



DRAINAGE IMPACT & FLOOD RISK ASSESSMENT

for

Proposed residential development
On land at Worcester Close
Istead Rise
Kent DA13 9LB

on behalf of

Frankham Projects

Document Control Sheet

Project Title Proposed development of 8 residential apartments at Worcester Close, Istead Rise, Kent DA13 9LB

Document Title Drainage Impact & Flood Risk Assessment

Job No. T-2022-097

Revision 4.0

Status 4th Draft – Planning Application

Issue	Status	Author	Date	Check	Date	Authorised	Date
1.0	1 st Draft	S. Carr	06.09.22	P. Lavender	07.09.22		
2.0	2 nd Draft	S. Carr	23.12.22	P. Lavender	23.12.22		
3.0	3 rd Draft	S. Carr	18.01.23	P. Lavender	18.01.23		
4.0	4 th Draft	S. Carr	08.02.23	P. Lavender	08.02.23		

Distribution List

Version	Issued to	Purpose	Date
1.0	Client for comments / Planning	1 st Draft	07.09.22
2.0	Client for comments / Planning	LPA Issue	23.12.22
3.0	Client for comments / Planning	LPA Issue	18.01.23
4.0	Client for comments / Planning	LPA Issue	08.02.23

CONTENTS

1.0	Status.....	4
2.0	Introduction.....	5
	Background.....	5
	Site Location.....	5
	Existing Site Layout.....	6
	Proposed Development.....	9
3.0	Foul Water Drainage.....	11
	Proposed Discharge.....	11
	Consents.....	11
4.0	Surface Water Drainage.....	13
	Existing Discharge.....	13
	Sustainable Urban Drainage Systems.....	15
	Pollution Prevention Measures.....	17
	Proposed Discharge.....	19
	Consents.....	19
5.0	Flood Risk.....	20
	Requirement for Flood Risk Assessment.....	20
	Consultation.....	21
	National Planning Policy Framework Context.....	22
	Sequential Test.....	23
	Exception Test.....	23
6.0	Operation & Maintenance Statement.....	24
7.0	Conclusions.....	26
Appendix A	Drawings	
	Tridax Drawings	
	T-2022-097-01 – Proposed Drainage Strategy	
	Architects Drawings	
	S22/8981/01 – Topographical Survey	
	WCL-BPTW-S01-00-DR-A-1001-P02-S3 - Proposed G F Plan	
	WCL-BPTW-S01-01-DR-A-1002 P02-S3 - Proposed First Floor Plan	
Appendix B	Southern Water Infrastructure Charges	
Appendix C	Environment Agency Flood Map	

1.0 STATUS

- 1.1 This Report is prepared for the sole use of Frankham Projects and their agents in connection with the proposed forthcoming planning application. No responsibility can be assumed for the Report if used by others.
- 1.2 For the purposes of the Contracts (Rights of Third Parties) Act 1999, nothing in this Report shall confer on any third party any right to enforce or benefit from any terms of this Report.

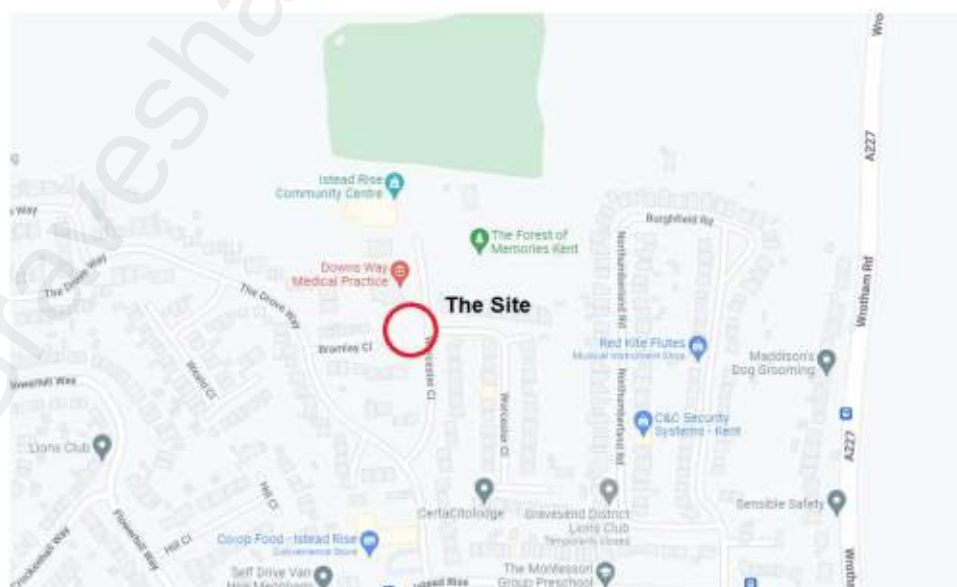
2.0 INTRODUCTION

Background

- 2.1 Tridax Ltd have been commissioned by Frankham Projects and requested to prepare a Drainage Impact and Flood Risk Assessment for the proposed development on land at Worcester Close, Istead Rise to provide 8 residential apartments.
- 2.2 This Report is in accordance with the Technical Guidance to the National Planning Policy Framework (NPPF), and Local Flood Risk Management Strategy ~ Guidance on Consultation.
- 2.3 The Report details the observations, calculates the probable flows that may be generated by the development and makes recommendations for the disposal of the foul and surface water and identifies any special mitigation measures required to reduce the risks of flooding.

Site Location

- 2.4 The development site is located within the Istead Rise village in the borough of Gravesham, Kent as indicated in Frame 1 below. The total site area is approximately 1,390m² (0.139ha) and is centred at Ordnance Survey reference (563647mE, 170235mN).



Frame 1 – Site Location Plan

Existing Site Layout

- 2.5 The development site is a 'Greenfield' triangular shape tree filled parcel of land fronting Worcester Close to the eastern boundary and adjacent Bramley Close to its western boundary. There is a pedestrian path adjacent the western boundary linking The Drove Way to the Downs Way Medical Practice which is located adjacent the sites northern boundary. The site is currently undeveloped with a number of mature trees located within its boundaries and finished as grass. The site has gradual falls from south to north and west to east with a small, raised area located adjacent the northern boundary. An existing location plan is extracted below in Frame 2 below together with a photograph looking into the site from Worcester Close in Frame 3.

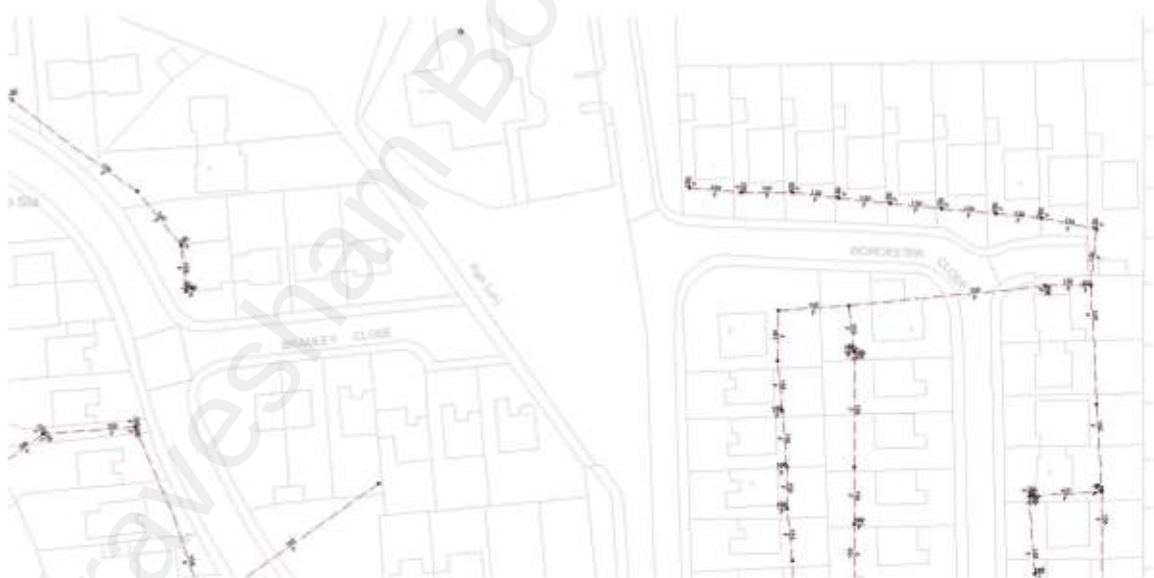


Frame 2 – Existing site Location (Extent of site outlined red)



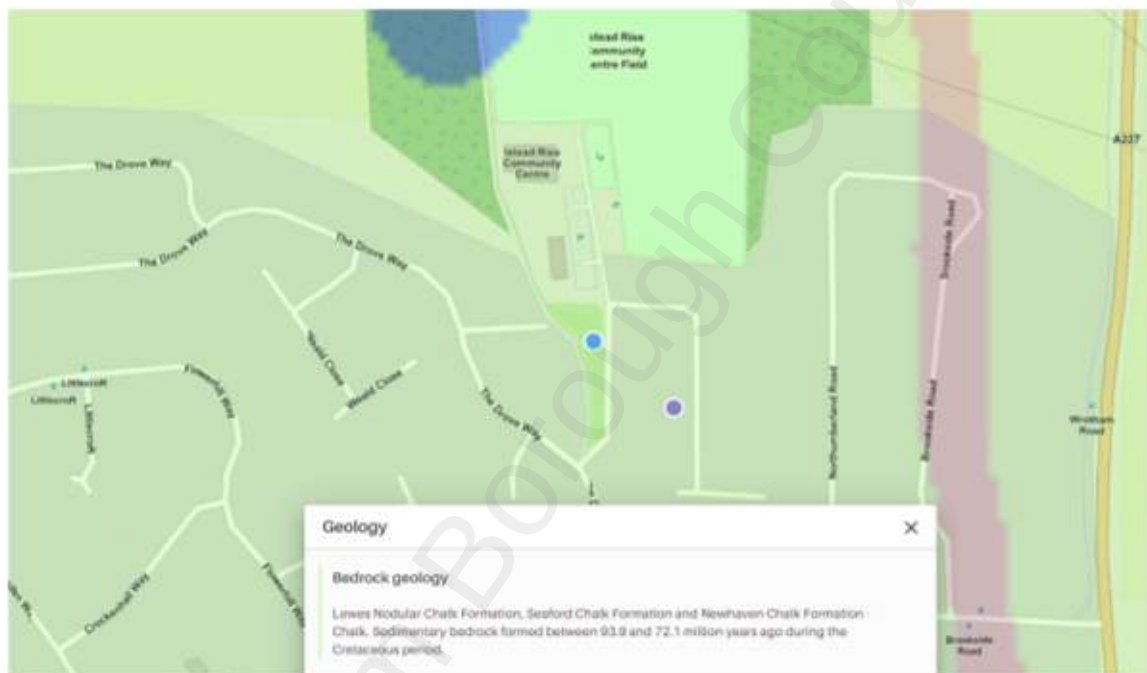
Frame 3 – View looking into the site from Worcester Close

- 2.6 Inspection of the public sewer records indicate that there are public foul sewers located in close proximity to this development site. There is a 100/150mmØ foul sewer shown located in the front gardens of 1-15 Worcester Close (adjacent the eastern boundary) with the nearest manhole 621D shown to have a cover level of 62.18m, invert level of 61.28m and depth of 0.9m. Inspection of Google Maps reveals that there is a manhole at the entrance to the surgery that may connect to the public system located to the front of 1-15 Worcester Close. There are also public foul sewers identified to the west of the site to the end of Bramley Close. Google Maps also shows that there is a manhole in the front garden drive of 5 Bramley Close that may connect to the public system identified at the end of Bramley Close. There are no surface water sewers identified on the public sewer records at this location. An extracted of the public sewer records is shown as Frame 4 below. A drainage investigation survey will need to be undertaken to confirm the current drainage arrangements and enable a full detailed drainage design to be undertaken.



Frame 4 – Extract of the Public Sewer Records

- 2.7 A study of the British Geological Survey Map indicates that the site is underlain by a bedrock of **Lewes Nodular Chalk Formation, Seaford Chalk Formation and Newhaven Chalk Formation – Chalk**. There are no superficial deposits recorded. Infiltration techniques may work at this location if penetrating the chalk strata. No intrusive site investigation has been undertaken on site. An extract of the Geological Map of Great Britain is shown in Frame 5 below.



Frame 5 – Extract of Geological Map of Britain

Proposed Development

- 2.8 The proposed development will introduce an 'L' shaped property on this site with a building footprint of approximately 350m². The property will be set over two floor levels and contain 8 homes for general needs consisting of a mixture of 1 and 2 bed units. Each floor level will provide two 1 bed homes together with two 2 bed homes. All new dwellings will have their own parking space which will be located within a carefully landscaped area. A further two parking spaces will be provided for visitor parking. Vehicular access will be via Worcester Close to the eastern boundary. The proposed development will introduce a total of approximately 505m² of impermeable surface finishes. The external parking areas and drive, totalling 355m², are proposed to have permeable finishes. Refer to the Architects drawings and the extracted details in Frames 6 -13 below.



Frame 6 – Ground Floor Site Plan



Frame 7 – Block Plan



Frame 8 – Proposed Aerial View

3.0 FOUL WATER DRAINAGE

Proposed Discharge

- 3.1 The proposed peak foul water discharge from the new development is calculated in accordance with BS EN 752: Part 4 as **3.38 litres/second**, as per the table below;

Peak Flow Rates
to BS EN 752: Part 4

kDU frequency factor (0.5 for dwellings)

	Sanitary Appliance	No of Features	DU	ΣDU
8 Units	WC's	8	1.20	9.6
	Washbasin	8	0.30	2.4
	Showers	8	0.30	2.4
	Kitchen Sink	8	0.80	6.4
	Washing Machine	8	1.50	12.0
	Dishwasher	8	0.80	6.4
	Bath	8	0.80	6.4
				45.6

$Q = 0.5kDU\sqrt{(\Sigma DU)}$
Q= 3.38l/s

- 3.2 The design flow from the proposed development calculated in accordance with 'Sewers for Adoption' 7th Edition is calculated as 0.37 litres/second as below;

$$6DWF = \frac{4,000 \text{ litres/dwelling/day} \times 8 \text{ Dwellings}}{24 \text{ hours}} = \mathbf{0.37l/s}$$

- 3.3 The proposed development will **increase** the **peak** foul flow being generated and discharged to the public foul sewer of **3.38 litres/**.

Consents

- 3.4 A Section 106 Water Industry Act application to connect this development to the public foul drainage system will be required to be made to and approved by Southern Water Services. It should be noted that there will be an 'Infrastructure Charge' applicable for first time connection to the public system. An indication of the method for calculating the infrastructure charge is contained in Appendix C.

- 3.5 Southern Water generally request that should an application receive planning approval then the following condition is attached to the consent: *'Construction of the development shall not commence until details of the proposed means of foul and surface water sewerage disposal have been submitted to, and approved in writing by, the Local Planning Authority (LPA) in consultation with Southern Water.'* A detailed foul and surface water drainage design will need to be submitted to the LPA for approval to discharge such a planning condition.
- 3.6 The detail drainage design will need to comply with the Building Regulations.

4.0 SURFACE WATER DRAINAGE

Existing Discharge

4.1 The requirement of NPPF is that the run-off from the development proposals replicates the natural drainage characteristics of the pre-developed site. In the case of 'Brownfield' developments, the drainage proposal will be measured against the existing performance of the site, although it is preferable for solutions to provide characteristics similar to 'Greenfield' development wherever possible.

4.2 The existing site characteristics are summarised as below.

Total Site Area	1,390m ² (0.139 ha)
Current Site Condition	Greenfield
Existing Impermeable Area	None
Proposed Impermeable Area	505m ² (0.05 ha)
Existing Surface Water Discharge Method	None
Proposed Surface Water Discharge Method	Infiltrate within the site

4.3 Greenfield Profile - Using the Institute of Hydrology Report 124 – Flood Estimation of Small Catchments (ICP SUDS) method, the mean annual flood flow (Q_{bar}) for small catchments is calculated as 0.1l/s.

ICP SUDS Input (FSR Method)

Return Period (Years): 5

Area (ha): 0.139

SAAR (mm): 651

Soil: 0.250

Growth Curve: (None)

Partly Urbanised Catchment (QBAR)

Urban: 0.000

Region: Region 7

Results

QBAR rural (l/s): 0.1

QBAR urban (l/s): 0.1

Return Period Flood

Region	QBAR (l/s)	Q (2yrs) (l/s)	Q (1 yrs) (l/s)	Q (30 yrs) (l/s)	Q (100 yrs) (l/s)
Region 6/Region 7	0.1	0.1	0.1	0.3	0.5

Frame 9 – Pre-Development Run-off Rates

- 4.4 The existing Greenfield run-off rate for the site is calculated as **0.72l/s/ha**. (0.1l/s / 0.139 ha). The pre-development run-off volume from a 1in100 year return period storm of 6hr duration is calculated as 5.425m³ as per the run-off calculator results as Frame 10 below. Post-development the run-off volume is reduced to 2.337m³ as per the run-off calculator results as Frame 11 below.

The screenshot shows the 'Rural Runoff Calculator' window. The 'Greenfield Volume' tab is active. The 'Greenfield Runoff Volume Input' section contains the following values: Rainfall Model (FSR Rainfall), Return Period (Years) (100), Storm Duration (mins) (360), Region (England and Wales), Area (ha) (0.139), Map (M5-60 (mm) 20,000), Ratio R (0.407), Areal Reduction Factor (1.00), SAAR (mm) (651), CWI (96.180), Urban (0.000), and SPR (10.000). The 'Results' section shows PR% (6.72) and Greenfield Runoff Volume (m³) (5.425). A 'Calculate' button is visible at the bottom right of the input section.

Frame 10 – Pre-Development Run-off Calculator Results

The screenshot shows the 'Rural Runoff Calculator' window with the same settings as Frame 10, but with updated results. The 'Area (ha)' is now 0.056, and the 'Greenfield Runoff Volume (m³)' is 2.337. All other input values and the PR% (6.72) remain the same. The 'Calculate' button is still present.

Frame 11 – Post-Development Run-off Calculator Results

Groundwater Protection

- 4.7 To protect the groundwater resources that contribute to public supply abstractions, three levels of Source Protection Zones (SPZ) are delineated around abstraction points. Each of these zones has different requirements for the quality of the water that can be discharged to it and consequently the type of development from which run-off may infiltrate. Below, as frame 12, the table shows the development types that are permissible in each zone and the techniques required to control pollution before it is discharged, based on the recommendations from the CIRIA Report 156 Infiltration Techniques.

Impermeable Area	Zone I (Inner Zone)	Zone II (Outer Zone)	Zone III (Total Catchment)
Roof Drainage	No objection (provided for sole use of roof drainage)	No objection	No objection
Public/Amenity	Not acceptable	Acceptable	Acceptable
Large Car Parks	Not acceptable	Acceptable (with interceptor)	Acceptable (with interceptor)
Lorry Parks	Not acceptable	Presumption Against	Acceptable (with interceptor)
Garage Forecourts	Not acceptable	Presumption Against	Acceptable (with interceptor)
Major Roads	Not acceptable	Presumption Against. Acceptable only in exceptional circumstances	Acceptable only if investigation favourable and with adequate precautions
Industrial Sites	No objection	Presumption Against	Acceptable only if investigation favourable and with adequate precautions

Frame 12 - Recommended discharges for Source Protection Zones

- 4.8 Inspection of the Department for Environment Food & Rural Affairs (DEFRA) Data Services Platform Groundwater Protection Zone map indicates that the site is located **inside** a Source Protection Zone 2 (Outer Protection Zone). Surface water runoff will be designed to discharge via infiltration within the site.

Sustainable Urban Drainage Systems (SUDS)

- 4.9 If possible, appropriately designed SUDS should be utilised so that ideally they not only attenuate run-off but also provide a level of improvement to the quality of the water passed on to watercourses or into the groundwater. This is known as source control and is a fundamental part of the SUDS philosophy. The drainage design for this project will seek to provide a suitable SUD's solution.

4.10 A range of typical SUDS components that can be used following the hierarchy of sustainability, as established by the Environment Agency and included in the Environment Agency publication: *SUDS – A Practical Guide*, are listed below in Frame 13 with the relative benefits of each feature and the appropriateness for the subject site.

