

Surface water risk management guidance for new and re-developed growth sites

To be read prior to submitting a pre-planning enquiry

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Change log

Version	Date	By	Amendment	Reason
1	04.10.24	RL	–	Issued for GP team consultation
2	23.10.24	RL/DM/MC	Secs 1.0.5, 2.3 and Sec 3 various	GP team review
3	16.12.24	RL/DM/MC	Review draft	Issued for wider DS consultation
4	14.03.25	PDSE	Re-ordered section; various	Issued for publication

Glossary of terms / acronyms

Conveyance	Refers to the off-site sewerage from the development site boundary to the point of connection to the public sewer or outfall
DIA	Drainage Impact Assessment. A detailed estimation of how a new connection will change the performance of the receiving network
DCG	Design and Construction Guidance. Technical guidance part of the Sewerage Sector Guidance for new development sewerage. Superseded Sewers for Adoption in April 2020
FWMA (2010)	Flood and Water Management Act 2010
LLFA	Lead Local Flood Authority
Outfall	The point of discharge from a drainage system to the receiving water body
PFF	Pass-Forward Flow. Theoretical maximum instantaneous capacity
NSTS	Non-Statutory Technical Standards. For sustainable drainage systems
PPE	Pre-Planning Enquiry. Developer led consultation
POC	Point of Connection
ReFH2	Revitalised Flood Hydrograph method of assessing rainfall run-off
SSG	Sewerage Sector Guidance issued by Water UK April 2020
SW	Surface Water. Refers drainage of roofs, driveways and other impermeable surfaces
SW DIA	Surface Water Drainage Impact Assessment. Assessment on a receiving surface water network
SPOC	Sustainable Point of Connection. The point of connection onto the sewer network that presents no significant additional risk or that presents a risk that can be mitigated, either by planned investment or developer funded enhancements
SuDS	Sustainable Drainage Systems. Drainage systems designed to ensure that surface water flow from a developed site replicates that from its pre-developed “greenfield” state, as far as is reasonably practicable

1. Introduction

Surface water connections account for a substantial number of developer queries. It is essential for the effective management of our operational risk that we ensure the risk posed from surface water drainage is clearly understood and taken into account during pre-planning and planning consultation. However, the alignment of our risk assessment with the promotion of SuDS principles in co-ordination with statutory consultees can obscure the purpose of our position.

To address this we have restructured our approach to reinforce the principles we currently employ and reflect the practicable limits to a drainage impact assessment. Our aim is to clarify roles and responsibilities and to establish readily definable outcomes from the outset; providing predictability and clarity to developers, local planners and customers.

If you are a consultant, developer or small house builder and you are evaluating your options for surface water disposal from your site or wish to engage with Anglian Water on a surface water connection, there are things you need to do before approaching us. This document will set out the principles, requirements and steps to follow for all surface water queries for new and redevelopment sites within our region, including the position we will take in planning consultations.

1.1 – Risk variables and assumed constraints

The risk posed by additional connected SW flow from new developments will vary with the type of receiving network and the scale of change in drainage characteristics produced by the development.

Existing SW networks have been designed for the existing catchments and will not embody notable / significant residual capacity.

Existing SW network outfalls are limited to the existing discharge capacities. An increase in discharge capacity will require a revised permit at the outfall. Network reinforcement is limited to flow attenuation as increasing Pass Forward Flow (PFF) will require a new permit.

1.2 – Regulation, obligation and governance

Lead Local Flood Authority (LLFA) under the Flood and Water Management Act (2010) are the Statutory Consultee on all surface water drainage for major new applications and under planning legislation are required to be consulted and approve the onsite surface water drainage strategies and have a wider remit to ensure the development does not cause flood risk elsewhere. As such, they are the appropriate body to adjudicate on the efficacy of a proposed SW drainage strategy for new developments above the threshold for planning consultation. Planning threshold is developments <½ hectare / <10 houses.

Anglian Water have not accounted for additional SW flow from new developments in the Infrastructure Charge, as socialising the cost of accommodating additional flow would be unfair on developments not connecting SW and could disincentivise SuDS hierarchy.

A SW DIA will be fully funded by the developer. Network reinforcement to accommodate additional SW flow from a new development will be chargeable to the developer. Anglian Water will collaborate and coordinate with the LLFA on planning consultation responses, to ensure the SuDS hierarchy is followed. Anglian Water will not undertake a SW DIA without an in principle approval from the LLFA of the proposed connection of SW.

Anglian Water will object in planning to any application proposing the discharge of SW to a FW network, or any application that would result in a net additional SW flow to a combined network. Anglian Water's surface water drainage policy should be used in conjunction with the LLFA guidance for the on-site design. Further information on our can be found on our website [here](#).

1.3 – Connections to highway drainage

S115 of the Water Industry Act 1991, allows for an agreement between the Highway Authority and the Sewerage undertaker to agree the use of either of their vested sewers or drains, upon any terms that may be agreed; to allow for the use of either owned assets for the purposes of conveying surface water from premises or streets. This advice is sent out to all Highway Authorities and LLFA, including Unitary Authorities and Local Planning Authorities who have statutory duties within the planning approval process.

Anglian Water apply a risk-based approach to any new connections to our network and only promote Sustainable Points of Connection (SPOC). This is done in order to mitigate against any increase in risk of flooding to existing networks; this includes obligations to our existing discharge permits and not causing unnecessary environmental harm. As such, any new S115 applications from Highway Authorities, either because of extra gullies requiring connection to the network or new road surface requiring an outfall to the public sewers, will need to be considered applying the same sustainable principles and current design standards.

We expect to be consulted and apply our risk-based approach to all applications requiring a connection to our network following the SPOC principle. If a new highway connection is required, the highway authority is expected to apply and provide evidence that there will be no increase in flood risk from the current baseline. If mitigation is required, the Highway Authority is expected to fully fund such measures, which may include attenuation storage and / or conveying to a SPOC further away.

Anglian Water therefore advises all Highway Authorities including Statutory bodies to consult with us in ALL circumstances where an S115 connection is required before issuing any recommendation for connection to Anglian Water assets.

1.4 – Current design standards

New developments must provide adequate drainage for both foul and stormwater in separate networks. The design of both foul and stormwater should follow adoptable standards set out in the Design and Construction Guidance.

The on-site design criteria are set out by the relevant LLFA. This sets out the critical design events to be considered for the surface water network including any attenuation storage requirements and flow restrictions to the outfall. The LLFA design criteria stipulates that all developments should attenuate runoff to pre-development Greenfield runoff rate and volumes for all rainfall events, up to and including the 1% annual probability (1:100 year) plus climate change.

Our design standards for the public SW network are in line with the DCG. Unless designed to store water, SW sewerage should be designed so that no surcharge occurs within the 1 year design event, and flooding from the network does not occur in the 30 year design event. This also reflects the NSTS design standard.

It should be noted that the LLFA consider the design of stormwater systems on a site by site based i.e. incremental basis to the wider catchment and do not consider the impact of any additional flows on the existing public network. Anglian Water will therefore do a hydraulic assessment of the residual capacity at the connection point based on the design flows from the upstream catchment for the 1:30 year design storm. For more information on the evidence required and minimum information for a connection to the existing public sewers, please see [Fact Sheet 1](#).

1.5 – Surface water pumping stations

The layout of any new development and hydraulic design of stormwater network should consider the natural drainage to provide a sustainable drainage solution that mimics the natural drainage. The design should exploit the natural topology and geology to provide a sustainable gravity system as far as is possible.

Surface water pumping stations should only be used where there is no other practicable method of surface water drainage. Developers/Consultants should engage with Anglian Water at the scoping stage and Anglian Water will require evidence to support the need for a SW pump station and this includes whole-life cost comparison of a gravity and pumped systems over the lifetime of the development. See Design and Construction (DCG) C5-8 and D4.1 for further design guidance.

2. Aligning process to risk

In recognition of the variability in risk posed by additional SW flow we have introduced a categorisation to define the various risk scenarios. This is intended both to provide clear advice to developers and allow Anglian Water to allocate our resources in proportion to the severity of risk posed.

The following scenarios are defined by the types of enquiry we can receive and the process for each will be more focused on the specifics of the application and tailored to give only relevant advice. The guidance offered in this section has been refined for each of the following new development surface water enquiry scenarios:

Scenario 1: No Point of Connection (POC) – Discharge to watercourse and / or infiltration

Scenario 2: No POC determined – No SW sewer available

Scenario 3: New surface area draining to an existing SW sewer

Scenario 4: New surface area draining to an existing FW sewer

Scenario 5: New surface area draining to an existing combined sewer

Scenario 6: Additional surface area draining to a SW sewer via an existing POC

Scenario 7: Changed surface area draining to a Combined via an existing

Scenario 8: Diverting existing surface drainage from an existing Combined POC to SW via a new SW POC

Scenario 9: Minor Applications – Developments of <½ hectare / <10 houses draining to an existing SW sewer

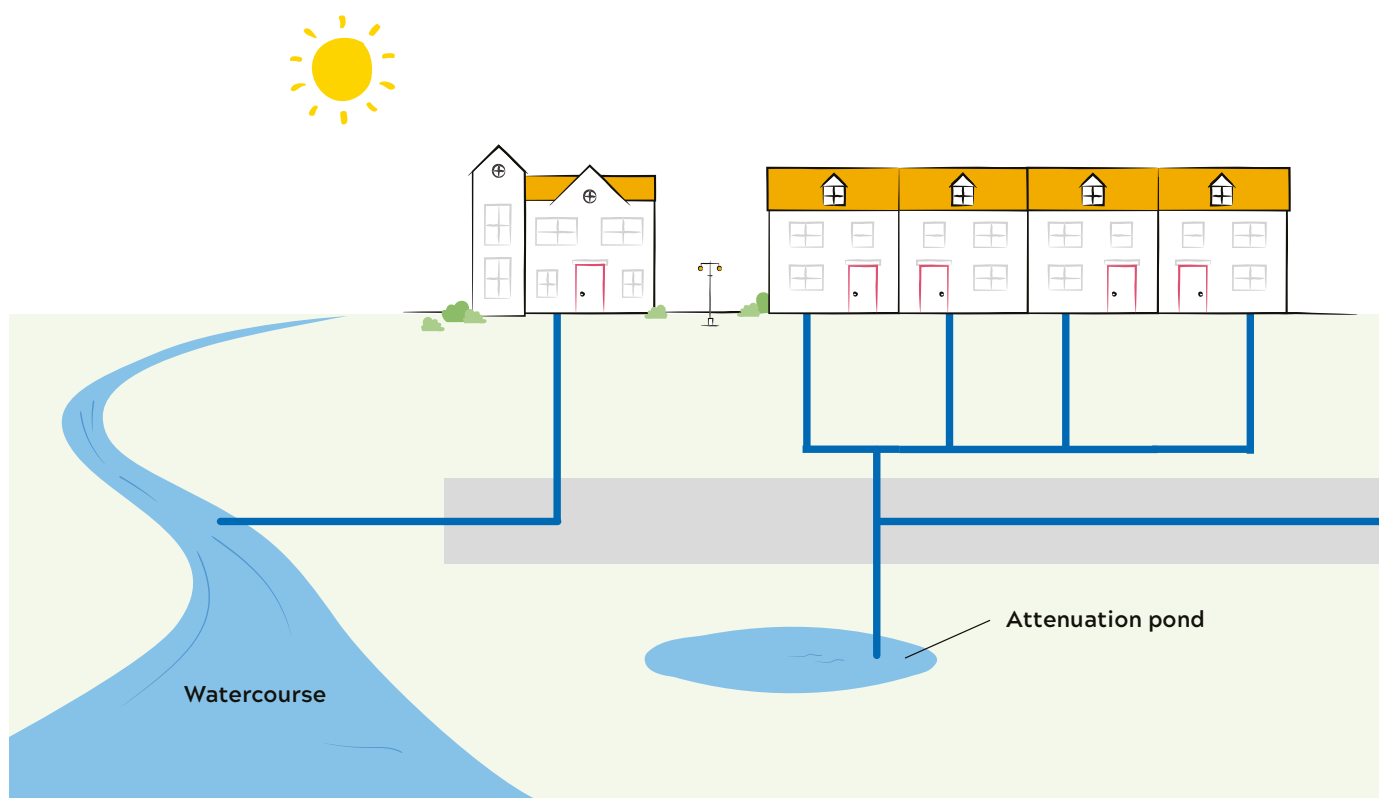
Scenario 10: Change of use, not entailing an increase in drainage surface area

If your development is not covered by any of the above scenarios we are unlikely to consider it to be sustainable. If this is the case please contact planningliaison@anglianwater.co.uk

Your development may encompass more than one scenario; for example, your site may encompass both brownfield redevelopment and greenfield areas. Although we will generally take a holistic view in such cases, we would require you to commence the process, as far as possible by adopting the appropriate scenario for each portion of the development site to which it is relevant. Once the assessment of all of the different areas of the site is complete, we can consider the net impact of the development as a whole.

