



Flood & Water Management Act 2010

Schedule 3 Sustainable Drainage

SuDS Scheme Application for SuDS Approving Body (SAB) Approval – Wales

Application Form for Pre-Application Approval of SuDS on new developments with reference to The Sustainable Drainage (Approval and Adoption Procedure) (Wales) Regulations 2018

Pre-Application Structure	
<u>Pre-Application Form</u>	<i>(To complete & return)</i>
<u>Guidance on Completing the Pre-Application Form</u> – including specific information and evidence required to support the application.	<i>(For guidance)</i>

(Use hyperlinks above to directly access the Form and Guidance)

Pre-Application Form

This form is based on the requirements provided by Welsh Government for the sole purpose of submitting information to the SuDS Approving Body (SAB) in accordance with the legislation detailed on this form and other relevant items of primary and subordinate legislation.

Please be aware that once you have downloaded this form, the SAB and Welsh Government will have no access to the form or the data you enter into it. Subsequent use of this form is solely at your discretion, including the choice to complete and submit it to the SAB in agreement with the declaration section.

Upon receipt of this form and any supporting information, it is the responsibility of the SAB to inform you of its obligations in regard to the processing of your application. Please refer to its website for further information on any legal, regulatory and commercial requirements relating to information security and data protection of the information you have provided.

Please Note:

1. This form is for **Pre-Application** discussions with SAB ONLY;
2. Consideration of this application will be based on compliance with the [Statutory National Standards for Sustainable Drainage Systems \(SuDS\) for Wales](#), and [Statutory Instruments](#);
3. You are advised to engage early, and directly, with the LPA and all other relevant organisations that may have an interest in your SuDS scheme proposal, including the SAB statutory consultees listed below:
 - a. Sewerage undertaker
 - b. National Resources Wales
 - c. Highway Authority
 - d. Canal & River Trust
 - e. Internal Drainage Districts (NRW);
4. **For a valid SuDS Scheme Pre-Application to the SAB, ALL sections of this form MUST be completed;** and
5. You are encouraged to provide an initial response to the further questions contained in the [Guidance](#) on completing this form, and to submit as much initial technical information as possible about your SuDS scheme proposals (also as indicated in the [Guidance](#)); as this will assist the SAB with pre-application considerations and discussions.

We will process the information you provide so that we can deal with your application. We may also process or release the information to offer you documents or services relating to environmental matters and consult the public, public organisation and other organisations; provide information from the public register to anyone who asks or prevent anyone from breaking environmental law, investigate cases where environmental law may have been broken and take any action that is needed, and respond to requests for information under the Freedom of Information Act 2000 and the Environmental Information Regulations 2004 (if the Data

Protection Act allows).

Please ensure that the information you submit is accurate and correct and does not include personal or sensitive information. If you require any further clarification, please contact the SAB directly.

If printed, please complete using block capitals and black ink prior to submitting to the SAB.

Please read through the [Guidance](#) and complete this application form carefully. If you fill in the application form correctly first time, the SAB can process it quicker.

Prior to the submission of a Full Application, applicants are strongly advised to make this Pre-Application submission to discuss their proposals with the SAB and ensure that an acceptable SuDS scheme is submitted later, at the Full Application stage. Please note that pre-application fees may apply.

Submissions made in support of this application shall be based upon current legislation and industry best practice including documents referenced in [Guidance on Making SuDS Applications for SAB Approval](#).

Proposals submitted should be developed by a competent and suitability qualified professional, experienced in drainage/ SuDs / flood risk management design.

Where applicable, the LPA planning reference or unique identifier should be included.

Applicants should complete this form and submit it, together with relevant supporting documents, to XXXXXXXX Council SuDs Approving Body. **(to be added by each individual SAB)**

Where applicable, payment of the Pre-Application fee can be made via BACS, Cheque (made payable to XXXXX Council) (to be added by each individual SAB) or in person at one of our Contact Centres. The following reference should be quoted xxx- xxxx. (to be added by each individual SAB) Your application will not be processed until the application fee is received and cleared in full.

When you have completed the application form please submit the form and associated documents to: (to be added by each individual SAB)

Electronically:

Phone:

Postal:

If you are not sure about anything contained in the application form, please contact us.

Content

ALL sections of this form MUST be fully completed unless otherwise stated.

- 1. Applicant Details**
- 2. Site Details**
- 3. Application**
- 4. Environmental Impact Assessment (EiA) Statement**
- 5. Compliance with Statutory National Standards for Sustainable Drainage Systems (SuDS)**
- 6. Initial Assessment of Flood Risk**
- 7. SuDS Scheme Application Checklist**
- 8. Declaration**

1. Applicant Details**Applicant Name and Address**

Title and Name		
Company		
Suffix (unit/name/number)		
Address line 1		
Address line 2		
Address line 3		
Town		
County		
Postcode		
Phone number	Mobile	
	Works	
	Home	
e-mail address		

Agent Name and Address

Title and Name		
Company		
Suffix (unit/name/number)		
Address line 1		
Address line 2		
Address line 3		
Town		
County		
Postcode		
Phone number	Mobile	
	Works	
	Home	
e-mail address		

Preferred contact	Applicant	Agent
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2. Site Details

A general description of site location supported by a plan specifying the construction area and the extent of the drainage system should be submitted. Plans shall be at a scale of 1:2500. All plans should show the direction of North.