SUDS Feature	Environmental Benefit	Water Quality Improved	Suitability for low permeability Soil	Ground water Recharge	Site specific restrictions	Appropriate for the Site?
Wetlands	✓	✓	x	x	Limited Site Area	No
Retention Ponds	✓	✓	✓	x	Limited Site Area	No
Soakaways	x	✓	x	✓	Infiltration rate to be confirmed	Yes
Swales	✓	✓	✓	✓	Limited Site Area	No
Underground Storage	x	x	✓	x	None	Yes
Permeable Paving	x	✓	x	✓	Infiltration rate to be confirmed	Yes
Green Roofs	✓	✓	✓	x	steep roofs	No
Water Butts	✓	x	✓	x	None	Yes
Rainwater Harvesting	x	x	✓	x	Limited catchment areas	No

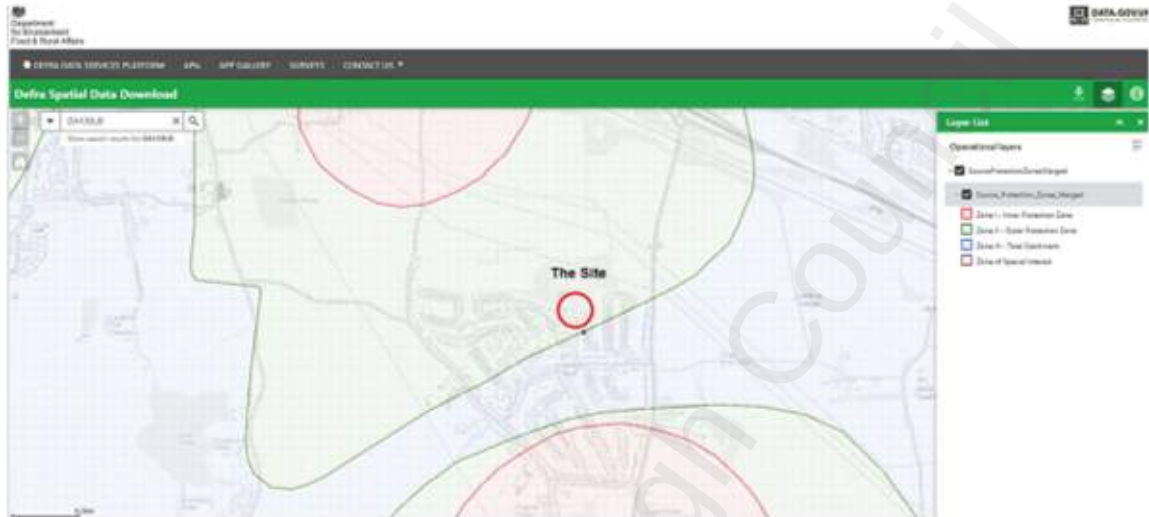
Frame 13 – Typical SUS's Components

4.11 From the table above it can be seen that there are SUDS elements that are potentially suitable for this site. The highest-ranking sustainable solution for this site could be to install soakaways. In reaching this conclusion the following was taken into account;

- The Geological map indicates that the site is underlain with Chalk and therefore infiltration should be achievable.
- There are no public combined or surface water sewers at this location.
- There is limited space available within the site to provide higher ranking SUD's features.

Pollution Protection

- 4.12 Inspection of the Groundwater Protection Zone map indicates that the site is located in a Source Protection Zone 2 (Outer Protection Zone). Refer to Frame 14 below.



Frame 14- EA Source Protection Zones

- 4.13 Reference to Table 4.3 of Chapter 4 of the Ciria's SUDS design manual (Frame 15 below) indicates that a simple index approach for the site would be appropriate with a Very Low Pollution Hazard Level. Reference to Defra Spatial Data indicates the site to be located inside of a Source Protection Zone 2. It is considered that infiltration techniques will be suitable at this location, but this is subject to confirmation via a ground investigation with in-situ infiltration testing.

TABLE 4.3 Minimum water quality management requirements for discharges to receiving surface waters and groundwater

Land use	Pollution hazard level	Requirements for discharge to surface waters, including coasts and estuaries ²	Requirements for discharge to groundwater
Residential roofs	Very low	Removal of gross solids and sediments only	
Individual property driveways, roofs (excluding residential), residential car parks, low traffic roads (eg cul de sacs, home zones, general access roads), non-residential car parking with infrequent change (eg schools, offices)	Low	Simple index approach ² <i>Note: extra measures may be required for discharges to protected resources¹</i>	
Commercial yard and delivery areas, non-residential car parking with frequent change (eg hospitals, retail), all roads except low traffic roads and trunk roads/motorways	Medium	Simple index approach ² <i>Note: extra measures may be required for discharges to protected resources¹</i>	Simple index approach ² <i>Note: extra measures may be required for discharges to protected resources¹</i> In England and Wales, Risk Screening ⁴ must be undertaken first to determine whether consultation with the environmental regulator is required. In Northern Ireland, the need for risk screening should be agreed with the environmental regulator.
Trunk roads and motorways	High	Follow the guidance and risk assessment process set out in HA (2009)	
Sites with heavy pollution (eg haulage yards, lorry parks, highly frequented lorry approaches to industrial estates, waste sites), sites where chemicals and fuels (other than domestic fuel oil) are to be delivered, handled, stored, used or manufactured, industrial sites	High	Discharges may require an environmental licence or permit ² . Obtain pre-permitting advice from the environmental regulator. Risk assessment is likely to be required ⁵ .	

Notes

The minimum water quality management requirements for discharges to receiving surface waters and groundwater are presented here. (For Northern Ireland, this guidance should be considered as interim until such time as Northern Ireland publishes its own legislation/policy/guidance.)

- These are not required in Scotland and Northern Ireland. For England and Wales, see Step 3 of the simple index approach (Section 26.7.1).
Protected surface water resources will include those designated for drinking water abstraction or for other environmental protection reasons. Protected groundwater resources are represented by SPZ1s in England and Wales.
- In Scotland, the Water Environment (Controlled Activities) (Scotland) Regulations (CAR) 2011 General Binding Rules, Rule 10 (d) (iv) effectively provides an exemption from requiring SuDS for coastal discharges. However, control of any contaminants likely to be present in surface water runoff is still required, but can be delivered using alternative methods such as proprietary treatment products. As the term 'SuDS' in this manual includes proprietary treatment products, this exemption is not valid in this context.
- The application of the simple index approach should follow the approach outlined in Section 26.7.1 (or equivalent approved).
- Risk screening is an assessment to identify high risk scenarios where the Environment Agency or Natural Resources Wales (NRW) would wish to be consulted regarding infiltration of water from surface runoff in order to agree the proposed design approach. The risk screening method is provided in Section 26.7.2.
- The risk assessment should determine the appropriate design approach to mitigate risk to acceptable levels following the guidance outlined in Section 26.7.3. This assessment should be approved by the environmental regulator.

Frame 15 – Ciria Sud's Manual Table 4.3

Proposed Discharge

- 4.14 The existing site is 'Greenfield' with totally permeable surface finishes. The proposed development will introduce approximately 740m² of impermeable surface finishes that will generate surface water runoff. A suitably designed surface water drainage system (SUD's) will be designed to receive the flow generated from the roof of the new property and then together with the runoff from the external impermeable areas discharge into suitably designed soakaways, subject to a satisfactory Ground Investigation result. No surface water is to discharge onto the public highway.
- 4.15 The underlying geology of the site is likely to be a bedrock of Lewes Nodular Chalk Formation, Seaford Chalk Formation and Newhaven Chalk Formation – Chalk, which potentially could have reasonable infiltration. A ground investigation will be required to confirm that infiltration will be appropriate.
- 4.16 At the detailed design stage the drainage system will be modelled using FeH rainfall data in an appropriate modelling or simulation software. Where FeH data is not available, 26.5mm should be manually input for the M5-60 value, as per the requirements of their latest Drainage and Planning Policy Statement (June 2017). The FSR dataset should not be used.

Consents

- 4.17 A detailed surface water drainage design will need to be submitted to the LPA for approval to discharge any relevant planning condition prior to commencing work on site. The design and proposed future maintenance will need to meet the requirements of the Flood and Water Management Act. The Lead Local Flood Authority will be consulted as part of the planning process for approval of the SUDs drainage design. In accordance with the planning process the LPA will consult with the Environment Agency. The detailed drainage design will need to comply with the Building Regulations.

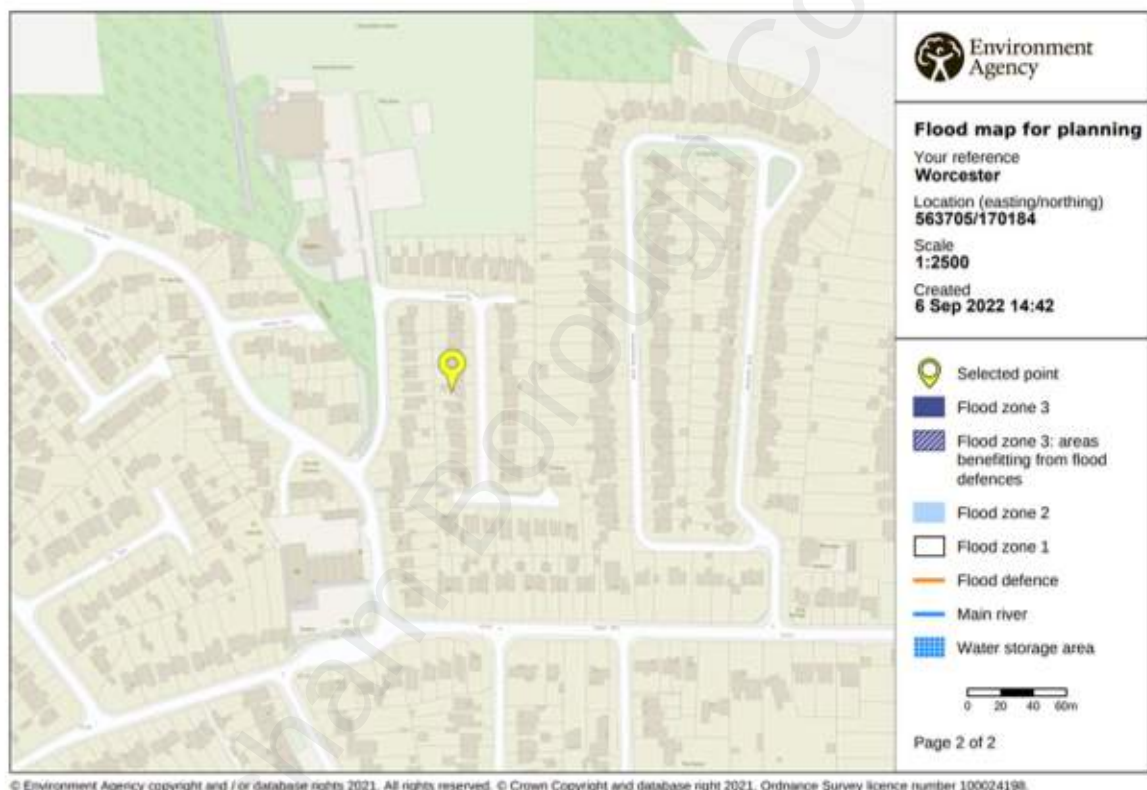
5.0 FLOOD RISK

Requirement for Flood Risk Assessment

- 5.1 Flood risk is primarily regulated through planning policy. Key requirements with respect to flooding are outlined in the National Planning Policy Framework (NPPF) which was published in March 2012, revised in July 2018 and February 2019. The current update was issued in July 2021.
- 5.2 The NPPF requires that an FRA should be submitted with planning applications for all sites over one ha in area and all smaller sites within Flood Zones 2 and 3 to determine the risks of flooding at a development site (from all sources including rivers, the sea, sewers and groundwater). An FRA is therefore an essential element in the overall acceptability of the proposed development in planning terms.
- 5.3 Guidance on the content of FRAs is contained in Technical Guidance to the National Planning Policy Framework which has been used to inform the scope and content of this FRA.
- 5.4 The primary resource for reviewing fluvial and tidal flood risks is via the Environment Agency (EA) indicative floodplain maps. These classify risks as follows:
- Flood Zone 1 (Low Probability): annual probability of flooding less than 1 in 1,000 (<0.1%);
 - Flood Zone 2 (Medium Probability): annual probability of flooding more than 1 in 1,000 (0.1%) but less than 1 in 100 (1%) for fluvial flooding or 1 in 200 (0.5%) for tidal flooding; and
 - Flood Zone 3 (High Probability): annual probability of flooding more than 1 in 100 (1%) for fluvial flooding or 1 in 200 (0.5%) for tidal flooding.

Consultation

- 5.5 Inspection of the Environment Agency Website indicates the site to lie within a Flood Zone 1 (Low Probability), and as the site is less than one hectare in area, an FRA will not be required by the Planning Authority. An extract of the Environment Agency Flood Map is shown in Frame 16 below.
- 5.6 No Consultation with the Environment Agency has been carried apart from an inspection of their website.



Frame 16 – Extract of Environment Agency Flood Maps

NATIONAL PLANNING POLICY FRAMEWORK CONTEXT

- 5.7 Inspection of the Environment Agency Website identifies the proposed site to be within the extent of the Flood Zone 1 (Low Probability). This zone comprises land assessed as having a less than 1in1000 annual probability of river or sea flooding (<0.1%). All uses of land are appropriate within this zone.
- 5.8 Reference to Frame 17 below (Table 1 of the Technical Guidance to NPPF), confirms that all uses of land are appropriate in this zone.

Zone 1 - low probability Definition This zone comprises land assessed as having a less than 1 in 1,000 annual probability of river or sea flooding (<0.1%). Appropriate uses All uses of land are appropriate in this zone. Flood risk assessment requirements For development proposals on sites comprising one hectare or above the vulnerability to flooding from other sources as well as from river and sea flooding, and the potential to increase flood risk elsewhere through the addition of hard surfaces and the effect of the new development on surface water run-off, should be incorporated in a flood risk assessment. This need only be brief unless the factors above or other local considerations require particular attention. Policy aims In this zone, developers and local authorities should seek opportunities to reduce the overall level of flood risk in the area and beyond through the layout and form of the development, and the appropriate application of sustainable drainage systems².

Frame 17- Extract of NPPF Table 1 – Flood Zones

- 5.9 Developers and local authorities should seek opportunities to reduce the overall level of flood risk in the area through the layout and form of the development and the appropriate application of sustainable drainage systems.

Sequential Test

5.10 Local Planning Authorities (LPA) are encouraged to take a risk-based approach to proposals for developments in or affecting flood risk areas through the application of the Sequential Test and the objectives of this test are to steer new development away from high-risk areas towards those at lower risk of flooding. However, in some areas where developable land is in short supply there can be an overriding need to build in areas that are at risk of flooding. In such circumstances, the application of the Sequential Test is used to ensure that the lower risk sites are developed before the higher risk ones. The Sequential Test can be considered adequately demonstrated if both of the following criteria are met:

- The Sequential Test has already been carried out for the site (for the same development type) at the strategic level (Local Plan)
- The development vulnerability is appropriate to the Flood Zone

5.11 **The proposed development vulnerability is appropriate to the Flood Zone and therefore passed.**

Exception Test

5.12 Reference to Frame 18 below (Table 3 of the Technical Guidance to NPPF), an Exception Test is **not** required.

Flood risk vulnerability classification (see table 2)		Essential infrastructure	Water compatible	Highly vulnerable	More vulnerable	Less vulnerable
Flood zone (see table 1)	Zone 1	✓	✓	✓	✓	✓
	Zone 2	✓	✓	Exception Test required	✓	✓
	Zone 3a	Exception Test required	✓	x	Exception Test required	✓
	Zone 3b functional floodplain	Exception Test required	✓	x	x	x

Frame 18- Extract of NPPF Table 3 – Flood Zone compatibility

6.0 OPERATION & MAINTENANCE STATEMENT

- 6.1 The surface water system as indicated on the design strategy drawing is a private Sustainable Urban Drainage System (SUDS) and the owner of the properties (Management Company) will be responsible for the inspection and maintenance for the system which is to be set up on completion of the development.
- 6.2 It is recommended that all manholes, chambers, catch pits, soakaways, and drainage channels are inspected as part of the general planned inspection and maintenance regime for the development, but certainly at no greater intervals than once a year.
- 6.3 Annual Inspection to include.
- Lift manhole covers to the catch pits and check general condition
 - Inspection chambers for paved areas are constructed as catchpits with a 450mm sump for silt collection below the standing water which will need to be dipped and empty as required by licensed carrier.
 - Review quantities of silt removed and consider whether inspections should be increased or possibly reduced to every two years.
 - Carry out works as identified from inspection.
- 6.4 Five-year Inspection / Five Year Anniversary
- Carry out jetting to all pipe work to ensure no blockages and free flow of water to the catch pits and to check overall integrity and remove any silt.
 - Remove all silt and water from the catchpits with a vacuum sucker and dispose off site by a licensed carrier.
 - Carry out a CCTV survey of the drainage system to check overall structural integrity and condition of the membrane.
 - Carry out works as identified from inspection.
- 6.5 Implementation Programme
- The developer will be responsible for the first year's maintenance and will arrange for a joint handover inspection between the Developer and the maintenance contractor to be appointed by the Management Company with a copy of this report

provided in order for the Maintenance Contractor to become familiar with and understand the requirements.

Gravesham Borough Council

7.0 CONCLUSION

- 7.1 Tridax Limited have been commissioned by Frankham Projects and requested to prepare a Drainage Impact Assessment for the proposed development on land at Worcester Close, Istead Rise to provide 8 residential apartments.
- 7.2 The development site is currently a 'Greenfield' (100% permeable surfaces) triangular shape parcel of land fronting Worcester Close to the eastern boundary and adjacent Bramley Close to its western boundary. There is a public bridleway adjacent the western boundary. The site is currently undeveloped with a number of mature trees located within its boundaries and finished as grass. The site has gradual falls from south to north and west to east with a small, raised area located adjacent the northern boundary.
- 7.3 The Geological map of Great Britain indicates that the site will be underlain by a bedrock of with Lewes Nodular Chalk Formation, Seaford Chalk Formation and Newhaven Chalk Formation – Chalk. There are no superficial deposits recorded. Infiltration techniques may work at this location if penetrating the chalk strata. A ground investigation will need to be undertaken to confirm the geology and the ground infiltration rate.
- 7.4 The site is identified to be within the extent of the Flood Zone 1 (Low Probability). The development is classified in Table 2 of NPPF as being 'more vulnerable' and is appropriate within this flood zone.
- 7.5 In accordance with the requirements of the GOV.UK Guidance – Flood risk and coastal change, we conclude that the site can be adequately drained and is not at risk from flooding or increases the risk of flooding elsewhere.
- 7.6 The proposed development will increase the **peak flow rate** of foul drainage to the public foul sewer by 3.38l/s. Approval will be required from Southern Water via a S106 application to connect to the public foul sewer. It should be noted that Southern Water will make an infra-structure charge upon connection and this sum includes for any necessary local network reinforcement to the public sewers to provide capacity for new development related growth.

- 7.7 This is a Greenfield development site where surface water runoff currently discharges off site to the adjacent public highway. There will be an opportunity to introduce a suitably designed SUD's solution for surface water runoff at this development site.
- 7.8 A detailed foul and surface water disposal design will need to be prepared and submitted to the LPA for discharge of any reserved matter should planning approval be granted.
- 7.9 In accordance with the requirements of the Technical Guidance to the National Planning Policy Framework (NPPF), we conclude that the site can be adequately drained, and is sustainable in terms of flood risk and that the proposals do not increase the risk to the neighbouring properties.

APPENDIX A

DRAWINGS

Tridax Drawing

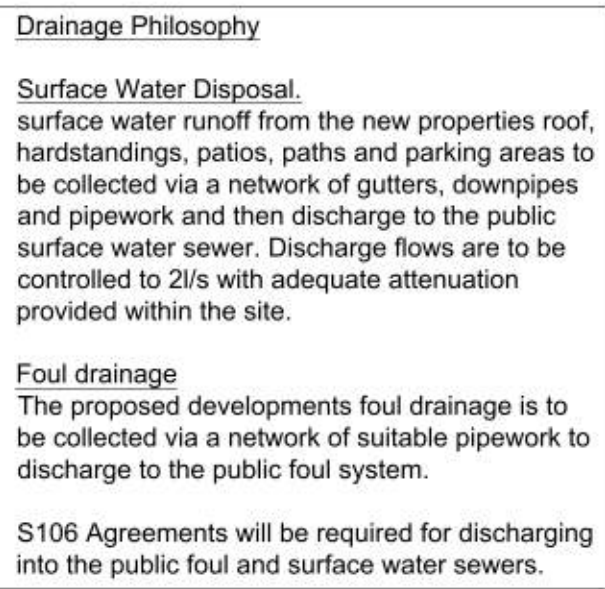
T-2022-097-01B - Proposed Drainage Strategy

Architectural Drawings

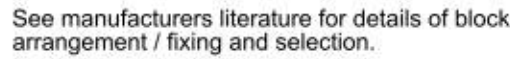
S22/8981/01 – Topographical Survey

WCL-BPTW-S01-00-DR-A-1001-P02-S3 - Proposed Ground Floor Plan

WCL-BPTW-S01-01-DR-A-1002 P02-S3 - Proposed First Floor Plan



Scale 1:25



As strength varies between block models, the contractor is to consult the manufacturer to ascertain the correct block selection for each installation.

NOTE: Minimum cover depths. (Guidance Only)

- Heavy vehicle loading (i.e. large vehicles)
Cover to be not less than 1200mm.
- Light vehicle loading (i.e. parked cars)
Cover to be not less than 800mm.
- Non trafficked areas:
Cover to be not less than 600mm

Aquacell Installation Notes: (Contractor to consult manufacturers literature for full details)

1. Excavate the trench to the required depth ensuring that the plan area is slightly greater than that of the AquaCell units.
2. Lay 100mm bed of coarse sand or non angular granular material, level and compact.
3. Lay the geotextile membrane over the base and up the sides of the trench.
4. Lay the AquaCell units parallel with each other. In multiple layer applications, wherever possible, continuous vertical joints should be avoided. AquaCell units can be laid in a 'brick bonded' formation (i.e. to overlap the joints below) For single layer applications use AquaCell Clips and for multi layers use AquaCell Clips and AquaCell Shear Connectors (vertical rods).
5. Fix the pipe adaptors to the AquaCell units as required to suit the incoming pipework.
6. In order to prevent silt from entering the tank, clogging the inlet pipework and reducing the storage capacity, it is recommended that a silt trap / catchpit is installed upstream of the tank inlet.
7. Wrap and overlap the geotextile covering the entire AquaCell structure, minimum lap to be in the order of 300mm.
8. Lay 100mm of coarse sand or non angular granular material between the trench walls and the AquaCell structure and compact being careful not to damage either the blocks or the geotextile membrane.
9. Lay 100mm of coarse sand or non angular granular material over the geotextile and compact.
10. Backfill tank with suitable clean material, free of organic matter and debris.

scale 1:25

- Maximum depth of cover level to soffit of pipe 3.0m
- For individual access cover grades see schedules.