The format chosen for the scenario definitions below, intentionally sets out the risk posed to Anglian Water operations first, followed by the actions required by the developer and then the position we are likely to take in planning. Additional information, such as the requisition of infrastructure and adoptable standards, is added as appropriate to the scenario.

2.1 – Scenario 1: No Point of Connection (POC) – Discharge to watercourse and / or infiltration



Network impact

A connection to the public surface water sewer network is not required as infiltration techniques or disposal to a watercourse is to be utilised. Therefore an assessment on the public sewer network is not required.

Additional information

Alternative disposal options

i) Other drainage infrastructure

There may be highway drainage within the vicinity of your development that could accommodate the additional flow. Subject to agreement with the Highway Authority, a connection for surface water may be made under the provisions of Section 115 of the Water Industry Act, 1991 ([See 1.3 – Connections to highway drainage](#))

ii) New drainage infrastructure and outfall

The alternative is that a new surface water sewer is constructed which is used to convey your surface water to a watercourse or as part of a SuDS scheme, where appropriate. Subject to the sewer being designed in accordance with the current version of Sewerage Sector Guidance, the sewer can be put forward for adoption by Anglian Water under Section 104 of the Water Industry Act 1991.

If the outfall is to a watercourse, the applicant may be required to obtain consent to discharge via the appropriate body in addition to approval of the drainage strategy from LPA. The applicant will also need to secure a Deed of Grant of Easement, in Anglian Water's favour for the right to convey water into the watercourse in perpetuity from the riparian land owner, prior to a sewer requisition.

Installation of offside sewers

If your site has no means of drainage without party land then you may be able to requisition Anglian Water, under Section 98 of the Water Industry Act 1991, to provide a connection to the public sewer or an approved outfall for domestic drainage purposes. Guidance on sewer requisition under Section 98 is provided [here](#).

Alternatively, you may wish to enter into a works agreement in accordance with Section 30 of the Anglian Water Authority Act 1977. This will allow you to design and construct the public sewer using Anglian Waters' statutory powers in accordance with Section 159/168 of the Water Industry Act 1991.

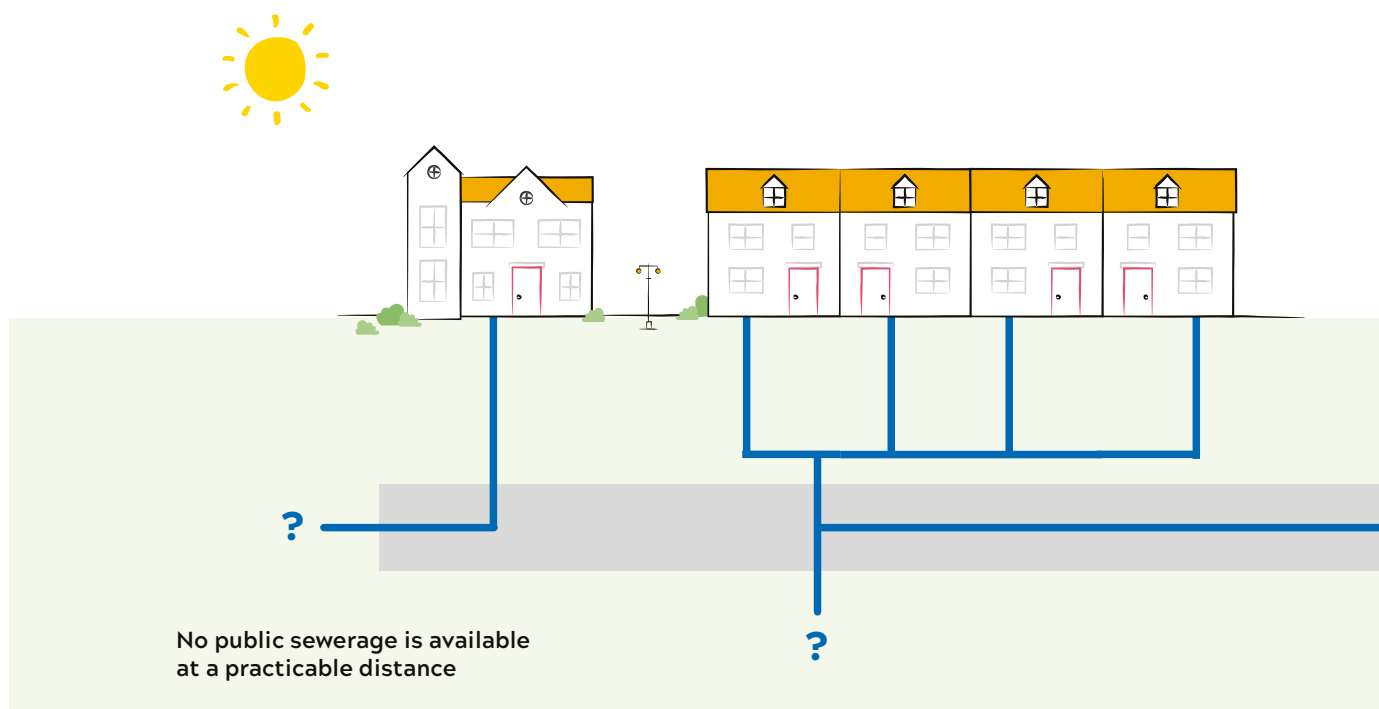
If the outfall is to a watercourse, the applicant may be required to obtain consent to discharge via the appropriate body in addition to approval of the drainage strategy from LPA. The applicant will also need to secure a Deed of Grant of Easement, in Anglian Water's favour for the right to convey water into the watercourse in perpetuity from the riparian land owner, prior to a sewer requisition.

Sewer adoption

A new surface water sewer can be used as a mechanism to discharge surface water to a watercourse or as part of a SuDS scheme where appropriate. SuDS are classed as sewers; therefore, subject to them being designed in accordance with the DCG Sewerage Sector Guidance, the sewer can be put forward for adoption by Anglian Water under Section 104 of the Water Industry Act 1991.

A pre-design consultation service is available if you would like to further advice on the adoptable standards for SuDS features. Reference our PDSA service on our Developer Services web page.

2.2 – Scenario 2: No POC determined – No SW sewer available



Network impact

As there are no public surface water sewers within the vicinity of the proposed development there is no feasible solution of surface water disposal within the existing network.

Process

Alternative methods of surface water disposal will need to be investigated such as infiltration techniques or a discharge to a watercourse in accordance with the surface water management hierarchy as outlined in Building Regulations Part H. There may also be a highway drainage system close to your site that could provide a suitable discharge point and you are advised to contact the local highways authority to examine this potential.

Alternatively, a new surface water sewer may be constructed which is used to convey your surface water to a watercourse or as part of a SuDS scheme, where appropriate.

Additional information

Alternative disposal options

i) Other drainage infrastructure

There may be highway drainage within the vicinity of your development that could accommodate the additional flow. Subject to agreement with the Highway Authority, a connection for surface water may be made under the provisions of Section 115 of the Water Industry Act, 1991 ([See 1.3 – Connections to highway drainage](#))

ii) New drainage infrastructure and outfall

The alternative is that a new surface water sewer is constructed which is used to convey your surface water to a watercourse or as part of a SuDS scheme, where appropriate. Subject to the sewer being designed in accordance with the current version of Sewerage Sector Guidance, the sewer can be put forward for adoption by Anglian Water under Section 104 of the Water Industry Act 1991.

If the outfall is to a watercourse, the applicant may be required to obtain consent to discharge via the appropriate body in addition to approval of the drainage strategy from LPA. The applicant will also need to secure a Deed of Grant of Easement, in Anglian Water's favour for the right to convey water into the watercourse in perpetuity from the riparian land owner, prior to a sewer requisition.

Installation of offside sewers

If your site has no means of drainage without crossing third party land then you may be able to requisition Anglian Water, under Section 98 of the Water Industry Act 1991, to provide a connection to the public sewer or an approved outfall for domestic drainage purposes. Guidance on sewer requisition under Section 98 is provided [here](#).

Alternatively, you may wish to enter into a works agreement in accordance with Section 30 of the Anglian Water Authority Act 1977. This will allow you to design and construct the public sewer using Anglian Waters' statutory powers in accordance with Section 159/168 of the Water Industry Act 1991.

If the outfall is to a watercourse, the applicant may be required to obtain consent to discharge via the appropriate body in addition to approval of the drainage strategy from LPA. The applicant will also need to secure a Deed of Grant of Easement, in Anglian Water's favour for the right to convey water into the watercourse in perpetuity from the riparian land owner, prior to a sewer requisition.

Sewer adoption

SuDS are classed as sewers; therefore, subject to them being designed in accordance with the DCG Sewerage Sector Guidance, the sewer can be put forward for adoption by Anglian Water under Section 104 of the Water Industry Act 1991.

