SAB details:

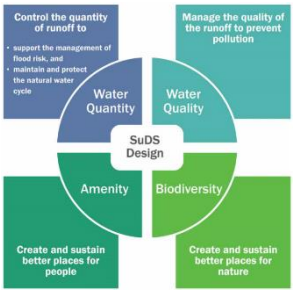
County Hall
Cardiff
CF10 4UW
Tel: (029) 2233 0961
Email: SAB@Cardiff.gov.uk

Neuadd y Sir
Caerdydd
CF10 4UW
Ffôn: (029) 2087 2088
Ebost:CDC@caerdydd.gov.uk

Flood & Water Management Act 2010

Schedule 3 Sustainable Drainage

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



Application Form for Full Application Approval of SuDS on new developments, in accordance with The Sustainable Drainage (Approval and Adoption Procedure) (Wales) Regulations 2018

Full Application Structure	
Full Application Form	*(To complete & return)*
Guidance on Completing the Full Application Form – including specific information and evidence required to support the application.	*(For guidance)*

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

Full 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 of 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 a Full SuDS Scheme Application for SAB approval ONLY;**
2. Approval of this application will be based on compliance with the Statutory National Standards for Sustainable Drainage Systems (SuDS) for Wales. and Statutory Instruments;
3. Once this application is made to SAB, it will be determined solely on the written technical and other information submitted with the full application;
4. You are strongly advised to have previously submitted a Pre-Application form to SAB, and engaged early, and directly, with the SAB, 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);
5. **For a valid SuDS Scheme Full Application to the SAB, all sections of this form MUST be fully completed; and**
6. **You are also required to provide technical information as indicated in the Guidance (or as otherwise directed by the SAB during Pre-Application 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 ensuring all boxes are completed fully. If you fill in the application form correctly first time, the SAB can process it quicker.

Prior to the submission of this Full Application, applicants are strongly advised to make a Pre-Application submission to discuss their proposals with the SAB and ensure that an acceptable SuDS scheme is submitted. 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 must be included.

Applicants should complete this form and submit it, together with the necessary supporting documents, to SAB@cardiff.gov.uk Cardiff Council SuDs Approving Body.

Please e-mail SAB@cardiff.gov.uk for payment options.

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:
Electronically: SAB@cardiff.gov.uk
Phone:
Postal: SuDS Approval Body, Cardiff City Council, Room 301, County Hall, Cardiff CF10 4UW

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

1. Applicant Details

Applicant Name and Address

Title and Name		Mr Andreu Dorca Duch
Company		Celsa Manufacturing (UK) Limited
Suffix (unit/name/number)		Building 58
Address line 1		Castle Works
Address line 2		East Moors Road
Address line 3		
Town		Cardiff
County		City and County of Cardiff
Postcode		CF24 5NN
Phone number	**Mobile**	07483 019166
	Works	029 2035 1800
	Home	
e-mail address		andreu.dorca@celsauk.com

Agent Name and Address

Title and Name		Mr Kevin Tobin
Company		James & Nicholas LLP
Suffix (unit/name/number)		
Address line 1		Grove House
Address line 2		Grove Place
Address line 3		
Town		Port Talbot
County		Neath Port Talbot
Postcode		SA13 1XA
Phone number	**Mobile**	07798 926866
	Works	01639 885431
	Home	
e-mail address		kevin.tobin@jamesandnicholas.com

Preferred contact	~~Applicant~~	**Agent**

2. Site Details

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

Name of proposed development	Redevelopment of Scrap Handling Facility, Mineral Site,Tremorfa, Cardiff

Grid Reference (E/N)	**321518**	**176393**
Suffix (unit/name/number)	Celsa Manufacturing (UK) Ltd	
Address line 1	Rover Way	
Address line 2		
Address line 3		
Town	Tremorfa	
County	Cardiff	
Postcode	CF24 5PH	

Description of proposed development	Installation of a new scrap metal shredding machine and associated plant. Construction of related foundations, hard-standings and internal access roadways. Construction of new amenity block and associated car parking.	
Total application site area (Ha)	4	
Is the existing site currently developed i.e. Brownfield or is it currently undeveloped i.e. Greenfield?	Brownfield	
Existing use	Scrap handling facility	
Proposed use	Scrap handling facility	
Does the site cross more than one SAB area?	Yes ☐	No ☒
If "Yes", please confirm the proportionate area in each SAB below: (The main contact will be the SAB that has most of the surface water drainage system within its boundary.)		

