

Shadow Habitats and Regulations Assessment (SHRA)

Boreham Mill, Warminster

Reference: 2500213-ENV-S1-SW-TR-E-0003

Date: 20/03/2026

 **Enviren**

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Executive Summary

This report has been compiled for the support of the development of 6 apartments at Boreham Mill, Warminster (Grid reference: ST 89097 44131). The proposals are for 6 apartments along with associated infrastructure.

This report demonstrates that the development will achieve Nutrient Neutrality through the implementation of Sustainable Drainage Systems (SuDS) and the acquisition of credits through a third party marketplace.

This report has been prepared using **a Template Shadow Habitats Regulations Assessment** as its base and ratifies that the proposed development shall not have an adverse effect on the River Avon SAC.

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1. Introduction

- 1.1. This report has been compiled for the support of the development of 6 apartments at Boreham Mill, Warminster (Grid reference: ST 89097 44131). The proposals are for 6 apartments along with associated infrastructure. This report demonstrates that through the implementation of Sustainable Drainage Systems (SuDS) and the acquisition of credits through a third party marketplace, the development will achieve Nutrient Neutrality. The site is approximately 0.194 Hectares when considering the areas outlined in the site plan.
- 1.2. The existing site currently consists of commercial/industrial urban land. The creation of the new dwellings would result in an increase in phosphorus discharging into the surrounding water network due to foul water and surface water discharge from the proposed dwellings; however, through suitable mitigation proposals the development will achieve nutrient neutrality (see **Appendix 1**).

Table 1.1 – Site Specific Information	
Category	Site Specific Information
Site Name	Boreham Mill, Warminster
Site Location	Warminster, Wiltshire
Local Authority	
Overall Site Area	0.194 Hectares
Nutrient(s) Considered	Phosphorus
Catchment (Surface Water)	River Avon
Catchment (Foul Water)	River Avon

2.Details of plan or Project

Mitigation and the Local Nutrient Mitigation Fund

- 2.1. Wiltshire Council has been awarded £9.8m of grant funding to aid the delivery of nutrient mitigation within the River Avon catchment. This grant enables mitigation projects to be identified and delivered, and for mitigation credits to be sold. Third party mitigation providers are also beginning to deliver measures in the catchment of the River Avon.
- 2.2. Within this catchment developers will take responsibility for securing nutrient mitigation for their development proposal. Mitigation can be secured:
 - on-site or through land in the ownership of the developer
 - through an agreement with an accredited third party mitigation provider
 - through a Wiltshire Council nutrient mitigation scheme
- 2.3. In all instances, the mitigation will need to be secured in perpetuity through the necessary legal agreements or planning condition.

Decision making in the River Avon catchment

- 2.4. Within the River Avon catchment, there is a need for qualifying developments to demonstrate neutrality for phosphorus. Qualifying development includes:
 - any form of development that increases overnight stays within the catchment
 - some commercial development that either attract large numbers of people into the catchment (such as a tourist attraction) or where there is a significant discharge into the catchment for example from an industrial process
 - development which results in the intensification of agricultural practices, such as an additional cattle barn
- 2.5. Development that increases overnight stays in the catchment may comprise permanent residential development, gypsy and traveller development, care homes, nursing homes, tourist accommodation including both permanent and temporary campsites and hotels.

Overview

Table 2.1: Project or Plan Details			
Application Reference Number	TBC	Date	/20/03/2026
Applicant details	David Ashcroft technical@enviren.co.uk via 01275 560427	Document prepared by/ and on behalf of	Barney Townsend (EnvirEn Ltd) On behalf of: David Ashcroft
Plan or Project Name*	Boreham Mill, Warminster		
Plan or Project Location	Boreham Mill, Warminster Grid refence: ST 89097 44131	European Site(s) potentially affected.	River Avon SAC
Component SSSI(s):	River Avon System		

Plan or Project site location

- 2.6. The site is located 1.880 kilometres southeast of Warminster Centre and around 1.960 kilometres northwest of Sutton Veny. The exact location can be found in **Figure 2.1**:

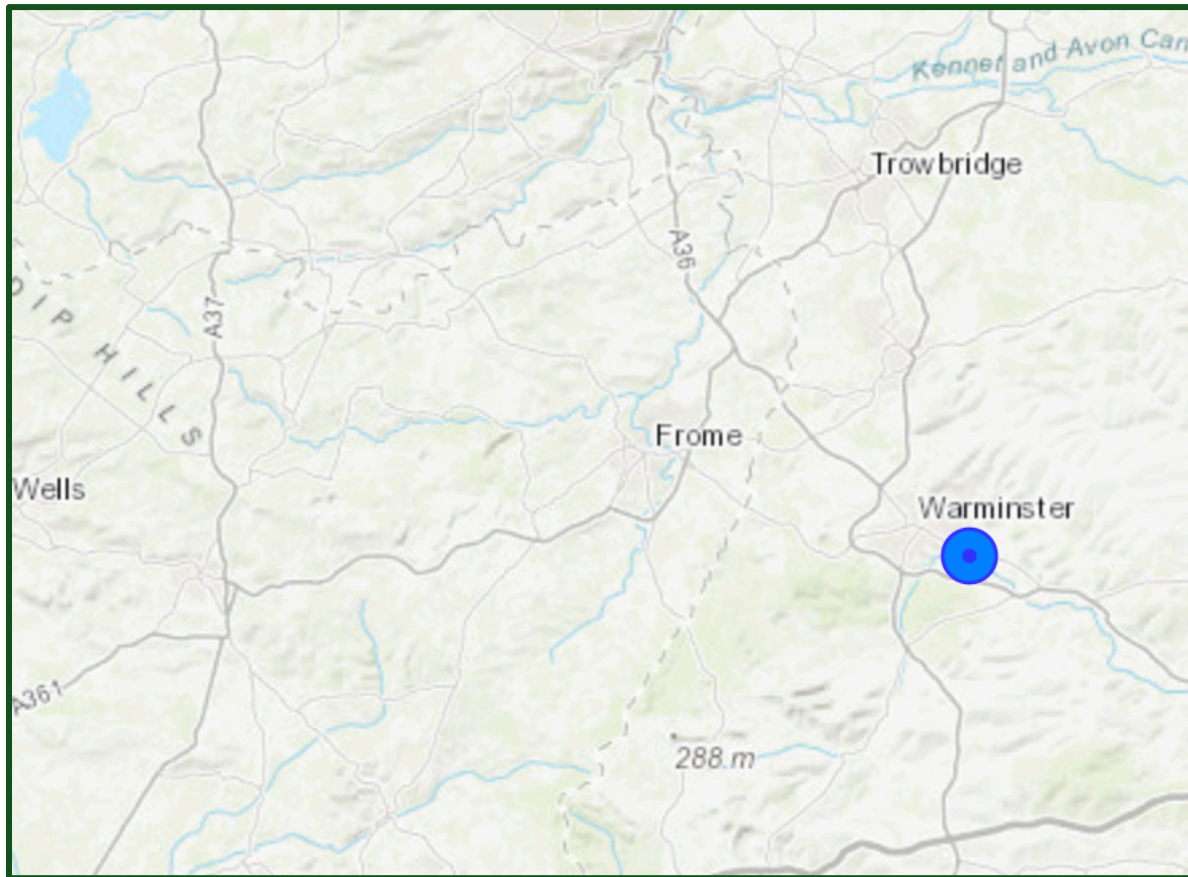


Figure 2.1 – Site Location

Environmental baseline

- 2.7. The area to be developed currently constitutes commercial/industrial land, which has limited ecological potential. Interrogation of local topographical information around the development parcel identifies that runoff from the site flows into the adjacent watercourse, discharging into River Wylye, which finally joins the River Avon. The River Avon continues in a southerly direction until it discharges into the sea.
- 2.8. As presented in the Enviren Nutrient Neutrality Assessment and Mitigation Strategy (Report ref: 2500213-ENV-S1-SW-TR-E-0002)[see **Appendix 1**], the development will achieve nutrient neutrality through the implementation of Sustainable Drainage Systems (SuDS) and the acquisition of credits through a third party marketplace.

Plan or Project description

- 2.9. The proposals are for the development of 6 apartments. The mitigation strategy shall consist of the implementation of Sustainable Drainage Systems (SuDS) and the acquisition of credits through a third-party marketplace. The documents appropriate to this assessment are:

- Enviren Ltd – Nutrient Neutrality Assessment and Mitigation strategy (Report ref: 2500213-ENV-S1-SW-TR-E-0002) (see **Appendix 1**)

Construction methodology and programme

2.10. The onsite laying of sewers shall be undertaken by a suitably qualified contractor. The pipes shall be either air tested or water tested to ensure that no leakages occur. The connection to the Package Treatment Plant (PTP) will be sealed and made good to prevent leakage.