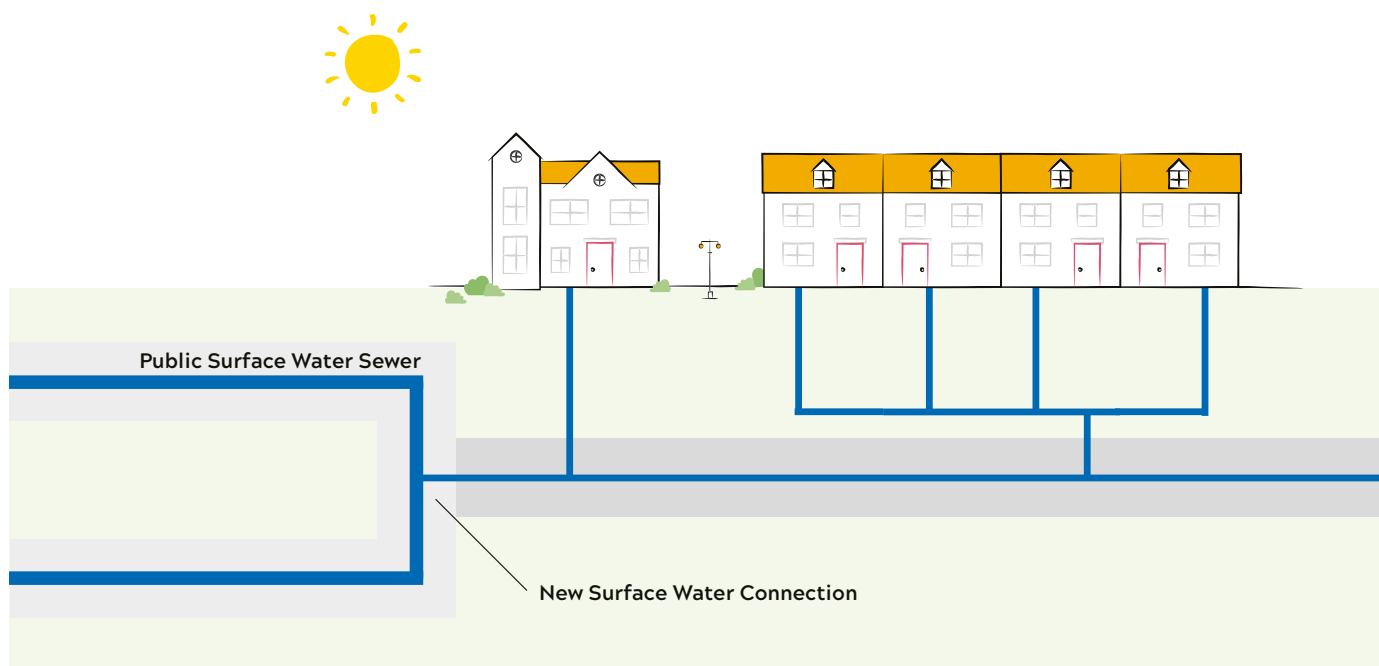
A pre-design consultation service is available if you would like to further advice on the adoptable standards for SuDS features. Reference our PDSA service on our Developer Services web page.

As you may be aware, Anglian Water will consider the adoption of SuDS provided that they meet the criteria outline in our SuDS adoption manual. This can be found on our website. We will adopt features located in public open space that are designed and constructed, in conjunction with the Local Authority and LLFA, to the criteria within our SuDS adoption manual. Specifically, developers must be able to demonstrate:

1. Effective upstream source control,
2. Effective exceeding design, and
3. Effective maintenance schedule demonstrating that the assets can be maintained both now and in the future with adequate access.

If you wish to look at the adoption of any SuDS then an expression of interest form can be found on our website [here](#).

2.3 – Scenario 3: New surface area draining to an existing SW sewer



Network impact

The surface water network has been designed for the existing catchment, therefore it is assumed to have minimal residual capacity for additional flow.

Process

Anglian Water needs to ensure the surface water hierarchy has been followed and can therefore only give an acceptance in principle to your proposed method of surface water disposal. We require you to liaise with the relevant LLFA as they are the Statutory Consultee for all surface water drainage strategies on major development sites and are required by law to advise on the broader area drainage constraints. LLFA approval is an essential pre-requisite to Anglian Water accepting a SW drainage strategy.

If LLFA are satisfied that, based upon evidence, no other option is feasible then a connection point may be made to the surface water sewer at a rate agreed with LLFA, subject to there being existing capacity or the provision of network reinforcement to accommodate the flow.

Please note that we will require evidence to demonstrate discussions with the LLFA have taken place and that the SW drainage strategy has been approved by them.

Once approval in principle has been reached with LLFA detailed analysis can be undertaken to establish the receiving surface water network capacity. Detailed analysis will be required to establish whether there is existing capacity to accommodate the proposed connection and if not, to advise on the extent of network reinforcement required.

The developer is responsible for providing the appropriate surface water disposal infrastructure. As such, all the work to determine the feasibility of a connection to the existing surface water sewer complete with all upgrades to the consented outfall is to be carried out by the developer at their cost.

If you wish to proceed with the evaluation of a connection to the surface water sewer, a cost and time-scale estimate for this analysis can be provided. Please contact planningliaison@anglianwater.co.uk

Anglian Water will request a planning condition to ensure no additional flow will be connected until, any identified upgrades have been delivered and sufficient capacity in the network has been demonstrated.

Additional information

Network reinforcement

Should network reinforcement be required as a consequence of additional surface water flow to an existing public surface water sewer, Anglian Water will request a planning condition to ensure no additional flow will be connected until sufficient capacity in the network has been demonstrated.

Reinforcement of the existing network, when required as a consequence of a new surface water connection, is not included within the Infrastructure Charge. These works may be requisitioned under Section 98 of the Water Industry Act 1991 or implemented by a self-lay provider under Section 151 of the Water Industry Act 1991, with the capital cost fully chargeable to the applicant. A cost and time-scale estimate can be provided for requisitioned network reinforcement.

Alternative disposal options

i) Other drainage infrastructure

There may be highway drainage within the vicinity of your development that could accommodate the additional flow. Subject to agreement with the Highway Authority, a connection for surface water may be made under the provisions of Section 115 of the Water Industry Act, 1991.

ii) New drainage infrastructure and outfall

The alternative is that a new surface water sewer is constructed which is used to convey your surface water to a watercourse or as part of a SuDS scheme, where appropriate. Subject to the sewer being designed in accordance with the current version of Sewerage Sector Guidance, the sewer can be put forward for adoption by Anglian Water under Section 104 of the Water Industry Act 1991.

If the outfall is to a watercourse, the applicant will be required to obtain consent to discharge via the appropriate body. If the outfall is to a watercourse, the applicant may be required to obtain consent to discharge via the appropriate body in addition to approval of the drainage strategy from LPA. The applicant will also need to secure a Deed of Grant of Easement, in Anglian Water's favour for the right to convey water into the watercourse in perpetuity from the riparian land owner, prior to a sewer requisition.

Installation of offsite sewers

If your site has no means of drainage without crossing third party land then you may be able to requisition Anglian Water, under Section 98 of the Water Industry Act 1991, to provide a connection to the public sewer or an approved outfall for domestic drainage purposes. Guidance on sewer requisition under Section 98 is provided [here](#).

Alternatively, you may wish to enter into a works agreement in accordance with Section 30 of the Anglian Water Authority Act 1977. This will allow you to design and construct the public sewer using Anglian Waters' statutory powers in accordance with Section 159/168 of the Water Industry Act 1991.

If the outfall is to a watercourse, the applicant may be required to obtain consent to discharge via the appropriate body in addition to approval of the drainage strategy from LPA. The applicant will also need to secure a Deed of Grant of Easement, in Anglian Water's favour for the right to convey water into the watercourse in perpetuity from the riparian land owner, prior to a sewer requisition.

Sewer adoption

SuDS are classed as sewers; therefore, subject to them being designed in accordance with the DCG Sewerage Sector Guidance, the sewer can be put forward for adoption by Anglian Water under Section 104 of the Water Industry Act 1991.

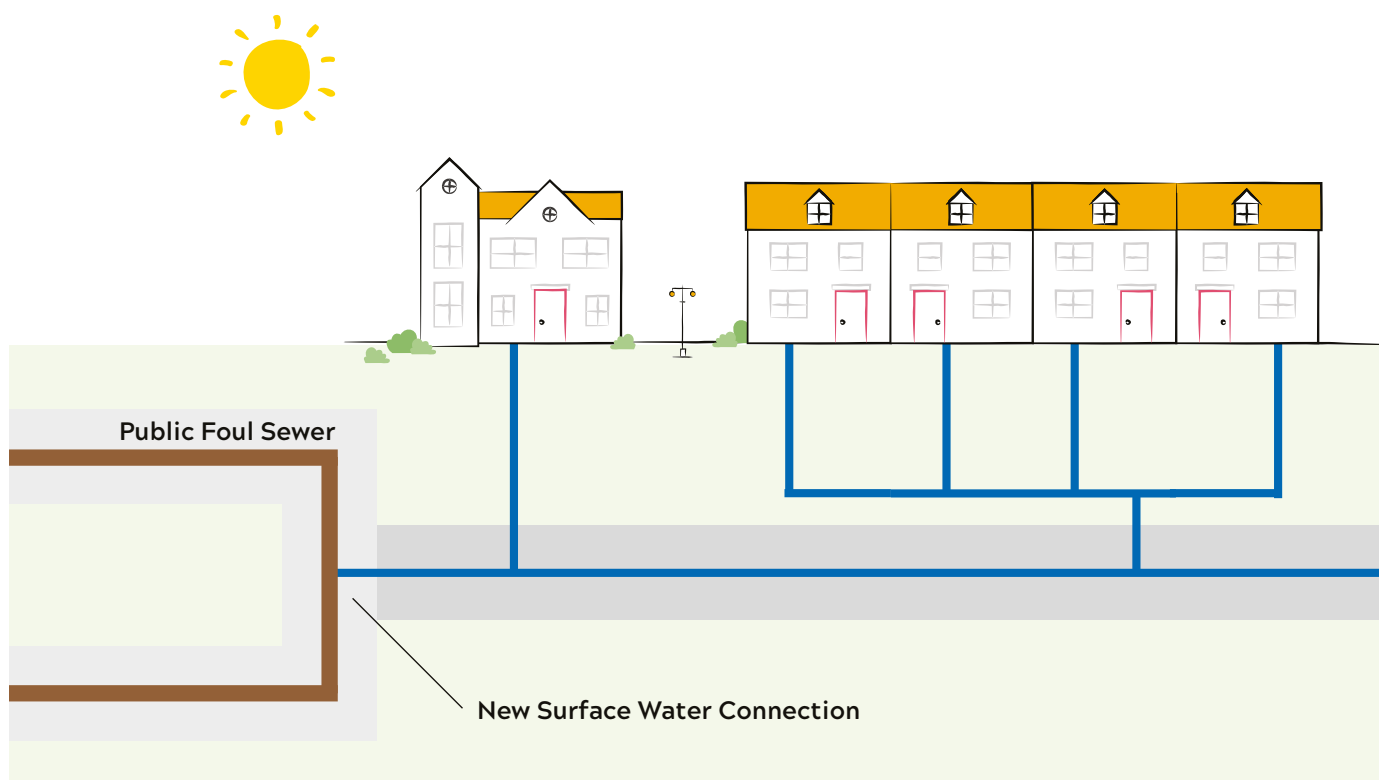
A pre-design consultation service is available if you would like to further advice on the adoptable standards for SuDS features. Reference our PDSA service on our Developer Services web page.

As you may be aware, Anglian Water will consider the adoption of SuDS provided that they meet the criteria outline in our SuDS adoption manual. This can be found on our website. We will adopt features located in public open space that are designed and constructed, in conjunction with the Local Authority and LLFA, to the criteria within our SuDS adoption manual. Specifically, developers must be able to demonstrate:

1. Effective upstream source control,
2. Effective exceeding design, and
3. Effective maintenance schedule demonstrating than the assets can be maintained both now and in the future with adequate access.

If you wish to look at the adoption of any SuDS then an expression of interest form can be found on our website [here](#).

2.4 – Scenario 4: New surface area draining to an existing FW sewer



Network impact

The connection of surface water flow to a foul water (FW) sewer will impose a high risk of flooding and pollution to the receiving network and compromise the ability of assets to operate within statutory enforced permitted limits. It should be noted that statutory operating permits reflect volumetric loading, which could not be mitigated solely by attenuating the discharge rate.