SAB	**% of Site Area**

3. Interest in the Land

What interest do you have in the land?		
Owner	Yes ☒	No ☐
Prospective Owner	Yes ☐	No ☒
Other (please provide details)		

4. Application

Has any prior advice been sought from the SAB about this application?		Yes ☒	No ☐
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	Simon Dooley		
Reference number		**Date**	
Details of pre-application advice received	Meeting (Simon Dooley/Kevin Tobin/Karl Jones) held 4/12/2023 to discuss the general principles of the scheme and the proposed application		

Does this application relate to any other SAB application already made?	Yes ☒	No ☐

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 ☐	No ☒
If "Yes", please provide brief details		

Is this application one of two or more applications made at the same time, each setting out an alternative proposal for construction of a drainage system	Yes ☐	No ☒
If "Yes", please provide details of other applications made at the same time (include SAB Reference number if available)		

5. Application Fee

It is recommended you contact the SAB directly to ensure the correct fee is paid with the application.

		Area of Land (Ha)	Fraction	Fees
Application fee		N/A	N/A	N/A
Each 0.1ha or fraction of 0.1ha, for first 0.5ha	**£70.00**			

Each 0.1ha or fraction of 0.1ha, from 0.5ha up to and including 1ha	**£50.00**	4		
Each 0.1ha or fraction of 0.1ha, from 1ha up to and including 5ha	**£20.00**	4		
Each additional 0.1ha or fraction of 0.1ha above 5Ha.	**£10.00**			
Is the applicant a town/community council?		If yes, application fee is half the amount		No
<u>If applicable</u> – reduction of 50% application fee due to this being an alternative proposal made at the same time.				
<u>If applicable</u> – application fee adjustment due to cross-SAB area approvals needed.				
			Total Fees	N/A

6. 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 ☐	No ☒

7. Compliance with Statutory National Standards for Sustainable Drainage Systems (SuDS)

All sustainable drainage systems <u>MUST</u> 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. 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 drainage scheme complies with this statutory requirement.

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:

4.1.2.1 Priority Level 1 – Collection of rainwater for use

There would potentially be an opportunity to collect rainwater for re-use, however Celsa have advised that re-use is not feasible for the following reasons:-

- Collected rainwater cannot be stored for use in the event of a fire on site because this is not permitted under the NRW permit for the site (due to the potential for contaminants being present in the collected rainwater.)

- Although collected rainwater could potentially be re-used in the shredder plant, the rainwater would need to be cleaned and filtered prior to any re-use to ensure no foreign objects were present (as these could cause costly damage to key components of plant) and to remove contamination. The cost of cleaning/filtering are such that re-use is not economically viable. In addition, the amount of water required for day-to-day operations varies considerably from one day to another and therefore storage of the excess would be required, albeit the maximum volume requiring storage would be difficult/impossible to determine.

4.1.2.2 Priority Level 2 – Surface water runoff infiltrated to ground

The results of infiltration testing indicate that the site has very good soakaway potential. It is therefore proposed that all surface water will be collected, treated then drained away via infiltration into the ground. This will mimic the exact drainage conditions that already occur across the entirety of the site.

4.1.2.3 Priority Level 3 – Surface water runoff discharged to watercourse

The proposed development site is situated approximately 250.0 m to the west of the Severn Estuary.

It is not considered likely to be viable to collect all surface water and discharge it into the Severn Estuary due to various factors including: -

- There is no existing available discharge point.
- The high pollution indices associated with the proposed operations at the development site, mean that it will be difficult/impossible to ensure the water quality is sufficiently high prior to discharge into the Estuary (which is environmentally sensitive).

