Documents referred to

Extracts only, provided for the Inspector's convenience. Nothing here is new evidence beyond what the response cites. Tabs C1, C2, C4 and C5 are typed extracts or summaries of published datasets. Annex page numbers are stamped bottom right of each page.

Tab	Document	Extract	Response	Pages
A	**Environment Agency permits (public register)**			
A1	Pulborough WwTW: permit A1507/S/07, variation V002 (25 November 2021)	cover; Tables S3.1a/b (limits from 31 March 2025: no phosphorus or total nitrogen limit); S3.2 (discharge to River Stor)	Issue 1	2 to 5
A2	Horsham WwTW: permit variation V009 (4 November 2025)	status log (phosphorus removal 'under the WFD_IMPm driver')	Issue 1	6
A3	Rudgwick (Chephurst Copse) WwTW: administrative variation V003 (8 July 2025)	status log (AMP7 improvements '(IMPm)')	Issue 1	7
A4	Storrington WwTW: permit variation V002 (20 December 2024)	introductory note (phosphorus removal 'under the WFD_IMPg driver')	Issue 1	8
B	**Environment Agency compliance assessment reports (public register)**			
B1	S/0743456: Billingshurst pumping station (event 27 December 2020; report 4 February 2021)	pp.1 to 2 (C3, volume or rate of discharge)	Issue 1	9 to 10
B2	I/0748421: Billingshurst pumping station (16 November 2022)	pp.1 to 2	Issue 1	11 to 12
B3	I/545569: Billingshurst WwTW (desk assessment, 18 January 2025)	pp.1 to 2 (C3)	Issue 1	13 to 14
B4	I/547018: Billingshurst pumping station (17 March 2025)	pp.1 to 2 (C3)	Issue 1	15 to 16
B5	C0013083: Billingshurst WwTW (site inspection, 22 June 2026)	pp.1, 2 and 5 (non-compliance; '3, 6K tankers a day')	Issues 1 and 2	17 to 19
B6	S/571465: Pulborough WwTW (site inspection, 31 July 2025)	pp.1 to 2 (primary tanks 'full and surcharged')	Issue 2	20 to 21
B7	C0007746: Pulborough WwTW (pollution incident, assessed 18 February 2026)	pp.1 to 3 (sludge spill reaching the watercourse)	Issue 1	22 to 24
C	**Other published data**			
C1	Catchment Data Explorer: Stor (GB107041012100), phosphate	typed extract	Issue 1	25
C2	PR24 WINEP: action 08SO101055a	typed extract	Issue 1	26
C3	Southern Water, DWMP Technical Summary: Population Growth and Urban Creep (August 2021)	Appendix B (Billingshurst: 10% spare DWF capacity in 2020, minus 6% by 2050)	Issue 2	27 to 28
C4	Southern Water, DWMP Annual Progress Report 2026	typed extract (Billingshurst and Pulborough)	Issue 2	29
C5	Environment Agency Water Quality Archive: SO-F0002868 and SO-F0003095	summary of nutrient determinands	Issues 1 and 3	30
D	**Natural England reports (cited pages)**			
D1	NERR143, Condition review of the Arun Valley sites: freshwater-dependent features	pp.145 and 169	Issue 2	31 to 32
D2	NECR603, Amberley Wildbrooks SSSI eco-hydrology and peat assessment	pp.11 and 82	Issue 2	33 to 34

Documents already in the examination library: HDCJB12 and its footnoted sources, including Natural England's Site Improvement Plan (footnote 52); SD07; HDCJB19; HDCJB28 and Appendices 1, 3 and 4; the Schedule of Main Modifications; Southern Water's main modifications response (14 August 2026); Natural England comment /887; the Quod EIA scoping report (Ms Pedan's Matter 6d statement, Appendix 1); Ms Pedan's Matter 5b statement.

Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2016

Southern Water Services Limited

Pulborough Wastewater Treatment Works
Marehill Road
Pulborough
West Sussex
RH20 2EJ

Variation application number

A1507/S/07/V002

Permit number

A1507/S/07

Table S3.1a Point Source emissions to water (other than sewer) – emission limits and monitoring requirements Effective upto and including 30 March 2025						
Effluent(s) and discharge point(s)	**Parameter**	**Limit (including unit)**	**Reference Period**	**Limit of effective range**	**Monitoring frequency**	**Compliance Statistic**
	ATU-BOD as O_2 (UWWTR)	50 mg/l	24 hour composite	This limit does not apply if a sample has met the 70% removal standard	As specified in schedule 3C	Maximum (Condition 3.1.4 applies)
	COD as O_2 (UWWTR)	Minimum of 75 % removal compared to influent	24 hour composite	To be compliant a sample has to meet the 75% removal standard or the 125 mg/l limit not both	As specified in schedule 3C	Look up table (Conditions 3.1.2 and 3.1.4 apply)
	COD as O_2 (UWWTR)	125 mg/l				
	COD as O_2 (UWWTR)	250 mg/l	24 hour composite	This limit does not apply if a sample has met the 75% removal standard	As specified in schedule 3C	Maximum (Condition 3.1.4 applies)
A2 Settled storm sewage via Outlet 1	Discharge start and end times	N/A	N/A	Condition 3.3.3 does not apply	Whenever a discharge occurs	N/A

Table S3.1b Point Source emissions to water (other than sewer) – emission limits and monitoring requirements Effective from 31 March 2025						
Effluent(s) and discharge point(s)	**Parameter**	**Limit (including unit)**	**Reference Period**	**Limit of effective range**	**Monitoring frequency**	**Compliance Statistic**
A1 Secondary treated sewage effluent via Outlet 1	Dry weather flow	1935 m^3/day	Total daily volume	N/A	Continuous	Condition 3.1.5 applies
	15-minute instantaneous or averaged flow	No limit set. Record as l/s	15 minute	N/A	Continuous	N/A
	ATU-BOD as O_2	15 mg/l	Instantaneous (spot sample)	N/A	As specified in schedule 3B	Look up table (Conditions 3.1.2 and 3.1.3 apply)
	ATU-BOD as O_2	50 mg/l	Instantaneous (spot sample)	N/A	As specified in schedule 3B	Maximum (Condition 3.1.3 applies)

Table S3.1b Point Source emissions to water (other than sewer) – emission limits and monitoring requirements Effective from 31 March 2025						
Effluent(s) and discharge point(s)	**Parameter**	**Limit (including unit)**	**Reference Period**	**Limit of effective range**	**Monitoring frequency**	**Compliance Statistic**
	Ammoniacal nitrogen (expressed as N)	7 mg/l	Instantaneous (spot sample)	N/A	As specified in schedule 3B	Look up table (Conditions 3.1.2 and 3.1.3 apply)
	Ammoniacal nitrogen (expressed as N)	27 mg/l	Instantaneous (spot sample)	N/A	As specified in schedule 3B	Maximum (Condition 3.1.3 applies)
	Suspended solids (measured after drying at 105°C)	25 mg/l	Instantaneous (spot sample)	N/A	As specified in schedule 3B	Look up table (Conditions 3.1.2 and 3.1.3 apply)
	Visible oil or grease	No significant trace present so far as is reasonably practicable	Instantaneous (visual examination)	N/A	N/A	No significant trace (Condition 3.1.3 applies)
	ATU-BOD as O_2 (UWWTR)	Minimum of 70 % removal compared to influent	24 hour composite	To be compliant a sample has to meet the 70% removal standard or the 25 mg/l limit not both	As specified in schedule 3C	Look up table (Conditions 3.1.2 and 3.1.4 apply)
	ATU-BOD as O_2 (UWWTR)	25 mg/l				
	ATU-BOD as O_2 (UWWTR)	50 mg/l	24 hour composite	This limit does not apply if a sample has met the 70% removal standard	As specified in schedule 3C	Maximum (Condition 3.1.4 applies)
	COD as O_2 (UWWTR)	Minimum of 75 % removal compared to influent	24 hour composite	To be compliant a sample has to meet the 75% removal standard or the 125 mg/l limit not both	As specified in schedule 3C	Look up table (Conditions 3.1.2 and 3.1.4 apply)
	COD as O_2 (UWWTR)	125 mg/l				
	COD as O_2 (UWWTR)	250 mg/l	24 hour composite	This limit does not apply if a sample has met the 75% removal standard	As specified in schedule 3C	Maximum (Condition 3.1.4 applies)