Operation

Operational phosphorus outputs

- 2.11. The existing land consists of commercial/industrial urban land and therefore by converting the land to residential urban land there will be an uplift in the quantity of phosphorus generated.
- 2.12. As calculated in the Enviren Ltd NNAMS the proposed development shall generate 0.35 kg/year of Total Phosphorus. This shall be immediately offset by the acquisition of credits through a third party marketplace. This is presented in **Table 2.2** and **Table 2.3** below:

Table 2.2: Nutrient Arisings	
Category	Value
Foul water phosphorus arisings	0.38 kg/year (Pre-LURA)
Area of proposed development	0.190 hectares
Current site use	Commercial/industrial urban land
Existing land use phosphorus arisings	-0.26 kg/year
Proposed site use	Residential urban land
Proposed land use phosphorus arisings	0.18 kg/year
Final Nutrient Budget (including 20% buffer)	0.35 kg/year (Pre-LURA)

Table 2.3: Final Nutrient Budget.	
Proposed phosphorus load from development	0.35 kg/year
Mitigation Provided Through Acquisition of Credits	-0.35 kg/year
Resultant nutrient load	0.00 kg/year

Limitations

- 2.13. The Natural England calculator used to calculate phosphorus outputs for the plan or project follows a generic 'broad-brush' approach and therefore cannot be tailored to meet each specific sites or situations. This is detailed in the calculator information page which states, "The tool has been designed so that the user is able to update the data and methods in light of any new research or understanding" and "The information supplied in this tool is for guidance purposes only and is not intended to provide an exact budget calculation due to the limitations and assumptions of the model. The user is responsible for ensuring the accuracy and completeness of all data entered, be it manually or automatically, and used by this tool."

3. Information about the River Avon SAC Site

Identifying sites

- 3.1. The development is hydrologically linked to the River Avon SAC through the River Wylfe to the south which flows into the River Avon System SSSI.

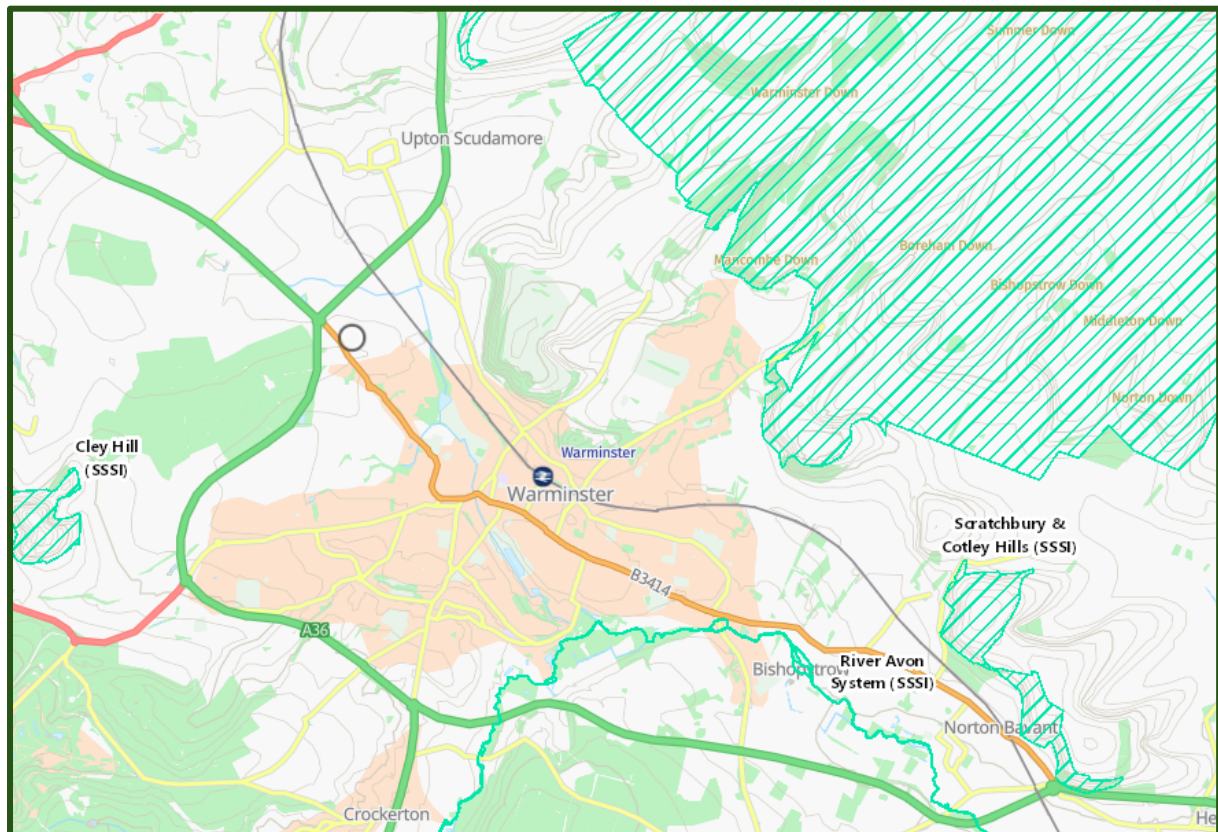


Figure 3.1: Protected Site Proximity.

European Site conservation objectives and qualifying features

- 3.2. The conservation objectives for the protected site can be found here: **Conservation objectives**.
- 3.3. The Natural England citation can be found here: **Natural England Citation**

4. Stage 1 – Screening of the Plan or Project

Likelihood of Significant Effects alone

- 4.1. Stage 1 of the HRA, the screening, is a test of Likely Significant Effect (LSE) to determine whether an Appropriate Assessment is required against all impact pathways identified. The screening is done considering the proposal in isolation and therefore not in-combination with any other plans or projects. It is also done in the absence of avoidance or other mitigation measures. Note that the assessment is made with awareness of the conservation objectives for the features of the European Site, however the actual assessment of the plan or project against the conservation objectives is not required until the Appropriate Assessment (Stage 2).

Potential Impact Pathways

- 4.2. The impact pathways relevant to the application site are as follows:
- The proposed development would result in an increase in phosphate loading within the hydrological catchment of the SAC, through the production of wastewater/slurry during operation, potentially leading to degradation of habitat or changes in water quality.

Likely Significant Effects

- 4.3. In terms of whether the project shall result in a Likely Significant Effect of the project, alone or in combination, it has been determined that:
- **There is an impact pathway and significant effects cannot be ruled out.**
- 4.4. This has been determined as the development shall result in an increase in wastewater, and as the project cannot fulfil the criteria established in the Wiltshire Council Interim guidelines on small scale thresholds and nutrient neutrality principles for the River Avon SAC catchment. This conclusion has been arrived at with due consideration to:
- The vulnerability/sensitivity of the receiving environment/features of interest;
 - When the risk of effects are likely to occur (e.g. construction and/or operation);
 - The likely geographical extent of the effects; and
 - Likelihood of significant effects (e.g. those above negligible in magnitude) occurring based on previous experience with similar elements, where available.
- 4.5. The proposals shall result in an increase in phosphorus discharging to the surrounding water network; new development must accord with the provisions of the Interim Guidelines to determine whether there is a Likely Significant Effect; therefore, as the development proposes new dwellings, the requirement for an Appropriate Assessment (AA) is triggered.

Table 4.1 : Potential effects of the plan or project alone on the River Avon SAC Site and its qualifying features

Qualifying Feature*	Relevant conservation objectives	Potential impact pathway	Likely Significant Effect alone
1	2	3	4
European Site: River Avon SAC			
See here: Natural England Citation	See here: Conservation objectives	➤ The proposed development will result in an increase in phosphate loading within the hydrological catchment of the SAC, through the production of wastewater/slurry during operation, potentially leading to degradation of habitat or changes in water quality affecting the wildfowl assemblage.	There is an impact pathway and significant effects cannot be ruled out.
Screening Decision of the Plan or Project Alone			
The risk of Likely Significant Effects on the River Avon SAC from the plan or project alone cannot be ruled out, and therefore an Appropriate Assessment (Stage 2) is required.			

5.Stage 2 – Appropriate Assessment

Appropriate Assessment of the plan or project alone

Assessment of potentially adverse effects without additional mitigation measures

Table 5.1 : Appropriate Assessment of the plan or project alone and in the absence of any mitigation measures.

