Sample description	Item	Sample number	Date	Weight (g)	Soak time (h)	Soak condition	Analysis	Compound	Concentration (µg/L)	Operational SNARL (µg/L)	24 hour SNARL (µg/L)	7 day SNARL (µg/L)
Hannington 1A-1 SOAK TEST 24 HOURS 05/01/2022	Hannington material 1A-1	22006124	05/01/2022	0.27	24	DI Water	DCM Water profile	Nonanal	0.12	1	1500	600
Hannington 1A-1 SOAK TEST 24 HOURS 05/01/2022	Hannington material 1A-1	22006124	05/01/2022	0.27	24	DI Water	DCM Water profile	Oleic acid	0.7	no data	210000	84000
Hannington 1A-1 SOAK TEST 24 HOURS 05/01/2022	Hannington material 1A-1	22006124	05/01/2022	0.268	24	DCM	DCM Water profile	Hexanal	None given	n/a	n/a	n/a
Hannington 1A-1 SOAK TEST 24 HOURS 05/01/2022	Hannington material 1A-1	22006124	05/01/2022	0.268	24	DCM	DCM Water profile	Pthalic anhydride	None given	n/a	n/a	n/a
Hannington 1A-2 SOAK TEST 24 HOURS 05/01/2022	Hannington material 1A-2	22006125	05/01/2022	0.1509	24	DI Water	DCM Water profile	Tridecene	0.11	10	15000	7500
Hannington 1A-2 SOAK TEST 24 HOURS 05/01/2022	Hannington material 1A-2	22006125	05/01/2022	0.1568	24	DCM	DCM Water profile	Pthalic anhydride	None given	n/a	n/a	n/a

Date & Time	SamplePointName	2 DAY COLONY COUNT AT 37C SWAB (no/swab)	2-day Colony Count at 37C (No/ml)	3-day Colony Count at 22C (No/ml)	Alkalinity Total (mg/l CACO3)	Aluminium Total (mg/l AL)	Assessed Hygiene Qualitative (bar AC 1242)	AW Supplied ()	Bacteria, Incubation 22C 2Day Post Clean (CFU/plate)	Bacteria, Incubation 22C 2Days (CFU/plate)	Barber Tap / Cap Present ()	BUILDING TYPE ()	Calcium Total (mg/l CA)	Chlorine Free (mg/l CL2)	Chlorine Total (mg/l CL2)	Clarity Qualitative ()	Clostridium Perfringens Confirmed (No/100ml)	Clostridium Perfringens Presumptive (No/100ml)	Coliforms Confirmed (No/100ml)	Coliforms Presumptive ()	Coliforms Presumptive at 37C (No/100ml)	Coliforms Confirmed MPN IDEXX (No/100ml)	Colour Filtered (Hazen)	Conductivity at 20C (µS/cm)	Copper Total (mg/l CU)	Customer Tap Type (bar AC 1242)	E.Coli Presumptive at 44C (No/100ml)	E.Coli (no/swab)	E.Coli Confirmed (No/100ml)	E.Coli Confirmed MPN IDEXX (No/100ml)	Enterococci Confirmed (No/100ml)	Enterococci Presumptive (No/100ml)	Flow Cytometry High Nucleic Acid % (%)	Flow Cytometry Intact Cell Count (No/100µl)	Flow Cytometry Low Nucleic Acid % (%)	Flow Cytometry Total Cell Count (No/100µl)	Hardness Strip Completed ()	Hardness Total CLEANWATER (mg/l CACO3)	Iron Total (mg/l FE)	Lead Total (µg/l PB)	Magnesium Total (mg/l MG)	Manganese Total (mg/l MN)	National Grid Reference Easting ()	National Grid Reference Northing ()	NATIONAL GRID SQUARE (2 CHARACTERS) ()	Nickel Total (µg/l NI)	No Flow / No Sample (bar AC 1242)	Non-lactose fermenting colonies (No/100ml)	Odour Qualitative ()	Odour Quantitative at 60C (TON)	ODOUR QUANTITATIVE 25C DE-CHLORINATED (TON)	pH Clean Water (pH)	Phosphorus Total (mg/l P)	Propyzamide (µg/l)	Purge and Trap Profile (bar AC 1242)	Recent Plumbing ()	Sample Point Flush Rate (l/min)	Sample Point Other Issues ()	Sample Point Shelf Present ()	Sample Point Sink Condition ()	Sample Point Tap Condition ()	Sodium Total (mg/l NA)	Taste Qualitative ()	TASTE QUANTITATIVE 25C DE-CHLORINATED (TON)	Temperature Field Measurement (°C)	Turbidity (NTU)	TURBIDITY FIELD TEST (NTU)	Undiluted odour count 25C dechlorinated ()	Undiluted taste count 25C dechlorinated ()	Water Profile (bar AC 1242)	Water Softener / Filter Present ()	Zinc Total (mg/l ZN)
05/01/2016 11:15	HANNINGTON NO 1 RES SIDE A		0	19										0.06	0.84				0		0								0										0.014			0																							10.3							
13/01/2016 10:50	HANNINGTON NO 1 RES SIDE A		1	8										0.07	0.79				0		0								0										0.01			0																							9.9							
18/01/2016 10:24	HANNINGTON NO 1 RES SIDE A		0	0										0	1.06				0		0						0		0																																											
21/01/2016 10:47	HANNINGTON NO 1 RES SIDE A		1	0										0.05	0.62				0		0								0										0.01			0																							6.6							
22/01/2016 09:47	HANNINGTON NO 1 RES SIDE A		0	0										0	0.8				0		0						0		0																																											
29/01/2016 12:00	HANNINGTON NO 1 RES SIDE A																																														0																									
02/02/2016 12:00	HANNINGTON NO 1 RES SIDE A																																														0																									
09/02/2016 12:00	HANNINGTON NO 1 RES SIDE A																																														0																									
17/02/2016 12:00	HANNINGTON NO 1 RES SIDE A																																														0																									
25/02/2016 12:00	HANNINGTON NO 1 RES SIDE A																																														0																									
04/03/2016 12:00	HANNINGTON NO 1 RES SIDE A																																														0																									
07/03/2016 12:00	HANNINGTON NO 1 RES SIDE A																																														0																									
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24/03/2016 12:00	HANNINGTON NO 1 RES SIDE A																																														0																									
01/04/2016 12:00	HANNINGTON NO 1 RES SIDE A																																														0																									
09/04/2016 12:00	HANNINGTON NO 1 RES SIDE A																																														0																									
16/04/2016 22:30	HANNINGTON NO 1 RES SIDE A				135	0								0.09	0.83								0.5	623																									0	1		7.57			0								1			0.12				0		
16/04/2016 23:30	HANNINGTON NO 1 RES SIDE A		2	12										0.09	0.83				0		0						0		0																																											
18/04/2016 11:37	HANNINGTON NO 1 RES SIDE A		0	5										0.06	0.82				0		0								0										0.011			0																							9.2							
29/04/2016 12:00	HANNINGTON NO 1 RES SIDE A																																														0																									
03/05/2016 12:00	HANNINGTON NO 1 RES SIDE A																																														0																									
04/05/2016 12:00	HANNINGTON NO 1 RES SIDE A																																														0																									
13/05/2016 12:00	HANNINGTON NO 1 RES SIDE A																																														0																									
16/05/2016 12:00	HANNINGTON NO 1 RES SIDE A																																														0																									
24/05/2016 12:00	HANNINGTON NO 1 RES SIDE A																																														0																									
02/06/2016 12:00	HANNINGTON NO 1 RES SIDE A																																														0																									
10/06/2016 10:49	HANNINGTON NO 1 RES SIDE A		0	1										0	0.35				0		0						0		0																																											
10/06/2016 14:26	HANNINGTON NO 1 RES SIDE A		0	152										0.2	0.46				0		0								0																																				14.8							
17/06/2016 10:54	HANNINGTON NO 1 RES SIDE A		0	30										0.06	0.62				0		0								0																																				16.4							
20/06/2016 11:12	HANNINGTON NO 1 RES SIDE A		0	27										0.05	0.61				0		0								0																																				18.1							
01/07/2016 11:42	HANNINGTON NO 1 RES SIDE A		0	22										0.05	0.58				0		0								0																																				17.8							
06/07/2016 10:43	HANNINGTON NO 1 RES SIDE A		0	1										0.05	0.62				0		0								0																																				18.3							
14/07/2016 07:13	HANNINGTON NO 1 RES SIDE A		0	0										0.07	0.66				0		0								0																																				18.1							
22/07/2016 09:47	HANNINGTON NO 1 RES SIDE A		0	35										0.07	0.66				0		0								0																																				20.3							
25/07/2016 12:19	HANNINGTON NO 1 RES SIDE A		0	1										0	0.62				0		0								0																																				19.6							
02/08/2016 10:50	HANNINGTON NO 1 RES SIDE A		0	7										0	0.6				0		0								0																																				20.2							
05/08/2016 13:16	HANNINGTON NO 1 RES SIDE A		0	4										0	0.62				0		0						0		0																																				20.4							
10/08/2016 10:33	HANNINGTON NO 1 RES SIDE A		0	11										0	0.55				0		0								0																																				20.5							
10/08/2016 10:34	HANNINGTON NO 1 RES SIDE A										1																																															3	1	1	1	1											
15/08/2016 06:59	HANNINGTON NO 1 RES SIDE A		0	0										0.05	0.52				0		0								0																																				19.4							
26/08/2016 11:09	HANNINGTON NO 1 RES SIDE A		0	10										0.05	0.57				0		0								0																																				19.8							
31/08/2016 07:02	HANNINGTON NO 1 RES SIDE A		0	0										0	0.53				0		0								0																																				19.8							
07/09/2016 07:06	HANNINGTON NO 1 RES SIDE A		0	0										0	0.57				0		0								0																																				19.6							
14/09/2016 10:53	HANNINGTON NO 1 RES SIDE A		0	0										0	0.58				0		0								0																																				20.8							
22/09/2016 10:34	HANNINGTON NO 1 RES SIDE A		1	22										0	0.55				0		0								0																																				20.6							
27/09/2016 11:03	HANNINGTON NO 1 RES SIDE A		0	0										0.05	0.63				0		0								0																																				20.1							
03/10/2016 10:50	HANNINGTON NO 1 RES SIDE A		0	28										0.05	0.6				0		0								0																																				18.6							
11/10/2016 11:04	HANNINGTON NO 1 RES SIDE A		0	13										0.05	0.66				0		0								0																																				16							
19/10/2016 08:03	HANNINGTON NO 1 RES SIDE A		0	16										0.05	0.6				0		0								0																																				16.5							
19/10/2016 13:00	HANNINGTON NO 1 RES SIDE A													0.1	0.6	0																											####	####	0				0														1			0.11	1					
19/10/2016 13:05	HANNINGTON NO 1 RES SIDE A		0	0										0.1	0.6				0		0						0		0														####	####	0																											
27/10/2016 10:53	HANNINGTON NO 1 RES SIDE A		0	3										0.05	0.63				0		0								0																																				14.8							
02/11/2016 07:22	HANNINGTON NO 1 RES SIDE A		0	2										0.07	0.7				0		0								0																																				13.3							
07/11/2016 10:56	HANNINGTON NO 1 RES SIDE A		0	15										0.05	0.67				0		0								0																																				13.3							
15/11/2016 11:24	HANNINGTON NO 1 RES SIDE A		0	24										0.06	0.83				0		0								0																																				12.1							
23/11/2016 11:36	HANNINGTON NO 1 RES SIDE A		1	0										0.05	0.7				0		0								0																																				10.3							
01/12/2016 11:06	HANNINGTON NO 1 RES SIDE A		0	45										0.06	0.63				0		0								0																																				9.5							
09/12/2016 10:27	HANNINGTON NO 1 RES SIDE A		0	34										0.05	0.64				0		0								0																																				9.4							
12/12/2016 11:13	HANNINGTON NO 1 RES SIDE A		0	15										0.05	0.66				0		0								0																																				8.6							
22/12/2016 10:07	HANNINGTON NO 1 RES SIDE A		0	0										0.05	0.58				0		0								0																																				8.7							
28/12/2016 10:26	HANNINGTON NO 1 RES SIDE A		0	25										0.06	0.75				0		0								0																																				8.5							
02/01/2017 06:50	HANNINGTON NO 1 RES SIDE A		0	8										0.12	0.75				0		0								0																																				7.8							
13/01/2017 10:52	HANNINGTON NO 1 RES SIDE A		0	0										0.05	0.74				0		0								0																																				6.3							
16/01/2017 11:28	HANNINGTON NO 1 RES SIDE A		0	0										0.05	0.75				0		0								0																																				6.3							
24/01/2017 11:27	HANNINGTON NO 1 RES SIDE A		0	0										0.05	0.78				0		0								0																																				5.8							
25/01/2017 14:45	HANNINGTON NO 1 RES SIDE A									35																																																															
25/01/2017 14:46	HANNINGTON NO 1 RES SIDE A									0																																																															
01/02/2017 09:28	HANNINGTON NO 1 RES SIDE A		2	0										0.05	0.84				0		0								0																																				5.5							
08/02/2017 07:06	HANNINGTON NO 1 RES SIDE A		0	0										0.08	0.65				0		0								0																																				6.3							
17/02/2017 11:18	HANNINGTON NO 1 RES SIDE A		0	0										0.07	0.66				0		0								0																																				5.9							
20/02/2017 11:21	HANNINGTON NO 1 RES SIDE A		0	0										0.07	0.85				0		0								0																																				6.2							
02/03/2017 08:21	HANNINGTON NO 1 RES SIDE A		1	0										0	0.72				0		0								0																																				7.1							
08/03/2017 09:32	HANNINGTON NO 1 RES SIDE A		0	0										0.06	0.7				0		0								0																																				7.4							
16/03/2017 12:44	HANNINGTON NO 1 RES SIDE A		2	0										0	0.72				0		0								0																																				8.9							
24/03/2017 11:20	HANNINGTON NO 1 RES SIDE A		0	0										0.07	0.71				0		0								0																																				8.9							
27/03/2017 11:59	HANNINGTON NO 1 RES SIDE A		0	0										0.06	0.73				0		0								0																																				8.8							
04/04/2017 08:00	HANNINGTON NO 1 RES SIDE A		0	0										0.05	0.71				0		0								0																																				9.7							
10/04/2017 09:15	HANNINGTON NO 1 RES SIDE A		0	11										0.05	0.7				0		0								0																																				10.5							
17/04/2017 07:44	HANNINGTON NO 1 RES SIDE A		0	14										0.05	0.62				0		0								0																																				12.2							
28/04/2017 10:04	HANNINGTON NO 1 RES SIDE A		0	0										0	0.77				0		0								0																																				11.2							
05/05/2017 07:08	HANNINGTON NO 1 RES SIDE A		0	1										0.05	0.66				0		0								0																																				11.3							
09/05/2017 10:02	HANNINGTON NO 1 RES SIDE A		0	0										0.06	0.68				0		0								0																																				11.5							
17/05/2017 11:28	HANNINGTON NO 1 RES SIDE A		0	0										0.07	0.66				0		0								0																																				12.9							
19/05/2017 11:54	HANNINGTON NO 1 RES SIDE A		0	12										0.07	0.68				0		0						0		0																																											
22/05/2017 07:55	HANNINGTON NO 1 RES SIDE A		0	0										0.05	0.69				0		0								0																																				13.3							
29/05/2017 07:49	HANNINGTON NO 1 RES SIDE A		0	7							1			0.08	0.63				0		0								0																													6	1	1	3	2				14.4							
01/06/2017 17:50	HANNINGTON NO 1 RES SIDE A													0	0.52				0		0						0		0																																											
05/06/2017 07:19	HANNINGTON NO 1 RES SIDE A		1	7										0.08	0.53				0		0								0																																				17.3							
09/06/2017 16:56	HANNINGTON NO 1 RES SIDE A						3	0				8		0.07	0.53				0		0					0	0		0								0						0	0	0											0									17.1						0	
13/06/2017 08:44	HANNINGTON NO 1 RES SIDE A		4	9										0.06	0.56				0		0								0																																				17.5							
16/06/2017 07:30	HANNINGTON NO 1 RES SIDE A					0								0	0.67										0.01															0.17		0							0		1		1.87										1	1	16.9	0.11		0	0			0.005
21/06/2017 10:30	HANNINGTON NO 1 RES SIDE A		0	0										0.06	0.67				0		0								0																																				17.8							
29/06/2017 09:46	HANNINGTON NO 1 RES SIDE A		0	0										0	0.58				0		0								0																																				18.2							
07/07/2017 11:39	HANNINGTON NO 1 RES SIDE A		0	3										0.05	0.65				0		0								0																																				18.4							
10/07/2017 11:28	HANNINGTON NO 1 RES SIDE A		0	0										0.05	0.64				0		0								0																																				18.6							
18/07/2017 09:28	HANNINGTON NO 1 RES SIDE A		0	0										0.06	0.56				0		0								0																																				19.2							
28/07/2017 12:04	HANNINGTON NO 1 RES SIDE A		0	0										0	0.56				0		0								0																																				18.8							
04/08/2017 10:57	HANNINGTON NO 1 RES SIDE A		0	2										0.05	0.53				0		0								0																																				18.6							
11/08/2017 11:30	HANNINGTON NO 1 RES SIDE A		5	9										0	0.52				0		0								0																																				18.2							
14/08/2017 11:35	HANNINGTON NO 1 RES SIDE A		0	0										0.05	0.53				0		0								0																																				18.5							
22/08/2017 10:28	HANNINGTON NO 1 RES SIDE A		0	0										0	0.51				0		0								0																																				18.3							
28/08/2017 07:09	HANNINGTON NO 1 RES SIDE A		0	17										0.05	0.54				0		0								0																																				18							

07/09/2017 11:31	HANNINGTON NO 1 RES SIDE A		0	0				0	0.56		0		0			0									18.2
11/09/2017 11:40	HANNINGTON NO 1 RES SIDE A		0	3				0	0.53		0		0			0									17.6
18/09/2017 07:25	HANNINGTON NO 1 RES SIDE A		0	22				0.08	0.57		0		0			0									16.4
26/09/2017 10:52	HANNINGTON NO 1 RES SIDE A		0	20				0.07	0.51		0		0			0									16
02/10/2017 09:47	HANNINGTON NO 1 RES SIDE A		0	6				0.06	0.5		0		0			0									16.4
13/10/2017 10:10	HANNINGTON NO 1 RES SIDE A		0	51				0	0.51		0		0			0									15.4
19/10/2017 08:35	HANNINGTON NO 1 RES SIDE A		0	12				0.06	0.54		0		0			0									15.5
23/10/2017 11:30	HANNINGTON NO 1 RES SIDE A		0	13				0.05	0.57		0		0			0									14.7
31/10/2017 11:20	HANNINGTON NO 1 RES SIDE A		0	0				0.05	0.59		0		0			0									14.1
09/11/2017 11:15	HANNINGTON NO 1 RES SIDE A		0	0				0.05	0.61		0		0			0									12.7
16/11/2017 07:54	HANNINGTON NO 1 RES SIDE A		0	0				0	0.62		0		0			0									11.8
23/11/2017 10:13	HANNINGTON NO 1 RES SIDE A		0	0				0	0.63		0		0			0									11
27/11/2017 11:24	HANNINGTON NO 1 RES SIDE A		0	0			1	0	0.7		0		0			0				6	2	1	2	2	10.5
05/12/2017 11:30	HANNINGTON NO 1 RES SIDE A		0	29				0.06	0.67		0		0			0									8.6
13/12/2017 10:09	HANNINGTON NO 1 RES SIDE A		0	23				0.07	0.69		0		0			0									7.4
22/12/2017 09:54	HANNINGTON NO 1 RES SIDE A		0	3				0.06	0.7		0		0			0									6.2
28/12/2017 11:18	HANNINGTON NO 1 RES SIDE A		0	0				0.09	0.73		0		0			0									6.2
01/01/2018 07:16	HANNINGTON NO 1 RES SIDE A		0	22				0.06	0.71		0		0			0									6.4
08/01/2018 11:33	HANNINGTON NO 1 RES SIDE A		1	4				0.08	0.79		0		0			0									6.4
16/01/2018 11:36	HANNINGTON NO 1 RES SIDE A		2	2				0.08	0.82		0		0			0									6
25/01/2018 08:12	HANNINGTON NO 1 RES SIDE A		0	0				0.06	0.79		0		0			0									5.8
29/01/2018 08:06	HANNINGTON NO 1 RES SIDE A		1	1				0.06	0.74		0		0			0									5.8
07/02/2018 11:32	HANNINGTON NO 1 RES SIDE A		0	0				0.07	0.76		0		0			0									8.2
15/02/2018 09:17	HANNINGTON NO 1 RES SIDE A		0	0				0.06	0.78		0		0			0									7.5
23/02/2018 11:25	HANNINGTON NO 1 RES SIDE A		1	1				0.08	0.79		0		0			0									6.7
26/02/2018 15:40	HANNINGTON NO 1 RES SIDE A		0	0				0.09	0.78		0		0			0									6.8
05/03/2018 11:10	HANNINGTON NO 1 RES SIDE A		0	0				0.07	0.84		0		0			0									5.4
14/03/2018 10:34	HANNINGTON NO 1 RES SIDE A		1	0				0.07	0.85		0		0			0									6.4
22/03/2018 11:33	HANNINGTON NO 1 RES SIDE A		8	0				0.07	0.72		0		0			0									6
28/03/2018 11:26	HANNINGTON NO 1 RES SIDE A		2	0				0	0.71		0		0			0									7.9
04/04/2018 11:16	HANNINGTON NO 1 RES SIDE A		6	18				0	0.77		0		0			0									10.4
11/04/2018 11:29	HANNINGTON NO 1 RES SIDE A		0	0				0.07	0.63		0		0			0									8.4
13/04/2018 12:20	HANNINGTON NO 1 RES SIDE A																		0.02						
16/04/2018 08:29	HANNINGTON NO 1 RES SIDE A		2	0				0.07	0.62		0		0			0									8.4
27/04/2018 11:28	HANNINGTON NO 1 RES SIDE A		21	334				0.06	0.61		0		0			0		0							11.5
28/04/2018 17:30	HANNINGTON NO 1 RES SIDE A	0	117	0				0	0.29		0	0	0	0	0	0		0							
28/04/2018 17:40	HANNINGTON NO 1 RES SIDE A		0	0				1.57	2.2		0		0	0		0									
28/04/2018 17:50	HANNINGTON NO 1 RES SIDE A		0	0				0.11	0.54		0		0	0		0		1							
30/04/2018 07:27	HANNINGTON NO 1 RES SIDE A		0	0				0.05	0.64		0		0			0									11.3
11/05/2018 10:33	HANNINGTON NO 1 RES SIDE A		3	6				0.05	0.68		0		0			0		0							12.6
14/05/2018 11:25	HANNINGTON NO 1 RES SIDE A		23	16				0.07	0.75		0		0			0		0							12.7
21/05/2018 12:02	HANNINGTON NO 1 RES SIDE A		0	0				0.07	0.73		0		0			0		0							13
23/05/2018 09:50	HANNINGTON NO 1 RES SIDE A		56	41				0.05	0.44		0		0	0		0		86							
23/05/2018 10:00	HANNINGTON NO 1 RES SIDE A		2	1				0	0.72		0		0	0		0		66							
23/05/2018 10:05	HANNINGTON NO 1 RES SIDE A		0	0				0	0.65		0		0	0		0		30							
29/05/2018 15:08	HANNINGTON NO 1 RES SIDE A		4	0				0.09	0.66		0		0			0		93							13.8
31/05/2018 11:50	HANNINGTON NO 1 RES SIDE A		0	2				0	0.65		0		0	0		0		0							
31/05/2018 12:00	HANNINGTON NO 1 RES SIDE A		0	6				0	0.65		0		0	0		0		37							
31/05/2018 12:10	HANNINGTON NO 1 RES SIDE A		0	0				0	0.65		0		0	0		0									
08/06/2018 10:55	HANNINGTON NO 1 RES SIDE A		9	42				0.05	0.58		0		0			0		0							12.5
12/06/2018 10:04	HANNINGTON NO 1 RES SIDE A		96	27				0	0.58		0		0	0		0		0							
12/06/2018 10:12	HANNINGTON NO 1 RES SIDE A		64	37				0.05	0.58		0		0	0		0		0							
12/06/2018 10:35	HANNINGTON NO 1 RES SIDE A		0	0				0.05	0.57		0		0	0		0		0							
14/06/2018 14:17	HANNINGTON NO 1 RES SIDE A		10	37				0.05	0.64		0		0			0		0							14.6
21/06/2018 11:15	HANNINGTON NO 1 RES SIDE A		9	40				0.1	1.1		0		0	0		0		0							
21/06/2018 12:30	HANNINGTON NO 1 RES SIDE A		3	1				0.05	0.58		0		0	0		0		0							
22/06/2018 10:46	HANNINGTON NO 1 RES SIDE A		18	2				0.05	0.62		0		0			0		89							16.4
27/06/2018 11:46	HANNINGTON NO 1 RES SIDE A		81	21				0.06	0.58		0		0			0		0							18.2
29/06/2018 10:50	HANNINGTON NO 1 RES SIDE A		0	24				0.27	1.5																
05/07/2018 10:30	HANNINGTON NO 1 RES SIDE A		134	32				0.08	0.79		0		0			0		0							19.6
06/07/2018 17:20	HANNINGTON NO 1 RES SIDE A		31	0				0.29	2.33		0		0	0		0		0							
13/07/2018 11:08	HANNINGTON NO 1 RES SIDE A		13	0		22		0.07	0.69		0		0			0		0							18.1
16/07/2018 11:07	HANNINGTON NO 1 RES SIDE A		17	2				0.07	0.74		0		0			0		0							18.3
16/07/2018 18:40	HANNINGTON NO 1 RES SIDE A		0	30				0.06	0.68		0		0	0		0		0							
16/07/2018 18:55	HANNINGTON NO 1 RES SIDE A		0	1				0.06	0.68		0		0	0		0		0							
16/07/2018 19:43	HANNINGTON NO 1 RES SIDE A		0	0				0.05	0.74		0		0	0		0									
25/07/2018 12:14	HANNINGTON NO 1 RES SIDE A		1	0				0.11	0.7		0		0			0									20.9
30/07/2018 15:07	HANNINGTON NO 1 RES SIDE A		0	1				0.08	0.71		0		0			0									20.1
06/08/2018 10:50	HANNINGTON NO 1 RES SIDE A					0																			
06/08/2018 10:56	HANNINGTON NO 1 RES SIDE A		19	55				0.08	0.68		0		0			0		0							21.8
16/08/2018 09:20	HANNINGTON NO 1 RES SIDE A		10	0				0.07	0.68		0		0			0		0							21.5
20/08/2018 10:41	HANNINGTON NO 1 RES SIDE A		17	67				0.05	0.69		0		0			0		0							20.8
21/08/2018 08:55	HANNINGTON NO 1 RES SIDE A		0	47				0	0.6		0		0	0		0		0							
21/08/2018 09:10	HANNINGTON NO 1 RES SIDE A		0	17				0	0.6		0		0	0		0									
21/08/2018 09:27	HANNINGTON NO 1 RES SIDE A		0	0				0	0.6		0		0	0		0									
21/08/2018 15:41	HANNINGTON NO 1 RES SIDE A		0	0				0.06	0.71		0		0	0		0									20.8
29/08/2018 07:29	HANNINGTON NO 1 RES SIDE A		0	0				0	0.53		0		0			0									20.1
03/09/2018 11:36	HANNINGTON NO 1 RES SIDE A				0	0																			
03/09/2018 11:50	HANNINGTON NO 1 RES SIDE A		0	0				0	0.51		0		0			0									19
13/09/2018 10:52	HANNINGTON NO 1 RES SIDE A		19	39				0	0.52		0		0			0		0							16.2
19/09/2018 11:06	HANNINGTON NO 1 RES SIDE A		3	29				0.05	0.45		0		0			0		23							18.3
24/09/2018 11:25	HANNINGTON NO 1 RES SIDE A		2223	0				0.05	0.63		0		0			0									17.1
01/10/2018 11:16	HANNINGTON NO 1 RES SIDE A		12	21	0	10		0.05	0.57		0		0			0		74							16.8
03/10/2018 10:00	HANNINGTON NO 1 RES SIDE A		0	2				0	0.18		0		0	0		0									
03/10/2018 10:05	HANNINGTON NO 1 RES SIDE A		0	1				0	0.48		0		0	0		0									
03/10/2018 10:18	HANNINGTON NO 1 RES SIDE A		0	23				0.07	0.54		0		0	0		0									
03/10/2018 10:20	HANNINGTON NO 1 RES SIDE A		0	0				0.07	0.5		0		0	0		0									
03/10/2018 10:35	HANNINGTON NO 1 RES SIDE A		0	284				0	0.08		0		0	0		0									
03/10/2018 10:55	HANNINGTON NO 1 RES SIDE A		0	0				0.07	0.63		0		0	0		0									
09/10/2018 12:29	HANNINGTON NO 1 RES SIDE A		0	1				0.05	0.58		0		0			0									16.3
18/10/2018 11:31	HANNINGTON NO 1 RES SIDE A		579	1				0.05	0.49		0		0			0									17.6
21/10/2018 15:07	HANNINGTON NO 1 RES SIDE A											0			0										
21/10/2018 15:25	HANNINGTON NO 1 RES SIDE A		0	0				0	0.47		0		0	0		0									
21/10/2018 17:20	HANNINGTON NO 1 RES SIDE A		0	0				0	0.48		0		0	0		0									
23/10/2018 11:10	HANNINGTON NO 1 RES SIDE A		0	0				0.05	0.46		0		0			0									16.8
03/11/2018 07:00	HANNINGTON NO 1 RES SIDE A		0	0	0	0		0.05	0.58		0		0			0									13.3
05/11/2018 11:19	HANNINGTON NO 1 RES SIDE A		0	0				0.06	0.55		0		0			0		5							14.6
08/11/2018 17:09	HANNINGTON NO 1 RES SIDE A		0	0				0	0.48	0	0		0	0		0	0								12.7
17/11/2018 07:28	HANNINGTON NO 1 RES SIDE A		2	0				0	0.59		0		0			0		0							11.9
19/11/2018 07:19	HANNINGTON NO 1 RES SIDE A		5	4				0	0.63		0		0			0		0							11.6
21/11/2018 12:50	HANNINGTON NO 1 RES SIDE A							0	0.58		0		0	0		0		55							
21/11/2018 13:00	HANNINGTON NO 1 RES SIDE A							0	0.58		0		0	0		0		39							
21/11/2018 13:15	HANNINGTON NO 1 RES SIDE A							0	0.59		0		0	0		0		4							
21/11/2018 13:25	HANNINGTON NO 1 RES SIDE A							0	0.58		0		0	0		0		9							
21/11/2018 15:15	HANNINGTON NO 1 RES SIDE A							0.06	0.62		0		0	0		0		13							
27/11/2018 12:07	HANNINGTON NO 1 RES SIDE A		0	0	0	0	1	0	0.61		0		0			0				4	1	1	1	1	11.7
07/12/2018 11:46	HANNINGTON NO 1 RES SIDE A		174	159				0	0.61		0		0			0		0							10.9
08/12/2018 18:05	HANNINGTON NO 1 RES SIDE A											0			0										
08/12/2018 18:07	HANNINGTON NO 1 RES SIDE A		105	114							0		0	0		0		0							
08/12/2018 18:18	HANNINGTON NO 1 RES SIDE A		151	181				0.08	0.47		0		0	0		0		0							14.4
08/12/2018 18:20	HANNINGTON NO 1 RES SIDE A											0			0										
08/12/2018 19:09	HANNINGTON NO 1 RES SIDE A		0	0				0.08	0.59		0		0	0		0		44							
10/12/2018 08:15	HANNINGTON NO 1 RES SIDE A											0			0										
10/12/2018 08:30	HANNINGTON NO 1 RES SIDE A							0.1	0.5			0			0										
14/12/2018 14:00	HANNINGTON NO 1 RES SIDE A		0	3				0	0.32		0		0	0		0									
15/12/2018 07:02	HANNINGTON NO 1 RES SIDE A		0	0				0	0.61		0		0			0									10.4
19/12/2018 08:29	HANNINGTON NO 1 RES SIDE A		105	47	0	0		0.08	0.6		0		0			0		0							10.1
20/12/2018 17:10	HANNINGTON NO 1 RES SIDE A		27	4				0	0.53		0		0	0		0		0							
20/12/2018 18:23	HANNINGTON NO 1 RES SIDE A		0	0				0	0.54		0		0	0		0									

28/12/2018 07:16	HANNINGTON NO 1 RES SIDE A	0	0		0.05	0.65				0	0			0											8.6	
03/01/2019 08:45	HANNINGTON NO 1 RES SIDE A	0	0		0.06	0.65				0	0			0											9.3	
08/01/2019 08:50	HANNINGTON NO 1 RES SIDE A	1	0		0.08	0.68				0	0			0											8.8	
15/01/2019 12:16	HANNINGTON NO 1 RES SIDE A	0	0		0.06	0.66				0	0			0										0	9.1	
23/01/2019 08:35	HANNINGTON NO 1 RES SIDE A	0	4		0.08	0.71				0	0			0											8.7	
23/01/2019 08:37	HANNINGTON NO 1 RES SIDE A			0																						
28/01/2019 07:57	HANNINGTON NO 1 RES SIDE A	21	6		0.06	0.69				0	0			0										0	9.4	
31/01/2019 14:18	HANNINGTON NO 1 RES SIDE A	6	0		0.05	0.68				0	0		0	0										0		
31/01/2019 14:21	HANNINGTON NO 1 RES SIDE A	1	0		0.05	0.68				0	0		0	0										0		
31/01/2019 14:34	HANNINGTON NO 1 RES SIDE A	0	0		0.05	0.68				0	0		0	0												
07/02/2019 08:30	HANNINGTON NO 1 RES SIDE A	0	0		0.08	0.73				0	0			0											7	
07/02/2019 08:31	HANNINGTON NO 1 RES SIDE A			0																						
15/02/2019 11:37	HANNINGTON NO 1 RES SIDE A	3	0		0.06	0.7				0	0			0											6.8	
18/02/2019 08:38	HANNINGTON NO 1 RES SIDE A	12	54	0	0.08	0.76				0	0			0											7.7	
26/02/2019 08:43	HANNINGTON NO 1 RES SIDE A	89	58		0.08	0.68				0	0			0										0	10.3	
28/02/2019 11:35	HANNINGTON NO 1 RES SIDE A	21	27		0.11	0.7				0	0		0	0										0		
28/02/2019 11:45	HANNINGTON NO 1 RES SIDE A	80	81		0.11	0.7				0	0		0	0										0		
02/03/2019 12:40	HANNINGTON NO 1 RES SIDE A	63	0		0	0.8				0	0		0	0										0		
02/03/2019 13:05	HANNINGTON NO 1 RES SIDE A	0	0		0	0.8				0	0		0	0												
02/03/2019 13:10	HANNINGTON NO 1 RES SIDE A	0	0		0	0.8				0	0		0	0												
06/03/2019 15:57	HANNINGTON NO 1 RES SIDE A			0																						
06/03/2019 16:11	HANNINGTON NO 1 RES SIDE A	0	0		0.06	0.63				0	0			0											9.5	
14/03/2019 13:20	HANNINGTON NO 1 RES SIDE A	0	0		0	0.67				0	0			0										35	10.8	
19/03/2019 13:00	HANNINGTON NO 1 RES SIDE A	4	0		0.08	0.91						0			0											
22/03/2019 07:49	HANNINGTON NO 1 RES SIDE A	1	0		0	0.67				0	0			0											9	
22/03/2019 07:51	HANNINGTON NO 1 RES SIDE A			0																						
29/03/2019 08:50	HANNINGTON NO 1 RES SIDE A	0	29		0.05	0.58				0	0			0											11.5	
02/04/2019 08:48	HANNINGTON NO 1 RES SIDE A	1	89		0.06	0.86				0	0			0											10.5	
02/04/2019 08:49	HANNINGTON NO 1 RES SIDE A			0																						
10/04/2019 08:34	HANNINGTON NO 1 RES SIDE A	0	0		0	0.6				0	0			0											10.5	
17/04/2019 08:06	HANNINGTON NO 1 RES SIDE A	1	36		0.06	0.63				0	0			0											11.1	
17/04/2019 08:08	HANNINGTON NO 1 RES SIDE A			1																						
24/04/2019 11:51	HANNINGTON NO 1 RES SIDE A	0	32		0.05	0.57				0	0			0											11	
26/04/2019 20:02	HANNINGTON NO 1 RES SIDE A				0.06	0.63						0			0										11.6	
03/05/2019 08:49	HANNINGTON NO 1 RES SIDE A	0	0		0.07	0.55				0	0			0											12.4	
03/05/2019 08:50	HANNINGTON NO 1 RES SIDE A			0																						
07/05/2019 08:42	HANNINGTON NO 1 RES SIDE A	0	0		0	0.62				0	0			0											13.5	
14/05/2019 12:36	HANNINGTON NO 1 RES SIDE A	0	41		0.06	0.64				0	0			0											13	
14/05/2019 12:37	HANNINGTON NO 1 RES SIDE A			0																						
22/05/2019 08:40	HANNINGTON NO 1 RES SIDE A	57	0		0.05	0.63				0	0			0											13.2	
30/05/2019 08:37	HANNINGTON NO 1 RES SIDE A	101	37		0.05	0.59				0	0			0											15.5	
30/05/2019 08:38	HANNINGTON NO 1 RES SIDE A			0																						
07/06/2019 08:47	HANNINGTON NO 1 RES SIDE A	0	0		0.06	0.57				0	0			0											16.7	
10/06/2019 08:32	HANNINGTON NO 1 RES SIDE A	0	0		0.08	0.56				0	0			0											16.1	
10/06/2019 08:33	HANNINGTON NO 1 RES SIDE A			0																						
19/06/2019 11:41	HANNINGTON NO 1 RES SIDE A	84	0		0	0.53				0	0			0											15.8	
26/06/2019 12:01	HANNINGTON NO 1 RES SIDE A	1	49		0.05	0.64						0			0										18.3	
26/06/2019 12:02	HANNINGTON NO 1 RES SIDE A			0																						
04/07/2019 08:42	HANNINGTON NO 1 RES SIDE A	3	25		0.05	0.55						0			0										18.6	
05/07/2019 14:37	HANNINGTON NO 1 RES SIDE A	52	0		0.06	0.54		0	0			0			0	0	0								18.1	
12/07/2019 12:37	HANNINGTON NO 1 RES SIDE A	1	0	0	0.1	0.58						0			0										18.6	
15/07/2019 07:53	HANNINGTON NO 1 RES SIDE A	0	7		0.05	0.49						0			0										17.8	
23/07/2019 08:48	HANNINGTON NO 1 RES SIDE A	0	2		0.07	0.51						0			0										19.8	
23/07/2019 08:49	HANNINGTON NO 1 RES SIDE A			0																						
31/07/2019 08:37	HANNINGTON NO 1 RES SIDE A	0	0		0	0.47						0			0										20.1	
08/08/2019 08:02	HANNINGTON NO 1 RES SIDE A	0	0		0.05	0.5						0			0										22.3	
08/08/2019 08:03	HANNINGTON NO 1 RES SIDE A			0																						
16/08/2019 09:16	HANNINGTON NO 1 RES SIDE A	0	1		0	0.47						0			0										21.3	
19/08/2019 08:30	HANNINGTON NO 1 RES SIDE A	51	9		0.05	0.52						0			0										20.3	
28/08/2019 08:34	HANNINGTON NO 1 RES SIDE A	0	0		0	0.51						0			0										21.2	
30/08/2019 17:42	HANNINGTON NO 1 RES SIDE A				0	0.44		0	0			0			0	0	0								20.1	
05/09/2019 15:14	HANNINGTON NO 1 RES SIDE A	0	0		0	0.47						0			0										19.5	
13/09/2019 08:33	HANNINGTON NO 1 RES SIDE A	1	0		0	0.52						0			0										19.8	
16/09/2019 08:39	HANNINGTON NO 1 RES SIDE A	0	3		0	0.53						0			0										19.3	
16/09/2019 08:40	HANNINGTON NO 1 RES SIDE A			0																						
27/09/2019 13:34	HANNINGTON NO 1 RES SIDE A	0	0		0	0.55						0			0										18.8	
30/09/2019 15:36	HANNINGTON NO 1 RES SIDE A			0																						
30/09/2019 15:54	HANNINGTON NO 1 RES SIDE A	0	17		0.06	0.56						0			0										19.2	
10/10/2019 11:36	HANNINGTON NO 1 RES SIDE A	29	12		0	0.53						0			0										16.8	
18/10/2019 08:25	HANNINGTON NO 1 RES SIDE A	0	0		0	0.74						0			0										17.5	
18/10/2019 08:26	HANNINGTON NO 1 RES SIDE A			0																						
24/10/2019 11:40	HANNINGTON NO 1 RES SIDE A	0	0		0.1	0.39						0			0										16.6	
28/10/2019 08:35	HANNINGTON NO 1 RES SIDE A	0	0		0.05	0.71						0			0										14.1	
28/10/2019 08:36	HANNINGTON NO 1 RES SIDE A			0																						
05/11/2019 08:42	HANNINGTON NO 1 RES SIDE A	0	10		0	0.8						0			0										15.7	
13/11/2019 11:24	HANNINGTON NO 1 RES SIDE A			0																						
13/11/2019 11:32	HANNINGTON NO 1 RES SIDE A	0	0		0.08	0.78						0			0										11.5	
20/11/2019 10:38	HANNINGTON NO 1 RES SIDE A	0	0		0.07	0.69						0			0										11.1	
27/11/2019 12:21	HANNINGTON NO 1 RES SIDE A			0																						
27/11/2019 12:28	HANNINGTON NO 1 RES SIDE A	0	6		0	0.67						0			0										9.5	
05/12/2019 12:13	HANNINGTON NO 1 RES SIDE A	0	0		0.07	0.79						0			0										9.9	
05/12/2019 12:14	HANNINGTON NO 1 RES SIDE A				0.07	0.79	0															0.052	0		9.9	0.11
11/12/2019 08:46	HANNINGTON NO 1 RES SIDE A	0	0		0.07	0.75						0			0										8.7	
11/12/2019 08:47	HANNINGTON NO 1 RES SIDE A			0																						
18/12/2019 08:26	HANNINGTON NO 1 RES SIDE A	0	0		0.06	0.61						0			0										8.5	
27/12/2019 10:43	HANNINGTON NO 1 RES SIDE A	0	0		0.08	0.79						0			0										10.5	
27/12/2019 10:44	HANNINGTON NO 1 RES SIDE A			0																						
02/01/2020 09:51	HANNINGTON NO 1 RES SIDE A	0	1		0.07	0.76						0			0			72.9	177	27.1	8768				8.2	
02/01/2020 09:52	HANNINGTON NO 1 RES SIDE A			0																						
07/01/2020 10:44	HANNINGTON NO 1 RES SIDE A	0	0		0.08	0.74						0			0			85.5	165	14.6	8733				8.7	
13/01/2020 10:42	HANNINGTON NO 1 RES SIDE A	0	0		0.07	0.78						0			0			72.1	161	28	8990				8.4	
13/01/2020 10:43	HANNINGTON NO 1 RES SIDE A			0																						
24/01/2020 11:19	HANNINGTON NO 1 RES SIDE A	0	0		0.06	0.81						0			0			79.3	266	20.3	####				8.1	
30/01/2020 10:33	HANNINGTON NO 1 RES SIDE A	0	0		0.05	0.79						0			0			72.4	199	27.6	####				7.4	
30/01/2020 10:35	HANNINGTON NO 1 RES SIDE A			0																						
05/02/2020 13:32	HANNINGTON NO 1 RES SIDE A	0	0		0	0.75						0			0			69.9	262	30.2	####				8.9	
11/02/2020 10:38	HANNINGTON NO 1 RES SIDE A	0	0		0.06	0.73						0			0			71.8	262	27.9	####				8	
11/02/2020 10:40	HANNINGTON NO 1 RES SIDE A			0																						
19/02/2020 10:01	HANNINGTON NO 1 RES SIDE A	0	0		0.05	0.76						0			0			74.1	232	25.9	####				7.9	
26/02/2020 10:24	HANNINGTON NO 1 RES SIDE A	0	0		0.06	0.77						0			0			80.4	224	19.6	9803				8.3	
26/02/2020 10:25	HANNINGTON NO 1 RES SIDE A			0																						
06/03/2020 10:49	HANNINGTON NO 1 RES SIDE A	1	0		0	0.8						0			0			71.6	201	28.4	####				7.3	
10/03/2020 08:30	HANNINGTON NO 1 RES SIDE A	1	0		0.07	0.77						0			0			80.8	240	19.2	####				8.2	
18/03/2020 10:30	HANNINGTON NO 1 RES SIDE A	0	0		0.05	0.73						0			0										8.7	
26/03/2020 10:06	HANNINGTON NO 1 RES SIDE A		0		0.07	0.78						0			0										8.3	
26/03/2020 10:08	HANNINGTON NO 1 RES SIDE A			0																						
30/03/2020 10:36	HANNINGTON NO 1 RES SIDE A		0		0.05	0.68						0			0										9.8	
06/04/2020 10:52	HANNINGTON NO 1 RES SIDE A		0		0.05	0.74						0			0										8.8	
14/04/2020 11:00	HANNINGTON NO 1 RES SIDE A		0		0.06	0.65						0			0										9.7	
21/04/2020 09:56	HANNINGTON NO 1 RES SIDE A		0	0	0.05	0.71						0			0										10.6	
29/04/2020 09:49	HANNINGTON NO 1 RES SIDE A		0		0.06	0.64						0			0										11.6	
06/05/2020 09:43	HANNINGTON NO 1 RES SIDE A		0		0.06	0.7						0			0										12.8	
07/05/2020 12:29	HANNINGTON NO 1 RES SIDE A				0.05	0.75						0			0										12.5	
11/05/2020 10:21	HANNINGTON NO 1 RES SIDE A		2		0.06	0.74						0			0										13.2	
19/05/2020 09:39	HANNINGTON NO 1 RES SIDE A		58	0	0.05	0.75						0			0										14.4	
27/05/2020 09:55	HANNINGTON NO 1 RES SIDE A		29		0.07	0.76						0			0										15.4	
02/06/2020 09:51	HANNINGTON NO 1 RES SIDE A		37		0.05	0.72						0			0										17.1	
08/06/2020 10:19	HANNINGTON NO 1 RES SIDE A		0		0.05	0.6						0			0										16.8	
11/06/2020 18:54	HANNINGTON NO 1 RES SIDE A				0	0.55		0	0			0			0	0	0								21.4	

19/06/2020 09:51	HANNINGTON NO 1 RES SIDE A	0					0.05	0.6				0			0																	18.8		
19/06/2020 09:52	HANNINGTON NO 1 RES SIDE A				2																													
25/06/2020 09:45	HANNINGTON NO 1 RES SIDE A	5					0.06	0.69				0			0																	17.6		
01/07/2020 09:50	HANNINGTON NO 1 RES SIDE A	3					0	0.48				0			0																	18.5		
09/07/2020 09:35	HANNINGTON NO 1 RES SIDE A	8					0.06	0.57				0			0																	18.2		
17/07/2020 08:03	HANNINGTON NO 1 RES SIDE A	0			0		0.07	0.54				0			0																	19.1		
20/07/2020 07:53	HANNINGTON NO 1 RES SIDE A	0					0.05	0.5				0			0																	18.5		
28/07/2020 08:00	HANNINGTON NO 1 RES SIDE A	0					0.05	0.49				0			0																	19.7		
05/08/2020 10:43	HANNINGTON NO 1 RES SIDE A	0					0	0.59				0			0																	20.7		
11/08/2020 18:07	HANNINGTON NO 1 RES SIDE A						0.05	0.71				0			0			79.3	420	20.7	2751											20		
13/08/2020 11:19	HANNINGTON NO 1 RES SIDE A	0			0		0.07	0.61				0			0			84.9	363	15.2	3392											21.2		
21/08/2020 11:36	HANNINGTON NO 1 RES SIDE A	0					0.06	0.51				0			0			87.4	350	12.6	1640											20.8		
24/08/2020 11:34	HANNINGTON NO 1 RES SIDE A	0					0	0.52				0			0			80.9	341	19.1	1410											20.4		
02/09/2020 08:01	HANNINGTON NO 1 RES SIDE A	0					0	0.44				0			0			84.8	453	15.2	1781											18.9		
10/09/2020 08:03	HANNINGTON NO 1 RES SIDE A	0					0	0.54				0			0			84.7	334	15.3	1875											18.6		
10/09/2020 08:04	HANNINGTON NO 1 RES SIDE A				0																													
18/09/2020 09:02	HANNINGTON NO 1 RES SIDE A	0					0	0.54				0			0			80.3	309	19.7	2735											18.5		
21/09/2020 10:57	HANNINGTON NO 1 RES SIDE A	0					0.06	0.57				0			0			79	285	21.1	2416											17.2		
29/09/2020 11:09	HANNINGTON NO 1 RES SIDE A	0					0.05	0.54				0			0			78.7	277	21.3	2806											17.8		
07/10/2020 11:03	HANNINGTON NO 1 RES SIDE A	0			8		0	0.67				0			0			84.2	328	15.9	3589											16.8		
15/10/2020 07:16	HANNINGTON NO 1 RES SIDE A	0					0.06	0.53				0			0			78	195	22.1	5773		0.022									15.1		
23/10/2020 07:26	HANNINGTON NO 1 RES SIDE A	0					0.08	0.53				0			0																	18		
23/10/2020 07:34	HANNINGTON NO 1 RES SIDE A																						0.033											
26/10/2020 10:36	HANNINGTON NO 1 RES SIDE A	0					0.06	0.49				0			0			64.7	249	35.3	7798		0.03									14.1		
03/11/2020 14:16	HANNINGTON NO 1 RES SIDE A	0			0		0	0.61				0			0			73.5	211	26.5	5359		0.033									13.5		
11/11/2020 10:57	HANNINGTON NO 1 RES SIDE A	0					0.05	0.39				0			0			61	77	39	3541		0.026									13.5		
19/11/2020 07:49	HANNINGTON NO 1 RES SIDE A	0					0	0.63				0			0			85.3	150	14.7	3503		0.023									12.3		
27/11/2020 07:39	HANNINGTON NO 1 RES SIDE A	0					0.05	0.73				0			0			85.4	137	14.6	3967		0.028									10.6		
30/11/2020 07:59	HANNINGTON NO 1 RES SIDE A	0			0		0.07	0.61				0			0			86	100	14	4120		0.025									12		
08/12/2020 08:15	HANNINGTON NO 1 RES SIDE A	0					0	0.71				0			0			80.9	131	19.1	6786		0.024									10.8		
16/12/2020 10:34	HANNINGTON NO 1 RES SIDE A	0					0.07	0.69				0			0			85.2	135	14.8	5678		0.031									10.7		
22/12/2020 11:22	HANNINGTON NO 1 RES SIDE A	0					0	0.74				0			0			75.7	152	24.3	4706		0.026									9.6		
30/12/2020 10:06	HANNINGTON NO 1 RES SIDE A	0					0	0.73				0			0			82.3	96	17.7	5092											8.4		
30/12/2020 10:07	HANNINGTON NO 1 RES SIDE A				0																		0.034											
06/01/2021 09:45	HANNINGTON NO 1 RES SIDE A	0					0	0.69				0			0			74.3	113	25.7	5426		0.025									7.3		
14/01/2021 10:17	HANNINGTON NO 1 RES SIDE A	1					0.05	0.75				0			0			81.7	82	18.3	5866		0.02									7.9		
22/01/2021 08:21	HANNINGTON NO 1 RES SIDE A	0					0	0.74				0			0			70.4	98	28.6	4959											6.5		
22/01/2021 08:22	HANNINGTON NO 1 RES SIDE A																						0.026											
25/01/2021 09:59	HANNINGTON NO 1 RES SIDE A	0					0	0.79				0			0			91.4	104	8.65	5256		0.017									7		
02/02/2021 07:44	HANNINGTON NO 1 RES SIDE A	0					0.07	0.7				0			0			80.7	83	19.3	9109											5.9		
02/02/2021 07:55	HANNINGTON NO 1 RES SIDE A																						0.018											
10/02/2021 07:56	HANNINGTON NO 1 RES SIDE A	0					0.05	0.78				0			0			89	118	11	5535		0.014									5.5		
18/02/2021 07:57	HANNINGTON NO 1 RES SIDE A	0					0.06	0.74				0			0			67.1	79	32.9	5324		0.023									6.3		
26/02/2021 11:04	HANNINGTON NO 1 RES SIDE A	0					0.05	0.72				0			0			63.7	135	36.3	5748		0.015									6.5		
01/03/2021 11:20	HANNINGTON NO 1 RES SIDE A	0					0.05	0.66				0			0			80.6	129	19.4	5828		0.017									6.7		
09/03/2021 10:47	HANNINGTON NO 1 RES SIDE A	0					0.08	0.64				0			0			85.2	115	14.8	6316		0.023									6.6		
17/03/2021 13:07	HANNINGTON NO 1 RES SIDE A	0					0.06	0.66				0			0			85.8	155	14.2	5954		0.018									8		
18/03/2021 16:33	HANNINGTON NO 1 RES SIDE A						0	0.62				0			0			92.5	228	7.46	6942											7.1		
25/03/2021 10:19	HANNINGTON NO 1 RES SIDE A	0					0	0.66				0			0			79.8	163	20.3	6632		0.015									9.6		
31/03/2021 08:19	HANNINGTON NO 1 RES SIDE A	0					0	0.62				0			0			73.2	205	26.8	6539		0.018									8.2		
09/04/2021 08:01	HANNINGTON NO 1 RES SIDE A	0					0.05	0.7				0			0			76.3	228	23.7	6337		0.016									8.7		
12/04/2021 07:46	HANNINGTON NO 1 RES SIDE A	0					0	0.68				0			0			69.4	144	30.6	5936											9.3		
12/04/2021 07:57	HANNINGTON NO 1 RES SIDE A																						0.014											
20/04/2021 07:44	HANNINGTON NO 1 RES SIDE A	0					0.06	0.64				0			0			73.8	183	26.2	6271		0.014									9.2		
28/04/2021 08:00	HANNINGTON NO 1 RES SIDE A	0					0.05	0.68				0			0			64.2	508	35.8	6631		0.019									10.5		
07/05/2021 11:32	HANNINGTON NO 1 RES SIDE A	0					0.07	0.58				0			0			76.2	361	23.8	5090											11.9		
07/05/2021 11:33	HANNINGTON NO 1 RES SIDE A																						0.025											
13/05/2021 07:46	HANNINGTON NO 1 RES SIDE A	0					0	0.58				0			0			57	1350	43	5117											13.7		
13/05/2021 07:51	HANNINGTON NO 1 RES SIDE A																						0.024											
21/05/2021 07:39	HANNINGTON NO 1 RES SIDE A	0					0	0.48				0			0			77.5	400	22.3	3134		0.019									15.3		
24/05/2021 07:45	HANNINGTON NO 1 RES SIDE A	0					0	0.63				0			0			77.9	692	22.1	3563											12.9		
24/05/2021 07:46	HANNINGTON NO 1 RES SIDE A																						0.017											
03/06/2021 07:41	HANNINGTON NO 1 RES SIDE A	0					0.06	0.6				0			0			75.1	185	24.9	4329											14.7		
03/06/2021 07:44	HANNINGTON NO 1 RES SIDE A																						0.023											
09/06/2021 08:27	HANNINGTON NO 1 RES SIDE A	0			0		0.05	0.57				0			0			80.5	385	19.5	3290		0.028									14.9		
17/06/2021 07:53	HANNINGTON NO 1 RES SIDE A	10					0	0.61				0			0			37.6	400	62.3	4115		0.022									17.1		
25/06/2021 07:33	HANNINGTON NO 1 RES SIDE A	0					0	0.58				0			0			59.3	357	40.5	3924											17.8		
25/06/2021 07:35	HANNINGTON NO 1 RES SIDE A																						0.033											
28/06/2021 07:33	HANNINGTON NO 1 RES SIDE A	0					0	0.51				0			0			58.3	305	41.5	2193											18.5		
28/06/2021 07:40	HANNINGTON NO 1 RES SIDE A																						0.02											
06/07/2021 08:05	HANNINGTON NO 1 RES SIDE A	0			0		0	0.53				0			0			60.1	282	39.8	2106		0.021									18.7		
14/07/2021 07:58	HANNINGTON NO 1 RES SIDE A	0					0.05	0.48				0			0			61.3	298	38.6	1464											18.6		
14/07/2021 07:59	HANNINGTON NO 1 RES SIDE A																						0.017											
22/07/2021 07:45	HANNINGTON NO 1 RES SIDE A	0					0.06	0.57				0			0			59.1	446	40.7	1895		0.022									19.9		
27/07/2021 14:25	HANNINGTON NO 1 RES SIDE A						0.06	0.53		0	0	0			0	0	0	46.7	385	53.2	1852											20.6		
30/07/2021 08:59	HANNINGTON NO 1 RES SIDE A	0					0	0.49				0			0			67.4	197	32.5	1325											22.1		
30/07/2021 09:00	HANNINGTON NO 1 RES SIDE A																						0.019											
02/08/2021 09:32	HANNINGTON NO 1 RES SIDE A	0					0.05	0.51				0			0			50.7	248	49.3	1265		0.022									22.2		
04/08/2021 15:33	HANNINGTON NO 1 RES SIDE A				0																													
10/08/2021 08:26	HANNINGTON NO 1 RES SIDE A	0					0.06	0.6				0			0			66.5	203	33.4	1085		0									19.4		
18/08/2021 07:50	HANNINGTON NO 1 RES SIDE A	5					0	0.6				0			0			64.7	164	35.2	1192		0.02									20.1		
26/08/2021 07:41	HANNINGTON NO 1 RES SIDE A	59					0	0.58				0			0			60.7	161	39.2	1102		0.019									20.2		
02/09/2021 16:10	HANNINGTON NO 1 RES SIDE A						0.05	0.49				0			0			40.2	150	59.6	1405											18.3		
03/09/2021 07:43	HANNINGTON NO 1 RES SIDE A	0			0		0.06	0.51				0			0			62.8	203	37.2	1435		0.009									18.7		
06/09/2021 09:35	HANNINGTON NO 1 RES SIDE A	1					0	0.45				0			0			56.9	140	43.1	1312											20.1		
06/09/2021 09:36	HANNINGTON NO 1 RES SIDE A																						0.017											
14/09/2021 09:20	HANNINGTON NO 1 RES SIDE A	0					0.06	0.61				0			0			59.2	158	40.8	1631		0.018									19.3		
20/09/2021 10:15	HANNINGTON NO 1 RES SIDE A	0					0	0.51				0			0			59.7	149	40.1	1314											19.9		
20/09/2021 10:20	HANNINGTON NO 1 RES SIDE A																						0.016											
28/09/2021 07:53	HANNINGTON NO 1 RES SIDE A				1																		0.039											
28/09/2021 08:00	HANNINGTON NO 1 RES SIDE A	0					0	0.75				0			0			66.3	408	33.6	2836											19.4		
08/10/2021 07:44	HANNINGTON NO 1 RES SIDE A	0					0.07	0.73				0			0			61.6	245	38.3	4121		0.046									17.6		
11/10/2021 09:31	HANNINGTON NO 1 RES SIDE A	0					0	0.75				0			0			41	242	59	3644		0.029									16.9		
14/10/2021 11:08	HANNINGTON NO 1 RES SIDE A		110	0.0162		74.5	0.05	0.67	0				595	0.01								225	0.02	0	9.46	0	2.64		7.39	1.11	40.7	16.3	0.11	0.017
19/10/2021 07:40	HANNINGTON NO 1 RES SIDE A	0					0.08	0.45				0			0								0.018									18.7		
21/10/2021 16:44	HANNINGTON NO 1 RES SIDE A						0	0.5				0			0																	17.2		
27/10/2021 08:37	HANNINGTON NO 1 RES SIDE A	0			0		0	0.61				0			0								0.021									16.2		
04/11/2021 09:20	HANNINGTON NO 1 RES SIDE A	0					0.06	0.47				0			0			37.8	120	62.2	2283		0.021									13.9		
12/11/2021 12:58	HANNINGTON NO 1 RES SIDE A	0					0.07	0.73				0			0			33.7	147	66.3	4187		0.029									12.5		
15/11/2021 07:38	HANNINGTON NO 1 RES SIDE A	0					0.08	0.68				0			0			58.3	160	41.7	3419		0.021									11.9		
23/11/2021 07:39	HANNINGTON NO 1 RES SIDE A				0																		0.025											
23/11/2021 07:46	HANNINGTON NO 1 RES SIDE A	0					0	0.52				0			0			57.4	179	42.6	2667											13.4		
01/12/2021 07:38	HANNINGTON NO 1 RES SIDE A	0					0	0.57				0			0			33	104	67	4519		0.024									9.9		
09/12/2021 09:20	HANNINGTON NO 1 RES SIDE A	0					0.08	0.62				0			0			36.4	63	63.6	4267		0.014									8.3		
15/12/2021 10:15	HANNINGTON NO 1 RES SIDE A	0					0.07	0.65				0			0																			
15/12/2021 14:42	HANNINGTON NO 1 RES SIDE A																						0.02											
15/12/2021 14:48	HANNINGTON NO 1 RES SIDE A	0					0.05	0.69				0			0			36.4	83	63.6	4591											7.1		
17/12/2021 12:00	HANNINGTON NO 1 RES SIDE A																											0						
20/12/2021 09:32	HANNINGTON NO 1 RES SIDE A				0																													
20/12/2021 12:00	HANNINGTON NO 1 RES SIDE A																											0						
30/12/2021 12:00	HANNINGTON NO 1 RES SIDE A																											0						
07/01/2022 12:00	HANNINGTON NO 1 RES SIDE A																											0						
11/01/2022 12:00	HANNINGTON NO 1 RES SIDE A																											0						
17/01/2022 12:00	HANNINGTON NO 1 RES SIDE A																											0						
28/01/2022 12:00	HANNINGTON NO 1 RES SIDE A																											0						
03/02/2022 12:00	HANNINGTON NO 1 RES SIDE A																											0						
09/02/2022 12:00	HANNINGTON NO 1 RES SIDE A																											0						
15/02/2022 12:00	HANNINGTON NO 1 RES SIDE A																											0						
21/02/2022 12:00	HANNINGTON NO 1 RES SIDE A																											0						

04/03/2022 12:00	HANNINGTON NO 1 RES SIDE A		0
10/03/2022 12:00	HANNINGTON NO 1 RES SIDE A		0
16/03/2022 12:00	HANNINGTON NO 1 RES SIDE A		0
24/03/2022 12:00	HANNINGTON NO 1 RES SIDE A		0
01/04/2022 12:00	HANNINGTON NO 1 RES SIDE A		0
04/04/2022 12:00	HANNINGTON NO 1 RES SIDE A		0
12/04/2022 12:00	HANNINGTON NO 1 RES SIDE A		0
20/04/2022 12:00	HANNINGTON NO 1 RES SIDE A		0
27/04/2022 12:00	HANNINGTON NO 1 RES SIDE A		0
04/05/2022 12:00	HANNINGTON NO 1 RES SIDE A		0
13/05/2022 12:00	HANNINGTON NO 1 RES SIDE A		0
16/05/2022 12:00	HANNINGTON NO 1 RES SIDE A		0
24/05/2022 12:00	HANNINGTON NO 1 RES SIDE A		0
01/06/2022 12:00	HANNINGTON NO 1 RES SIDE A		0
09/06/2022 12:00	HANNINGTON NO 1 RES SIDE A		0
17/06/2022 12:00	HANNINGTON NO 1 RES SIDE A		0
22/06/2022 12:00	HANNINGTON NO 1 RES SIDE A		0
27/06/2022 12:00	HANNINGTON NO 1 RES SIDE A		0
06/07/2022 12:00	HANNINGTON NO 1 RES SIDE A		0
14/07/2022 12:00	HANNINGTON NO 1 RES SIDE A		0
22/07/2022 12:00	HANNINGTON NO 1 RES SIDE A		0
25/07/2022 12:00	HANNINGTON NO 1 RES SIDE A		0
02/08/2022 12:00	HANNINGTON NO 1 RES SIDE A		0
10/08/2022 12:00	HANNINGTON NO 1 RES SIDE A		0
18/08/2022 12:00	HANNINGTON NO 1 RES SIDE A		0
26/08/2022 12:00	HANNINGTON NO 1 RES SIDE A		0
02/09/2022 12:00	HANNINGTON NO 1 RES SIDE A		0
08/09/2022 11:08	HANNINGTON NO 1 RES SIDE A	0	
08/09/2022 12:00	HANNINGTON NO 1 RES SIDE A		0
13/09/2022 12:00	HANNINGTON NO 1 RES SIDE A		0
29/09/2022 12:00	HANNINGTON NO 1 RES SIDE A		0
07/10/2022 13:50	HANNINGTON NO 1 RES SIDE A	0	

Date & Time	SamplePointName	2 DAY COLONY COUNT AT 37C SWAB (no/swab)	2-day Colony Count at 37C (No/ml)	3-day Colony Count at 22C (No/ml)	3-Day Colony Count at 22C swab (no/swab)	Alkalinity Total (mg/l CACO3)	Aluminium Total (mg/l AL)	Analytical Profile Index ()	Assessed Hygiene Qualitative (bar AC 1242)	AW Supplied ()	Bacteria, Incubation 22C 2Day Post Clean (CFU/plate)	Bacteria, Incubation 22C 2Days (CFU/plate)	Barber Tap / Cap Present ()	BUILDING TYPE ()	Calcium Total (mg/l CA)	Chlorine Free (mg/l CL2)	Chlorine Total (mg/l CL2)	Clarity Qualitative ()	Clostridium Perfringens Confirmed (No/100ml)	Clostridium Perfringens Presumptive (No/100ml)	Coliforms Confirmed (No/100ml)	Coliforms Presumptive ()	Coliforms Presumptive at 37C (No/100ml)	Coliforms Confirmed MPN IDEXX (No/100ml)	Conductivity at 20C (µS/cm)	Copper Total (mg/l CU)	Customer Tap Type (bar AC 1242)	E.Coli Presumptive at 44C (No/100ml)	E.Coli (no/swab)	E.Coli Confirmed (No/100ml)	E.Coli Confirmed MPN IDEXX (No/100ml)	Enterococci Confirmed (No/100ml)	Enterococci Presumptive (No/100ml)	Flow Cytometry High Nucleic Acid % (%)	Flow Cytometry Intact Cell Count (No/100µl)	Flow Cytometry Low Nucleic Acid % (%)	Flow Cytometry Total Cell Count (No/100µl)	Hardness Strip Completed ()	Hardness Total CLEANWATER (mg/l CACO3)	Iron Total (mg/l FE)	Lead Total (µg/l PB)	Magnesium Total (mg/l MG)	Manganese Total (mg/l MN)	National Grid Reference Easting ()	National Grid Reference Northing ()	NATIONAL GRID SQUARE (2 CHARACTERS) ()	Nickel Total (µg/l NI)	No Flow / No Sample (bar AC 1242)	Non-lactose fermenting colonies (No/100ml)	Odour Qualitative ()	ODOUR QUANTITATIVE 25C DE-CHLORINATED (TON)	pH Clean Water (pH)	Phosphorus Total (mg/l P)	Propyzamide (µg/l)	Purge and Trap Profile (bar AC 1242)	Recent Plumbing ()	Sample Point Flush Rate (l/min)	Sample Point Other Issues ()	Sample Point Shelf Present ()	Sample Point Sink Condition ()	Sample Point Tap Condition ()	Sodium Total (mg/l NA)	Taste Qualitative ()	TASTE QUANTITATIVE 25C DE-CHLORINATED (TON)	Temperature Field Measurement (°C)	Turbidity (NTU)	Undiluted odour count 25C dechlorinated ()	Undiluted taste count 25C dechlorinated ()	Water Profile (bar AC 1242)	Water Softener / Filter Present ()	Zinc Total (mg/l ZN)
05/01/2016 11:09	HANNINGTON NO 1 RES SIDE B		0	3												0.06	0.85				0		0							0										0.02			0																						10.8						
13/01/2016 10:43	HANNINGTON NO 1 RES SIDE B		0	0												0.06	0.77				0		0							0										0.01			0																						9.2						
21/01/2016 10:37	HANNINGTON NO 1 RES SIDE B		2	0												0.06	0.7				0		0							0										0.01			0																						7.6						
27/01/2016 07:09	HANNINGTON NO 1 RES SIDE B		0	0												0.06	0.88				0		0							0										0.01			0																						8.4						
02/02/2016 08:14	HANNINGTON NO 1 RES SIDE B		0	0												0.07	0.8				0		0							0										0.01			0																						8						
09/02/2016 10:40	HANNINGTON NO 1 RES SIDE B		0	0												0.07	0.8				0		0							0										0.01			0																						8.9						
17/02/2016 11:16	HANNINGTON NO 1 RES SIDE B		2	0												0.06	0.74				0		0							0										0.01			0																						7.9						
25/02/2016 09:02	HANNINGTON NO 1 RES SIDE B		0	1												0.05	0.48				0		0							0																																			9.3						
04/03/2016 11:10	HANNINGTON NO 1 RES SIDE B		0	0									1			0.06	0.76				0		0							0										0.01			0														5	1	2	1	1				7.4						
07/03/2016 11:05	HANNINGTON NO 1 RES SIDE B		0	3												0.07	0.81				0		0							0										0.01			0																						7.5						
15/03/2016 11:07	HANNINGTON NO 1 RES SIDE B		1	1												0.06	0.79				0		0							0										0.01			0																						8.3						
24/03/2016 06:45	HANNINGTON NO 1 RES SIDE B		0	0												0.07	0.8				0		0							0										0.01			0																						7.7						
01/04/2016 07:04	HANNINGTON NO 1 RES SIDE B		0	0												0.05	0.58				0		0							0										0.02			0																						8.2						
09/04/2016 07:06	HANNINGTON NO 1 RES SIDE B		0	0												0.06	0.86				0		0							0										0.01			0																						9.8						
11/04/2016 11:08	HANNINGTON NO 1 RES SIDE B		0	0												0.07	0.88				0		0							0										0.01			0																						9.5						
19/04/2016 06:58	HANNINGTON NO 1 RES SIDE B		0	1												0.06	0.88				0		0							0										0.01			0																						10.1						
29/04/2016 11:10	HANNINGTON NO 1 RES SIDE B		0	0												0.07	0.9				0		0							0										0.01			0																						10.4						
06/05/2016 10:25	HANNINGTON NO 1 RES SIDE B		0	1												0.05	0.88				0		0							0										0.01			0																						11.2						
13/05/2016 11:07	HANNINGTON NO 1 RES SIDE B		0	0												0.07	0.84				0		0							0										0.01			0																						12.1						
16/05/2016 11:01	HANNINGTON NO 1 RES SIDE B		0	3												0.07	0.8				0		0							0																																			13.2						
24/05/2016 11:05	HANNINGTON NO 1 RES SIDE B		0	6												0.05	0.79				0		0							0																																			15.2						
02/06/2016 09:15	HANNINGTON NO 1 RES SIDE B		0	4												0.07	0.67				0		0							0																																			15.2						
10/06/2016 08:42	HANNINGTON NO 1 RES SIDE B		9	4												0.09	0.63				0		0							0																																			13.6						
17/06/2016 10:48	HANNINGTON NO 1 RES SIDE B		0	5												0.06	0.66				0		0							0																																			17.4						
20/06/2016 11:04	HANNINGTON NO 1 RES SIDE B		0	4												0.06	0.64				0		0							0																																			17.4						
01/07/2016 11:34	HANNINGTON NO 1 RES SIDE B		0	19												0.05	0.6				0		0							0																																			17.9						
06/07/2016 10:36	HANNINGTON NO 1 RES SIDE B		0	1												0	0.63				0		0							0																																			18.4						
14/07/2016 07:06	HANNINGTON NO 1 RES SIDE B		0	0												0.07	0.67				0		0							0																																			18.2						
22/07/2016 09:39	HANNINGTON NO 1 RES SIDE B		2	5												0.06	0.65				0		0							0																																			20.1						
25/07/2016 12:27	HANNINGTON NO 1 RES SIDE B		0	2												0.05	0.65				0		0							0																																			20						
02/08/2016 10:44	HANNINGTON NO 1 RES SIDE B		0	0												0.05	0.61				0		0							0																																			21.4						
05/08/2016 13:21	HANNINGTON NO 1 RES SIDE B		3	4												0.05	0.62				0		0					0		0																																			20.7						
10/08/2016 10:24	HANNINGTON NO 1 RES SIDE B		0	0												0	0.55				0		0							0																																			21.2						
15/08/2016 06:52	HANNINGTON NO 1 RES SIDE B		0	1												0.06	0.61				0		0							0																																			20.1						
26/08/2016 11:02	HANNINGTON NO 1 RES SIDE B		0	3												0.05	0.61				0		0							0																																			19.8						
31/08/2016 06:55	HANNINGTON NO 1 RES SIDE B		0	0									1			0	0.62				0		0							0																											4	1	2	2	2				20						
07/09/2016 07:12	HANNINGTON NO 1 RES SIDE B		0	3												0.05	0.61				0		0							0																																			19.8						
14/09/2016 10:46	HANNINGTON NO 1 RES SIDE B		0	0												0.05	0.6				0		0							0																																			20.4						
22/09/2016 10:33	HANNINGTON NO 1 RES SIDE B		16	4												0.05	0.61				0		0							0																																			20.3						
27/09/2016 10:57	HANNINGTON NO 1 RES SIDE B		0	0												0.06	0.61				0		0							0																																			21.2						
03/10/2016 10:45	HANNINGTON NO 1 RES SIDE B		0	3												0.05	0.64				0		0							0																																			19.4						
11/10/2016 10:57	HANNINGTON NO 1 RES SIDE B		19	3												0.05	0.62				0		0							0																																			16.7						
19/10/2016 07:56	HANNINGTON NO 1 RES SIDE B		0	2												0	0.62				0		0							0																																			16.4						
27/10/2016 10:47	HANNINGTON NO 1 RES SIDE B		0	0												0.06	0.62				0		0							0																																			14.7						
02/11/2016 07:14	HANNINGTON NO 1 RES SIDE B		0	1												0.08	0.74				0		0							0																																			14.1						
07/11/2016 10:49	HANNINGTON NO 1 RES SIDE B		2	1												0.05	0.74				0		0							0																																			13.1						
15/11/2016 11:18	HANNINGTON NO 1 RES SIDE B		0	0												0.05	0.78				0		0							0																																			13.4						
23/11/2016 11:02	HANNINGTON NO 1 RES SIDE B		10	0												0	0.7				0		0					0		0																																									
23/11/2016 11:29	HANNINGTON NO 1 RES SIDE B		0	0												0.06	0.71				0		0							0																																			11.2						
01/12/2016 12:00	HANNINGTON NO 1 RES SIDE B																																															0																							
09/12/2016 12:00	HANNINGTON NO 1 RES SIDE B																																															0																							
12/12/2016 12:00	HANNINGTON NO 1 RES SIDE B																																															0																							
22/12/2016 12:00	HANNINGTON NO 1 RES SIDE B																																															0																							
28/12/2016 12:00	HANNINGTON NO 1 RES SIDE B																																															0																							
02/01/2017 12:00	HANNINGTON NO 1 RES SIDE B																																															0																							
13/01/2017 12:00	HANNINGTON NO 1 RES SIDE B																																															0																							
16/01/2017 12:00	HANNINGTON NO 1 RES SIDE B																																															0																							
24/01/2017 12:00	HANNINGTON NO 1 RES SIDE B																																															0																							
25/01/2017 14:40	HANNINGTON NO 1 RES SIDE B											19																																																											
25/01/2017 14:41	HANNINGTON NO 1 RES SIDE B											5																																																											
01/02/2017 12:00	HANNINGTON NO 1 RES SIDE B																																															0																							
07/02/2017 10:55	HANNINGTON NO 1 RES SIDE B		1	0												0.05	0.51				0		0					0		0																																									
08/02/2017 06:58	HANNINGTON NO 1 RES SIDE B		1	1												0	0.68				0		0							0																																			6						
17/02/2017 11:27	HANNINGTON NO 1 RES SIDE B		1	0												0.06	0.78				0		0							0																																			6						
20/02/2017 11:32	HANNINGTON NO 1 RES SIDE B		0	0												0.07	0.85				0		0							0																																			6.6						
02/03/2017 08:31	HANNINGTON NO 1 RES SIDE B		0	0												0	0.83				0		0							0																																			7.2						
08/03/2017 09:42	HANNINGTON NO 1 RES SIDE B		1	0												0.06	0.73				0		0							0																																			7.8						
16/03/2017 12:35	HANNINGTON NO 1 RES SIDE B		0	0												0.07	0.73				0		0							0																																			9.9						
24/03/2017 11:32	HANNINGTON NO 1 RES SIDE B		0	0												0.07	0.72				0		0							0																																			9.3						
27/03/2017 12:07	HANNINGTON NO 1 RES SIDE B		0	0												0.06	0.72				0		0							0																																			9.1						
04/04/2017 08:10	HANNINGTON NO 1 RES SIDE B		0	0												0	0.71				0		0							0																																			10.3						
10/04/2017 09:08	HANNINGTON NO 1 RES SIDE B		0	4												0.08	0.73				0		0							0																																			11.5						
17/04/2017 07:52	HANNINGTON NO 1 RES SIDE B		0	12												0.05	0.9				0		0							0																																			13.4						
28/04/2017 10:14	HANNINGTON NO 1 RES SIDE B		0	2												0	0.8				0		0							0																																			11.9						
05/05/2017 07:16	HANNINGTON NO 1 RES SIDE B		0	2												0	0.63				0		0							0																																			11.9						
09/05/2017 10:11	HANNINGTON NO 1 RES SIDE B		0	1												0.05	0.69				0		0							0																																			13.1						
17/05/2017 11:34	HANNINGTON NO 1 RES SIDE B		0	6												0.05	0.71				0		0							0																																			13.4						
22/05/2017 08:15	HANNINGTON NO 1 RES SIDE B		0	0												0.05	0.69				0		0							0																																			13.9						
31/05/2017 07:55	HANNINGTON NO 1 RES SIDE B		20	17				1								0	0.54				1		1					0		0																			0																						
01/06/2017 17:06	HANNINGTON NO 1 RES SIDE B																					0							0																																										
01/06/2017 17:10	HANNINGTON NO 1 RES SIDE B															0	0.45				0		0					0		0																			0																						
01/06/2017 17:20	HANNINGTON NO 1 RES SIDE B															0	0.45				0		0					0		0																			0																						
01/06/2017 17:36	HANNINGTON NO 1 RES SIDE B															0	0.45				0		0					0		0																			0																						
02/06/2017 19:19	HANNINGTON NO 1 RES SIDE B		0	0												0.12	0.58				0		0					0		0																																									
03/06/2017 20:15	HANNINGTON NO 1 RES SIDE B		0	1												0.05	0.44				0		0					0		0																																									
04/06/2017 09:39	HANNINGTON NO 1 RES SIDE B		0	1												0.06	0.52				0		0							0																			26																16.2						
05/06/2017 07:10	HANNINGTON NO 1 RES SIDE B		0	0									1			0	0.52				0		0							0																			32								4	1	1	1	1				16.4						
07/06/2017 09:00	HANNINGTON NO 1 RES SIDE B		0	0												0	0.46				0		0					0		0																			0																						
07/06/2017 10:05	HANNINGTON NO 1 RES SIDE B		0	0												0	0.54				0		0					0		0																			0																						
09/06/2017 16:43	HANNINGTON NO 1 RES SIDE B								3	0				8		0.05	0.52				0		0				0	0		0								0						0	0	0										0									16					0	
13/06/2017 08:50	HANNINGTON NO 1 RES SIDE B		6	9												0	0.56				0		0							0																			0																18.9						
16/06/2017 07:10	HANNINGTON NO 1 RES SIDE B						0									0	0.71									0.01															0		0							0	1		1.87										1	1	17.4	0.11	0	0			0.006

21/06/2017 10:41	HANNINGTON NO 1 RES SIDE B		66	15				0.07	0.7		0		0			0	0							18.8	
22/06/2017 16:16	HANNINGTON NO 1 RES SIDE B		0	0								0			0										
22/06/2017 16:20	HANNINGTON NO 1 RES SIDE B		1624	3916				0.06	0.7		0		0	0		0	0								
22/06/2017 16:35	HANNINGTON NO 1 RES SIDE B		100	102				0.06	0.7		0		0	0		0	0								
29/06/2017 09:39	HANNINGTON NO 1 RES SIDE B		12	17				0.06	0.59		0		0			0	0							19.2	
09/07/2017 07:43	HANNINGTON NO 1 RES SIDE B		0	0				0.07	0.68		0		0			0	3							19.3	
16/07/2017 07:49	HANNINGTON NO 1 RES SIDE B		0	0				0.05	0.52		0		0			0								19.5	
21/07/2017 09:37	HANNINGTON NO 1 RES SIDE B		0	12				0	0.54		0		0			0	67							20.3	
25/07/2017 09:18	HANNINGTON NO 1 RES SIDE B											0			0										
25/07/2017 09:20	HANNINGTON NO 1 RES SIDE B		34	1480							0		0	0		0	0								
30/07/2017 07:59	HANNINGTON NO 1 RES SIDE B		0	0				0	0.55		0		0			0								20.1	
04/08/2017 10:50	HANNINGTON NO 1 RES SIDE B		0	0				0	0.59		0		0			0								19.6	
11/08/2017 11:23	HANNINGTON NO 1 RES SIDE B		0	19				0	0.57		0		0			0	95							19.5	
12/08/2017 14:20	HANNINGTON NO 1 RES SIDE B		423	18				0.08	0.54		0		0	0		0	0								
12/08/2017 14:25	HANNINGTON NO 1 RES SIDE B		12	0				0.08	0.64		0		0	0		0	0								
12/08/2017 14:40	HANNINGTON NO 1 RES SIDE B		9	0				0.08	0.54		0		0	0		0	0								
14/08/2017 11:27	HANNINGTON NO 1 RES SIDE B		0	0				0	0.57		0		0			0	0							19.1	
22/08/2017 10:20	HANNINGTON NO 1 RES SIDE B		49	0				0.06	0.53		0		0			0								19.1	
28/08/2017 07:01	HANNINGTON NO 1 RES SIDE B		834	595				0	0.52		0		0			0								18.6	
01/09/2017 10:15	HANNINGTON NO 1 RES SIDE B		238	42				0	0.13		0		0	0		0	0								
01/09/2017 10:25	HANNINGTON NO 1 RES SIDE B		144	38				0.07	0.64		0		0	0		0	0								
01/09/2017 10:30	HANNINGTON NO 1 RES SIDE B		75	16				0.07	0.64		0		0	0		0	0								
01/09/2017 10:50	HANNINGTON NO 1 RES SIDE B		69	8				0.07	0.64		0		0	0		0	0								
01/09/2017 11:05	HANNINGTON NO 1 RES SIDE B		60	3				0.07	0.64		0		0	0		0	0								
01/09/2017 11:20	HANNINGTON NO 1 RES SIDE B		0	0				0.07	0.64		0		0	0		0									
05/09/2017 12:00	HANNINGTON NO 1 RES SIDE B		1203	3138				0	1.62																
06/09/2017 10:24	HANNINGTON NO 1 RES SIDE B		41	65				0	0.3		0		0	0		0	0								
06/09/2017 10:30	HANNINGTON NO 1 RES SIDE B		0	17				0	0.51		0		0	0		0	0								
06/09/2017 11:30	HANNINGTON NO 1 RES SIDE B		0	0				0	0.49		0		0	0		0									
07/09/2017 11:24	HANNINGTON NO 1 RES SIDE B		0	0				0.05	0.56		0		0			0								19.1	
11/09/2017 11:31	HANNINGTON NO 1 RES SIDE B		0	0				0	0.58		0		0			0								18.3	
18/09/2017 07:33	HANNINGTON NO 1 RES SIDE B		0	1				0.08	0.57		0		0			0	0							16.8	
19/09/2017 17:00	HANNINGTON NO 1 RES SIDE B		0	72				0.15	1.8		0		0	0		0	0								
26/09/2017 10:44	HANNINGTON NO 1 RES SIDE B		0	0				0.05	0.55		0		0			0								17.4	
02/10/2017 09:40	HANNINGTON NO 1 RES SIDE B		0	0				0	0.51		0		0			0								17	
13/10/2017 10:00	HANNINGTON NO 1 RES SIDE B		0	5				0	0.51		0		0			0	0							16	
18/10/2017 10:50	HANNINGTON NO 1 RES SIDE B											0			0										
18/10/2017 11:00	HANNINGTON NO 1 RES SIDE B		1	0				0.05	0.59		0		0	0		0	89								
18/10/2017 11:15	HANNINGTON NO 1 RES SIDE B		0	0				0.05	0.59		0		0	0		0	64								
18/10/2017 11:32	HANNINGTON NO 1 RES SIDE B		0	0				0.05	0.6		0		0	0		0	16								
18/10/2017 12:31	HANNINGTON NO 1 RES SIDE B		0	2				0.1	0.83		0		0	0		0									
19/10/2017 08:42	HANNINGTON NO 1 RES SIDE B		0	0				0.08	0.56		0		0			0								15.6	
23/10/2017 11:23	HANNINGTON NO 1 RES SIDE B		0	0				0	0.59		0		0			0	37							15.9	
31/10/2017 11:13	HANNINGTON NO 1 RES SIDE B		9	10				0.08	0.61		0		0			0	0							14.7	
07/11/2017 10:00	HANNINGTON NO 1 RES SIDE B		10	16				0.06	0.56		0		0	0		0	0								
07/11/2017 10:20	HANNINGTON NO 1 RES SIDE B		0	15				0.06	0.56		0		0	0		0	0								
07/11/2017 10:30	HANNINGTON NO 1 RES SIDE B		8	14				0.06	0.56		0		0	0		0	0								
07/11/2017 11:00	HANNINGTON NO 1 RES SIDE B		0	0				0.06	0.56		0		0	0		0									
09/11/2017 11:08	HANNINGTON NO 1 RES SIDE B		0	0				0.08	0.6		0		0			0	84							13.6	
10/11/2017 17:22	HANNINGTON NO 1 RES SIDE B		0	0				0	0.48																
10/11/2017 17:30	HANNINGTON NO 1 RES SIDE B		0	0				0	0.48																
10/11/2017 17:45	HANNINGTON NO 1 RES SIDE B		0	0				0	0.48																
16/11/2017 07:46	HANNINGTON NO 1 RES SIDE B		16	0				0	0.61		0		0			0	75							12.3	
21/11/2017 12:16	HANNINGTON NO 1 RES SIDE B		0	0				0.1	0.62		0		0	0		0									
23/11/2017 10:06	HANNINGTON NO 1 RES SIDE B		0	0				0	0.65		0		0			0								11.1	
27/11/2017 11:16	HANNINGTON NO 1 RES SIDE B		0	0				0	0.68		0		0			0								10.8	
05/12/2017 11:20	HANNINGTON NO 1 RES SIDE B		0	0			1	0.05	0.66		0		0			0			6	2	1	2	2	9.3	
13/12/2017 10:02	HANNINGTON NO 1 RES SIDE B		0	0				0.07	0.72		0		0			0								7.7	
22/12/2017 09:47	HANNINGTON NO 1 RES SIDE B		0	0				0.06	0.77		0		0			0								6.6	
28/12/2017 11:11	HANNINGTON NO 1 RES SIDE B		0	0				0.09	0.79		0		0			0								6.9	
01/01/2018 07:07	HANNINGTON NO 1 RES SIDE B		0	0				0.05	0.76		0		0			0								6.6	
08/01/2018 11:26	HANNINGTON NO 1 RES SIDE B		1	1				0.07	0.83		0		0			0								6.2	
16/01/2018 11:28	HANNINGTON NO 1 RES SIDE B		0	0				0.08	0.83		0		0			0	25							6.6	
17/01/2018 13:30	HANNINGTON NO 1 RES SIDE B		1	0				0.08	0.75		0		0	0		0									
17/01/2018 13:40	HANNINGTON NO 1 RES SIDE B		4	0				0.08	0.75		0		0	0		0									
17/01/2018 13:50	HANNINGTON NO 1 RES SIDE B		4	0				0.08	0.75		0		0	0		0									
25/01/2018 08:04	HANNINGTON NO 1 RES SIDE B		1	0				0	0.76		0		0			0								5.7	
29/01/2018 07:59	HANNINGTON NO 1 RES SIDE B		0	2				0.06	0.72		0		0			0	11							6	
31/01/2018 11:45	HANNINGTON NO 1 RES SIDE B		2	0				0.05	0.71		0		0	0		0									
31/01/2018 11:50	HANNINGTON NO 1 RES SIDE B		1	0				0.05	0.71		0		0	0		0									
31/01/2018 12:10	HANNINGTON NO 1 RES SIDE B		1	0				0.05	0.71		0		0	0		0									
07/02/2018 11:25	HANNINGTON NO 1 RES SIDE B		3	0				0.07	0.79		0		0			0								6.2	
15/02/2018 09:10	HANNINGTON NO 1 RES SIDE B		0	0				0.07	0.77		0		0			0								5.4	
23/02/2018 11:16	HANNINGTON NO 1 RES SIDE B		1	1				0.08	0.8		0		0			0								5.8	
26/02/2018 15:32	HANNINGTON NO 1 RES SIDE B		0	0				0.08	0.81		0		0			0								5.9	
05/03/2018 11:03	HANNINGTON NO 1 RES SIDE B		0	0				0.08	0.82		0		0			0	64							4.4	
07/03/2018 08:16	HANNINGTON NO 1 RES SIDE B		1	0				0	1.8	0	0		0	0		0									0.14
07/03/2018 08:22	HANNINGTON NO 1 RES SIDE B		2	0				0	0.9		0		0	0		0									
07/03/2018 09:15	HANNINGTON NO 1 RES SIDE B		2	0				0	0.9		0		0	0		0									
07/03/2018 09:32	HANNINGTON NO 1 RES SIDE B		2	0				0	0.9		0		0	0		0									
14/03/2018 10:28	HANNINGTON NO 1 RES SIDE B		4	0				0.06	0.84		0		0			0								6.8	
22/03/2018 11:26	HANNINGTON NO 1 RES SIDE B		7	2				0.07	0.75		0		0			0								6	
28/03/2018 11:19	HANNINGTON NO 1 RES SIDE B		2	0				0.06	0.74		0		0			0	33							6.2	
29/03/2018 19:03	HANNINGTON NO 1 RES SIDE B		0	0				0.06	0.79		0		0	0		0									
29/03/2018 19:06	HANNINGTON NO 1 RES SIDE B		0	0				0.06	0.79		0		0	0		0									
29/03/2018 19:16	HANNINGTON NO 1 RES SIDE B		0	0				0.06	0.79		0		0	0		0									
29/03/2018 19:34	HANNINGTON NO 1 RES SIDE B		0	0				0.06	0.79		0		0	0		0									
04/04/2018 11:22	HANNINGTON NO 1 RES SIDE B		2	0				0.06	0.74		0		0			0								6.3	
11/04/2018 11:21	HANNINGTON NO 1 RES SIDE B		0	0				0.07	0.66		0		0			0								7.4	
13/04/2018 12:15	HANNINGTON NO 1 RES SIDE B																	0.02							
16/04/2018 08:23	HANNINGTON NO 1 RES SIDE B		0	0				0.06	0.67		0		0			0	89							8.6	
17/04/2018 17:20	HANNINGTON NO 1 RES SIDE B		4	0				1.27	3.78		0	0	0	0	0	0	70								
27/04/2018 11:17	HANNINGTON NO 1 RES SIDE B		0	4				0.07	0.66		0		0			0	59							11.4	
30/04/2018 07:17	HANNINGTON NO 1 RES SIDE B		1	0				0	0.67		0		0			0								10.8	
30/04/2018 17:13	HANNINGTON NO 1 RES SIDE B		2	1				0.05	0.54		0		0	0		0	14								
30/04/2018 17:20	HANNINGTON NO 1 RES SIDE B		3	2				0	0.72		0		0	0		0	32								
30/04/2018 17:30	HANNINGTON NO 1 RES SIDE B	1										0			0										
30/04/2018 17:35	HANNINGTON NO 1 RES SIDE B		0	1				0	0.72		0		0	0		0	5								
30/04/2018 18:35	HANNINGTON NO 1 RES SIDE B		0	0				0	0.78		0		0	0		0									
11/05/2018 10:25	HANNINGTON NO 1 RES SIDE B		0	0				0.05	0.73		0		0			0	0							10.9	
14/05/2018 11:18	HANNINGTON NO 1 RES SIDE B		2	8				0.07	0.73		0		0			0	0							11.7	
21/05/2018 11:51	HANNINGTON NO 1 RES SIDE B		0	18				0.08	0.73		0		0			0	0							12.8	
21/05/2018 11:53	HANNINGTON NO 1 RES SIDE B					0	1												6	2	1	2	2		
23/05/2018 08:40	HANNINGTON NO 1 RES SIDE B	114			2910							0			0										
23/05/2018 08:50	HANNINGTON NO 1 RES SIDE B		0	0				0	0.65		0		0	0		0	0								
23/05/2018 09:00	HANNINGTON NO 1 RES SIDE B		1	0				0	0.65		0		0	0		0	29								
23/05/2018 09:15	HANNINGTON NO 1 RES SIDE B		0	0				0	0.22		0		0	0		0	24								
23/05/2018 09:40	HANNINGTON NO 1 RES SIDE B	93			0							0			0										
23/05/2018 10:35	HANNINGTON NO 1 RES SIDE B		0	0				0.05	0.63		0		0	0		0	1								

23/05/2018 11:10	HANNINGTON NO 1 RES SIDE B	0	0				0	0.67			0		0		0		0										
29/05/2018 15:02	HANNINGTON NO 1 RES SIDE B	0	0				0.09	0.68			0		0				0				74						13.1
31/05/2018 11:20	HANNINGTON NO 1 RES SIDE B	0	0				0.05	0.59			0		0		0		0				50						
31/05/2018 11:30	HANNINGTON NO 1 RES SIDE B	0	0				0.05	0.6			0		0		0		0				63						
31/05/2018 11:45	HANNINGTON NO 1 RES SIDE B	0	0				0.05	0.6			0		0		0		0				15						
08/06/2018 10:47	HANNINGTON NO 1 RES SIDE B	0	1				0.05	0.53			0		0				0				0						12.5
12/06/2018 09:32	HANNINGTON NO 1 RES SIDE B	0	0				0	0.56			0		0		0		0				0						
12/06/2018 09:50	HANNINGTON NO 1 RES SIDE B	0	0				0.06	0.63			0		0		0		0				48						
12/06/2018 09:53	HANNINGTON NO 1 RES SIDE B	15	0				0	0.57			0		0		0		0				0						
14/06/2018 14:10	HANNINGTON NO 1 RES SIDE B	2	2				0.08	0.59			0		0				0				79						13.7
21/06/2018 11:30	HANNINGTON NO 1 RES SIDE B	12	16				0	1.04			0		0		0		0				0						
21/06/2018 12:45	HANNINGTON NO 1 RES SIDE B	4	0				0	0.57			0		0		0		0										
22/06/2018 10:39	HANNINGTON NO 1 RES SIDE B	0	0				0.06	0.62			0		0				0				45						17.2
27/06/2018 11:38	HANNINGTON NO 1 RES SIDE B	41	29				0.05	0.62			0		0				0				0						18
29/06/2018 10:30	HANNINGTON NO 1 RES SIDE B	64	14				0.15	1.65																			
29/06/2018 12:05	HANNINGTON NO 1 RES SIDE B	312	6290				0.1	0.61																			
29/06/2018 12:10	HANNINGTON NO 1 RES SIDE B	14	41				0.1	0.61																			
29/06/2018 12:20	HANNINGTON NO 1 RES SIDE B	8	28				0.1	0.61																			
05/07/2018 10:24	HANNINGTON NO 1 RES SIDE B	180	1				0.07	0.75			0		0				0				0						19.1
06/07/2018 17:00	HANNINGTON NO 1 RES SIDE B	170	1				0.38	2.5			0		0		0		0				0						
13/07/2018 11:00	HANNINGTON NO 1 RES SIDE B	24	0				0.07	0.68			0		0				0				0						19
16/07/2018 10:56	HANNINGTON NO 1 RES SIDE B	6	0				0.06	0.7			0		0				0				0						18.8
16/07/2018 18:00	HANNINGTON NO 1 RES SIDE B	0	1				0.05	0.73			0		0		0		0				0						
16/07/2018 18:17	HANNINGTON NO 1 RES SIDE B	0	0				0.05	0.73			0		0		0		0				0						
16/07/2018 19:25	HANNINGTON NO 1 RES SIDE B	0	0				0.05	0.75			0		0		0		0										
25/07/2018 12:01	HANNINGTON NO 1 RES SIDE B				61																						
25/07/2018 12:08	HANNINGTON NO 1 RES SIDE B	34	0				0.07	0.67			0		0				0										20.9
30/07/2018 14:58	HANNINGTON NO 1 RES SIDE B	0	0				0.07	0.66			0		0				0										20
06/08/2018 10:48	HANNINGTON NO 1 RES SIDE B	1032	0				0.07	0.65			0		0				0										22.5
07/08/2018 18:05	HANNINGTON NO 1 RES SIDE B	8	28				0	0.42			0		0		0		0				0						
07/08/2018 18:15	HANNINGTON NO 1 RES SIDE B	6	15				0	0.42			0		0		0		0				61						
07/08/2018 18:35	HANNINGTON NO 1 RES SIDE B	0	1				0	0.44			0		0		0		0										
16/08/2018 09:11	HANNINGTON NO 1 RES SIDE B	0	0				0.06	0.69			0		0				0										22
20/08/2018 10:35	HANNINGTON NO 1 RES SIDE B	0	0		0		0.06	0.7			0		0				0										20.6
20/08/2018 10:36	HANNINGTON NO 1 RES SIDE B			0																							
21/08/2018 15:36	HANNINGTON NO 1 RES SIDE B	344	0				0.06	0.71			0		0		0		0										20.6
24/08/2018 08:50	HANNINGTON NO 1 RES SIDE B	0	0				0	0.65			0		0		0		0										
24/08/2018 09:05	HANNINGTON NO 1 RES SIDE B	0	0				0	0.52			0		0		0		0										
24/08/2018 09:20	HANNINGTON NO 1 RES SIDE B	0	0				0	0.52			0		0		0		0										
29/08/2018 07:20	HANNINGTON NO 1 RES SIDE B	114	0				0.05	0.37			0		0				0										20.5
03/09/2018 11:42	HANNINGTON NO 1 RES SIDE B	7	0				0.07	0.42			0		0				0										20.5
13/09/2018 10:44	HANNINGTON NO 1 RES SIDE B	2687	0				0.05	0.45			0		0				0										16.1
19/09/2018 10:58	HANNINGTON NO 1 RES SIDE B	1881	0				0	0.41			0		0				0										18.5
19/09/2018 10:59	HANNINGTON NO 1 RES SIDE B			0	6																						
24/09/2018 11:16	HANNINGTON NO 1 RES SIDE B	1032	0				0.05	0.68			0		0				0										17
01/10/2018 11:11	HANNINGTON NO 1 RES SIDE B	0	0				0.05	0.52			0		0				0										16.8
09/10/2018 12:21	HANNINGTON NO 1 RES SIDE B	124	0				0	0.5			0		0				0										18
18/10/2018 11:25	HANNINGTON NO 1 RES SIDE B	601	3				0.05	0.54			0		0				0										18.3
18/10/2018 11:26	HANNINGTON NO 1 RES SIDE B			0	0																						
21/10/2018 15:11	HANNINGTON NO 1 RES SIDE B											0				0											
21/10/2018 15:30	HANNINGTON NO 1 RES SIDE B	0	0				0	0.5			0		0		0		0										
21/10/2018 17:35	HANNINGTON NO 1 RES SIDE B	0	0				0	0.45			0		0		0		0										
23/10/2018 11:04	HANNINGTON NO 1 RES SIDE B	0	0				0	0.42			0		0				0										17
03/11/2018 06:53	HANNINGTON NO 1 RES SIDE B	0	0				0.06	0.55			0		0				0										13.3
05/11/2018 11:12	HANNINGTON NO 1 RES SIDE B	0	0				0.05	0.58			0		0				0										13
08/11/2018 17:17	HANNINGTON NO 1 RES SIDE B	150	0				0	0.39		0	0		0		0		0			0							15.3
16/11/2018 07:32	HANNINGTON NO 1 RES SIDE B	140	0	0	3	1	0.06	0.64			0		0				0					6	1	1	2	2	12.1
19/11/2018 07:12	HANNINGTON NO 1 RES SIDE B	0	0				0.06	0.64			0		0				0										11.6
27/11/2018 12:01	HANNINGTON NO 1 RES SIDE B	1	0				0.06	0.66			0		0				0										11.4
07/12/2018 11:38	HANNINGTON NO 1 RES SIDE B	137	0				0	0.64			0		0				0										11.3
15/12/2018 06:46	HANNINGTON NO 1 RES SIDE B	0	1	0	0		0.05	0.63			0		0				0										9.8
19/12/2018 08:18	HANNINGTON NO 1 RES SIDE B	85	0				0.08	0.78			0		0				0										10.2
28/12/2018 07:08	HANNINGTON NO 1 RES SIDE B	0	0				0	0.6			0		0				0										9.1
03/01/2019 08:37	HANNINGTON NO 1 RES SIDE B	64	0				0.06	0.65			0		0				0										9.1
08/01/2019 08:42	HANNINGTON NO 1 RES SIDE B	0	0				0.07	0.63			0		0				0										9.1
15/01/2019 12:07	HANNINGTON NO 1 RES SIDE B			0																							
15/01/2019 12:24	HANNINGTON NO 1 RES SIDE B	10	0				0.08	0.7			0		0				0										9.2
23/01/2019 08:28	HANNINGTON NO 1 RES SIDE B	0	0				0.09	0.73			0		0				0										8
28/01/2019 07:49	HANNINGTON NO 1 RES SIDE B	24	0				0.05	0.65			0		0				0										9
28/01/2019 07:51	HANNINGTON NO 1 RES SIDE B			0																							
07/02/2019 08:23	HANNINGTON NO 1 RES SIDE B	0	0				0.07	0.72			0		0				0										6.3
15/02/2019 11:29	HANNINGTON NO 1 RES SIDE B	28	0	0			0	0.66			0		0				0										9.8
18/02/2019 08:30	HANNINGTON NO 1 RES SIDE B	0	0				0.07	0.6			0		0				0										7.6
26/02/2019 08:36	HANNINGTON NO 1 RES SIDE B	0	2	0			0.09	0.7			0		0				0										9.3
06/03/2019 16:04	HANNINGTON NO 1 RES SIDE B	0	0				0	0.62			0		0				0										8.8
14/03/2019 13:03	HANNINGTON NO 1 RES SIDE B			0																							
14/03/2019 13:12	HANNINGTON NO 1 RES SIDE B	0	0				0	0.57			0		0				0										10.3
22/03/2019 07:42	HANNINGTON NO 1 RES SIDE B	81	0				0.07	0.71			0		0				0										9.6
29/03/2019 08:41	HANNINGTON NO 1 RES SIDE B	0	0				0.07	0.59			0		0				0										10.3
29/03/2019 08:43	HANNINGTON NO 1 RES SIDE B			0																							
02/04/2019 08:41	HANNINGTON NO 1 RES SIDE B	0	0				0.08	0.64			0		0				0										10
10/04/2019 08:27	HANNINGTON NO 1 RES SIDE B	56	0				0.05	0.61			0		0				0										11.1
10/04/2019 08:28	HANNINGTON NO 1 RES SIDE B			0																							
17/04/2019 08:00	HANNINGTON NO 1 RES SIDE B	46	0				0.08	0.6			0		0				0										11.3
24/04/2019 11:43	HANNINGTON NO 1 RES SIDE B	230	0				0.07	0.62			0		0				0										11.8
24/04/2019 11:45	HANNINGTON NO 1 RES SIDE B			0																							
26/04/2019 19:55	HANNINGTON NO 1 RES SIDE B						0.06	0.61						0				0									11.5
03/05/2019 08:43	HANNINGTON NO 1 RES SIDE B	0	0				0.07	0.63			0		0				0										12.2
07/05/2019 08:35	HANNINGTON NO 1 RES SIDE B	0	0				0.05	0.56			0		0				0										14.1
07/05/2019 08:36	HANNINGTON NO 1 RES SIDE B			0																							
14/05/2019 12:27	HANNINGTON NO 1 RES SIDE B	233	0				0.06	0.67			0		0				0										13.6
22/05/2019 08:32	HANNINGTON NO 1 RES SIDE B	326	0				0.05	0.62			0		0				0										13.6
22/05/2019 08:33	HANNINGTON NO 1 RES SIDE B			0																							
30/05/2019 08:30	HANNINGTON NO 1 RES SIDE B	94	0				0.05	0.62			0		0				0										15.1
07/06/2019 08:38	HANNINGTON NO 1 RES SIDE B	0	0				0	0.55			0		0				0										16.8
07/06/2019 08:39	HANNINGTON NO 1 RES SIDE B			4																							
10/06/2019 08:25	HANNINGTON NO 1 RES SIDE B	132	0				0.06	0.73			0		0				0										16.6
13/06/2019 11:20	HANNINGTON NO 1 RES SIDE B	0	0											0				0									
13/06/2019 11:30	HANNINGTON NO 1 RES SIDE B	0	0											0				0									
13/06/2019 11:45	HANNINGTON NO 1 RES SIDE B	0	1											0				0									
19/06/2019 11:33	HANNINGTON NO 1 RES SIDE B	107	0				0.05	0.53			0		0				0										17.1
19/06/2019 11:34	HANNINGTON NO 1 RES SIDE B			0																							
26/06/2019 11:55	HANNINGTON NO 1 RES SIDE B	0	0				0	0.51						0				0									17.9
04/07/2019 08:35	HANNINGTON NO 1 RES SIDE B	19	0				0	0.56						0				0									19.3
04/07/2019 08:36	HANNINGTON NO 1 RES SIDE B			0																							
05/07/2019 14:30	HANNINGTON NO 1 RES SIDE B	126	0				0	0.56	0	0				0				0	0	0							18.8
12/07/2019 12:27	HANNINGTON NO 1 RES SIDE B	46	0				0	0.52						0				0									19.7
15/07/2019 07:42	HANNINGTON NO 1 RES SIDE B	0	0	0			0	0.5						0				0									18.4
23/07/2019 08:40	HANNINGTON NO 1 RES SIDE B	0	0				0.08	0.47						0				0									20.5

31/07/2019 08:29 HANNINGTON NO 1 RES SIDE B	0	0		0.06	0.49				0	0									20.8	
31/07/2019 08:30 HANNINGTON NO 1 RES SIDE B			0																	
08/08/2019 07:55 HANNINGTON NO 1 RES SIDE B	0	36		0	0.47				0	0									21.8	
16/08/2019 09:10 HANNINGTON NO 1 RES SIDE B	117	0		0.08	0.8				0	0									21.3	
19/08/2019 08:23 HANNINGTON NO 1 RES SIDE B	155	60		0.05	0.58				0	0									20.6	
28/08/2019 08:25 HANNINGTON NO 1 RES SIDE B	0	0		0	0.58				0	0									20.6	
28/08/2019 08:27 HANNINGTON NO 1 RES SIDE B			0																	
30/08/2019 17:36 HANNINGTON NO 1 RES SIDE B				0	0.42		0	0	0	0	0	0							21	
05/09/2019 15:08 HANNINGTON NO 1 RES SIDE B	0	0		0	0.51				0	0									20.3	
13/09/2019 08:24 HANNINGTON NO 1 RES SIDE B	32	0		0.08	0.81				0	0									19.8	
13/09/2019 08:25 HANNINGTON NO 1 RES SIDE B			0																	
16/09/2019 08:32 HANNINGTON NO 1 RES SIDE B	0	0		0	0.55				0	0									20.2	
18/09/2019 21:03 HANNINGTON NO 1 RES SIDE B				0.05	0.43				0	0									19.3	
24/09/2019 12:26 HANNINGTON NO 1 RES SIDE B	0	0		0	0.58				0	0									20.9	
24/09/2019 12:29 HANNINGTON NO 1 RES SIDE B			0																	
30/09/2019 15:44 HANNINGTON NO 1 RES SIDE B	0	0		0.05	0.58				0	0									19.2	
10/10/2019 11:23 HANNINGTON NO 1 RES SIDE B	0	0		0	0.49				0	0									16.8	
10/10/2019 11:24 HANNINGTON NO 1 RES SIDE B			0																	
18/10/2019 08:19 HANNINGTON NO 1 RES SIDE B	0	0		0	0.83				0	0									16.3	
24/10/2019 11:30 HANNINGTON NO 1 RES SIDE B			0																	
24/10/2019 11:59 HANNINGTON NO 1 RES SIDE B	0	0		0.15	0.61				0	0									15.7	
28/10/2019 08:29 HANNINGTON NO 1 RES SIDE B	0	0		0.08	0.79				0	0									15	
05/11/2019 08:34 HANNINGTON NO 1 RES SIDE B	0	0	0	0	0.77				0	0									13.9	
13/11/2019 11:48 HANNINGTON NO 1 RES SIDE B	0	1		0	0.78				0	0									12.2	
20/11/2019 10:51 HANNINGTON NO 1 RES SIDE B	1	0	0	0.06	0.76				0	0									11.2	
27/11/2019 12:17 HANNINGTON NO 1 RES SIDE B	0	0		0	0.76				0	0									11.5	
05/12/2019 12:04 HANNINGTON NO 1 RES SIDE B	0	0		0.08	0.79				0	0									10.1	
05/12/2019 12:05 HANNINGTON NO 1 RES SIDE B			0																	
05/12/2019 12:06 HANNINGTON NO 1 RES SIDE B				0.08	0.79	0											0.05	0	10	0.16
11/12/2019 08:39 HANNINGTON NO 1 RES SIDE B	0	0		0.06	0.6				0	0									9.3	
18/12/2019 08:17 HANNINGTON NO 1 RES SIDE B	0	0		0.07	0.71				0	0									8.8	
18/12/2019 08:19 HANNINGTON NO 1 RES SIDE B			0																	
27/12/2019 10:37 HANNINGTON NO 1 RES SIDE B	1	0		0.06	0.82				0	0									8.5	
02/01/2020 09:43 HANNINGTON NO 1 RES SIDE B	0	27		0.06	0.78				0	0			84.6	838	15	9477			9.1	
02/01/2020 09:44 HANNINGTON NO 1 RES SIDE B			0																	
07/01/2020 10:37 HANNINGTON NO 1 RES SIDE B	0	0		0.06	0.72				0	0			84.9	767	15	9769			8.5	
13/01/2020 10:34 HANNINGTON NO 1 RES SIDE B	0	0		0.07	0.79				0	0			90.8	1842	9.12	####			9.6	
13/01/2020 10:35 HANNINGTON NO 1 RES SIDE B			0																	
24/01/2020 11:12 HANNINGTON NO 1 RES SIDE B	0	0		0.09	0.8				0	0			88	1129	11.6	####			8.5	
30/01/2020 10:26 HANNINGTON NO 1 RES SIDE B	0	0		0	0.8				0	0			79.3	686	20.6	####			8.8	
30/01/2020 10:27 HANNINGTON NO 1 RES SIDE B			0																	
05/02/2020 13:25 HANNINGTON NO 1 RES SIDE B	1	0		0	0.71				0	0			84.5	1280	15.4	####			9.1	
11/02/2020 10:32 HANNINGTON NO 1 RES SIDE B	0	0	3	0.05	0.75				0	0			83.6	764	15.8	####			8.4	
19/02/2020 09:55 HANNINGTON NO 1 RES SIDE B	0	0		0.05	0.75				0	0			82.9	648	16.8	####			8.7	
26/02/2020 10:16 HANNINGTON NO 1 RES SIDE B	0	0		0.05	0.79				0	0			83.3	749	16.6	####			8.3	
26/02/2020 10:17 HANNINGTON NO 1 RES SIDE B			0																	
02/03/2020 09:00 HANNINGTON NO 1 RES SIDE B	5	0							0	0										
06/03/2020 10:43 HANNINGTON NO 1 RES SIDE B	1	0		0.07	0.81				0	0			79.8	657	20.2	####			8.1	
10/03/2020 08:22 HANNINGTON NO 1 RES SIDE B	0	0		0.06	0.79				0	0			72.8	897	27.1	####			8.6	
18/03/2020 10:24 HANNINGTON NO 1 RES SIDE B	0	0		0	0.74				0	0									9	
26/03/2020 09:58 HANNINGTON NO 1 RES SIDE B		0		0.08	0.77				0	0									10.9	
26/03/2020 09:59 HANNINGTON NO 1 RES SIDE B			0																	
30/03/2020 10:30 HANNINGTON NO 1 RES SIDE B		0		0.06	0.75				0	0									9.3	
06/04/2020 10:46 HANNINGTON NO 1 RES SIDE B		0		0.07	0.79				0	0									10.6	
14/04/2020 10:53 HANNINGTON NO 1 RES SIDE B		0		0.07	0.64				0	0									11	
21/04/2020 09:49 HANNINGTON NO 1 RES SIDE B		143	0	0	0.68				0	0									12.2	
29/04/2020 09:43 HANNINGTON NO 1 RES SIDE B		0		0.06	0.67				0	0									12.1	
06/05/2020 09:37 HANNINGTON NO 1 RES SIDE B		0		0.06	0.71				0	0									13.6	
07/05/2020 12:22 HANNINGTON NO 1 RES SIDE B				0.06	0.77				0	0									13.4	
11/05/2020 09:52 HANNINGTON NO 1 RES SIDE B		0		0.07	0.72				0	0									13.7	
19/05/2020 09:31 HANNINGTON NO 1 RES SIDE B		0	0	0.06	0.75				0	0									14.9	
27/05/2020 09:48 HANNINGTON NO 1 RES SIDE B		0		0.05	0.76				0	0									16.5	
02/06/2020 09:44 HANNINGTON NO 1 RES SIDE B		0		0	0.71				0	0									16.9	
08/06/2020 10:12 HANNINGTON NO 1 RES SIDE B		0		0	0.63				0	0									17.9	
11/06/2020 18:57 HANNINGTON NO 1 RES SIDE B				0	0.66		0	0	0	0	0	0							18.5	
19/06/2020 09:43 HANNINGTON NO 1 RES SIDE B		0		0.05	0.59				0	0									17.7	
19/06/2020 09:44 HANNINGTON NO 1 RES SIDE B			0																	
25/06/2020 09:39 HANNINGTON NO 1 RES SIDE B		143		0	0.68				0	0									18.5	
01/07/2020 09:43 HANNINGTON NO 1 RES SIDE B		298		0	0.49				0	0									19.5	
09/07/2020 09:29 HANNINGTON NO 1 RES SIDE B		420		0.05	0.59				0	0									19.2	
17/07/2020 07:55 HANNINGTON NO 1 RES SIDE B		0	0	0.06	0.57				0	0									19.1	
20/07/2020 07:46 HANNINGTON NO 1 RES SIDE B		86		0.07	0.54				0	0									19.6	
28/07/2020 07:53 HANNINGTON NO 1 RES SIDE B		0		0.05	0.52				0	0									20.1	
05/08/2020 10:37 HANNINGTON NO 1 RES SIDE B		0		0	0.6				0	0									20.7	
11/08/2020 17:53 HANNINGTON NO 1 RES SIDE B				0.05	0.74				0	0			89.5	885	10.5	3745			20.7	
13/08/2020 11:11 HANNINGTON NO 1 RES SIDE B		70	0	0.07	0.62				0	0			90.1	900	9.89	4783			21.7	
21/08/2020 11:28 HANNINGTON NO 1 RES SIDE B		51		0.05	0.5				0	0			92.4	1336	7.49	3473			21	
24/08/2020 11:26 HANNINGTON NO 1 RES SIDE B		0		0.05	0.53				0	0			90.3	1004	9.56	2993			21.6	
02/09/2020 07:54 HANNINGTON NO 1 RES SIDE B		0		0	0.52				0	0			91.4	1318	8.57	3724			19.8	
10/09/2020 07:57 HANNINGTON NO 1 RES SIDE B		37	0	0	0.55				0	0			90.1	1360	9.93	3602			19.3	
18/09/2020 08:56 HANNINGTON NO 1 RES SIDE B		0		0.05	0.57				0	0			89.1	1343	10.9	4714			18.7	
21/09/2020 10:48 HANNINGTON NO 1 RES SIDE B		0		0.06	0.67				0	0			90	1140	9.91	3785			19.5	
29/09/2020 11:01 HANNINGTON NO 1 RES SIDE B		0		0.07	0.53				0	0			89.4	1282	10.6	4419			17.8	
07/10/2020 10:55 HANNINGTON NO 1 RES SIDE B		36		0.06	0.64				0	0			88.1	1246	11.9	5160			16.9	
07/10/2020 10:56 HANNINGTON NO 1 RES SIDE B			0																	
15/10/2020 07:08 HANNINGTON NO 1 RES SIDE B		0		0.07	0.6				0	0			81.7	665	18.4	6404	0.02		15.1	
23/10/2020 07:48 HANNINGTON NO 1 RES SIDE B		0		0.07	0.52				0	0							0.03		17.3	
26/10/2020 10:29 HANNINGTON NO 1 RES SIDE B		0		0.05	0.62				0	0			80.7	994	19.3	9303	0.03		14.4	
03/11/2020 14:09 HANNINGTON NO 1 RES SIDE B		0	0	0.07	0.56				0	0			79.8	911	20.2	6618	0.03		14	
11/11/2020 10:50 HANNINGTON NO 1 RES SIDE B		0		0.05	0.63				0	0			66.3	584	33.7	4484			13.5	
11/11/2020 10:51 HANNINGTON NO 1 RES SIDE B																	0.03			
19/11/2020 07:41 HANNINGTON NO 1 RES SIDE B		0		0.05	0.61				0	0			88.4	829	11.3	4494	0.02		12.6	
27/11/2020 07:31 HANNINGTON NO 1 RES SIDE B		0		0	0.68				0	0			85.1	693	14.7	4832	0.03		12.1	
30/11/2020 07:51 HANNINGTON NO 1 RES SIDE B		0	0	0.08	0.68				0	0			87.5	431	12.5	4372	0.03		12.9	
08/12/2020 08:07 HANNINGTON NO 1 RES SIDE B		0		0.05	0.68				0	0			83.5	630	16.5	6939	0.02		10.9	
16/12/2020 10:27 HANNINGTON NO 1 RES SIDE B		86		0.08	0.71				0	0			90.8	530	9.06	6392	0.03		9.9	
22/12/2020 11:15 HANNINGTON NO 1 RES SIDE B		14		0	0.76				0	0			78.3	558	21.3	5426	0.03		9.7	
23/12/2020 11:17 HANNINGTON NO 1 RES SIDE B		0																		
23/12/2020 11:27 HANNINGTON NO 1 RES SIDE B		0																		
23/12/2020 11:40 HANNINGTON NO 1 RES SIDE B		0																		
30/12/2020 09:58 HANNINGTON NO 1 RES SIDE B		0	0	0	0.66				0	0			83.4	229	16.6	5567	0.04		9.6	
06/01/2021 09:38 HANNINGTON NO 1 RES SIDE B		0		0.05	0.78				0	0			82.5	194	17.5	5548	0.02		7.9	
14/01/2021 10:13 HANNINGTON NO 1 RES SIDE B		0		0.05	0.72				0	0			81.2	101	18.8	5719	0.02		8	
22/01/2021 08:14 HANNINGTON NO 1 RES SIDE B		0		0.05	0.72				0	0			85.7	216	13.9	5186	0.03		6.6	
25/01/2021 09:53 HANNINGTON NO 1 RES SIDE B		0		0	0.76				0	0			87.2	180	12.8	5584	0.02		6.8	
02/02/2021 07:42 HANNINGTON NO 1 RES SIDE B		0		0	0.54				0	0			79.8	253	19.8	9151	0.02		6	
10/02/2021 07:48 HANNINGTON NO 1 RES SIDE B		0		0.06	0.79				0	0			88.2	229	11.8	5947	0.01		6.2	
18/02/2021 07:49 HANNINGTON NO 1 RES SIDE B		0		0.05	0.76				0	0			85.4	445	13.7	6062			5.9	
18/02/2021 07:50 HANNINGTON NO 1 RES SIDE B																	0.02			