Name of proposed development	
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Grid Reference (E/N)	Easting	Northing
Suffix (unit/name/number)		
Address line 1		
Address line 2		
Address line 3		
Town		
County		
Postcode		

Description of proposed development	
Total application site area (Ha)	
Is the site currently developed i.e. Brownfield, or is it currently undeveloped i.e. Greenfield?	
Existing land use	
Proposed land use	

3. Application

Has any prior advice been sought from the SuDS Approval Body (SAB) about this application?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
If Yes, please complete the following information about the advice you were given. This will help the SAB to deal with this application more efficiently.		

Officer Name					
Reference		Date	DD	MM	YYYY
Details of pre-application advice received					

Does this application relate to any other SAB application already made?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
If "Yes", please provide SAB Reference number		

Is this application part of a phased approach to development of the site, or one of multiple applications for the same site?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
If "Yes", please provide brief details		

4. Environmental Impact Assessment (EiA) Statement

Does this application relate to a development that is the subject of an EiA application under the Town & Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017(1)?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
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5. Compliance with Statutory National Standards for Sustainable Drainage Systems (SuDS)

All sustainable drainage systems **MUST** comply with the [Statutory National Standards for Sustainable Drainage Systems \(SuDS\) for Wales](#). You are advised to refer to the detailed text in the Standards that relate to the information required below. The Standards are re-produced, in the [Guidance](#) to assist in completing this application form.

Standard Principles

The Principles listed below will underpin the design of surface water management schemes to meet the Statutory National Standards. Where possible, please provide a brief summary in each of the boxes below relating to each of the bulleted Standard Principles and itemised Standards 1 to 6, showing how your proposed surface water drainage scheme complies with this statutory requirement.

Compliance with Standard Principles

My proposed surface water drainage scheme will comply in the following way/s:

Where possible, relevant items of supporting information (e.g. evidence, technical documents, plans and drawings etc.), as shown in [Table A](#) and [Table B](#) of this Guidance should be listed below and all relevant material submitted.

- 1.
- 2.
3. Etc.

Standards 1 to 6

Compliance with Standard S1 - Surface water runoff destination

My proposed surface water drainage scheme will comply in the following way/s:

Where possible, relevant items of supporting information (e.g. evidence, technical documents, plans and drawings etc.), as shown in [Table A](#) and [Table B](#) of this

Guidance should be listed below and all relevant material submitted.

1. (e.g. Drainage Strategy, Landscape Plan, destination priorities, detailed drainage design etc.)
- 2.
3. Etc.

Compliance with Standard S2 - Surface water runoff hydraulic control

My proposed surface water drainage scheme will comply in the following way/s:

Where possible, relevant items of supporting information (e.g. evidence, technical documents, plans and drawings etc.), as shown in [Table A](#) and [Table B](#) of this Guidance should be listed below and all relevant material submitted.

1. (e.g. Drainage Strategy, Landscape Plan, Flood Consequences Assessment, detailed drainage design, hydraulic calculations, flow control etc.)
- 2.
3. Etc.

Compliance with Standard S3 – Water Quality

My proposed surface water drainage scheme will comply in the following way/s:

Where possible, relevant items of supporting information (e.g. evidence, technical documents, plans and drawings etc.), as shown in [Table A](#) and [Table B](#) of this Guidance should be listed below and all relevant material submitted.

1. (e.g. Water Quality Strategy, treatment, contaminated land survey pollution prevention etc.)
- 2.
3. Etc.

Compliance with Standard S4 – Amenity

My proposed surface water drainage scheme will comply in the following way/s:

Where possible, relevant items of supporting information (e.g. evidence, technical documents, plans and drawings etc.), as shown in [Table A](#) and [Table B](#) of this Guidance should be listed below and all relevant material submitted.

1. (e.g. Amenity Plan, Landscape Plan, protection, improvement, multiple functionality etc.)
- 2.
3. Etc.

Compliance with Standard S5 – Biodiversity

My proposed surface water drainage scheme will comply in the following way/s:

Where possible, relevant items of supporting information (e.g. evidence, technical documents, plans and drawings etc.), as shown in [Table A](#) and [Table B](#) of this Guidance should be listed below and all relevant material submitted.

1. (e.g. Biodiversity Plan, Landscape Plan, habitat, protection, enhancement, multiple functionality etc.)
- 2.
3. Etc.

Compliance with Standard S6 – Design of drainage for Construction and Maintenance and Structural Integrity

My proposed surface water drainage scheme will comply in the following way/s:

Where possible, relevant items of supporting information (e.g. evidence, technical documents, plans and drawings etc.), as shown in [Table A](#) and [Table B](#) of this

Guidance should be listed below and all relevant material submitted.

1. (e.g. Drainage Strategy, Landscape Plan, detailed drainage design Construction Management Plan, Phasing Plan, SuDS Maintenance Plan etc.)
- 2.
3. Etc.

6. Initial Assessment of Flood Risk

Is the site within an area at risk of flooding? Refer to Natural Resources Wales Development Advice maps. (Natural Resources Wales / Development and flood risk)	Yes <input type="checkbox"/>	No <input type="checkbox"/>
If the proposed development is within the area at risk of flooding, you will need to consider whether it is appropriate to submit a flood consequences assessment. (Refer to Technical Advice Note 15 (TAN15)).		

Is the site located within an area susceptible to surface water flooding? Refer to NRW Surface Water Flood Maps .	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Is the site located within an area susceptible to groundwater flooding?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Is there a watercourse (as defined under Section 72 Land Drainage Act 1991) located within 20m of the proposed development?	Yes <input type="checkbox"/>	No <input type="checkbox"/>

7. SuDS Scheme Application - Checklist

Please complete the following checklist and make sure you have read the Guidance on Making SuDS Applications for SAB Approval , the Guidance on completing the Pre-Application Form , and provided all the necessary information in support of your application:	
Pre-Application fee (where required)	Yes <input type="checkbox"/>
Completed, signed and dated Pre-Application Form.	Yes <input type="checkbox"/>

Considered further questions and technical information in the [Guidance](#), required to help assess your Pre-Application and assist your Full Application proposals at a later date.