- Coastal defence works are due to be carried out in the vicinity in 2022 – 2024 by Cardiff Council meaning that discharge of surface water into the Estuary will not be possible until these works have been completed, i.e. discharge into the Estuary will not be viable for this project.

4.1.2.4 Priority Level 4 – Surface water runoff discharge to surface water drain or highway drain

The proposed development site is located directly off Rover Way, where there is a dedicated highway drain, however Cardiff Council have advised that this drain is already continually blocked, experiencing surcharges and in need of regular maintenance to rectify the ongoing issues and that consequently it would not be possible for surface water run-off from the proposed development to discharge into this drain.

There are also 2 no. DCWW surface water sewers (of 475 mm and 685 mm diameter) located within in Rover Way, however the manholes are located approximately 90 m away from the main site. Connection to these manholes would therefore be very costly as well as logistically difficult (including causing disruption to highway traffic (temporary signaling). In addition the required discharge rate would be at the Qbar rate (33.18l/s), which would potentially be rejected by DCWW.

4.1.2.5 Priority Level 5 – Surface water runoff discharge to combined sewer

The only known sewer that runs through the site is the 2400 mm diameter Combined Adopted Sewer that runs from the DCWW pumping station located to the north of the site to the DCWW waste treatment plant located in Tide Fields Road. This sewer is a major DCWW asset that is located approximately 6.0 m – 8.0 m below ground level. Connection to this sewer is not considered practical as this would require major civil works with associated very high costs.

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 **MUST** be listed below, and all relevant material submitted.

1. Drainage Strategy Report ref. 23.105 Issue 1 dated 11.12.2022 by James & Nicholas LLP
2. Geotechnical Report ref. 17250 dated 8th June 2022 by Terra Firma (Wales) Ltd (copy included at Appendix A, Drainage Strategy Report ref. 21.121 Issue 1 by James & Nicholas LLP)
3. Dwr Cymru Welsh Water Sewer Map ref. 321525,176305 dated 10/03/22 (copy included at Appendix B, Drainage Strategy Report ref. 21.121 Issue 1 by James & Nicholas LLP)
4. Flood Consequences Assessment Report ref. JBAU-XX-XX-RP-Z-0001-S3-P01 dated June 2022 by JBA Consulting
5. Drawings by James & Nicholas LLP as follows: -
   23.105 C200 (Site Location Plan)
   23.105 C201 (Existing Site Plan)
   23.105 C202 (Proposed Site Plan)
   23.105 C203 (Proposed Drainage Plan)
   23.105 C204 (Proposed Permitting Layout)
   23.105 C206 (Proposed Drainage Catchment Plan)
   23.105 C207 (Flood Exceedance Plan)
   23.105 C208 (Drainage Construction Plan)

Compliance with Standard S2 - Surface water runoff hydraulic control
My proposed surface water drainage scheme will comply in the following way/s:
Hydraulic control of surface water in the processing area will be governed by the maximum discharge rate stipulated within the DCWW trade effluent consent and it is anticipated that a discharge rate of 3.3l/s will allowed. To achieve this, the water will be collected from the Northern and Southern Filter Drains and stored in 2 no. separate tanks. It is proposed that the discharge rate from each tank will be limited 1.65l/s, thereby limiting the total discharge rate to a maximum of 3.3l/s. Hydraulic control of surface water runoff from the non-processing area will be achieved utilising generally-accepted methods, which will be solely infiltration. The underlying soil profile of the site presents a very good opportunity for infiltration and this should prevent runoff from occurring following a 'first flush' 5 mm rainfall event. It is proposed that the natural infiltration processes will be encouraged by the use of filter strips with proprietary filter media that will be located alongside the length of the internal roads. The amenity block and associated car parking will be served by close-to-surface infiltration rain gardens. Hydraulic calculations have been undertaken to determine the required sizing of the above proposed drainage system. These will be sized to ensure they have sufficient volume to store a 1 in 100-year return period storm + 40% climate change. Site levels will be designed so that the exceedance routes will direct surface water runoff towards the low-lying areas of the site. This should ensure that surface water will remain on site in the event of any failure of the local drainage system and/or any storms in excess of those considered within the calculations.
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 **MUST** be listed below, and all relevant material submitted.
As listed in Standard S1, above