26/02/2021 10:56 HANNINGTON NO 1 RES SIDE B	43					0.05	0.75				0			0			72.2	338	27.8	5731		0.02									6.7			
01/03/2021 11:13 HANNINGTON NO 1 RES SIDE B	0					0.06	0.59				0			0			77.3	494	22.7	6232		0.02									7.6			
09/03/2021 10:33 HANNINGTON NO 1 RES SIDE B																						0.02												
09/03/2021 10:36 HANNINGTON NO 1 RES SIDE B	0					0	0.63				0			0			80.9	418	19.1	6524											7.2			
17/03/2021 13:00 HANNINGTON NO 1 RES SIDE B	0					0.05	0.7				0			0			93.2	540	6.67	6458		0.02									7.8			
18/03/2021 16:26 HANNINGTON NO 1 RES SIDE B						0.08	0.66				0			0			84.1	472	15.9	7434											7.9			
25/03/2021 10:12 HANNINGTON NO 1 RES SIDE B	0					0.05	0.64				0			0			82.2	437	17.9	7115		0.02									8.8			
31/03/2021 08:11 HANNINGTON NO 1 RES SIDE B	0					0.05	0.64				0			0			81.2	478	18.8	6584		0.02									9.8			
09/04/2021 07:53 HANNINGTON NO 1 RES SIDE B	0					0.06	0.71				0			0			81	617	19	6698											9.5			
09/04/2021 07:54 HANNINGTON NO 1 RES SIDE B																						0.02												
12/04/2021 07:44 HANNINGTON NO 1 RES SIDE B	0					0	0.67				0			0			82.9	426	17.1	6110		0.01									9			
20/04/2021 07:34 HANNINGTON NO 1 RES SIDE B	0					0	0.63				0			0			73.1	461	26.9	6241		0.01									10.5			
28/04/2021 07:40 HANNINGTON NO 1 RES SIDE B	0					0.1	0.79				0			0			66	712	34	6966		0.02									11.2			
06/05/2021 11:43 HANNINGTON NO 1 RES SIDE B	0					0	0.53				0			0			82.9	801	16.7	5112		0.02									12.1			
13/05/2021 07:39 HANNINGTON NO 1 RES SIDE B	0					0	0.62				0			0			87.3	1402	12.7	6731		0.02									12.8			
21/05/2021 07:28 HANNINGTON NO 1 RES SIDE B	0					0.06	0.6				0			0			85.9	1176	14	4263		0.02									13.6			
24/05/2021 07:38 HANNINGTON NO 1 RES SIDE B	0					0	0.65				0			0			82.3	740	17.7	3544		0.02									13.6			
03/06/2021 07:35 HANNINGTON NO 1 RES SIDE B	0					0.08	0.66				0			0			80.2	1134	19.8	5458		0.02									14			
09/06/2021 08:19 HANNINGTON NO 1 RES SIDE B	0			0		0	0.57				0			0			90.8	1091	9.07	4390		0.03									14.9			
17/06/2021 07:46 HANNINGTON NO 1 RES SIDE B	4					0	0.6				0			0			50.4	1198	49.5	5243		0.02									17.9			
25/06/2021 07:26 HANNINGTON NO 1 RES SIDE B	0					0	0.56				0			0			71	1432	28.7	5976		0.04									18.5			
28/06/2021 07:31 HANNINGTON NO 1 RES SIDE B	0					0	0.54				0			0			68	933	31.7	3079		0.02									19			
06/07/2021 07:55 HANNINGTON NO 1 RES SIDE B	15			0		0	0.52				0			0			71.8	966	27.9	3108											19.1			
06/07/2021 07:56 HANNINGTON NO 1 RES SIDE B																						0.02												
14/07/2021 07:51 HANNINGTON NO 1 RES SIDE B	7					0	0.51				0			0			69.5	771	30.3	2265		0.02									20			
22/07/2021 07:37 HANNINGTON NO 1 RES SIDE B	0					0.05	0.58				0			0			68.7	797	31.1	2858		0.02									20.7			
27/07/2021 14:13 HANNINGTON NO 1 RES SIDE B						0.05	0.56		0	0	0			0	0	0	55.1	929	44.8	3034											20.7			
30/07/2021 08:42 HANNINGTON NO 1 RES SIDE B	0					0.07	0.51				0			0			83.1	616	16.8	1124											21.6			
30/07/2021 08:43 HANNINGTON NO 1 RES SIDE B																						0.02												
02/08/2021 09:13 HANNINGTON NO 1 RES SIDE B	203					0	0.52				0			0			61.2	592	38.6	2041		0.02									22.1			
04/08/2021 15:27 HANNINGTON NO 1 RES SIDE B				0																														
06/08/2021 15:20 HANNINGTON NO 1 RES SIDE B	0					0.05	0.64																											
06/08/2021 15:40 HANNINGTON NO 1 RES SIDE B	0					0.07	0.68																											
06/08/2021 15:50 HANNINGTON NO 1 RES SIDE B	0					0	0.62																											
10/08/2021 08:33 HANNINGTON NO 1 RES SIDE B	0					0	0.62				0			0			71.3	739	28.6	1804		0									21.5			
18/08/2021 07:40 HANNINGTON NO 1 RES SIDE B	0					0	0.5				0			0			78.6	1258	21	3122		0.02									20.6			
26/08/2021 07:45 HANNINGTON NO 1 RES SIDE B	137					0.06	0.5				0			0			69.8	695	30.2	2117											21.2			
26/08/2021 07:46 HANNINGTON NO 1 RES SIDE B																						0.02												
02/09/2021 16:16 HANNINGTON NO 1 RES SIDE B						0.06	0.49				0			0			49.9	459	49.9	2063											18.2			
03/09/2021 07:32 HANNINGTON NO 1 RES SIDE B	0			0		0.06	0.52				0			0			67.1	399	32.5	1906		0.02									20.1			
06/09/2021 09:22 HANNINGTON NO 1 RES SIDE B	0					0	0.48				0			0			66	455	33.7	1965		0.02									19.8			
14/09/2021 09:07 HANNINGTON NO 1 RES SIDE B	0					0.06	0.53				0			0			66.7	471	33.1	2393		0.02									20.9			
20/09/2021 10:02 HANNINGTON NO 1 RES SIDE B	0					0.05	0.55				0			0			68.8	677	31	2349											19.6			
20/09/2021 10:07 HANNINGTON NO 1 RES SIDE B																						0.02												
28/09/2021 07:43 HANNINGTON NO 1 RES SIDE B				1																		0.04												
28/09/2021 07:51 HANNINGTON NO 1 RES SIDE B	0					0	0.58				0			0			76	1078	23.7	4380											21.5			
08/10/2021 07:36 HANNINGTON NO 1 RES SIDE B	0					0	0.79				0			0			67.7	898	32.2	5057		0.05									17.1			
11/10/2021 09:13 HANNINGTON NO 1 RES SIDE B	0					0.06	0.76				0			0			46.5	601	53.4	4293											17			
11/10/2021 09:14 HANNINGTON NO 1 RES SIDE B																						0.04												
14/10/2021 10:55 HANNINGTON NO 1 RES SIDE B		114	0.0139		72.7	0	0.69	0				593	0.02								219	0.03	0	9.2	0	2.18	7.41	1.06		40	17.7	0.12		0.017
19/10/2021 07:34 HANNINGTON NO 1 RES SIDE B	0					0.07	0.52				0			0								0.02									17.4			
21/10/2021 16:37 HANNINGTON NO 1 RES SIDE B						0	0.49				0			0																	16.9			
27/10/2021 08:45 HANNINGTON NO 1 RES SIDE B	0			0		0.08	0.66				0			0								0.02									19.1			
04/11/2021 09:08 HANNINGTON NO 1 RES SIDE B	0					0.05	0.64				0			0			48.5	679	51.4	3388		0.02									14.3			
12/11/2021 13:05 HANNINGTON NO 1 RES SIDE B	0					0.06	0.75				0			0			40	555	60	4873		0.03									14			
15/11/2021 07:32 HANNINGTON NO 1 RES SIDE B	0					0.06	0.69				0			0			62.9	508	37	4058		0.02									13			
23/11/2021 07:34 HANNINGTON NO 1 RES SIDE B				0																		0.02												
23/11/2021 07:37 HANNINGTON NO 1 RES SIDE B	0					0.06	0.46				0			0			62.5	441	37.4	2994											12			
01/12/2021 07:29 HANNINGTON NO 1 RES SIDE B	0					0	0.54				0			0			35.6	304	64.3	4719		0.02									12			
09/12/2021 09:04 HANNINGTON NO 1 RES SIDE B	0					0.06	0.68				0			0			41.7	437	58.3	4846		0.01									8.6			
17/12/2021 07:35 HANNINGTON NO 1 RES SIDE B	0					0	0.56				0			0			45.6	789	54.4	4756		0.02									9.2			
20/12/2021 09:31 HANNINGTON NO 1 RES SIDE B	0			0		0.06	0.71				0			0			42.3	284	57.7	4598		0.02									8.1			
30/12/2021 09:33 HANNINGTON NO 1 RES SIDE B	0					0.07	0.65				0			0			41.2	283	58.7	4327											10			
30/12/2021 09:34 HANNINGTON NO 1 RES SIDE B																						0.02												
07/01/2022 07:36 HANNINGTON NO 1 RES SIDE B	0					0	0.6				0			0			43	385	57	4139		0.01									8.6			
10/01/2022 10:45 HANNINGTON NO 1 RES SIDE B						0	2.55																										0	
11/01/2022 08:55 HANNINGTON NO 1 RES SIDE B	0					0	0.68				0			0			44.2	234	55.8	4677											9.8			
11/01/2022 08:56 HANNINGTON NO 1 RES SIDE B																						0.02												
17/01/2022 17:46 HANNINGTON NO 1 RES SIDE B	0					0.06	0.78				0			0			43.1	303	56.8	4886		0.01									8.8			
20/01/2022 09:20 HANNINGTON NO 1 RES SIDE B																													0				1	
28/01/2022 07:41 HANNINGTON NO 1 RES SIDE B	0					0.07	0.79				0			0			49.5	343	50.5	4386											5.9			
28/01/2022 07:43 HANNINGTON NO 1 RES SIDE B																						0.02							0				0	
03/02/2022 12:36 HANNINGTON NO 1 RES SIDE B	0					0.05	0.78				0			0			49.8	423	50.2	4478											12.4			
03/02/2022 12:37 HANNINGTON NO 1 RES SIDE B																						0.01												
03/02/2022 12:38 HANNINGTON NO 1 RES SIDE B																													0				1	
09/02/2022 14:23 HANNINGTON NO 1 RES SIDE B	0					0.08	0.97				0			0			47.9	157	52	4211		0.01							0		8.8		1	
15/02/2022 11:35 HANNINGTON NO 1 RES SIDE B	0					0.05	0.65				0			0			50.6	292	49.4	4931											6.6			
15/02/2022 11:36 HANNINGTON NO 1 RES SIDE B																													0				0	
21/02/2022 08:36 HANNINGTON NO 1 RES SIDE B	0					0.08	0.79				0			0			50.1	280	49.9	4922											10			
21/02/2022 08:37 HANNINGTON NO 1 RES SIDE B				1																									0				0	
03/03/2022 07:35 HANNINGTON NO 1 RES SIDE B						0.05	0.98															0.02									7.8			
04/03/2022 07:45 HANNINGTON NO 1 RES SIDE B	0					0.08	0.97				0			0																	8.7			
04/03/2022 07:46 HANNINGTON NO 1 RES SIDE B																						0.02							0				1	
08/03/2022 13:46 HANNINGTON NO 1 RES SIDE B						0.06	0.89															0									8.8			
10/03/2022 09:09 HANNINGTON NO 1 RES SIDE B	0					0.05	0.78				0			0								0.01							0		7.1		0	
16/03/2022 13:24 HANNINGTON NO 1 RES SIDE B	0					0	0.94				0			0			42.3	335	57.7	5986											10.4			
16/03/2022 13:26 HANNINGTON NO 1 RES SIDE B																						0.01												
16/03/2022 13:27 HANNINGTON NO 1 RES SIDE B																													0				0	
24/03/2022 07:33 HANNINGTON NO 1 RES SIDE B	0			0		0.06	0.67				0			0			39.2	448	60.8	4972		0.02							0		12.7		0	
01/04/2022 09:25 HANNINGTON NO 1 RES SIDE B	0					0	0.73				0			0			37.3	425	62.7	5261											8.5			
01/04/2022 09:26 HANNINGTON NO 1 RES SIDE B																						0							0				0	
04/04/2022 07:39 HANNINGTON NO 1 RES SIDE B	0					0.07	0.6				0			0			37.5	381	62.5	4475		0.01							0		9.2		0	
12/04/2022 11:27 HANNINGTON NO 1 RES SIDE B	26					0	0.7				0			0			61.2	615	38.7	5336		0.01							0				0	
20/04/2022 08:10 HANNINGTON NO 1 RES SIDE B	0			0		0	0.68				0			0			42.2	950	57.6	5867		0.01							0		8.4		1	
27/04/2022 09:32 HANNINGTON NO 1 RES SIDE B	0					0	0.72				0			0			40.2	868	59.6	6316		0.01									12.2			
27/04/2022 09:33 HANNINGTON NO 1 RES SIDE B																													0				0	
04/05/2022 07:50 HANNINGTON NO 1 RES SIDE B	1					0.05	0.7				0			0			45.7	1174	54.2	6922		0.01							0		12.2		0	
13/05/2022 09:17 HANNINGTON NO 1 RES SIDE B	0					0	0.58				0			0			64.2	886	35.5	5006		0.01									14.9			
13/05/2022 09:18 HANNINGTON NO 1 RES SIDE B																													0				0	
16/05/2022 13:29 HANNINGTON NO 1 RES SIDE B	0			0		0.08	0.73				0			0			45.1	566	54.9	3497		0.02							0		15.2		0	
24/05/2022 07:33 HANNINGTON NO 1 RES SIDE B	3					0	0.55				0			0			70.9	1445	28.8	5021									0		15.6		1	
24/05/2022 07:34 HANNINGTON NO 1 RES SIDE B																						0.01												
01/06/2022 07:26 HANNINGTON NO 1 RES SIDE B	14					0.06	0.52				0			0			58.7	1089	41.3	3276											16.7			
01/06/2022 07:27 HANNINGTON NO 1 RES SIDE B																						0.02							0				0	
09/06/2022 09:32 HANNINGTON NO 1 RES SIDE B	0					0.06	0.62				0			0			69.2	1073	30.7	3813		0.02									16.6			
09/06/2022 09:33 HANNINGTON NO 1 RES SIDE B																													0				0	
17/06/2022 08:37 HANNINGTON NO 1 RES SIDE B	16					0	0.56				0			0			68.5	1088	31.4	4922											19.8			
17/06/2022 08:38 HANNINGTON NO 1 RES SIDE B				0																		0.02							0				0	
22/06/2022 11:03 HANNINGTON NO 1 RES SIDE B	2					0	0.54				0			0			69.5	778	30.4	3064											19.2			

22/06/2022 11:04	HANNINGTON NO 1 RES SIDE B															0.02	0		0
27/06/2022 07:30	HANNINGTON NO 1 RES SIDE B	0		0.05	0.56			0	0			62.4	1064	37.6	2907	0.01	0	20.2	0
29/06/2022 22:42	HANNINGTON NO 1 RES SIDE B			0.07	0.53			0	0			58.9	1324	41	3331			22.2	
30/06/2022 23:03	HANNINGTON NO 1 RES SIDE B			0	0.54			0	0			73	1521	26.7	3537			28.6	
06/07/2022 09:30	HANNINGTON NO 1 RES SIDE B	6		0	0.56			0	0			59.6	651	40.3	2615			19.1	
06/07/2022 09:31	HANNINGTON NO 1 RES SIDE B															0.01	0		0
14/07/2022 11:46	HANNINGTON NO 1 RES SIDE B	0		0	0.72			0	0			55.1	885	44.9	4554			20.2	
14/07/2022 11:47	HANNINGTON NO 1 RES SIDE B		0													0.02	0		0
22/07/2022 07:59	HANNINGTON NO 1 RES SIDE B	50		0	0.63			0	0			69	720	30.6	3818	0.02	0	22.5	1
25/07/2022 08:28	HANNINGTON NO 1 RES SIDE B	0		0	0.52			0	0			63.8	1181	36.1	3202	0.02	0	24.2	0
02/08/2022 13:54	HANNINGTON NO 1 RES SIDE B	29		0	0.48			0	0							0.01	0	23	0
10/08/2022 06:51	HANNINGTON NO 1 RES SIDE B		0														0		0
10/08/2022 06:59	HANNINGTON NO 1 RES SIDE B	0		0.05	0.67			0	0			66.7	741	32.9	2618	0.02		22.2	
14/08/2022 22:34	HANNINGTON NO 1 RES SIDE B			0	0.59			0	0									21.1	
18/08/2022 09:10	HANNINGTON NO 1 RES SIDE B	1		0.07	0.53			0	0							0.02		23.1	
18/08/2022 09:11	HANNINGTON NO 1 RES SIDE B																0		0
26/08/2022 07:47	HANNINGTON NO 1 RES SIDE B	0		0	0.58			0	0			74.2	1220	25.8	2369	0.01	0	22.2	0
02/09/2022 13:39	HANNINGTON NO 1 RES SIDE B	0		0.06	0.53			0	0			76.3	1029	23.5	1967	0.02	0	23.6	1
07/09/2022 22:03	HANNINGTON NO 1 RES SIDE B			0	0.51	0	0	0	0	0	0	71.5	1223	28.5	3021			23.4	
08/09/2022 10:19	HANNINGTON NO 1 RES SIDE B		0																
08/09/2022 10:28	HANNINGTON NO 1 RES SIDE B	4		0	0.57			0	0			51.4	706	48.4	2498	0.02	0	22.9	0
13/09/2022 09:50	HANNINGTON NO 1 RES SIDE B	34		0.08	0.62			0	0			49.2	695	50.7	3150	0.02	0	21.3	0
20/09/2022 11:41	HANNINGTON NO 1 RES SIDE B	0		0.07	0.6			0	0			69.9	682	29.8	2079			20.2	
20/09/2022 11:43	HANNINGTON NO 1 RES SIDE B															0.03	0		0
29/09/2022 07:24	HANNINGTON NO 1 RES SIDE B															0	0		1
29/09/2022 07:30	HANNINGTON NO 1 RES SIDE B	0		0	0.68			0	0			63	496	36.9	2892			18.1	
07/10/2022 13:43	HANNINGTON NO 1 RES SIDE B	0	0	0	0.5			0	0			59.1	453	40.9	3094		0	17.1	
07/10/2022 13:50	HANNINGTON NO 1 RES SIDE B															0.03			
10/10/2022 09:57	HANNINGTON NO 1 RES SIDE B			0.06	0.51			0	0			47.2	449	52.8	2226			16.4	

Responses to questions raised in email of 16 September 2022 regarding Hannington WTW – 3rd tranche

Please note – The original text/questions from [redacted] email of 16 September 2022 are set out below in black with Anglian Water's responses provided in blue text.

Q23. Please provide the Anglian Water acceptance and sign off documents for the scheme – indicate if any snagging remedial work was required.

Unfortunately as of today, we have been unable to locate the documentation requested however our efforts continue and we will pass on the information should we find it.

Q35. Provide the results from any additional materials testing on the non-approved pipework that has been carried out.

The results are provided in Appendix Q35. Please note that these tests were undertaken in-house as evaluation trials and were not following any protocol set out in BS6920 or equivalent.

Additional questions ([redacted] email 4 November 2022)

In relation to the requests for information for the Hannington event 2021, the Inspectorate gave an extended deadline of 21 October on the request dated 16 September (25 working days after the request was made). I understand there will be some work involved for the company in collating the responses - but in this instance many of the questions were simple request for records that just needed forwarding to the Inspectorate.

These queries include:-

4_11_A There is no appendix Q6 – please provide the document

Provided 7 November 2022

4_11_B Question 4 – the internal inspection report should be a readily available record and could be provided by return;

Provided 7 November 2022

4_11_C Question 7 (and the missing appendix 6) should demonstrate dates in and out of supply up to the present day but the info in the report stops in 2017 – please update the report to present day

Appendix Q6 provided 7 November 2022; additional information requested will be provided by 18 November 2022.

4_11_D Question 11 – The impact plan for this activity (putting the tank in supply) should be readily available;

Responses to questions raised in email of 16 September 2022 regarding Hannington WTW – 3rd tranche

Provided 7 November 2022

4_11_E Question 14 – Please provide the document control list for dates of changes to the MIC forms as there are many versions on the various submissions to the Inspectorate and there is no chronological order to the changes

As per our processes and procedures, controlled documents that are updated have a version history that is displayed on our share point site. Our MIC process is an ever developing one that has taken place over some years. Until recently the MIC form itself was not a controlled document. The MIC form has only become a controlled document this year as part of process improvements. As a result, there is no obtainable version history before this year. There has only been one controlled version of this document so far as evidenced by the version history list shown below.

Version History

Version	Modified Date	Modified By	Size
1.0	9/16/2022 02:24 PM	[redacted]	214 bytes

4_11_F Question 22 - The training records for in-house delivered training should be readily available and just require forwarding by email;

Provided 7 November 2022

Is it possible to have a response on the above questions by return?

Can you please include the following with the response due on 11 Nov:

4_11_G Question 14 – Please provide the document control list for dates of changes to the MIC forms as there are many versions on the various submissions to the Inspectorate

As per our processes and procedures, controlled documents that are updated have a version history that is displayed on our share point site. Our MIC process is an ever developing one that has taken place over some years. Until recently the MIC form itself was not a controlled document. The MIC form has only become a controlled document this year as part of process improvements. As a result, there is no obtainable version history before this year. There has only been one controlled version of this document so far as evidenced by the version history list shown below.

Responses to questions raised in email of 16 September 2022 regarding Hannington WTW – 3rd tranche

Version History

Version		Modified Date	Modified By	Size
1.0	⋮	9/16/2022 02:24 PM	[redacted]	214 bytes

4_11_H Question 24 – please include all dip sample results from 2016 to present

Response to follow (18 November 2022)

4_11_I Question 25 – the question was asked without the intention of making contact with the analysts

There have been no detections by any panellist for taste or odour at Hannington in the records presently held within the laboratory.

For records not within the laboratory but archived off-site, in order to determine the names of the analysts the original worksheets will need to be retrieved and manually reviewed as the initials of the analysts (and hence names) are not stored electronically. This will involve individually examining hundreds if not thousands of separate worksheets. We store a few months at the laboratory but the rest will need to be requested from our store which takes several days for delivery. With the exception of November and December 2016 all paper records from 2016 and earlier have been destroyed as we only keep data for the required 6 years. In addition, retrieving the records will be quite difficult logistically as it is estimated that the records will fill more than 60 large packing cases which will need to be delivered to the lab, taking several deliveries, as well as finding a secure location within the lab to store the records as they are being manually examined. The process of reviewing the documents will be labour-intensive and hence the timescales for being able to provide a final report will be in the order of a minimum of 6 – 8 weeks.

In view of this we would respectfully request the Inspectorate to reflect on the value of the information this exercise would produce and the relevance of this information to progressing the investigation and advise if it is still considered a requirement.

4_11_J Question 28 – Please provide the results for both compartments where the profile indicates there 'is something to report' in the sampling results (the question is not restricted to the MIC form results)

There have been no trace organics detections on compartment A since 2016. There have been a small number of trace organics detections on compartment B since 2016 in line with our commitment to carry out enhanced trace organics monitoring on this compartment whilst it remains in supply. This monitoring began in January 2022, please see results below.

Date	Time	Point Code	Point Name	Water Profile result µg/l	ug/l
20/01/2022	09:20	W01CAJLCR	HANNINGTON NO 1 RES SIDE B	Nonanal	0.14
20/01/2022	09:20	W01CAJLCR	HANNINGTON NO 1 RES SIDE B	Tridecanol* best fit	0.19
03/02/2022	12:38	W01CAJLCR	HANNINGTON NO 1 RES SIDE B	Nonanal	0.1
09/02/2022	14:23	W01CAJLCR	HANNINGTON NO 1 RES SIDE B	Nonanal	0.12
04/03/2022	07:46	W01CAJLCR	HANNINGTON NO 1 RES SIDE B	Nonanal	0.13
20/04/2022	08:10	W01CAJLCR	HANNINGTON NO 1 RES SIDE B	Total heavy gas oil	0.69
24/05/2022	07:33	W01CAJLCR	HANNINGTON NO 1 RES SIDE B	Nonanal	0.13
22/07/2022	07:59	W01CAJLCR	HANNINGTON NO 1 RES SIDE B	Nonanal	0.14
02/09/2022	13:39	W01CAJLCR	HANNINGTON NO 1 RES SIDE B	Ethyl hexanol	0.12
02/09/2022	13:39	W01CAJLCR	HANNINGTON NO 1 RES SIDE B	Nonanal	0.12
02/09/2022	13:39	W01CAJLCR	HANNINGTON NO 1 RES SIDE B	Tridecanol * best fit	0.1
29/09/2022	07:24	W01CAJLCR	HANNINGTON NO 1 RES SIDE B	Nonanal	0.11

4_11_K Question 30 – please provide the sample results to support the conclusion about the samples tap being the cause for the trends

Please see attached Appendix 4_11_K Question 30 showing examples of results for Reservoirs 1A and 1B. These indicate where there have been high levels of NLFs on an initial sample and that the resamples have also shown elevated levels of NLFs from the tap but not in the corresponding dip sample taken from the main body of water at the same time.

4_11_L Question 31 – please provide the resample results (include dates, times, locations)

The resamples were taken from Hannington 1B Sample tap on 02/06/2017 at 19:19 as shown in the results below:

Sample date & time:	02/06/2017 19:19:00		
Comments:	53744601 AW HANNINGTON 1B SAMPLE TAP		
Resample number:	17244298		
Determinand	**Name**	**Result**	**Unit**
09111	Chlorine Free	0.12	mg/l CL2
09121	Chlorine Total	0.58	mg/l CL2
09320	3-day Colony Count at 22C	0	No/ml _
09340	2-day Colony Count at 37C	0	No/ml _
25491	E.Coli Presumptive at 44C	0	No/100ml _
91931	Coliforms Presumptive at 37C	0	No/100ml _
91941	Coliforms Confirmed	0	No/100ml _
91951	E.Coli Confirmed	0	No/100ml _

4_11_M Question 32- please provide the full report including all samples taken and the reason for the sample (regulatory/operational). Please explain why the operational bacti sampling was stopped/reduced

Response to follow (18 November 2022)

8 November queries (email) on 16 September 2022 questions – Hannington

8_11_A Q4 refers to before the asset went into supply following the capital scheme and the new pipework – please provide this record

Response to follow (18 November 2022)

8_11_B See previous requests in the response regards to the training records for personal involved with the capital scheme at Hannington (format of the training information and dates).

Response to follow (18 November 2022)

Sample no.	Date	Time	Sample point	Reasons	75161 Water profile bar AC 1242	75171 P&T profile bar AC 1242
22405297	02/09/2022	13:39	W01CAJLCR	SS:LT: : :	1	0
22413356	08/09/2022	10:28	W01CAJLCR	SS:LT: : :	0	0
22419756	13/09/2022	09:50	W01CAJLCR	SS:LT: : :	0	0
22429489	20/09/2022	11:43	W01CAJLCR	SS:LT: : :	0	0
22445200	29/09/2022	07:24	W01CAJLCR	SS:LT: : :	1	0
22461343	07/10/2022	13:43	W01CAJLCR	SS:LT: : :	-----	0
22463376	10/10/2022	09:58	W01CAJLCR	SS:LT: : :	0	0
22466844	12/10/2022	12:55	W01CAJLCR	SS:LT:LW: :	0	-----
22475102	18/10/2022	12:23	W01CAJLCR	SS:LT: : :	0	0
22610203	28/10/2022	07:35	W01CAJLCR	IM:LT:SS: :	1	0
22613179	03/11/2022	10:53	W01CAJLCR	IM:LT:SS: :	0	0
22623555	10/11/2022	07:37	W01CAJLCR	IM:LT:SS: :	0	0
22633924	15/11/2022	08:09	W01CAJLCR	IM:LT:SS: :	1	0
22638935	24/11/2022	14:24	W01CAJLCR	SS:LT: : :	0	0
22641288	30/11/2022	08:03	W01CAJLCR	SS:LT: : :	1	0
22654927	06/12/2022	07:34	W01CAJLCR	SS:LT: : :	1	0
22664860	14/12/2022	10:01	W01CAJLCR	SS:LT: : :	0	0
22671951	21/12/2022	16:55	W01CAJLCR	SS:LT: : :	0	-----
22675403	28/12/2022	09:51	W01CAJLCR	SS:LT: : :	0	-----
23008891	12/01/2023	07:44	W01CAJLCR	SS:LT: : :	0	0
23009585	19/01/2023	10:12	W01CAJLCR	SS:LT: : :	0	0

Sample no.	Date	Time	Sample point	Reasons	Water Profile result µg/L		Operational SNARL (µg/L)	24 hour SNARL (µg/L)	7 day SNARL (µg/L)	Comments
22405297	02/09/2022	13:39	W01CAJLCR	SS:LT	Ethyl hexanol	0.12	None given	5400	2100	SNARL obtained from report requested under reference TO3777
22405297	02/09/2022	13:39	W01CAJLCR	SS:LT	Nonanal	0.12	1	1500	600	Not uncommon, below operational SNARL
22405297	02/09/2022	13:39	W01CAJLCR	SS:LT	Tridecanol * best fit	0.1	None	5520	2760	Only best fit, low result, below SNARL
22445200	29/09/2022	07:24	W01CAJLCR	SS:LT	Nonanal	0.11	1	1500	600	Not uncommon, below operational SNARL
30520066	28/10/2022	07:35	W01CAJLCR	MT:LT	Nonanal	0.26	1	1500	600	Not uncommon, below operational SNARL
30594015 (22633923)	15/11/2022	08:09	W01CAJLCR	MT:LT	Nonanal	0.27	1	1500	600	Not uncommon, below operational SNARL
30594015 (22633923)	15/11/2022	08:09	W01CAJLCR	MT:LT	Oleic acid	0.58	None given	210,000	84,000	Fatty acid, widespread use
30618894 (22641288)	30/11/2022	08:03	W01CAJLCR	SS:LT	Nonanal	0.31	1	1500	600	Not uncommon, below operational SNARL
30618894 (22641288)	30/11/2022	08:03	W01CAJLCR	SS:LT	Oleic acid	0.73	None given	210,000	84,000	Fatty acid, widespread use
30662681 (22654927)	06/12/2022	07:34	W01CAJLCR	SS:LT	Ethyl Hexanol	0.12	None given	5400	2100	Fatty acid, widespread use
30662681 (22654927)	06/12/2022	07:34	W01CAJLCR	SS:LT	Nonanal	0.1	1	1500	600	Not uncommon, below operational SNARL
30662681 (22654927)	06/12/2022	07:34	W01CAJLCR	SS:LT	Oleic acid	0.51	None given	210,000	84,000	Fatty acid, widespread use

[redacted]

[redacted]

Water Retaining Structure Internal Inspection Form

Regional Supply Area:	West
Supply Manager Area:	Wing
Site Name:	Hannington WR1 Side A
Site Short Name:	HAN1WR
Tank Name:	Treated Water Reservoir 01
Inspection Date (dd/mm/yyyy):	14/04/2016
Date of next inspection (dd/mm/yyyy) - if early check than normal frequency required:	
Inspection Reason:	final inspection
Clean Reason:	proactive clean
Impact Plan Number:	
Inspected By:	[redacted]

To upload data onto the log press Ctrl U once form complete.

Question	Answer	Comments	Remedial Work / Action	Priority 1-3*	Action Management System Number
<u>Tank Attributes</u>					
What is the tanks jack head category?	n/a				
Is the tank hydraulically isolatable - can it be easily taken out of supply?	Yes				
Is there adjoining untreated water storage - above, to the side, passing through the tank?	No				
Is this an Ozone tank - if so which stage?	No				
Is the structure covered by the reservoir act (1975) - large raised reservoirs >25,000m3?	No				
<u>Compartment Dimensions</u>					
Storage volume - floor to overflow (m3)	11640				
Operational volume - useable volume (m3)	10450				
Height of compartment (m)	5.3				
Width of compartment (m)	33.7				
Depth of compartment (m)	68.8				
Inlet height (m)	4.88	2 inlets-new and old			
Outlet height (m)	0.13				
Overflow height (m)	5.02				
Overflow diameter (mm)	200				

Top water level - normal operation (m)	4.5				
Bottom water level (m)	0.2				
Tank Structure					
What material is the tank?	Coated concrete				
What's the type of membrane?					
If an earth embankment what type is it?	Partial				
What type of roof covering is there?	Gravel				
What's the type of support structure?	Concrete				
Tank Roof					
Are there signs of leakage / ingress through roof?	No				
Is there evidence of cracks in roof?	Yes	Old cracks which seem to have sealed (salting)			
Is there evidence of discolouration / slime on internal roof?	No				
Are the roof joints / seals in satisfactory condition?	Yes				
Is there evidence of standing or pooling water?	No				
Is the roof drainage insufficient to clear all standing water?	No				
Tank walls					
Are there signs of leakage / ingress through walls?	No	See wall joints below.			
Is there evidence of cracks in walls?	No				

Is there evidence of discolouration / slime on walls?	Yes	Tide mark at top water level.	**Reservoir cleaned**		
Are the wall joints / seals in satisfactory condition?	Yes	2 wall joints leaking. Require over banding	**Wall joints over banded**		

Tank floor					
Are there signs of leakage / ingress through floor?	No	Leakage through old over banding	**Floor joints repaired**		
Is there evidence of cracks in floor?	No				
Is there evidence of discolouration / slime on floor?	No				
Was any material found in the tank / on the floor?	Yes	Carbon and rust particles.			
Tank Support structure					
Are the roof supports in satisfactory condition?	Yes				
Tank Fittings / Pipework					
Are the internal fittings in satisfactory condition?	Yes				
Is the inlet pipework in satisfactory condition?	Yes	Needs cleaning.	**Cleaned**		
Is the outlet pipework in satisfactory condition?	Yes	Needs cleaning.	**Cleaned**		
Is the overflow in satisfactory condition?	Yes	Needs cleaning.	**Cleaned**		
Are the valves in satisfactory condition?	Yes	Needs cleaning.	**Cleaned**		
Are the ladders in satisfactory condition?	Yes	Both need a clean.	**Cleaned**		
Is the metalwork in satisfactory condition?	Yes				
Are the baffled walls / curtains in satisfactory condition?	n/a				
Are the level probes in satisfactory condition?	Yes	Need checking by operations prior to returning the WR to service.			

Are cable entry points sealed, in satisfactory condition and without evidence of ingress?	No	Level instrument cable through upstand with no sealing.	Mastic seal applied on day of inspection.		
Are there any other fittings / mountings with inadequate seals / sealant?	n/a				
Are any mixers in satisfactory working order / condition?	n/a				
Are any sample pumps in satisfactory working order / condition?	n/a				
Is there any redundent pipework or equipment connected to the tank?	n/a				
Access points					
Are all the hatch, covers or doors in satisfactory condition and working order?	Yes				
Are the seals in place and in satisfactory condition?	Yes				
Are the insect meshes in place and in satisfactory condition?	Yes				
Is the mesh an adequate size? (approx. 1mm or less)	Yes				
Is the membrane lapping around up stands in satisfactory condition?	Yes				
Dedicated Air Vents					
Are the vents securely fixed undamaged and in good condition?	n/a				
Are the insect meshes in place and in satisfactory condition?	n/a				
Is the mesh an adequate size? (approx. 1mm or less)	n/a				

Roof Saturation Test					
Was the roof saturation test satisfactory?	Yes	No sign of ingress.			
Other					
Are there any other issues to note? (add detail in comments box)	No				
Have actions been added to the Action Management System (AMS)?					

To upload data onto the tracker press Ctrl U. Also the form must be saved to the correct HAWK folder (see instruction tab)

[redacted]

Priority	Brief Rationale for Categorisation	Examples
Priority 1	Major Defect. Remedial work to be implemented before return to service or within 12 months if return to service is approved pending remedial work.	Ingress issue Significant Leak
Priority 2	Remedial work to be implemented before the next inspection.	Roof Drainage Minor Leak
Priority 3	Continue to monitor condition at next inspection.	Slippage Corrosion

Water Retaining Structure Internal Inspection Form

Regional Supply Area:	West
Supply Manager Area:	Wing
Site Name:	Hannington WR
Site Short Name:	HANWR1
Tank Name:	Hannington WR1a (St1, Tnk1)
Inspection Date (dd/mm/yyyy)**:**	25/01/2022
Date of next inspection (dd/mm/yyyy) - if early check than normal frequency required:	
Inspection Reason:	initial inspection
Clean Reason:	proactive clean
Impact Plan Number:	
Inspected By:	[redacted]

To upload data onto the log press Ctrl U once form complete.

Question	Answer	Comments	Remedial Work / Action	Priority 1-3*	Action Management System Number
Tank Attributes					
What is the tanks jack head category?	n/a				
Is the tank hydraulically isolatable - can it be easily taken out of supply?	Yes				
Is there adjoining untreated water storage - above, to the side, passing through the tank?	No				
Is this an Ozone tank - if so which stage?	No				
Is the structure covered by the reservoir act (1975) - large raised reservoirs >25,000m3?	No				
Compartment Dimensions					
Storage volume - floor to overflow (m3)	11557.82				
Operational volume - useable volume (m3)	11557.82				
Height of compartment (m)	5.317				
Width of compartment (m)	33.78				
Depth of compartment (m)	68.43				
Inlet height (m)	4.875	x2 inlets- x1 old and x1 from new inlet mains New inlet main 4.875m (900cm Dia) Old inlet main 4.665m (600cm Dia)(Currently locked in closed position)			
Outlet height (m)	0.02	x1 Old Outlet main 48cm dia @ 120mm AFL (still in service) x2 New Outlet mains 50cm dia @ 93cm AFL			
Overflow height (m)	5.00	O/F stack pipe combined with washout pipework and isolation valve			
Overflow diameter (mm)	400				
Top water level - normal operation (m)	n/k	REFER TO VIEWX			
Bottom water level (m)	n/k	REFER TO VIEWX			

Tank Structure					
What material is the tank?	Other	In-situ Concrete			
What's the type of membrane?	Sheet				
If an earth embankment what type is it?	Partial				
What type of roof covering is there?	Gravel				
What's the type of support structure?	Concrete				
Tank Roof					
Are there signs of leakage / ingress through roof?	No	None evident at time of inspection.			
Is there evidence of cracks in roof?	Yes	Numerous self sealed cracks.			
Is there evidence of discolouration / slime on internal roof?	No	None evident at time of inspection.			
Are the roof joints / seals in satisfactory condition?	Yes	Appear in a satisfactory condition.			
Is there evidence of standing or pooling water?	No				
Is the roof drainage insufficient to clear all standing water?	No				
Tank walls					
Are there signs of leakage / ingress through walls?	No	None evident at time of inspection.			
Is there evidence of cracks in walls?	No	None evident at time of inspection.			
Is there evidence of discolouration / slime on walls?	No	None evident at time of inspection.			
Are the wall joints / seals in satisfactory condition?	Yes	Previously over-banded and appear in a satisfactory condition.			

Tank floor					
Are there signs of leakage / ingress through floor?	No	None evident at time of inspection.			
Is there evidence of cracks in floor?	No	None evident at time of inspection.			
Is there evidence of discolouration / slime on floor?	Yes	Some Iron sludge.			
Was any material found in the tank / on the floor?	Yes	Some GAC and Pipe inner coating material.			
Tank Support structure					
Are the roof supports in satisfactory condition?	Yes	84 square concrete columns 33cm			
Tank Fittings / Pipework					
Are the internal fittings in satisfactory condition?	Yes	All appear in a satisfactory condition.			
Is the inlet pipework in satisfactory condition?	Yes	Appear in a satisfactory condition.			
Is the outlet pipework in satisfactory condition?	No	Old outlet in satisfactory condition but x2 new outlets fail WQ audit.	Repair/remove in AW MAS	1	
Is the overflow in satisfactory condition?	Yes	Appear in a satisfactory condition.			
Are the valves in satisfactory condition?	Yes	WO valve			
Are the ladders in satisfactory condition?	Yes	x2 Ladders in good condition			
Is the metalwork in satisfactory condition?	n/a				
Are the baffled walls / curtains in satisfactory condition?	n/a				
Are the level probes in satisfactory condition?	Yes	Level probes in a satisfactory condition.			
Are cable entry points sealed, in satisfactory condition and without evidence of ingress?	Yes	Appear in a satisfactory condition.			
Are there any other fittings / mountings with inadequate seals / sealant?	No				
Are any mixers in satisfactory working order / condition?	No				

Are any sample pumps in satisfactory working order / condition?	n/a				
Is there any redundent pipework or equipment connected to the tank?	n/a				
Access points					
Are all the hatch, covers or doors in satisfactory condition and working order?	No	x2 Midas hatches in poor condition and difficult to operate.	Repair/replace	1	
Are the seals in place and in satisfactory condition?	No	x3 Techocover hatches showed evidence of water ingress during moat test	Repair IAW AW MAS	1	
Are the insect meshes in place and in satisfactory condition?	Yes	Appear in a satisfactory condition.			
Is the mesh an adequate size? (approx. 1mm or less)	Yes				
Is the membrane lapping around up stands in satisfactory condition?	Yes				
Dedicated Air Vents					
Are the vents securely fixed undamaged and in good condition?	n/a				
Are the insect meshes in place and in satisfactory condition?	n/a				
Is the mesh an adequate size? (approx. 1mm or less)	n/a				

Roof Saturation Test					
Was the roof saturation test satisfactory?	Yes	Roof saturation test satisfactory but x3 hatches failed moat test.	See line 77		
Other					
Are there any other issues to note? (add detail in comments box)	Yes	Insufficient water pressure and flow - 20000L Restoration tanker used for test.			
Have actions been added to the Action Management System (AMS)?					

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[redacted]

Priority	Brief Rationale for Categorisation	Examples
Priority 1	Major Defect. Remedial work to be implemented before return to service or within 12 months if return to service is approved pending remedial work.	Ingress issue Significant Leak
Priority 2	Remedial work to be implemented before the next inspection.	Roof Drainage Minor Leak
Priority 3	Continue to monitor condition at next inspection.	Slippage Corrosion

Water Retaining Structure Internal Inspection Form

Regional Supply Area:	West
Supply Manager Area:	Wing
Site Name:	Hannington WR
Site Short Name:	HANWR1
Tank Name:	Hannington WR1a (St1, Tnk1)
Inspection Date (dd/mm/yyyy)**:**	27/04/2022
Date of next inspection (dd/mm/yyyy) - if early check than normal frequency required:	
Inspection Reason:	final inspection
Clean Reason:	proactive clean
Impact Plan Number:	
Inspected By:	[redacted]

To upload data onto the log press Ctrl U once form complete.

Question	Answer	Comments	Remedial Work / Action	Priority 1-3*	Action Management System Number
Tank Attributes					
What is the tanks jack head category?	n/a				
Is the tank hydraulically isolatable - can it be easily taken out of supply?	Yes				
Is there adjoining untreated water storage - above, to the side, passing through the tank?	No				
Is this an Ozone tank - if so which stage?	No				
Is the structure covered by the reservoir act (1975) - large raised reservoirs >25,000m3?	No				
Compartment Dimensions					
Storage volume - floor to overflow (m3)	11557.82				
Operational volume - useable volume (m3)	11557.82				
Height of compartment (m)	5.317				
Width of compartment (m)	33.78				
Depth of compartment (m)	68.43				
Inlet height (m)	4.875	x2 inlets- x1 old and x1 from new inlet mains New inlet main 4.875m (900cm Dia) Old inlet main 4.665m (600cm Dia)(Currently locked in closed position)			
Outlet height (m)	0.02	x1 Old Outlet main 48cm dia @ 120mm AFL (still in service) x2 New Outlet mains 50cm dia @ 93cm AFL			
Overflow height (m)	5.00	O/F stack pipe combined with washout pipework and isolation valve			
Overflow diameter (mm)	400				
Top water level - normal operation (m)	n/k	REFER TO VIEWX			
Bottom water level (m)	n/k	REFER TO VIEWX			

Tank Structure					
What material is the tank?	Other	In-situ Concrete			
What's the type of membrane?	Sheet				
If an earth embankment what type is it?	Partial				
What type of roof covering is there?	Gravel				
What's the type of support structure?	Concrete				
Tank Roof					
Are there signs of leakage / ingress through roof?	No	None evident at time of inspection.			
Is there evidence of cracks in roof?	Yes	Numerous self sealed cracks.			
Is there evidence of discolouration / slime on internal roof?	No	None evident at time of inspection.			
Are the roof joints / seals in satisfactory condition?	Yes	Appear in a satisfactory condition.			
Is there evidence of standing or pooling water?	No				
Is the roof drainage insufficient to clear all standing water?	No				
Tank walls					
Are there signs of leakage / ingress through walls?	No	None evident at time of inspection.			
Is there evidence of cracks in walls?	No	None evident at time of inspection.			
Is there evidence of discolouration / slime on walls?	No	None evident at time of inspection.			
Are the wall joints / seals in satisfactory condition?	Yes	Previously over-banded and appear in a satisfactory condition.			

Tank floor					
Are there signs of leakage / ingress through floor?	No	None evident at time of inspection.			
Is there evidence of cracks in floor?	No	None evident at time of inspection.			
Is there evidence of discolouration / slime on floor?	No				
Was any material found in the tank / on the floor?	No				
Tank Support structure					
Are the roof supports in satisfactory condition?	Yes	84 square concrete columns 33cm			
Tank Fittings / Pipework					
Are the internal fittings in satisfactory condition?	Yes	All appear in a satisfactory condition.			
Is the inlet pipework in satisfactory condition?	Yes	Appear in a satisfactory condition.			
Is the outlet pipework in satisfactory condition?	Yes	Old outlet in satisfactory condition but x2 new outlets fail WQ audit.	New outlet pipework x2 repaired in AW MAS		
Is the overflow in satisfactory condition?	Yes	Appear in a satisfactory condition.			
Are the valves in satisfactory condition?	Yes	WO valve			
Are the ladders in satisfactory condition?	Yes	x2 Ladders in good condition			
Is the metalwork in satisfactory condition?	n/a				
Are the baffled walls / curtains in satisfactory condition?	n/a				
Are the level probes in satisfactory condition?	Yes	Level probes in a satisfactory condition.			
Are cable entry points sealed, in satisfactory condition and without evidence of ingress?	Yes	Appear in a satisfactory condition.			
Are there any other fittings / mountings with inadequate seals / sealant?	No				
Are any mixers in satisfactory working order / condition?	No				

Are any sample pumps in satisfactory working order / condition?	n/a				
Is there any redundent pipework or equipment connected to the tank?	n/a				
Access points					
Are all the hatch, covers or doors in satisfactory condition and working order?	Yes	x2 Midas hatches in poor condition and difficult to operate.	x2 New Technocover hatches installed IAW AW MAS		
Are the seals in place and in satisfactory condition?	Yes	x3 Techocover hatches showed evidence of water ingress during moat test	x3 hatches repaired IAW AW MAS		
Are the insect meshes in place and in satisfactory condition?	Yes	Appear in a satisfactory condition.			
Is the mesh an adequate size? (approx. 1mm or less)	Yes				
Is the membrane lapping around up stands in satisfactory condition?	Yes				
Dedicated Air Vents					
Are the vents securely fixed undamaged and in good condition?	n/a				
Are the insect meshes in place and in satisfactory condition?	n/a				
Is the mesh an adequate size? (approx. 1mm or less)	n/a				

Roof Saturation Test					
Was the roof saturation test satisfactory?	Yes	Post repair inundation test carried out with no evidence of ingress at time of inspection.			
Other					
Are there any other issues to note? (add detail in comments box)	Yes	Insufficient water pressure and flow - 20000L Restoration tanker used for test.			
Have actions been added to the Action Management System (AMS)?					

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[redacted]

Priority	Brief Rationale for Categorisation	Examples
Priority 1	Major Defect. Remedial work to be implemented before return to service or within 12 months if return to service is approved pending remedial work.	Ingress issue Significant Leak
Priority 2	Remedial work to be implemented before the next inspection.	Roof Drainage Minor Leak
Priority 3	Continue to monitor condition at next inspection.	Slippage Corrosion

Water Retaining Structure Internal Inspection Form

Regional Supply Area:	West
Supply Manager Area:	Wing
Site Name:	Hannington Reservoir 1B
Site Short Name:	HAN1WR
Tank Name:	
Inspection Date (dd/mm/yyyy)**:**	06/12/2016
Date of next inspection (dd/mm/yyyy) - if early check than normal frequency required:	
Inspection Reason:	initial inspection
Clean Reason:	programmed clean
Impact Plan Number:	
Inspected By:	[redacted]

To upload data onto the log press Ctrl U once form complete.

Question	Answer	Comments	Remedial Work / Action	Priority 1-3*	Action Management System Number
Tank Attributes					
What is the tanks jack head category?	n/a				
Is the tank hydraulically isolatable - can it be easily taken out of supply?	Yes				
Is there adjoining untreated water storage - above, to the side, passing through the tank?	No				
Is this an Ozone tank - if so which stage?	No				
Is the structure covered by the reservoir act (1975) - large raised reservoirs >25,000m3?	No				
Compartment Dimensions					
Storage volume - floor to overflow (m3)	11640				
Operational volume - useable volume (m3)	10450				
Height of compartment (m)	5.3				
Width of compartment (m)	33.7				
Depth of compartment (m)	68.8				
Inlet height (m)	4.88				
Outlet height (m)	0.13				
Overflow height (m)	5.02				
Overflow diameter (mm)	200				

Top water level - normal operation (m)	n/k	Check IRIS			
Bottom water level (m)	n/k	Check IRIS			
Tank Structure					
What material is the tank?	Coated concrete				
What's the type of membrane?	Liquid				
If an earth embankment what type is it?	Partial				
What type of roof covering is there?	Gravel				
What's the type of support structure?	Concrete				
Tank Roof					
Are there signs of leakage / ingress through roof?	No				
Is there evidence of cracks in roof?	Yes	Old cracks which seem to have sealed (salting)			
Is there evidence of discolouration / slime on internal roof?	No				
Are the roof joints / seals in satisfactory condition?	Yes	Wall joint over banded with Combi-flex			
Is there evidence of standing or pooling water?	No				
Is the roof drainage insufficient to clear all standing water?	No				
Tank walls					
Are there signs of leakage / ingress through walls?	No				
Is there evidence of cracks in walls?	No				

Is there evidence of discolouration / slime on walls?	Yes	Tide mark at top water level.			
Are the wall joints / seals in satisfactory condition?	Yes				

Tank floor					
Are there signs of leakage / ingress through floor?	Yes	small areas of combi flex adhesive deteriorated on floor over-banding	Repair damaged areas with Materseal 933	1	
Is there evidence of cracks in floor?	No				
Is there evidence of discolouration / slime on floor?	No				
Was any material found in the tank / on the floor?	No				
Tank Support structure					
Are the roof supports in satisfactory condition?	Yes	15 x 7 x 330mm^2 Diameter			
Tank Fittings / Pipework					
Are the internal fittings in satisfactory condition?	Yes				
Is the inlet pipework in satisfactory condition?	Yes				
Is the outlet pipework in satisfactory condition?	Yes				
Is the overflow in satisfactory condition?	Yes				
Are the valves in satisfactory condition?	Yes				
Are the ladders in satisfactory condition?	Yes				
Is the metalwork in satisfactory condition?	Yes				
Are the baffled walls / curtains in satisfactory condition?	n/a				
Are the level probes in satisfactory condition?	Yes				

Are cable entry points sealed, in satisfactory condition and without evidence of ingress?	Yes				
Are there any other fittings / mountings with inadequate seals / sealant?	n/a				
Are any mixers in satisfactory working order / condition?	n/a				
Are any sample pumps in satisfactory working order / condition?	n/a				
Is there any redundent pipework or equipment connected to the tank?	n/a				
Access points					
Are all the hatch, covers or doors in satisfactory condition and working order?	Yes				
Are the seals in place and in satisfactory condition?	Yes				
Are the insect meshes in place and in satisfactory condition?	Yes				
Is the mesh an adequate size? (approx. 1mm or less)	Yes				
Is the membrane lapping around up stands in satisfactory condition?	Yes				
Dedicated Air Vents					
Are the vents securely fixed undamaged and in good condition?	n/a				
Are the insect meshes in place and in satisfactory condition?	n/a				
Is the mesh an adequate size? (approx. 1mm or less)	n/a				

Roof Saturation Test					
Was the roof saturation test satisfactory?	Yes	No evidence of ingress during inspection			
Other					
Are there any other issues to note? (add detail in comments box)	No				
Have actions been added to the Action Management System (AMS)?					

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[redacted]

Priority	Brief Rationale for Categorisation	Examples
Priority 1	Major Defect. Remedial work to be implemented before return to service or within 12 months if return to service is approved pending remedial work.	Ingress issue Significant Leak
Priority 2	Remedial work to be implemented before the next inspection.	Roof Drainage Minor Leak
Priority 3	Continue to monitor condition at next inspection.	Slippage Corrosion

Water Retaining Structure Internal Inspection Form

Regional Supply Area:	West
Supply Manager Area:	Wing
Site Name:	Hannington Reservoir 1B
Site Short Name:	HAN1WR
Tank Name:	
Inspection Date (dd/mm/yyyy)**:**	30/01/2017
Date of next inspection (dd/mm/yyyy) - if early check than normal frequency required:	
Inspection Reason:	final inspection
Clean Reason:	programmed clean
Impact Plan Number:	
Inspected By:	[redacted]

To upload data onto the log press Ctrl U once form complete.

Question	Answer	Comments	Remedial Work / Action	Priority 1-3*	Action Management System Number
Tank Attributes					
What is the tanks jack head category?	n/a				
Is the tank hydraulically isolatable - can it be easily taken out of supply?	Yes				
Is there adjoining untreated water storage - above, to the side, passing through the tank?	No				
Is this an Ozone tank - if so which stage?	No				
Is the structure covered by the reservoir act (1975) - large raised reservoirs >25,000m3?	No				
Compartment Dimensions					
Storage volume - floor to overflow (m3)	11640				
Operational volume - useable volume (m3)	10450				
Height of compartment (m)	5.3				
Width of compartment (m)	33.7				
Depth of compartment (m)	68.8				
Inlet height (m)	4.88				
Outlet height (m)	0.13				
Overflow height (m)	5.02				
Overflow diameter (mm)	200				

Top water level - normal operation (m)	n/k	Check IRIS			
Bottom water level (m)	n/k	Check IRIS			
Tank Structure					
What material is the tank?	Coated concrete				
What's the type of membrane?	Liquid				
If an earth embankment what type is it?	Partial				
What type of roof covering is there?	Gravel				
What's the type of support structure?	Concrete				
Tank Roof					
Are there signs of leakage / ingress through roof?	No				
Is there evidence of cracks in roof?	Yes	Old cracks which appear to have self sealed (salting) no evidence of water ingress at time of inspection.			
Is there evidence of discolouration / slime on internal roof?	No				
Are the roof joints / seals in satisfactory condition?	Yes	Wall joint over banded with Combi-flex			
Is there evidence of standing or pooling water?	No				
Is the roof drainage insufficient to clear all standing water?	No				
Tank walls					
Are there signs of leakage / ingress through walls?	No				
Is there evidence of cracks in walls?	No				

Is there evidence of discolouration / slime on walls?	Yes	Tide mark at top water level.			
Are the wall joints / seals in satisfactory condition?	Yes				

Tank floor					
Are there signs of leakage / ingress through floor?	No	x6 small patches of combi flex adhesive repaired			
Is there evidence of cracks in floor?	No				
Is there evidence of discolouration / slime on floor?	No				
Was any material found in the tank / on the floor?	No				
Tank Support structure					
Are the roof supports in satisfactory condition?	Yes	15 x 7 x 330mm^2 Diameter			
Tank Fittings / Pipework					
Are the internal fittings in satisfactory condition?	Yes				
Is the inlet pipework in satisfactory condition?	Yes				
Is the outlet pipework in satisfactory condition?	Yes				
Is the overflow in satisfactory condition?	Yes				
Are the valves in satisfactory condition?	Yes				
Are the ladders in satisfactory condition?	Yes				
Is the metalwork in satisfactory condition?	Yes				
Are the baffled walls / curtains in satisfactory condition?	n/a				
Are the level probes in satisfactory condition?	Yes				

Are cable entry points sealed, in satisfactory condition and without evidence of ingress?	Yes				
Are there any other fittings / mountings with inadequate seals / sealant?	n/a				
Are any mixers in satisfactory working order / condition?	n/a				
Are any sample pumps in satisfactory working order / condition?	n/a				
Is there any redundent pipework or equipment connected to the tank?	n/a				
Access points					
Are all the hatch, covers or doors in satisfactory condition and working order?	Yes				
Are the seals in place and in satisfactory condition?	Yes				
Are the insect meshes in place and in satisfactory condition?	Yes				
Is the mesh an adequate size? (approx. 1mm or less)	Yes				
Is the membrane lapping around up stands in satisfactory condition?	Yes				
Dedicated Air Vents					
Are the vents securely fixed undamaged and in good condition?	n/a				
Are the insect meshes in place and in satisfactory condition?	n/a				
Is the mesh an adequate size? (approx. 1mm or less)	n/a				

Roof Saturation Test					
Was the roof saturation test satisfactory?	Yes	No evidence of ingress during inspection			
Other					
Are there any other issues to note? (add detail in comments box)	No				
Have actions been added to the Action Management System (AMS)?					

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[redacted]

Priority	Brief Rationale for Categorisation	Examples
Priority 1	Major Defect. Remedial work to be implemented before return to service or within 12 months if return to service is approved pending remedial work.	Ingress issue Significant Leak
Priority 2	Remedial work to be implemented before the next inspection.	Roof Drainage Minor Leak
Priority 3	Continue to monitor condition at next inspection.	Slippage Corrosion

West Cell Outlet									
Sample Type			**MIC**	**MIC**	**MIC**	**Commissioning**	**Commissioning**	**MIC**	**Pre Into Supply**
Sample number			17456943	18032842	18060918	18076413	18086388 and 18086624	20225769 20225838 20227429	20255414 20255880
Date			05/10/2017	26/01/2018	08/02/2018	20/02/2018	27/02/2018	23/05/2020	03/06/2020
Stand Time			16hrs	19 hours	36hrs	n/a	n/a	18 hours	n/a
Det Code	**Parameter**	**Units**							
Bacteriological									
91943/91943	Coliforms Confirmed	No/100ml	0	0	0	0	0	0	0
91953/91953	E.coli Confirmed	No/100ml	0	0	0	0	0	0	0
9340	2-day colony count at 37°C	No/ml	0	1	3	0	0	n/a	n/a
9320	3-day colony count at 22°C	No/ml	0	6	0	0	12	0	0
Chemistry									
09111	Chlorine Free	mg/l CL2	<0.05	0.08	<0.05	<0.05	0.09	0.05	<0.05
09121	Chlorine Total	mg/l CL2	0.16	0.92	0.52	0.5	0.58	0.15	0.36
00220	Taste Qualitative	---	1[1]	n/d	1[1]	n/a	1[1]	n/d	1[1]
00230	Odour Qualitative	---	1Z[2]	1Z[2]	1Z[2]	n/a	1Z[2]	1Z[2]	1Z[2]
92212	Odour Quantitative 25°C De-Chlorinated	---	Satisfactory	Satisfactory	Satisfactory	n/a	n/a	Satisfactory	n/a
97822	Taste Quantitative 25°C De-Chlorinated	---	Satisfactory	n/d	Satisfactory	n/a	n/a	Satisfactory	n/a
91371	Taste Quantitative 60°C De-Chlorinated	---	Satisfactory	Satisfactory	Satisfactory	n/a	n/a	Satisfactory	n/a
00612	pH Clean Water	pH	7.96	7.93	7.9	n/a	7.92	7.96	8.06
01621	Alkalinity Total	mg/l CACO3	187	193	193	n/a	n/a	172	n/a
00621	Conductivity at 20C	μS/cm	769	802	785	n/a	n/a	771	787
00681	Turbidity	NTU	0.14	0.15	0.08	n/a	0.09	0.12	<0.09
00721	Colour Filtered	Hazen	1.1	1.2	0.9	n/a	n/a	0.7	n/a
02875	Aluminium Total	mg/l AL	0.014	<0.014	<0.014	n/a	<0.014	0.029	0.042
Organics									
75161	Water Profile	μg/l	Undecanol - 0.12	Nothing to report	Nothing to report	n/a	n/a	Nothing to Report	n/a
75171	Purge and Trap	μg/l	Nothing to report	Ethyl hexanol - 0.14	Nothing to report	n/a	n/a	Nothing to Report	n/a

[1] No taste/satisfactory
[2] No odour
[3] Very mild chlorine

East Cell Outlet									
Sample Type			**MIC**	**MIC**	**Commissioning**	**Commissioning**	**MIC**	**MIC**	**Pre Into Supply**
Sample number			18032844	18060920	18076414	18086389 & 18086625	20233317 20250177 20250181	20259952	20257605 20257591
Date			26/01/2018	08/02/2018	20/02/2018	27/02/2018	30/05/2020	08/06/2020	05/06/2020
Stand Time			19 hours	36 hours	n/a	n/a	16hrs	16hrs	n/a
Det Code	**Parameter**	**Units**							
Bacteriological									
91943	Coliforms Confirmed	No/100ml	0	0	0	0	0	n/a	0
91953	E.coli Confirmed	No/100ml	0	0	0	0	0	n/a	0
9340	2-day colony count at 37°C	No/ml	0	3	4	1	n/a	n/a	n/a
9320	3-day colony count at 22°C	No/ml	0	0	0	24	0	n/a	0
Chemistry									
09111	Chlorine Free	mg/l CL2	0.08	0.09	<0.05	0.09	0.05	0.06	0.08
09121	Chlorine Total	mg/l CL2	0.75	0.85	0.55	0.63	0.15	0.55	0.33
00220	Taste Qualitative	---	1[1]	1[1]	n/a	1[1]	1[1]	n/a	1[1]
00230	Odour Qualitative	---	1Z[2]	1Z[2]	n/a	1Z[2]	2T[3]	n/a	1Z[2]
92212	Odour Quantitative 25°C De-Chlorinated	---	Satisfactory	Satisfactory	n/a	n/a	Satisfactory	Satisfactory	n/a
97822	Taste Quantitative 25°C De-Chlorinated	---	Satisfactory	Satisfactory	n/a	n/a	Satisfactory	Satisfactory	n/a
91371	Odour Quantitative 60°C De-Chlorinated	---	Satisfactory	Satisfactory	n/a	n/a	Satisfactory	n/a	n/a
00612	pH Clean Water	pH	7.93	7.89	n/a	7.93	7.92	n/a	7.88
01621	Alkalinity Total	mg/l CACO3	195	191	n/a	n/a	169	n/a	n/a
00621	Conductivity at 20C	µS/cm	800	799	n/a	n/a	767	n/a	780
00681	Turbidity	NTU	0.24	0.12	n/a	0.08	0.19	n/a	0.13
00721	Colour Filtered	Hazen	0.9	1.2	n/a	n/a	<0.34	n/a	n/a
02875	Aluminium Total	mg/l AL	<0.014	<0.014	n/a	<0.014	<0.014	<0.014	<0.014
Organics									
75161	Water Profile	µg/l	Nothing to Report	Nothing to Report	n/a	n/a	Nothing to Report	n/a	n/a
75171	Purge and Trap	µg/l	Ethyl hexanol - 0.19	Nothing to Report	n/a	n/a	Nothing to Report	n/a	n/a

[1] No taste/satisfactory
[2] No odour
[3] Very mild chlorine

Combined Cell Sample Point					
Sample Type			**MIC**	**Commissioning**	**Commissioning**
Sample number			18060919	18070553	18077909
Date			08/02/2018	15/02/2018	21/02/2018
Stand Time			36 hours	n/a	n/a
Det Code	**Parameter**	**Units**			
Bacteriological					
91943	Coliforms Confirmed	No/100ml	0	0	0
91953	E.coli Confirmed	No/100ml	0	0	0
9340	2-day colony count at 37°C	No/ml	2	30	2
9320	3-day colony count at 22°C	No/ml	8	20	259
Chemistry Paramters					
09111	Chlorine Free	mg/l CL2	<0.05	<0.05	0.05
09121	Chlorine Total	mg/l CL2	0.3	0.24	0.37
00220	Taste Qualitative	---	1[1]	1[1]	1[1]
00230	Odour Qualitative	---	1Z[2]	1Z[2]	1Z[2]
92212	Odour Quantitative 25°C De-Chlorinated	---	Satisfactory	Satisfactory	Satisfactory
97822	Taste Quantitative 25°C De-Chlorinated	---	Satisfactory	Satisfactory	Satisfactory
91371	Taste Quantitative 60°C De-Chlorinated	---	Satisfactory	n/a	n/a
00612	pH Clean Water	pH	8.08	8.06	7.9
01621	Alkalinity Total	mg/l CACO3	190	n/a	n/a
00621	Conductivity at 20C	µS/cm	792	801	798
00681	Turbidity	NTU	0.23	0.27	0.15
00721	Colour Filtered	Hazen	1.2	n/a	n/a
02875	Aluminium Total	mg/l AL	<0.014	n/a	n/a
Organics					
75161	Water Profile	µg/l	Nothing to report	n/a	n/a
75171	Purge and Trap	µg/l	Nothing to report	n/a	n/a

[1] No taste/satisfactory
[2] No odour
[3] Very mild chlorine

Sample description	Item	Sample nu	Date	Weight (g)	Soak time	Soak condi	Analysis	Compound	Concentration (µg/L)	Operational SNARL (µg/L)	24 hour SNARL (µg/L)	7 day SNARL (µg/L)	
Diddington West cell overflow - main barrell	Diddington West cell overflow - main barrell	none given	11/11/2021		24	DI Water	DCM Water profile	Non detected	n/a	n/a	n/a	n/a	
Diddington West cell overflow - main barrell	Diddington West cell overflow - main barrell	none given	11/11/2021		24	DCM	DCM Water profile	Non detected	n/a	n/a	n/a	n/a	
DIDDINGTON EAST TANK OVERFLOW FLANGE 24HR SOAK	Diddington East Overflow	21528817	19/11/2021	1.99	24	DI Water	DCM Water profile	Total diisooctyl phthalate	50.03	no data	3000	1500	
DIDDINGTON EAST TANK OVERFLOW FLANGE 168HR SOAK	Diddington East Overflow	21528820	19/11/2021	2.0801	168	DI Water	DCM Water profile	Dioctyl phthalate	37.66	no data	12000	6000	
DIDDINGTON EAST TANK OVERFLOW FLANGE 24HR SOAK	Diddington East Overflow	21528817	19/11/2021	1.99	24	DI Water	DCM Water profile	Diisobutyl phthalate	30.09	no data	150	60	
DIDDINGTON EAST TANK OVERFLOW FLANGE 168HR SOAK	Diddington East Overflow	21528820	19/11/2021	2.0801	168	DI Water	DCM Water profile	Diisobutyl phthalate	25.01	no data	150	60	
DIDDINGTON EAST TANK OVERFLOW FLANGE 48HR SOAK	Diddington East Overflow	21528818	19/11/2021	2.0136	48	DI Water	DCM Water profile	Total diisooctyl phthalate	24.38	no data	3000	1500	
DIDDINGTON EAST TANK OVERFLOW FLANGE 48HR SOAK	Diddington East Overflow	21528818	19/11/2021	2.0136	48	DI Water	DCM Water profile	Diisobutyl phthalate	20.71	no data	150	60	
DIDDINGTON EAST TANK OVERFLOW FLANGE 24HR SOAK	Diddington East Overflow	21528817	19/11/2021	1.99	24	DI Water	DCM Water profile	Dibutyl phthalate	17.48	no data	150	60	
DIDDINGTON EAST TANK OVERFLOW FLANGE 168HR SOAK	Diddington East Overflow	21528820	19/11/2021	2.0801	168	DI Water	DCM Water profile	Dibutyl phthalate	15.67	no data	150	60	
DIDDINGTON EAST TANK OVERFLOW FLANGE 24HR SOAK	Diddington East Overflow	21528817	19/11/2021	1.99	24	DI Water	DCM Water profile	Dicyclohexyl ester phthalic acid	13.49	no data	4800	2400	
DIDDINGTON EAST TANK OVERFLOW FLANGE 48HR SOAK	Diddington East Overflow	21528818	19/11/2021	2.0136	48	DI Water	DCM Water profile	Dibutyl phthalate	12.28	no data	150	60	
DIDDINGTON EAST TANK OVERFLOW FLANGE 96HR SOAK	Diddington East Overflow	21528819	19/11/2021	2.1011	96	DI Water	DCM Water profile	Diisobutyl phthalate	9.68	no data	150	60	
DIDDINGTON EAST TANK OVERFLOW FLANGE 48HR SOAK	Diddington East Overflow	21528818	19/11/2021	2.0136	48	DI Water	DCM Water profile	Dioctyl phthalate	9.55	no data	12000	6000	
DIDDINGTON EAST TANK OVERFLOW FLANGE 168HR SOAK	Diddington East Overflow	21528820	19/11/2021	2.0801	168	DI Water	DCM Water profile	Diethyl phthalate	8.84	no data	12000	4800	
DIDDINGTON EAST TANK OVERFLOW FLANGE 24HR SOAK	Diddington East Overflow	21528817	19/11/2021	1.99	24	DI Water	DCM Water profile	Palmitic acid	8.01	10000	2500	no data	
DIDDINGTON EAST TANK OVERFLOW FLANGE 48HR SOAK	Diddington East Overflow	21528818	19/11/2021	2.0136	48	DI Water	DCM Water profile	Dicyclohexyl ester phthalic acid	7.86	no data	4800	2400	
DIDDINGTON EAST TANK OVERFLOW FLANGE 168HR SOAK	Diddington East Overflow	21528820	19/11/2021	2.0801	168	DI Water	DCM Water profile	Dicyclohexyl ester phthalic acid	7.8	no data	4800	2400	
DIDDINGTON EAST TANK OVERFLOW FLANGE 24HR SOAK	Diddington East Overflow	21528817	19/11/2021	1.99	24	DI Water	DCM Water profile	Benzyl butyl phthalate	6.96	no data	7500	3000	
DIDDINGTON EAST TANK OVERFLOW FLANGE 96HR SOAK	Diddington East Overflow	21528819	19/11/2021	2.1011	96	DI Water	DCM Water profile	Dibutyl phthalate	6.78	no data	150	60	
DIDDINGTON EAST TANK OVERFLOW FLANGE 168HR SOAK	Diddington East Overflow	21528820	19/11/2021	2.0801	168	DI Water	DCM Water profile	Dimethyl pyridinediyl ethanone	6.54	no data	no data	no data	
DIDDINGTON EAST TANK OVERFLOW FLANGE 168HR SOAK	Diddington East Overflow	21528820	19/11/2021	2.0801	168	DI Water	DCM Water profile	Benzyl butyl phthalate	5.97	no data	7500	3000	
DIDDINGTON EAST TANK OVERFLOW FLANGE 24HR SOAK	Diddington East Overflow	21528817	19/11/2021	1.99	24	DI Water	DCM Water profile	Diethyl phthalate	5.57	no data	12000	4800	
DIDDINGTON EAST TANK OVERFLOW FLANGE 48HR SOAK	Diddington East Overflow	21528818	19/11/2021	2.0136	48	DI Water	DCM Water profile	Diethyl phthalate	5.52	no data	12000	4800	
DIDDINGTON EAST TANK OVERFLOW FLANGE 24HR SOAK	Diddington East Overflow	21528817	19/11/2021	1.99	24	DI Water	DCM Water profile	Tributyl phosphate	5.35	no data	2400	1200	
DIDDINGTON EAST TANK OVERFLOW FLANGE 48HR SOAK	Diddington East Overflow	21528818	19/11/2021	2.0136	48	DI Water	DCM Water profile	Benzyl butyl phthalate	4.99	no data	7500	3000	
DIDDINGTON EAST TANK OVERFLOW FLANGE 168HR SOAK	Diddington East Overflow	21528820	19/11/2021	2.0801	168	DI Water	DCM Water profile	Palmitic acid	4.72	10000	2500	no data	
DIDDINGTON EAST TANK OVERFLOW FLANGE 48HR SOAK	Diddington East Overflow	21528818	19/11/2021	2.0136	48	DI Water	DCM Water profile	Tributyl phosphate	4.59	no data	2400	1200	
DIDDINGTON EAST TANK OVERFLOW FLANGE 96HR SOAK	Diddington East Overflow	21528819	19/11/2021	2.1011	96	DI Water	DCM Water profile	Dioctyl phthalate	4.2	no data	12000	6000	
DIDDINGTON EAST TANK OVERFLOW FLANGE 168HR SOAK	Diddington East Overflow	21528820	19/11/2021	2.0801	168	DI Water	DCM Water profile	Tributyl phosphate	4.16	no data	2400	1200	
DIDDINGTON EAST TANK OVERFLOW FLANGE 48HR SOAK	Diddington East Overflow	21528818	19/11/2021	2.0136	48	DI Water	DCM Water profile	Palmitic acid	4.05	10000	2500	no data	
DIDDINGTON EAST TANK OVERFLOW FLANGE 24HR SOAK	Diddington East Overflow	21528817	19/11/2021	1.99	24	DI Water	DCM Water profile	Dioctyl phthalate	3.72	no data	12000	6000	
DIDDINGTON EAST TANK OVERFLOW FLANGE 24HR SOAK	Diddington East Overflow	21528817	19/11/2021	1.99	24	DI Water	DCM Water profile	Tributyl phosphate	3.23	no data	2400	1200	
DIDDINGTON EAST TANK OVERFLOW FLANGE 24HR SOAK	Diddington East Overflow	21528817	19/11/2021	1.99	24	DI Water	DCM Water profile	Oleic acid	3.01	no data	210000	84000	
DIDDINGTON EAST TANK OVERFLOW FLANGE 168HR SOAK	Diddington East Overflow	21528820	19/11/2021	2.0801	168	DI Water	DCM Water profile	Myristic acid	2.94	no data	5000	no data	
DIDDINGTON EAST TANK OVERFLOW FLANGE 24HR SOAK	Diddington East Overflow	21528817	19/11/2021	1.99	24	DI Water	DCM Water profile	Myristic acid	2.92	no data	5000	no data	
DIDDINGTON EAST TANK OVERFLOW FLANGE 168HR SOAK	Diddington East Overflow	21528820	19/11/2021	2.0801	168	DI Water	DCM Water profile	Phenoxy ethanol	2.91	no data	24000	12000	
DIDDINGTON EAST TANK OVERFLOW FLANGE 96HR SOAK	Diddington East Overflow	21528819	19/11/2021	2.1011	96	DI Water	DCM Water profile	Diethyl phthalate	2.81	no data	12000	4800	
DIDDINGTON EAST TANK OVERFLOW FLANGE 168HR SOAK	Diddington East Overflow	21528820	19/11/2021	2.0801	168	DI Water	DCM Water profile	Tributyl phosphate	2.47	no data	2400	1200	
DIDDINGTON EAST TANK OVERFLOW FLANGE 24HR SOAK	Diddington East Overflow	21528817	19/11/2021	1.99	24	DI Water	DCM Water profile	Squalene	2.26	no data	2500	no data	
DIDDINGTON EAST TANK OVERFLOW FLANGE 48HR SOAK	Diddington East Overflow	21528818	19/11/2021	2.0136	48	DI Water	DCM Water profile	Myristic acid	2.09	no data	5000	no data	
DIDDINGTON EAST TANK OVERFLOW FLANGE 168HR SOAK	Diddington East Overflow	21528820	19/11/2021	2.0801	168	DI Water	DCM Water profile	Oleic acid	2.01	no data	210000	84000	
DIDDINGTON EAST TANK OVERFLOW FLANGE 168HR SOAK	Diddington East Overflow	21528820	19/11/2021	2.0801	168	DI Water	DCM Water profile	Dodecanol	1.83	no data	60000	30000	
DIDDINGTON EAST TANK OVERFLOW FLANGE 48HR SOAK	Diddington East Overflow	21528818	19/11/2021	2.0136	48	DI Water	DCM Water profile	Phenoxy ethanol	1.72	no data	24000	12000	
DIDDINGTON EAST TANK OVERFLOW FLANGE 24HR SOAK	Diddington East Overflow	21528817	19/11/2021	1.99	24	DI Water	DCM Water profile	Phenoxy ethanol	1.69	no data	24000	12000	
DIDDINGTON EAST TANK OVERFLOW FLANGE 24HR SOAK	Diddington East Overflow	21528817	19/11/2021	1.99	24	DI Water	DCM Water profile	Dodecanol	1.64	no data	60000	30000	
DIDDINGTON EAST TANK OVERFLOW FLANGE 168HR SOAK	Diddington East Overflow	21528820	19/11/2021	2.0801	168	DI Water	DCM Water profile	Tridecylic acid	1.63	no data	no data	no data	
DIDDINGTON EAST TANK OVERFLOW FLANGE 96HR SOAK	Diddington East Overflow	21528819	19/11/2021	2.1011	96	DI Water	DCM Water profile	Dicyclohexyl ester phthalic acid	1.6	no data	4800	2400	
DIDDINGTON EAST TANK OVERFLOW FLANGE 48HR SOAK	Diddington East Overflow	21528818	19/11/2021	2.0136	48	DI Water	DCM Water profile	Oleic acid	1.58	no data	210000	84000	
DIDDINGTON EAST TANK OVERFLOW FLANGE 24HR SOAK	Diddington East Overflow	21528817	19/11/2021	1.99	24	DI Water	DCM Water profile	Chloro phosphate propanol	1.43	no data	1200	600	TRIS
DIDDINGTON EAST TANK OVERFLOW FLANGE 168HR SOAK	Diddington East Overflow	21528820	19/11/2021	2.0801	168	DI Water	DCM Water profile	Triacetin	1.36	no data	50000	20000	
DIDDINGTON WEST TANK OVERFLOW MIDDLE OF PIPE 24HR SOAK	Diddington West Overflow middle of pipe	21528813	19/11/2021	0.49	24	DI Water	DCM Water profile	Oleic acid	1.26	no data	210000	84000	
DIDDINGTON EAST TANK OVERFLOW FLANGE 168HR SOAK	Diddington East Overflow	21528820	19/11/2021	2.0801	168	DI Water	DCM Water profile	Chloro phosphate propanol	1.25	no data	1200	600	TRIS
DIDDINGTON EAST TANK OVERFLOW FLANGE 96HR SOAK	Diddington East Overflow	21528819	19/11/2021	2.1011	96	DI Water	DCM Water profile	Benzyl butyl phthalate	1.19	no data	7500	3000	
DIDDINGTON EAST TANK OVERFLOW FLANGE 24HR SOAK	Diddington East Overflow	21528817	19/11/2021	1.99	24	DI Water	DCM Water profile	Tridecylic acid	1.17	no data	no data	no data	
DIDDINGTON EAST TANK OVERFLOW FLANGE 24HR SOAK	Diddington East Overflow	21528817	19/11/2021	1.99	24	DI Water	DCM Water profile	Pentadecylic acid	1.16	no data	no data	no data	
DIDDINGTON EAST TANK OVERFLOW FLANGE 48HR SOAK	Diddington East Overflow	21528818	19/11/2021	2.0136	48	DI Water	DCM Water profile	Dodecanol	1.16	no data	60000	30000	
DIDDINGTON EAST TANK OVERFLOW FLANGE 24HR SOAK	Diddington East Overflow	21528817	19/11/2021	1.99	24	DI Water	DCM Water profile	Palmitoleic acid	1.13	no data	no data	no data	
DIDDINGTON WEST TANK OVERFLOW MIDDLE OF PIPE 48HR SOAK	Diddington West Overflow middle of pipe	21528814	19/11/2021	0.4892	48	DI Water	DCM Water profile	Ethylhexyl ester hexanedioic acid (best fit)	1.06	no data	4200	1680	
DIDDINGTON EAST TANK OVERFLOW FLANGE 96HR SOAK	Diddington East Overflow	21528819	19/11/2021	2.1011	96	DI Water	DCM Water profile	Total tributyl phosphate	1	no data	2400	1200	
DIDDINGTON EAST TANK OVERFLOW FLANGE 168HR SOAK	Diddington East Overflow	21528820	19/11/2021	2.0801	168	DI Water	DCM Water profile	Unknown compound (RT 22.672)	1	no data	no data	no data	
DIDDINGTON EAST TANK OVERFLOW FLANGE 168HR SOAK	Diddington East Overflow	21528820	19/11/2021	2.0801	168	DI Water	DCM Water profile	Vanillin	0.99	no data	3750	1500	
DIDDINGTON EAST TANK OVERFLOW FLANGE 48HR SOAK	Diddington East Overflow	21528818	19/11/2021	2.0136	48	DI Water	DCM Water profile	Tridecylic acid	0.98	no data	no data	no data	
DIDDINGTON EAST TANK OVERFLOW FLANGE 96HR SOAK	Diddington East Overflow	21528819	19/11/2021	2.1011	96	DI Water	DCM Water profile	Phenoxy ethanol	0.96	no data	24000	12000	
DIDDINGTON EAST TANK OVERFLOW FLANGE 168HR SOAK	Diddington East Overflow	21528820	19/11/2021	2.0801	168	DI Water	DCM Water profile	Pentadecylic acid	0.95	no data	no data	no data	
DIDDINGTON EAST TANK OVERFLOW FLANGE 48HR SOAK	Diddington East Overflow	21528818	19/11/2021	2.0136	48	DI Water	DCM Water profile	Chloro phosphate propanol	0.89	no data	1200	600	TRIS
DIDDINGTON EAST TANK OVERFLOW FLANGE 168HR SOAK	Diddington East Overflow	21528820	19/11/2021	2.0801	168	DI Water	DCM Water profile	Hexamethyl cyclotrisiloxane	0.88	no data	1250	500	
DIDDINGTON EAST TANK OVERFLOW FLANGE 48HR SOAK	Diddington East Overflow	21528818	19/11/2021	2.0136	48	DI Water	DCM Water profile	Triacetin	0.79	no data	50000	20000	
DIDDINGTON EAST TANK OVERFLOW FLANGE 48HR SOAK	Diddington East Overflow	21528818	19/11/2021	2.0136	48	DI Water	DCM Water profile	Pentadecylic acid	0.79	no data	no data	no data	
DIDDINGTON EAST TANK OVERFLOW FLANGE 168HR SOAK	Diddington East Overflow	21528820	19/11/2021	2.0801	168	DI Water	DCM Water profile	Tridecanol	0.78	no data	5520	2760	
DIDDINGTON EAST TANK OVERFLOW FLANGE 168HR SOAK	Diddington East Overflow	21528820	19/11/2021	2.0801	168	DI Water	DCM Water profile	Triphenyl phosphate	0.78	no data	7000	3500	
DIDDINGTON EAST TANK OVERFLOW FLANGE 24HR SOAK	Diddington East Overflow	21528817	19/11/2021	1.99	24	DI Water	DCM Water profile	Triacetin	0.77	no data	50000	20000	
DIDDINGTON EAST TANK OVERFLOW FLANGE 48HR SOAK	Diddington East Overflow	21528818	19/11/2021	2.0136	48	DI Water	DCM Water profile	Squalene	0.74	no data	2500	no data	
DIDDINGTON EAST TANK OVERFLOW FLANGE 168HR SOAK	Diddington East Overflow	21528820	19/11/2021	2.0801	168	DI Water	DCM Water profile	Butyl benzenesulfonamide	0.74	no data	1500	750	
DIDDINGTON EAST TANK OVERFLOW FLANGE 24HR SOAK	Diddington East Overflow	21528817	19/11/2021	1.99	24	DI Water	DCM Water profile	Triphenyl phosphate	0.72	no data	7000	3500	
DIDDINGTON EAST TANK OVERFLOW FLANGE 168HR SOAK	Diddington East Overflow	21528820	19/11/2021	2.0801	168	DI Water	DCM Water profile	Dimethyl phthalate	0.72	no data	22500	11250	
DIDDINGTON EAST TANK OVERFLOW FLANGE 24HR SOAK	Diddington East Overflow	21528817	19/11/2021	1.99	24	DI Water	DCM Water profile	Hexanoic acid tetradecyl ester	0.71	no data	no data	no data	
DIDDINGTON EAST TANK OVERFLOW FLANGE 48HR SOAK	Diddington East Overflow	21528818	19/11/2021	2.0136	48	DI Water	DCM Water profile	Palmitoleic acid	0.68	no data	no data	no data	
DIDDINGTON EAST TANK OVERFLOW FLANGE 24HR SOAK	Diddington East Overflow	21528817	19/11/2021	1.99	24	DI Water	DCM Water profile	Tridecanol	0.67	no data	5520	2760	
DIDDINGTON EAST TANK OVERFLOW FLANGE 168HR SOAK	Diddington East Overflow	21528820	19/11/2021	2.0801	168	DI Water	DCM Water profile	Tetramethyl decyn diol	0.64	no data	60000	30000	
DIDDINGTON EAST TANK OVERFLOW FLANGE 24HR SOAK	Diddington East Overflow	21528817	19/11/2021	1.99	24	DI Water	DCM Water profile	Tetramethyldecyndiol	0.62	no data	16800	8400	

DIDDINGTON EAST TANK OVERFLOW FLANGE 168HR SOAK	Diddington East Overflow	21528820	19/11/2021	2.0801	168	DI Water	DCM Water profile	Squalene	0.62	no data	2500	no data
DIDDINGTON EAST TANK OVERFLOW FLANGE 48HR SOAK	Diddington East Overflow	21528818	19/11/2021	2.0136	48	DI Water	DCM Water profile	Triphenyl phosphate	0.6	no data	7000	3500
DIDDINGTON EAST TANK OVERFLOW FLANGE 48HR SOAK	Diddington East Overflow	21528818	19/11/2021	2.0136	48	DI Water	DCM Water profile	Hexamethyl cyclotrisiloxane	0.59	no data	1250	500
DIDDINGTON EAST TANK OVERFLOW FLANGE 168HR SOAK	Diddington East Overflow	21528820	19/11/2021	2.0801	168	DI Water	DCM Water profile	Butoxyethoxy ethanol	0.59	400	8100	1050
DIDDINGTON EAST TANK OVERFLOW FLANGE 96HR SOAK	Diddington East Overflow	21528819	19/11/2021	2.1011	96	DI Water	DCM Water profile	Dodecanol	0.58	no data	60000	30000
DIDDINGTON EAST TANK OVERFLOW FLANGE 168HR SOAK	Diddington East Overflow	21528820	19/11/2021	2.0801	168	DI Water	DCM Water profile	Decahydro tetramethyl naphthofuranone	0.58	no data	15000	6000
DIDDINGTON EAST TANK OVERFLOW FLANGE 24HR SOAK	Diddington East Overflow	21528817	19/11/2021	1.99	24	DI Water	DCM Water profile	Butyl benzenesulfonamide	0.56	no data	1500	750
DIDDINGTON EAST TANK OVERFLOW FLANGE 48HR SOAK	Diddington East Overflow	21528818	19/11/2021	2.0136	48	DI Water	DCM Water profile	Tridecanol	0.5	no data	5520	2760
DIDDINGTON EAST TANK OVERFLOW FLANGE 48HR SOAK	Diddington East Overflow	21528818	19/11/2021	2.0136	48	DI Water	DCM Water profile	Vanillin	0.49	no data	3750	1500
DIDDINGTON EAST TANK OVERFLOW FLANGE 48HR SOAK	Diddington East Overflow	21528818	19/11/2021	2.0136	48	DI Water	DCM Water profile	Butyl benzenesulfonamide	0.49	no data	1500	750
DIDDINGTON EAST TANK OVERFLOW FLANGE 96HR SOAK	Diddington East Overflow	21528819	19/11/2021	2.1011	96	DI Water	DCM Water profile	Lauric acid	0.49	10000	16500	6600
DIDDINGTON EAST TANK OVERFLOW FLANGE 96HR SOAK	Diddington East Overflow	21528819	19/11/2021	2.1011	96	DI Water	DCM Water profile	Myristic acid	0.48	no data	5000	no data
DIDDINGTON EAST TANK OVERFLOW FLANGE 48HR SOAK	Diddington East Overflow	21528818	19/11/2021	2.0136	48	DI Water	DCM Water profile	Hexanoic acid tetradecyl ester	0.47	no data	no data	no data
DIDDINGTON WEST TANK OVERFLOW MIDDLE OF PIPE 168HR SOAK	Diddington West Overflow middle of pipe	21528816	19/11/2021	0.4986	168	DI Water	DCM Water profile	Oleic acid	0.42	no data	210000	84000
DIDDINGTON EAST TANK OVERFLOW FLANGE 96HR SOAK	Diddington East Overflow	21528819	19/11/2021	2.1011	96	DI Water	DCM Water profile	Triacetin	0.28	no data	50000	20000
DIDDINGTON WEST TANK OVERFLOW MIDDLE OF PIPE 48HR SOAK	Diddington West Overflow middle of pipe	21528814	19/11/2021	0.4892	48	DI Water	DCM Water profile	Oleic acid	0.26	no data	210000	84000
DIDDINGTON EAST TANK OVERFLOW FLANGE 96HR SOAK	Diddington East Overflow	21528819	19/11/2021	2.1011	96	DI Water	DCM Water profile	Vanillin	0.26	no data	3750	1500
DIDDINGTON EAST TANK OVERFLOW FLANGE 96HR SOAK	Diddington East Overflow	21528819	19/11/2021	2.1011	96	DI Water	DCM Water profile	Tridecylic acid	0.2	no data	no data	no data
DIDDINGTON EAST TANK OVERFLOW FLANGE 96HR SOAK	Diddington East Overflow	21528819	19/11/2021	2.1011	96	DI Water	DCM Water profile	Chloro phosphate propanol	0.2	no data	1200	600
DIDDINGTON WEST TANK OVERFLOW MIDDLE OF PIPE 48HR SOAK	Diddington West Overflow middle of pipe	21528814	19/11/2021	0.4892	48	DI Water	DCM Water profile	Phthalic anhydride	0.19	no data	15000	6000
DIDDINGTON EAST TANK OVERFLOW FLANGE 96HR SOAK	Diddington East Overflow	21528819	19/11/2021	2.1011	96	DI Water	DCM Water profile	Butyl benzenesulfonamide	0.19	no data	1500	750
DIDDINGTON WEST TANK OVERFLOW MIDDLE OF PIPE 24HR SOAK	Diddington West Overflow middle of pipe	21528813	19/11/2021	0.49	24	DI Water	DCM Water profile	Palmitic acid	0.18	10000	2500	no data
DIDDINGTON EAST TANK OVERFLOW FLANGE 96HR SOAK	Diddington East Overflow	21528819	19/11/2021	2.1011	96	DI Water	DCM Water profile	Hexamethyl cyclotrisiloxane	0.16	no data	1250	500
DIDDINGTON EAST TANK OVERFLOW FLANGE 96HR SOAK	Diddington East Overflow	21528819	19/11/2021	2.1011	96	DI Water	DCM Water profile	Dimethyl phthalate	0.15	no data	22500	11250
DIDDINGTON EAST TANK OVERFLOW FLANGE 96HR SOAK	Diddington East Overflow	21528819	19/11/2021	2.1011	96	DI Water	DCM Water profile	Ethoxy ethyl ester benzoic acid	0.14	no data	no data	no data
DIDDINGTON EAST TANK OVERFLOW FLANGE 96HR SOAK	Diddington East Overflow	21528819	19/11/2021	2.1011	96	DI Water	DCM Water profile	Tridecanol	0.14	no data	5520	2760
DIDDINGTON WEST TANK OVERFLOW MIDDLE OF PIPE 168HR SOAK	Diddington West Overflow middle of pipe	21528816	19/11/2021	0.4986	168	DI Water	DCM Water profile	Phthalic anhydride	0.11	no data	15000	6000
DIDDINGTON WEST TANK OVERFLOW MIDDLE OF PIPE 24HR SOAK	Diddington West Overflow middle of pipe	21528813	19/11/2021	0.49	24	DI Water	DCM Water profile	Ethylhexyl ester hexanedioic acid (best fit)	0.1	no data	4200	1680
DIDDINGTON WEST TANK OVERFLOW MIDDLE OF PIPE 24HR SOAK	Diddington West Overflow middle of pipe	21528813	19/11/2021	0.49	24	DI Water	DCM Water profile	Phthalic anhydride	0.03	no data	15000	6000
DIDDINGTON WEST TANK OVERFLOW MIDDLE OF PIPE 96HR SOAK	Diddington West Overflow middle of pipe	21528815	19/11/2021	0.4825	96	DI Water	DCM Water profile	Phthalic anhydride	0.02	no data	15000	6000
DIDDINGTON WEST TANK OVERFLOW MIDDLE OF PIPE 96HR SOAK	Diddington West Overflow middle of pipe	21528815	19/11/2021	0.4825	96	DI Water	DCM Water profile	Oleic acid	0.02	no data	210000	84000

	Code	DetName	Result 24 hours	Result 48 hours	Result 96 hours	Result 168 hours	DetUnits1	PCV	Internal target standard
DIDDINGTON WEST TANK OVERFLOW MIDDLE OF PIPE SOAK	1825	Silicon Acidified	< 0.450	< 0.450	< 0.450	< 0.160	mg/l SIO2		
DIDDINGTON WEST TANK OVERFLOW MIDDLE OF PIPE SOAK	1835	Sulphate Total	< 14.50	< 14.50	< 14.50	< 8.35	mg/l SO4	250	230
DIDDINGTON WEST TANK OVERFLOW MIDDLE OF PIPE SOAK	2075	Sodium Total	< 8.533	< 8.533	< 8.533	< 12.330	mg/l NA	200	180
DIDDINGTON WEST TANK OVERFLOW MIDDLE OF PIPE SOAK	2115	Potassium Total	< 0.370	< 0.370	< 0.370	0.329	mg/l K		150
DIDDINGTON WEST TANK OVERFLOW MIDDLE OF PIPE SOAK	2155	Copper Total	< 0.0020	< 0.0020	< 0.0020	< 0.0380	mg/l CU	2	1
DIDDINGTON WEST TANK OVERFLOW MIDDLE OF PIPE SOAK	2375	Magnesium Total	< 0.787	< 0.787	< 0.787	< 0.810	mg/l MG		50
DIDDINGTON WEST TANK OVERFLOW MIDDLE OF PIPE SOAK	2415	Calcium Total	< 6.230	< 6.230	< 6.230	0.594	mg/l CA		200
DIDDINGTON WEST TANK OVERFLOW MIDDLE OF PIPE SOAK	2455	Zinc Total	0.12	0.212	0.212	0.342	mg/l ZN		0.15
DIDDINGTON WEST TANK OVERFLOW MIDDLE OF PIPE SOAK	2875	Aluminium Total	0.0107	0.0108	0.0122	< 0.0070	mg/l AL	0.05	0.02
DIDDINGTON WEST TANK OVERFLOW MIDDLE OF PIPE SOAK	3525	Vanadium Total	< 0.0010	< 0.0010	< 0.0010	< 0.0010	mg/l V		
DIDDINGTON WEST TANK OVERFLOW MIDDLE OF PIPE SOAK	4035	Manganese Total	< 0.0030	< 0.0030	< 0.0030	< 0.0030	mg/l MN	0.05	0.005
DIDDINGTON WEST TANK OVERFLOW MIDDLE OF PIPE SOAK	4215	Iron Total	0.052	0.08	0.105	0.024	mg/l FE	200	20
DIDDINGTON WEST TANK OVERFLOW MIDDLE OF PIPE SOAK	73411	Uranium Total	< 0.07	< 0.07	< 0.07	< 0.22	µg/l U		
DIDDINGTON WEST TANK OVERFLOW MIDDLE OF PIPE SOAK	73601	Phosphorus Total	< 0.090	< 0.090	< 0.090	< 0.140	mg/l P		2.5
DIDDINGTON WEST TANK OVERFLOW MIDDLE OF PIPE SOAK	74252	Cobalt Total	0.25	0.3	0.39	0.35	µg/l CO		
DIDDINGTON WEST TANK OVERFLOW MIDDLE OF PIPE SOAK	74561	Boron Total	< 133.3	< 133.3	< 133.3	< 43.3	µg/l B	1000	500
DIDDINGTON WEST TANK OVERFLOW MIDDLE OF PIPE SOAK	91983	Silver Total	< 0.02	< 0.02	< 0.02	< 0.02	µg/l AG		5
DIDDINGTON WEST TANK OVERFLOW MIDDLE OF PIPE SOAK	92004	Antimony Total	< 0.09	< 0.09	< 0.09	< 0.09	µg/l SB	5	2.5
DIDDINGTON WEST TANK OVERFLOW MIDDLE OF PIPE SOAK	92015	Barium Total	18.5	23.7	37.2	24.9	µg/l BA		300
DIDDINGTON WEST TANK OVERFLOW MIDDLE OF PIPE SOAK	92614	Arsenic Total	< 0.16	< 0.16	< 0.16	< 0.18	µg/l AS	10	5
DIDDINGTON WEST TANK OVERFLOW MIDDLE OF PIPE SOAK	92654	Cadmium Total	< 0.06	< 0.06	< 0.06	< 0.03	µg/l CD	5	2.5
DIDDINGTON WEST TANK OVERFLOW MIDDLE OF PIPE SOAK	97254	Selenium Total	< 1.20	< 1.20	< 1.20	< 0.72	µg/l SE	10	5
DIDDINGTON WEST TANK OVERFLOW MIDDLE OF PIPE SOAK	98874	Chromium Total	< 0.5	< 0.3	< 0.5	< 0.5	µg/l CR	50	3
DIDDINGTON WEST TANK OVERFLOW MIDDLE OF PIPE SOAK	98913	Lead Total	0.196	< 0.160	< 0.160	< 0.130	µg/l PB	10	
DIDDINGTON WEST TANK OVERFLOW MIDDLE OF PIPE SOAK	98934	Nickel Total	0.66	< 0.61	1.68	< 1.51	µg/l NI	20	17

This metals analysis was only carried out on the Diddington sample Sampled 30/11/2021

Time in DI soak	Digest date/time (time acid was added)	Sample 1	Mass of sample in 100ml DI water
24 hours	Tuesday 30/11/2021 10:15	**21541368** DIDDINGTON WEST TANK OVERFLOW MIDDLE OF PIPE 24HR	0.0995 grams
48 hours	Wednesday 01/12/2021 10:10	**21550671** DIDDINGTON WEST TANK OVERFLOW MIDDLE OF PIPE 48HR	0.0944 grams
96 hours	Friday 03/12/2021 10:15	**21554520** DIDDINGTON WEST TANK OVERFLOW MIDDLE OF PIPE 96HR	0.0972 grams
168 hours	Monday 06/12/2021 10:20	**21557688** DIDDINGTON WEST TANK OVERFLOW MIDDLE OF PIPE	0.1010 grams

Sample	Sample Point Code	End Date	ODOUR	TASTE	PAH TOTAL SUM OF 4 (µg/l _)	BENZO (A) PYRENE TOTAL (µg/l _)	BENZO (B) FLOURANTHENE TOTAL (µg/l _)	BENZO (GHI) PERYLENE TOTAL (µg/l _)	BENZO (K) FLUORANTHENE (µg/l _)	INDENO (1,2,3-CD) PYRENE TOTAL (µg/l _)	ANAEROBES, SULPHITE REDUCING (No/100ml _)	COLIFORM CONF FROM PRES COLI MEMBRANE (No/100ml _)	E.COLI CONF FROM PRES COLIFORM MEMBRANE (No/100ml _)	NON-LACTOSE FERMENTING COLONIES (No/100ml _)	ENTEROCOCCI CONFIRMED (No/100ml _)	CLOSTRIDIUM PERFRINGENS CONFIRMED (No/100ml _)	COLONIES 22C 3 DAYS (No/ml _)	COLONIES 37C 2 DAYS (No/ml _)	Bacteria, Incubation 22C 2Days (CFU/plate _)	Bacterial, Incubation 22C 2Day PostClean (CFU/plate _)	PRESUMPTIVE COLIFORMS PER SWAB (_ _)	E.COLI (no/swab _)	ENTEROCOCCI CONFIRMED PER SWAB (no/swab _)	CLOSTRIDIUM PERFRINGENS CONFIRMED SWAB (No/plate _)	CHLORINE FREE (mg/l CL2)	CHLORINE TOTAL (mg/l CL2)	IRON TOTAL (mg/l FE)	MANGANESE TOTA L(mg/l MN)	TURBIDITY (NTU _)	CLARITY
0002-2018-086011	W01DIDDCR	27/02/2018 13:45:00										0	0				77	0							< 0.05	0.57				
0002-2018-131493	W01DIDDCR	24/03/2018 14:45:00										0	0	> 100			136	28							< 0.05	0.69				
0002-2018-131494	W01DIDDCR	24/03/2018 14:45:00										0	0	> 100			205	10							< 0.05	0.69				
0002-2018-131492	W01DIDDCR	24/03/2018 14:55:00										0	0	> 100			98	17							< 0.05	0.73				
0002-2018-132205	W01DIDDCR	25/03/2018 18:50:00										0	0				86	5							< 0.05	0.71				
0002-2018-132206	W01DIDDCR	25/03/2018 18:50:00										0	0				162	4							< 0.05	0.71				
0002-2018-132207	W01DIDDCR	25/03/2018 19:00:00										0	0				24	0							0.05	0.73				
0002-2018-161293	W01DIDDCR	09/04/2018 14:00:00										0	0	> 100			1493	756							< 0.05	0.17				
0002-2018-161292	W01DIDDCR	09/04/2018 14:05:00										0	0				950	601							0.05	0.52				
0002-2018-161295	W01DIDDCR	09/04/2018 14:15:00										0	0				103	43							0.05	0.77				
0002-2018-161294	W01DIDDCR	09/04/2018 14:40:00										0	0				12	6							0.06	0.75				
0002-2018-182170	W01DIDDCR	24/04/2018 16:30:00										0	0				1	1							0.07	0.72				
0002-2018-182171	W01DIDDCR	24/04/2018 16:35:00										0	0				0	0							0.07	0.72				
0002-2018-182172	W01DIDDCR	24/04/2018 16:52:00										0	0				1	0							0.07	0.72				
0002-2018-239892	W01DIDDCR	30/05/2018 13:24:00																	12											
0002-2018-351932	W01DIDDCR	01/08/2018 11:30:00																	31											
0002-2018-393779	W01DIDDCR	30/08/2018 09:36:00																	0											
0002-2018-393785	W01DIDDCR	30/08/2018 09:36:00																		0										
0002-2018-436690	W01DIDDCR	26/09/2018 07:57:00																	0											
0002-2018-436689	W01DIDDCR	26/09/2018 07:58:00																		0										
0002-2018-484104	W01DIDDCR	23/10/2018 14:56:00																	0											
0002-2018-484103	W01DIDDCR	23/10/2018 14:59:00																		0										
0002-2018-526541	W01DIDDCR	19/11/2018 09:25:00																	0											
0002-2018-526542	W01DIDDCR	19/11/2018 09:32:00																		0										
0002-2018-578050	W01DIDDCR	20/12/2018 15:08:00																	0											
0002-2018-578057	W01DIDDCR	20/12/2018 15:08:00																		0										
0002-2019-019446	W01DIDDCR	16/01/2019 12:24:00																		0										
0002-2019-036922	W01DIDDCR	28/01/2019 08:30:00																		0										
0002-2019-068044	W01DIDDCR	13/02/2019 08:04:00																		0										
0002-2019-087288	W01DIDDCR	26/02/2019 13:49:00																		0										
0002-2019-115769	W01DIDDCR	12/03/2019 08:39:00																		0										
0002-2019-138812	W01DIDDCR	28/03/2019 08:26:00																		0										
0002-2019-163070	W01DIDDCR	09/04/2019 16:18:00																		0										
0002-2019-180210	W01DIDDCR	22/04/2019 10:29:00																		0										
0002-2019-206775	W01DIDDCR	06/05/2019 08:34:00																		1										
0002-2019-230764	W01DIDDCR	21/05/2019 08:05:00																		0										
0002-2019-256043	W01DIDDCR	05/06/2019 08:11:00																		0										
0002-2019-273669	W01DIDDCR	17/06/2019 12:03:00																		0										
0002-2019-302952	W01DIDDCR	02/07/2019 07:40:00																		0										
0002-2019-327072	W01DIDDCR	17/07/2019 13:24:00																		0										
0002-2019-341068	W01DIDDCR	26/07/2019 15:37:00										0	0				2	0							0.05	0.65				
0002-2019-360017	W01DIDDCR	07/08/2019 13:29:00									0	0	0		0	0									0.05	0.61				
0002-2019-369214	W01DIDDCR	14/08/2019 12:18:00																		0										
0002-2019-393212	W01DIDDCR	30/08/2019 17:59:00																		0										
0002-2019-407623	W01DIDDCR	05/09/2019 16:32:00									0	0	0		0	0	0	0							< 0.05	0.64				
0002-2019-409913	W01DIDDCR	07/09/2019 16:34:00									0	0	0		0	0					0	0	0	0						
0002-2019-409910	W01DIDDCR	07/09/2019 16:51:00									0	0	0		0	0									< 0.05	0.5				
0002-2019-415326	W01DIDDCR	11/09/2019 12:51:00																		0										
0002-2019-439598	W01DIDDCR	27/09/2019 13:37:00																		0										
0002-2019-462645	W01DIDDCR	08/10/2019 13:38:00																		0										
0002-2019-464675	W01DIDDCR	09/10/2019 14:05:00									0	0	0		0	0	0	0							< 0.05	0.78				
0002-2020-229192	W01DIDDCR	27/05/2020 08:08:00																		0										
0002-2020-274215	W01DIDDCR	19/06/2020 07:56:00																		0										
0002-2020-322579	W01DIDDCR	17/07/2020 08:14:00																		0										
0002-2020-337231	W01DIDDCR	29/07/2020 16:38:00										0	0												< 0.05	0.7				
0002-2020-358383	W01DIDDCR	07/08/2020 19:19:00										0	0												< 0.05	0.73				
0002-2020-365729	W01DIDDCR	13/08/2020 07:30:00																		1										
0002-2020-368001	W01DIDDCR	14/08/2020 15:30:00									0	0	0		0	0									< 0.05	0.72				
0002-2020-415308	W01DIDDCR	10/09/2020 08:24:00																		0										
0002-2020-459079	W01DIDDCR	07/10/2020 07:46:00																		18										
0002-2020-463961	W01DIDDCR	10/10/2020 19:14:00										0	0												< 0.05	0.77				
0002-2020-488107	W01DIDDCR	28/10/2020 14:47:00									0	0	0		0	0									0.05	0.84				
0002-2020-503722	W01DIDDCR	03/11/2020 06:58:00																		0										
0002-2020-540709	W01DIDDCR	30/11/2020 07:33:00																		0										
0002-2020-587463jj	W01DIDDCR	30/12/2020 07:13:00																		3										
0002-2021-139918	W01DIDDCR	26/03/2021 08:35:00			0	< 0.002	< 0.006	< 0.004	< 0.004	< 0.006															< 0.05	0.94				
0002-2021-136523	W01DIDDCR	26/03/2021 08:40:00										0	0												< 0.05	0.94				
0002-2021-136805	W01DIDDCR	26/03/2021 08:40:00	NO SMELL / NO SMELL	NO TASTE / SATISFACTORY																					< 0.05	0.94	< 0.007	< 0.0030	0.14	CLEAR AND BRIGHT(NO PARTICULATE MATTER)
0002-2021-267790	W01DIDDCR	11/06/2021 11:25:00																		0										
0002-2021-305954	W01DIDDCR	05/07/2021 08:33:00																		0										
0002-2021-309347	W01DIDDCR	07/07/2021 14:40:00										0	0												0.07	0.6				
0002-2021-355192	W01DIDDCR	04/08/2021 10:18:00																		1										
0002-2021-394550	W01DIDDCR	31/08/2021 15:12:00																		0										
0002-2021-424402	W01DIDDCR	15/09/2021 15:40:00										0	0												< 0.05	0.61				
0002-2021-428098	W01DIDDCR	18/09/2021 16:57:00										0	0												< 0.05	0.62				

Sample	Sample Point Code	End Date	ODOUR THRESHOLD NUM 25 C DE-CHLORINATED (TON _)	UNDILUTED ODOUR PANEL COUNT 25DEG C -CH	TASTE THRESHOLD NUM 25 C DE-CHLORINATED (TON _)	UNDILUTED TASTE PANEL COUNT 25 DEG C -CH	ODOUR - POST PANEL - DE-CHLORINATED	ODOUR THRESHOLD NUM 60 C (TON _)	ODOUR INTENSITY DE-CHLORINATED	PURGE AND TRAP PROFILE DIRECT CRYOTRAP	WATER PROFILE SOLVENT EXTRACTION	ANAEROBES, SULPHITE REDUCING (No/100ml _)	COLIFORM CONF FROM PRES COLI MEMBRANE (No/100ml _)	E.COLI CONF FROM PRES COLIFORM MEMBRANE (No/100ml _)	ENTEROCOCCI CONFIRMED (No/100ml _)	CLOSTRIDIUM PERFRINGENS CONFIRMED (No/100ml _)	COLONIES 22C 3 DAYS (No/ml _)	COLONIES 37C 2 DAYS (No/ml _)	CHLORINE FREE (mg/l CL2)	CHLORINE TOTAL (mg/l CL2)	IRON TOTAL (mg/l FE)	MANGANESE TOTAL (mg/l MN)	TURBIDITY (NTU _)	CLARITY
0002-2019-409988	W01DIDECR	07/09/2019 17:50:00										0	0	0	0	0	0	0	< 0.05	0.5				
0002-2019-475778	W01DIDECR	16/10/2019 17:00:00																			0.106	0.0019	0.61	CLEAR AND BRIGHT(NO PARTICULATE MATTER)
0002-2019-475823	W01DIDECR	16/10/2019 17:00:00											0	0			4	0						
0002-2019-486302	W01DIDECR	23/10/2019 16:30:00																			0.364	0.0027	18.7	CLOUDY(PARTICULATE MATTER EVIDENT IN SAMPLE)
0002-2020-233317	W01DIDECR	30/05/2020 12:40:00											0	0			0		< 0.05	0.15				
0002-2020-250177	W01DIDECR	30/05/2020 12:40:00	1	1 POSITIVE PANELIST	1	NO POSITIVE PANELISTS	PENCIL WOOD	1	VERY MILD										< 0.05	0.15	0.011		0.19	CLEAR AND BRIGHT(NO PARTICULATE MATTER)
0002-2020-250181	W01DIDECR	30/05/2020 12:40:00								NOTHING TO REPORT	NOTHING TO REPORT								< 0.05	0.15				
0002-2020-259952	W01DIDECR	08/06/2020 11:50:00	1	NO POSITIVE PANELISTS	1	NO POSITIVE PANELISTS													0.06	0.55				
0002-2020-262614	W01DIDECR	10/06/2020 16:02:00	1	NO POSITIVE PANELISTS	1	NO POSITIVE PANELISTS							0	0			0		< 0.05	0.7			0.119	

Sample	Sample Point Code	End Date	ODOUR THRESHOLD NUM 25 C DE-CHLORINATED (TON _)	UNDILUTED ODOUR PANEL COUNT 25DEGC -CH	TASTE THRESHOLD NUM 25 C DE-CHLORINATED (TON _)	UNDILUTED TASTE PANEL COUNT 25 DEGC - CH	ODOUR THRESHOLD NUM 60 C (TON _)	PURGE AND TRAP PROFILE DIRECT CRYOTRAP	WATER PROFILE SOLVENT EXTRACTION	ANAEROBES, SULPHITE REDUCING (No/100ml _)	COLIFORM CONF FROM PRES COLI MEMBRANE (No/100ml _)	E.COLI CONF FROM PRES COLIFORM MEMBRANE (No/100ml _)	ENTEROCOCCI CONFIRMED (No/100ml _)	CLOSTRIDIUM PERFRINGENS CONFIRMED (No/100ml _)	COLONIES 22C 3 DAYS (No/ml _)	COLONIES 37C 2 DAYS (No/ml _)	CHLORINE FREE (mg/l CL2)	CHLORINE TOTAL (mg/l CL2)	IRON TOTAL (mg/l FE)	MANGANESE TOTAL (mg/l MN)	TURBIDITY (NTU _)	CLARITY
0002-2019-409987	W01DIDWCR	07/09/2019 17:50:00								0	0	0	0	0	0	0	0.05	0.52				
0002-2020-225769	W01DIDWCR	23/05/2020 12:00:00									0	0			0		0.05	0.15				
0002-2020-225838	W01DIDWCR	23/05/2020 12:00:00	1	NO POSITIVE PANELISTS	1	NO POSITIVE PANELISTS	1										0.05	0.15	0.008		0.12	CLEAR AND BRIGHT(5 PARTICLES)
0002-2020-227429	W01DIDWCR	23/05/2020 12:00:00						NOTHING TO REPORT	NOTHING TO REPORT								0.05	0.15				
0002-2020-255414	W01DIDWCR	03/06/2020 23:00:00															< 0.05	0.36	0.011	0.0011	< 0.090	CLEAR AND BRIGHT(NO PARTICULATE MATTER)
0002-2020-255880	W01DIDWCR	03/06/2020 23:00:00									0	0			0		< 0.05	0.36				
0002-2020-262615	W01DIDWCR	10/06/2020 16:08:00	1	NO POSITIVE PANELISTS	1	NO POSITIVE PANELISTS					0	0			0		< 0.05	0.65			< 0.090	
0002-2020-263148	W01DIDWCR	10/06/2020 11:30:00																				