Yes ☐

9. Declaration

I/ we hereby apply for SuDS Pre-Application Approval as described in this form and the accompanying plans/drawings and additional information. I confirm that, to the best of my knowledge, any facts stated are true and accurate and any opinions given are the genuine opinions of the persons giving them.
This form is completed using accurate information and can be used as a summary of concept of the surface water drainage strategy on this site.

Form completed by

Signature

Qualification of person responsible for signing off this application

Company

On behalf of (Client's details)

Date

Disclaimer

Information provided on this form and in supporting documents may be published on the SABs SuDS register and website and be made publicly available.

Guidance on completing the Pre-Application Form

This guidance comprises:

- [General comments](#)
- [Further Pre- Application questions](#)
- [Questions to be answered to show compliance with Statutory National Standards for Sustainable Drainage Systems \(SuDS\);](#)
- [Table A - Information and evidence;](#) and
- [Table B – Plans and drawings.](#)

General comments

Applications for approval must be submitted using this **Pre-Application** form provided by the SAB. **USE OF THIS FORM IS MANDATORY** as it has been developed to ensure your application has due regard to the statutory requirements.

This form is for SAB approval ONLY, and you are advised to also engage early, and directly, with the LPA and all other relevant organisations that may have an interest in your SuDS scheme proposal, including the SAB statutory consultees listed below:

- Sewerage undertaker;
- Natural Resources Wales;
- Highway Authority;
- Canal & River Trust; and
- Internal Drainage Districts (NRW)

You are advised to commence **Pre-Planning Application discussions** with the LPA at the earliest opportunity, and undertake discussions with both the SAB and the LPA simultaneously.

Development on site should not commence until formal Planning Approval **AND** Full SAB Approval has been given.

It is important that you keep SAB officers and planning officers informed of progress and decisions with regard to the planning application and the SAB application, as they are separate applications, with different requirements, timescales and approval bodies.

Engaging in **Pre-Application discussions** with the SAB at the outset of your SuDS concept design is strongly advised. Effective **Pre-Application discussions** and **Master Planning** can ensure a robust, cost effective and viable surface water management strategy and SuDS scheme design. SAB can help you determine the optimum SuDS solution for your site by providing an early indication of what may or may not comply with the **National SuDS Standards**.

Please provide as much technical information as possible to the SAB to enable a considered and reasoned response to be given at both **Pre-Application and Full Application stages**. i.e. the more information provided at the **Pre-Application stage**, the more detailed technical advice can be given.

The site-specific surface water drainage assessment and SuDS requirements should be integrated with the **Flood Consequences Assessment (FCA)**, and an integrated **Flood and Surface Water Drainage Report** provided to both the LPA and the SAB.

Please refer to key national and local documents prior to, and during the concept design, detailed design, SAB and LPA approvals, construction, adoption, operation & maintenance of a SuDS scheme. A list of, and links to, these documents are provided in the [Guidance on Making SuDS Applications for SAB Approval](#).

With specific regard to the **Pre-Application**:

- A **Pre-Application fee** may be charged by the SAB;
- To ensure a **Valid Application**, all questions on the form **MUST** be answered, and as much initial supporting information as possible should be provided as indicated in this Guidance on completing the Pre-Application Form;
- Your response to questions should reflect the specific requirements of the Statutory National Standards;
- Once your application form together with any supporting material has been correctly submitted to the SAB, it will be **validated**;
- Please be aware that if the questions have not been answered as indicated on the form, and by the requirements above, your application may be **refused**;
- However; if deemed to be a **Valid Application**, your submission will be technically assessed, and a SAB officer will contact you to commence **Pre-Application discussions**;
- There is no statutory timescale relating to the **Pre-Application process**. This enables an appropriate amount of time to be spent discussing, developing and agreeing your SuDS scheme design proposals (from early concept to final design), along with other related matters, with SAB officers; all prior to your Full Application submission;
- To enable productive **Pre-Application discussions**, it's important that you provide as much initial technical information as early as possible in the development process. This will assist "development specific" discussions to commence on: site and development characterisation, surface water sub-catchments and flow routes, and overall concept design etc.;
- Early reference to the statutory documents listed in this guidance should be made, and the site viability to accept an appropriate SuDS scheme considered carefully, prior to the submission of a **Pre-Application**;

- All technical and non-technical discussions with SAB should be undertaken as part of the **Pre-Application stage**, as only in exceptional circumstances, will SAB contact you during its assessment of the Full SuDS Scheme Application.
- Further **Pre-Application questions** are provided in this guidance to indicate where initial responses will assist your technical discussions with SAB; and
- Information contained in [Table A](#) and [Table B](#) of this guidance, is required for the Full Application. However, please provide as much information as possible at this Pre-Application stage to assist your technical discussions with the SAB, prior to submitting the Full Application at a later date.

Please provide one hard copy and one electronic copy sent to xxxxxxxxxx@xxxxxxxxxx.gov.uk, **(to be added by each individual SAB)**

Please refer to the relevant [Ciria SuDS Manual C753](#) chapters, and additional references indicated.

