



**Notice under regulation 28(4) of the Water Supply (Water Quality) Regulations 2016 (as amended)**

**Anglian Water Services Limited – AMP8 Warren Hill PFAS**

Reference: ANH-2024-00001

Version Number: 1

Water undertaker as appointed under section 6 of the Water Industry Act 1991 (as amended): Anglian Water Services Limited, with registered number 02366656 (hereinafter called ‘the Company’).

**Assets Affected:**

- Southfields Source CSTH0WV
- Southfields Bore 3 ASTH3CV
- Southfields Bore 4 ASTH4CV
- Southfields WTW TSTHF
- Warren Hill 1 Reservoir TWH1
- Newmarket PWSZ ZFS03
- Cheveley PWSZ ZFE36
- Bottisham PWSZ ZFE35

**Details of this Notice:**

1. The Drinking Water Inspectorate (‘the Inspectorate’) has received a regulation 28(1) report of the Water Supply (Water Quality) Regulations 2016 (as amended) (‘the Regulations’) from the Company dated 2 July 2024, which states that there is or has been a significant risk of supplying water from Southfields borehole sources (and associated assets as applicable) that could constitute a potential danger to human health or could be unwholesome.

2. Consequently, this Notice is served on the Company by the Inspectorate on behalf of the Secretary of State, under regulation 28(4) for the assets listed above, for risks associated with:

Table 1: Table of the hazards, hazardous events, and/or parameters covered by this Notice, including the Hazard I D numbers and the description of risks.

Description of Risk	Hazard/ Hazardous Event/ Parameter	Hazard I D
Increasing PFAS to Tier 2 target breach.	H067 Per- and polyfluoroalkyl substances (PFAS)	Various including: Southfields WTW ANH-TSTHF-H067-TR3605

3. The Company are required to satisfy the following requirements.

The date given is that until or by which the requirements must be maintained or satisfied, as appropriate.

**Requirements:**

**(a) To maintain the following measures for the period specified in each case:**

1. Regular review and update of the ground water risk assessments.  
**Date: Ongoing for the duration of this Notice**
2. Operational and regulatory monitoring for PFAS at the raw water source, and final water at Southfields WTW and Warren Hill Reservoir No 1.  
**Date: Ongoing for the duration of this Notice**
3. Tier 2 sample results on the final water investigated in line with company procedures.  
**Date: Ongoing for the duration of this Notice**
4. Understand the PFAS risks from the catchment investigations and continue to understand catchment management opportunities and control measures. **Date: Ongoing for the duration of this Notice**

**(b) To review, revise or make operational the following measures, by the dates specified in each case:**

1. The Company will take all reasonable steps to ensure that the PFAS levels do not exceed Tier 3 on the final water and any steps necessary must be taken to protect public health. If the concentration in any water sample exceeds the Tier 3, in water supplied to consumers, reasonable measures will be taken to

protect public health in consultation with local health professionals.

**Date: Ongoing for the duration of this Notice**

2. Report any Tier 2 PFAS triggers on the Warren Hill 1 Reservoir or Southfields WTW final water to; DWI, UKHSA and Local Authorities as per the reporting requirements.

**Date: Ongoing for the duration of this Notice**

3. Continually appraise the risk of PFAS as a hazard as part of the Regulation 27 Risk Assessment for the supply systems supplied by Southfields raw water Sources, Southfields WTW treated water and Warren Hill 1 Reservoir final water, according to a Drinking Water Safety Plan approach, and ensure that Regulation 28 documents are regularly reviewed and updates provided as necessary.

**Date: Ongoing for the duration of this Notice**

4. Complete the planning, design and procurement arrangements to provide GAC treatment on the Southfields raw water sources.

