



guardians of drinking water quality

DRINKING WATER INSPECTORATE

Area 1A Nobel House
17 Smith Square
London
SW1P 3JR

Enquiries: 030 0068 6400

E-mail: milo.purcell@defra.gsi.gov.uk

DWI Website: <http://www.dwi.gov.uk>

30 May 2018

Mr Paul Valleley
Director of Water Services
Anglian Water
Huntingdon
Cambridgeshire
PE29 6XU

Dear Mr Valleley

PERIODIC REVIEW 2019: ANGLIAN WATER SERVICES LIMITED DWI Scheme reference: ANG01 – Gayton - Nitrate

FINAL DECISION LETTER

The Inspectorate has completed its detailed assessment of the scheme proposed by Anglian Water to provide Ion Exchange treatment facilities to secure or facilitate compliance with the Nitrate standard for drinking water quality reasons at Gayton WTW.

The detailed assessment also took in to consideration the outcome of the risk assessment report submitted to the Inspectorate as required by regulation 28(1) of the Water Supply (Water Quality) Regulations 2016 for Gayton WTW and the connected supply system.

A summary of the outcome of our assessment of this scheme is attached. Based on the information submitted by the Company, the Inspectorate supports the need for a scheme to reduce Nitrate concentrations in treated water for water quality reasons, and the supported scheme shall be included by the Company in its Final Business Plan, subject to the caveats listed in the attachment.

In this instance the Inspectorate intends to issue a Notice under Regulation 28(4) of the Water Supply (Water Quality) Regulations 2016, as amended, that requires the Company to mitigate the risk of Nitrate that has been identified as a potential danger to human health from the water supplied from Gayton WTW.

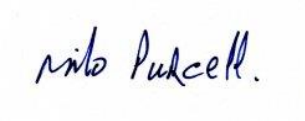
It is expected that the Company will continue to monitor treated water Nitrate concentrations, and that it will take all reasonable steps to prevent contraventions of the Nitrate standard.

I am copying this letter to:

- Jon Ashley and Kevin Ridout at Ofwat;
- Elinor Smith and John Collins at the Environment Agency;
- Bernard Crump (CCW Chair, Central and Eastern)
- Jeff Halliwell (Chair of Customer Engagement Forum)

Please contact Sue Pennison (Sue.Pennison@defra.gsi.gov.uk) with any queries relating to this letter.

Yours sincerely

A handwritten signature in blue ink that reads "Milo Purcell". The signature is written in a cursive style.

Milo Purcell
Deputy Chief Inspector

PERIODIC REVIEW 2019

SUMMARY OF DWI ASSESSMENT – LETTER OF SUPPORT

Comment	
<u>Water company:</u>	Anglian Water Services Limited
<u>DWI scheme reference(s):</u>	ANG01
<u>Scheme name:</u>	Gayton – Nitrate
<u>Proposal:</u>	Provision of Ion Exchange treatment at Gayton WTW to secure or facilitate compliance with the Nitrate standard for drinking water quality reasons.
<u>Supporting evidence:</u>	Risk assessment report for Gayton WTW Nitrate 2017/565365 dated 02 September 2017, submitted on 20 November 2017 Letter reference DWIPR19 Raw Water deterioration – Nitrate Gayton WTW from 29 December 2017.
<u>Conclusion:</u>	Subject to the caveats listed below, the Inspectorate supports the need for the following scheme: Installation of Ion Exchange treatment at Gayton
<u>Timescale:</u>	Completion date: not specified
<u>Estimated cost:</u>	Estimated capital costs: £4.15m Estimated net additional operating costs: £284k/pa
<u>Legal Instrument Required:</u>	Notice under Regulation 28 (4)
<u>Caveats:</u>	1. Subject to agreement to, and completion of, more intensive investigation to provide further information to confirm steps to be taken and project completion dates 2. Subject to continued catchment management work and quality monitoring
<u>Comment:</u>	DWI has no role in determining proportional allocation of expenditure. Where DWI technical support is given, this should not be taken by the company to imply that the scheme will be partially or wholly funded as a Quality item. It is noted that there is an WINEP scheme proposed for catchment investigations but this is yet to be fully agreed. Schemes that require a legal instrument are considered necessary to meet statutory drinking water quality requirements. These schemes will be transposed to formal programmes of work by DWI as soon as possible and their implementation and completion will be monitored, audited and closure confirmed by DWI.



