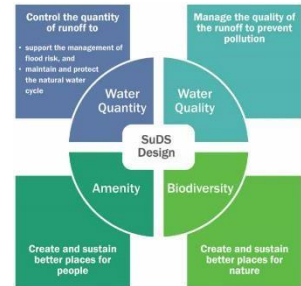


## Flood & Water Management Act 2010

### Schedule 3 Sustainable Drainage

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



## 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 PreApplication 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: [SABregistrations@carmarthenshire.gov.uk](mailto:SABregistrations@carmarthenshire.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 nonpotable 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  $1 \times 10^{-5}$  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 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 xxxxxxxxxx Specification and Construction publication in force in the county at the time of construction."*

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.