**Date: 31 July 2027**

5. Complete construction, installation and commissioning of GAC treatment on the Southfields raw water sources.

**Date: 31 March 2030**

**(c) To audit whether the measures have been effective by the following means:**

1. Define an audit strategy to monitor the effectiveness of the measures specified in sections (a) and (b).

**Date: 31 October 2024**

2. Implement, and keep under continuous review, the audit strategy defined in measure (c)1.

**Date: Following completion of measure (c)1. onwards.**

**(d) Not to supply water for regulation 4(1) purposes from Southfields borehole sources, or not to so supply unless the specified conditions below are satisfied:**

1. Not applicable.

**(e) To provide the following information in the time and manner specified below to enable monitoring of progress towards the mitigation of the risks:**

1. Provide a progress report annually.  
**Date: by 31 January each year.**
  
2. Provide a report confirming completion of the planning, design and procurement arrangements to provide GAC treatment for the Southfields raw water sources.  
**Date: 31 August 2027**
  
3. Provide a report confirm completion of construction, installation and commissioning of the GAC treatment at the Southfields raw water sources. Commissioning must include the following to account for the changes made:
  - An appropriate maintenance regime for any installed processes.
  - Full integration of the new (or modified) processes into the site control and monitoring systems.
  - Updating of the Site-Specific Disinfection Policy and any associated site-specific procedures.
  - Updating of the Site Operating Manual and removal of all out-of-date material from circulation.
  - Provisions of adequate training for all relevant personnel on the operation, repair and maintenance of the installed (or modified) process and the revised procedures, policies and manual.**Date: 30 April 2030**
  
4. Review the risk assessments for Southfields raw water sources as required by Regulation 27(4)  
**Date: 30 April 2030**
  
5. Submit the audit strategy for auditing the effectiveness of the measures, as specified in measure (c)1.  
**Date: 30 November 2024**
  
6. Submit any revisions of the audit strategy produced under measure (c)2.  
**Date: Within 1 month of a revision**

7. Submit a report in the event that any completed measures of this Notice need to be altered in any way, for any reason.

**Date: Ongoing for the duration of this Notice**

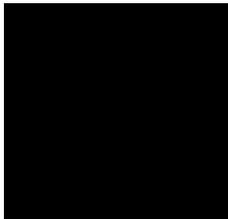
8. Submit a satisfactory completion report accompanied by a revised regulation 28(1) report with Board level Director sign-off.

**Date: 30 April 2031**

**Further Details of this Notice:**

4. Any product or substance used as a result of the requirements in this Notice must comply with regulation 31.
5. Under regulation 28(6) the Inspectorate, on behalf of the Secretary of State, may by notice served on the Company, revoke or vary this Notice.
6. Failure by the Company to comply with this Notice may result in enforcement proceedings under section 18 of the Water Industry Act 1991 (as amended).

Signed



Deputy Chief Inspector, on behalf of the Secretary of State for Environment, Food and Rural Affairs

12 August 2024

Reference: ANH-2024-00001



Drinking Water Inspectorate

Area 1A, Nobel House 17 Smith

Square London SW1P 3JR

Enquiries: 0330 041 6501 E-

mail:

[DWI.Enforcement@defra.gov.uk](mailto:DWI.Enforcement@defra.gov.uk)

DWI Website: [www.dwi.gov.uk](http://www.dwi.gov.uk)

DWI reference: ANH25

04 July 2024

██████████  
Director Of Water Business Stream  
Anglian Water Services Ltd  
Enterprise House  
Witham Park  
Lincoln  
Lincolnshire  
LN5 7JE

Dear ██████████

**Periodic Review 2024: Anglian Water Services Ltd**

**DWI Scheme reference: ANH25 - Warren Hill - PFAS**

**Final Decision Letter – Support Proposed Scheme**

The Inspectorate has completed its detailed assessment of the scheme proposed by Anglian Water Services Ltd to provide granular activated carbon (GAC) at Southfields boreholes 3 and 4 to mitigate the risk from PFAS for drinking water quality reasons at Warren Hill Reservoir 1 (and associated assets as applicable). This was a late submission, received by the Inspectorate on 02 July 2024. A summary of the outcome of our assessment of this scheme is attached.

The detailed assessment considered the outcome of the risk assessment report(s) dated 01 July 2024, that was submitted to the Inspectorate as required by regulation 28(1) of the Water Supply (Water Quality) Regulations 2016 (as amended) for Warren Hill Reservoir 1 (and associated assets as applicable).

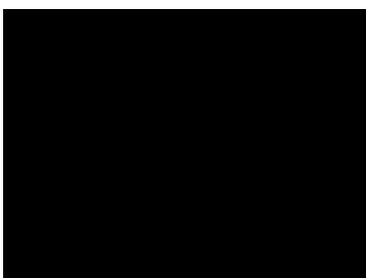
Based on the information submitted by the Company, the Inspectorate **supports** the need for this scheme, for water quality reasons, and the supported scheme shall be included by the Company in its AMP8 plans, subject to the caveats listed in the attachment.