Qualifying Feature	Impact pathway	Description of impacts and adverse effects	Assessment of adverse effects in relation to conservation objectives	Can adverse effect on River Avon SAC Site integrity be ruled out? Yes or No
European Site: River Avon SAC				
See here: Natural England Citation	See here: Conservation objectives	The wastewater produced by the project will discharge to the onsite PTP which would lead to the protected site. This would result in an increase in phosphorus (+0.35 kg/yr) that will be ultimately discharged into a watercourse hydrologically connected to the SAC Site. Due to the sensitivity of the SAC to any increase in phosphorus, this increase could cause further degradation or changes to	The increase in phosphorus could adversely affect all of the conservation objectives listed for the site; it will contribute to eutrophication of water bodies and changes to water chemistry within the site, thus making it unfavourable to aquatic invertebrates, affecting the structure and function of the habitats that support both them and vascular plants as per the qualifying criteria.	In the absence of mitigation, the net gain of phosphorus of the development in isolation will have an adverse effect on the SAC Site integrity.

		water quality to the waterbodies which support the aquatic invertebrate assemblage and vascular plants as per the qualifying criteria.		
Total Phosphorus produced by the plan or project <u>in the absence</u> of mitigation (as calculated in the Nutrient Neutrality Assessment and Mitigation Strategy NNAMS) = +0.35 kg/yr.				

Assessment of potentially adverse effects with additional mitigation measures

Table 5.2 : Appropriate assessment of the plan or project alone with any mitigation measures, conditions or restrictions.

Qualifying Feature	Description of adverse effects	Can adverse effects be mitigated? Yes or No	Description of mitigation measures including how they would be applied	Can adverse effect on site integrity be ruled out? Yes or No
European Site: River Avon SAC				
See here: Natural England Citation	See here: Conservation objectives	Yes	Mitigation shall be secured through the implementation of Sustainable Drainage Systems (SuDS) and through the acquisition of credits through a third party marketplace.	Yes
Total Phosphorus produced by the plan or project <u>with</u> mitigation (as calculated in the NNAMS) = -0.00 kg/year				

**Negative values show phosphorus removed from the catchment, '0' shows nutrient neutrality and positive values show that more mitigation is needed.*

Concluding Statement of Appropriate Assessment Alone

When considered alongside proposed mitigation measures it has been determined that the proposal has no adverse effect on the integrity of the River Avon SAC Site'

Residual Effects

N/A

Likelihood of Adverse Effects on Site Integrity in-combination other plans and projects

Likelihood of adverse effects in-combination due to nutrients

- 5.1. Nutrient neutrality has been demonstrated for the project alone with mitigation in place and therefore there will be no adverse effect on integrity of the SAC Site due to nutrients. Therefore, no in-combination assessment is required.

Conclusions on site integrity

Concluding Statement on the River Avon SAC Site Integrity

'It is concluded that the project will not adversely affect the integrity of the River Avon SAC Site, either alone or in-combination with other plans or projects, subject to the mitigation identified being secured in perpetuity'.

Appendix 1 – Enviren Nutrient Neutrality Assessment and Mitigation Strategy

For convenience – press “Alt + Left Arrow” to return to the section of the report



Nutrient Neutrality Assessment and Mitigation Strategy (NNAMS)

Boreham Mill, Warminster

Reference: 2500213-ENV-S1-SW-TR-E-0002

Date: 20/03/2026


Enviren

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Executive Summary

This report has been compiled for the support of the development of 6 apartments at Boreham Mill, Warminster (Grid reference: ST 89097 44131).

This report demonstrates that the development will achieve Nutrient Neutrality through the installation of SuDS and through the acquisition of credits through a third-party marketplace.

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1. Introduction

- 1.1. The construction of the new flats would result in an increase in phosphorus discharging into the surrounding water network due to foul water and surface water discharge from the proposed flats; however, through the installation of SuDS and through the acquisition of credits through a third party marketplace the development will achieve nutrient neutrality (see **Appendix 1**).

Table 1.1 – Site Specific Information	
Category	Site Specific Information
Site name	Boreham Mill, Warminster
Site location	Warminster, Wiltshire
Grid reference	ST 89097 44131
Local Authority	
Overall site area	0.194 Hectares
Nutrient(s) considered	Phosphorus
Catchment (Surface Water)	River Avon
Catchment (Foul Water)	River Avon
Receiving Wastewater Treatment Works (WwTW)	Onsite Package Treatment Plant
Existing land use	Commercial/Industrial Urban Land
Proposed land use	Residential Urban Land

2. Background Information

Site Location

2.1. The exact location of the site can be found in **Figure 2.1**:

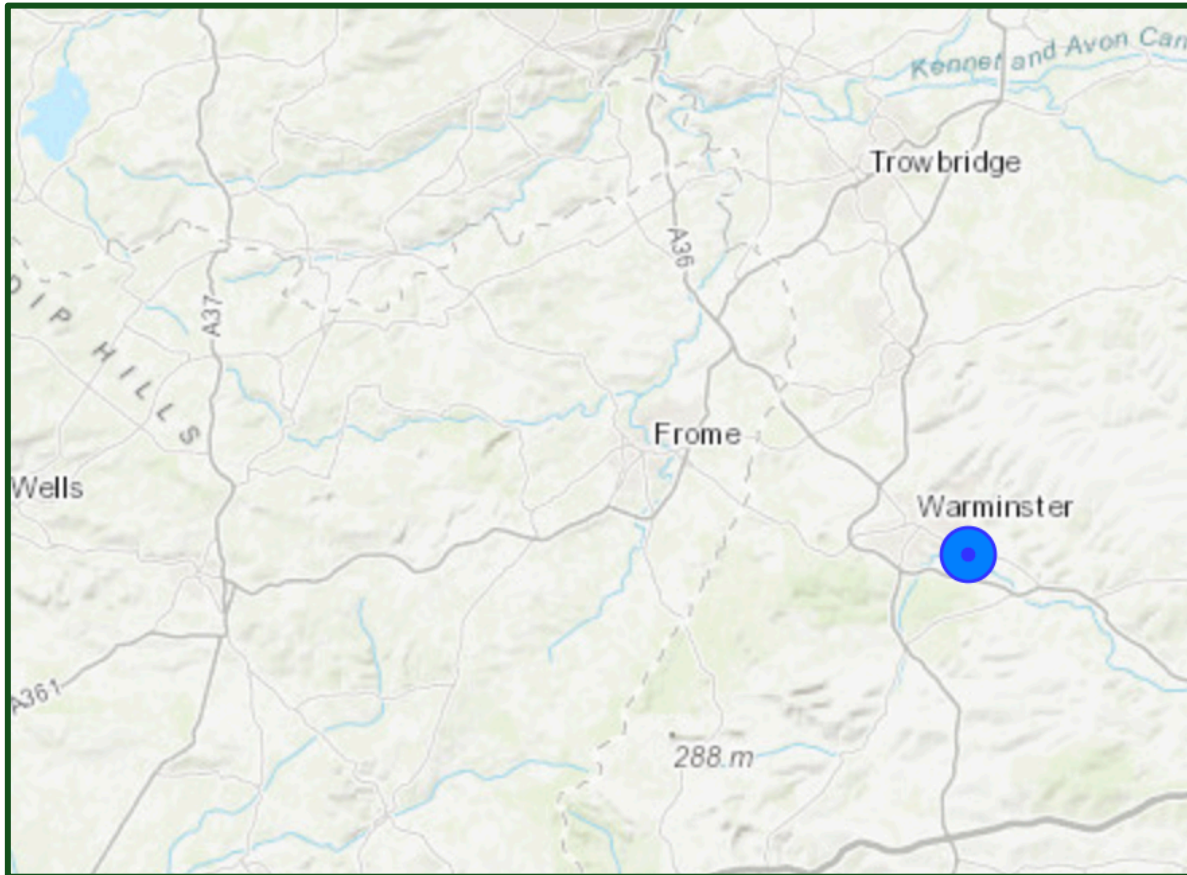


Figure 2.1 – Site Location

Existing Site Description

- 2.2. The area to be developed currently constitutes commercial land comprising an office block and associated infrastructure. The site is approximately 0.190 hectares in size when considering the areas in the site plan (see **Appendix 3**).



Figure 2.2 – Aerial Reconnaissance Photography

3. Development Proposals

- 3.1. The proposals are to consist of the redevelopment of an office building into 6 apartments.

Foul Water Drainage

- 3.2. The foul water drainage from the proposed apartments will discharge to the onsite Package Treatment Plant (**Appendix 6**), before being discharged to the wider water network.

Surface Water Drainage

- 3.3. The discharge of surface water from the site shall be to the adjacent watercourse. The proposed surface water shall be treated by a series of specifically designed Sustainable Drainage System (SuDS) components which shall maximise phosphorus removal and achieve nutrient neutrality.
- 3.4. Runoff from roofs shall be treated through a treatment train consisting of bioretention zones. Driveways and parking areas shall be constructed using type-c permeable paving. Following treatment, the surface water will be discharged to the adjacent watercourse. The performance of all SuDS components as contained in CIRIA C808 (Table 2.20)[issued August 2024] can be found in **Table 3.1**. Bioretention systems which utilise appropriate soil as per the FAWB study have been demonstrated to achieve a TP reduction in excess of 80% as per Table 18.1 of CIRIA C808 (see **Figure 3.1**). This has been accommodated as a Dissolved Phosphorus reduction in the calculations outlined in this report, with the particulate removal being based on the figures outlined in CIRIA C808.