Consequently, we do not consider a connection of surface water into a FW sewer to be a viable and sustainable option. Should a planning application be presented that proposes the disposal of surface water to a FW sewer we would take the view that this would pose an unmitigable risk of pollution and flooding from the network and will raise an objection to the planning application.

Process

A connection of surface area draining to a FW system is not a sustainable option and would not be supported.

Additional information

Network reinforcement

Network reinforcement is not reliably sustainable.

Alternative disposal options

i) Other drainage infrastructure

There may be highway drainage within the vicinity of your development that could accommodate the additional flow. Subject to agreement with the Highway Authority, a connection for surface water may be made under the provisions of Section 115 of the Water Industry Act, 1991 ([See 1.3 – Connections to highway drainage](#))

ii) New drainage infrastructure and outfall

The alternative is that a new surface water sewer is constructed which is used to convey your surface water to a watercourse or as part of a SuDS scheme, where appropriate. Subject to the sewer being designed in accordance with the current version of Sewerage Sector Guidance, the sewer can be put forward for adoption by Anglian Water under Section 104 of the Water Industry Act 1991.

If the outfall is to a watercourse, the applicant may be required to obtain consent to discharge via the appropriate body in addition to approval of the drainage strategy from LPA. The applicant will also need to secure a Deed of Grant of Easement, in Anglian Water's favour for the right to convey water into the watercourse in perpetuity from the riparian land owner, prior to a sewer requisition.

Installation of offsite sewers

If your site has no means of drainage without crossing third party land then you may be able to requisition Anglian Water, under Section 98 of the Water Industry Act 1991, to provide a connection to the public sewer or an approved outfall for domestic drainage purposes. Guidance on sewer requisition under Section 98 is provided [here](#).

Alternatively, you may wish to enter into a works agreement in accordance with Section 30 of the Anglian Water Authority Act 1977. This will allow you to design and construct the public sewer using Anglian Waters' statutory powers in accordance with Section 159/168 of the Water Industry Act 1991.

If the outfall is to a watercourse, the applicant may be required to obtain consent to discharge via the appropriate body in addition to approval of the drainage strategy from LPA. The applicant will also need to secure a Deed of Grant of Easement, in Anglian Water's favour for the right to convey water into the watercourse in perpetuity from the riparian land owner, prior to a sewer requisition.

Sewer adoption

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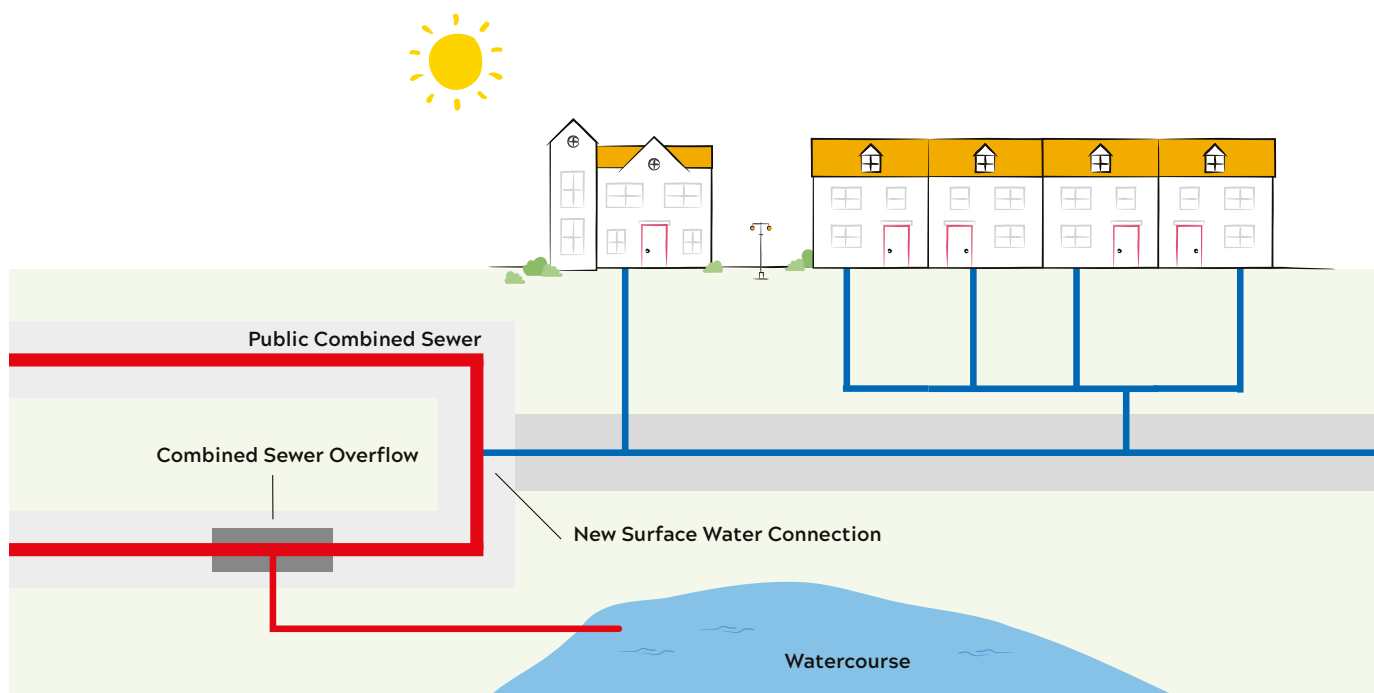
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As you may be aware, Anglian Water will consider the adoption of SuDS provided that they meet the criteria outline in our SuDS adoption manual. This can be found on our website. We will adopt features located in public open space that are designed and constructed, in conjunction with the Local Authority and LLFA, to the criteria within our SuDS adoption manual. Specifically, developers must be able to demonstrate:

1. Effective upstream source control,
2. Effective exceeding design, and
3. Effective maintenance schedule demonstrating that the assets can be maintained both now and in the future with adequate access.

If you wish to look at the adoption of any SuDS then an expression of interest form can be found on our website [here](#).

2.5 – Scenario 5: New surface area draining to an existing combined sewer



Network impact

The impact of additional surface water flow to a combined sewer will significantly increase the risk of flooding and pollution to the receiving network and potentially to compromise the ability of assets to operate within statutory enforced permitted limits.

Increasing the surface water catchment draining to a Combined sewerage system will require new operating permits for critical assets and therefore, the approval of the appropriate permitting authority. Detailed analysis will be necessary to demonstrate that the environmental impact can be reliably mitigated. This process could impose severe time constraints on the development programme and there could be no certainty of identifying a feasible mitigation method. It should be noted that statutory operating permits reflect volumetric loading, which could not be mitigated solely by attenuating the discharge rate.

Even with new operating permits and technically feasible environmental mitigation, the change in operation would likely require extensive network reinforcement, which may not be practicable to implement. Should a planning application be presented that proposes an increase of surface area draining to a Combined sewer we would take the view that this would pose an unmitigated risk of pollution and flooding to the network and will raise an objection to the planning application.

Process

A new connection that increases the surface area draining to a Combined system is unlikely to be a sustainable option and would not be supported.

Additional information

Network reinforcement

Network reinforcement is not reliably sustainable.

Alternative disposal options

i) Other drainage infrastructure

There may be highway drainage within the vicinity of your development that could accommodate the additional flow. Subject to agreement with the Highway Authority, a connection for surface water may be made under the provisions of Section 115 of the Water Industry Act, 1991.

ii) New drainage infrastructure and outfall

A new surface water sewer constructed to convey your surface water to a watercourse or as part of a SuDS scheme, where appropriate. Subject to the sewer being designed in accordance with the current version of Sewerage Sector Guidance, the sewer can be put forward for adoption by Anglian Water under Section 104 of the Water Industry Act 1991.

If the outfall is to a watercourse, the applicant may be required to obtain consent to discharge via the appropriate body in addition to approval of the drainage strategy from LPA. The applicant will also need to secure a Deed of Grant of Easement, in Anglian Water's favour for the right to convey water into the watercourse in perpetuity from the riparian land owner, prior to a sewer requisition.

Installation of offsite sewers

If your site has no means of drainage without crossing third party land then you may be able to requisition Anglian Water, under Section 98 of the Water Industry Act 1991, to provide a connection to the public sewer or an approved outfall for domestic drainage purposes. Guidance on sewer requisition under Section 98 is provided [here](#).

Alternatively, you may wish to enter into a works agreement in accordance with Section 30 of the Anglian Water Authority Act 1977. This will allow you to design and construct the public sewer using Anglian Waters' statutory powers in accordance with Section 159/168 of the Water Industry Act 1991.

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Sewer adoption

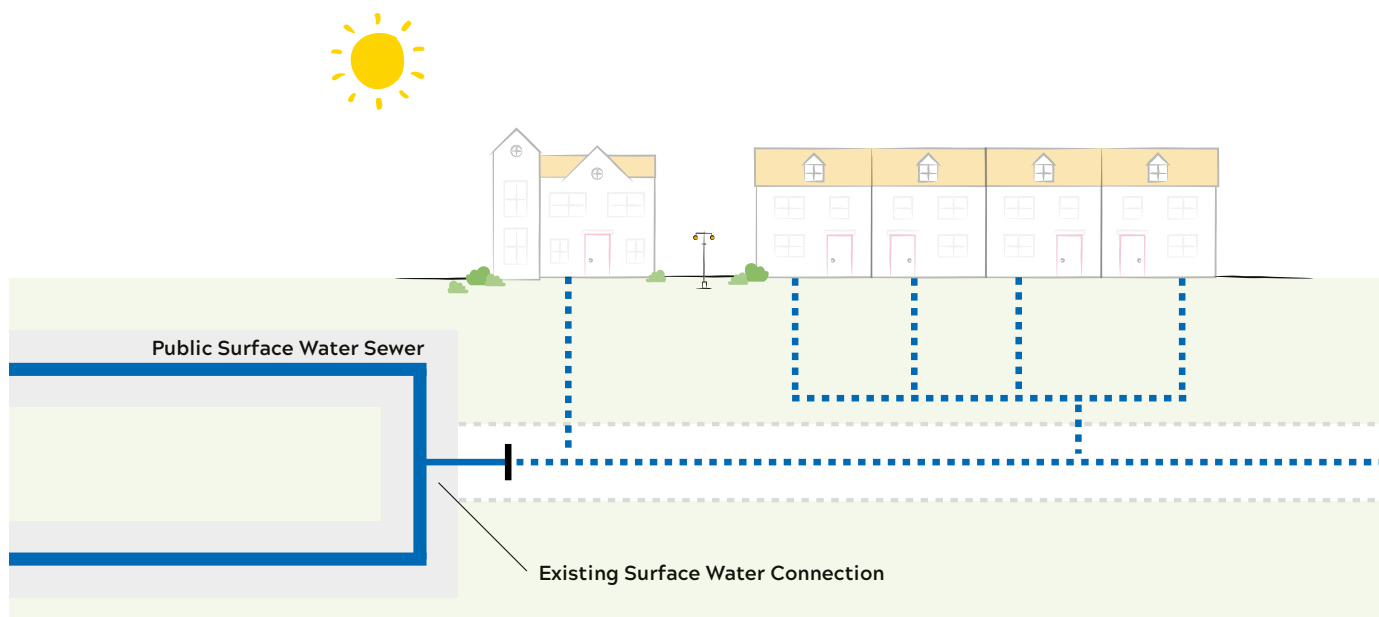
SuDS are classed as sewers; therefore, subject to them being designed in accordance with the DCG Sewerage Sector Guidance, the sewer can be put forward for adoption by Anglian Water under Section 104 of the Water Industry Act 1991. A pre-design consultation service is available if you would like to further advice on the adoptable standards for SuDS features. Reference our PDSA service on our Developer Services web page.