Consequently, a blank regulation 28(4) notice template has been attached to this letter for the Company's review. I would be grateful if the Company could add measures as appropriate, to this template and submit the completed template to [DWI.Enforcement@defra.gov.uk](mailto:DWI.Enforcement@defra.gov.uk) by 1 August 2024.

I am copying this letter to

- [REDACTED], Ofwat;
- [REDACTED], Environment Agency;
- [REDACTED], CCWater.

Yours sincerely



Deputy Chief Inspector, on behalf of the Secretary of State for Environment, Food and Rural Affairs

Cc [REDACTED], Anglian Water Services Ltd

Cc [REDACTED], Principal Inspector (Enforcement), Drinking Water Inspectorate

Cc [REDACTED], Company Liaison Inspector, Drinking Water Inspectorate

Cc [REDACTED], Principal Inspector, Drinking Water Inspectorate

## **Periodic Review 2024: Late Submission Scheme.**

### **Summary of DWI Assessment – Supported**

Water Company Name: Anglian Water Services Ltd

DWI Scheme Reference: ANH25

Scheme Name: Warren Hill PFAS

Proposal:

Granular activated carbon (GAC) at Southfield boreholes 3 and 4.

Supporting Evidence:

Risks described in the formal PR24 submission and accompanying regulation 28(1) risk assessments, provided to the Drinking Water Inspectorate.

Conclusion:

The Drinking Water Inspectorate supports the delivery of this scheme in order to secure or maintain drinking water quality.

Caveats: None

Timescale: End of AMP (not yet specified, but to be specified in the notice)

Estimated Cost: CAPEX £13,996.08k, OPEX £0.842k

Legal Instrument Required: Regulation 28(4) Notice

Comment:

The Inspectorate has no role in determining proportional allocation of expenditure. Where technical support from the Inspectorate 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. We note that it is late in the Price Review process, with Ofwat due to publish its draft determinations on 11 July 2024. This letter does not seek to undermine that process, nor should it be used as such. We encourage the company to engage with Ofwat on this matter at the earliest opportunity.



**Notice under regulation 28(4) of the Water Supply (Water Quality) Regulations 2016 (as amended)**

**Anglian Water Services Limited – AMP8 Barrow PFAS**

Reference: ANH-2024-00002

Version Number: 1

Water undertaker as appointed under section 6 of the Water Industry Act 1991 (as amended): Anglian Water Services Limited, with registered number 02366656 (hereinafter called 'the Company').

**Assets Affected:**

- Barrow Source CBRW0WV
- Barrow Borehole 1 ABRW1CV
- Barrow Borehole 2 ABRW2CV
- Barrow Borehole 3 ABRW3CV
- Barrow Borehole 4 ABRW4CV
- Barrow Borehole 6 ABRW6CV
- Barrow Borehole 7 ABRW7CV
- Goxhill 1 Source CGOX0WV
- Goxhill 1 Borehole 3 AGOX3CV
- Goxhill 1 Borehole 4 AGOX4CV
- Thornton Source CTHO0WV
- Thornton Borehole 1 ATHO1CV
- Thornton Borehole 2 ATHO2CV
- Thornton Borehole 3 ATHO3CV
- Barrow WTW TBRW1
- Barrow PWSZ ZLN04
- Kirton in Lindsey PWSZ ZLN76

## Details of this Notice:

1. The Drinking Water Inspectorate ('the Inspectorate') has received a regulation 28(1) report of the Water Supply (Water Quality) Regulations 2016 (as amended) ('the Regulations') from the Company dated 2 July 2024, which states that there is or has been a significant risk of supplying water from Barrow Water Treatment Works (and associated assets as applicable) that could constitute a potential danger to human health or could be unwholesome.
2. Consequently, this Notice is served on the Company by the Inspectorate on behalf of the Secretary of State, under regulation 28(4) for the assets listed above, for risks associated with:

Table 1: Table of the hazards, hazardous events, and/or parameters covered by this Notice, including the Hazard I D numbers and the description of risks.

Description of Risk	Hazard/ Hazardous Event/ Parameter	Hazard I D
Increasing PFAS to tier 2 target breach.	H067 Per- and polyfluoroalkyl substances (PFAS)	Various including: Barrow Source ANH- CBRW0WV-H067-CA0211

3. The Company are required to satisfy the following requirements.

The date given is that until or by which the requirements must be maintained or satisfied, as appropriate.