Table S3.1b Point Source emissions to water (other than sewer) – emission limits and monitoring requirements Effective from 31 March 2025						
Effluent(s) and discharge point(s)	**Parameter**	**Limit (including unit)**	**Reference Period**	**Limit of effective range**	**Monitoring frequency**	**Compliance Statistic**
A2 Settled storm sewage via Outlet 1	Settled storm sewage discharge event duration monitoring (discharge / no discharge)	N/A	N/A	Condition 3.3.3 does not apply	2 minute	N/A
	Settled storm sewage discharge start and end times	N/A	N/A	Condition 3.3.3 does not apply	Whenever a discharge occurs	N/A
	Settled storm sewage discharge event duration monitoring status (operational / not operational)	N/A	N/A	Condition 3.3.3 does not apply	2 minute	N/A

Table S3.2 Discharge points			
Effluent Name	**Discharge Point**	**Discharge point NGR**	**Receiving water/Environment**
A1 Secondary treated sewage effluent	Outlet 1	TQ 0618 1814	The River Stor
A2 Settled storm sewage			

Table S3.3 Storm sewage discharge settings						
Effluent(s) and discharge point(s)	**Description of discharge**	**Overflow setting l/s**	**Maximum size of solid matter**	**Screen aperture size**	**Minimum screen capacity flow l/s**	**Minimum storage capacity m^3 (off-line)**
A2 Settled storm sewage via Outlet 1	Settled storm sewage	59	No greater than 6 mm in more than 2 dimensions	6 mm	The screen shall be designed to cope with all flows up to and including the 1 in 5 year storm return period, as a minimum	635

Modification determined COPA/4682	14/10/2008	OSM Tier 3 added. Effective 01/04/2009.
Modification determined COPA/4682	23/03/2010	Full permit re-write. Future PR09 improvements, DWF updated and addition of flow measurement. Removal of Cu and Cr limits.
Variation determined COPA/4682/V001	17/06/2011	Relaxation of 95%ile and Upper Tier for BOD and 95%iles for ammonia and suspended solids.
Variation determined COPA/4682/V002	05/12/2013	Iron limit reviewed and consolidated permit issued in modern condition format
Variation determined COPA/4682/V003	26/10/2016	Variation of permit initiated to address extant appeal. Varied and consolidated permit issued in modern condition format.
Variation determined COPA/4682/V004	13/04/2017	Permit varied to add pH limit due to the implementation of sodium hydroxide dosing of the influent during treatment.
Variation determined COPA/4682/V005	28/03/2018	Permit varied as part of PR14 review programme to incorporate AMP6 improvements. EDM requirement added to storm overflow.
Variation determined COPA/4682/V006	09/08/2018	Administrative variation to correct error in previous permit version.
Variation determined COPA/4682/V007	06/12/2021	Permit varied to temporarily allow for aluminium dosing to aid suspended solids removal.
Variation determined COPA/4682/V008	20/12/2024	Permit varied as part of PR19 review programme to incorporate AMP7 improvements (increased phosphorus removal under the WFD_IMPm driver).
Environment Agency initiated variation COPA/4682/V009	10/12/2024	Variation of permit initiated to introduce PFOS monitoring requirement. The permit is within the 4 year hands off period but the operator has agreed in principle to waive this.
Additional information received	01/10/2025	Signed flexible permitting for PFOS Operating Techniques Agreement (OTA) document submitted by Southern Water Services Ltd.
Variation determined COPA/4682	04/11/2025	Varied and consolidated permit issued in modern condition format. The folio number for this permit is A00152.

End of introductory note

Chephurst Copse Rudgwick Wastewater Treatment Works
Permit number A1161/S/02

Introductory note

This introductory note does not form a part of the notice.

Under the Environmental Permitting (England & Wales) Regulations 2016 (schedule 5, part 1, paragraph 19) a variation may comprise a consolidated permit reflecting the variations and a notice specifying the variations included in that consolidated permit.

Schedule 1 of the notice specifies the conditions that have been varied and schedule 2 comprises a consolidated permit which reflects the variations being made. Only the variations specified in schedule 1 are subject to the right of appeal.

This administrative variation is to correct a typographical error in the previous permit version wherein a maximum suspended solids was applied as opposed to a maximum BOD limit.

The status log of a permit sets out the permitting history, including any changes to the permit reference number.

Status log of the permit		
Description	**Date**	**Comments**
Permit determined A1161/S/02	11/03/2003	Permit issued to Southern Water Services Limited. Effective date 01/04/2003.
Permit modified A1161/S/02	25/09/2009	OSM Tier 2 and LUT conditions added. Effective date 01/01/2010.
Permit modified A1161/S/02	31/03/2010	DWF definition updated and MCerts flow measurement conditions added.
Variation determined A1161/S/02/V001	27/06/2019	Admin variation to update sample point NGRs and to add an updated site plan.
Variation determined A1161/S/02/V002	21/11/2024	Permit varied to incorporate improvements to be delivered under AMP7 (IMPm).
Environment Agency initiated variation A1161/S/02/V003	20/06/2025	Administrative variation to correct an error in the previous table S3.1 wherein a max suspended solids limit was applied rather than a max BOD limit. Permit is within the 4-year hands off period and the operator has agreed in principle to the permit being varied within this period.
Variation determined A1161/S/02	08/07/2025	Varied and consolidated permit issued in modern condition format. The folio number for this permit is A01161.

End of introductory note

Storrington Wastewater Treatment Works
Permit number A1171/S/02

Introductory note

This introductory note does not form a part of the notice.

Under the Environmental Permitting (England & Wales) Regulations 2016 (schedule 5, part 1, paragraph 19) a variation may comprise a consolidated permit reflecting the variations and a notice specifying the variations included in that consolidated permit.

Schedule 1 of the notice specifies the conditions that have been varied and schedule 2 comprises a consolidated permit which reflects the variations being made. All the conditions of the permit have been varied and are subject to the right of appeal.

This permit variation and consolidation is to reflect asset improvements that have been agreed between the Environment Agency and Southern Water Services Limited as part of the National Environment Programme. The requirements are as follows:

- The upgrade of the final effluent treatment to provide phosphorus removal under the WFD_IMPg driver. Iron and phosphorus limits have been added to the permit from the agreed delivery date of 22 December 2024.
- The provision of increased storm tank capacity at the works so that it is the equivalent of 68 litres per head at the permitted DWF. The operator is using the agreed U_IMP6 phased approach to increase the storm tank capacity and the first phase increase using this approach should be completed by 31 March 2025.
- The installation of overflow operation monitoring into storm storage and MCERTS flow monitoring to record flow passed forward. This was completed by the agreed delivery date of 31 March 2022 for U_MON3 overflow operation monitoring into storm storage and should be completed by 31 March 2025, unless a later date is agreed in writing by the Environment Agency, for U_MON4 MCERTS flow passed forward flow monitoring. The unique ID for the overflow giving rise to the settled storm discharge is SRN0832.

