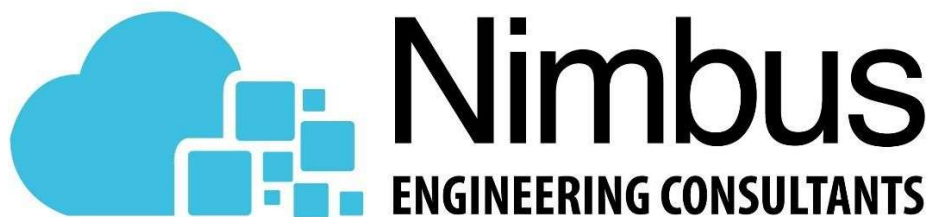


SuDS REPORT FOR
43 LONDON STREET, READING, RG1 4PS

DOCUMENT NUMBER.: C3592-R1-REV-B

PREPARED BY



Contents

1.	INTRODUCTION.....	3
1.1	Appointment	3
1.2	Objectives.....	4
1.3	Limitations	4
2.	GEOLOGY OF THE AREA.....	5
3.	SUSTAINABLE URBAN DRAINAGE SYSTEMS.....	6
4.	SuDS PROPOSALS FOR DEVELOPMENT	10
5.	PROPOSED SOLUTION.....	12
6.	TIMESCALE AND MAINTENANCE OF WORKS.....	13
7.	CONCLUSIONS.....	18

APPENDICES

APPENDIX A - DRAWINGS

APPENDIX B – SURFACE WATER RUN OFF CALCULATIONS & HYDRAULIC MODELLING RESULTS

APPENDIX C – LOCAL WATER AUTHORITY ASSET PLANS

1. INTRODUCTION

1.1 Appointment

Nimbus Engineering Consultants Limited have been appointed to provide a solution for the management of Surface Water runoff and to ensure that there is no risk of flooding caused by the proposed mixed-use development.

Reading Borough Council has imposed the following planning condition, relating to surface water:

“14. No development shall commence on site beyond foundation level until a Sustainable Drainage Strategy and associated detailed design, management and maintenance plan of surface water drainage for the site using SuDS methods has been submitted to and approved in writing by the Local Planning Authority. The plan shall include:

- i a timetable for its implementation, and*
- ii a management and annual maintenance plan for the lifetime of the development which shall include the arrangements for adoption by any public body or statutory undertaker, or any other arrangements to secure the operation of the sustainable drainage scheme throughout its lifetime.*

REASON: *These details are required due to insufficient information being contained within this submission and in order to reduce the risk of flooding onsite or elsewhere in accordance with Policy EN18 of the Reading Borough Local Plan 2019.”*

1.2 Objectives

This report will address the concerns raised by the Borough and provide details on a suitable Sustainable Urban Drainage System (SuDS) in order to reduce the surface water runoff leaving the site and show that the proposed development will not increase Flood Risk at the site, or elsewhere.

1.3 Limitations

The general limitations of this report are:

- A number of data and information sources have been used to prepare this report. Whilst Nimbus Engineering believes them to be trustworthy, Nimbus Engineering is unable to guarantee the accuracy of data and information that has been provided by others;
- This report has been prepared using the best data and information that was available at the time of writing. There is the potential for further information or data to become available, leading to changes in the conclusions drawn by this report, for which Nimbus Engineering cannot be held responsible.

2. GEOLOGY OF THE AREA

According to the British Geological Survey (BGS), the superficial deposits at the site are unknown, as shown in Figure 1, below. However, the proposed development site is surrounded by the Taplow and Kempton Park Gravel Member deposits. The bedrock in the area is of the Seaford and Newhaven Chalk Formations, consisting of Chalk as shown in Figure 2, below.

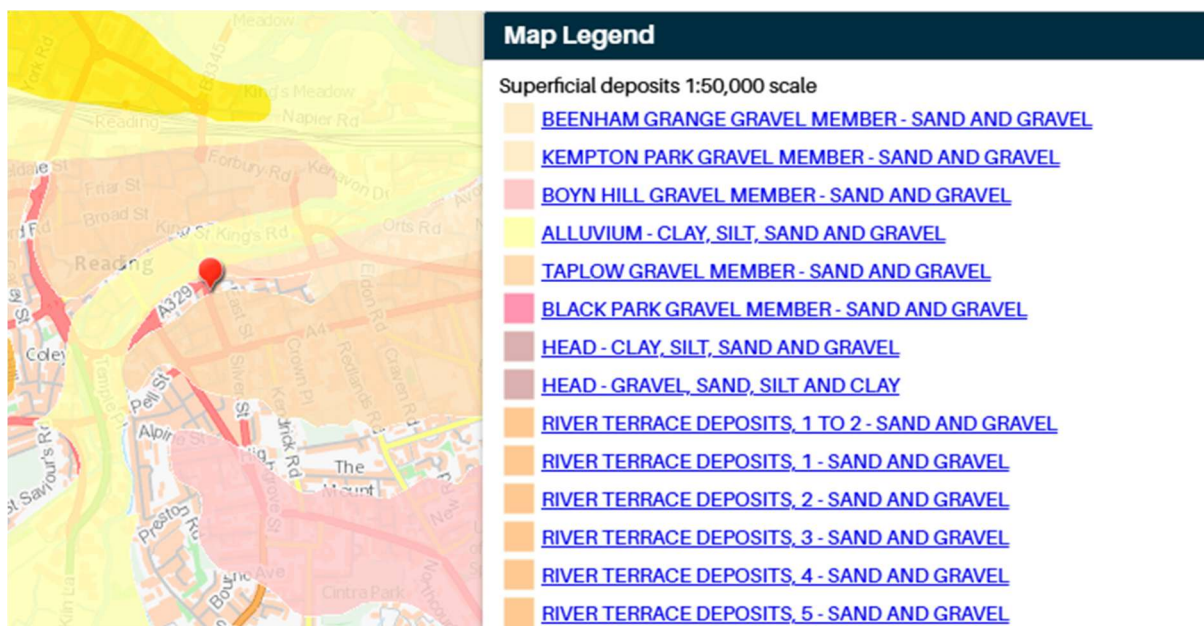


Figure 1- Superficial deposits at the site. (Source: British Geological Society Website (Contains British Geological Survey materials © URKI [2025]. Base mapping is provided by ESRI)).

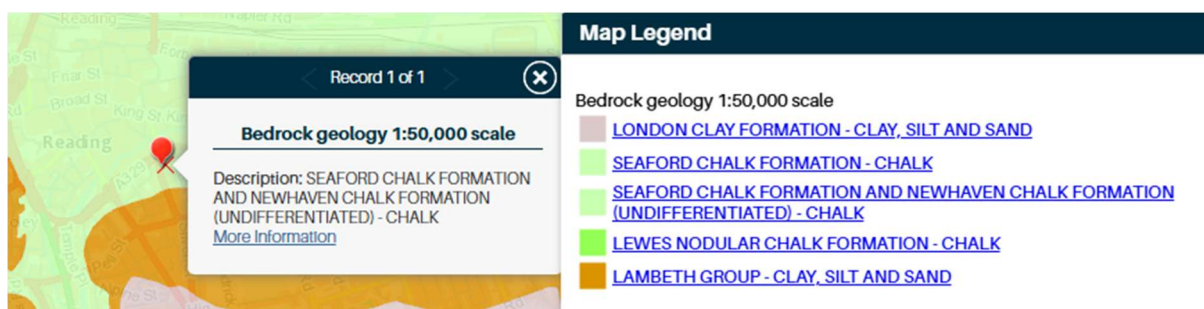


Figure 2- Bedrock at the site. (Source: British Geological Society Website (Contains British Geological Survey materials © URKI [2025]. Base mapping is provided by ESRI))

3. SUSTAINABLE URBAN DRAINAGE SYSTEMS

Surface water arising from a developed site should, as far as is practicable, be managed in a sustainable manner to mimic the surface water flows arising from the site prior to the proposed development, while reducing the flood risk to the site itself and elsewhere, taking climate change into account.

Reducing the rate of surface water discharge from urban sites is one of the most effective ways of reducing and managing flood risk.

Traditional piped surface water systems work by removing surface water from our developments as quickly as possible, however this can cause various adverse impacts:

- Increased downstream flooding, and sudden rises in flow rates and water levels in local water courses.
- Reduction in groundwater levels and dry weather flows in watercourses.
- Reduce amenity and adversely affect biodiversity due to the surface water runoff containing contaminants such as oil, organic matter and toxic materials.

SuDS are defined as a sequence of management principles and control structures designed to drain surface water in a more sustainable fashion than conventional piped drainage techniques. SuDS should utilise the natural landscape of an area which as well as slowing down the rate of runoff provides a number of environmental, ecological and social benefits.

These include:

- Protection and enhancement of water quality. As well as providing on-site attenuation, SuDS treat the water, resulting in an improved quality of water leaving the site. This is achieved when the water passes through fine soils and the roots of specially selected plants. Pollutants washed off the hard landscaping by rainfall will be safely removed before the water reaches the natural receiving water course.
- A sympathetic approach to the environmental setting by providing opportunities to create habitats for flora and fauna in urban watercourses and open spaces.
- Meeting the amenity and social needs of the local community and residents in the creation of attractive green spaces.

The various types of SuDS include:

Permeable paving	
Soakaways;	
Swales and basins;	
Bioretention/ rain gardens;	
Green roofs and rainwater re-use;	

Preferably a combination of these techniques should be used as part of the surface water management train, and it is important for all stakeholders, such as developers, architects, landscape architects and engineers to work in order to determine a feasible solution.

The SuDS management train is shown below, and this has been followed when proposing the proposed Sustainable Urban Drainage Systems for this site.

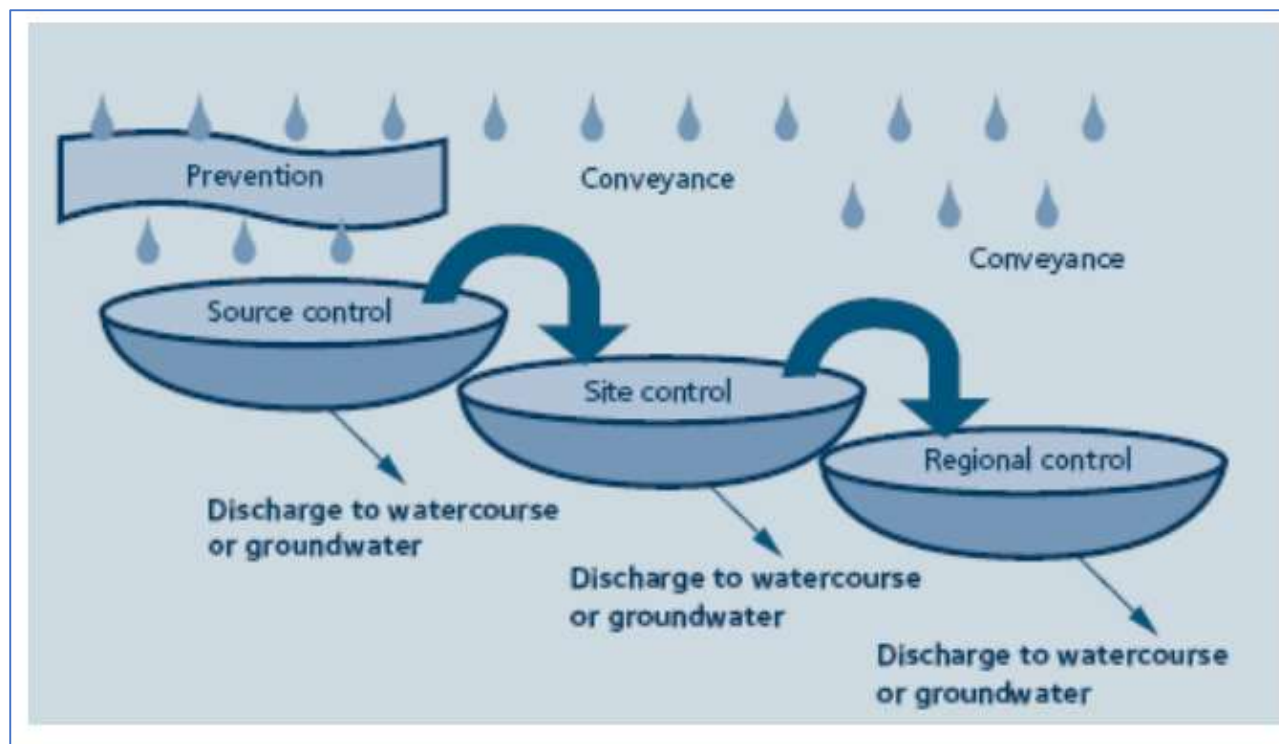


Figure 3 – SuDS Management Train

4. SuDS PROPOSALS FOR DEVELOPMENT

In accordance with the CIRIA SuDS Manual C753, the SuDS hierarchy has been considered in relation to the site-specific constraints and its surroundings. Table 1 below outlines the hierarchical approach considered for the development of 43 London Street, Reading, RG1 4PS.