### Requirements:

#### (a) To maintain the following measures for the period specified in each case:

1. Regular review and update of the ground water risk assessments.  
**Date: Ongoing for the duration of this Notice**
2. Operational and regulatory monitoring for PFAS at the raw water sources, and final water at Barrow WTW.  
**Date: Ongoing for the duration of this Notice**
3. Tier 2 sample results on the final water investigated in line with company procedures.  
**Date: Ongoing for the duration of this Notice**
4. Understand the PFAS risks from the catchment investigations and continue to understand catchment management opportunities and control measures. **Date: Ongoing for the duration of this Notice**

**(b) To review, revise or make operational the following measures, by the dates specified in each case:**

1. The Company will take all reasonable steps to ensure that the PFAS levels do not exceed Tier 3 on the final water and any steps necessary must be taken to protect public health. If the concentration in any water sample exceeds the Tier 3, in water supplied to consumers, reasonable measures will be taken to protect public health in consultation with local health professionals.

**Date: Ongoing for the duration of this Notice**

2. Report any Tier 2 PFAS triggers on the Barrow WTW final water to DWI, UKHSA and Local Authorities as per the reporting requirements.

**Date: Ongoing for the duration of this Notice**

3. Continually appraise the risk of PFAS as a hazard as part of the Regulation 27 Risk Assessment for the supply systems supplied by the Barrow WTW raw water sources and Barrow WTW final water, according to a Drinking Water Safety Plan approach, and ensure that Regulation 28 documents are regularly reviewed and updates provided as necessary.

**Date: Ongoing for the duration of this Notice**

4. Complete the planning, design and procurement arrangements to provide GAC treatment on the raw water sources supplying Barrow WTW.

**Date: 31 August 2027**

5. Complete the construction, installation and commissioning of GAC treatment on the raw water sources supplying Barrow WTW.

**Date: 31 March 2030**

**(c) To audit whether the measures have been effective by the following means:**

1. Define an audit strategy to monitor the effectiveness of the measures specified in sections (a) and (b).

**Date: 31 October 2024**

2. Implement, and keep under continuous review, the audit strategy defined in measure (c)1.

**Date: Following completion of measure (c)1. onwards.**

**(d) Not to supply water for regulation 4(1) purposes from Barrow Water Treatment Works, or not to so supply unless the specified conditions below are satisfied:**

1. Not applicable.

**(e) To provide the following information in the time and manner specified below to enable monitoring of progress towards the mitigation of the risks:**

1. Provide a progress report annually.  
**Date: by 31 January each year.**
2. Provide a report confirming the completion of the planning, design and procurement arrangements to provide GAC treatment on the raw water sources supplying Barrow WTW.  
**Date: 30 September 2027**
3. Provide a report confirming the completion of construction, installation and commissioning of the GAC treatment on the raw water sources supplying Barrow WTW. Commissioning must include the following to account for the changes made:
  - An appropriate maintenance regime for any installed processes.
  - Full integration of the new (or modified) processes into the site control and monitoring systems.
  - Updating of the Site-Specific Disinfection Policy and any associated site-specific procedures.
  - Updating of the Site Operating Manual and removal of all out-of-date material from circulation.
  - Provisions of adequate training for all relevant personnel on the operation, repair and maintenance of the installed (or modified) process and the revised procedures, policies and manual.**Date: 30 April 2030**
4. Review the risk assessments for Barrow Water Treatment Works raw water sources as required by Regulation 27(4).  
**Date: 30 April 2030**
5. Submit the audit strategy for auditing the effectiveness of the measures, as specified in measure (c)1.  
**Date: 30 November 2024**
6. Submit any revisions of the audit strategy produced under measure (c)2.  
**Date: Within 1 month of a revision**

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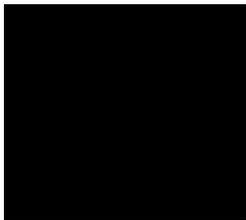
8. Submit a satisfactory completion report accompanied by a revised regulation 28(1) report with Board level Director sign-off.