As you may be aware, Anglian Water will consider the adoption of SuDS provided that they meet the criteria outline in our SuDS adoption manual. This can be found on our website. We will adopt features located in public open space that are designed and constructed, in conjunction with the Local Authority and LLFA, to the criteria within our SuDS adoption manual. Specifically, developers must be able to demonstrate:

1. Effective upstream source control,
2. Effective exceeding design, and
3. Effective maintenance schedule demonstrating that the assets can be maintained both now and in the future with adequate access.

If you wish to look at the adoption of any SuDS then an expression of interest form can be found on our website [here](#).

2.6 – Scenario 6: Additional surface area draining to a SW sewer via an existing POC



Network impact

The surface water network has been designed for the existing catchment, therefore it is assumed to have minimal residual capacity for additional flow. Detailed analysis will be required to establish whether there is existing capacity to accommodate the proposed additional flow and if not, to advise on the extent of network reinforcement required.

Process

Anglian Water needs to ensure the surface water hierarchy has been followed and can therefore only give an acceptance in principle to your proposed method of surface water disposal. We require you to liaise with the relevant LLFA as they are the Statutory Consultee for all surface water drainage strategies on major development sites and are required by law to advise on the broader area drainage constraints. LLFA approval is an essential pre-requisite to Anglian Water accepting a SW drainage strategy. If they are satisfied that, based upon evidence, no other option is viable then a connection point may be made to the surface water sewer at a rate agreed with LLFA, subject to there being existing capacity or the provision of network reinforcement to accommodate the flow.

Once approval in principle has been reached with LLFA detailed analysis can be undertaken to establish the receiving surface water network capacity. Detailed analysis will be required to establish whether there is existing capacity to accommodate the proposed connection and if not, to advise on the extent of network reinforcement required.

As the developer is responsible for providing the appropriate surface water disposal infrastructure. As such, all the work to determine the feasibility of a connection to the existing surface water sewer complete with all upgrades to the consented outfall is to be carried out by the developer at their cost.

If you wish to proceed with the evaluation of an increase in flow to the surface water sewer, a cost and timescale estimate for this analysis can be provided. Please contact planningliaison@anglianwater.co.uk

Please note that we will require evidence to demonstrate discussions with the LLFA have taken place and that the SW drainage strategy has been approved by them.

Anglian Water will request a planning condition to ensure no additional flow will be connected until sufficient capacity in the network has been demonstrated.

Additional information

Network reinforcement

Should network reinforcement be required as a consequence of additional surface water flow to an existing public surface water sewer, Anglian Water will request a planning condition to ensure no additional flow will be connected until sufficient capacity in the network has been confirmed.

Reinforcement of the existing network, when required as a consequence of a new surface water connection, is not included within the Infrastructure Charge. These works may be requisitioned under Section 98 of the Water Industry Act 1991 or implemented by a self-lay provider under Section 151 of the Water Industry Act 1991., with the capital cost fully chargeable to the applicant. A cost and timescale estimate can be provided for requisitioned network reinforcement.

Alternative disposal options

i) Other drainage infrastructure

There may be highway drainage within the vicinity of your development that could accommodate the additional flow. Subject to agreement with the Highway Authority, a connection for surface water may be made under the provisions of Section 115 of the Water Industry Act, 1991.

ii) New drainage infrastructure and outfall

A new surface water sewer constructed to convey your surface water to a watercourse or as part of a SuDS scheme, where appropriate. Subject to the sewer being designed in accordance with the current version of Sewerage Sector Guidance, the sewer can be put forward for adoption by Anglian Water under Section 104 of the Water Industry Act 1991.

If the outfall is to a watercourse, the applicant may be required to obtain consent to discharge via the appropriate body in addition to approval of the drainage strategy from LPA. The applicant will also need to secure a Deed of Grant of Easement, in Anglian Water's favour for the right to convey water into the watercourse in perpetuity from the riparian land owner, prior to a sewer requisition.

Installation of offsite sewers

If your site has no means of drainage without crossing third party land then you may be able to requisition Anglian Water, under Section 98 of the Water Industry Act 1991, to provide a connection to the public sewer or an approved outfall for domestic drainage purposes. Guidance on sewer requisition under Section 98 is provided [here](#).

Alternatively, you may wish to enter into a works agreement in accordance with Section 30 of the Anglian Water Authority Act 1977. This will allow you to design and construct the public sewer using Anglian Waters' statutory powers in accordance with Section 159/168 of the Water Industry Act 1991.

If the outfall is to a watercourse, the applicant may be required to obtain consent to discharge via the appropriate body in addition to approval of the drainage strategy from LPA. The applicant will also need to secure a Deed of Grant of Easement, in Anglian Water's favour for the right to convey water into the watercourse in perpetuity from the riparian land owner, prior to a sewer requisition.

Sewer adoption

SuDS are classed as sewers; therefore, subject to them being designed in accordance with the DCG Sewerage Sector Guidance, the sewer can be put forward for adoption by Anglian Water under Section 104 of the Water Industry Act 1991.

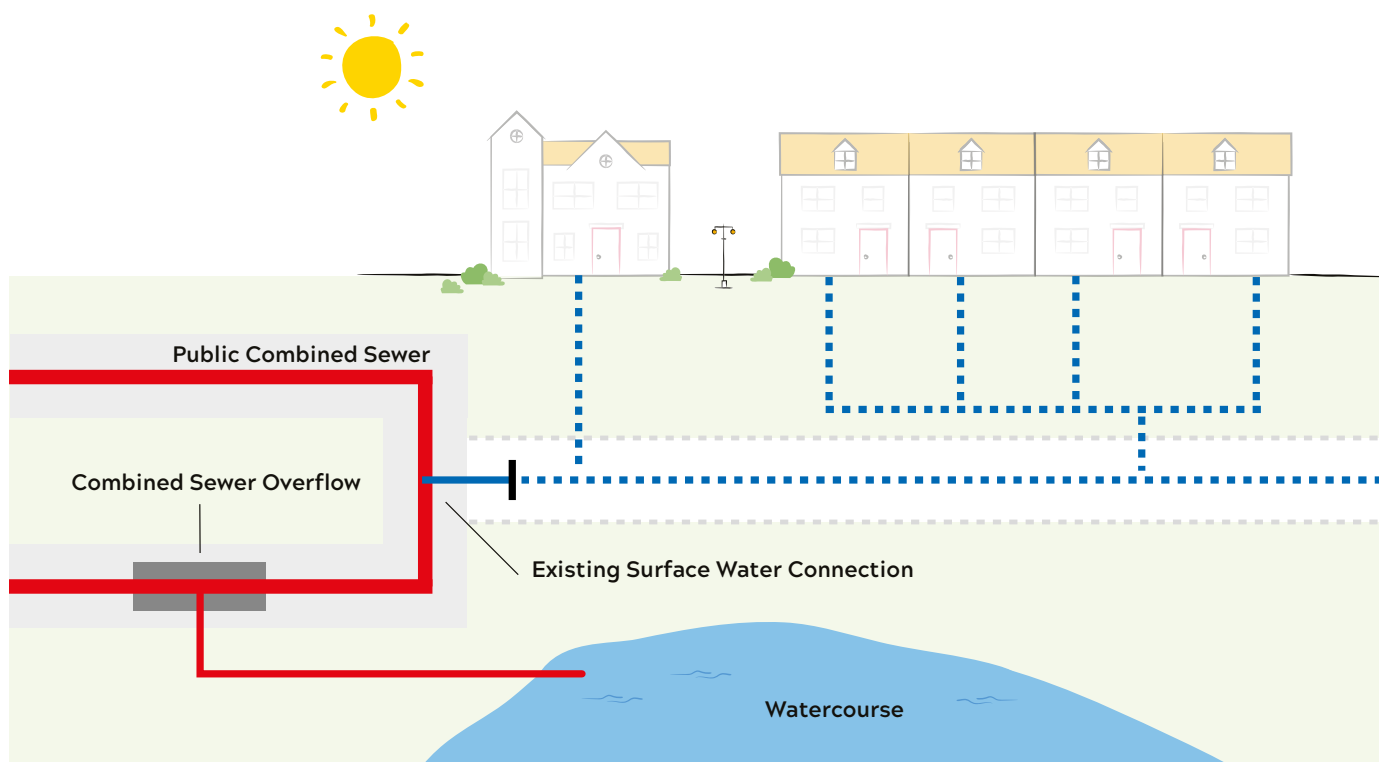
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As you may be aware, Anglian Water will consider the adoption of SuDS provided that they meet the criteria outline in our SuDS adoption manual. This can be found on our website. We will adopt features located in public open space that are designed and constructed, in conjunction with the Local Authority and LLFA, to the criteria within our SuDS adoption manual. Specifically, developers must be able to demonstrate:

1. Effective upstream source control,
2. Effective exceeding design, and
3. Effective maintenance schedule demonstrating than the assets can be maintained both now and in the future with adequate access.

If you wish to look at the adoption of any SuDS then an expression of interest form can be found on our website [here](#).

2.7 – Scenario 7: Changed surface area draining to a Combined via an existing



Network impact

The impact of surface water flow to a combined sewer significantly increases the risk of flooding and pollution to the receiving network and diminishes the ability of assets to operate within statutory enforced permitted limits. Anglian Water will use opportunities presented by new development to reduce exposure to pollution risk in the existing sewer network. As such, we expect new development to exploit all practicable opportunities to reduce surface water flow to the combined sewer network, in terms of volume and discharge flow rate. Our aim will be to obtain the maximum achievable benefit without introducing a need to pump flow.

Process

Anglian Water needs to ensure the surface water hierarchy has been followed. We require you to liaise with the relevant LLFA as they are the Statutory Consultee for all surface water drainage strategies on major development sites and are required by law to advise on the broader area drainage constraints. LLFA approval is an essential pre-requisite to Anglian Water accepting a SW drainage strategy. In the absence of an agreed SW drainage strategy Anglian Water would seek, through planning condition, to ensure surface water is restricted to the discharge rate advised in our policy.

Once approval in principle has been reached with LLFA detailed analysis can be undertaken to establish the receiving surface water network capacity. Detailed analysis will be required to establish whether there is existing capacity to accommodate the proposed connection and if not, to advise on the extent of network reinforcement required.

The SW strategy must clearly identify existing SW drainage arrangements, so that the extent of change in the SW discharge can be reasonably quantified and to ensure there will be a reduction in the volume and rate of flow to the combined sewer network during critical operating phases.

Please note that we will require evidence to demonstrate discussions with the LLFA have taken place and that the drainage strategy has been approved by them.

Additional information

Network reinforcement

Not required as no increase in flow

Alternative disposal options

i) Other drainage infrastructure

There may be highway drainage within the vicinity of your development that could accommodate the additional flow. Subject to agreement with the Highway Authority, a connection for surface water may be made under the provisions of Section 115 of the Water Industry Act,

ii) New drainage infrastructure and outfall

A new surface water sewer constructed to convey your surface water to a watercourse or as part of a SuDS scheme, where appropriate. Subject to the sewer being designed in accordance with the current version of Sewerage Sector Guidance, the sewer can be put forward for adoption by Anglian Water under Section 104 of the Water Industry Act 1991.