TABLE 18.1 Pollution removal for bioretention systems designed to FAWB guidelines (after FAWB, 2009)		
	Pollutant	Typical removal efficiency
	TSS	> 90%
	Total phosphorous	> 80%
	Nitrogen	50% on average
	Metals (zinc, lead, cadmium)	> 90%
	Metals (copper)	up to 60%

Figure 3.1 – Bioretention System – TP Removal Rate

- 3.5. Maintenance requirements of the SuDS features can be found in **Appendix 4** with measures based on the associated schedules contained in CIRIA C753 and CIRIA 808. SuDS considerations outlined in CIRIA C808 are reviewed in **Appendix 5**. The design life for the SuDS measures are 100 years and will all remain in perpetuity.

**Table 3.1 – Phosphorus Removal Efficiency of Various SuDS Components
(as per CIRIA C808)**

SuDS Component	Swale	Detention basin	Retention basin	Pond	Floating wetland	Bioretention zone	Tree pit	Filter strip	Filter drain	Willow bed	Permeable pavement	Vortex grit separator	Oil water separator	Stormwater filter	Granular media	Rainwater capture
Particulate Phosphorus Removal (%)	28	28	28	39	39	44	44	22	22	55	39	28	28	44	44	55
Dissolved Phosphorus Removal (%)	0*	5	23	23	TBC	0*	0*	0*	0*	45	0*	0*	0*	41		45
Total Phosphorus Removal (%)	28	33	51	62	≥39	44	44	22	22	100	39	28	28	≤85	≤85	100

*Can be increased providing specific, referenced media is used.

Table 3.2 – Total Phosphorus Removal Percentage of Treatment Train

Treatment Train	Phosphorus Removal Efficiency of SuDS Component (Average between Dissolved and Particulate Phosphorus)				Cumulative Removal		Calculated Phosphorus Removal Efficiency
	Bioretention Zones		Permeable Paving				
	PP	DP	PP	DP	PP	DP	
Bioretention Zones	44	36	N/A	N/A	44	36	80

Permeable Paving	N/A	N/A	39	0	39	0	39
100% Removal Considered		50% Removal Considered			Not Applicable		

4. Development Nutrient Calculator Calculations

- 4.1. The direct output of the nutrient budget calculator can be found in **Appendix 1**. The key nutrient budget outputs can be found in **Table 3.1**. The figures for the inputs utilised in this section can be found in the **Figures** section to the rear of the report.

Table 4.1 – Development Nutrient Budget Calculations		
Stage 1 – Foul Water Arisings from dwellings		
Number of dwellings	6	
Average occupancy rate	2.4	
Water usage	120	
Wastewater treatment works	User Defined Package Treatment Plant	
Wastewater treatment works TP permit (mg/litre)	0.6	
Annual wastewater TP load	+0.38kg/year	
Stage 2 – Existing Land Use		
Catchment	River Avon	
Soil drainage type	Naturally Wet	
Annual average rainfall (mm)	900.1-950	
Within Nitrate Vulnerable Zone	Yes	
Former Land Use	Land Use	Area (hectares)
	Commercial/Industrial Urban Land	0.194
Annual nutrient export (kg TP)	-0.26kg/year	
Stage 3 – Proposed Land Use		
Proposed Land Use	Land Use	Area (hectares)
	Residential Urban Land	0.194
SuDS removal efficiency	39% – 0.139 Ha 80% – 0.055 Ha	
Annual nutrient export (kg TP)	+0.18kg/year	
Stage 4 – Final Nutrient Budget		
The total annual nutrient load generated	+0.35kg/year	

5. Mitigation

- 5.1. The development shall achieve nutrient neutrality through the acquisition of credits through the LPA's credit scheme or through a third-party marketplace. Credits will be acquired for the amount 0.35kg/year.

6. Conclusion

- 6.1. As can be seen in this report, the nutrient arisings associated with the development have been extensively considered, along with off-site and on-site mitigation methods.
- 6.2. The applicant will purchase nutrient neutrality credits to offset the increase in nutrients from the development. The applicant shall achieve Nutrient Neutrality through the proposals and therefore nutrient arisings should not prevent planning approval.

Figures

For convenience – press “Alt + Left Arrow” to return to the section of the report



Figure 1 - Soil drainage type

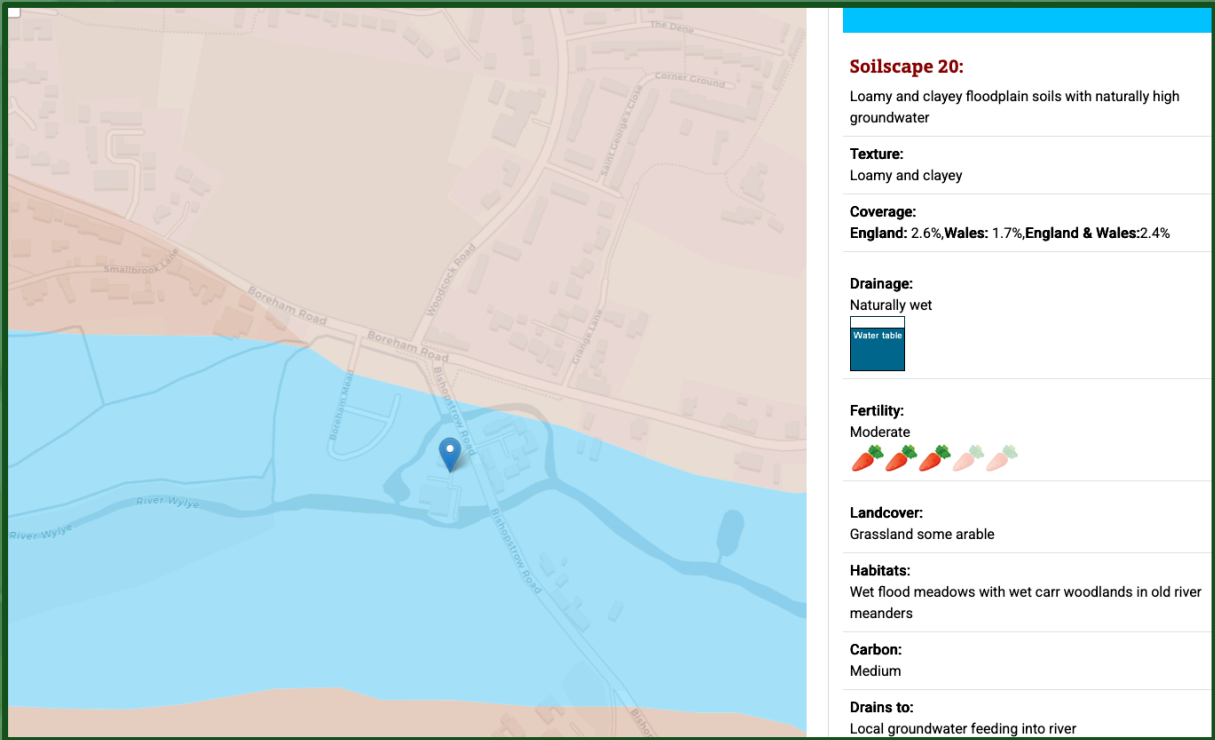


Figure 2 - Annual average rainfall (mm/year)