Compliance with Standard S3 – Water Quality
My proposed surface water drainage scheme will comply in the following way/s:
Surface water quality for site runoff will be managed through the construction of new SuDS features. Although surface water from the processing areas will not go into any environmental or sensitive receptors, water collected in this area will undergo the same process that is stated in the water quality risk assessment.

A water quality risk assessment has been carried out using the SuDS manual mitigation indices in accordance with Chapter 26 of the CIRIA C753 SuDS Manual (CIRIA, 2015).

Under this assessment the proposed development (i.e. development of a new industrial site where chemicals are delivered and stored) is shown fall within two pollution hazard zones. The processing area will fall under the 'High' pollution hazard level, whilst the Amenity Block and associated car parking areas will fall under the 'Medium' pollution hazard level (see Figure 2, below).

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 **MUST** be listed below, and all relevant material submitted.

As listed in Standard S1, above

Compliance with Standard S4 – Amenity

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

The proposed new SuDS features will be designed in accordance with CIRIA 2015 to maximize the multiple benefits of SuDS including amenity and biodiversity.

Designing for amenity is considered a particular priority. The proposed green features (i.e. the raingardens) will provide an amenity benefit to employees because of the proposed inclusion of seating areas around the landscaped areas, which will enable employees to comfortably access and enjoy these areas.

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 **MUST** be listed below, and all relevant material submitted.

As listed in Standard S1, above

Compliance with Standard S5 – Biodiversity

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

The proposed raingardens will each provide an opportunity to maximise biodiversity benefits. To achieve this, it is proposed that they will each be planted with local plant species. This should help to attract local wildlife and provide a continuation of habitat.

It is further proposed that a 'fact sheet' on the raingarden drainage system will be displayed in the Amenity Block to educate Celsa staff on how the proposed drainage system will work and to provide information on its ecological and environmental benefits.

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 **MUST** be listed below, and all relevant material submitted.
As listed in Standard S1, above

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:
All surface water drainage systems will be designed taking account of health and safety considerations during the construction, long-term operation and maintenance of the system. The existing site is currently unsurfaced with no mains surface water connection. An adopted (DCWW) 2400mm diameter combined sewer passes beneath the site running along its southern boundary. It is proposed that a 13.0 m easement zone, either side of the centre line of the pipe will be retained as per DCWW's adopted sewer policy. Prior to any detailed design being undertaken, the location of the sewer will be confirmed to ensure that the easement is not compromised. No works to the existing system are proposed as part of the development. The line of the sewer will be marked on all relevant construction drawings and site drainage plan kept on site during the construction stage identifying the location of the drain. All below-ground drainage will be constructed in accordance with Sewers for Adoption 7th Edition, to ensure compliance with best practice. The maintenance for all on-site drainage infrastructure will be the responsibility of the client. Details of the maintenance activities for the constructed drainage infrastructure will be passed to the client as part of an Operation and Maintenance Manual upon completion of the construction works. A full maintenance schedule for each drainage element is included at section 7.0 (below).
Relevant items of supporting information (e.g. evidence, technical documents, plans and drawings etc.), as shown Table A and Table B of this Guidance **MUST** be listed below, and all relevant material submitted.
As listed in Standard S1, above

8. 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 ☒	No ☐
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 ☒	No ☐
Is the site located within an area susceptible to groundwater flooding?	Yes ☐	No ☒
Is there a watercourse (as defined under Section 72 Land Drainage Act 1991) **located within 20m of the proposed development?**	Yes ☒	No ☐

9. 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 proposed drainage arrangements.