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM FORM NO: 2428

For materials to enter supply, Parts A and B must be signed and approved by Water Quality Performance Team

CONTACT NAME: [redacted] (and [redacted] as of 2017 CONTACT NUMBER: na25/01 [redacted] DATE: 14/06/2016

SITE: Diddington Reservoir Site
LOCATION ON SITE: Reservoir cell 1 and 2 and new pipework as part of Grafham Resilience Scheme
CONTRACTOR: JN Bentley
WAT- NO. IF APPLICABLE: WAT-06195

USEFUL LINKS
CONTACT THE WATER QUALITY PERFORMANCE TEAM
HAWK - MATERIALS IN CONTACT
WRAS DIRECTORY
DWI APPROVED PRODUCTS LIST
BRITISH STANDARDS WEBSITE

PART A

LINE NO.	SUPPLIER	MANUFACTURER HOLDING APPROVAL (IF DIFFERENT FROM SUPPLIER)	PRODUCT NAME	BRIEF DESCRIPTION OF MATERIAL IN CONTACT WITH WATER	APPROVING BODY DWI / WRAS / BSEN	APPROVING BODY REF	LARGE/ SMALL SURFACE AREA	1 PROJECT ENGINEER COORDINATION SIGN/DATE	2 WQPT MATERIALS APPROVED SIGN/DATE	3 COMMENTS / ADVICE SIGN/DATE	Brampton Tee Connections	Twin Brampton pipework commisioning- Section 3 of	Inlet Main Commisioning- Section 4 of	pipework commissioning- Section 6 of Commisioning	outlet main (Brampton)- Section 7 of Commisioning Plan	commissioning (phase 1)- Section 8 of Commissioning Plan	Ampthill pipeline commissioning - Section 9 of Commissioning Plan	Commissioning (Phase 1)- Section 10 of Commissioning	Ampthill surge vessel commissioning - Section 11 of Commissioning Plan	Diddington WR Commissioning - Section 13 of Commissioning Plan
1	Electrosteel Castings Ltd	Electrosteel Castings Ltd	'Electrofresh Plus' Cement Mortar Lined Ductile Iron Pipe **with** seal coat (Copon Hycote 162 PWX), conforming to EN 545. Pipes include 500/600mm/700mm/900mm/1000mm pipework (flange spigot pipe, standard/double spigot socket pipe), blank flange, socketed 45degree bend, 22.5degree bend, 500x500mm tee.	56/4/537 1011504/1505532 1109548	DWI WRAS	56/4/537 1011504/1505532 1109548	Large Small	[redacted] 07/07/2016	[redacted] 26/07/2016	A few of the pipes were ordered in November and others afterwards so I have put both the original WRAS and the updated approval number.	Yes	yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	Electrosteel Castings Ltd	Electrosteel Castings Ltd	'Electrofresh' Cement Mortar Lined Ductile Iron Pipe **without** seal coat, conforming to EN 545. Pipes include 80mm/500mm/600mm/900mm/1000mm pipework.	Internal surfaces of pipe in direct contact with potable water.	DWI	56/4/992	Large	[redacted] 30/06/2016	[redacted] 14/10/2016	DWI approval number for pipe lengths is fine, is there WRAS or equivalent approval for the fittings as only pipe lengths are covered by the DWI approval? **I have added the WRAS number.** WRAS number is for an epoxy resin, these are uncoated pipes? **Amended**		Yes		Yes	Yes	Yes		Yes	Yes	Yes
3	Electrosteel Castings Ltd	Electrosteel Castings Ltd	Eco Coat FBE Powder E/105/7010. Factory applied, blue coloured, fusion bonded epoxy coating on 100mm/300mm/500mm/600mm/700mm/900mm Specials (socketed 11.25degree,22.5degree, 45degree, 90degree bend, 500x500mm tee, 500x300mm taper, 500x350mm taper, 700x150 AF tee, 80x50mm double flanged concentric taper).	Coating applied to internal and external surface of the carbon steel pipe, which is in direct contact with the water.	WRAS	1209502	Small	[redacted] 30/06/2016	[redacted] 26/07/2016	Can you confirm it is just fittings on this line, and no lengths of pipe? Can you also confirm the coating is Eco Coat FBE Powder E/105/7010? If there are no length of pipe and it is this material then it is small surface area and I can sign it off. If any pipe, this will be large surface area and need a DWI approval number. **I can confirm that E/105/7010 is correct and it is just those fittings so I have amended the surface area to small** Apply as per manufacturer`s instructions. Cure for 6 minutes at 210°C and then cool in air	Yes	**Yes**	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	Electrosteel Castings Ltd	Akzo Nobel Powder Coatings GmbH	Factory applied (UK) epoxy 'Resicoat R4' coating on 300mm/450mm/500mm/600mm/700mm/900mm Specials (socketed 11.25degree,22.5degree, 45degree, 90degree bend, 500x300 tee, 500x200 tee, 500x500mm tee, 500x300mm taper, 500x350mm taper, 150x100mm double flanged concentric taper,	Coating applied to internal and external surface of the carbon steel pipe, which is in direct contact with the water.	WRAS	1112500	Small	[redacted] 30/06/2016	[redacted] 26/07/2016	Can you confirm it is just fittings on this line, and no lengths of pipe? If there are no lengths of pipe then it is small surface area and I can sign it off. If any pipe, this will be large surface area and need a DWI approval number. **It is just those fittings so I have amended the surface area to small**		**Yes**	Yes				Yes			Yes
5	Electrosteel Castings Ltd	VIP Polymers Ltd	250, 900mm EPDM Tyton Sit Plus Anchor Gasket with martensitic chromium nickel steel teeth with a chemical composition of: X 22Cr Ni17 with a steel grade of 1.4057 according to EN 10027	Rubber insert that fits inside the spigot socket connection between the 900mm pipes, to provide a seal. The teeth prevent the pipes coming apart.	WRAS	1112532	Small	[redacted] 30/06/2016	[redacted] 01/07/2016	Approval given for small surface area product and on the assumption that the teeth are not in contact with the water - please confirm these. **The surface area is small and the teeth are also not in contact with the water**										Yes
6	Electrosteel Castings Ltd	Andhra Polymers Pvt. Ltd	900mm/1000mm EPDM Rubber Push Fit Gasket	Rubber insert that fits inside the spigot socket connection between the 900mm/1000mm pipes, to provide a good seal.	WRAS	1301552	Small	[redacted] 30/06/2016	[redacted] 01/07/2016	Small surface area product				Yes	Yes	Yes		Yes	Yes	Yes
7	Powerrun Project management Ltd	Akzo Nobel Powder Coatings GmbH	Resicoat factory applied, epoxy coatings on Pipes include (900MM x8mm wall Flange spigot 1362MM long, 900MM x12mm wall Flange spigot 2650MM long, 900MM x8mm wall Flange spigot 1250MM long, 1200- 1000MM x10mm wall Flange spigot 1175MM long,900- 700MM x8mm wall Flange spigot 1751MM long, 600mm/700mm double flange, 600x500mm/700x150mm/700x500mm all flanged pipework, 900x700 MM, 00x500mm/500x350mm/600x500mm concentric	Coating applied to internal and external surface of the carbon steel pipe, which is in direct contact with the water.	DWI WRAS	56/4/602 1112500	Large Small	[redacted] 30/06/2016	[redacted] 14/10/2016	DWI approval number for pipe lengths is fine, is there WRAS or equivalent approval for the fittings as only pipe lengths are covered by the DWI approval? **Amended** WRAS number is not for Skotchcote 206N? **Amended**			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
8	Powerrun Project management Ltd	Akzo Nobel Powder Coatings GmbH	Resicoat factory applied, epoxy coatings on Pipes include: 1000mm x 800mm PN16 branch pipe with three 500mm PN16 branches, 800mm branch pipe with three 600mm PN16 branches.	Coating applied to internal and external surface of the carbon steel pipe, which is in direct contact with the water.	DWI WRAS	56/4/602 1112500	Large Small	[redacted] /3/07/2016	[redacted] 14/10/2016	Comments as above **Amended**										Yes
9	Powerrun Project management Ltd		100mm Stainless steel plate drilled to suit a 250mm nominal bore PN16 pattern	Stainless steel plate	Steel Grade	Stainless steel 316L	Small	[redacted] 13/07/2016	[redacted] 26/07/2016								Yes			
10	Powerrun Project management Ltd		500mm PN16 Stainless steel Orifice plate with 308.9mm square orifice 6mm thick & 300MM PN16 Stainless steel Orifice plate with 100mm Orifice	Stainless steel orifice plate	Steel Grade	Stainless steel 316L	Small	[redacted] 13/07/2016	[redacted] 26/07/2016			**Yes**		Yes	Yes	Yes		Yes	Yes	
11	George Green (Keighley) LTD	Northpoint Ltd	Steel pipes with scotchkote 206N includes 3230mm long pipe with lugs	Coating applied to internal and external surface of the carbon steel pipe, which is in direct contact with the water.	DWI	56/4/602	Large	[redacted] 30/06/2016	[redacted] 14/10/2016	Use of the product must be in accordance with the Instructions for Use: Instructions for Use of Pipes lined with Scotchkote 206NTM. Issue 04 dated 06 May 2013	Yes									Yes
12	George Green (Keighley) LTD	Akzo Nobel Powder Coatings GmbH	Factory applied 'Resicoat R4' coating on 900MM Duckfoot bend, DN900 steel flanged bellmouth	Coating applied to internal and external surface of the carbon steel pipe, which is in direct contact with the water.	WRAS	1112500	Small	[redacted] 08/09/2016	[redacted] 14/10/2016	Response received from Northpoint. Fittings coated with Resicoat R4. See separate tab.										Yes
13	AVK UK Ltd	Valspar Powder Coatings Ltd. Eastland Compounding	Factory applied, blue coloured, fusion bonded epoxy powder coatings on PN16 500mm/600mm/700mm Dismantling Joint	Internal surfaces of the dismantling joint will be in direct contact with the potable water.	WRAS	1407505 1511505	Small	[redacted] 30/06/2016	[redacted] 26/07/2016	E1H8691, E1H7389, E2H6531 & E1H8868. Factory applied, blue coloured, fusion bonded epoxy powder coatings. Apply as per manufacturer's instructions. Post-cure for 10 minutes at 180°C.			Yes	Yes	Yes	Yes	Yes	Yes	Yes	
14	AVK UK Ltd	ARI Flow Control Accessories	Air release valve with an epoxy coating, EPDM and NBR seals. 80mm Air Valves - Model No 701/40 DN80 ball valve DN80 flange	Internal surfaces of the valve will be in direct contact with the potable water.	WRAS	1404099	Small	[redacted] 30/06/2016	[redacted] 01/07/2016	If just an air valve it will be small surface area, have amended this. Can you confirm it is being used for above ground use - the WRAS listing specifies this? **Yes it is above ground**		**Yes**								
15	AVK UK Ltd	Henkel Ltd. AVK GUMMI A/S Akzo Nobel Powder Coatings GmbH	100, 500, 1000mm Metal Faced Gate Valve S54 PN16 F16 Loctite 5400 Adhesive EPDM Rubber Seal Factory Applied Epoxy Resicoat Coating	Internal surfaces of the valve will be in direct contact with the potable water.	WRAS	1112509 1306500 1112500	Small	[redacted] 30/06/2016	[redacted] 01/07/2016	If just a valve it will be small surface area, have amended this.			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
16	AVK UK Ltd	Aqua-Gas Manufacturing Ltd	DN80 Fire hydrant with epoxy powder coated ductile iron body. MK2 Clearway Fire Hydrant series 29/90.	Internal powder coated body will be in direct contact with the potable water.	WRAS	1301080	Small	[redacted] 30/06/2016	[redacted] 04/07/2016	If just a hydrant it will be small surface area, have amended this.	Yes	Yes	Yes				Yes			
17	AVK UK Ltd	AVK Valves (Anhui) Co. Ltd	500mm/700MM/900mm/1000mm Ductile Iron Gate Valve S54 EPDM 'O' Rings Blue Epoxy Coating	Internal surfaces of the valve will be in direct contact with the potable water.	WRAS	1311067	Small	[redacted] 30/06/2016	[redacted] 04/07/2016	If just a hydrant it will be small surface area, have amended this. Can you confirm it is being used for above ground use - the WRAS listing specifies this? **Yes it is above ground**	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
18	AVK UK Ltd	AVK UK Ltd	1/2 Two piece full bore stainless steel ball valve	Internal surfaces of the valve will be in direct contact with the potable water.	Steel Grade	Stainless steel 316L	Small	[redacted] 30/06/2016	[redacted] 26/07/2016						Yes					
19	AVK UK Ltd	AVK Valves (Anhui) Co. Ltd	600mm bypass valve, series 54 metal-faced gate valve	Internal surfaces of the valve will be in direct contact with the potable water.	WRAS	1311067	Small	[redacted] 13/07/2016	[redacted] 14/10/2016	Do you need the first approval number - the product approval is for an epoxy coated valve so should this not cover it? **Amended**				Yes	Yes	Yes		Yes	Yes	
20	AVK UK Ltd	Valspar Powder Coatings Ltd.	Factory applied, blue coloured, fusion bonded epoxy powder coatings 600 700mm Ductile iron flange adaptor	Epoxy coating on flange adaptor	WRAS	1407505	Small	[redacted] 13/07/2016	[redacted] 14/10/2016	Apply as per manufacturer's instructions. Post-cure for 10 minutes at 180°C				Yes	Yes	Yes		Yes	Yes	
23	ABB Instrumentaion	ABB Engineering (Shanghai) Ltd.	Rubbers- natural/isoprene. Black coloured, compression moulded, natural hard rubber material. Shore hardness 78.	(Stainless steel electrodes ans WRAS approved meter lining) Watermaster FEF121 electromagnetic flowmeter system - fullbore, Aquaprobe FEA100 insertion flowmeter, Watermaster FEW321 electromagnetic flowmeter-fullbore lining	WRAS Steel grade	1109533 Stainless steel 316L	Small	[redacted] 30/06/2016	[redacted] 04/07/2016	Can you confirm this will be purchased (if not already) before Sept 2016. **All have been purchased already**										Yes
24	ABB	Victrex plc	5220 Polyether Ether Ketone	FEA -121 Insertion Flowmeter	WRAS	1606514	Small	[redacted] 30/06/2016	[redacted] 26/07/2016	This approval number is for a PEEK phermoplastic material, is this the same as a polyether ether ketone? **Yes it is the same**										Yes
25	Freeflow	Freeflow Pipesystems Ltd.	Factory applied pipe and coatings. Carbon steel pipework coated with scotchkote 206N green, epoxy resin coating.	Epoxy resin coating on (1000X1000MM,1000X150MM AF TEE, 1000X80MM AF Level invert tee, 1000MM Dismantling joint, 80MM DF 90 Deg Bend, 150X80MM DF Concentric Taper, 1000MM Flange Adaptors) 900MM (Couplings, flange adaptors, steel spigot tees)	DWI WRAS	56/4/601 1502544	Large Small	[redacted] 06/06/2016	[redacted] 04/07/2016	Factory applied, green coloured epoxy resin coating. Apply as per instructions for use document issue number 2 dated '20.05.13'. Cure for 45 seconds@220-230°C. For use with water up to 60°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.				Yes	Yes	Yes		Yes	Yes	
26	SIG	Flexcrete Technologies Ltd	Adomast Powder	Tiefill. Grey coloured, single component, polymer modified, fibre reinforced, Portland cement based repair compound	WRAS	1109519	Small	[redacted] 06/06/2016	[redacted] 26/07/2016	Mix (with water) and apply as per manufacturer`s instructions. Cure for 21 days at 7°C.										Yes
27	VAG Valves UK Limited	Dexine Rubber Company Ltd	Black coloured, compression moulded EPDM rubber material coating for DN700 PN16 Riko Plunger Valve (Flow control valve)	EPDM coating for riko plunger valve	WRAS	1401510	Small	[redacted] 13/07/2016	[redacted] 26/07/2016			Yes		Yes	Yes	Yes		Yes	Yes	
28	IFM	IFM	Stainless steel 316L/1.4404; Sealing: FPM (Viton)	Electronic Pressure Sensor.	Steel Grade	Stainless steel 316L	Small	[redacted] 30/06/2016	[redacted] 26/07/2016	There's materials other than steel mentioned on this line, are they in contact with water? **It is only the stainless steel in contact with water**										Yes
29	IFM	IFM	Stainless steel 316L/1.4404; Ceramics (99.9% AL2 03); EPDM.	Combined Pressure Sensor (Pressure rating; 150 bar, 2175psi, 15 MPa.	Steel Grade	Stainless steel 316L	Small	[redacted] 30/06/2016	[redacted] 26/07/2016	There's materials other than steel mentioned on this line, are they in contact with water? **It is only the stainless steel in contact with water**										Yes
30	IFM	IFM	Ceramics (99.9% AL2 03), PTFE; Stainless steel 316L/1.4435; surface characteristics: Ra<0.4/RZ4	Combined Pressure Sensor (Pressure rating; 30 bar, 435psi, 3000kPa and 10000 mbar, 145psi)	Steel Grade	Stainless steel 316L	Small	[redacted] 30/06/2016	[redacted] 26/07/2016	There's materials other than steel mentioned on this line, are they in contact with water? **It is only the stainless steel in contact with water**										Yes
31	IFM	IFM	Stainless steel 316L/1.4404; O-Ring: FKM8 x 1.5 gr 80° Shore A.	Flow Monitor.	Steel Grade	Stainless steel 316L	Small	[redacted] 30/06/2016	[redacted] 26/07/2016	There's materials other than steel mentioned on this line, are they in contact with water? **It is only the stainless steel in contact with water**										Yes
32	CPE	CPE	Quantum	5.5M Surge vessel internals 316 stainless steel	DWI	56/4/1136	Large	[redacted] 13/07/2016	[redacted] 26/07/2016										Yes	
33	Orrmac Coatings	Sherwin Williams (Leighs paints)	Waterline P300	17.0M Surge vessel internal coating	DWI	56/4/253	Large	[redacted] 13/06/2016	[redacted] 04/07/2016					Yes	Yes	Yes		Yes	Yes	
34	Orrmac Coatings	Sherwin Williams (Leighs paints)	Waterline P300	27.0M Surge vessel internal coating	DWI	56/4/253	Large	[redacted] 13/06/2016	[redacted] 04/07/2016					Yes	Yes	Yes		Yes	Yes	
35	S M Gauge	S M Gauge	Pressure gauge stainless steel 1.4571 AISI 316Ti	Stainless steel 1/2" connection	Steel Grade	Stainless steel 316 Ti	Small	[redacted] 13/06/2016	[redacted] 04/07/2016					Yes	Yes	Yes		Yes	Yes	
36	Mars Valve	Mars Valves	Isolation valve stainless steel 1.4401 AISI 316	Level gauge isolation valves	Steel Grade	Stainless steel 316	Small	[redacted] 13/06/2016	[redacted] 04/07/2016					Yes	Yes	Yes		Yes	Yes	

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ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

FORM NO: 2428

37	Seagull stainless	Seagull fittings	ND25 PN16 flange	Stainless steel flange 1.4401 AISI 316	Steel Grade	Stainless steel 316	Small	[redacted] 13/06/2016	[redacted] 04/07/2016					Yes	Yes	Yes		Yes	Yes	
38	BSS	Geberit	1/2" pipe fittings	Stainless Steel 316L	WRAS	1206333	Small	[redacted] 13/06/2016	[redacted] 04/07/2016					Yes	Yes	Yes		Yes	Yes	
39	BSS	Geberit	Recirculation pipe work	Stainless steel 316L pipe fittings	WRAS	1206333	Small	[redacted] 13/06/2016	[redacted] 26/07/2016	WRAS approval number only relevant to fittings, not pipework, if pipework will be large surface area? **The supplier has confirmed that this is the correct WRAS approval number and have amended it to pipe fittings**						Yes				
40	KB Engineering	Dexine Rubber Company Ltd	EPDM rubber	Rubber joint	WRAS	1401510	Small	[redacted] 13/06/2016	[redacted] 27/07/2016			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
41	PVL	PVL	Flow restrictor	Stainless steel (Surge vessel flow restrictor 1.4301 AISI 304)	Reg31	Reg 31 (1) (b)	Small	[redacted] 13/06/2016	[redacted] 27/07/2016					Yes	Yes	Yes		Yes	Yes	
42	Inflow	Akzo Nobel Powder Coatings GmbH	Resicoat factory applied, epoxy powder coatings for Tri function air valve	Air valve inlet /outlet epoxy coating	WRAS	1112500	Small	[redacted] 13/06/2016	[redacted] 27/07/2016				Yes				Yes			
43	Inflow	Superior Seals	Black coloured, injection moulded NBR 'O' rings, seals and gaskets.	Rubbers	WRAS	1112513	Small	[redacted] 13/06/2016	[redacted] 27/07/2016			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
44	Inflow	Valspar Powder Coatings Ltd. Eastland Compounding	Factory applied, blue coloured, fusion bonded epoxy coating for drain valve	Epoxy coating on Drain valve	WRAS	1407505	Small	[redacted] 13/06/2016	[redacted] 27/07/2016	Apply as per manufacturer's instructions. Post-cure for 10 minutes at 180°C.		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
45	Steelway	Steelway	Hand rails	42.4mm OD x 2.5mm thick stainless steel handrails.(Fabricated in one section.- All welds continuous). 150x65x12mm base plates	Steel Grade	Stainless steel 316L	Small	[redacted] 13/06/2016	R.[redacted] 19/10/2017	Is this all stainless steel, it also mentions resin anchors? **Awaiting confirmation from supplier- NO RESIN USED**										Yes
46	Steelway	Steelway	Vertical access ladder	Stainless steel (120x8mm flat shaped top fixing bracket, M12 hex head bolts to stringers, 100x65x8mm angle stringers formed from 8mm plate, 8mmx400mm joint plates to side and back of stringers, M12 hex head bolts, 25mm DIA, solid seperated rungs, 200x100x8mm welded base plates)	Steel Grade	Stainless steel 316L	Small	[redacted] 14/06/2016	R.[redacted] 19/10/2017	Is this all stainless steel, it also mentions resin anchors? **Awaiting confirmation from supplier- NO RESIN USED**										Yes
47	Fab-Tek Installations LTD	Fab-Tek Installations LTD	Anti Vortex structure	Stainless Steel 316L	Steel Grade	Stainless steel 316L	Small	[redacted] 1/08/2016	[redacted] 14/10/2016											Yes
48	APA	Fosroc	Nitoseal MS600 Fosroc Primer MS2	Grey coloured medium modulus sealent based on hybrid silyl modified polyether technology. Used with primer.	WRAS	1404529	Small	[redacted] 14/06/2016	[redacted] 04/07/2016	Mix, apply and cure in accordance with manufacturer`s datasheet (version 12 CI/SfB: Yt4 dated May 2014).										Yes
49	Vulcan	Vulcan	M16 (Nut, washers) M16 x 380mm all thread	Stainless steel M16 Nut and Washers M16 x 380mm all thread	Steel Grade	Stainless steel 316	Small	[redacted] 14/06/2016	[redacted] 27/07/2016			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
50	Vulcan	Dexine Rubber Company Ltd	EPDM rubber for 80mm/200mm/350mm/450mm/500mm/600mm/700mm/900mm/ 1000mm PN16 Full faced Gaskets	Valve	WRAS	1401510	Small	[redacted] 14/07/2016	[redacted] 14/10/2016	It says that internal surfaces of the valve will be in contact, will these all be made of the EPDM rubber? **Amended to just valve**	Yes	Yes		Yes	Yes	Yes		Yes	Yes	
51	Technocover		Galvanised steel Security cover (1500 x 1500, 900 x 900) maxivented - twinleaf	Galvanised steel security cover	BS:EN 1461		Small	[redacted] 14/07/2016	[redacted] 14/10/2016	Waiting for info **(They have no WRAS/DWI approval numbers for their galvanised steel covers)** Are these the standard Technocover covers we have installed elsewhere? Does the galvanised steel comply with a British or European standard - if so it would be this rather than a DWI/WRAS number. **Amended**										Yes
52	Flowserve Pumps		Pump impeller	Bronze ASTM C90700	BSEN:1982:2008		Small	[redacted] 28/06/2016	[redacted] 27/07/2016						Yes	Yes				
53	Flowserve Pumps		Pump shaft	Stainless steel - 13% Chrome Steel: X12Cr13	EN10088: 1:2014		Small	[redacted] 28/06/2016	[redacted] 14/10/2016						Yes	Yes				
54	Belzona Polymerics		Belzona 1341	Belzona 1341 coating (internal coating of Pump casing)	WRAS	1306534	Small	[redacted] 28/06/2016	[redacted] 27/07/2016	Can you just clarify what it is the internal casing of - though unless it is a large surface area product the approval is fine? **Amended**					Yes	Yes				
55	Flowserve Pumps	Schunk GMBH	Mechanical seal face	Compression moulded carbon graphite	WRAS	1310509	Small	[redacted] 28/06/2016	[redacted] 27/07/2016						Yes	Yes				
56	Flowserve Pumps	ESK Ceramics	Mechanical seal face	Ceramic	WRAS	1112519	Small	[redacted] 28/06/2016	[redacted] 27/07/2016	Assume this has been purchased, as approval runs out at the end of the year? **Yes it has been purchased**					Yes	Yes				
57	Flowserve Pumps	Freudenburg	O' Rings	EPDM	WRAS	1206519	Small	[redacted] 28/06/2016	[redacted] 27/07/2016						Yes	Yes				
58	Flowserve Pumps	Dow Corning	Seal assembly Lubricants	Grease	WRAS	1206530	Small	[redacted] 28/06/2016	[redacted] 27/07/2016						Yes	Yes				
59	Flowserve pumps	Flowserve	Mechanical seal	Stainless Steel DIN 1.4404 (316L)	Steel Grade	Stainless steel 316L	Small	[redacted] 28/06/2016	[redacted] 04/07/2016						Yes	Yes				
60	Talis UK Incorporating	Erhard GmbH & Co. KG.	Roco Wave' buttery valve with blue epoxy coated ductile iron bodies, EPDM seat and stainless steel disc. Hand wheel operated (DN500, DN600, DN700)	Valve	WRAS	1512066	Small	[redacted] 12/07/2016	[redacted] 27/07/2016	Can you amend the comment indicating internal surfaces of a pipe are in contact with water - I'm assuming you don't mean this and it's just a valve? **Amended**				Yes	Yes	Yes		Yes	Yes	
61	Talis UK Incorporating	Akzo Nobel Powder Coatings GmbH	Coating for Twin air valve. Resicoat factory applied, epoxy powder coatings.	Resicoat factory applied, epoxy powder coating of twin air valve	WRAS	1112500	Small	[redacted] 12/07/2016	[redacted] 14/10/2016	This approval number is for a valve, can you amend please, and also put the full product identifier name/number please **Amended**			Yes				Yes			
62	Talis UK Incorporating/ Belgicast Internacional, S.L.	Gummiwerk Kraiburg GmbH & Co Akzo Nobel Powder Coating GMBH	Resicoat factory applied, epoxy powder coating 100mm resilient seated EPDM Seal gate valve with AA7 GDZ. Black coloured, compression moulded EPDM sheet material PN16 handwheel operated .	Internal surfaces of the valve and handwheel will be in direct contact with the potable water.	WRAS	1307508 1112500	Small	[redacted] 12/07/2016	[redacted] 14/10/2016	The approval number doesn't match up. **Amended**							Yes			
63	Talis UK Incorporating	RIV Rubinetterie Italiane Velatta S.P.A.	BSP Ball valve (1/2", 1")	1/2, 1 BSP Ball valve with chromium plated brass/cast brass bodies, PTFE seats and NBR 'O' rings.	WRAS	1210033	Small	[redacted] 12/07/2016	[redacted] 27/07/2016			**Yes**			Yes					
64	Talis UK Incorporating	RIV Rubinetterie Italiane Velatta S.P.A	PN16 Dual plate wafer check valve with resicoat factory applied, epoxy powder coatings	Spherical valve with chromium plated brass or cast brass bodies. PTFE seats and NBR 'O' rings.	WRAS	1210033	Small	[redacted] 13/07/2016	[redacted] 13/07/2016	Can you put these on two separate lines please if they're different products. **Amended** **Approval number doesn't match description or manufacturer AMENDED**				Yes	Yes	Yes		Yes	Yes	
65	Pulsar	n/a	PVDF dB10 Level Sensor in each cell of the reservoir	No part of the instrument is in direct contact with the water. The moulded housing and cable sheath are the only parts that are in contact with the condensation: - The moulded housing is made of PVDF Kynar 720 (Manufactured by Arkema) - The cable sheath is made of thermoplastic elastomer (provided by Pulsar electronics) - The heatshrink is made of polyolefin (provided by Hilltop Products) - The Potting coupound on the top of the transducer is Conapoxy FR-1047 (manufactured by Cytec) - The label is polycarbonate secured with 3M adhesive 467 See information on the separate worksheet tab.	None - Risk assessment	None - Risk assessment	Small	A.[redacted] 05/10/2016	[redacted] 31/10/2016	[redacted]										Yes
66	Hawker Electronics Ltd	n/a	Light Duty Electrode Holder HPE7	Light Duty Electrode Holder HPE7 suspended above the reservoir water level, consisting of: - Polypropylene body cap and backnut, approved to BS6920:2000. Injection moulded by Ruby plastics. - Neoprene rubber 'o' ring fitted in the cap, WRAS approved, detailed in item 75 - Internally, SS collar 316L grade - SS screw A2 grade - SS washers A2 grade Further information from Hawker 15/09/16: The electrode holder is injection moulded by Rugby Plastics using a Hawker mould. The electrode bracket insulators are made from PVCu. The PVCu disk is supplied in rod form by Oadby Plastics, which Hawker machine in to the insulators. The supplier of the PVCu rods have provided a letter of water quality conformation in Italy - see attached tab.	None - Risk assessment	None - Risk assessment	SMALL	A.[redacted] 11/10/2016	[redacted] 31/10/2016	[redacted]										Yes
67	Hawker Electronics Ltd	Hawker Electronics Ltd	Hawker Electrode Rod - Stainless Steel 316L Electrodes.	Electrode probes that are suspended from the electrode holder and hang vertically in the water.	-	SS Grade 316L	SMALL	A.[redacted] 11/10/2016	R.[redacted] 14/10/2016	The electrodes are stainless steel and not plastic coated, as first thought. The insulator between the probes and the bracket is now in the form of a PVCu insulator block mounted on the bracket. See comments in item 66 above.										Yes
68	Hawker Electronics Ltd	Hawker Electronics Ltd	Threaded Rod Type 211 to join electrodes together for longer lengths. Stainless Steel 316L.	Threaded Rod between electrodes. In direct contact with the water when level is above joint length.	-	SS Grade 316L	SMALL	A.[redacted] 11/10/2016	R.[redacted] 14/10/2016	Item approved on the Hannington MiC Form (2361) by [redacted] on 26/05/16										Yes
69	Hawker Electronics Ltd	Hawker Electronics Ltd	Hawker Type 189/X Threaded Coupler for Rod Electrodes Stainless Steel 316L	Coupler to connect two shorter electrode lengths. In direct contact with water when level is above joint length.	-	SS Grade 316L	SMALL	A.[redacted] 11/10/2016	R.[redacted] 14/10/2016	Item approved on the Hannington MiC Form (2361) by [redacted] on 26/05/16										Yes
70	Hawker Electronics Ltd	Hawker Electronics Ltd	Single Electrode Holder Mounting Bracket Type 71/SS Stainless Steel 316	2No. Electrode holders to sit in 2No. Single mounting brackets within cell 1A.	-	SS Grade 316	SMALL	A.[redacted] 11/10/2016	R.[redacted] 14/10/2016	Item approved on the Hannington MiC Form (2361) by [redacted] on 26/05/16										Yes
71	Hawker Electronics Ltd	Hawker Electronics Ltd	Double Electrode Holder Mounting Bracket Type 72/SS Stainless Steel 304	2No. Electrode holders to sit in 1No. Double mounting brackets within cell 1A.	-	SS Grade 304	SMALL	A.[redacted] 11/10/2016	R.[redacted] 14/10/2016	Item approved on the Hannington MiC Form (2361) by [redacted] on 26/05/16										Yes
72	Hawker Electronics Ltd	Hawker Electronics Ltd	Electrode Steady Bracket Type 75/SS Stainless Steel 316 with UPVC Insulator	Electrode Steady Bracket Type 75/SS Stainless Steel 316 with UPVC Insulator. Electrodes hang inside the bracket, to keep them captive and not floating around.	-	SS Grade 316	SMALL	A.[redacted] 11/10/2016	R.[redacted] 14/10/2016	Item approved on the Hannington MiC Form (2361) by [redacted] on 26/05/16										Yes
73	Hawker Electronics Ltd	n/a	UPVC Insulator for Electrode Steady Bracket	Pvc–u disk supplied in rod form by Oadby Plastics, machined into insulators. Material manufactured by Manifattura Cattaneo Spa.	-	None - Risk assessment	SMALL	A.[redacted] 11/10/2016	[redacted] 31/10/2016	[redacted]										Yes
74	AVK UK Ltd	AVK Valves (Anhui) Co. Ltd	450mm Butterfly valves S756	e of Butterfly valves	WRAS	1112059	SMALL	A.[redacted] 11/10/2016	R.[redacted] 14/10/2016		Yes	**Yes**		Yes	Yes	Yes		Yes	Yes	
75	Hawker Electronics Ltd	Elastotech srl	Neoprene o-ring	O-rings for Hawker HPE7 Electrode Holder, to replace standard non-WRAS approved o-rings. O-rings housed within electrode holder screw cap, so minimal contact with any condensation that may form.	WRAS	1301500	SMALL	A.[redacted] 07/07/2016	R.[redacted] 28/07/2016	Approved on the assumption the O-rings are within the range of in-radii sizes between 0.2mm and 5mm - the scope of the WRAS approval **The wall thickness of the o-ring, which I am assuming is the 'in-radii size', is less than 5mm.**										Yes
76	AVK UK Ltd	Valspar powder coatings	914MM OD PN16 fabricated Coupling	Blue powder coating	WRAS	1407505	Small	[redacted] 11/9/17	R.[redacted] 19/10/2017	Apply as per manufacturer's instructions. Post-cure for 10 minutes at 180°C							Yes			
		Eastland Compounding	Coupling EPDM Rubber Seal	Internal surfaces of the seal will be in direct contact with the potable water.	WRAS	1511505	Small	[redacted] 11/9/17	R.[redacted] 19/10/2017								Yes			
77	AVK UK Ltd	Valspar powder coatings	931-914MM PN16 fabricated stepped coupling	Blue powder coating	WRAS	1407505	Small	[redacted] 11/9/17	R.[redacted] 19/10/2017	Apply as per manufacturer's instructions. Post-cure for 10 minutes at 180°C							Yes			
		Eastland Compounding	Coupling EPDM Rubber Seal	Internal surfaces of the seal will be in direct contact with the potable water.	WRAS	1511505	Small	[redacted] 11/9/17	R.[redacted] 19/10/2017								Yes			
78	AVK UK Ltd	PPG Protective & Marine Coatings	500MM EVFS SHORT PATTERN DOUBLE FLANGED BUTTERFLY VALVE	Epoxy Coating	WRAS	1406524	Small	[redacted] 08/05/17	R.[redacted] 13/07/2017	SigmaGuard CSF 585. Factory applied, light blue coloured, two component solvent free epoxy coating consisting of a base and hardener. Mix base and hardener in a volume ratio of 77.5:22.5. Cure for 7 days@22°C. For use with water up to 23°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval				Yes	Yes	Yes		Yes	Yes	
		AVK GUMMI A/S		EPDM Rubber	WRAS	1306500	Small	[redacted] 08/05/17	R.[redacted] 13/07/2017					Yes	Yes	Yes		Yes	Yes	
79	Electrosteel Castings Ltd	Electrosteel Castings Ltd	90 Deg Duck foot Bend	Eco Coat FBE Powder E/105/7010. Factory applied, blue coloured, fusion bonded epoxy coating	WRAS	1209502	Small	[redacted] 11/9/17	R.[redacted] 19/10/2017	Apply as per manufacturer`s instructions. Cure for 6 minutes at 210°C and then cool in air. For use with water up to 85°C. Confirmed by [redacted] via email 23/10/2017 that product was purchased prior to Sept 2017.				Yes	Yes	Yes		Yes	Yes	

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM FORM NO: 2428

80	Frazer	George Fischer Sales LTD	150MM twinwall coupling	Range of black polyethylene electrofusion fittings for use with PE100 pipe	WRAS	1209054	Small	[redacted] 25/9/17	R.[redacted] 19/10/2017	Confirmed by [redacted] via email 23/10/2017 that product was purchased prior to Sept 2017.							Yes			
81	Frazer	GPS	150MM Twinwall Unperforated plain ended pipe	Excel NB Pipe 'New Blue' Pipe (Black core, blue outer).	DWI	56/4/1026	Large	[redacted] 25/9/17	R.[redacted] 19/10/2017								Yes			
82	Frazer	George Fischer Sales LTD	300MM twinwall coupling	Range of black polyethylene electrofusion fittings for use with PE100 pipe	WRAS	1209054	Small	[redacted] 25/9/17	R.[redacted] 19/10/2017	Confirmed by [redacted] via email 23/10/2017 that product was purchased prior to Sept 2017.							Yes			
83	Frazer	George Fischer Sales LTD	300MM twinwall coupling seals	Range of black polyethylene electrofusion fittings for use with PE100 pipe	WRAS	1209054	Small	[redacted] 25/9/17	R.[redacted] 19/10/2017	Confirmed by [redacted] via email 23/10/2017 that product was purchased prior to Sept 2017.							Yes			
84	Frazer	GPS	100MM HDPE Twinwall un perforated plain ended pipe 6m Long	Excel NB Pipe 'New Blue' Pipe (Black core, blue outer).	DWI	56/4/1026	Large	[redacted] 25/9/17	R.[redacted] 19/10/2017								Yes			
85	Frazer	GPS	100MM HDPE Twinwall solid wall pipe 6M long	Excel NB Pipe 'New Blue' Pipe (Black core, blue outer).	DWI	56/4/1026	Large	[redacted] 25/9/17	R.[redacted] 19/10/2017								Yes			
86	Frazer	GPS	150MM HDPE Twinwall un perforated plain ended pipe 6m Long	Excel NB Pipe 'New Blue' Pipe (Black core, blue outer).	DWI	56/4/1026	Large	[redacted] 25/9/17	R.[redacted] 19/10/2017								Yes			
87	Frazer	George Fischer Sales LTD	150MM twinwall coupling	Range of black polyethylene electrofusion fittings for use with PE100 pipe	WRAS	1209054	Small	[redacted] 25/9/17	R.[redacted] 19/10/2017	Confirmed by [redacted] via email 23/10/2017 that product was purchased prior to Sept 2017.							Yes			
88	Frazer	George Fischer Sales LTD	150MM twinwall 15 deg Bend	Range of black polyethylene electrofusion fittings for use with PE100 pipe	WRAS	1209054	Small	[redacted] 25/9/17	R.[redacted] 19/10/2017	Confirmed by [redacted] via email 23/10/2017 that product was purchased prior to Sept 2017.							Yes			
89	Frazer	George Fischer Sales LTD	150MM twinwall 30 deg Bend	Range of black polyethylene electrofusion fittings for use with PE100 pipe	WRAS	1209054	Small	[redacted] 25/9/17	R.[redacted] 19/10/2017	Confirmed by [redacted] via email 23/10/2017 that product was purchased prior to Sept 2017.							Yes			
90	Frazer	George Fischer Sales LTD	150MM twinwall 45 deg Bend	Range of black polyethylene electrofusion fittings for use with PE100 pipe	WRAS	1209054	Small	[redacted] 25/9/17	R.[redacted] 19/10/2017	Confirmed by [redacted] via email 23/10/2017 that product was purchased prior to Sept 2017.							Yes			
91	Frazer	George Fischer Sales LTD	150MM twinwall 90 deg Bend	Range of black polyethylene electrofusion fittings for use with PE100 pipe	WRAS	1209054	Small	[redacted] 25/9/17	R.[redacted] 19/10/2017	Confirmed by [redacted] via email 23/10/2017 that product was purchased prior to Sept 2017.							Yes			
92	Frazer	George Fischer Sales LTD	150MM T/S Junction 45 deg Bend	Range of black polyethylene electrofusion fittings for use with PE100 pipe	WRAS	1209054	Small	[redacted] 25/9/17	R.[redacted] 19/10/2017	Confirmed by [redacted] via email 23/10/2017 that product was purchased prior to Sept 2017.							Yes			
93	Frazer	GPS	300MM HDPE Twinwall un perforated plain ended pipe 6m Long	Excel NB Pipe 'New Blue' Pipe (Black core, blue outer).	DWI	56/4/1026	Large	[redacted] 25/9/17	R.[redacted] 19/10/2017								Yes			
94	Frazer	George Fischer Sales LTD	150MM black twinwall rigiduct long radius 90 deg Bend	Range of black polyethylene electrofusion fittings for use with PE100 pipe	WRAS	1209054	Small	[redacted] 25/9/17	R.[redacted] 19/10/2017	Confirmed by [redacted] via email 23/10/2017 that product was purchased prior to Sept 2017.							Yes			
95	Frazer	George Fischer Sales LTD	150MM Coupler	Range of black polyethylene electrofusion fittings for use with PE100 pipe	WRAS	1209054	Small	[redacted] 25/9/17	R.[redacted] 19/10/2017	Confirmed by [redacted] via email 23/10/2017 that product was purchased prior to Sept 2017.							Yes			
96	Frazer	George Fischer Sales LTD	150MM twinwall couplers	Range of black polyethylene electrofusion fittings for use with PE100 pipe	WRAS	1209054	Small	[redacted] 25/9/17	R.[redacted] 19/10/2017	Confirmed by [redacted] via email 23/10/2017 that product was purchased prior to Sept 2017.							Yes			
97	Frazer	George Fischer Sales LTD	100MM twinwall couplers	Range of black polyethylene electrofusion fittings for use with PE100 pipe	WRAS	1209054	Small	[redacted] 25/9/17	R.[redacted] 19/10/2017	Confirmed by [redacted] via email 23/10/2017 that product was purchased prior to Sept 2017.							Yes			
98	Fusion Provida	GPS	stub flange assembly OD 90MM black PE80 SDR11 C/W 80MM PN16 Backing Ring and flange joint set	Black coloured, injection moulded polyethylene fitting	WRAS	1403507	Small	[redacted] 25/9/17	R.[redacted] 19/10/2017								Yes			
99	Fusion Provida	GPS	PE Pipe OD 90MM blue PE80 SDR17 Solid 6m Long	Excel NB Pipe 'New Blue' Pipe (Black core, blue outer).	DWI	56/4/1026	Large	[redacted] 25/9/17	R.[redacted] 23/10/2017								Yes			
100	Fusion Provida	GPS	90 deg electrofusion PE bend OD 90MM black PE80 SDR 11	Internals of PE Fitting	WRAS	1403507	Small	[redacted] 25/9/17	R.[redacted] 19/10/2017								Yes			
101	Fusion Provida	GPS	Electrofusion coupling OD 90MM Black PE80 SDR11	Internals of PE Fitting	WRAS	1403507	Small	[redacted] 25/9/17	R.[redacted] 19/10/2017								Yes			
102	Fusion Provida	GPS	PE pipe 90mm OD pe100 SDR17 Solid Length 6M	Excel NB Pipe 'New Blue' Pipe (Black core, blue outer).	DWI	56/4/1026	Large	[redacted] 25/9/17	R.[redacted] 19/10/2017								Yes			
103	FWB Products	Zenith Industrial Rubber Products PVT Ltd	450 MM fullfaced epdm gasket	EPDM Gasket	WRAS	1311533	Small	[redacted] 21/9/17	R.[redacted] 19/10/2017			Yes								
104	GPS	GPS	500 OD SDR21 PE80 12M long	Excel NB pipe	DWI	56/4/1026	Large	[redacted] 11/07/16	R.[redacted] 13/07/2017	Use of the product must be in accordance with the Instructions for Use: Issue: Excel NB. Issue No: 1. Issue Date: 1/7/2011							Yes			
105	GPS	GPS	Electrofusion coupler 500OD to suit PE pipe	Black coloured, injection moulded polyethylene fitting	WRAS	1403507	Small	[redacted] 11/07/16	R.[redacted] 13/07/2017			Yes								
106	Industrial valves	Anhui Lujiang Rubber Products Co. Ltd	EPDM rubber/ O Rings for Butterfly Valves	EPDM rubber/ O Rings for Butterfly Valves	WRAS	1401524	Small	[redacted] 31/05/2017	R.[redacted] 13/07/2017			**Yes**		Yes	Yes	Yes		Yes	Yes	
		Akzo Nobel Powder Coatings GmbH	Resicoat R4 Blue coating for butterfly valves	Resicoat R4 Blue coating for butterfly valves	WRAS	1112500	Small	[redacted] 31/05/2017	R.[redacted] 19/10/2017	When was this product purchased, approval expired in November 2016? **Ordered 17/08/2016**		**Yes**		Yes	Yes	Yes		Yes	Yes	
107	Industrial valves	Anhui Lujiang Rubber Products Co. Ltd	EPDM rubber/ O Rings for disk check valves	EPDM rubber/ O Rings for disk check valves	WRAS	1401524	Small	[redacted] 31/05/2017	R.[redacted] 13/07/2017					Yes	Yes	Yes		Yes	Yes	
		Akzo Nobel Powder Coatings GmbH	Resicoat R4 Blue coating for Disk Check valves	Resicoat R4 Blue coating for Disk Check valves	WRAS	1112500	Small	[redacted] 31/05/2017	R.[redacted] 19/10/2017	When was this product purchased, approval expired in November 2016? **Ordered 17/08/2016**				Yes	Yes	Yes		Yes	Yes	
108	Industrial valves	Duvalco	500 & 600 MM resilient seated Gate valve	500 & 600 MM resilient seated Gate valve	WRAS	1511905	Small	[redacted] 31/05/2017	R.[redacted] 13/07/2017					Yes	Yes	Yes		Yes	Yes	
109	Kebrell Nut and bolts Ltd	Dexine Rubber Company Ltd	700, 600, 500, 300, 200MM EPDM Gasket	EPDM Gasket	WRAS	1401510	Small	[redacted] 31/05/2017	R.[redacted] 13/06/2017			Yes	Yes	Yes	Yes	Yes		Yes	Yes	
110	Keyline Builders Merchants	Arkema	945MM Coupling EPDM Rilsan PN16	Rilsan polyamide coatings to be used in conjunction with Primgreen LAT 12035 epoxy resin primer.	WRAS	1411519	Small	[redacted] 25/9/17	R.[redacted] 19/10/2017	Rilsan polyamide powder coatings to be used in conjunction with Primgreen LAT 12035 epoxy resin primer, apply and cure accordance with user instructions: Cerdato/ T2 RFP / September 2012. The following grades are for use with water up to 60°C: T Black 7450 AC, T Blue 7443 MAC, T Green 7529 MAC, T Grey 5161 MAC and T White 1488 AC.										Yes
111	Keyline Builder Merchant	Arkema	DN600, 700 PN16 EPDM Dismantling Joint	Rilsan polyamide powder coatings, used in conjuction with Primgreen LAT 12035 epoxy resin primer	WRAS	1411519	Small	[redacted] 11/9/17	R.[redacted] 19/10/2017	Rilsan polyamide powder coatings to be used in conjunction with Primgreen LAT 12035 epoxy resin primer, apply and cure accordance with user instructions: Cerdato/ T2 RFP / September 2012. The following grades are for use with water up to 60°C: T Black 7450 AC, T Blue 7443 MAC, T Green 7529 MAC, T Grey 5161 MAC and T White 1488 AC.			Yes	Yes	Yes	Yes	Yes	Yes	Yes	
111a	Keyline Builder Merchant	VIP Polymers Ltd	DN600, 700 PN16 EPDM Dismantling Joint	EPDM internal coating	WRAS	1607507	Small	[redacted] 13/07/17	R.[redacted] 15/08/2017				Yes	Yes	Yes	Yes	Yes	Yes	Yes	
112	Keyline Builders Merchants	Arkema	1048MM flange adaptor	Rilsan polyamide powder coatings	WRAS	1411519	Small	[redacted] 25/9/17	R.[redacted] 19/10/2017	Rilsan polyamide powder coatings to be used in conjunction with Primgreen LAT 12035 epoxy resin primer, apply and cure accordance with user instructions: Cerdato/ T2 RFP / September 2012. The following grades are for use with water up to 60°C: T Black 7450 AC, T Blue 7443 MAC, T Green 7529 MAC, T Grey 5161 MAC and T White 1488 AC.										Yes
113	Keyline Builders Merchants	Arkema	945MM EPDM rilsan pn16 Coupling	Factory applied Powder coating	WRAS	1411519	small	[redacted] 12/06/2017	R.[redacted] 13/06/2017	Rilsan polyamide powder coatings to be used in conjunction with Primgreen LAT 12035 epoxy resin primer, apply and cure accordance with user instructions: Cerdato/ T2 RFP / September 2012. The following grades are for use with water up to 60°C: T Black 7450 AC, T Blue 7443 MAC, T Green 7529 MAC, T Grey 5161 MAC and T White 1488 AC.										Yes
		Industrial rubber LTD	945MM EPDM rilsan pn16 Coupling	EPDM	WRAS	1310504	small	[redacted] 12/06/2017	R.[redacted] 13/06/2017											Yes
114	R2M	Vuhu Jinmao Liquid Science & technology co Lt	900, 1200MM Coupling	EPDM Rubber	WRAS	1311521	Small	[redacted] 17/7/17	R.[redacted] 15/08/2017											Yes
		Arkema		Rilsan polyamide powder coating	WRAS	1411519	Small	[redacted] 17/7/17	R.[redacted] 15/08/2017	Rilsan polyamide powder coatings to be used in conjunction with Primgreen LAT 12035 epoxy resin primer, apply and cure accordance with user instructions: Cerdato/ T2 RFP / September 2012. The following grades are for use with water up to 60°C: T Black 7450 AC, T Blue 7443 MAC, T Green 7529 MAC, T Grey 5161 MAC and T White 1488 AC.										Yes
115	Saint Gobain Pam	Intermarp (Italia) SPA	EPDM 450MM Anchor gasket	APE 70N. Black coloured, injection moulded EPDM rubber material.	WRAS	1406515	Small	[redacted] 01/08/2017	R.[redacted] 15/08/2017			Yes								
116	Saint Gobain Pam	Saint Gobain Pam	System CL 700mm double spigot pipe (1856, 3300, 3700mm long)	System Cl pipework (Cement mortar lined pipe)	DWI	56/4/283	Large	[redacted]- 8/08/2017	R.[redacted] 15/08/2017	Use of the product must be in accordance with the Instructions for Use: SAINT GOBAIN PAM UK. Instructions for Use Document for System CL Pipes. Issue Number 9. Date: 25th May 2009							Yes			
117	Saint Gobain Pam	Saint Gobain Pam	System CL 700mm spigot socket pipe (750, 1000, 1060, 1250, 3900, 5000, 5970, 6960mm Long)	System Cl pipework (Cement mortar lined pipe)	DWI	56/4/283	Large	[redacted]- 8/08/2017	R.[redacted] 15/08/2017	Use of the product must be in accordance with the Instructions for Use: SAINT GOBAIN PAM UK. Instructions for Use Document for System CL Pipes. Issue Number 9. Date: 25th May 2009				Yes	Yes	Yes	Yes	Yes	Yes	
118	Saint Gobain Pam	Intermarp (Italia) SPA	700MM Rapid gasket	APE 70N. Black coloured, injection moulded EPDM rubber material.	WRAS	1406515	Small	[redacted]- 8/08/2017	R.[redacted] 15/08/2017					Yes	Yes	Yes	Yes	Yes	Yes	
119	Saint Gobain Pam	Saint Gobain Pam	System CL 700mm flange spigot pipe (580, 1000, 5000mm long)	System Cl pipework (Cement mortar lined pipe)	DWI	56/4/283	Large	[redacted]- 8/08/2017	R.[redacted] 15/08/2017	Use of the product must be in accordance with the Instructions for Use: SAINT GOBAIN PAM UK. Instructions for Use Document for System CL Pipes. Issue Number 9. Date: 25th May 2009			Yes				Yes			
120	Saint Gobain Pam	Saint Gobain Pam	System CL 300MM Double flanged pipe (1015mm Long)	System Cl pipework (Cement mortar lined pipe)	DWI	56/4/283	Large	[redacted]- 8/08/2017	R.[redacted] 15/08/2017	Use of the product must be in accordance with the Instructions for Use: SAINT GOBAIN PAM UK. Instructions for Use Document for System CL Pipes. Issue Number 9. Date: 25th May 2009				Yes	Yes	Yes		Yes	Yes	
121	Saint Gobain Pam	Saint Gobain Pam	System CL 700mm Double flanged pipe (530, 1145, 1260mm long)	System Cl pipework (Cement mortar lined pipe)	DWI	56/4/283	Large	[redacted]- 8/08/2017	R.[redacted] 15/08/2017	Use of the product must be in accordance with the Instructions for Use: SAINT GOBAIN PAM UK. Instructions for Use Document for System CL Pipes. Issue Number 9. Date: 25th May 2009				Yes	Yes	Yes	Yes	Yes	Yes	
122	Saint Gobain Pam	BS Coatings	700MM DF 90Deg Bend	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/08/2017	R.[redacted] 15/08/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.				Yes	Yes	Yes		Yes	Yes	
123	Saint Gobain Pam	BS Coatings	700MM DF Duckfoot 90Deg Bend	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/08/2017	R.[redacted] 15/08/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.				Yes	Yes	Yes		Yes	Yes	
124	Saint Gobain Pam	Saint Gobain Pam	System CL 700MM Universal flange socket 1400mm long	System Cl pipework (Cement mortar lined pipe)	DWI	56/4/283	Large	[redacted]- 8/08/2017	R.[redacted] 15/08/2017	Use of the product must be in accordance with the Instructions for Use: SAINT GOBAIN PAM UK. Instructions for Use Document for System CL Pipes. Issue Number 9. Date: 25th May 2009				Yes						
125	Saint Gobain Pam	BS Coatings	700MM Blank Flange	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/08/2017	R.[redacted] 15/08/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.				Yes	Yes	Yes		Yes	Yes	
126	Saint Gobain Pam	BS Coatings	700x300MM AF Tee	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/08/2017	R.[redacted] 15/08/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.				Yes	Yes	Yes		Yes	Yes	
127	Saint Gobain Pam	Intermarp (Italia) SPA	150, 200, 300MM EPDM Gasket	APE 70N. Black coloured, injection moulded EPDM rubber material.	WRAS	1406515	Small	[redacted] 11/08/2017	R.[redacted] 19/10/2017					Yes	Yes	Yes		Yes	Yes	
128	Saint Gobain Pam	BS Coatings	700x700MM Rapid socket Tee	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/08/2017	R.[redacted] 15/08/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.				Yes	Yes	Yes		Yes	Yes	
129	Saint Gobain Pam	BS Coatings	700x700MM All Flanged Tee	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/08/2017	R.[redacted] 15/08/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.				Yes	Yes	Yes		Yes	Yes	
130	Saint Gobain Pam	BS Coatings	700x600MM concentric taper	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/08/2017	R.[redacted] 15/08/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.				Yes	Yes	Yes		Yes	Yes	
131	Saint Gobain Pam	Saint Gobain Pam	600MM Flange socket 1000, 5970mm long	System Cl pipework (Cement mortar lined pipe)	DWI	56/4/283	Large	[redacted] 11/9/17	R.[redacted] 19/10/2017	Use of the product must be in accordance with the Instructions for Use: SAINT GOBAIN PAM UK. Instructions for Use Document for System CL Pipes. Issue Number 9. Date: 25th May 2009				Yes	Yes	Yes		Yes	Yes	
132	Saint Gobain Pam	Intermarp (Italia) SPA	600MM Gaskets	APE 70N. Black coloured, injection moulded EPDM rubber material.	WRAS	1406515	Small	[redacted] 11/08/2017	R.[redacted] 19/10/2017					Yes	Yes	Yes		Yes	Yes	
133	Saint Gobain Pam	Intermarp (Italia) SPA	600MM rapid gasket	APE 70N. Black coloured, injection moulded EPDM rubber material.	WRAS	1406515	Small	[redacted] 11/08/2017	R.[redacted] 19/10/2017					Yes	Yes	Yes		Yes	Yes	
134	Saint Gobain Pam	Saint Gobain Pam	System CL 600MM double spigot pipe 3450MM Long	System Cl pipework (Cement mortar lined pipe)	DWI	56/4/283	Large	[redacted] 8/08/2017	R.[redacted] 15/08/2017	Use of the product must be in accordance with the Instructions for Use: SAINT GOBAIN PAM UK. Instructions for Use Document for System CL Pipes. Issue Number 9. Date: 25th May 2009				Yes	Yes	Yes		Yes	Yes	
135	Saint Gobain Pam	BS Coatings	700MM Universal socketed 22.5 DEG bend	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/08/2017	R.[redacted] 15/08/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.				Yes			Yes			
136	Saint Gobain Pam	Saint Gobain Pam	System CL 700mm double spigot pipe (1000, 1294, 2847, 4200mm long)	System Cl pipework (Cement mortar lined pipe)	DWI	56/4/283	Large	[redacted]- 8/08/2017	R.[redacted] 15/08/2017	Use of the product must be in accordance with the Instructions for Use: SAINT GOBAIN PAM UK. Instructions for Use Document for System CL Pipes. Issue Number 9. Date: 25th May 2009							Yes			
137	Saint Gobain Pam	Saint Gobain Pam	System CL 600MM Flange spigot pipe (1000, 1250, 1880mm long)	System Cl pipework (Cement mortar lined pipe)	DWI	56/4/283	Large	[redacted]- 8/08/2017	R.[redacted] 15/08/2017	Use of the product must be in accordance with the Instructions for Use: SAINT GOBAIN PAM UK. Instructions for Use Document for System CL Pipes. Issue Number 9. Date: 25th May 2009				Yes	Yes	Yes		Yes	Yes	
138	Saint Gobain Pam	Saint Gobain Pam	System CL 600MM double spigot pipe 3800MM Long	System Cl pipework (Cement mortar lined pipe)	DWI	56/4/283	Large	[redacted]- 8/08/2017	R.[redacted] 15/08/2017	Use of the product must be in accordance with the Instructions for Use: SAINT GOBAIN PAM UK. Instructions for Use Document for System CL Pipes. Issue Number 9. Date: 25th May 2009				Yes	Yes	Yes		Yes	Yes	
139	Saint Gobain Pam	BS Coatings	600MM DF 90 deg Bend	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/09/2017	R.[redacted] 19/10/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.				Yes	Yes	Yes		Yes	Yes	
140	Saint Gobain Pam	BS Coatings	600x600MM, 600x500mm rapid socket Tee	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/09/2017	R.[redacted] 19/10/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.				Yes	Yes	Yes		Yes	Yes	
141	Saint Gobain Pam	Saint Gobain Pam	System CL 600MM Double spigot pipe 4500MM long	System Cl pipework (Cement mortar lined pipe)	DWI	56/4/283	Large	[redacted]- 8/08/2017	R.[redacted] 15/08/2017	Use of the product must be in accordance with the Instructions for Use: SAINT GOBAIN PAM UK. Instructions for Use Document for System CL Pipes. Issue Number 9. Date: 25th May 2009				Yes	Yes	Yes		Yes	Yes	
142	Saint Gobain Pam	Saint Gobain Pam	System CL 600mm Standard spigot socket pipe 600, 750, 1000, 1250MM Long	System Cl pipework (Cement mortar lined pipe)	DWI	56/4/283	Large	[redacted]- 8/08/2017	R.[redacted] 15/08/2017	Use of the product must be in accordance with the Instructions for Use: SAINT GOBAIN PAM UK. Instructions for Use Document for System CL Pipes. Issue Number 9. Date: 25th May 2009				Yes	Yes	Yes		Yes	Yes	
143	Saint Gobain Pam	Saint Gobain Pam	System CL 600mm Standard spigot socket pipe 5000, 5970 MM Long	System Cl pipework (Cement mortar lined pipe)	DWI	56/4/283	Large	[redacted]- 8/08/2017	R.[redacted] 15/08/2017	Use of the product must be in accordance with the Instructions for Use: SAINT GOBAIN PAM UK. Instructions for Use Document for System CL Pipes. Issue Number 9. Date: 25th May 2009				Yes	Yes	Yes		Yes	Yes	
144	Saint Gobain Pam	Saint Gobain Pam	System CL 600MM double spigot pipe 2575mm Long	System Cl pipework (Cement mortar lined pipe)	DWI	56/4/283	Large	[redacted]- 8/08/2017	R.[redacted] 15/08/2017	Use of the product must be in accordance with the Instructions for Use: SAINT GOBAIN PAM UK. Instructions for Use Document for System CL Pipes. Issue Number 9. Date: 25th May 2009				Yes	Yes	Yes		Yes	Yes	
145	Saint Gobain Pam	Saint Gobain Pam	System CL 600MM DF pipe 1185, 1345, 2000mm long	System Cl pipework (Cement mortar lined pipe)	DWI	56/4/283	Large	[redacted]- 8/08/2017	R.[redacted] 15/08/2017	Use of the product must be in accordance with the Instructions for Use: SAINT GOBAIN PAM UK. Instructions for Use Document for System CL Pipes. Issue Number 9. Date: 25th May 2009				Yes	Yes	Yes		Yes	Yes	
146	Saint Gobain Pam	BS Coatings	600x500MM DF Concentric Taper	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/09/2017	R.[redacted] 19/10/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.				Yes	Yes	Yes		Yes	Yes	
147	Saint Gobain Pam	BS Coatings	600x600MM ALL Flanged Tee	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/09/2017	R.[redacted] 19/10/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.				Yes	Yes	Yes		Yes	Yes	
148	Saint Gobain Pam	BS Coatings	600MM Blank Flange	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/09/2017	R.[redacted] 19/10/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.				Yes	Yes	Yes		Yes	Yes	
149	Saint Gobain Pam	BS Coatings	500x200MM Tee	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/09/2017	R.[redacted] 19/10/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.		**Yes**								

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150	Saint Gobain Pam	BS Coatings	500MM Flange socket	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/09/2017	R.[redacted] 19/10/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.		Yes								
151	Saint Gobain Pam	Intermarp (Italia) SPA	500mm Gaskets	APE 70N. Black coloured, injection moulded EPDM rubber material.	WRAS	1406515	Small	[redacted] 11/08/2017	R.[redacted] 19/10/2017					Yes						
152	Saint Gobain Pam	Saint Gobain Pam	System CL 500MM Flange spigot 445MM Long	System CI pipework (Cement mortar lined pipe)	DWI	56/4/283	Large	[redacted] 8/08/2017	R.[redacted] 15/08/2017	Use of the product must be in accordance with the Instructions for Use: SAINT GOBAIN PAM UK. Instructions for Use Document for System CL Pipes. Issue Number 9. Date: 25th May 2009				Yes						
153	Saint Gobain Pam	Saint Gobain Pam	System CL 500MM Standard spigot socket pipe 6000MM Long	System CI pipework (Cement mortar lined pipe)	DWI	56/4/283	Large	[redacted] 8/08/2017	R.[redacted] 15/08/2017	Use of the product must be in accordance with the Instructions for Use: SAINT GOBAIN PAM UK. Instructions for Use Document for System CL Pipes. Issue Number 9. Date: 25th May 2009				Yes						Yes
154	Saint Gobain Pam	BS Coatings	300M DF 90DEG BEND	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/09/2017	R.[redacted] 19/10/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.				Yes	Yes	Yes		Yes	Yes	
155	Saint Gobain Pam	Saint Gobain Pam	System CL 200MM DF pipe 1285MM Long	System CI pipework (Cement mortar lined pipe)	DWI	56/4/283	Large	[redacted] 8/08/2017	R.[redacted] 15/08/2017	Use of the product must be in accordance with the Instructions for Use: SAINT GOBAIN PAM UK. Instructions for Use Document for System CL Pipes. Issue Number 9. Date: 25th May 2009				Yes	Yes	Yes		Yes	Yes	
156	Saint Gobain Pam	BS Coatings	200MM DF 90 Deg Bend	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/09/2017	R.[redacted] 19/10/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.				Yes	Yes	Yes		Yes	Yes	
157	Saint Gobain Pam	Intermarp (Italia) SPA	450, 600MM Anchor Gasket	APE 70N. Black coloured, injection moulded EPDM rubber material.	WRAS	1406515	Small	[redacted] 11/09/2017	R.[redacted] 19/10/2017			Yes								
158	Saint Gobain Pam	Saint Gobain Pam	System CL 1000MM Standard spigot socket pipe 6960MM Long	System CI pipework (Cement mortar lined pipe)	DWI	56/4/283	Large	[redacted] 8/08/2017	R.[redacted] 15/08/2017	Use of the product must be in accordance with the Instructions for Use: SAINT GOBAIN PAM UK. Instructions for Use Document for System CL Pipes. Issue Number 9. Date: 25th May 2009				Yes	Yes	Yes		Yes	Yes	Yes
159	Saint Gobain Pam	Saint Gobain Pam	System CL 500MM DF PIPE 415MM Long	System CI pipework (Cement mortar lined pipe)	DWI	56/4/283	Large	[redacted] 8/08/2017	R.[redacted] 15/08/2017	Use of the product must be in accordance with the Instructions for Use: SAINT GOBAIN PAM UK. Instructions for Use Document for System CL Pipes. Issue Number 9. Date: 25th May 2009				Yes						Yes
160	Saint Gobain Pam	Saint Gobain Pam	System CL 500MM DF Pipe 1335MM LONG	System CI pipework (Cement mortar lined pipe)	DWI	56/4/283	Large	[redacted] 8/08/2017	R.[redacted] 15/08/2017	Use of the product must be in accordance with the Instructions for Use: SAINT GOBAIN PAM UK. Instructions for Use Document for System CL Pipes. Issue Number 9. Date: 25th May 2009				Yes						Yes
161	Saint Gobain Pam	BS Coatings	1000MM Socketed 90 DEG bend	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/09/2017	R.[redacted] 19/10/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.				Yes	Yes	Yes		Yes	Yes	Yes
162	Saint Gobain Pam	Saint Gobain Pam	1000MM Spigot socket pipe 1060, 1250, 6960MM Long	System CI pipework (Cement mortar lined pipe)	DWI	56/4/283	Large	[redacted] 8/08/2017	R.[redacted] 15/08/2017	Use of the product must be in accordance with the Instructions for Use: SAINT GOBAIN PAM UK. Instructions for Use Document for System CL Pipes. Issue Number 9. Date: 25th May 2009				Yes						Yes
163	Saint Gobain Pam	BS Coatings	700MM socketed 22.5 DEG Bend	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/08/2017	R.[redacted] 15/08/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.				Yes	Yes	Yes	Yes	Yes	Yes	
164	Saint Gobain Pam	Saint Gobain Pam	System CL 700MM socket spigot pipe 6890mm long	System CI pipework (Cement mortar lined pipe)	DWI	56/4/283	Large	[redacted] 8/08/2017	R.[redacted] 15/08/2017	Use of the product must be in accordance with the Instructions for Use: SAINT GOBAIN PAM UK. Instructions for Use Document for System CL Pipes. Issue Number 9. Date: 25th May 2009							Yes			
165	Saint Gobain Pam	BS Coatings	700mm x adjustable 150mm Flange on socket tee	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/08/2017	R.[redacted] 15/08/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.			Yes							
166	Saint Gobain Pam	BS Coatings	700MM Socketed 45 Deg Bend	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/08/2017	R.[redacted] 15/08/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.			Yes							
167	Saint Gobain Pam	BS Coatings	700MM Socketed 90 Deg Bend	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/08/2017	R.[redacted] 15/08/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.				Yes	Yes	Yes		Yes	Yes	
168	Saint Gobain Pam	BS Coatings	150x80mm Concentic Taper	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/9/17	R.[redacted] 19/10/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.			Yes	Yes			Yes			Yes
169	Saint Gobain Pam	BS Coatings	700x150MM All Flanged Tee	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/9/17	R.[redacted] 19/10/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.			Yes							
170	Saint Gobain Pam	BS Coatings	700x500MM All Flanged Tee	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/9/17	R.[redacted] 19/10/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.				Yes	Yes	Yes	Yes	Yes	Yes	
171	Saint Gobain Pam	Saint Gobain Pam	700mm Flange socket pipe 1000mm Long	System CI pipework (Cement mortar lined pipe)	DWI	56/4/283	Large	[redacted] 11/9/17	R.[redacted] 19/10/2017	Use of the product must be in accordance with the Instructions for Use: SAINT GOBAIN PAM UK. Instructions for Use Document for System CL Pipes. Issue Number 9. Date: 25th May 2009							Yes			
172	Saint Gobain Pam	BS Coatings	700 x 200mm level inert Tee	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/9/17	R.[redacted] 19/10/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.				Yes	Yes	Yes	Yes	Yes	Yes	
173	Saint Gobain Pam	BS Coatings	700MM Natural socketed tee	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/9/17	R.[redacted] 19/10/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.				Yes	Yes	Yes	Yes	Yes	Yes	
174	Saint Gobain Pam	Saint Gobain Pam	700mm Double spigot pipe 1000, 1550, 4200mm long	System CI pipework (Cement mortar lined pipe)	DWI	56/4/283	Large	[redacted] 11/9/17	R.[redacted] 19/10/2017	Use of the product must be in accordance with the Instructions for Use: SAINT GOBAIN PAM UK. Instructions for Use Document for System CL Pipes. Issue Number 9. Date: 25th May 2009							Yes			
175	Saint Gobain Pam	BS Coatings	200x80mm DF Flat Taper	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/9/17	R.[redacted] 19/10/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.				Yes	Yes	Yes		Yes	Yes	
176	Saint Gobain Pam	BS Coatings	100MM 90DEG BEND	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/9/17	R.[redacted] 19/10/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.			Yes							
177	Saint Gobain Pam	BS Coatings	150x100AF TEE	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/9/17	R.[redacted] 19/10/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.			Yes							
178	Saint Gobain Pam	Saint Gobain Pam	500MM spigot socket, 1000, 1060, 1350MM long	System CI pipework (Cement mortar lined pipe)	DWI	56/4/283	Large	[redacted] 11/9/17	R.[redacted] 19/10/2017	Use of the product must be in accordance with the Instructions for Use: SAINT GOBAIN PAM UK. Instructions for Use Document for System CL Pipes. Issue Number 9. Date: 25th May 2009				Yes						
179	Talis UK Incorporating ATPLAS& ERHARD	Erhard GmbH & Co. KG	500,600MM DIA PN16 Flanged double eccentric Butterfly valve clockwise close handwheel operated	Roco Wave' Butterfly Valve	WRAS	1512066	Small	[redacted] 11/9/17	R.[redacted] 19/10/2017					Yes	Yes	Yes		Yes	Yes	
180	UTS engineering LTD	Azko Nobel	DN500, DN700 Dismantling joint	Resicoat R4 Blue powder coating	WRAS	1112500	Small	[redacted] 11/9/17	R.[redacted] 19/10/2017	Confirmed by email 25/10/2017 from [redacted] that the product was purchased prior to Dec 2016.			Yes	Yes	Yes	Yes	Yes	Yes	Yes	
181		VIP Polymers Ltd		EPDM	WRAS	1112504	Small	[redacted] 11/9/17	R.[redacted] 19/10/2017	Confirmed by email 25/10/2017 from [redacted] that the product was purchased prior to Dec 2016.			Yes	Yes	Yes	Yes	Yes	Yes	Yes	
182	Wolseley Utilities LTD T/A Burdens	Akzo Nobel Powder Coating GMBH	80MM resilient seated Gate valve	Resicoat R4 Blue powder coating	WRAS	1112500	Small	[redacted] 11/9/17	R.[redacted] 23/10/2017	Confirmed by email 25/10/2017 from [redacted] that the product was purchased prior to Dec 2016.										Yes
183		Gummiwerk Kraiburg GmbH & Co		AA7 GDZ. Black coloured, compression moulded EPDM sheet material	WRAS	1307508	Small	[redacted] 11/9/17	R.[redacted] 23/10/2017											Yes
184	Wolseley Utilities LTD T/A Burdens	Dexine Rubber Company Ltd	150MM Full faced EPDM Gasket	EPDM	WRAS	1401510	Small	[redacted] 11/9/17	R.[redacted] 19/10/2017					Yes	Yes	Yes		Yes	Yes	
185	Wolseley Utilities LTD T/A Burdens	GPS	110MM Plain ended Pipe 6000MM long	Excel NB Pipe 'New Blue' Pipe (Black core, blue outer).	DWI	56/4/1026	Large	[redacted] 25/9/17	R.[redacted] 19/10/2017								Yes			
186	Wolseley Utilities LTD T/A Burdens	GPS	PN 16 PE100 Stub Flange Assembly	Black coloured, injection moulded polyethylene fitting	WRAS	1403507	Small	[redacted] 25/9/17	R.[redacted] 19/10/2017								Yes			
187	Wolseley Utilities LTD T/A Burdens	Dexine Rubber Company	450mm Full faced EPDM Gasket	EPDM Gasket	WRAS	1401510	Small	[redacted] 25/9/17	R.[redacted] 19/10/2017			Yes								
188	AVK UK Ltd	AVK UK Ltd	DN500 PN16 Twin plate wafer check valve	316l stainless steel plates	STAINLESS STEEL	316L	Small	[redacted] 20/9/17	R.[redacted] 19/10/2017					Yes	Yes	Yes		Yes	Yes	
189		AVK GUMMI A/S		EPDM Seat	WRAS	1306500	Small	[redacted] 20/9/17	R.[redacted] 19/10/2017					Yes	Yes	Yes		Yes	Yes	
190	Keyline builders merchants	Aqua Gas Maufacturing Ltd	100MM resilient seated gate valve	Internal of valve	WRAS	1512320	Small	[redacted] 25/9/17	R.[redacted] 19/10/2017				Yes				Yes			
191	Radius Systems Ltd	GPS	ELECTROFUSION COUPLING TO SUIT 500 OD PE PIPE - SDR 11	Black coloured, injection moulded polyethylene fitting	WRAS	1403507	Small	[redacted] 25/9/17	R.[redacted] 19/10/2017			Yes								
192	RCF Nut and Bolt co (tipton) ltd	Dexine rubber company Ltd	700mm gasket	EPDM Gasket	WRAS	1401510	Small	[redacted] 25/9/17	R.[redacted] 19/10/2017					Yes	Yes	Yes	Yes	Yes	Yes	
193	Wolseley Utilities LTD T/A Burdens	Aqua Gas Maufacturing Ltd	150mm resilient seated EPDM seal gate valve PN16 cap top clockwise close	Internal of valve	WRAS	1512320	Small	[redacted] 25/9/17	R.[redacted] 19/10/2017					Yes	Yes	Yes		Yes	Yes	
194	Wolseley Utilities LTD T/A Burdens	GPS	Pipe PE100 blue SDR11 OD 90 Straight length 12m Solid Burdens code: 21527313	Excel NB Pipe 'New Blue' Pipe (Black core, blue outer).	DWI	56/4/1026	Large	[redacted] 25/9/17	R.[redacted] 19/10/2017								Yes			
195	Wolseley Utilities LTD T/A Burdens	Arkema	738 OD, 945 OD coupler	Rilsan polyamide powder coatings, used in conjuction with Primgreen LAT 12035 epoxy resin primer	WRAS	1411519	Small	[redacted] 22/9/17	R.[redacted] 19/10/2017	Rilsan polyamide powder coatings to be used in conjunction with Primgreen LAT 12035 epoxy resin primer, apply and cure accordance with user instructions: Cerdato/ T2 RFP / September 2012. The following grades are for use with water up to 60°C: T Black 7450 AC, T Blue 7443 MAC, T Green 7529 MAC, T Grey 5161 MAC and T			Yes							
		VIP Polymers Ltd		EPDM internal coating	WRAS	1607507	Small	[redacted] 22/9/17	R.[redacted] 19/10/2017				Yes							
196	Wolseley Utilities LTD T/A Burdens	Dexine Rubber Company Ltd	DN250mm, DN300mm full faced EPDM gasket	EPDM Gasket	WRAS	1401510	Small	[redacted] 25/9/17	R.[redacted] 19/10/2017								Yes			
197	Wolseley Utilities LTD T/A Burdens	Arkema	125, 532, 635 ,1048 mm OD Flange adaptor	Rilsan polyamide powder coatings, used in conjuction with Primgreen LAT 12035 epoxy resin primer	WRAS	1411519	Small	[redacted] 22/9/17	R.[redacted] 19/10/2017	Rilsan polyamide powder coatings to be used in conjunction with Primgreen LAT 12035 epoxy resin primer, apply and cure accordance with user instructions: Cerdato/ T2 RFP / September 2012. The following grades are for use with water up to 60°C: T Black 7450 AC, T Blue 7443 MAC, T Green 7529 MAC, T Grey 5161 MAC and T		Yes								Yes
		VIP Polymers Ltd		EPDM internal coating	WRAS	1607507	Small	[redacted] 22/9/17	R.[redacted] 19/10/2017			Yes								Yes
198	Wolseley Utilities LTD T/A Burdens	Arkema	500, 700mm Dismantling joint	Rilsan polyamide powder coatings, used in conjuction with Primgreen LAT 12035 epoxy resin primer	WRAS	1411519	Small	[redacted] 22/9/17	R.[redacted] 19/10/2017	Rilsan polyamide powder coatings to be used in conjunction with Primgreen LAT 12035 epoxy resin primer, apply and cure accordance with user instructions: Cerdato/ T2 RFP / September 2012. The following grades are for use with water up to 60°C: T Black 7450 AC, T Blue 7443 MAC, T Green 7529 MAC, T Grey 5161 MAC and T		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		VIP Polymers Ltd		EPDM internal coating	WRAS	1607507	Small	[redacted] 22/9/17	R.[redacted] 19/10/2017			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
199	Wolseley Utilities LTD T/A Burdens	Fusion Group Ltd	90, 125, 250, 300 MM electrofusion coupler	Black coloured, injection moulded polyethylene fittings	WRAS	1504501	Small	[redacted] 25/9/17	R.[redacted] 19/10/2017								Yes			
200	Wolseley Utilities LTD T/A Burdens	Fusion Group Ltd	90, 125 mm Elbow electrofusion coupler	Black coloured, injection moulded polyethylene fittings	WRAS	1504501	Small	[redacted] 25/9/17	R.[redacted] 19/10/2017								Yes			
201	Wolseley Utilities LTD T/A Burdens	GPS	80, 100, 250, 300 mm Stub flange	Internals of PE Fitting	WRAS	1403507	Small	[redacted] 25/9/17	R.[redacted] 19/10/2017			Yes					Yes			
202	Anchor bay	Fosroc Ltd	Fosroc Nitosea IMS600	Site applied, grey coloured polyurethane joint sealant	WRAS	1404529	Small	[redacted] 16/11/17	R.[redacted] 17/11/2017	Mix, apply and cure in accordance with manufacturer`s datasheet (version 12 CI/SfB: Yt4 dated May 2014).										Yes

Brampton tees (Items 1, 3, 11, 16, 17, 50 and 74) - 450mm pipework, fittings and valves - Scotchkote pipe, equal tee, valve, hydrant, stainless steel spades in front of blank test ends, blank flange behind closed valve and full faced gaskets
Brampton mains - Section 3 of Diddington WR commissioning plan
Hannington inlet main - Section 4 of Diddington WR commissioning plan
Reservoir outlet pipework - Section 6 of Diddington WR Commisioning Plan
Pumping station to Brampton connection - Section 7 of Diddington WR commissioning plan
Brampton pumps (phase 1) - Section 8 of Diddington WR Commissioning Plan
Ampthill pipeline - Section 9 of Commissioning Plan
Ampthill pumps (Phase 1)- Section 10 of Commissioning Plan
Brampton and Ampthill surge vessel commissioning - Section 11 of Commissioning Plan
Diddington WR Commissioning - Section 13 of Commissioning Plan

Insert more lines as necessary

1 **PROJECT ENGINEER TO SIGN AND DATE TO CONFIRM MATERIALS HAVE BEEN CHECKED AGAINST CURRENT APPROVAL LISTS**
2 **WATER QUALITY PERFORMANCE TEAM TO SIGN AND DATE TO CONFIRM MATERIALS ARE APPROVED IN ACCORDANCE WITH REGULATION 31(4)(a) and 31(4)(b)**
3 **COMMENTS OR ADVICE FROM WATER QUALITY PERFORMANCE TEAM, EG INSTRUCTIONS FOR USE**

Yes **PLEASE TICK** **Confirmed via email by [redacted] 19/10/2017 that all products are now on the form**

NOTE:

REQUEST FOR REDUCED SAMPLING SIGN/DATE	WQPT APPROVED FOR SIGN/DATE	COMMENTS SIGN/DATE
No		

PART B
PART B COMPLETED BY: [redacted]
Please provide the following contact names:
OPERATIONAL SCIENTIST: [redacted]
SUPPLY MANAGER: Ghislain Juvanon/[redacted]

TRACE ORGANICS 1 2

Version 002 - June 2009

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

FORM NO: 2428

PART A LINE NUMBERS WHICH SAMPLES REPRESENT	SAMPLE NUMBER	SAMPLE DATE	COLIFORMS	E. COLI	COLONY COUNTS 2 DAY 37°C 3 DAY 22°C	QUALITATIVE TASTE	QUALITATIVE ODOUR	pH	COLOUR (HAZEN)	TURBIDITY (NTU)	CONDUCTIVITY (us/cm)	ALKALINITY(mg/l CaCO3)	ALUMINIUM (mg/l Al)	DCM & PURGE/ TRAP	MK FORM NO.	PROCESS ENGINEER /SCIENTIST CONFIRMATION SIGN/DATE	WQPT APPROVED FOR SUPPLY SIGN/DATE	Comments
Brampton main tees - not in commissioning plan																		
(1, 3, 11, 16, 17, 50 and 74)	16456918	05/10/2016	0	0	0, 0	1	2T	7.67	0.5	0.13	726	155	< 0.014	1, n/d	10683	~	~	Labelled as South main on samples, actually resamples from North main tees Requires further bacti and purge and traps
(1, 3, 11, 16, 17, 50 and 74)	16456917	05/10/2016	0	0	0, 0	1	2T	7.97	0.7	0.12	848	183	0.0381	1, 0	10683	~	~	Labelled as South main on samples, actually resamples from North main tees. Requires further full suite apart from purge and traps
(1, 3, 11, 16, 17, 50 and 74)	16477707	19/10/2016	0	0	0, 18	~	~	~	~	~	~	~	~	~, 0	10682	R.[redacted] 24/10/2016	R.[redacted] 24/10/2016	
(1, 3, 11, 16, 17, 50 and 74)	16477706	19/10/2016	0	0	12, 22	1	1Z	7.64	0.8	0.07	734	163	< 0.014	1, ~	10682	R.[redacted] 24/10/2016	R.[redacted] 24/10/2016	Low level organics is satisfactory.
Southern main tee 1 (u/s) (1, 3, 11, 16, 17, 50 and 74)	16505633	03/11/2016	0	0	0, 0	1	3T	7.65	0.6	0.11	764	186	< 0.014	1, 0	10741	R.[redacted] 08/11/2016	R.[redacted] 08/11/2016	Low level organics, comparable to those approve for tee 1 on Northern main. Mild chlorine odour and slightly high free chlorine (0.46 mg/L) than expected for Grafham. Requires flush and 16 hour stand, followed by onsite checks (clarity, turbidity, taste, odour, chlorine) to confirm no significant chlorine odour compared with source water. Confirm to [redacted] - approval given on this basis.
Southern main tee 2 (d/s) (1, 3, 11, 16, 17, 50 and 74)	16505634	03/11/2016	0	0	0, 0	1	1Z	7.67	0.7	0.14	748	189	< 0.014	0, 0	10741	R.[redacted] 08/11/2016	R.[redacted] 08/11/2016	Slightly high free chlorine (0.46 mg/L) than expected for Grafham. Requires flush and 16 hour stand, followed by onsite checks (clarity, turbidity, taste, odour, chlorine) to confirm satisfactory. Confirm to [redacted] - approval given on this basis.
Brampton mains diversions - section 3 of Diddington commissioning plan																		
Northern Brampton main - Existing supply (u/s connection)	17274323	19/06/2017	0	0	0, 0	1	2T	7.56	0.8	0.11	760	181	< 0.014	1, 0	10968	R.[redacted] 01/08/2017	R.[redacted] 01/08/2017	Free chlorine 1.06, Total chlorine 1.10 mg/L No problems with low oleic acid level (hand cream) Further bacti needed as chlorine kit found to be defective
Northern Brampton main - Existing supply (u/s connection)	17304002	04/07/2017	0	0	0, 5	1	1Z	n/a	n/a	n/a	n/a	n/a	< 0.014	n/a	n/a	R.[redacted] 01/08/2017	R.[redacted] 01/08/2017	Chlorine <0.01, 0.08 Chlorines redone with non-defective kit after around 6 days standing: 0.07/0.93
Northern Brampton main - Existing supply (u/s connection)	17331300-5 17332681 17331839	25/07/2017	0	0	0, n/a	1	1Z	7.29	n/a	0.1	n/a	n/a	n/d	0, 0	11129	R.[redacted] 01/08/2017	R.[redacted] 01/08/2017	Chlorines <0.05/0.95 No aluminium analysed for, am comfortable without as no issues with last sample set. This set was only taken as samples had timed out rather than for WQ reasons. pH added to lab suite later so only an indicative result, but no issues with previous set. New mains set, added here for completeness.
Northern Brampton main - Existing supply (u/s connection)	17365020 17366918 17364897	11/08/2017	0	0	0, n/a	1	2T	7.5	n/a	0.14	n/a	n/a	< 0.014	0, 0	11129	R.[redacted] 16/08/2017	R.[redacted] 16/08/2017	No chlorines New mains set, added here for completeness.
Northern Brampton main - Cross connection	17274324	19/06/2017	0	0	0, 25	n/d	2A	7.61	0.8	0.15	766	176	0.0293	1, 0	10968	R.[redacted] 01/08/2017	R.[redacted] 01/08/2017	Free chlorine 0.43, Total chlorine 0.55 mg/L Chlorine levels too low No problems with low oleic acid level (hand cream) or butoxyethoxy ethanol (Op SNARL 0.4 mg/L) Further bacti needed as chlorine kit found to be defective, plus chemistry
Northern Brampton main - Cross connection	17304005	04/07/2017	0	0	0, 0	1	2T	n/a	n/a	n/a	n/a	n/a	< 0.014	n/a	n/a	R.[redacted] 01/08/2017	R.[redacted] 01/08/2017	Chlorine <0.01, 0.16 Chlorines redone with non-defective kit after around 6 days standing: 0.06/0.86
Northern Brampton main - Cross connection	17331300-5 17332682 17331843	25/07/2017	0	0	0, n/a	1	1Z	7.36	n/a	0.1	n/a	n/a	n/d	1, 0	11129	R.[redacted] 01/08/2017	R.[redacted] 01/08/2017	Chlorines <0.05/0.93 No aluminium analysed for, am comfortable without as no issues with last sample set. This set was only taken as samples had timed out rather than for WQ reasons. pH added to lab suite later so only an indicative result, but no issues with previous set. New mains set, added here for completeness.
Northern Brampton main - Cross connection	17365019 17366917 17364896	11/08/2017	0	0	0, n/a	1	2T	7.53	n/a	0.12	n/a	n/a	< 0.014	0, 0	11129	R.[redacted] 16/08/2017	R.[redacted] 16/08/2017	Chlorines <0.05/0.9 New mains set, added here for completeness.
Northern Brampton main - End of main discharge point	17274322	19/06/2017	0	0	0, 0	1	2T	7.71	0.8	0.18	761	178	< 0.014	0, 0	10968	R.[redacted] 01/08/2017	R.[redacted] 01/08/2017	Free chlorine 0.36, Total chlorine 0.67 mg/L Chlorine levels too low Further bacti needed as chlorine kit found to be defective
Northern Brampton main - End of main discharge point	17304004	04/07/2017	0	0	0, 0	1	2T	n/a	n/a	n/a	n/a	n/a	< 0.014	n/a	n/a	R.[redacted] 01/08/2017	R.[redacted] 01/08/2017	Chlorine <0.01, 0.11 Chlorines redone with non-defective kit after around 6 days standing: 0.06/0.79
Northern Brampton main - End of main discharge point	17331300-5 17332683 17331840	25/07/2017	0	0	0, n/a	1	1Z	7.43	n/a	0.11	n/a	n/a	n/d	1, 0	11129	R.[redacted] 01/08/2017	R.[redacted] 01/08/2017	Chlorines <0.05/0.9 No aluminium analysed for, am comfortable without as no issues with last sample set. This set was only taken as samples had timed out rather than for WQ reasons. pH added to lab suite later so only an indicative result, but no issues with previous set. New mains set, added here for completeness.
Northern Brampton main - End of main discharge point	17365018 17366916 17364895	11/08/2017	0	0	0, n/a	1	2T	7.65	n/a	0.1	n/a	n/a	< 0.014	0, 0	11129	R.[redacted] 16/08/2017	R.[redacted] 16/08/2017	Chlorines <0.05/0.92 New mains set, added here for completeness.
Southern Brampton main - Existing supply (u/s connection)	17266697	13/06/2017	0	0	0, 0	1	1Z	7.56	0.8	0.1	756	174	< 0.014	0, 0	10968	R.[redacted] 01/08/2017	R.[redacted] 01/08/2017	Free chlorine 1.12, Total chlorine 1.36 mg/L Further bacti needed as chlorine kit found to be defective
Southern Brampton main - Existing supply (u/s connection)	17304006	04/07/2017	0	0	0, 1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R.[redacted] 01/08/2017	R.[redacted] 01/08/2017	Chlorine 0.01, 0.11 Chlorines redone with non-defective kitafter around 6 days standing: 0.06/0.91
Southern Brampton main - Existing supply (u/s connection)	17331300-5 17332686 17331318	25/07/2017	0	0	0, n/a	1	1Z	7.32	n/a	0.08	n/a	n/a	n/d	0, 0	11129	R.[redacted] 01/08/2017	R.[redacted] 01/08/2017	Chlorines <0.05/0.92 No aluminium analysed for, am comfortable without as no issues with last sample set. This set was only taken as samples had timed out rather than for WQ reasons. pH added to lab suite later so only an indicative result, but no issues with previous set. New mains set, added here for completeness.
Southern Brampton main - Cross connection	17266698	13/06/2017	0	0	1, 6	1	1Z	7.5	0.7	0.11	754	171	< 0.014	0, 0	10968	R.[redacted] 01/08/2017	R.[redacted] 01/08/2017	Free chlorine 0.45, Total chlorine 0.55 mg/L Chlorine levels too low Further bacti needed as chlorine kit found to be defective
Southern Brampton main - Cross connection	17303999	04/07/2017	0	0	0, 0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R.[redacted] 01/08/2017	R.[redacted] 01/08/2017	Chlorine 0.01, 0.12 Chlorines redone with non-defective kit after around 6 days standing: 0.06/0.74
Southern Brampton main - Cross connection	17331300-5 17332685 17331842	25/07/2017	0	0	0, n/a	1	1Z	7.41	n/a	0.08	n/a	n/a	n/d	0, 0	11129	R.[redacted] 01/08/2017	R.[redacted] 01/08/2017	Chlorines <0.05/0.89 No aluminium analysed for, am comfortable without as no issues with last sample set. This set was only taken as samples had timed out rather than for WQ reasons. pH added to lab suite later so only an indicative result, but no issues with previous set. New mains set, added here for completeness.
Southern Brampton main - End of main discharge point	17266699	13/06/2017	0	0	0, 24	1	1Z	7.49	0.8	0.11	762	169	< 0.014	0, 0	10968	R.[redacted] 01/08/2017	R.[redacted] 01/08/2017	Free chlorine 1.12, Total chlorine 1.50 mg/L Further bacti needed as chlorine kit found to be defective
Southern Brampton main - End of main discharge point	17303998	04/07/2017	0	0	0, 24	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R.[redacted] 01/08/2017	R.[redacted] 01/08/2017	Chlorine 0.02, 0.10 Slightly elevated 3-day compared to existing, but not high enough to fail. Chlorines redone with non-defective kit after around 6 days standing: 0.05/0.76
Southern Brampton main - End of main discharge point	17331300-5 17332684 17331841	25/07/2017	0	0	0, n/a	1	1Z	7.44	n/a	0.09	n/a	n/a	n/d	0, 0	11129	R.[redacted] 01/08/2017	R.[redacted] 01/08/2017	Chlorines <0.05/0.9 No aluminium analysed for, am comfortable without as no issues with last sample set. This set was only taken as samples had timed out rather than for WQ reasons. pH added to lab suite later so only an indicative result, but no issues with previous set. New mains set, added here for completeness.

Note a second set of bacti samples were taken 25/07/17 after a further 12 hours stand (17332909-2914). These were not required as the main was physically swabbed by the Pneuclean method. The location was not exactly recorded (North and South main was not identified) so it's not possible to identify the exact sampling location. All six samples were clear for coliforms and e.coli. Two samples (one on an existing supply and one on a cross connection) had 399 and 348 on a 2-day respectively. However these samples were not refrigerated and wer left in a van for 12 hours prior to being submitted. As these samples were not required, they were not stored correctly and all were satisfactory for TC/EC, then the decision has been made to approve the two mains on the basis of the sets of samples taken after the 16 hour stand, as per the standard New Mains procedure.

Southern main put into supply on the basis of thr 25/07/17 samples, but the northern main couldn't be put into supply in time. It was therefore chlorinated and resampled. All samples satisfactory and the main was passed again 16/07/17.

PART A LINE NUMBERS WHICH SAMPLES REPRESENT	SAMPLE NUMBER	SAMPLE DATE	COLIFORMS	E. COLI	COLONY COUNTS 2 DAY 37°C 3 DAY 22°C	QUALITATIVE TASTE	QUALITATIVE ODOUR	pH	COLOUR (HAZEN)	TURBIDITY (NTU)	CONDUCTIVITY (us/cm)	ALKALINITY(mg/l CaCO3)	ALUMINIUM (mg/l Al)	DCM & PURGE/ TRAP	MK FORM NO.	PROCESS ENGINEER /SCIENTIST CONFIRMATION SIGN/DATE	WQPT APPROVED FOR SUPPLY SIGN/DATE	Comments
Hannington inlet main - should be New Mains samples, have been taken as MIC sets (Section 4 of Diddington commissioning plan)																		
Existing Hannington main ductile (existing supply)	17285810	27/06/2017	0	0	0, 1	n/d	1Z	7.44	0.8	0.18	761	175	< 0.014	1, 0	10935	n/a	n/a	Free 0.87/Total 1.32 - too high, problem subsequently identified with chlorine kit Further bacti needed once chlorine kit issue sorted Organics compounds indicative of handcream
Existing Hannington main ductile (existing supply)	17304018	04/07/2017	0	0	0, n/d	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	Chlorine 0.01, 0.10 No 3-day plates (though new mains don't need them) Chlorines redone with non-defective kit after around 6 days standing: 0.06/0.90
Existing Hannington main ductile (existing supply)	17356098	04/08/2017	0	0	0, n/d	1	2T	7.48	n/a	0.3	n/a	n/a	< 0.014	0, 0	11108	R.[redacted] 15/08/2017	R.[redacted] 15/08/2017	Chlorines 0.05/0.91 Approved via email by S.[redacted] on 10/08/2017
Brampton connection 700mm ductile (cross connection)	17285811	27/06/2017	0	0	0, 249	1	1Z	8.03	1.2	0.15	779	176	< 0.014	1, 1	10935	~	~	Free 0.18/Total 0.51 - chlorines wrong, problem subsequently identified with chlorine kit Further bacti needed once chlorine kit issue sorted, plus organics
Brampton connection 700mm ductile (cross connection)	17304118 17304019	04/07/2017	0	0	0, n/d	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0, 0	11084	~	~	Chlorine 0.01, 0.16 No 3-day plates (though new mains don't need them) Chlorines redone with non-defective kit after around 6 days standing: 0.05/0.72
Brampton connection 700mm ductile (cross connection)	17356101	04/08/2017	0	0	21, n/d	1	1Z	7.51	n/a	0.1	n/a	n/a	< 0.014	0, 0	11108	R.[redacted] 15/08/2017	R.[redacted] 15/08/2017	Chlorines 0.05/0.92 Approved via email by S.[redacted] on 10/08/2017
Hannington main connection tee (end of main near Diddington inlet)	17285809	27/06/2017	0	0	0, 0	1	1Z	7.54	0.8	0.14	757	174	< 0.014	0, 0	10935	~	~	Free 0.96/Total 1.34 - too high, problem subsequently identified with chlorine kit Further bacti needed once chlorine kit issue sorted
Hannington main connection tee (end of main near Diddington inlet)	17304020	04/07/2017	0	0	0, n/d	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	~	~	Chlorine <0.01, 0.11 No 3-day plates (though new mains don't need them) Chlorines redone with non-defective kit after around 6 days standing: 0.05/0.76
Hannington main East cell connection tee (end of main near East cell Diddington inlet)	17356099	04/08/2017	0	0	0, n/d	1	2T	7.48	n/a	0.08	n/a	n/a	< 0.014	0, 0	11108	R.[redacted] 15/08/2017	R.[redacted] 15/08/2017	Chlorines <0.05/0.9 Approved via email by S.[redacted] on 10/08/2017
Hannington main West cell connection tee (end of main near West cell Diddington inlet)	17356100	04/08/2017	0	0	0, n/d	1	2T	7.46	n/a	1.19	n/a	n/a	< 0.014	0, 0	11108	R.[redacted] 15/08/2017	R.[redacted] 15/08/2017	Chlorines <0.05/0.9 Approved via email by S.[redacted] on 10/08/2017 Turbidity higher than would expect, will require satisfactory onsite checks.
Hannington main connection tee (H1, end of main near Diddington inlet)	19408751	06/09/2019	0	0	0, 2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R.[redacted] 12/09/2019	R.[redacted] 12/09/2019	Chlorine <0.01, 0.71 Flush and bacti as this section never fully went into service, approved for auto-flush to be set up
Hannington main connection tee (H2, end of main near Diddington inlet)	19408750	06/09/2019	0	0	0, 0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R.[redacted] 12/09/2019	R.[redacted] 12/09/2019	Chlorines <0.05/0.72 Flush and bacti as this section never fully went into service, approved for auto-flush to be set up
Hannington main hydrant (H3, middle of main, near Ampthill main crossover)	19408749	06/09/2019	0	0	0, 0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R.[redacted] 12/09/2019	R.[redacted] 12/09/2019	Chlorines <0.05/0.81 Flush and bacti as this section never fully went into service, approved for auto-flush to be set up
Diddington res outlet main (Section 6 of Diddington commissioning plan)																		
Diddington outlet main source supply	17405300	05/09/2017	0	0	0, 82	1	2T	7.54	0.8	0.07	775	191	< 0.014	0, 0	11103	n/a	n/a	0.05/0.76 Need to confirm which lines on Part A this applies to
Diddington PS bypass	17405301	05/09/2017	0	0	46, 1894	1	1Z	7.64	1	0.22	778	191	< 0.014	1, 1	11103	~	~	<0.05/0.73 Further bacti, odour and organics required Need to confirm which lines on Part A this applies to

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Reservoir outlet chamber (end of main)	17405302	05/09/2017	0	0	53, 5357	1	2T	7.85	1	0.1	780	193	< 0.014	1, 1	11103	~	~	<0.05/0.70 Further bacti, odour and organics required Need to confirm which lines on Part A this applies to
Diddington incoming water (source supply)	17423554	18/09/2017	0	0	0, 0	1	2T	7.67	1.8	0.13	765	161	< 0.014	1, 0	11102	n/a	n/a	0.16/1.06
Diddington PS bypass	17423553	18/09/2017	0	0	0, 34	1	1Z	8.02	1.4	0.21	761	153	< 0.014	0, 0	11141	R.[redacted] 20/12/2017	R.[redacted] 20/12/2017	<0.06/0.26 - large drop in residual Further flush, stand and pre-into supply bacti will be required - otherwise ok to sign off
Reservoir outlet chamber (end of main)	17423555	18/09/2017	0	0	0, 0	1	1Z	8.08	1.2	0.11	761	162	< 0.014	0, 0	11141	R.[redacted] 20/12/2017	R.[redacted] 20/12/2017	<0.08/0.28 - large drop in residual Further flush, stand and pre-into supply bacti will be required - otherwise ok to sign off
Diddington Brampton pumping station outlet main (Section 7 of Diddington commissioning plan)																		
Diddington incoming water (source supply)	17423554	18/09/2017	0	0	0, 0	1	2T	7.67	1.8	0.13	765	161	< 0.014	1, 0	11102	n/a	n/a	0.16/1.06
Pump P1H00002 discharge pipeowork (end of main)	17423556	18/09/2017	2	0	0, 0	1	2T	7.74	0.8	0.11	773	152	< 0.014	0, 0	11102	~	~	<0.14/0.44 - large drop in residual Further bacti required
Diddington incoming water (source supply)	17440026	29/09/2017	0	0	0, 0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.12/0.92
Pump P1H00002 discharge pipeowork (end of main)	17440027	29/09/2017	0	0	3, 0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R.[redacted] 20/12/2017	R.[redacted] 20/12/2017	0.13/0.84 Further flush, stand and pre-into supply bacti will be required - otherwise ok to sign off
Diddington Brampton pumps (Section 8 of Diddington commissioning plan)																		
Diddington incoming water (source supply)	17423554	18/09/2017	0	0	0, 0	1	2T	7.67	1.8	0.13	765	161	< 0.014	1, 0	11102	n/a	n/a	0.16/1.06
Pump P1H00005 sample tap	17423557 17424414 17426233	18/09/2017	0	0	0, 1	1	2T	7.62	0.8	1.21	773	152	< 0.014	1, 0	11102	R.[redacted] 20/12/2017	R.[redacted] 20/12/2017	Iron = 136 ug/L <0.14/0.58 - large drop in residual, needs rechecking
Pump P1H00006 sample tap	17423558 17424415 17426234	18/09/2017	0	0	0, 1	n/d	2T	7.64	1.4	0.83	772	147	< 0.014	1, 0	11102	R.[redacted] 20/12/2017	R.[redacted] 20/12/2017	Iron = 102 ug/L <0.12/0.58 - large drop in residual, needs rechecking
Diddington incoming water (source supply)	17458476	05/10/2017	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/d	n/a	n/a	n/a	n/a	n/a	n/a	n/a	Iron = 26 ug/L <0.05/0.10 - low residual due to source water being Diddington reservoir, that had been filled slowly
Pump P1H00001 sample tap	17458474	05/10/2017	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/d	n/a	n/a	n/a	n/a	n/a	R.[redacted] 20/12/2017	R.[redacted] 20/12/2017	Iron = 100 ug/L No lab turbidity <0.05/0.06 - low residual due to being fed from Diddington reservoir that had been filled slowly Further flush, stand and pre-into supply bacti will be required - otherwise ok to sign off
Pump P1H00002 sample tap	17458475	05/10/2017	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/d	n/a	n/a	n/a	n/a	n/a	R.[redacted] 20/12/2017	R.[redacted] 20/12/2017	Iron = 68 ug/L No lab turbidity <0.05/0.07 - low residual due to being fed from Diddington reservoir that had been filled slowly Further flush, stand and pre-into supply bacti will be required - otherwise ok to sign off
Pump 5 sample tap	17466621	11/10/2017	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.18	n/a	n/a	n/a	n/a	n/a	R.[redacted] 20/12/2017	R.[redacted] 20/12/2017	Further flush, stand and pre-into supply bacti will be required - otherwise ok to sign off
Pump 6 sample tap	174666622	11/10/2017	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.21	n/a	n/a	n/a	n/a	n/a	R.[redacted] 20/12/2017	R.[redacted] 20/12/2017	Further flush, stand and pre-into supply bacti will be required - otherwise ok to sign off
Ampthill pipeline (Section 9 of Diddington commissioning plan)																		
Ampthill connection (source supply)	17550999	01/12/2017	0	0	0, 1	1	2T	7.7	0.6	0.13	797	185	< 0.014	0, 0	11203	n/a	n/a	0.06/0.92
Pump P1H00006 discharge point (end of main)	17550997	01/12/2017	0	0	0, 0	1	1Z	7.92	0.7	0.12	799	183	< 0.014	0, 0	11203	R.[redacted] 20/12/2017	R.[redacted] 20/12/2017	<0.05/0.71 Over 20% drop in chlorine, need to flush, stand and remeasure chlorine - otherwise samples are ok though a further bacti will later be required
Ampthill connection (source supply)	17561363 17561455	08/12/2017	0	0	0, 0	1	1Z	n/a	n/a	0.15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.06/1.02
Pump P1H00006 discharge point (end of main)	17561364 17561454	08/12/2017	0	0	0, 0	1	1Z	n/a	n/a	0.11	n/a	n/a	n/a	n/a	n/a	R.[redacted] 20/12/2017	R.[redacted] 20/12/2017	0.05/0.94 Further flush, stand and pre-into supply bacti will be required - otherwise ok to sign off
Diddington Ampthill pumps (Section 10 of Diddington commissioning plan)																		
Ampthill connection (source supply)	17559449	07/12/2017	0	0	0, 36	1	1Z	8.14	1.1	0.31	778	188	< 0.014	0, 0	11203	v	n/a	0.06/0.18 - low due to source being Diddington res which isn't turning over well.
Ampthill pump P1H00004 (marked onsite as P1H00003)	17559447	07/12/2017	0	0	0, 122	1	1Z	8.01	1.4	4.41	782	187	0.0166	0, 0	11203	~	~	0.05/0.19 - low but same as supply 87 ug/L iron Need flush, stand and bacti/turbidity taken
Ampthill pump P1H00005 (marked onsite as P1H00002)	17559446	07/12/2017	0	0	0, 42	1	1Z	8.18	1.2	0.35	777	187	0.0153	0, 0	11203	R.[redacted] 20/12/2017	R.[redacted] 20/12/2017	0.05/0.19 - low but same as supply 60 ug/L iron Further flush, stand and pre-into supply bacti will be required - otherwise ok to sign off
Ampthill pump P1H00006 (marked onsite as P1H00001)	17559448	07/12/2017	0	0	0, 4	1	1Z	8.15	1.1	0.61	777	190	0.0181	0. 0	11203	R.[redacted] 20/12/2017	R.[redacted] 20/12/2017	<0.05/0.17 - low but same as supply 85 ug/L iron Further flush, stand and pre-into supply bacti will be required - otherwise ok to sign off
Diddington reservoir outlet (source supply)	17574748 17574786	19/12/2017	0	0	0, 12	1	2T	n/d	n/d	0.15	n/d	n/d	n/d	n/d	n/a	n/a	n/a	0.05/0.39 - low due to source being Diddington res which isn't turning over well.
Ampthill pump P1H00004 (marked onsite as P1H00003)	17574749 17574785	19/12/2017	0	0	0, 1	1	2T	n/d	n/d	0.54	n/d	n/d	n/d	n/d	n/a	R.[redacted] 22/12/2017	R.[redacted] 22/12/2017	0.05/0.38 - low but same as supply Further flush, stand and pre-into supply bacti will be required - otherwise ok to sign off
Brampton and Ampthill Surge vessels (Section 11 of Diddington commisioning plan)																		
Northern supply (source supply)	17401261	01/09/2017	0	0	12, 17	1	1Z	7.58	0.6	0.1	763	179	< 0.014	0, 0	11112	n/a	n/a	<0.05/0.49
Brampton pressure vessel	17401260	01/09/2017	0	0	0, 0	1	2T	7.68	0.8	0.08	766	179	< 0.014	1, 0	11112	R.[redacted] 12/01/2018	R.[redacted] 12/01/2018	<0.05/0.37 Further flush, stand and pre-into supply bacti will be required - otherwise ok to sign off
Brampton Northern supply (source supply)	17551003	01/12/2017	0	0	0, 1	1	1Z	7.69	0.6	0.11	803	185	< 0.014	0, 0	11111	n/a	n/a	0.06/0.92
Ampthill pressure vessel	17550998	01/12/2017	0	0	0, 2	1	1Z	7.69	0.6	0.26	796	186	< 0.014	1, 0	11111	R.[redacted] 12/01/2018	R.[redacted] 12/01/2018	0.02/0.83 Further flush, stand and pre-into supply bacti will be required - otherwise ok to sign off
Diddington reservoir (Section 13 of Diddington commissioning plan)																		
Diddington incoming water (source supply)	17456944	05/10/2017	0	0	0, 0	1	1Z	7.57	1	0.14	775	180	< 0.014	1, 0	11141	n/a	n/a	0.05/0.84
Diddington West cell (1) hatch 1	17456941	05/10/2017	0	0	1, 0	1	1Z	7.91	1	0.18	771	185	0.0143	0, 0	11141	~	~	<0.05/0.18 - large drop in residual due to res being filled slowly Samples satisfactory, but will need a further MIC set to be taken before signoff NOTE - Samples taken from WEST cell only
Diddington West cell (1) hatch 2	17456942	05/10/2017	0	0	0, 0	1	1Z	7.95	1.1	0.17	771	186	< 0.014	1, 0	11141	~	~	<0.05/0.15 - large drop in residual due to res being filled slowly Samples satisfactory, but will need a further MIC set to be taken before signoff NOTE - Samples taken from WEST cell only
Diddington West cell (1) outlet main	17456943	05/10/2017	0	0	0, 0	1	1Z	7.96	1.1	0.14	769	187	0.0142	1, 0	11141	~	~	<0.05/0.16 - large drop in residual due to res being filled slowly Samples satisfactory, but will need a further MIC set to be taken before signoff NOTE - Samples taken from WEST cell only
Diddington West cell (1) hatch 1 (res at 31%)	18031338	25/10/2017	0	0	0, 0	n/d	1Z	7.93	1.4	1.46	799	193	0.0184	0, 0	11340	~	~	<0.06/0.72 - drop in residual due to res being filled slowly Taste not completed, elevated turbidity. Will be resampled (full MIC) once at 60%
Diddington West cell (1) hatch 2 (res at 31%)	18031339	25/10/2017	0	0	1, 1	n/d	1Z	7.92	1	0.38	794	192	< 0.014	0, 0	11340	~	~	<0.05/0.72 - drop in residual due to res being filled slowly Taste not completed, elevated turbidity. Will be resampled (full MIC) once at 60%
Diddington West cell (1) outlet main	18032842	26/01/2017	0	0	1, 6	n/d	1Z	7.93	1.2	0.15	802	193	< 0.014	0, 1	11340	~	~	<0.08/0.92 - higher residual than upstream samples from res hatches, no reason given. Taste not completed. Will be resampled (full MIC) once at 60%
Diddington East cell (2) hatch 1 (res at 34%)	18031337	25/10/2017	0	0	1, 0	1	2T	7.9	1.2	0.11	783	193	< 0.014	0, 0	11340	~	~	<0.06/0.69 - drop in residual due to res being filled slowly Will be resampled (full MIC) once at 60%
Diddington East cell (2) hatch 2 (res at 34%)	18031336	25/10/2017	0	0	0, 0	1	2T	7.9	1.3	0.13	797	196	< 0.014	0, 0	11340	~	~	<0.05/0.65 - drop in residual due to res being filled slowly Will be resampled (full MIC) once at 60%
Diddington East cell (2) outlet main	18032844	26/01/2701	0	0	0, 0	1	1Z	7.93	0.9	0.24	800	195	< 0.014	0, 1	11141	~	~	<0.08/0.75 - drop in residual due to res being filled slowly Will be resampled (full MIC) once at 60%
Diddington reservoir incoming water	18059791	07/02/2018	0	0	0, 0	n/d	1Z	7.77	1	0.22	788	199	0.1019	0, 0	11384	n/a	n/a	Chlorines 0.08/0.85 Missing taste, aluminium a little elevated - need t&o and Al resamples
Diddington West cell (1) hatch 1 (res around 60%)	18059788	07/02/2018	0	0	0, 4	n/d	1Z	7.97	0.9	0.23	789	201	0.0343	1, 0	11384	R.[redacted] 26/02/2018	R.[redacted] 26/02/2018	Chlorines 0.05/0.76 24 hour stand Missing taste, aluminium a little elevated - need t&o and Al resamples
Diddington West cell (1) hatch 2 (res around 60%)	18059790	07/02/2018	0	0	1, 0	n/d	1Z	7.95	1	0.48	802	249	0.053	1, 0	11384	R.[redacted] 26/02/2018	R.[redacted] 26/02/2018	Chlorines 0.08/0.85 24 hour stand Missing taste, aluminium a little elevated - need t&o and Al resamples
Diddington West cell (1) outlet main	Covered by sample 18060918																	
Diddington reservoir incoming water	18059789	07/02/2018	0	0	2, 6	n/d	2T	7.95	0.9	0.4	794	193	0.0382	1, 0	11384	n/a	n/a	Chlorines 0.09/0.85 24 hour stand Missing taste, aluminium a little elevated - need t&o and Al resamples
Diddington East cell (2) hatch 1 (res around 60%)	18059787	07/02/2018	0	0	3, 34	n/d	1Z	7.96	1.3	0.42	788	199	0.0813	1, 0	11384	R.[redacted] 26/02/2018	R.[redacted] 26/02/2018	Chlorines 0.08/0.81 24 hour stand Slightly elevated 3-day plate, will be resampled as part of into supply sampling Missing taste, aluminium a little elevated - need t&o and Al resamples
Diddington East cell (2) hatch 2 (res around 60%)	18059792	07/02/2018	0	0	2, 4	n/d	1Z	7.93	1.1	0.34	793	189	0.0151	1, 0	11384	R.[redacted] 26/02/2018	R.[redacted] 26/02/2018	Chlorines 0.08/0.97 24 hour stand Missing taste, aluminium a little elevated - need t&o and Al resamples
Diddington East cell (2) outlet main	Covered by sample 18060920																	

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Diddington reservoir inlet West cell (1)	18080154	20/02/2018	n/a	n/a	n/a	n/d	1Z	7.95	1.2	0.27	798	182	< 0.014	n/a	n/a	R. [redacted] 26/02/2018	R. [redacted] 26/02/2018	Chlorines 0.07/0.96 Sample not tasted, agreed with [redacted] that asset can be put into supply after onsite taste and odour checks are reported as satisfactory on the into-supply day.
Diddington West cell (1) hatch 1 (res around 60%)	18080156	20/02/2018	n/a	n/a	n/a	n/d	1Z	7.98	1.2	0.06	797	188	0.0242	n/a	n/a	R. [redacted] 26/02/2018	R. [redacted] 26/02/2018	Chlorines <0.05/0.51 Aluminium just above target standard, but taken with a different dip bucket to cell 2, which was below LOD. Suspect the slightly raised aluminium is due to the bucket used, and is satisfactory. Sample not tasted, agreed with [redacted] that asset can be put into supply after onsite taste and odour checks are reported as satisfactory on the into-supply day.
Diddington West cell (1) hatch 2 (res around 60%)	18080157	20/02/2018	n/a	n/a	n/a	n/d	1Z	7.8	1.4	0.29	802	183	0.0255	n/a	n/a	R. [redacted] 26/02/2018	R. [redacted] 26/02/2018	Chlorines 0.05/0.64 Aluminium just above target standard, but taken with a different dip bucket to cell 2, which was below LOD. Suspect the slightly raised aluminium is due to the bucket used, and is satisfactory. Sample not tasted, agreed with [redacted] that asset can be put into supply after onsite taste and odour checks are reported as satisfactory on the into-supply day.
Diddington reservoir inlety East cell (2)	18080155	20/02/2018	n/a	n/a	n/a	n/d	1Z	7.81	1.3	0.15	804	184	< 0.014	n/a	n/a	R. [redacted] 26/02/2018	R. [redacted] 26/02/2018	Chlorines 0.06/0.84 Sample not tasted, agreed with [redacted] that asset can be put into supply after onsite taste and odour checks are reported as satisfactory on the into-supply day.
Diddington East cell (2) hatch 1 (res around 60%)	18080158	20/02/2018	n/a	n/a	n/a	n/d	1Z	7.96	1.1	0.08	797	188	< 0.014	n/a	n/a	R. [redacted] 26/02/2018	R. [redacted] 26/02/2018	Chlorines <0.05/0.58 Sample not tasted, agreed with [redacted] that asset can be put into supply after onsite taste and odour checks are reported as satisfactory on the into-supply day.
Diddington East cell (2) hatch 2 (res around 60%)	18080159	20/02/2018	n/a	n/a	n/a	n/d	1Z	7.95	1.1	0.12	797	190	< 0.014	n/a	n/a	R. [redacted] 26/02/2018	R. [redacted] 26/02/2018	Chlorines <0.05/0.59 Sample not tasted, agreed with [redacted] that asset can be put into supply after onsite taste and odour checks are reported as satisfactory on the into-supply day.