Further Pre-Application questions to consider at an early stage

1. Initial Surface Water Discharge Hierarchy

Surface water drainage arrangements shall demonstrate the proposed surface water drainage complies with National SuDS Standards. As much of the runoff as possible should be discharged to each hierarchy element before a lower hierarchy element is considered. Collection and infiltration methods of drainage are required to be considered in the first instance. With reference to the hierarchy levels below, please indicate your initial drainage arrangements to enable discussion with SAB. It is recommended you also have discussions with land and asset owners at the earliest possible stage.

1. Collect for use
2. Infiltration
3. To watercourse
a) Is it an Ordinary Watercourse? b) Is it a Main River?
4. To surface water sewer
a) Is it a Highway drain? b) Is it a public sewer? c) Is it a private sewer? d) Other?

2. Initial Infiltration Assessment

Where infiltration drainage is proposed, testing should be carried out to a methodology agreed with the SAB e.g. [Infiltration Drainage - Manual of Good Practice \(CIRIA R156\)](#) and [BRE Soakaway Design \(DG 365 – 2016\)](#), and be used to inform the design, construction, maintenance, testing and assessment of infiltration systems. Where possible, initial answers to the questions below should be provided, along with any supporting surveys, reports and other material.

Has infiltration testing been carried out?
Has there been an analysis of development Geology?
What is the depth to the highest recorded groundwater level (metres)?
Has borehole testing been carried out?
Has a Contaminated Land Assessment been undertaken?
Is the infiltration drainage proposed on contaminated land?
What is the infiltration test result ($\times 10^{-2}$)?

3. Approximate Impermeable Area

Provide the approximate existing and proposed impermeable areas on the site. The existing impermeable area will need to be evidenced via a topographical survey when submitting the Full Application.

4. Initial Calculation of Peak Discharge Rates

Runoff rates should be calculated in accordance with SAB agreed methodology e.g. [Flood Estimation Handbook](#), [Revitalised Flood Estimation Handbook \(ReFEH\)](#) or [IoH Report 124](#). Where possible, initial existing and proposed peak discharge rates in litres/second/hectare should be provided for the event probabilities below, along with any calculations, reports and other supporting material.

Mean Annual Peak Rate Runoff or Annual Exceedance Probability (AEP)
1 in 1 or 0.01%
1 in 30 or 3.33%
1 in 100 or % 1%

5. Initial Calculation of Long-Term Storage

Long Term Storage is required to deal with the additional volume of water generated as a result of the creation of impermeable surfaces. Where possible, initial existing and proposed **long-term storage volumes (m³)**, should be provided for the **1 in 100 / 1% (6 hour) rainfall event**, along with the **long-term storage volume expressed as a depth across the whole site area (mm)**. Any initial calculations, reports and other supporting material should also be provided.

6. Initial Calculation of Attenuation Storage

Attenuation storage is provided to enable the rate of runoff from the site into the receiving watercourse is to be limited to an acceptable rate to protect against erosion and flooding downstream.

Where the additional volume generated by development is not dealt with, peak flow for the 1 in 100 /1% rainfall events shall be limited to the Mean Annual Peak Rate of Runoff. Where possible, the **attenuation storage volume (m³)**, and **expressed as a depth across the whole site area (mm)** should be provided, along with any initial calculations, reports and other supporting material.

7. Water Quality

Surface water runoff should be treated via a SuDS management train to prevent negative impacts on the receiving water quality and/or protect downstream drainage systems, including sewers. Initial information on water quality treatment methods via a **SuDS management train** should be provided where possible, and be supported by any calculations, reports and other available material.

8. Biodiversity

Potential benefits to biodiversity should be maximised as part of the development. The SuDS design should ensure, where possible, ecologically rich green and blue corridors are provided by linking natural habitats and ecosystems throughout the site. Initial information on incorporating **green and blue corridors in the SuDS concept design to enhance biodiversity** should be provided where possible and be supported by any reports and other available material.

9. Amenity

Where possible, SuDS should enhance the provision of high quality, attractive public space which can help provide health and wellbeing benefits. Initial information on incorporating **enhanced amenity, including public space in the SuDS concept** should be provided where possible and be supported by any reports and other available material.

10. Non-performance Bond, Adoption, Operation & Maintenance

It's important that consideration at the SuDS design concept stage, is given to the estimated cost of the SuDS construction work, SuDS adoption arrangements and SuDS maintenance responsibilities, activities and frequencies, for the lifetime of the development. Any initial thoughts, calculations and other information regarding these topics should be provided where possible.

Questions to be answered to show compliance with Statutory National Standards for Sustainable Drainage Systems (SuDS)

Where possible for **each of the Standards**, relevant items of supporting information (e.g. evidence, technical documents, plans and drawings etc.), as shown in [Table A](#) and [Table B](#) of this Guidance, should be listed on the application form and all relevant material submitted.

Standard Principles

The Principles listed below underpin the design of surface water management schemes to meet the [Statutory National Standards for Sustainable Drainage Systems \(SuDS\) for Wales](#). Where possible, please provide a brief summary relating to each Principle, showing how your proposed surface water drainage scheme complies with this statutory requirement.