If the outfall is to a watercourse, the applicant may be required to obtain consent to discharge via the appropriate body in addition to approval of the drainage strategy from LPA. The applicant will also need to secure a Deed of Grant of Easement, in Anglian Water's favour for the right to convey water into the watercourse in perpetuity from the riparian land owner, prior to a sewer requisition.

Installation of offsite sewers

If your site has no means of drainage without crossing third party land then you may be able to requisition Anglian Water, under Section 98 of the Water Industry Act 1991, to provide a connection to the public sewer or an approved outfall for domestic drainage purposes. Guidance on sewer requisition under Section 98 is provided [here](#).

Alternatively, you may wish to enter into a works agreement in accordance with Section 30 of the Anglian Water Authority Act 1977. This will allow you to design and construct the public sewer using Anglian Waters' statutory powers in accordance with Section 159/168 of the Water Industry Act 1991.

If the outfall is to a watercourse, the applicant may be required to obtain consent to discharge via the appropriate body in addition to approval of the drainage strategy from LPA. The applicant will also need to secure a Deed of Grant of Easement, in Anglian Water's favour for the right to convey water into the watercourse in perpetuity from the riparian land owner, prior to a sewer requisition.

Sewer adoption

SuDS are classed as sewers; therefore, subject to them being designed in accordance with the DCG Sewerage Sector Guidance, the sewer can be put forward for adoption by Anglian Water under Section 104 of the Water Industry Act 1991.

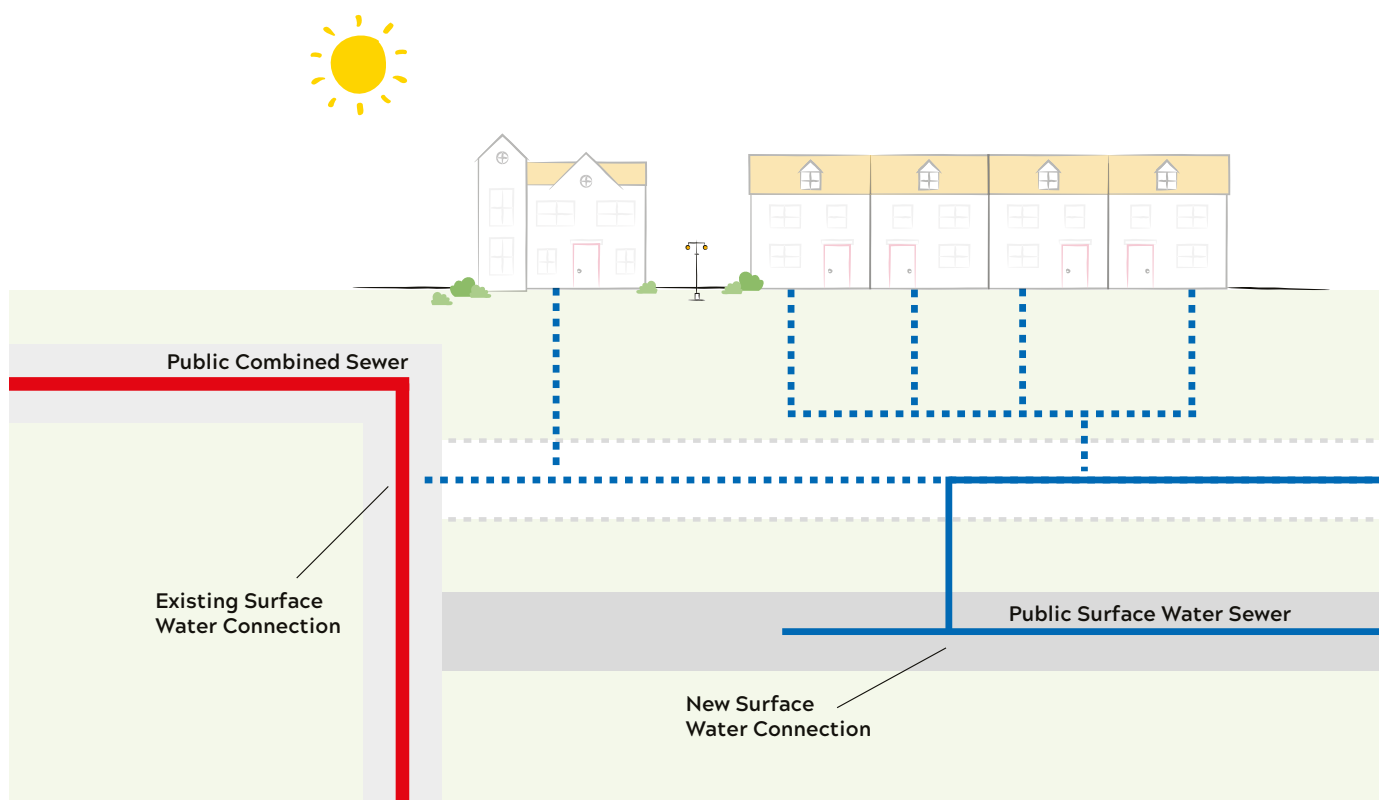
A pre-design consultation service is available if you would like to further advice on the adoptable standards for SuDS features. Reference our PDSA service on our Developer Services web page.

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1. Effective upstream source control,
2. Effective exceeding design, and
3. Effective maintenance schedule demonstrating than the assets can be maintained both now and in the future with adequate access.

If you wish to look at the adoption of any SuDS then an expression of interest form can be found on our website [here](#).

2.8 – Scenario 8: Diverting existing surface drainage from an existing Combined POC to SW via a new SW POC



Network impact

Anglian Water will use opportunities presented by new development to reduce exposure to pollution risk in the existing sewer network. As such, we expect new development to exploit all practicable opportunities to reduce surface water flow to the combined sewer network, in terms of volume and discharge flow rate. Our aim will be to obtain the maximum achievable benefit without introducing a need to pump flow.

Therefore, Anglian Water is supportive in principle to the diversion of existing SW flow from Combined networks to SW networks. This will have an incremental effect of separating surface water from the combined network and potentially creating headroom for new FW connections. We will need to establish that the relative benefit, in terms of residual operational risk is justifiable.

Process

As the developer is responsible for providing the appropriate surface water disposal infrastructure. As such, all the work to determine the feasibility of a connection to the existing surface water sewer complete with all upgrades to the consented outfall is to be carried out by the developer at their cost.

The impact on the SW network would still need to be assessed in line with a new contributing area connection ([see 1.3 Scenario 3: New surface area draining to an existing SW sewer](#)); however, emphasis will be placed on resultant balance of risk across the Combined and SW networks. If you wish Anglian Water to carry out the evaluation of an increase in flow to the surface water sewer, a cost and timescale estimate for this analysis can be provided. Please contact planningliaison@anglianwater.co.uk

Anglian Water needs to ensure the surface water hierarchy has been followed. We require you to liaise with the relevant LLFA as they are the Statutory Consultee for all surface water drainage strategies on major development sites and are required by law to advise on the broader area drainage constraints.

LLFA approval is an essential pre-requisite to Anglian Water accepting a SW drainage strategy. In the absence of an agreed SW drainage strategy Anglian Water would seek, through planning condition, to ensure surface water is restricted to the discharge rate advised in our policy

We will require evidence to demonstrate discussions with the LLFA have taken place and that the drainage strategy has been approved by them.

Additional information

Environmental incentive

This is considered a more sustainable solution with a net environmental impact as a more sustainable surface water discharge method is used for the new development. Anglian Water will offer an environmental incentive to such and this amount to 50% of the wastewater infrastructure charge for the development. More information on the environmental incentive is available on our website here:

Network reinforcement

Should network reinforcement be required as a consequence of additional surface water flow to an existing public surface water sewer, Anglian Water will request a planning condition to ensure no additional flow will be connected until any identified upgrades have been delivered and sufficient capacity in the network has been confirmed.

Reinforcement of the existing network, when required as a consequence of a new surface water connection, is not included within the Infrastructure Charge. These works may be requisitioned under Section 98 of the Water Industry Act 1991 or implemented by a self-lay provider under Section 151 of the Water Industry Act 1991. , with the capital cost fully chargeable to the applicant. A cost and timescale estimate can be provided for requisitioned network reinforcement.

Alternative disposal options

i) Other drainage infrastructure

There may be highway drainage within the vicinity of your development that could accommodate the additional flow. Subject to agreement with the Highway Authority, a connection for surface water may be made under the provisions of Section 115 of the Water Industry Act,

ii) New drainage infrastructure and outfall

A new surface water sewer constructed to convey your surface water to a watercourse or as part of a SuDS scheme, where appropriate. Subject to the sewer being designed in accordance with the current version of Sewerage Sector Guidance, the sewer can be put forward for adoption by Anglian Water under Section 104 of the Water Industry Act 1991.

If the outfall is to a watercourse, the applicant may be required to obtain consent to discharge via the appropriate body in addition to approval of the drainage strategy from LPA. The applicant will also need to secure a Deed of Grant of Easement, in Anglian Water's favour for the right to convey water into the watercourse in perpetuity from the riparian land owner, prior to a sewer requisition.

Installation of offsite sewers

If your site has no means of drainage without crossing third party land then you may be able to requisition Anglian Water, under Section 98 of the Water Industry Act 1991, to provide a connection to the public sewer or an approved outfall for domestic drainage purposes. Guidance on sewer requisition under Section 98 is provided [here](#).

Alternatively, you may wish to enter into a works agreement in accordance with Section 30 of the Anglian Water Authority Act 1977. This will allow you to design and construct the public sewer using Anglian Waters' statutory powers in accordance with Section 159/168 of the Water Industry Act 1991.

If the outfall is to a watercourse, the applicant may be required to obtain consent to discharge via the appropriate body in addition to approval of the drainage strategy from LPA. The applicant will also need to secure a Deed of Grant of Easement, in Anglian Water's favour for the right to convey water into the watercourse in perpetuity from the riparian land owner, prior to a sewer requisition.

Sewer requisition

If your site has no means of drainage without crossing or access via third party land then you may be able to requisition Anglian Water, under Section 98 of the Water Industry Act 1991, to provide a connection to the public sewer for domestic drainage purposes. As part of this option, you may wish to enter into a works agreement in accordance with Section 30 of the Anglian Water Authority Act 1977. This will allow you to design and construct the public sewer using Anglian Waters' statutory powers in accordance with Section 159/168 of the Water Industry Act 1991.

Sewer adoption

A new surface water sewer can be used as a mechanism to discharge surface water to a watercourse or as part of a SuDS scheme where appropriate. SuDS are classed as sewers; therefore, subject to them being designed in accordance with the DCG Sewerage Sector Guidance, the sewer can be put forward for adoption by Anglian Water under Section 104 of the Water Industry Act 1991.

A pre-design consultation service is available if you would like to further advice on the adoptable standards for SuDS features. Reference our PDSA service on our Developer Services web page.

2.9 – Scenario 9: Minor Applications – Developments of <math>< \frac{1}{2}</math> hectare / <math>< 10</math> houses draining to an existing SW sewer

Network impact

Anglian Water recognise that minor developments of less than 10 houses or $\frac{1}{2}$ hectare represent amongst them, reasonably anticipated infill development as well as localised redevelopment necessary to maintain the viability of existing amenities. Such developments generally present minimal additional risk to the operation of the sewer networks. However, in some cases even a minor development can provide a pathway that exposes the sewer network to excess surface water or create new points of flood vulnerability. In these cases the result is to generate a level of operational risk that is disproportionate to the scale of the development and impracticable to mitigate.