Clause E6.6 - Pipes and Joints Adjacent to Structures

- Where rigid pipes are used, a flexible joint (rocker pipe) shall be provided as close as is feasible to the outside face of any structure into which a pipe is built, within 150mm for pipe diameters less than 300mm. The design of the joints shall be compatible with any subsequent movement.
- The recommended length of the next pipe (rocker pipe) away from the structure shall be as shown in Table E.12.

Table E.12 Rocker Pipes

Text taken from Figure B.14

1. Stub pipes into structures shall be of rigid material.
2. No incoming branch is to be less than 90° from the outgoing direction of flow, all pipes entering the bottom of the manhole are to have level soffits.

Clause E6.7 - Setting Manhole Covers and Frames

1. Manhole frames shall be set to level, bedded and haunched externally over the base and sides of the frame in mortar, in accordance with the manufacturers instructions.
2. Frames for manhole covers shall be bedded in a polyester resin based mortar in all situations where covers are sited in NRSWA Road Categories I,II or III (i.e. all except residential cul-de-sacs).

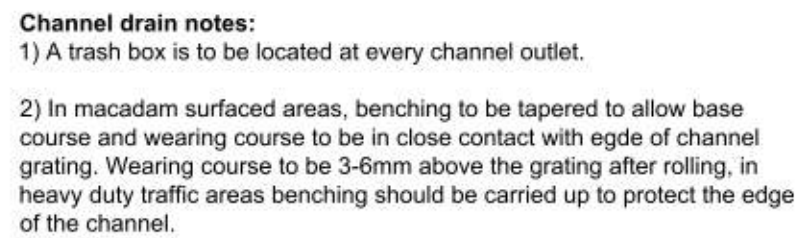
Table E.6

NRSAWA road category	Description	Minimum frame depth (mm)
I	Trunk roads and dual carriageways	150
II	All other A roads	150
III	Bus services	150
IV	All other roads except residential cul-de-sacs	150
-	Residential cul-de-sacs	100

Clause: E2.32 Manhole Covers and Frames

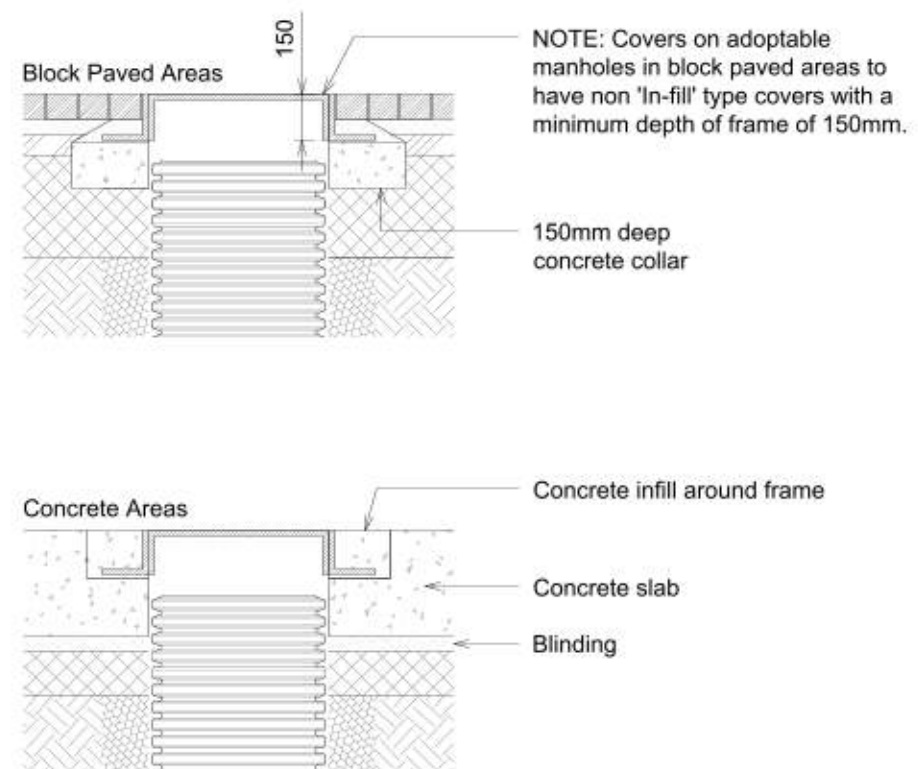
1. Manhole covers and frames shall comply with the relevant provisions of BS EN124, BS5793 and Highways Agency Guidance Document HA 104/09. They shall be of a non-rocking design which does not rely on the use of cushion inserts.
2. Manhole covers on foul-only sewers shall be of low leakage types in order to prevent excessive surface water ingress.
3. As a minimum, Class D400 covers shall be used in carriageways of roads (including pedestrian streets), hard shoulders and parking areas used by all types of road vehicles.
4. Minimum frame depths for NRSWA road categories I to IV shall be as Table E.6.

scale 1:10



scale 1:25

- All covers to comply with BS EN 124 and BS7903, see Clause E2.32.
All covers to have mortar bedding and haunching to cover and frame
to Clause E6.7



DRAINAGE NOTES

- The location of any existing drains and sewers are to be accurately located and reported prior to any work commencing on site.
- All materials, workmanship and construction to be in accordance with the requirements of 'Sewers for Adoption - 7th Edition' and published addendum and corrigendum.
- Channel drains shown are only to collect surface water run-off from hard paved areas and door thresholds and are not intended to collect groundwater or run-off from gardens and landscaped areas.
- All abandoned pipework to be completely removed or grout filled unless stated otherwise.

NOTES

- The Contractor should check all dimensions on site.
- It is the Contractors responsibility to ensure compliance with building regulations and current codes of practice.
- Drawings cannot take into account any drains or underground works not locatable by visual survey of the site.
- Commencement of any building works prior to full building regulation approval is entirely at the clients risk.

[illegible]

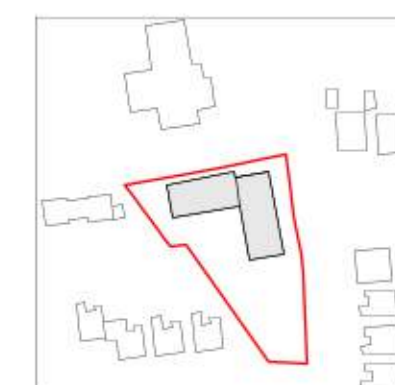
Copyright and other intellectual property rights in this document and all related documents, drawings, etc., including calculations, is invested in Tridax Ltd and cannot be used or reproduced for any other purpose than that for which they been created without the express permission in writing by Tridax Ltd. In first instance ring 01304 820777.



Note:
Existing context based on Ordnance Survey data, Topographical Survey and Arboriculture Survey (by others).
Landscape design is illustrative of design intent only.
Size, location and orientation of ASHP (including acoustic enclosure) and PV Panels subject to detailed design.

Key

- 1B2P
- 2B3P
- 2B4P
- Proposed Tree
- Retained Tree



Key Plan

Notes:
Do not scale. All dimensions are in millimetres unless otherwise stated. This drawing should be read in conjunction with all relevant project information and contract documentation. All dimensions to be checked prior to fabrication and/or commencement of works. All works to comply with all relevant legal standards, building regulations and warranty provider requirements. Report any discrepancies, if in doubt ask.

Rev	Status	Date	Description	Dwn	Chkd
P01	S3	15.12.22	RIBA Stage 3 Design Freeze / Draft Planning Issue	HLB	AA

Client Name: Gravesham Borough Council			
Project Name: 20-102 Worcester Close			
Drawing Name: Ground Floor Plan			
Drawing Number: WCL-BPTW-S01-00-DR-A-1001		Rev: P01	Status: S3
Project No: 20-102	RIBA Stage: 3	Drawn By: HLB	Scale: 1:100 @ A2

PRELIMINARY - FOR COMMENT

40 Norman Road,
Greenwich, London
SE10 9QX
t 020 8293 5175
bptw.co.uk



1:100m





Note:
Existing context based on Ordnance Survey data, Topographical Survey and Arboriculture Survey (by others).
Landscape design is illustrative of design intent only.
Size, location and orientation of ASHP (including acoustic enclosure) and PV Panels subject to detailed design.

Key

- Proposed Tree
- Retained Tree

Notes:
Do not scale. All dimensions are in millimetres unless otherwise stated. This drawing should be read in conjunction with all relevant project information and contract documentation. All dimensions to be checked prior to fabrication and or commencement of works. All works to comply with all relevant legal standards, building regulations and warranty provider requirements. Report any discrepancies, if in doubt ask.

Rev	Status	Date	Description	Rev	Chkd
P01	S3	09.11.12	Preliminary Issue		HLB
P02	S3	15.12.22	RIBA Stage 3 Design Freeze / Draft Planning Issue		HLB AA

Client Name:
Gravesham Borough Council

Project Name:
20-102 Worcester Close

Drawing Name:
Proposed Block Plan

Drawing Number:
WCL-BPTW-S01-ZZ-DR-A-0112

Rev:
P02

Status:
S3

Project No:
20-102

RIBA Stage:
3

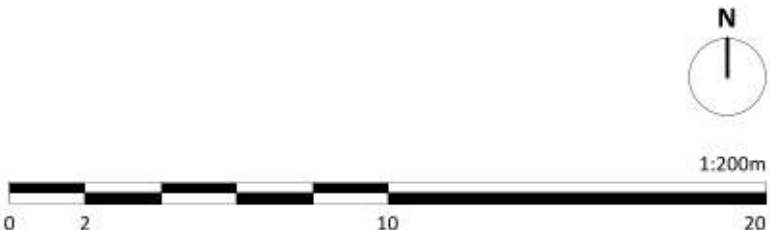
Drawn By:
HLB

Scale:
1:200 @ A1

PRELIMINARY - FOR COMMENT

40 Norman Road,
Greenwich, London
SE10 9CX
t 020 8293 5175
bptw.co.uk

DP
TW





Tree Schedule			
1	Fruit	multibole	h=5
2	Fruit	multibole	h=5
3	Fruit	multibole	h=5
4	Fruit	multibole	h=5
5	Fruit	multibole	h=5
6	Oak	d=0.4	h=12
7	Ash	d=0.4	h=12
8	Ash	d=0.4	h=12
9	Silver birch	d=0.3	h=10
10	Silver birch	d=0.25	h=10
11	Unknown	d=0.2	h=5
12	Maple	multibole	h=12
13	Ash	d=0.35	h=12
14	Silver birch	d=0.25	h=10
15	Silver birch	d=0.2	h=10
16	Maple	d=0.4	h=12
17	Maple	d=0.4	h=12
18	Maple	d=0.4	h=12
19	Maple	d=0.2	h=4
20	Maple	d=0.4	h=12

Survey control			
Stn	Easting	Northing	Height
H1	563964.537	170214.801	63.174
H2	563962.314	170153.761	64.682
H3	563933.114	170138.664	65.314
H4	563951.826	170186.741	64.435
H5	563953.166	170205.653	63.987
H6	563943.678	170224.325	64.039
H7	563927.148	170230.335	64.194
H8	563932.448	170243.903	64.833
H9	563958.804	170259.358	62.606

© Copyright 2022 Hook Survey Limited
This drawing is the property of Hook Survey Limited and shall remain the property of Hook Survey Limited. It shall not be used for any other purpose without the written consent of Hook Survey Limited. It shall not be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or by any information storage and retrieval system, without the prior written permission of Hook Survey Limited.

Topographical Survey Legend

Hedge		Telephone line	
Undergrowth		Power line	
Tree		Banking	
Bush		Contour line	
Building		Survey Station	
Glass Building		Gate	
Open Building		Level	

Ordnance Survey Benchmark

Foul Drainage

Storm Drainage

Abbreviations

Animal Set	Set
Air Valve	AV
Barometer	BS
Bus Stop	BS
Cover Level	CL
Earth Road	ER
Electricity Pole	EP
Fire Hydrant	FH
Inspection Cover	IC
Invert Level	IL
Lamp Post	LP
Manhole	MH
Marker	MC
Name Plate	NP
Power Pole	PP
Rain water Pipe	RWP
Road Sign	RS
Roosting Site	RS
Reinforced Steel Joint	RSJ
Soil Vent Pipe	SVP
Stop Valve	SV
Survey Station	STN
Telegraph Pole	TP
Tree Stump	TS
Trial Hole	TH
Unable To Lift	UTL
Vent Pipe	VP
Water Valve	WV

Metres

Scale

Notes

All trees are identified where possible. Species, girth, height and girth are indicative only.

Drainage has been surveyed where found and traced where possible.

Eaves and ridge heights of surrounding buildings have been surveyed where possible.

HOOK SURVEY
Land & Building Surveyors
www.hooksurvey.com

Project:
Land at Worcester Close
Istead Rise, Kent DA13 9LB

Client:
Frankham Projects Limited

Drawing title:
Topographical Survey

Job No.: 522/8963	Drawn By: 522/8963/01	Revision: -
Scale: 1:200	Date: August 2022	Drawn By: W.A.

Grid & Tenth related to:
Ordnance Survey (OSGB36) coordinate system and level data
defined by Geoid model OS1015, based around 2 survey stations
H1 & H2 with a scale factor of 1.00000

Head Office
Unit 1, Bylow Farm
Orchard Way
Dartford, Kent
DA2 7ER
Email: mail@hooksurvey.com
Tel: 01322 277221

Midlands Office
42 Hanson Avenue
Shipton-on-Stour
Warwickshire
CV36 4HS
Email: midlands@hooksurvey.com
Tel: 01608 523118

www.hooksurvey.com

Registered Member
The Survey Association

APPENDIX B

Southern Water Infrastructure Charge

Gravesham Borough Council

New Connections Services Charging Arrangements 2022-23

March 2022

Version 1.21



from
**Southern
Water** 

Contents

Section 1: Introduction to our charges.....	5
Key changes which were introduced for 2022/2023	6
Our area of operation	8
Who pays for what?	9
Who can deliver my connection work?	10
Self-Lay Providers (water supply)	11
Developers and drainage contractors (wastewater) .	11
Regional water companies and NAV's	12
Section 2: Infrastructure Charges	13
What are infrastructure charges?	13
When are Infrastructure Charges applied?	13
What are Infrastructure Credits?	13
When are Infrastructure Credits applied?	14
Overview of 2022-23 Infrastructure Charges:	15
Wastewater Infrastructure Charges	15
Water Infrastructure Charges	15
Infrastructure Charges – general information.....	16
Infrastructure Charges – domestic use in other premises	16
Infrastructure Charge credits	16
Timing of charges.....	17
Upsizing new main or sewers for future use	17
Alternative Point of Connection	17
Persons Chargeable	17
Section 3: Site Specific Charges	18
Water Connection Services.....	20
New Service Connections (s45)	20

Charges for new water mains (s41)	24
Diverting a water main (S 185)	28
Wastewater connection services	29
Sewer Connections (s106/107)	30
Sewer adoptions (s104/102)	30
Requisitioning a new sewer (s98)	31
Diverting a sewer (s185).....	36
Site Specific charges – general information	38
Section 4: Charges for SLPs and NAVs.....	40
General Guidance	40
Charges for SLPs.....	40
NAVS	41
Section 5: General Information	42
Validity Period of Quotations and Transitional Arrangements.....	42
Timings and Methods of payment.....	43
Water	43
Wastewater	44
Methods of Payment.....	44
How did we calculate the charges?	45
Infrastructure Charges	45
Water	45
Wastewater	46
Contact Us:.....	47
Appendices	48
Appendix i – Additional Services.....	48
Build Over a Sewer	48
Odour Impact Assessments	48

Pre-planning Enquiry Water	50
Appendix ii – Worked Examples	51
Appendix iii Glossary and defined terms	57

Gravesham Borough Council

Section 1: Introduction to our charges

This document sets out our charges for new connection services that apply from 1 April 2022 to 31 March 2023.

Connections services cover the work that is needed to connect new homes and businesses to the existing water and wastewater network. Charges for connection services are split into two broad categories:

Infrastructure charges - the charges for work that is needed on the existing water or sewer network to provide for new development-related growth. These will be recovered through our "Infrastructure Charges", which are fixed for both water and wastewater connections.

Site Specific charges - the charges for all work carried out on the development site and the pipework required to connect the new homes to the existing water main or sewer at a defined point of connection. These charges cover the cost of Site Specific work to provide any new pipework or pumping facilities that are needed to connect the new houses to the nearest practical point on the existing network – and **where the internal diameter of the new connecting pipework is no larger than the internal diameter of our existing network**. This category includes:

- New water service connections
- New water mains
- New drainage connections
- New sewers
- Diversions of existing water mains and sewers that need to be moved on a development site

In this document we publish fixed charges for most of the Site Specific activities that we carry out.

By publishing our charges upfront, our Developer Services customers should be able to confidently work out a reasonable estimate of the charges that will apply to their specific development project, at a much earlier stage, providing they know the parameters of the development. To support this, we also provide a New Connection Charging calculator to assist our customers in the generation of estimates for their developments. This will be on our website from 1st March 2022 alongside the New Connection Charging Arrangements.

There are a limited number of circumstances where the work needed is not fully covered by our published charges and this is made clear in this document. There may also be circumstances when charges will be estimated upfront and reassessed once the work is complete. Again, it will be made clear where this applies.

Our charges are developed in-line with a set of rules made by the water industry regulator, Ofwat that apply to all water companies operating in England. They allow us some flexibility to develop our charges, so they reflect our company circumstances and the region we operate within. They have been developed through consultation and engagement with our customers.

Key changes which were introduced for 2022/2023

Bill stability and price predictability remain key principles within our charging scheme. Therefore, we have sought to keep changes to our Charging Arrangements to a minimum.

In consultation with our developer customers, we have developed and implemented handling strategies to promote bill stability. A challenging operating environment, including an unusually high rate of inflation over 5% and a reduction in income offset, would have resulted in an increase of more than 10% for some developments. Our handling strategies have minimised the price increases for all developer customers and reduced the number of potential developments exceeding the 10% threshold.

Changes to Site Specific Charges

We plan to keep bills as stable as possible and, therefore, expect prices to remain broadly similar to last year. Currently, forecasts predict inflation for the FY2022-23 will be 5.1% and we will align our Charging Arrangements with the prevailing rate of inflation.

Ofwat has placed an increased focus on cost-reflectivity to the existing charging principles. We have reviewed Cost reflective pricing will promote a competitive market for alternative service providers as demonstrated in the RISE report published by Ofwat. We have carried out several reviews including benchmarking and seeking external assurance to confirm we offer cost reflective charges. Where we have identified areas for more cost-reflective pricing we have acted. For example, admin and application fees for new service connections have been reduced.

Changes to the infrastructure Charges:

The Net Wastewater Infrastructure charge has reduced by 7% and remains consistent with last year's charge.

The Gross Water Infrastructure Charge remains at £0 and the Income Offset has reduced. This change is to a large extent a result of more accurate forecasting over the 5 year rolling time horizon. The reduction in the income offset maintains the historic level of the discount provided on requisition charges in line with Ofwat's charging rules. Following the implementation of our handling strategy, the Net Water Infrastructure Charge will be -£213. We continue to offer an incentive of £230 per property for water efficient developments.

Handling strategy

We calculate the infrastructure charge using a five-year forecast of expenditure and property numbers. Applying the same methodology as in previous years, this year's variance in the Water Infrastructure Charge is driven by updated forecasts. This reduced the Income Offset for water connections to £22 from £335, which would have resulted in overall charge increases to typical developments in excess of the 10%. To moderate this, we propose to take a phased approach to reflecting the updated expenditure forecasts in our charges. This phasing approach increases the level of the Income Offset to £213, reducing the impact of the changes in 2022-23 and promoting bill stability.

Furthermore, maintaining the size of the Water Environmental Efficiency Incentive further dampens the effect of price fluctuations. A property achieving the environmental requirements would experience a smaller increase.

Our area of operation

We are the water and wastewater supplier for large areas of the South East of the country. We are however a larger wastewater provider than a water provider. Within our wastewater area, various Water only Companies (WoC's) operate. It is important to note that you may need to pay charges to different Water Companies dependant on who the water and wastewater suppliers are for the area of your development. Each company will publish their respective charges within their Charging Arrangements document.

The map below details both the area that we operate and the different Water only Companies within the wider wastewater geographic area covered by us.