Level	Yes	No
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	☐	☐
5. To combined sewer	☐	☒

Has advice been sought from the asset owners?	Yes ☒	No ☐
Has advice been sought from the land owners?	Yes ☒	No ☐

10. 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.

Has infiltration testing been carried out?	Yes ☒	No ☐
Analysis of development Geology (including both bedrock and superficial deposits where known)	**6-8m of Made ground (consisting of slag, concrete and brick) 8-22m Alluvium and Soft Clay 22m Onwards – Red Marl**	

Depth to groundwater (metres)				
Borehole testing	**Reference**			
	Date			

Has a Contaminated Land Assessment been undertaken?	Yes ☒	No ☐
Is the infiltration drainage proposed on contaminated land?	Yes ☒	No ☐

Infiltration test result	7.32 x 10^{-5} ms^{-1}

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

What are your proposals regarding cost of works, adoption and maintenance of the SuDS scheme?

Non-performance Bond – Estimated cost of work	N/A
Adoption (including land agreements etc)	N/A
Funded Maintenance Plan for the lifetime of the development	N/A

12. 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 Full Application Form, and provided all the necessary information in support of your application:	
Correct Full Application fee.	Yes ☒
Completed, signed and dated Full Application form.	Yes ☒
Plan/s specifying the construction area and the extent of the drainage system for which approval is sought. All plan/s shall be at a scale of 1:2500 and MUST show the direction of North.	Yes ☒
Taken account of SAB Guidance on technical information to be submitted to enable SAB to assess your Full Application.	Yes ☒

13. Declaration

I/ we hereby apply for SuDS Approval as described in this form and the accompanying plans/drawings and additional information. I confirm that I have read and complied with the National SuDS Standards and, 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 has been completed using evidence from the Flood Consequences Assessment where applicable, surface water drainage strategy and site plans and associated documents.
This form has been completed using accurate information. It can be used as a summary of the detailed surface water drainage proposals on this site, and clearly shows that these drainage proposals conform to the National SuDS Standards for Wales.

Form completed by	Kevin Tobin
Signature	*K Tobin*
Qualification of person responsible for signing off this application	BSc DIC MICE Chartered Engineer
Company	James & Nicholas LLP
On behalf of (Client's details)	Celsa Manufacturing (UK) Ltd
Date	11/12/2023

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 Full Application Form

This guidance comprises:

- General comments
- Detailed 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 **Full 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 also 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:

- 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 the **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 **Full Application**:

- To ensure a **Valid Application**, all questions on the form MUST be answered, and ALL supporting material MUST be submitted as indicated in the **Guidance on completing the Full Application Form** (or as otherwise agreed with the SAB);
- Your response to questions should be comprehensive and reflect the specific requirements of the Statutory National Standards;
- Once your application form together with any supporting material has been 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 will be automatically refused;**
- If deemed to be a **valid application**, your submission will be technically assessed by the SAB;
- Once a **Full SuDS Scheme Application** is received, the SAB will determine it solely on the written technical and other information submitted with the full application;
- Only in exceptional circumstances, will SAB contact you during its assessment of the **Full SuDS Scheme Application**, therefore it's essential that any technical uncertainties or issues are dealt with by all parties as part of the Pre-Application process, and prior to the **Full Application** being submitted;
- In accordance with the statutory requirements, SAB will notify you of the outcome of its technical assessment of your **Full Application**; and
- The **Full Application** may be **Approved** subject to **Conditions** or it may be **Refused,** in which case you will be informed of the reasons why.

Please provide one hard copy and one electronic copy sent to SAB@cardiff.gov.uk

Please refer to the relevant Ciria SuDS Manual C753 chapters, and additional references indicated.

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

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, **MUST** 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, **MUST** 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 **MUST** 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 **MUST** 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 **MUST** 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 **MUST** 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 **MUST** 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 **MUST** 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 x 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, written agreements in principle, 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);
- Agreement in Principle 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 devises, 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 Cardiff Council Specification and Construction publication in force in the county at the time of construction."*

2)

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.