Process

It is also recognised that minor development will not usually have the necessary resource to undertake complex and specialist detailed analysis expected of larger developments. We also note that the more precise conclusions derived from modelling would offer limited value to understanding the changes posed to sewer network operation by a minor development.

Similarly, there is likely to be very limited space on a minor development site, particularly brownfield sites, for attenuation that functions without the need to pump flow or a drainage field to be sustainably operated / compliant with Building Regulations.

A best practical option could be acceptable if the risk imposed to the sewer network is judged to be minimal. Therefore, the process for minor applications will employ a more empirical approach, examining the evidence to establish the pre-developed drainage characteristics of the site and identify the likely proportional changes presented by its development.

The following criteria will be used to determine our acceptance of a SW connection from minor developments:

Criterion	Purpose and relevance
An existing SW connection and contributing area / equivalent previous use	Provided the area is not substantially increased the exposure to risk is broadly known
Existing localised flood vulnerability	New connections from flood vulnerable areas could greatly increase the networks exposure to the risk. The risk increase may be as such, we would not accept it
Constraints that limit construction, such as listed structures or a sensitive habitat	The preservation of heritage and natural amenity will be taken into consideration in determining attenuation capacity
High risk sewer network	Acceptance would be subject to a high risk catchment check. No new SW flow would be acceptable to a network that is already vulnerable to overloading
The receiving sewer network type	We will not accept SW flow to a FW sewer We will not accept a new SW connection to a Combined sewer
Feasibility of conveyance to the SPOC	Streetworks UK (formally National Joint Utilities Group) Guidance Publications
No requirement for network reinforcement	It is highly unlikely that network reinforcement would be economically viable for minor development. Acceptance would be dependent upon only very marginal increases in risk or the facility for mitigation on site

Some analysis of the existing sewer network will be necessary and this would usually be a desktop assessment of existing data. In some cases, asset surveys may be necessary to confirm the assessment.

As the developer is responsible for providing the appropriate surface water disposal infrastructure, work to determine the feasibility of a connection to a surface water sewer is considered to be part of the developer's evaluation of surface water disposal options to a consented outfall.

Anglian Water will need to ensure the surface water hierarchy has been followed. We require you to provide evidence to prove that alternative disposal routes are unfeasible. If we are satisfied that, based upon evidence, no other option is viable then a connection point may be made, subject to the specific requirements to mitigate additional risk to the network.

Anglian Water will request a planning condition to ensure the agreed drainage strategy is implemented. If you have any queries on this process, please contact planningliaison@anglianwater.co.uk

Additional information

Network reinforcement

Network reinforcement is not economically viable.

Alternative disposal options

i) Other drainage infrastructure

There may be highway drainage within the vicinity of your development that could accommodate the additional flow. Subject to agreement with the Highway Authority, a connection for surface water may be made under the provisions of Section 115 of the Water Industry Act,

ii) New drainage infrastructure and outfall

A new surface water sewer constructed to convey your surface water to a watercourse or as part of a SuDS scheme, where appropriate. Subject to the sewer being designed in accordance with the current version of Sewerage Sector Guidance, the sewer can be put forward for adoption by Anglian Water under Section 104 of the Water Industry Act 1991.

If the outfall is to a watercourse, the applicant may be required to obtain consent to discharge via the appropriate body in addition to approval of the drainage strategy from LPA. The applicant will also need to secure a Deed of Grant of Easement, in Anglian Water's favour for the right to convey water into the watercourse in perpetuity from the riparian land owner, prior to a sewer requisition.

Installation of offsite sewers

If your site has no means of drainage without crossing third party land then you may be able to requisition Anglian Water, under Section 98 of the Water Industry Act 1991, to provide a connection to the public sewer or an approved outfall for domestic drainage purposes. Guidance on sewer requisition under Section 98 is provided [here](#).

Alternatively, you may wish to enter into a works agreement in accordance with Section 30 of the Anglian Water Authority Act 1977. This will allow you to design and construct the public sewer using Anglian Waters' statutory powers in accordance with Section 159/168 of the Water Industry Act 1991.

If the outfall is to a watercourse, the applicant may be required to obtain consent to discharge via the appropriate body in addition to approval of the drainage strategy from LPA. The applicant will also need to secure a Deed of Grant of Easement, in Anglian Water's favour for the right to convey water into the watercourse in perpetuity from the riparian land owner, prior to a sewer requisition.

Sewer adoption

SuDS are classed as sewers; therefore, subject to them being designed in accordance with the DCG Sewerage Sector Guidance, the sewer can be put forward for adoption by Anglian Water under Section 104 of the Water Industry Act 1991.

A pre-design consultation service is available if you would like to further advice on the adoptable standards for SuDS features. Reference our PDSA service on our Developer Services web page.

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1. Effective upstream source control,
2. Effective exceeding design, and
3. Effective maintenance schedule demonstrating than the assets can be maintained both now and in the future with adequate access.

If you wish to look at the adoption of any SuDS then an expression of interest form can be found on our website [here](#).

2.10 – Scenario 10: Change of use, not entailing an increase in drainage surface area

Network impact

In situations where the development involves a change of use but does not lead to an increase of the drained impermeable area that is connected to the public sewer, the risk to the receiving network is unchanged. However; if the receiving network is already exposed to significant operational risk, whether by property flooding or environmental impact from storm overflows, Anglian Water will use opportunities presented by new development to reduce exposure to risk in the existing sewer network.

As such, we expect new development to exploit all reasonably practicable opportunities to reduce surface water flow to the sewer network, in terms of either volume or discharge flow rate. Our aim will be to obtain the maximum achievable benefit without introducing a need to pump flow. Refer to Section 1.5 Surface water pumping stations

Process

Anglian Water needs to ensure the surface water hierarchy has been followed. We require you to liaise with the relevant LLFA as they are the Statutory Consultee for all surface water drainage strategies on major development sites and are required by law to advise on the broader area drainage constraints.

LLFA approval is an essential pre-requisite to Anglian Water accepting a SW drainage strategy. In the absence of an agreed SW drainage strategy Anglian Water would seek, through planning condition, to ensure surface water is restricted to the discharge rate advised in our policy

Please note that we will require evidence to demonstrate discussions with the LLFA have taken place and that the drainage strategy has been approved by them..

The SW strategy must clearly identify existing SW drainage arrangements, so that the extent of change in the SW discharge can be reasonably quantified and to ensure there will be a reduction in the volume and / or rate of flow to the sewer network during critical operating phases.

Additional information

Environmental incentive

If the approved SW drainage arrangement can be shown to have a net positive environmental impact, you may be eligible to receive an environmental incentive of up to 50% of the wastewater infrastructure charge for the development. More information on the environmental incentive is available on page 42 of the [2025/2026 charges document](#) on our website.

Network reinforcement

Not required as no increase in flow

Alternative disposal options

i) Other drainage infrastructure

There may be highway drainage within the vicinity of your development that could accommodate the additional flow. Subject to agreement with the Highway Authority, a connection for surface water may be made under the provisions of Section 115 of the Water Industry Act,

ii) New drainage infrastructure and outfall

A new surface water sewer constructed to convey your surface water to a watercourse or as part of a SuDS scheme, where appropriate. Subject to the sewer being designed in accordance with the current version of Sewerage Sector Guidance, the sewer can be put forward for adoption by Anglian Water under Section 104 of the Water Industry Act 1991.

If the outfall is to a watercourse, the applicant may be required to obtain consent to discharge via the appropriate body in addition to approval of the drainage strategy from LPA. The applicant will also need to secure a Deed of Grant of Easement, in Anglian Water's favour for the right to convey water into the watercourse in perpetuity from the riparian land owner, prior to a sewer requisition.

Installation of offsite sewers

If your site has no means of drainage without crossing third party land then you may be able to requisition Anglian Water, under Section 98 of the Water Industry Act 1991, to provide a connection to the public sewer or an approved outfall for domestic drainage purposes. Guidance on sewer requisition under Section 98 is provided [here](#).

Alternatively, you may wish to enter into a works agreement in accordance with Section 30 of the Anglian Water Authority Act 1977. This will allow you to design and construct the public sewer using Anglian Waters' statutory powers in accordance with Section 159/168 of the Water Industry Act 1991.

If the outfall is to a watercourse, the applicant may be required to obtain consent to discharge via the appropriate body in addition to approval of the drainage strategy from LPA. The applicant will also need to secure a Deed of Grant of Easement, in Anglian Water's favour for the right to convey water into the watercourse in perpetuity from the riparian land owner, prior to a sewer requisition.

Sewer adoption

A new surface water sewer can be used as a mechanism to discharge surface water to a watercourse or as part of a SuDS scheme where appropriate. SuDS are classed as sewers; therefore, subject to them being designed in accordance with the DCG Sewerage Sector Guidance, the sewer can be put forward for adoption by Anglian Water under Section 104 of the Water Industry Act 1991.

A pre-design consultation service is available if you would like to further advice on the adoptable standards for SuDS features. Reference our PDSA service on our Development Services web page.

3 – Surface water drainage impact assessment

Where a development requires a connection to the surface water sewer network there is a requirement to undertake a DIA. The purpose of the DIA is to establish whether the effect on the receiving network either presents no significant additional risk or presents a risk that can be effectively and realistically mitigated. Anglian Water will raise an objection in planning to any development proposing a connection for surface water when the impact on the sewer network has not been evaluated.

3.1 – Regulation and governance

Surface water drainage management is primarily governed by the FWMA (2010) in which the LLFA have the sole responsibility to approve the onsite drainage strategy for all major developments as part of the planning permission. This approval extends to the red outline boundary of the development, with additional requirement for the drainage strategy not to cause flood risk elsewhere. It therefore means surface water drainage is often done on an incremental basis and not catchment wide down to outfall. The LLFA however, has to work in collaboration with other Risk Management Authorities (RMA) such as Water and Sewerage Companies, Environment Agency and Highway Authorities to manage flood risk within the wider catchment and river basins.

As such, unless the proposed drainage strategy is part of a wider strategic development, the abutting network to a new development might not have included the flows from the adjacent development, as this will have been approved separately by the LLFA.

Therefore, the developer is required to undertake such analysis as is necessary to devise a drainage strategy that poses no flooding risk to receiving networks within and beyond red line boundary of the development site.

3.2 – Developer's obligation

A DIA will be required to establish whether there is residual capacity in the receiving network to accommodate the additional flow and if not, the extent of network reinforcement required to accommodate the additional flow. As the developer is responsible for providing the appropriate surface water disposal infrastructure, work to determine the feasibility of a connection to a public sewer is considered to be part of the developer's evaluation of surface water disposal options to a consented outfall.

In order to progress a DIA, the developer will need to engage with Anglian Water to establish an agreed methodology and parameters for the assessment.

3.3 – DIA Process

The DIA process will commence once the developer has submitted a PPE. However; a DIA for a surface water connection could involve varying degrees of complexity depending on the size of development, the discharge rate required and the sensitivity of the proposed receiving network. The proportional change in the existing operation of the network will be a defining factor to establishing the appropriate methodology and complexity for the DIA.

Relatively small increases in predicted flow may be satisfactorily assessed using a desktop approach with some supporting manual calculations. More complex predicted impacts will require detailed analysis, up to and including hydraulic modelling.

While Anglian Water can undertake detailed analysis, our resources are limited and often committed on our investment programme. Therefore, we would encourage developers to utilise their own resources to undertake such detailed analysis that may be required, to minimise avoidable delay. Analysis completed by the developer can be submitted to Anglian Water for review and approval.