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Director of Water Services
Anglian Water
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PE29 6XU

Dear Mr Valleley

PERIODIC REVIEW 2019: ANGLIAN WATER SERVICES LIMITED DWI Scheme reference: ANG02 – Irby Reservoir - Nitrate

FINAL DECISION LETTER

The Inspectorate has completed its detailed assessment of the scheme proposed by Anglian Water to provide ion exchange nitrate removal to secure or facilitate compliance with the nitrate standard for drinking water quality reasons at Irby reservoir.

The detailed assessment also took in to consideration the outcome of the risk assessment report submitted to the Inspectorate as required by regulation 28(1) of the Water Supply (Water Quality) Regulations 2016 for Irby reservoir and the connected supply system.

A summary of the outcome of our assessment of this scheme is attached. Based on the information submitted by the Company, the Inspectorate supports the need for a scheme to reduce nitrate concentrations in treated water for water quality reasons, and the supported scheme shall be included by the Company in its Final Business Plan, subject to the caveats listed in the attachment.

In this instance the Inspectorate intends to issue a Notice under Regulation 28(4) of the Water Supply (Water Quality) Regulations 2016, as amended, that requires the Company to mitigate the risk of nitrate that has been identified as a potential danger to human health from the water supplied from Irby reservoir.

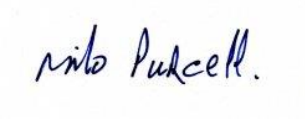
It is expected that the Company will continue to monitor treated water nitrate concentrations, and that it will take all reasonable steps to prevent contraventions of the nitrate standard.

I am copying this letter to:

- Jon Ashley and Kevin Ridout at Ofwat;
- Elinor Smith and John Collins at the Environment Agency;
- Bernard Crump (CCW Chair, Central and Eastern)
- Jeff Halliwell (Chair of Customer Engagement Forum)

Please contact Sue Pennison (Sue.Pennison@defra.gsi.gov.uk) with any queries relating to this letter.

Yours sincerely

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Milo Purcell
Deputy Chief Inspector

PERIODIC REVIEW 2019

SUMMARY OF DWI ASSESSMENT – LETTER OF SUPPORT

Comment	
<u>Water company:</u>	Anglian Water Services limited
<u>DWI scheme reference(s):</u>	ANG02
<u>Scheme name:</u>	Irby reservoir – nitrate
<u>Proposal:</u>	Provision of ion exchange nitrate removal treatment at Irby reservoir to secure or facilitate compliance with the nitrate standard for drinking water quality reasons.
<u>Supporting evidence:</u>	<p>Risk assessment report for Irby reservoir 1 - 2017/569102 dated 02 September 2017, submitted on 20 November 2017</p> <p>Letter reference DWI PR19 Raw water deterioration - Nitrate Irby WTW from December 2017 and the associated PR14 correspondence.</p>
<u>Conclusion:</u>	<p>Subject to the caveats listed below, the Inspectorate supports the need for the following scheme:</p> <p>To install an ion exchange nitrate removal treatment system at Irby reservoir which is the blending point for the four upstream sources of Habrough, Healing, Little London and Littlecoates.</p>
<u>Timescale:</u>	Completion date: not provided
<u>Estimated cost:</u>	Estimated capital costs: £27m
<u>Legal Instrument Required:</u>	Notice under Regulation 28 (4)
<u>Caveats:</u>	<ol style="list-style-type: none"> 1. Subject to agreement to, and completion of, more intensive investigation to provide further information to confirm steps to be taken and project completion dates 2. Subject to management of the blending flows until the ion exchange plant is operational 3. Subject to continued catchment management work in the local area
<u>Comment:</u>	DWI has no role in determining proportional allocation of expenditure. Where DWI technical support is given, this should not be taken by the company to imply that the scheme will be partially or wholly funded as a Quality item. It is noted that this scheme is proposed under the EA WINEP however this is still under development.



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30 May 2018

Mr Paul Valleley
Director of Water Services
Anglian Water
Huntingdon
Cambridgeshire
PE29 6XU

Dear Mr Valleley

PERIODIC REVIEW 2019: Anglian Water Services DWI Scheme reference: ANG3 –Lead Strategy - Lead

FINAL DECISION LETTER

The Inspectorate has completed its detailed assessment of the scheme proposed by Anglian Water Services to provide upgrading and installation of plumbosolvency treatment at selected WTW's as well as a scheme of lead pipe replacement to secure or facilitate compliance with the lead standard for drinking water quality reasons across the Anglian Water area.

The detailed assessment also took in to consideration the outcome of the risk assessment reports submitted to the Inspectorate as required by regulation 28(1) of the Water Supply (Water Quality) Regulations 2016 for supply systems across the Anglian area.

A summary of the outcome of our assessment of this scheme is attached. Based on the information submitted by the Company, the Inspectorate supports the need for a scheme to reduce lead concentrations in treated water for water quality reasons, and the supported scheme shall be included by the Company in its Final Business Plan, subject to the caveats listed in the attachment.