**Date: 30 April 2031**

**Further Details of this Notice:**

4. Any product or substance used as a result of the requirements in this Notice must comply with regulation 31.
5. Under regulation 28(6) the Inspectorate, on behalf of the Secretary of State, may by notice served on the Company, revoke or vary this Notice.
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Signed



Deputy Chief Inspector, on behalf of the Secretary of State for Environment, Food and Rural Affairs

12 August 2024

Reference: ANH-2024-00002





Drinking Water Inspectorate

Area 1A, Nobel House 17 Smith

Square London SW1P 3JR

Enquiries: 0330 041 6501 E-

mail:

[DWI.Enforcement@defra.gov.uk](mailto:DWI.Enforcement@defra.gov.uk)

DWI Website: [www.dwi.gov.uk](http://www.dwi.gov.uk)

DWI reference: ANH24

04 July 2024

██████████  
Director Of Water Business Stream  
Anglian Water Services Ltd  
Enterprise House  
Witham Park  
Lincoln  
Lincolnshire  
LN5 7JE

Dear ██████████

## **Periodic Review 2024: Anglian Water Services Ltd**

**DWI Scheme reference: ANH24 - Barrow - PFAS**

### **Final Decision Letter – Support Proposed Scheme**

The Inspectorate has completed its detailed assessment of the scheme proposed by Anglian Water Services Ltd to provide granular activated carbon (GAC) to mitigate the risk from PFAS for drinking water quality reasons at Barrow Water Treatment Works (and associated assets as applicable). This was a late submission, received by the Inspectorate on 02 July 2024. A summary of the outcome of our assessment of this scheme is attached.

The detailed assessment considered the outcome of the risk assessment report(s) dated 01 July 2024, that was submitted to the Inspectorate as required by regulation 28(1) of the Water Supply (Water Quality) Regulations 2016 (as amended) for Barrow Water Treatment Works (and associated assets as applicable).

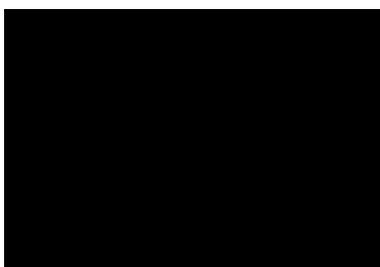
Based on the information submitted by the Company, the Inspectorate **supports** the need for this scheme, for water quality reasons, and the supported scheme shall be included by the Company in its AMP8 plans, subject to the caveats listed in the attachment.

Consequently, a blank regulation 28(4) notice template has been attached to this letter for the Company's review. I would be grateful if the Company could add measures as appropriate, to this template and submit the completed template to [DWI.Enforcement@defra.gov.uk](mailto:DWI.Enforcement@defra.gov.uk) by 1 August 2024.

I am copying this letter to

- [REDACTED], Ofwat;
- [REDACTED], Environment Agency;
- [REDACTED], CCWater.

Yours sincerely



Deputy Chief Inspector, on behalf of the Secretary of State for Environment, Food and Rural Affairs

Cc [REDACTED], Anglian Water Services Ltd

Cc [REDACTED], Principal Inspector (Enforcement), Drinking Water Inspectorate

Cc [REDACTED], Company Liaison Inspector, Drinking Water Inspectorate

Cc [REDACTED], Principal Inspector, Drinking Water Inspectorate

## **Periodic Review 2024: Late Submission Scheme.**

### **Summary of DWI Assessment – Supported**

Water Company Name: Anglian Water Services Ltd

DWI Scheme Reference: ANH24

Scheme Name: Barrow PFAS

Proposal:

**Granular activated carbon (GAC).**

Supporting Evidence:

Risks described in the formal PR24 submission and accompanying regulation 28(1) risk assessments, provided to the Drinking Water Inspectorate.

Conclusion:

The Drinking Water Inspectorate supports the delivery of this scheme in order to secure or maintain drinking water quality.

Caveats: None

Timescale: End of AMP (not yet specified, but to be specified in the notice)

Estimated Cost: CAPEX £27.697m, OPEX £462k

Legal Instrument Required: Regulation 28(4) Notice

Comment:

The Inspectorate has no role in determining proportional allocation of expenditure. Where technical support from the Inspectorate 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. We note that it is late in the Price Review process, with Ofwat due to publish its draft determinations on 11 July 2024. This letter does not seek to undermine that process, nor should it be used as such. We encourage the company to engage with Ofwat on this matter at the earliest opportunity.