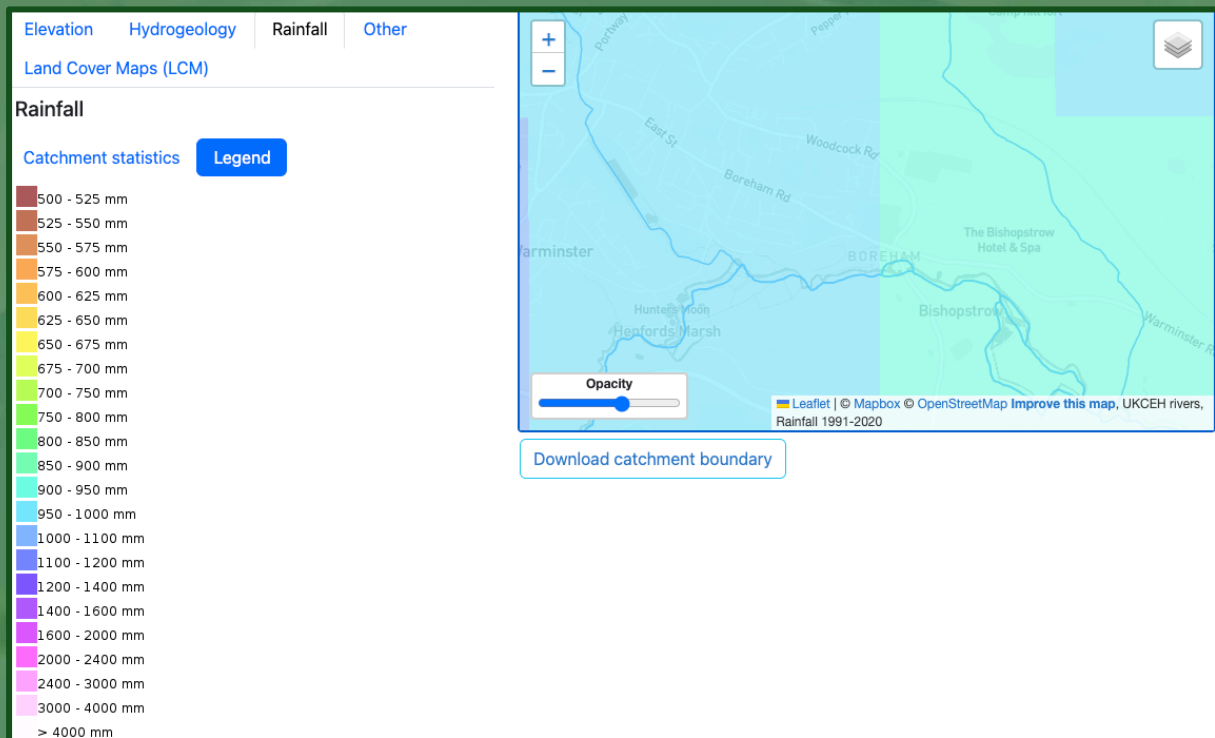
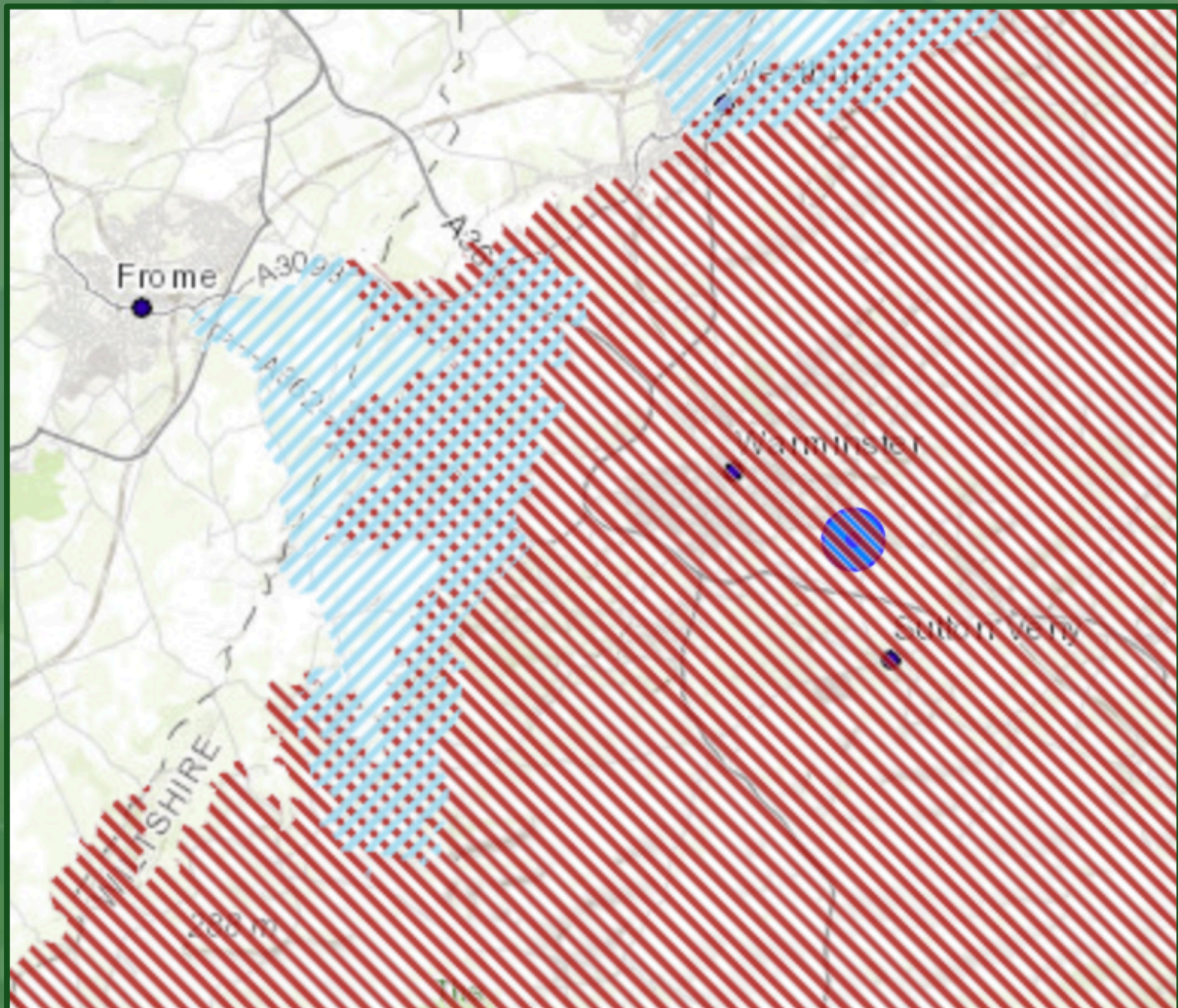


Figure 3 –Nitrate Vulnerable Zone (NVZ).



Appendix 1 – Development Nutrient Budget Calculations

For convenience – press “Alt + Left Arrow” to return to the section of the report



Nutrients from wastewater		
This sheet contains 2 tables. The tables are separated by a heading, which describes the following table. Note: You will need to fill in cells B5 to B9 in the first table 'Water infrastructure information'. Cells B10 is automatically calculated and will state '0.00' unless the user inputs have been entered. Cells A11 to A12 and B11 to B12 are automatically generated and will state 'Not applicable' depending on the inputs to cells B5 and B9. You may need to fill in cell C10 depending on the information you entered in cell B9. Cells C5 to C9 and cells C11 to C12 are intentionally blank cells. You do not need to fill in any cells in the second table 'Final calculation of nutrient load from wastewater'. Cells B16 to B18 are automatically calculated and will state '0.00' unless the user inputs have been entered to the first table 'Water infrastructure information'. Cells A19 to A22, cells B20 and B22 are automatically generated and will state 'Not applicable' depending on the user inputs to the first table 'Water infrastructure information'. Cell B15, cell B19 and cell B21 are intentionally blank cells. How to fill in the table 'Water infrastructure information' Cell B5: Enter the date of first occupancy. Cell B6: Enter the average occupancy rate of the development. The default rate is 2.4, this should not be edited without sufficient evidence. Cell B7: Enter the water usage. This value should be kept at 120 unless other efficiency measures are used. Cell B8: Enter the total number of dwellings or units that will be within the development site as of the project completion date. Cell B9: Choose the receiving wastewater treatment works (WwTW) from the dropdown list. If you select 'Package Treatment Plant user defined' or 'Septic Tank user defined', you must enter their certified value of total phosphorus (TP) in cell C10. Otherwise the default values will be used in the calculation of the nutrient load associated with wastewater. Nutrient permits may be changing for the WwTW you select, from 01/01/2025, or 01/04/2030. If the date of first occupancy is in-between changing permit dates, multiple permit limits may be automatically generated in cells B10 to B12. If applicable, up to 3 values for the nutrient loading associated with wastewater will be presented in cell B18, B20 or B22.		
Water infrastructure information		
Description of required information	Data entry column - user inputs required	Additional data entry column - user inputs may be required
Date of first occupancy (dd/mm/yyyy):	01/06/2026	
Average occupancy rate (people/dwelling or people/unit):	2.40	
Water usage (litres/person/day):	120	
Development proposal (dwellings/units):	6	
Wastewater treatment works:	Package Treatment Plant user defined	
Current wastewater treatment works P permit (mg TP/litre):	Enter value in cell C10	0.6
Not applicable	Not applicable	
Not applicable	Not applicable	
Final calculation of nutrient load from wastewater		
Description of values generated	Values generated	
Wastewater nutrient loading		
Additional population (people):	14.40	
Wastewater by development (litres/day):	1728.00	
Annual wastewater TP load (kg TP/yr):	0.38	
Not applicable		
Not applicable	Not applicable	
Not applicable		
Not applicable	Not applicable	

Nutrients from future land use

This sheet contains one table.