Compliance with Standard Principles

The SuDS scheme requirements are shown below:

1. How do you propose to manage water on or close to the surface and as close to the source of the runoff as possible?
(see **Standard S1** and **Standard S2**)
2. How do you propose to treat rainfall as a valuable natural resource?
(see **Standard S1** and **Standard S2**)
3. How do you propose to ensure pollution is prevented at source, rather than relying on the drainage system to treat or intercept it?
(see **Standard S3**)
4. How do you propose to manage rainfall to help protect people from increased flood risk, and the environment from morphological and associated ecological damage resulting from changes in flow rates, patterns and sediment movement caused by the development?
5. How do you propose to take account of likely future pressures on flood risk, the environment and water resources such as climate change and urban creep?
6. How do you propose to use the SuDS Management Train, using drainage components in series across a site to achieve a robust surface water management system (rather than using a single “end of pipe” feature, such as

a pond, to serve the whole development)?
(see **Standard S1**, **Standard S2** and **Standard S3**)

7. How do you propose to maximise the delivery of benefits for amenity and biodiversity?
(see **Standard S4** and **Standard S5**)

8. How do you propose to make the best use of available land through multifunctional usage of public spaces and the public realm?

9. How do you propose that the SuDS scheme performs safely, reliably and effectively over the design life of the development taking into account the need for reasonable levels of maintenance?
(see **Standard S6**)

10. How do you propose to avoid the need for pumping where possible?

11. How do you propose to ensure the scheme is affordable, taking into account both construction and long-term maintenance costs and the additional environmental and social benefits afforded by the system?

12. Applications should be accompanied by proposals for a maintenance plan and the means of funding for the scheme for its design life.

Standard S1 - Surface water runoff destination

The requirements of Standard S2 listed below address the use of surface water by the development and where it should be discharged. The aim is to ensure that runoff is treated as a resource and managed in a way that minimises negative impact of the development on flood risk, the morphology and water quality of receiving waters and the associated ecology. This will ensure that early consideration is given to the use of rainwater harvesting systems to both manage runoff and deliver a source of non-potable water for the site where practical. Where it is not, prioritisation should be given to infiltration. Discharges to sewerage systems should be limited where possible.

As much of the runoff as possible (subject to technical or cost constraints) should be discharged to each destination before a lower priority destination (level) is considered.

Depending on the site characteristics, drainage from different parts of the site could have different drainage destinations.

Depending on the quantity of runoff and the potential for a particular destination to manage that runoff, small events may discharge to a higher level while larger events may need to make use of lower priority destinations.

Compliance with Standard S1 - Surface water runoff destination

Priority Level 1 is the preferred (highest priority) and 4 and 5 should only be used in exceptional circumstances.

Proposed drainage scheme runoff destinations, and the reasons for proposing these, should be indicated as shown below. If/where Priority Level 1 or Priority Level 2 run off destination/s are unable to be achieved, the reasons for this should also be provided.

Priority Level 1: Surface water runoff is collected for use.

Priority Level 2: Surface water runoff is infiltrated to ground.

Note: If any runoff is not infiltrated to ground, and a lower priority level of surface water runoff destination is proposed, "Exception Criteria" **MUST** be demonstrated and evidence provided.

Priority Level 3: Surface water runoff is discharged to a surface water body.

Priority Level 4: Surface water runoff is discharged to a surface water sewer, highway drain, or another drainage system.

Priority Level 5: Surface water runoff is discharged to a combined sewer.

Note: Strong presumption against discharge to a combined sewer.

Standard S2 - Surface water runoff hydraulic control

The aim of Standard S2 listed below is to manage the surface water runoff from, and on a site, to protect people on the site from flooding from the drainage system for events up to a suitable return period. Also, to mitigate any increased flood risk to people and property downstream of the site as a result of the development, and to protect the receiving water body from morphological damage.

Compliance with Standard S2 - Surface water runoff hydraulic control

The SuDS scheme should comply with the following:

1. Surface water should be managed to prevent, so far as possible, any discharge from the site for the majority of rainfall events of less than 5mm.

2. The surface water runoff rate for the 1 in 1-year return period event (or agreed equivalent) should be controlled to help mitigate the negative impacts of the development runoff on the morphology and associated ecology of the receiving surface water bodies.
3. The surface water runoff (rate and volume) for the 1% (1 in 100 year) return period event (or agreed equivalent) should be controlled to help mitigate negative impacts of the development on flood risk in the receiving water body.
4. The surface water runoff for events up to the 1% (1 in 100 year) return period (or agreed equivalent) should be managed to protect people and property on and adjacent to the site from flooding from the drainage system.
5. The risks (both on site and off site) associated with the surface water runoff for events greater than the 1% (1 in 100 year) return period should be considered. Where the consequences are excessive in terms of social disruption, damage or risk to life, mitigating proposals should be developed to reduce these impacts.
6. Drainage design proposals should be examined for the likelihood and consequences of any potential failure scenarios (e.g. structural failure or blockage), and the associated flood risks managed where possible.

Standard S3 – Water Quality

Standard S3 shown below addresses the drainage design requirements to minimise the potential pollution risk posed by the surface water runoff to the receiving water body.

Compliance with Standard S3 – Water Quality

The SuDS scheme should comply with the following:

1. Surface water runoff should be treated to prevent negative impacts on the receiving water quality and/or protect downstream drainage systems, including sewers.

Standard S4 – Amenity

Standard S4 shown below addresses the design of SuDS components to ensure that, where possible, they enhance the provision of high quality, attractive public space

which can help provide health and wellbeing benefits, they improve liveability for local communities and they contribute to improving the climate resilience of new developments.

Compliance with Standard S4 – Amenity

The SuDS scheme should comply with the following:

1. The design of the surface water management system should maximise amenity benefits.

Standard S5 – Biodiversity

Standard S5 shown below addresses the design of SuDS to ensure that, where possible, they create ecologically rich green and blue corridors in developments and enrich biodiversity value by linking networks of habitats and ecosystems together. Biodiversity should be considered at the early design stage of a development to ensure the potential benefits are maximised.