Sustainable Drainage Proposal	Description	Constraints/Comments	Appropriate
Rainwater Use as a Resource	Use of rainwater runoff for reuse, e.g. Rainwater harvesting tanks, Blue Roofs for irrigation	N/A	N/A
Rainwater Full Infiltration to Ground (Source Control)	Infiltration devices and/or soakaways. Surface water runoff stored on site and gradually percolating into receiving ground	A full infiltration strategy was deemed unfeasible considering the lack of space for a soakaway. Due to the geology consisting of chalk, a 10m boundary from any foundations is required.	Yes
Rainwater Partial Infiltration to Ground (Source Control)	Installation of permeable/porous surfacing	Large areas of permeable paving have been proposed.	Yes
Rainwater attenuation in green infrastructure features for gradual release	The onsite storage of all surface water runoff which can then be gradually conveyed to a nearby watercourse, sewer or infiltration into the ground. Forms of green infrastructure features: Green Roofs, Raingardens, Ponds, Swales, Detention basins, Infiltration Trenches and raingarden planters	Two areas of green roofing have been proposed.	Yes
Rainwater discharge direct to a watercourse	All surface water runoff on site discharged at a restricted rate to a nearby watercourse	N/A	N/A

Controlled rainwater discharge to a surface water sewer or drain	All surface water runoff on site discharged at a restricted rate to a nearby surface water sewer or drain, all rainwater runoff stored in below ground attenuation features. E.g. oversized pipes or geo-cellular tanks	The remaining surface water will be attenuated in an underground attenuation tank before discharging at a restricted rate to the nearby Surface Water Sewer.	Yes
Controlled rainwater discharge to a combined sewer	All surface water runoff on site discharged at a restricted rate to a nearby combined sewer all rainwater runoff stored in below ground attenuation features. E.g. oversized pipes or geo-cellular tanks	N/A	N/A

Table 1: SuDS Control Measures for Development

The SuDS proposal for this site involves conveying the surface water runoff from roofs to the proposed outfall via down pipes and conveying to an underground surface water attenuation tank, before discharging at a restricted rate of 5l/s to the nearby surface water asset.

5. PROPOSED SOLUTION

NPPF states that any proposed SuDS solution is to be proportionate to the nature and scale of the development.

In order to ensure that the SuDS management train has been considered fully, large areas of permeable paving have been proposed, to treat surface water runoff at the source.

The remaining surface water runoff from the site will then be discharged to an underground crate-style attenuation tank, at least 6m x 4.0m x 1.2m in size to store 27.36m³ of surface water, designed for a 1 in 100 Year Storm Event +45% Climate Chance Allowance. The runoff will then be discharged at a restricted rate of 5l/s, as previously agreed, to the nearby Thames Water Surface Water Sewer. The proposed SuDS solution is shown in drawing C3592-03/04 in Appendix A.

To ensure a feasible solution was proposed, a hydraulic model was built using Infodrainage to simulate rainfall events for a 1 in 100-year storm event, with a 45% allowance for climate change. The hydraulic modelling reports can be found in Appendix B.

We believe the above solution is proportionate to the nature and scale of the development.

6. TIMESCALE AND MAINTENANCE OF WORKS

All drainage works shall be completed prior to first occupation and there shall be no adoption of any of the drainage works within the site, the homeowners will be responsible to oversee the long-term maintenance of the drains. The following outline maintenance strategy sets out recommended timescales for maintenance of the proposed drainage works, in line with CIRIA SuDS Design Guide. A management and maintenance plan drawing has also been included in Appendix A.

- Regular inspection will comprise the inspection and cleaning of catchment, gutters, filters and tanks to reduce the likelihood of contamination, this is recommended to be carried out every 3 to 6 months.
- Jet washing of permeable surfaces should be undertaken every 3 to 6 months in order to ensure that the system works properly.
- The catchpit and flow control chambers for the attenuation tank should be checked and emptied regularly or after a high storm event for the accumulation of debris/silt in order to ensure that there are no blockages.

Maintenance schedule	Required action	Typical frequency
Regular maintenance	Brushing and vacuuming (standard cosmetic sweep over whole surface)	Once a year, after autumn leaf fall, or reduced frequency as required, based on site-specific observations or clogging or manufacturer's recommendations – pay particular attention to areas where water runs onto pervious surface from adjacent impermeable areas as this is the most likely to collect the most sediment
Occasional maintenance	Stabilise and mow contributing and adjacent areas	As required
	Removal of weeds or management using glyphosate applied directly into the weeds by an applicator rather than spraying	As required
Remedial Actions	Remediate any landscaping which, through vegetation maintenance or soil slip, has been raised to within 50 mm of the level of the paving.	As required
	Remedial work to any depressions, rutting and cracked or broken blocks considered detrimental to the structural performance or a hazard to users, and replace lost jointing material.	As required
	Rehabilitation of surface and upper substructure by remedial sweeping	Every 10 to 15 years or as required (if infiltration performance is reduced due to significant clogging)
Monitoring	Initial inspection	Monthly for three months after installation
	Inspect for evidence of poor operation and/or weed growth – if required, take remedial action	Three-monthly, 48hr after large storms in six months
	Inspect slit accumulation rates and establish appropriate brushing frequencies	Annually
	Monitor inspection chambers	Annually

Table 2: Operation and maintenance requirements for pervious pavements.

Maintenance schedule	Required action	Typical Frequency
Regular Inspections	Inspect all components including soil substrate vegetation, drains irrigation systems (if applicable), membranes and roof structure for proper operation integrity of waterproofing and structural stability	Annually and after severe storms
	Inspect soil substrate for evidence of erosion channels and identify any sediment sources	Annually and after severe storms
	Inspect drain inlets to ensure unrestricted runoff from the drainage layer to the conveyance or roof drain system	Annually and after severe storms
	Inspect underside of roof for evidence of leakage	Annually and after severe storms
Regular Maintenance	Remove debris and litter to prevent clogging of inlet drains and interference with plant growth	Six monthly and annually or as required
	During establishment (ie year one) replace dead plants as required	Monthly (but usually responsibility of manufacturer)
	Post establishment, replace dead plants as required (where > 5% of coverage)	Annually (in autumn)
	Remove fallen leaves and debris from deciduous plant foliage	Six monthly or as required
	Remove nuisance and invasive vegetation, including weeds	Six monthly or as required
	Mow grasses, prune shrubs and manage other planting (if appropriate) as required- clippings should be removed and not allowed to accumulate	Six monthly or as required
Remedial Actions	If erosion channels are evident, these should be stabilised with extra soil substrate similar to the original material and sources of erosion damage should be identified and controlled	As required
	If drain inlet has settled, cracked or moved, investigate and repair as appropriate	As required

Table 3: Operation and maintenance requirement for green roofs.

Maintenance schedule	Required action	Typical frequency
Regular maintenance	Inspect and identify any areas that are not operating correctly. If required, take remedial action	Monthly for 3 months, then annually
	Remove debris from the catchment surface (where it may cause risks to performance)	Monthly
	For systems where rainfall infiltrates into the tank from above, check surface of filter for blockages by sediment, algae or other matter: remove and replace surface infiltration medium as necessary.	Annually
	Remove sediment from pre-treatment structures and/ or internal forebays	Annually, or as required
Remedial actions	Repair/ rehabilitate inlets, outlet, overflows and vents	As required
Monitoring	Inspect/check all inlets, outlets, vents and overflows to ensure that they are in good condition and operating as designed	Annually
	Survey inside of tank for sediment build-up and remove if necessary	Every 5 years or as required

Table 4: Operation and maintenance requirements for attenuation storage tanks.

Maintenance schedule	Required action	Typical frequency
Regular maintenance	Inspect from surface and identify any areas that are not operating correctly. If required, take remedial action	Monthly for 3 months, then 6 monthly intervals
	Remove debris from the catchment surface (where it may cause risks to performance)	Monthly
	Orifice plates within plastic chambers or vortex controls to be jetted from the surface after heavy rainfall events to remove any debris or silt	As required
	Empty catchpits upstream of SuDS features to ensure no debris is passed downstream	3 months or as required
Remedial actions*	In the event of a blockage, a vortex flow control can be removed from the chamber via the lifting cabled located at the access, this will be cleaned at surface level and reinstalled into its original location	As required
	In the event of a blockage, the orifice plate should be jetted from surface, and if blockage is not cleared the orifice plate can be removed by removing fixing bolts. These fixing bolts should be checked and replaced if needed.	As required
Monitoring	Following installation it is important that any extraneous materials i.e. building materials: granular backfill, in-situ pour concrete etc are removed from the unit and the new flow control chamber is fully jetted down	Upon installation
	Inspect/check chamber channel for any debris or silt build-up. Upstream chambers should be checked at the same time as these monitoring works to ensure network is operating at full capacity.	Annually

Table 5: Operation and maintenance requirements for flow control chambers

*All Remedial Works should be carried out by a competent and certified contractor, with no access to chambers or removal of parts to be undertaken by homeowners

If upstream network of flow control chamber is regularly maintained, little maintenance is required within the chamber as there are no moving parts

7. CONCLUSIONS

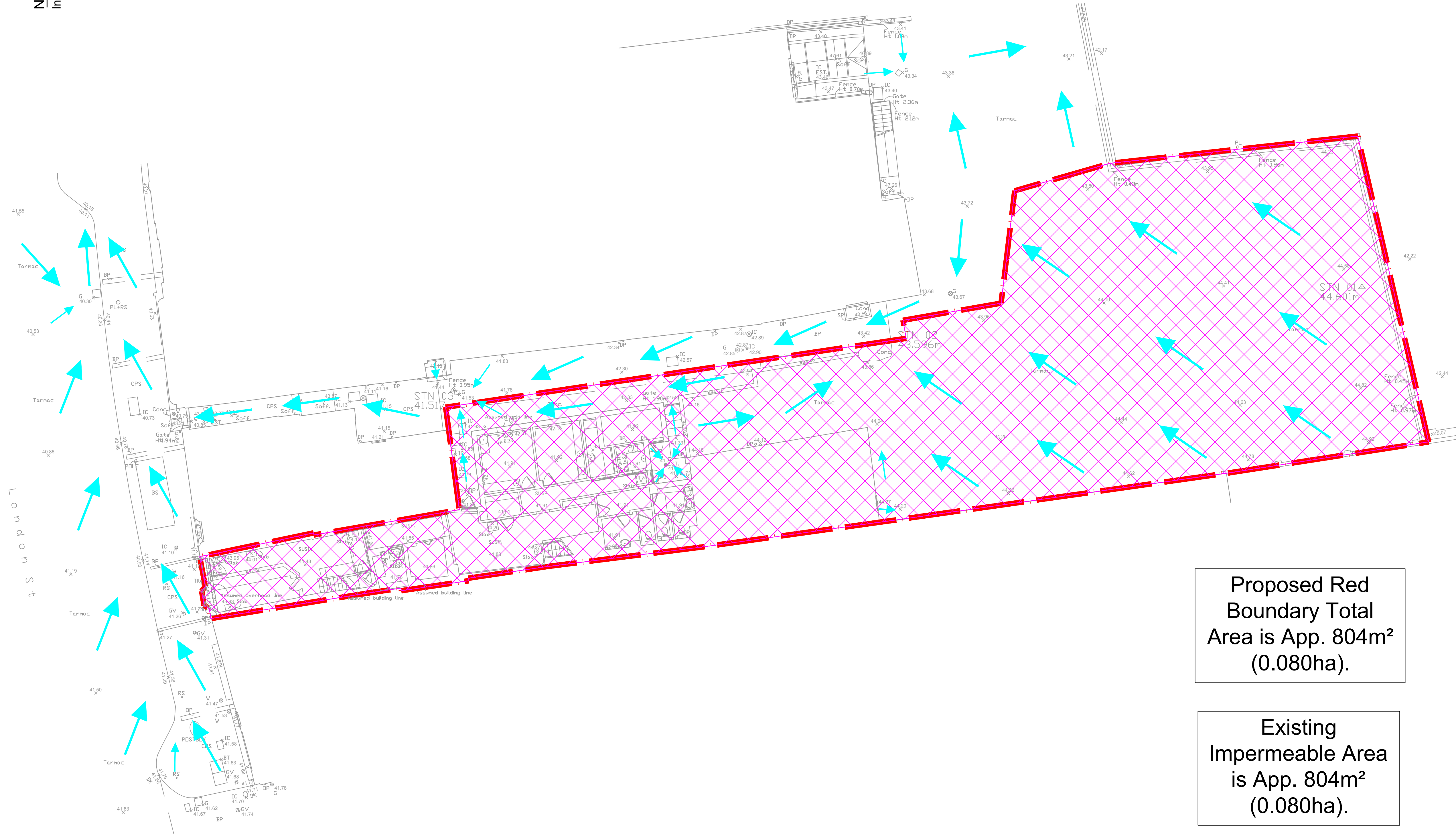
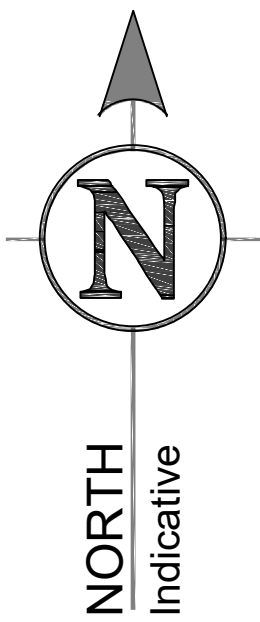
The purpose of this report, and associated calculations and drawings, is to present a SuDS solution to satisfy Reading Borough Council that the proposed development will not increase surface water flows and hence, increase flood risk at the site or elsewhere.