Note: You will need to fill in cells A5 to A21 and B5 to B21. Cells B22 and C5 to C22 are automatically generated calculations and will state '0.00' unless the user inputs have been entered. Row 22 is a Total Row. The Total Row states 'Totals:' in cell A22 and automatically calculates the total sum of cells B5 to B21 in cell B22 and C5 to C21 in cell C22.

How to fill in the table 'Future land uses'

Cells A5-A21: Choose the future (post-development) land use type(s) of landcover present on the new site from the dropdown list
Cells B5-B21: Enter the area in hectares of each land use type.

The nutrient load from future land uses is shown in cells C5 to C21 for total phosphorus (TP).

The total nutrient load from future land uses is shown in cell C22 for TP.

Future land uses		
New land use type(s) - user inputs required	Area (ha) - user inputs required	Annual phosphorus export (kg TP/yr)
Residential urban land	0.22	0.41
		0.00
		0.00
		0.00
		0.00
		0.00
		0.00
		0.00
		0.00
		0.00
		0.00
		0.00
		0.00
		0.00
		0.00
		0.00
		0.00
		0.00
		0.00
		0.00
		0.00
		0.00
Totals:	0.22	0.41

Nutrients from future land use after sustainable urban drainage system (SuDS) treatment

This sheet contains one table.

Note: You will need to fill in cells A5 to A29, cells B5 to B29, cells C5 to C29, cells E5 to E29 and cells F5 to F29 if you are including SuDS to remove nutrients from the surface runoff. Cells B30, D5 to D30 and cells G5 to G30 are automatically calculated and will state '0.00' unless the SuDS feature has been entered. Cells H5 to H29 are automatically generated and will state 'Not applicable' unless the total area of the landcover entered is larger than the total area of the landcover entered into the worksheet 'Nutrients, from_future_land_use'. Row 30 is a Total Row. The Total Row states 'Totals', in cell A30 and automatically calculates the total sum of cells B5 to B29 in cell B30, cells D5 to D29 in cell D30 and cells G5 to G29 in cell G30. Cell C30, cell E30, cell F30 and cell H30 are intentionally blank.

How to fill in the table 'SuDS information'

Cells A5 to A29: Choose the future (post-development) land use type(s) of landcover present on the new site within the SuDS catchment area from the dropdown list. Only landcovers entered into the worksheet titled 'Nutrients, from_future_land_use' can be entered.

Cells B5 to B29: Enter the area in hectares of each new land use type within the SuDS catchment area.

Cells C5 to C29: Enter the percentage of the flow entering the SuDS feature. If all flow is being diverted to the SuDS feature then this value should be set to 100%.

The annual total phosphorus (TP) loads associated with the landcovers in the SuDS catchment area are automatically calculated in cells D5 to D29.

Cells E5 to E29: Enter the name of the SuDS features used to intercept surface flows can be entered in. Any text can be entered into these cells. Cells F5 to F29: Enter the nutrient removal rates associated with the SuDS features for TP.

Values for column F: must be identified by the user and must be specific to the SuDS features being implemented.

The annual TP load removed by the SuDS features are automatically calculated in cells G5 to G29. These values are subtracted from the nutrient budget.

Note: You do not need to fill in column H 'Notes on data'. It will state 'Not applicable' unless the total area of each landcover within the SuDS catchment area exceeds the area of the landcovers entered into the worksheet titled 'Nutrients, from_future_land_use'.

The total nutrient load removed through the SuDS features is shown in cell G30 for TP.

SuDS information

New land use type(s) within SuDS catchment area - user inputs required	SuDS catchment area (ha) - user inputs required	Percentage of flow entering the SuDS (%) - user inputs required	Annual phosphorus inputs to SuDS feature(s) (kg T/yr)	Name of SuDS feature(s) - user inputs required	TP removal rate for features - user specified (%) - user inputs required	Annual phosphorus load removed by SuDS (kg TP/yr)	Notes on data
Residential urban land	0.14	100.00	0.26	Permeable Paving	39.00	0.10	Not applicable
Residential urban land	0.06	100.00	0.10	Bioretention Zones	80.00	0.08	Not applicable
			0.00			0.00	Not applicable
			0.00			0.00	Not applicable
			0.00			0.00	Not applicable
			0.00			0.00	Not applicable
			0.00			0.00	Not applicable
			0.00			0.00	Not applicable
			0.00			0.00	Not applicable
			0.00			0.00	Not applicable
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			0.00			0.00	Not applicable
			0.00			0.00	Not applicable
			0.00			0.00	Not applicable
			0.00			0.00	Not applicable
			0.00			0.00	Not applicable
			0.00			0.00	Not applicable
			0.00			0.00	Not applicable
			0.00			0.00	Not applicable
			0.00			0.00	Not applicable
			0.00			0.00	Not applicable
			0.00			0.00	Not applicable
			0.00			0.00	Not applicable
Totals:	0.19		0.36			0.18	

Final nutrient budgets

This worksheet contains one table. This table is automatically populated using the outputs from the previous worksheets.

Note: You do not need to fill in any cells in the table.
Cells B5 to B8 and cells B10 are automatically calculated and will state '0.00' unless the user inputs have been entered to all of the required worksheets.
Cells A11 to A14, cell B12 and cell B14 are automatically generated and will state 'Not applicable' depending on the user inputs to the worksheet
'Nutrients_from_wastewater'.
Cell B9, B11 and B13 are intentionally blank.

This table presents calculations that underpin the final annual nutrient budget for the development site. Up to 3 values for the nutrient budget may be presented in cells B10, B12 and B24 for total phosphorus (TP).

Total nutrient budget calculations

Description of values generated	Values generated
Wastewater TP load (kg TP/year):	0.38
Net land use TP change (kg TP/year):	-0.09
TP budget:	0.29
TP budget + 20% buffer:	0.35
Annual nutrient budget	
The total annual phosphorus load to mitigate is (kg TP/yr):	0.35
Not applicable	
Not applicable	Not applicable
Not applicable	
Not applicable	Not applicable

Appendix 2 – Statutory Undertaker Maps

For convenience – press “Alt + Left Arrow” to return to the section of the report



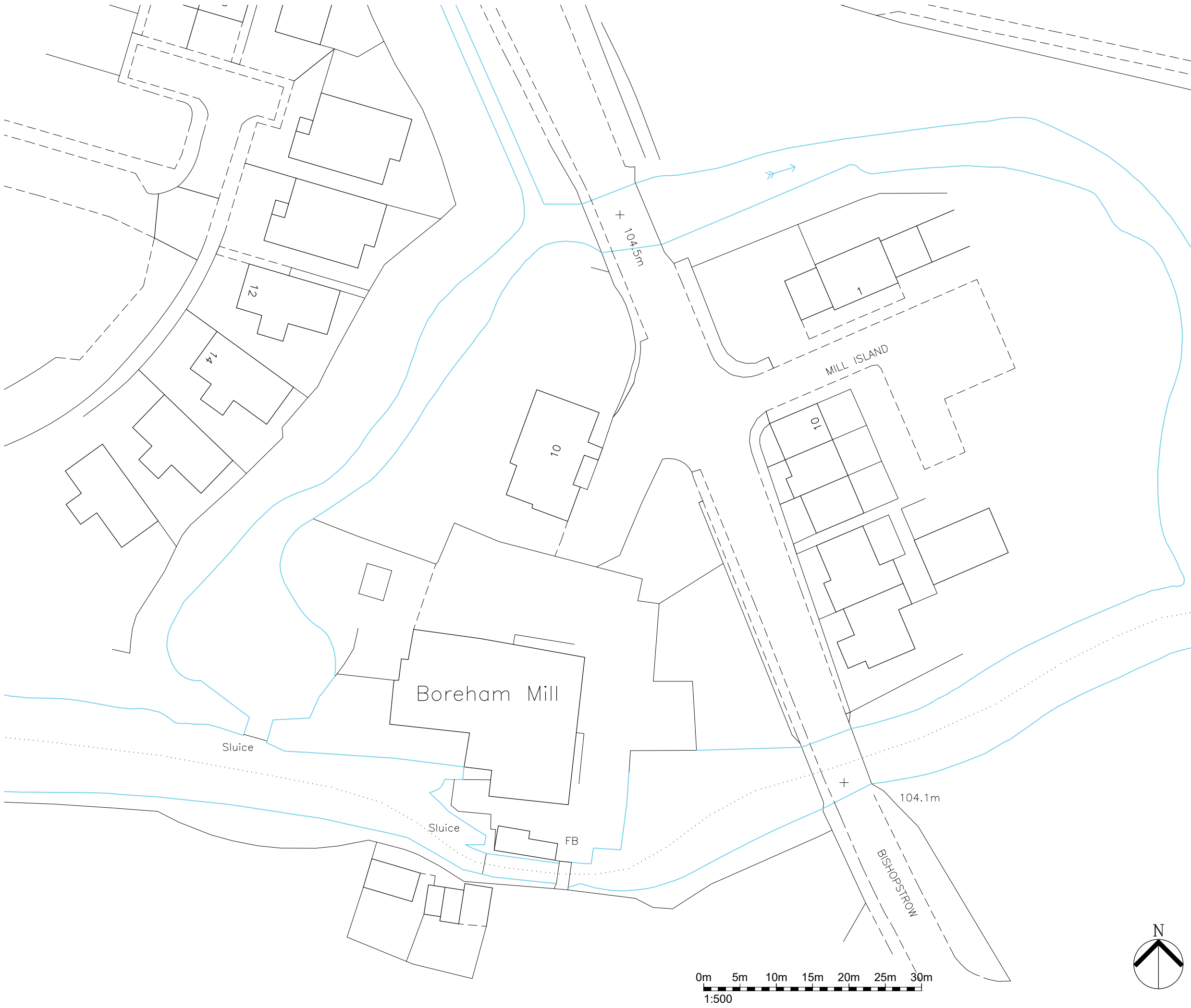
Reproduced from the Ordnance Survey map with the permission of the Controller of His Majesty's Stationery Office. © Crown copyright and database rights (2025) OS AC0000848304