Compliance with Standard S5 – Biodiversity

The SuDS scheme should comply with the following:

1. The design of the surface water management system should maximise biodiversity benefits.

Standard S6 – Design of drainage for Construction and Maintenance and Structural Integrity

Standard S6 shown below deals with designing robust surface water drainage systems so that they can be easily and safely constructed, maintained and operated, taking account of the need to minimise negative impacts on the environment and natural resources.

Compliance with Standard S6 – Design of drainage for Construction and Maintenance and Structural Integrity

The SuDS scheme should comply with the following:

1. All elements of the surface water drainage system should be designed so that they can be constructed easily, safely, cost-effectively, timely manner, and with the aim of minimising the use of scarce resources and embedded carbon (energy).
2. All elements of the surface water drainage system should be designed so that maintenance and operation can be undertaken (by the relevant responsible

body) easily, safely, cost-effectively, in a timely manner, and with the aim of minimising the use of scarce resources and embedded carbon (energy).

3. The surface water drainage system should be designed to ensure structural integrity of all elements under anticipated loading conditions over the design life of the development site, taking into account the requirement for reasonable levels of maintenance.

Note:

Information provided may be published on the SABs SuDS register and website and be made publicly available.

TABLE A: Specific information and evidence required for the Full Application

Flood Consequences Assessment (FCA) – (See [Technical Advice Note 15: Development and Flood Risk \(TAN15\)](#))

REASON: To show existing and future flood risks to and from the site, and how these will be managed to ensure people and property remain safe for the lifetime of the development. The assessment will include:

- The requirements of TAN 15; and
- Frequent references and links to relevant planning conditions, reserved planning matters, and to the FCA.

Detailed Geotechnical Factual and Interpretive Report – (See also specific [Ciria SuDS Manual C753](#) Chapters 13 & 25)

REASON: To show existing on site and relevant off-site physical properties of soils, rocks and features, and demonstrating that the proposed method of surface water drainage is appropriate for the geology of the site; and will continue to perform to its design criteria for the lifetime of the development. The report will include:

- Topography, geology & site history;
- Significant constraints (incl. soluble rocks, landslides, shallow mining, shallow groundwater, made ground, contaminated land);
- Drainage potential (incl. depth to water table, permeability of superficial deposits, thickness of superficial deposits, permeability of bedrock, presence of floodplains);
- Ground stability (incl. soluble rocks, landslides, shallow mining, running sands, swelling clays, compressible ground, collapsible ground);
- British Geological Survey BGS GeoSure Maps (incl. artificial deposits, superficial deposits, bedrock);
- Borehole & trial pit locations, monitoring & any related information;
- Detailed infiltration assessment (incl. evidence of soil types, soil infiltration coefficients & Standard Percentage Run-off (SPR) calculations);
- Where pervious pavements are proposed in certain soil types, soaked CBRs are required;
- Laboratory work;
- Where possible, detailed evidence of groundwater table levels over recent 12-month period or other validated evidence; and
- Groundwater levels and location of, and impacts on:
 - Surface Water Safeguard Zones
 - Groundwater Safeguard Zones,
 - Water Protection Zones, and/or
 - Groundwater Nitrate Vulnerable Zones.

Detailed Whole Site SuDS Drainage Design Proposals – (See also all [Ciria SuDS](#)

Manual C753 Chapters)

REASON: To confirm that the proposed drainage solution is appropriate for the location, type, scale and nature of the site and development proposed; and to demonstrate that flood risk will be reduced, to ensure people and property remain safe for the lifetime of the development. The proposals will include:

- Drainage Strategy;
- Masterplan;
- Reference and alignment to the Local Flood Risk Management Strategy (LFRMS);
- Approved Flood Consequences Assessment (FCA) including:
 - existing hydrology,
 - greenfield & brownfield runoff rate calculations,
 - critical duration rainfall events,
 - simulation results for design storm RP, 1 in 1 RP, 1 in 2 RP, 1 in 30 RP and 1:100 RP,
 - appropriate % allowance for climate change and urban creep,
 - historical flood events and groundwater levels,
 - risks (both on site and off site) associated with surface water runoff for events greater than the 1% (1 in 100 year) return period,
 - descriptions of existing drainage assets and features,
 - current and future flood risks including:
 - surface,
 - groundwater,
 - other sources,
 - exceedance flood flow paths,
 - discharges,
- Existing and proposed impermeable and permeable areas (runoff betterment required of min 30% or equivalent to greenfield on existing brownfield areas);
- Models (as appropriate) and detailed hydraulic calculations;
- Detailed SuDS design including:
 - Interception incl. mechanisms and summer and winter interception compliance targets (e.g. summer 80% & winter 50%),
 - treatment,
 - conveyance,
 - peak flow and volume control (1:100y - 6 hr rainfall event for peak volume control),
 - surface storage (long-term and attenuation),
 - underground storage,
 - use of vegetation and trees,
 - exceedance routes and components (for 1:100y rainfall event or greater),
 - demonstration that the required storages and conveyance flows can be delivered on site,
 - minimum throttle outlet flow rates (i.e. 1-2 l/s/ha or 5 l/s/ha where risk of blockage and no other viable alternative),
 - risks and consequences of design failure scenarios,
- Surface water storage; calculations including time to discharge from full to half full;
- Infiltration calculations including:
 - stated safety factor,
 - stated infiltration rate at 1×10^{-5} m/s or higher,
- Outfalls & discharges (normally 2 l/s/ha is considered an appropriate rate so as not to

- increase flood risk downstream);
- Specifications for all materials used in the design;
- Components can be constructed, operated and maintained easily, safely and cost effectively;
- Components retain structural integrity for the lifetime of the development;
- Components demonstrated to resist all imposed design loadings with specified factors of safety;
- Evidence to enable SAB to calculate the Non-performance Bond value incl. unit rates for each SuDS component;
- Drainage related flood risk mitigation measures, stating their location, type and features (i.e. roads & access areas protected to 1:30y rainfall, internals & critical infrastructure protected to 1:100y rainfall or greater, appropriate freeboard);
- Multiple use of SuDS benefits incl. temporary flooded areas; and
- Future ownership of surface water drainage assets and adoptions.