Site specific details will influence the selection of the assessment method, so a pre-application consultation with our DS Growth Planning team is recommended to ensure the correct information is submitted at PPE.

In general, the process would be expected to progress in the following steps:

- i. Pre-application to confirm relevant information
- ii. PPE to provide the developer with sewer network asset data, necessary to represent existing capacity
- iii. Developer incorporates sewer network data into the SW design hydraulic calculations
- iv. Developer submits hydraulic calculations to Anglian Water for checking and approval

If required....

- v. Developer submits outline proposals for mitigating predicted impact or network reinforcement
- vi. Anglian Water will consult with its operational teams and specialists on the viability of proposed mitigation measures
- vii. Developer funds network reinforcement under the appropriate section of WIA1991

3.3.1 – Sewer network asset data

Data will be provided from Anglian Water hydraulic models. It will be limited to pipe dimensions, levels, connectivity and pipe sub-catchment information. The data can be supplied in either CSV or shapefile format.

It is important to note that much of this data will not have been directly verified and may be either inherited from earlier data sets, inferred or derived by engineering judgement. The data will be supplied with notification to identify its provenance and the level of confidence that should be placed in it.

Please note that where existing data on an asset that is critical to the DIA is of low confidence, we may require a survey to confirm that data before accepting the results of any analysis based upon it.

Anglian Water will not supply results of our own analysis, as this will have been undertaken to different criteria to that required for new development.

3.3.2 – Hydraulic analysis techniques

The scale and complexity of the required drainage strategy will determine whether detailed hydraulic modelling is necessary for the DIA. Small developments, presenting a modest increase in additional flow may be adequately assessed using manual calculations.

Although hydraulic modelling will not be appropriate for all sites, for complex developments with multiple drainage strategy options, modelling provides the basis for iterative assessment. There are benefits in adopting the modelling approach when evolving a complex strategy, as it is both repeatable and auditable, while maintaining the assumptions relating to our existing network operation.

Anglian Water will provide design hyetographs to the Developer based on the existing sewerage catchment. These can be used to verify the design input in the models from the onsite drainage design. Anglian Water will provide a flood hydrograph to the connection point using the Revitalised Flood Hydrograph (ReFH2) method. ([See Fact sheet 3](#)).

We will use auditable GIS data to calculate the catchment area and the percentage impermeable area or PIMP (also known as the percentage urbanisation) to adjust the catchment characteristics and hence the outflow hydrograph. By using the aerial mosaic images, the PIMP of the existing catchment is adjusted and similar to designing a new network, a conservative approach may be adopted. In most cases this will not require extensive data and flow surveys. This is a sensible approach that will enable a quick way to model the impact on our existing network, with all the unknowns.

3.3.3 – Evaluating and approving analysis

Once the developer has completed the analysis it should be submitted to the DS Growth Planning team for evaluation and approval.

The submitted analysis will need to be accompanied by records of any survey work undertaken to verify asset data, along with flow survey details, if this was required as part of the agreed DIA methodology.

Review of the DIA is part of the PPE and is included within the PPE fee. The review findings and any recommendations will be provided to the developer in the form of an addendum to the PPE report.

Fact Sheet 1

Minimum information required to prove the existence of an existing connection to the public sewer

Any new connection of surface water from re-development areas to the existing public sewer has the potential to increase flood or pollution risk to the existing network and cause disturbance to our existing customers. As such any proposed connection to the existing network should be accompanied by evidence to prove the existing surface drainage arrangements, together with hydraulic assessment of the impact of the resultant flows for at least the 1:30 year return period +climate change. Referred to as a DIA, this should be able to confirm that there would be no detriment to the existing operation of the network and where appropriate, the DIA should demonstrate an improvement in the network operation.

In addition to the above, surface water drainage designs are in most cases narrowly focussed, only considering drainage design within the development red line boundary. Hence, unless the development is part of a wider catchment or strategic development, the receiving public sewer network will not have been designed to accommodate the additional flow. A DIA is therefore required in all circumstances to prove there is capacity for the new flows from currently undrained areas. No consideration will be made for unrestricted discharge as this will not be in line with the current design standards.

The following is the minimum information required to prove an existing connection to the public sewer network:

1. Full site survey of existing pipes/chambers including at the point of connection to the public sewer
2. Existing impermeable areas (roofs and hardstanding) and how these are drained into the pipes on site, i.e. gullies, channel drains and downpipes
3. CCTV survey proving 1 and 2, and the status of the existing onsite network

Provision of the above does not discount the need to follow our current surface water drainage policy. In all cases any approval to connect to the public sewers will be accompanied by a DIA and the intrinsic requirement not to increase flood risk to the existing network. The DIA takes account of the flows within the network for the upstream catchment to the connection point and the impact on the downstream network.

The following information will not be accepted as evidence to prove adherence to the surface water hierarchy:

- Use of generic desktop soil maps. Surface water hierarchy evidence should be based on site specific investigations
- Evidence of clay soils does not imply SuDS cannot be used. SuDS does not require infiltration throughout. Different solutions can be applied on any site which will not necessarily take up a lot of space but provide wider benefits.
- Evidence of made ground or contamination. SuDS can be shallow and when used cumulatively can provide wider benefits including retaining the first 5mm of rainfall within the site.

Return to [2.4 – Current design standards](#)

Fact Sheet 2

Minimum information required as evidence to request connection of non-public flows to the public sewer

Anglian Water like any other Water and Sewerage Companies (WaSC) are responsible for the adoption and maintenance of public sewers and lateral drains. Public sewers with respect to surface water drainage are defined as sewers that drain roof and appurtenant yards. Flows from areas such as footpaths and highways are classified as highway runoff and are the responsibility of highway authorities. Similarly, flows from greenfield areas or gardens is classified as land drainage is usually the responsibility of the landowner or Internal Drainage Board where one exists.

WaSC are identified as a Risk Management Authority (RMA) within the Flood and Water Management Act (2010). The FMWA sets out the duties and responsibilities of RMAs in managing flood risk within developments and wider catchments. Among their duties an RMA has to work collaboratively with other statutory bodies in managing surface water flood risk.

Thus Anglian Water works collaboratively with Highway Authorities and LLFA in managing surface water flooding. Some key areas involve highway drainage improvement works and surface water flood alleviation schemes by LLFA. In both cases, the flows from these areas are classified as non-public flows and Anglian Water are not duty-bound to accommodate such flows within the public surface water network. By law the surface water network is not meant to accommodate non-public flows.

However, in the wider duties of working collaboratively to manage surface water flood risk, Anglian Water does cooperate with other RMAs to facilitate and provide solutions that have wider benefit to the overall surface water management within catchments. It is therefore incumbent on us to set out the evidence required when such non-public flows require a connection to the public network.

The following is the minimum information required to prove the need and wider benefits resultant from a connection of non-public flows to existing public sewer network:

- Technical Drainage report outlining the current wider surface water flooding problem within the area or catchment.
- The Technical Drainage report should highlight the before and after scenarios for the following critical design events; 1-in-1, 1-in-5, 1-in-10, 1-in-30 year. 1-in-30 year is the critical design for stormwater network where no flooding should exist.
- The wider benefits of the proposals to the existing public sewer network, including social benefits to the wider community.
- For highway improvements; consideration of SuDS solutions will be key to accommodate any new highway drainage into the public network.

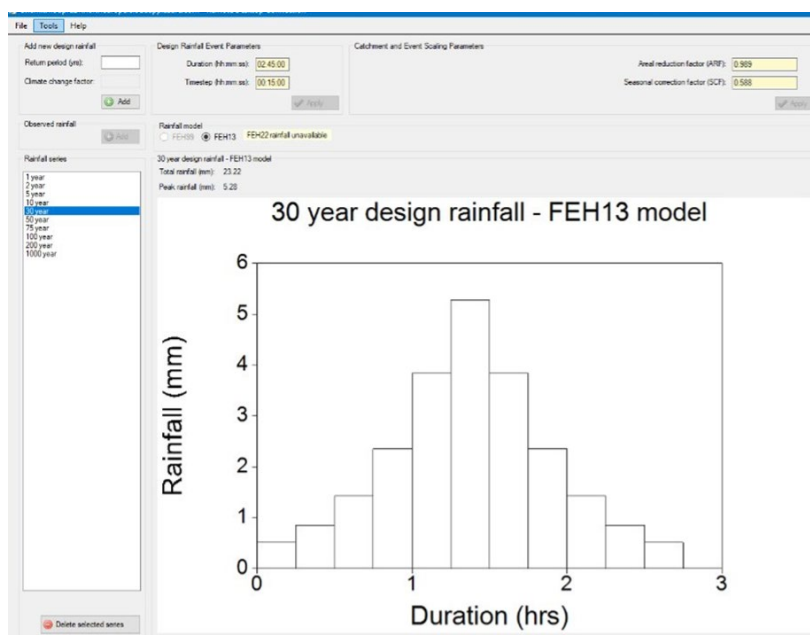
Return to [2.4 – Current design standards](#)

Fact Sheet 3

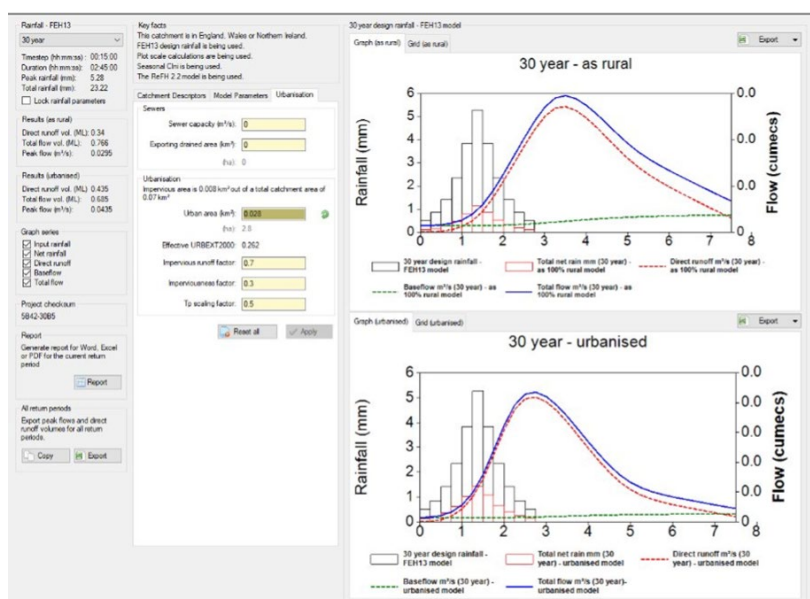
Further information on the use of ReFH2 for hydraulic analysis

The ReFH2 is a design rainfall-runoff methodology for producing rainfall hyetographs of different return periods with corresponding design flood or hydrograph. It is commonly used for small catchments of up to 0.5km², on small sites to inform pluvial flood risk and drainage design. The model can be used for both greenfield and brownfield sites.

ReFH2 uses catchment descriptors to describe the climate, drainage characteristics and soils for the site together with rainfall model data to produce a rainfall-runoff model. It can be used in ungauged catchments and since this is a design application, it can be used with confidence to model the impact of new flows to an existing catchment including the downstream network for different return periods associated with the new design.



ReFH2 Flood Hydrograph



It is important to note that there is peak flow as well as design rainfall intensity for each return period

Return to [3.3.2 – Hydraulic analysis techniques](#)



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