WATER MAINS - Distribution Main - Washout Main - Raw Water Main - Abandoned Main - Private Main	SEWERS - Foul - Surface - Combined - Abandoned Colours generally indicate the use of the sewer/drain (i.e Red - Foul, Dark Blue - Surface, Magenta - Combined/Dual Use, Light Green - Highway Drain, Mid Green - Overflow) styles of line are shown on the key in sample/typical colours. STRUCTURES - Manhole - Foul - Manhole - Surface - Manhole - Combined - Outfall - Inlet - Lamphole - Bifurcation - Foul - Bifurcation - Surface - Bifurcation - Combined - Combined Sewage Overflow	PUBLIC PRIVATE SECTION 104	OTHER WESSEX PIPES - Rising Mains - Standby Rising Mains - Effluent Disposal - Overflow - Syphon	NON-WESSEX / UNKNOWN - Private Rising Mains - Culverted Watercourse - Highway Drain - Use Unknown - Status Unknown
SITES - Source - Reservoir - Pump - Treatment Works FITTINGS - Valve - Open - Valve - Closed - Fire Hydrant - Pressure Reducing Valve - Meter	OTHER STRUCTURES - Chamber - Tunnel - Interceptor - Attenuation Tank - Storage Tank	Date: 17/11/2025 Centre: 389193E, 144057N Scale: 1:1,250 (when printed at A2 size)		

Appendix 3 – Proposed Site Plan

For convenience – press “Alt + Left Arrow” to return to the section of the report





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Areas are given in m2 unless otherwise stated.
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SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

Refer to the relevant Construction (Design and Management) documentation where applicable.

It is assumed that all works on this drawing will be carried out by a competent contractor, working where appropriate to an approved method statement.

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Rev	Description	Date	By

gth

GREENSLADE TAYLOR HUNT

DEVELOPMENT LAND AND PLANNING
WINCHESTER HOUSE
DEANE GATE AVENUE
TAUNTON SOMERSET
TA1 2UH
TEL: 01823 334466

PROJECT TITLE

Boreham Mill
Bishopstrow Road, Warminster,
Wiltshire, BA12 9HQ

DRAWING TITLE

STATUS **SKETCH**

SCALE 1:500

SHEET SIZE **A3**

DATE June 25 DRAWN HS CHECKED

DWG NO. **3467-SK-02** REV

Appendix 4 – SuDS Maintenance Requirements

For convenience – press “Alt + Left Arrow” to return to the section of the report



Table A4.1 – SuDS Maintenance Requirements – Permeable Paving		
CIRIA C753 Maintenance Requirement		
Maintenance schedule	Required action	Typical Frequency
Regular Maintenance	Annually	Brushing and vacuuming (standard cosmetic sweep over whole surface)
Occasional Maintenance	As necessary	Stabilise and mow contributing and adjacent areas.
	As necessary	Removal of weeds
Regular Maintenance	As necessary	Remediate any landscaping which through vegetation maintenance or soil slip, has been raised to within 50 mm of the level of the paving
	As necessary	Remedial work to any depressions, rutting and cracked or broken blocks considered detrimental to the structural performance or a hazard to users, and replace lost jointing material
	Every 10-15 years	Rehabilitation of surface and upper substructure by remedial sweeping
CIRIA C808 Maintenance Requirement		
It is unlikely that the permeable paving will be lifted to replace the subsurface layers. The only maintenance activity that is required is sweeping the surface when needed.		

Table A4.2 – SuDS Maintenance Requirements – Bioretention Systems

CIRIA C753 Maintenance Requirement		
Maintenance schedule	Required action	Typical Frequency
Regular inspections	Inspect infiltration surfaces for silting and ponding, record de-watering time of the facility and assess standing water levels in underdrain (if appropriate) to determine if maintenance is necessary.	Quarterly.
	Check operation of underdrains by inspection of flows after rain.	Annually.
	Assess plants for disease infection, poor growth, invasive species etc and replace as necessary.	Quarterly
	Inspect inlets and outlets for blockage.	Quarterly
Regular Maintenance	Remove litter and surface debris and weeds.	Quarterly (or more frequently for tidiness or aesthetic reasons)
	Replace any plants, to maintain planting density.	As required
	Remove sediment, litter and debris build-up from around inlets or from forebays.	Quarterly to biannually
Occasional Maintenance	Infill any holes or scour in the filter medium, improve erosion protection if required.	As required
	Repair minor accumulations of silt by raking away surface mulch, scarifying surface of medium and replacing mulch.	As required
Remedial Actions	Remove and replace filter medium and vegetation above.	As required but likely to be > 20 years
CIRIA C808 Maintenance Requirement		

The background of the page is a soft, green-toned illustration. It features a pond with concentric, wavy lines representing ripples. Several green leaves of various shapes are scattered across the upper half, some appearing to float on the water. Small, light-colored bubbles are also visible, particularly around the leaves and in the lower right area.

Usually, maintenance of these devices simply includes scraping away any built-up sediment at the inlet or on the surface and littler picking. Vegetation may be harvested and pruned at the end of the growing season and devices may be weeded too.

If the treatment media is included in the design, it is likely to become exhausted after a number of years and will need to be removed and replaced. This can be facilitated by locating in a basket near the inlet to the device. However, simple soil amendments to enhance P sorption typically do not increase bioretention maintenance needs.

Appendix 5 – SuDS Considerations

For convenience – press “Alt + Left Arrow” to return to the section of the report



Appendix 6 – August Package Treatment Plant

For convenience – press “Alt + Left Arrow” to return to the section of the report





Prüfinstitut für
Abwassertechnik
GmbH

PERFORMANCE RESULTS

“August ir Ko” UAB

Juodasis kelias 104A, 11307 Vilnius, Lithuania

EN 12566-3

Small wastewater treatment systems for up to 50 PT

Small wastewater treatment system AT

Suspended growth activated sludge process in continuous-flow in a
polypropylene tank

Test report – No PIA2014-215B38

Nominal organic daily load	0.35	kg BOD ₅ /d	
Nominal hydraulic daily load	0.90	m ³ /d	
Material	Polypropylene		
Treatment efficiency (nominal sequences)		Efficiency	Effluent
	COD	94.4 %	45.0 mg/l
	BOD ₅	98.2 %	7.0 mg/l
	SS	97.2 %	12.0 mg/l
	NH ₄ -N*	99.5 %	0.2 mg/l
	N _{tot} *	93.2 %	5.6 mg/l
	P _{tot}	93.3 %	0.6 mg/l
Electrical consumption	1.0	kWh/d	
*determined for temperatures $\geq 12^{\circ}\text{C}$ in the bioreactor			

Performance tested by:

PIA – Prüfinstitut für Abwassertechnik GmbH

(PIA GmbH)

Hergenrather Weg 30

52074 Aachen, Germany

This document replaces neither the declaration
of performance nor the CE marking.