Diddington reservoir sample taps (Not in commissioning plan, formal full MIC not needed, added to this form for completeness)

Diddington reservoir sample tap West cell (1)	18060918	08/02/2018	0	0	3, 0	1	1Z	7.9	0.9	0.08	785	193	< 0.014	0, 0	11395	R. [redacted] 19/02/2018	R. [redacted] 19/02/2018	Chlorines 0.04/0.52 36 hour reservoir stand, sample line flushed Sample results satisfactory, but chlorine levels erratic on samples, passed but mains need flushing until residuals are comparable with reservoir (completed 20/02/2018, see tab) Further flush, stand and pre-into supply bacti will be required - otherwise ok to sign off
Diddington reservoir sample tap East cell (2)	18060920	08/02/2018	0	0	3, 0	1	1Z	7.89	1.2	0.12	799	191	< 0.014	0, 0	11395	R. [redacted] 19/02/2018	R. [redacted] 19/02/2018	Chlorines 0.09/0.85 36 hour reservoir stand, sample line flushed Sample results satisfactory, but chlorine levels erratic on samples, passed but mains need flushing until residuals are comparable with reservoir (completed 20/02/2018, see tab) Further flush, stand and pre-into supply bacti will be required - otherwise ok to sign off
Diddington reservoir animal net tap	18060921	08/02/2018	0	0	1, 8	1	1Z	8.03	1.1	0.23	801	190	< 0.014	0, 0	11395	R. [redacted] 19/02/2018	R. [redacted] 19/02/2018	[illegible] 36 hour reservoir stand, sample line flushed Sample results satisfactory, but chlorine levels erratic on samples, passed but mains need flushing until residuals are comparable with reservoir (completed 20/02/2018, see tab) Further flush, stand and pre-into supply bacti will be required - otherwise ok to sign off
Diddington reservoir combined sample tap (Regulatory tap W01DIDDCR)	18060919	08/02/2018	0	0	2, 8	1	1Z	8.08	1.2	0.23	792	190	< 0.014	0, 0	11395	R. [redacted] 19/02/2018	R. [redacted] 19/02/2018	Chlorines 0.02/0.30 36 hour reservoir stand, sample line flushed Sample results satisfactory, but chlorine levels erratic on samples, passed but mains need flushing until residuals are comparable with reservoir (completed 20/02/2018, see tab) Also having laboratory commissioning samples taken prior to entering supply
Diddington reservoir combined sample tap (Regulatory tap W01DIDDCR) - lab commissioning sample	18070553	15/02/2018	0	0	30, 20	1	1Z	8.06	n/a	0.27	801	n/a	n/a	n/a	n/a	~	~	Chlorines <0.05/0.24 Chlorine levels low and plates slightly elevated, further commissioning sample to be taken
Diddington reservoir combined sample tap (Regulatory tap W01DIDDCR) - lab commissioning sample	18077909	21/02/2018	0	0	2, 259	1	1Z	7.9	n/a	0.15	798	n/a	n/a	n/a	n/a	R. [redacted] 26/02/2018	R. [redacted] 26/02/2018	Chlorines 0.05/0.37 Chlorine levels lower than seen in the body of water, possibly due to dropping off in the outlet main, needs keeping a close eye on once the reservoir is in supply. Elevated 3-day plate count. Agreed with [redacted] that the tap and asset can be commissioned with this level of 3-day plate counts, and levels monitored closely (no indication of a wider issue in the asset, and outlet main is not currently in supply so not turning over well). IM sample to be taken after reservoir goes into supply.

Diddington reservoir mains recycle lines (Valve bypasses, being treated as mains fittings as <6m long, so bacti only, added to this form for completeness)

Hannington recycle main source supply	18070574	15/02/2018	0	0	0, 0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	Chlorines 0.07/0.98
Hannington recycle main upstream	18070571	15/02/2018	0	0	0, 2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R. [redacted] 19/02/2018	R. [redacted] 19/02/2018	Chlorines 0.06/0.93
Hannington recycle main downstream	18070575	15/02/2018	0	0	0, 7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R. [redacted] 19/02/2018	R. [redacted] 19/02/2018	Chlorines 0.06/0.96
Ampthill recycle main source supply	18070576	15/02/2018	0	0	0, 135	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R. [redacted] 19/02/2018	R. [redacted] 19/02/2018	Chlorines 0.06/0.96
Ampthill recycle line	18070573	15/02/2018	0	0	0, 6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R. [redacted] 19/02/2018	R. [redacted] 19/02/2018	Chlorines 0.06/0.95
Ampthill recycle line upstream	18079736	22/02/2018	0	0	1, 0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R. [redacted] 26/02/2018	R. [redacted] 26/02/2018	Chlorines 0.07/0.94
Ampthill recycle line downstream	18079738	22/02/2018	0	0	0, 0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R. [redacted] 26/02/2018	R. [redacted] 26/02/2018	Chlorines 0.08/0.95

Diddington reservoir pre into-supply bacti samples (Section 14 of Diddington commissioning plan)

Diddington reservoir West cell (1) inlet	18077897	21/02/2018	0	0	2, 0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R. [redacted] 26/02/2018	R. [redacted] 26/02/2018	Chlorines 0.07/0.94 Chlorines higher as representative of Grafham final water, rather than water that has been held in Diddington reservoir
Diddington reservoir West cell (1) hatch 1	18077896	21/02/2018	0	0	1, 18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R. [redacted] 26/02/2018	R. [redacted] 26/02/2018	Chlorines 0.01/0.51
Diddington reservoir West cell (1) hatch 2	18077894	21/02/2018	0	0	3, 10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R. [redacted] 26/02/2018	R. [redacted] 26/02/2018	Chlorines <0.05/0.64
Diddington reservoir East cell (2) inlet	18077898	21/02/2018	0	0	0, 3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R. [redacted] 26/02/2018	R. [redacted] 26/02/2018	Chlorines 0.06/0.84 Chlorines higher as representative of Grafham final water, rather than water that has been held in Diddington reservoir
Diddington reservoir East cell (2) hatch 1	18077899	21/02/2018	0	0	4, 3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R. [redacted] 26/02/2018	R. [redacted] 26/02/2018	Chlorines 0.04/0.58
Diddington reservoir East cell (2) hatch 2	18077895	21/02/2018	0	0	4, 14	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R. [redacted] 26/02/2018	R. [redacted] 26/02/2018	Chlorines 0.02/0.59
Diddington reservoir sample tap West cell (1)	18076413	20/02/2018	0	0	0, 0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R. [redacted] 26/02/2018	R. [redacted] 26/02/2018	Chlorines <0.05/0.50
Diddington reseroir sample tap East cell (2)	18076414	20/02/2018	0	0	4, 0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R. [redacted] 26/02/2018	R. [redacted] 26/02/2018	Chlorines <0.05/0.55
Diddington reservoir Brampton pump 5	18076415	20/02/2018	0	0	0, 0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R. [redacted] 26/02/2018	R. [redacted] 26/02/2018	Chlorines <0.05/0.44
Diddington reservoir Brampton pump 6	18076416	20/02/2018	0	0	0, 0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R. [redacted] 26/02/2018	R. [redacted] 26/02/2018	Chlorines <0.05/0.44
Diddington reservoir Brampton interconnector	18076417	20/02/2018	0	0	0, 0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R. [redacted] 26/02/2018	R. [redacted] 26/02/2018	Chlorines <0.05/0.43
Diddington reservoir Brampton/Hannington interconnector	18077900	21/02/2018	0	0	2, 2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R. [redacted] 26/02/2018	R. [redacted] 26/02/2018	Chlorines 0.09/0.76

Note (RB 26/02/1018): All assets not already into supply approved on 26/02/2018, with the exception of Ampthill main, Ampthill pumps and Ampthill surge vessel (Sections 9, 10 and part of 11 of the Diddington commissioning plan. Expected into supply date for assets is 27/02/2018 under MIP W/260218/05 Rev6. Ampthill sections will be sampled and commissioned at a later date.

Diddington reservoir into supply samples (as per Diddington into supply MIP)

Diddington reservoir combined outlet (W01DIDDCR)	18086011	27/02/2018	0	0	0, 77	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	Chlorines <0.05/0.57 Chlorine residual lower than Grafham final as water has been standing in the reservoir during the commissioning phase, with regular topups and drains to ensure a residual >0.5 mg/L is maintained
Diddington reservoir West cell (1) outlet	18086388 18086624	27/02/2018	0	0	0, 12	1	1Z	7.92	n/a	0.09	n/a	n/a	< 0.014	n/a	n/a	n/a	n/a	Chlorines 0.09/0.58
Diddington reservoir East cell (2) outlet	18086389 18086625	27/02/2018	0	0	1, 24	1	1Z	7.93	n/a	0.08	n/a	n/a	< 0.014	n/a	n/a	n/a	n/a	Chlorines 0.09/0.63
Grafham Brampton surge vessel	18086390	27/02/2018	0	0	1, 4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	Chlorines 0.05/0.52

Ampthill mains and pumps pre into-supply bacti samples (Section 14 of Diddington commissioning plan)

Diddington Ampthill pump 1	18114930	13/03/2018	0	0	2, 139	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R. [redacted] 18/03/2018	R. [redacted] 18/03/2018	Chlorines <0.05/0.86
Diddington Ampthill pump 2	18114928	13/03/2018	0	0	0, 53	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R. [redacted] 18/03/2018	R. [redacted] 18/03/2018	Chlorines 0.05/0.81
Diddington Ampthill pump 3	18114929	13/03/2018	0	0	1, 66	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R. [redacted] 18/03/2018	R. [redacted] 18/03/2018	Chlorines 0.05/0.81
Diddington Ampthill connection	18114931	13/03/2018	0	0	2, 43	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R. [redacted] 18/03/2018	R. [redacted] 18/03/2018	Chlorines 0.07/0.92 Chlorines higher as representative of Grafham final water, rather than water from Diddington reservoir
Diddington Ampthill surge vessel	18114932	13/03/2018	0	0	0, 88	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R. [redacted] 18/03/2018	R. [redacted] 18/03/2018	Chlorines 0.06/0.88
Diddington Ampthill pump 1	18155723	04/04/2018	0	0	13, n/d	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R. [redacted] 04/04/2018	R. [redacted] 04/04/2018	Chlorines <0.06/0.50 No 3-day plates as put in as NM samples. 2-day plates higher than previously, need a good flush prior to commissioning and a downstream bacti after commissioning
Diddington Ampthill pump 2	18155724	04/04/2018	0	0	36, n/d	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R. [redacted] 04/04/2018	R. [redacted] 04/04/2018	Chlorines 0.06/0.80 No 3-day plates as put in as NM samples. 2-day plates higher than previously, need a good flush prior to commissioning and a downstream bacti after commissioning
Diddington Ampthill pump 3	18155725	04/04/2018	0	0	33, n/d	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R. [redacted] 04/04/2018	R. [redacted] 04/04/2018	Chlorines 0.07/0.78 No 3-day plates as put in as NM samples. 2-day plates higher than previously, need a good flush prior to commissioning and a downstream bacti after commissioning
Diddington Ampthill connection	18155728	04/04/2018	0	0	7, n/d	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R. [redacted] 04/04/2018	R. [redacted] 04/04/2018	Chlorines 0.08/0.87 No 3-day plates as put in as NM samples. 2-day plates higher than previously, need a good flush prior to commissioning and a downstream bacti after commissioning
Diddington Ampthill surge vessel	18155729	04/04/2018	0	0	2, n/d	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R. [redacted] 04/04/2018	R. [redacted] 04/04/2018	Chlorines 0.07/0.79 No 3-day plates as put in as NM samples. 2-day plates higher than previously, need a good flush prior to commissioning and a downstream bacti after commissioning

Insert more lines as necessary

** taste testing only to be performed on samples of potable water and after confirmation of clear bacteriological results*

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM		FORM NO:	2428
1	PROCESS ENGINEER/SCIENTIST TO SIGN AND DATE TO CONFIRM SAMPLES TAKEN ARE APPROPRIATE FOR THE MATERIALS LISTED IN PART A AND THAT EVERY PRODUCT HAS BEEN TESTED		
2	WATER QUALITY PERFORMANCE TEAM TO SIGN AND DATE TO CONFIRM APPROVAL FOR USE IN SUPPLY		
NOTE	OPERATIONAL SCIENTIST TO GIVE FINAL APPROVAL FOR THE MATERIAL OR EQUIPMENT TO ENTER SUPPLY		

Purchase Order

J.N. Bentley
Keighley Road
Skipton
North Yorkshire, BD23 2QR

Contract Name:	Diddington Service Reservoir	Client:	
Contract Number:	NA25-01	Doc ref:	NA25-01-SRV-POR-82
Date:	Tuesday 09/11/2021		

Purchase Order Details

Purchase Order Number:	JA21699	Supplier Ref:	ESC02
Order Date:	24/11/2015	Supplier:	ELECTROSTEEL CASTINGS (UK) LIMITED
Order Value:	£8,938	Supplier Contact:	[redacted]
Expected Delivery Date:	07/12/2015	Supplier Tel. No:	
Delivery Notes:	Carriage Included To be delivered on a flat bed vehicle c/w side rails	Supplier Fax No:	
Delivery Address:	Grafham Resilience Construction Project West Perry Huntingdon PE28 0BW	Supplier Address:	CHESTERFIELD INDUSTRIAL ESTATE CARRWOOD ROAD CHESTERFIELD DERBYSHIRE S41 9QB
Raised By:	[redacted]		

Order Information: AS PER ANGLIAN FRAMEWORK AGREEMENT

PRICES AS PER YOUR QUOTATION REF: ECL 2015/206064
DWI APPROVAL NUMBER FOR EPOXY COATING - 56.4.537
WRAS APPROVAL FOR COATINGS PAINTS AND LINING - FACTORY APPLIED - 5028 - DUNPOINT POWDER COATING LTD - 1011504

Create Goods Received | Create Supplier Comment

Product	Del Date	Call Off	Quantity	Units	Price	Del	Out
[Replication or Save Conflict]							
OVERFLOW REF:02 900MM FLANGE SOCKET PIPE 1410MM LONG WITH PUDDLE FLANGE 500MM FROM FLANGE FACE|JA21699/6273070	07/12/2015		2	No	1957.95	2	0
[Replication or Save Conflict]							
OVERFLOW REF:03 900MM DF PIPE 3195MM LONG PN16 BSEN545|JA21699/6273080	07/12/2015		2	No	2137.65	2	0
[Replication or Save Conflict]							

Body:

Comments:

Spreadsheet Attachment :

Requisition

J.N. Bentley
Keighley Road
Skipton
North Yorkshire, BD23 2QR

Contract Name:	Diddington Service Reservoir	Client:	Anglian Water
Contract Number:	NA25-01	Doc ref:	NA25-01-WLO-REQ-56-2015111210002 2
Date:	Thursday 12/11/2015		

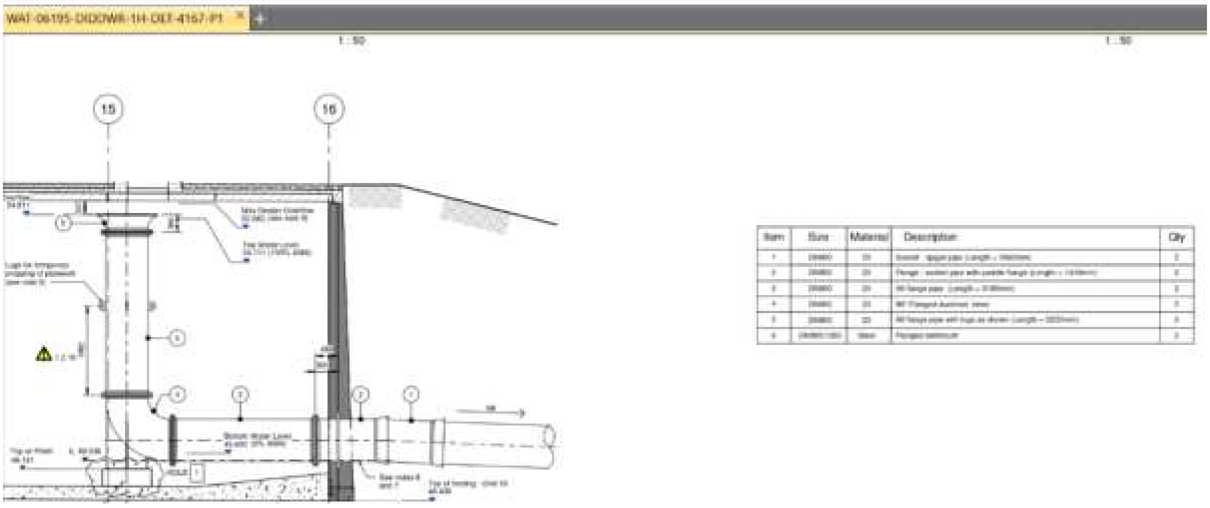
Details

Select Product

Product Type	PIPES & ANCILLARIES		
Product Sub-Type	DI-WATER		
Product Category	900MM - PIPE - FLANGED		
Product Ref	Q900DF3000B		
◆Product	OVERFLOW REF:03 900MM DF PIPE 3195MM LONG PN16 BSEN545		
◆Units	No	Enquiry Number:	EJA20635
◆Quantity	2	Purchase Order Number:	JA21699
◆Delivery Date	20/11/2015		
Notes:	Item No. 3 on attached drawing.		

View Order

Files: **WAT-06195-DIDDWR-1H-DET-4167-P1.pdf** Attach



Personnel	EL123	WS083			WS022		WS
		Attendance Sheet	Assessment	Assignment	Attendance Sheet	Assessment	Attendance Sheet
J[redacted]				*	N/A	N/A	N/A
[redacted]		N/A	N/A	N/A			N/A
[redacted]					N/A	N/A	N/A
[redacted]					N/A	N/A	N/A
[redacted]					N/A	N/A	N/A
[redacted]					N/A	N/A	N/A
[redacted]					N/A	N/A	N/A

062
Assessment
N/A
N/A
N/A
N/A
N/A
N/A
N/A

Key:

EL123	Online Materials In Contact computer based training cou
WS083	Materials In Contact Training
WS022	Water Quality Scientific Induction - Module 7 MIC
WS062	Third Party MIC & Sampling
	Paperwork Present/Completed
	Paperwork Not Found
N/A	Not applicable for this job role
*	No assignment associated with this training course at thi

is time (this was only added ~2019)

LOVE TO LEARN

Water Quality and Water Services Technical Training

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Course Name	Materials in Contact
Course Number	WS083
Module Number	1
Course Date	14/06/18
Location	[redacted]
Trainer	

Delegates Present:

Name	Employee Number or Company Name:	Contact email address	Signature:	Sampler Initials or Location for onsite assessment If applicable	Trainers Use only: Pass/Fail	Test Course %	Passport Signed (Y/N)
[redacted]					PASS	85	Y
					PASS	98	
					PASS	98	
					PASS	~~4~~ 100	
					PASS	100	
					PASS	100	
					PASS	100	

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Water Quality and Water Services Technical Training

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Course Name	mic training.
Course Number	
Module Number	
Course Date	15/7/16
Location	Grafham
Trainer	[redacted]

Delegates Present:

Name	Employee Number or Company Name:	Job Role	Contact email address	Line Manager:	Signature:	Trainers Use only Pass/Fail	Test Course %	Passport Signed (Y/N)
[redacted]								
						Trainers Use only		
Name	Employee	Job	Contact email	Line	Signa	Pass/Fail	Test	Passp

May be uncontrolled if Printed

Diddington Reservoir – West Cell 2019

General Condition

Ingress noted at joint in side wall

Diddington Reservoir – West Cell 2019

Ingress through roof joint on beam

Ingress through wall to roof joint

Diddington Reservoir – West Cell 2019

Ingress through wall adjacent to overflow

Ingress through wall to roof joint

Diddington Reservoir – West Cell 2019

Ingress through wall to roof joint

Inlet pipework

Diddington Reservoir – West Cell 2019

Blue material in bottom of reservoir

Outlet pipework

Diddington Reservoir – West Cell 2019

Pre Flood Test

Self sealed salting in rook

Diddington Reservoir – West Cell 2019

Washout sump and handrail

Weeping around overflow

Diddington Reservoir – East Cell 2019

General condition

Ingress on roof beam

Diddington Reservoir – East Cell 2019

Ingress through hatch to upstand joint

Ingress through hatch to upstand joint

Diddington Reservoir – East Cell 2019

Ingress through wall to roof joint

Ingress through wall to roof joint

Diddington Reservoir – East Cell 2019

Ingress through wall to roof joint

Ingress through wall to roof joint

Diddington Reservoir – East Cell 2019

Ingress around pipe wall joint

Material from main flushing

Diddington Reservoir – East Cell 2019

Outlet pipework

Overflow pipework

Diddington Reservoir – East Cell 2019

Washout handrail

Weeping around overflow pipework

Diddington Reservoir – East Cell 2019

Weeping around overflow pipework

Diddington Reservoir – 2021 Inspection Photos

Overbanding joint lifting

Diddington Reservoir – 2021 Inspection Photos

General condition

Blistering of coating on overflow pipework

Diddington Reservoir – 2021 Inspection Photos

Overflow pipework

Inlet pipework

[redacted]

Water Retaining Structure Internal Inspection Form

Regional Supply Area:	West
Supply Manager Area:	Grafham
Site Name:	DIDDINGTON WR
Site Short Name:	DIDDWR
Tank Name:	STORAGE RES ST1 Tnk2
Inspection Date (dd/mm/yyyy)**:**	29/05/2020
Date of next inspection (dd/mm/yyyy) - if early check than normal frequency required:	
Inspection Reason:	final inspection
Clean Reason:	programmed clean
Impact Plan Number:	
Inspected By:	[redacted]

To upload data onto the log press Ctrl U once form complete.

Question	Answer	Comments	Remedial Work / Action	Priority 1-3*	Action Management System Number
Tank Attributes					
What is the tanks jack head category?	N				
Is the tank hydraulically isolatable - can it be easily taken out of supply?	Yes				
Is there adjoining untreated water storage - above, to the side, passing through the tank?	No				
Is this an Ozone tank - if so which stage?	No				
Is the structure covered by the reservoir act (1975) - large raised reservoirs >25,000m3?	Yes				
Compartment Dimensions					
Storage volume - floor to overflow (m3)	23,070				
Operational volume - useable volume (m3)	23,070				
Height of compartment (m)	6.3				
Width of compartment (m)	50				
Depth of compartment (m)	76.9				
Inlet height (m)	5.08	Measured ofl 750mm O/D			
Outlet height (m)	0	Floor Level 1.2m O/D with baffle plate above			
Overflow height (m)	6.06	Measured ofl 900mm O/D			
Overflow diameter (mm)	900				
Top water level - normal operation (m)					
Bottom water level (m)	0				
Tank Structure					
What material is the tank?	Other	Reinforced Concrete			
What's the type of membrane?	Sheet	Semi adhered Premseal			
If an earth embankment what type is it?	Buried				
What type of roof covering is there?	Gravel				
What's the type of support structure?	Concrete	98 columns 14 x 7 rows. 300mm x300mm square			
Tank Roof					
Are there signs of leakage / ingress through roof?	No	There is Ingress from Several locations from the roof to wall joint construction and 2 locations on the roof above columns 4 adjacent from the overflow and W/o sump. Repaires to the roof to wall joint and roof have been completed	Investigate externally and repair. Work completed		
Is there evidence of cracks in roof?	No				
Is there evidence of discolouration / slime on internal roof?	No				
Are the roof joints / seals in satisfactory condition?	Yes				
Is there evidence of standing or pooling water?	Yes	Roof under inundation test			
Is the roof drainage insufficient to clear all standing water?	No				
Tank walls					
Are there signs of leakage / ingress through walls?	No	Weeping around the overflow pipe wall connection. The infill panels are weeping mid height from roof test. These might be rectified once the roof repair above is corrected. This has been overbanded and no further issues.	Overband internally around pipe connection. As row 42 comments for roof failt correction. Work completed		
Is there evidence of cracks in walls?	Yes				
Is there evidence of discolouration / slime on walls?	No				
Are the wall joints / seals in satisfactory condition?	n/a				

Tank floor					
Are there signs of leakage / ingress through floor?	No				
Is there evidence of cracks in floor?	Yes	Minor srinkage			
Is there evidence of discolouration / slime on floor?	Yes	The resiliance project had flushed into this tank so there were some material diposits found	All cleaned		
Was any material found in the tank / on the floor?	Yes	As Above			
Tank Support structure					
Are the roof supports in satisfactory condition?	Yes				
Tank Fittings / Pipework					
Are the internal fittings in satisfactory condition?	Yes				
Is the inlet pipework in satisfactory condition?	Yes				
Is the outlet pipework in satisfactory condition?	Yes				
Is the overflow in satisfactory condition?	Yes				
Are the valves in satisfactory condition?	Yes	These are all external to tank and in good working order			
Are the ladders in satisfactory condition?	Yes	3 x stainless steel laders			
Is the metalwork in satisfactory condition?	Yes	Stailless steel handrail around sump			
Are the baffled walls / curtains in satisfactory condition?	n/a				
Are the level probes in satisfactory condition?	Yes	Ultrasonic and Level probes			
Are cable entry points sealed, in satisfactory condition and without evidence of ingress?	Yes				
Are there any other fittings / mountings with inadequate seals / sealant?	n/a				
Are any mixers in satisfactory working order / condition?	n/a				
Are any sample pumps in satisfactory working order / condition?	n/a				
Is there any redundent pipework or equipment connected to the tank?	No				
Access points					
Are all the hatch, covers or doors in satisfactory condition and working order?	Yes	These are not fit for purpose due to being the wrong type, allowing rain water into moat area and insects into the tank. These have all been replaced	Replace for correct hatch type. Completed no issues		
Are the seals in place and in satisfactory condition?	Yes				
Are the insect meshes in place and in satisfactory condition?	Yes				
Is the mesh an adequate size? (approx. 1mm or less)	Yes				
Is the membrane lapping around up stands in satisfactory condition?	Yes	Coated in sports coat waterproofing			
Dedicated Air Vents					
Are the vents securely fixed undamaged and in good condition?	n/a				
Are the insect meshes in place and in satisfactory condition?	n/a				
Is the mesh an adequate size? (approx. 1mm or less)	n/a				

Roof Saturation Test					
Was the roof saturation test satisfactory?	Yes	Please see comments in rows 42,48 & 76, All work is completed and there are no issues			
Other					
Are there any other issues to note? (add detail in comments box)					
Have actions been added to the Action Management System (AMS)?					

To upload data onto the tracker press Ctrl U. Also the form must be saved to the correct HAWK folder (see instruction tab)

[redacted]

Priority	Brief Rationale for Categorisation	Examples
Priority 1	Major Defect. Remedial work to be implemented before return to service or within 12 months if return to service is approved pending remedial work.	Ingress issue Significant Leak
Priority 2	Remedial work to be implemented before the next inspection.	Roof Drainage Minor Leak
Priority 3	Continue to monitor condition at next inspection.	Slippage Corrosion

External Inspection For Water Retaining Structures

Regional Supply Area:			
Supply Manager Area:			
Site Name:			
Site Short Name:			
Structure Name:			
Tank Known Locally as:			
Inspection Date:		**Inspection Reason:**	
Assessment Completed by:			

* priority rankings are detailed in PSW-PRO-7.2 Procedure for External Inspection of Water Retaining Structures, plus see end of form.

Hawk > Corporate Documents > Asset > Operational Documents > Storage Points > Completed Annual External Reports

Photographs can be used to provide additional information - attach to the photo tab of this form.

External Inspection Questions

	Site Security	**Insert Y/N or n/a**	**Comments**	**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
1	Are the site access gates in satisfactory condition?							
2	Are all correct locks in place and in satisfactory condition?							
3	Is the site fence in satisfactory condition?							
4	Are the buildings secure?							
5	Are alarm systems appropriate and in satisfactory working order?							
6	Is animal fencing in good condition and adequate (if present)?							
7	Is the site security adequate to prevent unauthorised access?							
	Embankment	**Insert Y/N or n/a**	**Comments**	**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
8	Is there evidence of soil slippage/sinkage/erosion?							
9	Is there evidence of vermin damage?							
10	Is there evidence of encroachment by vegetation?							
11	Are there unexpected wet areas?							
	Tank Walls (where visible)	**Insert Y/N or n/a**	**Comments**	**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
12	Are there signs of leakage?							
13	Is there evidence of cracks in walls?							
14	Is there evidence of spalling masonry (where applicable)?							
15	Is there evidence of corrosion of steel walls (where applicable)?							
16	Is there evidence of plant growth?							
	Tank Support Structure	**Insert Y/N or n/a**	**Comments**	**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
17	Is there evidence or cracks?							
18	Is there evidence of spalling masonry (where applicable)?							
19	Is there evidence of corrosion?							
20	Is there evidence of any falling debris?							
21	Have access protection scaffolding crash decks been damaged or modified?							
22	Is there any general damage to the structure?							
23	Is lightning protection damaged/missing?							
	Tank Roof	**Insert Y/N or n/a**	**Comments**	**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
24	Is there evidence of soil slippage/sinkage/erosion?							
25	Is there evidence of vermin damage?							
26	Is there evidence of unwanted plant growth?							
27	Is there evidence of encroachment by vegetation?							
28	Is there evidence of spalling masonry/bulging/buckling/ corrosion?							
29	Is the membrane protective covering inadequate?							
30	Is there evidence of membrane blistering?							
31	Is there evidence of standing or pooling water?							
32	Is membrane lapping around upstands/edges damaged, degraded or inadequate?							
33	Are there any other fittings/mountings with inadequate seals/sealant?							
34	Is the roof drainage insufficient to clear all standing water?							
35	Is there any general damage to the roof integrity?							
	Access Points	**Insert Y/N or n/a**	**Comments**	**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
36	Are all the hatch, covers or doors in satisfactory condition and working order?							
37	Are the correct locks in place? (correct level of security?)							
38	Are the seals in place and in satisfactory condition?							
39	Are the insect meshes in place and in satisfactory condition?							
40	Is the mesh an adequate size? (approx. 1mm or less)							
41	Are the drainage holes in the outside upstand clear of debris? (where applicable)							
42	Are the drainage holes an appropriate size? (where applicable, less than 5mm)							
43	Is plant growth around and above treated water hatches kept clear?							
44	Is the hatch alarm in good working order (where fitted)?							
	Dedicated Air Vents	**Insert Y/N or n/a**	**Comments**	**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**

45	Are the vents securely fixed undamaged and in good condition?							
46	Are the insect meshes in place and in satisfactory condition?							
47	Is the mesh an adequate size? (approx 1mm or less)							
	Cable Entries	**Insert Y/N or n/a**	**Comments**	**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
48	Are cable entry points sealed, in satisfactory condition and without evidence of ingress?							
	Valves	**Insert Y/N or n/a**	**Comments**	**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
49	Is there an accurate valve plan located on site?							
50	Are valve markers in place and correct?							
51	Are all externally accessible valves locked off or wheels removed?							
52	Are valve covers in place and undamaged?							
53	Are all valve chambers dry?							
54	Are valves free from any sign of leakage?							
	Pipework	**Insert Y/N or n/a**	**Comments**	**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
55	Is all pipework in good condition with no visible leaks?							
56	Does all pipework have satisfactory anchorage?							
57	Is pipework clear of excessive corrosion?							
58	Is the condition of lagging satisfactory (where present)?							
59	Is trace heating functional (where fitted)?							

	Overflows / Washouts	Insert Y/N or n/a	Comments	Have all necessary actions been completed whilst on-site?	Remedial Work / Action	Priority 1-3*	Water Services Action Management System Number	Photo taken
60	Is the overflow/washout location accurately detailed on a site schematic/plan?							
61	Is there a flap valve fitted on the pipe entering the first downstream chamber?							
62	Is the flap valve operational & closes effectively?							
63	Is the overflow/washout clear of unexpected running water?							
64	Is the overflow/washout pipework in satisfactory condition?							
65	Is there an operational flap valve fitted on the environment discharge point/outfall?							
66	Is the environment discharge point/outfall in satisfactory condition?							

	Bypasses	Insert Y/N or n/a	Comments	Have all necessary actions been completed whilst on-site?	Remedial Work / Action	Priority 1-3*	Water Services Action Management System Number	Photo taken
67	Is there a bypass onsite?							
68	Is the bypass accurately detailed on a site schematic/plan?							
69	Is the controlling valve/bypass arrangement identified, marked and easily accessible onsite?							
70	Is there a means to flush the bypass pipework?							
71	Is the bypass flushed routinely?							
72	Is the bypass fully isolated?							

	Sample Taps	Insert Y/N or n/a	Comments	Have all necessary actions been completed whilst on-site?	Remedial Work / Action	Priority 1-3*	Water Services Action Management System Number	Photo taken
73	Are the sample points easily accessible?							
74	Are the sample taps in good condition?							
75	Are the sample taps labelled and the certificates present onsite?							
76	Are the routine and non-routine sample taps clearly labelled?							
77	Is there water flow at the sample point?							
78	Is the waste drainage satisfactory?							

	Site Drainage	Insert Y/N or n/a	Comments	Have all necessary actions been completed whilst on-site?	Remedial Work / Action	Priority 1-3*	Water Services Action Management System Number	Photo taken
79	Is an accurate site drainage schematic/plan available on site?							
80	Are any underbed drains clear of debris and water?							
81	Are all drains clear of debris and standing water?							
82	Are all trenchlines free from settlement?							
83	Are all open ditches clear of debris and excessive vegetation?							
84	Are flows in drains as expected?							
85	Are ground conditions as expected?							

	Ground Maintenance	Insert Y/N or n/a	Comments	Have all necessary actions been completed whilst on-site?	Remedial Work / Action	Priority 1-3*	Water Services Action Management System Number	Photo taken
86	Has the ground maintenance frequency been maintained?							
87	Is access to the fence line maintained?							
88	Are trees bushes and hedges appropriately maintained around fence lines and hatches?							
89	Are conservation areas maintained appropriately?							
90	Are the grounds in a tidy condition?							

	Other	Comments	Have all necessary actions been completed whilst on-site?	Remedial Work / Action	Priority 1-3*	Water Services Action Management System Number	Photo taken
91	Are there any other issues to note? (add detail in comments box)						

	Evidence (Specific to Vermin Assessment)	Insert Y/N	Comments	Have all necessary actions been completed whilst on-site?	Remedial Work / Action	Priority 1-3*	Water Services Action Management System Number	Photo taken
92	Notable vermin activity on site?							
	Other (Specific to Vermin Assessment)	**Insert Y/N**	**Comments**	**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
93	Has there been a change / increase in activity levels of vermin, noted through routine visits? E.g. is it evident that there have been recent visits by the vermin contractor, such as registering in the signing in book on site?							
	Evidence of Vermin on site Tick Yes to all that apply.	**Insert Y/N**	**Indicate Estimated Number - Select as Appropriate**					
94	Rabbits							
	Moles							
	Deer							
	Fox							
	Rodents (mice, rats)							
	Birds, Bats							
	Insects							
	Other:- please state							
	INSPECTION OF OTHER TANKS IN OTHER BUILDINGS (Vermin Risk Assessment Requirement)							
	Are there other tanks on site, not specifically designed as water retaining structures e.g. chemical make up tanks, softeners, filters where the contents will be used in the water treatment process? If the answer is YES, then complete the remaining questions.	**Insert Y/N**						
	Access points	**Insert Y/N**	**Comments**		**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
95	Is the building secure - access around doors etc?							
96	Is the tank sealed to prevent entry of vermin and is it in a satisfactory condition?							
97	Are fill, drain and vent pipes secure against ingress of vermin.							

[redacted]

Water Retaining Structure Internal Inspection Form	
Regional Supply Area:	West
Supply Manager Area:	Grafham
Site Name:	DIDDINGTON WR
Site Short Name:	DIDDWR
Tank Name:	STORAGE RES ST1 Tnk2
Inspection Date (dd/mm/yyyy):	08/11/2021
Date of next inspection (dd/mm/yyyy) - if early check than normal frequency required:	
Inspection Reason:	initial inspection
Clean Reason:	programmed clean
Impact Plan Number:	
Inspected By:	[redacted]

To upload data onto the log press Ctrl U once form complete.

Question	Answer	Comments	Remedial Work / Action	Priority 1-3*	Action Management System Number
Tank Attributes					
What is the tanks jack head category?	N				
Is the tank hydraulically isolatable - can it be easily taken out of supply?	Yes				
Is there adjoining untreated water storage - above, to the side, passing through the tank?	No				
Is this an Ozone tank - if so which stage?	No				
Is the structure covered by the reservoir act (1975) - large raised reservoirs >25,000m3?	Yes				
Compartment Dimensions					
Storage volume - floor to overflow (m3)	23,070				
Operational volume - useable volume (m3)	23,070				
Height of compartment (m)	6.3				
Width of compartment (m)	50				
Depth of compartment (m)	76.9				
Inlet height (m)	5.08	Measured ofl 750mm O/D			
Outlet height (m)	0	Floor Level 1.2m O/D with baffle plate above			
Overflow height (m)	6.06	Measured ofl 900mm O/D			
Overflow diameter (mm)	900				
Top water level - normal operation (m)					
Bottom water level (m)	0				
Tank Structure					
What material is the tank?	Other	Reinforced Concrete			
What's the type of membrane?	Sheet	Semi adhered Premseal			
If an earth embankment what type is it?	Buried				
What type of roof covering is there?	Gravel				
What's the type of support structure?	Concrete	98 columns 14 x 7 rows. 300mm x300mm square			
Tank Roof					
Are there signs of leakage / ingress through roof?	Yes	There is ingress from the roof in 2 location across the roof joint between columns 3 & 4 adjacent from the overflow and W/o sump this is in the same location as previously repaired and is a mirror to the other half .*potential tracking externally under the Premseal membrane*	Investigate externally and repair	1	
Is there evidence of cracks in roof?	No				
Is there evidence of discolouration / slime on internal roof?	No				
Are the roof joints / seals in satisfactory condition?	Yes				
Is there evidence of standing or pooling water?	Yes	Roof under inundation test			
Is the roof drainage insufficient to clear all standing water?	No				
Tank walls					
Are there signs of leakage / ingress through walls?	No	But the previously installed overbanding has failed and has started to delaminate of the wall	Repair internally	1	
Is there evidence of cracks in walls?	Yes				
Is there evidence of discolouration / slime on walls?	No				
Are the wall joints / seals in satisfactory condition?	n/a				

Tank floor					
Are there signs of leakage / ingress through floor?	No				
Is there evidence of cracks in floor?	Yes	Minor shrinkage			
Is there evidence of discolouration / slime on floor?	Yes	The resilience project had flushed into this tank so there were some material deposits found	All cleaned		
Was any material found in the tank / on the floor?	Yes	As Above			
Tank Support structure					
Are the roof supports in satisfactory condition?	Yes				
Tank Fittings / Pipework					
Are the internal fittings in satisfactory condition?	Yes				
Is the inlet pipework in satisfactory condition?	Yes				
Is the outlet pipework in satisfactory condition?	Yes				
Is the overflow in satisfactory condition?	No	The coating is blistering and flaking on the flanged sections of pipe.	Investigate problems and escalate to WQ team for recomendations for repair as AW MAS and POSWSH requirements	1	
Are the valves in satisfactory condition?	Yes	These are all external to tank			
Are the ladders in satisfactory condition?	Yes	3 x stainless steel ladders			
Is the metalwork in satisfactory condition?	Yes	Stainless steel handrail around sump			
Are the baffled walls / curtains in satisfactory condition?	n/a				
Are the level probes in satisfactory condition?	Yes	Ultrasonic and Level probes			
Are cable entry points sealed, in satisfactory condition and without evidence of ingress?	Yes				
Are there any other fittings / mountings with inadequate seals / sealant?	n/a				
Are any mixers in satisfactory working order / condition?	n/a				
Are any sample pumps in satisfactory working order / condition?	n/a				
Is there any redundant pipework or equipment connected to the tank?	No				
Access points					
Are all the hatch, covers or doors in satisfactory condition and working order?	No	these were replaced last inspection and 2 out of the 7 had ingress from the hatch to up-stand joint.	lift and re-bed the 2 hatches identified on the drawing and refit to AW MAS	1	
Are the seals in place and in satisfactory condition?	Yes	As above the foam seals are ok			
Are the insect meshes in place and in satisfactory condition?	Yes				
Is the mesh an adequate size? (approx. 1mm or less)	Yes				
Is the membrane lapping around up stands in satisfactory condition?	Yes	Coated in sports coat waterproofing			
Dedicated Air Vents					
Are the vents securely fixed undamaged and in good condition?	n/a				
Are the insect meshes in place and in satisfactory condition?	n/a				
Is the mesh an adequate size? (approx. 1mm or less)	n/a				

Roof Saturation Test					
Was the roof saturation test satisfactory?	No	Please see comments in rows 42	repair externally	1	
Other					
Are there any other issues to note? (add detail in comments box)					
Have actions been added to the Action Management System (AMS)?					
To upload data onto the tracker press Ctrl U. Also the form must be saved to the correct HAWK folder (see instruction tab)					
[redacted]					

Priority	Brief Rationale for Categorisation	Examples
Priority 1	Major Defect. Remedial work to be implemented before return to service or within 12 months if return to service is approved pending remedial work.	Ingress issue Significant Leak
Priority 2	Remedial work to be implemented before the next inspection.	Roof Drainage Minor Leak
Priority 3	Continue to monitor condition at next inspection.	Slippage Corrosion

External Inspection For Water Retaining Structures

Regional Supply Area:	
Supply Manager Area:	
Site Name:	
Site Short Name:	
Structure Name:	
Tank Known Locally as:	
Inspection Date:	**Inspection Reason:**
Assessment Completed by:	

* priority rankings are detailed in PSW-PRO-7.2 Procedure for External Inspection of Water Retaining Structures, plus see end of form.

[redacted]

Photographs can be used to provide additional information - attach to the photo tab of this form.

External Inspection Questions

	Site Security	**Insert Y/N or n/a**	**Comments**	**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
1	Are the site access gates in satisfactory condition?							
2	Are all correct locks in place and in satisfactory condition?							
3	Is the site fence in satisfactory condition?							
4	Are the buildings secure?							
5	Are alarm systems appropriate and in satisfactory working order?							
6	Is animal fencing in good condition and adequate (if present)?							
7	Is the site security adequate to prevent unauthorised access?							
	Embankment	**Insert Y/N or n/a**	**Comments**	**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
8	Is there evidence of soil slippage/sinkage/erosion?							
9	Is there evidence of vermin damage?							
10	Is there evidence of encroachment by vegetation?							
11	Are there unexpected wet areas?							
	Tank Walls (where visible)	**Insert Y/N or n/a**	**Comments**	**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
12	Are there signs of leakage?							
13	Is there evidence of cracks in walls?							
14	Is there evidence of spalling masonry (where applicable)?							
15	Is there evidence of corrosion of steel walls (where applicable)?							
16	Is there evidence of plant growth?							
	Tank Support Structure	**Insert Y/N or n/a**	**Comments**	**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
17	Is there evidence or cracks?							
18	Is there evidence of spalling masonry (where applicable)?							
19	Is there evidence of corrosion?							
20	Is there evidence of any falling debris?							
21	Have access protection scaffolding crash decks been damaged or modified?							
22	Is there any general damage to the structure?							
23	Is lightning protection damaged/missing?							
	Tank Roof	**Insert Y/N or n/a**	**Comments**	**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
24	Is there evidence of soil slippage/sinkage/erosion?							
25	Is there evidence of vermin damage?							
26	Is there evidence of unwanted plant growth?							
27	Is there evidence of encroachment by vegetation?							
28	Is there evidence of spalling masonry/bulging/buckling/ corrosion?							
29	Is the membrane protective covering inadequate?							
30	Is there evidence of membrane blistering?							
31	Is there evidence of standing or pooling water?							
32	Is membrane lapping around upstands/edges damaged, degraded or inadequate?							
33	Are there any other fittings/mountings with inadequate seals/sealant?							
34	Is the roof drainage insufficient to clear all standing water?							
35	Is there any general damage to the roof integrity?							
	Access Points	**Insert Y/N or n/a**	**Comments**	**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
36	Are all the hatch, covers or doors in satisfactory condition and working order?							
37	Are the correct locks in place? (correct level of security?)							
38	Are the seals in place and in satisfactory condition?							
39	Are the insect meshes in place and in satisfactory condition?							
40	Is the mesh an adequate size? (approx. 1mm or less)							
41	Are the drainage holes in the outside upstand clear of debris? (where applicable)							
42	Are the drainage holes an appropriate size? (where applicable, less than 5mm)							
43	Is plant growth around and above treated water hatches kept clear?							
44	Is the hatch alarm in good working order (where fitted)?							
	Dedicated Air Vents	**Insert Y/N or n/a**	**Comments**	**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
45	Are the vents securely fixed undamaged and in good condition?							
46	Are the insect meshes in place and in satisfactory condition?							
47	Is the mesh an adequate size? (approx 1mm or less)							
	Cable Entries	**Insert Y/N or n/a**	**Comments**	**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
48	Are cable entry points sealed, in satisfactory condition and without evidence of ingress?							
	Valves	**Insert Y/N or n/a**	**Comments**	**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
49	Is there an accurate valve plan located on site?							
50	Are valve markers in place and correct?							
51	Are all externally accessible valves locked off or wheels removed?							
52	Are valve covers in place and undamaged?							
53	Are all valve chambers dry?							
54	Are valves free from any sign of leakage?							
	Pipework	**Insert Y/N or n/a**	**Comments**	**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
55	Is all pipework in good condition with no visible leaks?							
56	Does all pipework have satisfactory anchorage?							
57	Is pipework clear of excessive corrosion?							
58	Is the condition of lagging satisfactory (where present)?							
59	Is trace heating functional (where fitted)?							

t

	Overflows / Washouts	Insert Y/N or n/a	Comments	Have all necessary actions been completed whilst on-site?	Remedial Work / Action	Priority 1-3*	Water Services Action Management System Number	Photo taken
60	Is the overflow/washout location accurately detailed on a site schematic/plan?							
61	Is there a flap valve fitted on the pipe entering the first downstream chamber?							
62	Is the flap valve operational & closes effectively?							
63	Is the overflow/washout clear of unexpected running water?							
64	Is the overflow/washout pipework in satisfactory condition?							
65	Is there an operational flap valve fitted on the environment discharge point/outfall?							
66	Is the environment discharge point/outfall in satisfactory condition?							
	Bypasses	**Insert Y/N or n/a**	**Comments**	**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
67	Is there a bypass onsite?							
68	Is the bypass accurately detailed on a site schematic/plan?							
69	Is the controlling valve/bypass arrangement identified, marked and easily accessible onsite?							
70	Is there a means to flush the bypass pipework?							
71	Is the bypass flushed routinely?							
72	Is the bypass fully isolated?							
	Sample Taps	**Insert Y/N or n/a**	**Comments**	**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
73	Are the sample points easily accessible?							
74	Are the sample taps in good condition?							
75	Are the sample taps labelled and the certificates present onsite?							
76	Are the routine and non-routine sample taps clearly labelled?							
77	Is there water flow at the sample point?							
78	Is the waste drainage satisfactory?							
	Site Drainage	**Insert Y/N or n/a**	**Comments**	**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
79	Is an accurate site drainage schematic/plan available on site?							
80	Are any underbed drains clear of debris and water?							
81	Are all drains clear of debris and standing water?							
82	Are all trenchlines free from settlement?							
83	Are all open ditches clear of debris and excessive vegetation?							
84	Are flows in drains as expected?							
85	Are ground conditions as expected?							
	Ground Maintenance	**Insert Y/N or n/a**	**Comments**	**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
86	Has the ground maintenance frequency been maintained?							
87	Is access to the fence line maintained?							
88	Are trees bushes and hedges appropriately maintained around fence lines and hatches?							
89	Are conservation areas maintained appropriately?							
90	Are the grounds in a tidy condition?							
	Other		**Comments**	**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
91	Are there any other issues to note? (add detail in comments box)							

	Evidence (Specific to Vermin Assessment)	Insert Y/N	Comments	Have all necessary actions been completed whilst on-site?	Remedial Work / Action	Priority 1-3*	Water Services Action Management System Number	Photo taken
92	Notable vermin activity on site?							
	Other (Specific to Vermin Assessment)	**Insert Y/N**	**Comments**	**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
93	Has there been a change / increase in activity levels of vermin, noted through routine visits? E.g. is it evident that there have been recent visits by the vermin contractor, such as registering in the signing in book on site?							
	Evidence of Vermin on site Tick Yes to all that apply.	**Insert Y/N**	**Indicate Estimated Number - Select as Appropriate**					
94	Rabbits							
	Moles							
	Deer							
	Fox							
	Rodents (mice, rats)							
	Birds, Bats							
	Insects							
	Other:- please state							
	INSPECTION OF OTHER TANKS IN OTHER BUILDINGS (Vermin Risk Assessment Requirement)							
	Are there other tanks on site, not specifically designed as water retaining structures e.g. chemical make up tanks, softeners, filters where the contents will be used in the water treatment process? If the answer is YES, then complete the remaining questions.	**Insert Y/N**						
	Access points	**Insert Y/N**	**Comments**		**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
95	Is the building secure - access around doors etc?							
96	Is the tank sealed to prevent entry of vermin and is it in a satisfactory condition?							
97	Are fill, drain and vent pipes secure against ingress of vermin.							

[redacted]

Water Retaining Structure Internal Inspection Form

Regional Supply Area:	West
Supply Manager Area:	Grafham
Site Name:	DIDDINGTON WR
Site Short Name:	DIDDWR
Tank Name:	STORAGE RES ST1 Tnk1
Inspection Date (dd/mm/yyyy)**:**	22/05/2020
Date of next inspection (dd/mm/yyyy) - if early check than normal frequency required:	
Inspection Reason:	final inspection
Clean Reason:	programmed clean
Impact Plan Number:	
Inspected By:	[redacted]

To upload data onto the log press Ctrl U once form complete.

Question	Answer	Comments	Remedial Work / Action	Priority 1-3*	Action Management System Number
Tank Attributes					
What is the tanks jack head category?	N				
Is the tank hydraulically isolatable - can it be easily taken out of supply?	Yes				
Is there adjoining untreated water storage - above, to the side, passing through the tank?	No				
Is this an Ozone tank - if so which stage?	No				
Is the structure covered by the reservoir act (1975) - large raised reservoirs >25,000m3?	Yes				
Compartment Dimensions					
Storage volume - floor to overflow (m3)	23,070				
Operational volume - useable volume (m3)	23,070				
Height of compartment (m)	6.3				
Width of compartment (m)	50				
Depth of compartment (m)	76.9				
Inlet height (m)	5.08	Measured ofl 750mm O/D			
Outlet height (m)	0	Floor Level 1.2m O/D with baffle plate above			
Overflow height (m)	6.06	Measured ofl 900mm O/D			
Overflow diameter (mm)	900				
Top water level - normal operation (m)					
Bottom water level (m)	0				
Tank Structure					
What material is the tank?	Other	Reinforced Concrete			
What's the type of membrane?	Sheet	Semi adhered Premseal			
If an earth embankment what type is it?	Buried				
What type of roof covering is there?	Gravel				
What's the type of support structure?	Concrete	98 columns 14 x 7 rows. 300mm x300mm square			
Tank Roof					
Are there signs of leakage / ingress through roof?	No	There is Ingress from Several locations from the roof to wall joint construction and 2 locations on the roof above columns 4 adjacent from the overflow and W/o sump, External Repaires to the roof to wall joint and the roof in the 2 locations has rectified this issue.	Investigate externally and repair. Completed all ok		
Is there evidence of cracks in roof?	No				
Is there evidence of discolouration / slime on internal roof?	No				
Are the roof joints / seals in satisfactory condition?	Yes				
Is there evidence of standing or pooling water?	Yes	Roof under inundation test			
Is the roof drainage insufficient to clear all standing water?	No				
Tank walls					
Are there signs of leakage / ingress through walls?	No	Weeping around the overflow pipe wall connection. The infill panels are weeping mid height from roof test. These might be rectified once the roof repair above is corrected. This was repaired internally and overbanded, no issues on this inspection	Overband internally around pipe connection. As row 42 comments for roof failt correction. Work completed		
Is there evidence of cracks in walls?	Yes				
Is there evidence of discolouration / slime on walls?	No				
Are the wall joints / seals in satisfactory condition?	n/a				

Tank floor					
Are there signs of leakage / ingress through floor?	No				
Is there evidence of cracks in floor?	Yes	Minor srinkage			
Is there evidence of discolouration / slime on floor?	Yes	The resiliance project had flushed into this tank so there were some material diposits found	All cleaned		
Was any material found in the tank / on the floor?	Yes	As Above			
Tank Support structure					
Are the roof supports in satisfactory condition?	Yes				
Tank Fittings / Pipework					
Are the internal fittings in satisfactory condition?	Yes				
Is the inlet pipework in satisfactory condition?	Yes				
Is the outlet pipework in satisfactory condition?	Yes				
Is the overflow in satisfactory condition?	Yes				
Are the valves in satisfactory condition?	Yes	These are all external to tank and in good working order			
Are the ladders in satisfactory condition?	Yes	3 x stainless steel laders			
Is the metalwork in satisfactory condition?	Yes	Stailless steel handrail around sump			
Are the baffled walls / curtains in satisfactory condition?	n/a				
Are the level probes in satisfactory condition?	Yes	Ultrasonic and Level probes			
Are cable entry points sealed, in satisfactory condition and without evidence of ingress?	Yes				
Are there any other fittings / mountings with inadequate seals / sealant?	n/a				
Are any mixers in satisfactory working order / condition?	n/a				
Are any sample pumps in satisfactory working order / condition?	n/a				
Is there any redundent pipework or equipment connected to the tank?	No				
Access points					
Are all the hatch, covers or doors in satisfactory condition and working order?	Yes	These are not fit for purpose due to being the wrong type, allowing rain water into moat area and insects into the tank. All hatches replaced all ok.	Replace for correct hatch type. Work completed		
Are the seals in place and in satisfactory condition?	Yes				
Are the insect meshes in place and in satisfactory condition?	Yes				
Is the mesh an adequate size? (approx. 1mm or less)	Yes				
Is the membrane lapping around up stands in satisfactory condition?	Yes	Coated in sports coat waterproofing			
Dedicated Air Vents					
Are the vents securely fixed undamaged and in good condition?	n/a				
Are the insect meshes in place and in satisfactory condition?	n/a				
Is the mesh an adequate size? (approx. 1mm or less)	n/a				

Roof Saturation Test					
Was the roof saturation test satisfactory?	Yes	Please see comments in rows 42,48 & 76. Work completed has rectified any issues			
Other					
Are there any other issues to note? (add detail in comments box)					
Have actions been added to the Action Management System (AMS)?					
To upload data onto the tracker press Ctrl U. Also the form must be saved to the correct HAWK folder (see instruction tab)					
[redacted]					

Priority	Brief Rationale for Categorisation	Examples
Priority 1	Major Defect. Remedial work to be implemented before return to service or within 12 months if return to service is approved pending remedial work.	Ingress issue Significant Leak
Priority 2	Remedial work to be implemented before the next inspection.	Roof Drainage Minor Leak
Priority 3	Continue to monitor condition at next inspection.	Slippage Corrosion

External Inspection For Water Retaining Structures

Regional Supply Area:			
Supply Manager Area:			
Site Name:			
Site Short Name:			
Structure Name:			
Tank Known Locally as:			
Inspection Date:		**Inspection Reason:**	
Assessment Completed by:			

* priority rankings are detailed in PSW-PRO-7.2 Procedure for External Inspection of Water Retaining Structures, plus see end of form.

[redacted]

Photographs can be used to provide additional information - attach to the photo tab of this form.

External Inspection Questions

	Site Security	**Insert Y/N or n/a**	**Comments**	**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
1	Are the site access gates in satisfactory condition?							
2	Are all correct locks in place and in satisfactory condition?							
3	Is the site fence in satisfactory condition?							
4	Are the buildings secure?							
5	Are alarm systems appropriate and in satisfactory working order?							
6	Is animal fencing in good condition and adequate (if present)?							
7	Is the site security adequate to prevent unauthorised access?							
	Embankment	**Insert Y/N or n/a**	**Comments**	**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
8	Is there evidence of soil slippage/sinkage/erosion?							
9	Is there evidence of vermin damage?							
10	Is there evidence of encroachment by vegetation?							
11	Are there unexpected wet areas?							
	Tank Walls (where visible)	**Insert Y/N or n/a**	**Comments**	**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
12	Are there signs of leakage?							
13	Is there evidence of cracks in walls?							
14	Is there evidence of spalling masonry (where applicable)?							
15	Is there evidence of corrosion of steel walls (where applicable)?							
16	Is there evidence of plant growth?							
	Tank Support Structure	**Insert Y/N or n/a**	**Comments**	**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
17	Is there evidence or cracks?							
18	Is there evidence of spalling masonry (where applicable)?							
19	Is there evidence of corrosion?							
20	Is there evidence of any falling debris?							
21	Have access protection scaffolding crash decks been damaged or modified?							
22	Is there any general damage to the structure?							
23	Is lightning protection damaged/missing?							
	Tank Roof	**Insert Y/N or n/a**	**Comments**	**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
24	Is there evidence of soil slippage/sinkage/erosion?							
25	Is there evidence of vermin damage?							
26	Is there evidence of unwanted plant growth?							
27	Is there evidence of encroachment by vegetation?							
28	Is there evidence of spalling masonry/bulging/buckling/ corrosion?							
29	Is the membrane protective covering inadequate?							
30	Is there evidence of membrane blistering?							
31	Is there evidence of standing or pooling water?							
32	Is membrane lapping around upstands/edges damaged, degraded or inadequate?							
33	Are there any other fittings/mountings with inadequate seals/sealant?							
34	Is the roof drainage insufficient to clear all standing water?							
35	Is there any general damage to the roof integrity?							
	Access Points	**Insert Y/N or n/a**	**Comments**	**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
36	Are all the hatch, covers or doors in satisfactory condition and working order?							
37	Are the correct locks in place? (correct level of security?)							
38	Are the seals in place and in satisfactory condition?							
39	Are the insect meshes in place and in satisfactory condition?							
40	Is the mesh an adequate size? (approx. 1mm or less)							
41	Are the drainage holes in the outside upstand clear of debris? (where applicable)							
42	Are the drainage holes an appropriate size? (where applicable, less than 5mm)							
43	Is plant growth around and above treated water hatches kept clear?							
44	Is the hatch alarm in good working order (where fitted)?							
	Dedicated Air Vents	**Insert Y/N or n/a**	**Comments**	**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**

45	Are the vents securely fixed undamaged and in good condition?							
46	Are the insect meshes in place and in satisfactory condition?							
47	Is the mesh an adequate size? (approx 1mm or less)							
	Cable Entries	**Insert Y/N or n/a**	**Comments**	**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
48	Are cable entry points sealed, in satisfactory condition and without evidence of ingress?							
	Valves	**Insert Y/N or n/a**	**Comments**	**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
49	Is there an accurate valve plan located on site?							
50	Are valve markers in place and correct?							
51	Are all externally accessible valves locked off or wheels removed?							
52	Are valve covers in place and undamaged?							
53	Are all valve chambers dry?							
54	Are valves free from any sign of leakage?							
	Pipework	**Insert Y/N or n/a**	**Comments**	**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
55	Is all pipework in good condition with no visible leaks?							
56	Does all pipework have satisfactory anchorage?							
57	Is pipework clear of excessive corrosion?							
58	Is the condition of lagging satisfactory (where present)?							
59	Is trace heating functional (where fitted)?							

	Overflows / Washouts	Insert Y/N or n/a	Comments	Have all necessary actions been completed whilst on-site?	Remedial Work / Action	Priority 1-3*	Water Services Action Management System Number	Photo taken
60	Is the overflow/washout location accurately detailed on a site schematic/plan?							
61	Is there a flap valve fitted on the pipe entering the first downstream chamber?							
62	Is the flap valve operational & closes effectively?							
63	Is the overflow/washout clear of unexpected running water?							
64	Is the overflow/washout pipework in satisfactory condition?							
65	Is there an operational flap valve fitted on the environment discharge point/outfall?							
66	Is the environment discharge point/outfall in satisfactory condition?							
	Bypasses	**Insert Y/N or n/a**	**Comments**	**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
67	Is there a bypass onsite?							
68	Is the bypass accurately detailed on a site schematic/plan?							
69	Is the controlling valve/bypass arrangement identified, marked and easily accessible onsite?							
70	Is there a means to flush the bypass pipework?							
71	Is the bypass flushed routinely?							
72	Is the bypass fully isolated?							
	Sample Taps	**Insert Y/N or n/a**	**Comments**	**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
73	Are the sample points easily accessible?							
74	Are the sample taps in good condition?							
75	Are the sample taps labelled and the certificates present onsite?							
76	Are the routine and non-routine sample taps clearly labelled?							
77	Is there water flow at the sample point?							
78	Is the waste drainage satisfactory?							
	Site Drainage	**Insert Y/N or n/a**	**Comments**	**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
79	Is an accurate site drainage schematic/plan available on site?							
80	Are any underbed drains clear of debris and water?							
81	Are all drains clear of debris and standing water?							
82	Are all trenchlines free from settlement?							
83	Are all open ditches clear of debris and excessive vegetation?							
84	Are flows in drains as expected?							
85	Are ground conditions as expected?							
	Ground Maintenance	**Insert Y/N or n/a**	**Comments**	**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
86	Has the ground maintenance frequency been maintained?							
87	Is access to the fence line maintained?							
88	Are trees bushes and hedges appropriately maintained around fence lines and hatches?							
89	Are conservation areas maintained appropriately?							
90	Are the grounds in a tidy condition?							
	Other		**Comments**	**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
91	Are there any other issues to note? (add detail in comments box)							

	Evidence (Specific to Vermin Assessment)	Insert Y/N	Comments	Have all necessary actions been completed whilst on-site?	Remedial Work / Action	Priority 1-3*	Water Services Action Management System Number	Photo taken
92	Notable vermin activity on site?							
	Other (Specific to Vermin Assessment)	**Insert Y/N**	**Comments**	**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
93	Has there been a change / increase in activity levels of vermin, noted through routine visits? E.g. is it evident that there have been recent visits by the vermin contractor, such as registering in the signing in book on site?							
	Evidence of Vermin on site Tick Yes to all that apply.	**Insert Y/N**	**Indicate Estimated Number - Select as Appropriate**					
94	Rabbits							
	Moles							
	Deer							
	Fox							
	Rodents (mice, rats)							
	Birds, Bats							
	Insects							
	Other:- please state							
	INSPECTION OF OTHER TANKS IN OTHER BUILDINGS (Vermin Risk Assessment Requirement)							
	Are there other tanks on site, not specifically designed as water retaining structures e.g. chemical make up tanks, softeners, filters where the contents will be used in the water treatment process? If the answer is YES, then complete the remaining questions.	**Insert Y/N**						
	Access points	**Insert Y/N**	**Comments**		**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
95	Is the building secure - access around doors etc?							
96	Is the tank sealed to prevent entry of vermin and is it in a satisfactory condition?							
97	Are fill, drain and vent pipes secure against ingress of vermin.							

[redacted]

Water Retaining Structure Internal Inspection Form

Regional Supply Area:	West
Supply Manager Area:	Grafham
Site Name:	DIDDINGTON WR
Site Short Name:	DIDDWR
Tank Name:	STORAGE RES ST1 Tnk1
Inspection Date (dd/mm/yyyy)**:**	08/11/2021
Date of next inspection (dd/mm/yyyy) - if early check than normal frequency required:	
Inspection Reason:	initial inspection
Clean Reason:	programmed clean
Impact Plan Number:	
Inspected By:	[redacted]

To upload data onto the log press Ctrl U once form complete.

Question	Answer	Comments	Remedial Work / Action	Priority 1-3*	Action Management System Number
Tank Attributes					
What is the tanks jack head category?	N				
Is the tank hydraulically isolatable - can it be easily taken out of supply?	Yes				
Is there adjoining untreated water storage - above, to the side, passing through the tank?	No				
Is this an Ozone tank - if so which stage?	No				
Is the structure covered by the reservoir act (1975) - large raised reservoirs >25,000m3?	Yes				
Compartment Dimensions					
Storage volume - floor to overflow (m3)	23,070				
Operational volume - useable volume (m3)	23,070				
Height of compartment (m)	6.3				
Width of compartment (m)	50				
Depth of compartment (m)	76.9				
Inlet height (m)	5.08	Measured ofl 750mm O/D			
Outlet height (m)	0	Floor Level 1.2m O/D with baffle plate above			
Overflow height (m)	6.06	Measured ofl 900mm O/D			
Overflow diameter (mm)	900				
Top water level - normal operation (m)					
Bottom water level (m)	0				
Tank Structure					
What material is the tank?	Other	Reinforced Concrete			
What's the type of membrane?	Sheet	Semi adhered Premseal			
If an earth embankment what type is it?	Buried				
What type of roof covering is there?	Gravel				
What's the type of support structure?	Concrete	98 columns 14 x 7 rows. 300mm x300mm square			
Tank Roof					
Are there signs of leakage / ingress through roof?	Yes	There is Ingress from 1 location on a roof joint between columns 3 & 4 adjacent from the overflow and W/o sump this is in a mirror image to the other side, this was previous area of issues and was repaired externally. * potential for ingress tracking under the premseal membrane*	Investigate externally and repair	1	
Is there evidence of cracks in roof?	No				
Is there evidence of discolouration / slime on internal roof?	No				
Are the roof joints / seals in satisfactory condition?	Yes				
Is there evidence of standing or pooling water?	Yes	Roof under inundation test			
Is the roof drainage insufficient to clear all standing water?	No				
Tank walls					
Are there signs of leakage / ingress through walls?	No				
Is there evidence of cracks in walls?	Yes				
Is there evidence of discolouration / slime on walls?	No				
Are the wall joints / seals in satisfactory condition?	n/a				

Tank floor					
Are there signs of leakage / ingress through floor?	No				
Is there evidence of cracks in floor?	Yes	Minor srinkage			
Is there evidence of discolouration / slime on floor?	Yes	The resiliance project had flushed into this tank so there were some material diposits found	All cleaned		
Was any material found in the tank / on the floor?	Yes	As Above			
Tank Support structure					
Are the roof supports in satisfactory condition?	Yes				
Tank Fittings / Pipework					
Are the internal fittings in satisfactory condition?	Yes				
Is the inlet pipework in satisfactory condition?	Yes				
Is the outlet pipework in satisfactory condition?	Yes				
Is the overflow in satisfactory condition?	No	The coating is blistering and flaking on the flanged sections of pipe.	Investigate problems and escalate to WQ team for recomendations for repair as AW MAS and POSWSH requirements	1	
Are the valves in satisfactory condition?	Yes	These are all external to tank the inlet lets by a little			
Are the ladders in satisfactory condition?	Yes	3 x stainless steel laders			
Is the metalwork in satisfactory condition?	Yes	Stailless steel handrail around sump			
Are the baffled walls / curtains in satisfactory condition?	n/a				
Are the level probes in satisfactory condition?	Yes	Ultrasonic and Level probes			
Are cable entry points sealed, in satisfactory condition and without evidence of ingress?	Yes				
Are there any other fittings / mountings with inadequate seals / sealant?	n/a				
Are any mixers in satisfactory working order / condition?	n/a				
Are any sample pumps in satisfactory working order / condition?	n/a				
Is there any redundent pipework or equipment connected to the tank?	No				
Access points					
Are all the hatch, covers or doors in satisfactory condition and working order?	Yes	Hatches were changed last inspection and are in ok condition.			
Are the seals in place and in satisfactory condition?	Yes				
Are the insect meshes in place and in satisfactory condition?	Yes	Hatches were changed last inspection and are in ok condition.			
Is the mesh an adequate size? (approx. 1mm or less)	Yes				
Is the membrane lapping around up stands in satisfactory condition?	Yes	Coated in sports coat waterproofing			
Dedicated Air Vents					
Are the vents securely fixed undamaged and in good condition?	n/a				
Are the insect meshes in place and in satisfactory condition?	n/a				
Is the mesh an adequate size? (approx. 1mm or less)	n/a				

Roof Saturation Test					
Was the roof saturation test satisfactory?	No	Please see comments in rows 42.	Repair externally	1	
Other					
Are there any other issues to note? (add detail in comments box)					
Have actions been added to the Action Management System (AMS)?					
To upload data onto the tracker press Ctrl U. Also the form must be saved to the correct HAWK folder (see instruction tab)					
[redacted]					

Priority	Brief Rationale for Categorisation	Examples
Priority 1	Major Defect. Remedial work to be implemented before return to service or within 12 months if return to service is approved pending remedial work.	Ingress issue Significant Leak
Priority 2	Remedial work to be implemented before the next inspection.	Roof Drainage Minor Leak
Priority 3	Continue to monitor condition at next inspection.	Slippage Corrosion

External Inspection For Water Retaining Structures

Regional Supply Area:			
Supply Manager Area:			
Site Name:			
Site Short Name:			
Structure Name:			
Tank Known Locally as:			
Inspection Date:		**Inspection Reason:**	
Assessment Completed by:			

* priority rankings are detailed in PSW-PRO-7.2 Procedure for External Inspection of Water Retaining Structures, plus see end of form.

Photographs can be used to provide additional information - attach to the photo tab of this form.

External Inspection Questions

	Site Security	**Insert Y/N or n/a**	**Comments**	**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
1	Are the site access gates in satisfactory condition?							
2	Are all correct locks in place and in satisfactory condition?							
3	Is the site fence in satisfactory condition?							
4	Are the buildings secure?							
5	Are alarm systems appropriate and in satisfactory working order?							
6	Is animal fencing in good condition and adequate (if present)?							
7	Is the site security adequate to prevent unauthorised access?							
	Embankment	**Insert Y/N or n/a**	**Comments**	**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
8	Is there evidence of soil slippage/sinkage/erosion?							
9	Is there evidence of vermin damage?							
10	Is there evidence of encroachment by vegetation?							
11	Are there unexpected wet areas?							
	Tank Walls (where visible)	**Insert Y/N or n/a**	**Comments**	**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
12	Are there signs of leakage?							
13	Is there evidence of cracks in walls?							
14	Is there evidence of spalling masonry (where applicable)?							
15	Is there evidence of corrosion of steel walls (where applicable)?							
16	Is there evidence of plant growth?							
	Tank Support Structure	**Insert Y/N or n/a**	**Comments**	**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
17	Is there evidence or cracks?							
18	Is there evidence of spalling masonry (where applicable)?							
19	Is there evidence of corrosion?							
20	Is there evidence of any falling debris?							
21	Have access protection scaffolding crash decks been damaged or modified?							
22	Is there any general damage to the structure?							
23	Is lightning protection damaged/missing?							
	Tank Roof	**Insert Y/N or n/a**	**Comments**	**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
24	Is there evidence of soil slippage/sinkage/erosion?							
25	Is there evidence of vermin damage?							
26	Is there evidence of unwanted plant growth?							
27	Is there evidence of encroachment by vegetation?							
28	Is there evidence of spalling masonry/bulging/buckling/ corrosion?							
29	Is the membrane protective covering inadequate?							
30	Is there evidence of membrane blistering?							
31	Is there evidence of standing or pooling water?							
32	Is membrane lapping around upstands/edges damaged, degraded or inadequate?							
33	Are there any other fittings/mountings with inadequate seals/sealant?							
34	Is the roof drainage insufficient to clear all standing water?							
35	Is there any general damage to the roof integrity?							
	Access Points	**Insert Y/N or n/a**	**Comments**	**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
36	Are all the hatch, covers or doors in satisfactory condition and working order?							
37	Are the correct locks in place? (correct level of security?)							
38	Are the seals in place and in satisfactory condition?							
39	Are the insect meshes in place and in satisfactory condition?							
40	Is the mesh an adequate size? (approx. 1mm or less)							
41	Are the drainage holes in the outside upstand clear of debris? (where applicable)							
42	Are the drainage holes an appropriate size? (where applicable, less than 5mm)							
43	Is plant growth around and above treated water hatches kept clear?							
44	Is the hatch alarm in good working order (where fitted)?							
	Dedicated Air Vents	**Insert Y/N or n/a**	**Comments**	**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**

45	Are the vents securely fixed undamaged and in good condition?							
46	Are the insect meshes in place and in satisfactory condition?							
47	Is the mesh an adequate size? (approx 1mm or less)							
	Cable Entries	**Insert Y/N or n/a**	**Comments**	**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
48	Are cable entry points sealed, in satisfactory condition and without evidence of ingress?							
	Valves	**Insert Y/N or n/a**	**Comments**	**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
49	Is there an accurate valve plan located on site?							
50	Are valve markers in place and correct?							
51	Are all externally accessible valves locked off or wheels removed?							
52	Are valve covers in place and undamaged?							
53	Are all valve chambers dry?							
54	Are valves free from any sign of leakage?							
	Pipework	**Insert Y/N or n/a**	**Comments**	**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
55	Is all pipework in good condition with no visible leaks?							
56	Does all pipework have satisfactory anchorage?							
57	Is pipework clear of excessive corrosion?							
58	Is the condition of lagging satisfactory (where present)?							
59	Is trace heating functional (where fitted)?							

	Overflows / Washouts	Insert Y/N or n/a	Comments	Have all necessary actions been completed whilst on-site?	Remedial Work / Action	Priority 1-3*	Water Services Action Management System Number	Photo taken
60	Is the overflow/washout location accurately detailed on a site schematic/plan?							
61	Is there a flap valve fitted on the pipe entering the first downstream chamber?							
62	Is the flap valve operational & closes effectively?							
63	Is the overflow/washout clear of unexpected running water?							
64	Is the overflow/washout pipework in satisfactory condition?							
65	Is there an operational flap valve fitted on the environment discharge point/outfall?							
66	Is the environment discharge point/outfall in satisfactory condition?							
	Bypasses	**Insert Y/N or n/a**	**Comments**	**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
67	Is there a bypass onsite?							
68	Is the bypass accurately detailed on a site schematic/plan?							
69	Is the controlling valve/bypass arrangement identified, marked and easily accessible onsite?							
70	Is there a means to flush the bypass pipework?							
71	Is the bypass flushed routinely?							
72	Is the bypass fully isolated?							
	Sample Taps	**Insert Y/N or n/a**	**Comments**	**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
73	Are the sample points easily accessible?							
74	Are the sample taps in good condition?							
75	Are the sample taps labelled and the certificates present onsite?							
76	Are the routine and non-routine sample taps clearly labelled?							
77	Is there water flow at the sample point?							
78	Is the waste drainage satisfactory?							
	Site Drainage	**Insert Y/N or n/a**	**Comments**	**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
79	Is an accurate site drainage schematic/plan available on site?							
80	Are any underbed drains clear of debris and water?							
81	Are all drains clear of debris and standing water?							
82	Are all trenchlines free from settlement?							
83	Are all open ditches clear of debris and excessive vegetation?							
84	Are flows in drains as expected?							
85	Are ground conditions as expected?							
	Ground Maintenance	**Insert Y/N or n/a**	**Comments**	**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
86	Has the ground maintenance frequency been maintained?							
87	Is access to the fence line maintained?							
88	Are trees bushes and hedges appropriately maintained around fence lines and hatches?							
89	Are conservation areas maintained appropriately?							
90	Are the grounds in a tidy condition?							
	Other	**Comments**		**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
91	Are there any other issues to note? (add detail in comments box)							

	Evidence (Specific to Vermin Assessment)	Insert Y/N	Comments	Have all necessary actions been completed whilst on-site?	Remedial Work / Action	Priority 1-3*	Water Services Action Management System Number	Photo taken
92	Notable vermin activity on site?							
	Other (Specific to Vermin Assessment)	**Insert Y/N**	**Comments**	**Have all necessary actions been completed whilst on-site?**	**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
93	Has there been a change / increase in activity levels of vermin, noted through routine visits? E.g. is it evident that there have been recent visits by the vermin contractor, such as registering in the signing in book on site?							
	Evidence of Vermin on site Tick Yes to all that apply.	**Insert Y/N**	**Indicate Estimated Number - Select as Appropriate**					
94	Rabbits							
	Moles							
	Deer							
	Fox							
	Rodents (mice, rats)							
	Birds, Bats							
	Insects							
	Other:- please state							
	INSPECTION OF OTHER TANKS IN OTHER BUILDINGS (Vermin Risk Assessment Requirement)							
	Are there other tanks on site, not specifically designed as water retaining structures e.g. chemical make up tanks, softeners, filters where the contents will be used in the water treatment process? If the answer is YES, then complete the remaining questions.	**Insert Y/N**						
	Access points	**Insert Y/N**	**Comments**		**Remedial Work / Action**	**Priority 1-3***	**Water Services Action Management System Number**	**Photo taken**
95	Is the building secure - access around doors etc?							
96	Is the tank sealed to prevent entry of vermin and is it in a satisfactory condition?							
97	Are fill, drain and vent pipes secure against ingress of vermin.							

Diddington

2019-20 Res 1		2019-20 Res 2		2021 (Side 1)		2022 28 March	
Title	*Slide No*	*Title*	*Slide No*	*Title*	*Slide No*	*Title*	*Slide No*
Ingress issues (1)	2	Ingress around overflow 4/31	10	20211108_102441 2/12	15	Tank 1 1/8	18
InletPipe JPG	3	Inside in tank above inlet pipe 23/31	11	20211108_110329 7/12	16	Tank 1-2 3/8	19
Material from main flushing	4	Overflow pipe 26/31	12	20211108_110431 11/12	17	Tank 1-3 4/8	20
Overflow pipe JPG	5	Weeping around overflow pipe wall connection 30/32	13			Tank 1-4 5/8	21
Pre Flood test photo	6	Weeping around overflow pipe wall connection (2) 31/32	14				
Washout sump and handrail	7						
Weeping around overflow pipe wall connection	8						
Weeping around overflow pipe wall connection(2)	9						

Ingress issues (1)

InletPipe JPG

Material from main flushing

Overflow pipe JPG

Pre Flood test photo

Washout sump and handrail

Weeping around overflow pipe and wall connection

Weeping around overflow pipe wall connection(2)

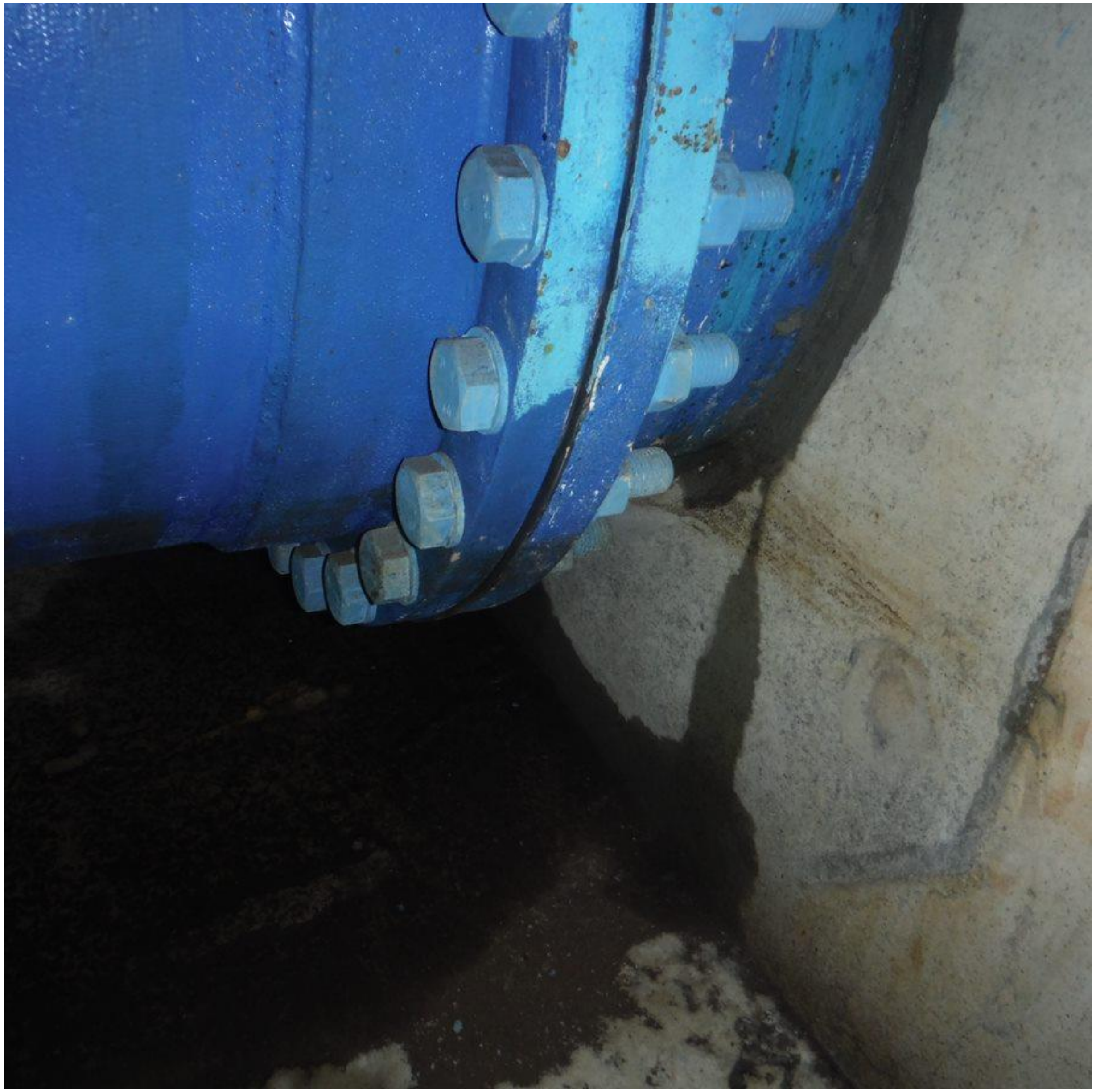
Ingress around overflow 4/31

Inside in tank above inlet pipe
23/31

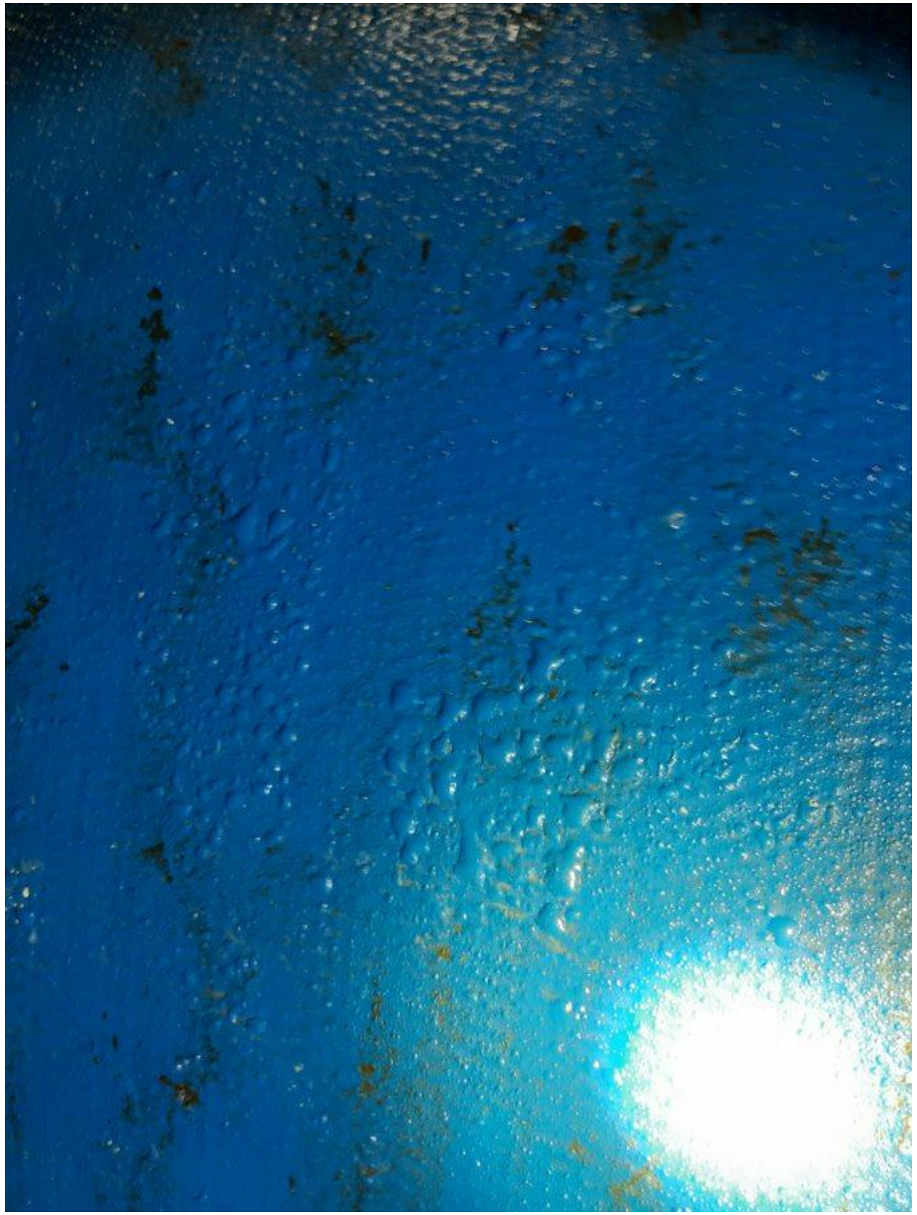
Overflow pipe 26/31

Weeping around overflow pipe wall connection 30/32

Weeping around overflow pipe wall connection (2) 31/32



20211108_102441 2/12



20211108_110329 7/12

20211108_110431 11/12

Tank 1 1/8

Tank 1-2 3/8

Tank 1-3 4/8

Tank 1-4 5/8

From:	[redacted]
To:	[redacted]
Subject:	FW: Diddington Reservoir Update
Date:	11 September 2023 10:24:11
Attachments:	image001.png

FYI only

Kind regards,

[redacted]

Dr. [redacted] CSci, MI Water | Inspector | Drinking Water Inspectorate
Area 1A Nobel House, 17 Smith Square, London, SW1P 3JR
Mobile: [redacted] | Enquiries Line: 0330 041 6501 | Email: [redacted]defra.gov.uk
DWI Website DWI LinkedIn

From: [redacted] <[redacted]@anglianwater.co.uk>
Sent: 11 September 2023 09:10
To: [redacted] <[redacted]defra.gov.uk>
Cc: [redacted] <[redacted]defra.gov.uk>; [redacted]
<[redacted]anglianwater.co.uk>; WQRegulation <WQRegulation@anglianwater.co.uk>
Subject: RE: Diddington Reservoir Update

Dear [redacted]

I hope you had a nice weekend?

A quick email to confirm that the West Cell at Diddington Reservoir was returned to supply following satisfactory sample results on Saturday 9 September.

Kind regards
[redacted]F

From: [redacted]
Sent: 01 September 2023 11:29
To: [redacted] <[redacted]defra.gov.uk>
Cc: [redacted] <[redacted]defra.gov.uk>; [redacted]
<[redacted]anglianwater.co.uk>; WQRegulation <WQRegulation@anglianwater.co.uk>
Subject: Diddington Reservoir Update

Dear [redacted]

Following our discussions onsite at Grafham on Wednesday, just a quick email to confirm that the East Cell of Diddington Reservoir has now been returned to supply following satisfactory sample results.

Sample results are still awaited for the West Cell but it is hoped that will also be back in supply in the near future and we will send a further update at this stage.

Kind regards

[redacted]F

[redacted]
Water Quality Regulation Scientist
Mobile: [redacted]

Anglian Water Services Limited
Lancaster House, Lancaster Way, Ermine Business Park,
Huntingdon, Cambridgeshire, PE29 6XU

anglianwater

Goods/services procured for the benefit of Anglian Water Services Ltd. and the @one Alliance Partner Balfour Beatty Utility Solutions Ltd

@one Alliance Payment Team
Anglian Water Services Ltd
Thorpe Wood House
Thorpe Wood
Peterborough
PE3 6WT

Change to @one Alliance Purchase Order

Information	
Order Ref:	**7000017625**
Date	05.02.2015
Vendor No.	212853
Currency	GBP
Our reference	
Contact Name	[redacted]
Contact No.	[redacted]
Payment Terms	Payment net monthly

Invoices MUST quote the Purchase Order number, and must be submitted to the payments section either by email to invoices@anglianwater.co.uk or by post to the address details above. Failure to do so will result in payment being delayed.

Contact e-mail: [redacted]@anglianwater.co.uk

Sigma Pipeline Solutions Ltd - In Admin
C/O FRP Advisory LLP
2nd Floor
110 Cannon Street
LONDON
Greater London EC4N 6EU
UNITED KINGDOM

Item	Material	Order Qty	Unit Description	Net Price/Unit	Item Value	Delivery Date
	Header text:		**CL 14/01/2022 - RE-PRINT** PLEASE NOTE - All materials and equipment supplied, or any work undertaken that introduces any product, substance, or material in contact with, treated or untreated water that is intended for potable use shall comply with the current relevant regulations and in particular Regulation 31. Anglian Waters particular requirements for compliance with Regulation 31 can be found here: http://www.anglianwater.co.uk/_assets/media/StandardTC3_%28including_REG_31_Requirements%29.pdf **delivery req'd as soon as possible please**			
1	411583	2.00	each 500mm FLG Spigot Pipe 1000 L Blue 1000mm long, with 3M Scotchkote Epoxy coating 162PWX Blue, 2 part epoxy coating.	662.91 per 1 EA	1,325.82	
	Description of Changed Field: Old Value: New Value:		Net price changed 278.91 GBP 662.91 GBP			
2	411572	2.00	each 500mm Dbl FLG Pipe 500 L Blue 500mm long, with 3M Scotchkote Epoxy coating 162PWX Blue, 2 part epoxy coating	578.98 per 1 EA	1,157.96	

Important Information to Vendors

1. All Acknowledgements and order queries should be directed to the nominated Anglian Water contact named above.
2. Unless Anglian Water has expressly acknowledged in advance and in writing, signed by hand, that the Supplier's terms are to apply, this Purchase Order is placed under the standard terms and conditions of Anglian Water Services Ltd for the @one Alliance. https://www.anglianwater.co.uk/about-us/who-we-are/our-suppliers/
3. Notwithstanding para 2 above, where the parties have entered into a separate written agreement for the provision of the Goods/Services set out in this Purchase Order ("Agreement"), the Purchase Order terms and conditions referred to herein shall be excluded and the terms set out in the Agreement are the only terms that shall apply to the Goods/Services ordered herein.

Anglian Water Services Ltd - VAT Reg No. GB 514 0600 02
Registered in England No. 2366656 -Registered office: Lancaster House,Lancaster Way, Ermine Business Park , Huntingdon , Cambs,UK PE29 6XU

Item	Material	Order Qty	Unit Description	Net Price/Unit			Item Value	Delivery Date
	Description of Changed Field:			Net price changed				
	Old Value:			386.98 GBP				
	New Value:			578.98 GBP				
3	412591	2.00	each	445.81	per 1	EA	891.62	
			500mm 90º DBL FLG Shrt Radius Bend Blue Ductile Iron supplied with WRAS approved 1112500 Resicoat_R4 externally and internally					
4	412618	2.00	each	289.31	per 1	EA	578.62	
			500mm FLG Bellmouth Blue Ductile Iron supplied with WRAS approved 1112500 Resicoat_R4 externally and internally SITE CONTACT: [redacted] contact on ([redacted]) No curtain siders will be accepted for off-loading All deliveries must report to the site office or Site Foreman prior to unloading. No delivery vehicles are to reverse without a banksman being present. The only competency level acceptable to the @one alliance with regard to the operation of lorry mounted cranes & associated offloading equipment are The Construction Plant Competence Scheme CPCS Card or The Association Of Lorry Loader Manufacturers & Importers ALLMI Card. All personnel involved or assisting with the offloading of vehicles must hold relevant certificates of competency. All pipe & fitting deliveries must be pre-slung or a suitable rail and fall arrest system to be in place on the trailer. Failure to adhere to these stipulations will result in the delivery being rejected. ------------------------------ ----------------------- --------------					

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Item	Material	Order Qty	Unit Description	Net Price/Unit	Item Value	Delivery Date
			All products supplied that come into contact with potable or raw water are to hold valid WRAS or DWI certification. --- Additional Health & Safety Conditions It is a requirement by the Contractor that all site personnel, which includes Sub Contractors, delivery drivers, maintenance personnel, supervisory or management staff etc. carrying out work on Sites adhere to the following supplementary PPE requirements; 1.It is mandatory that appropriate Safety Boots are worn at all times and these must be laced and provides adequate ankle support, all types of rigger boots will be prohibited from site. 2.It is mandatory that Safety Helmets are correctly worn at all times. Safety Helmets must be defect free and in date. 3.It is mandatory that appropriate Hi-Visibility clothing is worn at all times on site. 4.It is mandatory that appropriate gloves fit for purpose are worn at all times on site. However if wearing gloves would adversely affect the safety performance of a particular task then a risk assessment must identify this and an exception to the rule must be agreed by the contractor. If agreement is given not to wear gloves then, it will only apply to the specific activity on the specific site for which the exception was granted. The risk assessment negates the need to wear gloves this will only apply to that activity on that specific site. Gloves must be worn at all other times. 5. It is mandatory that minimum Grade F eye protection is worn on site at all times. Where a task requires a higher grade of eye protection, identified by risk assessment and work instructions, then that will be worn instead. However if			

Item	Material	Order Qty	Unit Description	Net Price/Unit	Item Value	Delivery Date
			wearing eye protection would adversely affect the safety performance of a particular task then a risk assessment must identify this and an exception to the rule must be agreed by the Contractors. If agreement is given not to wear eye protection then, it will only apply to the specific activity on the specific site for which the exception was granted. Failure to comply with these requirements could result in personnel being removed from site. Should any of the above PPE be supplied by the Contractor then the Contractor reserve the right to contra charge the Sub Contractor or supplier at cost plus a reasonable fee. Any PPE issued by Contractor to the Sub Contractor will need to be recorded and signed for.			

Total Net Value Excluding VAT

3,954.02

WAT-05860-03-02-01-08 - Hannington-Pitsford Drought Mitigation

Delivery Point:

[redacted]
Pitsford WTW,
Grange Lane, Pitsford,
Northampton, NN6 9AP
NORTHAMPTON
NN6 9AP
UNITED KINGDOM

Important Information to Vendors

1. All Acknowledgements and order queries should be directed to the nominated Anglian Water contact named above.
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3. Notwithstanding para 2 above, where the parties have entered into a separate written agreement for the provision of the Goods/Services set out in this Purchase Order ("Agreement"), the Purchase Order terms and conditions referred to herein shall be excluded and the terms set out in the Agreement are the only terms that shall apply to the Goods/Services ordered herein.

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

For materials to enter supply, Parts A and B must be signed and approved by Water Quality Performance Team

CONTACT NAME:	[redacted] (and [redacted] as of 2017	**CONTACT NUMBER: na25/01**	[redacted]	**DATE:**	14/06/2016
FORM NO:	2428				
SITE:	Diddington Reservoir Site				
LOCATION ON SITE:	Reservoir cell 1 and 2 and new pipework as part of Grafham Resilience Scheme				
CONTRACTOR:	JN Bentley				
WAT- NO. IF APPLICABLE:	WAT-06195				

USEFUL LINKS

CONTACT THE WATER QUALITY PERFORMANCE TEAM
HAWK - MATERIALS IN CONTACT
WRAS DIRECTORY
DWI APPROVED PRODUCTS LIST
BRITISH STANDARDS WEBSITE

PART A

LINE NO.	SUPPLIER	MANUFACTURER HOLDING APPROVAL (IF DIFFERENT FROM SUPPLIER)	PRODUCT NAME	BRIEF DESCRIPTION OF MATERIAL IN CONTACT WITH WATER	APPROVING BODY DWI / WRAS/ BSEN	APPROVING BODY REF	LARGE/ SMALL SURFACE AREA	1 PROJECT ENGINEER CONFIRMATION SIGN/DATE	2 WQPT - MATERIALS APPROVED SIGN/DATE	3 COMMENTS / ADVICE SIGN/DATE	Brampton Tee Connections	Twin Brampton pipework commisioning- Section 3 of	Inlet Main Commisioning- Section 4 of	pipework commissioning- Section 6 of Commisioning	outlet main (Brampton)- Section 7 of Commisioning Plan	commissioning (phase 1)- Section 8 of Commissioning Plan	Ampthill pipeline commissioning - Section 9 of Commissioning Plan	Commissioning (Phase 1)- Section 10 of Commissioning	Ampthill surge vessel commissioning - Section 11 of Commissioning Plan	Diddington WR Commissioning - Section 13 of Commissioning Plan
1	Electrosteel Castings Ltd	Electrosteel Castings Ltd	'Electrofresh Plus' Cement Mortar Lined Ductile Iron Pipe **with** seal coat (Copon Hycote 162 PWX), conforming to EN 545. Pipes include 500/600mm/700mm/900mm/1000mm pipework (flange spigot pipe, standard/double spigot socket pipe), blank flange, socketed 45degree bend, 22.5degree bend, 500x500mm tee.	56/4/537 1011504/1505532 1109548	DWI WRAS	56/4/537 1011504/1505532 1109548	Large Small	[redacted] 07/07/2016	[redacted] 26/07/2016	A few of the pipes were ordered in November and others afterwards so I have put both the original WRAS and the updated approval number.	Yes	yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	Electrosteel Castings Ltd	Electrosteel Castings Ltd	'Electrofresh' Cement Mortar Lined Ductile Iron Pipe **without** seal coat, conforming to EN 545. Pipes include 80mm/500mm/600mm/900mm/1000mm pipework.	Internal surfaces of pipe in direct contact with potable water.	DWI	56/4/992	Large	[redacted] 30/06/2016	[redacted] 14/10/2016	DWI approval number for pipe lengths is fine, is there WRAS or equivalent approval for the fittings as only pipe lengths are covered by the DWI approval? **I have added the WRAS number.** WRAS number is for an epoxy resin, these are uncoated pipes? **Amended**		Yes		Yes	Yes	Yes		Yes	Yes	Yes
3	Electrosteel Castings Ltd	Electrosteel Castings Ltd	Eco Coat FBE Powder E/105/7010. Factory applied, blue coloured, fusion bonded epoxy coating on 100mm/300mm/500mm/600mm/700mm/900mm Specials (socketed 11.25degree,22.5degree, 45degree, 90degree bend, 500x500mm tee, 500x300mm taper, 500x350mm taper, 700x150 AF tee, 80x50mm double flanged concentric taper).	Coating applied to internal and external surface of the carbon steel pipe, which is in direct contact with the water.	WRAS	1209502	Small	[redacted] 30/06/2016	[redacted] 26/07/2016	Can you confirm it is just fittings on this line, and no lengths of pipe? Can you also confirm the coating is Eco Coat FBE Powder E/105/7010? If there are no length of pipe and it is this material then it is small surface area and I can sign it off. If any pipe, this will be large surface area and need a DWI approval number. **I can confirm that E/105/7010 is correct and it is just those fittings so I have amended the surface area to small** Apply as per manufacturer`s instructions. Cure for 6 minutes at 210°C and then cool in air	Yes	**Yes**	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	Electrosteel Castings Ltd	Akzo Nobel Powder Coatings GmbH	Factory applied (UK) epoxy 'Resicoat R4' coating on 300mm/450mm/500mm/600mm/700mm/900mm Specials (socketed 11.25degree,22.5degree, 45degree, 90degree bend, 500x300 tee, 500x200 tee, 500x500mm tee, 500x300mm taper, 500x350mm taper, 150x100mm double flanged concentric taper,	Coating applied to internal and external surface of the carbon steel pipe, which is in direct contact with the water.	WRAS	1112500	Small	[redacted] 30/06/2016	[redacted] 26/07/2016	Can you confirm it is just fittings on this line, and no lengths of pipe? If there are no lengths of pipe then it is small surface area and I can sign it off. If any pipe, this will be large surface area and need a DWI approval number. **It is just those fittings so I have amended the surface area to small**		**Yes**	Yes				Yes			Yes
5	Electrosteel Castings Ltd	VIP Polymers Ltd	250, 900mm EPDM Tyton Sit Plus Anchor Gasket with martensitic chromium nickel steel teeth with a chemical composition of: X 22Cr Ni17 with a steel grade of 1.4057 according to EN 10027	Rubber insert that fits inside the spigot socket connection between the 900mm pipes, to provide a seal. The teeth prevent the pipes coming apart.	WRAS	1112532	Small	[redacted] 30/06/2016	[redacted] 01/07/2016	Approval given for small surface area product and on the assumption that the teeth are not in contact with the water - please confirm these. **The surface area is small and the teeth are also not in contact with the water**										Yes
6	Electrosteel Castings Ltd	Andhra Polymers Pvt. Ltd	900mm/1000mm EPDM Rubber Push Fit Gasket	Rubber insert that fits inside the spigot socket connection between the 900mm/1000mm pipes, to provide a good seal.	WRAS	1301552	Small	[redacted] 30/06/2016	[redacted] 01/07/2016	Small surface area product				Yes	Yes	Yes		Yes	Yes	Yes
7	Powerrun Project management Ltd	Akzo Nobel Powder Coatings GmbH	Resicoat factory applied, epoxy coatings on Pipes include (900MM x8mm wall Flange spigot 1362MM long, 900MM x12mm wall Flange spigot 2650MM long, 900MM x8mm wall Flange spigot 1250MM long, 1200- 1000MM x10mm wall Flange spigot 1175MM long,900- 700MM x8mm wall Flange spigot 1751MM long, 600mm/700mm double flange, 600x500mm/700x150mm/700x500mm all flanged pipework, 900x700 MM, 00x500mm/500x350mm/600x500mm concentric	Coating applied to internal and external surface of the carbon steel pipe, which is in direct contact with the water.	DWI WRAS	56/4/602 1112500	Large Small	[redacted] 30/06/2016	[redacted] 14/10/2016	DWI approval number for pipe lengths is fine, is there WRAS or equivalent approval for the fittings as only pipe lengths are covered by the DWI approval? **Amended** WRAS number is not for Skotchcote 206N? **Amended**			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
8	Powerrun Project management Ltd	Akzo Nobel Powder Coatings GmbH	Resicoat factory applied, epoxy coatings on Pipes include: 1000mm x 800mm PN16 branch pipe with three 500mm PN16 branches, 800mm branch pipe with three 600mm PN16 branches.	Coating applied to internal and external surface of the carbon steel pipe, which is in direct contact with the water.	DWI WRAS	56/4/602 1112500	Large Small	[redacted] /3/07/2016	[redacted] 14/10/2016	Comments as above **Amended**										Yes
9	Powerrun Project management Ltd		100mm Stainless steel plate drilled to suit a 250mm nominal bore PN16 pattern	Stainless steel plate	Steel Grade	Stainless steel 316L	Small	[redacted] 13/07/2016	[redacted] 26/07/2016								Yes			
10	Powerrun Project management Ltd		500mm PN16 Stainless steel Orifice plate with 308.9mm square orifice 6mm thick & 300MM PN16 Stainless steel Orifice plate with 100mm Orifice	Stainless steel orifice plate	Steel Grade	Stainless steel 316L	Small	[redacted] 13/07/2016	[redacted] 26/07/2016			**Yes**		Yes	Yes	Yes		Yes	Yes	
11	George Green (Keighley) LTD	Northpoint Ltd	Steel pipes with scotchkote 206N includes 3230mm long pipe with lugs	Coating applied to internal and external surface of the carbon steel pipe, which is in direct contact with the water.	DWI	56/4/602	Large	[redacted] 30/06/2016	[redacted] 14/10/2016	Use of the product must be in accordance with the Instructions for Use: Instructions for Use of Pipes lined with Scotchkote 206NTM. Issue 04 dated 06 May 2013	Yes									Yes
12	George Green (Keighley) LTD	Akzo Nobel Powder Coatings GmbH	Factory applied 'Resicoat R4' coating on 900MM Duckfoot bend, DN900 steel flanged bellmouth	Coating applied to internal and external surface of the carbon steel pipe, which is in direct contact with the water.	WRAS	1112500	Small	[redacted] /09/2016	[redacted] 14/10/2016	Response received from Northpoint. Fittings coated with Resicoat R4. See separate tab.										Yes
13	AVK UK Ltd	Valspar Powder Coatings Ltd. Eastland Compounding	Factory applied, blue coloured, fusion bonded epoxy powder coatings on PN16 500mm/600mm/700mm Dismantling Joint	Internal surfaces of the dismantling joint will be in direct contact with the potable water.	WRAS	1407505 1511505	Small	[redacted] 30/06/2016	[redacted] 26/07/2016	E1H8691, E1H7389, E2H6531 & E1H8868. Factory applied, blue coloured, fusion bonded epoxy powder coatings. Apply as per manufacturer's instructions. Post-cure for 10 minutes at 180°C.			Yes	Yes	Yes	Yes	Yes	Yes	Yes	
14	AVK UK Ltd	ARI Flow Control Accessories	Air release valve with an epoxy coating, EPDM and NBR seals. 80mm Air Valves - Model No 701/40 DN80 ball valve DN80 flange	Internal surfaces of the valve will be in direct contact with the potable water.	WRAS	1404099	Small	[redacted] 30/06/2016	[redacted] 01/07/2016	If just an air valve it will be small surface area, have amended this. Can you confirm it is being used for above ground use - the WRAS listing specifies this? **Yes it is above ground**		**Yes**								
15	AVK UK Ltd	Henkel Ltd. AVK GUMMI A/S Akzo Nobel Powder Coatings GmbH	100, 500, 1000mm Metal Faced Gate Valve S54 PN16 F16 Loctite 5400 Adhesive EPDM Rubber Seal Factory Applied Epoxy Resicoat Coating	Internal surfaces of the valve will be in direct contact with the potable water.	WRAS	1112509 1306500 1112500	Small	[redacted] 30/06/2016	[redacted] 01/07/2016	If just a valve it will be small surface area, have amended this.			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
16	AVK UK Ltd	Aqua-Gas Manufacturing Ltd	DN80 Fire hydrant with epoxy powder coated ductile iron body. MK2 Clearway Fire Hydrant series 29/90.	Internal powder coated body will be in direct contact with the potable water.	WRAS	1301080	Small	[redacted] 30/06/2016	[redacted] 04/07/2016	If just a hydrant it will be small surface area, have amended this.	Yes	Yes	Yes				Yes			
17	AVK UK Ltd	AVK Valves (Anhui) Co. Ltd	500mm/700MM/900mm/1000mm Ductile Iron Gate Valve S54 EPDM 'O' Rings Blue Epoxy Coating	Internal surfaces of the valve will be in direct contact with the potable water.	WRAS	1311067	Small	[redacted] 30/06/2016	[redacted] 04/07/2016	If just a hydrant it will be small surface area, have amended this. Can you confirm it is being used for above ground use - the WRAS listing specifies this? **Yes it is above ground**	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
18	AVK UK Ltd	AVK UK Ltd	1/2 Two piece full bore stainless steel ball valve	Internal surfaces of the valve will be in direct contact with the potable water.	Steel Grade	Stainless steel 316L	Small	[redacted] 30/06/2016	[redacted] 26/07/2016						Yes					
19	AVK UK Ltd	AVK Valves (Anhui) Co. Ltd	600mm bypass valve, series 54 metal-faced gate valve	Internal surfaces of the valve will be in direct contact with the potable water.	WRAS	1311067	Small	[redacted] 13/07/2016	[redacted] 14/10/2016	Do you need the first approval number - the product approval is for an epoxy coated valve so should this not cover it? **Amended**				Yes	Yes	Yes		Yes	Yes	
20	AVK UK Ltd	Valspar Powder Coatings Ltd.	Factory applied, blue coloured, fusion bonded epoxy powder coatings 600 700mm Ductile iron flange adaptor	Epoxy coating on flange adaptor	WRAS	1407505	Small	[redacted] 13/07/2016	[redacted] 14/10/2016	Apply as per manufacturer's instructions. Post-cure for 10 minutes at 180°C				Yes	Yes	Yes		Yes	Yes	
23	ABB Instrumentaion	ABB Engineering (Shanghai) Ltd.	Rubbers- natural/isoprene. Black coloured, compression moulded, natural hard rubber material. Shore hardness 78.	(Stainless steel electrodes ans WRAS approved meter lining) Watermaster FEF121 electromagnetic flowmeter system - fullbore, Aquaprobe FEA100 insertion flowmeter, Watermaster FEW321 electromagnetic flowmeter-fullbore lining	WRAS Steel grade	1109533 Stainless steel 316L	Small	[redacted] 30/06/2016	[redacted] 04/07/2016	Can you confirm this will be purchased (if not already) before Sept 2016. **All have been purchased already**										Yes
24	ABB	Victrex plc	5220 Polyether Ether Ketone	FEA -121 Insertion Flowmeter	WRAS	1606514	Small	[redacted] 30/06/2016	[redacted] 26/07/2016	This approval number is for a PEEK phermoplastic material, is this the same as a polyether ether ketone? **Yes it is the same**										Yes
25	Freeflow	Freeflow Pipesystems Ltd.	Factory applied pipe and coatings. Carbon steel pipework coated with scotchkote 206N green, epoxy resin coating.	Epoxy resin coating on (1000X1000MM,1000X150MM AF TEE, 1000X80MM AF Level invert tee, 1000MM Dismantling joint, 80MM DF 90 Deg Bend, 150X80MM DF Concentric Taper, 1000MM Flange Adaptors) 900MM (Couplings, flange adaptors, steel spigot tees)	DWI WRAS	56/4/601 1502544	Large Small	[redacted] 06/06/2016	[redacted] 04/07/2016	Factory applied, green coloured epoxy resin coating. Apply as per instructions for use document issue number 2 dated '20.05.13'. Cure for 45 seconds@220-230°C. For use with water up to 60°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.				Yes	Yes	Yes		Yes	Yes	
26	SIG	Flexcrete Technologies Ltd	Adomast Powder	Tiefill. Grey coloured, single component, polymer modified, fibre reinforced, Portland cement based repair compound	WRAS	1109519	Small	[redacted] 06/06/2016	[redacted] 26/07/2016	Mix (with water) and apply as per manufacturer`s instructions. Cure for 21 days at 7°C.										Yes
27	VAG Valves UK Limited	Dexine Rubber Company Ltd	Black coloured, compression moulded EPDM rubber material coating for DN700 PN16 Riko Plunger Valve (Flow control valve)	EPDM coating for riko plunger valve	WRAS	1401510	Small	[redacted] 13/07/2016	[redacted] 26/07/2016			Yes		Yes	Yes	Yes		Yes	Yes	
28	IFM	IFM	Stainless steel 316L/1.4404; Sealing: FPM (Viton)	Electronic Pressure Sensor.	Steel Grade	Stainless steel 316L	Small	[redacted] 30/06/2016	[redacted] 26/07/2016	There's materials other than steel mentioned on this line, are they in contact with water? **It is only the stainless steel in contact with water**										Yes
29	IFM	IFM	Stainless steel 316L/1.4404; Ceramics (99.9% AL2 03); EPDM.	Combined Pressure Sensor (Pressure rating; 150 bar, 2175psi, 15 MPa.	Steel Grade	Stainless steel 316L	Small	[redacted] 30/06/2016	[redacted] 26/07/2016	There's materials other than steel mentioned on this line, are they in contact with water? **It is only the stainless steel in contact with water**										Yes
30	IFM	IFM	Ceramics (99.9% AL2 03), PTFE; Stainless steel 316L/1.4435; surface characteristics: Ra<0.4/RZ4	Combined Pressure Sensor (Pressure rating; 30 bar, 435psi, 3000kPa and 10000 mbar, 145psi)	Steel Grade	Stainless steel 316L	Small	[redacted] 30/06/2016	[redacted] 26/07/2016	There's materials other than steel mentioned on this line, are they in contact with water? **It is only the stainless steel in contact with water**										Yes
31	IFM	IFM	Stainless steel 316L/1.4404; O-Ring: FKM8 x 1.5 gr 80° Shore A.	Flow Monitor.	Steel Grade	Stainless steel 316L	Small	[redacted] 30/06/2016	[redacted] 26/07/2016	There's materials other than steel mentioned on this line, are they in contact with water? **It is only the stainless steel in contact with water**										Yes
32	CPE	CPE	Quantum	5.5M Surge vessel internals 316 stainless steel	DWI	56/4/1136	Large	[redacted] 13/07/2016	[redacted] 26/07/2016										Yes	
33	Orrmac Coatings	Sherwin Williams (Leighs paints)	Waterline P300	17.0M Surge vessel internal coating	DWI	56/4/253	Large	[redacted] 13/06/2016	[redacted] 04/07/2016					Yes	Yes	Yes		Yes	Yes	
34	Orrmac Coatings	Sherwin Williams (Leighs paints)	Waterline P300	27.0M Surge vessel internal coating	DWI	56/4/253	Large	[redacted] 13/06/2016	[redacted] 04/07/2016					Yes	Yes	Yes		Yes	Yes	
35	S M Gauge	S M Gauge	Pressure gauge stainless steel 1.4571 AISI 316Ti	Stainless steel 1/2" connection	Steel Grade	Stainless steel 316 Ti	Small	[redacted] 13/06/2016	[redacted] 04/07/2016					Yes	Yes	Yes		Yes	Yes	
36	Mars Valve	Mars Valves	Isolation valve stainless steel 1.4401 AISI 316	Level gauge isolation valves	Steel Grade	Stainless steel 316	Small	[redacted] 13/06/2016	[redacted] 04/07/2016					Yes	Yes	Yes		Yes	Yes	