We consider that in reaching our decision to vary the permit we have taken into account all relevant considerations and legal requirements. We are satisfied that the permit will ensure that a high level of protection is provided for the environment and human health and that the activities will not give rise to any significant pollution of the environment or harm to human health.

The status log of a permit sets out the permitting history, including any changes to the permit reference number.

Status log of the permit		
Description	**Date**	**Comments**
Permit determined A1171/S/02	18/03/2003	Permit issued to Southern Water Services Ltd to replace existing consent COPA/167. Effective date 01/04/2003.
Permit modified A1171/S/02	14/10/2008	OSM conditions added. Effective date 01/04/2009.
Permit modified A1171/S/02	30/03/2010	New DWF definition and MCerts flow measurement conditions added. Effective date 31/03/2010.
Variation determined A1171/S/02/V001	15/01/2020	Administrative variation to correct multiple NGRs and to add a new site plan.

Environment Agency	**EPR Compliance Assessment Report**	Report ID: S/0743456

This form will report compliance with your permit as determined by an Environment Agency officer

Site	LAND ADJ. BILLINGSHURST PUMP. STN, LAND ADJ. BILLINGSHURST PUMP. ST, OFF SHANE STREET, BILLINGSHURST, WEST SUSSEX, RH14 9PQ			Permit Ref	A02501		
Operator/ Permit holder	SOUTHERN WATER SERVICES LTD (S)						
Assessment Date	04/02/2021	Breach Date	04/02/2021	Time in	02:56	Out	22:25
What parts of the permit were assessed	Terminal sewage pumping station sewage in emergencyCAR=STD						
Assessment Type	Site inspection: Sewage Pumping Station (network)	EPR Activity:	Water Discharge				
Recipient's name/position	Pollution Team						
Officer's name	[redacted]			Date issued	04/02/2021		

Section 1 - Compliance Assessment Summary

This is based on the requirements of the permit under the Environmental Permitting Regulations. A detailed explanation and any action you may need to take are given in the Detailed Assessment of Compliance (section 2) and the Actions (section 4). This summary details which conditions we have assessed, where we believe any non-compliance with the permit has occurred, the relevant condition and how the non-compliance has been categorised using our Compliance Classification Scheme (CCS). For more details of our CCS scheme, contact your local office.

KEY: **C1, C2, C3, C4** = CCS breach category **A** = Assessed (no evidence of non-compliance

Activities and Permit Conditions Assessed	CCS Category	Condition(s) breached
1 - Terminal sewage pumping station sewage in emergency		
2.1a. EPR Permitted activities (a1)	C3	Volume or rate of discharge

Descriptive Works Fail	N/A	Number of breaches recorded	1

If the total no of breaches is greater than zero, then please see Section 3 for details of our proposed enforcement response

Section 2 – Compliance Assessment Report Detail

This section contains a report of our findings and will usually include information on:

- the part(s) of the permit that were assessed (e.g. maintenance, training etc)
- where the type of assessment was 'Data Review' details of the report/results triggering the assessment
- any non-compliances identified
- any non-compliances with directly applicable legislation
- details of any multiple non-compliances
- details of advice given
- any other areas of concern
- all actions requested
- any examples of good practice.
- a reference to photos taken

This report should be clear, comprehensive, unambiguous and normally completed within 14 days of an assessment.

NIRS - 01876035
CSMS - 4203563

Southern Water wish to notify you of an incident confirmed to us at 28/12/2020 12:18:
Incident Notification
Confirmed Event 28/12/2020 12:18
CSMS 4203563
SWS Site STANE STREET BILLINGSHURST WPS
Address STANE STREET BILLINGSHURST WEST SUSSEX RH149JU
SWS Premises WW Pumping Station
OSGB Site 508002E 124713N OSGB Spill Unknown
Initial Details Southern Water wish to notify you of a non-compliant storm discharge at the above site which has now ceased. This is due
to the site not meeting the required pass forward rate in storm conditions. This occurred On 27/12 from 02:56 until 22:25 for a total of 1169
minutes. Please find attached our initial update.

On 28/12/2020 at 12:18 our spill reporting team advised us of a non-compliant storm discharge from 02:56 until 22:25 on 27/12/2020 for a total of 1169 minutes. Due to the site not meeting the consented pass forward rate during Storm Bella.

The site was not meeting the required PFR of 110.4 l/s and only passing forward 66.83 l/s due to the adverse weather and the high flows entering the site.

There was no site attendance at the time and no photographs were gathered, our spill reporting team are currently investigating this further and confirm the estimated volume discharged.

Once we obtain this information, we will provide a full update.

Environment Agency	**EPR Compliance Assessment Report**	Report ID: I/0748421

This form will report compliance with your permit as determined by an Environment Agency officer

Site	LAND ADJ. BILLINGSHURST PUMP. STN, LAND ADJ. BILLINGSHURST PUMP. ST, OFF SHANE STREET, BILLINGSHURST, WEST SUSSEX, RH14 9PQ			Permit Ref	A02501		
Operator/ Permit holder	SOUTHERN WATER SERVICES LIMITED. +						
Assessment Date	16/11/2022	Breach Date	16/11/2022	Time in	14:37	Out	23:59
What parts of the permit were assessed	Sewage pumping station sewage in emergency						
Assessment Type	Incidents/permit review/Self-reported pollution incident (desk CAR)	EPR Activity:	Water Discharge				
Recipient's name/position	Pollution Team						
Officer's name	[redacted]			Date issued	22/12/2022		

Section 1 - Compliance Assessment Summary

This is based on the requirements of the permit under the Environmental Permitting Regulations. A detailed explanation and any action you may need to take are given in the Detailed Assessment of Compliance (section 2) and the Actions (section 4). This summary details which conditions we have assessed, where we believe any non-compliance with the permit has occurred, the relevant condition and how the non-compliance has been categorised using our Compliance Classification Scheme (CCS). For more details of our CCS scheme, contact your local office.

KEY: **C1, C2, C3, C4** = CCS breach category **A** = Assessed (no evidence of non-compliance

Activities and Permit Conditions Assessed	CCS Category	Condition(s) breached
1 - Sewage pumping station sewage in emergency		
2.1b. WRA Nature of discharge (a1)	C4	Volumes or Rates of Discharge

Descriptive Works Fail	N/A	Number of breaches recorded	1

If the total no of breaches is greater than zero, then please see Section 3 for details of our proposed enforcement response

Section 2 – Compliance Assessment Report Detail

This section contains a report of our findings and will usually include information on:

- the part(s) of the permit that were assessed (e.g. maintenance, training etc)
- where the type of assessment was 'Data Review' details of the report/results triggering the assessment
- any non-compliances identified
- any non-compliances with directly applicable legislation
- details of any multiple non-compliances
- details of advice given
- any other areas of concern
- all actions requested
- any examples of good practice.
- a reference to photos taken

This report should be clear, comprehensive, unambiguous and normally completed within 14 days of an assessment.

NIRS 02113547 / CSMS 4451480

Initial report from Southern Water stated that *"Southern Water wish to notify you of a discharge at the above site which has now ceased. Our Network Analytic Team have identified via telemetry review a Compliant Emergency discharge via the screened CEO from 16/11 14:37 until 17/11 09:40 for a duration of 782 minutes due to power issues on site. We are currently investigating once we have more information we will update you."*

A further update was sent from Southern Water stating that *"On 16/11/2022 at 16:28 a Southern Water Site Operative notified of an issue on site. The site had suffered a power outage and flows were entering a nearby stream.*
A Southern Water Investigation Technician was despatched to site and arrived at 18:40.
Ammonia samples were obtained as follows:
Point of Entry – 0 Mg/l
50m downstream – 0 Mg/l
150m downstream – 0 Mg/l
250m downstream – 0 Mg/l
The stream was extremely fast flowing due to torrential rainfall in the catchment. No RAG or debris was observed at any of the sample locations.
Southern Water Network Analytics confirmed a compliant emergency discharge had occurred as detailed above due to a mains electricity power issue and the standby generator failed to start. Flows would have been heavily diluted due to the torrential rainfall in the area. UKPN have confirmed there were no power outages in the catchment at the time of the event."