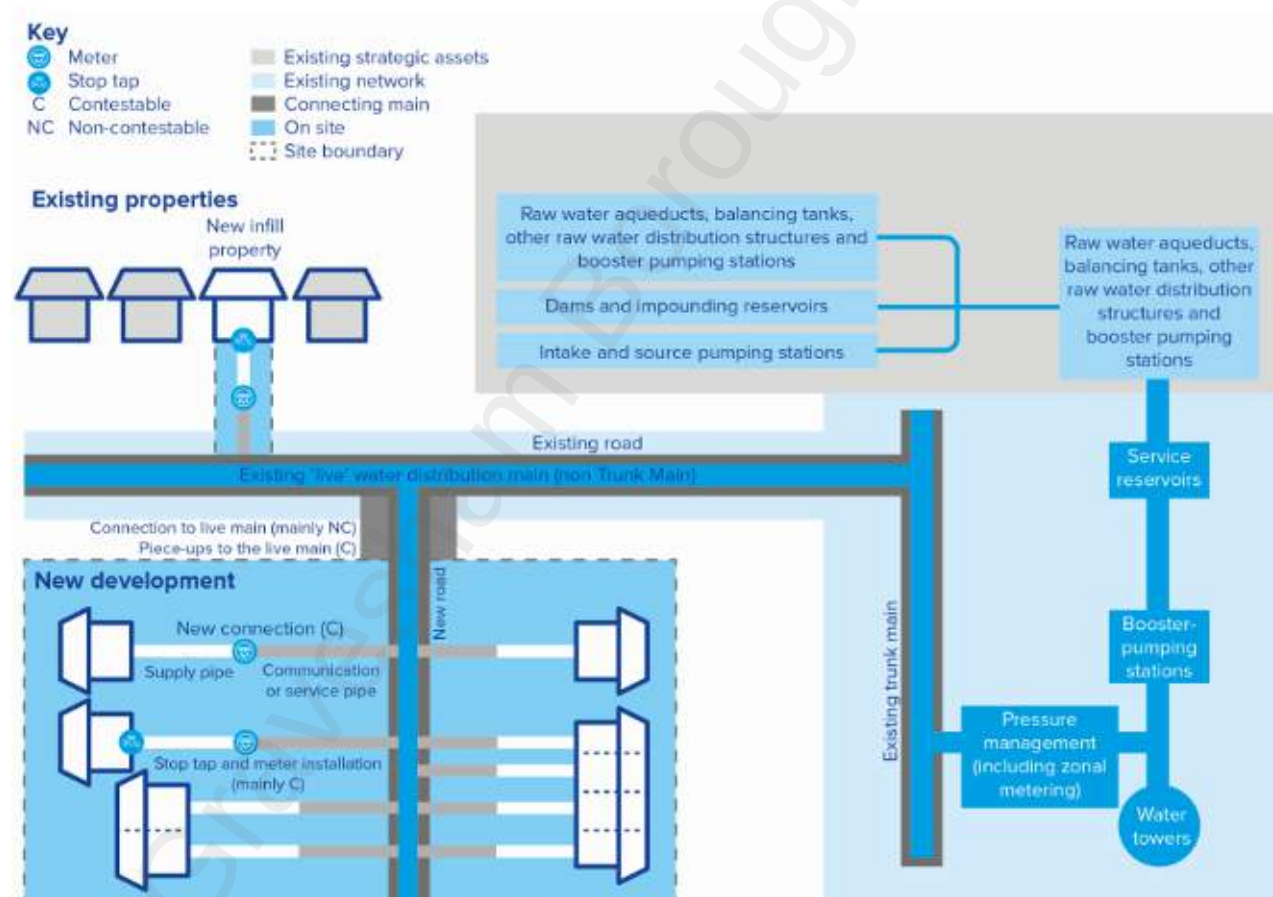


Who pays for what?

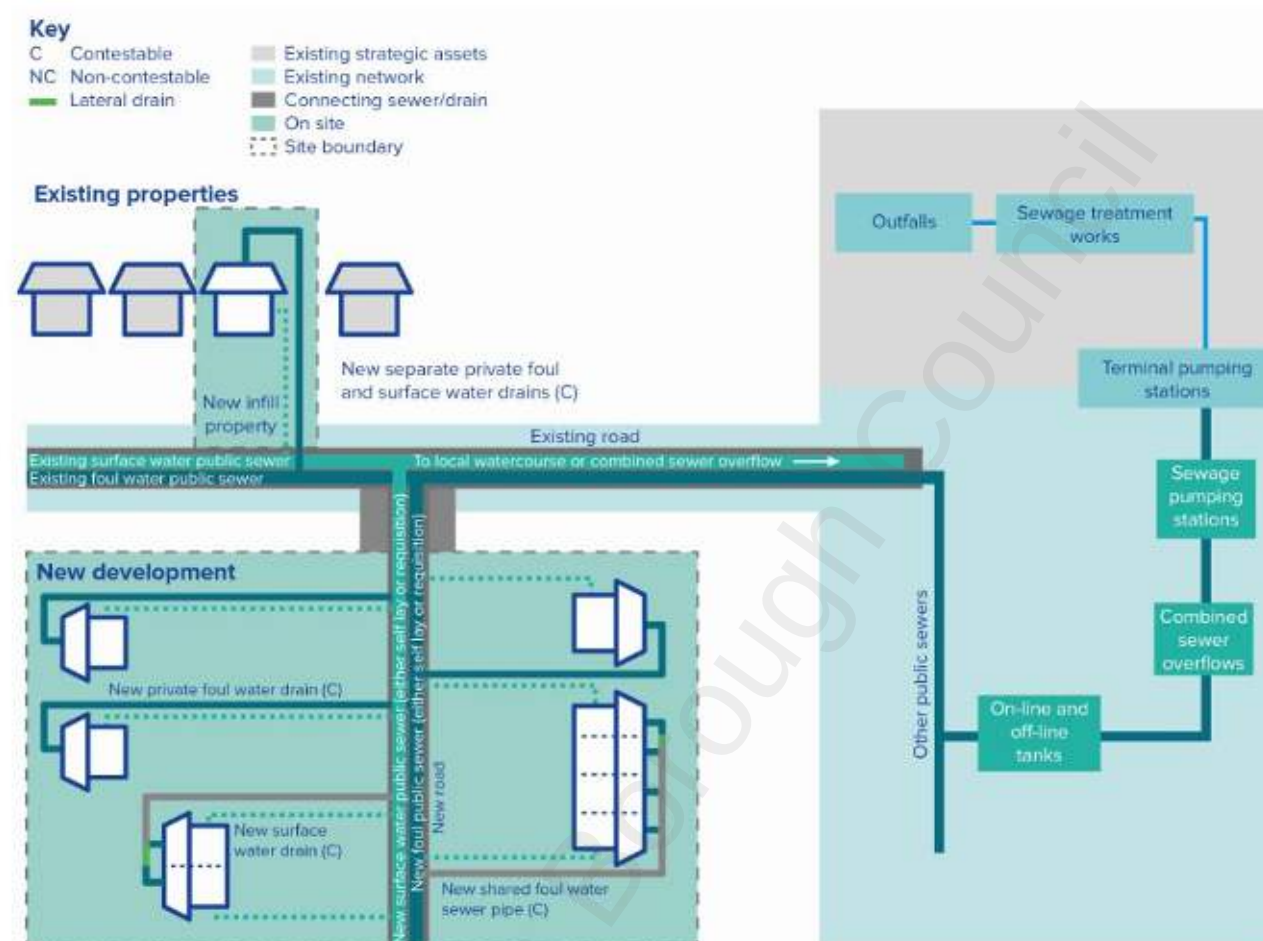
The following diagrams show who pays for what in relation to water and wastewater connection services. The diagrams are annotated as follows:

Infrastructure	Who pays and how?
Site Specific work to connect to an appropriate point on the existing network	Applicants through Site Specific charges
Network reinforcement including upgrades and increased capacity within the existing network	Applicants through the New Infrastructure Charge
New resources and treatment assets	Us through our 5-year investment plan

Typical connections work and the location of existing water assets



Typical connections work and the location of wastewater assets



Who can deliver my connection work?

Developer Services customers can choose who provides the majority of new connection services for their development and who owns and operates the new network once it has been constructed.

The areas where Developer Services customers have a choice over who provides the new infrastructure are known as “**Contestable Services**”. There are other services, such as those linked to application and administration processes or security of water supply and water quality that can only be provided by us. These are known as “**Non-Contestable Services**”.

Further information is detailed in our Annual Contestability Summary which can be found under section 9.3 of the Southern Water [Design and Construction Specification \(DCS\)](#)

The table below details who can provide or deliver different elements of the services in this area.

What service do I need?	Who generally applies?	Who can deliver?
New water supply connections and mains	Existing customer / Developer / Self Lay Provider (SLP)	Self Lay Providers (SLP) New Appointees (NAVs) Southern Water
New sewers and laterals	Existing customer / Developer	Developers or Drainage Contractors New Appointees (NAVs) Southern Water
Adoption and operation of new water connection infrastructure	Developer / Self Lay Provider (SLP)	New Appointees (NAVs) Southern Water
Adoption and operation of new wastewater infrastructure	Developer	New Appointees (NAVs) Southern Water

We encourage applicants to consider all potential delivery options and the following guide sets out further details on the options available to Developer Services customers.

Self-Lay Providers (water supply)

Self-Lay Providers (SLPs) can install new water supply connections for a development. If you want to use a SLP, or compare their service to ours, you should contact them directly.

SLPs can provide many elements of water supply infrastructure (such as mains and service pipes) and when an applicant chooses to use an SLP, the SLP will agree with us the connection work it will carry out.

In most cases we will still need to carry out some work, for example design approvals or mains connections to the existing network. The SLP must include the cost of any work we need to carry out within the estimate it provides to the applicant.

The SLP can often choose who will own the new infrastructure. Once the work has been completed, they have the opportunity to transfer to a NAV or us, providing it reaches the required industry standards.

Southern Water will adopt assets which are provided in accordance with our Design and Construction Specification. More details can be found on our website [Self Lay Schemes](#).

Developers and drainage contractors (wastewater)

In most situations, the wastewater infrastructure needed for a new development is constructed by the developer or a suitable drainage contractor employed by the developer. We very rarely carry out these works.

Once complete, the developer can transfer ownership of the new network to either a NAV or Southern Water. We are obliged to take ownership of ("adopt") these types of assets providing they are designed and constructed to meet water industry standards.

More details can be found on our website [Sewer Adoption](#)

Regional water companies and NAV's

Southern Water are what is known as a regional incumbent water company. All water companies can provide new connection services or agree to take ownership of new water and wastewater connection infrastructure provided by others, in accordance with the Water Industry Act 1991. Water companies are legally required to provide water mains, sewers and lateral drains, if requested by a developer, through a process known as requisitioning.

Alternatively, NAVs (New Appointees and Variations), also known as "inset" companies, can provide new connection services, or take ownership of the new water and wastewater connection infrastructure provided for a new development. NAVs are appointed by Ofwat and replace the regional water company. It is for the developer to choose whether to use a NAV or the regional water company to supply services for new sites, according to certain legal criteria.

More details can be found on our website [NAV](#) or by visiting Ofwat's [website](#)

Details of [current NAVs](#) can be found on Ofwat's website

Section 2: Infrastructure Charges

What are infrastructure charges?

Infrastructure Charges are levied whenever additional loading is being placed on the water or sewerage networks. This is in order to obtain a contribution towards upgrading the relevant network (pipes only) as and when necessary, to help accommodate future development.

When are Infrastructure Charges applied?

Standard 25mm and 32mm domestic use supplies attract 1 charge for water and 1 charge for sewerage.

Infrastructure charges should always be applied at one per property/unit with the following exceptions:

- Fire supplies do not attract charges
- Temporary Building Supplies (TBS) do not attract charges if they are disconnected within 1 year.
 - If they are going to be disconnected at a later time, then this attracts a charge of 25% of the total infrastructure charge, per year, for up to a maximum of 4 years.
 - Temporary Building Supplies that are to be retained to serve a property after construction is complete attract 1 charge only
- Supplies 50mm and over for domestic use such as large houses, residential care homes and sheltered housing, attract charges based on the installed fittings. This logic may also be applied to holiday villages that will not be in use all year round, but each case should be assessed on its own merit.
- Should a supply be commercial to serve machinery, the fittings list will not be relevant and instead the developer will need to supply a flow rate which can be used to size the meter.

What are Infrastructure Credits?

In some circumstances we can apply credits, removing one lot of charge per credit, this can reduce the Infrastructure Charges to zero, however the customer is never refunded any leftover credit and cannot be used elsewhere in their charges.

When are Infrastructure Credits applied?

Infrastructure credits can be applied to recognise previous and/ or existing loading on the network **that is due to be removed/ disconnected** based on proposed fittings versus existing, which should be provided by the customer in Section G of the S45 water connection application.

For example:

If someone is converting a large house in to two flats then one credit can be applied to make up for the existing load on the network.

- 2 x Infrastructure Charge
- 1 x Infrastructure Credit
- Total Customer pays = 1 x Infrastructure Charge

Conditions:

- The site must have had a water supplied via an official SW supply during the last 5 years.
 - If the site has a live supply which is due for disconnection then credit(s) can be applied.
 - If the site has a live supply which they intend to reuse then credits can only be applied if the supply is large enough to qualify for credits based on fittings (50mm+) and the fittings in question are due to be removed. It is rare that previous and new fittings are similar, and the customer ends up not being charged any infrastructure due to the lack of new demand.
 - *For example; a large house being converted in to a care home will have more toilets (fittings) and therefore will require more charges than credits awarded.*

Overview of 2022-23 Infrastructure Charges:

New developments increase the load on our networks and may require investment in upstream network reinforcement. This investment is funded through the Infrastructure Charge where the cost of network reinforcement is levied per property at the time of final connection.

An Income Offset is then applied to produce a net charge.

Southern Water offers a water efficiency incentive in the form of a reduced Water Infrastructure Charge. The discount is available to developments where houses are designed with efficient fixtures and fittings in order to achieve 110 litres consumption per person per day.

Wastewater Infrastructure Charges

	FY 2021/22	FY2022/23
Wastewater: Gross Charge	£574	£608
Wastewater: Income Offset	-£128	-£193
Wastewater: Net Charge	£446	£415

Water Infrastructure Charges

	FY 2021/22	FY 2022/23
Water: Gross Charge	£00.00	£00.00
Water: Income Offset	-£335	-£213
Water: Net Charge	-£335	-£213
Water: Net Charge incl. Environmental Efficiency Incentive	-£565	-£443

Environmental Efficiency Incentive: Target 100 – promoting water efficiency

We operate in a water stressed region and are keen to work with developers and incentivise them to build new homes that are water efficient. Our aim is to reduce the average amount of water used by our customers to 100 litres per person per day. Currently our existing customers use about 130 litres per person per day on average. When new homes are built with water efficient fixtures and fittings that will achieve average water use of 110 litres per person per day, we will allow an enhanced Income Offset against the 'gross' Infrastructure Charge.

We continue to offer an incentive of £230 per property for water efficient developments.

We will measure this against the current optional Building Regulations standards, to take a consistent approach. At the application stage, evidence of the property construction to the optional Building Regulations standard should be provided to secure the discount.

Infrastructure Charges – general information

Infrastructure Charges – domestic use in other premises

Infrastructure Charges are applicable for domestic use in dwellings that are not individually metered, e.g. flats with a common billing arrangement, and non-dwellings, however they are calculated differently. We calculate this by working out the likely domestic use and how this equates to an equivalent number of domestic dwellings. We use the “**Relevant Multiplier**” approach which is the standard approach used throughout the water industry.

We will utilise the same Relevant Multiplier approach (and other relevant methods) to calculate equivalent Income Offset that is applicable for properties that do not attract the flat rate Infrastructure Charge.

Details of how we calculate the Relevant Multiplier can be found [here](#).

Infrastructure Charge credits

If the development site contained homes that were connected to our network within the last five years, we will apply an Infrastructure Charge credit. This means that we will deduct the number of former homes from the total number of houses that are built as part of the new development, reducing the number of Infrastructure Charges that are due. For example, if a development takes place on a site where 20 homes previously existed, and the new development will result in 40 new homes being built in their place, Infrastructure Charges will only apply to 20 of the new homes that are connected.

In some cases, where the site was not previously housing, we may review the metered water consumption or sewer flows from the site and equate it to an average home within our area, so we can estimate how much water was used previously by the premises on the site and deduct that from the amount we expect to be used by the new properties. In the absence of metered information, other reasonable evidence will be used to estimate the prior demand on the network from the site.

Timing of charges

Due to the changes to how Income Offsets are applied, we will generally collect Infrastructure Charges on connection. Payment upfront may be possible but only where both water and wastewater Infrastructure Charges are paid (when applicable).

Upsizing new main or sewers for future use

Occasionally we may request that mains or sewers that developers or SLPs construct should be upsized to provide capacity for future growth. Where mains and sewers are upsized because of our request, we will repay any extra expense reasonably incurred and fund it from Infrastructure Charges. Our contribution will be based on assumed flow rates for the development relative to that of the other flows allowed for in the design.

Alternative Point of Connection

Occasionally the most cost-effective form of network reinforcement is to transfer the default point of connection (i.e. from the point where the diameter of the new connecting pipework is no larger than the diameter of our existing network) to a different position known as the 'alternative point of connection'. The 'alternative point of connection' is the nearest point on our existing network where there is currently capacity to serve the proposed development.

In these cases, we are open to discussing with developers, NAVs and SLPs approaches where a commercial agreement can be entered for the applicant to undertake these activities. As the pipework from the 'alternative point of connection' is only related to the development site, the risk is lower than most network reinforcement activities as the work is not modifying or changing the existing network.

As this work is considered network reinforcement, the Site-Specific charges may not apply. The Site-Specific charges are specifically generated for Site Specific activities. The applicability of our published charges to these activities will be considered on a case-by-case basis.

Persons Chargeable

The person liable to pay the water infrastructure charge or the sewerage infrastructure charge shall be

- (i) the person requesting the relevant connection to be made, the person making the relevant connection (other than on behalf of the Company) or the person on whose behalf the relevant connection was requested or made, or
- (ii) if the relevant connection is made without authorisation by the Company, the person making such connection, the person on whose behalf the relevant connection was made or the person using the services provided thereby.

Section 3: Site Specific Charges

General principles

Our Site Specific charges cover all elements of work that may be needed to connect the new properties to our existing network.

What you pay will largely depend on the size of your development and its location. The cost will vary depending on the number of connections needed, the amount and size of the connecting pipework, the depth that it needs to be installed, the nature of the surface that the work is being carried out in and the size of the associated infrastructure required. We have set fixed charges that cover a range of options.

In addition, we have also set charges for other activities that we may need to carry out such as traffic management, work in the highways and working in areas of contaminated land.

In order to be able to make a reasonable estimate of the cost of the Site Specific work required, applicants do need to know the parameters of the development.

Below we have set out a guide to Site Specific work that explains the different types of infrastructure that might be needed and other factors that will need to be considered. This is followed by the charges that will apply to this work.

Surface Categories

The type of surface has a big influence on construction costs because of the difference in techniques used, reinstatement required and co-ordination with other parties. Our charges vary depending on the type of surface and this is set out in the charging tables that follow. The different surface types are detailed below:

Excavation done by others:

- These charges apply when the trench has been pre-excavated by the applicant in line with our standards. It does not include for any backfill or reinstatement.

Unmade ground:

- These charges apply to undisturbed or unfinished surfaces. These could include construction sites, fields or verges.

Footpaths:

- These charges apply when working in a footpath.

Side roads:

- These charges apply when working in/on a minor road. These are formally categorised as Type 3 and Type 4 roads (New Roads and Street Works Act 1991 - Code of Practice). Most local residential roads would fall into this category.

Main roads:

- These charges apply when working on major roads. Main Roads are formally categorised as Type 0, 1 and 2 roads. These roads are much busier, and examples include roads with an official A or B number (e.g. A27) or dual carriageways and higher speed single carriageway roads.

Traffic Management

Standard traffic management approaches where we can keep traffic flowing, or install 2-way traffic lights, are included within our standard charges. If more complex traffic management is needed, or we incur additional local authority charges, we will apply an additional charge for extraordinary traffic management. Examples of where these charges apply include:

- 3- or 4-way temporary traffic lights when working at junctions
- Road closures
- Temporary closure of pedestrian crossings or traffic lights (often known as 'bagging' traffic lights)
- Lane rental charges

Water Site Specific Design

For all Site Specific work that we deliver ourselves, the design costs are inclusive within the charges.

Point of Connection Applications

As with any site design, you will need to know where the Point of Connection (POC) will be for the development you are applying for. This means that for all future applications you will need to have firstly submitted a POC application. This is essential as the identified POC will then inform your design that you submit to us for checking and approval. We aim to have these POC applications back to you within 14 days, or 28 days for complex sites.

Income Offset

Income Offsets no longer apply to Site-specific elements of work.

VAT

The charges set out in this document **do not** include VAT. If VAT is required on any elements of work, we will make it clear at the application stage or in the estimates we provide.