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37	Seagull stainless	Seagull fittings	ND25 PN16 flange	Stainless steel flange 1.4401 AISI 316	Steel Grade	Stainless steel 316	Small	[redacted] 13/06/2016	[redacted] 04/07/2016					Yes	Yes	Yes		Yes	Yes	
38	BSS	Geberit	1/2" pipe fittings	Stainless Steel 316L	WRAS	1206333	Small	[redacted] 13/06/2016	[redacted] 04/07/2016					Yes	Yes	Yes		Yes	Yes	
39	BSS	Geberit	Recirculation pipe work	Stainless steel 316L pipe fittings	WRAS	1206333	Small	[redacted] 13/06/2016	[redacted] 26/07/2016	WRAS approval number only relevant to fittings, not pipework, if pipework will be large surface area? **The supplier has confirmed that this is the correct WRAS approval number and have amended it to pipe fittings**						Yes				
40	KB Engineering	Dexine Rubber Company Ltd	EPDM rubber	Rubber joint	WRAS	1401510	Small	[redacted] 13/06/2016	[redacted] 27/07/2016			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
41	PVL	PVL	Flow restrictor	Stainless steel (Surge vessel flow restrictor 1.4301 AISI 304)	Reg31	Reg 31 (1) (b)	Small	[redacted] 13/06/2016	[redacted] 27/07/2016					Yes	Yes	Yes		Yes	Yes	
42	Inflow	Akzo Nobel Powder Coatings GmbH	Resicoat factory applied, epoxy powder coatings for Tri function air valve	Air valve inlet /outlet epoxy coating	WRAS	1112500	Small	[redacted] 13/06/2016	[redacted] 27/07/2016				Yes				Yes			
43	Inflow	Superior Seals	Black coloured, injection moulded NBR 'O' rings, seals and gaskets.	Rubbers	WRAS	1112513	Small	[redacted] 13/06/2016	[redacted] 27/07/2016			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
44	Inflow	Valspar Powder Coatings Ltd. Eastland Compounding	Factory applied, blue coloured, fusion bonded epoxy coating for drain valve	Epoxy coating on Drain valve	WRAS	1407505	Small	[redacted] 13/06/2016	[redacted] 27/07/2016	Apply as per manufacturer's instructions. Post-cure for 10 minutes at 180°C.		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
45	Steelway	Steelway	Hand rails	42.4mm OD x 2.5mm thick stainless steel handrails.(Fabricated in one section.- All welds continuous). 150x65x12mm base plates	Steel Grade	Stainless steel 316L	Small	[redacted] 13/06/2016	R.[redacted] 19/10/2017	Is this all stainless steel, it also mentions resin anchors? **Awaiting confirmation from supplier- NO RESIN USED**										Yes
46	Steelway	Steelway	Vertical access ladder	Stainless steel (120x8mm flat shaped top fixing bracket, M12 hex head bolts to stringers, 100x65x8mm angle stringers formed from 8mm plate, 8mmx400mm joint plates to side and back of stringers, M12 hex head bolts, 25mm DIA, solid seperated rungs, 200x100x8mm welded base plates)	Steel Grade	Stainless steel 316L	Small	[redacted] 14/06/2016	R.[redacted] 19/10/2017	Is this all stainless steel, it also mentions resin anchors? **Awaiting confirmation from supplier- NO RESIN USED**										Yes
47	Fab-Tek Installations LTD	Fab-Tek Installations LTD	Anti Vortex structure	Stainless Steel 316L	Steel Grade	Stainless steel 316L	Small	[redacted] 01/08/2016	[redacted] 14/10/2016											Yes
48	APA	Fosroc	Nitoseal MS600 Fosroc Primer MS2	Grey coloured medium modulus sealent based on hybrid silyl modified polyether technology. Used with primer.	WRAS	1404529	Small	[redacted] 14/06/2016	[redacted] 04/07/2016	Mix, apply and cure in accordance with manufacturer`s datasheet (version 12 CI/SfB: Yt4 dated May 2014).										Yes
49	Vulcan	Vulcan	M16 (Nut, washers) M16 x 380mm all thread	Stainless steel M16 Nut and Washers M16 x 380mm all thread	Steel Grade	Stainless steel 316	Small	[redacted] 14/06/2016	[redacted] 27/07/2016			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
50	Vulcan	Dexine Rubber Company Ltd	EPDM rubber for 80mm/200mm/350mm/450mm/500mm/600mm/700mm/900mm/ 1000mm PN16 Full faced Gaskets	Valve	WRAS	1401510	Small	[redacted] 14/07/2016	[redacted] 14/10/2016	It says that internal surfaces of the valve will be in contact, will these all be made of the EPDM rubber? **Amended to just valve**	Yes	Yes		Yes	Yes	Yes		Yes	Yes	
51	Technocover		Galvanised steel Security cover (1500 x 1500, 900 x 900) maxivented - twinleaf	Galvanised steel security cover	BS:EN 1461		Small	[redacted] 14/07/2016	[redacted] 14/10/2016	Waiting for info **(They have no WRAS/DWI approval numbers for their galvanised steel covers)** Are these the standard Technocover covers we have installed elsewhere? Does the galvanised steel comply with a British or European standard - if so it would be this rather than a DWI/WRAS number. **Amended**										Yes
52	Flowserve Pumps		Pump impeller	Bronze ASTM C90700	BSEN:1982:2008		Small	[redacted] 28/06/2016	[redacted] 27/07/2016						Yes	Yes				
53	Flowserve Pumps		Pump shaft	Stainless steel - 13% Chrome Steel: X12Cr13	EN10088: 1:2014		Small	[redacted] 28/06/2016	[redacted] 14/10/2016						Yes	Yes				
54	Belzona Polymerics		Belzona 1341	Belzona 1341 coating (internal coating of Pump casing)	WRAS	1306534	Small	[redacted] 28/06/2016	[redacted] 27/07/2016	Can you just clarify what it is the internal casing of - though unless it is a large surface area product the approval is fine? **Amended**					Yes	Yes				
55	Flowserve Pumps	Schunk GMBH	Mechanical seal face	Compression moulded carbon graphite	WRAS	1310509	Small	[redacted] 28/06/2016	[redacted] 27/07/2016						Yes	Yes				
56	Flowserve Pumps	ESK Ceramics	Mechanical seal face	Ceramic	WRAS	1112519	Small	[redacted] 28/06/2016	[redacted] 27/07/2016	Assume this has been purchased, as approval runs out at the end of the year? **Yes it has been purchased**					Yes	Yes				
57	Flowserve Pumps	Freudenburg	O' Rings	EPDM	WRAS	1206519	Small	[redacted] 28/06/2016	[redacted] 27/07/2016						Yes	Yes				
58	Flowserve Pumps	Dow Corning	Seal assembly Lubricants	Grease	WRAS	1206530	Small	[redacted] 28/06/2016	[redacted] 27/07/2016						Yes	Yes				
59	Flowserve pumps	Flowserve	Mechanical seal	Stainless Steel DIN 1.4404 (316L)	Steel Grade	Stainless steel 316L	Small	[redacted] 28/06/2016	[redacted] 04/07/2016						Yes	Yes				
60	Talis UK Incorporating	Erhard GmbH & Co. KG.	Roco Wave' buttery valve with blue epoxy coated ductile iron bodies, EPDM seat and stainless steel disc. Hand wheel operated (DN500, DN600, DN700)	Valve	WRAS	1512066	Small	[redacted] 12/07/2016	[redacted] 27/07/2016	Can you amend the comment indicating internal surfaces of a pipe are in contact with water - I'm assuming you don't mean this and it's just a valve? **Amended**				Yes	Yes	Yes		Yes	Yes	
61	Talis UK Incorporating	Akzo Nobel Powder Coatings GmbH	Coating for Twin air valve. Resicoat factory applied, epoxy powder coatings.	Resicoat factory applied, epoxy powder coating of twin air valve	WRAS	1112500	Small	[redacted] 12/07/2016	[redacted] 14/10/2016	This approval number is for a valve, can you amend please, and also put the full product identifier name/number please **Amended**			Yes				Yes			
62	Talis UK Incorporating/ Belgicast Internacional, S.L.	Gummiwerk Kraiburg GmbH & Co Akzo Nobel Powder Coating GMBH	Resicoat factory applied, epoxy powder coating 100mm resilient seated EPDM Seal gate valve with AA7 GDZ. Black coloured, compression moulded EPDM sheet material PN16 handweheel operated .	Internal surfaces of the valve and handwheel will be in direct contact with the potable water.	WRAS	1307508 1112500	Small	[redacted] 12/07/2016	[redacted] 14/10/2016	The approval number doesn't match up. **Amended**							Yes			
63	Talis UK Incorporating	RIV Rubinetterie Italiane Velatta S.P.A.	BSP Ball valve (1/2", 1")	1/2, 1 BSP Ball valve with chromium plated brass/cast brass bodies, PTFE seats and NBR 'O' rings.	WRAS	1210033	Small	[redacted] 12/07/2016	[redacted] 27/07/2016			**Yes**			Yes					
64	Talis UK Incorporating	RIV Rubinetterie Italiane Velatta S.P.A	PN16 Dual plate wafer check valve with resicoat factory applied, epoxy powder coatings	Spherical valve with chromium plated brass or cast brass bodies. PTFE seats and NBR 'O' rings.	WRAS	1210033	Small	[redacted] 13/07/2016	[redacted] 13/07/2016	Can you put these on two separate lines please if they're different products. **Amended** **Approval number doesn't match description or manufacturer AMENDED**				Yes	Yes	Yes		Yes	Yes	
65	Pulsar	n/a	PVDF dB10 Level Sensor in each cell of the reservoir	No part of the instrument is in direct contact with the water. The moulded housing and cable sheath are the only parts that are in contact with the condensation: - The moulded housing is made of PVDF Kynar 720 (Manufactured by Arkema) - The cable sheath is made of thermoplastic elastomer (provided by Pulsar electronics) - The heatshrink is made of polyolefin (provided by Hilltop Products) - The Potting coupound on the top of the transducer is Conapoxy FR-1047 (manufactured by Cytec) - The label is polycarbonate secured with 3M adhesive 467 See information on the separate worksheet tab.	None - Risk assessment	None - Risk assessment	Small	A.[redacted] 05/10/2016	[redacted] 31/10/2016	[redacted]										Yes
66	Hawker Electronics Ltd	n/a	Light Duty Electrode Holder HPE7	Light Duty Electrode Holder HPE7 suspended above the reservoir water level, consisting of: - Polypropylene body cap and backnut, approved to BS6920:2000. Injection moulded by Ruby plastics. - Neoprene rubber 'o' ring fitted in the cap, WRAS approved, detailed in item 75 - Internally, SS collar 316L grade - SS screw A2 grade - SS washers A2 grade Further information from Hawker 15/09/16: The electrode holder is injection moulded by Rugby Plastics using a Hawker mould. The electrode bracket insulators are made from PVCu. The PVCu disk is supplied in rod form by Oadby Plastics, which Hawker machine in to the insulators. The supplier of the PVCu rods have provided a letter of water quality conformation in Italy - see attached tab.	None - Risk assessment	None - Risk assessment	SMALL	A.[redacted] 11/10/2016	[redacted] 31/10/2016	[redacted]										Yes
67	Hawker Electronics Ltd	Hawker Electronics Ltd	Hawker Electrode Rod - Stainless Steel 316L Electrodes.	Electrode probes that are suspended from the electrode holder and hang vertically in the water.	-	SS Grade 316L	SMALL	A.[redacted] 11/10/2016	R.[redacted] 14/10/2016	The electrodes are stainless steel and not plastic coated, as first thought. The insulator between the probes and the bracket is now in the form of a PVCu insulator block mounted on the bracket. See comments in item 66 above.										Yes
68	Hawker Electronics Ltd	Hawker Electronics Ltd	Threaded Rod Type 211 to join electrodes together for longer lengths. Stainless Steel 316L.	Threaded Rod between electrodes. In direct contact with the water when level is above joint length.	-	SS Grade 316L	SMALL	A.[redacted] 11/10/2016	R.[redacted] 14/10/2016	Item approved on the Hannington MiC Form (2361) by [redacted] on 26/05/16										Yes
69	Hawker Electronics Ltd	Hawker Electronics Ltd	Hawker Type 189/X Threaded Coupler for Rod Electrodes Stainless Steel 316L	Coupler to connect two shorter electrode lengths. In direct contact with water when level is above joint length.	-	SS Grade 316L	SMALL	A.[redacted] 11/10/2016	R.[redacted] 14/10/2016	Item approved on the Hannington MiC Form (2361) by [redacted] on 26/05/16										Yes
70	Hawker Electronics Ltd	Hawker Electronics Ltd	Single Electrode Holder Mounting Bracket Type 71/SS Stainless Steel 316	2No. Electrode holders to sit in 2No. Single mounting brackets within cell 1A.	-	SS Grade 316	SMALL	A.[redacted] 11/10/2016	R.[redacted] 14/10/2016	Item approved on the Hannington MiC Form (2361) by [redacted] on 26/05/16										Yes
71	Hawker Electronics Ltd	Hawker Electronics Ltd	Double Electrode Holder Mounting Bracket Type 72/SS Stainless Steel 304	2No. Electrode holders to sit in 1No. Double mounting brackets within cell 1A.	-	SS Grade 304	SMALL	A.[redacted] 11/10/2016	R.[redacted] 14/10/2016	Item approved on the Hannington MiC Form (2361) by [redacted] on 26/05/16										Yes
72	Hawker Electronics Ltd	Hawker Electronics Ltd	Electrode Steady Bracket Type 75/SS Stainless Steel 316 with UPVC Insulator	Electrode Steady Bracket Type 75/SS Stainless Steel 316 with UPVC Insulator. Electrodes hang inside the bracket, to keep them captive and not floating around.	-	SS Grade 316	SMALL	A.[redacted] 11/10/2016	R.[redacted] 14/10/2016	Item approved on the Hannington MiC Form (2361) by [redacted] on 26/05/16										Yes
73	Hawker Electronics Ltd	n/a	UPVC Insulator for Electrode Steady Bracket	Pvc–u disk supplied in rod form by Oadby Plastics, machined into insulators. Material manufactured by Manifattura Cattaneo Spa.	-	None - Risk assessment	SMALL	A.[redacted] 11/10/2016	[redacted] 31/10/2016	[redacted]										Yes
74	AVK UK Ltd	AVK Valves (Anhui) Co. Ltd	450mm Butterfly valves S756	e of Butterfly valves	WRAS	1112059	SMALL	A.[redacted] 11/10/2016	R.[redacted] 14/10/2016		Yes	Yes		Yes	Yes	Yes		Yes	Yes	
75	Hawker Electronics Ltd	Elastotech srl	Neoprene o-ring	O-rings for Hawker HPE7 Electrode Holder, to replace standard non-WRAS approved o-rings. O-rings housed within electrode holder screw cap, so minimal contact with any condensation that may form.	WRAS	1301500	SMALL	A.[redacted] 07/07/2016	R.[redacted] 28/07/2016	Approved on the assumption the O-rings are within the range of in-radii sizes between 0.2mm and 5mm - the scope of the WRAS approval **The wall thickness of the o-ring, which I am assuming is the 'in-radii size', is less than 5mm.**										Yes
76	AVK UK Ltd	Valspar powder coatings	914MM OD PN16 fabricated Coupling	Blue powder coating	WRAS	1407505	Small	[redacted] 11/9/17	R.[redacted] 19/10/2017	Apply as per manufacturer's instructions. Post-cure for 10 minutes at 180°C							Yes			
		Eastland Compounding	Coupling EPDM Rubber Seal	Internal surfaces of the seal will be in direct contact with the potable water.	WRAS	1511505	Small	[redacted] 11/9/17	R.[redacted] 19/10/2017								Yes			
77	AVK UK Ltd	Valspar powder coatings	931-914MM PN16 fabricated stepped coupling	Blue powder coating	WRAS	1407505	Small	[redacted] 11/9/17	R.[redacted] 19/10/2017	Apply as per manufacturer's instructions. Post-cure for 10 minutes at 180°C							Yes			
		Eastland Compounding	Coupling EPDM Rubber Seal	Internal surfaces of the seal will be in direct contact with the potable water.	WRAS	1511505	Small	[redacted] 11/9/17	R.[redacted] 19/10/2017								Yes			
78	AVK UK Ltd	PPG Protective & Marine Coatings	500MM EVFS SHORT PATTERN DOUBLE FLANGED BUTTERFLY VALVE	Epoxy Coating	WRAS	1406524	Small	[redacted] 08/05/17	R.[redacted] 13/07/2017	SigmaGuard CSF 585. Factory applied, light blue coloured, two component solvent free epoxy coating consisting of a base and hardener. Mix base and hardener in a volume ratio of 77.5:22.5. Cure for 7 days@22°C. For use with water up to 23°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval				Yes	Yes	Yes		Yes	Yes	
		AVK GUMMI A/S		EPDM Rubber	WRAS	1306500	Small	[redacted] 08/05/17	R.[redacted] 13/07/2017					Yes	Yes	Yes		Yes	Yes	
79	Electrosteel Castings Ltd	Electrosteel Castings Ltd	90 Deg Duck foot Bend	Eco Coat FBE Powder E/105/7010. Factory applied, blue coloured, fusion bonded epoxy coating	WRAS	1209502	Small	[redacted] 11/9/17	R.[redacted] 19/10/2017	Apply as per manufacturer`s instructions. Cure for 6 minutes at 210°C and then cool in air. For use with water up to 85°C. Confirmed by [redacted] via email 23/10/2017 that product was purchased prior to Sept 2017.				Yes	Yes	Yes		Yes	Yes	

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM FORM NO: 2428

80	Frazer	George Fischer Sales LTD	150MM twinwall coupling	Range of black polyethylene electrofusion fittings for use with PE100 pipe	WRAS	1209054	Small	[redacted] 25/9/17	R.[redacted] 19/10/2017	Confirmed by [redacted] via email 23/10/2017 that product was purchased prior to Sept 2017.							Yes			
81	Frazer	GPS	150MM Twinwall Unperforated plain ended pipe	Excel NB Pipe 'New Blue' Pipe (Black core, blue outer).	DWI	56/4/1026	Large	[redacted] 25/9/17	R.[redacted] 19/10/2017								Yes			
82	Frazer	George Fischer Sales LTD	300MM twinwall coupling	Range of black polyethylene electrofusion fittings for use with PE100 pipe	WRAS	1209054	Small	[redacted] 25/9/17	R.[redacted] 19/10/2017	Confirmed by [redacted] via email 23/10/2017 that product was purchased prior to Sept 2017.							Yes			
83	Frazer	George Fischer Sales LTD	300MM twinwall coupling seals	Range of black polyethylene electrofusion fittings for use with PE100 pipe	WRAS	1209054	Small	[redacted] 25/9/17	R.[redacted] 19/10/2017	Confirmed by [redacted] via email 23/10/2017 that product was purchased prior to Sept 2017.							Yes			
84	Frazer	GPS	100MM HDPE Twinwall un perforated plain ended pipe 6m Long	Excel NB Pipe 'New Blue' Pipe (Black core, blue outer).	DWI	56/4/1026	Large	[redacted] 25/9/17	R.[redacted] 19/10/2017								Yes			
85	Frazer	GPS	100MM HDPE Twinwall solid wall pipe 6M long	Excel NB Pipe 'New Blue' Pipe (Black core, blue outer).	DWI	56/4/1026	Large	[redacted] 25/9/17	R.[redacted] 19/10/2017								Yes			
86	Frazer	GPS	150MM HDPE Twinwall un perforated plain ended pipe 6m Long	Excel NB Pipe 'New Blue' Pipe (Black core, blue outer).	DWI	56/4/1026	Large	[redacted] 25/9/17	R.[redacted] 19/10/2017								Yes			
87	Frazer	George Fischer Sales LTD	150MM twinwall coupling	Range of black polyethylene electrofusion fittings for use with PE100 pipe	WRAS	1209054	Small	[redacted] 25/9/17	R.[redacted] 19/10/2017	Confirmed by [redacted] via email 23/10/2017 that product was purchased prior to Sept 2017.							Yes			
88	Frazer	George Fischer Sales LTD	150MM twinwall 15 deg Bend	Range of black polyethylene electrofusion fittings for use with PE100 pipe	WRAS	1209054	Small	[redacted] 25/9/17	R.[redacted] 19/10/2017	Confirmed by [redacted] via email 23/10/2017 that product was purchased prior to Sept 2017.							Yes			
89	Frazer	George Fischer Sales LTD	150MM twinwall 30 deg Bend	Range of black polyethylene electrofusion fittings for use with PE100 pipe	WRAS	1209054	Small	[redacted] 25/9/17	R.[redacted] 19/10/2017	Confirmed by [redacted] via email 23/10/2017 that product was purchased prior to Sept 2017.							Yes			
90	Frazer	George Fischer Sales LTD	150MM twinwall 45 deg Bend	Range of black polyethylene electrofusion fittings for use with PE100 pipe	WRAS	1209054	Small	[redacted] 25/9/17	R.[redacted] 19/10/2017	Confirmed by [redacted] via email 23/10/2017 that product was purchased prior to Sept 2017.							Yes			
91	Frazer	George Fischer Sales LTD	150MM twinwall 90 deg Bend	Range of black polyethylene electrofusion fittings for use with PE100 pipe	WRAS	1209054	Small	[redacted] 25/9/17	R.[redacted] 19/10/2017	Confirmed by [redacted] via email 23/10/2017 that product was purchased prior to Sept 2017.							Yes			
92	Frazer	George Fischer Sales LTD	150MM T/S Junction 45 deg Bend	Range of black polyethylene electrofusion fittings for use with PE100 pipe	WRAS	1209054	Small	[redacted] 25/9/17	R.[redacted] 19/10/2017	Confirmed by [redacted] via email 23/10/2017 that product was purchased prior to Sept 2017.							Yes			
93	Frazer	GPS	300MM HDPE Twinwall un perforated plain ended pipe 6m Long	Excel NB Pipe 'New Blue' Pipe (Black core, blue outer).	DWI	56/4/1026	Large	[redacted] 25/9/17	R.[redacted] 19/10/2017								Yes			
94	Frazer	George Fischer Sales LTD	150MM black twinwall rigiduct long radius 90 deg Bend	Range of black polyethylene electrofusion fittings for use with PE100 pipe	WRAS	1209054	Small	[redacted] 25/9/17	R.[redacted] 19/10/2017	Confirmed by [redacted] via email 23/10/2017 that product was purchased prior to Sept 2017.							Yes			
95	Frazer	George Fischer Sales LTD	150MM Coupler	Range of black polyethylene electrofusion fittings for use with PE100 pipe	WRAS	1209054	Small	[redacted] 25/9/17	R.[redacted] 19/10/2017	Confirmed by [redacted] via email 23/10/2017 that product was purchased prior to Sept 2017.							Yes			
96	Frazer	George Fischer Sales LTD	150MM twinwall couplers	Range of black polyethylene electrofusion fittings for use with PE100 pipe	WRAS	1209054	Small	[redacted] 25/9/17	R.[redacted] 19/10/2017	Confirmed by [redacted] via email 23/10/2017 that product was purchased prior to Sept 2017.							Yes			
97	Frazer	George Fischer Sales LTD	100MM twinwall couplers	Range of black polyethylene electrofusion fittings for use with PE100 pipe	WRAS	1209054	Small	[redacted] 25/9/17	R.[redacted] 19/10/2017	Confirmed by [redacted] via email 23/10/2017 that product was purchased prior to Sept 2017.							Yes			
98	Fusion Provida	GPS	stub flange assembly OD 90MM black PE80 SDR11 C/W 80MM PN16 Backing Ring and flange joint set	Black coloured, injection moulded polyethylene fitting	WRAS	1403507	Small	[redacted] 25/9/17	R.[redacted] 19/10/2017								Yes			
99	Fusion Provida	GPS	PE Pipe OD 90MM blue PE80 SDR17 Solid 6m Long	Excel NB Pipe 'New Blue' Pipe (Black core, blue outer).	DWI	56/4/1026	Large	[redacted] 25/9/17	R.[redacted] 23/10/2017								Yes			
100	Fusion Provida	GPS	90 deg electrofusion PE bend OD 90MM black PE80 SDR 11	Internals of PE Fitting	WRAS	1403507	Small	[redacted] 25/9/17	R.[redacted] 19/10/2017								Yes			
101	Fusion Provida	GPS	Electrofusion coupling OD 90MM Black PE80 SDR11	Internals of PE Fitting	WRAS	1403507	Small	[redacted] 25/9/17	R.[redacted] 19/10/2017								Yes			
102	Fusion Provida	GPS	PE pipe 90mm OD pe100 SDR17 Solid Length 6M	Excel NB Pipe 'New Blue' Pipe (Black core, blue outer).	DWI	56/4/1026	Large	[redacted] 25/9/17	R.[redacted] 19/10/2017								Yes			
103	FWB Products	Zenith Industrial Rubber Products PVT Ltd	450 MM fullfaced epdm gasket	EPDM Gasket	WRAS	1311533	Small	[redacted] 21/9/17	R.[redacted] 19/10/2017			Yes								
104	GPS	GPS	500 OD SDR21 PE80 12M long	Excel NB pipe	DWI	56/4/1026	Large	[redacted] 11/07/16	R.[redacted] 13/07/2017	Use of the product must be in accordance with the Instructions for Use: Issue: Excel NB. Issue No: 1. Issue Date: 1/7/2011							Yes			
105	GPS	GPS	Electrofusion coupler 500OD to suit PE pipe	Black coloured, injection moulded polyethylene fitting	WRAS	1403507	Small	[redacted] 11/07/16	R.[redacted] 13/07/2017			Yes								
106	Industrial valves	Anhui Lujiang Rubber Products Co. Ltd	EPDM rubber/ O Rings for Butterfly Valves	EPDM rubber/ O Rings for butterfly valves	WRAS	1401524	Small	[redacted] 31/05/2017	R.[redacted] 13/07/2017			**Yes**		Yes	Yes	Yes		Yes	Yes	
		Akzo Nobel Powder Coatings GmbH	Resicoat R4 Blue coating for butterfly valves	Resicoat R4 Blue coating for butterfly valves	WRAS	1112500	Small	[redacted] 31/05/2017	R.[redacted] 19/10/2017	When was this product purchased, approval expired in November 2016? **Ordered 17/08/2016**		**Yes**		Yes	Yes	Yes		Yes	Yes	
107	Industrial valves	Anhui Lujiang Rubber Products Co. Ltd	EPDM rubber/ O Rings for disk check valves	EPDM rubber/ O Rings for disk check valves	WRAS	1401524	Small	[redacted] 31/05/2017	R.[redacted] 13/07/2017					Yes	Yes	Yes		Yes	Yes	
		Akzo Nobel Powder Coatings GmbH	Resicoat R4 Blue coating for Disk Check valves	Resicoat R4 Blue coating for Disk Check valves	WRAS	1112500	Small	[redacted] 31/05/2017	R.[redacted] 19/10/2017	When was this product purchased, approval expired in November 2016? **Ordered 17/08/2016**				Yes	Yes	Yes		Yes	Yes	
108	Industrial valves	Duvalco	500 & 600 MM resilient seated Gate valve	500 & 600 MM resilient seated Gate valve	WRAS	1511905	Small	[redacted] 31/05/2017	R.[redacted] 13/07/2017					Yes	Yes	Yes		Yes	Yes	
109	Kebrell Nut and bolts Ltd	Dexine Rubber Company Ltd	700, 600, 500, 300, 200MM EPDM Gasket	EPDM Gasket	WRAS	1401510	Small	[redacted] 31/05/2017	R.[redacted] 13/06/2017			Yes	Yes	Yes	Yes	Yes		Yes	Yes	
110	Keyline Builders Merchants	Arkema	945MM Coupling EPDM Rilsan PN16	Rilsan polyamide coatings to be used in conjunction with Primgreen LAT 12035 epoxy resin primer.	WRAS	1411519	Small	[redacted] 25/9/17	R.[redacted] 19/10/2017	Rilsan polyamide powder coatings to be used in conjunction with Primgreen LAT 12035 epoxy resin primer, apply and cure accordance with user instructions: Cerdato/ T2 RFP / September 2012. The following grades are for use with water up to 60°C: T Black 7450 AC, T Blue 7443 MAC, T Green 7529 MAC, T Grey 5161 MAC and T White 1488 AC.										Yes
111	Keyline Builder Merchant	Arkema	DN600, 700 PN16 EPDM Dismantling Joint	Rilsan polyamide powder coatings, used in conjuction with Primgreen LAT 12035 epoxy resin primer	WRAS	1411519	Small	[redacted] 11/9/17	R.[redacted] 19/10/2017	Rilsan polyamide powder coatings to be used in conjunction with Primgreen LAT 12035 epoxy resin primer, apply and cure accordance with user instructions: Cerdato/ T2 RFP / September 2012. The following grades are for use with water up to 60°C: T Black 7450 AC, T Blue 7443 MAC, T Green 7529 MAC, T Grey 5161 MAC and T White 1488 AC.			Yes	Yes	Yes	Yes	Yes	Yes	Yes	
111a	Keyline Builder Merchant	VIP Polymers Ltd	DN600, 700 PN16 EPDM Dismantling Joint	EPDM internal coating	WRAS	1607507	Small	[redacted] 13/07/17	R.[redacted] 15/08/2017				Yes	Yes	Yes	Yes	Yes	Yes	Yes	
112	Keyline Builders Merchants	Arkema	1048MM flange adaptor	Rilsan polyamide powder coatings	WRAS	1411519	Small	[redacted] 25/9/17	R.[redacted] 19/10/2017	Rilsan polyamide powder coatings to be used in conjunction with Primgreen LAT 12035 epoxy resin primer, apply and cure accordance with user instructions: Cerdato/ T2 RFP / September 2012. The following grades are for use with water up to 60°C: T Black 7450 AC, T Blue 7443 MAC, T Green 7529 MAC, T Grey 5161 MAC and T White 1488 AC.										Yes
113	Keyline Builders Merchants	Arkema	945MM EPDM rilsan pn16 Coupling	Factory applied Powder coating	WRAS	1411519	small	[redacted] 12/06/2017	R.[redacted] 13/06/2017	Rilsan polyamide powder coatings to be used in conjunction with Primgreen LAT 12035 epoxy resin primer, apply and cure accordance with user instructions: Cerdato/ T2 RFP / September 2012. The following grades are for use with water up to 60°C: T Black 7450 AC, T Blue 7443 MAC, T Green 7529 MAC, T Grey 5161 MAC and T White 1488 AC.										Yes
		Industrial rubber LTD	945MM EPDM rilsan pn16 Coupling	EPDM	WRAS	1310504	small	[redacted] 12/06/2017	R.[redacted] 13/06/2017											Yes
114	R2M	Wuhu Jinmao Liquid Science & technology co Lt	900, 1200MM Coupling	EPDM Rubber	WRAS	1311521	Small	[redacted] 17/7/17	R.[redacted] 15/08/2017											Yes
		Arkema		Rilsan polyamide powder coating	WRAS	1411519	Small	[redacted] 17/7/17	R.[redacted] 15/08/2017	Rilsan polyamide powder coatings to be used in conjunction with Primgreen LAT 12035 epoxy resin primer, apply and cure accordance with user instructions: Cerdato/ T2 RFP / September 2012. The following grades are for use with water up to 60°C: T Black 7450 AC, T Blue 7443 MAC, T Green 7529 MAC, T Grey 5161 MAC and T White 1488 AC.										Yes
115	Saint Gobain Pam	Intermarp (Italia) SPA	EPDM 450MM Anchor gasket	APE 70N. Black coloured, injection moulded EPDM rubber material.	WRAS	1406515	Small	[redacted] 01/08/2017	R.[redacted] 15/08/2017			Yes								
116	Saint Gobain Pam	Saint Gobain Pam	System CL 700mm double spigot pipe (1856, 3300, 3700mm long)	System CI pipework (Cement mortar lined pipe)	DWI	56/4/283	Large	[redacted]- 8/08/2017	R.[redacted] 15/08/2017	Use of the product must be in accordance with the Instructions for Use: SAINT GOBAIN PAM UK. Instructions for Use Document for System CL Pipes. Issue Number 9. Date: 25th May 2009							Yes			
117	Saint Gobain Pam	Saint Gobain Pam	System CL 700mm spigot socket pipe (750, 1000, 1060, 1250, 3900, 5000, 5970, 6960mm Long)	System CI pipework (Cement mortar lined pipe)	DWI	56/4/283	Large	[redacted]- 8/08/2017	R.[redacted] 15/08/2017	Use of the product must be in accordance with the Instructions for Use: SAINT GOBAIN PAM UK. Instructions for Use Document for System CL Pipes. Issue Number 9. Date: 25th May 2009				Yes	Yes	Yes	Yes	Yes	Yes	
118	Saint Gobain Pam	Intermarp (Italia) SPA	700MM Rapid gasket	APE 70N. Black coloured, injection moulded EPDM rubber material.	WRAS	1406515	Small	[redacted]- 8/08/2017	R.[redacted] 15/08/2017					Yes	Yes	Yes	Yes	Yes	Yes	
119	Saint Gobain Pam	Saint Gobain Pam	System CL 700mm flange spigot pipe (580, 1000, 5000mm long)	System CI pipework (Cement mortar lined pipe)	DWI	56/4/283	Large	[redacted]- 8/08/2017	R.[redacted] 15/08/2017	Use of the product must be in accordance with the Instructions for Use: SAINT GOBAIN PAM UK. Instructions for Use Document for System CL Pipes. Issue Number 9. Date: 25th May 2009			Yes				Yes			
120	Saint Gobain Pam	Saint Gobain Pam	System CL 300MM Double flanged pipe (1015mm Long)	System CI pipework (Cement mortar lined pipe)	DWI	56/4/283	Large	[redacted]- 8/08/2017	R.[redacted] 15/08/2017	Use of the product must be in accordance with the Instructions for Use: SAINT GOBAIN PAM UK. Instructions for Use Document for System CL Pipes. Issue Number 9. Date: 25th May 2009				Yes	Yes	Yes		Yes	Yes	
121	Saint Gobain Pam	Saint Gobain Pam	System CL 700mm Double flanged pipe (530, 1145, 1260mm long)	System CI pipework (Cement mortar lined pipe)	DWI	56/4/283	Large	[redacted]- 8/08/2017	R.[redacted] 15/08/2017	Use of the product must be in accordance with the Instructions for Use: SAINT GOBAIN PAM UK. Instructions for Use Document for System CL Pipes. Issue Number 9. Date: 25th May 2009				Yes	Yes	Yes	Yes	Yes	Yes	
122	Saint Gobain Pam	BS Coatings	700MM DF 90Deg Bend	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/08/2017	R.[redacted] 15/08/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.				Yes	Yes	Yes		Yes	Yes	
123	Saint Gobain Pam	BS Coatings	700MM DF Duckfoot 90Deg Bend	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/08/2017	R.[redacted] 15/08/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.				Yes	Yes	Yes		Yes	Yes	
124	Saint Gobain Pam	Saint Gobain Pam	System CL 700MM Universal flange socket 1400mm long	System CI pipework (Cement mortar lined pipe)	DWI	56/4/283	Large	[redacted]- 8/08/2017	R.[redacted] 15/08/2017	Use of the product must be in accordance with the Instructions for Use: SAINT GOBAIN PAM UK. Instructions for Use Document for System CL Pipes. Issue Number 9. Date: 25th May 2009				Yes						
125	Saint Gobain Pam	BS Coatings	700MM Blank Flange	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/08/2017	R.[redacted] 15/08/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.				Yes	Yes	Yes		Yes	Yes	
126	Saint Gobain Pam	BS Coatings	700x300MM AF Tee	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/08/2017	R.[redacted] 15/08/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.				Yes	Yes	Yes		Yes	Yes	
127	Saint Gobain Pam	Intermarp (Italia) SPA	150, 200, 300MM EPDM Gasket	APE 70N. Black coloured, injection moulded EPDM rubber material.	WRAS	1406515	Small	[redacted] 11/08/2017	R.[redacted] 19/10/2017					Yes	Yes	Yes		Yes	Yes	
128	Saint Gobain Pam	BS Coatings	700x700MM Rapid socket Tee	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/08/2017	R.[redacted] 15/08/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.				Yes	Yes	Yes		Yes	Yes	
129	Saint Gobain Pam	BS Coatings	700x700MM All Flanged Tee	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/08/2017	R.[redacted] 15/08/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.				Yes	Yes	Yes		Yes	Yes	
130	Saint Gobain Pam	BS Coatings	700x600MM concentric taper	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/08/2017	R.[redacted] 15/08/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.				Yes	Yes	Yes		Yes	Yes	
131	Saint Gobain Pam	Saint Gobain Pam	600MM Flange socket 1000, 5970mm long	System CI pipework (Cement mortar lined pipe)	DWI	56/4/283	Large	[redacted] 11/9/17	R.[redacted] 19/10/2017	Use of the product must be in accordance with the Instructions for Use: SAINT GOBAIN PAM UK. Instructions for Use Document for System CL Pipes. Issue Number 9. Date: 25th May 2009				Yes	Yes	Yes		Yes	Yes	
132	Saint Gobain Pam	Intermarp (Italia) SPA	600MM Gaskets	APE 70N. Black coloured, injection moulded EPDM rubber material.	WRAS	1406515	Small	[redacted] 11/08/2017	R.[redacted] 19/10/2017					Yes	Yes	Yes		Yes	Yes	
133	Saint Gobain Pam	Intermarp (Italia) SPA	600MM rapid gasket	APE 70N. Black coloured, injection moulded EPDM rubber material.	WRAS	1406515	Small	[redacted] 11/08/2017	R.[redacted] 19/10/2017					Yes	Yes	Yes		Yes	Yes	
134	Saint Gobain Pam	Saint Gobain Pam	System CL 600MM double spigot pipe 3450MM Long	System CI pipework (Cement mortar lined pipe)	DWI	56/4/283	Large	[redacted] 8/08/2017	R.[redacted] 15/08/2017	Use of the product must be in accordance with the Instructions for Use: SAINT GOBAIN PAM UK. Instructions for Use Document for System CL Pipes. Issue Number 9. Date: 25th May 2009				Yes	Yes	Yes		Yes	Yes	
135	Saint Gobain Pam	BS Coatings	700MM Universal socketed 22.5 DEG bend	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/08/2017	R.[redacted] 15/08/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.				Yes			Yes			
136	Saint Gobain Pam	Saint Gobain Pam	System CL 700mm double spigot pipe (1000, 1294, 2847, 4200mm long)	System CI pipework (Cement mortar lined pipe)	DWI	56/4/283	Large	[redacted]- 8/08/2017	R.[redacted] 15/08/2017	Use of the product must be in accordance with the Instructions for Use: SAINT GOBAIN PAM UK. Instructions for Use Document for System CL Pipes. Issue Number 9. Date: 25th May 2009							Yes			
137	Saint Gobain Pam	Saint Gobain Pam	System CL 600MM Flange spigot pipe (1000, 1250, 1880mm long)	System CI pipework (Cement mortar lined pipe)	DWI	56/4/283	Large	[redacted]- 8/08/2017	R.[redacted] 15/08/2017	Use of the product must be in accordance with the Instructions for Use: SAINT GOBAIN PAM UK. Instructions for Use Document for System CL Pipes. Issue Number 9. Date: 25th May 2009				Yes	Yes	Yes		Yes	Yes	
138	Saint Gobain Pam	Saint Gobain Pam	System CL 600MM double spigot pipe 3800MM Long	System CI pipework (Cement mortar lined pipe)	DWI	56/4/283	Large	[redacted]- 8/08/2017	R.[redacted] 15/08/2017	Use of the product must be in accordance with the Instructions for Use: SAINT GOBAIN PAM UK. Instructions for Use Document for System CL Pipes. Issue Number 9. Date: 25th May 2009				Yes	Yes	Yes		Yes	Yes	
139	Saint Gobain Pam	BS Coatings	600MM DF 90 deg Bend	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/09/2017	R.[redacted] 19/10/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.				Yes	Yes	Yes		Yes	Yes	
140	Saint Gobain Pam	BS Coatings	600x600MM, 600x500mm rapid socket Tee	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/09/2017	R.[redacted] 19/10/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.				Yes	Yes	Yes		Yes	Yes	
141	Saint Gobain Pam	Saint Gobain Pam	System CL 600MM Double spigot pipe 4500MM long	System CI pipework (Cement mortar lined pipe)	DWI	56/4/283	Large	[redacted]- 8/08/2017	R.[redacted] 15/08/2017	Use of the product must be in accordance with the Instructions for Use: SAINT GOBAIN PAM UK. Instructions for Use Document for System CL Pipes. Issue Number 9. Date: 25th May 2009				Yes	Yes	Yes		Yes	Yes	
142	Saint Gobain Pam	Saint Gobain Pam	System CL 600mm Standard spigot socket pipe 600, 750, 1000, 1250MM Long	System CI pipework (Cement mortar lined pipe)	DWI	56/4/283	Large	[redacted]- 8/08/2017	R.[redacted] 15/08/2017	Use of the product must be in accordance with the Instructions for Use: SAINT GOBAIN PAM UK. Instructions for Use Document for System CL Pipes. Issue Number 9. Date: 25th May 2009				Yes	Yes	Yes		Yes	Yes	
143	Saint Gobain Pam	Saint Gobain Pam	System CL 600mm Standard spigot socket pipe 5000, 5970 MM Long	System CI pipework (Cement mortar lined pipe)	DWI	56/4/283	Large	[redacted]- 8/08/2017	R.[redacted] 15/08/2017	Use of the product must be in accordance with the Instructions for Use: SAINT GOBAIN PAM UK. Instructions for Use Document for System CL Pipes. Issue Number 9. Date: 25th May 2009				Yes	Yes	Yes		Yes	Yes	
144	Saint Gobain Pam	Saint Gobain Pam	System CL 600MM double spigot pipe 2575mm Long	System CI pipework (Cement mortar lined pipe)	DWI	56/4/283	Large	[redacted]- 8/08/2017	R.[redacted] 15/08/2017	Use of the product must be in accordance with the Instructions for Use: SAINT GOBAIN PAM UK. Instructions for Use Document for System CL Pipes. Issue Number 9. Date: 25th May 2009				Yes	Yes	Yes		Yes	Yes	
145	Saint Gobain Pam	Saint Gobain Pam	System CL 600MM DF pipe 1185, 1345, 2000mm long	System CI pipework (Cement mortar lined pipe)	DWI	56/4/283	Large	[redacted]- 8/08/2017	R.[redacted] 15/08/2017	Use of the product must be in accordance with the Instructions for Use: SAINT GOBAIN PAM UK. Instructions for Use Document for System CL Pipes. Issue Number 9. Date: 25th May 2009				Yes	Yes	Yes		Yes	Yes	
146	Saint Gobain Pam	BS Coatings	600x500MM DF Concentric Taper	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/09/2017	R.[redacted] 19/10/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.				Yes	Yes	Yes		Yes	Yes	
147	Saint Gobain Pam	BS Coatings	600x600MM ALL Flanged Tee	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/09/2017	R.[redacted] 19/10/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.				Yes	Yes	Yes		Yes	Yes	
148	Saint Gobain Pam	BS Coatings	600MM Blank Flange	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/09/2017	R.[redacted] 19/10/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.				Yes	Yes	Yes		Yes	Yes	
149	Saint Gobain Pam	BS Coatings	500x200MM Tee	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/09/2017	R.[redacted] 19/10/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.		**Yes**								

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

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150	Saint Gobain Pam	BS Coatings	500MM Flange socket	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/09/2017	R.[redacted] 19/10/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.	Yes								
151	Saint Gobain Pam	Intermarp (Italia) SPA	500mm Gaskets	APE 70N. Black coloured, injection moulded EPDM rubber material.	WRAS	1406515	Small	[redacted] 11/08/2017	R.[redacted] 19/10/2017				Yes						
152	Saint Gobain Pam	Saint Gobain Pam	System CL 500MM Flange spigot 445MM Long	System CI pipework (Cement mortar lined pipe)	DWI	56/4/283	Large	[redacted] 8/08/2017	R.[redacted] 15/08/2017	Use of the product must be in accordance with the Instructions for Use: SAINT GOBAIN PAM UK. Instructions for Use Document for System CL Pipes. Issue Number 9. Date: 25th May 2009			Yes						
153	Saint Gobain Pam	Saint Gobain Pam	System CL 500MM Standard spigot socket pipe 6000MM Long	System CI pipework (Cement mortar lined pipe)	DWI	56/4/283	Large	[redacted] 8/08/2017	R.[redacted] 15/08/2017	Use of the product must be in accordance with the Instructions for Use: SAINT GOBAIN PAM UK. Instructions for Use Document for System CL Pipes. Issue Number 9. Date: 25th May 2009			Yes						Yes
154	Saint Gobain Pam	BS Coatings	300M DF 90DEG BEND	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/09/2017	R.[redacted] 19/10/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.			Yes	Yes	Yes		Yes	Yes	
155	Saint Gobain Pam	Saint Gobain Pam	System CL 200MM DF pipe 1285MM Long	System CI pipework (Cement mortar lined pipe)	DWI	56/4/283	Large	[redacted] 8/08/2017	R.[redacted] 15/08/2017	Use of the product must be in accordance with the Instructions for Use: SAINT GOBAIN PAM UK. Instructions for Use Document for System CL Pipes. Issue Number 9. Date: 25th May 2009			Yes	Yes	Yes		Yes	Yes	
156	Saint Gobain Pam	BS Coatings	200MM DF 90 Deg Bend	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/09/2017	R.[redacted] 19/10/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.			Yes	Yes	Yes		Yes	Yes	
157	Saint Gobain Pam	Intermarp (Italia) SPA	450, 600MM Anchor Gasket	APE 70N. Black coloured, injection moulded EPDM rubber material.	WRAS	1406515	Small	[redacted] 11/09/2017	R.[redacted] 19/10/2017		Yes								
158	Saint Gobain Pam	Saint Gobain Pam	System CL 1000MM Standard spigot socket pipe 6960MM Long	System CI pipework (Cement mortar lined pipe)	DWI	56/4/283	Large	[redacted] 8/08/2017	R.[redacted] 15/08/2017	Use of the product must be in accordance with the Instructions for Use: SAINT GOBAIN PAM UK. Instructions for Use Document for System CL Pipes. Issue Number 9. Date: 25th May 2009			Yes	Yes	Yes		Yes	Yes	Yes
159	Saint Gobain Pam	Saint Gobain Pam	System CL 500MM DF PIPE 415MM Long	System CI pipework (Cement mortar lined pipe)	DWI	56/4/283	Large	[redacted] 8/08/2017	R.[redacted] 15/08/2017	Use of the product must be in accordance with the Instructions for Use: SAINT GOBAIN PAM UK. Instructions for Use Document for System CL Pipes. Issue Number 9. Date: 25th May 2009			Yes						Yes
160	Saint Gobain Pam	Saint Gobain Pam	System CL 500MM DF Pipe 1335MM LONG	System CI pipework (Cement mortar lined pipe)	DWI	56/4/283	Large	[redacted] 8/08/2017	R.[redacted] 15/08/2017	Use of the product must be in accordance with the Instructions for Use: SAINT GOBAIN PAM UK. Instructions for Use Document for System CL Pipes. Issue Number 9. Date: 25th May 2009			Yes						Yes
161	Saint Gobain Pam	BS Coatings	1000MM Socketed 90 DEG bend	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/09/2017	R.[redacted] 19/10/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.			Yes	Yes	Yes		Yes	Yes	Yes
162	Saint Gobain Pam	Saint Gobain Pam	1000MM Spigot socket pipe 1060, 1250, 6960MM Long	System CI pipework (Cement mortar lined pipe)	DWI	56/4/283	Large	[redacted] 8/08/2017	R.[redacted] 15/08/2017	Use of the product must be in accordance with the Instructions for Use: SAINT GOBAIN PAM UK. Instructions for Use Document for System CL Pipes. Issue Number 9. Date: 25th May 2009			Yes						Yes
163	Saint Gobain Pam	BS Coatings	700MM socketed 22.5 DEG Bend	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/08/2017	R.[redacted] 15/08/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.			Yes	Yes	Yes	Yes	Yes	Yes	
164	Saint Gobain Pam	Saint Gobain Pam	System CL 700MM socket spigot pipe 6890mm long	System CI pipework (Cement mortar lined pipe)	DWI	56/4/283	Large	[redacted] 8/08/2017	R.[redacted] 15/08/2017	Use of the product must be in accordance with the Instructions for Use: SAINT GOBAIN PAM UK. Instructions for Use Document for System CL Pipes. Issue Number 9. Date: 25th May 2009						Yes			
165	Saint Gobain Pam	BS Coatings	700mm x adjustable 150mm Flange on socket tee	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/08/2017	R.[redacted] 15/08/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.		Yes							
166	Saint Gobain Pam	BS Coatings	700MM Socketed 45 Deg Bend	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/08/2017	R.[redacted] 15/08/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.		Yes							
167	Saint Gobain Pam	BS Coatings	700MM Socketed 90 Deg Bend	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/08/2017	R.[redacted] 15/08/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.			Yes	Yes	Yes		Yes	Yes	
168	Saint Gobain Pam	BS Coatings	150x80mm Concentic Taper	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/9/17	R.[redacted] 19/10/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.		Yes	Yes			Yes			Yes
169	Saint Gobain Pam	BS Coatings	700x150MM All Flanged Tee	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/9/17	R.[redacted] 19/10/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.		Yes							
170	Saint Gobain Pam	BS Coatings	700x500MM All Flanged Tee	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/9/17	R.[redacted] 19/10/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.			Yes	Yes	Yes	Yes	Yes	Yes	
171	Saint Gobain Pam	Saint Gobain Pam	700mm Flange socket pipe 1000mm Long	System CI pipework (Cement mortar lined pipe)	DWI	56/4/283	Large	[redacted] 11/9/17	R.[redacted] 19/10/2017	Use of the product must be in accordance with the Instructions for Use: SAINT GOBAIN PAM UK. Instructions for Use Document for System CL Pipes. Issue Number 9. Date: 25th May 2009						Yes			
172	Saint Gobain Pam	BS Coatings	700 x 200mm level inert Tee	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/9/17	R.[redacted] 19/10/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.			Yes	Yes	Yes	Yes	Yes	Yes	
173	Saint Gobain Pam	BS Coatings	700MM Natural socketed tee	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/9/17	R.[redacted] 19/10/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.			Yes	Yes	Yes	Yes	Yes	Yes	
174	Saint Gobain Pam	Saint Gobain Pam	700mm Double spigot pipe 1000, 1550, 4200mm long	System CI pipework (Cement mortar lined pipe)	DWI	56/4/283	Large	[redacted] 11/9/17	R.[redacted] 19/10/2017	Use of the product must be in accordance with the Instructions for Use: SAINT GOBAIN PAM UK. Instructions for Use Document for System CL Pipes. Issue Number 9. Date: 25th May 2009						Yes			
175	Saint Gobain Pam	BS Coatings	200x80mm DF Flat Taper	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/9/17	R.[redacted] 19/10/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.			Yes	Yes	Yes		Yes	Yes	
176	Saint Gobain Pam	BS Coatings	100MM 90DEG BEND	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/9/17	R.[redacted] 19/10/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.		Yes							
177	Saint Gobain Pam	BS Coatings	150x100AF TEE	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/9/17	R.[redacted] 19/10/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.		Yes							
178	Saint Gobain Pam	Saint Gobain Pam	500MM spigot socket, 1000, 1060, 1350MM long	System CI pipework (Cement mortar lined pipe)	DWI	56/4/283	Large	[redacted] 11/9/17	R.[redacted] 19/10/2017	Use of the product must be in accordance with the Instructions for Use: SAINT GOBAIN PAM UK. Instructions for Use Document for System CL Pipes. Issue Number 9. Date: 25th May 2009			Yes						
179	Talis UK Incorporating ATPLAS& ERHARD	Erhard GmbH & Co. KG	500,600MM DIA PN16 Flanged double eccentric Butterfly valve clockwise close handwheel operated	Roco Wave' Butterfly Valve	WRAS	1512066	Small	[redacted] 11/9/17	R.[redacted] 19/10/2017				Yes	Yes	Yes		Yes	Yes	
180	UTS engineering LTD	Azko Nobel	DN500, DN700 Dismantling joint	Resicoat R4 Blue powder coating	WRAS	1112500	Small	[redacted] 11/9/17	R.[redacted] 19/10/2017	Confirmed by email 25/10/2017 from [redacted] that the product was purchased prior to Dec 2016.		Yes	Yes	Yes	Yes	Yes	Yes	Yes	
181		VIP Polymers Ltd		EPDM	WRAS	1112504	Small	[redacted] 11/9/17	R.[redacted] 19/10/2017	Confirmed by email 25/10/2017 from [redacted] that the product was purchased prior to Dec 2016.		Yes	Yes	Yes	Yes	Yes	Yes	Yes	
182	Wolseley Utilities LTD T/A Burdens	Akzo Nobel Powder Coating GMBH	80MM resilient seated Gate valve	Resicoat R4 Blue powder coating	WRAS	1112500	Small	[redacted] 11/9/17	R.[redacted] 23/10/2017	Confirmed by email 25/10/2017 from [redacted] that the product was purchased prior to Dec 2016.									Yes
183		Gummiwerk Kraiburg GmbH & Co		AA7 GDZ. Black coloured, compression moulded EPDM sheet material	WRAS	1307508	Small	[redacted] 11/9/17	R.[redacted] 23/10/2017										Yes
184	Wolseley Utilities LTD T/A Burdens	Dexine Rubber Company Ltd	150MM Full faced EPDM Gasket	EPDM	WRAS	1401510	Small	[redacted] 11/9/17	R.[redacted] 19/10/2017				Yes	Yes	Yes		Yes	Yes	
185	Wolseley Utilities LTD T/A Burdens	GPS	110MM Plain ended Pipe 6000MM long	Excel NB Pipe 'New Blue' Pipe (Black core, blue outer).	DWI	56/4/1026	Large	[redacted] 25/9/17	R.[redacted] 19/10/2017							Yes			
186	Wolseley Utilities LTD T/A Burdens	GPS	PN 16 PE100 Stub Flange Assembly	Black coloured, injection moulded polyethylene fitting	WRAS	1403507	Small	[redacted] 25/9/17	R.[redacted] 19/10/2017							Yes			
187	Wolseley Utilities LTD T/A Burdens	Dexine Rubber Company	450mm Full faced EPDM Gasket	EPDM Gasket	WRAS	1401510	Small	[redacted] 25/9/17	R.[redacted] 19/10/2017		Yes								
188	AVK UK Ltd	AVK UK Ltd	DN500 PN16 Twin plate wafer check valve	316l stainless steel plates	STAINLESS STEEL	316L	Small	[redacted] 20/9/17	R.[redacted] 19/10/2017				Yes	Yes	Yes		Yes	Yes	
189		AVK GUMMI A/S		EPDM Seat	WRAS	1306500	Small	[redacted] 20/9/17	R.[redacted] 19/10/2017				Yes	Yes	Yes		Yes	Yes	
190	Keyline builders merchants	Aqua Gas Maufacturing Ltd	100MM resilient seated gate valve	Internal of valve	WRAS	1512320	Small	[redacted] 25/9/17	R.[redacted] 19/10/2017			Yes				Yes			
191	Radius Systems Ltd	GPS	ELECTROFUSION COUPLING TO SUIT 500 OD PE PIPE - SDR 11	Black coloured, injection moulded polyethylene fitting	WRAS	1403507	Small	[redacted] 25/9/17	R.[redacted] 19/10/2017		Yes								
192	RCF Nut and Bolt co (tipton) ltd	Dexine rubber company Ltd	700mm gasket	EPDM Gasket	WRAS	1401510	Small	[redacted] 25/9/17	R.[redacted] 19/10/2017				Yes	Yes	Yes	Yes	Yes	Yes	
193	Wolseley Utilities LTD T/A Burdens	Aqua Gas Maufacturing Ltd	150mm resilient seated EPDM seal gate valve PN16 cap top clockwise close	Internal of valve	WRAS	1512320	Small	[redacted] 25/9/17	R.[redacted] 19/10/2017				Yes	Yes	Yes		Yes	Yes	
194	Wolseley Utilities LTD T/A Burdens	GPS	Pipe PE100 blue SDR11 OD 90 Straight length 12m Solid Burdens code: 21527313	Excel NB Pipe 'New Blue' Pipe (Black core, blue outer).	DWI	56/4/1026	Large	[redacted] 25/9/17	R.[redacted] 19/10/2017							Yes			
195	Wolseley Utilities LTD T/A Burdens	Arkema	738 OD, 945 OD coupler	Rilsan polyamide powder coatings, used in conjuction with Primgreen LAT 12035 epoxy resin primer	WRAS	1411519	Small	[redacted] 22/9/17	R.[redacted] 19/10/2017	Rilsan polyamide powder coatings to be used in conjunction with Primgreen LAT 12035 epoxy resin primer, apply and cure accordance with user instructions: Cerdato/ T2 RFP / September 2012. The following grades are for use with water up to 60°C: T Black 7450 AC, T Blue 7443 MAC, T Green 7529 MAC, T Grey 5161 MAC and T		Yes							
		VIP Polymers Ltd		EPDM internal coating	WRAS	1607507	Small	[redacted] 22/9/17	R.[redacted] 19/10/2017			Yes							
196	Wolseley Utilities LTD T/A Burdens	Dexine Rubber Company Ltd	DN250mm, DN300mm full faced EPDM gasket	EPDM Gasket	WRAS	1401510	Small	[redacted] 25/9/17	R.[redacted] 19/10/2017							Yes			
197	Wolseley Utilities LTD T/A Burdens	Arkema	125, 532, 635 ,1048 mm OD Flange adaptor	Rilsan polyamide powder coatings, used in conjuction with Primgreen LAT 12035 epoxy resin primer	WRAS	1411519	Small	[redacted] 22/9/17	R.[redacted] 19/10/2017	Rilsan polyamide powder coatings to be used in conjunction with Primgreen LAT 12035 epoxy resin primer, apply and cure accordance with user instructions: Cerdato/ T2 RFP / September 2012. The following grades are for use with water up to 60°C: T Black 7450 AC, T Blue 7443 MAC, T Green 7529 MAC, T Grey 5161 MAC and T	Yes								Yes
		VIP Polymers Ltd		EPDM internal coating	WRAS	1607507	Small	[redacted] 22/9/17	R.[redacted] 19/10/2017		Yes								Yes
198	Wolseley Utilities LTD T/A Burdens	Arkema	500, 700mm Dismantling joint	Rilsan polyamide powder coatings, used in conjuction with Primgreen LAT 12035 epoxy resin primer	WRAS	1411519	Small	[redacted] 22/9/17	R.[redacted] 19/10/2017	Rilsan polyamide powder coatings to be used in conjunction with Primgreen LAT 12035 epoxy resin primer, apply and cure accordance with user instructions: Cerdato/ T2 RFP / September 2012. The following grades are for use with water up to 60°C: T Black 7450 AC, T Blue 7443 MAC, T Green 7529 MAC, T Grey 5161 MAC and T	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		VIP Polymers Ltd		EPDM internal coating	WRAS	1607507	Small	[redacted] 22/9/17	R.[redacted] 19/10/2017		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
199	Wolseley Utilities LTD T/A Burdens	Fusion Group Ltd	90, 125, 250, 300 MM electrofusion coupler	Black coloured, injection moulded polyethylene fittings	WRAS	1504501	Small	[redacted] 25/9/17	R.[redacted] 19/10/2017							Yes			
200	Wolseley Utilities LTD T/A Burdens	Fusion Group Ltd	90, 125 mm Elbow electrofusion coupler	Black coloured, injection moulded polyethylene fittings	WRAS	1504501	Small	[redacted] 25/9/17	R.[redacted] 19/10/2017							Yes			
201	Wolseley Utilities LTD T/A Burdens	GPS	80, 100, 250, 300 mm Stub flange	Internals of PE Fitting	WRAS	1403507	Small	[redacted] 25/9/17	R.[redacted] 19/10/2017		Yes					Yes			
202	Anchor bay	Fosroc Ltd	Fosroc Nitosea IMS600	Site applied, grey coloured polyurethane joint sealant	WRAS	1404529	Small	[redacted] 16/11/17	R.[redacted] 17/11/2017	Mix, apply and cure in accordance with manufacturer`s datasheet (version 12 CI/SfB: Yt4 dated May 2014).									Yes

Brampton tees (Items 1, 3, 11, 16, 17, 50 and 74) - 450mm pipework, fittings and valves - Scotchkote pipe, equal tee, valve, hydrant, stainless steel spades in front of blank test ends, blank flange behind closed valve and full faced gaskets
Brampton mains - Section 3 of Diddington WR commissioning plan
Hannington inlet main - Section 4 of Diddington WR commissioning plan
Reservoir outlet pipework - Section 6 of Diddington WR Commisioning Plan
Pumping station to Brampton connection - Section 7 of Diddington WR commissioning plan
Brampton pumps (phase 1) - Section 8 of Diddington WR Commissioning Plan
Ampthill pipeline - Section 9 of Commissioning Plan
Ampthill pumps (Phase 1)- Section 10 of Commissioning Plan
Brampton and Ampthill surge vessel commissioning - Section 11 of Commissioning Plan
Diddington WR Commissioning - Section 13 of Commissioning Plan

Insert more lines as necessary

1 **PROJECT ENGINEER TO SIGN AND DATE TO CONFIRM MATERIALS HAVE BEEN CHECKED AGAINST CURRENT APPROVAL LISTS**
2 **WATER QUALITY PERFORMANCE TEAM TO SIGN AND DATE TO CONFIRM MATERIALS ARE APPROVED IN ACCORDANCE WITH REGULATION 31(4)(a) and 31(4)(b)**
3 **COMMENTS OR ADVICE FROM WATER QUALITY PERFORMANCE TEAM, EG INSTRUCTIONS FOR USE**

Yes **PLEASE TICK** **Confirmed via email by [redacted] 19/10/2017 that all products are now on the form**

NOTE:

REQUEST FOR REDUCED SAMPLING SIGN/DATE	WQPT APPROVED FOR SIGN/DATE	COMMENTS SIGN/DATE
No		

PART B
PART B COMPLETED BY: [redacted]
Please provide the following contact names:
OPERATIONAL SCIENTIST: [redacted]
SUPPLY MANAGER: [redacted]

TRACE ORGANICS 1 2

Version 002 - June 2009

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

FORM NO: 2428

PART A LINE NUMBERS WHICH SAMPLES REPRESENT	SAMPLE NUMBER	SAMPLE DATE	COLIFORMS	E. COLI	COLONY COUNTS 2 DAY 37°C 3 DAY 22°C	QUALITATIVE TASTE	QUALITATIVE ODOUR	pH	COLOUR (HAZEN)	TURBIDITY (NTU)	CONDUCTIVITY (us/cm)	ALKALINITY(mg/l CaCO3)	ALUMINIUM (mg/l Al)	DCM & PURGE/ TRAP	MK FORM NO.	PROCESS ENGINEER /SCIENTIST CONFIRMATION SIGN/DATE	WQPT APPROVED FOR SUPPLY SIGN/DATE	Comments
Brampton main tees - not in commissioning plan																		
(1, 3, 11, 16, 17, 50 and 74)	16456918	05/10/2016	0	0	0, 0	1	2T	7.67	0.5	0.13	726	155	< 0.014	1, n/d	10683	~	~	Labelled as South main on samples, actually resamples from North main tees Requires further bacti and purge and traps
(1, 3, 11, 16, 17, 50 and 74)	16456917	05/10/2016	0	0	0, 0	1	2T	7.97	0.7	0.12	848	183	0.0381	1, 0	10683	~	~	Labelled as South main on samples, actually resamples from North main tees. Requires further full suite apart from purge and traps
(1, 3, 11, 16, 17, 50 and 74)	16477707	19/10/2016	0	0	0, 18	~	~	~	~	~	~	~	~	~, 0	10682	R.[redacted] 24/10/2016	R.[redacted] 24/10/2016	
(1, 3, 11, 16, 17, 50 and 74)	16477706	19/10/2016	0	0	12, 22	1	1Z	7.64	0.8	0.07	734	163	< 0.014	1, ~	10682	R.[redacted] 24/10/2016	R.[redacted] 24/10/2016	Low level organics is satisfactory.
Southern main tee 1 (u/s) (1, 3, 11, 16, 17, 50 and 74)	16505633	03/11/2016	0	0	0, 0	1	3T	7.65	0.6	0.11	764	186	< 0.014	1, 0	10741	R.[redacted] 08/11/2016	R.[redacted] 08/11/2016	Low level organics, comparable to those approve for tee 1 on Northern main. Mild chlorine odour and slightly high free chlorine (0.46 mg/L) than expected for Grafham. Requires flush and 16 hour stand, followed by onsite checks (clarity, turbidity, taste, odour, chlorine) to confirm no significant chlorine odour compared with source water. Confirm to [redacted] - approval given on this basis.
Southern main tee 2 (d/s) (1, 3, 11, 16, 17, 50 and 74)	16505634	03/11/2016	0	0	0, 0	1	1Z	7.67	0.7	0.14	748	189	< 0.014	0, 0	10741	R.[redacted] 08/11/2016	R.[redacted] 08/11/2016	Slightly high free chlorine (0.46 mg/L) than expected for Grafham. Requires flush and 16 hour stand, followed by onsite checks (clarity, turbidity, taste, odour, chlorine) to confirm satisfactory. Confirm to [redacted] - approval given on this basis.
Brampton mains diversions - section 3 of Diddington commissioning plan																		
Northern Brampton main - Existing supply (u/s connection)	17274323	19/06/2017	0	0	0, 0	1	2T	7.56	0.8	0.11	760	181	< 0.014	1, 0	10968	R.[redacted] 01/08/2017	R.[redacted] 01/08/2017	Free chlorine 1.06, Total chlorine 1.10 mg/L No problems with low oleic acid level (hand cream) Further bacti needed as chlorine kit found to be defective
Northern Brampton main - Existing supply (u/s connection)	17304002	04/07/2017	0	0	0, 5	1	1Z	n/a	n/a	n/a	n/a	n/a	< 0.014	n/a	n/a	R.[redacted] 01/08/2017	R.[redacted] 01/08/2017	Chlorine <0.01, 0.08 Chlorines redone with non-defective kit after around 6 days standing: 0.07/0.93
Northern Brampton main - Existing supply (u/s connection)	17331300-5 17332681 17331839	25/07/2017	0	0	0, n/a	1	1Z	7.29	n/a	0.1	n/a	n/a	n/d	0, 0	11129	R.[redacted] 01/08/2017	R.[redacted] 01/08/2017	Chlorines <0.05/0.95 No aluminium analysed for, am comfortable without as no issues with last sample set. This set was only taken as samples had timed out rather than for WQ reasons. pH added to lab suite later so only an indicative result, but no issues with previous set. New mains set, added here for completeness.
Northern Brampton main - Existing supply (u/s connection)	17365020 17366918 17364897	11/08/2017	0	0	0, n/a	1	2T	7.5	n/a	0.14	n/a	n/a	< 0.014	0, 0	11129	R.[redacted] 16/08/2017	R.[redacted] 16/08/2017	No chlorines New mains set, added here for completeness.
Northern Brampton main - Cross connection	17274324	19/06/2017	0	0	0, 25	n/d	2A	7.61	0.8	0.15	766	176	0.0293	1, 0	10968	R.[redacted] 01/08/2017	R.[redacted] 01/08/2017	Free chlorine 0.43, Total chlorine 0.55 mg/L Chlorine levels too low No problems with low oleic acid level (hand cream) or butoxyethoxy ethanol (Op SNARL 0.4 mg/L) Further bacti needed as chlorine kit found to be defective, plus chemistry
Northern Brampton main - Cross connection	17304005	04/07/2017	0	0	0, 0	1	2T	n/a	n/a	n/a	n/a	n/a	< 0.014	n/a	n/a	R.[redacted] 01/08/2017	R.[redacted] 01/08/2017	Chlorine <0.01, 0.16 Chlorines redone with non-defective kit after around 6 days standing: 0.06/0.86
Northern Brampton main - Cross connection	17331300-5 17332682 17331843	25/07/2017	0	0	0, n/a	1	1Z	7.36	n/a	0.1	n/a	n/a	n/d	1, 0	11129	R.[redacted] 01/08/2017	R.[redacted] 01/08/2017	Chlorines <0.05/0.93 No aluminium analysed for, am comfortable without as no issues with last sample set. This set was only taken as samples had timed out rather than for WQ reasons. pH added to lab suite later so only an indicative result, but no issues with previous set. New mains set, added here for completeness.
Northern Brampton main - Cross connection	17365019 17366917 17364896	11/08/2017	0	0	0, n/a	1	2T	7.53	n/a	0.12	n/a	n/a	< 0.014	0, 0	11129	R.[redacted] 16/08/2017	R.[redacted] 16/08/2017	Chlorines <0.05/0.9 New mains set, added here for completeness.
Northern Brampton main - End of main discharge point	17274322	19/06/2017	0	0	0, 0	1	2T	7.71	0.8	0.18	761	178	< 0.014	0, 0	10968	R.[redacted] 01/08/2017	R.[redacted] 01/08/2017	Free chlorine 0.36, Total chlorine 0.67 mg/L Chlorine levels too low Further bacti needed as chlorine kit found to be defective
Northern Brampton main - End of main discharge point	17304004	04/07/2017	0	0	0, 0	1	2T	n/a	n/a	n/a	n/a	n/a	< 0.014	n/a	n/a	R.[redacted] 01/08/2017	R.[redacted] 01/08/2017	Chlorine <0.01, 0.11 Chlorines redone with non-defective kit after around 6 days standing: 0.06/0.79
Northern Brampton main - End of main discharge point	17331300-5 17332683 17331840	25/07/2017	0	0	0, n/a	1	1Z	7.43	n/a	0.11	n/a	n/a	n/d	1, 0	11129	R.[redacted] 01/08/2017	R.[redacted] 01/08/2017	Chlorines <0.05/0.9 No aluminium analysed for, am comfortable without as no issues with last sample set. This set was only taken as samples had timed out rather than for WQ reasons. pH added to lab suite later so only an indicative result, but no issues with previous set. New mains set, added here for completeness.
Northern Brampton main - End of main discharge point	17365018 17366916 17364895	11/08/2017	0	0	0, n/a	1	2T	7.65	n/a	0.1	n/a	n/a	< 0.014	0, 0	11129	R.[redacted] 16/08/2017	R.[redacted] 16/08/2017	Chlorines <0.05/0.92 New mains set, added here for completeness.
Southern Brampton main - Existing supply (u/s connection)	17266697	13/06/2017	0	0	0, 0	1	1Z	7.56	0.8	0.1	756	174	< 0.014	0, 0	10968	R.[redacted] 01/08/2017	R.[redacted] 01/08/2017	Free chlorine 1.12, Total chlorine 1.36 mg/L Further bacti needed as chlorine kit found to be defective
Southern Brampton main - Existing supply (u/s connection)	17304006	04/07/2017	0	0	0, 1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R.[redacted] 01/08/2017	R.[redacted] 01/08/2017	Chlorine 0.01, 0.11 Chlorines redone with non-defective kitafter around 6 days standing: 0.06/0.91
Southern Brampton main - Existing supply (u/s connection)	17331300-5 17332686 17331318	25/07/2017	0	0	0, n/a	1	1Z	7.32	n/a	0.08	n/a	n/a	n/d	0, 0	11129	R.[redacted] 01/08/2017	R.[redacted] 01/08/2017	Chlorines <0.05/0.92 No aluminium analysed for, am comfortable without as no issues with last sample set. This set was only taken as samples had timed out rather than for WQ reasons. pH added to lab suite later so only an indicative result, but no issues with previous set. New mains set, added here for completeness.
Southern Brampton main - Cross connection	17266698	13/06/2017	0	0	1, 6	1	1Z	7.5	0.7	0.11	754	171	< 0.014	0, 0	10968	R.[redacted] 01/08/2017	R.[redacted] 01/08/2017	Free chlorine 0.45, Total chlorine 0.55 mg/L Chlorine levels too low Further bacti needed as chlorine kit found to be defective
Southern Brampton main - Cross connection	17303999	04/07/2017	0	0	0, 0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R.[redacted] 01/08/2017	R.[redacted] 01/08/2017	Chlorine 0.01, 0.12 Chlorines redone with non-defective kit after around 6 days standing: 0.06/0.74
Southern Brampton main - Cross connection	17331300-5 17332685 17331842	25/07/2017	0	0	0, n/a	1	1Z	7.41	n/a	0.08	n/a	n/a	n/d	0, 0	11129	R.[redacted] 01/08/2017	R.[redacted] 01/08/2017	Chlorines <0.05/0.89 No aluminium analysed for, am comfortable without as no issues with last sample set. This set was only taken as samples had timed out rather than for WQ reasons. pH added to lab suite later so only an indicative result, but no issues with previous set. New mains set, added here for completeness.
Southern Brampton main - End of main discharge point	17266699	13/06/2017	0	0	0, 24	1	1Z	7.49	0.8	0.11	762	169	< 0.014	0, 0	10968	R.[redacted] 01/08/2017	R.[redacted] 01/08/2017	Free chlorine 1.12, Total chlorine 1.50 mg/L Further bacti needed as chlorine kit found to be defective
Southern Brampton main - End of main discharge point	17303998	04/07/2017	0	0	0, 24	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R.[redacted] 01/08/2017	R.[redacted] 01/08/2017	Chlorine 0.02, 0.10 Slightly elevated 3-day compared to existing, but not high enough to fail. Chlorines redone with non-defective kit after around 6 days standing: 0.05/0.76
Southern Brampton main - End of main discharge point	17331300-5 17332684 17331841	25/07/2017	0	0	0, n/a	1	1Z	7.44	n/a	0.09	n/a	n/a	n/d	0, 0	11129	R.[redacted] 01/08/2017	R.[redacted] 01/08/2017	Chlorines <0.05/0.9 No aluminium analysed for, am comfortable without as no issues with last sample set. This set was only taken as samples had timed out rather than for WQ reasons. pH added to lab suite later so only an indicative result, but no issues with previous set. New mains set, added here for completeness.

Note a second set of bacti samples were taken 25/07/17 after a further 12 hours stand (17332909-2914). These were not required as the main was physically swabbed by the Pneuclean method. The location was not exactly recorded (North and South main was not identified) so it's not possible to identify the exact sampling location. All six samples were clear for coliforms and e.coli. Two samples (one on an existing supply and one on a cross connection) had 399 and 348 on a 2-day respectively. However these samples were not refrigerated and wer left in a van for 12 hours prior to being submitted. As these samples were not required, they were not stored correctly and all were satisfactory for TC/EC, then the decision has been made to approve the two mains on the basis of the sets of samples taken after the 16 hour stand, as per the standard New Mains procedure.

Southern main put into supply on the basis of thr 25/07/17 samples, but the northern main couldn't be put into supply in time. It was therefore chlorinated and resampled. All samples satisfactory and the main was passed again 16/07/17.

PART A LINE NUMBERS WHICH SAMPLES REPRESENT	SAMPLE NUMBER	SAMPLE DATE	COLIFORMS	E. COLI	COLONY COUNTS 2 DAY 37°C 3 DAY 22°C	QUALITATIVE TASTE	QUALITATIVE ODOUR	pH	COLOUR (HAZEN)	TURBIDITY (NTU)	CONDUCTIVITY (us/cm)	ALKALINITY(mg/l CaCO3)	ALUMINIUM (mg/l Al)	DCM & PURGE/ TRAP	MK FORM NO.	PROCESS ENGINEER /SCIENTIST CONFIRMATION SIGN/DATE	WQPT APPROVED FOR SUPPLY SIGN/DATE	Comments
Hannington inlet main - should be New Mains samples, have been taken as MIC sets (Section 4 of Diddington commissioning plan)																		
Existing Hannington main ductile (existing supply)	17285810	27/06/2017	0	0	0, 1	n/d	1Z	7.44	0.8	0.18	761	175	< 0.014	1, 0	10935	n/a	n/a	Free 0.87/Total 1.32 - too high, problem subsequently identified with chlorine kit Further bacti needed once chlorine kit issue sorted Organics compounds indicative of handcream
Existing Hannington main ductile (existing supply)	17304018	04/07/2017	0	0	0, n/d	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	Chlorine 0.01, 0.10 No 3-day plates (though new mains don't need them) Chlorines redone with non-defective kit after around 6 days standing: 0.06/0.90
Existing Hannington main ductile (existing supply)	17356098	04/08/2017	0	0	0, n/d	1	2T	7.48	n/a	0.3	n/a	n/a	< 0.014	0, 0	11108	R.[redacted] 15/08/2017	R.[redacted] 15/08/2017	Chlorines 0.05/0.91 Approved via email by S.[redacted] on 10/08/2017
Brampton connection 700mm ductile (cross connection)	17285811	27/06/2017	0	0	0, 249	1	1Z	8.03	1.2	0.15	779	176	< 0.014	1, 1	10935	~	~	Free 0.18/Total 0.51 - chlorines wrong, problem subsequently identified with chlorine kit Further bacti needed once chlorine kit issue sorted, plus organics
Brampton connection 700mm ductile (cross connection)	17304118 17304019	04/07/2017	0	0	0, n/d	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0, 0	11084	~	~	Chlorine 0.01, 0.16 No 3-day plates (though new mains don't need them) Chlorines redone with non-defective kit after around 6 days standing: 0.05/0.72
Brampton connection 700mm ductile (cross connection)	17356101	04/08/2017	0	0	21, n/d	1	1Z	7.51	n/a	0.1	n/a	n/a	< 0.014	0, 0	11108	R.[redacted] 15/08/2017	R.[redacted] 15/08/2017	Chlorines 0.05/0.92 Approved via email by S.[redacted] on 10/08/2017
Hannington main connection tee (end of main near Diddington inlet)	17285809	27/06/2017	0	0	0, 0	1	1Z	7.54	0.8	0.14	757	174	< 0.014	0, 0	10935	~	~	Free 0.96/Total 1.34 - too high, problem subsequently identified with chlorine kit Further bacti needed once chlorine kit issue sorted
Hannington main connection tee (end of main near Diddington inlet)	17304020	04/07/2017	0	0	0, n/d	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	~	~	Chlorine <0.01, 0.11 No 3-day plates (though new mains don't need them) Chlorines redone with non-defective kit after around 6 days standing: 0.05/0.76
Hannington main East cell connection tee (end of main near East cell Diddington inlet)	17356099	04/08/2017	0	0	0, n/d	1	2T	7.48	n/a	0.08	n/a	n/a	< 0.014	0, 0	11108	R.[redacted] 15/08/2017	R.[redacted] 15/08/2017	Chlorines <0.05/0.9 Approved via email by S.[redacted] on 10/08/2017
Hannington main West cell connection tee (end of main near West cell Diddington inlet)	17356100	04/08/2017	0	0	0, n/d	1	2T	7.46	n/a	1.19	n/a	n/a	< 0.014	0, 0	11108	R.[redacted] 15/08/2017	R.[redacted] 15/08/2017	Chlorines <0.05/0.9 Approved via email by S.[redacted] on 10/08/2017 Turbidity higher than would expect, will require satisfactory onsite checks.
Hannington main connection tee (H1, end of main near Diddington inlet)	19408751	06/09/2019	0	0	0, 2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R.[redacted] 12/09/2019	R.[redacted] 12/09/2019	Chlorine <0.01, 0.71 Flush and bacti as this section never fully went into service, approved for auto-flush to be set up
Hannington main connection tee (H2, end of main near Diddington inlet)	19408750	06/09/2019	0	0	0, 0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R.[redacted] 12/09/2019	R.[redacted] 12/09/2019	Chlorines <0.05/0.72 Flush and bacti as this section never fully went into service, approved for auto-flush to be set up
Hannington main hydrant (H3, middle of main, near Ampthill main crossover)	19408749	06/09/2019	0	0	0, 0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R.[redacted] 12/09/2019	R.[redacted] 12/09/2019	Chlorines <0.05/0.81 Flush and bacti as this section never fully went into service, approved for auto-flush to be set up
Diddington res outlet main (Section 6 of Diddington commissioning plan)																		
Diddington outlet main source supply	17405300	05/09/2017	0	0	0, 82	1	2T	7.54	0.8	0.07	775	191	< 0.014	0, 0	11103	n/a	n/a	0.05/0.76 Need to confirm which lines on Part A this applies to
Diddington PS bypass	17405301	05/09/2017	0	0	46, 1894	1	1Z	7.64	1	0.22	778	191	< 0.014	1, 1	11103	~	~	<0.05/0.73 Further bacti, odour and organics required Need to confirm which lines on Part A this applies to

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Reservoir outlet chamber (end of main)	17405302	05/09/2017	0	0	53, 5357	1	2T	7.85	1	0.1	780	193	< 0.014	1, 1	11103	~	~	<0.05/0.70 Further bacti, odour and organics required Need to confirm which lines on Part A this applies to
Diddington incoming water (source supply)	17423554	18/09/2017	0	0	0, 0	1	2T	7.67	1.8	0.13	765	161	< 0.014	1, 0	11102	n/a	n/a	0.16/1.06
Diddington PS bypass	17423553	18/09/2017	0	0	0, 34	1	1Z	8.02	1.4	0.21	761	153	< 0.014	0, 0	11141	R.[redacted] 20/12/2017	R.[redacted] 20/12/2017	<0.06/0.26 - large drop in residual Further flush, stand and pre-into supply bacti will be required - otherwise ok to sign off
Reservoir outlet chamber (end of main)	17423555	18/09/2017	0	0	0, 0	1	1Z	8.08	1.2	0.11	761	162	< 0.014	0, 0	11141	R.[redacted] 20/12/2017	R.[redacted] 20/12/2017	<0.08/0.28 - large drop in residual Further flush, stand and pre-into supply bacti will be required - otherwise ok to sign off
Diddington Brampton pumping station outlet main (Section 7 of Diddington commissioning plan)																		
Diddington incoming water (source supply)	17423554	18/09/2017	0	0	0, 0	1	2T	7.67	1.8	0.13	765	161	< 0.014	1, 0	11102	n/a	n/a	0.16/1.06
Pump P1H00002 discharge pipeowork (end of main)	17423556	18/09/2017	2	0	0, 0	1	2T	7.74	0.8	0.11	773	152	< 0.014	0, 0	11102	~	~	<0.14/0.44 - large drop in residual Further bacti required
Diddington incoming water (source supply)	17440026	29/09/2017	0	0	0, 0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.12/0.92
Pump P1H00002 discharge pipeowork (end of main)	17440027	29/09/2017	0	0	3, 0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R.[redacted] 20/12/2017	R.[redacted] 20/12/2017	0.13/0.84 Further flush, stand and pre-into supply bacti will be required - otherwise ok to sign off
Diddington Brampton pumps (Section 8 of Diddington commissioning plan)																		
Diddington incoming water (source supply)	17423554	18/09/2017	0	0	0, 0	1	2T	7.67	1.8	0.13	765	161	< 0.014	1, 0	11102	n/a	n/a	0.16/1.06
Pump P1H00005 sample tap	17423557 17424414 17426233	18/09/2017	0	0	0, 1	1	2T	7.62	0.8	1.21	773	152	< 0.014	1, 0	11102	R.[redacted] 20/12/2017	R.[redacted] 20/12/2017	Iron = 136 ug/L <0.14/0.58 - large drop in residual, needs rechecking
Pump P1H00006 sample tap	17423558 17424415 17426234	18/09/2017	0	0	0, 1	n/d	2T	7.64	1.4	0.83	772	147	< 0.014	1, 0	11102	R.[redacted] 20/12/2017	R.[redacted] 20/12/2017	Iron = 102 ug/L <0.12/0.58 - large drop in residual, needs rechecking
Diddington incoming water (source supply)	17458476	05/10/2017	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/d	n/a	n/a	n/a	n/a	n/a	n/a	n/a	Iron = 26 ug/L <0.05/0.10 - low residual due to source water being Diddington reservoir, that had been filled slowly
Pump P1H00001 sample tap	17458474	05/10/2017	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/d	n/a	n/a	n/a	n/a	n/a	R.[redacted] 20/12/2017	R.[redacted] 20/12/2017	Iron = 100 ug/L No lab turbidity <0.05/0.06 - low residual due to being fed from Diddington reservoir that had been filled slowly Further flush, stand and pre-into supply bacti will be required - otherwise ok to sign off
Pump P1H00002 sample tap	17458475	05/10/2017	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/d	n/a	n/a	n/a	n/a	n/a	R.[redacted] 20/12/2017	R.[redacted] 20/12/2017	Iron = 68 ug/L No lab turbidity <0.05/0.07 - low residual due to being fed from Diddington reservoir that had been filled slowly Further flush, stand and pre-into supply bacti will be required - otherwise ok to sign off
Pump 5 sample tap	17466621	11/10/2017	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.18	n/a	n/a	n/a	n/a	n/a	R.[redacted] 20/12/2017	R.[redacted] 20/12/2017	Further flush, stand and pre-into supply bacti will be required - otherwise ok to sign off
Pump 6 sample tap	174666622	11/10/2017	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.21	n/a	n/a	n/a	n/a	n/a	R.[redacted] 20/12/2017	R.[redacted] 20/12/2017	Further flush, stand and pre-into supply bacti will be required - otherwise ok to sign off
Ampthill pipeline (Section 9 of Diddington commissioning plan)																		
Ampthill connection (source supply)	17550999	01/12/2017	0	0	0, 1	1	2T	7.7	0.6	0.13	797	185	< 0.014	0, 0	11203	n/a	n/a	0.06/0.92
Pump P1H00006 discharge point (end of main)	17550997	01/12/2017	0	0	0, 0	1	1Z	7.92	0.7	0.12	799	183	< 0.014	0, 0	11203	R.[redacted] 20/12/2017	R.[redacted] 20/12/2017	<0.05/0.71 Over 20% drop in chlorine, need to flush, stand and remeasure chlorine - otherwise samples are ok though a further bacti will later be required
Ampthill connection (source supply)	17561363 17561455	08/12/2017	0	0	0, 0	1	1Z	n/a	n/a	0.15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.06/1.02
Pump P1H00006 discharge point (end of main)	17561364 17561454	08/12/2017	0	0	0, 0	1	1Z	n/a	n/a	0.11	n/a	n/a	n/a	n/a	n/a	R.[redacted] 20/12/2017	R.[redacted] 20/12/2017	0.05/0.94 Further flush, stand and pre-into supply bacti will be required - otherwise ok to sign off
Diddington Ampthill pumps (Section 10 of Diddington commissioning plan)																		
Ampthill connection (source supply)	17559449	07/12/2017	0	0	0, 36	1	1Z	8.14	1.1	0.31	778	188	< 0.014	0, 0	11203	v	n/a	0.06/0.18 - low due to source being Diddington res which isn't turning over well.
Ampthill pump P1H00004 (marked onsite as P1H00003)	17559447	07/12/2017	0	0	0, 122	1	1Z	8.01	1.4	4.41	782	187	0.0166	0, 0	11203	~	~	0.05/0.19 - low but same as supply 87 ug/L iron Need flush, stand and bacti/turbidity taken
Ampthill pump P1H00005 (marked onsite as P1H00002)	17559446	07/12/2017	0	0	0, 42	1	1Z	8.18	1.2	0.35	777	187	0.0153	0, 0	11203	R.[redacted] 20/12/2017	R.[redacted] 20/12/2017	0.05/0.19 - low but same as supply 60 ug/L iron Further flush, stand and pre-into supply bacti will be required - otherwise ok to sign off
Ampthill pump P1H00006 (marked onsite as P1H00001)	17559448	07/12/2017	0	0	0, 4	1	1Z	8.15	1.1	0.61	777	190	0.0181	0, 0	11203	R.[redacted] 20/12/2017	R.[redacted] 20/12/2017	<0.05/0.17 - low but same as supply 85 ug/L iron Further flush, stand and pre-into supply bacti will be required - otherwise ok to sign off
Diddington reservoir outlet (source supply)	17574748 17574786	19/12/2017	0	0	0, 12	1	2T	n/d	n/d	0.15	n/d	n/d	n/d	n/d	n/a	n/a	n/a	0.05/0.39 - low due to source being Diddington res which isn't turning over well.
Ampthill pump P1H00004 (marked onsite as P1H00003)	17574749 17574785	19/12/2017	0	0	0, 1	1	2T	n/d	n/d	0.54	n/d	n/d	n/d	n/d	n/a	R.[redacted] 22/12/2017	R.[redacted] 22/12/2017	0.05/0.38 - low but same as supply Further flush, stand and pre-into supply bacti will be required - otherwise ok to sign off
Brampton and Ampthill Surge vessels (Section 11 of Diddington commisioning plan)																		
Northern supply (source supply)	17401261	01/09/2017	0	0	12, 17	1	1Z	7.58	0.6	0.1	763	179	< 0.014	0, 0	11112	n/a	n/a	<0.05/0.49
Brampton pressure vessel	17401260	01/09/2017	0	0	0, 0	1	2T	7.68	0.8	0.08	766	179	< 0.014	1, 0	11112	R.[redacted] 12/01/2018	R.[redacted] 12/01/2018	<0.05/0.37 Further flush, stand and pre-into supply bacti will be required - otherwise ok to sign off
Brampton Northern supply (source supply)	17551003	01/12/2017	0	0	0, 1	1	1Z	7.69	0.6	0.11	803	185	< 0.014	0, 0	11111	n/a	n/a	0.06/0.92
Ampthill pressure vessel	17550998	01/12/2017	0	0	0, 2	1	1Z	7.69	0.6	0.26	796	186	< 0.014	1, 0	11111	R.[redacted] 12/01/2018	R.[redacted] 12/01/2018	0.02/0.83 Further flush, stand and pre-into supply bacti will be required - otherwise ok to sign off
Diddington reservoir (Section 13 of Diddington commissioning plan)																		
Diddington incoming water (source supply)	17456944	05/10/2017	0	0	0, 0	1	1Z	7.57	1	0.14	775	180	< 0.014	1, 0	11141	n/a	n/a	0.05/0.84
Diddington West cell (1) hatch 1	17456941	05/10/2017	0	0	1, 0	1	1Z	7.91	1	0.18	771	185	0.0143	0, 0	11141	~	~	<0.05/0.18 - large drop in residual due to res being filled slowly Samples satisfactory, but will need a further MIC set to be taken before signoff NOTE - Samples taken from WEST cell only
Diddington West cell (1) hatch 2	17456942	05/10/2017	0	0	0, 0	1	1Z	7.95	1.1	0.17	771	186	< 0.014	1, 0	11141	~	~	<0.05/0.15 - large drop in residual due to res being filled slowly Samples satisfactory, but will need a further MIC set to be taken before signoff NOTE - Samples taken from WEST cell only
Diddington West cell (1) outlet main	17456943	05/10/2017	0	0	0, 0	1	1Z	7.96	1.1	0.14	769	187	0.0142	1, 0	11141	~	~	<0.05/0.16 - large drop in residual due to res being filled slowly Samples satisfactory, but will need a further MIC set to be taken before signoff NOTE - Samples taken from WEST cell only
Diddington West cell (1) hatch 1 (res at 31%)	18031338	25/10/2017	0	0	0, 0	n/d	1Z	7.93	1.4	1.46	799	193	0.0184	0, 0	11340	~	~	<0.06/0.72 - drop in residual due to res being filled slowly Taste not completed, elevated turbidity. Will be resampled (full MIC) once at 60%
Diddington West cell (1) hatch 2 (res at 31%)	18031339	25/10/2017	0	0	1, 1	n/d	1Z	7.92	1	0.38	794	192	< 0.014	0, 0	11340	~	~	<0.05/0.72 - drop in residual due to res being filled slowly Taste not completed, elevated turbidity. Will be resampled (full MIC) once at 60%
Diddington West cell (1) outlet main	18032842	26/01/2017	0	0	1, 6	n/d	1Z	7.93	1.2	0.15	802	193	< 0.014	0, 1	11340	~	~	<0.08/0.92 - higher residual than upstream samples from res hatches, no reason given. Taste not completed. Will be resampled (full MIC) once at 60%
Diddington East cell (2) hatch 1 (res at 34%)	18031337	25/10/2017	0	0	1, 0	1	2T	7.9	1.2	0.11	783	193	< 0.014	0, 0	11340	~	~	<0.06/0.69 - drop in residual due to res being filled slowly Will be resampled (full MIC) once at 60%
Diddington East cell (2) hatch 2 (res at 34%)	18031336	25/10/2017	0	0	0, 0	1	2T	7.9	1.3	0.13	797	196	< 0.014	0, 0	11340	~	~	<0.05/0.65 - drop in residual due to res being filled slowly Will be resampled (full MIC) once at 60%
Diddington East cell (2) outlet main	18032844	26/01/2701	0	0	0, 0	1	1Z	7.93	0.9	0.24	800	195	< 0.014	0, 1	11141	~	~	<0.08/0.75 - drop in residual due to res being filled slowly Will be resampled (full MIC) once at 60%
Diddington reservoir incoming water	18059791	07/02/2018	0	0	0, 0	n/d	1Z	7.77	1	0.22	788	199	0.1019	0, 0	11384	n/a	n/a	Chlorines 0.08/0.85 Missing taste, aluminium a little elevated - need t&o and Al resamples
Diddington West cell (1) hatch 1 (res around 60%)	18059788	07/02/2018	0	0	0, 4	n/d	1Z	7.97	0.9	0.23	789	201	0.0343	1, 0	11384	R.[redacted] 26/02/2018	R.[redacted] 26/02/2018	Chlorines 0.05/0.76 24 hour stand Missing taste, aluminium a little elevated - need t&o and Al resamples
Diddington West cell (1) hatch 2 (res around 60%)	18059790	07/02/2018	0	0	1, 0	n/d	1Z	7.95	1	0.48	802	249	0.053	1, 0	11384	R.[redacted] 26/02/2018	R.[redacted] 26/02/2018	Chlorines 0.08/0.85 24 hour stand Missing taste, aluminium a little elevated - need t&o and Al resamples
Diddington West cell (1) outlet main	Covered by sample 18060918																	
Diddington reservoir incoming water	18059789	07/02/2018	0	0	2, 6	n/d	2T	7.95	0.9	0.4	794	193	0.0382	1, 0	11384	n/a	n/a	Chlorines 0.09/0.85 24 hour stand Missing taste, aluminium a little elevated - need t&o and Al resamples
Diddington East cell (2) hatch 1 (res around 60%)	18059787	07/02/2018	0	0	3, 34	n/d	1Z	7.96	1.3	0.42	788	199	0.0813	1, 0	11384	R.[redacted] 26/02/2018	R.[redacted] 26/02/2018	Chlorines 0.08/0.81 24 hour stand Slightly elevated 3-day plate, will be resampled as part of into supply sampling Missing taste, aluminium a little elevated - need t&o and Al resamples
Diddington East cell (2) hatch 2 (res around 60%)	18059792	07/02/2018	0	0	2, 4	n/d	1Z	7.93	1.1	0.34	793	189	0.0151	1, 0	11384	R.[redacted] 26/02/2018	R.[redacted] 26/02/2018	Chlorines 0.08/0.97 24 hour stand Missing taste, aluminium a little elevated - need t&o and Al resamples
Diddington East cell (2) outlet main	Covered by sample 18060920																	

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Diddington reservoir inlet West cell (1)	18080154	20/02/2018	n/a	n/a	n/a	n/d		1Z	7.95	1.2	0.27	798	182	< 0.014	n/a	n/a	R.[redacted] 26/02/2018	R.[redacted] 26/02/2018	Chlorines 0.07/0.96 Sample not tasted, agreed with [redacted] that asset can be put into supply after onsite taste and odour checks are reported as satisfactory on the into-supply day.
Diddington West cell (1) hatch 1 (res around 60%)	18080156	20/02/2018	n/a	n/a	n/a	n/d		1Z	7.98	1.2	0.06	797	188	0.0242	n/a	n/a	R.[redacted] 26/02/2018	R.[redacted] 26/02/2018	Chlorines <0.05/0.51 Aluminium just above target standard, but taken with a different dip bucket to cell 2, which was below LOD. Suspect the slightly raised aluminium is due to the bucket used, and is satisfactory. Sample not tasted, agreed with [redacted] that asset can be put into supply after onsite taste and odour checks are reported as satisfactory on the into-supply day.
Diddington West cell (1) hatch 2 (res around 60%)	18080157	20/02/2018	n/a	n/a	n/a	n/d		1Z	7.8	1.4	0.29	802	183	0.0255	n/a	n/a	R.[redacted] 26/02/2018	R.[redacted] 26/02/2018	Chlorines 0.05/0.64 Aluminium just above target standard, but taken with a different dip bucket to cell 2, which was below LOD. Suspect the slightly raised aluminium is due to the bucket used, and is satisfactory. Sample not tasted, agreed with [redacted] that asset can be put into supply after onsite taste and odour checks are reported as satisfactory on the into-supply day.
Diddington reservoir inlety East cell (2)	18080155	20/02/2018	n/a	n/a	n/a	n/d		1Z	7.81	1.3	0.15	804	184	< 0.014	n/a	n/a	R.[redacted] 26/02/2018	R.[redacted] 26/02/2018	Chlorines 0.06/0.84 Sample not tasted, agreed with [redacted] that asset can be put into supply after onsite taste and odour checks are reported as satisfactory on the into-supply day.
Diddington East cell (2) hatch 1 (res around 60%)	18080158	20/02/2018	n/a	n/a	n/a	n/d		1Z	7.96	1.1	0.08	797	188	< 0.014	n/a	n/a	R.[redacted] 26/02/2018	R.[redacted] 26/02/2018	Chlorines <0.05/0.58 Sample not tasted, agreed with [redacted] that asset can be put into supply after onsite taste and odour checks are reported as satisfactory on the into-supply day.
Diddington East cell (2) hatch 2 (res around 60%)	18080159	20/02/2018	n/a	n/a	n/a	n/d		1Z	7.95	1.1	0.12	797	190	< 0.014	n/a	n/a	R.[redacted] 26/02/2018	R.[redacted] 26/02/2018	Chlorines <0.05/0.59 Sample not tasted, agreed with [redacted] that asset can be put into supply after onsite taste and odour checks are reported as satisfactory on the into-supply day.
Diddington reservoir sample taps (Not in commissioning plan, formal full MIC not needed, added to this form for completeness)																			
Diddington reservoir sample tap West cell (1)	18060918	08/02/2018	0	0	3, 0	1		1Z	7.9	0.9	0.08	785	193	< 0.014	0, 0	11395	R.[redacted] 19/02/2018	R.[redacted] 19/02/2018	Chlorines 0.04/0.52 36 hour reservoir stand, sample line flushed Sample results satisfactory, but chlorine levels erratic on samples, passed but mains need flushing until residuals are comparable with reservoir (completed 20/02/2018, see tab) Further flush, stand and pre-into supply bacti will be required - otherwise ok to sign off
Diddington reservoir sample tap East cell (2)	18060920	08/02/2018	0	0	3, 0	1		1Z	7.89	1.2	0.12	799	191	< 0.014	0, 0	11395	R.[redacted] 19/02/2018	R.[redacted] 19/02/2018	Chlorines 0.09/0.85 36 hour reservoir stand, sample line flushed Sample results satisfactory, but chlorine levels erratic on samples, passed but mains need flushing until residuals are comparable with reservoir (completed 20/02/2018, see tab) Further flush, stand and pre-into supply bacti will be required - otherwise ok to sign off
Diddington reservoir animal net tap	18060921	08/02/2018	0	0	1, 8	1		1Z	8.03	1.1	0.23	801	190	< 0.014	0, 0	11395	R.[redacted] 19/02/2018	R.[redacted] 19/02/2018	36 hour reservoir stand, sample line flushed Sample results satisfactory, but chlorine levels erratic on samples, passed but mains need flushing until residuals are comparable with reservoir (completed 20/02/2018, see tab) Further flush, stand and pre-into supply bacti will be required - otherwise ok to sign off
Diddington reservoir combined sample tap (Regulatory tap W01DIDDCR)	18060919	08/02/2018	0	0	2, 8	1		1Z	8.08	1.2	0.23	792	190	< 0.014	0, 0	11395	R.[redacted] 19/02/2018	R.[redacted] 19/02/2018	Chlorines 0.02/0.30 36 hour reservoir stand, sample line flushed Sample results satisfactory, but chlorine levels erratic on samples, passed but mains need flushing until residuals are comparable with reservoir (completed 20/02/2018, see tab) Also having laboratory commissioning samples taken prior to entering supply
Diddington reservoir combined sample tap (Regulatory tap W01DIDDCR) - lab commissioning sample	18070553	15/02/2018	0	0	30, 20	1		1Z	8.06	n/a	0.27	801	n/a	n/a	n/a	n/a	~	~	Chlorines <0.05/0.24 Chlorine levels low and plates slightly elevated, further commissioning sample to be taken
Diddington reservoir combined sample tap (Regulatory tap W01DIDDCR) - lab commissioning sample	18077909	21/02/2018	0	0	2, 259	1		1Z	7.9	n/a	0.15	798	n/a	n/a	n/a	n/a	R.[redacted] 26/02/2018	R.[redacted] 26/02/2018	Chlorines 0.05/0.37 Chlorine levels lower than seen in the body of water, possibly due to dropping off in the outlet main, needs keeping a close eye on once the reservoir is in supply. Elevated 3-day plate count. Agreed with [redacted] that the tap and asset can be commissioned with this level of 3-day plate counts, and levels monitored closely (no indication of a wider issue in the asset, and outlet main is not currently in supply so not turning over well). IM sample to be taken after reservoir goes into supply.
Diddington reservoir mains recycle lines (Valve bypasses, being treated as mains fittings as <6m long, so bacti only, added to this form for completeness)																			
Hannington recycle main source supply	18070574	15/02/2018	0	0	0, 0	n/a		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	Chlorines 0.07/0.98
Hannington recycle main upstream	18070571	15/02/2018	0	0	0, 2	n/a		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R.[redacted] 19/02/2018	R.[redacted] 19/02/2018	Chlorines 0.06/0.93
Hannington recycle main downstream	18070575	15/02/2018	0	0	0, 7	n/a		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R.[redacted] 19/02/2018	R.[redacted] 19/02/2018	Chlorines 0.06/0.96
Ampthill recycle main source supply	18070576	15/02/2018	0	0	0, 135	n/a		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R.[redacted] 19/02/2018	R.[redacted] 19/02/2018	Chlorines 0.06/0.96
Ampthill recycle line	18070573	15/02/2018	0	0	0, 6	n/a		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R.[redacted] 19/02/2018	R.[redacted] 19/02/2018	Chlorines 0.06/0.95
Ampthill recycle line upstream	18079736	22/02/2018	0	0	1, 0	n/a		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R.[redacted] 26/02/2018	R.[redacted] 26/02/2018	Chlorines 0.07/0.94
Ampthill recycle line downstream	18079738	22/02/2018	0	0	0, 0	n/a		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R.[redacted] 26/02/2018	R.[redacted] 26/02/2018	Chlorines 0.08/0.95
Diddington reservoir pre into-supply bacti samples (Section 14 of Diddington commissioning plan)																			
Diddington reservoir West cell (1) inlet	18077897	21/02/2018	0	0	2, 0	n/a		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R.[redacted] 26/02/2018	R.[redacted] 26/02/2018	Chlorines 0.07/0.94 Chlorines higher as representative of Grafham final water, rather than water that has been held in Diddington reservoir
Diddington reservoir West cell (1) hatch 1	18077896	21/02/2018	0	0	1, 18	n/a		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R.[redacted] 26/02/2018	R.[redacted] 26/02/2018	Chlorines 0.01/0.51
Diddington reservoir West cell (1) hatch 2	18077894	21/02/2018	0	0	3, 10	n/a		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R.[redacted] 26/02/2018	R.[redacted] 26/02/2018	Chlorines <0.05/0.64
Diddington reservoir East cell (2) inlet	18077898	21/02/2018	0	0	0, 3	n/a		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R.[redacted] 26/02/2018	R.[redacted] 26/02/2018	Chlorines 0.06/0.84 Chlorines higher as representative of Grafham final water, rather than water that has been held in Diddington reservoir
Diddington reservoir East cell (2) hatch 1	18077899	21/02/2018	0	0	4, 3	n/a		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R.[redacted] 26/02/2018	R.[redacted] 26/02/2018	Chlorines 0.04/0.58
Diddington reservoir East cell (2) hatch 2	18077895	21/02/2018	0	0	4, 14	n/a		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R.[redacted] 26/02/2018	R.[redacted] 26/02/2018	Chlorines 0.02/0.59
Diddington reservoir sample tap West cell (1)	18076413	20/02/2018	0	0	0, 0	n/a		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R.[redacted] 26/02/2018	R.[redacted] 26/02/2018	Chlorines <0.05/0.50
Diddington reseroir sample tap East cell (2)	18076414	20/02/2018	0	0	4, 0	n/a		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R.[redacted] 26/02/2018	R.[redacted] 26/02/2018	Chlorines <0.05/0.55
Diddington reservoir Brampton pump 5	18076415	20/02/2018	0	0	0, 0	n/a		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R.[redacted] 26/02/2018	R.[redacted] 26/02/2018	Chlorines <0.05/0.44
Diddington reservoir Brampton pump 6	18076416	20/02/2018	0	0	0, 0	n/a		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R.[redacted] 26/02/2018	R.[redacted] 26/02/2018	Chlorines <0.05/0.44
Diddington reservoir Brampton interconnector	18076417	20/02/2018	0	0	0, 0	n/a		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R.[redacted] 26/02/2018	R.[redacted] 26/02/2018	Chlorines <0.05/0.43
Diddington reservoir Brampton/Hannington interconnector	18077900	21/02/2018	0	0	2, 2	n/a		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R.[redacted] 26/02/2018	R.[redacted] 26/02/2018	Chlorines 0.09/0.76

Note (RB 26/02/1018): All assets not already into supply approved on 26/02/2018, with the exception of Ampthill main, Ampthill pumps and Ampthill surge vessel (Sections 9, 10 and part of 11 of the Diddington commissioning plan. Expected into supply date for assets is 27/02/2018 under MIP W/260218/05 Rev6. Ampthill sections will be sampled and commissioned at a later date.

Diddington reservoir into supply samples (as per Diddington into supply MIP)																			
Diddington reservoir combined outlet (W01DIDDCR)	18086011	27/02/2018	0	0	0, 77	n/a		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	Chlorines <0.05/0.57 Chlorine residual lower than Grafham final as water has been standing in the reservoir during the commissioning phase, with regular topups and drains to ensure a residual >0.5 mg/L is maintained
Diddington reservoir West cell (1) outlet	18086388 18086624	27/02/2018	0	0	0, 12	1		1Z	7.92	n/a	0.09	n/a	n/a	< 0.014	n/a	n/a	n/a	n/a	Chlorines 0.09/0.58
Diddington reservoir East cell (2) outlet	18086389 18086625	27/02/2018	0	0	1, 24	1		1Z	7.93	n/a	0.08	n/a	n/a	< 0.014	n/a	n/a	n/a	n/a	Chlorines 0.09/0.63
Grafham Brampton surge vessel	18086390	27/02/2018	0	0	1, 4	n/a		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	Chlorines 0.05/0.52
Ampthill mains and pumps pre into-supply bacti samples (Section 14 of Diddington commissioning plan)																			
Diddington Ampthill pump 1	18114930	13/03/2018	0	0	2, 139	n/a		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R.[redacted] 18/03/2018	R.[redacted] 18/03/2018	Chlorines <0.05/0.86
Diddington Ampthill pump 2	18114928	13/03/2018	0	0	0, 53	n/a		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R.[redacted] 18/03/2018	R.[redacted] 18/03/2018	Chlorines 0.05/0.81
Diddington Ampthill pump 3	18114929	13/03/2018	0	0	1, 66	n/a		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R.[redacted] 18/03/2018	R.[redacted] 18/03/2018	Chlorines 0.05/0.81
Diddington Ampthill connection	18114931	13/03/2018	0	0	2, 43	n/a		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R.[redacted] 18/03/2018	R.[redacted] 18/03/2018	Chlorines 0.07/0.92 Chlorines higher as representative of Grafham final water, rather than water from Diddington reservoir
Diddington Ampthill surge vessel	18114932	13/03/2018	0	0	0, 88	n/a		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R.[redacted] 18/03/2018	R.[redacted] 18/03/2018	Chlorines 0.06/0.88
Diddington Ampthill pump 1	18155723	04/04/2018	0	0	13, n/d	n/a		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R.[redacted] 04/04/2018	R.[redacted] 04/04/2018	Chlorines <0.06/0.50 No 3-day plates as put in as NM samples. 2-day plates higher than previously, need a good flush prior to commissioning and a downstream bacti after commissioning
Diddington Ampthill pump 2	18155724	04/04/2018	0	0	36, n/d	n/a		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R.[redacted] 04/04/2018	R.[redacted] 04/04/2018	Chlorines 0.06/0.80 No 3-day plates as put in as NM samples. 2-day plates higher than previously, need a good flush prior to commissioning and a downstream bacti after commissioning
Diddington Ampthill pump 3	18155725	04/04/2018	0	0	33, n/d	n/a		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R.[redacted] 04/04/2018	R.[redacted] 04/04/2018	Chlorines 0.07/0.78 No 3-day plates as put in as NM samples. 2-day plates higher than previously, need a good flush prior to commissioning and a downstream bacti after commissioning
Diddington Ampthill connection	18155728	04/04/2018	0	0	7, n/d	n/a		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R.[redacted] 04/04/2018	R.[redacted] 04/04/2018	Chlorines 0.08/0.87 No 3-day plates as put in as NM samples. 2-day plates higher than previously, need a good flush prior to commissioning and a downstream bacti after commissioning
Diddington Ampthill surge vessel	18155729	04/04/2018	0	0	2, n/d	n/a		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R.[redacted] 04/04/2018	R.[redacted] 04/04/2018	Chlorines 0.07/0.79 No 3-day plates as put in as NM samples. 2-day plates higher than previously, need a good flush prior to commissioning and a downstream bacti after commissioning

Insert more lines as necessary

** taste testing only to be performed on samples of potable water and after confirmation of clear bacteriological results*

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM						FORM NO:	2428
1	PROCESS ENGINEER/SCIENTIST TO SIGN AND DATE TO CONFIRM SAMPLES TAKEN ARE APPROPRIATE FOR THE MATERIALS LISTED IN PART A AND THAT EVERY PRODUCT HAS BEEN TESTED						
2	WATER QUALITY PERFORMANCE TEAM TO SIGN AND DATE TO CONFIRM APPROVAL FOR USE IN SUPPLY						
NOTE	OPERATIONAL SCIENTIST TO GIVE FINAL APPROVAL FOR THE MATERIAL OR EQUIPMENT TO ENTER SUPPLY						

Version 002 - June 2009

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

For materials to enter supply, Parts A and B must be signed and approved by Water Quality Performance Team

FORM NO: 2361

CONTACT NAME:	[redacted]	**CONTACT NUMBER:**	[redacted]	**DATE:**	18/04/2016
SITE:	Hannington Reservoir Site				
LOCATION ON SITE:	Reservoir 1A and 1B and new pipework/fittings as part of Grafham Resilience Scheme				
CONTRACTOR:	Stonbury Limited & JN Bentley				
WAT- NO. IF APPLICABLE:	WAT-06195				

USEFUL LINKS

CONTACT THE WATER QUALITY PERFORMANCE TEAM
HAWK - MATERIALS IN CONTACT
WRAS DIRECTORY
DWI APPROVED PRODUCTS LIST
BRITISH STANDARDS WEBSITE

PART A

LINE NO.	SUPPLIER	MANUFACTURER HOLDING APPROVAL (IF DIFFERENT FROM SUPPLIER)	PRODUCT NAME	BRIEF DESCRIPTION OF MATERIAL IN CONTACT WITH WATER	APPROVING BODY DWI / WRAS/ BSEN	APPROVING BODY REF	LARGE/ SMALL SURFACE AREA	1 PROJECT ENGINEER CONFIRMATION SIGN/DATE	2 WQPT - MATERIALS APPROVED SIGN/DATE	3 COMMENTS / ADVICE SIGN/DATE	Res 1a	Res 1b	Cross Connection	Cut IN	600MM Cross Connection	End of pipework
1	Stonbury Limited	BASF Construction Chemicals (UK) Ltd	MasterSeal 933**	Proprietary construction joint over-banding strip adhesive. (8 Meter length)	DWI	56/4/144	SMALL	[redacted] 18/04/2016	[redacted] 26/05/2016	This product must be cured in accordance with the cure curve provided in the IFU document otherwise this product must be cured for a minimum of 10 days at a minimum temperature of 70C.						
2	Stonbury Limited	BASF Construction Chemicals (UK) Ltd	MasterSeal 930**	Proprietary construction joint over-banding strip. (8 Meter length)	DWI	56/4/144	SMALL	[redacted] 18/04/2016	[redacted] 26/05/2016	This product must be cured in accordance with the cure curve provided in the IFU document otherwise this product must be cured for a minimum of 10 days at a minimum temperature of 70C.						
3	Electrosteel Castings Ltd	Electrosteel Castings Ltd	'Electrofresh Plus' Cement Mortar Lined Ductile Iron Pipe **with** seal coat (Copon Hycote 162 PWX), conforming to EN 545. Pipes include 500mm/1000mm pipework (flange spigot pipe, standard/double	New pipework laid from the reservoir to the existing outlet Hannington.pipework on the other side of the A43. Internal surface in	DWI	56/4/537	LARGE	A. [redacted] 10/05/2016	R. [redacted] 27/05/2016	This approval is for the pipe only. The tapers, tees and bends have been provided by Powerrun (item 10)						
4	Electrosteel Castings LtdB20:C26B20:C31B20:C34G19B	Electrosteel Castings Ltd	'Electrofresh' Cement Mortar Lined Ductile Iron Pipe **without** seal coat, conforming to EN 545. Pipes include 500mm/1000mm pipework (flange spigot pipe, standard/double spigot socket pipe).	New pipework laid from the reservoir to the existing outlet Hannington.pipework on the other side of the A43. Internal surface in	DWI	56/4/992	LARGE	A. [redacted] 10/05/2016	R. [redacted] 27/05/2016	This approval is for the pipe only. The tapers, tees and bends have been provided by Powerrun (item 10)						
5	Electrosteel Castings Ltd	Electrosteel Castings Ltd	Factory applied (India) epoxy 'Eco coat' coating on 500mm/1000mm Specials (socketed 45degree bend, 1000x200mm tee, 200x80mm taper).	Coating applied to internal and external surface of the carbon steel fittings, which is in direct contact with the water.	WRAS	1209502	SMALL	A. [redacted] 10/05/2016	R. [redacted] 09/06/2016	Cure for 6 minutes at 210°C and then cool in air. Is the coating applied on the fittings or the carbon steel pipe? **The coating is applied to the pipe at the factory in India.** Is this a Large surface area product as on the pipe? **The fittings are classed as a small surface area.**						
6	Electrosteel Castings Ltd	Akzo Nobel Powder Coatings GmbH	Factory applied (UK) epoxy 'Resicoat R4' coating on 500mm/1000mm Specials (socketed 45degree bend, 1000x200mm tee, 200x80mm taper).	Coating applied to internal and external surface of the carbon steel fittings, which is in direct contact with the water.	WRAS	1112500	SMALL	A. [redacted] 10/05/2016	R. [redacted] 09/06/2016	Is the coating applied on the fittings or the carbon steel pipe? **The coating is applied to the pipe at the factory in the UK.** Is this a Large surface area product as on the pipe? **The fittings are classed as a small surface area.**						
7	Electrosteel Castings Ltd	Thomas Grozier and Son Pty. Ltd.	BK Standard Lubricant	Pipe Lubricant used to assist in pushing the two pipes together, with gasket.	WRAS	1109550	SMALL	A. [redacted] 10/05/2016	[redacted] 26/05/2016	The material has been ordered and used. The work at Hannington will be completed before September (when approval expires), so even if additional material is required, it would be ordered before the expiry date.						
8	Electrosteel Castings Ltd	VIP Polymers Ltd	500mm EPDM Tyton Sit Plus Anchor Gasket with martensitic chromium nickel steel teeth with a chemical composition of: X 22Cr Ni17 with a steel grade of 1.4057 according to EN 10027	Rubber insert that fits inside the spigot socket connection between the 500mm pipes, to provide a seal. The teeth prevent the pipes coming apart.	WRAS	1112532	SMALL	A. [redacted] 10/05/2016	R. [redacted] 27/05/2016	The teeth are stainless steel, which has chromium and nickel in its composition. Martensitic steel is a variant of stainless steel. In either case, the teeth are installed within the rubber gasket, so will not be in direct contact with the water anyway. Approval given on the basis the teeth are not in contact with the water.						
9	Electrosteel Castings Ltd	Andhra Polymers Pvt. Ltd	1000mm EPDM Rubber Push Fit Gasket	Rubber insert that fits inside the spigot socket connection between the 1000mm pipes, to provide a good seal.	WRAS	1301552	SMALL	A. [redacted] 10/05/2016	[redacted] 26/05/2016							
10	Powerrun Project Management Ltd	Northpoint Ltd	Carbon Steel special fittings lined with Scotchkote 206N. Specials include spigoted tees, 1000x600mm concentric tapers, 500mm 45 degree bends, 1000mm 90 degree bends, 1000mm spigot pipe	Coating applied to internal and external surface of the carbon steel fittings, which is in direct contact with the water.	DWI	DWI 56/4/602	SMALL	A. [redacted] 10/05/2016	R. [redacted] 09/06/2016	This DWI number is for a pipe not fittings or a coating. **Powerrun manufacture pipework systems, which include specials, in both carbon steel and stainless steel. The DWI approval includes the skotchkote coating. See extract.** Is this a Large surface area product as on the pipe? **The fittings are classed as a small surface area.**						
11	Wolseley Utilities Ltd trading as Burdens	Semperit Technische Produkte GmbH	Gasket for 500mm pipework	Gasket between valve and pipe flanges	WRAS	1208502	SMALL	A. [redacted] 10/05/2016	[redacted] 26/05/2016							
12	Saint Gobain	BS Coatings	Factory applied epoxy powder coating to 500mm blank flanges.	Blank flange either in direct contact with the water, or separated by a valve. Generally used during commissioning.	WRAS	1503518	SMALL	A. [redacted] 10/05/2016	[redacted] 26/05/2016							
13	SIG PLC	Fosroc	Conbextra HF	High Flow Grout - To fill annulus between core drill and puddle pipe	N/A	N/A	N/A	N/A	N/A	**Note: None of this coating will be in contact with the water, as has been totally covered by the Flexcrete 851. Included for completeness only.**						
14	Flexcrete Technologies Ltd	Flexcrete Technologies Ltd	Flexcrete Cementitious Coating 851 White	Coating covering annulus of Conbextra HF - Surface ratio 89	DWI	DWI 56/4/95	SMALL	A. [redacted] 10/05/2016	R. [redacted] 27/05/2016							
15	Bentley	Adomast Manufacturing Ltd	Adoplug	Cementitious Repair Mortar used to plug construction bolt holes.	WRAS	1412517	SMALL	A. [redacted] 10/05/2016	[redacted] 26/05/2016	Must be used as per Mix and apply as per `Adomast Technical Specification 344', dated 3rd July 2014. Cure for 21 days@7°C.						
16	Hawker Electronics Ltd	Hawker Electronics Ltd	Light Duty Electrode Holder HPE7, consisting of polypropylene body cap and backnut, approved to BS6920:2000. The neoprene rubber 'o' ring fitted in the cap is detailed in item 35. Internally, SS collar	Light Duty Electrode Holder HPE7 suspended above the reservoir water level.	-	None - Risk assessment	SMALL	A. [redacted] 10/05/2016	R. [redacted] 31/10/2016	[redacted]						
17	Hawker Electronics Ltd	Hawker Electronics Ltd	Hawker Electrode Rod - Stainless Steel 316L Electrodes.	Electrode probes that are suspended from the electrode holder and hang vertically in the water.	-	SS Grade 316L	SMALL	A. [redacted] 10/05/2016	[redacted] 26/05/2016	The electrodes are stainless steel and not plastic coated, as first thought. The insulator between the probes and the bracket is now in the form of a PVCu insulator block mounted on the bracket. See comments in items 16 and 36.						
18	Hawker Electronics Ltd	Hawker Electronics Ltd	Threaded Rod Type 211 to join electrodes together for longer lengths. Stainless Steel 316L.	Threaded Rod between electrodes. In direct contact with the water when level is above joint length.	-	SS Grade 316L	SMALL	A. [redacted] 10/05/2016	[redacted] 26/05/2016							
19	Hawker Electronics Ltd	Hawker Electronics Ltd	Hawker Type 189/X Threaded Coupler for Rod Electrodes Stainless Steel 316L	Coupler to connect two shorter electrode lengths. In direct contact with water when level is above joint length.	-	SS Grade 316L	SMALL	A. [redacted] 10/05/2016	[redacted] 26/05/2016							
20	Hawker Electronics Ltd	Hawker Electronics Ltd	Single Electrode Holder Mounting Bracket Type 71/SS Stainless Steel 316	2No. Electrode holders to sit in 2No. Single mounting brackets within cell 1A.	-	SS Grade 316	SMALL	A. [redacted] 10/05/2016	[redacted] 26/05/2016							
21	Hawker Electronics Ltd	Hawker Electronics Ltd	Double Electrode Holder Mounting Bracket Type 72/SS Stainless Steel 304	2No. Electrode holders to sit in 1No. Double mounting brackets within cell 1A.	-	SS Grade 304	SMALL	A. [redacted] 10/05/2016	[redacted] 26/05/2016							
22	Hawker Electronics Ltd	Hawker Electronics Ltd	Electrode Steady Bracket Type 75/SS Stainless Steel 316 with UPVC Insulator	Electrode Steady Bracket Type 75/SS Stainless Steel 316 with UPVC Insulator. Electrodes hang inside the bracket, to keep them captive and	-	SS Grade 316	SMALL	A. [redacted] 10/05/2016	[redacted] 26/05/2016							
23	Electrix Ltd	Electrix Ltd	Stainless Steel 316 Flexible Conduit	Flexible Conduit. Used to contain electrical cabling.	-	SS Grade 316	SMALL	A. [redacted] 10/05/2016	[redacted] 26/05/2016							
24	Vulcan Industrial Fasteners Ltd	Flexitallic Ltd	1000mm full faced Novus Gaskets, used between the 1000mm pipework and other fittings (non return valve, valve).	Inner annulus (thickness of gasket) will be in contact with the potable water. nitrile rubber/aramid fibre gasket	WRAS	1510515	SMALL	A. [redacted] 10/05/2016	[redacted] 26/05/2016							
25	Vulcan Industrial Fasteners Ltd	Dexine Rubber Company Ltd	80mm EPDM Gaskets, used between the tee and the 80mm air valve/hydrant.	Inner annulus (thickness of gasket) will be in contact with the potable water.	WRAS	1401510	SMALL	A. [redacted] 10/05/2016	[redacted] 26/05/2016							
26	AVK UK Ltd	AVK Valves (Anhui) Co. Ltd	500mm and 600 mm Metal Faced Gate Valve Series 54 DN16 Buried Service Spec. Product Code 54-0500-31-1101100 and 54-0600-31-1101100 respectively.	Internal surfaces of the valve will be in direct contact with the potable water.	WRAS	1311067	SMALL	A. [redacted] 10/05/2016	R. [redacted] 27/05/2016	All series 54 valves are covered by WRAS number						
27	AVK UK Ltd	Henkel Ltd.	1000mm Metal Faced Gate Valve 5410003X1302000 PN16 F16 Loctite 5400 Adhesive	Internal surfaces of the valve will be in direct contact with the potable water.	WRAS	1112509	SMALL	A. [redacted] 10/05/2016	[redacted] 26/05/2016							
28	AVK UK Ltd		PN16 Dismantling Joints (500, 600, 1000mm), PN16 Flange Adaptors (500 and 1000mm) and Couplers (935mm and 1048mm OD) - All are epoxy coated fittings with an EPDM seal.	Internal surfaces of the valve will be in direct contact with the potable water.	WRAS	1407505	SMALL	A. [redacted] 10/05/2016	[redacted] 26/05/2016							
29	AVK UK Ltd	ARI Flow Control Accessories	Air release valve with an epoxy coating, EPDM and NBR seals. 80mm Air Valves - Model No 701/40 DN50 ball valve DN80 flange	Internal surfaces of the valve will be in direct contact with the potable water.	WRAS	1404099	SMALL	A. [redacted] 10/05/2016	R. [redacted] 27/05/2016	The model is a 'D' (double) acting air valve, so is the 'D Series' referred to on the WRAS certificate.						
30	AVK UK Ltd	Aqua-Gas Manufacturing Ltd	80mm Fire hydrant with epoxy powder coated ductile iron body. MK2 Clearway Fire Hydrant series 29/90.	Internal powder coated body will be in direct contact with the potable water.	WRAS	1301080	SMALL	A. [redacted] 10/05/2016	[redacted] 26/05/2016							
31	Industrial Valves Ltd	Akzo Nobel Powder Coatings GmbH	1000mm Non Return Valve wafer dual plate check valve c/w low pressure springs Cast iron Epoxy Powder Coated valve body	Internal powder coated body, plates, springs and seal will be in direct contact with the potable water.	WRAS	1112500	SMALL	A. [redacted] 10/05/2016	[redacted] 26/05/2016							
32	Keyline Builders Merchants Ltd	Arkema	1048mm Viking Johnson Coupler with epoxy coating and gasket Rilsan polyamide powder coatings	Internal surfaces of the valve will be in direct contact with the potable water.	WRAS	1411519	SMALL	A. [redacted] 10/05/2016	[redacted] 26/05/2016							
33	Hope Construction Materials Ltd	Grace Construction Products Ltd	Cement Grout for Annulus in Cell 1b - Concrete with Admixture - See separate tab for e-mail chain on Reg 31 Compliance for WRDA 17 and ADVA 650.	To fill annulus between core drill and puddle pipe. In direct contact with the water in the reservoir. Surface Area 89.	Reg 31	-	SMALL	A. [redacted] 13/06/2016	R. [redacted] 28/07/2016	See separate tab for e-mail chain on Reg 31 Compliance for Admixture						
34	Powerrun Project Management Ltd	Spencer Coatings Ltd	Acothane DW Blue	Coating applied to the weld seam, inside the 900mm pipe, so in direct contact with the potable water.	DWI	56/4/1059	SMALL	A. [redacted] 07/07/2016	R. [redacted] 28/07/2016	The product must be cured for a minimum period of 7 days at a minimum temperature of 3°C.						
35	Hawker Electronics Ltd	Elastotech srl	Neoprene o-ring	O-rings for Hawker HPE7 Electrode Holder, to replace standard non-WRAS approved o-rings. O-rings housed within electrode holder screw cap, so minimal contact with any condensation that may form.	WRAS	1301500	SMALL	A. [redacted] 07/07/2016	R. [redacted] 28/07/2016	Approved on the assumption the O-rings are within the range of in-radii sizes between 0.2mm and 5mm - the scope of the WRAS approval **The wall thickness of the o-ring, which I am assuming is the 'in-radii size', is less than 5mm.**						
36	Hawker Electronics Ltd	n/a	UPVC Insulator for Electrode Steady Bracket	Pvc–u disk supplied in rod form by Oadby Plastics, machined into insulators. Material manufactured by Manifattura Cattaneo Spa.	-	None - Risk assessment	SMALL	A. [redacted] 11/10/2016	R. [redacted] 31/10/2016	[redacted]						
37	Electrosteel Castings Ltd	3M United Kingdom Plc. - Infrastructure Protection Division (IsPD)	3M skotchkote Epoxy Coating 162PWX (Part A) Base for Blue and 3M skotchkote Epoxy Coating 162PWX (part B) Activator (for Blue),	Used on the cut ends of pipes. In theory, it will not be in direct contact with water, as the gaskets will seal the pipe.	WRAS	1109548	SMALL	A. [redacted] 07/07/2016	R. [redacted] 28/07/2016	Approved on the assumption the material is already purchased, as approval lapses at the end of Sept 2016 **This product has already been purchased**						
38	Franklyn Yates Engineering	Azko Nobel Powder Coatings GmbH	1.9M Scotchkoted Steel Special 935MM Spigoted offset Tee with 600MM Flanged Branch	New pipework laid for cross-connection	WRAS	1112500	SMALL	[redacted] 08/11/2016	R. [redacted] 05/05/2017	can you either confirm the item was purchased before December 2016. This Item was ordered 01/12/16 (BB)						
39	AQUA-GAS AVK LTD	Valspar Powder Coatings Ltd	Factory applied epoxy powder coated fabricated coupling 935MM (with EPDM Rubber Seal - see item below)	Internal surfaces of the coupling will be in direct contact with the potable water.	WRAS	1407505	SMALL	K. [redacted] 08/11/2016	R. [redacted] 28/12/2016	Apply as per manufacturer's instructions. Post-cure for 10 minutes at 180°C						
40	AQUA-GAS AVK LTD	Eastland Compounding	Coupling EPDM Rubber Seal	Internal surfaces of the seal will be in direct contact with the potable water.	WRAS	1511505	SMALL	K. [redacted] 08/11/2016	R. [redacted] 28/12/2016							
41	SIG PLC	Sika Corporation	Sika Hydrotite Hydrophilic Waterstop CJ0725 25X7MM 0M Roll	THIS PRODUCT WILL NOT BE IN CONTACT WITH THE POTABLE WATER, AS IT WILL BE COMPLETELY ENCASED IN CONCRETE. Please see the 'comments' cell and the separate worksheet 'Sika Hydrotite' for more information.	-B57:T68	-	-	A. [redacted] 09/12/2016	R. [redacted] 28/12/2016	This product is used to provide a water stop seal between the new outlet pipes and the core drilled reservoir wall of cell 1a and cell 1b. One band of the product will be between the outlet pipe and the cement infill annulus (see item 33) and one band of the product will be between the internal core drilled face of the reservoir wall and the concrete infill annulus. THIS PRODUCT WILL NOT BE IN CONTACT WITH THE POTABLE WATER, AS IT WILL BE COMPLETELY ENCASED IN CONCRETE. Please see the separate worksheet 'Sika Hydrotite' for more information. RB 28/12/16 - Agreed this product does not come under the scope of Regulation 31, but included on the MIC form completeness and for information on construction materials.						