This Incident has resulted in the following non – compliance being identified, and the following actions need to be carried out.

CCS – 4 <u>Volume or Rate of Discharge</u> "A discharge to controlled waters shall only take place in the event of: (i) an emergency resulting from concomitant failure of the mains electricity supply and the onsite standby generator. Such discharge shall only take place for so long as is necessary to effect repairs or bring a mobile generator into use, this period shall not in any-event exceed two hours."

- Discharge lasted more than two hours and UKPN have confirmed no power outages in the area during the time of the discharge.

Environment Agency	**EPR Compliance Assessment Report**	Report ID: I/545569

This form will report compliance with your permit as determined by an Environment Agency officer

Site	BILLINGSHURST WWTW, STANE STREET, BILLINGSHURST, WEST SUSSEX, RH14 9JU			Permit Ref	A00526		
Operator/ Permit holder	SOUTHERN WATER SERVICES LIMITED						
Assessment Date	18/01/2025	Breach Date	18/01/2025	Time in	00:00	Out	00:00
What parts of the permit were assessed	Wastewater Treatment Works secondary treated sewage effluent						
Assessment Type	Incidents/permit review/Self-reported pollution incident (desk CAR)	EPR Activity:	Water Discharge				
Recipient's name/position	Southern Water Limited						
Officer's name	[redacted]			Date issued	21/03/2025		

Section 1 - Compliance Assessment Summary

This is based on the requirements of the permit under the Environmental Permitting Regulations. A detailed explanation and any action you may need to take are given in the "Detailed Assessment of Compliance" (section 3). This summary details which conditions we have assessed, where we believe any non-compliance with the permit has occurred, the relevant condition and how the non-compliance has been categorised using our Compliance Classification Scheme (CCS). For more details of our CCS scheme, contact your local office.

KEY: **C1, C2, C3, C4** = CCS breach category **A** = Assessed (no evidence of non-compliance

Activities and Permit Conditions Assessed	CCS Category	Condition(s) breached
1 - Wastewater Treatment Works secondary treated sewage effluent		
2.1a. EPR Permitted activities (a1)	C3	2.1.1

Descriptive Works Fail	N/A	Number of breaches recorded	1

If the total no of breaches is greater than zero, then please see Section 3 for details of our proposed enforcement response

Section 2 – Compliance Assessment Report Detail

This section contains a report of our findings and will usually include information on:

- the part(s) of the permit that were assessed (e.g. maintenance, training etc)
- where the type of assessment was 'Data Review' details of the report/results triggering the assessment
- any non-compliances identified
- any non-compliances with directly applicable legislation
- details of any multiple non-compliances
- details of advice given
- any other areas of concern
- all actions requested
- any examples of good practice.
- a reference to photos taken

This report should be clear, comprehensive, unambiguous and normally completed within 14 days of an assessment.

NIRS02349260 / WCS5121665

An initial report on 18/01/2025 from Southern Water stated that "following a power failure P&I were dispatched to refuel the generator. This morning our operator attended to check the wet well levels and ensure the site was running once power was restored. On arrival he found the site was spilling from the CSO".

Southern Water confirmed the discharge occurred on 18/01/2025 for 393 minutes. The Environment Agency have classified this as a category 3 impact to water quality. In addition, our assessment is that this incident resulted in a breach of permit classed as a CCS Cat 3.

CCS 3 - Permit Condition 2.1.1 ***"The only activities authorised by the permit are the activities specified in schedule 1 table S1.1."***

The discharge occurred from Outfall 2 when the generator had run out of fuel and a breaker in the kiosk had tripped, not constituting storm sewage. The incident has been assessed as a CICS Category 3 impact due to a limited and localised effect on water quality as supported by ammonia readings taken by the Operator.

Actions:
(Section 4, C. Ref: 2.1a) Southern Water to investigate the root cause of the incident and detail what lessons have been learnt and how impacts caused by similar incidents can be mitigated.

Environment Agency	**EPR Compliance Assessment Report**	Report ID: I/547018

This form will report compliance with your permit as determined by an Environment Agency officer

Site	LAND ADJ. BILLINGSHURST PUMP. STN, LAND ADJ. BILLINGSHURST PUMP. ST, OFF SHANE STREET, BILLINGSHURST, WEST SUSSEX, RH14 9PQ			Permit Ref	A02501		
Operator/ Permit holder	SOUTHERN WATER SERVICES LIMITED						
Assessment Date	17/03/2025	Breach Date	21/02/2025	Time in	00:00	Out	00:00
What parts of the permit were assessed	Terminal sewage pumping station storm sewage overflow						
Assessment Type	Incidents/permit review/Self-reported pollution incident (desk CAR)	EPR Activity:	Water Discharge				
Recipient's name/position	Southern Water Services Limited						
Officer's name	[redacted]			Date issued	21/03/2025		

Section 1 - Compliance Assessment Summary

This is based on the requirements of the permit under the Environmental Permitting Regulations. A detailed explanation and any action you may need to take are given in the Detailed Assessment of Compliance (section 2) and the Actions (section 4). This summary details which conditions we have assessed, where we believe any non-compliance with the permit has occurred, the relevant condition and how the non-compliance has been categorised using our Compliance Classification Scheme (CCS). For more details of our CCS scheme, contact your local office.

KEY: **C1, C2, C3, C4** = CCS breach category **A** = Assessed (no evidence of non-compliance

Activities and Permit Conditions Assessed	CCS Category	Condition(s) breached
1 - Terminal sewage pumping station storm sewage overflow		
2.1b. WRA Nature of discharge (a1)	C3	Volume or Rate of Discharge

Descriptive Works Fail	N/A	Number of breaches recorded	1

If the total no of breaches is greater than zero, then please see Section 3 for details of our proposed enforcement response

Section 2 – Compliance Assessment Report Detail

This section contains a report of our findings and will usually include information on:

- the part(s) of the permit that were assessed (e.g. maintenance, training etc)
- where the type of assessment was 'Data Review' details of the report/results triggering the assessment
- any non-compliances identified
- any non-compliances with directly applicable legislation
- details of any multiple non-compliances
- details of advice given
- any other areas of concern
- all actions requested
- any examples of good practice.
- a reference to photos taken

This report should be clear, comprehensive, unambiguous and normally completed within 14 days of an assessment.

NIRS02360506 / WCS5136632

An initial report was sent on 22/02/2025 from Southern Water stating that a "crew arrived on site at 01:30 found the panel was showing the storm pump running but in fact it wasn't so they put this in hand to allow it to pass forward flow. It was noted at this point level was high and spilling so a through a screened CSO."

Southern Water confirmed the discharge occurred from 19:16hrs on 21/02/2025 to 02:45hrs on 22/02/2025 for a duration of 449 minutes. The Environment Agency have classified this as a Category 3 impact to water quality. In addition, our assessment is that this incident resulted in a breach of permit classed as a CCS Cat 3.