Water Connection Services

New Service Connections (s45)

Guide to our charges for new service connections

- New service connections involve a section of small diameter pipe, known as the communication pipe, laid from an existing water main to the boundary of a property where a water meter chamber and stop-tap (valve) is normally located
- New service connections can be completed by either us or a SLP
- A small diameter supply pipe within the boundary of a property links the communication pipe with the internal plumbing of the house. The supply pipe is the responsibility of the property owner
- Service connections are made under Section 45 or 51 of the Water Industry Act. There is an initial non-refundable application charge with further administration charge only if the applicant goes ahead
- The charges below should be combined to form the total costs associated with a particular application
- The costs for new connections are applied per property and measured by the number of meters installed
- The costs will vary depending on whether the work needs to be carried out in an existing road (side or main road) or in a new development site where the road is not yet surfaced or adopted
- On new development sites, connection types are known as Near Side or Far Side. Pipework up to 3 metres long is described as Near Side; pipework between 3 and 8 metres long is known as Far Side
- For Side Road and Main Road connections, each connection has up to 8 metres of pipework included within the standard charge
- The charges include connection to the water main, a new meter, stop-tap and meter chamber
- Larger diameter pipes may be needed to make connections to larger buildings such as flats and office blocks. We have set charges for a range of pipe diameters including up to 8 metres of pipework. Charges also include connection to the main, a new meter, valve and a boundary box
- If more than 8 metres of pipework is needed, we have set charges for additional pipework
- If the connections need to be made in an area of contaminated land, additional charges will apply to cover the cost of specialist fittings, pipework and management of ground conditions
- Standard traffic management where we can keep traffic flowing, or install 2-way traffic lights, are included within our standard charges
- If more complex traffic management is needed or we incur additional local authority charges, we will apply an additional charge for extraordinary traffic management. This is not always easy to predict but we will make our Developer Services customers aware as early as possible if this charge will apply
- The charge for 3- or 4-way lights is for when temporary 3- or 4-way lights are required. It will also apply where existing traffic lights or pedestrian crossings need to be temporarily disabled to facilitate the works
- The charge for road closures will apply when a road closure is mandated by the local authority
- The lane rental charge will apply when the working on a highway where these charges apply
- The charges associated with water connections are payable up-front, at the point of application, and at the provision of estimates for the work
- The supply meter rate is our charge for the supply of meters only. This applies predominantly to SLP's. The charge includes the procurement and ordering of the meters and delivery to one of our facilities. The meters require picking up from our facilities as the charge does not include delivery
- It is **not a requirement for SLP's to source water meters through Southern Water** providing the installer is utilising meters to our specification:
 - Supplier: Arad Metering Services, 21 Marys Lane, Burghill, Hereford, HR4 7QL

- Type: Automated Meter Reading (AMR) type screw in concentric 15mm or 20mm meter (supplier ref: F389-10)

Section 45 new service connections application and administration fees

Service	Charge	Contestable / Non-contestable	How is this applied?
S45 - Application Fee (first connection) (inc. VAT)	£85.96	Non-contestable	Per application
S45 - Application Fee (subsequent connections) (inc. VAT)	£52.48	Non-contestable	Per subsequent connection
S45 – Administration Fee (first connection)	£32.93	Non-contestable	Per application
S45 – Administration Fee (subsequent connections)	£20.10	Non-contestable	Per subsequent connection
Water Regulations Inspection (External) – 1 st of every 10 plots (1 st , 11 th , 21 st etc.)	£86	Non-contestable	Per connection
Water Regulations Inspection (External) – every other plot (2 nd – 10 th , 12 th – 20 th etc.)	£6	Non-contestable	Per connection
Reviewing Site-Specific water distribution systems design	£214	Non-contestable	Per connection
Point of connection enquiry	£116	Either	Per application
Abortive Charges (site not ready – applied per 10 plots)	£86	N/A	Per occurrence
Re-inspection fee (applied per 10 plots)	£86	N/A	Per occurrence

Standard connection charges (up to 32mm) – new development sites

Connection type	Charge	Excavation undertaken?	Contestable / Non-contestable	How is this applied?
New development site near side	£242	Excavation done by others	Contestable	Per property
New development site near side	£306	With excavation	Contestable	Per property
New development site far side	£277	Excavation done by others	Contestable	Per property
New development site far side	£367	With excavation	Contestable	Per property

Standard connection charges (up to 32mm) – on existing highways

Connection type	Charge	Excavation undertaken?	Contestable / Non-contestable	How is this applied?
Side Road	£777	With excavation	Either	Per property
Main Road	£913	With excavation	Either	Per property

Large Diameter Metered Connections – on existing highways or new development sites

Connection type	Charge	Excavation	Contestable / Non-contestable	How is this applied?
63mm connection	£2,529	With excavation	Either	Per property/premise
90mm connection	£6,794	With excavation	Non-contestable	Per property/premise
125mm connection	£7,075	With excavation	Non-contestable	Per property/premise

Additional pipework (per metre)

Surface Pipe size	Excavation done by others	Unmade ground	Footpath	Side Road	Main Road
Property connections (25/32mm)	£10	£31	£77	£91	£131
63mm	£41	£67	£97	£121	£162
90mm	£41	£83	£114	£152	£185
125mm	£47	£93	£123	£162	£197

Contaminated Land

Contaminated land	Charge	Excavation type	How is this applied?
Barrier connection - property connections (25/32/63mm)	£49	Excavation done by others	Per property
Barrier connection - property connections (25/32/63mm)	£128	With excavation	Per property
Barrier pipe – 25/32mm	£21	Not applicable	Per metre of pipe
Barrier pipe – 63mm	£36	Not applicable	Per metre of pipe
Barrier pipe – 90mm	£36	Not applicable	Per metre of pipe
Barrier pipe – 125mm	£41	Not applicable	Per metre of pipe

Extraordinary traffic management associated with new service connection jobs

Standalone traffic management charges for new service connections are different to those associated with new mains. New service jobs are typically less complex and therefore attract a lower, cost-reflective price.

Traffic Management	Charge	How is this applied?
Traffic management – 3 or 4 way lights	£1,322	Per installation if required
Traffic management – road closures	£1,650	Per application if required
Traffic management – lane rentals	£632	Per day required

Supply meter only

Supply Meter Only	Charge	How is this applied?
Supply meter	£73	Per meter supplied

Flats with internal meters

Following our development of standard charges, flats with internal meters do not fit easily into our standard charging arrangements, as there are lower levels of excavation. As a result, we are offering the option for a bespoke pricing option for those Developer Services customers who are developing flats with internal meters. This bespoke price will be offered as an alternative to the above standard charging approach. The Developer Services customer will then be able to choose which option to go with that offers best value. **We strongly advise Developer Services customers to take up this option** as it may offer better value in these circumstances.

Disconnections

Our unit charge for disconnecting existing connections from our water mains (where chargeable) is **£370**.

Charges for new water mains (s41)

General Information

- Water mains are pipes that will supply water to new homes within a development
- New water mains can be provided by us or by a SLP
- When carried out by a SLP it is done under Section 51 of the Water Industry Act. We will adopt the new infrastructure once it's complete, providing it meets the required industry standards and the new Water Sector Guidance in relation to the Adoption of Self Laid Assets by Water Companies
- Some aspects of water main installation can only be carried out by us and we will provide an estimate to the SLP carrying out the work
- The SLP may request elements of contestable work to be delivered by us. These elements will be charged in accordance with the charges within this document
- If the applicant would like us to provide the new water main, they can do so through an agreement called a Requisition under Section 41 of the Water Industry Act
- The charges below should be combined to form the total costs for the application
- Our water main charges include all valves, hydrants, washouts and the costs involved in co-ordinating our work with the applicant's schedule
- Our "excavation done by others (unmade)" charge applies where there is not currently a surfaced hardstanding
- Our "excavation done by others (made)" charge applies where there is a surfaced hardstanding. Examples include existing roads and highways, brownfield sites or sites where the developer has constructed the highway surfacing
- Separate charges apply when a connection needs to be made to an existing water main. This includes one valve and one hydrant. The charge will depend on the size of the pipe being connected to the existing network
- Connections to Self-Lay Mains are simple pipe to pipe connections to mains laid under an adoption agreement
- On some occasions we may need to install (or be requested to install) pressure monitoring valves to reduce the risk of bursts, district meters that allow us to measure the amount of water being supplied to a specific area, or non-return valves to prevent backflow of water. These will be charged per installation and the cost will depend on the size of the pipe they are connected to
- If the site being developed is on an area of land that may be contaminated due to its previous use, we may need to install a specialist pipe known as a barrier pipe to avoid contamination of the water supply
- If these specialist pipes are required, they are charged in addition to the water main and the cost will vary depending on the pipe size
- Standard traffic management where we can keep traffic flowing, or install 2-way traffic lights, are included within our standard charges
- If more complex traffic management is needed, or we incur additional local authority charges, we will apply an additional charge for extraordinary traffic management. This is not always easy to predict but we will make our Developer Services customers aware as early as possible if this charge will apply
- The charge for 3- or 4-way lights is for when temporary 3 or 4 way lights are required. It will also apply where existing traffic lights or pedestrian crossings need to be temporarily disabled to facilitate the works
- The charge for road closures will apply when a road closure is mandated by the local authority
- The lane rental charge will apply when the working on a highway where these charges apply
- From April 2020 there will no longer be an Income Offset applied to water mains requisitions
- The charges associated with water mains laying are payable up-front and following the provision of estimates. Under our current charging approach there is an option to pay under the relevant deficit

approach, where charges are payable over a 12-year period. Should this be attractive for applicants we will be able to offer a bespoke quotation on that basis. The final charges due may prove to be different to those calculated using the following charges due to the different calculation method

The following table may assist in estimating the pipe sizes required for new mains:

Number of properties	Pipe diameter (PE pipes)	Nominal bore (other pipe materials)
0-20	63mm	50mm
20-40	90mm	80mm
40-95	125mm	100mm
95-300	180mm	150mm
300-700	250mm	200mm

New Mains (s41) application, enquiry and administration and design charges

Service	Charge	Contestable / Non-contestable	How is this applied?
S41 – Point of Connection Enquiry	£116	Contestable	Per enquiry
S41 – Mains Application / Administration / Collaborative Full Design Fee – 0 to 50 units	£1471	Either	Per application
S41 – Mains Application / Administration / Collaborative Full Design Fee – 51 to 250 units	£1,550	Either	Per application
S41 – Mains Application / Administration / Collaborative Full Design Fee – 251 to 500 units	£1,738	Either	Per application
S41 – Mains Application / Administration / Collaborative Full Design Fee – 500+ units	£2,007	Either	Per application

New water mains installations charges (per metre)

Surface Pipe size	Excavation done by others (unmade)	Excavation done by others (made)	Unmade ground	Footpath	Side Road	Main Road
63mm	£57	£93	£93	£128	£156	£204
90mm	£57	£93	£111	£148	£193	£232
125mm	£59	£94	£118	£153	£200	£240
180mm	£73	£122	£145	£185	£219	£261
250mm	£104	£156	£167	£223	£259	£320
315mm	£154	£233	£219	£305	£342	£400
355mm	£181	£257	£250	£336	£376	£437

Mains Connections to an existing water main

Connecting pipe size	Charge	Contestable / Non-contestable	How is this applied?
63mm	£3,521	Either	Per connection
90mm	£3,558	Either	Per connection
125mm	£3,723	Non-Contestable	Per connection
180mm	£5,178	Non-Contestable	Per connection
250mm	£5,742	Non-Contestable	Per connection
315mm	£11,024	Non-Contestable	Per connection
355mm	£20,553	Non-Contestable	Per connection
Connection to Self-Laid Main (any size)	£1,402	Non-Contestable	Per connection

Pressure monitoring valves

Pressure reducing valves (with by-pass)	Charge	Contestable / Non-contestable	How is this applied?
63mm	£9,875	Either	Per installation
90mm	£10,203	Either	Per installation
125mm	£11,043	Either	Per installation
180mm	£13,226	Either	Per installation
250mm	£19,576	Either	Per installation
315mm	£35,909	Either	Per installation
335mm	£36,217	Either	Per installation

District meters

District meters (with by-pass)	Charge	Contestable / Non-contestable	How is this applied?
63mm	£9,095	Either	Per installation
90mm	£9,422	Either	Per installation
125mm	£9,958	Either	Per installation
180mm	£11,826	Either	Per installation
250mm	£18,544	Either	Per installation
315mm	£35,909	Either	Per installation
335mm	£36,217	Either	Per installation

Non-return valves

Non-return valves	Charge	Contestable / Non-contestable	How is this applied?
63mm	£3,149	Contestable	Per installation
90mm	£3,149	Contestable	Per installation
125mm	£3,268	Contestable	Per installation
180mm	£3,408	Contestable	Per installation
250mm	£6,640	Contestable	Per installation
315mm	£8,300	Contestable	Per installation
335mm	£8,300	Contestable	Per installation

Contaminated land (per metre)

Contaminated land	Charge	Excavation type	How is this applied?
Barrier pipe – 63mm	£31	Not applicable	Per metre of pipe
Barrier pipe – 90mm	£31	Not applicable	Per metre of pipe
Barrier pipe – 125mm	£36	Not applicable	Per metre of pipe
Barrier pipe – 180mm	£40	Not applicable	Per metre of pipe
Barrier pipe – 250mm	£75	Not applicable	Per metre of pipe
Barrier pipe – 315mm	£88	Not applicable	Per metre of pipe
Barrier pipe – 355mm	£99	Not applicable	Per metre of pipe

Extraordinary traffic management for mains construction projects

Traffic Management	Charge	How is this applied?
Traffic management – 3 or 4 way lights	£1,535	Per installation if required
Traffic management – road closures	£1,915	Per application if required
Traffic management – lane rentals	£746	Per day required

Diverting a water main (S185)

The below information relates to our charges where our existing assets require diverting to permit a development.

- Developers with an interest in land that contains existing water or sewerage assets can arrange for the alteration or removal those assets to allow development work to progress
- For both water mains and sewers this is undertaken under Section 185 of the Water Industry Act
- All or part of the diversion works may be contestable, in which case we will give the developer the opportunity to undertake the works, or employ a suitably qualified third-party contractor to undertake these elements
- The decision on who undertakes the construction is based on the risk of the work and asset criticality ratings
- Applicants can visit our [website](#) or contact our Business Channels team for advice ahead of application
- Alternatively, should a developer delivered diversion be assessed as needing to be delivered by Southern Water, we will only charge the differential in application fees
- We do not offer published fixed charges for construction activities in this area. We will keep this under review
- We will provide a bespoke estimate for each project. The applicant will be free to choose how to proceed on provision of estimates at key stages
- We will utilise information from both our estimating database and supplier contracts at the early stages of the process to provide these bespoke estimates. As the design progresses, we will further engage with our suppliers to deliver an increasingly detailed and accurate quotation for the defined scope of the work required
- The estimates may be different to the requisition published charges due to the individual nature of each site
- The charges associated with diversions are payable up-front and following the provision of estimates.

Service	Charge	Contestable / Non-contestable	How is this applied?
S185 - Application Fee (water diversion) (inc. VAT)	£1829	Non-contestable	Per application
S185 - Design Fee (Southern Water diversion)	10% of total project value	Non-contestable	Per application
S185 – Technical Assessment Fee (developer diversion)	£592	Non-contestable	Per application
S185 – Security requirements (developer diversions)	See below	Non-contestable	Per application

Security requirements

For developer delivered diversion projects we require a 100% performance deposit. 80% is returned on completion of the works and the remaining 20% following a 1-year warranty period.

Wastewater connection services

Guide to our charges

From April 2020 we developed a single set of construction charges that apply to lateral drains, connections and new sewers. As we have historically undertaken very few wastewater lateral drains and connections, and the scope of the two activities overlap, we have decided to create a consistent, simplified charging approach for these activities.

New lateral drains and connections

- Lateral drains are the part of the drain that runs from the edge of the property and connects with the sewer
- Sewer connections are usually undertaken under Section 106 of the Water Industry Act through an application for a connection made to us. If approved, work is usually carried out by a drainage contractor on behalf of the applicant
- There are charges associated with the Section 106 application process
- On very rare occasions, we may need to undertake connection work ourselves and we would notify you of this following review of your Section 106 sewer connection application
- If we need to carry out this work, we do so under Section 107 of the Water Industry Act and only in those specific circumstances would the fixed construction charges detailed below apply
- If we are required to make the connection, the cost will depend on size, depth and the nature of the surface the pipe is being constructed in
- The charges below should be combined to form the total costs associated with a particular application
- Connections are made by connecting a new pipe directly to an existing sewer, existing manhole or by constructing a new manhole
- If a new manhole is not needed, then the connection to the existing sewer or manhole is included in the pipe laying rate
- Highways charges may apply if we need to work with the local authority to allow us to carry out the construction work. These charges would cover any temporary road, parking bay and pedestrian crossing closures
- Traffic management is included within our standard charges
- We may need to reduce the flow in the existing sewer, so we can make the connection safely. A bespoke additional charge for over pumping the receiving sewer will be applied in these cases
- Sewer connections are deep and must be carried out safely. On some occasions, specialist ground support, such as interlocking sheet piles, may be needed to protect our construction teams and the surrounding areas and properties. If this needed, additional bespoke charges would apply
- In areas where groundwater levels are high, we may need to carry out specialist dewatering. In most cases we can manage this with a small pump, but in some conditions a more specialist approach will be needed. Customers will receive a bespoke estimate for this work should these circumstances arise
- The charges associated with wastewater connections are payable up-front on application and provision of estimates. Work will commence on receipt of payment

Sewer Connections (s106/107)

Section 106/107 application and administration charges

Service	Charge	Contestable / Non-contestable	How is this applied?
S106/107 Application / Administration fee – Connection to existing sewer / manhole (inc. VAT)	£291	Non-contestable	Per connection
S106/107 Application / Administration fee – New manhole construction (inc. VAT)	£373	Non-contestable	Per connection

Sewer adoptions (s104/102)

Section 104 /102 application and administration charges

- If new sewers are needed to drain the new properties, developers usually apply through the Section 104 process and work is carried out by a drainage contractor. Under this approach we will adopt the new sewer once it is complete, providing it meets the required industry standards
- There is a similar approach for adopting already constructed sewers under our Section 102 process
- There are fixed charges associated with the Section 104 and 102 application process

Service	Charge	Contestable / Non-contestable	How is this applied?
S102 - Application Fee (including initial administration) (inc. VAT)	£406	Non-contestable	Per application
S104 - Application Fee (including initial administration) (inc. VAT)	£650	Non-contestable	Per application
S102 / S104 - Technical / Inspection Fee (including final administration)	2.5% of construction value	Non-contestable	Per application
S102 / S104 - Legal Fee	£420	Non-contestable	Per application
S104 - Security	Bond – 10% of construction value	Non-contestable	Per application

Requisitioning a new sewer (s98)

If a developer requires us to carry out the construction of a new sewer, they can make an application through a Section 98 requisition. The developer is responsible for the full cost of requisitioning a sewer. Charges are applied at four defined stages in our process as detailed below.

- **Application Fee** – An initial application fee as outlined on our application form will be required with your application and covers the work in assessing the initial feasibility and producing the preliminary estimate and outline design.
- **Detailed Design Fee** – Should you wish to accept the preliminary estimate and proceed to stage 2 of the design process, a 'Detailed Design fee' equivalent to 10% of the preliminary estimate will be required. This fee will cover further detailed design work including land surveys, site investigations, the tendering of the requisition works and producing the formal offer, estimated construction costs and design. The design fee will be deducted from any final payment due once the requisition is complete.
- **Construction cost** – After you have received the formal offer, costs and design, you will need to accept and pay the construction cost of the works. This will be a single lump sum payment to cover all our costs. Once paid it will cover the project management, onsite construction works and final connection for all works related to the S98 requisition. Under our current charging approach there is an option to pay under the relevant deficit approach, where charges are payable over a 12-year period. Should this be attractive for applicants we will be able to offer a bespoke quotation on that basis. The final charges due may prove to be different to those calculated using the aforementioned method. Additional costs may arise through separate applications related to the development for example if a diversion of a water or sewerage main is required
- **Other charges** - If the requisitioned sewer crosses third party land, there will be a cost for land negotiations and compensation. Our Southern Water Land and Estates team will carry out these negotiations with the landowner and agree the level of compensation to be paid. These costs are the responsibility of the requisitioner.
- In addition to the cost of the requisition, Southern Water levies an infrastructure charge for each new property when it is connected to our public sewerage network. This is detailed earlier within these charging arrangements.
- Where network reinforcement is required to ensure there is enough capacity in our network to serve the new homes that are built, without impacting the service of our existing customers, this will be paid for through our Infrastructure Charge.