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

FORM NO: 2361

42	SIG PLC	Flexcrete Technologies Ltd	Flexcrete Fast Fill R4 Rapid Repair Mortar	Mortar used to fill bolt holes. Surface area of grout holes will be in contact with the potable water	WRAS	1408533	SMALL	[redacted] 19/12/2016	R.[redacted] 28/12/2016	Mix mortar (in powder form) with water in a 1000:140 mass ratio. Cure for 21 days@7°C. For use with water up to 23°C. This material is only approved for the mixing & curing conditions that appear on the approval. If the mix & cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.
43	George Green	Northpoint Ltd	1000mm Steel Specials. Pipeline coated with scotchkote 206N.	Internal surfaces of the pipework will be in contact with Potable Water.	DWI	56/4/602	LARGE	[redacted] 04/02/17	R.[redacted] 05/05/2017	Use of the product must be in accordance with the Instructions for Use: Instructions for Use of Pipes lined with Scotchkote 206NTM. Issue 04 dated 06 May 2013
44	UTS ENGINEERING LTD		1018MM OD PN16 FLANGE ADAPTOR	Internal surfaces of the Flange adaptor will be in contact with Potable Water.	WRC	PT/394/0915	Small	[redacted] 02/05/17	R.[redacted] 19/05/2017	WRc approved products confirmed with WRc to comply with Reg 31 for the life of the approval certificate (approved until 15/09/2017) and certification will be removed if any approvals lapse in this period.
			DN600 DISMANTLING JOINT EPDM PN16	Internal surfaces of the Dismantling joint will be in contact with Potable Water.	WRC	PT/394/0915	Small	[redacted] 11/04/17	R.[redacted] 05/05/2017	WRc approved products confirmed with WRc to comply with Reg 31 for the life of the approval certificate (approved until 15/09/2017) and certification will be removed if any approvals lapse in this period.
45	Saint Gobain	BS Coatings	80mm double flange pipework joiners (168-750mm lengths), 80mm all flanged tee. 600mm double flange bend 22.5 degree	Eurokote factory applied blue epoxy powder coating. Coated internal surfaces of the fittings will be in contact with Potable Water.	WRAS	1503518	Small	[redacted] 11/04/17	R.[redacted] 06/06/2017	Factory applied epoxy powder coatings. Apply as per manufacturer's instructions. Cure for 5 minutes@200°C. For use with water up to 85°C. This material is only approved for the curing conditions that appear on the approval. If the cure conditions are varied from those specified on the approval then the material is not covered by the scope of the approval.
46	RCF BOLT & NUT	Dexine Rubber Company Ltd	1000mm full faced gasket 6mm EPDM. 1000mm full faced gasket 3mm EPDM, 600mm full faced gasket EPDM	THICKNESS OF GASKET WILL BE IN CONTACT WITH WATER	WRAS	1401510	Small	[redacted] 11/04/17	R.[redacted] 05/05/2017	
47	Electrosteel Castings Ltd	Electrosteel Castings Ltd	Powder coated Double flanged 1000MM 22.5 degree Bend (Eco Coat FBE Powder E/105/7010 powder coated)	Factory applied blue coloured (Eco Coat FBE Powder E/105/7010)	WRAS	1209502	Small	[redacted] 11/04/17	R.[redacted] 17/05/2017	Factory applied, blue coloured, fusion bonded epoxy coating. Apply as per manufacturer`s instructions. Cure for 6 minutes at 210°C and then cool in air. For use with water up to 85°C
48	Electrosteel Castings Ltd	Electrosteel Castings Ltd	Electro fresh 600mm x5500MM spigot socket pipe	'Electrofresh' Cement Mortar Lined Ductile Iron Pipe without seal coat, conforming to EN 545.	DWI	56/4/992	Large	[redacted] 11/04/17	R.[redacted] 17/05/2017	Use of the product must be in accordance with the Instructions for Use: Instructions for Use for Electrofresh Pipes at Site Work Instruction: WC-04-02 Issue No: 03 Rev. C Issue Date: 25.02.2016 Before connection to supply, the water undertaker or their approved agent, must carry out tests to establish that migration from the cement mortar lining will not cause a contravention of the upper prescribed concentration for hydrogen ion in the relevant regulations.
49	Electrosteel Castings Ltd	Electrosteel Castings Ltd	Powder Coated 600mm flange socket piece	Factory applied blue coloured (Eco Coat FBE Powder E/105/7010)	WRAS	1209502	Small	[redacted] 11/04/17	R.[redacted] 17/05/2017	
50	Electrosteel Castings Ltd	Electrosteel Castings Ltd	Powder Coated 600MM DF 45 Degree bend	Factory applied blue coloured (Eco Coat FBE Powder E/105/7010)	WRAS	1209502	Small	[redacted] 11/04/17	R.[redacted] 17/05/2017	
51	Electrosteel Castings Ltd	Electrosteel Castings Ltd	Powder Coated 600MM Socketed 22.5 Degree bend	Factory applied blue coloured (Eco Coat FBE Powder E/105/7010)	WRAS	1209502	Small	[redacted] 11/04/17	R.[redacted] 17/05/2017	
52	Electrosteel Castings Ltd	Electrosteel Castings Ltd	Powder Coated 600 x 80MM all flanged tee	Factory applied blue coloured (Eco Coat FBE Powder E/105/7010)	WRAS	1209502	Small	[redacted] 11/04/17	R.[redacted] 17/05/2017	
53	Electrosteel Castings Ltd	Electrosteel Castings Ltd	Powder coated 600MM TYTON SIT + Anchor gasket	Factory applied blue coloured (Eco Coat FBE Powder E/105/7010)	WRAS	1209502	Small	[redacted] 11/04/17	R.[redacted] 17/05/2017	
54	Electrosteel Castings Ltd	Electrosteel Castings Ltd	Powder coated 600MM Blank Flange	Factory applied blue coloured (Eco Coat FBE Powder E/105/7010)	WRAS	1209502	Small	[redacted] 11/04/17	R.[redacted] 17/05/2017	
55	Electrosteel Castings Ltd	Electrosteel Castings Ltd	Powder Coated 1000MM 22.5 Degree Bend	Factory applied blue coloured (Eco Coat FBE Powder E/105/7010)	WRAS	1209502	Small	[redacted] 11/04/17	R.[redacted] 17/05/2017	
56	Electrosteel Castings Ltd	Electrosteel Castings Ltd	Powder Coated 1000MM 11.25 degree Bend	Factory applied blue coloured (Eco Coat FBE Powder E/105/7010)	WRAS	1209502	Small	[redacted] 11/04/17	R.[redacted] 17/05/2017	
57	FWB Products	Zenith Industrial Rubber Products PVT Ltd	500MM EPDM Gasket	EPDM Gasket	WRAS	1311533	Small	[redacted] 11/04/17	R.[redacted] 05/05/2017	
58	Saint Gobain	Saint Gobain	80mm double flange 90 degree bend	Eurokote factory applied blue coloured powder coating	WRAS	1503518	Small	[redacted] 11/04/17	R.[redacted] 06/06/2017	
59	Vulcan Industrial Fasteners Ltd	Dexine Rubber Company Ltd	600MM Full faced gasket	Thickness of gasket will be in contact with water	WRAS	1401510	Small	[redacted] 11/04/17	R.[redacted] 05/05/2017	
60	Vulcan Industrial Fasteners Ltd	Dexine Rubber Company Ltd	200MM EPDM Gasket	Thickness of gasket will be in contact with water	WRAS	1401510	Small	[redacted] 11/04/17	R.[redacted] 05/05/2017	
61	Wolseley Utilities Ltd trading as Burd	GPS	Stub flange asembly 90MM OD SDR17	PE Fitting	WRAS	1403507	Small	[redacted] 27/06/17	R.[redacted] 27/06/2017	
62	Wolseley Utilities Ltd trading as Burd	GPS	Excel NB 90mm OD PE pipe SDR17	PE internals of pipe	DWI	56/4/1026	Large	[redacted] 27/06/17	R.[redacted] 27/06/2017	Use of the product must be in accordance with the Instructions for Use: Issue: Excel NB. Issue No: 1. Issue Date: 1/7/2011
63	Saint Gobain	Saint gobain	System CL 800mm x 2500mm long DF pipe	Cement mortar lined pipework	DWI	56/4/283	Large	[redacted] 27/06/17	R.[redacted] 27/06/2017	Use of the product must be in accordance with the Instructions for Use: SAINT GOBAIN PAM UK. Instructions for Use Document for System CL Pipes. Issue Number 9. Date: 25th May 2009
64	olseley Utilities Ltd trading as Burde	Aqua Gas Manufacturing	Type 2 Hydrant 80MM	Epoxy powder coating on ductile iron body	WRAS	1301080	Small	[redacted] 27/06/17	R.[redacted] 27/06/2017	

Insert more lines as necessary

1 PROJECT ENGINEER TO SIGN AND DATE TO CONFIRM MATERIALS HAVE BEEN CHECKED AGAINST CURRENT APPROVAL LISTS
2 WATER QUALITY PERFORMANCE TEAM TO SIGN AND DATE TO CONFIRM MATERIALS ARE APPROVED IN ACCORDANCE WITH REGULATION 31(4)(a) and 31(4)(b)
3 COMMENTS OR ADVICE FROM WATER QUALITY PERFORMANCE TEAM, EG INSTRUCTIONS FOR USE

x **PLEASE TICK BOX TO CONFIRM NO FURTHER MATERIALS WILL BE ADDED TO PART A OF THIS FORM**

NOTE: FOR SMALL SURFACE AREA MATERIALS THEY MAY NOT REQUIRE A FULL SET OF MIC SAMPLES. PLEASE CONTACT THE WATER QUALITY PERFORMANCE TEAM FOR FURTHER ADVICE

REQUEST FOR REDUCED SAMPLING	WQPT APPROVED FOR REDUCED SAMPLING	COMMENTS
SIGN/DATE	SIGN/DATE	SIGN/DATE
No	n/a	n/a

PART B

PART B COMPLETED BY: [redacted]
Please provide the following contact names:
OPERATIONAL SCIENTIST: [redacted]
SUPPLY MANAGER: [redacted]

PART A LINE NUMBERS WHICH SAMPLES REPRESENT	SAMPLE NUMBER	SAMPLE DATE	COLIFORMS	E. COLI	COLONY COUNTS 2 DAY 37°C 3 DAY 22°C	QUALITATIVE TASTE *	QUALITATIVE ODOUR	pH	COLOUR (HAZEN)	TURBIDITY (NTU)	CONDUCTIVITY (us/cm)	ALKALINITY(mg/l CaCO3)	ALUMINIUM (mg/l Al)	TRACE ORGANICS: DCM & PURGE/ TRAP	TRACE ORGANICS: MK FORM NO.	1 PROCESS ENGINEER /SCIENTIST CONFIRMATION SIGN/DATE	2 WQPT APPROVED FOR SUPPLY SIGN/DATE	
1,2,3, 4, 11, 12, 14-23, 26	16256074 16256090 16257518	04/06/2016	0	0	0, 1	1	3T	7.41	0.4	0.32	611	129	< 0.014	0, 0	10545	R.[redacted] 09/06/2016	R.[redacted] 09/06/2016	* Approval to return to supply given subject to line 16 of Part A being approved, or this material being removed from the interior of the reservoir prior to return to supply.
Hannington new main and cross connection																		
Cell 2 North connection (Existing supply) - 16 hour	17278877	22/06/2017	n/d	n/d	n/d	1	1Z	n/d	n/a	0.1	n/a	n/a	n/d	n/d	n/d	~	~	No chlorine residuals Not all parameters sampled Enterococci/Closrtidia satisfactory
Cell 2 North connection (Existing supply) - additional 12	17280513	22/06/2017	0	0	n/d, 0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	~	~	No chlorine residuals Enterococci/Closrtidia satisfactory
Cell 2 North connection (Existing supply) - 16 hour stand	17304001	04/07/2017	0	0	0, n/a	1	1Z	7.41	n/a	0.13	n/a	n/a	< 0.014	1, 1	11084	R.[redacted] 12/07/2016	R.[redacted] 12/07/2016	Enterococci/Clostridia clear Chlorine <0.01, 0.45 Organics levels satisfactory (handcream, toluene operational SNARL 24 ug/L)
Cell 2 North connection (Existing supply) - additional 12 hour stand	17305386	05/07/2017	0	0	0, 0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R.[redacted] 12/07/2016	R.[redacted] 12/07/2016	Enterococci and Clostridia clear Chlorine <0.1/0.54
Cell 2 North connection (Existing supply) - Marked as "Hannington res A" on	17312425	10/07/2017	n/a	n/a	n/a	1	2T	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R.[redacted] 12/07/2016	R.[redacted] 12/07/2016	Clarity N Resample following nettle odour on end air valve. Main had been standing for an undetermined time (>16 hours)
Cell 2 North connection (Existing supply) - Marked as "Hannington res A" on	17312439	11/07/2017	n/a	n/a	n/a	1	2T	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R.[redacted] 12/07/2016	R.[redacted] 12/07/2016	Clarity N Resample following nettle odour on end air valve. Main had been standing for 16 hours after flushing
600mm cross connection																		
Outlet main test plate (new main) - 16 hour stand	17278878	22/06/2017	n/d	n/d	n/d	n/d	1Z	n/d	n/a	0.6	n/a	n/a	n/d	n/d	n/d	~	~	No chlorine residuals Not all parameters sampled Enterococci/Closrtidia satisfactory
Outlet main test plate (new main) - additional 12 hour	17280512	22/06/2017	0	0	n/d, 51	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	~	~	No chlorine residuals Enterococci/Closrtidia satisfactory

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Outlet main test plate (new main set) - 16 hour stand	17304000	04/07/2017	0	0	0, n/a	1	1Z	7.57	n/a	0.2	n/a	n/a	< 0.014	1, 0	11084	R.[redacted] 12/07/2016	R.[redacted] 12/07/2016	Enterococci/Clostridia clear Chlorine <0.01, 0.49 Organics levels satisfactory (handcream)
Outlet main test plate (new main set) - additional 12 hour stand	17305388	05/07/2017	0	0	0, 34	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R.[redacted] 12/07/2016	R.[redacted] 12/07/2016	Enterococci and Clostridia clear Chlorine <0.1/0.50
Outlet main test plate (new main set) - Marked as "Hannington res B" on	17312426	10/07/2017	n/a	n/a	n/a	1	3T	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R.[redacted] 12/07/2016	R.[redacted] 12/07/2016	Clarity N Resample following nettle odour on end air valve. Main had been standing for an undetermined time (>16 hours)
Outlet main test plate (new main set) - Marked as "Hannington res B" on	17312440	11/07/2017	n/a	n/a	n/a	1	3T	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R.[redacted] 12/07/2016	R.[redacted] 12/07/2016	Clarity N Resample following nettle odour on end air valve. Main had been standing for 16 hours after flushing
New main																		
Outlet end main air valve (new main) - 16 hour stand	17278879	22/06/2017	n/d	n/d	n/d	n/d	2T	n/d	n/a	0.6	n/a	n/a	n/d	n/d	n/d	~	~	No chlorine residuals Not all parameters sampled Enterococci/Closrtidia satisfactory
Outlet end main air valve (new main) - additional 12 hour	n/d	n/d	n/d	n/d	n/d	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	~	~	No sample got to the lab
Outlet end main air valve (new main set) - 16 hour stand	17304003	04/07/2017	0	0	0, n/a	n/d	3NET	7.46	n/a	0.12	n/a	n/a	< 0.014	1, 0	11084	R.[redacted] 12/07/2016	R.[redacted] 12/07/2016	Enterococci/Clostridia clear Chlorine 0.02, 0.50 Organics levels very low (all well below 1 ug/L). Not in Tox database, and mild nettle odour detected. Will need a further sample for clarity, taste and odour to confirm these very low levels detected will not cause an issue. Resamples are ok for taste and odour, given the very low levels of these compounds and no t&o issues on resample, the organics levels are
Outlet end main air valve (new main set) - additional 12 hour stand	17305387	05/07/2017	0	0	0, 37	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R.[redacted] 12/07/2016	R.[redacted] 12/07/2016	Enterococci and Clostridia clear Chlorine <0.1/0.50
Outlet end main air valve (new main set) - Marked as "Hannington res C" on	17312427	10/07/2017	n/a	n/a	n/a	1	3T	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R.[redacted] 12/07/2016	R.[redacted] 12/07/2016	Clarity N Resample following nettle odour on end air valve. Main had been standing for an undetermined time (>16 hours)
Outlet end main air valve (new main set) - Marked as "Hannington res C" on	17312441	11/07/2017	n/a	n/a	n/a	1	2T	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R.[redacted] 12/07/2016	R.[redacted] 12/07/2016	Clarity N Resample following nettle odour on end air valve. Main had been standing for 16 hours after flushing
Bacti samples following connection of 'golden joints' at either end of mains. Not MIC samples, included here for completeness																		
Hannington res 2 source supply (cell 1)	17318436	14/07/2017	0	0	0, n/d	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R.[redacted] 17/07/2016	Chlorine <0.05/0.60 Samples not registered for 3-day plates but happy to pass on the basis of clear TC/EC/2-day plates and good chlorine residuals
Hannington res 2 source supply (cell 2)	17318437	14/07/2017	0	0	0, n/d	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R.[redacted] 17/07/2016	Chlorine 0.06/0.55 Samples not registered for 3-day plates but happy to pass on the basis of clear TC/EC/2-day plates and good chlorine residuals
Hannington new main cross connection (between d/s of u/s golden joints)	17318434	14/07/2017	0	0	0, n/d	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R.[redacted] 17/07/2016	Chlorine <0.05/0.54 Samples not registered for 3-day plates but happy to pass on the basis of clear TC/EC/2-day plates and good chlorine residuals
Hannington new main air valve (u/s of d/s golden joint)	17318435	14/07/2017	0	0	0, n/d	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R.[redacted] 17/07/2016	Chlorine <0.05/0.55 Samples not registered for 3-day plates but happy to pass on the basis of clear TC/EC/2-day plates and good chlorine residuals
Hannington new main d/s (d/s of d/s golden joint)	17318433	14/07/2017	0	0	0, n/d	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	R.[redacted] 17/07/2016	Chlorine <0.05/0.52 Samples not registered for 3-day plates but happy to pass on the basis of clear TC/EC/2-day plates and good chlorine residuals

Insert more lines as necessary

** taste testing only to be performed on samples of potable water and after confirmation of clear bacteriological results*

1 **PROCESS ENGINEER/SCIENTIST TO SIGN AND DATE TO CONFIRM SAMPLES TAKEN ARE APPROPRIATE FOR THE MATERIALS LISTED IN PART A AND THAT EVERY PRODUCT HAS BEEN TESTED**

2 **WATER QUALITY PERFORMANCE TEAM TO SIGN AND DATE TO CONFIRM APPROVAL FOR USE IN SUPPLY**

NOTE **OPERATIONAL SCIENTIST TO GIVE FINAL APPROVAL FOR THE MATERIAL OR EQUIPMENT TO ENTER SUPPLY**

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

FORM NO: 2790

For materials to enter supply, Parts A and B must be signed and approved by Water Quality Performance Team and final authorisation will be given by the Operational Scientist

Contact Name:	[redacted]	Conta ct	[redacted]	DATE:	24/03/2017
Site:	Pitsford WTW				
Location on site:	Storage Tank				
Contractor:	Stonburys				
WAT- No. If applicable:	WAT 06526				

USEFUL LINKS

- CONTACT THE WATER QUALITY PERFORMANCE TEAM
- HAWK - MATERIALS IN CONTACT
- WRAS DIRECTORY
- DWI APPROVED PRODUCTS LIST
- BRITISH STANDARDS WEBSITE

PART A

Line No.	Supplier	Manufacturer holding approval (if different from supplier)	Product name	Brief Description of material in contact with water	Approving body DWI / BS6920/ WRAS/ BSEN	Approving body ref	Large/ Small Surface Area	Have IFU or Conditions for use been checked and can you meet all the requirements?	1 Person completing the work Sign/Date	2 WQPT - Materials Approved Sign/Date	3 Comments and Advice Sign/Date	
1	Flexcrete Technologies Ltd	Flexcrete Technologies Ltd	**Monolevel 844SP**	Wall render coat	DWI Reg 31	DWI 56/4/1161	Large	Yes	[redacted] 24/3/17	[redacted] 11/04/17		
2	Flexcrete Technologies Ltd	Flexcrete Technologies Ltd	**Flexcrete Cementitious Coating 851 Grey**	Cementitious protective coating	DWI Reg 31	DWI 56/4/1159	Large	Yes	[redacted] 24/3/17	[redacted] 11/04/17		This product must be cured for a minimum of 21 days at a minimum temperature of 7°C or in accordance with the cure curve provided in the manufacturers IFU
3	BASF plc Construction Chemicals (UK) Ltd	BASF plc Construction Chemicals (UK) Ltd	**MasterSeal 930**	Joint overbanding	DWI Reg 31	DWI 56/4/144	Small	Yes	[redacted] 24/3/17	[redacted] 11/04/17		This product must be cured in accordance with the cure curve provided in the IFU document otherwise this product must be cured for a minimum of 10 days at a minimum temperature of 7°C.
4	BASF plc Construction Chemicals (UK) Ltd	BASF plc Construction Chemicals (UK) Ltd	**MasterSeal 933**	Epoxy joint material	DWI Reg 31	DWI 56/4/144	Small	Yes	[redacted] 24/3/17	[redacted] 11/04/17		
5	Spencer Coatings	Spencer Coatings	**Acothane DW Blue**	Pipe paint	DWI Reg 31	DWI 56/4/1059	Small	Yes	[redacted] 24/3/17	[redacted] 11/04/17	..	The product must be cured for a minimum period of 7 days at a minimum temperature of 3°C.
6	Metroseal	Metroseal	**EDPM Gaskets**	Between pipe Joint	WRAS	WRAS 1311550	Small	Yes	[redacted] 24/3/17	[redacted] 28/03/17		
7	AVK	BS Coatings	**Eurokote 448 Bleu 5005**	Valve in new chamber	WRAS	WRAS 1206533	Small	Yes	[redacted] 24/3/17	[redacted] 28/03/17		Cure for 7 days at 20°C. WRAS expiry date 30/06/17
8												
9												
10												

Insert more lines as necessary

No	Please tick box to confirm no further materials will be added to part A of this form

NOTE: Small surface area materials may not require a full set of MIC samples. Please contact the Water Quality Peformance Team (WQPerformance@anglianwater.co.uk) if you wish to discuss reduced sampling. Part A must be complete before the WQPT can reduce sampling requirements.

PART B - Sampling requirements - to be completed by???

PART A LINE NUMBERS WHICH SAMPLES REPRESENT	Source being used to sample	Analysis	Bottles required	Comparison required?	Likely contact time whilst in operation?	Agreed standing time for samples	Scientist / Engineer agreement (sign and date)	WQPT Approval (sign and date)

PART C - Sample results

Part C completed by:	
Please provide the following contact names:	
Risk Scientist:	
Supply Manager:	
Senior Technician or deputy:	

To Self Assess Sample results

Ensure Parts A and B above are completed fully
Click this button and locate the QDW / PACE 711 report with the MIC Samples on it. Open that report and then identify which samples are associated with this form.

Assess Samples

COLONY COUNTS	TRACE ORGANICS	1	2	3

Version 002 - June 2009

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

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Part A line numbers which samples represent	Sample Number	Sample Date and Time	Sample Type	Location	Free Chlorine	Total Chlorine	Coliforms	E Coli	2 day	3 day	Qualitative Taste*	Qualitative Odour*	Quantative Taste*	Quantative Odour*	pH	Colour (Hazen)	Turbidity (NTU)	Conductivity (us/cm)	Alkalinity (mg/l CaCO3	Aluminium (mg/l Al)	Iron (mg/l Fe)	Water Profile	Purge & Trap	MK FORM NO.	Sample Completed ?	Verdict	Comment	Person completing the work	Operational Scientist or autorised delagte signature or date	WQPT
																												Sign/Date	Sign/Date	Sign/Date
1,2,3,4,5,6,7	17354725 17355277 17355987	03/08/17 @ 07:45	DIP	Pitsford Storage tank post refurb	<0.05	0.49	0	0	0	0	1	1Z	1	1	7.46	0.7	0.16	627	115	<0.014	n/a	0	0	11139	Yes	Pass			S.[redacted] 08/08/17	S.[redacted] 08/08/17

Insert more lines as required

** taste testing only to be performed on samples of potable water and after confirmation of clear bacteriological results*

PART D

Risk Scientist to give final approval to go into supply			
Into supply date		**Name**	

Pitsford

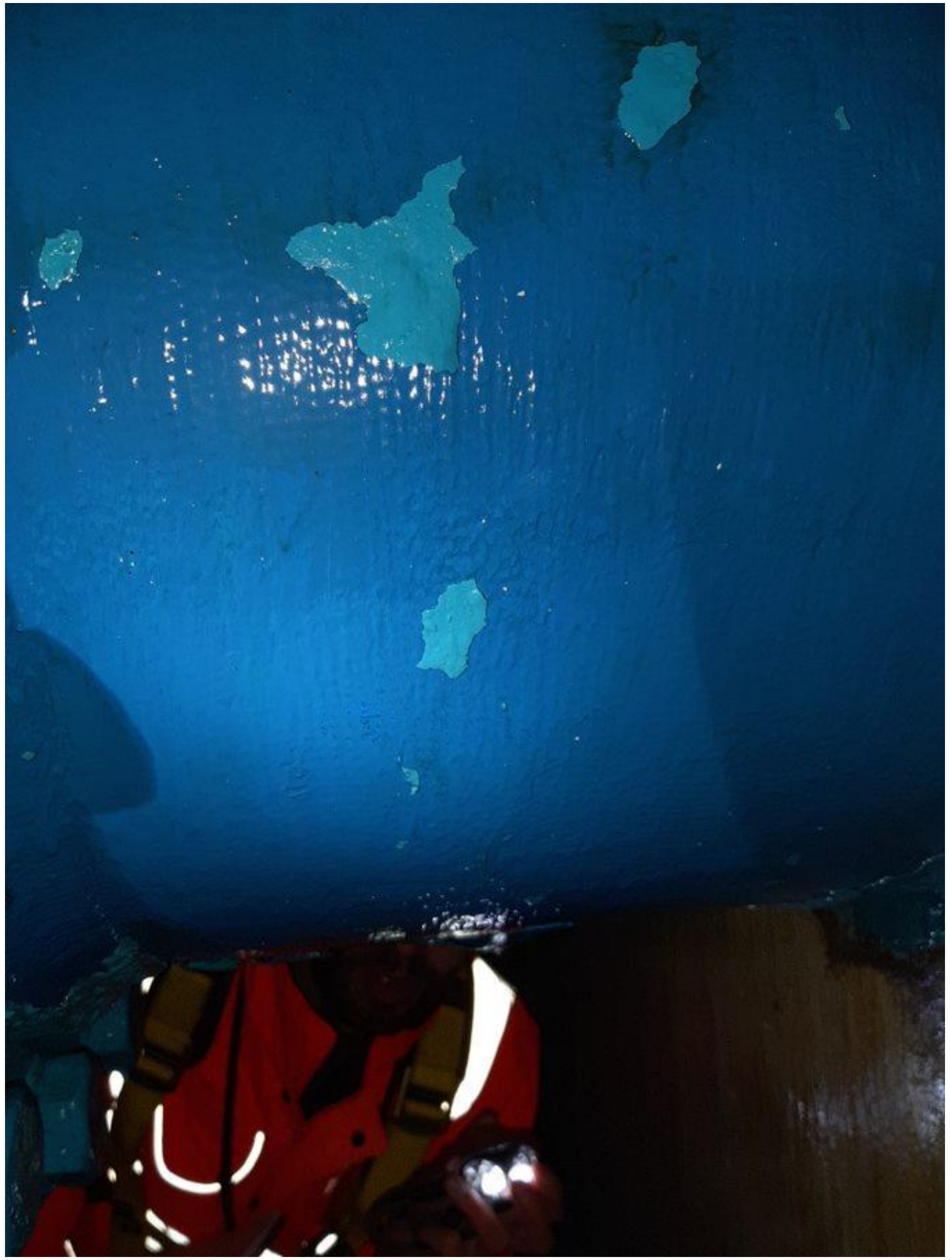
2021 March & May		2021 December	
Title	*Slide No*	*Title*	*Slide No*
Internal Plates jpg 24/31	2	20211217_104344 12/27	5
Outlet pipe to outlet chamber 25/31	3	20211217_104354 13/27	6
Resilience inlet pipe 27/31	4	20211217_104420 14/27	7
		20211217_104432 15/27	8
		20211217_104727 16/27	9
		20211217_111030 17/27	10
		20211217_111043 18/27	11
		20211217_111051 19/27	12
		20211217_111111 20/27	13
		20211217_111131 21/27	14
		20211217_111528 22/27	15
		20211217_111859 23/27	16
		20211217_114003 24/27	17
		20211217_114025 25/27	18
		20211217_114031 26/27	19
		20211217_114056 27/27	20

Internal Plates jpg 24/31

Outlet pipe to outlet chamber 25/31

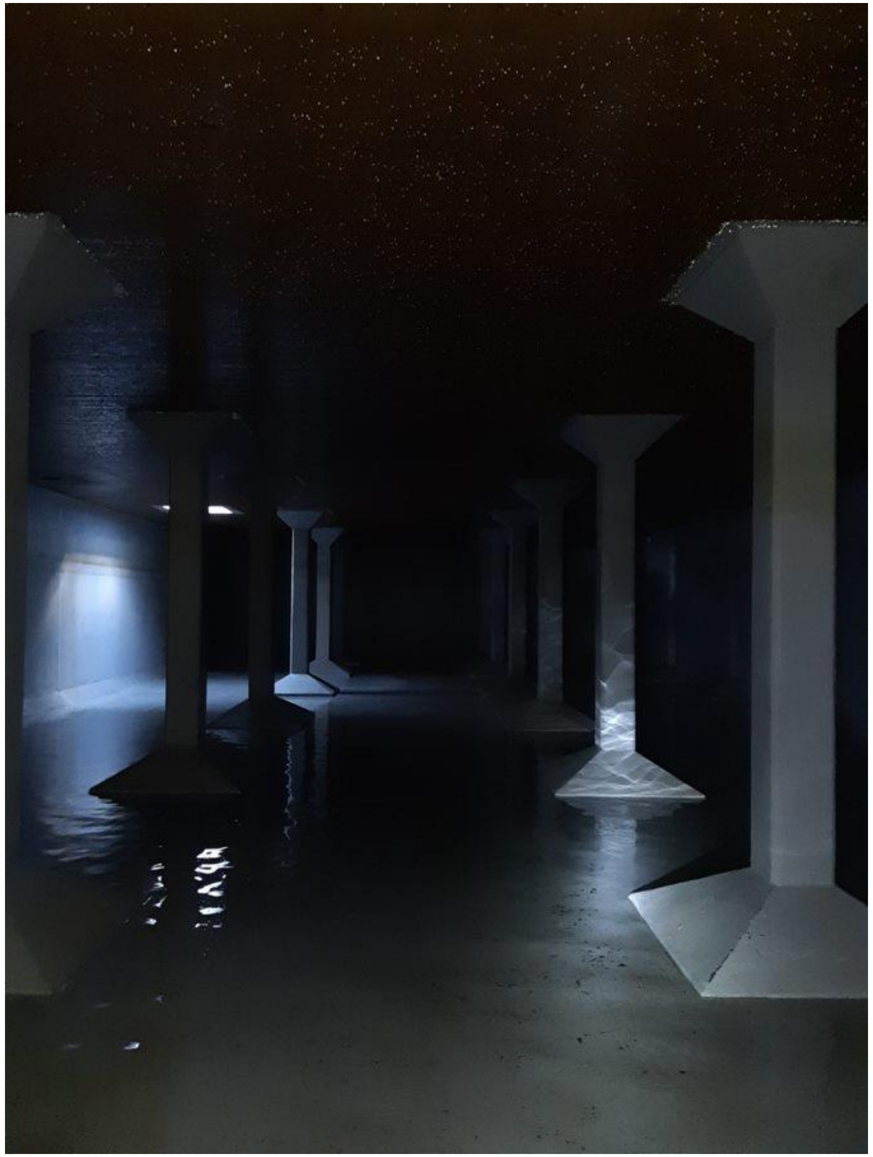
Resilience inlet pipe 27/31

20211217_104344 12/27



20211217_104354 13/27

20211217_104420 14/27

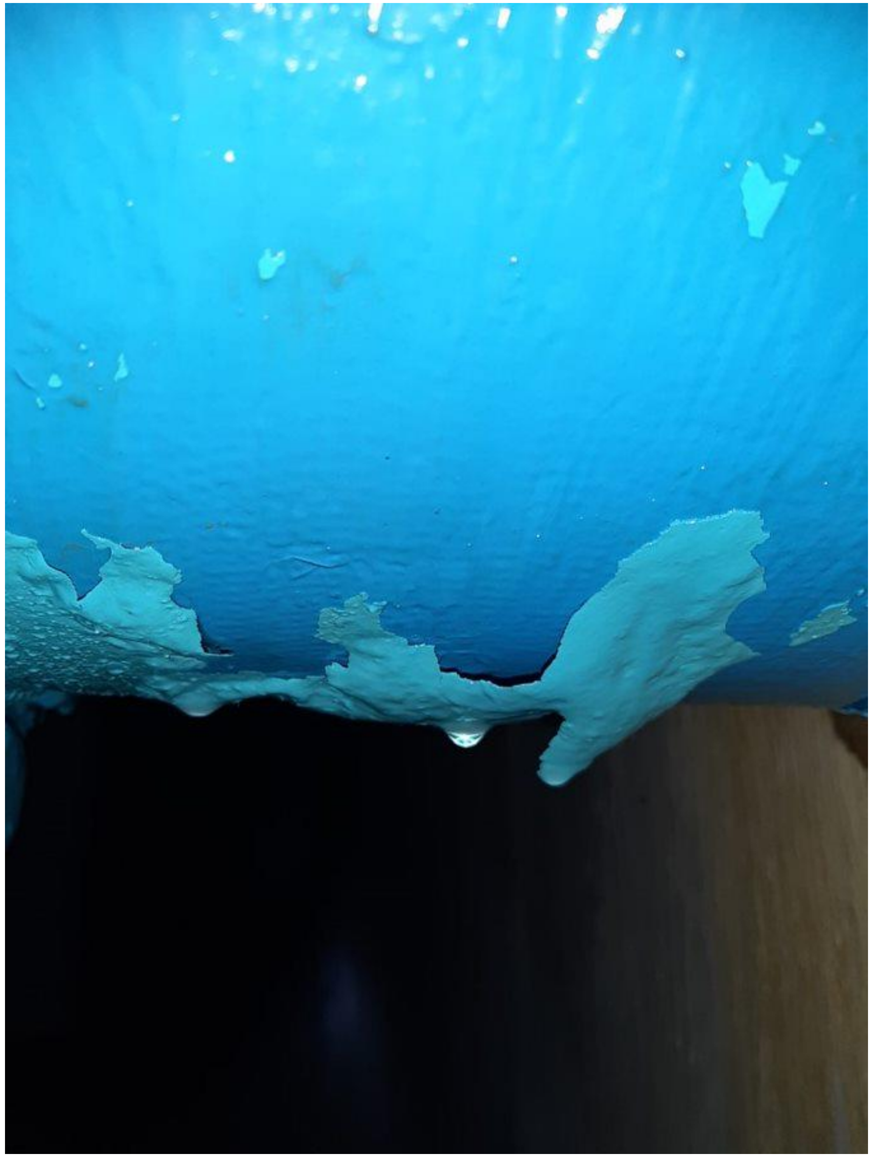


20211217_104432 15/27

20211217_104727 16/27

20211217_111030 17/27

20211217_111043 18/27



20211217_111051 19/27

20211217_111111 20/27

20211217_111131 21/27

20211217_111528 22/27

20211217_111859 23/27

20211217_114003 24/27

20211217_114025 25/27

20211217_114031 26/27

20211217_114056 27/27

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

FORM NO: 1796

PART B

PART B COMPLETED BY:

Please provide the following contact names:

OPERATIONAL SCIENTIST:

SUPPLY MANAGER:

PART A LINE NUMBERS WHICH SAMPLES REPRESENT	SAMPLE NUMBER	SAMPLE DATE	COLIFORMS	E. COLI	COLONY COUNTS 2 DAY 37°C 3 DAY 22°C	QUALITATIVE TASTE*	QUANTITATIVE TASTE (25°C)	QUALITATIVE ODOUR	QUANTITATIVE ODOUR (60°C)	pH	COLOUR (HAZEN)	TURBIDITY (NTU)	CONDUCTIVITY (us/cm)	ALKALINITY(mg/l CaCO3)	ALUMINIUM (mg/l Al)	TRACE ORGANICS: DCM & PURGE/ TRAP	TRACE ORGANICS: MK FORM NO.	1 PROCESS ENGINEER /SCIENTIST CONFIRMATION SIGN/DATE	2 WQPT APPROVED FOR SUPPLY SIGN/DATE

* taste testing only to be performed on samples of potable water and after confirmation of clear bacteriological results

1	PROCESS ENGINEER/SCIENTIST TO SIGN AND DATE TO CONFIRM SAMPLES TAKEN ARE APPROPRIATE FOR THE MATERIALS LISTED IN PART A AND THAT EVERY PRODUCT HAS BEEN TESTED
2	WATER QUALITY PERFORMANCE TEAM TO SIGN AND DATE TO CONFIRM APPROVAL FOR USE IN SUPPLY
NOTE	OPERATIONAL SCIENTIST TO GIVE FINAL APPROVAL FOR THE MATERIAL OR EQUIPMENT TO ENTER SUPPLY

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

FORM NO: 1886

PART B

PART B COMPLETED BY: [redacted]

Please provide the following contact names:

OPERATIONAL SCIENTIST: [redacted]

SUPPLY MANAGER: [redacted]

PART A LINE NUMBERS WHICH SAMPLES REPRESENT	SAMPLE NUMBER	SAMPLE DATE	COLIFORMS	E. COLI	COLONY COUNTS 2 DAY 37°C 3 DAY 22°C	QUALITATIVE TASTE*	QUALITATIVE ODOUR	pH	COLOUR (HAZEN)	TURBIDITY (NTU)	CONDUCTIVITY (us/cm)	ALKALINITY(mg/l CaCO3)	ALUMINIUM (mg/l Al)	TRACE ORGANICS DCM & PURGE/ TRAP	MK FORM NO.	1 PROCESS ENGINEER /SCIENTIST CONFIRMATION SIGN/DATE	2 WQPT APPROVED FOR SUPPLY SIGN/DATE	Comments	Chlorines
Existing supply																			
n/a	16479082	20/10/2016	0	0	0/0		3T	6.96	0.4	0.02	365	82.2	<0.014	0&0	MK10719	~	~	Feed to surge comparision	Chlorine 0.40/0.82
	16511256	08/11/2016	0	0	0/0		1Z	7.08	0.4	0.13	367	86.6	<0.014	0&0	MK10719	~	~	Feed to surge comparision	Chlorine 0.12/1.17
	16527827	18/11/2016	0	0	0/0	1	3T	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	[redacted] 21/11/2016	[redacted] 21/11/2016	Feed to surge comparision	Chlorine <0.05/0.93
Surge vessel 1																			
	16479084	20/10/2016	0	0	0/0		2T	6.97	0.5	0.03	365	79.6	<0.014	0&1	MK10719	~	~	Pitsford Surge Vessel1 Anomalous chlorines	Chlorine 0.29/0.73
	16511257	08/11/2016	0	0	0/0		1Z	7.08	0.5	0.13	366	86.1	<0.014	0&0	MK10719	~	~	Pitsford Surge Vessel1	Chlorine 0.10/0.94
	16527828	18/11/2016	0	0	0/0	1	3T	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	[redacted] 21/11/2016	[redacted] 21/11/2016	Pitsford Surge Vessel1 Bacti samples out of date - needs further samples	Chlorine 0.06/0.91
	18305158	04/07/2018	0	0	0/3	1	1Z	7.19	0.6	0.08	528	126	<0.014	0&0	MK11603	~	[redacted] 25/07/18	Pitsford Surge Vessel1 Bacti samples out of date - needs further samples Anomalous chlorines	Chlorine 0.33/0.84
	18327857	19/07/2018	0	0	0/0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	~	[redacted] 25/07/18	Pitsford Surge Vessel1 Bacti samples out of date - needs further samples Anomalous chlorines	Chlorine 0.19/0.78
	18539194	27/11/2018	0	0	0/0	n/a	n/a	7.14	0.4	0.10	401	84.5	n/a	n/a	n/a	~	~	Pitsford Surge Vessel outlet 1 Free chlorine still high	Chlorine 0.24/0.95
Items 1-8	19119500	14/03/2019	0	0	0/0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a			Pitsford Surge Vessel outlet 1 Chlorine still anomalous	Chlorine 0.36/1.08
	19138783	28/03/2019	0	0	0/0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a			Pitsford Surge Vessel outlet 1 bacti resample	Chlorine 0.05/0.95
Surge vessel 2																			
	16479083	20/10/2016	0	0	0/0		2T	6.98	0.4	0.02	366	84.3	<0.014	0&0	MK10719	~	~	Pitsford Surge Vessel2 Anomalous chlorines	Chlorine 0.27/0.75
	16511255	08/11/2016	0	0	0/0		1Z	7.06	0.4	0.12	364	83.7	<0.014	0&0	MK10719	~	~	Pitsford Surge Vessel2	Chlorine 0.09/0.96
	16527829	18/11/2016	0	0	0/0	1	3T	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	[redacted] 21/11/2017	[redacted] 21/11/2016	Pitsford Surge Vessel2 Bacti samples out of date - needs further samples	Chlorine 0.06/1.0
	18305157	04/07/2018	0	0	0/2	1	1Z	7.16	0.5	0.08	528	122	<0.014	0&0	MK11602	~'	[redacted] 25/07/18	Pitsford Surge Vessel2 Bacti samples out of date - needs further samples Anomalous chlorines	Chlorine 0.33/0.67
	18327856	19/07/2018	0	0	0/0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	~	[redacted] 25/07/18	Pitsford Surge Vessel2 Bacti samples out of date - needs further samples Anomalous chlorines	Chlorine 0.29/0.65
	18539193	27/11/2018	0	0	0/0	n/a	n/a	7.12	0.4	0.12	n/a	82.5	n/a	n/a	n/a	~	~	Pitsford Surge Vessel outlet 2 Free chlorine still high	Chlorine 0.33/0.84
	19119498	14/03/2019	0	0	0/0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a			Pitsford Surge Vessel outlet 2 Chlorine still anomalous	Chlorine 0.34/1.13
Items 1-8	19138780	28/03/2019	0	0	0/0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a			Pitsford Surge Vessel outlet 2 bacti resample	Chlorine 0.09/0.97
Connection point at end of main (New mains samples)																			
	18539195	27/11/2018	0	0	0/0	n/a	n/a	n/a	0.4	0.12	n/a	81.3	n/a	n/a	n/a	~	~	New connection point No chlorines	No chlorine residuals
	19119499	14/03/2019	0	0	0/0	1	1Z	7.33	n/a	0.07	507	n/a	n/a	n/a	n/a			New connection point Chlorine still anomalous	Chlorine 0.34/1.03
Items 9-11	19138782 19138865	28/03/2019	0	0	0/0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a			New connection point clarity and bacti resample	Chlorine <0.05/0.92 Clarity N
New sample point (Sample point commissioning samples)																			
	18539196	27/11/2018	0	0	0/0	1	2T	7.11	0.4	0.08	402	79.9	< 0.014	0&0	MK11789	~	~	New sample point Bacti samples out of date - needs further samples Anomalous chlorines	Chlorine 0.23/0.91
	19119497	14/03/2019	0	0	0/0	1	1Z	7.33	n/a	0.12	410	n/a	n/a	n/a	n/a			New sample point Chlorine still anomalous	Chlorine 0.34/1.08
Items 9-11	19138781	28/03/2019	0	0	0/0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a			New sample point bacti resample	Chlorine 0.34/1.08
Surge vessel 1																			
Items 1-8	19185165	25/04/2019	0	0	0/0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a		LE 30/04/19		Chlorine 0.07/0.97
Items 1-8	19509250 19510881	07/11/2019	0	0	0/9	1	1Z	n/a	n/a	0.13	n/a	n/a	n/a	n/a	n/a		11/11/2019		Chlorine 0.08/0.93
Surge vessel 2																			
Items 1-8	19185163	25/04/2019	0	0	0/0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a		LE 30/04/19		Chlorine 0.06/0.99
Items 1-8	19509248 19510880	07/11/2019	0	0	0/6	1	1Z	n/a	n/a	0.11	n/a	n/a	n/a	n/a	n/a		11/11/2019		Chlorine 0.05/0.95
Connection point at end of main (New mains samples)																			
Items 9-11	19185164	25/04/2019	0	0	0/0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a		LE 30/04/19		Chlorine 0.05/0.93
Items 9-11	19509247 19510882	07/11/2019	0	0	0/12	1	1Z	n/a	n/a	0.19	n/a	n/a	n/a	n/a	n/a		11/11/2019		Chlorine 0.1/0.94
New sample point (Sample point commissioning samples)																			
Items 9-11	19185166	25/04/2019	0	0	0/0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a		LE 30/04/19		Chlorine <0.05/0.95
Items 9-11	19509249	07/11/2019	0	0	0/0	1	1Z	n/a	n/a	0.11	n/a	n/a	n/a	n/a	n/a		11/11/2019		Chlorine 0.11/0.94
Insert more lines as necessary																			

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

FORM NO: 1984

PART B

PART B COMPLETED BY:	
Please provide the following contact names:	
OPERATIONAL SCIENTIST:	
SUPPLY MANAGER:	

PART A LINE NUMBERS WHICH SAMPLES REPRESENT	SAMPLE NUMBER	SAMPLE DATE	COLIFORMS	E. COLI	COLONY COUNTS 2 DAY 37°C 3 DAY 22°C	QUALITATIVE TASTE*	QUALITATIVE ODOUR	pH	COLOUR (HAZEN)	TURBIDITY (NTU)	CONDUCTIVITY (us/cm)	ALKALINITY(mg/l CaCO3)	ALUMINIUM (mg/l Al)	TRACE ORGANICS		1	2
														DCM & PURGE/ TRAP	MK FORM NO.	PROCESS ENGINEER /SCIENTIST CONFIRMATION	WQPT APPROVED FOR SUPPLY
																SIGN/DATE	SIGN/DATE

Insert more lines as necessary

** taste testing only to be performed on samples of potable water and after confirmation of clear bacteriological results*

1	PROCESS ENGINEER/SCIENTIST TO SIGN AND DATE TO CONFIRM SAMPLES TAKEN ARE APPROPRIATE FOR THE MATERIALS LISTED IN PART A AND THAT EVERY PRODUCT HAS BEEN TESTED
2	WATER QUALITY PERFORMANCE TEAM TO SIGN AND DATE TO CONFIRM APPROVAL FOR USE IN SUPPLY
NOTE	OPERATIONAL SCIENTIST TO GIVE FINAL APPROVAL FOR THE MATERIAL OR EQUIPMENT TO ENTER SUPPLY

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ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

FORM NO:	2358

For materials to enter supply, Parts A and B must be signed and approved by Drinking Water Standards Team

CONTACT NAME:	[redacted]	CONTACT NUMBER:	[redacted]	DATE:	08/03/2016
SITE:	Pitsford WTW				
LOCATION ON SITE:	Clarifier No.1				
CONTRACTOR:	FLI Water Ltd				
WAT- NO. IF APPLICABLE:	N/A				

PART A

LINE NO.	SUPPLIER	MANUFACTURER HOLDING APPROVAL (IF DIFFERENT FROM SUPPLIER)	PRODUCT NAME	BRIEF DESCRIPTION OF MATERIAL IN CONTACT WITH WATER	APPROVING BODY DWI / WRAS/ BSEN	APPROVING BODY REF	LARGE/ SMALL SURFACE AREA	1 PROJECT ENGINEER CONFIRMATION SIGN/DATE	2 DWST - MATERIALS APPROVED SIGN/DATE
1	Power Plastics	Lubrizol	Sludge Cone	Estane, Natural Coloured Polyurethane	WRAS	1209524	Small	[redacted] 16/03/16	[redacted] 16/03/16
2	Mill Stainless		Cone Ring	EN1.4404 - Grade 316 Stainless Steel	-	-	Small	[redacted] 16/03/16	[redacted] 16/03/16
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									

1 PROJECT ENGINEER TO SIGN AND DATE TO CONFIRM MATERIALS HAVE BEEN CHECKED AGAINST CURRENT APPROVAL LISTS

2 DRINKING WATER STANDARDS TEAM TO SIGN AND DATE TO CONFIRM MATERIALS ARE APPROVED IN ACCORDANCE WITH REGULATION 31(4)(a) and 31(4)(b)

☐ **PLEASE TICK BOX TO CONFIRM NO FURTHER MATERIALS WILL BE ADDED TO PART A OF THIS FORM**

USEFUL LINKS

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

FORM NO:	2358

PART B

PART B COMPLETED BY:	
Please provide the following contact names:	
SUPPLY SCIENTIST:	
SUPPLY MANAGER:	

PART A LINE NUMBERS WHICH SAMPLES REPRESENT	SAMPLE NUMBER	SAMPLE DATE	COLIFORMS	E. COLI	COLONY COUNTS 2 DAY 37°C 3 DAY 22°C	QUALITATIVE TASTE*	QUANTITATIVE TASTE (25°C)	QUALITATIVE ODOUR	QUANTITATIVE ODOUR (60°C)	pH	COLOUR (HAZEN)	TURBIDITY (NTU)	CONDUCTIVITY (us/cm)	ALKALINITY(mg/l CaCO3)	ALUMINIUM (mg/l Al)	TRACE ORGANICS DCM & PURGE/ TRAP	TRACE ORGANICS MK FORM NO.	1 PROCESS ENGINEER /SCIENTIST CONFIRMATION SIGN/DATE	2 DWST APPROVED FOR SUPPLY SIGN/DATE	
Both	16335251	27/07/2016	0	0	64/365	N/A	N/A	2A	3	7.45	3.9	1.47	422	123	<0.014	0/0	10597			>100NLFs
Comparison sample Clarifier No4	16338144 16350570 16350090	29/07/2016	0	0	6/125	N/A	N/A	2A	1	7.17	3.5	2.07	413	104	0.014	1/0	10597			93NLFs

* taste testing only to be performed on samples of potable water and after confirmation of clear bacteriological results

1	PROCESS ENGINEER/SCIENTIST TO SIGN AND DATE TO CONFIRM SAMPLES TAKEN ARE APPROPRIATE FOR THE MATERIALS LISTED IN PART A AND THAT EVERY PRODUCT HAS BEEN TESTED
2	DRINKING WATER STANDARDS TEAM TO SIGN AND DATE TO CONFIRM APPROVAL FOR USE IN SUPPLY
NOTE	SUPPLY SCIENTIST TO GIVE FINAL APPROVAL FOR THE MATERIAL OR EQUIPMENT TO ENTER SUPPLY

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

For materials to enter supply, Parts A and B must be signed and approved by Water Quality Performance Team and final authorisation will be given by the Operational S

Contact Name:	[redacted]	**Conta ct**	[redacted]	**DATE:**	
Site:	Pitsford WTW				
Location on site:	Pitsford Clarifier 2				
Contractor:	FLI Water				
WAT- No. If applicable:	WAT-06568-04-01				

USEFUL LINKS

PART A

Line No.	Supplier	Manufacturer holding approval (if different from supplier)	Product name	Brief Description of material in contact with water	Approving body DWI / BS6920/ WRAS/ BSEN	Approving body ref	Large/ Small Surface Area
1	Power Plastics	Lubrizol	**Sludge Cone**	Estane Natural Coloured Polyurethane	WRAS	1209524	Small
2	Mill Satinless	NA	**Cone Ring**	EN1.4401 Grade 316 Stainless Steel	NA	NA	Small
3							
4							
5							
6							
7							
8							
9							
10							

Insert more lines as necessary

☐ **Please tick box to confirm no further materials will be added to part A of this form**

NOTE: Small surface area materials may not require a full set of MIC samples. Please contact the Water Quality Peformance Team (WQPerformance@anglianwater.co.uk) if you wish to discuss reduced sampling. Part A must be comple

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

PART B - Sampling requirements - to be completed by???

PART A LINE NUMBERS WHICH SAMPLES REPRESENT	Source being used to sample	Analysis	Bottles required	Comparison required?	Likely contact time whilst in operation?	Agreed standing time for samples	Scientist / Engineer agreement (sign and date)	WQPT Approval (sign and date)

PART C - Sample results

Part C completed by:	
Please provide the following contact names:	
Risk Scientist:	
Supply Manager:	
Senior Technician or deputy:	

To Self Assess Sample results

Ensure Parts A and B above are completed fully
Click this button and locate the QDW / PACE 711 report with the MIC Samples on it. Open that report and then identify which samples are associated with this form.

COLONY COUNTS

TRACE ORGAN

Version 002 - June 2009

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

Part A line numbers which samples represent	Sample Number	Sample Date and Time	Sample Type	Location	Free Chlorine	Total Chlorine	Coliforms	E Coli	2 day	3 day	Qualitative Taste*	Qualitative Odour*	Quantative Taste*	Quantative Odour*	pH	Colour (Hazen)	Turbidity (NTU)	Conductivity (us/cm)	Alkalinity (mg/l CaCO3	Aluminium (mg/l Al)	Iron (mg/l Fe)	Water Profile	Purge & Trap

Insert more lines as requ

** taste testing only to be performed on samples of potable water and after confirmation of clear bacteriological results*

PART D

Risk Scientist to give final approval to go into supply

Into supply date			**Name**	

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ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

	FORM NO:	2719

cientist

10/03/2017

	1	2	3
Have IFU or Conditions for use been checked and can you meet all the requirements?	Person completing the work	WQPT - Materials Approved	Comments and Advice
	Sign/Date	Sign/Date	Sign/Date
Yes	[redacted] 10/03/17	[redacted] 13/03/17	
Yes	[redacted] 10/03/17	[redacted] 13/03/17	
			..

te before the WQPT can reduce sampling requirements.

								FORM NO:		2719						

Assess Samples

ICS				1	2	3	

FORM NO: 2719

MK FORM NO.	Sample Completed?	Verdict	Comment	Person completing the work	Operational Scientist or autorised delagte signature or date	WQPT
				Sign/Date	Sign/Date	Sign/Date

ired

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								FORM NO:		2719						

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ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

For materials to enter supply, Parts A and B must be signed and approved by Water Quality Performance Team and final authorisation will be given by the Operational Scientist

FORM NO: 2790

Contact Name:	[redacted]	Contact	[redacted]	**DATE:**	**24/03/2017**
Site:	Pitsford WTW				
Location on site:	Storage Tank				
Contractor:	Stonburys				
WAT- No. If applicable:	WAT 06526				

USEFUL LINKS

PART A

Line No.	Supplier	Manufacturer holding approval (if different from supplier)	Product name	Brief Description of material in contact with water	Approving body DWI / BS6920/ WRAS/ BSEN	Approving body ref	Large/ Small Surface Area	Have IFU or Conditions for use been checked and can you meet all the requirements?	1 Person completing the work Sign/Date	2 WQPT - Materials Approved Sign/Date	3 Comments and Advice Sign/Date	
1	Flexcrete Technologies Ltd	Flexcrete Technologies Ltd	**Monolevel 844SP**	Wall render coat	DWI Reg 31	DWI 56/4/1161	Large	Yes	[redacted] 24/3/17	[redacted] 11/04/17		
2	Flexcrete Technologies Ltd	Flexcrete Technologies Ltd	**Flexcrete Cementitious Coating 851 Grey**	Cementitious protective coating	DWI Reg 31	DWI 56/4/1159	Large	Yes	[redacted] 24/3/17	[redacted] 11/04/17		This product must be cured for a minimum of 21 days at a minimum temperature of 7°C or in accordance with the cure curve provided in the manufacturers IFU
3	BASF plc Construction Chemicals (UK) Ltd	BASF plc Construction Chemicals (UK) Ltd	**MasterSeal 930**	Joint overbanding	DWI Reg 31	DWI 56/4/144	Small	Yes	[redacted] 24/3/17	[redacted] 11/04/17		This product must be cured in accordance with the cure curve provided in the IFU document otherwise this product must be cured for a minimum of 10 days at a minimum temperature of 7°C.
4	BASF plc Construction Chemicals (UK) Ltd	BASF plc Construction Chemicals (UK) Ltd	**MasterSeal 933**	Epoxy joint material	DWI Reg 31	DWI 56/4/144	Small	Yes	[redacted] 24/3/17	[redacted] 11/04/17		
5	Spencer Coatings	Spencer Coatings	**Acothane DW Blue**	Pipe paint	DWI Reg 31	DWI 56/4/1059	Small	Yes	[redacted] 24/3/17	[redacted] 11/04/17	..	The product must be cured for a minimum period of 7 days at a minimum temperature of 3°C.
6	Metroseal	Metroseal	**EPDM Gaskets**	Between pipe Joint	WRAS	WRAS 1311550	Small	Yes	[redacted] 24/3/17	[redacted] 28/03/17		
7	AVK	BS Coatings	**Eurokote 448 Bleu 5005**	Valve in new chamber	WRAS	WRAS 1206533	Small	Yes	[redacted] 24/3/17	[redacted] 28/03/17		Cure for 7 days at 20°C. WRAS expiry date 30/06/17
8												
9												
10												

Insert more lines as necessary

No	Please tick box to confirm no further materials will be added to part A of this form

NOTE: Small surface area materials may not require a full set of MIC samples. Please contact the Water Quality Peformance Team (WQPerformance@anglianwater.co.uk) if you wish to discuss reduced sampling. Part A must be complete before the WQPT can reduce sampling requirements.

PART B - Sampling requirements - to be completed by???

PART A LINE NUMBERS WHICH SAMPLES REPRESENT	Source being used to sample	Analysis	Bottles required	Comparison required?	Likely contact time whilst in operation?	Agreed standing time for samples	Scientist / Engineer agreement (sign and date)	WQPT Approval (sign and date)

PART C - Sample results

Part C completed by:	
Please provide the following contact names:	
Risk Scientist:	
Supply Manager:	
Senior Technician or deputy:	

To Self Assess Sample results
Ensure Parts A and B above are completed fully
Click this button and locate the QDW / PACE 711 report with the MIC Samples on it. Open that report and then identify which samples are associated with this form.

Assess Samples

COLONY COUNTS	TRACE ORGANICS	1	2	3

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ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

FORM NO: 2790

Part A line numbers which samples represent	Sample Number	Sample Date and Time	Sample Type	Location	Free Chlorine	Total Chlorine	Coliforms	E Coli	2 day	3 day	Qualitative Taste*	Qualitative Odour*	Quantative Taste*	Quantative Odour*	pH	Colour (Hazen)	Turbidity (NTU)	Conductivity (us/cm)	Alkalinity (mg/l CaCO3	Aluminium (mg/l Al)	Iron (mg/l Fe)	Water Profile	Purge & Trap	MK FORM NO.	Sample Completed ?	Verdict	Comment	Person completing the work Sign/Date	Operational Scientist or autorised delagte signature or date Sign/Date	WQPT Sign/Date
1,2,3,4,5,6,7	17354725 17355277 17355987	03/08/17 @ 07:45	DIP	Pitsford Storage tank post refurb	<0.05	0.49	0	0	0	0	1	1Z	1	1	7.46	0.7	0.16	627	115	<0.014	n/a	0	0	11139	Yes	Pass			S.[redacted] 08/08/17	S.[redacted] 08/08/17

Insert more lines as required

** taste testing only to be performed on samples of potable water and after confirmation of clear bacteriological results*

PART D

Risk Scientist to give final approval to go into supply

Into supply date	**Name**	

Version 002 - June 2009

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

For materials to enter supply, Parts A and B must be signed and approved by Risk and Optimisation Team and final authorisation will be given by a Risk or Water Quality S

Contact Name:	[redacted]	**Contact Number:**	[redacted]	**DATE:**	
Site:	Pitsford WTW				
Location on site:	Fish Screen at Raw Water Booster				
Contractor:	Taprogge				
WAT- No. If applicable:	WAT-06772-04-15				

USEFUL LINKS

PART A

Line No.	Supplier	Manufacturer holding approval (if different from supplier)	Product name	Brief Description of material in contact with water	Approving body DWI / BS6920/ WRAS/ BSEN	Approving body ref	Large/ Small Surface Area
1	TAPROGGE		**Filter internals stainless steel**	Duplex 1.4462 EN 10088 Stainless steel grade 1.4541	Procedure for the acceptance of materials for PDW	7th Revision 05.01.2017	SMALL
2	TAPROGGE	Perrin	**Ball valve**	Duplex 1.4462 EN 10088 Stainless steel grade 1.4408		7th Revision 05.01.2017	SMALL
3	TAPROGGE	Rema Tip Top GmbH	**Rubber lining of Filter housing**	Chemonit 181	WRAS	1605514	SMALL
4	TAPROGGE	FRENZELIT Werke GmbH	**Flange and internal gaskets**	Novapress Universal Gasket	WRAS	1503526	SMALL
5	TAPROGGE	Otto Gehrckens GmbH	**O-Rings**	P582/NBR 70 Shore	WRAS	unknown	SMALL
6	TAPROGGE	Wouter Witzel Eurovalve BV	**Butterfly valve EVS**	PDS01.01.001	WRAS	1612049	SMALL
7	TAPROGGE	SEMPERIT	**Wiper**	EPDM E2514	WRAS	1302535	SMALL
8							
9							

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

10	

Insert more lines as necessary

✓ Please tick box to confirm no further materials will be added to part A of this form

NOTE: Small surface area materials may not require a full set of MIC samples. Please contact the Risk and Optimisation Team (WQRiskandOptimisatio@anglianwater.co.uk) if you wish to discuss reduced sampling. Part A must be comple

PART B - Sampling requirements - to be completed by???

PART A LINE NUMBERS WHICH SAMPLES REPRESENT	Source being used to sample	Analysis	Bottles required	Comparison required?	Likely contact time whilst in operation?	Agreed standing time for samples	Scientist / Engineer agreement (sign and date)	Risk Scientist Approval (sign and date)

PART C - Sample results

Part C completed by:

Please provide the following contact names:

To Self Assess Sample results

Ensure Parts A and B above are completed fully

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

Risk Scientist:

Supply Manager:

Senior Technician or deputy:

Click this button and locate the QDW / PACE 711 report with the MIC Samples on it. Open that report and then identify which samples are associated with this form.

Part A line numbers which samples represent	Sample Number	Sample Date and Time	Sample Type	Location	Free Chlorine	Total Chlorine	Coliforms	E Coli	COLONY COUNTS		Qualitative Taste*	Qualitative Odour*	Quantative Taste*	Quantative Odour*	pH	Colour (Hazen)	Turbidity (NTU)	Conductivity (us/cm)	Alkalinity (mg/l CaCO3)	Aluminium (mg/l Al)	Iron (mg/l Fe)	TRACE ORGAN	
									2 day	3 day												Water Profile	Purge & Trap

Insert more lines a

** taste testing only to be performed on samples of potable water and after confirmation of clear bacteriological results*

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

PART D

			Risk Scientist to give final approval to go into supply
Into supply date		**Name**	

FORM NO: 2795

cientist

22/03/2017

	1	2	3
Have IFU or Conditions for use been checked and can you meet all the requirements?	Person completing the work	Risk Scientist - Materials Approved	Comments and Advice
	Sign/Date	Sign/Date	Sign/Date
Yes	[redacted] 29/03/17	[redacted] 29/03/2017	
Yes	[redacted] 29/03/17	[redacted] 01/05/17	Stainless steel grade not part of EN 10088
Yes	[redacted] 29/03/17	[redacted] 29/03/2017	
Yes	[redacted] 29/03/17	[redacted] 29/03/2017	
Yes	[redacted] 29/03/17	[redacted] 01/06/17	Contact risk scores calculated and score well below 100.
Yes	[redacted] 29/03/17	[redacted] 29/03/2017	
Yes	[redacted] 29/03/17	[redacted] 21/04/17	

								FORM NO:		2795				

te before the Risk Team can reduce sampling requirements.

Version 002 - June 2009

							FORM NO:	2795
Assess Samples								
ICS				1	2	3		
MK FORM NO.	Sample Completed?	Verdict	Comment	Person completing the work	Risk or WQ Scientist or autorised delagte signature and date	Risk and Optimisation Team		
				Sign/Date	Sign/Date	Sign/Date		

s required

FORM NO:	2795

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

For materials to enter supply, Parts A and B must be signed and approved by Risk and Optimisation Team and final authorisation will be given by a Risk or Water Quality S

Contact Name:	[redacted]	**Contact Number:**	[redacted]	**DATE:**	
Site:	Pitsford				
Location on site:	Raw Water Pump Hall				
Contractor:	FLI				
WAT- No. If applicable:	WAT-06948-04-05				

USEFUL LINKS

PART A

Line No.	Supplier	Manufacturer holding approval (if different from supplier)	Product name	Brief Description of material in contact with water	Approving body DWI / BS6920/ WRAS/ BSEN	Approving body ref	Large/ Small Surface Area
1	FLI Water	Valspar Powder Coatings	**E1H8691 - Blue FBE Coating**	Dismantling Joint	WRAS	1407505	Small
2	FLI Water	Eastland Compounding	**24641 Black Coloured EPDM**	Dismantling Joint Seal	WRAS	1511505	Small
3	FLI Water	Zenith Industrial Rubber Products	**EP70110BP Black Coloured EPDM**	Flange Gaskets	WRAS	1311533	Small
4							
5							
6							
7							
8							
9							
10							

Insert more lines as necessary

✓ **Please tick box to confirm no further materials will be added to part A of this form**

NOTE: Small surface area materials may not require a full set of MIC samples. Please contact the Risk and Optimisation Team (WQRiskandOptimisatio@anglianwater.co.uk) if you wish to discuss reduced sampling. Part A must be comple

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

PART B - Sampling requirements - to be completed by???

PART A LINE NUMBERS WHICH SAMPLES REPRESENT	Source being used to sample	Analysis	Bottles required	Comparison required?	Likely contact time whilst in operation?	Agreed standing time for samples	Scientist / Engineer agreement (sign and date)	Risk Scientist Approval (sign and date)

PART C - Sample results

Part C completed by:	
Please provide the following contact names:	
Risk Scientist:	
Supply Manager:	
Senior Technician or deputy:	

To Self Assess Sample results

Ensure Parts A and B above are completed fully

Click this button and locate the QDW / PACE 711 report with the MIC

Samples on it. Open that report and then identify which samples

are associated with this form.

COLONY COUNTS

TRACE ORGAN

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

Part A line numbers which samples represent	Sample Number	Sample Date and Time	Sample Type	Location	Free Chlorine	Total Chlorine	Coliforms	E Coli	2 day	3 day	Qualitative Taste*	Qualitative Odour*	Quantative Taste*	Quantative Odour*	pH	Colour (Hazen)	Turbidity (NTU)	Conductivity (us/cm)	Alkalinity (mg/l CaCO3	Aluminium (mg/l Al)	Iron (mg/l Fe)	Water Profile	Purge & Trap

Insert more lines as req

** taste testing only to be performed on samples of potable water and after confirmation of clear bacteriological results*

PART D

Risk Scientist to give final approval to go into supply

Into supply date			**Name**	

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

	FORM NO:	3008

cientist

19/10/2017

	1	2	3
Have IFU or Conditions for use been checked and can you meet all the requirements?	**Person completing the work**	**Risk Scientist - Materials Approved**	**Comments and Advice**
	Sign/Date	**Sign/Date**	**Sign/Date**
Yes	[redacted] / 19/10/17	[redacted] 23/10/2017	
Yes	[redacted] / 19/10/17	[redacted] 23/10/2017	
Yes	[redacted] / 19/10/17	[redacted] 23/10/2017	
			..

te before the Risk Team can reduce sampling requirements.

								FORM NO:		3008					

Assess Samples

NICS				1	2	3

				FORM NO:	3008	
MK FORM NO.	**Sample Completed?**	**Verdict**	**Comment**	**Person completing the work**	**Risk or WQ Scientist or autorised delagte signature and date**	**Risk and Optimisation Team**
				Sign/Date	**Sign/Date**	**Sign/Date**

uired

								FORM NO:		3008						

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

For materials to enter supply, Parts A and B must be signed and approved by Risk and Optimisation Team and final authorisation will be given by a Risk or Water Quality S

Contact Name:	[redacted]	**Contact Number:**	[redacted]	**DATE:**	
Site:	Pitsford WTW				
Location on site:	Clarifier no1 sludge cone and ring				
Contractor:	FLI				
WAT- No. If applicable:	WAT-06938-04-CC				

USEFUL LINKS

PART A

Line No.	Supplier	Manufacturer holding approval (if different from supplier)	Product name	Brief Description of material in contact with water	Approving body DWI / BS6920/ WRAS/ BSEN	Approving body ref	Large/ Small Surface Area
1	FLI	Lubrizol Advanced Materials Europe	**5297 Polyurethane**	Estane Grades 58887 Nat 036, 58315 Nat 035, 58315 Nat 033, 58887 Nat	WRAS	1712504	Small
2	FLI	FLI	**Approved product Stainless Steel**	Stainless steel ring support	DWI	BSEN 10088	small
3							
4							
5							
6							
7							
8							
9							
10							

Insert more lines as necessary

☐ **Please tick box to confirm no further materials will be added to part A of this form**

NOTE: Small surface area materials may not require a full set of MIC samples. Please contact the Risk and Optimisation Team (WQRiskandOptimisatio@anglianwater.co.uk) if you wish to discuss reduced sampling. Part A must be comple

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

PART B - Sampling requirements - to be completed by???

PART A LINE NUMBERS WHICH SAMPLES REPRESENT	Source being used to sample	Analysis	Bottles required	Comparison required?	Likely contact time whilst in operation?	Agreed standing time for samples	Scientist / Engineer agreement (sign and date)	Risk Scientist Approval (sign and date)

PART C - Sample results

Part C completed by:	
Please provide the following contact names:	
Risk Scientist:	
Supply Manager:	
Senior Technician or deputy:	

To Self Assess Sample results

Ensure Parts A and B above are completed fully
Click this button and locate the QDW / PACE 711 report with the MIC
Samples on it. Open that report and then identify which samples
are associated with this form.

COLONY COUNTS	TRACE ORGAN

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

Part A line numbers which samples represent	Sample Number	Sample Date and Time	Sample Type	Location	Free Chlorine	Total Chlorine	Coliforms	E Coli	2 day	3 day	Qualitative Taste*	Qualitative Odour*	Quantative Taste*	Quantative Odour*	pH	Colour (Hazen)	Turbidity (NTU)	Conductivity (us/cm)	Alkalinity (mg/l CaCO3	Aluminium (mg/l Al)	Iron (mg/l Fe)	Water Profile	Purge & Trap
	18024346	19/01/2018		Clarifier 1								3Y		3	7.59	4.4	1.12	435	95	<0.014	NA	NA	NA
	18027860	22/01/2018		Clarifier 5 comparrison								3A		6	7.59		1.3	527	117	N/A	N/A	N/A	N/A

Insert more lines as req

** taste testing only to be performed on samples of potable water and after confirmation of clear bacteriological results*

PART D

Risk Scientist to give final approval to go into supply

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

Into supply date			**Name**	

	FORM NO:	3099

Scientist

17/01/2018			
	1	2	3
Have IFU or Conditions for use been checked and can you meet all the requirements?	Person completing the work	Risk Scientist - Materials Approved	Comments and Advice
	Sign/Date	Sign/Date	Sign/Date
Yes	[redacted] 17/01/2018	[redacted] 24/01/2017	
Yes	[redacted] 17/01/2018	24/01/2017	
			..

te before the Risk Team can reduce sampling requirements.

FORM NO:	3099

Assess Samples

NICS				1	2	3

Version 002 - June 2009

							FORM NO:	3099
MK FORM NO.	Sample Completed?	Verdict	Comment	Person completing the work	Risk or WQ Scientist or autorised delagte signature and date	Risk and Optimisation Team		
				Sign/Date	Sign/Date	Sign/Date		

uired

FORM NO:	3099

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

For materials to enter supply, Parts A and B must be signed and approved by Risk and Optimisation Team and final authorisation will be given by a Risk or Water Quality S

Contact Name:	[redacted]	**Contact Number:**	[redacted]	**DATE:**	
Site:	[redacted]				
Location on site:	Clarifier no2 sludge cone and ring				
Contractor:	FLI				
WAT- No. If applicable:	WAT-06938-05-CC				

USEFUL LINKS

PART A

Line No.	Supplier	Manufacturer holding approval (if different from supplier)	Product name	Brief Description of material in contact with water	Approving body DWI / BS6920/ WRAS/ BSEN	Approving body ref	Large/ Small Surface Area
1	FLI	Lubrizol Advanced Materials Europe	**5297 Polyurethane**	Estane Grades 58887 Nat 036, 58315 Nat 035, 58315 Nat 033, 58887 Nat	WRAS	1712504	Small
2	FLI	FLI	**Approved product Stainless Steel**	Stainless steel ring support	DWI	BSEN 10088	small
3							
4							
5							
6							
7							
8							
9							
10							

Insert more lines as necessary

☐ **Please tick box to confirm no further materials will be added to part A of this form**

NOTE: Small surface area materials may not require a full set of MIC samples. Please contact the Risk and Optimisation Team (WQRiskandOptimisatio@anglianwater.co.uk) if you wish to discuss reduced sampling. Part A must be comple

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

PART B - Sampling requirements - to be completed by???

PART A LINE NUMBERS WHICH SAMPLES REPRESENT	Source being used to sample	Analysis	Bottles required	Comparison required?	Likely contact time whilst in operation?	Agreed standing time for samples	Scientist / Engineer agreement (sign and date)	Risk Scientist Approval (sign and date)
No sampling required. Sampling on Clarifier 1 MIC form 3099 for same work and same materials results were same as comparrison sample. We know the materials should not cause an adverse affect on partially treated water quality. [redacted]25/01/2018								

PART C - Sample results

Part C completed by:	
Please provide the following contact names:	
Risk Scientist:	
Supply Manager:	
Senior Technician or deputy:	

To Self Assess Sample results

Ensure Parts A and B above are completed fully

Click this button and locate the QDW / PACE 711 report with the MIC Samples on it. Open that report and then identify which samples are associated with this form.

COLONY COUNTS

TRACE ORGAN

Version 002 - June 2009

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

Part A line numbers which samples represent	Sample Number	Sample Date and Time	Sample Type	Location	Free Chlorine	Total Chlorine	Coliforms	E Coli	2 day	3 day	Qualitative Taste*	Qualitative Odour*	Quantative Taste*	Quantative Odour*	pH	Colour (Hazen)	Turbidity (NTU)	Conductivity (us/cm)	Alkalinity (mg/l CaCO3	Aluminium (mg/l Al)	Iron (mg/l Fe)	Water Profile	Purge & Trap

Insert more lines as

** taste testing only to be performed on samples of potable water and after confirmation of clear bacteriological results*

PART D

Risk Scientist to give final approval to go into supply

Version 002 - June 2009

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

Into supply date			**Name**	

Version 002 - June 2009

			FORM NO:	3100

cientist

17/01/2018

		1	2	3
Have IFU or Conditions for use been checked and can you meet all the requirements?	**Person completing the work**	**Risk Scientist - Materials Approved**	**Comments and Advice**
	Sign/Date	**Sign/Date**	**Sign/Date**
Yes	[redacted] 17/01/2018	[redacted] 25/01/2018	
Yes	[redacted] 17/01/2018	25/01/2018	
			..

te before the Risk Team can reduce sampling requirements.

								FORM NO:		3100				

Assess Samples

NICS				1	2	3								

FORM NO: 3100

MK FORM NO.	Sample Completed?	Verdict	Comment	Person completing the work	Risk or WQ Scientist or autorised delagte signature and date	Risk and Optimisation Team
				Sign/Date	Sign/Date	Sign/Date

required

				FORM NO:	3100				

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

For materials to enter supply, Parts A and B must be signed and approved by Risk and Optimisation Team and final authorisation will be given by a Risk or Water Quality S

Contact Name:	[redacted]	**Contact Number:**	[redacted]	**DATE:**	
Site:	Pitsford WTW				
Location on site:	GAC NO4 backwash inlet/outlet valve				
Contractor:	N/A				
WAT- No. If applicable:	N/A				

USEFUL LINKS

PART A

Line No.	Supplier	Manufacturer holding approval (if different from supplier)	Product name	Brief Description of material in contact with water	Approving body DWI / BS6920/ WRAS/ BSEN	Approving body ref	Large/ Small Surface Area
1	IWS	HUK (brand of Hydra Valve), model & Technical infomation on data plate	**2014W Butterfly Valves**	Valve internals	WRAS	1705079	small
2							
3							
4							
5							
6							
7							
8							
9							
10							

Insert more lines as necessary

Please tick box to confirm no further materials will be added to part A of this form

NOTE: Small surface area materials may not require a full set of MIC samples. Please contact the Risk and Optimisation Team (WQRiskandOptimisatio@anglianwater.co.uk) if you wish to discuss reduced sampling. Part A must be comple

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

PART B - Sampling requirements - to be completed by???

PART A LINE NUMBERS WHICH SAMPLES REPRESENT	Source being used to sample	Analysis	Bottles required	Comparison required?	Likely contact time whilst in operation?	Agreed standing time for samples	Scientist / Engineer agreement (sign and date)	Risk Scientist Approval (sign and date)

PART C - Sample results

Part C completed by:	
Please provide the following contact names:	
Risk Scientist:	
Supply Manager:	
Senior Technician or deputy:	

To Self Assess Sample results

Ensure Parts A and B above are completed fully
Click this button and locate the QDW / PACE 711 report with the MIC
Samples on it. Open that report and then identify which samples
are associated with this form.

COLONY COUNTS

TRACE ORGAN

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

Part A line numbers which samples represent	Sample Number	Sample Date and Time	Sample Type	Location	Free Chlorine	Total Chlorine	Coliforms	E Coli	2 day	3 day	Qualitative Taste*	Qualitative Odour*	Quantative Taste*	Quantative Odour*	pH	Colour (Hazen)	Turbidity (NTU)	Conductivity (us/cm)	Alkalinity (mg/l CaCO3	Aluminium (mg/l Al)	Iron (mg/l Fe)	Water Profile	Purge & Trap
	1802992	24/01/2018	Reduced MIC	GAC Backwash Main			0	0	1	27													

Insert more lines as

** taste testing only to be performed on samples of potable water and after confirmation of clear bacteriological results*

PART D

Risk Scientist to give final approval to go into supply

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM				
Into supply date			Name	

	FORM NO:	3101

Scientist

15/01/2018

	1	2	3
Have IFU or Conditions for use been checked and can you meet all the requirements?	Person completing the work	Risk Scientist - Materials Approved	Comments and Advice
	Sign/Date	Sign/Date	Sign/Date
Yes	[redacted] 17-01-2018	[redacted] 29/01/2018	
			..

te before the Risk Team can reduce sampling requirements.

								FORM NO:	3101

Assess Samples

NICS				1	2	3

							FORM NO:	3101
MK FORM NO.	Sample Completed?	Verdict	Comment	Person completing the work	Risk or WQ Scientist or autorised delagte signature and date	Risk and Optimisation Team		
				Sign/Date	Sign/Date	Sign/Date		
				[redacted] 29/01/2018	[redacted] 29/01/2018			

equired

				FORM NO:	3101				

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

For materials to enter supply, Parts A and B must be signed and approved by Risk and Optimisation Team and final authorisation will be given by a Risk or Water C

Contact Name:	[redacted]	**Contact Number:**	[redacted]
Site:	Pitsford WTW		
Location on site:	On raw water main coming into site from the reservoir, before primary ozone tank.		
Contractor:	AW IOS - Barhale		
WAT- No. If applicable:	WAT-06714-04-19		

USEFUL LINKS

PART A

Line No.	Supplier	Manufacturer holding approval (if different from supplier)	Product name	Brief Description of material in contact with water
1	R2M Limited	Anhui Import & Export Co.	**600mm Gate Valve**	ductile iron bodies with internal and
2	R2M Limited	Dexine Rubber Tehnologies	**800mm Gasket**	EPDM gasket material
3	R2M Limited	Dexine Rubber Tehnologies	**600mm Gasket**	EPDM gasket material
4	R2M Limited	Dexine Rubber Tehnologies	**80mm Gasket**	EPDM gasket material
5	R2M Limited	Tianjin Jiamingaiyue Powder Coatings Ltd	**600x600x80mm Tee**	iron body with Blue Epoxy Powder (
6	R2M Limited	Tianjin Jiamingaiyue Powder Coatings Ltd	**80x600long Extension Piece**	iron body with Blue Epoxy Powder (
7	R2M Limited	Tianjin Jiamingaiyue Powder Coatings Ltd	**80mm Fire hydrant**	iron body with Blue Epoxy Powder (
8	R2M Limited	Wuhu Jinmao Liquid Science & Technology Co. Ltd	**800mm Flange Adaptor**	:or - compressedmoulded EPDM rul
9	R2M Limited	Arkema	**800mm Flange Adaptor**	aptor with Rilsan polyamide powde

Insert more lines as necessary

Y	**Please tick box to confirm no further materials will be added to part A of this form**

NOTE: Small surface area materials may not require a full set of MIC samples. Please contact the Risk and Optimisation Team (WQRiskandOptimisatio@anglianwater.co.uk) if you wish to discuss reduced sampling. Part A must l

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

PART B - Sampling requirements - to be completed by???

PART A LINE NUMBERS WHICH SAMPLES REPRESENT	Source being used to sample	Analysis	Bottles required	Comparison required?	Likely contact time whilst in operation?	Agreed standing time for samples	Scie Eng agre (sign a
1	Raw Water (Surface)	Turbidity, colour, PH, conductivity, alkalinity, aluminium	500ml Chem	Sample taken from W01PTW0JR pre work and post work			

PART C - Sample results

Part C completed by:	
Please provide the following contact names:	
Risk Scientist:	
Supply Manager:	
Senior Technician or deputy:	

To Self Assess Sample r
Ensure Parts A and B above
Click this button and locate
Samples on it. Open that re
are associated with this forr

COLONY COUNTS

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

Part A line numbers which samples represent	Sample Number	Sample Date and Time	Sample Type	Location	Free Chlorine	Total Chlorine	Coliforms	E Coli	2 day	3 day	Qualitative Taste*	Qualitative Odour*	Quantative Taste*	Quantative Odour*	pH	Colour (Hazen)	Turbidity (NTU)

** taste testing only to be performed on samples of potable water and after confirmation of clear bacteriological results*

PART D

Risk Scientist to give final approval t

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM			
Into supply date			Name

	FORM NO:

uality Scientist

3	DATE:	13/02/2018

				1	2	3
Approving body DWI / BS6920/ WRAS/ BSEN	Approving body ref	Large/ Small Surface Area	Have IFU or Conditions for use been checked and can you meet all the requirements?	Person completing the work	Risk Scientist - Materials Approved	Comments and Advice
				Sign/Date	Sign/Date	Sign/Date
WRAS	1506954	Small	Yes	[redacted]	[redacted]	
WRAS	1401510	Small	Yes	[redacted]	12/04/2018	
WRAS	1401510	Small	Yes	[redacted]	12/04/2018	
WRAS	1401510	Small	Yes	[redacted]	12/04/2018	
WRAS	1707542	Small	Yes	[redacted]	12/04/2018	..
WRAS	1707542	Small	Yes	[redacted]	12/04/2018	
WRAS	1707542	Small	Yes	[redacted]	12/04/2018	
WRAS	1311521	Small	Yes	[redacted]	12/04/2018	
WRAS	1411519	Small	Yes	[redacted]	12/04/2018	

be complete before the Risk Team can reduce sampling requirements.

														FORM NO:	
ntist / jineer ement nd date)	Risk Scientist Approval (sign and date)														

esults
are completed fully
the QDW / PACE 711 report with the MIC
port and then identify which samples
n.

Assess Samples

				TRACE ORGANICS				1	2	3			

															FORM NO:
Conductivity (us/cm)	Alkalinity (mg/l CaCO3	Aluminium (mg/l Al)	Iron (mg/l Fe)	Water Profile	Purge & Trap	MK FORM NO.	Sample Completed?	Verdict	Comment	Person completing the work	Risk or WQ Scientist or autorised delagte signature and date	Risk and Optimisation Team			
										Sign/Date	Sign/Date	Sign/Date			

Insert more lines as required

o go into supply

Version 002 - June 2009

	FORM NO:

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

For materials to enter supply, Parts A and B must be signed and approved by Risk and Optimisation Team and final authorisation will be given by a Risk or Water Quality S

Contact Name:	[redacted]	**Contact Number:**	[redacted]	**DATE:**	
Site:	Pitsford WTW				
Location on site:	Raw water building, Pump No 2				
Contractor:	FLI Water				
WAT- No. If applicable:	WAT-06900-00-17				

USEFUL LINKS

PART A

Line No.	Supplier	Manufacturer holding approval (if different from supplier)	Product name	Brief Description of material in contact with water	Approving body DWI / BS6920/ WRAS/ BSEN	Approving body ref	Large/ Surfac
1	Belzona Polymerics Ltd		Belzona Supermetalglide 1341, Grey coloured, two part epoxy	Efficiency Coatings for Pump Casings & Elements.	WRAS	1306534	Sm
2	K B Engineering / BML	Klinger LTD	Klingersill C-4430 (green/cream)	Pump casing gaskets	WRAS	1408541	Sm
3	BML	ITW Rocol	Sapphire Aqua Sil	icone based lubricant used on O rin	WRAS	1704534	Sm
4	Canmec		Bronze PB1 (BS EN 1982:2008)	Pump rings and sleeves	BSEN		Sm
5	[redacted]	Eriks Group/Angst & Pfister AG	EP Elasomers	O Rings	WRAS	1410506	Sm
6	[redacted]	Morgan advanced materials	Carbon	Mechanical seal face	WRAS	1405503	Sm
7	[redacted]	Coorstek	Ceramic	Mechanical seal face	WRAS	1505504	Sm
8							
9							
10							

Insert more lines as necessary

☐ **Please tick box to confirm no further materials will be added to part A of this form**

NOTE: Small surface area materials may not require a full set of MIC samples. Please contact the Risk and Optimisation Team (WQRiskandOptimisatio@anglianwater.co.uk) if you wish to discuss reduced sampling. Part A must be comple

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

PART B - Sampling requirements - to be completed by???

PART A LINE NUMBERS WHICH SAMPLES REPRESENT	Source being used to sample	Analysis	Bottles required	Comparison required?	Likely contact time whilst in operation?	Agreed standing time for samples	Scientist / Engineer agreement (sign and date)	Risk Scientist Approval (sign and date)

PART C - Sample results

Part C completed by:	
Please provide the following contact names:	
Risk Scientist:	
Supply Manager:	
Senior Technician or deputy:	

To Self Assess Sample results

Ensure Parts A and B above are completed fully

Click this button and locate the QDW / PACE 711 report with the MIC

Samples on it. Open that report and then identify which samples

are associated with this form.

COLONY COUNTS

TRA

Version 002 - June 2009

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

Part A line numbers which samples represent	Sample Number	Sample Date and Time	Sample Type	Location	Free Chlorine	Total Chlorine	Coliforms	E Coli	2 day	3 day	Qualitative Taste*	Qualitative Odour*	Quantative Taste*	Quantative Odour*	pH	Colour (Hazen)	Turbidity (NTU)	Conductivity (us/cm)	Alkalinity (mg/l CaCO3	Aluminium (mg/l Al)	Iron (mg/l Fe)	Water Profile

Insert more lines a

** taste testing only to be performed on samples of potable water and after confirmation of clear bacteriological results*

PART D

Risk Scientist to give final approval to go into supply

Version 002 - June 2009

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM				
Into supply date			Name	

			FORM NO:	3196

;cientist

10/04/2018

		1	2	3
' Small e Area	Have IFU or Conditions for use been checked and can you meet all the requirements?	Person completing the work	Risk Scientist - Materials Approved	Comments and Advice
		Sign/Date	Sign/Date	Sign/Date
ıall	Yes	[redacted] 10/04/18	[redacted] 10/04/2018	
ıall	Yes	[redacted] 10/04/18	[redacted] 10/04/2018	
ıall	Yes	[redacted] 10/04/18	[redacted] 10/04/2018	
ıall	Yes	[redacted] 10/04/18	[redacted] 25/06/2018	
ıall	Yes	[redacted] 10/04/18	[redacted] 10/04/2	..
ıall	Yes	[redacted] 10/04/18	[redacted] 10/04/2018	
ıall	Yes	[redacted] 10/04/18	[redacted] 25/06/2018	

te before the Risk Team can reduce sampling requirements.

							FORM NO:	3196							

Assess Samples

CE ORGANICS				1	2	3		

Version 002 - June 2009

							FORM NO:	3196
Purge & Trap	MK FORM NO.	Sample Completed?	Verdict	Comment	Person completing the work	Risk or WQ Scientist or autorised delagte signature and date	Risk and Optimisation Team	
					Sign/Date	Sign/Date	Sign/Date	

s required

Version 002 - June 2009

			FORM NO:	3196

Version 002 - June 2009

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

For materials to enter supply, Parts A and B must be signed and approved by Risk and Optimisation Team and final authorisation will be given by a Risk or Water Quality S

Contact Name:	[redacted]	**Contact Number:**	[redacted]	**DATE:**	
Site:	Pitsford WTW				
Location on site:	Main Pump Hall				
Contractor:	IWS				
WAT- No. If applicable:	WAT-06900-01-34				

USEFUL LINKS

PART A

Line No.	Supplier	Manufacturer holding approval (if different from supplier)	Product name	Brief Description of material in contact with water	Approving body DWI / BS6920/ WRAS/ BSEN	Approving body ref	Large/ Small Surface Area
1	Belzona Polymerics Ltd		**Belzona Supermetalglide 1341, Grey coloured, two part epoxy coating.**	Efficiency Coatings for Pump Casings & Elements.	WRAS	1306534	Small
2	K B Engineering / BML	Klinger Ltd	**Klingersill C-4430 (green/cream)**	Pump casing gaskets	WRAS	1408541	Small
3	BML	ITW Rocol	**Sapphire Aqua Sil**	icone based lubricant used on O rin	WRAS	1704534	Small
4		IWS	**Bronze PB1 (BS EN 1982:2008)**	BS EN 1982:2008			Small
5	[redacted]	Eriks group/Angst & Pfister AG	**EP Elastomers**	O rings	WRAS	1410506	Small
6		Morgan advanced materials	**Carbon**	carbon mechanical seal sealing	WRAS	1405503	Small
7		CoorsTek advanced materials	**Silicon carbide**	Silicon carbide sealing ring	WRAS	1505505	Small
8							
9							
10							

Insert more lines as necessary

☐ **Please tick box to confirm no further materials will be added to part A of this form**

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

NOTE: Small surface area materials may not require a full set of MIC samples. Please contact the Risk and Optimisation Team (WQRiskandOptimisatio@anglianwater.co.uk) if you wish to discuss reduced sampling. Part A must be comple

PART B - Sampling requirements - to be completed by???

PART A LINE NUMBERS WHICH SAMPLES REPRESENT	Source being used to sample	Analysis	Bottles required	Comparison required?	Likely contact time whilst in operation?	Agreed standing time for samples	Scientist / Engineer agreement (sign and date)	Risk Scientist Approval (sign and date)
1-7	Fully treated water	Full MIC with taste	1*Bacti, 2*500ml Chem, 2*Purge and trap vials, 1*Winchester	No	n/a	n/a.	SC	LE

PART C - Sample results

Part C completed by:	
Please provide the following contact names:	
Risk Scientist:	
Supply Manager:	
Senior Technician or deputy:	

To Self Assess Sample results

Ensure Parts A and B above are completed fully

Click this button and locate the QDW / PACE 711 report with the MIC Samples on it. Open that report and then identify which samples are associated with this form.

Version 002 - June 2009

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

Part A line numbers which samples represent	Sample Number	Sample Date and Time	Sample Type	Location	Free Chlorine	Total Chlorine	Coliforms	E Coli	COLONY COUNTS 2 day	COLONY COUNTS 3 day	Qualitative Taste*	Qualitative Odour*	Quantative Taste*	Quantative Odour*	pH	Colour (Hazen)	Turbidity (NTU)	Conductivity (us/cm)	Alkalinity (mg/l CaCO3)	Aluminium (mg/l Al)	Iron (mg/l Fe)	TRACE ORGAI Water Profile	Purge & Trap
1-7	18260607	08/06/2018	Bacti	No. 1 Pump	<0.05	1	0	0	31	739	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
1-7	18262015	08/06/2018	P&T	No. 1 Pump	#N/A	###	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
1-7	18262016	08/06/2018	Chemi	No. 1 Pump	<0.05	1	#N/A	#N/A	#N/A	#N/A	1	1Z	1	1	7.27	0.7	0.2	545	113	<0.014	#N/A	#N/A	#N/A
	18277993	21/06/2018	Bacti	No. 1 Pump	<0.05	1	0	0	0	0													

Insert more lines as req

** taste testing only to be performed on samples of potable water and after confirmation of clear bacteriological results*

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

PART D

			Risk Scientist to give final approval to go into supply
Into supply date		**Name**	

			FORM NO:	3197
Scientist				
31/05/2018				

	1	2	3
Have IFU or Conditions for use been checked and can you meet all the requirements?	Person completing the work	Risk Scientist - Materials Approved	Comments and Advice
	Sign/Date	Sign/Date	Sign/Date
Yes	[redacted] 31/05/18	[redacted] 31/05/2018	
Yes	[redacted] 31/05/18	[redacted] 31/05/2018	
Yes	[redacted] 31/05/18	[redacted] 31/05/2018	
Yes	[redacted] 31/05/18	[redacted] 31/05/2018	
Yes	[redacted] 31/05/18	[redacted] 31/05/2018	..
Yes	[redacted] 31/05/18	31/05/2018	
Yes	[redacted] 31/05/18	01/06/18	

		FORM NO:	3197	

te before the Risk Team can reduce sampling requirements.

Assess Samples

						FORM NO:	3197
ICS				1	2	3	
MK FORM NO.	Sample Completed?	Verdict	Comment	Person completing the work	Risk or WQ Scientist or autorised delagte signature and date	Risk and Optimisation Team	
				Sign/Date	Sign/Date	Sign/Date	
#N/A	Yes	Fail	Requires resampling				
#N/A	Yes	Pass					
#N/A	Yes	Pass	Turbidity slightly elevated				
					[redacted] 25/06/2018		

ired

Version 002 - June 2009

		FORM NO:	3197

Version 002 - June 2009

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

For materials to enter supply, Parts A and B must be signed and approved by Risk and Optimisation Team and final authorisation will be given by a Risk or Water Quality S

Contact Name:	[redacted]	**Contact Number:**		**DATE:**	
Site:	Pitsford WTW				
Location on site:	GAC 5 valve				
Contractor:	N/A				
WAT- No. If applicable:					

USEFUL LINKS

PART A

Line No.	Supplier	Manufacturer holding approval (if different from supplier)	Product name	Brief Description of material in contact with water	Approving body DWI / BS6920/ WRAS/ BSEN	Approving body ref	Large/ Small Surface Area
1	IWS	HUK (brand of Hydra Valve), model & Technical infomation on data plate	**2014W Butterfly Valves**	Valve internals epoxy coated ductile iron bodies, EPDM seat and steel disc	WRAS	1705079	small
2							
3							
4							
5							
6							
7							
8							
9							
10							

Insert more lines as necessary

☐ **Please tick box to confirm no further materials will be added to part A of this form**

NOTE: Small surface area materials may not require a full set of MIC samples. Please contact the Risk and Optimisation Team (WQRiskandOptimisatio@anglianwater.co.uk) if you wish to discuss reduced sampling. Part A must be comple

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

PART B - Sampling requirements - to be completed by???

PART A LINE NUMBERS WHICH SAMPLES REPRESENT	Source being used to sample	Analysis	Bottles required	Comparison required?	Likely contact time whilst in operation?	Agreed standing time for samples	Scientist / Engineer agreement (sign and date)	Risk Scientist Approval (sign and date)
01-Jan	Partially treated Water	Coliforms, Ecoli, 2 and 3 day plate counts	Bacti	Yes	None always in use	0	[redacted]	[redacted] 10/04/2018

PART C - Sample results

Part C completed by:	
Please provide the following contact names:	
Risk Scientist:	
Supply Manager:	
Senior Technician or deputy:	

To Self Assess Sample results

Ensure Parts A and B above are completed fully

Click this button and locate the QDW / PACE 711 report with the MIC

Samples on it. Open that report and then identify which samples

are associated with this form.

COLONY COUNTS

TRACE ORGAN

Version 002 - June 2009

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

Part A line numbers which samples represent	Sample Number	Sample Date and Time	Sample Type	Location	Free Chlorine	Total Chlorine	Coliforms	E Coli	2 day	3 day	Qualitative Taste*	Qualitative Odour*	Quantative Taste*	Quantative Odour*	pH	Colour (Hazen)	Turbidity (NTU)	Conductivity (us/cm)	Alkalinity (mg/l CaCO3	Aluminium (mg/l Al)	Iron (mg/l Fe)	Water Profile	Purge & Trap
	18167554	13/04/2018	Spot	U/S													0						
	18157898	06/04/2018	Spot	D/S			0	0	0	103													

Insert more lines as req

** taste testing only to be performed on samples of potable water and after confirmation of clear bacteriological results*

PART D

Risk Scientist to give final approval to go into supply

Version 002 - June 2009

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM				
Into supply date			Name	

Version 002 - June 2009

	FORM NO:	3199

Scientist

06/04/2018

	1	2	3
Have IFU or Conditions for use been checked and can you meet all the requirements?	Person completing the work	Risk Scientist - Materials Approved	Comments and Advice
	Sign/Date	Sign/Date	Sign/Date
Yes	[redacted] 10/04/2018	[redacted] 10/04/2018	
			..

te before the Risk Team can reduce sampling requirements.

								FORM NO:		3199							

Assess Samples

NICS				1	2	3	

Version 002 - June 2009

								FORM NO:	3199
MK FORM NO.	Sample Completed?	Verdict	Comment	Person completing the work	Risk or WQ Scientist or autorised delagte signature and date	Risk and Optimisation Team			
				Sign/Date	Sign/Date	Sign/Date			

ıired

Version 002 - June 2009

				FORM NO:	3199					

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

For materials to enter supply, Parts A and B must be signed and approved by Risk and Optimisation Team and final autho

Contact Name:	[redacted]	**Contact Number:**	[redacted]	**Date:**	
Site:	PITSFORD WWKS				
Location on site:	PRE_OZONE TANK.				
Contractor:	BARHALE				
WAT- No. If applicable:	WAT-07074-04-05				

USEFUL LINKS

PART A - Approvals

Line No.	Supplier	Manufacturer holding approval (if different from supplier)	Product name	Brief Description of material in contact with water	Large/ Small Surface Area	Approving body DWI / BS6920/ WRAS/ BSEN	Appr body
1	torbay tech tronics	O.I.filtration	**Viton "A" Gasket**	black coloured gasket fluroelastomeric materiel	s	wras	1602
2	torbay tech tronics	O.I.filtration	**Ceramic dome**	diffuser stone from hydraullically pressed ceramic	s	wras	1308
3							
4							

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

5							
6							
7							
8							
9							
10							

Insert more lines as necessary

x	Please put X in box to confirm no further materials will be added to part A of this form

NOTE: Some products and materials may not require a full set of MIC samples, depending on what they are and where they are being installed.
Please contact the Risk and Optimisation Team (WQRiskandOptimisatio@anglianwater.co.uk) if you wish to discuss reduced sampling. Part A must be complete before t

PART B - Sampling requirements

PART A LINE NUMBERS WHICH SAMPLES REPRESENT	Source being used to sample	Analysis	Bottles required	Comparison required?	Likely contact time whilst in operation?	Agreed standing time for samples	Scientist / Engineer agreement (sign and date)	Risk Scientist Approval (sign and date)

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

PART C - Sample results

Part C completed by:	
Please provide the following contact names:	
Risk Scientist:	
Supply Manager:	
Senior Technician or deputy:	

To Self Assess Sample results

Ensure Parts A and B above are completed fully
Click this button and locate the QDW / PACE 711 report with the MIC
Samples on it. Open that report and then identify which samples
are associated with this form.

Part A line numbers which samples represent	Sample Number	Sample Date and Time	Sample Type	Location	Free Chlorine	Total Chlorine	Coliforms	E Coli	COLONY COUNTS 2 day	COLONY COUNTS 3 day	Qualitative Taste*	Qualitative Odour	Quantative Taste*	Quantative Odour	pH	Colour (Hazen)	Turbidity (NTU)	Conductivity (us/cm)	Alkalinity (mg/l CaCO3)	Aluminium (mg/l Al)	Iron (mg/l Fe)	TRA Water Profile

Insert more lines as required

** taste testing only to be performed on samples of potable water and after confirmation of clear bacteriological results*

PART D - Permission to go into supply

Risk Scientist to give final approval to go into supply			
Into supply date:		**Name:**	

				Form Number:	2389

risation will be given by a Risk or Water Quality Scientist

21/06/2018

		1	2	
oving y ref	Have rhe Instructions for Use (IFU) or Conditions for use been checked and can you meet all the requirements?	Person completing the work	Risk Scientist - Materials Approved	Comments and Advice
		Sign/Date	Sign/Date	Sign/Date
2500	yes	a.[redacted]	LE 21/06/18	Reduced/no samples required pending confirmation that products don't carry any advisory information on potential risk
3502	yes	a.[redacted]	LE 21/06/18	Reduced/no samples required pending confirmation that products don't carry any advisory information on potential risk

Version 002 - June 2009

				Form Number:	2389				

the Risk Team can reduce sampling requirements.

			Form Number:	2389			

Assess Samples

CE ORGANICS					1	2	3
Purge & Trap	MK FORM NO.	Sample Completed?	Verdict	Comment	Person completing the work	Risk or WQ Scientist or authorised delegate signature and date	Risk and Optimisation Team
					Sign/Date	Sign/Date	Sign/Date

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

For materials to enter supply, Parts A and B must be signed and approved by Risk and Optimisation Team and final autho

Contact Name:	[redacted]	**Contact Number:**	[redacted]	**Date:**	
Site:	**Pitsford**				
Location on site:	Post-ozone tank lane 2 and 3				
Contractor:	torbay tech tronics.				
WAT- No. If applicable:	WAT-07074-04-04				

USEFUL LINKS

PART A - Approvals

Line No.	Supplier	Manufacturer holding approval (if different from supplier)	Product name	Brief Description of material in contact with water	Large/ Small Surface Area	Approving body DWI / BS6920/ WRAS/ BSEN
1	torbay tech tronics	O.I.filtration	**Viton "A" Gasket**	black coloured gasket fluroelastomeric materiel	s	wras
2	torbay tech tronics	O.I.filtration	**Ceramic dome**	diffuser stone from hydraullically pressed ceramic	s	wras
3						
4						
5						
6						

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

7						
8						
9						
10						

Insert more lines as necessary

x	**Please put X in box to confirm no further materials will be added to part A of this form**

NOTE: Some products and materials may not require a full set of MIC samples, depending on what they are and where they are being installed.
Please contact the Risk and Optimisation Team (WQRiskandOptimisatio@anglianwater.co.uk) if you wish to discuss reduced sampling. Part A must be complete before t

PART B - Sampling requirements

PART A LINE NUMBERS WHICH SAMPLES REPRESENT	Source being used to sample	Analysis	Bottles required	Comparison required?	Likely contact time whilst in operation?	Agreed standing time for samples	Scientist / Engineer agreement (sign and date)	Risk Scientist Approval (sign and date)
1 to 2	Partially treated Water	Full MIC without taste	1*Bacti, 2*500ml Chem, 2*Purge and trap vials, 1*Winchester	Yes	1 hr	16hr (for works shutdowns)	R.[redacted]	R.[redacted]

PART C - Sample results

Part C completed by:	[redacted]		**To Self Assess Sample results**

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

Please provide the following contact names:

Risk Scientist: [redacted]

Supply Manager: [redacted]

Senior Technician or deputy: [redacted]

Ensure Parts A and B above are completed fully
Click this button and locate the QDW / PACE 711 report with the M
Samples on it. Open that report and then identify which samples
are associated with this form.

Part A line numbers which samples represent	Sample Number	Sample Date and Time	Sample Type	Location	Free Chlorine	Total Chlorine	Coliforms	E Coli	COLONY COUNTS 2 day	COLONY COUNTS 3 day	Qualitative Taste*	Qualitative Odour	Quantative Taste*	Quantative Odour	pH	Colour (Hazen)	Turbidity (NTU)	Conductivity (us/cm)	Alkalinity (mg/l CaCO3)	Aluminium (mg/l Al)	Iron (mg/l Fe)
Lane 2																					
n/a	19059432	07/02/2019	MIC	Comparison	n/a	n/a	0	0	0	4	n/a	2T	n/a	SOLVEN	7.57	1.6	0.12	508	93	< 0.014	n/a
1 to 2	19069433	07/02/2019	MIC	Post work	n/a	n/a	4	8	0	118	n/a	3Y	n/a	SOLVEN	7.57	3.4	0.18	504	94.3	< 0.014	n/a
n/a	19129346 19129360	21/03/2019	MIC	Comparison	n/a	n/a	0	0	0	127	n/a	1Z	n/a	1	n/a	2	0.1	n/a	n/a	n/a	n/a
1 to 2	19129345 19129359	21/03/2019	MIC	Post work	n/a	n/a	0	0	0	79	n/a	2Y	n/a	EARTHY	7.57	3.5	0.14	n/a	n/a	n/a	n/a
n/a	19268891 19268907 19272691	13/06/2019	MIC	Comparison	n/a	n/a	0	0	0	11	n/a	1Z	n/a	1	7.55	1.7	0.18	506	101	<0.01 4	0.055
1 to 2	19268890 19268906 19269637 19272690	13/06/2019	MIC	Post work Lane 3	n/a	n/a	28	10	15	29	n/a	1z	n/a	2	7.52	3.6	0.27	503	99.2	<0.01 4	0.056
n/a	19286214 19286006 19286715	25/06/2019	MIC	Comparison	n/a	n/a	0	0	0	143	n/a	1Z	n/a	1	7.5	2.8	0.16	508	96.8	<0.01 4	0.038
1 to 2	19286013 19286213 19286716	25/06/2019	MIC	Post work Lane 3	n/a	n/a	0	0	0	0	n/a	1Z	n/a	2	7.63	3.4	0.2	505	95.6	<0.01 4	0.04
n/a	19309032 19310814	05/07/2019	Bacti Water Profile	Comparison	n/a	n/a	0	0	0	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

1 to 2	19309033 19310815	05/07/2019	Bacti Water Profile	Post work Lane 3	n/a	n/a	4	0	0	17	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Insert more lines as required

** taste testing only to be performed on samples of potable water and after confirmation of clear bacteriological results*

PART D - Permission to go into supply

Risk Scientist to give final approval to go into supply			
Into supply date:	**11/07/2019**	[redacted]	

				Form Number:	3300

risation will be given by a Risk or Water Quality Scientist

21/06/2018

		1	2	
Approving body ref	**Have rhe Instructions for Use (IFU) or Conditions for use been checked and can you meet all the requirements?**	**Person completing the work**	**Risk Scientist - Materials Approved**	**Comments and Advice**
		Sign/Date	**Sign/Date**	**Sign/Date**
1602500	yes	a.[redacted]	LE 15/10/18	
1308502	yes	a.[redacted]	LE 15/10/18	AT sent delivery note as proof of purchase before WRAS expiration date

					Form Number:	3300				

the Risk Team can reduce sampling requirements.