Detailed SuDS Assets Maintenance Plan – (See also specific [Ciria SuDS Manual C753 Chapter 32 & Appendix B](#))

REASON: To confirm that the SuDS management train and individual SuDS components will be effectively maintained (including asset replacement where necessary), to perform to their design criteria for the lifetime of the development. The plan shall include:

- Information on how SuDS will be managed & maintained, & who will do it;
- Details of future vehicular & pedestrian access arrangements;
- Information on the various human, plant & materials resources needed & broad timescales as to when; and
- Sympathetic to the need to promote the biodiversity supported by the SuDS system.

Amenity and Biodiversity Plan – (See also specific [Ciria SuDS Manual C753 Chapters 5 & 6](#))

REASON: To demonstrate how the SuDS will protect and enhance amenity and biodiversity for the lifetime of the development. The plan shall include:

- How the amenity value from a SuDS scheme for the development will be maximised for the local and wider community;
- Amenity providing clean water, SuDS legibility, safe access, multiple functionality and attractive spaces, social value and adaptable to change;
- Bio-diversity providing clean water, connectivity along the management train and habitat creation;
- Details of amenity and biodiversity value, and the linkages between them; and
- Proposals to benefit priority habitats and maintain or enhance others where possible.

Unstable and Contaminated Land Reports – (See also specific [Ciria SuDS Manual C753 Chapters 4 & 26](#))

REASON: To identify the presence, location and nature of any unstable and/or contaminated land on or close to the site; and how this has been taken account of in the

SuDS scheme design, and how it will be managed and maintained for the lifetime of the development. The reports shall include any pollution remediation strategies.

Water Quality Treatment and Pollution Prevention Strategy and Plan – (See also specific [Ciria SuDS Manual C753](#) Chapters 4, 26 & 27)

REASON: To show how the SuDS proposal will avoid or minimise the generation of pollutants and how it will prevent pollutants mixing with runoff before it enters the drainage system. The plan shall include:

- Supporting current or future quality objectives for the water body over the lifetime of the development;
- Evidence of pollution risk screening and that the minimum water quality management requirements have been considered & are able to be met (using SuDS Manual (Table 4.3), CIRIA 2015);
- Information on type & strength of contaminants & polluting materials;
- How have these potential contaminants been managed close to the source & on the surface;
- Details of what SuDS components have been provided in series (the SuDS train) to cleanse flow prior to point of discharge;
- Information on how sediment is trapped & retained on site (for rainfall events greater than 1:1-year return period);
- Details of accessibility to undertake sediment cleansing & other maintenance activities;
- Details of how the impacts from accidental spills been addressed; and
- Written evidence of discussion & agreement with Natural Resources Wales.

Landscape Plan – (See also specific [Ciria SuDS Manual C753](#) Chapter 29)

REASON: To show how the proposed soft landscape features work in harmony with the overall objectives of SuDS, and how the landscape supports and enhances flood risk reduction, improved water quality, amenity and biodiversity. The plan shall include:

- Detailed overall layout, ground contouring, planting, hard, soft & water features;
- Detail landscape elements to improve water quality;
- Show how the design achieves effective attenuation, flow control & exceedance;
- Improvements to ecology & biodiversity;
- Detailed consideration of effective routine & periodic maintenance activities;
- Full understanding of the sites character: slope, gradient, ground modelling, geology, soils types, natural drainage patterns;
- Show existing features to be preserved, enhanced, removed &/or replaced; and
- Details of any soils stabilization/reinforcement & erosion control.

Construction Management Plan – (See also specific [Ciria SuDS Manual C753](#) Chapter 31 & Appendix B, and [CIRIA report C768 - Guidance on the construction of SuDS](#))

REASON: To provide a structured approach to the construction activities and temporary works deployed for constructing SuDS, ensuring that key construction site issues such as drainage, flooding, sediment control, pollution prevention, compression of infiltration areas,

storage of materials & existing amenity and natural habitats etc. are sensitively and effectively managed until the site construction is complete. The plan shall include:

- Details of the nature of the work to be completed;
- Site plans & full scheme drawings, where required to support the method of approach;
- Consents & reinstatement requirements;
- Access points & details;
- Any site-specific ecological issues, or features that require protection &/or consideration;
- Pollution control arrangements & any likely water quality issues resulting from the highways & SuDS construction;
- Proposed strategy for sediment control, erosion control & site drainage during the construction of the development; where this impacts on the SuDS proposed for the site, it should identify any potential impacts on the final performance of the drainage system & any necessary protection measures or remedial works; and
- Measures to prevent the inadvertent access across the completed or partially completed SuDS.