In this instance the Inspectorate intends to issue a Notice under Regulation 28(4) of the Water Supply (Water Quality) Regulations 2016, as amended, that requires the Company to mitigate the risk of lead that has been identified as a potential danger to human health from the water supplied across the Anglian area.

It is expected that the Company will continue to monitor treated water lead concentrations, and that it will take all reasonable steps to prevent contraventions of the lead] standard.

I am copying this letter to:

- Jon Ashley and Kevin Ridout at Ofwat;

- Elinor Smith and John Collins at the Environment Agency;
- Bernard Crump (CCW Chair, Central and Eastern)
- Jeff Halliwell (Chair of Customer Engagement Forum)

Please contact Sue Pennison (Sue.Pennison@defra.gsi.gov.uk) with any queries relating to this letter.

Yours sincerely

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Milo Purcell
Deputy Chief Inspectorate (Regulations)

PERIODIC REVIEW 2019

SUMMARY OF DWI ASSESSMENT – LETTER OF SUPPORT

Comment	
<u>Water company:</u>	Anglian Water Services
<u>DWI scheme reference(s):</u>	ANG 3
<u>Scheme name:</u>	Lead Strategy
<u>Proposal:</u>	Provision of an integrated strategy across the Anglian Water area to secure or facilitate compliance with the lead standard for drinking water quality reasons.
<u>Supporting evidence:</u>	Letter reference- DWI PR 19 Lead Strategy. 29 December 2017 - Anglian Lead Strategy 29/12/2017
<u>Conclusion:</u>	<p>Subject to the caveats listed below, the Inspectorate supports the need for the following scheme:</p> <p>Anglian Water Services to provide upgrading and installation of plumbosolvency treatments at selected WTW's as well as a scheme of lead pipe replacement.</p>
<u>Timescale:</u>	Completion date: Within AMP 7.
<u>Estimated cost:</u>	<p>Estimated capital costs: £46, 214, 650</p> <p>Estimated net additional operating costs: NA</p>
<u>Legal Instrument Required:</u>	Notice under Regulation 28 (4)
<u>Caveats:</u>	None
<u>Comment:</u>	<p>DWI has no role in determining proportional allocation of expenditure. Where DWI technical support is given, this should not be taken by the company to imply that the scheme will be partially or wholly funded as a Quality item.</p> <p>Schemes that require a legal instrument are considered necessary to meet statutory drinking water quality requirements. These schemes will be transposed to formal programmes of work by DWI as soon as possible and their implementation and completion will be monitored, audited and closure confirmed by DWI.</p>



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Director of Water Services
Anglian Water
Huntingdon
Cambridgeshire
PE29 6XU

Dear Mr Valleley

PERIODIC REVIEW 2019: ANGLIAN WATER SERVICES LIMITED DWI Scheme reference: ANG04 – Little Saxham reservoir - Nitrate

FINAL DECISION LETTER

The Inspectorate has completed its detailed assessment of the scheme proposed by Anglian Water to provide to secure or facilitate compliance with the nitrate standard for drinking water quality reasons at Little Saxham reservoir.

The detailed assessment also took in to consideration the outcome of the risk assessment report submitted to the Inspectorate as required by regulation 28(1) of the Water Supply (Water Quality) Regulations 2016 for Little Saxham reservoir and connected supply system.

A summary of the outcome of our assessment of this scheme is attached. Based on the information submitted by the Company, the Inspectorate supports the need for a scheme to reduce nitrate concentrations in treated water for water quality reasons, and the supported scheme shall be included by the Company in its Final Business Plan, subject to the caveats listed in the attachment.

In this instance the Inspectorate intends to issue a Notice under Regulation 28(4) of the Water Supply (Water Quality) Regulations 2016, as amended, that requires the Company to mitigate the risk of nitrate that has been identified as a potential danger to human health from the water supplied from Little Saxham reservoir.

It is expected that the Company will continue to monitor treated water nitrate concentrations, and that it will take all reasonable steps to prevent contraventions of the nitrate standard.

I am copying this letter to:

- Jon Ashley and Kevin Ridout at Ofwat;
- Elinor Smith and John Collins at the Environment Agency;
- Bernard Crump (CCW Chair, Central and Eastern)
- Jeff Halliwell (Chair of Customer Engagement Forum)

Please contact Sue Pennison (Sue.Pennison@defra.gsi.gov.uk) with any queries relating to this letter.