As requested, SuDS have been incorporated into this design, in the form of:

- An underground, crate-style attenuation tanks, capable of storing 20.36m³, sized for 1 in 100 Year storm plus 45% Climate Change Allowance, with the flow restriction leaving the site set to 5.0 l/s which is the previously agreed discharge rate.
- A large area of permeable paving, with slot drains to collect the run off from any sloped areas;
- Two areas of green roofing.

The proposed development will ensure all surface water run off is dealt with onsite and, therefore, reduces flood risk at the site and elsewhere.

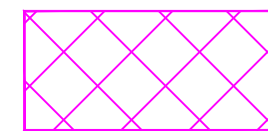
APPENDIX A – DRAWINGS



IMPORTANT
FOR DETAILS ABOUT POST DEVELOPMENT
IMPERMEABLE AREAS PLEASE SEE DRAWING C3592-02

DRAWING TO BE PRINTED IN COLOUR.

KEY:

-  Existing impermeable area that is considered to contribute to the existing sewer system from site.
-  Proposed Site Boundary.
-  Existing Levels as per Topo survey.
-  Existing exceedance flow route for surface water in case of extreme storm events. Routes are based on topo survey.

NOTES:

- DRAWING WILL NEED TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DRAWINGS FROM ARCHITECT, LANDSCAPE ARCHITECT, STRUCTURAL ENGINEER AND M&E.
- EXISTING LEVELS ARE BASED ON TOPOGRAPHICAL SURVEY UNDERTAKEN BY POINT 2 SURVEYORS Ltd ON JANUARY 2019 ON DRAWING NO. LS2140/1/01.

NOT FOR CONSTRUCTION

IMPORTANT

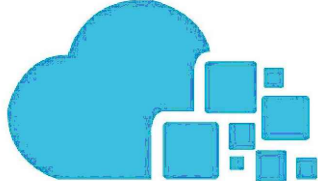
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REV	DATE	DRAWN	DESCRIPTION	CHECK	APPR.
B	11-08-25	M.H	Client details updated.	SL	SL
A	03-08-25	M.H	For Information.	SL	SL

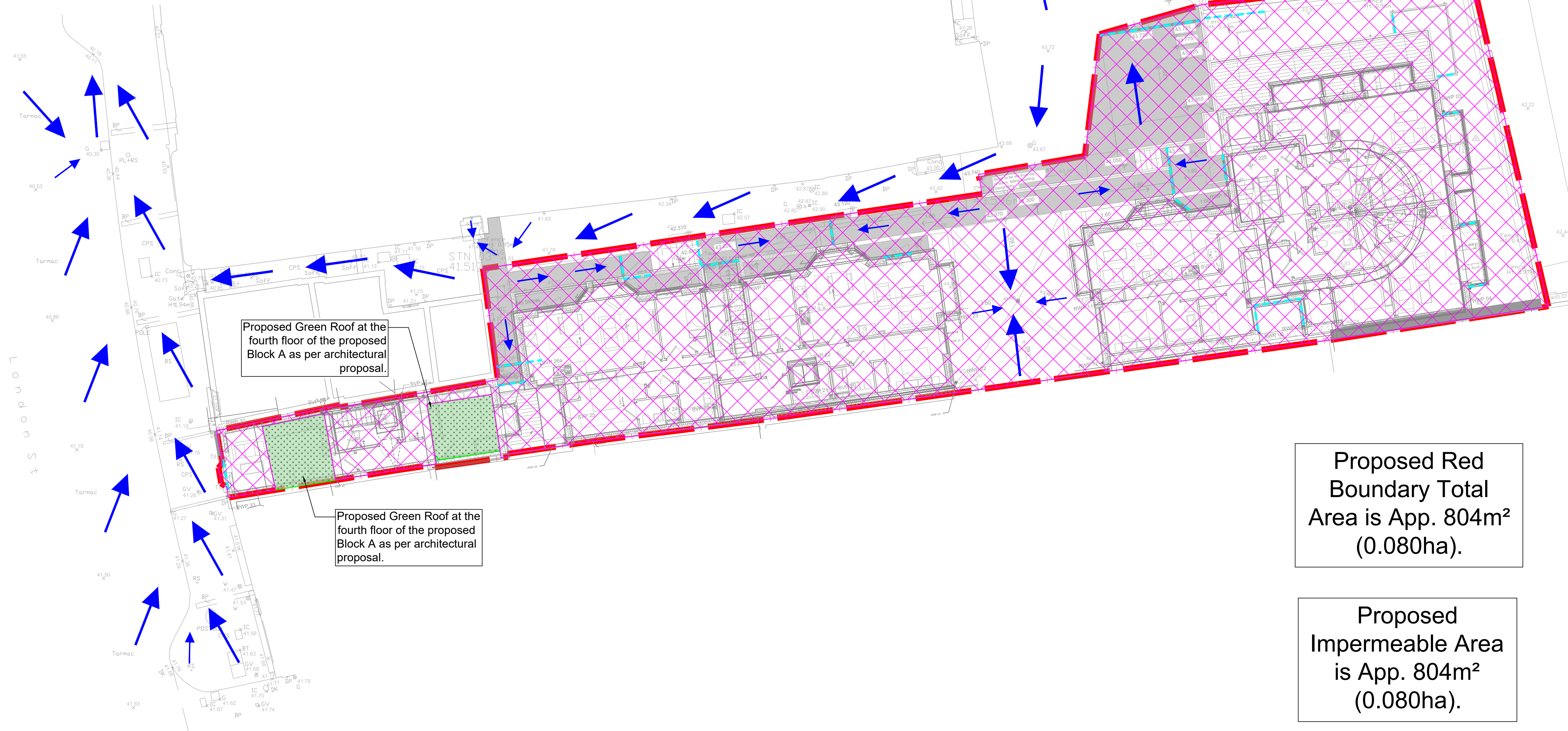
PROJECT:
C3592 - 43 London Street, Reading, RG1 4PS

TITLE:
Pre-Development Impermeable Areas.

CLIENT:	Mynshull House, 78 Churchgate Stockport, Greater Manchester SK1 1YJ www.39di.co.uk david.higgins@39di.co.uk	39°
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**Nimbus**
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www.nimbusengineering.co.uk
info@nimbusengineering.co.uk

CHECKED BY:	DATE:	APPROVED BY:	DATE:
S.L	03-08-25	S.L	03-08-25
DRN BY:	SCALE:	DRAWING NUMBER:	REV:
M.H	1:125	C3592-01	B
DATE:	SIZE:		
03-08-25	A1		



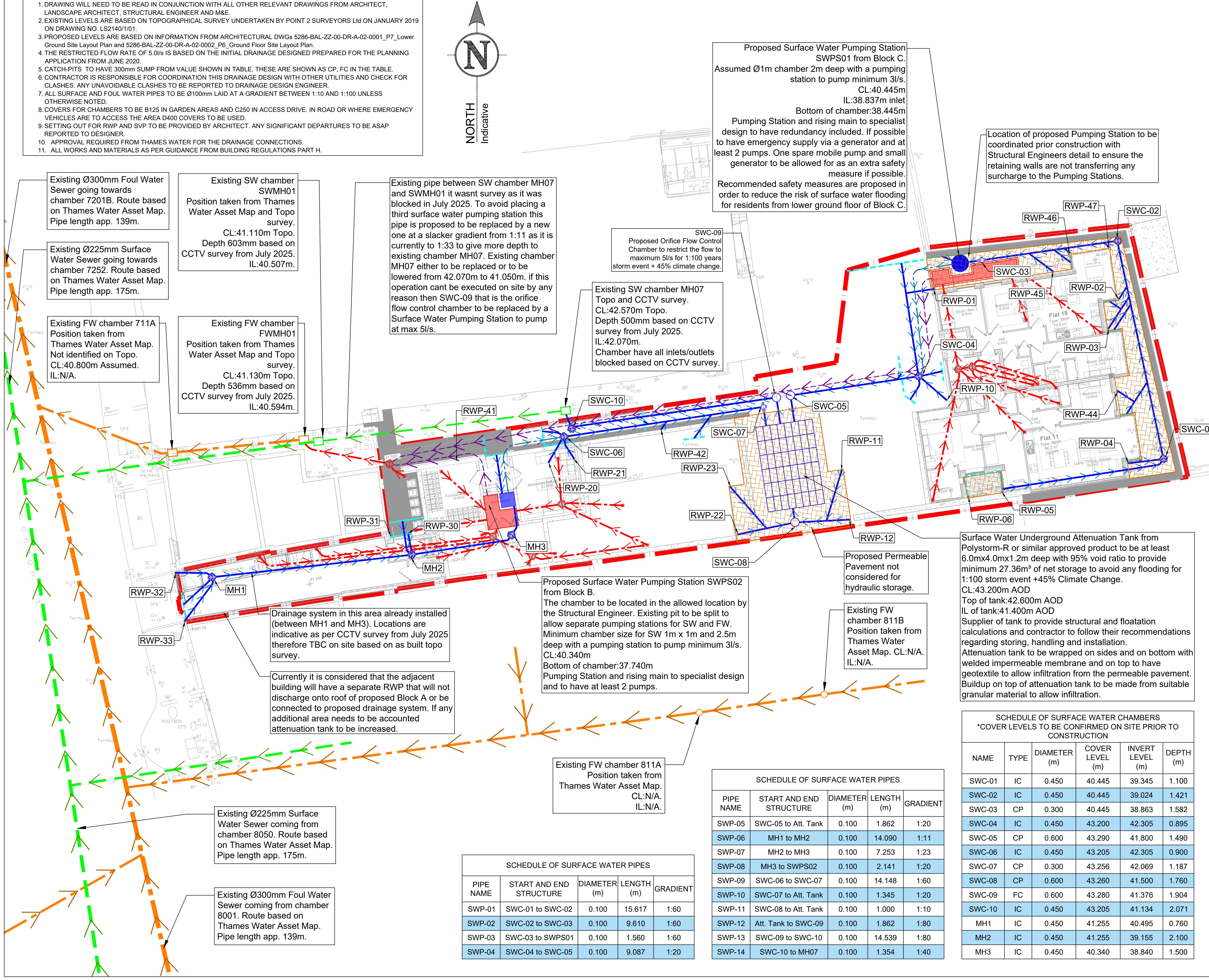
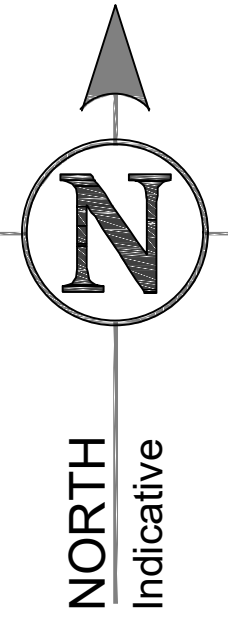
Proposed
Impermeable areas
represents app.
100% from total
considered site
boundary.