CCS 3 - Permit Condition: ***Volume or Rate of Discharge "a discharge to controlled waters shall only take place in the event of: (i) an emergency resulting from concomitant failure of the mains electricity supply and the on site standby generator. Such discharge shall only take place for so long as is necessary to effect repairs or bring a mobile generator into use, this period shall not in any event exceed two hours. OR (ii) the rate of flow in the incoming sewers at National Grid Reference TQ 0801 2471 exceeds 120.5 litres per second and shall continue only for so long as this rate is exceeded."***

The discharge occurred when no flows were being passed forward despite the control panel indicating storm pumps were running resulting in flows discharging to the nearby watercourse, thus breaching condition "Volume or Rate of Discharge". The incident has been assessed as a CICS Category 3 impact due to a limited and localised effect on water quality as supported by ammonia readings taken by the operator.

Actions:
(Section 4, C. Ref: 2.1b) Southern Water to provide the Environment Agency with a report detailing the root cause of the incident as well as what lessons have been learnt and what measures have been implemented to reduce the likelihood of similar event occurring and to mitigate impacts on the environment.

EPR Compliance Assessment Report

Report issued on 17/08/2026
Assessment reference: C0013083 - Version 1

This form will report compliance with your permit as determined by an Environment Agency Officer.

Operator and site information

Permit reference	A00526	Site address	BILLINGSHURST WWTW, STANE STREET, ., RH14 9JU
Report recipient	Southern Water Services Limited	Permit holder	SOUTHERN WATER SERVICES LIMITED

Compliance assessment information

Assessment type	Site Inspection	Arrival time	09:30	Lead assessing officer	[redacted]
Date of assessment	22 June 2026	Departure time	11:00		

Section 1: Assessment summary

This is a summary of what was found during our assessment. We check the permit and categorise any non-compliances. There are 4 risk categories of non-compliance, which represent the severity of the reasonably foreseeable impact.

Number of non-compliances: 1

Activities and conditions shown have been assessed by an Environment Agency Officer. There may be other conditions on your permit that have not been assessed. Non-compliance categories represent the severity of the reasonably foreseeable impact.

Sewage - Secondary Treated Sewage Effluent

EA condition reference	Permit condition	Compliance status	Compliance category	Breach date
1.1a - EPR General management conditions (c2)	1.1.1	Non-compliance	3. Minor impact	22/06/2026
2.3f - Screen/solid matter removal requirements (b5)	2.3.2		Assessed	

Enforcement response

You must take immediate action to rectify any non-compliance recorded in this report and to prevent non-compliance. Non-compliance with your permit is an offence, which may result in criminal prosecution. We may also consider serving an enforcement or suspension notice or revoking your permit. The enforcement response of this assessment is as follows:

Advice & Guidance

At present we do not intend to take further enforcement action in respect of the non-compliance identified. This does not prevent us from taking enforcement action if further relevant information comes to light or advice isn't followed.

Section 2: Actions

There are three action types that may be present in this section:

- Non-compliance actions must be completed to rectify non-compliance. Failure to do so could lead to an escalation in our enforcement response.
- Data and Information Requests are for information that we need to assist with assessing compliance. Failure to provide information requested may result in the use of enforcement notices.
- Additional Actions are not related to a permit non-compliance but may relate to other legal requirements or recommendations to prevent pollution.

Actions

Reference	Type	Description	Permit condition	Observation	Complete by
C0013083-A-01	Non-compliance	SWS must fix the broken gearbox for the PST. Along with provide the EA with the root cause analysis for the elevated ammonia for the site which is has meant the site now needs temporary equipment installed and tankering off site daily to stay within its permitted ammonia limits.	1.1.1	Gear Box failed on one of the PST	18/09/2026
C0013083-A-02	Additional Action	The EA requests that SWS check the screens regularly and keep the screens clean and clear.	2.3.2	Mechanical inlet screens	18/09/2026

Actions already completed in this assessment

There are no completed actions recorded.



Bypass bar screen.

Tankering off site

It was noted while on site, that currently the WWTW is needing 3, 6K tankers a day to syphon flow off site so that is does not breach its permit limits for ammonia.

'Temporary' extra equipment being installed on site to assist with treatment.

On the day of the site visit, 3 MBBRs were being put in along with generators and supporting equipment to help the site manage to keep its ammonia levels under permitted conditions.

Supporting photographs for 'Temporary' extra equipment being installed on site to assist with treatment.



Extra new equipment to help with ammonia treatment being set up on site.



Extra new equipment 3 MBBRs to help with ammonia treatment being set up on site.

Environment Agency	**EPR Compliance Assessment Report**	Report ID: S/571465

This form will report compliance with your permit as determined by an Environment Agency officer

Site	PULBOROUGH WWTW, MAREHILL ROAD, PULBOROUGH, WEST SUSSEX, RH20 2EJ			Permit Ref	A00020		
Operator/ Permit holder	SOUTHERN WATER SERVICES LIMITED						
Assessment Date	31/07/2025	Breach Date	N/A	Time in	10:30	Out	12:15
What parts of the permit were assessed	Wastewater Treatment Works tertiary treated sewage effluent						
Assessment Type	Site inspection: Wastewater Treatment Works - Operator Self Monitoring (OSM)	EPR Activity:	Water Discharge				
Recipient's name/position	Redacted						
Officer's name	Redacted			Date issued	07/08/2025		

Section 1 - Compliance Assessment Summary

This is based on the requirements of the permit under the Environmental Permitting Regulations. A detailed explanation and any action you may need to take are given in the Detailed Assessment of Compliance (section 2) and the Actions (section 4) . This summary details which conditions we have assessed, where we believe any non-compliance with the permit has occurred, the relevant condition and how the non-compliance has been categorised using our Compliance Classification Scheme (CCS). For more details of our CCS scheme, contact your local office.

KEY: **C1, C2, C3, C4** = CCS breach category **A** = Assessed (no evidence of non-compliance

Activities and Permit Conditions Assessed	CCS Category	Condition(s) breached
1 - Wastewater Treatment Works tertiary treated sewage effluent		
1.1a. EPR General management conditions (c2)	A	1.1.1
2.1a. EPR Permitted activities (a1)	A	2.1.1
2.2a. The site authorised discharge points (a1)	A	2.2.1
2.3a. EPR Operating techniques as specified in table S1.2 (a1)	A	2.3

Descriptive Works Fail	N/A	Number of breaches recorded	0

If the total no of breaches is greater than zero, then please see Section 3 for details of our proposed enforcement response

Section 2 – Compliance Assessment Report Detail

This section contains a report of our findings and will usually include information on:

- the part(s) of the permit that were assessed (e.g. maintenance, training etc)
- where the type of assessment was 'Data Review' details of the report/results triggering the assessment
- any non-compliances identified
- any non-compliances with directly applicable legislation
- details of any multiple non-compliances
- details of advice given
- any other areas of concern
- all actions requested
- any examples of good practice.
- a reference to photos taken

This report should be clear, comprehensive, unambiguous and normally completed within 14 days of an assessment.

This was an announced inspection of Pulborough WwTW (Permit number A1507/S/07 WIMS permit reference number A00020).

General comments:-
The site's grit seperator is no longer operational (photo 1) vegetation is growing out of the top of the unit. SW operatives reported that the consequence of this it that the balancing tank is prone to grit build-up. Grit removal requires the tankering of effluent flows from pumping stations in the catchment to allow access to the tank, a job requiring significant planning and resourcing.

Flows to site appeared high, despite preceding dry weather. Of the 5 PST's on site, the 3 larger ones were full and surcharged (photo 2). 2024 DWF %Q90 for site is 85.92, so within permitted limit (and preceding 3 years).

Storm tanks were empty and clean.

SWS staff reported that 40% of flow bypasses PSTs and goes direct to aeration tanks. 60% of flow to filter beds (6x) which appeared in good condition and working well with good effluent distribution.

Tertiary sand filters treat 50% of effluent with the remainder recombining for FE sample point.