Yours sincerely

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Milo Purcell
Deputy Chief Inspector

PERIODIC REVIEW 2019

SUMMARY OF DWI ASSESSMENT – LETTER OF SUPPORT

Comment	
<u>Water company:</u>	Anglian Water Services Limited
<u>DWI scheme reference(s):</u>	ANG04
<u>Scheme name:</u>	Little Saxham Reservoir - nitrate
<u>Proposal:</u>	Provision of ion exchange nitrate removal treatment at Little Saxham to secure or facilitate compliance with the nitrate standard for drinking water quality reasons.
<u>Supporting evidence:</u>	Risk assessment report for Little Saxham reservoir - 2017/580112 dated 02 September 2017, submitted on 20 November 2017 Letter reference DWI PR19 Raw water deterioration - Nitrate Little Saxham WTW from 29 December 2017
<u>Conclusion:</u>	Subject to the caveats listed below, the Inspectorate supports the need for the following scheme: Install ion exchange nitrate removal treatment at Little Saxham reservoir which is the blending point for the two upstream sources of Barrow Heath and Risby.
<u>Timescale:</u>	Completion date: not specified
<u>Estimated cost:</u>	Estimated capital costs: £8.9m
<u>Legal Instrument Required:</u>	Notice under Regulation 28 (4)
<u>Caveats:</u>	<ol style="list-style-type: none"> 1. Subject to agreement to, and completion of, more intensive investigation to provide further information to confirm steps to be taken and project completion dates 2. Subject to continued management of the nitrate levels through blending 3. Subject to continued catchment management work to plan for the long term reduction of nitrate levels within the groundwater.
<u>Comment:</u>	DWI has no role in determining proportional allocation of expenditure. Where DWI technical support is given, this should not be taken by the company to imply that the scheme will be partially or wholly funded as a Quality item. It is noted that there is an WINEP scheme for catchment investigations to identify sources of nitrate, however this is still under development and full details have yet to be agreed



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Mr Paul Valleley
Director of Water Services
Anglian Water
Huntingdon
Cambridgeshire
PE29 6XU

Dear Mr Valleley

PERIODIC REVIEW 2019: ANGLIAN WATER SERVICES LIMITED DWI Scheme reference: ANG05 – Water in Buildings – Various parameters

FINAL DECISION LETTER

The Inspectorate has completed its detailed assessment of the scheme proposed by Anglian Water to provide an enhanced programme of inspections and working with customers and suppliers on water fittings in buildings to secure or facilitate compliance with Water Supply (Water Quality) Regulations 2016.

A summary of the outcome of our assessment of this scheme is attached. Based on the information submitted by the Company, the Inspectorate supports the need for a scheme for water quality reasons, and the supported scheme shall be included by the Company in its Final Business Plan, subject to the caveats listed in the attachment.

In this instance the Inspectorate intends to issue a Notice under Regulation 28(4) of the Water Supply (Water Quality) Regulations 2016, as amended that requires the Company to mitigate the risks posed by customer's water fittings.

It is expected that the Company will continue to monitor drinking water quality at customer taps and that it will take all reasonable steps to respond to compliance exceedences for a variety of substances, single property events, and customer complaints, attributed to plumbing and fittings contraventions within buildings.

I am copying this letter to:

- Jon Ashley and Kevin Ridout at Ofwat;
- Elinor Smith and John Collins at the Environment Agency;
- Bernard Crump (CCW Chair, Central and Eastern)
- Jeff Halliwell (Chair of Customer Engagement Forum)

Please contact Sue Pennison (Sue.Pennison@defra.gsi.gov.uk) with any queries relating to this letter.

Yours sincerely

Milo Purcell.