					Form Number:	**3300**		
IIC		Assess Samples						

TRACE ORGANICS						**1**	**2**	**3**
Water Profile	**Purge & Trap**	**MK FORM NO.**	**Sample Completed?**	**Verdict**	**Comment**	**Person completing the work**	**Risk or WQ Scientist or authorised delegate signature and date**	**Risk and Optimisation Team**
						Sign/Date	**Sign/Date**	**Sign/Date**
1	0	11746	**Yes**	**n/a**	Requested further bacti, odours, colour and turbidity. Bacti not representative of comparison and colour higher - solvent odour in both samples but resample	[redacted]	~	~
0	0	11746	**Yes**	**fail**		[redacted]	~	~
n/a	n/a	n/a	**Yes**	**n/a**	Very mild earthy odour that's not there on the comparison, but GAC can remove odours and not significant. Colour higher but turbidity fine, so satisfactory.	[redacted]	R.[redacted]25/03/2019	R.[redacted]25/03/2019
n/a	n/a	n/a	**Yes**	**PASS**		[redacted]	R.[redacted]25/03/2019	R.[redacted]25/03/2019
	0	11746	**Yes**	**n/a**				
1	0	11746	**Yes**	**fail**	Bacti and trace organics need resampling. Bacti higher then previous samples and WP came back with 3.58ug/l Heavy gas oil			
1	0	11746	**Yes**	**n/a**	Total heavy gas oil on both the comparison (5ug/l) and lane 3 (3.3ug/l). Resamples to be taken at WR, lane 1/2, lane 3, GAC inlet and final			
1	0	11746	**Yes**	**fail**				
0	n/a	11746	**Yes**					

					Form Number:	**3300**				
0	n/a	11746	**Yes**	**Pass**	Pre-GAC and disinfection so coliforms and 3 day PC acceptable, trace organics came back clear					

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

For materials to enter supply, Parts A and B must be signed and approved by Risk and Optimisation Team and final authoris

Contact Name:	[redacted]	**Contact Number:**	[redacted]	**Date:**	
Site:	Pitsford WTW				
Location on site:	GAC 5 Outlet Valve				
Contractor:					
WAT- No. If applicable:					

USEFUL LINKS

PART A - Approvals

Line No.	Supplier	Manufacturer holding approval (if different from supplier)	Product name	Brief Description of material in contact with water (e.g. pump, pipe, sealant)	Large/ Small surface area	Approving body (DWI/ BS6920/ WRAS/ KIWA/ BSEN)	Appr body
1	Socla SAS		**Sylax Range Butterfly Valve**	Range wafer, lugged and double flange butterfly valves with blue epoxy coated bodies and either stainless steel or blue epoxy coated ductile iron discs. Maximum working pressure 16.0 bar. Cold water use only.	Small	WRAS	161(
2							
3							
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Insert more lines as necessary

	Please put X in box to confirm no further materials will be added to part A of this form

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

NOTE: Some products and materials may not require a full set of MIC samples, depending on what they are and where they are being installed.
Please contact the Risk and Optimisation Team (WQRiskandOptimisatio@anglianwater.co.uk) if you wish to discuss reduced sampling. Part A must be complete before the

PART B - Sampling requirements

PART A LINE NUMBERS WHICH SAMPLES REPRESENT	Source being used to sample	Analysis	Bottles required	Comparison required?	Likely contact time whilst in operation?	Agreed standing time for samples	Scientist / Engineer agreement (sign and date)	Risk Scientist Approval (sign and date)
1	Partially treated Water	Coliforms, Ecoli, 2 and 3 day plate counts	Bacti	Yes	Few seconds	0	LE 18/07/18	

PART C - Sample results

Part C completed by:	
Please provide the following contact names:	
Risk Scientist:	
Supply Manager:	
Senior Technician or deputy:	

To Self Assess Sample results
Ensure Parts A and B above are completed fully
Click this button and locate the QDW / PACE 711 report with the MIC
Samples on it. Open that report and then identify which samples
are associated with this form.

									COLONY COUNTS	*	r	*	r				m)		Al)		TRA

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

Part A line numbers which samples represent	Sample Number	Sample Date and Time	Sample Type	Location	Free Chlorine	Total Chlorine	Coliforms	E Coli	2 day	3 day	Qualitative Taste	Qualitative Odou	Quantative Taste	Quantative Odou	pH	Colour (Hazen)	Turbidity (NTU)	Conductivity (us/c	Alkalinity (mg/l CaCO3)	Aluminium (mg/l /	Iron (mg/l Fe)	Water Profile

Insert more lines as required

** taste testing only to be performed on samples of potable water and after confirmation of clear bacteriological results*

PART D - Permission to go into supply

Risk Scientist to give final approval to go into supply			
Into supply date:		**Name:**	

			Form Number:	**3333**	

ation will be given by a Risk or Water Quality Scientist

	18/07/2018

		1	**2**	
oving y ref	**Have rhe Instructions for use (IFU) or conditions for use been checked and can you meet all the requirements?**	**Person completing the work** Sign/Date	**Risk Scientist - Materials Approved** Sign/Date	**Comments and Advice**
)315	Yes	[redacted] 18/07/18	LE 18/07/18	

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				Form Number:	3333			

Risk Team can reduce sampling requirements.

Assess Samples

CE ORGANICS				1	2		

				Form Number:	3333			
Purge & Trap	MK FORM NO.	Sample Completed?	Verdict	Comment	Person completing the work	Risk or WQ Scientist or authorised delegate signature and date		
					Sign/Date	Sign/Date		

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

For materials to enter supply, Parts A and B must be signed and approved by Risk and Optimisation Team and final authoris

Contact Name:	[redacted]	**Contact Number:**	[redacted]
Site:	Pitsford Final Connection		
Location on site:	Rear of storage tank 2		
Contractor:			
WAT- No. If applicable:	WAT-07033		

USEFUL LINKS

PART A - Approvals

Line No.	Supplier	Manufacturer holding approval (if different from supplier)	Product name	Brief Description of material in contact with water (e.g. pump, pipe, sealant)	Large/ Small surface area	Appro bo (DW BS69 WR KIW BSE
1	Wolsley	Arkema	**Rislan polyamide powder coating T Black 7450 AC, T Blue 7443 MAC, T Green 7529 MAC, T Grey 5161 MAC and T White 1488 AC.**	Coating	Small	WR
2	Wolsley	VIP Polymers Ltd	**EDPM Gasket rubber**	Gasket Rubber	Small	WR
3	Aliaxis	GPS	**GPS N Blue PE80 Pipe**	Pipe	Large	DV
4	Aliaxis	GPS	**GPS Excel Black Type F**	Pipe	Large	DV
5	Electrostreel	Electrosteel Castings	**Electrocoat EP812 Blue**	Coating	Small	WR
6	AVK	AVK	**S29-388/389 Hydrant**	Valve	Small	WR
7	AVK	AVK	**EDPM Gasket rubber**	Gasket Rubber	Small	WR
8	AVK	DUCI SRL	**EDPM O Ring**	Gasket Rubber	Small	WR
9	AVK	AVK	**DN80 PN16 Gate Valve**	Valve	Small	KIV
10	AVK	AVK	**DN500 PN16 Gate Valve with Bypass**	Valve	Small	WR
11	Saint Gobain	BS Coatings	**Eurokote Epoxy powder coating**	Coating	Small	WR
12	Saint Gobain	BS Coatings	**Flogul 645 PVDC Resin Coating**	Coating	Small	WR

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM						
13	Saint Gobain	Saint Gobain	**Blast Furnace Cement Mortar**	Sealant	Small	WR
14	Saint Gobain	VIP Polymers Ltd	**EPDM Gasket Rubber**	Gasket Rubber	Small	WR
15	Powerrun	Powerrun	**500mm NB Sch 10s PN10 316L stainless steel flange / spigot pipe at 1500mm long.**	Pipe	Large	DV
16	Powerrun	Powerrun	**500mm NB Sch 10s PN10 316L stainless steel flange / spigot 90 degree single mitre cut bend.**	Pipe bend	Large	DV
17	Powerrun	Powerrun	**600-500mm NB Sch 10s 316L stainless steel double spigot concentric reducer.**	Pipe reducer	Large	DV
18	Powerrun	Powerrun	**Flange mounted pipe support from 316L stainless steel to suit 500NB PN10.**	Pipe vertical support member	Large	DV
18	Powerrun	Powerrun	**Pipe strap from 316L stainless steel to suit 500NB PN10.**	Pipe horizontal support strap	Large	DV
19	R2M Ltd	Arkema	**Rislan polyamide powder coating T Black 7450 AC, T Blue 7443 MAC, T Green 7529 MAC, T Grey 5161 MAC and T White 1488 AC.**	Coating to 2no 500mm 11deg PN16 flanged bends, and 1no 500mm 1mtr PN16 Double flanged pipe.	Small	WR
20	R2M Ltd	Tianjin Jiamingaiyue Powder Coatings Co., Ltd	**`Blue Epoxy Powder Coating (5005)`. Blue coloured, factory applied epoxy powder coating.**	Factory applied metal coatings to nuts & bolts associated with pipework & fittings.	Small	WR
21	R2M Ltd	VIP Polymers Ltd	**EPDM - Material Only**	Gasket Rubber	Small	WR

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM						
22	Axalta Powder Coating Systems UK Ltd.	Acothane UK Ltd.	**Acothane DW**	Polyurethane sealant.	Small	WR DV
23	Waveney	Zenith Industrial Rubber Products PVT Ltd	**EDPM Gasket rubber**	Gasket Rubber	Small	WR
24	R2M Ltd	Akzo Nobel Powder Coatings GmbH	**Resicoat R4 Factory Applied Epoxy Powder Coating**	Epoxy Powder Coating	Small	WR
25	R2M Ltd	Compounds AG	**Sunaflex T 8193 Black EDPM Rubber Material**	Rubber	Small	WR
26	R2M Ltd	Compounds AG	**Sunaflex T 8165 Black EDPM Rubber Material**	Rubber	Small	WR
27	R2M Ltd	Compounds AG	**Sunaflex T 8157 Black EDPM Rubber Material**	Rubber	Small	WR

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

28	Wolseley	Plasson UK	**Fittings for use with Tube and Pipe - Couplings**	Plastic Compression Fitting	Small	WR
29	Wolseley	Talis-UK Ltd.	**Fittings for use with Tube and Pipe - Couplings**	Ferrule strap (see right hand column for materials)	Small	WR
30	Wolseley	Philmac Pty Ltd.	**Fittings for use with Tube and Pipe - Compression, plastic, for use with plastic tube**	Plastic Compression Fitting	Small	WR
31	Wolseley	Talis UK	**Talbot Matrix Water Meter Manifold Single**	Matrix Box	Small	WR
32	Wolseley	Albion Valves (UK) Limited	**Double Check Valve**	Double Check Valve housed in a DZR brass body	Small	WR
33	Concrete Repairs Ltd	Natural Cement Distribution Ltd	**NATCEM 35**	Fast Setting and Fast Curing Mortar	Small	DW
34	Concrete Repairs Ltd	BASF plc Construction Chemicals (UK) Ltd	**Masterseal 930/933**	Elastic Joint Bandage	Small	DW
35	Wolseley	Teekay Couplings Ltd	**Axiflex**	Stainless Steel pipe couplings	Small	WR
X	**Please put X in box to confirm no further materials will be added to part A of this form**					

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

NOTE: Some products and materials may not require a full set of MIC samples, depending on what they are and where they are being installed.
Please contact the Risk and Optimisation Team (WQRiskandOptimisatio@anglianwater.co.uk) if you wish to discuss reduced sampling. Part A must be complete before the

PART B - Sampling requirements

PART A LINE NUMBERS WHICH SAMPLES REPRESENT	Source being used to sample	Analysis	Bottles required	Comparison required?	Likely contact time whilst in operation?	Agreed standing time for samples	Scientist / Engineer agreement (sign and date)	Risk Scientist Approval (sign and date)
1 to 14	Fully treated water	Full MIC with taste	1*Bacti, 2*500ml Chem, 2*Purge and trap vials, 1*Winchester	Yes, U/S sample or comparison to final water	Few hours	16hr		LE 04/10/19

PART C - Sample results

Part C completed by:	[redacted]
Please provide the following contact names:	
Risk Scientist:	[redacted]
Supply Manager:	[redacted]
Senior Technician or deputy:	[redacted]

To Self Assess Sample results
Ensure Parts A and B above are completed fully
Click this button and locate the QDW / PACE 711 report wit
Samples on it. Open that report and then identify which sa
are associated with this form.

COLONY COUNTS

Version 002 - June 2009

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

Part A line numbers which samples represent	Sample Number	Sample Date and Time	Sample Type	Location	Free Chlorine	Total Chlorine	Coliforms	E Coli	2 day	3 day	Qualitative Taste	Qualitative Odou	Quantative Taste	Quantative Odou	pH	Colour (Hazen)	Turbidity (NTU)	Conductivity (us/c	Alkalinity (mg/l CaCO3)	Aluminium (mg/l /
All above	20223725	######	MI	Pitsford main comparison sample	< 0.05	0.6	0	0	n/a	0	n/d	1Z	1	1	7.42	0.5	0.15	631	120	< 0.014
All above	20223726	######	MI	Pitsford main dip sample bellmouth	< 0.05	0.4	0	0	n/a	0	n/d	1Z	1	1	7.42	0.5	0.3	632	115	< 0.014

Insert more lines as required

** taste testing only to be performed on samples of potable water and after confirmation of clear bacteriological results*

PART D - Permission to go into supply

Risk Scientist to give final approval to go into supply			
Into supply date:		**Name:**	

	Form Number:	3435

ation will be given by a Risk or Water Quality Scientist

Date: 19/09/2019

			1	2	
ɔving dy (WI/)20/ AS/ WA/ EN)	Approving body ref	Have rhe Instructions for use (IFU) or conditions for use been checked and can you meet all the requirements?	Person completing the work Sign/Date	Risk Scientist - Materials Approved Sign/Date	
AS	1411519	Yes	KS 19/09/2019	LE 01/10/19	
AS	1607507	Yes	KS 19/09/2019	LE 01/10/19	
WI	56.4.651	Yes	KS 19/09/2019	LE 24/09/19	
WI	56.4.961	Yes	KS 19/09/2019	LE 24/09/19	
AS	1807507	Yes	KS 19/09/2019	LE 01/10/19	Factory ap
AS	1906065	Yes	KS 19/09/2019	LE 24/09/19	
AS	1807505	Yes	KS 19/09/2019	LE 24/09/19	
AS	1809507	Yes	KS 19/09/2019	LE 01/10/19	
WA	K6320/13	Yes	KS 19/09/2019	LE 01/10/19	
AS	1812709	Yes	KS 19/09/2019	LE 24/09/19	
AS	1503518	Yes	KS 19/09/2019	LE 24/09/19	
AS	1512509	Yes	KS 19/09/2019	LE 24/09/19	

				Form Number:	3435
AS	1602506	Yes	KS 19/09/2019	LE 01/10/19	
AS	1607507	Yes	KS 19/09/2019	LE 01/10/19	
VI	56.4.769	Yes	KS 08/01/2020	R.[redacted]09/01/2020	
VI	56.4.769	Yes	KS 08/01/2020	R.[redacted]09/01/2020	
VI	56.4.769	Yes	KS 08/01/2020	R.[redacted]09/01/2020	
VI	56.4.769	Yes	KS 08/01/2020	R.[redacted]09/01/2020	
VI	56.4.769	Yes	KS 08/01/2020	R.[redacted]09/01/2020	
AS	1910523	Yes	SJ 09/03/2020	R.[redacted]11/03/2020	Facto Apply accordance with us pre-heated to 330°C fo
AS	1707542	Yes	SJ 09/03/2020	R.[redacted]11/03/2020	Apply as per manufactu
AS	1612514	Yes	SJ 09/03/2020	R.[redacted]10/03/2020	

				Form Number:	3435
AS \I	1807514 56/4/1059	Yes	SJ 09/04/2020	R.[redacted]09/04/2020	WRAS: Site applied, cr polyurethane sealer. Ac DW Blue consists of ar coloured, liquid activator weight ratio of 100:48 a for 7 days@3°C. For us appear on the approval. I DWI: Use of the produ The pro
AS	1701547	Yes	SJ 16/04/2020	R.[redacted]20/04/2020	
AS	1701509	Yes	SJ 04/05/2020	R.[redacted]06/05/2020	The Resicoat R4 is a Fact Surge Vessel Sweetener L The coatings are electrost minutes@220°C.
AS	1809508	Yes	SJ 04/05/2020	R.[redacted]06/05/2020	
AS	1804527	Yes	SJ 04/05/2020	R.[redacted]06/05/2020	
AS	1610511	Yes	SJ 04/05/2020	R.[redacted]06/05/2020	

				Form Number:	3435
AS	1707368	Yes	SJ 04/05/2020	R.[redacted]06/05/2020	Range of compression 2018 the fittings can be only) and copper pipe t
AS	1705071	Yes	SJ 04/05/2020	R.[redacted]06/05/2020	Range of Talbot pushfit f EN 12201). Supplied wi
AS	1704375	Yes	SJ 04/05/2020	R.[redacted]06/05/2020	The 3G Metric Imperial ra with PE100
AS	1710128	Yes	SJ 04/05/2020	R.[redacted]06/05/2020	Range of single or manifo valve on each connection fit inlet and outlet con
AS	1709141	Yes	SJ 05/05/2020	R.[redacted]06/05/2020	
VI	56/4/1090	Yes	SJ 05/05/2020	R.[redacted]06/05/2020	Use of the product must
VI	56/4/144	Yes	SJ 13/05/2020	R.[redacted]14/05/2020	Use of the product mu adhesive - APPL This product must be c provided
AS	1802083	Yes	SJ 10/06/2020	R.[redacted]10/06/2020	Range of 'Axiflex' and 'A

						Form Number:	3435

Risk Team can reduce sampling requirements.

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Assess Samples

	TRACE ORGANICS				1

Version 002 - June 2009

						Form Number:	3435
Iron (mg/l Fe)	Water Profile	Purge & Trap	MK FORM NO.	Sample Completed?	Verdict	Comment	Person completing the work Sign/Date
n/a	0	0	12484	**No**	**n/a**		[redacted]
n/a	0	0	12484	**No**	**PASS**	Sample had lost 30% chlorine, and no qualitative odour. But no bacti issues, and quant odour was satisfactory. Passed on the assumption the main will be well flushed into the out of supply storage tank prior to being put into use.	[redacted]

Comments and Advice		
Factory applied coating		
plied 2 part epoxy coating (base + hardener) ratio 3:1, cure for 1hr @60 then 7 day @28		
Epoxy coated DI bodies		
Factory applied epoxy powder coating		

Factory applied		
Instructions For Use, Issue: PFSSP Rev 3, Issue Date: 22/10/2019		
Instructions For Use, Issue: PFSSP Rev 3, Issue Date: 22/10/2019		
Instructions For Use, Issue: PFSSP Rev 3, Issue Date: 22/10/2019		
Instructions For Use, Issue: PFSSP Rev 3, Issue Date: 22/10/2019		
Instructions For Use, Issue: PFSSP Rev 3, Issue Date: 22/10/2019		
›ry applied coating (Note approval number replaces previous 1411519 listed above). ser instructions 'Dircom - 4418E/05.2015/20'. The coatings are approved when the piece to be coated is r 7 minutes – if the pre-heat is varied from this then the materials are not covered by the scope of the approval.		
Expires:31/07/2022 rer`s instructions "Blue epoxy powder coating (5005)" dated 17-07-17. Cure for 20 minutes at 180°C.		
Expires: 31/12/2021		

eam, blue or grey coloured, two-part polyurethane coatings to be used in conjunction with Acothane LV thane DW cream consists of an amber coloured, liquid activator and cream coloured coating. Acothane amber coloured, liquid activator and blue coloured coating. Acothane DW Grey consists of an amber and grey coloured coating. Acothane LV is a cream coloured sealer. Mix Acothane LV and activator in a nd then cure for 2 days@3°C. Mix Acothane DW and activator in a weight ratio of 100:31 and then cure se with water up to 23°C. These materials are only approved for the mixing and curing conditions that f the mixing and/or curing conditions are varied from those specified on the approval then the materials are not covered by the scope of the approval. ct must be in accordance with the Instructions for Use: Instructions For Use Document - Acothane DW. Issue 8 dated November 2019 duct must be cured for a minimum period of 7 days at a minimum temperature of 3°C.		
Black coloured, compression moulded EPDM rubber gasket.		
ory Applied Epoxy Powder Coating used for the manufacture of the Hawle Tapping Saddles for the ine. tatically applied by spray onto a panel pre-heated for 15 minutes@225°C and then post cured for 15		

fittings with plastic bodies for use with PE pipe to BS EN 12201:2 (above ground use only). From May supplied with adaptors for use with copper pipe to EN1057 R250 (sizes: 15-28mm, above ground use EN1057 R220 (sizes: 15-22mm, above and below ground use). Maximum working pressure 16.0 bar. Cold water use only.		
ittings with polypropylene or acetal bodies and EPDM O-Rings for use with MDPE pipe (manufactured to th pipe inserts. For above and below ground use. Maximum working pressure 16.0 bar. Cold water use only.		
ange of plastic compression fittings with polypropylene bodies, compression nut and silicone seal for use pipe (manufactured to AS/NZS 4130:2009) and PE80 pipe (manufactured to BS EN 12201).		
ld below ground meter boxes. The boxes incorporate a concentric water meter manifold and a servicing . Each meter manifold incorporates a non-return valve (not intended for backflow protection). The push-nections are supplied with pipe inserts and are for use with MDPE pipe (manufactured to EN 12201). Maximum working pressure 16.0 bar. Cold water use only.		
be in accordance with the Instructions for Use: Product Information: NATCEM 35 Fast Setting and Fast Curing Mortar . Issue date 26/06/2017 issue number 01 Approval expiry date: 10 March 2023		
st be in accordance with the Instructions for Use: MasterSeal 930 joint bandage with MasterSeal 933 ICATION TO POTABLE WATER CONTACT AREAS INSTRUCTIONS FOR USE Ref Rev 2 22052018 ured for a minimum of 10 days at a minimum temperature of 7°C or in accordance with the cure curve in the manufacturer's instruction for use document. Approval expiry date: 28 April 2024		
xiflex Repair' Stainless Steel pipe couplings, incorporating EPDM seals. Intended for used with Steel (BS EN10210-1 S235). Expiry date: 28/02/2023		

2		

Risk or WQ Scientist or authorised delegate signature and date		
Sign/Date		
~		
R.[redacted]29/05/2020		

Version 002 - June 2009

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM			
For materials to enter supply, Parts A and B must be signed and approved by Risk and Optimisation Team and final authoris			
Contact Name:	[redacted]	**Contact Number:** [redacted]	**Date:**
Site:	Pitsford WTW		
Location on site:	Clarifier 4 cone and ring replacement		
Contractor:	FLI		
WAT- No. If applicable:	WAT-07056-00-06		

USEFUL LINKS

PART A - Approvals

Line No.	Supplier	Manufacturer holding approval (if different from supplier)	Product name	Brief Description of material in contact with water (e.g. pump, pipe, sealant)	Large/ Small surface area	Approving body (DWI/ BS6920/ WRAS/ KIWA/ BSEN)	Appr body
1	FLI	Lubrizol Advanced Materials Europe	**5297 Polyurethane**	Estane Grades 58887 Nat 036, 58315 Nat 035, 58315 Nat 033, 58887 Nat 052, 58300 Nat 033, 58300 Nat 036, 58887 Nat 029, 58315 Nat 055 & 58887 Nat 038'. Natural (transparent, colourless), injection moulded TPU materials.	WRAS	1712504	[redacted]
2	FLI	FLI	**Approved product Stainless Steel**	Stainless steel ring support	DWI	BSEN 10088	[redacted]
3							
4							
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7							
8							
9							

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

10							

Insert more lines as necessary

	Please put X in box to confirm no further materials will be added to part A of this form

NOTE: Some products and materials may not require a full set of MIC samples, depending on what they are and where they are being installed.
Please contact the Risk and Optimisation Team (WQRiskandOptimisatio@anglianwater.co.uk) if you wish to discuss reduced sampling. Part A must be complete before the

PART B - Sampling requirements

PART A LINE NUMBERS WHICH SAMPLES REPRESENT	Source being used to sample	Analysis	Bottles required	Comparison required?	Likely contact time whilst in operation?	Agreed standing time for samples	Scientist / Engineer agreement (sign and date)	Risk Scientist Approval (sign and date)

PART C - Sample results

Part C completed by:	
Please provide the following contact names:	
Risk Scientist:	
Supply Manager:	
Senior Technician or deputy:	

To Self Assess Sample results
Ensure Parts A and B above are completed fully
Click this button and locate the QDW / PACE 711 report with the MIC
Samples on it. Open that report and then identify which samples
are associated with this form.

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM																							
Part A line numbers which samples represent	Sample Number	Sample Date and Time	Sample Type	Location	Free Chlorine	Total Chlorine	Coliforms	E Coli	COLONY COUNTS		Qualitative Taste*	Qualitative Odour	Quantative Taste*	Quantative Odour	pH	Colour (Hazen)	Turbidity (NTU)	Conductivity (us/cm)	Alkalinity (mg/l CaCO3)	Aluminium (mg/l Al)	Iron (mg/l Fe)	TRA
									2 day	3 day												Water Profile

Insert more lines as required

** taste testing only to be performed on samples of potable water and after confirmation of clear bacteriological results*

PART D - Permission to go into supply

Risk Scientist to give final approval to go into supply			
Into supply date:		**Name:**	

				Form Number:	3442

ation will be given by a Risk or Water Quality Scientist

	01/11/2018

		1	2	
oving y ref	Have rhe Instructions for use (IFU) or conditions for use been checked and can you meet all the requirements?	Person completing the work Sign/Date	Risk Scientist - Materials Approved Sign/Date	Comments and Advice
[redacted]	yes	[redacted] 01/11/2018	LE 01/11/18	Sampling not required as early on in treatment process and all products are approved
[redacted]	yes	[redacted] 01/11/2018	LE 01/11/18	Sampling not required as early on in treatment process and all products are approved

				Form Number:	**3442**			

Risk Team can reduce sampling requirements.

Assess Samples

				Form Number:	3442			
CE ORGANICS		Sample Completed?	Verdict	Comment	1	2		
Purge & Trap	MK FORM NO.				Person completing the work	Risk or WQ Scientist or authorised delegate signature and date		
					Sign/Date	Sign/Date		

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

For materials to enter supply, Parts A and B must be signed and approved by Risk and Optimisation Team and final authori

Contact Name:	[redacted]	**Contact Number:**	[redacted]
Site:	Pitsford WTW		
Location on site:	Pre-ozone		
Contractor:	Barhale		
WAT- No. If applicable:	WAT-06714-04-19		

USEFUL LINKS

PART A - Approvals

Line No.	Supplier	Manufacturer holding approval (if different from supplier)	Product name	Brief Description of material in contact with water (e.g. pump, pipe, sealant)	Large/ Small surface area	Approving body (DWI/ BS6920/ WRAS/ KIWA/ BSEN)
1	R2M Limited	Akzo Nobel Powder Coatings GmbH	**800mm Butterfly valve**	Ductile iron body with Blue Epoxy Powder Coating	Small	WRAS
2	R2M Limited	Wuhu Jinmao Liquid Science & Technology Co. Ltd	**800mm Flange Adaptor**	Flange Adaptor - compressed moulded EPDM rubber material	Small	WRAS
3	R2M Limited	Arkema	**800mm Flange Adaptor**	Flange Adaptor with Rilsan polyamide powder coatings	Small	WRAS
4						
5						
6						
7						
8						
9						
10						

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

Insert more lines as necessary

X	Please put X in box to confirm no further materials will be added to part A of this form

NOTE: Some products and materials may not require a full set of MIC samples, depending on what they are and where they are being installed.
Please contact the Risk and Optimisation Team (WQRiskandOptimisatio@anglianwater.co.uk) if you wish to discuss reduced sampling. Part A must be complete before the

PART B - Sampling requirements

PART A LINE NUMBERS WHICH SAMPLES REPRESENT	Source being used to sample	Analysis	Bottles required	Comparison required?	Likely contact time whilst in operation?	Agreed standing time for samples	Scientist / Engineer agreement (sign and date)	Risk Scientist Approval (sign and date)

PART C - Sample results

Part C completed by:

Please provide the following contact names:

Risk Scientist:

Supply Manager:

Senior Technician or deputy:

To Self Assess Sample results

Ensure Parts A and B above are completed fully

Click this button and locate the QDW / PACE 711 report wit

Samples on it. Open that report and then identify which sar

are associated with this form.

COLONY COUNTS

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

Part A line numbers which samples represent	Sample Number	Sample Date and Time	Sample Type	Location	Free Chlorine	Total Chlorine	Coliforms	E Coli	2 day	3 day	Qualitative Taste	Qualitative Odou	Quantative Taste	Quantative Odou	pH	Colour (Hazen)	Turbidity (NTU)	Conductivity (us/c	Alkalinity (mg/l CaCO3)	Aluminium (mg/l /	Iron (mg/l Fe)

Insert more lines as required

** taste testing only to be performed on samples of potable water and after confirmation of clear bacteriological results*

PART D - Permission to go into supply

Risk Scientist to give final approval to go into supply			
Into supply date:		**Name:**	

			Form Number:	3450

sation will be given by a Risk or Water Quality Scientist

Date:	07/11/2018

		1	2	
Approving body ref	Have rhe Instructions for use (IFU) or conditions for use been checked and can you meet all the requirements?	Person completing the work	Risk Scientist - Materials Approved	Comments and Advice
		Sign/Date	Sign/Date	
1701509	Yes	[redacted]	R.[redacted]09/11/2018	Resicoat factory applied, epoxy powder coatings. The coatings are electrostatically applied by spray onto a panel pre-heated for 15 minutes@225°C and then post cured for 15 minutes@220°C.
1311521	Yes	[redacted]	R.[redacted]09/11/2018	
1411519	Yes	[redacted]	R.[redacted]09/11/2018	Rilsan polyamide powder coatings to be used in conjunction with Primgreen LAT 12035 epoxy resin primer, apply and cure accordance with user instructions: Cerdato/ T2 RFP / September 2012.

Version 002 - June 2009

Form Number:	3450

e Risk Team can reduce sampling requirements.

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Assess Samples

TRACE ORGANICS			1	2

Version 002 - June 2009

					Form Number:	3450			
Water Profile	Purge & Trap	MK FORM NO.	Sample Completed?	Verdict	Comment	Person completing the work	Risk or WQ Scientist or authorised delegate signature and date		
						Sign/Date	Sign/Date		

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

For materials to enter supply, Parts A and B must be signed and approved by Risk and Optimisation Team and final authoris

Contact Name:	[redacted]	**Contact Number:**	[redacted]	**Date:**	
Site:	Pitsford WTW				
Location on site:	Relift pump A				
Contractor:					
WAT- No. If applicable:	WAT-07049-00-02-OS				

USEFUL LINKS

PART A - Approvals

Line No.	Supplier	Manufacturer holding approval (if different from supplier)	Product name	Brief Description of material in contact with water (e.g. pump, pipe, sealant)	Large/ Small surface area	Approving body (DWI/ BS6920/ WRAS/ KIWA/ BSEN)	Appr body
1	KSB		**GG25 Cast Iron**	Wear ring	Small		
2	KSB		**NBR 70**	"O" Rings	Small		
3	KSB		**BURGMANN MG1 ASPGG**	Mechanical seal	Small		
4	KSB		**A4-70**	Fasteners	Small		
5	KSB		**Sherwin Williams M255 Black**	Paint	Small		
6							
7							
8							
9							
10							

Insert more lines as necessary

☐ **Please put X in box to confirm no further materials will be added to part A of this form**

NOTE: Some products and materials may not require a full set of MIC samples, depending on what they are and where they are being installed.
Please contact the Risk and Optimisation Team (WQRiskandOptimisatio@anglianwater.co.uk) if you wish to discuss reduced sampling. Part A must be complete before the

PART B - Sampling requirements

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

PART A LINE NUMBERS WHICH SAMPLES REPRESENT	Source being used to sample	Analysis	Bottles required	Comparison required?	Likely contact time whilst in operation?	Agreed standing time for samples	Scientist / Engineer agreement (sign and date)	Risk Scientist Approval (sign and date)

PART C - Sample results

Part C completed by:	
Please provide the following contact names:	
Risk Scientist:	
Supply Manager:	
Senior Technician or deputy:	

To Self Assess Sample results

Ensure Parts A and B above are completed fully

Click this button and locate the QDW / PACE 711 report with the MIC

Samples on it. Open that report and then identify which samples

are associated with this form.

Part A line numbers which samples represent	Sample Number	Sample Date and Time	Sample Type	Location	Free Chlorine	Total Chlorine	Coliforms	E Coli	COLONY COUNTS		Qualitative Taste*	Qualitative Odour	Quantative Taste*	Quantative Odour	pH	Colour (Hazen)	Turbidity (NTU)	Conductivity (us/cm)	Alkalinity (mg/l CaCO3)	Aluminium (mg/l Al)	Iron (mg/l Fe)	TRA
									2 day	3 day												Water Profile

Version 002 - June 2009

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

Insert more lines as required

** taste testing only to be performed on samples of potable water and after confirmation of clear bacteriological results*

PART D - Permission to go into supply

Risk Scientist to give final approval to go into supply			
Into supply date:		**Name:**	

				Form Number:	3486

ation will be given by a Risk or Water Quality Scientist

	14/12/2018

		1	2	
oving y ref	Have rhe Instructions for use (IFU) or conditions for use been checked and can you meet all the requirements?	Person completing the work	Risk Scientist - Materials Approved	Comments and Advice
		Sign/Date	Sign/Date	
		[redacted] 21/12/19		
		[redacted] 21/12/19		
		[redacted] 21/12/19		
		[redacted] 21/12/19		
		[redacted] 21/12/19		

Risk Team can reduce sampling requirements.

Version 002 - June 2009

				Form Number:	3486			

Assess Samples

CE ORGANICS		Sample Completed?	Verdict	Comment	1	2
Purge & Trap	MK FORM NO.				Person completing the work	Risk or WQ Scientist or authorised delegate signature and date
					Sign/Date	Sign/Date

				Form Number:	**3486**			

ANLIAN WATER SERVICES - MATERIALS APPROVAL FORM

For materials to enter supply, Parts A and B must be signed and approved by Risk and Optimisation Team and final authoris

Contact Name:	[redacted]	**Contact Number:**	[redacted]	**Date:**	
Site:	Pitsford WTW				
Location on site:	ASG Backwash				
Contractor:	IOS - Barhale				
WAT- No. If applicable:	WAT-07048-00-01-CC				

USEFUL LINKS

PART A - Approvals

Line No.	Supplier	Manufacturer holding approval (if different from supplier)	Product name	Brief Description of material in contact with water (e.g. pump, pipe, sealant)	Large/ Small surface area	Approving body (DWI/ BS6920/ WRAS/ KIWA/ BSEN)	Appr body
1	Wolseley	Daikin Fluoro Chemicals (China) Co. Ltd.	**PFTE Thrust Washer**	Washer	Small	WRAS	1709
3	Wolseley	Suzhou Meilong Rubber & Plastic Products Co., Ltd	**U-Cup Seal & O-Ring**	Seal	Small	WRAS	1901
4	Wolseley	Akzo Nobel Powder Coatings Gmb	**Paint Coating**	Paint	Large	WRAS	1701
5	Wolseley	Saint-Gobain PAM UK Ltd	**Pipe**	Coati ng	Large	DWI	DWI 56
6	Wolseley	Arkema	**Coating**	Rislan Powder Coating	Large	WRAS	1411
7	Wolseley	AVK GUMMI A/S	**EPDM Seal**	Black coloured, injection moulded EPDM rubber material.	Small	WRAS	1807
8	Wolseley	VIP Polymers Ltd	**Gasket**	Ethylene Propylene Diene Monomer (EPDM) - material only.	Small	WRAS	1607

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

9	Wolseley	BS Coatings	**Coating**	Factory Applied Epoxy Coating	Large	WRAS	150]
10	Wolseley	Aqua-Gas Manufacturing Ltd	**Gate Valve**	Epoxy coated ductile iron bodies, bonnet and gland flange, and a ductile iron gate/wedge which is fully encapsulated with EPDM	Small	WRAS	180(
11	Wolseley	ZENITH INDUSTRIAL RUBBER PRODUCTS PVT LTD	**EPDM Seal**	Black coloured, compression moulded EPDM rubber material	Small	WRAS	170]
12							

Insert more lines as necessary

X	**Please put X in box to confirm no further materials will be added to part A of this form**

NOTE: Some products and materials may not require a full set of MIC samples, depending on what they are and where they are being installed.
Please contact the Risk and Optimisation Team (WQRiskandOptimisatio@anglianwater.co.uk) if you wish to discuss reduced sampling. Part A must be complete before the

PART B - Sampling requirements

PART A LINE NUMBERS WHICH SAMPLES REPRESENT	Source being used to sample	Analysis	Bottles required	Comparison required?	Likely contact time whilst in operation?	Agreed standing time for samples	Scientist / Engineer agreement (sign and date)	Risk Scientist Approval (sign and date)
1 to 11	Partially treated Water	Full MIC without taste	1*Bacti, 2*500ml Chem, 2*Purge and trap vials, 1*Winchester	Combined filter outlet	few minutes	N/A		LE 20/05/19

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

PART C - Sample results

Part C completed by:	
Please provide the following contact names:	
Risk Scientist:	
Supply Manager:	
Senior Technician or deputy:	

To Self Assess Sample results

Ensure Parts A and B above are completed fully

Click this button and locate the QDW / PACE 711 report with the MIC

Samples on it. Open that report and then identify which samples

are associated with this form.

Part A line numbers which samples represent	Sample Number	Sample Date and Time	Sample Type	Location	Free Chlorine	Total Chlorine	Coliforms	E Coli	COLONY COUNTS 2 day	COLONY COUNTS 3 day	Qualitative Taste*	Qualitative Odour	Quantative Taste*	Quantative Odour	pH	Colour (Hazen)	Turbidity (NTU)	Conductivity (us/cm)	Alkalinity (mg/l CaCO3)	Aluminium (mg/l Al)	Iron (mg/l Fe)	TRA Water Profile
1 to 11	19290008 19290075	27/06/19 09:30	Bacti Chemi	ASG Pipework	<0.05	0.05	0	0	2	46	N/A	2Y	N/A	2	7.5	3.3	0.15	511	103	0.022	0.192	0
N/A	19290009 19290076	27/06/19 09:30	Bacti Chemi	Comparison	0.06	0.07	1	0	14	86	N/A	2Y	N/A	1	7.4	3.1	0.24	505	99.2	<0.01 4	0.064	0

Insert more lines as required

** taste testing only to be performed on samples of potable water and after confirmation of clear bacteriological results*

PART D - Permission to go into supply

Risk Scientist to give final approval to go into supply			
Into supply date:	**05/07/2019**	**Name:**	[redacted]

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM														

				Form Number:	3602
ation will be given by a Risk or Water Quality Scientist					
	17/04/2019				

			1	2	
oving y ref	Have rhe Instructions for use (IFU) or conditions for use been checked and can you meet all the requirements?	Person completing the work	Risk Scientist - Materials Approved	Comments and Advice
		Sign/Date	Sign/Date	
9517	Yes	DW 14/05/2019	LE 30/04/19	
3513	Yes	DW 14/05/2019	LE 20/05/19	Updated Material/WRAS approval Number (DW)
1509	Yes	DW 14/05/2019	LE 30/04/19	Epoxy factory applied coating
/4/283	Yes	DW 14/05/2019	LE 30/04/19	Cement mortar lined pipe without seal coat
1519	Yes	DW 14/05/2019	LE 20/05/19	To be used in conjunction with Primegreen LAT 12035 epoxy resin primer - DW confirmed it is factory applied
7505	Yes	DW 14/05/2019	LE 30/04/19	
7507	Yes	DW 14/05/2019	LE 30/04/19	

			Form Number:	3602			
3518	Yes	DW 14/05/2019	LE 30/04/19	Epoxy factory applied coating			
5705	Yes	DW 14/05/2019	LE 30/04/19				
1547	Yes	DW 14/05/2019	LE 30/04/19				

Risk Team can reduce sampling requirements.

Version 002 - June 2009

				Form Number:	3602

Assess Samples

CE ORGANICS					1	2
Purge & Trap	MK FORM NO.	Sample Completed?	Verdict	Comment	Person completing the work	Risk or WQ Scientist or authorised delegate signature and date
					Sign/Date	Sign/Date
0	12046	**Yes**	**Pass**	Clarity P		LE 04/07/19
0	12046	**Yes**	**N/a**	Clarity P		LE 04/07/19

				Form Number:	**3602**			

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

For materials to enter supply, Parts A and B must be signed and approved by Risk and Optimisation Team and final authorisa

Contact Name:	[redacted]	**Contact Numbe**
Site:	Pitsford Resilience Scheme - New Mains Laying	
Location on site:		
Contractor:		
WAT- No. If applicable:	WAT-07103	

USEFUL LINKS

PART A - Approvals

Line No.	Supplier	Manufacturer holding approval (if different from supplier)	Product name	Brief Des con (e.g. p
1	Glynwed Pipe Systems	GPS	GPS Excel Blue	630mm, 500mi
2	Jindal Saw Ltd	Akzo Nobel Powder Coatings GMBH	Resicoat R 4 R4-ES HJF 13R PAM blue	Epoxy powder
3	AVK Valves (Anhui) Co Ltd UK	AVK Valves (Anhui) Co Ltd UK	Series 21 Gate Valves	Gate valves du
4	AVK Valves (Anhui) Co Ltd UK	AVK Aqua Gas Manufacturing Ltd	Fire hydrant	Series 29/388
5	Viking Johnson		Maxi Adaptor	Flange adaptor
6	Wolsey - (Supplying Gasket & Bolt Sets)	Zenith Industrial Rubber Products PVT Ltd	EPDM Rubber EP701110HW	Flange Gaskets
7	AVK Valves (Anhui) Co Ltd. UK	AVK Valves	series 851 DN25 single orifice Series 851 DN50-DN200 double orifice	single and d
8				
9				
10				

Insert more lines as necessary

Please put X in box to confirm no further materials will be added to part A of this form

NOTE: Some products and materials may not require a full set of MIC samples, depending on what they are and where they are being installed.

PART B - Sampling requirements

PART A LINE NUMBERS WHICH SAMPLES	Source being used to sample	Analysis	Bottles required	Comparison required?	Likely contact time whilst in
All above	Fully treated water	Full MIC with taste	1*Bacti, 2*500ml Chem, 2*Purge and	Yes	Minimal
Note, these were sampled as new mains					

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

PART C - Sample results

Part C completed by:

Please provide the following contact names:

Risk Scientist:

Supply Manager:

Senior Technician or deputy:

To Sel
Ensure
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Sampl
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DETERMINAND CODES **next row** **73**

Part A line numbers which samples represent	Sample Number	Sample Date and Time	Sample Type	Location	Free Chlorine	Total Chlorine	Coliforms	E Coli	COLONY COUNTS 2 day	3 day	Qualitative Taste*	Qualitative Odour	Quantative Taste*	Quantative Odour
					09111	**09121**	9194	9195	09340	09320	00220	00230		
tbc	20375510	20/08/2020	Chemistry	WAT 07103 PITSFORD BARHALE	0.2	0.4					1	2T		
tbc	20375521	20/08/2020	Bacti	WAT-07103 FH PITSFORD, BARHALE, 250MM BRIXWORTH MAIN	0.2	0.4	0	0						
tbc	20375511	20/08/2020	Chemistry	WAT 07103 PITSFORD BARHALE	0.15	0.25					1	2T		
tbc	20375522	20/08/2020	Bacti	WAT-07103 FH PITSFORD, BARHALE, 630MM INLET MAIN	0.15	0.25	0	0						
tbc	20384964	26/08/2020	Chemistry	WAT-07103 PITSFORD BARHALE HARPOLE DELIVERY MAIN	0.19	0.3					1	1Z		
tbc	20384593	26/08/2020	Bacti	WAT-07103 PITSFORD (BARHALE), HARPOLE DELIVERY MAIN	0.19	0.3	0	0						
tbc	20384963	26/08/2020	Chemistry	WAT-07103 PITSFORD BARHALE ES FOR HARPOLE DELIVERY	0.13	0.35					1	1Z		
tbc	20384592	26/08/2020	Bacti	WAT-07103 PITSFORD (BARHALE), ES FOR HARPOLE DELIVERY	0.15	0.35	0	0						

Insert more lines as required

** taste testing only to be performed on samples of potable water and after confirmation of clear bacteriological results*

PART D - Permission to go into supply

Risk Scientist to give final approval to go into supply

Into supply date: **Name:**

		Form Number:	3857

ation will be given by a Risk or Water Quality Scientist

r:	[redacted]	Date:	21/11/2019

cription of material in tact with water ump, pipe, sealant)	Large/ Small surface area	Approving body	Approving body ref	Have rhe Instructions for use (IFU) or	1 Person completing the work Sign/Date	2 Risk Scientist - Materials Approved Sign/Date	Comments
n and 225mm HPPE pipes	Large	DWI	56/4/850	Yes	[redacted] 26/11/19	R.[redacted] 26/11/19	Use of the product must
coating to DI bends and fittings	Small	WRAS	1701509	Yes	[redacted] 26/11/19	R.[redacted] 26/11/19	
tile iron bodies, wedge and	Small	WRAS	1806705	Yes	[redacted] 26/11/19	R.[redacted] 26/11/19	
nderground fire hydrant	Small	WRAS	1906065	Yes	[redacted] 26/11/19	R.[redacted] 26/11/19	
s and couplings	Small	KIWA	1512709	Yes	[redacted] 26/11/19	R.[redacted] 26/11/19	
	Small	WRAS	1701547	Yes	[redacted] 26/11/19	R.[redacted] 26/11/19	
ouble orifice air relief valves	Small	WRAS	1501035	Yes	[redacted] 26/11/19	R.[redacted] 26/11/19	

Agreed standing	Scientist / Engineer	Risk Scientist
16 hr, as for New Mains	R.[redacted]	R.[redacted]

												Form Number:	3857

f Assess Sample results
Parts A and B above are completed fully
his button and locate the QDW / PACE 711 report with the MIC
es on it. Open that report and then identify which samples
sociated with this form.

Assess Samples

00612	00721	00681	00621	01621,	02875	04215	75161	75171					
							TRACE ORGANICS						1
pH	Colour (Hazen)	Turbidity (NTU)	Conductivity (us/cm)	Alkalinity (mg/l CaCO3)	Aluminium (mg/l Al)	Iron (mg/l Fe)	Water Profile	Purge & Trap	MK FORM NO.	Sample Completed?	Verdict	Comment	Person completing the work Sign/Date
		< 0.090											
		0.38											
		0.309											
		0.29											

and Advice		
pe in accordance with the		

2
Risk or WQ Scientist or authorised delegate signature and date
Sign/Date

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

For materials to enter supply, Parts A and B must be signed and approved by Risk and Optimisation Team and final authorisa

Contact Name:	[redacted]	**Contact Number:**	[redacted]	**Date:**	
Site:	Pitsford WTW				
Location on site:	Pitsford Contact tank and Storage Tank repairs				
Contractor:	IOS DLO				
WAT- No. If applicable:	WAT-07173-04-17				

USEFUL LINKS

PART A - Approvals

Line No.	Supplier	Manufacturer holding approval (if different from supplier)	Product name	Brief Description of material in contact with water (e.g. pump, pipe, sealant)	Large/ Small surface area	Approving body (DWI/ BS6920/ WRAS/ KIWA/ BSEN)	Appr body
1	Natuarl Cement Ltd		**Natcem 35**	Repair mortar	Small	DWI	56/4/
2							
3							
4							
5							
6							
7							
8							
9							
10							

Insert more lines as necessary

X	**Please put X in box to confirm no further materials will be added to part A of this form**

NOTE: Some products and materials may not require a full set of MIC samples, depending on what they are and where they are being installed.
Please contact the Risk and Optimisation Team (WQRiskandOptimisatio@anglianwater.co.uk) if you wish to discuss reduced sampling. Part A must be complete before the R

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

PART B - Sampling requirements

PART A LINE NUMBERS WHICH SAMPLES REPRESENT	Source being used to sample	Analysis	Bottles required	Comparison required?	Likely contact time whilst in operation?	Agreed standing time for samples	Scientist / Engineer agreement (sign and date)	Risk Scientist Approval (sign and date)

PART C - Sample results

Part C completed by:	[redacted]
Please provide the following contact names:	
Risk Scientist:	
Supply Manager:	
Senior Technician or deputy:	

To Self Assess Sample results

Ensure Parts A and B above are completed fully

Click this button and locate the QDW / PACE 711 report with the MIC

Samples on it. Open that report and then identify which samples

are associated with this form.

Part A line numbers which samples represent	Sample Number	Sample Date and Time	Sample Type	Location	Free Chlorine	Total Chlorine	Coliforms	E Coli	COLONY COUNTS		ualitative Taste*	ualitative Odour	uantative Taste*	uantative Odour	pH	Colour (Hazen)	urbidity (NTU)	ductivity (us/cm)	lkalinity (mg/l CaCO3)	minium (mg/l Al)	Iron (mg/l Fe)	TRA
									2 day	3 day												Water Profile

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

											Qu	Q	Qu	Q		C	T	Con	A	Alu	:	
	20133475	25/03/2020		pitsford contact tank	0.19	0.54	0	0	n/a	0												
	20133657	25/03/2020		pitsford contact tank																		0
	20133793	25/03/2020		pitsford contact tank								2T	n/a	1 (60c)	7.58	1.3	0.75	447	120	0.045	73	

Insert more lines as required

** taste testing only to be performed on samples of potable water and after confirmation of clear bacteriological results*

PART D - Permission to go into supply

Risk Scientist to give final approval to go into supply			
Into supply date:		**Name:**	

	Form Number:	3876

tion will be given by a Risk or Water Quality Scientist

	17/12/2019

		1	2	
oving y ref	Have rhe Instructions for use (IFU) or conditions for use been checked and can you meet all the requirements?	Person completing the work Sign/Date	Risk Scientist - Materials Approved Sign/Date	Comments and Advice
'1090	Yes	[redacted]	R.[redacted] 19/12/2019	Use of the product must be in accordance with the Instructions for Use: Product Information: NATCEM 35 Fast Setting and Fast Curing Mortar . Issue date 26/06/2017 issue number 01

isk Team can reduce sampling requirements.

Version 002 - June 2009

				Form Number:	3876			

Assess Samples

CE ORGANICS					1	2		
Purge & Trap	MK FORM NO.	Sample Completed?	Verdict	Comment	Person completing the work	Risk or WQ Scientist or authorised delegate signature and date		

				Form Number:	**3876**			
					Sign/Date	**Sign/Date**		
			pass		[redacted]	30-Mar-20		
0	12364		**pass**		[redacted]	30-Mar-20		
			pass	turbidity a little elevated. Ceck turidity prior to commencing work.	[redacted]	30-Mar-20		

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM — Form Number: 3892

For materials to enter supply, Parts A and B must be signed and approved by Risk and Optimisation Team and final authorisation will be given by a Risk or Water Quality Scientist

Contact Name:	[redacted]	Contact Number:	
Date:	10/01/2020		
Site:	Pitsford WTW		
Location on site:	Pitsford resilience scheme non-infra		
Contractor:			
WAT- No. If applicable:	WAT-07103		

USEFUL LINKS

PART A - Approvals

Line No.	Supplier	Manufacturer holding approval (if different from supplier)	Product name	Brief Description of material in contact with water (e.g. pump, pipe, sealant)	Large/ Small surface area	Approving body (DWI/ BS6920/ WRAS/ KIWA/ BSEN)	Approving body ref	Have the Instructions for use (IFU) or conditions for use been checked and can you meet all the requirements?	1 Person completing the work Sign/Date	2 Risk Scientist - Materials Approved Sign/Date	Comments and Advice
1	AVK UK	Wouter Witzel Eurovalve BV	EVTLS - PDS01.06.001 (DN50-DN1200 Lugged wafer type)	Butterfly Valve	Small	WRAS	1612049	Yes	[redacted] 10-07-20	R.[redacted] 30/07/2020	
2	AVK UK	Wouter Witzel Eurovalve BV	EVUS - PDS01.07.001 (DN600-DN1200 U-section wafer type)	Butterfly Valve	Small	WRAS	1612049	Yes	[redacted] 10-07-20	R.[redacted] 30/07/2020	
3	AVK UK	Wouter Witzel Eurovalve BV	EVFL - PDS01.11.001 (DN50-DN1200 double flanged type)	Butterfly Valve	Small	WRAS	1612049	Yes	[redacted] 10-07-20	R.[redacted] 30/07/2020	
4	AVK UK	AVK Gummi A/S	Seat/Seals for Wouter Witzel ECV Check Valve	EPDM O-ring	Small	WRAS	1601506	Yes	[redacted] 10-07-20	R.[redacted] 30/07/2020	
6	AVK UK	Wouter Witzel Eurovalve BV	SS 1.4408 Disc for Wouter Witzel ECV Check Valve	Disc	Small	BS EN	EN 10088-3:2014	Yes	[redacted] 14-08-20	R.[redacted] 25/08/2020	
7	AVK UK	Wouter Witzel Eurovalve BV	SS 1.4401 Spring/Shaft/Stop pin for Wouter Witzel ECV Check Valve	Spring/Shaft/Stop Pin	Small	DIN	DIN 17457	Yes	[redacted] 04-08-20	R.[redacted] 04/08/2020	Also approved via DWI advice sheet 5
7a	Johnson Valves										
8	AVK UK	Aqua-Gas Manufacturing Ltd	Series 21/35 RS (DN80-200)	Gate Valve	Small	WRAS	1512320	Yes	[redacted] 10-07-20	R.[redacted] 30/07/2020	
9	AVK UK	AVK AQUA-GAS MANUFACTURING LTD	S29-388/389 FIRE HYDRANT	Hydrant	Small	WRAS	1906065	Yes	[redacted] 10-07-20	R.[redacted] 30/07/2020	
10	AVK UK	AVK Valves (Anhui) Co. , Ltd	AVK Series 54 (DN350-DN900)	Gate Valve	Small	WRAS	1812709	Yes	[redacted] 10-07-20	R.[redacted] 30/07/2020	
11	AVK UK	A.R.I. Flow Control Accessories	½" - 1" BSP male (S050, S-050-C. S-050 L & S052 ranges)	Air Release Valve	Small	WRAS	1909095	Yes	[redacted] 10-07-20	R.[redacted] 30/07/2020	
12	AVK UK	Akzo Nobel Powder Coatings GmbH	Resicoat factory applied epoxy powder coatings	AVK 641/11 DN200 coating	Small	WRAS	1701509	Yes	[redacted] 14-08-20	R.[redacted] 25/08/2020	The coatings are electrostatically applied by spray onto a panel pre-heated for 15 minutes@225ºC and then post cured for 15 minutes@220ºC.
13	AVK UK	Xiamen Maifeng Seal Products Co Ltd	Compression moulded EPDM O rings and gaskets	AVK 641/11 DN200 gaskets & o-rings	Small	WRAS	1508511	Yes	[redacted] 14-08-20	R.[redacted] 25/08/2020	Product must be purchased prior to 31/08/2020, else updated WRAS number is needed. Already ordered/purchased. ([redacted] 27-08-20)
	BOUGHTON PUMP	**FLOWSERVE ME300-450 PUMP**									
15	Flowserve Flow Solutions Group	BELZONA POLMERICS LTD 1341	Pump Casing	Belzona coated cast iron	Small	WRAS	1712525	yes	[redacted] 10-07-20	R.[redacted] 30/07/2020	coat 1 for 4 hours at a temperature of between 10ºC and 30ºC. Mix, apply and cure coat 2 in accordance with manufacturer's instructions for use 'FN10139', publication no. '04-07-17'.
16	Flowserve Flow Solutions Group	BELZONA POLMERICS LTD 1341	Casing Cover	Belzona coated cast iron	Small	WRAS	1712525	yes	[redacted] 10-07-20	R.[redacted] 30/07/2020	coat 1 for 4 hours at a temperature of between 10ºC and 30ºC. Mix, apply and cure coat 2 in accordance with manufacturer's instructions for use 'FN10139', publication no. '04-07-17'.
16a	Flowserve Flow Solutions Group		Areas of the pump casing not Belzona coated (high velocity areas where the coating would be eroded)	Cast Iron	Small	BS EN	EN 1561:2011 / EN-GJL-250	yes	[redacted] 10/06/21	R.[redacted] 11/06/2021	RB - confirmed as compliant with 2011 revision
16b	Flowserve Flow Solutions Group	BELZONA POLMERICS LTD 5892	Areas of the pump casing not coated with Belzona 1341 lines 16 & 16 (high velocity areas where the coating would be eroded)	Belzona coated cast iron	Small	WRAS	1701523	yes	[redacted] 30/06/21	R.[redacted] 05/07/2021	Belzona 5892 (FN10106)'. Site applied, epoxy coating consisting of Belzona 5892 (white – Parts A & B) & Belzona 5892 (grey – Parts A & B). Belzona 5892 (white – Parts A & B) are mixed in a weight ratio of 5.7:1 and then applied (no cure). Belzona 5892 (grey – Parts A & B) are mixed in a weight ratio of 5.7:1 and then applied to the white. The final coating is then cured for 24 hours@30ºC. For use with water up to 85ºC. This material is only approved for the mixing and curing conditions that appear on the approval. If the mixing and/or curing conditions are varied from those specified on the approval then the materials are not covered by the scope of the approval. Approval expires January 2022.
17	Flowserve Flow Solutions Group	UNI-TECH PRECISION PVT.LTD	Pump Shaft	Stainless steel shaft	Small	BS EN	EN 10088-1: 2014 1.4028 (X30Cr13)	yes	[redacted] 10-07-20	R.[redacted] 04/08/2020	Assume you mean EN 10088-1:2014? Yes, updated
18	Flowserve Flow Solutions Group	ZWIEBEL	Impeller	Bronze impeller	Small	BS EN	EN 1982:2017 CC480K (CuSn10-C)	yes	[redacted] 10-07-20	R.[redacted] 30/07/2020	
19	Flowserve Flow Solutions Group	TANCOGNE	Shaft Sleeve	Stainless steel sleeve	Small	BS EN	EN 10088-1: 2014 1.4028 (X30Cr13)	yes	[redacted] 10-07-20	R.[redacted] 04/08/2020	Assume you mean EN 10088-1:2014? Yes, updated
~~20~~	Flowserve Flow Solutions Group	EMILE MAURIN ETS METALLURGIQUES	~~Washer~~	Zinc plated washer	Small	BS EN	ISO 898-Cl. 04	yes	[redacted] 10-07-20	R.[redacted] 30/07/2020	
20	Flowserve Flow Solutions Group		Washer	Stainless Steel	Small	BS EN	X5CrNi18-10 EN 1.4301/304 grade	yes	[redacted] 10/06/21	R.[redacted] 11/06/2021	
~~21~~	Flowserve Flow Solutions Group	MECA PERCHE	~~Nut~~	Zinc plated nut	Small	BS EN	ISO 898-Cl. 6.8	yes	[redacted] 10-07-20	R.[redacted] 30/07/2020	
21	Flowserve Flow Solutions Group		Nut	Stainless Steel	Small	BS EN	X5CrNi18-10 EN 1.4301/304 grade	yes	[redacted] 10/06/21	R.[redacted] 11/06/2021	
21a	Flowserve Flow Solutions Group		Casing plug		Small	BS EN	X2CrNiMo17-12-2 EN EN 1.4404/316L grade	yes	[redacted] 10/06/21	R.[redacted] 11/06/2021	
22	Flowserve Flow Solutions Group	GARDETTE INDUSTRIE	Impeller key	Stainless steel key	Small	BS EN	EN 10088-1:2014 X5CrNi18-10	yes	[redacted] 10-07-20	R.[redacted] 04/08/2020	Assume you mean EN 10088-1:2014? Yes, updated
	BOUGHTON PUMP SEAL	**P167 MECHANICAL SEAL**									
23	Flowserve B.V. Seal Operations		Metal components	Stainless steel	Small	DWI	Annex 3C 1.4404	yes	[redacted] 10-07-20	R.[redacted] 30/07/2020	
24	Flowserve B.V. Seal Operations	VULCAN ENGINEERING LTD	Rotating Face	Ceramic	Small	WRAS	1905510	yes	[redacted] 10-07-20	R.[redacted] 30/07/2020	
25	Flowserve B.V. Seal Operations	VULCAN ENGINEERING LTD	Stationary Face	Ceramic	Small	WRAS	1905510	yes	[redacted] 10-07-20	R.[redacted] 30/07/2020	
26	Flowserve B.V. Seal Operations	VULCAN ENGINEERING LTD	Elastomers	RUBBERS - FLUOROELASTOMERS - COMPONENTS	Small	WRAS	1507557	yes	[redacted] 10-07-20	R.[redacted] 04/08/2020	Only approved if purchased prior to 31/07/2020. Please advise if this is the case. Yes, purchased before 31/7/20
	HARPOLE PUMP										
27	Flowserve Flow Solutions Group	BELZONA POLMERICS LTD	Pump Casing	Belzona coated cast iron	Small	WRAS	1712525	yes	[redacted] 10-07-20	R.[redacted] 30/07/2020	Site applied, two-component epoxy coatings consisting of a base and solidifier. Cure coat 1 for 4 hours at a temperature of between 10ºC and 30ºC. Mix, apply and cure coat 2 in accordance with manufacturer's instructions for use 'FN10139', publication no. '04-07-17'.
28	Flowserve Flow Solutions Group	BELZONA POLMERICS LTD	Casing Cover	Belzona coated cast iron	Small	WRAS	1712525	yes	[redacted] 10-07-20	R.[redacted] 30/07/2020	Site applied, two-component epoxy coatings consisting of a base and solidifier. Cure coat 1 for 4 hours at a temperature of between 10ºC and 30ºC. Mix, apply and cure coat 2 in accordance with manufacturer's instructions for use 'FN10139', publication no. '04-07-17'.
28a	Flowserve Flow Solutions Group		Areas of the pump casing not Belzona coated (high velocity areas where the coating would be eroded)	Cast Iron	Small	BS EN	EN 1561:2011 / EN-GJL-250	yes	[redacted] 10/06/21	R.[redacted] 11/06/2021	RB - confirmed as compliant with 2011 revision
28b	Flowserve Flow Solutions Group	BELZONA POLMERICS LTD 5892	Areas of the pump casing not coated with Belzona 1341 lines 16 & 16 (high velocity areas where the coating would be eroded)	Belzona coated cast iron	Small	WRAS	1701523	yes	[redacted] 30/06/21	R.[redacted] 05/07/2021	Belzona 5892 (FN10106)'. Site applied, epoxy coating consisting of Belzona 5892 (white – Parts A & B) & Belzona 5892 (grey – Parts A & B). Belzona 5892 (white – Parts A & B) are mixed in a weight ratio of 5.7:1 and then applied (no cure). Belzona 5892 (grey – Parts A & B) are mixed in a weight ratio of 5.7:1 and then applied to the white. The final coating is then cured for 24 hours@30ºC. For use with water up to 85ºC. This material is only approved for the mixing and curing conditions that appear on the approval. If the mixing and/or curing conditions are varied from those specified on the approval then the materials are not covered by the scope of the approval. Approval expires January 2022.
30	Flowserve Flow Solutions Group	GILLET INDUSTRIES (FOUNDERIE)	Impeller	Bronze impeller	Small	BS EN	EN 1982:2017 CC480K (CuSn10-C)	yes	[redacted] 10-07-20	R.[redacted] 30/07/2020	
31	Flowserve Flow Solutions Group	MICROTECH PRECISION ENGINEERING	Shaft Sleeve	Stainless steel sleeve	Small	BS EN	EN 10088-1:2014 1.4028 (X30Cr13)	yes	[redacted] 10-07-20	R.[redacted] 04/08/2020	Assume you mean EN 10088-1:2014? Yes, updated
~~32~~	Flowserve Flow Solutions Group	EMILE MAURIN ETS METALLURGIQUES	~~Washer~~	Zinc plated washer	Small	BS EN	ISO 898-Cl. 04	yes	[redacted] 10-07-20	R.[redacted] 30/07/2020	
32	Flowserve Flow Solutions Group		Washer	Stainless Steel	Small	BS EN	X5CrNi18-10 EN 1.4301/304 grade	yes	[redacted] 10/06/21	R.[redacted] 11/06/2021	
~~33~~	Flowserve Flow Solutions Group	EMILE MAURIN ETS METALLURGIQUES	~~Nut~~	Zinc plated nut	Small	BS EN	ISO 898-Cl. 6.8	yes	[redacted] 10-07-20	R.[redacted] 30/07/2020	
33	Flowserve Flow Solutions Group		Nut	Stainless Steel	Small	BS EN	X5CrNi18-10 EN 1.4301/304 grade	yes	[redacted] 10/06/21	R.[redacted] 11/06/2021	
33a	Flowserve Flow Solutions Group		Casing plug		Small	BS EN	X2CrNiMo17-12-2 EN EN 1.4404/316L grade	yes	[redacted] 10/06/21	R.[redacted] 11/06/2021	
34	Flowserve Flow Solutions Group	FRANCIS KIRK & SON LTD	Impeller key	Stainless steel key	Small	BS EN	EN 10088-1: 2014 X5CrNi18-10	yes	[redacted] 10-07-20	R.[redacted] 04/08/2020	Assume you mean EN 10088-1:2014? Yes, updated
	HARPOLE PUMP SEAL	**P220 MECHANICAL SEAL**									

[illegible]

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

Form Number: 3892

n/a	21140470	30/03/2021	[illegible]	[illegible]	0.05	0.38	0	0	n/a	66	n/a	n/a	n/a	n/a	n/a	n/a	0.85	n/a	n/a	n/a	0.17	n/a	n/a	n/a	Yes	n/a	Slightly elevated 3-day plate count, turbidity and iron. Iron over TNS but not over PCV. To monitor.	[redacted]	n/a
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	n/a	n/a	n/a	Yes	n/a	Iron over TNS but not over PCV. To monitor.	[redacted]	n/a
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	n/a	n/a	n/a	Yes	n/a	Slightly elevated 3-day plate count, turbidity and iron. Iron over TNS but not over PCV. To monitor.	[redacted]	n/a
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	n/a	n/a	n/a	Yes	n/a	Iron over TNS but not over PCV. To monitor.	[redacted]	n/a
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	n/a	n/a	n/a	Yes	n/a	Slightly elevated 3-day plate count, strange chlorine residuals	[redacted]	n/a
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	n/a	n/a	n/a	Yes	n/a		[redacted]	n/a
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	n/a	n/a	n/a	Yes	n/a		[redacted]	n/a
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	n/a	n/a	n/a	Yes	n/a		[redacted]	n/a
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	n/a	n/a	n/a	Yes	n/a	Iron over TNS but not over PCV. To monitor.	[redacted]	n/a
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1	n/a	12931	Yes	Fail	Iron over PCV, needs further investigation Requested water profile resamples at the same time.	[redacted]	n/a
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0	n/a	n/a	Yes	n/a	No issues	[redacted]	n/a
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0	n/a	12931	Yes	n/a	Iron over TNS but not over PCV. To monitor.	[redacted]	n/a
[illegible]																													
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	n/a	n/a	n/a	Yes	FAIL	Iron and turbidity over PCV	[redacted]	n/a
n/a	21154801	#########	After flush	Sample 10: Boughton pump 1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.19	n/a	n/a	n/a	0.04	n/a	n/a	n/a	Yes	n/a	After flush, no iron or turbidity issues	[redacted]	n/a
n/a	21156630 21157395	#########	Prior to flush, had been standing for 24 hours	Sample 10: Boughton pump 1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.62	n/a	n/a	n/a	0.13	0	n/a	12931	Yes	n/a	Iron over TNS but below PCV after 24-hour stand	[redacted]	n/a
n/a	21154801 21156631	#########	After flush	Sample 10: Boughton pump 1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.22	n/a	n/a	n/a	0.07	1	n/a	12931	Yes	n/a	After flush, no significant iron or turbidity issues	[redacted]	n/a
Turbidity and iron sampling after 7-day stand period on Brixworth (after repairs) and Harpole (no repairs) to investigate iron issues																													
n/a	21175064	#########	After 7-day stand period	24" Hannington main	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.15	n/a	n/a	n/a	0.03	n/a	n/a	n/a	Yes	PASS		[redacted]	n/a
n/a	21175050	#########	After 7-day stand period	630mm Hannington main	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	< 0.090	n/a	n/a	n/a	0.01	n/a	n/a	n/a	Yes	PASS		[redacted]	n/a
n/a	21175055	#########	After 7-day stand period	24" inlet tap	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.18	n/a	n/a	n/a	0.04	n/a	n/a	n/a	Yes	PASS		[redacted]	n/a
n/a	21175063	#########	After 7-day stand period	630mm inlet tap	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.09	n/a	n/a	n/a	0.02	n/a	n/a	n/a	Yes	PASS		[redacted]	n/a
n/a	21175060	#########	After 7-day stand period	24" inlet manifold	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.11	n/a	n/a	n/a	0.03	n/a	n/a	n/a	Yes	PASS		[redacted]	n/a
n/a	21175053	#########	After 7-day stand period	630mm inlet manifold	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.13	n/a	n/a	n/a	0.06	n/a	n/a	n/a	Yes	PASS		[redacted]	n/a
n/a	21175059	#########	After 7-day stand period	Harpole pump 1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	21.6	n/a	n/a	n/a	2.11	n/a	n/a	n/a	Yes	FAIL	Pump rusting issues being pursued by the project team, daily flush needed on pumps in the meantime	[redacted]	n/a
n/a	21175061	#########	After 7-day stand period	Harpole pump 2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	19.5	n/a	n/a	n/a	2.16	n/a	n/a	n/a	Yes	FAIL	Pump rusting issues being pursued by the project team, daily flush needed on pumps in the meantime	[redacted]	n/a
n/a	21175052	#########	After 7-day stand period and flush	Harpole pump 1 post-flush	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.46	n/a	n/a	n/a	0.11	n/a	n/a	n/a	Yes	PASS		[redacted]	n/a
n/a	21175051	#########	After 7-day stand period and flush	Harpole pump 2 post-flush	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.42	n/a	n/a	n/a	0.12	n/a	n/a	n/a	Yes	PASS		[redacted]	n/a
n/a	21175058	#########	After 7-day stand period	Brixworth pump 1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	12.1	n/a	n/a	n/a	1.23	n/a	n/a	n/a	Yes	FAIL	Pump rusting issues being pursued by the project team, daily flush needed on pumps in the meantime	[redacted]	n/a
n/a	21175057	#########	After 7-day stand period	Brixworth pump 2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	27.3	n/a	n/a	n/a	3.23	n/a	n/a	n/a	Yes	FAIL	Pump rusting issues being pursued by the project team, daily flush needed on pumps in the meantime	[redacted]	n/a
n/a	21175054	#########	After 7-day stand period and flush	Brixworth pump 1 post-flush	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.09	n/a	n/a	n/a	0.02	n/a	n/a	n/a	Yes	PASS		[redacted]	n/a
n/a	21175056	#########	After 7-day stand period and flush	Brixworth pump 2 post-flush	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.13	n/a	n/a	n/a	0.02	n/a	n/a	n/a	Yes	PASS		[redacted]	n/a
n/a	21175062	#########	After 7-day stand period	Brixworth pumps 3,4,5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.51	n/a	n/a	n/a	0.07	n/a	n/a	n/a	Yes	PASS		[redacted]	n/a
Boughton pump MIC sampling following pump repairs due to rusting																													
16a, 16b, 20, 21,	21185709	28/04/2021	MIC	Boughton pump 1	0.06	0.38	0	0	n/a	0	1	1Z	1	1	7.4	0.7	0.77	622	128	< 0.006	n/d	1	0	12999	Yes	FAIL	No iron result, resample requested. 16 hour stand.	[redacted]	~
16a, 16b, 20, 21,	21218354	14/05/2021	Bacti/chem resamples	Boughton pump 1	0.07	0.38	0	0	n/a	10	n/a	n/a	n/a	n/a	n/a	n/a	0.8	n/a	n/a	n/a	0.16	0	n/a	12931	Yes	PASS	16-hour stand period. Satisfactory to return to supply with a daily flush.	[redacted]	R.[redacted]18/05/2021
MIC resampling following pump repairs due to rusting																													
n/a	21357159	05/08/2021	MIC	630mm Hannington inlet main	0.05	0.38	0	0	n/a	0	1	1Z	1	1	7.3	< 0.68	< 0.09	608	117	0.006	n/d	0	0	13140	Yes	n/a		[redacted]	n/a
40a, 40b, 43, 44,	21357157	05/08/2021	MIC	Brixworth pump 2	< 0.05	0.36	0	0	n/a	0	1	2T	1	1	7.3	< 0.68	0.82	608	119	< 0.006	n/d	0	0	13140	Yes	FAIL	Bacti, turbidity and iron resample after flush and stand	[redacted]	n/a
28a, 28b, 32, 33,	21357158	05/08/2021	MIC	Harpole pump 1	< 0.05	0.22	0	0	n/a	0	1	2T	2MU STY	1MU STY	7.3	< 0.68	2.59	609	118	0.008	n/d	0	0	13140	Yes	FAIL	Bacti, qual t&o, quant t&o, turbidity and iron resample after flush and stand	[redacted]	n/a
MIC resampling following pump repairs due to rusting																													
n/a	21378728	19/08/2021	MIC resamples	630mm Hannington inlet main	< 0.05	0.29	0	0	n/a	0	1	1Z	1	1	7.3	< 0.68	0.34	606	102	< 0.006	0.09	n/a	n/a	n/a	Yes	n/a		[redacted]	n/a
n/a	21378727	19/08/2021	MIC resamples	24" Hannington inlet main	< 0.05	0.29	0	0	n/a	20	1	2T	1	1	7.4	< 0.68	< 0.09	606	107	< 0.006	0.02	n/a	n/a	n/a	Yes	n/a		[redacted]	n/a
43, 44, 44a	21378726	19/08/2021	MIC resamples	Brixworth pump 2	< 0.05	0.17	0	0	n/a	203	1	2T	1	1	7.4	0.7	1.03	600	99.6	< 0.006	0.21	n/a	n/a	n/a	Yes	FAIL	Bacti, turbidity and iron resample after flush and stand - to be resampled	[redacted]	n/a
MIC resampling following pump repairs due to rusting																													
n/a	21414448	09/09/2021	MIC	630mm Hannington inlet main	< 0.05	0.25	0	0	n/a	121	1	1Z	1	1	7.3	1.4	0.12	607	112	< 0.006	0.05	0	0	n/d	Yes	n/a		[redacted]	n/a
28a, 28b, 32, 33, 33a	21414449	09/09/2021	MIC	Harpole pump 1	< 0.05	0.17	0	0	n/a	598	1	2T	2 CHLOR	2 CHLOR	7.3	< 0.68	0.4	604	112	< 0.006	0.09	0	0	n/d	Yes	PASS	Quant chlorine taste and odour is unusual as there is little chlorine in the sample. However organics don't suggest an organic source. Turbidity and iron slightly elevated but would be unlikely to breach the PCV with a daily flush. Approved on the agreement of a daily flush has been programmed in and the plant won't run without, as per previous discussions on the turbidity/iron issues on thee pumps with standing. Will resample for bacti and quant t&o whilst the asset is online, to investigate the elevated plate count and quant chlorine results - neither result would affect	[redacted]	R.[redacted]14/09/2021
MIC resampling following pump repairs due to rusting, and post into supply set for Harpole pump 1																													
n/a	21438116	24/09/2021	Bacti & Chemi	Harpole pump 1 (after 16 hour stand whilst in supply)	< 0.05	0.13	0	0	n/a	1923	n/a	n/a	n/d	n/d	7.4	< 0.68	1.03	595	107	n/a	n/d	n/a	n/a	n/a	Yes	n/a	High 3-day plate count, elevated turbidity - no iron result but may be getting close to the PCV. Requested further	[redacted]	~
40a, 40b, 43, 44, 44a	21438117	24/09/2021	MIC	Brixworth pump 2	< 0.05	0.29	0	0	n/a	4	1	3T	1	1	7.4	< 0.68	0.59	594	105	< 0.006	0.1	0	0	?	Yes	PASS	Mild chlorine odour despite little chlorine, but not seen on quantitative result. Turbidity and iron slightly elevated but would be unlikely to breach the PCV with a daily flush. Bacti after 16 hour stand needed due to sample timing out, but	[redacted]	~
Pre-into supply bacti (Brixworth pump 2), and additional post into supply set for Harpole pump 1																													
n/a	21457919	06/10/2021	Bacti & Chemi	Inlet manifold (comparison)	< 0.05	0.55	0	0	n/a	5	1	1Z	1	1	7.3	2.8	0.09	592	101	< 0.006	0.22	n/a	n/a	n/a	Yes	n/a	Unusually high colour with no elevated turbidity. Slightly elevated iron just above TSS.	[redacted]	~
n/a	21457920	06/10/2021	Bacti & Chemi	Harpole pump 1 (after 16 hour stand whilst in supply)	< 0.05	0.33	0	0	n/a	2	1	2T	1	1	7.3	0.8	0.71	598	96.1	< 0.006	0.12	n/a	n/a	n/a	Yes	PASS	Slightly raised turbidity, and iton above TSS, but would likely still be below PCV after 24 hour, so can continue in supply with a 24-hour flush period. Though NRV was then replaced	[redacted]	~
n/a	21457918	06/10/2021	Bacti	Brixworth pump 2	< 0.05	0.33	0	0	n/a	14	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	Yes	PASS	Pass but was over 10 days (12 days) by the time it was retrieved from PACE. However as two sets of bacti have not suggested a deteriorating bacti issue on standing, approval given to put into supply within 14 days of sampling (before 20/10/2021), after a good flush to waste and	[redacted]	R.[redacted]18/10/2021
Bacti resampling following replacement of NRV on Harpole pump 1 on 06/10/21 (after sample above was taken)																													
n/a	21487333	26/10/2021	Bacti	Harpole pump 1 (after 16 hour stand)	0.01	0.21	0	0	n/a	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	Yes	PASS	Chlorine residuals a little lower than last MIC set, requsted a good flush and W checks before putting it into supply.	[redacted]	R.[redacted]01/11/2021
Bacti and chemi resampling following replacement of NRV on Boughton pump March 2022																													
n/a	22146544 22147582	29/03/2022	Bacti/chemi	Upstream comparison	< 0.05	0.61	0	0	n/a	5	1	3T	1	1	7.6		0.45	n/a	119	< 0.007	n/a	n/a	n/a	n/a	Yes	PASS	Chlorine residuals a little lower than last MIC set, requsted a good flush and W checks before putting it into supply.	[redacted]	R.[redacted]07/04/2022
n/a	22146545 22147583	29/03/2022	Bacti/chemi	Boughton pump (after 16 hour stand)	< 0.05	0.51	0	0	n/a	50	1	3T	1	1	7.6		0.52	n/a	130	< 0.007	n/a	n/a	n/a	n/a	Yes	PASS	Chlorine residuals a little lower than last MIC set, requsted a good flush and W checks before putting it into supply.	[redacted]	R.[redacted]07/04/2022

Insert more lines as required

** taste testing only to be performed on samples of potable water and after confirmation of clear bacteriological results*

PART D - Permission to go into supply

Risk Scientist to give final approval to go into supply

Into supply date:	**12/01/2021 (Brixworth assets) 02/02/2021 (Harpole assets) 23/02/2021 (Boughton**	**Name:**	R.[redacted]

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

For materials to enter supply, Parts A and B must be signed and approved by Risk and Optimisation Team and final authoris

Contact Name:	[redacted]	**Contact Number:**	[redacted]	**Date:**	
Site:	Pitsford WTW				
Location on site:	Pitsford storage tank 1 repairs				
Contractor:	IOS Barhale DLO				
WAT- No. If applicable:	WAT-07174-04-34				

USEFUL LINKS

PART A - Approvals

Line No.	Supplier	Manufacturer holding approval (if different from supplier)	Product name	Brief Description of material in contact with water (e.g. pump, pipe, sealant)	Large/ Small surface area	Approving body (DWI/ BS6920/ WRAS/ KIWA/ BSEN)	Appr bod
1	Natural Cement Ltd		**Natcem 35**	Concrete repair mortar	Small	DWI	56/4/
2							
3							
4							
5							
6							
7							
8							
9							
10							

Insert more lines as necessary

X	**Please put X in box to confirm no further materials will be added to part A of this form**

NOTE: Some products and materials may not require a full set of MIC samples, depending on what they are and where they are being installed.
Please contact the Risk and Optimisation Team (WQRiskandOptimisatio@anglianwater.co.uk) if you wish to discuss reduced sampling. Part A must be complete before the

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

PART B - Sampling requirements

PART A LINE NUMBERS WHICH SAMPLES REPRESENT	Source being used to sample	Analysis	Bottles required	Comparison required?	Likely contact time whilst in operation?	Agreed standing time for samples	Scientist / Engineer agreement (sign and date)	Risk Scientist Approval (sign and date)

PART C - Sample results

Part C completed by:	
Please provide the following contact names:	
Risk Scientist:	
Supply Manager:	
Senior Technician or deputy:	

To Self Assess Sample results
Ensure Parts A and B above are completed fully
Click this button and locate the QDW / PACE 711 report with the MIC
Samples on it. Open that report and then identify which samples
are associated with this form.

Part A line numbers which samples represent	Sample Number	Sample Date and Time	Sample Type	Location	Free Chlorine	Total Chlorine	Coliforms	E Coli	COLONY COUNTS 2 day	COLONY COUNTS 3 day	ualitative Taste*	ualitative Odour	antative Taste*	uantative Odour	pH	Colour (Hazen)	urbidity (NTU)	ductivity (us/cm)	lkalinity (mg/l CaCO3)	minium (mg/l Al)	Iron (mg/l Fe)	TRA Water Profile

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ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

											Qu	Q	Qu	Q		C	T	Con	A	Alu	:	

Insert more lines as required

** taste testing only to be performed on samples of potable water and after confirmation of clear bacteriological results*

PART D - Permission to go into supply

Risk Scientist to give final approval to go into supply			
Into supply date:		**Name:**	

				Form Number:	3896

ation will be given by a Risk or Water Quality Scientist

16/01/2020

		1	2	
oving / ref	Have rhe Instructions for use (IFU) or conditions for use been checked and can you meet all the requirements?	Person completing the work	Risk Scientist - Materials Approved	Comments and Advice
		Sign/Date	Sign/Date	
/1090	Yes	[redacted]	R.[redacted]1601/2020	Use of the product must be in accordance with the Instructions for Use: Product Information: NATCEM 35 Fast Setting and Fast Curing Mortar . Issue date 26/06/2017 issue number 01

Risk Team can reduce sampling requirements.

				Form Number:	3896			

Assess Samples

CE ORGANICS		Sample Completed?	Verdict	Comment	1	2		
Purge & Trap	MK FORM NO.				Person completing the work	Risk or WQ Scientist or authorised delegate signature and date		

Version 002 - June 2009

				Form Number:	**3896**			
					Sign/Date	**Sign/Date**		

Version 002 - June 2009

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

For materials to enter supply, Parts A and B must be signed and approved by Risk and Optimisation Team and final authorisa

Contact Name:	Pitsford Ammonia tank 2 flow meter	**Contact Number:**	
Site:	Pitsford WTW		
Location on site:	Lower chemical block		
Contractor:			
WAT- No. If applicable:			

USEFUL LINKS

PART A - Approvals

Line No.	Supplier	Manufacturer holding approval (if different from supplier)	Product name	Brief Description of material in contact with water (e.g. pump, pipe, sealant)	Large/ Small surface area	Approving body (DWI/ BS6920/ WRAS/ KIWA/ BSEN)
1	Smith Brothers	Apator Powogaz S.A	**Flow meter**	JS' range of water meters	small	WRAS
2						
3						
4						
5						
6						
7						
8						
9						
10						

Insert more lines as necessary

☐ **Please put X in box to confirm no further materials will be added to part A of this form**

NOTE: Some products and materials may not require a full set of MIC samples, depending on what they are and where they are being installed.
Please contact the Risk and Optimisation Team (WQRiskandOptimisatio@anglianwater.co.uk) if you wish to discuss reduced sampling. Part A must be complete before the R

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

PART B - Sampling requirements

PART A LINE NUMBERS WHICH SAMPLES REPRESENT	Source being used to sample	Analysis	Bottles required	Comparison required?	Likely contact time whilst in operation?	Agreed standing time for samples	Scientist / Engineer agreement (sign and date)	Risk Scientist Approval (sign and date)

PART C - Sample results

Part C completed by:

Please provide the following contact names:

Risk Scientist:

Supply Manager:

Senior Technician or deputy:

To Self Assess Sample results

Ensure Parts A and B above are completed fully

Click this button and locate the QDW / PACE 711 report with

Samples on it. Open that report and then identify which samp

are associated with this form.

Part A line numbers which samples represent	Sample Number	Sample Date and Time	Sample Type	Location	Free Chlorine	Total Chlorine	Coliforms	E Coli	COLONY COUNTS 2 day	COLONY COUNTS 3 day	Qualitative Taste*	Qualitative Odour	Quantative Taste*	Quantative Odour	pH	Colour (Hazen)	Turbidity (NTU)	Conductivity (us/cm)	Alkalinity (mg/l CaCO3)	Aluminium (mg/l Al)	Iron (mg/l Fe)
	20401136	01/09/2020		D/S sample	<0.05	1.08	0	0		0											
	20401892	01/09/2020		D/S sample							1	1Z			7.52	1	0.1	397	90.8	<0.014	0.008

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

	20401137	01/09/2020		U/S sample	0.07	1.08	0	0		0											
	20401891	01/09/2020		U/S sample							1	1Z			7.6	1	0.1	400	84.5	<0.014	0.008
	20422393	16/09/2020		U/S sample																	
	20422394	16/09/2020		D/S sample																	

Insert more lines as required

** taste testing only to be performed on samples of potable water and after confirmation of clear bacteriological results*

PART D - Permission to go into supply

Risk Scientist to give final approval to go into supply			
Into supply date:		**Name:**	

Form Number:	4215

ıtion will be given by a Risk or Water Quality Scientist

Date:

		1	2	
Approving body ref	Have rhe Instructions for use (IFU) or conditions for use been checked and can you meet all the requirements?	Person completing the work	Risk Scientist - Materials Approved	Comments and Advice
		Sign/Date	Sign/Date	
1802340	yes	[redacted] 11/08/20	[redacted] 11/08/20	

ɩisk Team can reduce sampling requirements.

Form Number:	4215

the MIC
ples

Assess Samples

TRACE ORGANICS						1	2
Water Profile	Purge & Trap	MK FORM NO.	Sample Completed?	Verdict	Comment	Person completing the work	Risk or WQ Scientist or authorised delegate signature and date
						Sign/Date	Sign/Date
			Yes	Pass			[redacted] 16/09/20
			Yes	Pass			[redacted] 16/09/20

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					Form Number:	**4215**			
			Yes	**Pass**			[redacted] 16/09/20		
			Yes	**Pass**			[redacted] 16/09/20		
0	0	MK12694	**Yes**	**Pass**			[redacted] 22/09/20		
0	0	MK12694	**Yes**	**Pass**			[redacted] 22/09/20		

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

For materials to enter supply, Parts A and B must be signed and approved by Risk and Optimisation Team and final authoris

Contact Name:	[redacted]	**Contact Number:**	[redacted]	**Date:**	
Site:	Pitsford WW				
Location on site:	Back wash ASG pump 2				
Contractor:	The Deritend Group Limited B27032				
WAT- No. If applicable:	WAT-07352-00-95-OS				

USEFUL LINKS

PART A - Approvals

Line No.	Supplier	Manufacturer holding approval (if different from supplier)	Product name	Brief Description of material in contact with water (e.g. pump, pipe, sealant)	Large/ Small surface area	Approving body (DWI/ BS6920/ WRAS/ KIWA/ BSEN)	Appr body
1	Bedford Pumps LTD		BBF 3.02 Clear, uncoloured lubricating oil.	Barrier oil	Small	WRAS	2011
2	Axalta coatings		Axalta coatings (Blue)	Coating	Small	WRAS	1807
3	AES seals		Molykote (111)	Grease	Small	WRAS	1707
4	AES seals	[redacted]	EPDM O rings(DE35/M534)	Mech seal	Small	WRAS	1809
5	Vulcan Engineering Ltd		Dark grey coloured, compression moulded,	Mech seal	Small	WRAS	1708
6	Vulcan Engineering Ltd		Dark grey coloured, sintered silicon carbide washer	Mech seal	Small	WRAS	1905
7	Vulcan Engineering Ltd		0530.19.V.X BELL'. Black coloured, compression moulded FKM seal. Shore	Mech seal	Small	WRAS	2008
8	Aristoncavi SpA		EPDM Sheathed cable Drincable'. Blue coloured,	Electrical supply cable	Small	WRAS	1807
9							
10							

Insert more lines as necessary

	Please put X in box to confirm no further materials will be added to part A of this form

NOTE: Some products and materials may not require a full set of MIC samples, depending on what they are and where they are being installed.
Please contact the Risk and Optimisation Team (WQRiskandOptimisatio@anglianwater.co.uk) if you wish to discuss reduced sampling. Part A must be complete before the

PART B - Sampling requirements

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

PART A LINE NUMBERS WHICH SAMPLES REPRESENT	Source being used to sample	Analysis	Bottles required	Comparison required?	Likely contact time whilst in operation?	Agreed standing time for samples	Scientist / Engineer agreement (sign and date)	Risk Scientist Approval (sign and date)

PART C - Sample results

Part C completed by:	
Please provide the following contact names:	
Risk Scientist:	
Supply Manager:	
Senior Technician or deputy:	

To Self Assess Sample results
Ensure Parts A and B above are completed fully
Click this button and locate the QDW / PACE 711 report with the MIC
Samples on it. Open that report and then identify which samples
are associated with this form.

Part A line numbers which samples represent	Sample Number	Sample Date and Time	Sample Type	Location	Free Chlorine	Total Chlorine	Coliforms	E Coli	COLONY COUNTS		Qualitative Taste*	Qualitative Odour	Quantative Taste*	Quantative Odour	pH	Colour (Hazen)	Turbidity (NTU)	Conductivity (us/cm)	Alkalinity (mg/l CaCO3)	Aluminium (mg/l Al)	Iron (mg/l Fe)	TRA
									2 day	3 day												Water Profile

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

Insert more lines as required

** taste testing only to be performed on samples of potable water and after confirmation of clear bacteriological results*

PART D - Permission to go into supply

Risk Scientist to give final approval to go into supply			
Into supply date:		**Name:**	

			Form Number:	4439	

ation will be given by a Risk or Water Quality Scientist

	06/04/2021

		1	2	
ving ref	Have the Instructions for use (IFU) or conditions for use been checked and can you meet all the requirements?	Person completing the work	Risk Scientist - Materials Approved	Comments and Advice
		Sign/Date	Sign/Date	
1529	YES	[redacted] 06/04/21	[redacted] 06/04/21	
7513	YES	[redacted] 06/04/21	[redacted] 06/04/21	'06ABG(A3)' dated April 2018. Cure for 14
7509	YES	[redacted] 06/04/21	[redacted] 06/04/21	
9507	YES	[redacted] 06/04/21	[redacted] 06/04/21	
3505	YES	[redacted] 06/04/21	[redacted] 06/04/21	
5510	YES	[redacted] 06/04/21	[redacted] 06/04/21	
3507	YES	[redacted] 06/04/21	[redacted] 06/04/21	
7522	YES	[redacted] 06/04/21	[redacted] 06/04/21	coloured outer part being the water contact layer

Risk Team can reduce sampling requirements.

				Form Number:	4439			

Assess Samples

CE ORGANICS		Sample Completed?	Verdict	Comment	1	2
Purge & Trap	MK FORM NO.				Person completing the work	Risk or WQ Scientist or authorised delegate signature and date
					Sign/Date	Sign/Date

				Form Number:	4439			

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

For materials to enter supply, Parts A and B must be signed and approved by Risk and Optimisation Team and final authoris

Contact Name:	[redacted]	**Contact Number:**	[redacted]	**Date:**	
Site:	Pitsford WTW				
Location on site:	GAC Supernatant return tank				
Contractor:	Deritend Ltd				
WAT- No. If applicable:	WAT-07352-00-78-OS				

USEFUL LINKS

PART A - Approvals

Line No.	Supplier	Manufacturer holding approval (if different from supplier)	Product name	Brief Description of material in contact with water (e.g. pump, pipe, sealant)	Large/ Small surface area	Approving body (DWI/ BS6920/ WRAS/ KIWA/ BSEN)	Appr body
1	Bedford Pumps LTD		**BBF 3.02 Clear, uncoloured lubricating oil.**	Barrier oil	Small	WRAS	2011
2	Axalta coatings		**Axalta coatings (Blue)**	Coating	Small	WRAS	1807
3	AES seals		**Molykote (111)**	Grease	Small	WRAS	1707
4	AES seals	[redacted]	**EPDM O rings(DE35/M534)**	Mech seal	Small	WRAS	1809
5	Vulcan Engineering Ltd		**Dark grey coloured, compression moulded,**	Mech seal	Small	WRAS	1708
6	Vulcan Engineering Ltd		**Dark grey coloured, sintered silicon carbide washer**	Mech seal	Small	WRAS	1905
7	Vulcan Engineering Ltd		**0530.19.V.X BELL': Black coloured, compression moulded FKM seal. Shore**	Mech seal	Small	WRAS	2008
8	Aristoncavi SpA		**EPDM Sheathed cable Drincable'. Blue coloured,**	Electrical supply cable	Small	WRAS	1807
9							
10							

Insert more lines as necessary

	Please put X in box to confirm no further materials will be added to part A of this form

NOTE: Some products and materials may not require a full set of MIC samples, depending on what they are and where they are being installed.
Please contact the Risk and Optimisation Team (WQRiskandOptimisatio@anglianwater.co.uk) if you wish to discuss reduced sampling. Part A must be complete before the

PART B - Sampling requirements

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

PART A LINE NUMBERS WHICH SAMPLES REPRESENT	Source being used to sample	Analysis	Bottles required	Comparison required?	Likely contact time whilst in operation?	Agreed standing time for samples	Scientist / Engineer agreement (sign and date)	Risk Scientist Approval (sign and date)

PART C - Sample results

Part C completed by:	
Please provide the following contact names:	
Risk Scientist:	
Supply Manager:	
Senior Technician or deputy:	

To Self Assess Sample results

Ensure Parts A and B above are completed fully

Click this button and locate the QDW / PACE 711 report with the MIC

Samples on it. Open that report and then identify which samples

are associated with this form.

Part A line numbers which samples represent	Sample Number	Sample Date and Time	Sample Type	Location	Free Chlorine	Total Chlorine	Coliforms	E Coli	COLONY COUNTS 2 day	COLONY COUNTS 3 day	Qualitative Taste*	Qualitative Odour	Quantative Taste*	Quantative Odour	pH	Colour (Hazen)	Turbidity (NTU)	Conductivity (us/cm)	Alkalinity (mg/l CaCO3)	Aluminium (mg/l Al)	Iron (mg/l Fe)	TRA Water Profile

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

Insert more lines as required

** taste testing only to be performed on samples of potable water and after confirmation of clear bacteriological results*

PART D - Permission to go into supply

Risk Scientist to give final approval to go into supply			
Into supply date:		**Name:**	

				Form Number:	4439

ation will be given by a Risk or Water Quality Scientist

06/04/2021

		1	2	
ving / ref	Have the Instructions for use (IFU) or conditions for use been checked and can you meet all the requirements?	Person completing the work	Risk Scientist - Materials Approved	Comments and Advice
		Sign/Date	Sign/Date	
1529	YES	[redacted] 06/04/21	[redacted] 06/04/21	
7513	YES	[redacted] 06/04/21	[redacted] 06/04/21	'06ABG(A3)' dated April 2018. Cure for 14
7509	YES	[redacted] 06/04/21	[redacted] 06/04/21	
9507	YES	[redacted] 06/04/21	[redacted] 06/04/21	
3505	YES	[redacted] 06/04/21	[redacted] 06/04/21	
5510	YES	[redacted] 06/04/21	[redacted] 06/04/21	
3507	YES	[redacted] 06/04/21	[redacted] 06/04/21	
7522	YES	[redacted] 06/04/21	[redacted] 06/04/21	coloured outer part being the water contact layer.

Risk Team can reduce sampling requirements.

				Form Number:	4439			

Assess Samples

CE ORGANICS					1	2
Purge & Trap	MK FORM NO.	Sample Completed?	Verdict	Comment	Person completing the work	Risk or WQ Scientist or authorised delegate signature and date
					Sign/Date	Sign/Date

Version 002 - June 2009

				Form Number:	4439			

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

For materials to enter supply, Parts A and B must be signed and approved by Risk and Optimisation Team and final authoris

Contact Name:	[redacted]	**Contact Number:**	[redacted]	**Date:**	
Site:	Pitsford CT ST12 Tank2				
Location on site:	On cover upstand				
Contractor:	Churchills ILtd				
WAT- No. If applicable:	WAT-07312-04-81				

USEFUL LINKS

PART A - Approvals

Line No.	Supplier	Manufacturer holding approval (if different from supplier)	Product name	Brief Description of material in contact with water (e.g. pump, pipe, sealant)	Large/ Small surface area	Approving body (DWI/ BS6920/ WRAS/ KIWA/ BSEN)	Appr body
1	Natural Cement Ltd		**Natcem 35**	Repair mortar	Small	DWI	56/4/
2							
3							
4							
5							
6							
7							
8							
9							
10							

Insert more lines as necessary

X	**Please put X in box to confirm no further materials will be added to part A of this form**

NOTE: Some products and materials may not require a full set of MIC samples, depending on what they are and where they are being installed.
Please contact the Risk and Optimisation Team (WQRiskandOptimisatio@anglianwater.co.uk) if you wish to discuss reduced sampling. Part A must be complete before the

PART B - Sampling requirements

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

PART A LINE NUMBERS WHICH SAMPLES REPRESENT	Source being used to sample	Analysis	Bottles required	Comparison required?	Likely contact time whilst in operation?	Agreed standing time for samples	Scientist / Engineer agreement (sign and date)	Risk Scientist Approval (sign and date)

PART C - Sample results

Part C completed by:	
Please provide the following contact names:	
Risk Scientist:	
Supply Manager:	
Senior Technician or deputy:	

To Self Assess Sample results
Ensure Parts A and B above are completed fully
Click this button and locate the QDW / PACE 711 report with the MIC
Samples on it. Open that report and then identify which samples
are associated with this form.

Part A line numbers which samples represent	Sample Number	Sample Date and Time	Sample Type	Location	Free Chlorine	Total Chlorine	Coliforms	E Coli	COLONY COUNTS		Qualitative Taste*	Qualitative Odour	Quantative Taste*	Quantative Odour	pH	Colour (Hazen)	Turbidity (NTU)	Conductivity (us/cm)	Alkalinity (mg/l CaCO3)	Aluminium (mg/l Al)	Iron (mg/l Fe)	TRA
									2 day	3 day												Water Profile

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

Insert more lines as required

** taste testing only to be performed on samples of potable water and after confirmation of clear bacteriological results*

PART D - Permission to go into supply

Risk Scientist to give final approval to go into supply			
Into supply date:		**Name:**	

				Form Number:	4440

ation will be given by a Risk or Water Quality Scientist

	06/04/2021

		1	2	
oving / ref	Have the Instructions for use (IFU) or conditions for use been checked and can you meet all the requirements?	Person completing the work Sign/Date	Risk Scientist - Materials Approved Sign/Date	Comments and Advice
1090	Yes	[redacted] 6/4/2021	[redacted] 06/04/21	Use of the product must be in accordance with the

Risk Team can reduce sampling requirements.

				Form Number:	4440			

CE ORGANICS		Sample Completed?	Verdict	Comment	1	2
Purge & Trap	MK FORM NO.				Person completing the work	Risk or WQ Scientist or authorised delegate signature and date
					Sign/Date	Sign/Date

Version 002 - June 2009

				Form Number:	**4440**			

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

For materials to enter supply, Parts A and B must be signed and approved by Risk and Optimisation Team and final authori

Contact Name:	[redacted]
Site:	Pitsford WTW
Location on site:	GAC Motive water Pump
Contractor:	Deritend Ltd
WAT- No. If applicable:	WAT-07570-00-18

USEFUL LINKS

PART A - Approvals

Line No.	Supplier	Manufacturer holding approval (if different from supplier)	Product name	Brief Description of material in contact with water (e.g. pump, pipe, sealant)	Large/ Small surface area	Approving body (DWI/ BS6920/ WRAS/ KIWA/ BSEN)	Appr body
1	Belzona	Belzona Polymerics LTD	**Belzona (1341)Blue**	Coating	Small	WRAS	1
2	Dichungstechnik		**Klingersil C-4324 Fibre**	Gasket	Small	WRAS	1
3	AES Seals	Dow Performance silicones	**Molykote® 111 (translucent white) silicone greases.**	Grease	Small	WRAS	1
4	AES Seals	GmbH	**coloured, compression moulded carbon**	Mech seal	Small	WRAS	1
5	AES Seals	Microcera LLC	**Silicon Carbide (mi20/Tufbide)**	Mech seal	Small	WRAS	1
6	AES Seals	[redacted]	**EPDM O rings(DE35/M534)**	Mech seal	Small	WRAS	1
7							
8							
9							
10							

Insert more lines as necessary

☐ **Please put X in box to confirm no further materials will be added to part A of this form**

NOTE: Some products and materials may not require a full set of MIC samples, depending on what they are and where they are being installed.
Please contact the Risk and Optimisation Team (WQRiskandOptimisatio@anglianwater.co.uk) if you wish to discuss reduced sampling. Part A must be complete before the

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

PART B - Sampling requirements

PART A LINE NUMBERS WHICH SAMPLES REPRESENT	Source being used to sample	Analysis	Bottles required	Comparison required?	Likely contact time whilst in operation?	Agreed standing time for samples	Scientist / Engineer agreement (sign and date)	Risk Scientist Approval (sign and date)

PART C - Sample results

Part C completed by:	
Please provide the following contact names:	
Risk Scientist:	
Supply Manager:	
Senior Technician or deputy:	

To Self Assess Sample results

Ensure Parts A and B above are completed fully

Click this button and locate the QDW / PACE 711 report with the MI(

Samples on it. Open that report and then identify which samples

are associated with this form.

Part A line numbers which samples represent	Sample Number	Sample Date and Time	Sample Type	Location	Free Chlorine	Total Chlorine	Coliforms	E Coli	COLONY COUNTS		Qualitative Taste*	Qualitative Odour	Quantative Taste*	Quantative Odour	pH	Colour (Hazen)	Turbidity (NTU)	Conductivity (us/cm)	Alkalinity (mg/l CaCO3)	Aluminium (mg/l Al)	Iron (mg/l Fe)	TRA(
									2 day	3 day												Water Profile

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

1	21458172	06/1021 12:30		Pitsford WTW GAC motive pump A								2U	1	1	7.37	1.6	0.1	385	88.1	0.006	<0.00 7	
2	21458647	06/1021 12:30		Pitsford WTW GAC motive pump A																		0

Insert more lines as required

** taste testing only to be performed on samples of potable water and after confirmation of clear bacteriological results*

PART D - Permission to go into supply

Risk Scientist to give final approval to go into supply			
Into supply date:		**Name:**	

			Form Number:	4554

sation will be given by a Risk or Water Quality Scientist

		1	2	
oving y ref	Have the Instructions for use (IFU) or conditions for use been checked and can you meet all the requirements?	Person completing the work Sign/Date	Risk Scientist - Materials Approved Sign/Date	Comments and Advice
712525	YES	[redacted] 18/08/2021	[redacted] 19/08/2021	
706523	YES	18/08/2021	19/08/2021	
707509	YES	[redacted] 18/08/2021	[redacted] 19/08/2021	
811515	YES	18/08/2021	19/08/2021	
712508	YES	[redacted] 18/08/2021	[redacted] 19/08/2021	
809507	YES	18/08/2021	19/08/2021	

e Risk Team can reduce sampling requirements.

				Form Number:	4554			

Assess Samples

CE ORGANICS		Sample Completed?	Verdict	Comment	1	2
Purge & Trap	MK FORM NO.				Person completing the work	Risk or WQ Scientist or authorised delegate signature and date
					Sign/Date	Sign/Date

Version 002 - June 2009

				Form Number:	**4554**			
		Yes	**PASS**			19/10/2021		
0	13229	**Yes**	**PASS**			19/10/2021		

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

For materials to enter supply, Parts A and B must be signed and approved by Risk and Optimisation Team and final authori

Contact Name:	[redacted]
Site:	Pitsford WTW
Location on site:	Ozone Tank (Inlet Pipework)
Contractor:	IOS
WAT- No. If applicable:	WAT-07548-04-65

USEFUL LINKS

PART A - Approvals

Line No.	Supplier	Manufacturer holding approval (if different from supplier)	Product name	Brief Description of material in contact with water (e.g. pump, pipe, sealant)	Large/ Small surface area	Approving body (DWI/ BS6920/ WRAS/ KIWA/ BSEN)	Appr body
1	Talis		**EVOLUTION 800/16, flange PN16, EPDM, HW, IP67, CC DBV DOUBLE OFFSET**	800mm Butterfly Valve	Small	WRAS	190
2							
3	Freeflow		**800mm Steel Pipework, coated with Resicoat R4-FB HKC71R**	800mm Dia Steel (coated) pipework; 1950mm and 600mm	Large	DWI	DWI 56
4							
5							
6							
7							
8							
9							
10							

Insert more lines as necessary

X	**Please put X in box to confirm no further materials will be added to part A of this form**

NOTE: Some products and materials may not require a full set of MIC samples, depending on what they are and where they are being installed.
Please contact the Risk and Optimisation Team (WQRiskandOptimisatio@anglianwater.co.uk) if you wish to discuss reduced sampling. Part A must be complete before the

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

PART B - Sampling requirements

PART A LINE NUMBERS WHICH SAMPLES REPRESENT	Source being used to sample	Analysis	Bottles required	Comparison required?	Likely contact time whilst in operation?	Agreed standing time for samples	Scientist / Engineer agreement (sign and date)	Risk Scientist Approval (sign and date)

PART C - Sample results

Part C completed by:	
Please provide the following contact names:	
Risk Scientist:	
Supply Manager:	
Senior Technician or deputy:	

To Self Assess Sample results
Ensure Parts A and B above are completed fully
Click this button and locate the QDW / PACE 711 report with the MI
Samples on it. Open that report and then identify which samples
are associated with this form.

Part A line numbers which samples represent	Sample Number	Sample Date and Time	Sample Type	Location	Free Chlorine	Total Chlorine	Coliforms	E Coli	COLONY COUNTS		ualitative Taste*	ualitative Odour	uantative Taste*	uantative Odour	pH	Colour (Hazen)	urbidity (NTU)	ductivity (us/cm)	lkalinity (mg/l CaCO3)	minium (mg/l Al)	ron (mg/l Fe)	TRA
									2 day	3 day												Water Profile

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

											Qu	Q	Qu	Q		C	T	Con	A	Alu		

Insert more lines as required

** taste testing only to be performed on samples of potable water and after confirmation of clear bacteriological results*

PART D - Permission to go into supply

Risk Scientist to give final approval to go into supply			
Into supply date:		**Name:**	

	Form Number:	4652

sation will be given by a Risk or Water Quality Scientist

	1	2	
oving y ref	Have the Instructions for use (IFU) or conditions for use been checked and can you meet all the requirements?	Person completing the work Sign/Date	Risk Scientist - Materials Approved Sign/Date	Comments and Advice
1056	Yes	[redacted]- 30/09/21	[redacted] 04/1	Exp date: 31/01/2024. Please follow installation requirements.
/4/817	Yes	[redacted]- 30/09/21	[redacted] 04/1	Use of the product must be in accordance with the Instructions for Use: Issue 8 Dated 17.02.20 Approval exp date: 04/05.25

e Risk Team can reduce sampling requirements.

Version 002 - June 2009

				Form Number:	4652			

Assess Samples

CE ORGANICS					1	2		
Purge & Trap	MK FORM NO.	Sample Completed?	Verdict	Comment	Person completing the work	Risk or WQ Scientist or authorised delegate signature and date		

Version 002 - June 2009

				Form Number:	**4652**			
					Sign/Date	**Sign/Date**		

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

Form Number: 4882

For materials to enter supply, Parts A and B must be signed and approved by Risk and Optimisation Team and final authorisation will be given by a Risk or Water Quality Scientist

Contact Name:	[redacted]
Site:	Pitsford WTW
Location on site:	GAC (Absorber Outlet Valves 2 & 3)
Contractor:	IOS / FLI
WAT- No. If applicable:	WAT-07548-04-46 and WAT-07548-04-47

USEFUL LINKS

PART A - Approvals

Line No.	Supplier	Manufacturer holding approval (if different from supplier)	Product name	Brief Description of material in contact with water (e.g. pump, pipe, sealant)	Large/ Small surface area	Approving body (DWI/ BS6920/ WRAS/ KIWA/ BSEN)	Approving body ref	Have the Instructions for use (IFU) or conditions for use been checked and can you meet all the requirements?	1 Person completing the work Sign/Date	2 Risk Scientist - Materials Approved Sign/Date	Comments and Advice
1	FLI	TIANJIN WORLDS VALVE CO LTD	CBF10-TA03 BUTTERFLY VALVES	300mm dia Butterfly Valve	Small	WRAS	1705069	Yes	[redacted]- 18/03/22	[redacted] 18/03/2022	Must be used before end of May 2022
2											
3											
4											
5											
6											
7											
8											
9											
10											

Insert more lines as necessary

☐ **Please put X in box to confirm no further materials will be added to part A of this form**

NOTE: Some products and materials may not require a full set of MIC samples, depending on what they are and where they are being installed.
Please contact the Risk and Optimisation Team (WQRiskandOptimisatio@anglianwater.co.uk) if you wish to discuss reduced sampling. Part A must be complete before the Risk Team can reduce sampling requirements.

PART B - Sampling requirements

PART A LINE NUMBERS WHICH SAMPLES REPRESENT	Source being used to sample	Analysis	Bottles required	Comparison required?	Likely contact time whilst in operation?	Agreed standing time for samples	Scientist / Engineer agreement (sign and date)	Risk Scientist Approval (sign and date)
1	Partially treated Water	Full MIC without taste	1*Bacti, 2*500ml Chem, 2*Purge and					[redacted] 18/03/2022

PART C - Sample results

Part C completed by:		**To Self Assess Sample results**	

Version 002 - June 2009

ANGLIAN WATER SERVICES - MATERIALS APPROVAL FORM

Form Number: 4882

Please provide the following contact names:

Risk Scientist:	
Supply Manager:	
Senior Technician or deputy:	

Ensure Parts A and B above are completed fully
Click this button and locate the QDW / PACE 711 report with the MIC Samples on it. Open that report and then identify which samples are associated with this form.

Assess Samples

Part A line numbers which samples represent	Sample Number	Sample Date and Time	Sample Type	Location	Free Chlorine	Total Chlorine	Coliforms	E Coli	COLONY COUNTS 2 day	COLONY COUNTS 3 day	Qualitative Taste*	Qualitative Odour	Quantative Taste*	Quantative Odour	pH	Colour (Hazen)	Turbidity (NTU)	Conductivity (us/cm)	Alkalinity (mg/l CaCO3)	Aluminium (mg/l Al)	Iron (mg/l Fe)	TRACE ORGANICS Water Profile	TRACE ORGANICS Purge & Trap	TRACE ORGANICS MK FORM NO.	Sample Completed?	Verdict	Comment	1 Person completing the work Sign/Date	2 Risk or WQ Scientist or authorised delegate signature and date Sign/Date

Insert more lines as required
** taste testing only to be performed on samples of potable water and after confirmation of clear bacteriological results*

PART D - Permission to go into supply

Risk Scientist to give final approval to go into supply			
Into supply date:		**Name:**	

Kedington - Request for further information:

1. The drawings issued to FLI and the associated list specifying the pipework to be ordered

FLI were provided with two, for construction, drawings relating to the contact and balance tanks at Kedington WTW. These drawings are attached in Appendices 1a and 1b.

The list of pipework and fittings required for the contact and balance tanks was provided to FLI as a table within the drawing provided in Appendix 1b.

In the attached Appendix 1c are the specification requirements and tolerances for the pipes and fittings which was also provided to FLI.

2. Name and contact details of the person responsible at FLI for the scheme. Please provide an indication on their willingness and availability to provide a voluntary witness statement

The person responsible for the Kedington WTW Scheme at FLI is [redacted] The contact details for [redacted] can be found in Appendix 2

3. The order paperwork / purchase records that were made to FT Ductile

A copy of the order paperwork placed by FLI Water to FT Ductile can be found in the attached Appendix 3.

4. Name and contact details of the person responsible for the pipework on behalf of FT Ductile. Please provide an indication on their willingness and availability to provide a voluntary witness statement

The person responsible for the pipework in the Kedington WTW Scheme on behalf of FT Ductile is [redacted] The contact details for [redacted] can be found in Appendix 2

5. Delivery paperwork and invoices for products delivered to site (from FT Ductile)

A copy of the delivery note from FT Ductile to FLI Water, from 19 August 2019, for the delivery of the pipework and fittings to Kedington WTW is attached in Appendix 5a.

A Copy of the invoice from FT Ductile to FLI Water for the items delivered to Kedington WTW on 19 August 2-19 is attached in Appendix 5b.

6. Provide the contact details of S. Jackson as mentioned on part A of the MIC form. Please provide an indication on their willingness and availability to provide a voluntary witness statement

The details for [redacted] can be found in Appendix 2

Pitsford storage tank B - Request for further information:

7. Please provide all the MIC forms created since 2015 for Pitsford works (This should include MIC forms 1984, 2790 and 1796). Please identify which forms are associated with work within tank B and whether it the form is associated with the capital work on the inlet pipework scheme

The collated MIC forms relating to Pitsford WTW which have been created since 2015 can be found in the attached Appendix 7.

In collating these reports into one file we became aware of an incorrect MIC number used on the form on tab 4438. The form states it is MIC No. 4439. The two forms (4438 and 4439) both relate to activities at Pitsford WTW and were created at the same time and an error in completion has occurred. The rest of the form has been checked and is correct.

Three MIC forms Nos. 1796, 1984 and 2790, highlighted with yellow tabs in Appendix 7, which relate to the interior of Pitsford WTW Storage Tank B. The form 1984 was completed for the installation of the resilience pipework inlet from Hannington Reservoirs into the storage tank.

MIC form 4345 refers to 'Pitsford Final Connection' and 'Rear of storage tank 2'. This work was carried out in the embankment behind the tank and not within Storage Tank B. This MIC form include details of the stainless steel pipework for the new inlet installed into Storage Tank A.

8. Please confirm if there has been any pipework modifications on any other areas of the tank

There have not been any pipework modifications within Storage Tank B, except the installation of the new inlet pipework.

9. Provide the contact details of [redacted] (@one alliance project engineer). Please provide an indication on their willingness and availability to provide a voluntary witness statement.