Section 98 requisition application charges

Service	Charge	Contestable / Non-contestable	How is this applied?
S98 - Application fee (including initial Administration) (inc. VAT)	£4,911	Non-contestable	Per application
S98 - Design fee*	10% of total project value	Either	Per application
S98 - Point of connection enquiry	£116	Either	Per application

New Site Specific Sewers

- We have set fixed charges for gravity sewers, manhole construction and rising main construction. Costs will vary depending on the size and depth of the sewer
- Our charges include the costs of design, surveys, land-entry, management costs, traffic management and related administration
- The charges also include standard trench support – excavator driven sheet piles and support structures; and groundwater management – through the provision of a localised pump to remove water from a trench
- On some occasions, specialist approaches may be needed, including if the development site contains contaminated material. In such cases we will provide a bespoke estimate

New gravity sewers charges per metre - unmade ground

Pipe size \ Pipe depth	Up to 1.5m	>1.5 - 2.5m	>2.5 - 3.5m	>3.5 - 4.5m
0 - 150mm	£320	£387	£482	£587
>150 - 300mm	£464	£538	£636	£760
>300 - 450mm	£558	£664	£793	£931
>450 - 600mm	£776	£915	£1,042	£1,180
>600 - 900mm	£1,065	£1,194	£1,365	£1,492
>900 - 1200mm	£1,423	£1,591	£1,766	£1,907

New gravity sewers charges per metre – footpath

Pipe size \ Pipe depth	Up to 1.5m	>1.5 - 2.5m	>2.5 - 3.5m	>3.5 - 4.5m
0 - 150mm	£594	£851	£1,153	£1,535
>150 - 300mm	£733	£994	£1,245	£1,674
>300 - 450mm	£823	£1,101	£1,408	£1,842
>450 - 600mm	£1,090	£1,433	£1,783	£2,170
>600 - 900mm	£1,356	£1,754	£2,227	£2,752
>900 - 1200mm	£1,730	£2,265	£2,791	£3,404

New gravity sewers charges per metre - side road

Pipe size \ Pipe depth	Up to 1.5m	>1.5 - 2.5m	>2.5 - 3.5m	>3.5 - 4.5m
0 - 150mm	£628	£873	£1,122	£1,479
>150 - 300mm	£757	£1,016	£1,248	£1,620
>300 - 450mm	£837	£1,178	£1,428	£1,864
>450 - 600mm	£1,115	£1,463	£1,799	£2,313
>600 - 900mm	£1,406	£1,872	£2,292	£2,818
>900 - 1200mm	£1,837	£2,367	£2,873	£3,490

New gravity sewers per metre - main road

Pipe size \ Pipe depth	Up to 1.5m	>1.5 - 2.5m	>2.5 - 3.5m	>3.5 - 4.5m
0 - 150mm	£779	£961	£1,245	£1,628
>150 - 300mm	£902	£1,114	£1,383	£1,773
>300 - 450mm	£996	£1,273	£1,583	£2,011
>450 - 600mm	£1,281	£1,614	£1,970	£2,493
>600 - 900mm	£1,591	£2,005	£2,448	£2,991
>900 - 1200mm	£2,002	£2,557	£3,065	£3,694

New manholes - unmade ground (per manhole)

Manhole size \ Manhole depth	Up to 1.5m	>1.5 - 2.5m	>2.5 - 3.5m	>3.5 - 4.5m
1200mm	£5,675	£6,740	£9,039	£11,001
1350mm	£6,250	£7,413	£9,955	£12,175
1500mm	£6,731	£7,926	£10,950	£13,183
1800mm	£9,269	£11,000	£14,531	£17,588
2100mm	£13,337	£15,717	£19,756	£23,797

New manholes – footpath (per manhole)

Manhole size \ Manhole depth	Up to 1.5m	>1.5 - 2.5m	>2.5 - 3.5m	>3.5 - 4.5m
1200mm	£6,746	£7,914	£10,354	£12,616
1350mm	£7,377	£8,674	£11,374	£13,912
1500mm	£8,025	£9,276	£12,518	£14,960
1800mm	£10,716	£12,800	£14,783	£19,536
2100mm	£15,002	£17,536	£21,869	£23,712

New manholes - side road (per manhole)

Manhole size \ Manhole depth	Up to 1.5m	>1.5 - 2.5m	>2.5 - 3.5m	>3.5 - 4.5m
1200mm	£7,719	£9,109	£11,755	£13,903
1350mm	£8,371	£9,929	£12,828	£15,229
1500mm	£9,058	£10,439	£13,864	£16,103
1800mm	£11,919	£14,132	£17,483	£20,997
2100mm	£16,227	£18,913	£23,304	£27,186

New manholes - main road (per manhole)

Manhole depth Manhole size	Up to 1.5m	>1.5 - 2.5m	>2.5 - 3.5m	>3.5 - 4.5m
1200mm	£8,584	£10,011	£12,680	£14,831
1350mm	£9,366	£10,967	£13,888	£16,292
1500mm	£10,155	£11,579	£15,029	£17,272
1800mm	£13,314	£15,535	£19,114	£22,450
2100mm	£17,900	£20,600	£25,008	£29,303

New rising main - unmade ground (per metre)

Pipe depth Pipe size	Up to 1.5m	>1.5 - 2.5m	>2.5 - 3.5m	>3.5 - 4.5m
0 - 125mm	£295	£349	£447	£565
>125 - 180mm	£313	£372	£473	£585
>180 - 255mm	£355	£419	£527	£638
>255 - 315mm	£404	£474	£587	£722
>315 - 355mm	£459	£539	£673	£812
>355 - 400mm	£510	£595	£741	£897

New rising main – footpath (per metre)

Pipe depth Pipe size	Up to 1.5m	>1.5 - 2.5m	>2.5 - 3.5m	>3.5 - 4.5m
0 - 125mm	£530	£753	£1,039	£1,393
>125 - 180mm	£577	£803	£1,060	£1,417
>180 - 255mm	£629	£853	£1,095	£1,457
>255 - 315mm	£697	£942	£1,146	£1,627
>315 - 355mm	£824	£1,064	£1,283	£1,718
>355 - 400mm	£886	£1,154	£1,451	£1,874

New rising main – side road (per metre)

Pipe depth Pipe size	Up to 1.5m	>1.5 - 2.5m	>2.5 - 3.5m	>3.5 - 4.5m
0 - 125mm	£528	£768	£1,034	£1,381
>125 - 180mm	£547	£828	£1,055	£1,405
>180 - 255mm	£601	£869	£1,090	£1,456
>255 - 315mm	£718	£956	£1,182	£1,627
>315 - 355mm	£781	£1,057	£1,402	£1,893
>355 - 400mm	£862	£1,178	£1,513	£1,960

New rising main – main road (per metre)

Pipe size \ Pipe depth	Up to 1.5m	>1.5 - 2.5m	>2.5 - 3.5m	>3.5 - 4.5m
0 - 125mm	£694	£870	£1,125	£1,488
>125 - 180mm	£688	£907	£1,147	£1,513
>180 - 255mm	£734	£936	£1,196	£1,554
>255 - 315mm	£833	£1,069	£1,307	£1,722
>315 - 355mm	£923	£1,192	£1,522	£2,000
>355 - 400mm	£1,008	£1,315	£1,634	£2,067

Diverting a sewer (s185)

The below information relates to our charges where our existing assets require diverting to permit a development.

- Developers with an interest in land that contains existing water or sewerage assets can arrange for the alteration or removal those assets to allow development work to progress
- For both water mains and sewers this is undertaken under Section 185 of the Water Industry Act
- All or part of the diversion works may be contestable, in which case we will give the developer the opportunity to undertake the works, or employ a suitably qualified third-party contractor to undertake these elements
- The decision on who undertakes the construction is based on the risk of the work and asset criticality ratings
- Applicants can visit our [website](#) or contact our Business Channels team for advice ahead of application
- Alternatively, should a developer delivered diversion be assessed as needing to be delivered by Southern Water, we will only charge the differential in application fees
- We do not offer published fixed charges for construction activities in this area. We will keep this under review
- We will provide a bespoke estimate for each project. The applicant will be free to choose how to proceed on provision of estimates at key stages
- We will utilise information from both our estimating database and supplier contracts at the early stages of the process to provide these bespoke estimates. As the design progresses, we will further engage with our suppliers to deliver an increasingly detailed and accurate quotation for the defined scope of the work required
- The estimates may be different to the requisition published charges due to the individual nature of each site
- The charges associated with diversions are payable up-front and following the provision of estimates.

Service	Charge	Contestable / Non-contestable	How is this applied?
S185 - Application Fee (developer wastewater diversion) (inc. VAT)	£392.23	Non-contestable	Per application
S185 - Application Fee (Southern Water wastewater diversion) (inc. VAT)	£2333.22	Non-contestable	Per application
S185 - Design Fee (Southern Water diversion)	10% of total project value	Non-contestable	Per application
S185 – Technical Assessment Fee (developer diversion)	£592	Non-contestable	Per application
S185 – Inspection Fees (developer wastewater diversion)	2.5% of construction value	Non-contestable	Per application
S185 – Legal Fees (developer wastewater diversion)	£420	Non-contestable	Per application
S185 – Security requirements (developer diversions)	See below	Non-contestable	Per application

Security requirements

For developer delivered diversion projects we require a 100% performance deposit. 80% is returned on completion of the works and the remaining 20% following a 1-year warranty period.

Gravesham Borough Council

Site Specific charges – general information

Exceptions to fixed charges

The charges in this document are predominantly fixed charges. On some occasions, the costs associated with laying new water mains and sewers (requisitions) may be more complex and challenging, in which case it will be difficult to provide a fixed charge.

This could include circumstances where:

- The technical complexity of the work is high, or the type of work required is bespoke or carried out infrequently
- Third parties can legitimately recover their costs from companies and there is not a reasonable level of certainty of those costs in advance of connection work being undertaken
- Third parties have rights to protect their assets or interests in a way that affects the construction method. The third parties' requirements are unknown upfront
- The work is to be carried out on or close to land with particular environmental, historical or archaeological characteristics. These characteristics mean that specific measures are required during construction or reinstatement. The details of these measures may not be fully defined in advance of construction.

Where the above circumstances occur, we may be unable to provide a fixed upfront charge for the entire works, and will provide a budget estimate comprising a mixture of:

- Indicative or estimated charges for the elements of works affected by the circumstances above, and;
- Fixed upfront charges for the elements of the work where there is sufficient certainty and it is reasonable to do so.

There may be occasions where providing an indicative estimate is not possible or where the estimate will not meet the degree of confidence desired by the applicant. In these cases, we will work with the applicant to agree the best way to proceed.

Some specific examples of where exceptions could apply include:

- Management and disposal of contaminated material
- Extraordinary ground support such as interlocking sheet piles
- Extraordinary groundwater control such as deep wells or well pointing
- Excavation of rock or artificial obstructions
- Excavation and reinstatement of concrete highways
- Extraordinary pipe bedding requirements (such as piling)
- Costs associated with land compensation or loss of profit
- Statutory undertakers' diversions
- Tunnelling and trenchless installation techniques such as directional drilling or auger-boring
- Pumping stations and installations
- Costs of permits, permissions and supervision associated with rail crossings, canal or river crossings, major highway crossings
- Costs associated with 'immune bodies' where our statutory powers may not apply
- Bespoke legal agreements such as Deed of Grant Easement or Transfer of Pumping Stations where not included within the routine agreements or processes

The above list is not exhaustive but reflects some typical examples that may fall into the principles outlined above. The examples are generally highly site and context specific. The frequency with which these occur is also difficult to predict. Including these types of circumstance in standard charges would be challenging and could adversely affect the charges incurred by all applicants.

Reassessment of charges

For all of the Site-Specific charges, where there is significant variation of primary quantities of 15% or more from the upfront quotation, we will recalculate the charges in line with adjusted quantities based on the detailed charges published within this document.

Differences in the charges

In the different categories of Site-Specific charges there are different charges for what appear to be similar activities. There are two major reasons behind this:

- We use different delivery partners for different types of work. Connections and simple works are generally delivered using different partners to more complex, risky construction works. There are different costs associated with this
- For some simple items there are very low costs in terms of management effort, or the costs are in different charges. An example is water connections where the internal costs for managing the work are covered by our application and administration charges. For more complex elements of work, the charges include all costs associated with project management, design, site investigation, existing customer management, dealing with external stakeholders and permitting, securing planning permission and other similar activities. Due to the way that the charges have been developed these are included within the charge items to make the charges as user-friendly as possible.

Sewer and water network plans & maps

To assist our Developer Services customers in planning their works, it is possible to request an extract of our network plan. We now partner with digdat to provide copies of our network plans. There are a range of pricing options dependant on the options selected by the customer.

Further information can be found on our website [sewer and water maps](#)

Section 4: Charges for SLPs and NAVs

General Guidance

In January 2021, Ofwat introduced a standard practice across the water industry in England for water companies to follow when adopting self-laid mains.

This standard practice is known as the water code for adoption and is also referred to as 'the codes'. You can find out more about the codes here on the [Water UK website](#).

More details can be found on our website [Self Lay Schemes](#)

Charges for SLPs

Section 51 SLP point of connection application, enquiry, administration, and design checking charges

Service	Charge	Contestable / Non-contestable	How is this applied?
S51 – Agreement, Design Check / Approval and Vesting Fee (SLP undertakes design)	£541	Non-contestable	Per adoption agreement
S51 – Water Mains Design Check / Approval Fee (re-designs)	£214	Non-contestable	When required
S51 – Point of Connection Application including level 2 capacity check application – 0 to 50 units (SLP undertake design)	£269	Non-contestable	Per application
S51 – Point of Connection Application including level 2 capacity check application – 51 to 250 units (SLP undertake design)	£805	Non-contestable	Per application
S51 – Point of Connection Application including level 2 capacity check application – 251 to 500 units (SLP undertake design)	£1072	Non-contestable	Per application
S51 – Point of Connection Application including level 2 capacity check application – >500 units (SLP undertake design)	£1,341	Non-contestable	Per application

Administration and Application Charges for SLPs – SLF F5

Service	Charge	Contestable / Non-contestable	How is this applied?
S51 – Self-Laid Application Fee (first connection) (inc. VAT)	£66.17	Non-contestable	Per application
S51 – Self-Laid Application Fee (subsequent connections) (inc. VAT)	£40.13	Non-contestable	Per subsequent connection
S51 – Self-Laid Administration Fee (first connection)	£21.16	Non-contestable	Per application
S51 – Self-Laid Administration Fee (subsequent connections)	£13.11	Non-contestable	Per subsequent connection

Construction Rates

From time to time, SLP's will ask us to deliver some work on their behalf for example, connecting a newly laid main delivered by an SLP to an existing large-diameter main. SLP's are offered the same rate as published above in our section "Charges for new water mains" on page 23.

NAVS

NAV Application Charges

Our NAV application charges include charges for both supply and waste charges.

These charges are inclusive of VAT.

NAV Application Charges	Waste	Water
0-50 units	£178	£178
51-250 units	£536	£536
>251 units	£715	£715

Section 5: General Information

Validity Period of Quotations and Transitional Arrangements

After consultation with our Developer Customers, we have developed transitional arrangements for projects and developments that straddle the implementation of the new charging approach.

Infrastructure Charges

- Infrastructure Charges will be chargeable at the gross charge applicable for the year that the property connects to the network
- Income Offsets will be applied to the Infrastructure Charge in cases where the development has not previously received a form of Income Offset (associated with requisitions, Asset Payments or Income Offset equivalents for NAVs)
- The 'old' Infrastructure Charge will continue to apply in the circumstances detailed within 'Historic transitional agreements' detailed below

Site Specific Charges

- The standard validity period of a quote is 3 months.
- We will provide quotations and estimates based on our 2021/22 Charging Arrangements until the 31st March 2022
- For quotes issued between 1st January 2022 to 31st March 2022 we will accept a 6 month validity period for estimates issued for Site Specific activities instead of our standard 3 months validity period
- We will provide quotations and estimates based on our 2022/23 Charging Arrangements from the 1st April 2022
- Minor changes, updates or alterations to existing agreements will be based upon the Charging Arrangements that applied to the year that the agreement was made
- Minor changes, updates or alterations are considered to be a less than 15% change to the primary quantities (properties connected, metres of pipe, value of order etc)
- Larger changes would result in the requirement for a new agreement based upon the current years Charging Arrangements
- Should a customer request a re-quotation under the 2022/23 Charging Arrangements, this will become the quote that the customer must accept

Historic transitional arrangements

We worked with our stakeholders and Water UK to agree a set of principles by which we based our charges during the 2017-18 to 2018-19 transition period. The transition principles for this period are set out below.

Infrastructure Charges

- Following the removal of Condition C in March 2022, all connections made to the Southern Water network, other than those which have legacy agreements, will be charged in accordance with the new Infrastructure Charge as defined in Ofwat's Charges Scheme Rules

Site Specific Charges

- Applications received between 1st February 2018, and the 31st March 2018 for Site Specific mains and sewer work that will be carried out after 1st April 2018, will be quoted on either the old rules, or Ofwat's Charging Rules for New Connection Services. Developers and SLPs will be invited to choose their preferred method
- Applications received between 1st February 2018, and the 31st March 2018 for Site Specific new property connections that will be carried out after 1st April 2018, will be quoted under the old approach due to the volumes of applications. From the 1st April 2018 quotations will be made under the new charging approach
- Developers or SLPs that have received a quotation or draft adoption agreement under the old rules, but have not formally accepted can re-apply after the 1st February 2018 for a quotation in accordance with Charging Rules for New Connection Services
- Quotations for some Site Specific work provided under the old rules, and accepted before 1st April 2018 are to continue to apply until 1st April 2023 unless the Developer Services customer and the company agree to vary the quotation
- Where a legal agreement is already in place in relation to charges for Site Specific work carried out as part of an adoption, then the charges defined within that agreement remain valid for the life of the agreement unless the Developer Services customer and the company agree to vary those charges
- Charges relating to the old charging rules, will be adjusted by inflation if the quotation or legal agreement includes an appropriate provision for adjusting the charges.
- All our quotations under the new charging arrangements have a fixed period of validity. This validity period is detailed on the quotation that is supplied to all Developer Services customers. Should the Developer Services customer not progress within the validity period, it may be necessary to issue an updated quotation for the application

Timings and Methods of payment

Water

Water Connections

Water connection application fees are payable up-front at the time of application.

Administration fees are payable along with the construction fees on the acceptance of the quotation. These are again paid up-front.

Water Mains Laying

Application fees are payable up-front at the time of application.

Any further fees are payable following the issue of the Site-Specific quotation. These fees are generally paid up-front ahead of construction work progressing.

Water Infrastructure Charges

Water infrastructure charges are generally payable on connection. We are happy to discuss advance payment, but in these circumstances, customers must pay both Water and Wastewater Infrastructure Charges when we supply both services. Customers must also be aware that charges can go up and down and therefore there is an element of risk that customer is taking when paying in advance.

Water Income Offset

The water Income Offset is payable at the same time as the Infrastructure Charge.

Wastewater

Wastewater Connections

Wastewater connection application fees are payable up-front at the time of application.

Construction fees (if applicable) are payable up-front on the acceptance of the quotation.

Wastewater Site Specific Sewer Laying

Application fees are payable up-front at the time of application.

Any further fees are payable following the issue of the Site-Specific quotation. There is generally a two-stage approach given the complexity of these projects.

Wastewater Infrastructure Charges

Wastewater infrastructure charges are generally payable on connection. Invoices are issued on a routine basis during the lifespan of the development to the applicant. We measure connected properties via the registering of meters associated with the properties. We are happy to discuss advance payment, but in these circumstances, customers must pay both Water and Wastewater Infrastructure Charges when we supply both services. Customers must also be aware that charges can go up and down and therefore there is an element of risk that customer is taking when paying in advance.

Wastewater Income Offset

The wastewater Income Offset is payable at the same time as the Infrastructure Charge.

Methods of Payment

We accept BACs, credit and debit cards and cheques for payment for our services. Further details can be found on our Get Connected portal or via the 'Ways to Pay' information that is delivered with our quotations.

How did we calculate the charges?

Infrastructure Charges

Our gross infrastructure charges use a rolling 5-year forecast to distribute the cost of forecast network reinforcement evenly between the anticipated number of new connections. As part of this equation, we apply a correction mechanism which considers recent over/under recovery and adjusts the gross charge appropriately. We report our current performance of over/under recovery in table 2K of our Annual performance report (APR).

We then calculate an income offset to reflect and maintain the historic balance of contributions.

The income offset is calculated through applying the typical pre-2018 recovery rates to current forecasts. The difference between the two represents the total value of the offset. We divide this number between the anticipated numbers of new connections to produce a unit rate.

The net charge is therefore the product of the gross charge and income offset.

Water

Site Specific charges - new property connections

A significant amount of work was undertaken to calculate the 2020/21 site specific charges. For new individual property connections, we analysed 12 months of new connections data. This involved nearly 7000 property connections, ensuring a significant population of data to base the new charges upon. We categorised the costs into the new standard categories, along with the number of new water meters (aligned with properties). This allowed us to develop the per water meter (property) average costs.

For larger diameter connections (63mm and above), we undertook the same approach, but adjusted to consider those connections that were related to flats with internal meters, as these were increasing the unit costs.

The costs for additional pipework and barrier pipe for contaminated land closely correlate to the direct costs in proving these activities.

Traffic management costs were developed by using a selection of traffic management costs and building up a unit average. There was a high degree of cost fluctuation within this area. We will continue to collect data to ensure that this remains as representative as possible.

The charges reflect the relevant costs of providing the work. All Southern Water costs are recovered through the application and administration fees. No Southern Water overheads are applied to the construction costs for service connections.

The 2020 charges were uplifted by CPI (0.3%)

The 2021/22 charges were calculated in the same way as 2020/21 detailed above. The only change to the 2021/22 charges was an uplift of 0.3% (CPI). The charges for 2022 have again been uplifted by CPI (5.1%). This is in line with contractual uplift the Contractors are entitled to under the Framework Contracts.

Site Specific charges - water mains

The charges for laying new water mains were derived by analysing over 100 historic projects to develop all-inclusive unit charges for mains laying activities. The sites included nearly 90,000 metres of water mains installed, again generating a significant data set to drive accuracy. For each pipe size we recorded total length and how many valves and hydrants were installed. By applying our suppliers' standard rates, this allowed us to calculate a unit charge per metre.

Connections in most cases are a standard operation and the charges are based upon a bottom-up estimate. The charges include installation of a valve and hydrant per connection, at the request of the SLP community, so the same charge will apply to different classes of Developer Services customer.

Meters and pressure reducing valves are based on a bottom-up estimate. These include for a by-pass.

The costs for additional pipework and barrier pipe for contaminated land closely correlate to the direct costs in providing these activities.

Traffic management charges were developed by using a selection of traffic management costs and building up a unit average. There was a high degree of cost fluctuation within this area. We will continue to collect data to ensure that this remains as representative as possible.

Uplifts for project management, management of external constraints and administration costs are added to the base construction rates to ensure the charges cover all the costs associated with the provision of the infrastructure.

The charges reflect the relevant costs of providing the work, including administration and project management. There are no corporate overheads applied to these charges.