There was a missing manhole cover on the line to the discharge point into the receiving watercourse. Possibly due to fallen tree damage. This is outside the site boundary and represents a potential health and safety risk to members of the public (photo 3).

FE telemetry readings: NH4-N 0.94 mg/l, turbidity 3.74 ntu, temp. 17.53 c.

EPR Compliance Assessment Report

Report issued on 04/03/2026
Assessment reference: C0007746 - Version 1

This form will report compliance with your permit as determined by an Environment Agency Officer.

Operator and site information

Permit reference	A00020	Site name	PULBOROUGH WWTW
Report recipient	----------	Permit holder	SOUTHERN WATER SERVICES LIMITED

Compliance assessment information

Assessment type	Self-reported pollution incident	Arrival time	10:30	Lead assessing officer	----------
Date of assessment	18 February 2026	Departure time	12:00		

Section 1: Assessment summary

This is a summary of what was found during our assessment. We check the permit and categorise any non-compliances. There are 4 risk categories of non-compliance, which represent the severity of the reasonably foreseeable impact.

Number of non-compliances: 1

All activities and conditions shown have been assessed by an Environment Agency Officer. There may be other conditions on your permit that have not been assessed.

Sewage - Secondary Treated Sewage Effluent

EA condition reference	Permit condition	Compliance status	Compliance category	Breach date
2.1a - EPR Permitted activities (a1)	2.1.1	Non-compliance	3. Minor impact	17/02/2026

Enforcement response

You must take immediate action to rectify any non-compliance recorded in this report and to prevent non-compliance. Non-compliance with your permit is an offence, which may result in criminal prosecution. We may also consider serving an enforcement or suspension notice or revoking your permit. The enforcement response of this assessment is as follows:

Site Warning

At present we do not intend to take further enforcement action. This does not prevent us from taking enforcement action if further relevant information comes to light or offences continue.

Section 2: Actions

There are three action types that may be present in this section:

- Non-compliance actions must be completed to rectify non-compliance. Failure to do so could lead to an escalation in our enforcement response.
- Data and Information Requests are for information that we need to assist with assessing compliance. Failure to provide information requested may result in the use of enforcement notices.

- Additional Actions are not related to a permit non-compliance but may relate to other legal requirements or recommendations to prevent pollution.

Actions

Reference	Type	Description	Permit condition	Observation	Complete by
C0007746-A01	Non-compliance	Southern Water to confirm date the replacement valve was installed.	2.1.1	Spill from Sludge Receptor Tank	20/03/2026
C0007746-A02	Non-compliance	Southern Water to ensure all polluting matter pertaining to this incident has been removed and the area has been cleaned. Please provide photographs to evidence the remedial work has taken place.	2.1.1	Spill from Sludge Receptor Tank	20/03/2026
C0007746-A03	Non-compliance	Southern Water to provide an update to explain why the incident was not reported to the Environment Agency until 18/02/2026, following the detection of failure of the faulty valve. Southern Water to also explain how the impacts from similar events will be minimised and/or prevented.	2.1.1	Spill from Sludge Receptor Tank	20/03/2026

Actions already completed in this assessment

There are no completed actions recorded.

Section 3: Report detail

Record of Environment Agency Officer's observations and compliance assessment.

Introduction

This CAR form has been issued following an unannounced site visit by Environment Officers following information provided in the report for NIRS02468512.

Assessment findings

Spill from Sludge Receptor Tank

On site, operators explained that a valve controlling flows into the primary settlement tanks (PSTs) led to spills of sludge from the sludge receptor tank. The spill was noticed on 12/02/2026 but it was hypothesised by operators that the spill could have begun as early as 10/02/2026. Originally thought by operators to be contained to site, the polluting matter was discovered by operators to have exited site via land and through the site's boundary fence on 17/02/2026. The inspecting Environment Officer observed deposits of sludge on land outside of the works on 18/02/2026. Operators on site explained that the polluting matter had reached the watercourse.

Non-compliances

2.1a - EPR Permitted activities (a1) - Sewage - Secondary Treated Sewage Effluent — 3. Minor impact

Permit condition: 2.1.1

Reason for non-compliance

Assessed as non-compliance as the discharge activity is not authorised by the permit, specifically Schedule 1 Table S1.1

Reason for compliance category

Assessed as CC3 as CICS Category 3 impact to land and CICS Category 3 impact to water was observed. Impact to land justified by multiple patches of sludge observed on land outside the works. Impact to water justified as operators confirmed polluting matter had entered the watercourse.

Action references: C0007746-A01, C0007746-A02, C0007746-A03 — Check action details

Assessed conditions with no evidence of non-compliance

None

Supporting photographs for Spill from Sludge Receptor Tank



Sludge deposit on track adjacent to works.

Tab C1. Environment Agency, Catchment Data Explorer: Stor (water body GB107041012100), phosphate

Typed extract from the Catchment Data Explorer data download for the water body (classifications and reasons for not achieving good status, cycle 3). Pulborough WwTW discharges to the River Stor (Tab A1, Table S3.2). Online: environment.data.gov.uk/catchment-planning/WaterBody/GB107041012100; the confirmed water industry reason is at /catchment-planning/ReasonsForNotAchievingGood/577412.

Phosphate classification

Year	Status	Cycle
2015	Poor	2
2016	Poor	2
2019	Poor	2
2019	Poor	3
2022	Poor	3

Reasons for not achieving good status: phosphate (Stor, cycle 3)

Sector (certainty)	Activity (certainty)	Pressure	RNAG ID
Agriculture and rural land management (Suspected)	Poor nutrient management (Suspected)	Phosphate	577413
Water Industry (Confirmed)	Sewage discharge (continuous) (Confirmed)	Phosphate	577412
No sector responsible (Not applicable)	Not applicable (Not applicable)	Phosphate	569002

Relied on: Issue 1 (River Stor at Poor status for phosphate, with continuous sewage discharge a confirmed reason).

Tab C2. Environment Agency, PR24 Water Industry National Environment Programme: action 08SO101055a

Typed extract of the action's row in the PR24 WINEP national dataset (sheet 'PR24 WINEP National Data', row 10790). Fields left blank in the dataset are omitted. The driver code HD_INV denotes a Habitats Directive investigation.

Field	Entry
Unique_ID	08SO101055a
Water_Company	Southern Water Services Ltd
Driver_Code_Primary	HD_INV
Obligation	Habitats Directive
Tier_1_Outcome	Maintain or restore favourable conservation status at European sites.
Action_Name	Arun Valley Ramsar, SAC, SPA
Action_Description	Investigation
Type	Investigation
Action_Categorisation_Aim	Investigation_to_inform_PR29
Action_Categorisation_Group	Continuous_Discharge
Action_Categorisation_Type	Complex investigation involving multiple surveys andor monitoring locations, andor complex modelling
Spatial_Scale_of_Action_Delivery	Within_SAC
PRIMARY:Name_of_European_Site(SAC/SPA/RAMSAR)	Arun Valley SAC UK0030366
ADDITIONAL1:Name_of_European_Site(SAC/SPA/RAMSAR)	Arun Valley Ramsar UK11004
ADDITIONAL2:Name_of_European_Site(SAC/SPA/RAMSAR)	Arun Valley SPA UK9020281
Options_Assessment_Outcome	proceed
Assessment_Decision_Date	2023-03-10
Completion_Date	2027-04-30

Relied on: Issue 1 (Habitats Regulations investigation of water company discharges at the Arun Valley sites, agreed March 2023, due 30 April 2027).