The details for [redacted] can be found in Appendix 2

10. Provide the contact details of [redacted] (Bentleys). Please provide an indication on their willingness and availability to provide a voluntary witness statement

We have spoken to [redacted] and whilst he is happy to provide a statement, however neither he nor JN Bentley undertook work at Pitsford WTW associated with the Hannington to Pitsford WTW Resilience Scheme. This work was undertaken by Balfour Beatty and sub contracted to Stonbury.

The details for [redacted] can be found in Appendix 2.

11. Provide the contact details of [redacted] who signed the MIC form provided in response to questions following the 20 day report. Please provide an indication on their willingness and availability to provide a voluntary witness statement

Unfortunately this is not possible as [redacted] passed away in 2020.

12. Provide the contact details of [redacted] as mentioned on part A of the MIC form referenced above. Please provide an indication on their willingness and availability to provide a voluntary witness statement

The details for [redacted] can be found in Appendix 2.

13. Provide the contact details for [redacted] – reported to be the person in charge of the work carried out by Stonbury's. Please provide an indication on their willingness and availability to provide a voluntary witness statement

The details for [redacted] can be found in Appendix 2.

14. Provide the contact details of the operational manager(s) and support manager(s) in charge of Pitsford works since 2015. Please provide dates they were responsible for the works. Please provide an indication on their willingness and availability to provide a voluntary witness statement

The table below lists the Pitsford Supply and Supply Support Managers since 2015.

Supply Managers

Name	From	To
[redacted]	October 2014	July 2015
[redacted]	July 2015	Sept 2015
[redacted]	Sept 2015	April 2017
[redacted]	April 2017	Present

Supply Support Managers

Name	From	To
[redacted]	October 2014	July 2015
[redacted]	July 2015	Sept 2017
[redacted]	Sept 2017	Present

[redacted] is no longer employed by Anglian Water or our partners and as such we are unable to provide her contact details.

The remaining individual contact details and availability to provide witness statements are included in Appendix 2.

15. Please provide the purchase order, invoice and delivery note for the pipework purchased from Jindal Sigma

The purchase order placed with Sigma Pipeline Solutions Ltd is provided in Appendix 15a. The invoice and delivery note from Jindal Saw Pipeline Solutions Ltd is provided in Appendix 15b.

16. Provide any information/certificates supplied by Jindall Sigma confirming that the pipework purchased was the correct product and that the factory applied coatings complied with any specific Instructions for use (eg. procedure, test conditions, cure time records)

The pipework supplied by Jindal Sigma Ltd was coated at the time of manufacture in their India facility with 3M Scotchkote Epoxy Coating and Resicoat R4. Both of these products hold WRAS approval for the conveyance of potable water, The WRAS approvals are attached in Appendices 16a and 16b, respectively.

We do not hold any further information relating to the factory applied coatings applied by Jindal Sigma Ltd at the time of manufacture. According to Companies House, until being dissolved in 2018, Jindal Sigma Ltd was the UK arm of the Indian company Jindal Saw Ltd. We have contacted Jindal Saw Ltd, the parent company, but they state that they do not have any documentation relating to the previous, now dissolved company.

17. Provide the schedule of work (construction pack and specifications for the pipework) supplied to Stonbury's

The information provided to Stonbury including the materials specification and site layout for construction are included in the 'For Construction' drawing in Appendix 17.

Within the drawing is a table of Final Pipework Schedule which lists the items required to carry out the works. The detailed drawing of the pipes and fittings to be installed within the storage tank includes further annotation relating to the required internal and external coatings.

17a. Please request from Stonbury's any records from the scheme contained in the site diary, please include before and after photographs, compliance with Instructions for Use records, lists of products used including any field applied coatings and records of curing times/ temperatures, sampling, testing and commissioning reports.

Throughout the investigation into the issue identified in Pitsford WTW Storage Tank B we have been in contact with Stonbury to cross reference our information and gain further information relating to their activities on site. Stonbury had a major IT server crash in 2017 and unfortunately have not able to recover all the content affected.

Stonbury were able to provide the Project Report for Pitsford to Hannington Inlet Installation, which is provided in Appendix 17a. This document includes the installation of the new inlet pipework into Storage Tank B.

At the time of the work undertaken by Stonbury we did not require records to be kept of compliance with Instructions For Use (IFU) requirements. Following the receipt of a recommendation in 2017 relating to the requirement to record coatings used and the compliance with any related IFU we updated our procedure and made this a mandatory requirement.

18. Please supply the date and time of the photographs contained within the 20 day report.

The images in Figures 7 and 8, on page 9 of the 20-day report were collected during the inspection of the tank on 17 December 2021.

The image, in Figure 18.1 below, was included as Figure 4 on page 7, in the 20-day report. This image was provided to us during our investigation by Stonbury and was taken from the entry dated 01 April 2015 in the Stonbury Job Report document, the section from page 41 of the Stonbury Job Report is shown in Figure 18.2 below.

Figure 18.1 – Image included in the 20-day Report

Update - Wed 01 Apr, 2015

Updated by [redacted] on **Wednesday 01 April, 2015 - 19:18 PM**

Due to the swabbing regime changing we have over the last couple of days been able to install the remaining internal pipe work including stainless steel support brackets. Images attached.

concrete has also been poured to 1 no. Line stop today.

Figure 18.2 – Stonbury Job Report entry including image used in 20-day report

19. Please provide all of the internal reservoir inspection reports and any associated pictures/photographs of the pipework in question since 2015

Copies of the internal inspection reports can be found in Appendix 19a. The photographs from these inspections of the pipework are attached in Appendix 19b and 19c.

Additional pictures have been identified of the pipework in question within Storage Tank B are shown above in Figure 18.2 taken from Stonbury Project Log, which is provided in Appendix 17a and from the internal inspections.

20. Provide a summary of all remedial work identified and completed in the tank

Prior to Stonbury's starting work on Storage Tank B, it had been identified that the outlet penstock to Storage Tank B was passing. Repairs were attempted in June 2014, August 2014 and April 2015 to resolve the leaking outlet penstock in Storage Tank B. These attempts were unsuccessful in allowing the tank to be isolated.

This culminated in an Integrated Main Works scheme being raised that was submitted and approved for the construction of a chamber and new penstock within the tank to allow for isolation to be undertaken. Work was completed in 2015.

Subsequent internal inspections carried in 2017 and 2021, did not identify any remedial work required within Storage Tank B. The inspection reports are included as Appendix 19a.

21. Please provide dates and times of the tank being in and out of supply since January 2015 to present (please include tank level information to support the timeline)

The table below provides a timeline for the changes in operational status for Pitsford WTW Storage Tank B and the sources of information used to collate the data. The storage tank level monitor is located in the combined outlet chamber and therefore does not provide specific evidence to either Tank A or B.

Storage Tank B Service Dates		
Period/Date	Service Status	Information Source / Comment
Pre-2015 to 07/10/2016	Out of Supply	07/10/2016 (15:25) - Site Ops Log - Storage Tank B valved back into supply
07/10/2016 to 10/02/2017	In Supply	
10/02/2017 to 11/08/2017	Out of Supply	10/02/2017 (19:30) - Site Ops Log - RHS (B) side now draining down ready for new hatches. 11/08/2017 (11:20) – Site Ops Log - Storage Tank B returned to supply and sample taken

11/08/2017 to 10/08/2019	In Supply	
10/08/2019 to 13/08/2019	Out of Supply	10/08/2019- 22:25 - Site Ops Log - RHS storage tank remains OOS (site shutdown that morning). Can refill on Monday Morning 13/08/2019- 13:00 – Site Ops Log - storage tank side B filled with Hannington water. Bacti taken pre and post back into supply. Bacti needs taking at 19-00 post 6hrs back into supply.
13/08/2019 to 15/09/2019	In Supply	
15/09/2019 to 28/11/2019	Out of Supply	15/9/2019- 1600 - Site Ops log - Site shudown, half of storage tank in supply 28/11/2019 14:00 - Site Ops log - Storage tank B is filled with works water. On site tests F= 0.04, turb= 0.26 28/11/2019 15:00 storage tank B back into supply.
28/11/2019 to 05/10/2020	In Supply	
05/10/2020 to 24/12/2020	Out of Supply	05/10/2020 – Site Ops Log - Entry confirm [redacted] informed Tank B has been taken out as part of MIP. W/240920/01 Rev 7 24/12/2020 14:20 - Site Ops log - Storage tank b valved back into supply after passing on-site checks.
24/12/2020 to 19/03/2021	In Supply	
19/03/2021 to 19/05/2021	Out of Supply	19/03/2021 - Site Ops log - Storage tank side B removed from supply and drawing to W/O 19/03/2021 - WQAP - confirmed action to removed Tank B was complete (support by OCM conference call notes) 25/03/2025 - Initial Internal inspection completed (Appendix 19a) 11/05/2021 - Final Internal Inspection completed (Appendix 19a) 19/05/2021 11:00 Storage tank side B into supply after passing samples.
19/05/2021 to 13/12/2021	In Supply	
13/12/2021 to present	Out of Supply	13/12/2021 - 3-day Report submitted to DWI states Pitsford WTW Storage Tank B was removed from supply on 13th. 17/12/2021 - Initial Internal Inspection completed (Appendix 19a)

22. Provide an itemised invoice supplied from Stonbury's for the work carried out on the tank for the capital scheme and any work carried out on the asset after the scheme was completed (2015 to present).

The original quote accepted from Stonbury and the final itemisation of activities undertaken is attached as Appendix 22.

Diddington - Requests for further Information:

23. Please provide the photographs from the internal inspections 2019. 2020 and 2021

Photographs from the three internal inspections are included in Appendix 23.

24. Provide the internal inspections reports for 2019

The internal inspection of Diddington East and West cells carried out on 21 November 2019 were initial inspections, which identified areas requiring remedial work. Following the completion of the identified remedial works the reservoir cells passed reinspection. The final inspections were carried out on the West cell on 22 May 2020 and the East cell on 29 May 2020. Copies of the initial and final inspection reports are provided in Appendix 24.

25. Please confirm where the Dacrylate V&M enamel was applied? Please confirm which company applied the coating and who manufactured/ supplied the product. Please supply any certificates of conformity/testing/assurance associated with the procurement of the product and during the application of the enamel.

As we stated in the 3-day report, Electrofresh manufacture standard 5.5m lengths of pipe in their facility in India. The pipes are then transferred to their facility in Chesterfield, Derbyshire where they are fabricated and coatings applied to meet the specifications of the order. The Electrofresh work order for the fabrication is provided in Appendix 25a.

Following the fabrication of required flange, any bare metal areas on the external surface, had a zinc paint application before being finished with 3M Scotchkote Epoxy 162PWX coating. 3M Scotchkote Epoxy 162PWX held both DWI and WRAS approvals (DWI approval 56/4/300) at the time of purchase and installation. The external barrel of the pipe was then coated with a synthetic coating for aesthetic purposes. The paint used was Dacrylate V&M enamel, and this holds no approval for contact with drinking water. We provided the Electrofresh IFU and the Dacrylate V&M enamel safety data sheet with the 3-day report, which are provided as Appendix 25b and 25c.

We do not have or been able to acquire any certificates of conformity / testing / assurance associated with the procurement of the Dacrylate V&M enamel.

26. Please provide the order paperwork / purchase records that were made to the supplier for the overflow pipework

The details of the requisition and purchase orders for the overflow pipework installed in Diddington Reservoir are attached in Appendix 26.

27. Please provide the delivery paperwork and invoices for products as delivered to site

To date we have not been able to locate the requested delivery paperwork and invoice. We are able to provide a copy of the quotation received which is included as Appendix 27. We are continuing to work on locating the requested documentation and will provide you with a further update by 31 July.

28. The 3 day report (p10) states that 'We are continuing to work with the product suppliers to investigate any potential impact on water quality'. Please provide an update on any risks identified between the company and supplier to water quality

Electrosteel were not able to provide any additional information on the Dacrylate V&M enamel paint, beyond the safety data sheet for the wet paint, which was provided as Appendix 9 with the 3-day report, and were not able to comment on any potential risks to water quality.

We further engaged Dacrylate the manufacturer of the enamel. Similarly, they were only able to supply a technical and safety datasheet and confirm the product has no known testing or approval for use in contact with potable water.

29. Please identify the person responsible for creating the list of materials used on the scheme

The Anglian Water Project Manager for the scheme was [redacted] and accountable for the documentation produced.

30. Provide the contact details of [redacted] (named on the MIC form). Please provide an indication on their willingness and availability to provide a voluntary witness statement

The details for [redacted] can be found in Appendix 2.

31. Provide the contact details of [redacted] (named on the MIC form). Please provide an indication on their willingness and availability to provide a voluntary witness statement

[redacted] is no longer employed by Anglian Water or our partners and as such we are unable to provide her contact details.

Hannington - Requests for further Information:

32. Please provide the internal inspection reports and associated photographs prior to and following the outlet pipework installation

The inspection reports for Hannington Reservoirs 1A and 1B are provided in Appendix 32a, with Reservoir 1A photographs in Appendix 32b and Reservoir 1B photographs in Appendix 32c.

33. Please confirm where the Dacrylate V&M enamel was applied? Please confirm which company applied the coating and who manufactured/ supplied the product. Please supply any certificates of conformity/testing/assurance associated with the procurement of the product and during the application of the enamel.

As we stated in the 3-day report, Electrosteel manufacture standard 5.5m lengths of pipe in their facility in India. Electrosteel produce the required lengths at their facility in Chesterfield, Derbyshire.

Following the fabrication of required flange, any bare metal areas on the external surface, had a zinc paint application before being finished with 3M Scotchkote Epoxy 162PWX coating. 3M Scotchkote Epoxy 162PWX held both DWI and WRAS approvals (DWI approval 56/4/300) at the time of purchase and installation. The external barrel of the pipe was then coated with a synthetic coating for aesthetic purposes. The paint used was Dacrylate V&M enamel, and this holds no approval for contact with drinking water. We provided the Electrosteel IFU and the Dacrylate V&M enamel safety data sheet with the 3-day report, which are provided as Appendix 25b and 25c.

We do not have or been able to acquire any certificates of conformity / testing / assurance associated with the procurement of the Dacrylate V&M enamel.

34. Please provide the order paperwork / purchase records that were made to the supplier for the outlet pipework

Below, in Figure 34.1 is a section of the technical drawing provided as Appendix 1 with the 3-day report, showing item 20, the section of pipe which passes through the reservoir wall and into the water space. In Figure 34.2 is the section of the drawing listing the specification of these pipes

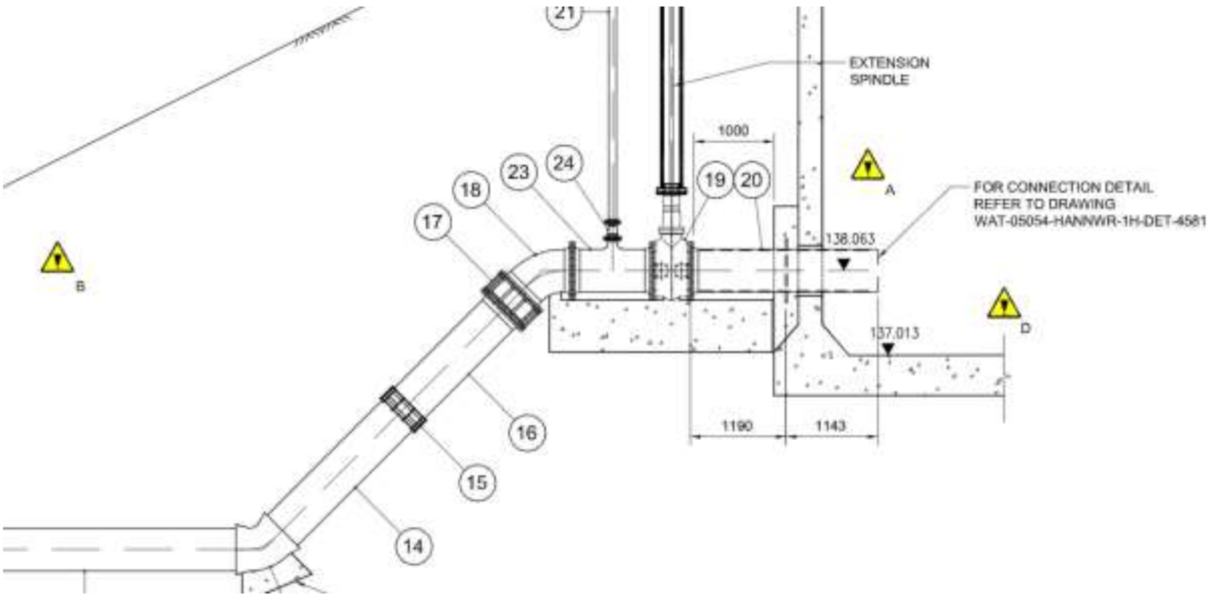
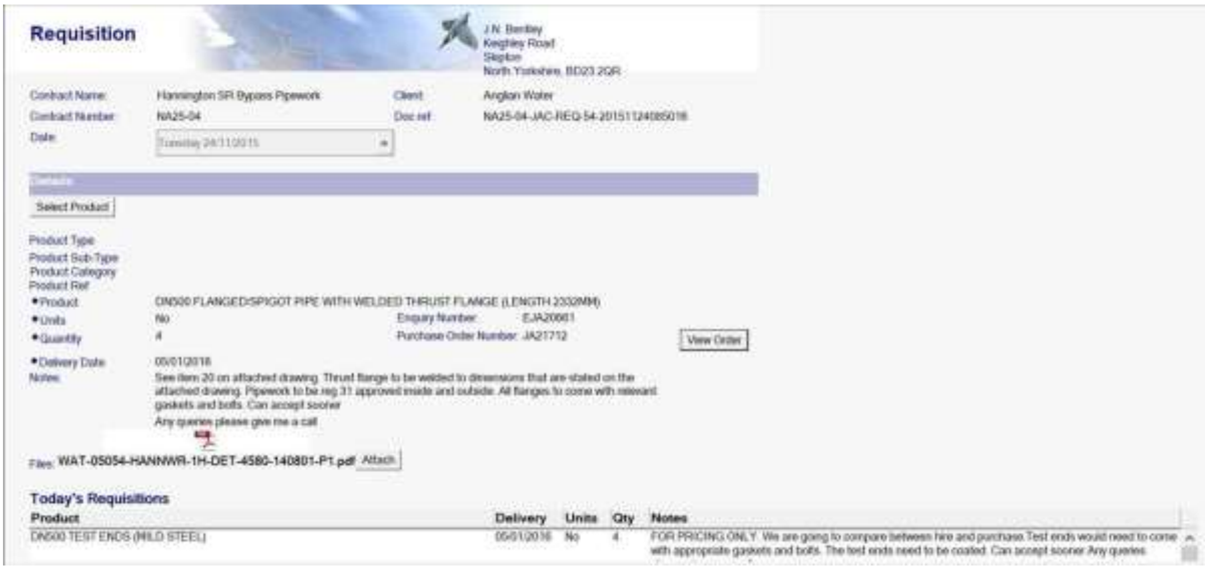


Figure 34.1 – Section of engineering drawing for the Hannington inlet pipe

20	DI	DN500 FLANGED/SPIGOT PIPE WITH THRUST FLANGE (LENGTH 2332mm)	4

Figure 34.2 – Section of engineering drawing relating to the pipe requirements

The requisition order from JN Bentley for the four lengths of pipework listed as item 20, which passes through the reservoir wall and into the reservoir is shown in Figure 34.3.



Requisition

J.N. Bentley
Keighley Road
Skipton
North Yorkshire, BD23 2QR

Contract Name: Hannington SR Bypass Pipework
Client: Anglian Water
Contract Number: NA25-04
Doc ref: NA25-04-JAC-REQ-54-20151124085018
Date: Tuesday 24/11/2015

Select Product

Product Type
Product Sub Type
Product Category
Product Ref
• Product: DN500 FLANGED/SPIGOT PIPE WITH WELDED THRUST FLANGE (LENGTH 2332MM)
• Units: No
Enquiry Number: EJA20661
• Quantity: 4
Purchase Order Number: JA21712
View Order
• Delivery Date: 05/01/2016
Notes: See item 20 on attached drawing. Thrust flange to be welded to dimensions that are stated on the attached drawing. Pipework to be reg 31 approved inside and outside. All flanges to come with relevant gaskets and bolts. Can accept sooner.
Any queries please give me a call

Files: WAT-05054-HANNWR-1H-DET-4580-140801-P1.pdf Attach

Today's Requisitions

Product	Delivery	Units	Qty	Notes
DN500 TEST ENDS (MILD STEEL)	05/01/2016	No	4	FOR PRICING ONLY. We are going to compare between hire and purchase. Test ends would need to come with appropriate gaskets and bolts. The test ends need to be coated. Can accept sooner. Any queries

Figure 34.3 – JN Bentley requisition order

Attached in Appendix 34 is an extract showing the external application for payment made by Electrosteel for the pipe ordered for Hannington Reservoirs.

35. Please provide the delivery paperwork and invoices for products as delivered to site

The invoice from Electrosteel for the pipework at Hannington Reservoirs is contained in Appendix 35.

To date we have not been able to locate the requested delivery paperwork We are continuing to work on locating the requested documentation and will provide you with a further update by 31 July.

36. Please identify the person responsible for creating the list of materials used on the scheme

The Anglian Water Project Manager for the scheme was [redacted] and was accountable for the documentation produced.

For all Sites :

37. Provide the contact details [redacted] (Anglian Water reservoir Inspection Engineer). Please provide an indication on their willingness and availability to provide a voluntary witness statement

The details for [redacted] can be found in Appendix 2.

38. Provide the contact details of [redacted] (Chief Engineer Anglian Water). Please provide an indication on their willingness and availability to provide a voluntary witness statement

The details for [redacted] can be found in Appendix 2.

Pitsford WTW Tank B Timeline

Note:

Date	Time	Action/evidence	Job info	Data source	Notes
19/05/2014	n/a	MIC form 1796 raised		MIC Form/Log	Doesn't appear Part A started being filled out until Sept-2016
06/05/2014	n/a	Refurbishment work by Stonbury starting in Tank B		Email chain	
Jan/Feb - 2015	n/a	MIC form 1984 raised/Part A filled out		MIC Form/Log	No date provided on log, date listed on form
29/01/2015	n/a	MIC Form 1984 Part A lines approved (Hannington inlet components)		MIC Form/Log	
Jun-15	n/a	Tank B out of Supply		Site Operation Log	Data sources only reviewed upto June-2015, tank was aready out of service at this time point.
Apr-15	n/a	Photo shows no coating present on Hannington inlet fittings installed by Stonbury		Photo/email	
29 & 30/09/2016	n/a	MIC form 1796 - Part A signed off		MIC form/Log	
23/09/2016	n/a	Stonbury site dirary records states 'paint pipe in res'		Stonbury site diary	
06/10/2016	02:15	Tank B final internal inspection	Tank B inspected, cleaned and disinfected. Refilling using Hannington main water via new inlet connection, ready to be sampled later today. AW padlock refitted.	Site Operation Log & Res and Tower Inspection	
07/10/2016	15:25	Tank B valved into supply	Storage Tank B valved back into supply	Site Operation Log	
10/02/2017	19:30	Tank B valved out of supply	RHS (B) side now draining down ready for new hatches.	Site Operation Log	
14/03/2017	n/a	MIC form 2790 raised		MIC form/Log	
28/03/2017	n/a	MIC form 2790 - Items on Part A signed off			
11/04/2017	n/a	MIC form 2790 - Items on Part A signed off			
01/08/2017	n/a	Tank B final internal inspection		Res and Tower Inspection	
02/08/2017	13:00/15:00	Tank B comparrison samples and filled	filling samples taken from Tank B. Storage tank B had been filled and shut in for MIC sampling in the morning	Site Operation Log	
03/08/2017	n/a	Tank B post stand samples	Storage Tank side B dip MIC samples taken F 0.04, T 0.19	Site Operation Log	
09/08/2017	n/a	Tank B post stand sample results	d	Site Operation Log	
10/08/2017	n/a	Storage Tank B drained	Storage Tank B now empty, washout shut. Filling tomorrow	Site Operation Log	
11/08/2017	11:20	Tank B valved into supply	Storage Tank B returned to supply and sample taken	Site Operation Log	
23/10/2018	n/a	MIC form 3435 rasied for Hannington inlet into Tank A and final connection behind both structures		MIC form/Log	
10/08/2019	22:25	Tank B valved out of supply	RHS storage tank remains OOS (site shutdown that morning). Can refill on Monday Morning	Site Operation Log	
13/08/2019	13:00	Tank B valved into supply	Storage tank side B filled with Hannington water. Bacti taken pre and post back into supply. Bacti needs taking at 19-00 post 6hrs back into supply.	Site Operation Log	
15/09/2019	16:00	Tank B valved out of supply	Site shudown, half of storage tank in supply	Site Operation Log	Tank B removal not specifically stated
08/11/2019	14:00	Tank B sampled	sample taken under DISCP for tank B	Site Operation Log	
28/11/2019	14:00	Tank B filled	Storage tank B is filled with works water. On site tests F= 0.04, turb= 0.26	Site Operation Log	
28/11/2019	15:00	Tank B valved into supply	Storage tank B back into supply.	Site Operation Log	
10/06/2022	n/a	MIC form 3435 - Final line on Part A signed off		MIC Form/Log	
05/10/2020	n/a	Tank B valved out of supply	Entry confirm [redacted] informed Tank B has been taken out as part of MIP. W/240920/01 Rev 7	Duty Log	
21/12/2020	n/a	Tank B filled and sampled	Starting to fill storage tank B and storage tank side B filled and shut in. Bacti and chemi take. Storage Tank B samples under SS (20578953/20579502)	Site Operation Log	
24/12/2020	14:20	Tank B valved into supply	Storage tank b valved back into supply after passing on-site checks.	Site Operation Log	
19/03/2021	n/a	Tank B valved out of supply	Storage tank side B removed from supply and drawing to W/O	Site Operation Log	
19/03/2021	n/a	WQAP update	confirmed action to removed Tank B was complete (support by OCM conference call notes)	WQAP	
25/03/2021	n/a	Tank B initial internal inspection		Res and Tower Inspection Report	
06/04/2021	n/a	MIC form 4440 - raised for Tank B		MIC Form/Log	
06/04/2021	n/a	MIC form 4440 - Part A signed off		MIC Form/Log	
11/05/2021	n/a	Tank B final internal inspection		Res and Tower Inspection Report	
12/05/2021	10:30	Tank B filled and sampled	Tank B filling sample taken by [redacted] under DIPSCP	Site Operation Log	
13/05/2021	11:50	Tank B sampled post stand	Tank B post 16hr stand samples taken by [redacted] under DISCP	Site Operation Log	
19/05/2021	11:00	Tank B valved into supply	Storage tank side B into supply after passing samples. Bacti sample on final taken re: ST side B return to supply	Site Operation Log	
13/12/2021	n/a	Tank B valved out of supply		n/a	Pitsford WTW Storage Tank B was removed from supply as part of the respond into potential Regulation 31 investigation.
17/12/2021	n/a	Tank B initial internal inspection		Res and Tower Inspection Report	

Sample No.	Sample date	2-day Colony Count at 37C	2-day Colony Count at 37C	3-day Colony Count at 22C	3-day Colony Count at 22C	Alkalinity Total (mg/l CACO3)	Alkalinity Total Total	Aluminium Total (mg/l AL)	Aluminium Total Total	Chlorine Free (mg/l CL2)	Chlorine Free Total	Chlorine Total (mg/l CL2)	Chlorine Total Total	Clarity Qualitative	Clarity Qualitative	Coliforms Confirmed	Coliforms Confirmed	Coliforms Presumptive at	Coliforms Presumptive at	Coliforms Confirmed	Coliforms Confirmed	Colour Filtered	Colour Filtered Total	Conductivity at 20C (µS/cm)	Conductivity at 20C Total
16458105	06/10/2016																								
16458108	06/10/2016					125	125	0	0													0.6	0.6	622	622
16458246	06/10/2016	0	0	0	0					0	0	0.48	0.48			0	0	0	0						
17353244	02/08/2017	0	0	0	0											0	0	0	0						
17354383	02/08/2017													N	0							0.8	0.8		
18060061	07/02/2018													N	0										
18507597	06/11/2018	0	0	0	0	72.5	72.5	0	0	0.05	0.05	1.1	1.1							0	0	0.4	0.4	394	394
18509531	07/11/2018	0	0	0	0	78.5	78.5	0	0	0	0	1.11	1.11							0	0	0.8	0.8	385	385
20371848	18/08/2020			0	0					0	0	0.46	0.46							0	0				
20372171	18/08/2020																					0.7	0.7		

Sample No.	Sample date	E.Coli Presumptive at	E.Coli Presumptive at	E.Coli Confirmed	E.Coli Confirmed	E.Coli Confirmed	E.Coli Confirmed	Odour Qualitative	Odour Qualitative	Odour Quantitative at	Odour Quantitative at	ODOUR QUANTITATIVE	ODOUR QUANTITATIVE	pH Clean Water (pH)	pH Clean Water Total	Purge and Trap Profile (bar AC	Purge and Trap Profile Total	Taste Qualitative	Taste Qualitative	TASTE QUANTITATIVE	TASTE QUANTITATIVE	Temperature Field	Temperature Field	Turbidity (NTU)	Turbidity Total	Undiluted odour count	Undiluted odour count	Undiluted taste count	Undiluted taste count	Water Profile (bar AC 1242)	Water Profile Total
16458105	06/10/2016															0	0													0	0
16458108	06/10/2016							2T	0	1	1			7.66	7.66			1	1	1	1			0.16	0.16			0	0		
16458246	06/10/2016	0	0	0	0																										
17353244	02/08/2017	0	0	0	0																										
17354383	02/08/2017							1Z	0									1	1					0.15	0.15						
18060061	07/02/2018							3T	0									1	1					0.13	0.13						
18507597	06/11/2018					0	0	1Z	0	1	1	1	1	7.08	7.08	0	0					6	6	0.07	0.07	0	0			0	0
18509531	07/11/2018					0	0	1Z	0	1	1	1	1	7.11	7.11	0	0							0.08	0.08	0	0			0	0
20371848	18/08/2020					0	0																								
20372171	18/08/2020							1Z	0									1	1					0.15	0.15						

INSTRUCTIONS FOR USE DOCUMENT

ACOTHANE DW

A COATING AND LINING FOR WATER RETAINING STRUCTURES INCLUDING TANKS, VESSELS, RESERVOIRS, PIPELINES, PIPE RANDOM LENGTHS, BENDS, FITTINGS AND VALVES.

ISSUE NO. 8

ISSUE DATE. NOVEMBER 2019

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1. Introduction

This document covers factory and on site applications of Acothane DW to internal and external surfaces of metallic, cementitious and GRP structures holding or trans- porting water intended for human consumption.

Acothane DW is suitable for factory applied coatings to pipes and fittings and in situ coating of tanks, vessels and small components such as valves or short lengths of pipe.

Acothane DW is manufactured by Axalta Coating Systems UK LTD & is supplied solely in the UK by Acothane UK LTD.

2. Product Description

Acothane DW is a two component solvent free 100% solids polyurethane coating and lining suitable for all substrates. The associated sealer (Acothane LV Sealer) is also a two component solvent free polyurethane coating that should be used for application onto concrete substrates only.

Acothane DW is formulated for internal and external protection of such substrates providing a surface hard flexible long term corrosion and erosion resistant coating.

The base component for Acothane DW is Cream or Blue.

The activator component for Acothane DW is an amber liquid.

The base component for Acothane LV Sealer is an amber liquid.

The activator component for Acothane LV Sealer is an amber liquid.

Mixed and applied Acothane DW is Cream or Blue depending on base colour. There is virtually no colour change to the base material when it is mixed with the activator. See Section 5.

Mixed and applied Acothane LV Sealer is Amber. There is virtually no colour change to the base material when it is mixed with the activator -see Section 5.

Packaging for Spray Application: 20 litre drums of base and activator.

Packaging for Hand Application: Composite 2 and 4 litre packs for Acothane DW and 3.5 litre packs for Acothane LV Sealer.

3. Product Storage

Acothane DW and Acothane LV Sealer shall be stored in the original sealed containers at between 5 ºC and 30 ºC and should be used within 2 years of purchase.

4. Surface Preparation

Steel Surfaces.

All surfaces shall be free from oil, grease and other contamination prior to abrasive blast cleaning.

Metallic surfaces should be abrasive blast cleaned to a minimum Sa2 ½ (industry standard) in accordance with ISO 8501-1.

Prior to blast cleaning all sharp protuberances, surface lamination, weld spatter etc. shall be removed by thorough cleaning and grinding.

Immediately after blast cleaning all dust, residues and debris left on the surface shall be removed.

Flash rusting of an abrasive blast cleaned surface can quickly occur if high humidity exists or substrate / dew point differentials are reduced. To restrict the onset of flash rusting humidity should be maintained below 50% and the surfaces should be maintained at least 3 ºC above dew point. This may require the use of dehumidification equipment and / or convection heaters.

Acothane DW is a surface tolerant coating and will accommodate a degree of blooming and flash rusting.

Where surfaces have degraded between Sa2 ½ and Sa2 all loose oxide should be removed with a stiff brush.

Concrete Surfaces

Any coal tar, bitumen, asphalt or old coatings based on these materials should be removed together with any broken or loose concrete.
Further surface preparation will consist of light abrasive blast cleaning or water jetting to remove all surface contamination.

Spalled areas and major voids should be made good using a light weight, high strength, shrinkage compensating mortar approved under Regulation 31[4]a. These products are listed in section C5 of the List of Approved Products published by the Drinking Water Inspectorate and copies can be downloaded from http://dwi.defra.gov.uk/drinking-water-products/approved-products/soslistcurrent.pdf

New concrete should be lightly abrasive blast cleaned to remove all laitance and curing agents.

Following above preparation methods all surfaces should receive a fairing coat (1-3 mm) of Regulation 31 (4) a approved cementitious lining finished with a damp sponge to create a profiled surface comparable to coarse abrasive paper. These products are listed in Part C5 of the List of Approved Products.

If a fairing coat is applied, it should be allowed to cure for a minimum of 72 hours and have a moisture content of less than 16% before the surface is sealed using Acothane LV Sealer, prior to the full application of Acothane DW as described above.

GRP Surfaces

Preparation can be by light abrasive blasting or thorough mechanical abrasion to create a suitable profile for maximum adhesion of Acothane DW.

After surface preparation all dust and abrasive residues shall be removed by thorough sweeping or vacuuming.

5. Product Application

Stripe Coat.

To ensure the specified film thickness is achieved at welds, bolt heads, back to back plates and protuberances a stripe coat of Acothane DW shall be applied by brush application prior to the main coating application. The maximum over coating interval without further surface preparation shall be 24 hours.

Spray Application – Acothane DW.

Spray application is carried out via hot spray equipment approved by Acothane UK Limited

The spray equipment shall be capable of heating the base component up to 65 ºC in the supply container with maintenance of heat through the supply hoses and whip end to ensure a mixed product temperature of 35 ºC to 40 ºC at the spray tip is achieved.

Spray application for tanks, vessels, water retaining structures and reservoir roofs is carried out in wet-on-wet increments from a hand held spray gun to achieve the specified film thickness in a single wet-on-wet coating application.

Spray application for pipe internals is carried out by internal pipe spray moles or spinning heads in a single wet-on-wet spray application to achieve the specified film thickness.

Cartridge Gun Spray Application

Acothane DW can also be applied with the Acothane DW Cartridge Spray Gun utilising prefilled cartridges which are fitted to the cartridge spray gun for mixing and spraying providing a single spray application similar to plural component spray application.

Brush and Roller Application – Acothane DW.

Acothane DW is supplied in pre-measured Base and Activator units which must be thoroughly mixed together prior to use.

The Base component should be stirred and whilst stirring the full contents of the Activator container should be added and mixed until homogenous (as described below).

To ensure complete mixing the initial mixed material in the container shall be transferred to a clean plastic mixing pot / container and the original supply container scraped out to remove all initial mixed material.

Further mixing shall be carried out to ensure a thorough mix to produce a homogenous liquid.

Application by Brush and Roller can now be undertaken within the stated pot life (30 minutes @ 25°C) of the product.

Multi coats will be required by brush and roller to achieve the specified film thickness on vertical surfaces and this will usually be two or three coats depending on application method. The minimum time for application of successive coats is when the previous coat is touch dry.

Wet film thickness readings will verify the thickness achieved and, being solvent free, wet film readings will correspond to dry film thickness.

Brush and Roller Application – Acothane LV Sealer.

Acothane LV Sealer is supplied in pre-measured Base and Activator units which must be thoroughly mixed together prior to use.

The Base component should be stirred and whilst stirring the full contents of the Activator container should be added and mixed until homogenous.

These materials easily mix together and continuous stirring for 2 – 3 minutes using a pallet knife or other suitable mixing device should ensure the base and activator are fully mixed.

To ensure complete mixing the initial mixed material in the container shall be transferred to a clean plastic mixing pot / container and the original supply container scraped out to remove all initial mixed material.

Further mixing shall be carried out to ensure a thorough mix to produce a homogenous liquid as described above.

Application by Brush and Roller can now be undertaken within the stated pot life (35 minutes @ 25°C) of the product.

Multi coats may be required by brush and roller on porous substrates to achieve a resin rich surface. The minimum time for application of successive coats is when the previous coat is touch dry.

6. Environmental Conditions and Final Cure Times

During application the surface temperature should be maintained above 3ºC of dew point and relative humidity shall not exceed 90%.

The applied coating is quickly resistant to water splashing and can tolerate water immersion after its initial set, (approximately 24 hours) and will continue to cure under water immersion without detriment to its performance.

Return to Service Requirements: 72 hours at 7ºC or 7 days at 3ºC, followed by cleaning and disinfection to water undertaker's procedures.

The coating should be checked for film thickness and coating integrity. If recoating or repairs are necessary then re-prepare damaged areas and feather back the sound coating by 50 mm and reapply Acothane DW to the specified film thickness, overlapping the sound coating to effect complete encapsulation to the repaired area.

7. Mix Ratio.

Acothane DW.

By Volume 3 parts Base to 1 part Activator

By Weight 100 grams Base to 31 grams activator

Acothane LV Sealer.

By Volume 2.5 parts Base to 1 part Activator

By Weight 100 grams Base to 48 grams activator

8. Film Thickness.

The specified film thickness is at the discretion of the client with consideration to the substrate to be coated and end use envisaged.

For steel substrates nominal film thickness shall be 1mm with a minimum of 800 microns.

For concrete and cementitious substrates the minimum film thickness shall be 1mm to accommodate the surface profile.

There is no maximum film thickness limitation with Acothane DW.

9. Flushing and Disinfection.

Prior to return to service the coated surfaces shall be flushed and disinfected.

Disinfection and flushing shall be carried out in accordance with the water undertaker's procedures for the disinfection of potable water retaining structures. There is no maximum concentration for free chlorine in contact with the product.

Alternatively the guidance given in Water UK Technical Paper "Principles of water supply hygiene and technical guidance notes" shall be followed.

10. Disposal of Waste Water

Permission or consent for disposal of the used disinfectant and treated water to a sewer or watercourse must be obtained from the relevant water service company or Environment

Agency, as appropriate.

11. Health and Safety

Activator
Engineering measures: Ensure there is sufficient ventilation of the area.
Respiratory protection: Self-contained breathing apparatus must be available in case of emergency. Air-fed respiratory equipment must be worn when this product is sprayed.
Hand protection: Protective gloves. Nitrile gloves. Butyl gloves.
Eye protection: Safety glasses. Ensure eye bath is to hand.
Skin protection: Protective clothing.

Base
Respiratory protection: Respiratory protection not required.
Hand protection: Protective gloves.
Eye protection: Safety glasses. Ensure eye bath is to hand.
Skin protection: Protective clothing.

Once mixed and during brush/roller application it is recommended that protective clothing, gloves and safety glasses are worn. If spraying air-fed respiratory equipment must be worn.

Full details of product health and safety requirements are given in the Material Safety Data Sheets for Base and Activator components, available on request.

12. Spillage and Waste Control.

The unreacted Base and Activator components constitute hazardous waste and shall be dealt with in accordance with the Material Safety Data Sheets (see attached) and local environmental requirements.

13. Contact details

[redacted]
Acothane UK Limited
Unit 1 Clarkes Business Park
Bilton Way
Lutterworth
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ACOTHANE UK LTD

Reference: 06ADW
Issue Number: 1
Issue Date: July 2012
Supersedes Issue: -

ACOTHANE DW – TECHNICAL DATA SHEET

PRODUCT DESCRIPTION

High build solvent-free two pack polyurethane with outstanding physical properties in terms of flexural strength, tensile strength, impact and abrasion resistance.

This document should be read in conjunction with Acothane DW Instructions For Use Document.

USES

Internal and external coating and lining for metallic, cementitious, composite and GRP tanks, vessels ,reservoirs ,pipelines, pipe bends and random lengths, valves and fittings holding or transporting drinking water.
Also suitable for coating and lining waste water sewage and sludge and most trade effluent tanks, vessels and bund areas.

TECHNICAL PROPERTIES

Colour	Cream, Grey and Blue
Finish	Glossy hard surface with easy clean finish
Curing Agent	Acothane Activator
Mix Ratio	3 Base : 1 Activator by volume
Specific Gravity	Base: 1.27 Activator: 1.22 Mixed: 1.26
Volume Solids	100%
Elongation	35%
Recommended Film Thickness	Can be spray applied in wet on wet increments at up to 5mm Brush application up to 500 microns per coat Recommended thickness for steel and GRP 1mm nominal 800 microns minimum and 1mm minimum for concrete
Theoretical Spreading Rate	1 m^2/litre @ 1000 microns
Application Method	Brush or approved plural component hot spray machine
Flash Point	200°C
VOC	0 g/litre

Drying Times	**20**ºC
Touch Dry	30 mins spray / 2 hrs brush
Hard Dry	5-6 hours
Full Cure	7 days
Minimum Overcoat	1½ hours
Maximum Overcoat	24 hours
Water Immersion	After 24 hrs or in compliance with WRAS and drinking water regulations

At lower temperatures, curing rate will be slower.

CERTIFICATION/APPROVALS

BS6920: Part 1: 2000 “Specification” Complying with the requirements for Water Regulations Advisory Scheme tests on water quality and is suitable for use with cold water for factory and site application. FDA and USDA Compliant for use in contact with food products.

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WRAS Water Fittings Directory Reference 0712527

Meets the performance requirements of BS EN 10290

Authorised for use under Regulation 31{4}{a} for Factory and On Site Applications

RECOMMENDED SYSTEMS

Steel & GRP: Direct to prepared surface

Concrete: Seal with Acothane LV Sealer

SURFACE PREPARATION

Steel: Ensure surfaces are free from grease, oil salts etc. Grit blast to minimum BS 7079 standard SA 2 ½ - surface profile depth 75-100 microns.

Mechanical tools may also be used providing a surface profile of minimum 75 microns can be achieved. **Do not polish the steel surface.**

Acothane DW is a surface tolerant coating and will accommodate a degree of surface blooming and flash rusting. Contact the Acothane UK Ltd technical department if clarification is required.

GRP: Ensure surfaces are free from grease, oil, salts etc. Lightly abrade to raise a suitable surface profile.

Concrete: Remove all laitance and other contaminants by most appropriate method e.g. blast cleaning. Ensure the concrete is dry to a reading of less than 16% on the Wood Moisture Equivalent (WME) scale of the Protimeter Surveymaster SM Moisture Meter or similar instrument. Seal with LV Sealer.

PRODUCT APPLICATION

Mixing Activator must be added to base and thoroughly mixed ensuring an even mix throughout the 'pot'. Care must be taken to avoid unmixed material being left on sides and bottom of can. Decanting mixed material into a plastic container and further mixing is recommended. Plastic container may be recovered for further use when coating on walls has cured. Pot life - approx. 25-30 minutes @25°C.

Thinners Do not thin.

Brush See Instructions for use Document

Roller

Conventional Spray

Airless Spray See Instructions For Use Document

Air Assisted Airless Spray

Cleaner Thinner No.4

Cleanup Considerations All equipment should be cleaned immediately after use with Thinner No.4

It is advisable that equipment should be cleaned/flushed during the course of application, the frequency of which will depend on the volume of material used and timescale over which applied.

Ensure all waste materials (including packaging) are disposed of in accordance with local regulations.

HEALTH, SAFETY & ENVIRONMENTAL

This product must be used in accordance with the Material Safety Data Sheet supplied by Acothane UK Ltd. The user must observe local health, safety and environmental regulations when using this product.
Consult Acothane UK Limited if there are any concerns over the suitability of this product.

ACOTHANE UK LTD

PACK SIZES

2lt composite, comprising 1500ml base and 500ml activator & 20 litre units for spray application

PACK WEIGHTS

200 litre base 282kg   200 litre activator 264kg
20 litre base   28kg   20 litre activator 26.2kg
1500ml base 2.24kg   500ml activator 0.72kg
2 litre composite   2.96kg
5 litre composite   7.07kg

STORAGE CONDITIONS

Shelf life: 2 years when stored in original sealed containers at temperatures between 5°C and 30°C.

LIMITATIONS

Normal application requires relative humidity below 80%. To avoid risk of condensation, application should be done only when the temperature of the steel surface is at least 3°C (5°F) higher than the dew point. Application at temperatures below 3°C (33°F) must be watched carefully since the possible presence of ice in the pores of the surface could result in poor adhesion and reduced corrosion protection.

Temperature:	At Application :	Preferably above 3°C - surfaces free from ice/condensation
	In Service :	Immersion 0°C to 70°C depending on solution
		Dry -20°C to 120°C continuous

TEST DATA

TEST	SPECIFICATION	RESULT
Bond Strength	DIN 53232 (Primed and Unprimed Steel)	150 kg/cm^2
	DIN 53151 (Cross cut)	Glass G1
Water Vapour Permeability	DIN 52615	0.005 metric/perm.cm
Shrinkage	-	Negligible
Impact	ASTM 2794 – 69/14	20 N.M.
Tensile Strength	DIN 53504	20 N/mm^2
Elongation	ASTM D2370	20-35%
Abrasion Resistance	ASTM 4060, CS17, 1 kg. load, 1000 cycles	<100 mg. loss
Shore Hardness	-	'D' 80 approx.
Flexibility	British Gas GBE/CW6	Pass 2% strain @ 5°C
Cathodic Disbonding	British Gas GBE/CW6 (28 days @ 20°C) 1500 mV (calomel) 1.5 mm DFT Thickness	Pass

DISCLAIMER

The information given in these specifications and technical advice - whether verbal, or in writing or by way of trials is for guidance only and is given in good faith, but without warranty. This also applies where proprietary rights or third parties are involved. Any person using Acothane UK Ltd products without first making further enquiries as to the suitability of the products for the intended purpose and testing the products to assess their fitness for the purpose does so at their own risk. The application, use and processing of the products are beyond our control and are therefore your own responsibility, and we can accept no liability for the performance of the products arising out of such use, beyond the value of the goods delivered by us. The information contained in these data sheets is liable to modification from time to time in the light of experience and our policy of continuous development.

It is the user's responsibility to ensure that this sheet is current prior to using the product.

ACOTHANE UK LTD

Reference: 06ALVS(A10)
Issue Number: 3
Issue Date: November 2009
Supersedes Issue: 2

ACOTHANE LV SEALER – TECHNICAL DATA SHEET

PRODUCT DESCRIPTION

A two pack solvent-free polyurethane sealer for concrete.

USES

Priming of concrete, plaster, prior to application of finishing system, or as a saturation coating for concrete.

TECHNICAL PROPERTIES

Colour	Clear
Finish	Glossy
Curing Agent	Acothane Activator
Mix Ratio	2.5 Base: 1 Activator by volume
Specific Gravity	Base: 1.01
	Activator: 1.22
	Mixed: 1.07
Volume Solids	100%
Recommended Film Thickness	Spreading rate is dependent on surface porosity and may vary considerably
Theoretical Spreading Rate	**6** m^2/ litre
Application Method	Brush, Roller
Flash Point	200°C
VOC	0 g/litre

Drying Times	**10**ºC	**20**ºC	**30**ºC
Touch Dry		6 hours	
Hard Dry		16 hours	
Minimum Overcoat		6 hours	
Maximum Overcoat		24 hours	

CERTIFICATION/APPROVALS

RECOMMENDED SYSTEMS

Acothane Range

SURFACE PREPARATION

Remove all laitance and other contaminants by most appropriate method e.g. blast cleaning. Ensure the concrete is dry to a reading of less than 16% on the Wood Moisture Equivalent (WME) scale of the Protimeter Surveymaster SM Moisture Meter or similar instrument.

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PRODUCT APPLICATION

Mixing	Add Activator to Base and stir thoroughly ensuring all material on the sides and bottom of the container are fully incorporated. Decant mixed material into a suitable container such as a plastic pail or paint bucket and further mix to ensure Base and Activator components are fully blended together. Pot life 35-40 minutes. Do not apply after this time.
Thinners	Do not thin.
Brush	After mixing use immediately. Work well into substrate.
Roller	After mixing use immediately. Work well into substrate.
Conventional Spray	
Air Assisted Airless Spray	
Cleaner	Thinner No.4
Cleanup Considerations	All equipment should be cleaned immediately after use with Thinner No.4 It is advisable that equipment should be cleaned/flushed during the course of application, the frequency of which will depend on the volume of material used and timescale over which applied. Ensure all waste materials (including packaging) are disposed of in accordance with local regulations.

HEALTH, SAFETY & ENVIRONMENTAL

This product must be used in accordance with the Material Safety Data Sheet supplied by Acothane UK Ltd. The user must observe local health, safety and environmental regulations when using this product.
Consult Acothane UK Limited if there are any concerns over the suitability of this product.

PACK SIZES

3.5lt composite, comprising 2.5lt base and 1.0lt activator.

PACK WEIGHTS

2.50 lt base: 2.95 kg
1.00 lt activator: 1.36 kg

STORAGE CONDITIONS

Shelf life: 12 months when stored in original sealed containers at temperatures between 5°C and 30°C.

LIMITATIONS

Normal application requires relative humidity below 80%. To avoid risk of condensation, application should be done only when the temperature of the substrate is at least 3°C above dew point. Surfaces to be free of ice / condensation.

Temperature: In Service : Immersion 0°C to 70°C depending on solution
Dry -20°C to 120°C continuous

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1
S.V.
1st Sept 22
Pitsford
pipe

Date & Time	Sample Point Name	1,2-Dichloroethane (µg/l)	2,4-D (µg/l)	2-day Colony Count at 37C (No/ml)	3-day Colony Count at 22C (No/ml)	6:2 FLUOROTELOMER SULPHONATE (µg/l)	Algae Total Cell Count (cells/ml)
17/02/2015 09:11	Pitsford Final Water at District Pumps	0	0	0	0	0	14
14/05/2015 09:49	Pitsford Final Water at District Pumps	0	0	0	2	0	20
03/08/2015 09:51	Pitsford Final Water at District Pumps					0	20
28/10/2015 08:56	Pitsford Final Water at District Pumps					0	7
01/03/2016 08:30	Pitsford Final Water at District Pumps		0			0	8
26/05/2016 09:52	Pitsford Final Water at District Pumps		0	0	1	0	17
15/08/2016 08:47	Pitsford Final Water at District Pumps					0	25
09/11/2016 08:38	Pitsford Final Water at District Pumps		0	0	0	0	8
21/02/2017 08:22	Pitsford Final Water at District Pumps			0	0	0	0
18/05/2017 08:21	Pitsford Final Water at District Pumps			0	0	0	34
07/08/2017 08:22	Pitsford Final Water at District Pumps			0	1	0	17
01/11/2017 08:18	Pitsford Final Water at District Pumps			0	0	0	0
19/02/2018 09:29	Pitsford Final Water at District Pumps			0	0	0	0
15/05/2018 08:15	Pitsford Final Water at District Pumps					0	8
10/08/2018 09:05	Pitsford Final Water at District Pumps					0	17
30/10/2018 09:01	Pitsford Final Water at District Pumps					0	0
31/01/2019 08:34	Pitsford Final Water at District Pumps	0		0	0	0	9
25/04/2019 08:20	Pitsford Final Water at District Pumps	0		0	0	0	17
20/06/2019 13:05	Pitsford Final Water at District Pumps						
24/06/2019 15:39	Pitsford Final Water at District Pumps						
05/07/2019 13:40	Pitsford Final Water at District Pumps						
16/07/2019 11:31	Pitsford Final Water at District Pumps					0	0
21/10/2019 08:06	Pitsford Final Water at District Pumps			0	0		
22/03/2020 07:47	Pitsford Final Water at District Pumps					0	
14/06/2020 07:02	Pitsford Final Water at District Pumps				0	0	
06/09/2020 12:10	Pitsford Final Water at District Pumps				0	0	
19/11/2020 11:15	Pitsford Final Water at District Pumps						
29/11/2020 07:18	Pitsford Final Water at District Pumps				0	0	
17/12/2020 08:21	Pitsford Final Water at District Pumps						
12/03/2021 08:30	Pitsford Final Water at District Pumps					0	0
04/06/2021 08:47	Pitsford Final Water at District Pumps					0	0
24/08/2021 08:05	Pitsford Final Water at District Pumps					0	60
18/11/2021 09:03	Pitsford Final Water at District Pumps					0	0
11/02/2022 16:38	Pitsford Final Water at District Pumps				0	0	
04/05/2022 08:03	Pitsford Final Water at District Pumps				0	0	
27/07/2022 10:48	Pitsford Final Water at District Pumps				0	0	

Date & Time	ALGAE TOTAL DIATOMS (cells/ml)	Alkalinity Total (mg/l CACO3)	Aluminium Total (mg/l AL)	AMINOMETHYL PHOSPHONIC ACID (µg/l)	Ammonia (mg/l NH4)	ANABAENA SPP (cells/ml)	Anionic Surfactants (µg/l LS)	Antimony Total (µg/l SB)	APHANIZOMENON SPP (cells/ml)	Arsenic Total (µg/l AS)	Atrazine (µg/l)	AZOXYSTROBIN (µg/l)	Bacteria, Incubation 22C 2Day Post Clean (CFU/plate)
17/02/2015 09:11											0		
14/05/2015 09:49											0		
03/08/2015 09:51													
28/10/2015 08:56													
01/03/2016 08:30											0		
26/05/2016 09:52											0		
15/08/2016 08:47													
09/11/2016 08:38											0		
21/02/2017 08:22													
18/05/2017 08:21													
07/08/2017 08:22													
01/11/2017 08:18													
19/02/2018 09:29			0		0.18					0.27			
15/05/2018 08:15			0		0.17					0.33			
10/08/2018 09:05				0	0.17								
30/10/2018 09:01	0					0			0				
31/01/2019 08:34	0	115	0	0.01	0.5	0			0	0.39			0
25/04/2019 08:20	0	125	0	0	0.21	0			0	0.35			0
20/06/2019 13:05													
24/06/2019 15:39													
05/07/2019 13:40													
16/07/2019 11:31	0	114	0		0.18	0			0	0.43			0
21/10/2019 08:06													
22/03/2020 07:47													
14/06/2020 07:02													
06/09/2020 12:10													
19/11/2020 11:15													
29/11/2020 07:18													
17/12/2020 08:21													
12/03/2021 08:30	0	113	0.02	0	0.23	0			0			0	
04/06/2021 08:47	0	115	0.01	0	0.16	0			0			0	
24/08/2021 08:05	0	91.3	0.01	0	0.15	0			0			0	
18/11/2021 09:03	0	97.2	0.01		0.16	0			0			0	
11/02/2022 16:38													
04/05/2022 08:03													
27/07/2022 10:48													

Date & Time	Bacteria, Incubation 22C 2Days (CFU/plate)	Barium Total (µg/l BA)	Benazolin (µg/l)	Bentazone (µg/l)	Benzene (µg/l)	Benzo (A) Pyrene (µg/l)	Benzo(B)Fluoranthene (µg/l)	Benzo(GHI)Perylene (µg/l)	Benzo(K)Fluoranthene (µg/l)	Boron Total (µg/l B)	BOSCALID (µg/l)	Bromacil (µg/l)	Bromate (µg/l)
17/02/2015 09:11			0	0	0					0		0	0
14/05/2015 09:49			0	0	0					0		0	1.42
03/08/2015 09:51													
28/10/2015 08:56													
01/03/2016 08:30				0								0	0
26/05/2016 09:52				0								0	0
15/08/2016 08:47													
09/11/2016 08:38				0								0	2.05
21/02/2017 08:22													0
18/05/2017 08:21													0
07/08/2017 08:22													1.14
01/11/2017 08:18													0
19/02/2018 09:29													0
15/05/2018 08:15													0.59
10/08/2018 09:05				0									0.72
30/10/2018 09:01													0.63
31/01/2019 08:34				0	0					0	0		0.53
25/04/2019 08:20				0	0					0	0		0
20/06/2019 13:05													
24/06/2019 15:39													
05/07/2019 13:40													
16/07/2019 11:31													
21/10/2019 08:06													
22/03/2020 07:47													
14/06/2020 07:02													
06/09/2020 12:10													
19/11/2020 11:15													
29/11/2020 07:18													
17/12/2020 08:21													
12/03/2021 08:30				0									0
04/06/2021 08:47				0									0
24/08/2021 08:05				0									0
18/11/2021 09:03													
11/02/2022 16:38													
04/05/2022 08:03													
27/07/2022 10:48													

Date & Time	Bromide (µg/l BR)	Bromide Indicative (µg/l BR)	Bromodichloromethane (µg/l)	Bromoform (µg/l)	Cadmium Total (µg/l CD)	Calcium Total (mg/l CA)	Carbetamide (µg/l)	Carbon Organic Total (Acid Sparged) (mg/l C)	CENTRIC DIATOMS GENERAL (cells/ml)	CERATIUM SPP (cells/ml)	Chlorate (µg/l)	Chlorate Indicative (µg/l)	Chloridazon (µg/l)
17/02/2015 09:11							0.02	3.73			0		
14/05/2015 09:49							0	3.13			0		
03/08/2015 09:51											0		
28/10/2015 08:56											0		
01/03/2016 08:30			1.7	1.4			0.01	3.36			0		
26/05/2016 09:52			3.1	1.6			0.01	3.4			0		
15/08/2016 08:47			2.9	1.6							0		
09/11/2016 08:38			1.1	1.2			0.01	3.51			0		
21/02/2017 08:22			1.1	1.2			0.01	3.54			0		
18/05/2017 08:21			1.6	1.2			0.01	3.27			0		
07/08/2017 08:22			2.7	2.2			0.01	3.01			0		
01/11/2017 08:18			1.4	1.3			0.01	3.16			0		
19/02/2018 09:29			1.6	1.8			0.03	3.38			0		
15/05/2018 08:15			2	2			0.04				0		
10/08/2018 09:05			3.2	3			0.04				0		
30/10/2018 09:01			1.5	1.2			0.01		0	0	0		
31/01/2019 08:34	48.4		2.1	2.7		69.9	0.01	3.22	0	0	0		
25/04/2019 08:20	31.4		2	1.7		75.7	0.01	3.29	0	0	0		
20/06/2019 13:05													
24/06/2019 15:39													
05/07/2019 13:40													
16/07/2019 11:31	25.6		2.5	2		69.3			0	0	0		
21/10/2019 08:06													
22/03/2020 07:47													
14/06/2020 07:02													
06/09/2020 12:10													
19/11/2020 11:15													
29/11/2020 07:18													
17/12/2020 08:21													
12/03/2021 08:30		20.7	2	0		60	0	3.52	0	0		0	
04/06/2021 08:47	36		2.7	0		61.9	0	3.3	0	0		0	
24/08/2021 08:05	35.6					52.1	0	3.48	0	0	0		
18/11/2021 09:03	32.3		1.5	1.6		57.2			0	0	0		
11/02/2022 16:38													
04/05/2022 08:03													
27/07/2022 10:48													

Date & Time	Chloride Total (mg/l CL)	Chlorine Free (mg/l CL2)	Chlorine Total (mg/l CL2)	CHLORMEQUAT (µg/l)	Chloroform (µg/l)	Chlorophyll A (µg/l)	CHLOROTHANONIL (µg/l)	Chlortoluron (µg/l)	Chromium Total (µg/l CR)	Clarity Qualitative ( )	Clopyralid (µg/l)	Clostridium Perfringens Confirmed (No/100ml)	Clostridium Perfringens Presumptive (No/100ml)
17/02/2015 09:11	28.3	0.08	1.18					0		0	0.02	0	0
14/05/2015 09:49	32.8	0.07	1.1					0		0	0.04	0	0
03/08/2015 09:51										0			
28/10/2015 08:56										0			
01/03/2016 08:30	38.1				1.3			0		0	0.02		
26/05/2016 09:52	34.5	0.06	1.09		2.4			0		0	0.02		
15/08/2016 08:47					2.2					0			
09/11/2016 08:38	35.8	0.11	1.05		0.8			0		0	0.01		
21/02/2017 08:22		0.08	1.14		0.9					0	0.02	0	0
18/05/2017 08:21		0.08	1.09		1.2					0	0.02	0	0
07/08/2017 08:22		0.08	1.1		2					0	0.02	0	0
01/11/2017 08:18		0.08	1.17		0.9					0	0.02	0	0
19/02/2018 09:29		0.08	1.1		1	0				0	0.03		
15/05/2018 08:15					1.2	0.1				0	0.01		
10/08/2018 09:05					2	0.2				0	0.04		
30/10/2018 09:01					1.3	0.2				0	0.01		
31/01/2019 08:34	58.7	0.07	1.11		1.5	0.29				0	0.01	0	0
25/04/2019 08:20	54.5	0.08	0.98		1.5	0				0	0.01	0	0
20/06/2019 13:05													
24/06/2019 15:39													
05/07/2019 13:40													
16/07/2019 11:31					1.8	0.2				0			
21/10/2019 08:06		0.07	1.18										
22/03/2020 07:47													
14/06/2020 07:02		0.12	1.11										
06/09/2020 12:10		0.07	0.98										
19/11/2020 11:15		0.09	0.98										
29/11/2020 07:18		0.05	1.14										
17/12/2020 08:21		0.05	1.26										
12/03/2021 08:30	28.5				2.3	0				0	0		
04/06/2021 08:47	26.7				2.4	0.18				0	0		
24/08/2021 08:05	32.5					0.09				0	0.02		
18/11/2021 09:03					0					0			
11/02/2022 16:38		0.08	1.22										
04/05/2022 08:03		0.16	1.15										
27/07/2022 10:48		0.05	1.28										

Date & Time	COELOSPHAERIUM (cells/ml)	Coliforms Confirmed (No/100ml)	Coliforms Presumptive ( )	Coliforms Presumptive at 37C (No/100ml)	Coliforms Confirmed MPN IDEXX (No/100ml)	Colour Filtered (Hazen)	Conductivity at 20C (µS/cm)	Copper Total (mg/l CU)	CRYPTOMONAS SPP (cells/ml)	Cryptosporidium Oocysts (No/l)	Cryptosporidium oocysts per sample (No/sample)	Cyanazine (µg/l)	Cyanide Total (µg/l CN)
17/02/2015 09:11		0		0			386					0	0
14/05/2015 09:49		0		0			417					0	0
03/08/2015 09:51													
28/10/2015 08:56													
01/03/2016 08:30												0	
26/05/2016 09:52		0		0								0	
15/08/2016 08:47													
09/11/2016 08:38		0		0								0	
21/02/2017 08:22		0		0			399						
18/05/2017 08:21		0		0			423						
07/08/2017 08:22		0		0			376						
01/11/2017 08:18		0		0			386						
19/02/2018 09:29		0		0		0.6							
15/05/2018 08:15						0.9							
10/08/2018 09:05													
30/10/2018 09:01	0								0				
31/01/2019 08:34	0	0		0		0			0				0
25/04/2019 08:20	0	0		0		0.4			0				0
20/06/2019 13:05													
24/06/2019 15:39													
05/07/2019 13:40													
16/07/2019 11:31	0					1.1			0				
21/10/2019 08:06					0		450						
22/03/2020 07:47													
14/06/2020 07:02					0								
06/09/2020 12:10					0								
19/11/2020 11:15													
29/11/2020 07:18					0								
17/12/2020 08:21													
12/03/2021 08:30	0					1.5			0				
04/06/2021 08:47	0					0.8			0				
24/08/2021 08:05	0					0			0				0
18/11/2021 09:03	0					0			0				
11/02/2022 16:38					0		457						
04/05/2022 08:03					0		471						
27/07/2022 10:48					0		461						

Date & Time	CYPROCONAZOLE (µg/l)	Deposit Volume (SPARE)	Dibromochloromethane (µg/l)	Dichlorprop (µg/l)	DINOBRYON SPP (cells/ml)	Dinoflagellates (cells/ml)	Dissolved Oxygen (mg/l O)	Diuron (µg/l)	E.Coli Presumptive at 44C (No/100ml)	E.Coli (no/swab)	E.Coli Confirmed (No/100ml)	E.Coli Confirmed MPN IDEXX (No/100ml)	Enterococci Confirmed (No/100ml)
17/02/2015 09:11								0			0		
14/05/2015 09:49								0			0		
03/08/2015 09:51													
28/10/2015 08:56													
01/03/2016 08:30			4.1					0					
26/05/2016 09:52			5.9					0			0		
15/08/2016 08:47			5.4										
09/11/2016 08:38			2.7					0			0		
21/02/2017 08:22			2.8								0		
18/05/2017 08:21			3.4								0		
07/08/2017 08:22			5.5								0		
01/11/2017 08:18			3.3								0		
19/02/2018 09:29			3.9				11				0		
15/05/2018 08:15			4.5				8.81						
10/08/2018 09:05			6.6										
30/10/2018 09:01			3		0	0							
31/01/2019 08:34			5.1		0	0	10.2				0		
25/04/2019 08:20			4.5		0	0	8.81				0		
20/06/2019 13:05													
24/06/2019 15:39													
05/07/2019 13:40													
16/07/2019 11:31			5.2		0	0	7.03						
21/10/2019 08:06												0	
22/03/2020 07:47													
14/06/2020 07:02												0	
06/09/2020 12:10												0	
19/11/2020 11:15													
29/11/2020 07:18												0	
17/12/2020 08:21													
12/03/2021 08:30			3.5		0	0	9.8						
04/06/2021 08:47			4.2		0	0	8.15						
24/08/2021 08:05					0	0	6.98						
18/11/2021 09:03			3.7		0	0	9.03						
11/02/2022 16:38												0	
04/05/2022 08:03												0	
27/07/2022 10:48												0	

Date & Time	Enterococci Presumptive (No/100ml)	ETHOFUMESATE (µg/l)	FLORASULAM (µg/l)	Flow Cytometry High Nucleic Acid % (%)	Flow Cytometry Intact Cell Count (No/100µl)	Flow Cytometry Low Nucleic Acid % (%)	Flow Cytometry Total Cell Count (No/100µl)	FLUFENACET (µg/l)	Fluoride Total (mg/l F)	Fluroxypyr (µg/l)	Glyphosate (µg/l)	GOMPHOSPHAERIA (cells/ml)	Gross Alpha Activity (Bq/l)
17/02/2015 09:11									0.33				
14/05/2015 09:49									0.32				
03/08/2015 09:51													
28/10/2015 08:56													
01/03/2016 08:30									0.32				
26/05/2016 09:52									0.31				
15/08/2016 08:47													
09/11/2016 08:38									0.35				
21/02/2017 08:22													
18/05/2017 08:21													
07/08/2017 08:22													
01/11/2017 08:18													
19/02/2018 09:29													
15/05/2018 08:15													
10/08/2018 09:05										0	0		
30/10/2018 09:01												0	
31/01/2019 08:34								0	0.29	0	0	0	
25/04/2019 08:20								0	0.29	0	0.01	0	
20/06/2019 13:05													
24/06/2019 15:39													
05/07/2019 13:40													
16/07/2019 11:31									0.3			0	
21/10/2019 08:06													
22/03/2020 07:47													
14/06/2020 07:02													
06/09/2020 12:10				50.9	57	49.1	990						
19/11/2020 11:15													
29/11/2020 07:18				76.5	498	23.5	####						
17/12/2020 08:21													
12/03/2021 08:30								0	0.29		0	0	
04/06/2021 08:47								0	0.3		0	0	
24/08/2021 08:05								0	0.32		0	0	
18/11/2021 09:03									0.31			0	
11/02/2022 16:38				31.8	65	68.3	9017						
04/05/2022 08:03				37.9	25	62.2	2357						
27/07/2022 10:48				54.3	29	45.7	337						

Date & Time	Gross Beta Activity (Bq/l)	Hardness Total CLEANWATER (mg/l CACO3)	Indeno(1,2,3-CD)Pyrene (µg/l)	Iodide (µg/l I)	Iron Total (mg/l FE)	Isoproturon (µg/l)	Lead Total (µg/l PB)	LENACIL (µg/l)	Linear Alkylbenzene Sulfonate (mg/l LAS)	Linuron (µg/l)	Magnesium Total (mg/l MG)	Manganese Total (mg/l MN)	MCPA (µg/l)
17/02/2015 09:11					0	0				0		0	0
14/05/2015 09:49					0	0				0		0	0
03/08/2015 09:51					0							0	
28/10/2015 08:56					0							0	
01/03/2016 08:30					0	0				0		0	0
26/05/2016 09:52					0	0				0		0	0
15/08/2016 08:47					0							0	
09/11/2016 08:38					0.02	0				0		0	0
21/02/2017 08:22					0							0	
18/05/2017 08:21					0							0	
07/08/2017 08:22					0							0	
01/11/2017 08:18					0							0	
19/02/2018 09:29				0	0.01							0	
15/05/2018 08:15				0	0.01							0	
10/08/2018 09:05				0	0.02							0	
30/10/2018 09:01				0	0.01							0	
31/01/2019 08:34		208		0	0.01						8.1	0	
25/04/2019 08:20		222		0	0						7.93	0	
20/06/2019 13:05													
24/06/2019 15:39													
05/07/2019 13:40													
16/07/2019 11:31		206		0	0						7.94	0	
21/10/2019 08:06													
22/03/2020 07:47				9.42									
14/06/2020 07:02				0									
06/09/2020 12:10				0									
19/11/2020 11:15													
29/11/2020 07:18				0									
17/12/2020 08:21													
12/03/2021 08:30		175		0	0						6.02	0	
04/06/2021 08:47		180		0	0.01						6.15	0	
24/08/2021 08:05		158		0	0						6.8	0	
18/11/2021 09:03		172		0	0						7.07	0	
11/02/2022 16:38													
04/05/2022 08:03													
27/07/2022 10:48													

Date & Time	MCPB (µg/l)	Mecoprop (MCPP) (µg/l)	MELOSIRA SPP (cells/ml)	Mercury Total (µg/l HG)	Metaldehyde (µg/l)	Metamitron (µg/l)	METAZACHLOR (µg/l)	METRIBUZIN (µg/l)	Microscystis (cells/ml)	Monuron (µg/l)	Nickel Total (µg/l NI)	Nitrate (mg/l NO3)	Nitrate/Nitrite combination ( )
17/02/2015 09:11		0		0	0.15		0.01			0		9.43	0.19
14/05/2015 09:49		0		0	0.1		0			0		11.7	0.23
03/08/2015 09:51												4.32	0.09
28/10/2015 08:56												0	0.05
01/03/2016 08:30		0			0.13		0.01			0		11.5	0.23
26/05/2016 09:52		0			0.08		0.01			0		11.7	0.23
15/08/2016 08:47												4.65	0.09
09/11/2016 08:38		0			0.06		0			0		0	0.04
21/02/2017 08:22					0.09		0					5.54	0.11
18/05/2017 08:21					0.08		0					5.96	0.12
07/08/2017 08:22					0.06		0					0	0.05
01/11/2017 08:18					0.09		0					0	0.04
19/02/2018 09:29					0.06		0.01					19.4	0.39
15/05/2018 08:15					0.04		0.01					18.3	0.37
10/08/2018 09:05					0.04		0					11.2	0.22
30/10/2018 09:01			0		0.04		0		0			5.37	0.11
31/01/2019 08:34			0	0	0.04		0		0			13.2	0.26
25/04/2019 08:20			0	0	0.04		0		0			14.7	0.29
20/06/2019 13:05													
24/06/2019 15:39													
05/07/2019 13:40													
16/07/2019 11:31			0						0			8.72	0.17
21/10/2019 08:06													
22/03/2020 07:47													
14/06/2020 07:02													
06/09/2020 12:10													
19/11/2020 11:15													
29/11/2020 07:18													
17/12/2020 08:21													
12/03/2021 08:30			0		0.02		0		0			14	0.28
04/06/2021 08:47			0		0.02		0		0			10.7	0.21
24/08/2021 08:05			0		0.02		0		0			0	0.11
18/11/2021 09:03			0						0			0	0.08
11/02/2022 16:38					0.02								
04/05/2022 08:03					0.02								
27/07/2022 10:48					0.02								

Date & Time	Nitrite (mg/l NO2)	N-Nitrosodimethylamine (ng/l)	Non-lactose fermenting colonies (No/100ml)	Odour - Post Panel - De-Chlorinated ( )	Odour Qualitative ( )	Odour intensity de-chlorinated ()	ODOUR QUANTITATIVE 25C DE-CHLORINATED (TON)	Orthophosphate Total (mg/l P)	OSCILLATORIA SPP (cells/ml)	PEDIASTRUM SPP (cells/ml)	PERFLUOROBUTANE SULPHONATE IN WATER (µg/l)	PERFLUOROHEXANE SULPHONATE IN WATER (µg/l)	PERFLUOROHEXANOIC ACID IN WATER (µg/l)
17/02/2015 09:11	0	0			0		1	0.96			0	0	0
14/05/2015 09:49	0	0			0		1	1.52			0	0	0
03/08/2015 09:51	0	0			0		1	2.01			0	0	0
28/10/2015 08:56	0	0.16			0		1	1.97			0	0	0
01/03/2016 08:30	0	0			0		1	1			0	0	0
26/05/2016 09:52	0	0.1			0		1	2.04			0	0	0
15/08/2016 08:47	0	0.34			0		1	2.02			0	0	0
09/11/2016 08:38	0	0.11			0		1	1.07			0	0	0
21/02/2017 08:22	0	0.39			0		1	1			0	0	0
18/05/2017 08:21	0	0			0		1	1.02			0	0	0
07/08/2017 08:22	0	0			0		1	2.08			0	0	0
01/11/2017 08:18	0	0.6			0		1	2.05			0	0	0
19/02/2018 09:29	0	0.12			0		1	1.06			0	0	0
15/05/2018 08:15	0	0.9			0		1	1.99			0	0	0
10/08/2018 09:05	0	0.25			0		1	2.05			0	0	0
30/10/2018 09:01	0	0.22			0		1	0.98	0	0	0	0	0
31/01/2019 08:34	0	0			0		1	1.06	0	0	0	0	0
25/04/2019 08:20	0	0.3			0		1	1.08	0	0	0	0	0
20/06/2019 13:05													
24/06/2019 15:39													
05/07/2019 13:40													
16/07/2019 11:31	0	0.28			0		1	1.96	0	0	0	0	0
21/10/2019 08:06	0												
22/03/2020 07:47											0	0	0
14/06/2020 07:02	0										0	0	0
06/09/2020 12:10	0										0	0	0
19/11/2020 11:15					0		1						
29/11/2020 07:18	0										0	0	0
17/12/2020 08:21													
12/03/2021 08:30	0	0			0		1	0.97	0	0	0	0	0
04/06/2021 08:47	0	0			0		1	1.93	0	0	0	0	0
24/08/2021 08:05	0	0.1			0		1	1.88	60	0	0	0	0
18/11/2021 09:03	0	0			0		1	1.08	0	0	0	0	0
11/02/2022 16:38	0										0	0	0
04/05/2022 08:03	0										0	0	0
27/07/2022 10:48	0										0	0	0

Date & Time	Perfluorooctane Sulphonate in Water (µg/l)	Perfluorooctane sulphonic acid (ng/l)	Perfluorooctanoic acid (ng/l)	PERFLUOROOCTANOIC ACID IN WATER (µg/l)	PERIDINIUM SPP (cells/ml)	pH Clean Water (pH)	Phosphorus Total (mg/l P)	Polynuclear Aromatic Hydrocarbons Sum 4 (µg/l)	Potassium Total (mg/l K)	Prometryn (µg/l)	PROPAMOCARB (µg/l)	Propazine (µg/l)	Propyzamide (µg/l)
17/02/2015 09:11	0			0		7.29	0.94					0	0.08
14/05/2015 09:49	0			0		7.3	1.63					0	0.06
03/08/2015 09:51	0			0		7.11	2.01						
28/10/2015 08:56	0			0		7.06	1.97						
01/03/2016 08:30	0			0		7.25	0.99					0	0.05
26/05/2016 09:52	0			0		7.14	2.08					0	0.05
15/08/2016 08:47	0			0		6.96	2.05						
09/11/2016 08:38	0			0		7.09	1.08					0	0.02
21/02/2017 08:22	0			0		7.12	1.07						
18/05/2017 08:21	0			0		7.15	1.09						
07/08/2017 08:22	0			0		6.93	2.06						
01/11/2017 08:18	0			0		7.07	2.22						
19/02/2018 09:29	0			0		7.37	1.05						
15/05/2018 08:15	0			0		7.31	1.99						0.06
10/08/2018 09:05	0			0		7.08	2.12						0.04
30/10/2018 09:01	0			0	0	7.09	1.05						0.02
31/01/2019 08:34	0			0	0	7.26	1.07		5.11				0.03
25/04/2019 08:20	0			0	0	7.28	1.13		4.98				0.03
20/06/2019 13:05													
24/06/2019 15:39													
05/07/2019 13:40													
16/07/2019 11:31	0			0	0	7.05	1.99		5.05				
21/10/2019 08:06													
22/03/2020 07:47	0			0									
14/06/2020 07:02	0			0									
06/09/2020 12:10	0			0									
19/11/2020 11:15													
29/11/2020 07:18	0			0									
17/12/2020 08:21													
12/03/2021 08:30	0			0	0	7.24	0.97		3.86				0.02
04/06/2021 08:47	0			0	0	7.24	1.78		3.88				0.01
24/08/2021 08:05	0			0	0	7.19	1.9		4.41				0.01
18/11/2021 09:03	0			0	0	7.25	1.11		4.91				
11/02/2022 16:38	0			0									
04/05/2022 08:03	0			0									
27/07/2022 10:48	0			0									

Date & Time	PROSULFOCARB (µg/l)	Purge and Trap Profile (bar AC 1242)	Quinmerac (µg/l)	RHODOMONAS SPP (cells/ml)	Selenium Total (µg/l SE)	Simazine (µg/l)	Sodium Total (mg/l NA)	Solvents Sum 2 (µg/l)	Sulphate Total (mg/l SO4)	Taste - Post Panel - De-Chlorinated ()	Taste Qualitative ( )	Taste intensity de-chlorinated ()	TASTE QUANTITATIVE 25C DE-CHLORINATED (TON)
17/02/2015 09:11		0	0.04			0		0	51.9		1		1
14/05/2015 09:49		0	0.03			0		0	63.7		1		1
03/08/2015 09:51		0									1		1
28/10/2015 08:56		0									1		1
01/03/2016 08:30		0	0.02			0			63.4		1		1
26/05/2016 09:52		0	0.03			0			63.9		1		1
15/08/2016 08:47		0									1		1
09/11/2016 08:38		0	0.02			0			65.1		1		1
21/02/2017 08:22		0									1		1
18/05/2017 08:21		0									1		1
07/08/2017 08:22		0									1		1
01/11/2017 08:18		0									1		1
19/02/2018 09:29		1									1		1
15/05/2018 08:15		0									1		1
10/08/2018 09:05		0									1		1
30/10/2018 09:01		0		0						0	1	2	1
31/01/2019 08:34	0	0	0.01	0			30.1	0	82.8		1		1
25/04/2019 08:20	0	0	0	0			28.3	0	86.4		1		1
20/06/2019 13:05													
24/06/2019 15:39													
05/07/2019 13:40													
16/07/2019 11:31		0		0			28.3				1		1
21/10/2019 08:06													
22/03/2020 07:47		0						0					
14/06/2020 07:02		0						0					
06/09/2020 12:10		0											
19/11/2020 11:15		0									1		1
29/11/2020 07:18		0						0					
17/12/2020 08:21		0											
12/03/2021 08:30	0	1	0	0			16.1		52.9		1		1
04/06/2021 08:47	0	0	0	0			15.5		56		1		1
24/08/2021 08:05	0	0	0	0			18.2		62.9		1		1
18/11/2021 09:03		0		0			19.8				1		1
11/02/2022 16:38		0											
04/05/2022 08:03		0											
27/07/2022 10:48		0											

Date & Time	Tebuconazole (µg/l)	Temperature Field Measurement (°C)	TERBUTHYLAZINE (µg/l)	Terbutryne (µg/l)	Tetrachloroethene (µg/l)	Tetrachloromethane (µg/l)	TOTAL BLUE-GREEN ALGAE (cells/ml)	Total green algae (cells/ml)	Total Oxidised Nitrogen (mg/l N)	TRIALLATE (ng/l)	Trichloroethene (µg/l)	Triclopyr (µg/l)	Trietazine (µg/l)
17/02/2015 09:11		3.6		0	0	0			2.13		0		
14/05/2015 09:49		13		0	0	0			2.64		0		
03/08/2015 09:51									0				
28/10/2015 08:56									0				
01/03/2016 08:30				0					2.6				
26/05/2016 09:52		12.4		0					2.63				
15/08/2016 08:47									1.05				
09/11/2016 08:38		18.4		0					0				
21/02/2017 08:22		5.6							1.25				
18/05/2017 08:21		12.9							1.35				
07/08/2017 08:22		18							0				
01/11/2017 08:18		12.2							0				
19/02/2018 09:29		4.3							4.39				
15/05/2018 08:15									4.14				
10/08/2018 09:05									2.52				
30/10/2018 09:01							0	0	1.21				
31/01/2019 08:34		4.1			0	0	0	9	2.97		0	0	
25/04/2019 08:20		9.9			0	0	0	17	3.33		0	0	
20/06/2019 13:05													
24/06/2019 15:39		15.3											
05/07/2019 13:40													
16/07/2019 11:31							0	0	1.97			0	
21/10/2019 08:06		12.5											
22/03/2020 07:47					0						0		
14/06/2020 07:02		16			0						0		
06/09/2020 12:10		17.4											
19/11/2020 11:15		9.9											
29/11/2020 07:18		8.4			0						0		
17/12/2020 08:21		6.3											
12/03/2021 08:30	0						0	0	3.16			0	
04/06/2021 08:47	0						0	0	2.42			0	
24/08/2021 08:05	0						60	0	1.28			0	
18/11/2021 09:03							0	0	0.94			0	
11/02/2022 16:38		5.6											
04/05/2022 08:03		11.6											
27/07/2022 10:48		18.9											

Date & Time	Trihalomethanes Total (µg/l)	TRINEXAPAC ETHYL (µg/l)	Tritium (Bq/l)	Turbidity (NTU)	TURBIDITY FIELD TEST (NTU)	Undiluted odour count 25C dechlorinated ()	Undiluted taste count 25C dechlorinated ()	Uranium Total (µg/l U)	UV Transmission (%)	VOLUME OF WATER FILTERED AT LAB ( )	Volume of Water Filtered On Site (SPARE)	Water Profile (bar AC 1242)	Zinc Total (mg/l ZN)
17/02/2015 09:11				0.08		0	0					0	
14/05/2015 09:49				0.07		0	0					0	
03/08/2015 09:51						0	0					0	
28/10/2015 08:56						0	0					1	
01/03/2016 08:30	8.42					0	0					0	
26/05/2016 09:52	13					0	0					0	
15/08/2016 08:47	12.1					0	0					0	
09/11/2016 08:38	5.84					0	0					0	
21/02/2017 08:22	5.91			0.06		0	0					0	
18/05/2017 08:21	7.34			0.09		0	0					0	
07/08/2017 08:22	12.4			0.03		0	0					0	
01/11/2017 08:18	6.87			0.04		0	0					0	
19/02/2018 09:29	8.25					0	0					0	
15/05/2018 08:15	9.68					0	0					0	
10/08/2018 09:05	14.8					0	0					0	
30/10/2018 09:01	7.05					0	1					0	
31/01/2019 08:34	11.4			0.15		0	0		91.6			0	
25/04/2019 08:20	9.64			0.07		0	0		91.6			0	
20/06/2019 13:05												1	
24/06/2019 15:39												0	
05/07/2019 13:40												0	
16/07/2019 11:31	11.5					0	0		91.2			0	
21/10/2019 08:06				0.06								0	
22/03/2020 07:47												0	
14/06/2020 07:02				0								0	
06/09/2020 12:10				0.1								0	
19/11/2020 11:15						0	0					0	
29/11/2020 07:18				0								0	
17/12/2020 08:21												0	
12/03/2021 08:30	7.76	0				0	0		88.5			1	
04/06/2021 08:47	9.28	0				0	0		91.9			1	
24/08/2021 08:05		0				0	0		89.9			0	
18/11/2021 09:03	6.77	0				0	0		91.8			0	
11/02/2022 16:38				0.13								0	
04/05/2022 08:03				0								0	
27/07/2022 10:48				0.09								0	

Responses to questions raised in email of 16 September 2022 regarding Pitsford WTW – 2nd tranche 7 November 2022

Please note – The original text/questions from [redacted]email of 16 September 2022 are set out below in black with Anglian Water's responses provided in blue text.

Q5. Please provide the internal inspection carried out before the asset first went into supply.
This asset is pre c.1960 so there is no inspection report relating to when it first went into supply.

Q6. Please supply the Regulation 31 training records for the contractors and water quality team in relation to this scheme (please include the training documents, assessments and sign-offs).
Regulation 31 training at this time (2016) was limited please see associated training matrix (Appendix Q6a) and available records for personnel involved with work that could be located (Appendix Q6b).

Q7. Please supply a copy of the handover and acceptance/sign off document for the capital scheme.
Response to follow (11 November 2022)

Q9. Please provide the impact plan for Pitsford tank B going into supply on 7 October 2016.
No impact plan was created for the return to service of tank B on 07/10/2016. This was because this asset needed to be returned to service urgently in response to severe algal challenges at the site. The asset was returned to service in accordance with methodology present in the site operating manual and after review of samples which had been taken.

Q13. Please provide the organics report for the samples 'with something to report' on the sample results and provide the investigations and conclusions associated with the detections since October 2016.
Following our normal processes and procedures such low levels of trace organics would have been assessed as acceptable based on comparison with available SNARLs.

Sample Type	Sample No	Date	Time	Location	Water Profile Result (µg/l)	Purge & Trap Result (µg/l)
IM	18074647	19/02/2018	09:29	Pitsford final (W01PTW1CN)	Nothing to report	Isopropyl alcohol 0.24
IM	21117577	12/03/2021	08:30	Pitsford final (W01PTW1CN)	Nonanal 0.18	Formamide 0.18
IM	21257171	04/06/2021	08:47	Pitsford final (W01PTW1CN)	Nonanal - 0.17	Nothing to report

Q17. Provide an update on whether the pictures from internal inspections (pre and post going into supply) are now available. Please provide the pictures and inspection reports or a statement that they are not available and include the relevant IT service requests and the IT service desks response on whether they can be retrieved.
Appendix Q17a – email chain
Appendix Q17b - 'Snips' of Teams chat regarding unarchiving of G-drive files

Q18. Provide the results from any additional materials testing on the non-approved pipework that has been carried out.
Response to follow (11 November 2022)

Water Retaining Structure Internal Inspection Form

Regional Supply Area:	West
Supply Manager Area:	Pitsford
Site Name:	Pitsford WTW
Site Short Name:	PITSWW
Tank Name:	Treated Water Reservoir 02
Inspection Date (dd/mm/yyyy):	06/10/2016
Date of next inspection (dd/mm/yyyy) - if early check than normal frequency required:	
Inspection Reason:	final inspection
Clean Reason:	programmed clean
Impact Plan Number:	
Inspected By:	[redacted]

To upload data onto the log press Ctrl U once form complete.

Question	Answer	Comments	Remedial Work / Action	Priority 1-3*	Action Management System Number
Tank Attributes					
What is the tanks jack head category?					
Is the tank hydraulically isolatable - can it be easily taken out of supply?	Yes				
Is there adjoining untreated water storage - above, to the side, passing through the tank?	No				
Is this an Ozone tank - if so which stage?	No				
Is the structure covered by the reservoir act (1975) - large raised reservoirs >25,000m3?	No				
Compartment Dimensions					
Storage volume - floor to overflow (m3)					
Operational volume - useable volume (m3)					
Height of compartment (m)	3.5	Taken from Previous reports, Due to the reactive clean to return to service during night time.			
Width of compartment (m)	23.06	Taken from Previous reports, Due to the reactive clean to return to service during night time.			
Depth of compartment (m)	31.09	Taken from Previous reports, Due to the reactive clean to return to service during night time.			
Inlet height (m)	0.6	There has been a new inlet installed on the rear of the tank, this is for resiliance and not normally open.			
Outlet height (m)		This is floor level, there has been a new chamber build and a new Isolation valve installed			
Overflow height (m)	3.4				
Overflow diameter (mm)		This is a letter box construction			
Top water level - normal operation (m)					
Bottom water level (m)					
Tank Structure					
What material is the tank?	Other	Reinforced Concrete			
What's the type of membrane?	Sheet				
If an earth embankment what type is it?	Other	Tank is level with the road and has an embankment around the back and side of its structure			
What type of roof covering is there?	Gravel				
What's the type of support structure?	Concrete				
Tank Roof					
Are there signs of leakage / ingress through roof?	No				
Is there evidence of cracks in roof?	No				
Is there evidence of discolouration / slime on internal roof?	No				
Are the roof joints / seals in satisfactory condition?	Yes				
Is there evidence of standing or pooling water?	No				
Is the roof drainage insufficient to clear all standing water?	No				
Tank walls					
Are there signs of leakage / ingress through walls?	No	This has now been Coated			
Is there evidence of cracks in walls?	No				
Is there evidence of discolouration / slime on walls?	No				

Are the wall joints / seals in satisfactory condition?	Yes				

Tank floor					
Are there signs of leakage / ingress through floor?	No	This has now been Coated			
Is there evidence of cracks in floor?	No				
Is there evidence of discolouration / slime on floor?	No				
Was any material found in the tank / on the floor?	No				
Tank Support structure					
Are the roof supports in satisfactory condition?	Yes	35 x 300mmx300mm coated columns			
Tank Fittings / Pipework					
Are the internal fittings in satisfactory condition?	Yes				
Is the inlet pipework in satisfactory condition?	Yes	There are now two inlets the existing 600mm I/d from site and a new installed resilience main			
Is the outlet pipework in satisfactory condition?	Yes	new installed outlet valve and chamber			
Is the overflow in satisfactory condition?	Yes				
Are the valves in satisfactory condition?	Yes				
Are the ladders in satisfactory condition?	Yes	S/Steel newly installed			
Is the metalwork in satisfactory condition?	n/a				
Are the baffled walls / curtains in satisfactory condition?	Yes				
Are the level probes in satisfactory condition?	n/a	this is controlled by pump sump			
Are cable entry points sealed, in satisfactory condition and without evidence of ingress?	Yes				
Are there any other fittings / mountings with inadequate seals / sealant?	n/a				
Are any mixers in satisfactory working order / condition?	n/a				
Are any sample pumps in satisfactory working order / condition?	n/a				
Is there any redundant pipework or equipment connected to the tank?	n/a				
Access points					
Are all the hatch, covers or doors in satisfactory condition and working order?	Yes	New installed outlet valve and chamber has incorrect insect protection on the hatches this has had retrofitted seals installed			
Are the seals in place and in satisfactory condition?	Yes	As Above			
Are the insect meshes in place and in satisfactory condition?	Yes	Minor repairs carried, to ensure secure as above			
Is the mesh an adequate size? (approx. 1mm or less)	Yes	These are on the outer sides			
Is the membrane lapping around up stands in satisfactory condition?	No	These are aqualined coated			
Dedicated Air Vents					
Are the vents securely fixed undamaged and in good condition?	Yes	These are inside an upstand with a techno cover on top			
Are the insect meshes in place and in satisfactory condition?	Yes				
Is the mesh an adequate size? (approx. 1mm or less)	Yes				

Roof Saturation Test					
Was the roof saturation test satisfactory?	Yes	Due to this being carried out in out of hours and in the dark we completed a minimum flood test on the hatches and around the upstands and wall joint for around 2hrs, the roof had no work completed on it since last inspection and was still in good condition.			
Other					
Are there any other issues to note? (add detail in comments box)	Yes	The hatches are planned to be replaced but asset is needed to be returned due to the algae bloom on the res for resilience to be removed at a later date for this work to commence			
Have actions been added to the Action Management System (AMS)?					

To upload data onto the tracker press Ctrl U. Also the form must be saved to the correct HAWK folder (see instruction tab)

[redacted]

Priority	Brief Rationale for Categorisation	Examples
Priority 1	Major Defect. Remedial work to be implemented before return to service or within 12 months if return to service is approved pending remedial work.	Ingress issue Significant Leak
Priority 2	Remedial work to be implemented before the next inspection.	Roof Drainage Minor Leak
Priority 3	Continue to monitor condition at next inspection.	Slippage Corrosion

Water Retaining Structure Internal Inspection Form

Regional Supply Area:	West
Supply Manager Area:	Pitsford
Site Name:	Pitsford WTW
Site Short Name:	PITSWW
Tank Name:	Treated Water Reservoir 02
Inspection Date (dd/mm/yyyy)**:**	01/08/2017
Date of next inspection (dd/mm/yyyy) - if early check than normal frequency required:	
Inspection Reason:	final inspection
Clean Reason:	programmed clean
Impact Plan Number:	
Inspected By:	[redacted]

To upload data onto the log press Ctrl U once form complete.

Question	Answer	Comments	Remedial Work / Action	Priority 1-3*	Action Management System Number
Tank Attributes					
What is the tanks jack head category?					
Is the tank hydraulically isolatable - can it be easily taken out of supply?	Yes				
Is there adjoining untreated water storage - above, to the side, passing through the tank?	No				
Is this an Ozone tank - if so which stage?	No				
Is the structure covered by the reservoir act (1975) - large raised reservoirs >25,000m3?	No				
Compartment Dimensions					
Storage volume - floor to overflow (m3)					
Operational volume - useable volume (m3)					
Height of compartment (m)	3.5	Taken from Previous reports			
Width of compartment (m)	23.06	Taken from Previous reports			

Depth of compartment (m)	31.09	Taken from Previous reports			
Inlet height (m)	0.6				
Outlet height (m)		This is floor level, there has been a new chamber build and a new Isolation valve installed			
Overflow height (m)	3.4				
Overflow diameter (mm)		This is a letter box construction			
Top water level - normal operation (m)					
Bottom water level (m)					
<u>Tank Structure</u>					
What material is the tank?	Other	Reinforced Concrete			
What's the type of membrane?	Sheet				
If an earth embankment what type is it?	Other	Tank is level with the road and has an embankment around the back and side of its structure			
What type of roof covering is there?	Gravel				
What's the type of support structure?	Concrete				

<u>Tank Roof</u>					
Are there signs of leakage / ingress through roof?	No				
Is there evidence of cracks in roof?	No				
Is there evidence of discolouration / slime on internal roof?	No				
Are the roof joints / seals in satisfactory condition?	Yes				
Is there evidence of standing or pooling water?	No				
Is the roof drainage insufficient to clear all standing water?	No				
<u>Tank walls</u>					
Are there signs of leakage / ingress through walls?	No	This has now been Coated			
Is there evidence of cracks in walls?	No				
Is there evidence of discolouration / slime on walls?	No				

Are the wall joints / seals in satisfactory condition?	Yes				

Tank floor					
Are there signs of leakage / ingress through floor?	No	This has now been Coated			
Is there evidence of cracks in floor?	No				
Is there evidence of discolouration / slime on floor?	No				
Was any material found in the tank / on the floor?	No				
Tank Support structure					
Are the roof supports in satisfactory condition?	Yes	35 x 300mmx300mm coated columns			
Tank Fittings / Pipework					
Are the internal fittings in satisfactory condition?	Yes				
Is the inlet pipework in satisfactory condition?	Yes	There are now two inlets the existing 600mm I/d from site and a new installed resilience main			
Is the outlet pipework in satisfactory condition?	Yes	new installed outlet valve and chamber			
Is the overflow in satisfactory condition?	Yes				

Are the valves in satisfactory condition?	Yes				
Are the ladders in satisfactory condition?	Yes	S/Steel newly installed			
Is the metalwork in satisfactory condition?	n/a				
Are the baffled walls / curtains in satisfactory condition?	Yes				
Are the level probes in satisfactory condition?	n/a	this is controled by pump sump			
Are cable entry points sealed, in satisfactory condition and without evidence of ingress?	Yes				
Are there any other fittings / mountings with inadequate seals / sealant?	n/a				
Are any mixers in satisfactory working order / condition?	n/a				
Are any sample pumps in satisfactory working order / condition?	n/a				
Is there any redundent pipework or equipment connected to the tank?	n/a				
<u>Access points</u>					
Are all the hatch, covers or doors in satisfactory condition and working order?	Yes	New Installed Hatches			

Are the seals in place and in satisfactory condition?	Yes				
Are the insect meshes in place and in satisfactory condition?	Yes	Minor repairs carried out on day of inspection, all ok			
Is the mesh an adequate size? (approx. 1mm or less)	Yes				
Is the membrane lapping around up stands in satisfactory condition?	No	These are aqualined coated			
Dedicated Air Vents					
Are the vents securely fixed undamaged and in good condition?	Yes	These are inside an upstand with a techno cover on top			
Are the insect meshes in place and in satisfactory condition?	Yes				
Is the mesh an adequate size? (approx. 1mm or less)	Yes				

Roof Saturation Test					
Was the roof saturation test satisfactory?	Yes				
Other					
Are there any other issues to note? (add detail in comments box)					
Have actions been added to the Action Management System (AMS)?					

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[redacted]

Priority	Brief Rationale for Categorisation	Examples
Priority 1	Major Defect. Remedial work to be implemented before return to service or within 12 months if return to service is approved pending remedial work.	Ingress issue Significant Leak
Priority 2	Remedial work to be implemented before the next inspection.	Roof Drainage Minor Leak
Priority 3	Continue to monitor condition at next inspection.	Slippage Corrosion

Water Retaining Structure Internal Inspection Form

Regional Supply Area:	West
Supply Manager Area:	Pitsford
Site Name:	Pitsford WTW
Site Short Name:	PITSWW
Master Tank Name:	Storage Tank St12 Tnk2
Tank Name:	Treated Water Reservoir 02
Inspection Date (dd/mm/yyyy)**:**	25/03/2021
Date of next inspection (dd/mm/yyyy) - if early check than normal frequency required:	
Inspection Reason:	initial inspection
Clean Reason:	reactive clean
Impact Plan Number:	
Inspected By:	[redacted]

To upload data onto the log press Ctrl U once form complete.

Question	Answer	Comments	Remedial Work / Action	Priority 1-3*	Action Management System Number
Tank Attributes					
What is the tanks jack head category?	No				
Is the tank hydraulically isolatable - can it be easily taken out of supply?	Yes				
Is there adjoining untreated water storage - above, to the side, passing through the tank?	No				
Is this an Ozone tank - if so which stage?	No				
Is the structure covered by the reservoir act (1975) - large raised reservoirs >25,000m3?	No				
Compartment Dimensions					
Storage volume - floor to overflow (m3)	2462				
Operational volume - useable volume (m3)	2462				
Height of compartment (m)	3.33				
Width of compartment (m)	24				
Length of compartment (m)	31				
Inlet height (m)	1.3	Ofl 600mm there is a second inlet on the far end of the tank from the resiliance scheme 500mm 3.1m of the floor			
Outlet height (m)	0.2	There an additional outlet Chamber which has a 530mm outlet the existing 600mm x 600mm Gate valve going into a common outlet chamber, this is letting by considerable due to mounting and fixing failure breaking the surrounding wall around the valve			
Overflow height (m)	3.31	This is a letter box construction and goes into the overflow and wash out chamber			
Overflow diameter (mm)		200mm gap from roof and 3.1m long			

Top water level - normal operation (m)					
Bottom water level (m)					
Tank Structure					
What material is the tank?	Other	Reinforced Concrete			
What's the type of membrane?	Liquid	Looks like Aqualine Coated Roof Membrane there is a thick geotextile layer and deck drain on top.			
If an earth embankment what type is it?	Full				
What type of roof covering is there?	Gravel				
What's the type of support structure?	Concrete				
Tank Roof					
Are there signs of leakage / ingress through roof?	No				
Is there evidence of cracks in roof?	Yes	There are minor cracks which are self sealed in several locations.			
Is there evidence of discolouration / slime on internal roof?	No				
Are the roof joints / seals in satisfactory condition?	n/a				
Is there evidence of standing or pooling water?	No	Guttering Detail is sufficient to remove any water			
Is the roof drainage insufficient to clear all standing water?	No				
Tank walls					
Are there signs of leakage / ingress through walls?	No				
Is there evidence of cracks in walls?	No	These are coated in good condition			
Is there evidence of discolouration / slime on walls?	No	These are coated in good condition			
Are the wall joints / seals in satisfactory condition?	Yes	These have all been overbanded and then a coating applied on the walls			

Tank floor					
Are there signs of leakage / ingress through floor?	No	All Joints have been overbanded and then the floor has been coated			
Is there evidence of cracks in floor?	No	As above			
Is there evidence of discolouration / slime on floor?	No				
Was any material found in the tank / on the floor?	Yes	Rusty deposits (potentially from inlet main during flushing during the resiliance scheme comissioning)			
Tank Support structure					
Are the roof supports in satisfactory condition?	Yes	28 x 300 mm x 300mm columns 7 of which are incorporated in the baffle wall			
Tank Fittings / Pipework					
Are the internal fittings in satisfactory condition?	n/a				
Is the inlet pipework in satisfactory condition?	Yes				
Is the outlet pipework in satisfactory condition?	No	600 mm Gate Valve as description in Row 31			
Is the overflow in satisfactory condition?	Yes				
Are the valves in satisfactory condition?	Yes	Apart from the outlet valve			
Are the ladders in satisfactory condition?	Yes	Fixed Ladder Stainless Steel			
Is the metalwork in satisfactory condition?	n/a				
Are the baffled walls / curtains in satisfactory condition?	Yes	coated			
Are the level probes in satisfactory condition?	n/a				
Are cable entry points sealed, in satisfactory condition and without evidence of ingress?	Yes				
Are there any other fittings / mountings with inadequate seals / sealant?	n/a				
Are any mixers in satisfactory working order / condition?	n/a				

Are any sample pumps in satisfactory working order / condition?	n/a				
Is there any redundant pipework or equipment connected to the tank?	No				
Access points					
Are all the hatch, covers or doors in satisfactory condition and working order?	No	All but the common Overflow hatch showed signs of ingress from the Hatch to up stand interface. The Common outlet hatch wasn't tested at this inspection due to it being in service. Planning for this tank to be inspected is to be planned	Lift and re-bed all 6 out of 7 hatches.	1	
Are the seals in place and in satisfactory condition?	Yes	Foam seals are in good condition			
Are the insect meshes in place and in satisfactory condition?	Yes				
Is the mesh an adequate size? (approx. 1mm or less)	Yes				
Is the membrane lapping around up stands in satisfactory condition?	Yes	Some of the upstand have an aqualined coating the other have a old waterproof coating			
Dedicated Air Vents					
Are the vents securely fixed undamaged and in good condition?	Yes				
Are the insect meshes in place and in satisfactory condition?	Yes				
Is the mesh an adequate size? (approx. 1mm or less)	Yes				

Roof Saturation Test					
Was the roof saturation test satisfactory?	Yes	Ingress from the Hatch to Up-stand interface during the moat function test.	If all Items in row 77 are completed the tanks should pass its next inundation test	1	
Other					
Are there any other issues to note? (add detail in comments box)					
Have actions been added to the Action Management System (AMS)?					

To upload data onto the tracker press Ctrl U. Also the form must be saved to the correct HAWK folder (see instruction tab)

[redacted]

Priority	Brief Rationale for Categorisation	Examples
Priority 1	Major Defect. Remedial work to be implemented before return to service or within 12 months if return to service is approved pending remedial work.	Ingress issue Significant Leak
Priority 2	Remedial work to be implemented before the next inspection.	Roof Drainage Minor Leak
Priority 3	Continue to monitor condition at next inspection.	Slippage Corrosion

Water Retaining Structure Internal Inspection Form

Regional Supply Area:	West
Supply Manager Area:	Pitsford
Site Name:	Pitsford WTW
Site Short Name:	PITSWW
Master Tank Name:	Storage Tank St12 Tnk2
Tank Name:	Treated Water Reservoir 02
Inspection Date (dd/mm/yyyy)**:**	11/05/2021
Date of next inspection (dd/mm/yyyy) - if early check than normal frequency required:	
Inspection Reason:	final inspection
Clean Reason:	reactive clean
Impact Plan Number:	
Inspected By:	[redacted]

To upload data onto the log press Ctrl U once form complete.

Question	Answer	Comments	Remedial Work / Action	Priority 1-3*	Action Management System Number
Tank Attributes					
What is the tanks jack head category?	No				
Is the tank hydraulically isolatable - can it be easily taken out of supply?	Yes				
Is there adjoining untreated water storage - above, to the side, passing through the tank?	No				
Is this an Ozone tank - if so which stage?	No				
Is the structure covered by the reservoir act (1975) - large raised reservoirs >25,000m3?	No				
Compartment Dimensions					
Storage volume - floor to overflow (m3)	2462				
Operational volume - useable volume (m3)	2462				
Height of compartment (m)	3.33				
Width of compartment (m)	24				
Length of compartment (m)	31				
Inlet height (m)	1.3	Ofl 600mm there is a second inlet on the far end of the tank from the resiliance scheme 500mm 3.1m of the floor			
Outlet height (m)	0.2	There an additional outlet Chamber which has a 530mm outlet the existing 600mm x 600mm Gate valve going into a common outlet chamber, this is letting by considerable due to mounting and fixing failure breaking the surrounding wall around the valve			
Overflow height (m)	3.31	This is a letter box construction and goes into the overflow and wash out chamber			
Overflow diameter (mm)		200mm gap from roof and 3.1m long			

Top water level - normal operation (m)					
Bottom water level (m)					
Tank Structure					
What material is the tank?	Other	Reinforced Concrete			
What's the type of membrane?	Liquid	Looks like Aqualine Coated Roof Membrane there is a thick geotextile layer and deck drain on top.			
If an earth embankment what type is it?	Full				
What type of roof covering is there?	Gravel				
What's the type of support structure?	Concrete				
Tank Roof					
Are there signs of leakage / ingress through roof?	No				
Is there evidence of cracks in roof?	Yes	There are minor cracks which are self sealed in several locations.			
Is there evidence of discolouration / slime on internal roof?	No				
Are the roof joints / seals in satisfactory condition?	n/a				
Is there evidence of standing or pooling water?	No	Guttering Detail is sufficient to remove any water			
Is the roof drainage insufficient to clear all standing water?	No				
Tank walls					
Are there signs of leakage / ingress through walls?	No				
Is there evidence of cracks in walls?	No	These are coated in good condition			
Is there evidence of discolouration / slime on walls?	No	These are coated in good condition			
Are the wall joints / seals in satisfactory condition?	Yes	These have all been overbanded and then a coating applied on the walls			

Tank floor					
Are there signs of leakage / ingress through floor?	No	All Joints have been overbanded and then the floor has been coated			
Is there evidence of cracks in floor?	No	As above			
Is there evidence of discolouration / slime on floor?	No				
Was any material found in the tank / on the floor?	Yes	Rusty deposits (potentially from inlet main during flushing during the resiliance scheme comissioning)			
Tank Support structure					
Are the roof supports in satisfactory condition?	Yes	28 x 300 mm x 300mm columns 7 of which are incorporated in the baffle wall			
Tank Fittings / Pipework					
Are the internal fittings in satisfactory condition?	n/a				
Is the inlet pipework in satisfactory condition?	Yes				
Is the outlet pipework in satisfactory condition?	No	600 mm Gate Valve as description in Row 31			
Is the overflow in satisfactory condition?	Yes				
Are the valves in satisfactory condition?	Yes	Apart from the outlet valve			
Are the ladders in satisfactory condition?	Yes	Fixed Ladder Stainless Steel			
Is the metalwork in satisfactory condition?	n/a				
Are the baffled walls / curtains in satisfactory condition?	Yes	coated			
Are the level probes in satisfactory condition?	n/a				
Are cable entry points sealed, in satisfactory condition and without evidence of ingress?	Yes				
Are there any other fittings / mountings with inadequate seals / sealant?	n/a				
Are any mixers in satisfactory working order / condition?	n/a				

Are any sample pumps in satisfactory working order / condition?	n/a				
Is there any redundant pipework or equipment connected to the tank?	No				
Access points					
Are all the hatch, covers or doors in satisfactory condition and working order?	Yes	All but the common Overflow hatch showed signs of ingress from the Hatch to up stand interface. The Common outlet hatch wasn't tested at this inspection due to it being in service. Planning for this tank to be inspected is to be planned. All hatches have been lifted and rebed all passed inundation and moat function test.	Lift and re-bed all 6 out of 7 hatches. All work complete and satifactory		
Are the seals in place and in satisfactory condition?	Yes	Foam seals are in good condition			
Are the insect meshes in place and in satisfactory condition?	Yes				
Is the mesh an adequate size? (approx. 1mm or less)	Yes				
Is the membrane lapping around up stands in satisfactory condition?	Yes	Some of the upstand have an aqualined coating the other have a old waterproof coating			
Dedicated Air Vents					
Are the vents securely fixed undamaged and in good condition?	Yes				
Are the insect meshes in place and in satisfactory condition?	Yes				
Is the mesh an adequate size? (approx. 1mm or less)	Yes				

Roof Saturation Test					
Was the roof saturation test satisfactory?	Yes	Ingress from the Hatch to Up-stand interface during the moat function test. All passed this inspection and all work completed.	If all Items in row 77 are completed the tanks should pass its next inundation test. All work completed		
Other					
Are there any other issues to note? (add detail in comments box)					
Have actions been added to the Action Management System (AMS)?					

To upload data onto the tracker press Ctrl U. Also the form must be saved to the correct HAWK folder (see instruction tab)

[redacted]

Priority	Brief Rationale for Categorisation	Examples
Priority 1	Major Defect. Remedial work to be implemented before return to service or within 12 months if return to service is approved pending remedial work.	Ingress issue Significant Leak
Priority 2	Remedial work to be implemented before the next inspection.	Roof Drainage Minor Leak
Priority 3	Continue to monitor condition at next inspection.	Slippage Corrosion

Water Retaining Structure Internal Inspection Form

Regional Supply Area:	West
Supply Manager Area:	Pitsford
Site Name:	Pitsford WTW
Site Short Name:	PITSWW
Master Tank Name:	Storage Tank St12 Tnk2
Tank Name:	Treated Water Reservoir 02
Inspection Date (dd/mm/yyyy)**:**	17/12/2021
Date of next inspection (dd/mm/yyyy) - if early check than normal frequency required:	
Inspection Reason:	initial inspection
Clean Reason:	reactive clean
Impact Plan Number:	
Inspected By:	[redacted]

To upload data onto the log press Ctrl U once form complete.

Question	Answer	Comments	Remedial Work / Action	Priority 1-3*	Action Management System Number
Tank Attributes					
What is the tanks jack head category?	No				
Is the tank hydraulically isolatable - can it be easily taken out of supply?	Yes				
Is there adjoining untreated water storage - above, to the side, passing through the tank?	No				
Is this an Ozone tank - if so which stage?	No				
Is the structure covered by the reservoir act (1975) - large raised reservoirs >25,000m3?	No				
Compartment Dimensions					
Storage volume - floor to overflow (m3)	2462				
Operational volume - useable volume (m3)	2462				
Height of compartment (m)	3.33				
Width of compartment (m)	24				
Length of compartment (m)	31				
Inlet height (m)	1.3	Ofl 600mm there is a second inlet on the far end of the tank from the resiliance scheme 500mm 3.1m of the floor			
Outlet height (m)	0.2	There an additional outlet Chamber which has a 530mm outlet the existing 600mm x 600mm Gate valve going into a common outlet chamber, this is letting by considerable due to mounting and fixing failure breaking the surrounding wall around the valve			
Overflow height (m)	3.31	This is a letter box construction and goes into the overflow and wash out chamber			
Overflow diameter (mm)		200mm gap from roof and 3.1m long			

Top water level - normal operation (m)					
Bottom water level (m)					
Tank Structure					
What material is the tank?	Other	Reinforced Concrete			
What's the type of membrane?	Liquid	Looks like Aqualine Coated Roof Membrane there is a thick geotextile layer and deck drain on top.			
If an earth embankment what type is it?	Full				
What type of roof covering is there?	Gravel				
What's the type of support structure?	Concrete				
Tank Roof					
Are there signs of leakage / ingress through roof?	No				
Is there evidence of cracks in roof?	Yes	There are minor cracks which are self sealed in several locations.			
Is there evidence of discolouration / slime on internal roof?	No				
Are the roof joints / seals in satisfactory condition?	n/a				
Is there evidence of standing or pooling water?	No	Guttering Detail is sufficient to remove any water			
Is the roof drainage insufficient to clear all standing water?	No				
Tank walls					
Are there signs of leakage / ingress through walls?	No				
Is there evidence of cracks in walls?	No	These are coated in good condition			
Is there evidence of discolouration / slime on walls?	No	These are coated in good condition			
Are the wall joints / seals in satisfactory condition?	Yes	These have all been overbanded and then a coating applied on the walls			

Tank floor					
Are there signs of leakage / ingress through floor?	No	All Joints have been overbanded and then the floor has been coated			
Is there evidence of cracks in floor?	No	As above			
Is there evidence of discolouration / slime on floor?	No				
Was any material found in the tank / on the floor?	Yes	Rusty deposits (potentially from inlet main during flushing during the resiliance scheme comissioning)			
Tank Support structure					
Are the roof supports in satisfactory condition?	Yes	28 x 300 mm x 300mm columns 7 of which are incorporated in the baffle wall			
Tank Fittings / Pipework					
Are the internal fittings in satisfactory condition?	n/a				
Is the inlet pipework in satisfactory condition?	Yes				
Is the outlet pipework in satisfactory condition?	No	600 mm Gate Valve as description in Row 31			
Is the overflow in satisfactory condition?	Yes				
Are the valves in satisfactory condition?	Yes	Apart from the outlet valve			
Are the ladders in satisfactory condition?	Yes	Fixed Ladder Stainless Steel			
Is the metalwork in satisfactory condition?	n/a				
Are the baffled walls / curtains in satisfactory condition?	Yes	coated			
Are the level probes in satisfactory condition?	n/a				
Are cable entry points sealed, in satisfactory condition and without evidence of ingress?	Yes				
Are there any other fittings / mountings with inadequate seals / sealant?	n/a				
Are any mixers in satisfactory working order / condition?	n/a				

Are any sample pumps in satisfactory working order / condition?	n/a				
Is there any redundant pipework or equipment connected to the tank?	No				
Access points					
Are all the hatch, covers or doors in satisfactory condition and working order?	Yes	All Hatches were lifted and re-bed on the last final inspection they are all still in an ok working condition with no signs of ingress			
Are the seals in place and in satisfactory condition?	Yes	Foam seals are in good condition			
Are the insect meshes in place and in satisfactory condition?	Yes				
Is the mesh an adequate size? (approx. 1mm or less)	Yes				
Is the membrane lapping around up stands in satisfactory condition?	Yes	Some of the upstand have an aqualined coating the other have a old waterproof coating			
Dedicated Air Vents					
Are the vents securely fixed undamaged and in good condition?	Yes				
Are the insect meshes in place and in satisfactory condition?	Yes				
Is the mesh an adequate size? (approx. 1mm or less)	Yes				

Roof Saturation Test					
Was the roof saturation test satisfactory?	Yes				
Other					
Are there any other issues to note? (add detail in comments box)					
Have actions been added to the Action Management System (AMS)?					

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Personnel	EL123	WS083			WS022		WS
		Attendance Sheet	Assessment	Assignment	Attendance Sheet	Assessment	Attendance Sheet
[redacted]					N/A	N/A	N/A
[redacted]		N/A	N/A	N/A			N/A
[redacted]	[redacted]	N/A	N/A	N/A			N/A

062
Assessment
N/A
N/A
N/A

Key:

EL123	Online Materials In Contact computer based training cou
WS083	Materials In Contact Training
WS022	Water Quality Scientific Induction - Module 7 MIC
WS062	Third Party MIC & Sampling
	Paperwork Present/Completed
	Paperwork Not Found
N/A	Not applicable for this job role
*	No assignment associated with this training course at thi

is time (this was only added ~2019)