Wastewater

Site specific charges - new lateral drains, connections, and new sewers

We very rarely construct new lateral drains and connections for our Developer Services customers. This work is generally undertaken directly by applicants and their drainage contractors. Due to this reason we have removed our bespoke Wastewater connections charges and combined into the updated new sewer (requisition) charges.

The charges for laying new sewers are categorised into 3 main areas – gravity pipe laying, manholes and rising main laying. Upper limits on pipe sizes and depths are included, which should cover most activities that Developer Services customers would request in this area.

The base construction rates are aggregated AMP7 suppliers' rates for the activities specified. We include uplifts for Southern Water activities including design, project management and the management of third party activities.

This allows for an all-inclusive charge that, in turn, allows the Developer Services customer to identify the total cost of an activity using information that they would be likely to possess, be able to estimate, or make sensible assumptions around (for example metres or pipe, sizes, depths and number of manholes).

In this case, as traffic management is often unavoidable, traffic management is included within the charges.

The charges reflect the relevant costs of providing the work, including administration and project management. There are no corporate overheads applied to these charges.

Contact Us:

If your enquiry is related to Developer Services, in the first instance contact our Service Desk team 0330 303 0119 option 5 or email us at developerservices@southernwater.co.uk.

If you have a specific issue relating to an ongoing project:

Wastewater Services: Technical Manager:

graham.dunn@southernwater.co.uk

Water Services: Technical Manager:

sathikaran.amuthaseelan@southernwater.co.uk

Project Delivery:

peter.simmons@southernwater.co.uk

If you have a specific issue relating to our charges or how they have been calculated, please contact:
newconnectioncharging@southernwater.co.uk

Appendices

Appendix i – Additional Services

Our Charging Arrangements sets the charges payable in respect of:

- Water and Wastewater Infrastructure Charges and Offset Charges
- The provision of New Mains and New Sewers
- The provision of Service Connections, Lateral Drains and Wastewater Connections
- Adoption Agreements, Self-Lay Agreements and Diversions

Below are other charges for services which are offered to customers, please note all charges in this section only are inclusive of VAT:

Build Over a Sewer

If you are building a new property or extension you will need to ensure it does not affect our public sewer mains. Therefore, if your proposals mean building over/near (within 3 metres) a public sewer or lateral drain you will need our approval before doing so and required to submit an application form.

	Charges
Build Over Application Fee	£720

Odour Impact Assessments

From April 2021 Southern Water will apply charges for odour assessment services where developments are located in an area perceived to be at risk of odour nuisance in the vicinity of a wastewater treatment works (WwTW).

Southern Water's standard position will be to require an odour risk assessment for developments in the vicinity of wastewater treatment assets. We apply a precautionary buffer zone, for developments located within 500 metres of the site boundary, is assumed in lieu of an odour assessment. However exceptions to this precautionary approach may apply based on historical complaints or local issues.

We would request that an odour assessment, using dispersion modelling tools, is carried out by an experienced odour specialist. The scope of the assessment is to be agreed in advance taking into account Southern Water's internal assessment protocol and technical standards. Due to the potential for odour emissions from wastewater processes, we recommend that all sensitive receptors should be located outside the $1.5 \text{ ou}_{\text{EM}}^{-3}$ (expressed as the 98th percentile of hourly averages on an annual basis).

Our overall aim is to work with developers to produce a consistent odour assessment which is acceptable to all parties and suitable for planning submission.

To achieve this we will:

- Provide ongoing contact and information exchange with the developer;
- Ensure Southern Water guidance and technical standards are communicated and effectively applied;
- Provide site information necessary for the assessment (such as relevant odour history, layout, boundary details, treatment process details);
- Arrange access to site and establish contact with site based operational staff;
- Discuss and agree any assessment scope;
- Assist in the identification of odour sources and sampling requirements;
- Highlight health and safety requirements, associated risk assessments and work permits required prior to gaining access to site; and
- Review third party odour assessments and provide constructive feedback. The review will look to make a recommendation to either:
 - Accept the report and its recommendations; or
 - Identify areas that require addressing by the developer or their consultant in order to be recommended for acceptance by SW.

On occasions, where development is identified as constrained by odour, SW remain open to discuss any proportionate and reasonable odour mitigation options that could be applied to facilitate development. Associated discussions and charges are excluded from those stated in this document.

Table 1 details the fixed cost for handling developer enquiries, scope discussions, site visits, review and consultations. Payment will be made up front against an agreed scope of involvement and reviewed should additional involvement or repeat task be required.

A fee to recover any development related costs for additional and necessary tasks can be discussed where required.

References:

- SW Technical Standards document PSWWT 4022 i10 (will be provided on request)

Table1 List of project tasks

Task Ref	Task description	Charge (exc. VAT)
1. Odour Assessment – Consultation & review	• Agreement of assessment scope • Handle information requests • Review of submitted odour assessment by Developer • Consultation and feedback • Excluding Site visit/survey (see below)	£1,462
2. Site Visit (where required)	• Access requirements and attendance – 1 day	£300
3. Site Survey (where required)	• Agreement of Scope of survey (visit) • Organisation (access arrangement and requirements) • Review of method statement and Health & Safety arrangements • Attendance – Up to 2 days	£360

Pre-planning Enquiry Water

When you are planning to connect to our water network, you can check if there is available capacity at your point of connection. A Pre-planning Enquiry will assist in identifying any possible capacity constraints that may be associated with servicing your development site.

For sites with over 500 units we'd recommend applying for a Point of Connection application.

Pre -planning Enquiry Water	Charge
0-50 units	£178
51-250 units	£536
>251 units	£715

Appendix ii – Worked Examples

Scenario 1: Single connection to a new house from an existing main

Scenario 1: Single connection to a house from an existing main									Alternative Delivery Method	
Application Charge	Item	Unit	Qty	2022 Uplift	Total Charge (£)	Barrier Pipe Uplift/Rate	Barrier Pipe Total Charge (£)	Contestable? (Y/N)	Self-Lay Rate (£)	Self-Lay Total Charge (£)
	Pre-Construction Charge									
Y	Application Fee per application	Per Application	1	£71.63	£71.63	NA	0	N	£55.14	£55.14
Y	Administration Fee	Per Application	1	£32.93	£32.93	NA	0	N	£17.63	£17.63
Y	Design Fee	Per Application	0		£0.00	NA	0	Y	NA	£0.00
	Construction Charges									
Y	Connection	Per Connection	1	£777.00	£777.00	£128.00	£128.00	Y	NA	£0.00
Y	Pipework Road	Per meter	0	NA	£0.00	NA	£0.00	Y	NA	£0.00
Y	Traffic Mngmt	Per TM Usage	0	NA	£0.00	NA	£0.00	Y	NA	£0.00
Y	Meters	Per Connection	0	NA	£0.00	NA	£0.00	Y	NA	£0.00
	Other Charges									
Y	Water Regs		1	£86.00	£86.00	NA	£0.00	Y	NA	£0.00
Y	S106 vetting fee Admin&Application Fee		1	£291.00	£291.00	NA	£0.00	N	NA	£0.00
	Infrastructure Charges									
Y	Infrastructure Charges - Water		1	£0.00	£0.00	NA	£0.00	N	£0.00	£0.00
Y	Infrastructure Charges - Sewerage		1	£608.00	£608.00	NA	£0.00	N	£608.00	£608.00
	Income Offset									
Y	Income Offset Water		1	-£213.00	-£213.00	NA	£0.00	N	-£213.00	-£213.00
Y	Income Offset Sewerage		1	-£193.00	-£193.00	NA	£0.00	N	-£193.00	-£193.00
	Totals				£1,460.56		£1,588.56			£274.77

Scenario 2: Single connection to a block of flats from an existing main

Scenario 2: Single connection to a block of flats from an existing main									Alternative Delivery Method	
Application Charge	Item	Unit	Qty	Rate (£)	Total Charge (£)	Barrier Pipe Uplift/Rate	Barrier Pipe Total Charge (£)	Contestable? (Y/N)	Self-Lay Rate (£)	Self-Lay Total Charge (£)
	Pre-Construction Charge									
Y	Application Fee (First Connection)	Per Application	1	£71.63	£71.63	NA	£0.00	N	£55.14	£55.14
Y	Application Fee (Subsequent Conns)	Per Additional Conn	9	£43.73	£393.57	NA	£0.00	N	£33.44	£300.98
Y	Administration Fee (First Connection)	Per Application	1	£32.93	£32.93	NA	£0.00	N	£17.63	£17.63
Y	Administration Fee (Subsequent Conns)	Per Additional Conn	9	£20.10	£180.90	NA	£0.00	N	£10.93	£98.33
Y	Design Fee	Per Application	1	£214.40	£214.40	NA	£0.00	Y	£0.00	£0.00
	Construction Charges									
Y	Large Diameter Connection 63mm	Per Connection	1	£2,529.00	£2,529.00	£128.00	£128.00	Y	NA	£0.00
	Traffic Mngmt	Per TM Usage	0	£0.00	£0.00	£0.00	£0.00	Y	NA	£0.00
Y	Meters	Per Connection	9	£73.57	£662.13	£0.00	£0.00	Y	NA	£0.00
	Other Charges									
Y	Water Regs (first of every ten plots)	Per Plot	1	£86.00	£86.00	NA	£0.00	Y	NA	£0.00
Y	Water Regs (subsequent conns)	Per Plot	9	£6.00	£54.00	NA	£0.00	Y	NA	£0.00
Y	S106 vetting fee Admin&Application Fee	Per Application	1	£291.00	£291.00	NA	£0.00	N	NA	£0.00
	Infrastructure Charges									
Y	Infrastructure Charges - Water	Per Plot	10	£0.00	£0.00	NA	£0.00	N	£0.00	£0.00
Y	Infrastructure Charges - Sewerage	Per Plot	10	£608.00	£6,080.00	NA	£0.00	N	£608.00	£6,080.00
	Income Offset									
Y	Income Offset Water	Per Plot	10	-£213.00	-£2,130.00	NA	£0.00	N	-£213.00	-£2,130.00
Y	Income Offset Sewerage	Per Plot	10	-£193.00	-£1,930.00	NA	£0.00	N	-£193.00	-£1,930.00
	Totals				£6,535.56		£6,663.56			£2,492.08

Scenario 3: Medium Development 50 Houses

Scenario 3: Medium Development 50 Houses									Alternative Delivery Method			
Applicable Charge	Item	Unit	Qty	Rate (£)	Total Charge (£)	Barrier Pipe Uplift/Rate (£)	Barrier Pipe Total Charge (£)	Contestable? (Y/N)	Self-Lay Rate (£)	Self-Lay Total Charge (£)	NAV Rate (£)	NAV Total (£)
Pre-Construction Charge Connection												
Y	Application Fee (First Connection)	Per Application	1	£71.63	£71.63	NA	£0.00	N	£55.14	£55.14	NA	£0.00
Y	Application Fee (Subsequent Conns)	Per Additional Conn	49	£43.73	£2,142.77	NA	£0.00	N	£33.44	£1,638.64	NA	£0.00
Y	Administration Fee (First Connection)	Per Application	1	£32.93	£32.93	NA	£0.00	N	£17.63	£17.63	£32.93	£32.93
Y	Administration Fee (Subsequent Conns)	Per Additional Conn	49	£20.10	£984.90	NA	£0.00	N	£10.93	£535.33	NA	£0.00
	Design Fee	Per Design	0		£0.00	NA	£0.00	Y	NA		NA	£0.00
	NAV Application fee	Per Design	0	£0.00	0	NA	£0.00	Y	NA	£0.00	£178.00	£178.00
Pre-Construction Charge Mains												
Y	Mains Application, Administration, Collaborative Design	Per Application	1	£1,471.00	£1,471.00	NA	£0.00	Y	£541.00	£541.00	NA	£0.00
Y	Adminstration	Per Application	0	£0.00	£0.00	NA	0	Y		£0.00	NA	£0.00
Y	Design Fee	Per Design	0	£0.00	£0.00	NA	£0.00	Y		£0.00	NA	£0.00
Y	POC	Per Application	1	£116.00	£116.00	NA	£0.00	Y	£269.00	£269.00	NA	£0.00
Construction Charges Connection												
Y	Service Connection	Per Connection	50	£242.00	£12,100.00	£49.00	£2,450.00	Y	NA	£0.00	NA	£0.00
	Pipe Work	Per Meter	0	NA	£0.00	NA	£0.00	Y	NA	£0.00	NA	£0.00
	Meter Installation	Per Installation	0	NA	£0.00	NA	£0.00	Y	NA	£0.00	NA	£0.00
Construction Charges Mains												
Y	Mains Connection to 180mm Main	Per Installation	1	£5,178.00	£5,178.00	NA	£0.00	N	£5,178.00	£5,178.00	£5,178.00	£5,178.00
Y	180mm PRV Unmade Ground	Per Installation	1	£13,226.00	£13,226.00	NA	£0.00	Y	NA	£0.00	NA	£0.00
Y	125mm PRV Unmade Ground	Per Installation	3	£11,043.00	£33,129.00	NA	£0.00	Y	NA	£0.00	NA	£0.00
Y	90mm PRV Unmade Ground	Per Installation	1	£10,203.00	£10,203.00	NA	£0.00	Y	NA	£0.00	NA	£0.00
Y	125mm in road including excavation	Per Meter	10	£200.00	£2,000.00	£36.00	£360.00	Y	NA	£0.00	£200.00	£2,000.00
Y	125mm PE in unmade surface with excavation by others	Per Meter	190	£59.00	£11,210.00	£36.00	£6,840.00	Y	NA	£0.00	NA	£0.00
Y	90mm PE in unmade surface with excavation by others	Per Meter	100	£57.00	£5,700.00	£31.00	£3,100.00	Y	NA	£0.00	NA	£0.00
Y	Road Closure	Per TM Usage	1	£1,915.00	£1,915.00	NA	£0.00	Y	£1,915.00	£1,915.00	£1,915.00	£1,915.00
Other Charges												
Y	Water Regs (first of every ten plots)	Per Plot	5	£86.00	£430.00	NA	£0.00	Y	NA	£0.00	NA	£0.00
Y	Water Regs (subsequent conns)	Per Plot	45	£6.00	£270.00	NA	£0.00	Y	NA	£0.00	NA	£0.00
Y	S106 vetting fee Admin&Application Fee	Per Application	1	£291.00	£291.00	NA	£0.00	N	NA	£0.00	£291.00	£291.00
	NAV Application fees for Sewerage	Per Application	NA	£0.00	£0.00	NA	£0.00	Y	NA	£0.00	£178.00	£178.00
Infrastructure Charges												
Y	Infrastructure Charges - Water	Per Plot	50	£0.00	£0.00	NA	£0.00	N	£0.00	£0.00	£0.00	£0.00
Y	Infrastructure Charges - Sewerage	Per Plot	50	£608.00	£30,400.00	NA	£0.00	N	£608.00	£30,400.00	£608.00	£30,400.00
Income Offset												
Y	Income Offset Water	Per Plot	50	-£213.00	-£10,650.00	NA	£0.00	N	-£213.00	-£10,650.00	-£213.00	-£10,650.00
Y	Income Offset Sewerage	Per Plot	50	-£193.00	-£9,650.00	NA	£0.00	N	-£193.00	-£9,650.00	-£193.00	-£9,650.00
Totals					£110,571.23		£123,321.23			£20,249.74		£19,872.93

Scenario 4: Medium Development 50 Houses Water Company Excavates

Scenario 4: Medium Development 50 Houses Water Company Excavates									Alternative Delivery Method			
Applicable Charge	Item	Unit	Qty	Rate (£)	Total Charge (£)	Barrier Pipe Uplift/Rate (£)	Barrier Pipe Total Charge (£)	Contestable? (Y/N)	Self-Lay Rate (£)	Self-Lay Total Charge (£)	NAV Rate (£)	NAV Total (£)
Pre-Construction Charge Connection												
Y	Application Fee (First Connection)	Per Application	1	£71.63	£71.63	NA	£0.00	N	£55.14	£55.14	NA	£0.00
Y	Application Fee (Subsequent Conns)	Per Additional Conn	49	£43.73	£2,142.77	NA	£0.00	N	£33.44	£1,638.64	NA	£0.00
Y	Administration Fee (First Connection)	Per Application	1	£32.93	£32.93	NA	£0.00	N	£17.63	£17.63	£32.93	£32.93
Y	Administration Fee (Subsequent Conns)	Per Additional Conn	49	£20.10	£984.90	NA	£0.00	N	£10.93	£535.33	NA	£0.00
	NAV Application fee for supply	Per Design	0	£0.00	0	NA	£0.00	Y	NA	£0.00	£178.00	£178.00
Pre-Construction Charge Mains												
Y	Mains Application, Administration, Collaborative Design	Per Application	1	£1,471.00	£1,471.00	NA	£0.00	Y	£541.00	£541.00	NA	£0.00
Y	Design Fee	Per Design	0	£0.00	£0.00	NA	£0.00	Y	NA	£0.00	NA	£0.00
Y	POC	Per Application	1	£116.00	£116.00	NA	£0.00	Y	£269.00	£269.00	NA	£0.00
Construction Charges Connection												
Y	Service Connection	Per Connection	50	£306.00	£15,300.00	£128.00	£6,400.00	Y	NA	£0.00	NA	£0.00
	Pipe Work	Per Meter	0	NA	£0.00	NA	£0.00	Y	NA	£0.00	NA	£0.00
	Meter Installation	Per Installation	0	NA	£0.00	NA	£0.00	Y	NA	£0.00	NA	£0.00
Construction Charges Mains												
Y	Mains Connection to 180mm Main	Per Connection	1	£5,178.00	£5,178.00	NA	£0.00	N	£5,178.00	£5,178.00	£5,178.00	£5,178.00
Y	150mm PRV Unmade Ground	Per Installation	1	£13,226.00	£13,226.00	NA	£0.00	Y	NA	£0.00	NA	£0.00
Y	100mm PRV Unmade Ground	Per Installation	3	£11,043.00	£33,129.00	NA	£0.00	Y	NA	£0.00	NA	£0.00
Y	80mm PRV Unmade Ground	Per Installation	1	£10,203.00	£10,203.00		£0.00	Y	NA	£0.00	NA	£0.00
Y	125mm PE in road with excavation	Per Meter	10	£200.00	£2,000.00	£36.00	£360.00	Y	NA	£0.00	£200.00	£2,000.00
Y	125mm in footpath with excavation	Per Meter	50	£153.00	£7,650.00	£36.00	£1,800.00	Y	NA	£0.00	NA	£0.00
Y	125mm PE in unmade surface with excavation	Per Meter	140	£112.00	£15,680.00	£36.00	£5,040.00	Y	NA	£0.00	NA	£0.00
Y	90mm PE in unmade surface with excavation	Per Meter	100	£106.00	£10,600.00	£31.00	£3,100.00	Y	NA	£0.00	NA	£0.00
Y	Traffic Mngmt	Per TM Usage	1	£1,915.00	£1,915.00	NA	£0.00	Y	NA	£1,915.00	£1,915.00	£1,915.00
Other Charges												
Y	Water Regs (first of every ten plots)	Per Plot	5	£86.00	£430.00	NA	£0.00	Y	NA	£0.00	NA	£0.00
Y	Water Regs (subsequent conns)	Per Plot	45	£6.00	£270.00	NA	£0.00	Y	NA	£0.00	NA	£0.00
Y	S106 vetting fee Admin&Application Fee	Per Application	1	£291.00	£291.00	NA	£0.00	N	NA	£0.00	£291.00	£291.00
	NAV Application fees for Sewerage	Per Application	0	£0.00	£0.00	NA	£0.00	N	NA	£0.00	£178.00	£178.00
Infrastructure Charges												
Y	Infrastructure Charges - Water	Per Plot	50	£0.00	£0.00	NA	£0.00	N	£0.00	£0.00	£0.00	£0.00
Y	Infrastructure Charges - Sewerage	Per Plot	50	£608.00	£30,400.00	NA	£0.00	N	£608.00	£30,400.00	£608.00	£30,400.00
Income Offset												
Y	Income Offset Water	Per Plot	50	-£213.00	-£10,650.00	NA	£0.00	N	-£213.00	-£10,650.00	-£213.00	-£10,650.00
Y	Income Offset Sewerage	Per Plot	50	-£193.00	-£9,650.00	NA	£0.00	N	-£193.00	-£9,650.00	-£193.00	-£9,650.00
	Totals				£130,791.23		£147,491.23			£20,249.74		£19,872.93

Scenario 5: Large housing development requiring new mains and communication pipes (excavation and reinstatement completed by others)