CHECKED BY: S.L		DATE: 03-08-25	APPROVED BY: S.L		DATE: 03-08-25
DRN BY: M.H		SCALE: 1:125	DRAWING NUMBER: C3592-02		REV: B
DATE: 03-08-25		SIZE: A1			

IMPORTANT
FOR DETAILS ABOUT PRE DEVELOPMENT
IMPERMEABLE AREAS PLEASE SEE DRAWING C3592-01

NOTES:

- DRAWING WILL NEED TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DRAWINGS FROM ARCHITECT, LANDSCAPE ARCHITECT, STRUCTURAL ENGINEER AND M&E.
- EXISTING LEVELS ARE BASED ON TOPOGRAPHICAL SURVEY UNDERTAKEN BY POINT 2 SURVEYORS Ltd ON JANUARY 2019 ON DRAWING NO. LS2140/1/01.
- PROPOSED LEVELS ARE BASED ON INFORMATION FROM ARCHITECTURAL DWGs 5286-BAL-ZZ-00-DR-A-02-0001_P7_Lower Ground Site Layout Plan and 5286-BAL-ZZ-00-DR-A-02-0002_P6_Ground Floor Site Layout Plan.
- THE RESTRICTED FLOW RATE OF 5.0l/s IS BASED ON THE INITIAL DRAINAGE DESIGNED PREPARED FOR THE PLANNING APPLICATION FROM JUNE 2020.
- CATCH-PITS TO HAVE 300mm SUMP FROM VALUE SHOWN IN TABLE. THESE ARE SHOWN AS CP, FC IN THE TABLE.
- CONTRACTOR IS RESPONSIBLE FOR COORDINATION THIS DRAINAGE DESIGN WITH OTHER UTILITIES AND CHECK FOR CLASHES. ANY UNAVOIDABLE CLASHES TO BE REPORTED TO DRAINAGE DESIGN ENGINEER.
- ALL SURFACE AND FOUL WATER PIPES TO BE Ø100mm LAID AT A GRADIENT BETWEEN 1:10 AND 1:100 UNLESS OTHERWISE NOTED.
- COVERS FOR CHAMBERS TO BE B125 IN GARDEN AREAS AND C250 IN ACCESS DRIVE. IN ROAD OR WHERE EMERGENCY VEHICLES ARE TO ACCESS THE AREA D400 COVERS TO BE USED.
- SETTING OUT FOR RWP AND SVP TO BE PROVIDED BY ARCHITECT. ANY SIGNIFICANT DEPARTURES TO BE ASAP REPORTED TO DESIGNER.
- APPROVAL REQUIRED FROM THAMES WATER FOR THE DRAINAGE CONNECTIONS.
- ALL WORKS AND MATERIALS AS PER GUIDANCE FROM BUILDING REGULATIONS PART H.



Proposed Surface Water Pumping Station
SWPS01 from Block C.
Assumed Ø1m chamber 2m deep with a pumping
station to pump minimum 3l/s.
CL:40.445m
IL:38.837m inlet
Bottom of chamber:38.445m
Pumping Station and rising main to specialist
design to have redundancy included. If possible
to have emergency supply via a generator and at
least 2 pumps. One spare mobile pump and small
generator to be allowed for as an extra safety
measure if possible.
Recommended safety measures are proposed in
order to reduce the risk of surface water flooding
for residents from lower ground floor of Block C.

Location of proposed Pumping Station to be
coordinated prior construction with
Structural Engineers detail to ensure the
retaining walls are not transferring any
surcharge to the Pumping Stations.

SWC-09
Proposed Orifice Flow Control
Chamber to restrict the flow to
maximum 5l/s for 1:100 years
storm event + 45% climate change.

Existing SW chamber MH07
Topo and CCTV survey.
CL:42.570m Topo.
Depth 500mm based on CCTV
survey from July 2025.
IL:42.070m.
Chamber have all inlets/outlets
blocked based on CCTV survey.

Proposed Permeable
Pavement not
considered for
hydraulic storage.

Existing FW chamber 811B
Position taken from
Thames Water
Asset Map. CL:N/A.
IL:N/A.

Surface Water Underground Attenuation Tank from
Polystorm-R or similar approved product to be at least
6.0mx4.0mx1.2m deep with 95% void ratio to provide
minimum 27.36m³ of net storage to avoid any flooding for
1:100 storm event +45% Climate Change.
CL:43.200m AOD
Top of tank:42.600m AOD
IL of tank:41.400m AOD
Supplier of tank to provide structural and floatation
calculations and contractor to follow their recommendations
regarding storing, handling and installation.
Attenuation tank to be wrapped on sides and on bottom with
welded impermeable membrane and on top to have
geotextile to allow infiltration from the permeable pavement.
Buildup on top of attenuation tank to be made from suitable
granular material to allow infiltration.

SCHEDULE OF SURFACE WATER CHAMBERS *COVER LEVELS TO BE CONFIRMED ON SITE PRIOR TO CONSTRUCTION					
NAME	TYPE	DIAMETER (m)	COVER LEVEL (m)	INVERT LEVEL (m)	DEPTH (m)
SWC-01	IC	0.450	40.445	39.345	1.100
SWC-02	IC	0.450	40.445	39.024	1.421
SWC-03	CP	0.300	40.445	38.863	1.582
SWC-04	IC	0.450	43.200	42.305	0.895
SWC-05	CP	0.600	43.290	41.800	1.490
SWC-06	IC	0.450	43.205	42.305	0.900
SWC-07	CP	0.300	43.256	42.069	1.187
SWC-08	CP	0.600	43.260	41.500	1.760
SWC-09	FC	0.600	43.280	41.376	1.904
SWC-10	IC	0.450	43.205	41.134	2.071
MH1	IC	0.450	41.255	40.495	0.760
MH2	IC	0.450	41.255	39.155	2.100
MH3	IC	0.450	40.340	38.840	1.500

SCHEDULE OF SURFACE WATER PIPES				
PIPE NAME	START AND END STRUCTURE	DIAMETER (m)	LENGTH (m)	GRADIENT
SWP-05	SWC-05 to Att. Tank	0.100	1.862	1:20
SWP-06	MH1 to MH2	0.100	14.090	1:11
SWP-07	MH2 to MH3	0.100	7.253	1:23
SWP-08	MH3 to SWPS02	0.100	2.141	1:20
SWP-09	SWC-06 to SWC-07	0.100	14.148	1:60
SWP-10	SWC-07 to Att. Tank	0.100	1.345	1:20
SWP-11	SWC-08 to Att. Tank	0.100	1.000	1:10
SWP-12	Att. Tank to SWC-09	0.100	1.862	1:80
SWP-13	SWC-09 to SWC-10	0.100	14.539	1:80
SWP-14	SWC-10 to MH07	0.100	1.354	1:40

SCHEDULE OF SURFACE WATER PIPES				
PIPE NAME	START AND END STRUCTURE	DIAMETER (m)	LENGTH (m)	GRADIENT
SWP-01	SWC-01 to SWC-02	0.100	15.617	1:60
SWP-02	SWC-02 to SWC-03	0.100	9.610	1:60
SWP-03	SWC-03 to SWPS01	0.100	1.560	1:60
SWP-04	SWC-04 to SWC-05	0.100	9.087	1:20

DRAWING TO BE PRINTED IN COLOUR.

KEY:

- Proposed Surface Water Pipes.
- Proposed Surface Water Rising Main.
- Proposed Foul Water Pipes.
- Proposed Indicative FW Rising Main.
- Existing Thames Water SW Public Sewer.
- Existing Thames Water FW Public Sewer.
- Channel drain position shown indicative.
Threshold drains to be detailed by architect.
- Proposed Site Boundary.
- Proposed RWP (blue) and SVP (red).
Locations TBC by Architect or M&E.
- Proposed SW inspection/catchpit chamber.
- Proposed FW inspection chamber.
- Existing Surface (green) and Foul Water
chambers as per Thames Water map.
- Proposed ground levels as per architectural
drawings. TBC on site.
- Existing Levels as per topo survey.
- Proposed Surface Water Pumping Station
to be designed by specialist.
- Proposed Foul Water Pumping Station.
Rising Main and pumps to be designed by
specialist and pump chamber by the
Structural Engineer.
- Permeable Pavement as per Landscape
Architect specification. Permeable
Pavement not considered for hydraulic
storage.

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REV	DATE	DRAWN	DESCRIPTION	CHECK	APPR.
B	11-08-25	M.H	Client details updated.	SL	SL
A	03-08-25	M.H	For information.	SL	SL

PROJECT:
C3592 - 43 London Street, Reading, RG1 4PS

TITLE:
Proposed Surface Water Strategy Layout showing Proposed
Lower Ground Floor.

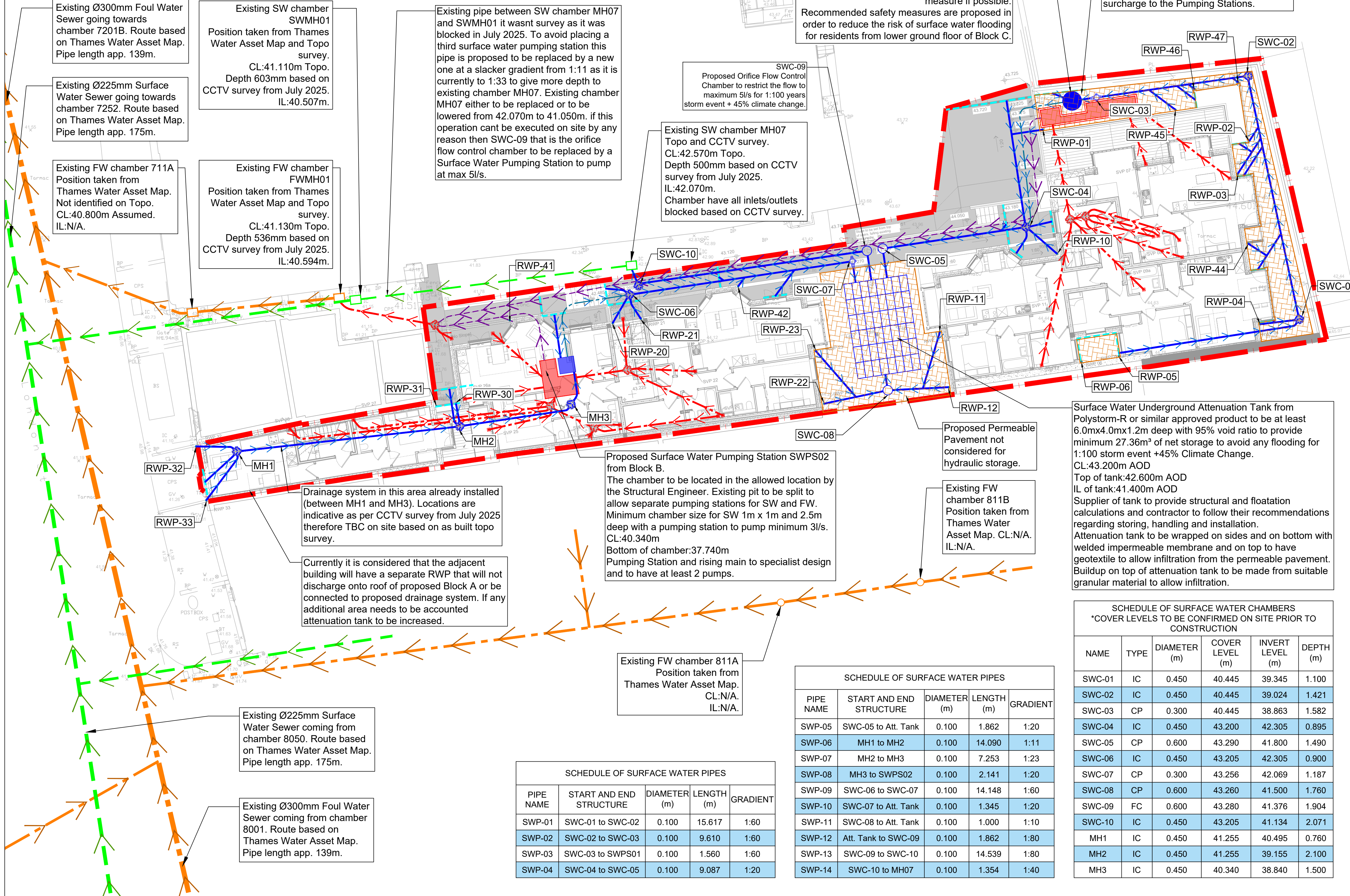
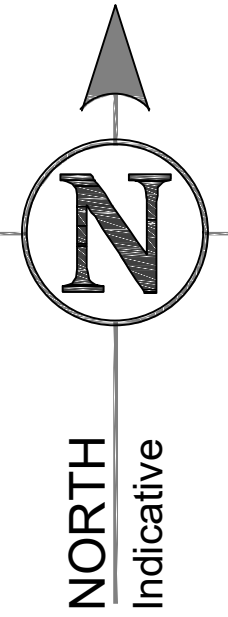
CLIENT: Mynshull House, 78 Churchgate
Stockport, Greater Manchester
SK1 1YJ
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info@nimbusengineering.co.uk

CHECKED BY: S.L	DATE: 03-08-25	APPROVED BY: S.L	DATE: 03-08-25
DRN BY: M.H	SCALE: 1:125	DRAWING NUMBER: C3592-03	REV: B
DATE: 03-08-25	SIZE: A1		

NOTES:

- DRAWING WILL NEED TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DRAWINGS FROM ARCHITECT, LANDSCAPE ARCHITECT, STRUCTURAL ENGINEER AND M&E.
- EXISTING LEVELS ARE BASED ON TOPOGRAPHICAL SURVEY UNDERTAKEN BY POINT 2 SURVEYORS Ltd ON JANUARY 2019 ON DRAWING NO. LS2140/1/01.
- PROPOSED LEVELS ARE BASED ON INFORMATION FROM ARCHITECTURAL DWGS 5286-BAL-ZZ-00-DR-A-02-0001_P7_Lower Ground Site Layout Plan and 5286-BAL-ZZ-00-DR-A-02-0002_P6_Ground Floor Site Layout Plan.
- THE RESTRICTED FLOW RATE OF 5.0l/s IS BASED ON THE INITIAL DRAINAGE DESIGNED PREPARED FOR THE PLANNING APPLICATION FROM JUNE 2020.
- CATCH-PITS TO HAVE 300mm SUMP FROM VALUE SHOWN IN TABLE. THESE ARE SHOWN AS CP, FC IN THE TABLE.
- CONTRACTOR IS RESPONSIBLE FOR COORDINATION THIS DRAINAGE DESIGN WITH OTHER UTILITIES AND CHECK FOR CLASHES. ANY UNAVOIDABLE CLASHES TO BE REPORTED TO DRAINAGE DESIGN ENGINEER.
- ALL SURFACE AND FOUL WATER PIPES TO BE Ø100mm LAID AT A GRADIENT BETWEEN 1:10 AND 1:100 UNLESS OTHERWISE NOTED.
- COVERS FOR CHAMBERS TO BE B125 IN GARDEN AREAS AND C250 IN ACCESS DRIVE. IN ROAD OR WHERE EMERGENCY VEHICLES ARE TO ACCESS THE AREA D400 COVERS TO BE USED.
- SETTING OUT FOR RWP AND SVP TO BE PROVIDED BY ARCHITECT. ANY SIGNIFICANT DEPARTURES TO BE ASAP REPORTED TO DESIGNER.
- APPROVAL REQUIRED FROM THAMES WATER FOR THE DRAINAGE CONNECTIONS.
- ALL WORKS AND MATERIALS AS PER GUIDANCE FROM BUILDING REGULATIONS PART H.



DRAWING TO BE PRINTED IN COLOUR.

KEY:

- Proposed Surface Water Pipes.
- Proposed Surface Water Rising Main.
- Proposed Foul Water Pipes.
- Proposed Indicative FW Rising Main.
- Existing Thames Water SW Public Sewer.
- Existing Thames Water FW Public Sewer.
- Channel drain position shown indicative. Threshold drains to be detailed by architect.
- Proposed Site Boundary.
- Proposed RWP (blue) and SVP (red). Locations TBC by Architect or M&E.
- Proposed SW inspection/catchpit chamber.
- Proposed FW inspection chamber.
- Existing Surface (green) and Foul Water chambers as per Thames Water map.
- Proposed ground levels as per architectural drawings. TBC on site.
- Existing Levels as per topo survey.
- Proposed Surface Water Pumping Station to be designed by specialist.
- Proposed Foul Water Pumping Station. Rising Main and pumps to be designed by specialist and pump chamber by the Structural Engineer.
- Permeable Pavement as per Landscape Architect specification. Permeable Pavement not considered for hydraulic storage.

NOT FOR CONSTRUCTION

IMPORTANT

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REV	DATE	DRAWN	DESCRIPTION	CHECK	APPR.
B	11-08-25	M.H	Client details updated.	SL	SL
A	03-08-25	M.H	For information.	SL	SL

PROJECT:
C3592 - 43 London Street, Reading, RG1 4PS

TITLE:
Proposed Surface Water Strategy Layout showing Proposed Ground Floor.

CLIENT: Mynshull House, 78 Churchgate
Stockport, Greater Manchester
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CHECKED BY: S.L	DATE: 03-08-25	APPROVED BY: S.L	DATE: 03-08-25
DRN BY: M.H	SCALE: 1:125	DRAWING NUMBER: C3592-04	REV: B
DATE: 03-08-25	SIZE: A1		

Surface Water Underground Attenuation Tank from Polystorm-R or similar approved product to be at least 6.0mx4.0mx1.2m deep with 95% void ratio to provide minimum 27.36m³ of net storage to avoid any flooding for 1:100 storm event +45% Climate Change. CL:43.200m AOD Top of tank:42.600m AOD IL of tank:41.400m AOD. Supplier of tank to provide structural and floatation calculations and contractor to follow their recommendations regarding storing, handling and installation. Attenuation tank to be wrapped on sides and on bottom with welded impermeable membrane and on top to have geotextile to allow infiltration from the permeable pavement. Buildup on top of attenuation tank to be made from suitable granular material to allow infiltration.

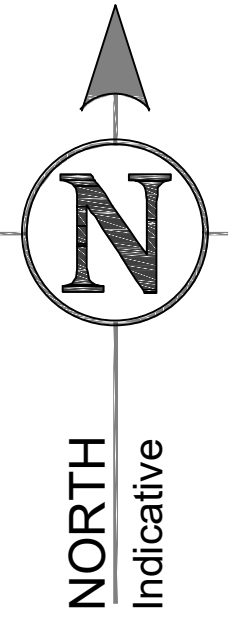
SCHEDULE OF SURFACE WATER CHAMBERS *COVER LEVELS TO BE CONFIRMED ON SITE PRIOR TO CONSTRUCTION					
NAME	TYPE	DIAMETER (m)	COVER LEVEL (m)	INVERT LEVEL (m)	DEPTH (m)
SWC-01	IC	0.450	40.445	39.345	1.100
SWC-02	IC	0.450	40.445	39.024	1.421
SWC-03	CP	0.300	40.445	38.863	1.582
SWC-04	IC	0.450	43.200	42.305	0.895
SWC-05	CP	0.600	43.290	41.800	1.490
SWC-06	IC	0.450	43.205	42.305	0.900
SWC-07	CP	0.300	43.256	42.069	1.187
SWC-08	CP	0.600	43.260	41.500	1.760
SWC-09	FC	0.600	43.280	41.376	1.904
SWC-10	IC	0.450	43.205	41.134	2.071
MH1	IC	0.450	41.255	40.495	0.760
MH2	IC	0.450	41.255	39.155	2.100
MH3	IC	0.450	40.340	38.840	1.500

SCHEDULE OF SURFACE WATER PIPES				
PIPE NAME	START AND END STRUCTURE	DIAMETER (m)	LENGTH (m)	GRADIENT
SWP-05	SWC-05 to Att. Tank	0.100	1.862	1:20
SWP-06	MH1 to MH2	0.100	14.090	1:11
SWP-07	MH2 to MH3	0.100	7.253	1:23
SWP-08	MH3 to SWPS02	0.100	2.141	1:20
SWP-09	SWC-06 to SWC-07	0.100	14.148	1:60
SWP-10	SWC-07 to Att. Tank	0.100	1.345	1:20
SWP-11	SWC-08 to Att. Tank	0.100	1.000	1:10
SWP-12	Att. Tank to SWC-09	0.100	1.862	1:80
SWP-13	SWC-09 to SWC-10	0.100	14.539	1:80
SWP-14	SWC-10 to MH07	0.100	1.354	1:40

SCHEDULE OF SURFACE WATER PIPES				
PIPE NAME	START AND END STRUCTURE	DIAMETER (m)	LENGTH (m)	GRADIENT
SWP-01	SWC-01 to SWC-02	0.100	15.617	1:60
SWP-02	SWC-02 to SWC-03	0.100	9.610	1:60
SWP-03	SWC-03 to SWPS01	0.100	1.560	1:60
SWP-04	SWC-04 to SWC-05	0.100	9.087	1:20

NOTES:

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- APPROVAL REQUIRED FROM THAMES WATER FOR THE DRAINAGE CONNECTIONS.
- ALL WORKS AND MATERIALS AS PER GUIDANCE FROM BUILDING REGULATIONS PART H.



Proposed Foul Water Pumping Station FWPS01 from Block C. Pumps and rising main to be specified by supplier/specialist. The Block C comprises from 1 bed ap., 8 x 2 bed ap. and 3 x 3 bed ap. and using flow and loads that equals to 50PE x 0.8 = 40PE x 150litres/pers/day = 6000 litres or 6m³ of net storage required under the IL of the incoming inlet. CL:40.445m

IL:38.906m IL of incoming inlets

Assumed Pumping Station to be built as part of the structural design TBC by the Structural Engineer prior construction and to have minimum internal plan area of 5m² therefore a minimum depth of 1.2m under incoming inlet.

Bottom of the chamber 37.706m

Total depth of chamber 2.739m

CONTRACTOR TO ADVISE IF THE PROPOSED LOCATION OF PUMPING STATION IS SUITABLE BASED ON COORDINATION WITH ALL OTHER DISCIPLINES ESPECIALLY STRUCTURAL ENGINEER PRIOR ANY CONSTRUCTION IS UNDERTAKEN ON SITE.

Assumed Vertical Staircase will be allowed in this location to allow access for both SW and FW Pumping Stations without entering in Block C. Contractor to ensure coordination is undertaken between all disciplines before any construction is commenced on site.

Existing SW chamber MH07 Topo and CCTV survey. CL:42.570m Topo. Depth 500mm based on CCTV survey from July 2025. IL:42.070m. Chamber have all inlets/outlets blocked based on CCTV survey.

Proposed Foul Water Pumping Station FWPS02 from Block B. Pumps and rising main to be specified by supplier/specialist. The Block A and B comprises from 4 x 1 bed ap., 5 x 2 bed ap. and 1 x 3 bed ap. and using flow and loads that equals to 37PE x 0.8 = 30PE x 150litres/pers/day = 4500 litres or 4.5m³ of net storage required under the IL of the incoming inlet. CL:40.340m

IL:38.919m IL of incoming inlets

Assumed Pumping Station to be built as part of the structural design TBC by the Structural Engineer prior construction and to have minimum internal plan area of 3.85m² therefore a minimum depth of 1.179m under incoming inlet.

Bottom of the chamber 37.740m

Total depth of chamber 2.600m

THE PROPOSED FOUL WATER CHAMBER AS PER STRUCTURAL ENGINEER DETAIL TO HAVE PARTITION WALLS BETWEEN SW AND FW.

SCHEDULE OF SOIL VENT PIPES *COVER LEVELS TO BE CONFIRMED ON SITE PRIOR TO CONSTRUCTION			
NAME	COVER LEVEL (m)	INVERT LEVEL (m)	DEPTH (m)
SVP-05	40.525	39.425	1.100
SVP-06	40.525	39.425	1.100
SVP-10	40.525	39.425	1.100
SVP-04	40.525	39.425	1.100
SS-07	40.525	39.425	1.100
SS-08	40.525	39.425	1.100
SVP-07	40.525	39.246	1.279
SS-06	40.525	39.425	1.100

SCHEDULE OF SOIL VENT PIPES *COVER LEVELS TO BE CONFIRMED ON SITE PRIOR TO CONSTRUCTION			
NAME	COVER LEVEL (m)	INVERT LEVEL (m)	DEPTH (m)
SVP-21	43.225	39.830	3.395
SVP-23	43.225	39.267	3.958
SVP-24	40.340	39.163	1.177
SVP-25	41.255	39.456	1.799
SVP-28	41.255	40.237	1.018
SVP-27	41.255	40.270	0.985
SVP-26a	41.255	39.170	2.085
SS-02	40.340	39.089	1.251
SVP-20	43.225	39.623	3.602
SVP-22	43.225	39.658	3.567
SS-05	40.645	39.450	1.195
SS-04	40.645	39.331	1.314
SS-03	41.443	41.061	0.382

DRAWING TO BE PRINTED IN COLOUR.

KEY:

- Proposed Surface Water Pipes.
- Proposed Surface Water Rising Main.
- Proposed Foul Water Pipes.
- Proposed Indicative FW Rising Main.
- Existing Thames Water SW Public Sewer.
- Existing Thames Water FW Public Sewer.
- Channel drain position shown indicative. Threshold drains to be detailed by architect.
- Proposed Site Boundary.
- Proposed RWP (blue) and SVP (red). Locations TBC by Architect or M&E.
- Proposed SW inspection/catchpit chamber.
- Proposed FW inspection chamber.
- Existing Surface (green) and Foul Water chambers as per Thames Water map.
- Proposed ground levels as per architectural drawings. TBC on site.
- Existing Levels as per topo survey.
- Proposed Surface Water Pumping Station to be designed by specialist.
- Proposed Foul Water Pumping Station. Rising Main and pumps to be designed by specialist and pump chamber by the Structural Engineer.
- Permeable Pavement as per Landscape Architect specification. Permeable Pavement not considered for hydraulic storage.

NOT FOR CONSTRUCTION

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REV	DATE	DRAWN	DESCRIPTION	CHECK	APPR.
B	11-08-25	M.H	Client details updated.	SL	SL
A	03-08-25	M.H	For information.	SL	SL

PROJECT:
C3592 - 43 London Street, Reading, RG1 4PS

TITLE:
Proposed Foul Water Strategy Layout showing Proposed Lower Ground Floor.