Construction Phasing Plan – (See also specific [Ciria SuDS Manual C753](#) Chapter 31 & Appendix B, and [CIRIA report C768 - Guidance on the construction of SuDS](#))

REASON: To clearly state how the development and/or phase/s of the development will drain during the construction and occupation of the development prior to adoption. The plan shall include:

- The sequencing of phases of the development and how the drainage systems (permanent or temporary) connect to an outfall (temporary or permanent) during the construction and occupation of the development prior to adoption.

Information and communications plan (where appropriate) – (See also specific [Ciria SuDS Manual C753](#) Chapter 34)

REASON: To provide a structured approach to engagement with the local community and set out the engagement stages, how they are delivered, the resources available to deliver them, and the timescale within which an outcome needs to be delivered. The plan shall include:

- communication with and education of existing residents;
- communication with and education of new residents;
- site and SuDS component specific information boards; and
- local community education and education strategies (eg through schools).

Construction (Design and Management) CDM Regulations 2015 File – (See also specific [Ciria SuDS Manual C753](#) Chapter 36 & Appendix B)

REASON: To ensure that SuDS designs fulfil regulatory and legal requirements, and SuDS health and safety risk assessments are in line with BS EN 31010:2010. The file shall include:

- Risk assessments for the design, construction, operation and maintenance of the

highway and drainage system.

Statutory consents and permissions

REASON: To provide evidence that all necessary consents and permissions have been obtained. These shall include:

- Discharge consents & licenses to watercourses;
- Rights to lay pipes on third party land/easements;
- Easement details;
- Permission from riparian owner to discharge;
- Water Industry Act 1991 Section 104 (adoption) and Section 106 (Connection) agreements from Statutory Undertaker; and
- Land drainage consent & management company drainage agreements.

Title documents

REASON: To ensure all legal interests and ownership etc. in land and buildings associated with the SuDS are identified, and can be communicated for legal transfers, acquisitions and responsibilities. These shall include

- Up-to-date coloured Copy Entries of Title or Epitome of Title to the land in question.

TABLE B: Plans and drawings containing relevant information required for the Full Application

Drawing number issue sheet

Outline or Full Planning Permission Notice and approved layout drawing (where applicable).

Site location plan (Scale 1:2500) supported by recent photographs.

Natural and artificial drainage catchment and sub-catchment plan (Scale 1:2500) showing:

- Land contours;
- Topography;
- Watercourses; and
- Current flood risk areas, both within, above and below, impacting on the site.

Concept drawings (Scale 1:2500) of the proposed development layout (and/or layout options), appropriate and proportionate evidence showing:

- Contoured flood routing plan showing exceedance flows;
- Outline sizing of site areas and land use zones;
- Conceptual SuDS calculations and design including:
 - interception,
 - treatment,
 - conveyance,
 - peak flow and volume control,
 - storage (long-term and attenuation)
 - exceedance routes and components
 - demonstration that the required indicative storages and conveyance flows can be delivered on site
 - protection and enhancement of:

water quality,
amenity,
bio-diversity,
landscape.

- Location of roads, buildings and sustainable drainage features (including water quality measures);
- Potential flood risk protection features that may be required; and
- Initial thoughts on SuDS adoption & maintenance responsibilities.

General engineering layout coloured drawings (Scale 1:500 & 1:1250) showing:

- Areas of proposed SuDS submitted for SAB approval & offered for adoption – coloured green with solid red outline;
- Site Boundaries;
- Existing buildings (on and around the site);
- Positions of all carriageways, footways, footpaths, cycleways, verges, service strips, traffic calming features;
- Existing and proposed foul and surface water drainage, highway drainage to be offered for adoption by the Highway Authority, & any highway drainage not to be adopted, need to be identified in different colours & clearly labelled;
- Where applicable, each dwelling draining private surface water to the highway SuDS, should be clearly identified on the plan and coloured differently;
- Watercourses;
- Finished building ground floor levels;
- Manholes;
- Storage/attenuation devices, chambers and systems;
- Outfalls/headwalls;
- Other ancillary systems/features;
- Existing trees and proposed locations;
- Easements to be coloured blue;
- Position of dwellings, garaging and/or parking spaces, structures; and
- Falls and cross-falls of SuDS components, footways and carriageways.

Longitudinal section coloured drawings (Scale 1:500 Horizontal & 1:100 Vertical) showing:

- Existing and proposed road levels for the centre line, channels, gradients and vertical curves;
- Surface and foul water drainage profiles, including positions of chambers, gradients, pipe diameters, cover and invert levels and protection;
- Highway drainage should be identified in a different colour;
- Pipe material;
- Pipe strength;
- Bedding classification and details; and
- Ground water and watercourse levels.

Cross section drawings and standard detail drawings (Scale 1:100, 1:50, 1:20 & 1:10) showing items in the general engineering layout drawings, at intervals of no greater than 30 metres.

Landscaping layout drawing (Scale 1:500)

showing:

- Details of planting, trees species /size/positions;
- Any existing trees to be retained;
- Tree pit details;
- Grassed areas play grounds and equipment;
- Fencing and, walls; and
- Confirmation of land ownership.

Specialist drawings (Scale 1:1250)

showing:

- Bridges, Culverts, any pipework over 600mm diameter, headwalls, retaining walls and any other constructed features; and
- Existing Statutory Services and utility plans showing surrounding location of proposed development.

The *following note* shall be incorporated on all drawings submitted:

- 1) *“The specification in all respects shall be in accordance with the current xxxxxxxxxxxxxxxxx Specification and Construction publication in force in the county at the time of construction.” (to be added by each individual SAB)*

It should be noted that:

- Should the developer wish to submit AutoCAD files, he should attach the relevant pen setting files (ctb).
- Plans should be folded to A4 size.