Scenario 5: Large housing development requiring new mains and communication pipes (excavation and reinstatement completed by others)										Alternative Delivery Method		
Applicable Charge	Item	Unit	Qty	Rate (£)	Total Charge (£)	Barrier Pipe Uplift/Rate (£)	Barrier Pipe Total Charge (£)	Contestable? (Y/N)	Self-Lay Rate (£)	Self-Lay Total Charge (£)	NAV Rate (£)	NAV Total (£)
Pre-Construction Charge Connection												
Y	Application Fee (First Connection)	Per Application	1	£71.63	£71.63	NA	£0.00	N	£55.14	£55.14	NA	£0.00
Y	Application Fee (Subsequent Conns)	Per Additional Conn	199	£43.73	£8,702.27	NA	£0.00	N	£33.44	£6,654.89	NA	£0.00
Y	Administration Fee (First Connection)	Per Application	1	£32.93	£32.93	NA	£0.00	N	£17.63	£17.63	£32.93	£32.93
Y	Administration Fee (Subsequent Conns)	Per Additional Conn	199	£20.10	£3,999.90	NA	£0.00	N	£10.93	£2,174.08	NA	£0.00
	Design Fee	Per Design	0	£0.00	0	NA	£0.00	Y	NA	£0.00	NA	£0.00
	NAV Application fee	Per Design	0	£0.00	0	NA	£0.00	Y	NA	£0.00	£536.00	£536.00
Pre-Construction Charge Mains												
	Mains Application, Administration, Collaborative Design	Per Application	1	£1,550.00	£1,550.00	NA	£0.00	Y	£541.00	£541.00	NA	£0.00
	Design Fee	Per Design	0	£0.00	0	NA	£0.00	Y	£0.00	£0.00	NA	£0.00
Y	POC	Per Application	1	£116.00	£116.00	NA	£0.00	Y	£805.00	£805.00	NA	£0.00
Construction Charges Connection												
Y	Service Connection	Per Connection	200	£242.00	£48,400.00	£49.00	£9,800.00	Y	NA	£0.00	NA	£0.00
	Pipe Work	Per meter	0	£0.00	£0.00	NA	£0.00	Y	NA	£0.00	NA	£0.00
	Meter Installation	Per Installation	0	£0.00	£0.00	NA	£0.00	Y	NA	£0.00	NA	£0.00
Construction Charges Mains												
Y	Mains Connection to 250mm Main	Per Connection	1	£5,742.00	£5,742.00	NA	£0.00	N	£5,742.00	£5,742.00	£5,742.00	£5,742.00
Y	180mm in road with excavation	Per Meter	20	£219.00	£4,380.00	£40.00	£800.00	Y	NA	£0.00	£219.00	£4,380.00
Y	180mm Excavation by others unmade ground	Per Meter	100	£73.00	£7,300.00	£40.00	£4,000.00	Y	NA	£0.00	NA	£0.00
Y	125mm Excavation by others unmade ground	Per Meter	480	£59.00	£28,320.00	£36.00	£17,280.00	Y	NA	£0.00	NA	£0.00
Y	90mm Excavation by others unmade ground	Per Meter	400	£57.00	£22,800.00	£31.00	£12,400.00	Y	NA	£0.00	NA	£0.00
Y	150mm PRV Unmade Ground	Per Installation	1	£13,226.00	£13,226.00	NA	£0.00	Y	NA	£0.00	NA	£0.00
Y	100mm PRV Unmade Ground	Per Installation	5	£11,043.00	£55,215.00	NA	£0.00	Y	NA	£0.00	NA	£0.00
Y	80mm PRV Unmade Ground	Per Installation	2	£10,203.00	£20,406.00	NA	£0.00	Y	NA	£0.00	NA	£0.00
Y	Traffic Mngmt	Per TM Usage	1	£1,915.00	£1,915.00	NA	£0.00	Y	£1,915.00	£1,915.00	£1,915.00	£1,915.00
Other Charges												
Y	Water Regs (first of every ten plots)	Per Plot	20	£82.00	£1,640.00	NA	£0.00	Y	NA	£0.00	NA	£0.00
Y	Water Regs (subsequent conns)	Per Plot	180	£6.00	£1,080.00	NA	£0.00	Y	NA	£0.00	NA	£0.00
Y	S106 vetting fee Admin&Application Fee	Per Application	1	£291.00	£291.00	NA	£0.00	N	NA	£0.00	£291.00	£291.00
Y	S98 Requisition Application	Per Application	1	£4,911.00	£4,911.00	NA	£0.00	N	NA	£0.00	NA	£0.00
Y	S98 POC Application	Per Application	1	£116.00	£116.00	NA	£0.00	N	NA	£0.00	NA	£0.00
Y	20m of gravity sewer in side road	Per Meter	20	£2,313.00	£46,260.00	NA	£0.00	Y	NA	£0.00	£2,313.00	£46,260.00
	NAV Sewerage Application Form	Per Application	0	NA	£0.00	NA	£0.00	N	NA	£0.00	£536.00	£536.00
Infrastructure Charges												
Y	Infrastructure Charges - Water	Per Plot	200	£0.00	£0.00	NA	£0.00	N	£0.00	£0.00	£0.00	£0.00
Y	Infrastructure Charges - Sewerage	Per Plot	200	£608.00	£121,600.00	NA	£0.00	N	£608.00	£121,600.00	£608.00	£121,600.00
Income Offset												
Y	Income Offset Water	Per Plot	200	-£213.00	-£42,600.00	NA	£0.00	N	-£213.00	-£42,600.00	-£213.00	-£42,600.00
Y	Income Offset Sewerage	Per Plot	200	-£193.00	-£38,600.00	NA	£0.00	N	-£193.00	-£38,600.00	-£193.00	-£38,600.00
Totals					£316,874.73		£361,154.73			£58,304.74		£100,092.93

Scenario 6: Large housing development requiring new mains and communication pipes (excavation and reinstatement completed by Water Company)

Scenario 6: Large housing development requiring new mains and communication pipes (excavation and reinstatement completed by Water Company)										Alternative Delivery Method		
Applicable Charge	Item	Unit	Qty	Rate (£)	Total Charge (£)	Barrier Pipe Uplift/Rate	Barrier Pipe Total Charge (£)	Contestable? (Y/N)	Self-Lay Rate (£)	Self-Lay Total Charge (£)	NAV Rate (£)	NAV Total (£)
Pre-Construction Charge Connection												
Y	Application Fee (First Connection)	Per Application	1	£71.63	£71.63	NA	£0.00	N	£55.14	£55.14	NA	£0.00
Y	Application Fee (Subsequent Conns)	Per Additional Conn	199	£43.73	£8,702.27	NA	£0.00	N	£33.44	£6,654.89	NA	£0.00
Y	Administration Fee (First Connection)	Per Application	1	£32.93	£32.93	NA	£0.00	N	£17.63	£17.63	£32.93	£32.93
Y	Administration Fee (Subsequent Conns)	Per Additional Conn	199	£20.10	£3,999.90	NA	£0.00	N	£10.93	£2,174.08	NA	£0.00
	Design Fee	Per Design	0	NA	£0.00	NA	£0.00	N	NA	£0.00	NA	£0.00
	NAV Application fee	Per Design	0	£0.00	£0.00	NA	£0.00	Y	NA	£0.00	£536.00	£536.00
Pre-Construction Charge Mains												
Y	Mains Application, Administration, Collaborative Design	Per Application	1	£1,550.00	£1,550.00	NA	£0.00	N	£541.00	£541.00	NA	£0.00
	Design Fee	Per Design	0	0	£0.00	NA	£0.00	N	NA	£0.00	NA	£0.00
Y	POC	Per Application	1	£116.00	£116.00	NA	£0.00	N	£805.00	£805.00	NA	£0.00
Construction Charges Connection												
Y	Service Connection	Per Connection	200	£306.00	£61,200.00	£128.00	£25,600.00	Y	NA	£0.00	NA	£0.00
	Pipe Work	Per Meter	0	£0.00	£0.00	£0.00	£0.00	Y	NA	£0.00	NA	£0.00
	Meter Installation	Per installation	0	£0.00	£0.00	£0.00	£0.00	Y	NA	£0.00	NA	£0.00
Construction Charges Mains												
Y	Mains Connection to 250mm Main	Per Connection	1	£5,742.00	£5,742.00	£0.00	£0.00	Y	£5,742.00	£5,742.00	£5,742.00	£5,742.00
Y	180mm in road with excavation	Per Meter	20	£219.00	£4,380.00	£38.00	£760.00	Y	NA	£0.00	£219.00	£4,380.00
Y	180mm with Excavation in footpath	Per Meter	100	£185.00	£18,500.00	£38.00	£3,800.00	Y	NA	£0.00	NA	£0.00
Y	125mm with Excavation in unmade ground	Per Meter	480	£118.00	£56,640.00	£34.00	£16,320.00	Y	NA	£0.00	NA	£0.00
Y	90mm with Excavation in unmade ground	Per Meter	400	£111.00	£44,400.00	£29.00	£11,600.00	Y	NA	£0.00	NA	£0.00
Y	150mm PRV Unmade Ground	Per installation	1	£13,266.00	£13,266.00	NA	£0.00	Y	NA	£0.00	NA	£0.00
Y	100mm PRV Unmade Ground	Per installation	5	£11,043.00	£55,215.00	NA	£0.00	Y	NA	£0.00	NA	£0.00
Y	80mm PRV Unmade Ground	Per installation	2	£10,203.00	£20,406.00	NA	£0.00	Y	NA	£0.00	NA	£0.00
Y	Traffic Mngmt	Per TM Usage	1	£1,915.00	£1,915.00	NA	£0.00	Y	£1,915.00	£1,915.00	£1,915.00	£1,915.00
Other Charges												
Y	Water Regs (first of every ten plots)	Per Plot	20	£86.00	£1,720.00	NA	£0.00	N	NA	£0.00	NA	£0.00
Y	Water Regs (subsequent conns)	Per Plot	180	£6.00	£1,080.00	NA	£0.00	N	NA	£0.00	NA	£0.00
	S106 vetting fee Admin&Application Fee	Per Application	1	£277.00	£277.00	NA	£0.00	N	NA	£0.00	£277.00	£277.00
	S98 Requisition Application	Per Application	1	£4,672.80	£4,672.80	NA	£0.00	N	NA	£0.00	NA	£0.00
	S98 POC Application	Per Application	1	£110.00	£110.00	NA	£0.00	N	NA	£0.00	NA	£0.00
	20m of gravity sewer in side road	Per Meter	20	£2,313.00	£46,260.00	NA	£0.00	Y	NA	£0.00	£2,313.00	£46,260.00
Y	NAV Sewerage Application fee	Per Application	0	NA	£0.00	NA	£0.00	N	NA	£0.00	£536.00	£536.00
Infrastructure Charges												
Y	Infrastructure Charges - Water	Per Plot	200	£0.00	£0.00	NA	£0.00	N	£0.00	£0.00	£0.00	£0.00
Y	Infrastructure Charges - Sewerage	Per Plot	200	£608.00	£121,600.00	NA	£0.00	N	£608.00	£121,600.00	£608.00	£121,600.00
Income Offset												
Y	Income Offset Water	Per Plot	200	-£213.00	-£42,600.00	NA	£0.00	N	-£213.00	-£42,600.00	-£213.00	-£42,600.00
Y	Income Offset Sewerage	Per Plot	200	-£193.00	-£38,600.00	NA	£0.00	N	-£193.00	-£38,600.00	-£193.00	-£38,600.00
Totals					£390,670.53		£448,750.53			£58,304.74		£100,092.93

Appendix iii Glossary and defined terms

Where possible we have adopted the industry agreed common terms.

The complete list is available on the Ofwat website [here](#):

Administration Fee means the fee associated with general administration activities, after the cost advice stage, relating to the construction phase, which can include processing any payments, scheduling the works, supervision and project management, and processing information into relevant billing/management systems. This would not include site-based activities covered in construction costs, such as additional site visits. Adoption means the process whereby assets are vested in the water company and subsequently maintained at its expense.

Alternative Point of Connection means another location indicated by the Water Company which is neither i) a practical location indicated by the Developer Customer, nor ii) the nearest practical location where the existing Water Main or Sewer is the same size or larger than the new connecting Water Main or Sewer.

Annual Contestability Summary

means the standard format document published annually (or more frequently) by the Water Company on its website setting out which work and services are Contestable Work and Services and which are Non-contestable Work and Services as described in section 3 of the Water Sector Guidance (see www.water.org.uk/water-sector-guidance-approved-documents/).

Application Fee means the fee levied at point of application, which is associated with upfront application processing, which can include reviewing and acknowledging an application, checking that all relevant information has been received, preparing a cost advice, an agreement or the acceptance for the proposed works.

Barrier Pipe means a polyethylene (PE) pipe with an aluminium barrier layer conforming to water industry specification 4-32-19.

Bond or Surety means a cash bond or financial guarantee underwritten by an appropriate warranty provider, bank or insurance company, which is accepted by the Water Company.

Branch Connection means the connection of new pipework to an existing Water Main such to provide a supply of water to a Development.

Communication Pipe means any part of a Service Pipe which a Water Company could be, or have been, required to lay under section 46 of the Water Industry Act 1991. Typically, it consists of a pipe laid from an existing or newly laid Water Main to the boundary of a property and may include a meter housing and / or external stop valve.

Contaminated Land means land by which a water company will install or request the installation of barrier pipe, following review of the previous use of site, or where proven necessary, in accordance with section 78A of the Environmental Protection Act 1990.

Contestable Work means the work or services that can be completed by either a Water Company or an Accredited Third Party, with the work and services relating to the provision of water supplies defined in each Water Company's Annual Contestability Summary. For work related to new sewerage services, the majority of work is considered contestable, excluding diversions and requisitions.

Design Checking Fee means the cost of checking a design submitted by an Accredited Third Party

Design Fee means the cost of designing against the application, providing a detailed site drawing and design, specification and cost advice. This may also include activities identified in the Administration Fee (such as site visit) if that cost is not already charged by the particular Water Company.

Developer Services means, collectively, the activities associated with serving Developer Customers, which may include the provision of new Water Mains, new Sewers, Communication Pipes, Lateral Drains, diversions of water and sewerage assets and connections made to supply water for building purposes.

Domestic Use means water used primarily for domestic purposes, including for drinking, washing, cooking, central heating and sanitary purposes.

Excavation by Others means any work undertaken by someone other than the Water Company in excavation, backfilling or reinstatement.

Excavation by Water Company means any work undertaken by the Water Company (or an agent acting on their behalf) in excavation, backfilling or reinstatement.

Existing Main means a Water Main or Sewer that was commissioned independently of development commencing.

Far Side Connection means a connection between premises and an existing water main on the opposite side of the street to those premises, to a maximum communication pipe length of distance of 18 metres, for which a straight linear meterage rate is not applied. Where the water main is located in the centre line of the street then the connection will be considered a Far Side Connection.

Fire Supplies means supplies provided solely for fire safety provision.

Fixed Charges means charges which are fixed in amount or which are calculated by reference to a predetermined methodology set out in a Water Company's Charging Arrangements, the application of which allows calculation at the outset of the total amount owing in a given Charging Year in respect of the charges in question. For the avoidance of doubt, a Water Company may impose Fixed Charges by reference to a unit measurement (for example, per megalitre). Furthermore, a Water Company may offer more than one Fixed Charge in charging for a service provided in accordance with the present rules (for example, by differentiating between different geographic areas).

Footpath means a hard-surfaced area intended for use by pedestrian or cyclists.

Household Premises means any premises used principally as a domestic dwelling or intended for such use, such as a house or flat.

Infrastructure Credit means a credit which may be applied when there has previously been a billable account on the same site/address. The eligibility criteria and method of calculating Infrastructure Credits is defined by the Water Company in its Charging Arrangements. This term is autonomous from any incentives applied against the infrastructure charge, for water efficiency for example. These are defined in the term Water Efficiency Incentive.

Infrastructure Charge means the charges described in section 146(2) of the Water Industry Act 1991. That is, a charge paid by the Developer Customer to the Water Company when a property is connected to the company's water supply or sewer network for the first time. The charges fund wider network reinforcement to meet the increased demand arising from the new connections.

Manifold Connection means where a Communication Pipe connects with a manifold to which separate Supply Pipes are connected and meters may be fitted.

NAV means a company appointed by Ofwat through the new appointments and variations process to provide water and/or sewerage services to customers in an area previously served by the incumbent Water Company. A new appointment is made when Ofwat appoints a company for the first time to provide services for specific geographic area. A variation occurs where an existing appointment is varied to amend the area served.

Near Side Connection means a connection between premises and an existing Water Main on the same side of a street to those premises. Where the Water Main is in the centre line of the street then the connection will be considered a Far Side Connection.

Network Assembly means components such as sluice valves or washouts, including associated chambers, needed to operate and maintain a water network.

Network Reinforcement means work to provide or modify such other specified types of infrastructure (mains and tanks, service reservoirs, pumping stations, or sewers) as is necessary in consequence of the need to provide adequate water supply and/or sewerage capacity to a development at which mains, service pipes, public sewers and/or lateral drains have been installed or connected by the company imposing the charge or by a company with whom the company has entered into an agreement for bulk supply or bulk discharge.

Non-contestable Work means work or services that can only be completed by the Water Company (or an agent acting on their behalf) and, in the case of work or services associated with the provision of water supplies, is defined in each Water Company's Annual Contestability Summary.

Non-domestic Use means water used primarily for non-domestic purposes, including anything not for Domestic Use, such as water for industrial or business use (including manufacturing processes, washing and cleaning and cooling), agricultural use and filling swimming pools.

Non-household Premises means any premises not a household premises, being used principally for industrial, business, recreational or community purposes and not as a dwelling, or intended for such use.

Non-standard Connection means a service sized above the standard size as defined by the Water Company.

Phase means a discrete part of a Development which the Developer Customer chooses to separately progress.

Pre-Planning Enquiry means an enquiry submitted by a Developer Customer to understand the infrastructure requirements or considerations for proposed developments.

Pre-Planning Enquiry Response means a report by the Water Company in response to a Pre-Planning Enquiry that will confirm i) if the development can be supplied with water, ii) capacity within the wastewater network, iii) if any reinforcement work will be required to supply the site together, iv) and, if applicable, identify any existing assets crossing the site which may require diverting or protecting, and v) if Network Reinforcement is required to supply the site, what indicative capital cost or range of costs is likely for these works.

Relevant Multiplier means a calculation to determine the Infrastructure Charges payable relating to Non-household Premises or Household Premises subject to a common billing agreement and is based on the number and type of water fittings proposed for those premises.

Road means a hard-surfaced area intended for vehicles.

Self-certification means the activity whereby an Accredited Third Party inspects, checks and certifies installations, both internal and external to a premise, as being compliant with relevant standards and requirements.

Service Connection means the joining of a Service Pipe to a Water Main which is provided under section 45 and 46 of the Water Industry Act 1991.

Service Pipe means a pipe, which is, or is to be, connected with a Water Main for supplying water from that main to any premise.

Sewerage Sector Guidance means guidance documents published in accordance with Ofwat's Code for adoption agreements, relating to the adoption of sewerage assets and available at www.water.org.uk/sewerage-sector-guidance-approveddocuments/.

Supply Pipe means the part of the Service Pipe that is not the Communication Pipe, and which remains the customer's responsibility. This can be seen in Figure 1.

Sustainable Drainage Incentive means, where offered, a reduction in infrastructure charges to a Developer Customer where they evidence that a Development will or does meet a stipulated threshold for use of a sustainable drainage solution, as defined in the Water Company's Charging Arrangements and/or specific environmental policies.

Traffic Management Fees means charges to cover the cost of working in the highway safely as a result of compliance with the Traffic Management Act 2004.

Trial hole means exploratory excavation to identify the location of apparatus, prior to works commencing. Unmade Ground means ground which does not have a man-made surface, and may feature grass and topsoil.

Upsizing means where the Water Company instructs that new Water Mains and/or Sewers are increased in size beyond that required to satisfy the minimum design for a specific Development. This may be to facilitate future development and is deemed Network Reinforcement.

Water Company means a company holding an appointment as a water or sewerage undertaker under the Water Industry Act 1991.

Water Efficiency Incentive means, where offered, a reduction in infrastructure charges to a Developer Customer where they evidence that a Development will or does meet a stipulated threshold for reduced water consumption, as defined in the Water Company's Charging Arrangements and/or specific environmental policies.

Water Industry Registration Scheme (WIRS) means the scheme operated by Lloyd's Register EMEA on behalf of Water UK and its members, which certifies the competence of companies undertaking Self-Lay, or such other scheme as replaces it from time to time.

Water Regs UK means the company responsible for running the Water Industry Approved Plumber Scheme (WIAPS) on behalf of the water industry in England and Wales, formerly provided under the Water Regulations Advisory Scheme. The company promotes compliance with the Water Fitting Regulations 1999 and other relevant standards across the UK to protect customers.

Water Regulations Advisory Scheme (WRAS) means a compliance mark that demonstrates that an item or product complies with standards set out by Water Supply (Water Fittings) Regulations 1999.

Water Sector Guidance means guidance documents published in accordance with Ofwat's Code for adoption agreements, relating to the adoption of water assets and available at www.water.org.uk/water-sector-guidance-approved-documents/.

Gravesham Borough Council

APPENDIX C

Environment Agency Flood Map

Gravesham Borough Council

Flood map for planning

Your reference
Worcester

Location (easting/northing)
563705/170184

Created
6 Sep 2022 14:42

Your selected location is in flood zone 1, an area with a low probability of flooding.

You will need to do a flood risk assessment if your site is **any of the following:**

- bigger than 1 hectare (ha)
- In an area with critical drainage problems as notified by the Environment Agency
- identified as being at increased flood risk in future by the local authority's strategic flood risk assessment
- at risk from other sources of flooding (such as surface water or reservoirs) and its development would increase the vulnerability of its use (such as constructing an office on an undeveloped site or converting a shop to a dwelling)

Notes

The flood map for planning shows river and sea flooding data only. It doesn't include other sources of flooding. It is for use in development planning and flood risk assessments.

This information relates to the selected location and is not specific to any property within it. The map is updated regularly and is correct at the time of printing.

Flood risk data is covered by the Open Government Licence **which** sets out the terms and conditions for using government data. <https://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/>

Use of the address and mapping data is subject to Ordnance Survey public viewing terms under Crown copyright and database rights 2021 OS 100024198. <https://flood-map-for-planning.service.gov.uk/os-terms>