Appendix B: Wastewater Systems with limited spare DWF capacity

Site Code	Catchment Name	DWF permit (m^3/d)	Population equivalent 2020 actual	Forecasted Population Equivalent (PE)		Spare DWF capacity	
				2020	2050	2020 - (based on actual population)	2050
LIHB	LISS HILLBROW	11	82	352	401	63%	-330%
WILL	WILLOW WOOD ST.LAWRENCE	28	271	372	382	-219%	-308%
STOC	STOCKBRIDGE	231	824	850	893	-88%	-97%
PLUM	PLUMPTON	55	153	354	387	29%	-53%
WCRK	WHITEWALLCREEK	5,000	31,173	38,842	47,790	1%	-44%
LIMP	OXTED	4,724	15,618	16,671	19,850	-13%	-34%
BOLD	BOLDRE	200	635	650	675	-28%	-34%
SITT	SITTINGBOURNE	11,800	59,931	72,707	90,160	5%	-33%
SAND	SANDOWN	29,703	130,771	147,581	163,762	-8%	-28%
CHLE	CHALE	117	579	588	701	-8%	-26%
CRAN	CRANBROOK	1,337	4,400	7,630	8,614	28%	-25%
HAMH	HAMHILL	12,200	59,642	66,117	82,625	4%	-25%
NFLE	NORTHFLEET	9,300	55,440	60,105	71,017	-1%	-24%
GRAI	GRAIN	402	1,664	1,714	2,394	7%	-24%
SIDL	SIDLESHAM	5,800	25,167	35,452	38,423	14%	-22%
HERN	MAY STREET HERNE BAY	5,903	43,011	44,443	53,396	1%	-22%
LIDS	LIDSEY	5,833	21,708	28,941	34,390	19%	-17%
LOXW	LOXWOOD	767	3,761	3,860	4,727	8%	-13%
MOTN	MOTNEY HILL	44,582	263,577	275,006	362,211	16%	-12%
FAVE	FAVERSHAM	7,000	26,291	35,943	42,175	23%	-12%
QUEE	QUEENBOROUGH	11,225	38,684	44,849	53,983	12%	-12%
FULL	FULLERTON	19,291	55,810	66,107	78,703	15%	-10%
VICL	NEWTOWN IOW	5	37	31	35	-15%	-9%
WOOD	WOODCHURCH	293	1,329	1,741	1,830	17%	-9%
SHST	SANDHURST	206	1,114	1,140	1,367	9%	-9%
HBKM	HILLBROW KNOWLES MEADOW	11	58	77	89	30%	-9%
CHAN	CHARING	605	2,056	2,738	2,997	19%	-8%
PETE	PETERSFIELD	4,980	17,104	22,147	23,609	15%	-8%
PENS	PENSHURST	130	462	480	650	18%	-7%
EDEN	EDENBRIDGE	2,240	10,073	11,618	14,839	24%	-7%

Site Code	Catchment Name	DWF permit (m^3/d)	Population equivalent 2020 actual	Forecasted Population Equivalent (PE)		Spare DWF capacity	
				2020	2050	2020 - (based on actual population)	2050
HAND	HANDCROSS	186	1,214	1,249	1,565	19%	-6%
BILL	BILLINGSHURST	1,445	7,999	8,280	9,609	10%	-6%
DAMB	DAMBRIDGE WINGHAM	3,510	14,211	24,710	27,111	38%	-5%
PEEL	PEEL COMMON	59,683	256,119	268,490	298,170	6%	-5%
SOAM	SOUTH AMBERSHAM	3,194	10,708	14,007	15,748	23%	-5%
TUWS	TUNBRIDGE WELLS SOUTH	8,850	29,800	32,729	41,027	18%	-5%
ALFR	ALFRISTON	307	816	858	908	3%	-4%
HAIN	HAILSHAM NORTH	3,162	12,023	17,812	20,411	35%	-4%
ASHF	ASHFORD	24,000	91,200	111,517	134,369	25%	-3%
BURG	GODDARDS GREEN	9,917	49,686	56,830	66,191	20%	-3%
GRAV	GRAVESEND	10,886	63,731	65,468	76,523	13%	-2%
MINS	MINSTER IOT	1,000	5,114	5,158	6,635	19%	-2%
OFFH	OFFHAM	10	61	76	86	31%	-1%
HELS	ST HELENS	300	1,436	1,612	1,677	11%	-1%
SMAR	SMARDEN	175	926	945	1,122	15%	-1%
WESM	WEST MARDEN	40	309	308	379	22%	0%

Tab C4. Southern Water, Drainage and Wastewater Management Plan: Annual Progress Report 2026 (published 31 March 2026)

Typed extract of the rows for Billingshurst and Pulborough from the 'System Plans' sheet of the published workbook. Growth to 2055 from the 2025 population served: Billingshurst +781; Pulborough +991; together 1,772.

Wastewater system name	Population Served 2025	Forecast population 2030	Forecast population 2045	Forecast population 2055	Percentage change 2030 - 2055	Is a detailed study required?	Is a water quality study planned?	The current stage of study
BILLINGSHURST	8,672	8,596	8,992	9,453	10.0%	Yes	Yes	Risk Assessment
PULBOROUGH	9,158	9,078	9,693	10,149	11.8%	Yes	Yes	Risk Assessment

Relied on: Issue 2 (forecasts adding fewer than 2,000 people to Billingshurst and Pulborough together by 2055).

Tab C5. Environment Agency Water Quality Archive: nutrient determinands in final effluent at Pulborough and Billingshurst

Summary prepared from the Archive's full data downloads for the two final-effluent sampling points (downloaded 16 October and 11 September 2026). It lists every phosphorus and nitrogen determinand recorded, with the number of samples and the first and last sample dates. Online: environment.data.gov.uk/water-quality (search by sampling point).

SO-F0002868: Pulborough Sewage Treatment Works final effluent

Determinand	Samples	First	Last
Nitrate as N	112	2000-02-08	2009-03-09
Nitrite as N	112	2000-02-08	2009-03-09
Nitrogen, Total Oxidised as N	112	2000-02-08	2009-03-09
Orthophosphate, reactive as P	112	2000-02-08	2009-03-09
Ammoniacal Nitrogen as N	321	2000-02-08	2026-08-13

SO-F0003095: Billingshurst New Sewage Treatment Works final effluent (Outfall B)

Determinand	Samples	First	Last
Nitrate as N	112	2000-02-08	2009-03-10
Nitrite as N	112	2000-02-08	2009-03-10
Nitrogen, Total Oxidised as N	112	2000-02-08	2009-03-10
Orthophosphate, reactive as P	112	2000-02-08	2009-03-10
Ammoniacal Nitrogen as N	316	2000-02-08	2026-07-20
Phosphorus, Total as P	55	2022-01-10	2026-07-20

Relied on: Issue 1 (Pulborough effluent phosphorus not measured since March 2009) and Issue 3 (nitrogen other than ammonia not measured at either works since March 2009).

study used outputs from previous investigations, historical data and various tools and models. The impact of agricultural measures was also assessed using the Farmscoper model.

The study is the first stage of collating all the existing evidence, understanding the gaps that require further investigation and providing an action plan to inform targeted work to address evidence gaps. During this study, it has been concluded that the primary source of the nutrients to the Arun Valley designated sites is diffuse pollution (from local inputs; drainage and runoff from the local catchment) and inputs from the Rivers Rother and Stor, and Upper Arun under flood events. The study also identified a significant input of sewage into Waltham Brooks SSSI from Southern Water's Coldwaltham Wastewater treatment works, as the effluent discharges directly onto this site. However, there are some significant data/evidence gaps around the source apportionment and percentages between diffuse and point source. For example, this study has not attempted to understand the impacts from storming from combined sewerage overflows, this is a gap that requires further investigation as there is data available on this.