Milo Purcell
Deputy Chief Inspector

PERIODIC REVIEW 2019

SUMMARY OF DWI ASSESSMENT – LETTER OF SUPPORT

Comment	
<u>Water company:</u>	Anglian Water Services limited
<u>DWI scheme reference(s):</u>	ANG05
<u>Scheme name:</u>	Water in Buildings
<u>Proposal:</u>	<ol style="list-style-type: none"> 1. Enhanced public buildings inspections 2. Point of use installation trial 3. Collaborative approach working with trading standards 4. Customer awareness and behaviour campaign
<u>Supporting evidence:</u>	<p>PR19 submission 29/12/2017.</p> <p>Assessment of the risks to water quality relating to water in buildings which is detailed in the Consumer stage of our Water Quality Risk Portal and Regulation 28 risk reports to the DWI.</p> <p>Hazards relating to water in buildings have been identified as: TCP, <i>Clostridium perfringens</i>, coliform bacteria, colony counts, copper, <i>Cryptosporidium</i>, discolouration, E.coli, Enterococci, hydrocarbons, iron, lead, manganese, nickel, odour, particles, sodium, solvents, taste, turbidity and zinc.</p>
<u>Conclusion:</u>	<p>Subject to the caveats listed below, the Inspectorate supports the need for the following scheme:</p> <ol style="list-style-type: none"> 1. Enhanced public buildings inspections 2. Point of use installation trial 3. Collaborative approach working with trading standards 4. Customer awareness and behaviour campaign
<u>Timescale:</u>	Completion date: 2025
<u>Estimated cost:</u>	Estimated capital costs: £8m
<u>Legal Instrument Required:</u>	Notice under Regulation 28 (4)
<u>Caveats:</u>	None
<u>Comment:</u>	DWI has no role in determining proportional allocation of expenditure. Where DWI technical support is given, this should not be taken by the company to imply that the scheme will be partially or wholly funded as a Quality item. It is noted that this scheme is proposed under the EA WINEP however this is still under development.



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Director of Water Services
Anglian Water
Huntingdon
Cambridgeshire
PE29 6XU

Dear Mr Valleley

PERIODIC REVIEW 2019: ANGLIAN WATER SERVICES LIMITED DWI Scheme reference: ANG06 – Wighton WTW - Nitrate

FINAL DECISION LETTER

The Inspectorate has completed its detailed assessment of the scheme proposed by Anglian Water to provide an ion exchange nitrate removal treatment facility to secure or facilitate compliance with the nitrate standard for drinking water quality reasons at Wighton WTW.

The detailed assessment also took in to consideration the outcome of the risk assessment report submitted to the Inspectorate as required by regulation 28(1) of the Water Supply (Water Quality) Regulations 2016 for Wighton WTW and the connected supply system.

A summary of the outcome of our assessment of this scheme is attached. Based on the information submitted by the Company, the Inspectorate supports the need for a scheme to reduce nitrate concentrations in treated water for water quality reasons, and the supported scheme shall be included by the Company in its Final Business Plan, subject to the caveats listed in the attachment.

In this instance the Inspectorate intends to issue a Notice under Regulation 28(4) of the Water Supply (Water Quality) Regulations 2016, as amended, that requires the Company to mitigate the risk of nitrate that has been identified as a potential danger to human health from the water supplied from Wighton WTW.

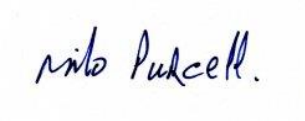
It is expected that the Company will continue to monitor treated water nitrate concentrations, and that it will take all reasonable steps to prevent contraventions of the nitrate standard.

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Milo Purcell
Deputy Chief Inspector

PERIODIC REVIEW 2019

SUMMARY OF DWI ASSESSMENT – LETTER OF SUPPORT

Comment	
<u>Water company:</u>	Anglian Water Services Limited
<u>DWI scheme reference(s):</u>	ANG06
<u>Scheme name:</u>	Wighton WTW – Nitrate
<u>Proposal:</u>	Provision of ion exchange nitrate removal treatment at Wighton WTW to secure or facilitate compliance with the nitrate standard for drinking water quality reasons.
<u>Supporting evidence:</u>	Risk assessment report for Wighton WTW nitrate 2017/584005 dated 02 September 2017, submitted on 20 November 2017 Letter reference DWI_PR19 Raw water deterioration - Nitrate Wighton WTW December 2017.
<u>Conclusion:</u>	Subject to the caveats listed below, the Inspectorate supports the need for the following scheme: Install an ion exchange nitrate removal treatment facility at Wighton WTW to treat water abstracted from the two on site boreholes
<u>Timescale:</u>	Completion date: not specified
<u>Estimated cost:</u>	Estimated capital costs: £3.8m
<u>Legal Instrument Required:</u>	Notice under Regulation 28 (4)
<u>Caveats:</u>	<ol style="list-style-type: none"> 1. Subject to agreement to, and completion of, more intensive investigation to provide further information to confirm steps to be taken and project completion dates 2. Subject to continued catchment management work to plan for the long term reduction of nitrate levels within the groundwater.
<u>Comment:</u>	<p>DWI has no role in determining proportional allocation of expenditure. Where DWI technical support is given, this should not be taken by the company to imply that the scheme will be partially or wholly funded as a Quality item. It is noted that there is a WINEP scheme for catchment investigations to identify sources of nitrate however this is still in development and has not yet been finalised.</p> <p>Schemes that require a legal instrument are considered necessary to meet statutory drinking water quality requirements. These schemes will be transposed to</p>

	formal programmes of work by DWI as soon as possible and their implementation and completion will be monitored, audited and closure confirmed by DWI.
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