CLIENT: Myrshull House, 78 Churchgate
Stockport, Greater Manchester
SK1 1YJ
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david.higgins@39di.co.uk

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CHECKED BY:	DATE:	APPROVED BY:	DATE:
S.L	03-08-25	S.L	03-08-25
DRN BY:	SCALE:	DRAWING NUMBER:	REV:
M.H	1:125	C3592-05	B
DATE:	SIZE:		
03-08-25	A1		

SCHEDULE OF FOUL WATER PIPES				
PIPE NAME	START AND END STRUCTURE	DIAMETER (m)	LENGTH (m)	GRADIENT
FWP-01	SVP-05 to FWC-02	0.100	9.397	1:30
FWP-02	SVP-06 to FWC-02	0.100	6.419	1:25
FWP-03	SVP-10 to FWC-01	0.100	6.878	1:40
FWP-04	SS-08 to FWC-01	0.100	4.488	1:26
FWP-05	SS-07 to FWC-01	0.100	4.798	1:21
FWP-06	SVP-04 to FWC-01	0.100	6.483	1:38
FWP-07	FWC-01 to FWC-02	0.100	0.980	1:40
FWP-08	FWC-02 to FWPS01	0.100	6.053	1:30
FWP-09	SVP-07 to FWPS01	0.100	3.400	1:10
FWP-10	SS-06 to FWPS01	0.100	7.325	1:14
FWP-11	SVP-21 to MH5	0.100	7.903	1:10
FWP-12	SVP-23 to MH5	0.100	1.671	1:10
FWP-13	SVP-24 to MH5	0.100	0.626	1:10
FWP-14	MH5 to MH4	0.100	3.059	1:76
FWP-15	SVP-25 to MH4	0.100	4.558	1:10
FWP-16	SVP-27 to MH4	0.100	12.701	1:10
FWP-17	SVP-28 to MH4	0.100	16.865	1:13
FWP-18	SS-02 to MH4	0.100	0.885	1:10
FWP-19	MH4 to FWPS02	0.100	0.627	1:30
FWP-20	SVP-20 to FWC-03	0.100	6.668	1:20
FWP-21	SVP-22 to FWC-03	0.100	4.290	1:10
FWP-22	SS-05 to FWC-03	0.100	3.228	1:20
FWP-23	FWC-03 to FWPS02	0.100	3.218	1:10
FWP-24	SVP-26a to FWPS02	0.100	5.025	1:20
FWP-25	SS-04 to FWPS02	0.100	4.119	1:10
FWP-26	SS-03 to FWC-04	0.100	1.396	1:40
FWP-27	FWC-04 to FWMH01	0.100	6.435	1:20

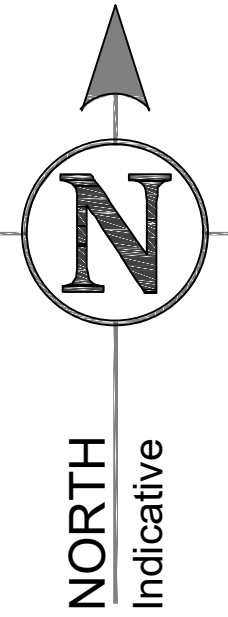
SCHEDULE OF FOUL WATER CHAMBERS *COVER LEVELS TO BE CONFIRMED ON SITE PRIOR TO CONSTRUCTION					
NAME	TYPE	DIAMETER (m)	COVER LEVEL (m)	INVERT LEVEL (m)	DEPTH (m)
FWC-01	IC	0.450	40.525	39.193	1.332
FWC-02	IC	0.450	40.525	39.108	1.417
FWC-03	IC	0.450	40.645	39.229	1.416
FWC-04	IC	0.450	41.500	40.966	0.534
MH4	IC	0.450	40.340	38.940	1.400
MH5	IC	0.450	40.340	39.040	1.300

IMPORTANT

CURRENTLY NO PUMPS WERE SHOWN FOR GROUNDWATER INFILTRATION FROM BASEMENT WATERPROOFING OR RETAINING WALLS. DETAILS TBC BY SUPPLIER/SPECIALIST OF WATERPROOFING SYSTEM IN SUBSEQUENT DESIGN STAGES.

NOTES:

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- APPROVAL REQUIRED FROM THAMES WATER FOR THE DRAINAGE CONNECTIONS.
- ALL WORKS AND MATERIALS AS PER GUIDANCE FROM BUILDING REGULATIONS PART H.



Proposed Foul Water Pumping Station FWPS01 from Block C. Pumps and rising main to be specified by supplier/specialist. The Block C comprises from 1 bed ap., 8 x 2 bed ap. and 3 x 3 bed ap. and using flow and loads that equals to 50PE x 0.8 = 40PE x 150litres/pers/day = 6000 litres or 6m³ of net storage required under the IL of the incoming inlet. CL:40.445m

IL:38.906m IL of incoming inlets

Assumed Pumping Station to be built as part of the structural design TBC by the Structural Engineer prior construction and to have minimum internal plan area of 5m² therefore a minimum depth of 1.2m under incoming inlet.

Bottom of the chamber 37.706m

Total depth of chamber 2.739m

CONTRACTOR TO ADVISE IF THE PROPOSED LOCATION OF PUMPING STATION IS SUITABLE BASED ON COORDINATION WITH ALL OTHER DISCIPLINES ESPECIALLY STRUCTURAL ENGINEER PRIOR ANY CONSTRUCTION IS UNDERTAKEN ON SITE.

Assumed Vertical Staircase will be allowed in this location to allow access for both SW and FW Pumping Stations without entering in Block C. Contractor to ensure coordination is undertaken between all disciplines before any construction is commenced on site.

Existing SW chamber MH07 Topo and CCTV survey. CL:42.570m Topo. Depth 500mm based on CCTV survey from July 2025. IL:42.070m. Chamber have all inlets/outlets blocked based on CCTV survey.

Proposed Foul Water Pumping Station FWPS02 from Block B. Pumps and rising main to be specified by supplier/specialist. The Block A and B comprises from 4 x 1 bed ap., 5 x 2 bed ap. and 1 x 3 bed ap. and using flow and loads that equals to 37PE x 0.8 = 30PE x 150litres/pers/day = 4500 litres or 4.5m³ of net storage required under the IL of the incoming inlet. CL:40.340m

IL:38.919m IL of incoming inlets

Assumed Pumping Station to be built as part of the structural design TBC by the Structural Engineer prior construction and to have minimum internal plan area of 3.85m² therefore a minimum depth of 1.179m under incoming inlet.

Bottom of the chamber 37.740m

Total depth of chamber 2.600m

THE PROPOSED FOUL WATER CHAMBER AS PER STRUCTURAL ENGINEER DETAIL TO HAVE PARTITION WALLS BETWEEN SW AND FW.

SCHEDULE OF SOIL VENT PIPES *COVER LEVELS TO BE CONFIRMED ON SITE PRIOR TO CONSTRUCTION			
NAME	COVER LEVEL (m)	INVERT LEVEL (m)	DEPTH (m)
SVP-05	40.525	39.425	1.100
SVP-06	40.525	39.425	1.100
SVP-10	40.525	39.425	1.100
SVP-04	40.525	39.425	1.100
SS-07	40.525	39.425	1.100
SS-08	40.525	39.425	1.100
SVP-07	40.525	39.246	1.279
SS-06	40.525	39.425	1.100

SCHEDULE OF SOIL VENT PIPES *COVER LEVELS TO BE CONFIRMED ON SITE PRIOR TO CONSTRUCTION			
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SVP-25	41.255	39.456	1.799
SVP-28	41.255	40.237	1.018
SVP-27	41.255	40.270	0.985
SVP-26a	41.255	39.170	2.085
SS-02	40.340	39.089	1.251
SVP-20	43.225	39.623	3.602
SVP-22	43.225	39.658	3.567
SS-05	40.645	39.450	1.195
SS-04	40.645	39.331	1.314
SS-03	41.443	41.061	0.382

DRAWING TO BE PRINTED IN COLOUR.

KEY:

- Proposed Surface Water Pipes.
- Proposed Surface Water Rising Main.
- Proposed Foul Water Pipes.
- Proposed Indicative FW Rising Main.
- Existing Thames Water SW Public Sewer.
- Existing Thames Water FW Public Sewer.
- Channel drain position shown indicative. Threshold drains to be detailed by architect.
- Proposed Site Boundary.
- Proposed RWP (blue) and SVP (red). Locations TBC by Architect or M&E.
- Proposed SW inspection/catchpit chamber.
- Proposed FW inspection chamber.
- Existing Surface (green) and Foul Water chambers as per Thames Water map.
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NOT FOR CONSTRUCTION

IMPORTANT

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B	11-08-25	M.H	Client details updated.	SL	SL
A	03-08-25	M.H	For Information.	SL	SL

PROJECT:

C3592 - 43 London Street, Reading, RG1 4PS

TITLE:

Proposed Foul Water Strategy Layout showing Proposed Ground Floor.

CLIENT:

Myrshull House, 78 Churchgate
Stockport, Greater Manchester
SK1 1YJ
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39°

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CHECKED BY:	DATE:	APPROVED BY:	DATE:
S.L	03-08-25	S.L	03-08-25
DRN BY:	SCALE:	DRAWING NUMBER:	REV:
M.H	1:125	C3592-06	B
DATE:	SIZE:		
03-08-25	A1		

SCHEDULE OF FOUL WATER PIPES				
PIPE NAME	START AND END STRUCTURE	DIAMETER (m)	LENGTH (m)	GRADIENT
FWP-01	SVP-05 to FWC-02	0.100	9.397	1:30
FWP-02	SVP-06 to FWC-02	0.100	6.419	1:25
FWP-03	SVP-10 to FWC-01	0.100	6.878	1:40
FWP-04	SS-08 to FWC-01	0.100	4.488	1:26
FWP-05	SS-07 to FWC-01	0.100	4.798	1:21
FWP-06	SVP-04 to FWC-01	0.100	6.483	1:38
FWP-07	FWC-01 to FWC-02	0.100	0.980	1:40
FWP-08	FWC-02 to FWPS01	0.100	6.053	1:30
FWP-09	SVP-07 to FWPS01	0.100	3.400	1:10
FWP-10	SS-06 to FWPS01	0.100	7.325	1:14
FWP-11	SVP-21 to MH5	0.100	7.903	1:10
FWP-12	SVP-23 to MH5	0.100	1.671	1:10
FWP-13	SVP-24 to MH5	0.100	0.626	1:10
FWP-14	MH5 to MH4	0.100	3.059	1:76
FWP-15	SVP-25 to MH4	0.100	4.558	1:10
FWP-16	SVP-27 to MH4	0.100	12.701	1:10
FWP-17	SVP-28 to MH4	0.100	16.865	1:13
FWP-18	SS-02 to MH4	0.100	0.885	1:10
FWP-19	MH4 to FWPS02	0.100	0.627	1:30
FWP-20	SVP-20 to FWC-03	0.100	6.668	1:20
FWP-21	SVP-22 to FWC-03	0.100	4.290	1:10
FWP-22	SS-05 to FWC-03	0.100	3.228	1:20
FWP-23	FWC-03 to FWPS02	0.100	3.218	1:10
FWP-24	SVP-26a to FWPS02	0.100	5.025	1:20
FWP-25	SS-04 to FWPS02	0.100	4.119	1:10
FWP-26	SS-03 to FWC-04	0.100	1.396	1:40
FWP-27	FWC-04 to FWMH01	0.100	6.435	1:20

SCHEDULE OF FOUL WATER CHAMBERS *COVER LEVELS TO BE CONFIRMED ON SITE PRIOR TO CONSTRUCTION					
NAME	TYPE	DIAMETER (m)	COVER LEVEL (m)	INVERT LEVEL (m)	DEPTH (m)
FWC-01	IC	0.450	40.525	39.193	1.332
FWC-02	IC	0.450	40.525	39.108	1.417
FWC-03	IC	0.450	40.645	39.229	1.416
FWC-04	IC	0.450	41.500	40.966	0.534
MH4	IC	0.450	40.340	38.940	1.400
MH5	IC	0.450	40.340	39.040	1.300

IMPORTANT

CURRENTLY NO PUMPS WERE SHOWN FOR GROUNDWATER INFILTRATION FROM BASEMENT WATERPROOFING OR RETAINING WALLS. DETAILS TBC BY SUPPLIER/SPECIALIST OF WATERPROOFING SYSTEM IN SUBSEQUENT DESIGN STAGES.