It was also determined that the primary source of sediment onto the designated sites is likely to result from overtopping from the Rivers Arun and Stor during floods when the river carries a high sediment load, with approximately 70% of the sediment load derived from agricultural land and 30% from bank erosion. This is both an issue directly in terms of deterioration of water chemistry on these sites but also is directly affecting condition of other interest features such as aquatic plants species and peatland habitat.

As diffuse sources were the primary input of nutrients, measures outlined from Farmscoper model analysis, focussing on the livestock and arable sources of TN and TP, are therefore expected to be primary means to improve the sites and their condition in relation to water quality. Additional key measures were also identified to address evidence gaps that may be affecting source apportionment; including the legacy inputs to the systems as remobilisation of total phosphorus was indicated, especially on Pulborough Brooks SSSI, and the need to investigate the potential input via leakage through the sluices on the sites as this is uncertain at this stage. There was also a focus on Coldwaltham wastewater treatment works as high concentrations of nutrients were identified in the ditches connected to this discharge at Waltham Brooks SSSI.

The Farmscoper model analysis indicated that introduction of cover crops would be the most effective measure, followed by creation of riparian buffer strips. Different bundles were determined for dairy and grazing farms, and arable farms. When applied in combination, the calculated reductions in diffuse pollution were approximately 10-15% for TN, 20-35% for TP, and 25-45% for sediment. It was noted that achieving the CSMG targets at all three sites would be challenging with these measures alone. These percentages are also subject to change as they were assessed against what were provisional CSMG water quality targets for the SSSIs associated, and there are still evidence gaps that may affect the source apportionment. At Waltham Brooks SSSI, the most significant progress towards meeting the target would occur if inputs from the wastewater treatment works could be reduced primarily.

resulting from these main bird species has been calculated at 190.4 and 980.1 kg/year respectively. This has been defined as being a “relatively small” proportion of the total P and N inputs when compared with those deriving from the local catchment under normal conditions or following high rain-fall flood events, a representation of which is shown below.

Phosphorous:

- Wildfowl – 190.4 kg/year
- Local catchment – 1,000 kg/year
- Flood event – 600 – 2,000 kg/year

Nitrogen:

- Wildfowl – 980.1 kg/year
- Local catchment – 47,500 kg/year
- Flood event – 9,000 – 25,000 kg/year

The other sources of nutrient input (fish presence and river sluices) identified as being relevant to the Arun Valley designated sites, the absence of sufficient data or evidence makes the magnitude of impact from these sources difficult to quantify. These issues have been raised with the appropriate organisations and discussions have begun to try and identify potential mitigation measures.

Water company discharges

Water quality and water chemistry analysis undertaken during Natural England’s 2021 assessment of the Arun Valley designated sites identified several issues, mostly relating to elevated Total Phosphorous (TP) and Total Nitrogen (TN) concentrations. Whilst the current source apportionment of nutrients impacting these sites is yet to be fully clarified, preliminary investigations into this have started (Natural England’s Arun Valley Water Quality Nature Recovery Plan – Phase 1, please refer to section 13 for more details). Early indications of this work suggest that in general and with the exception of Waltham Brooks SSSI, pollutants deriving from point sources (water company discharges) are not significant and only contribute to a small amount to the overall nutrient input, with the Rivers Arun and Stor being the likely sources of delivery (overtopping during high rain-fall events). It has also been suggested, that due to the degree of dilution relationship shown in the analysis of river flow and nutrient concentration, the composition of pollutants during high rain-fall events leading to subsequent overtopping is expected to be primarily from diffuse sources.

However, the preliminary investigations have highlighted evidence gaps, uncertainties and limitations which reduces the confidence of the above conclusions. Anecdotal information obtained through undertaking this condition assessment report has also highlighted this such as risks around connectivity between the main river system and the designated sites (as detailed further in the pressures section on drainage). Whilst the magnitude of severity

1. Introduction

The site comprises a lowland wet grassland forming part of the Arun Valley floodplain. A series of grassland fields are criss-crossed by ditches with areas of scrub and surrounding woodland. The site is located (see Figure A in Appendix 1) within part of a larger nature reserve, owned and operated by the Sussex Wildlife Trust (SWT), the Royal Society for the Protection of Birds (RSPB) and private landowners. The whole Site is designated as Amberley Wild Brooks Site of Special Scientific Interest (SSSI). It also forms part of the Arun Valley Special Protection Area (SPA), the Arun Valley Special Area of Conservation (SAC) and Arun Valley Ramsar site. The site is also within the South Downs National Park. In order to inform works to improve the value of the site for nature conservation, the investigation involved mapping the depth of peat deposits in select localities across the site along with investigating surface water and groundwater interactions in both the site itself and in the surrounding area.

The purpose of the project is to review the ecohydrological status of Amberley Wild Brooks to understand its development and unmodified state, looking at the potential for its restoration to a more natural state. Amberley Wild Brooks has a relict lowland peat bog on site, mentioned in the SSSI citation as an area of peat in the north, which represents the only sizeable example of a relict raised bog in the southeast.

Key drivers of changes in peatland hydrology are climate, land use, groundwater or surface water abstraction and drainage, input of nutrients and pollutants from atmosphere or external water sources.

A number of parties are currently investigating and assessing the hydrological and hydrogeological status of the site. In parallel with this investigation, Atkins are also being employed by Natural England to investigate and assess the nutrient balance within the watercourses and ditches on the site. A third project is also ongoing, delivered by Atkins on behalf of Southern Water. This involves the ongoing long-term investigation and assessment of the behaviour of groundwater in the Folkestone Beds aquifer associated with Southern Water's groundwater abstraction for Public Water Supply at Pulborough.

1.1 Scope

The project was augmented to take the opportunity to provide additional data on groundwater for the ongoing Atkins study for Southern Water.

The combined scope of works comprised of:

- A series of borehole transects providing a cross section of geological sequence and groundwater level through the nature reserve;
- A series of hand augers to investigate the depth of peat across the site;
- A series of peat probes to investigate the depth of peat across the site;

7.1 Acidity

Peat ranged from lower pH values at 6.2 to relatively high at 6.9, with higher pH often associated with higher electrical conductivity. These values are towards the upper end of what is typically encountered in a healthy peat body and may indicate poor health of the peat deposits.

7.2 Fertility

Based on the abundance and variety of plant life on site, it is currently classed as eutrophic (although this is currently under review by Natural England due to the presence of certain mesotrophic species which form part of the special interest features of the site).

A study by Abraham and others (2019) found notable changes in the vegetation community to species with a preference for drier, more saline, habitats, and higher stress tolerance. Floodplains typically perform nutrient retention helping improve overall water quality however this is often impaired by reducing surface water connectivity such as the installation of surface water drains and flood embankments such as on site. Reduction of the inundation of floodwater leads to an overall reduction in nutrients in the floodplain. Further study is needed to the scale to which the site is losing nutrients. A catchment scale nutrient management plan is recommended for the site and is currently being undertaken by Atkins on behalf of Natural England.

7.3 Hydrological regime

This report has focussed upon the hydrology and hydrogeology of the site in relation to the peat deposits. Groundwater, rainfall, and surface water flow all contribute to the wetland hydrological regime. Wetness can also be controlled as much by on-site management as much as external inputs of water, for example raising and lowering ditch levels. The site has undergone many changes in its history effectively forming three historical landscapes:

- Pre-peat formation as an inundated tidal inlet;
- Succeeding peat formation as a river floodplain with several dendritic river channels supplying the submerged ground conditions needed for peat accumulation; and,
- The site's current state as a managed wetland with a series of drainage ditches which are essentially draining the peat of water over time.

7.3.1 Groundwater

Peat has been encountered in the north, east and central-east areas of the site. The limited data available at present suggests that peat is absent within the footprint of the