Notified Body
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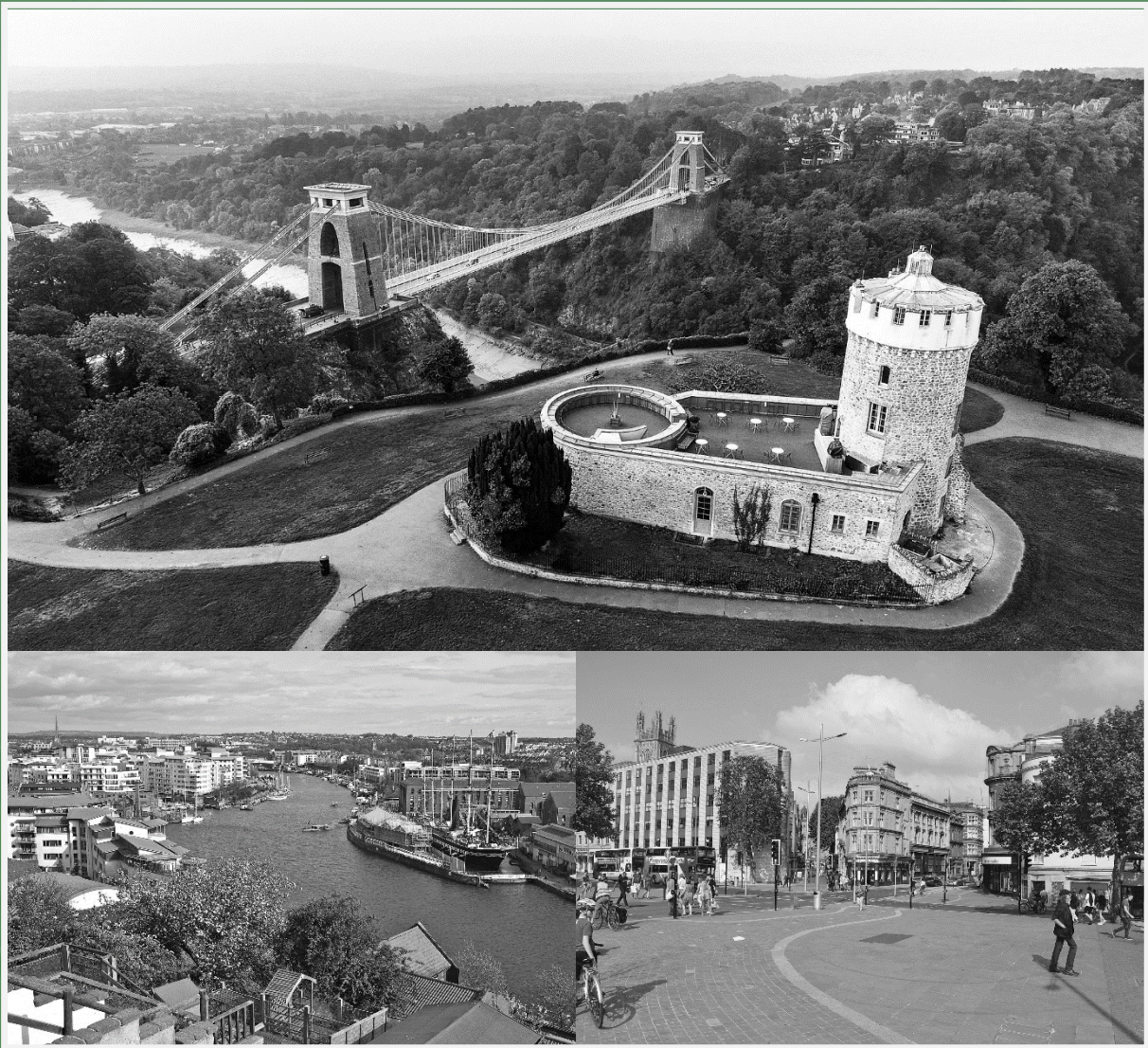
Prüfinstitut für Abwassertechnik GmbH
[Signature]
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Elmar Lancé

September 2014

ISO 19650 Filing Notation

Project	
0XXX	Project Number
Originator	
ENV	Enviren
Functional Breakdown	
S1	Planning submission
S2	Technical submission
S3	Construction Information
S4	As built details
Spatial Breakdown	
SW	Southwest
EE	East of England
SE	South East
WM	West Midlands
EM	East Midlands
YO	Yorkshire
NW	North West
NE	North East
LO	London
OT	Other
Form	
DR	Drawing
GR	Diagram
TR	Textual Report
Discipline (relevant)	
C	Civil Engineering
E	Environmental Engineering
G	Ground Engineering
O	Other Discipline
T	Town and Country Planning and Building Control
W	Water Engineering
Z	Multiple Discipline
Number	
000X	Report number

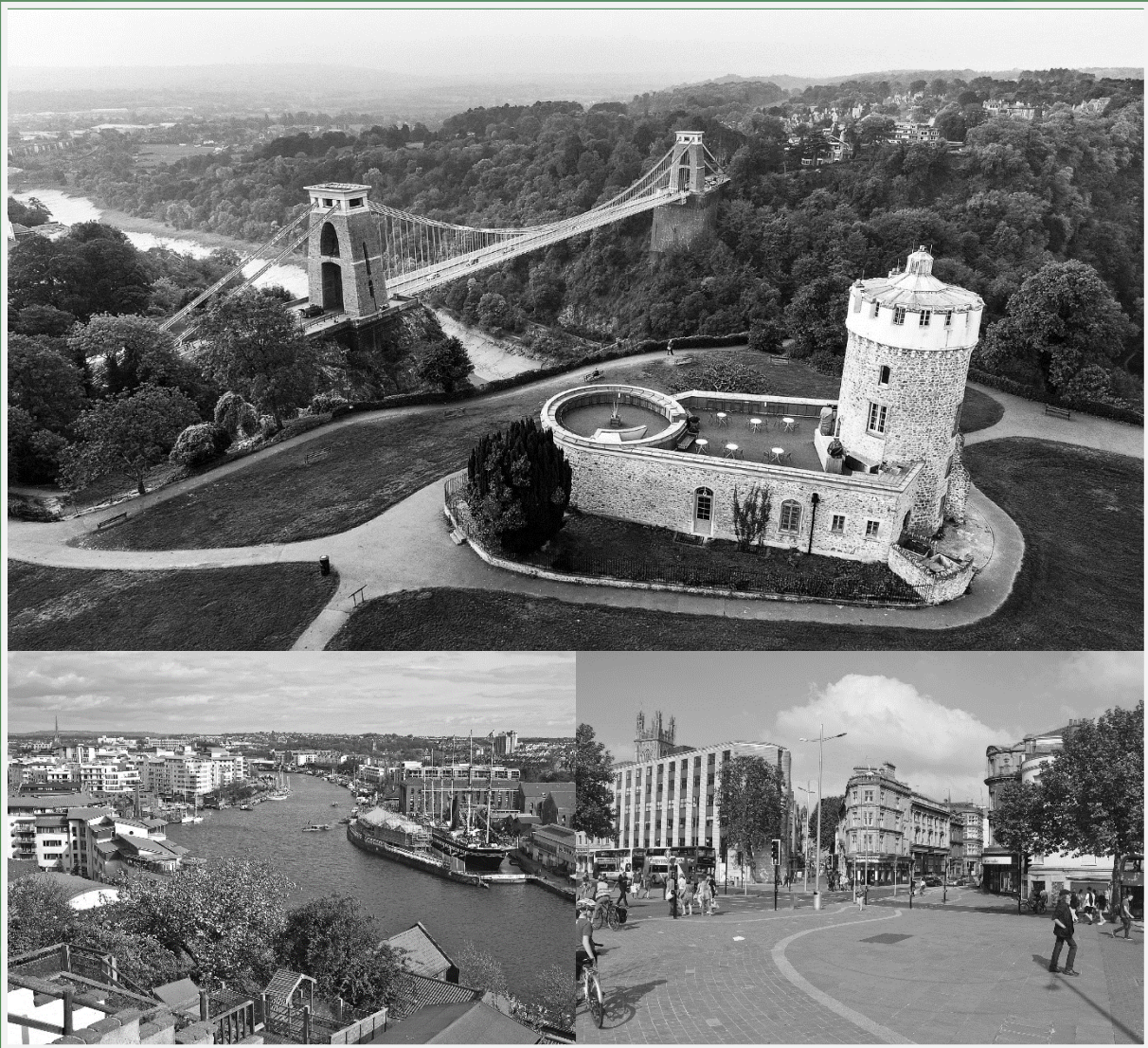


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Originator	
ENV	Enviren
Functional Breakdown	
S1	Planning submission
S2	Technical submission
S3	Construction Information
S4	As built details
Spatial Breakdown	
SW	Southwest
EE	East of England
SE	South East
WM	West Midlands
EM	East Midlands
YO	Yorkshire
NW	North West
NE	North East
LO	London
OT	Other
Form	
DR	Drawing
GR	Diagram
TR	Textual Report
Discipline (relevant)	
C	Civil Engineering
E	Environmental Engineering
G	Ground Engineering
O	Other Discipline
T	Town and Country Planning and Building Control
W	Water Engineering
Z	Multiple Discipline
Number	
000X	Report number



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