MAINTENANCE REQUIREMENTS FOR ALL DRAINAGE FEATURES WITHIN DEVELOPMENT	
MANAGEMENT COMPANY WILL BE FORMED AND BE RESPONSIBLE FOR ALL DRAINAGE FEATURES	
IDENTIFIER	MAINTENANCE REQUIREMENTS & REMEDIAL ACTIONS
5.GREEN ROOFS	INSPECT AND IDENTIFY ANY AREAS THAT ARE NOT OPERATING CORRECTLY ANNUALLY AND AFTER SEVERE STORMS. THIS INCLUDE SOIL SUBSTRATE VEGETATION, IRRIGATION SYSTEMS, MEMBRANES AND ROOF STRUCTURE. REMOVE DEBRIS AND LITTER EVERY SIX MONTHS OR AS REQUIRED. DURING FIRST YEAR INSPECT AND REPLACE PLANTS AT LEAST MONTHLY THEN ANNUALLY IN AUTUMN. EVERY 6 MONTHS MOW GRASSES, PRUNE SHRUBS AND MANAGE OTHER PLANTING AS REQUIRED AND CLIPPINGS SHOULD BE REMOVED AND NOT ALLOWED TO ACCUMULATE. IF EROSION CHANNELS ARE PRESENT, THESE SHOULD BE STABILISED WITH EXTRA SOIL SUBSTRATE SIMILAR TO THE ORIGINAL MATERIAL AND SOURCES OF EROSION DAMAGED SHOULD BE IDENTIFIED AND CONTROLLED. IF DRAIN INLET HAS SETTLED, CRACKED OR MOVED, INVESTIGATE AND REPAIR AS APPROPRIATE.
6. PERMEABLE PAVING	REGULAR JET-WASHING OF PERMEABLE BLOCK PAVING TO KEEP JOINTS AND VOIDS CLEAR. THIS SHOULD BE CARRIED OUT EVERY 6 MONTHS.



Proposed Surface Water Pumping Station
SWPS01 from Block C.
Assumed Ø1m chamber 2m deep with a pumping
station to pump minimum 3l/s.
CL:40.445m
IL:38.837m inlet
Bottom of chamber:38.445m
Pumping Station and rising main to specialist
design to have redundancy included. If possible
to have emergency supply via a generator and at
least 2 pumps. One spare mobile pump and small
generator to be allowed for as an extra safety
measure if possible.
Recommended safety measures are proposed in
order to reduce the risk of surface water flooding
for residents from lower ground floor of Block C.

Location of proposed Pumping Station to be
coordinated prior construction with
Structural Engineers detail to ensure the
retaining walls are not transferring any
surcharge to the Pumping Stations.

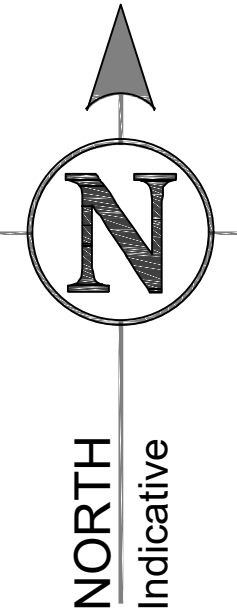
SWC-09
Proposed Orifice Flow Control
Chamber to restrict the flow to
maximum 5l/s for 1:100 years
storm event + 45% climate change.

Existing SW chamber MH07
Topo and CCTV survey.
CL:42.570m Topo.
Depth 500mm based on CCTV
survey from July 2025.
IL:42.070m.
Chamber have all inlets/outlets
blocked based on CCTV survey.

Surface Water Underground Attenuation Tank from
Polystorm-R or similar approved product to be at least
6.0mx4.0mx1.2m deep with 95% void ratio to provide
minimum 27.36m³ of net storage to avoid any flooding for
1:100 storm event +45% Climate Change.
CL:43.200m AOD
Top of tank:42.600m AOD
IL of tank:41.400m AOD
Supplier of tank to provide structural and floatation
calculations and contractor to follow their recommendations
regarding storing, handling and installation.
Attenuation tank to be wrapped on sides and on bottom with
welded impermeable membrane and on top to have
geotextile to allow infiltration from the permeable pavement.
Buildup on top of attenuation tank to be made from suitable
granular material to allow infiltration.



MAINTENANCE REQUIREMENTS FOR ALL DRAINAGE FEATURES WITHIN DEVELOPMENT	
MANAGEMENT COMPANY WILL BE FORMED AND BE RESPONSIBLE FOR ALL DRAINAGE FEATURES	
IDENTIFIER	MAINTENANCE REQUIREMENTS & REMEDIAL ACTIONS
1. CATCHPITS AND FLOW CONTROL CHAMBERS	CATCHPIT CHAMBERS ARE TO BE INSPECTED AND EMPTIED EVERY 3 MONTHS, ESPECIALLY AFTER A HEAVY RAINFALL EVENT TO ENSURE THE SYSTEM DOES NOT CLOG UP WITH SILT OR GET BLOCKED.
2. DRAINAGE RUNS	ANY DEFORMED OR DAMAGED PIPEWORK IS TO BE IDENTIFIED BY A DRAINAGE/CCTV SURVEY AND IS TO BE REPLACED BY APPOINTED MANAGEMENT COMPANY.
3. CHANNEL DRAINS	CHANNEL DRAINS ARE TO BE INSPECTED AND ANY DEBRIS OR LITTER REMOVED EVERY 3 MONTHS OF AFTER A HEAVY RAINFALL EVENT TO ENSURE THERE ARE NO BLOCKAGES.
4. ATTENUATION TANK	ATTENUATION TANK MAINTENANCE SHOULD BE MINIMAL IF CORRECT INSTALLATION METHODS ARE FOLLOWED AND UPSTREAM AND DOWNSTREAM NETWORK IS CORRECTLY MAINTAINED.



DRAWING TO BE PRINTED IN COLOUR.

KEY:

- Proposed Surface Water Pipes.
- Proposed Surface Water Rising Main.
- Proposed Foul Water Pipes.
- Proposed Indicative FW Rising Main.
- Existing Thames Water SW Public Sewer.
- Existing Thames Water FW Public Sewer.
- Channel drain position shown indicative. Threshold drains to be detailed by architect.
- Proposed Site Boundary.
- Proposed RWP (blue) and SVP (red). Locations TBC by Architect or M&E.
- Proposed SW inspection/catchpit chamber.
- Proposed FW inspection chamber.
- Existing Surface (green) and Foul Water chambers as per Thames Water map.
- Proposed ground levels as per architectural drawings. TBC on site.
- Existing Levels as per topo survey.
- Proposed Surface Water Pumping Station to be designed by specialist.
- Proposed Foul Water Pumping Station. Rising Main and pumps to be designed by specialist and pump chamber by the Structural Engineer.
- Permeable Pavement as per Landscape Architect specification. Permeable Pavement not considered for hydraulic storage.

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A	03-08-25	M.H	For Information.	SL	SL

PROJECT:
C3592 - 43 London Street, Reading, RG1 4PS

TITLE:
Proposed Surface Water Maintenance and Management Plan.

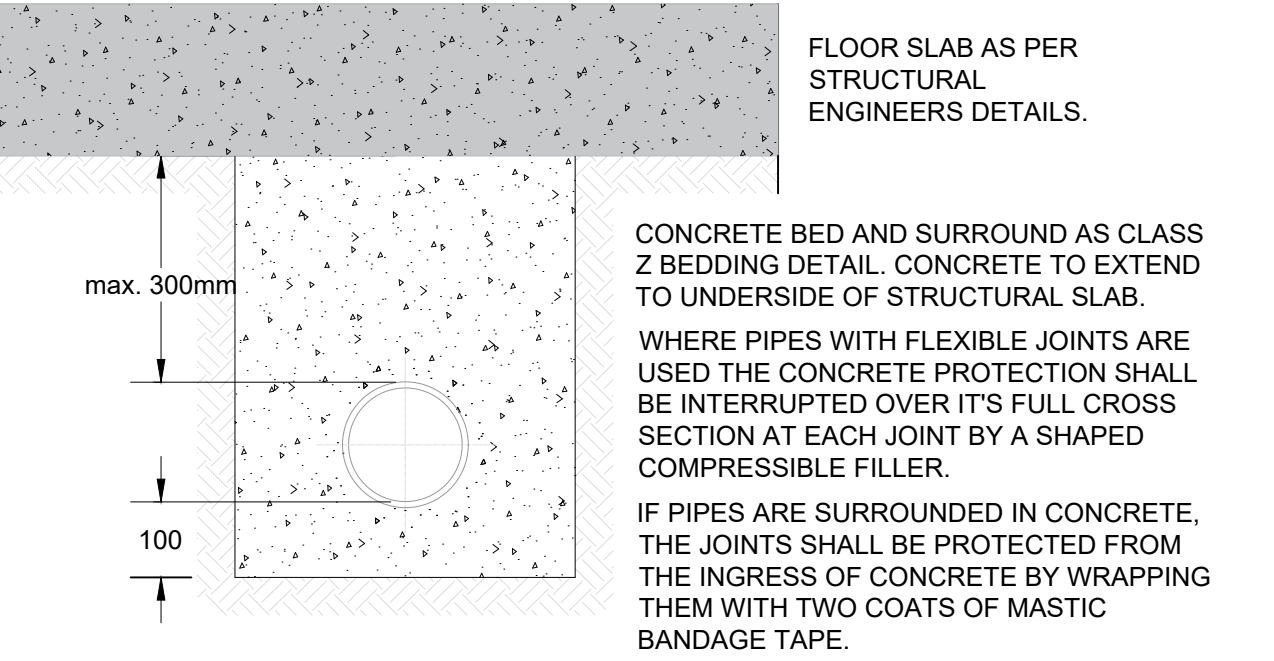
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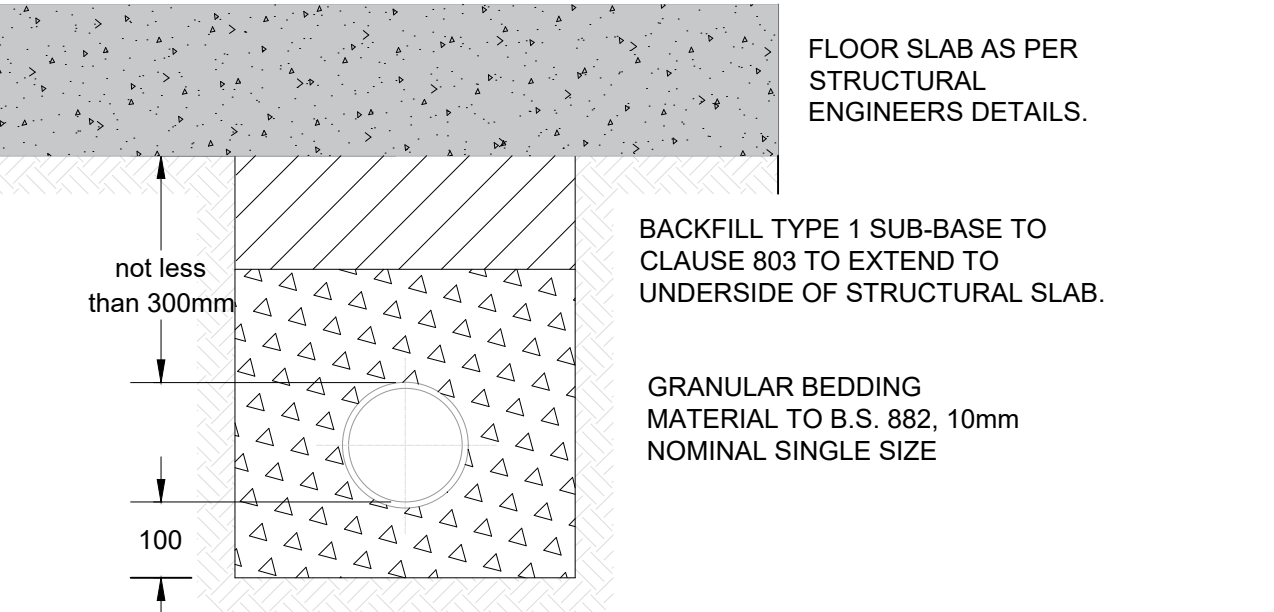
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DRN BY: M.H	SCALE: 1:125	DRAWING NUMBER: C3592-07	REV: B
DATE: 03-08-25	SIZE: A1		

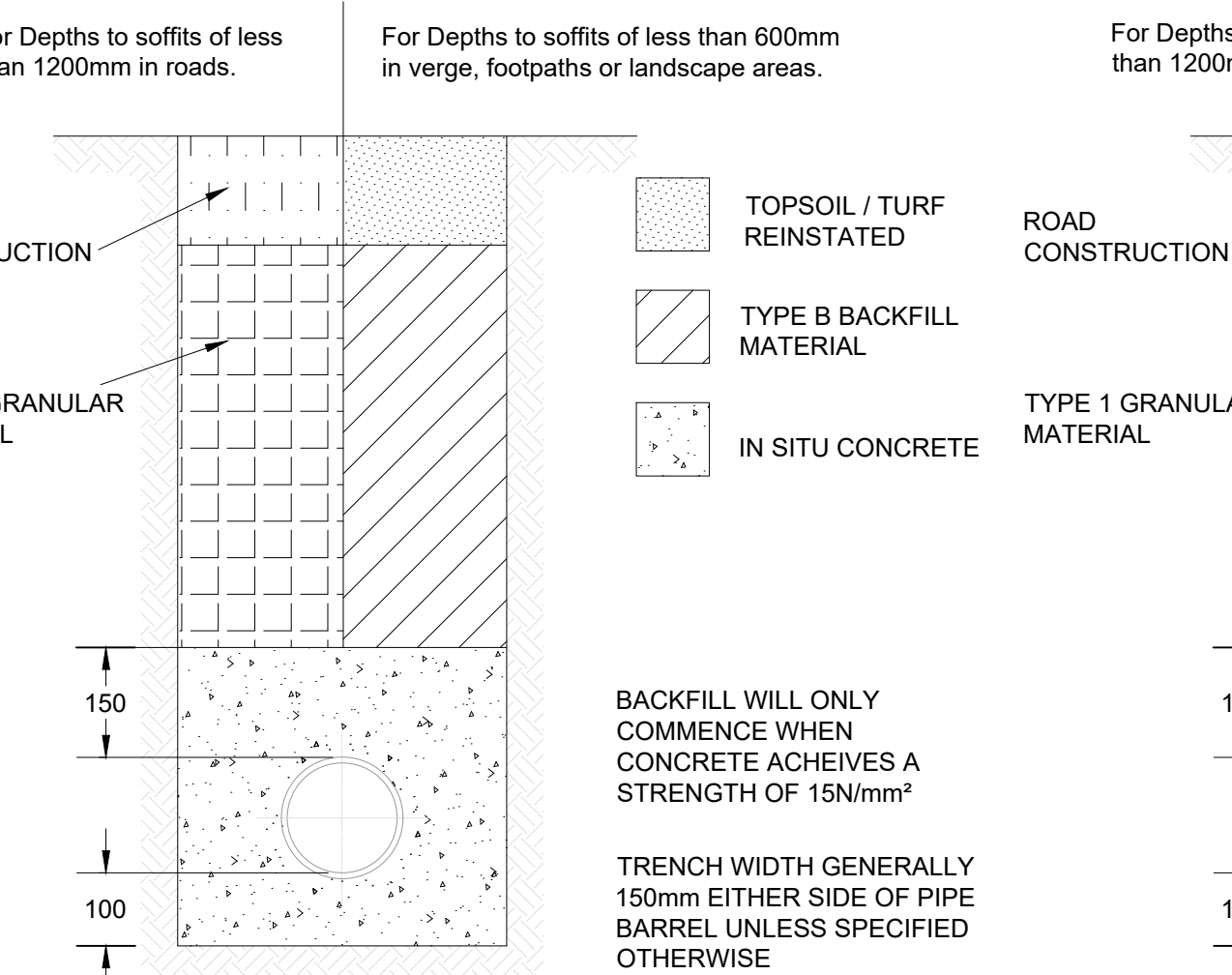
TRENCH BEDDING AND FILL MATERIALS								
GRANULAR BEDDING TYPE A								
TYPE	USE FOR NOMINAL PIPE (DIA.)	% PASSING BY MASS BS 410 SIEVE SIZES (mm)						
		63	37.5	20	14	10	5	2.36
A40	>1350	100	85-100	0-25	—	0-5	—	—
A20	600-1350	—	100	85-100	—	0-25	0-5	—
A14	300-525	—	—	100	85-100	0-50	0-10	—
A10	<300	—	—	—	100	85-100	0-25	0-5



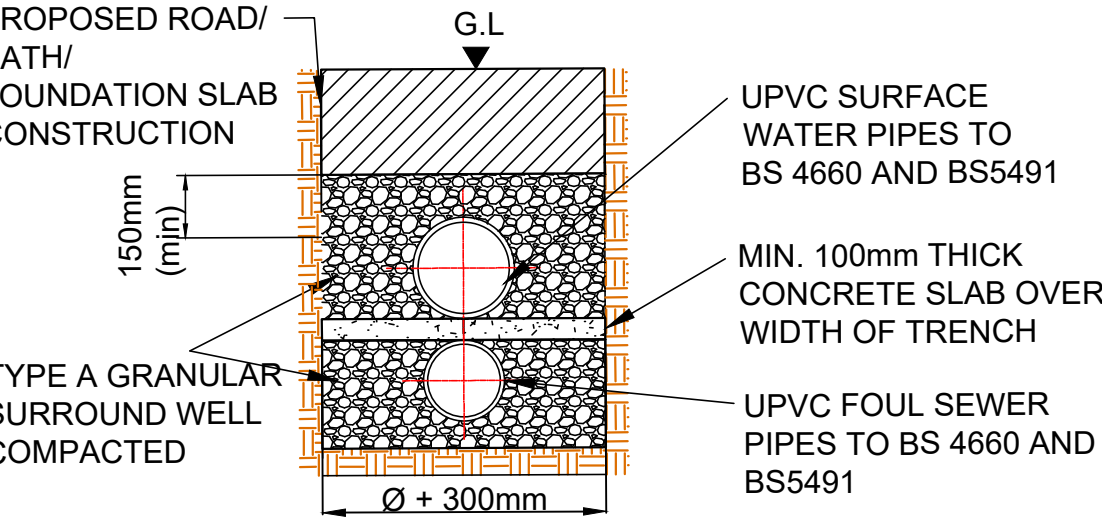
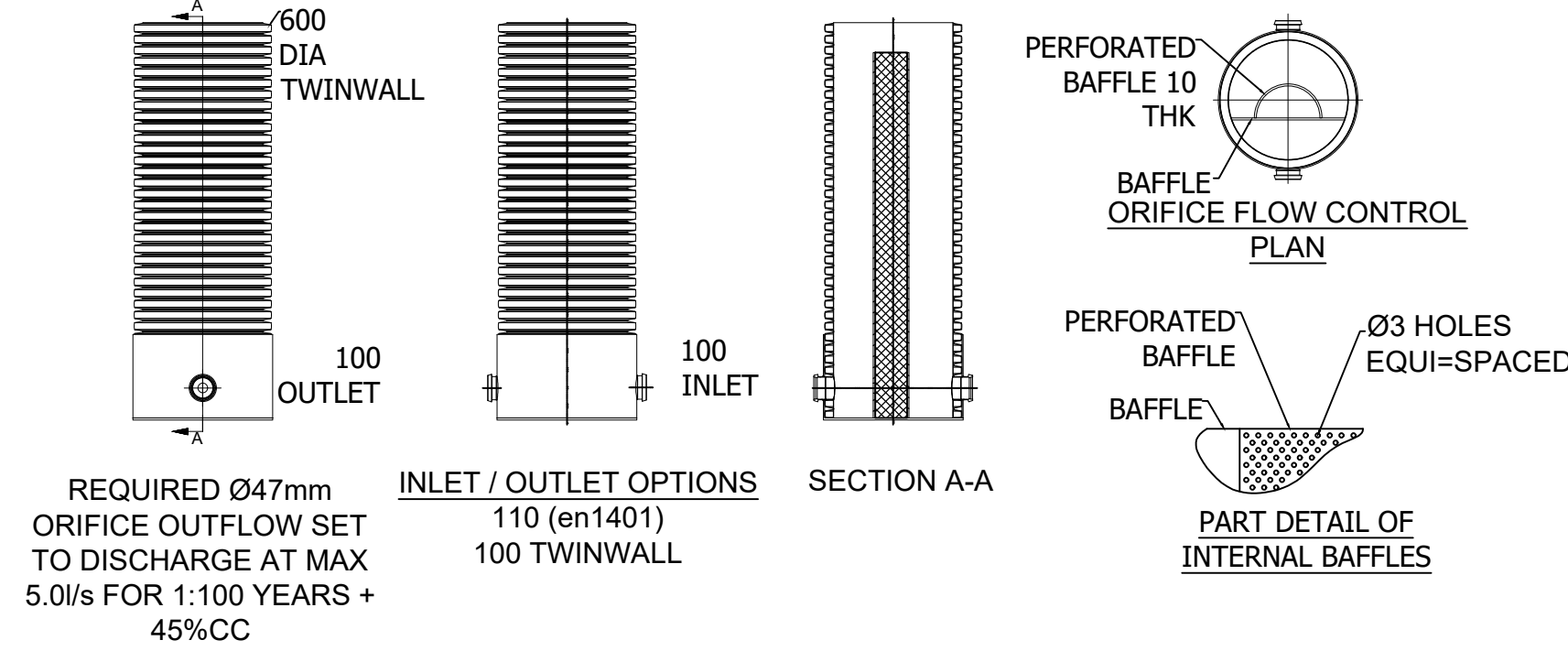
DRAINS UNDER BUILDINGS
NOT TO SCALE



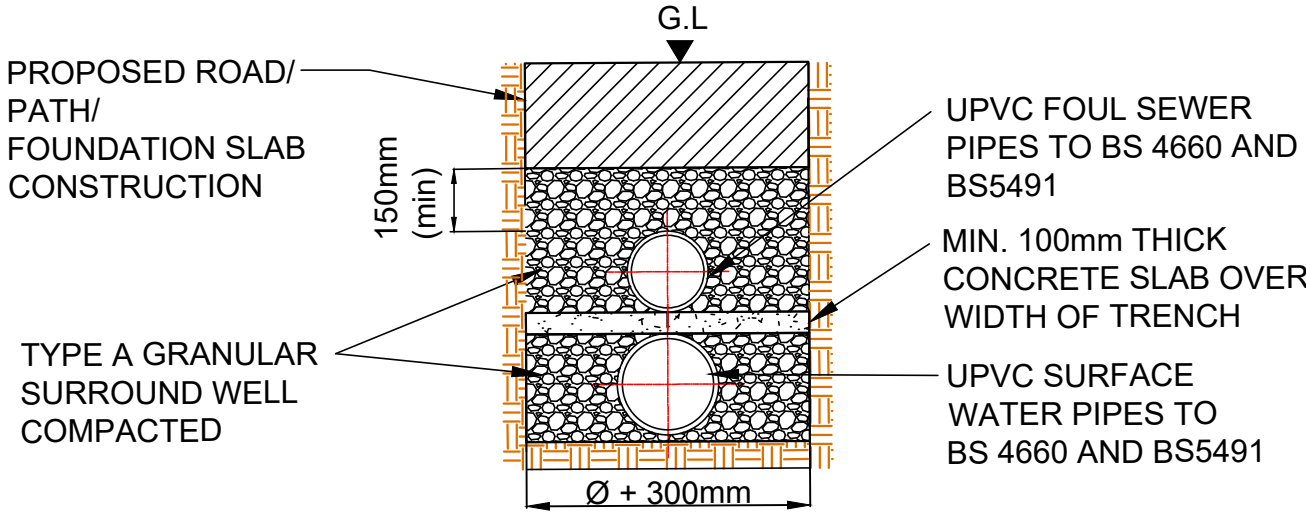
DRAINS UNDER BUILDINGS
NOT TO SCALE



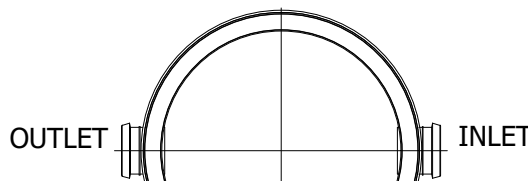
CLASS Z BEDDING FOR DRAINAGE PIPES
NOT TO SCALE



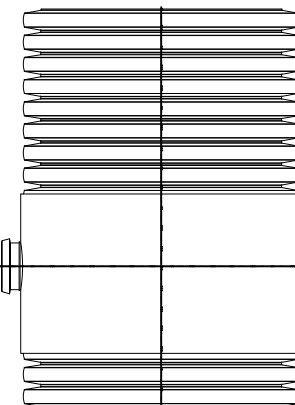
PROTECTION FOR SURFACE WATER SEWER
CROSSINGS ABOVE FOUL SEWERS (UPVC PIPES)
NOT TO SCALE



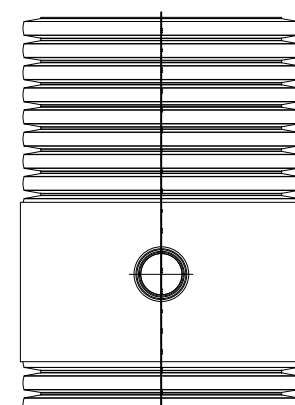
PROTECTION FOR FOUL SEWER CROSSINGS
ABOVE SURFACE WATER SEWERS (UPVC PIPES)
NOT TO SCALE



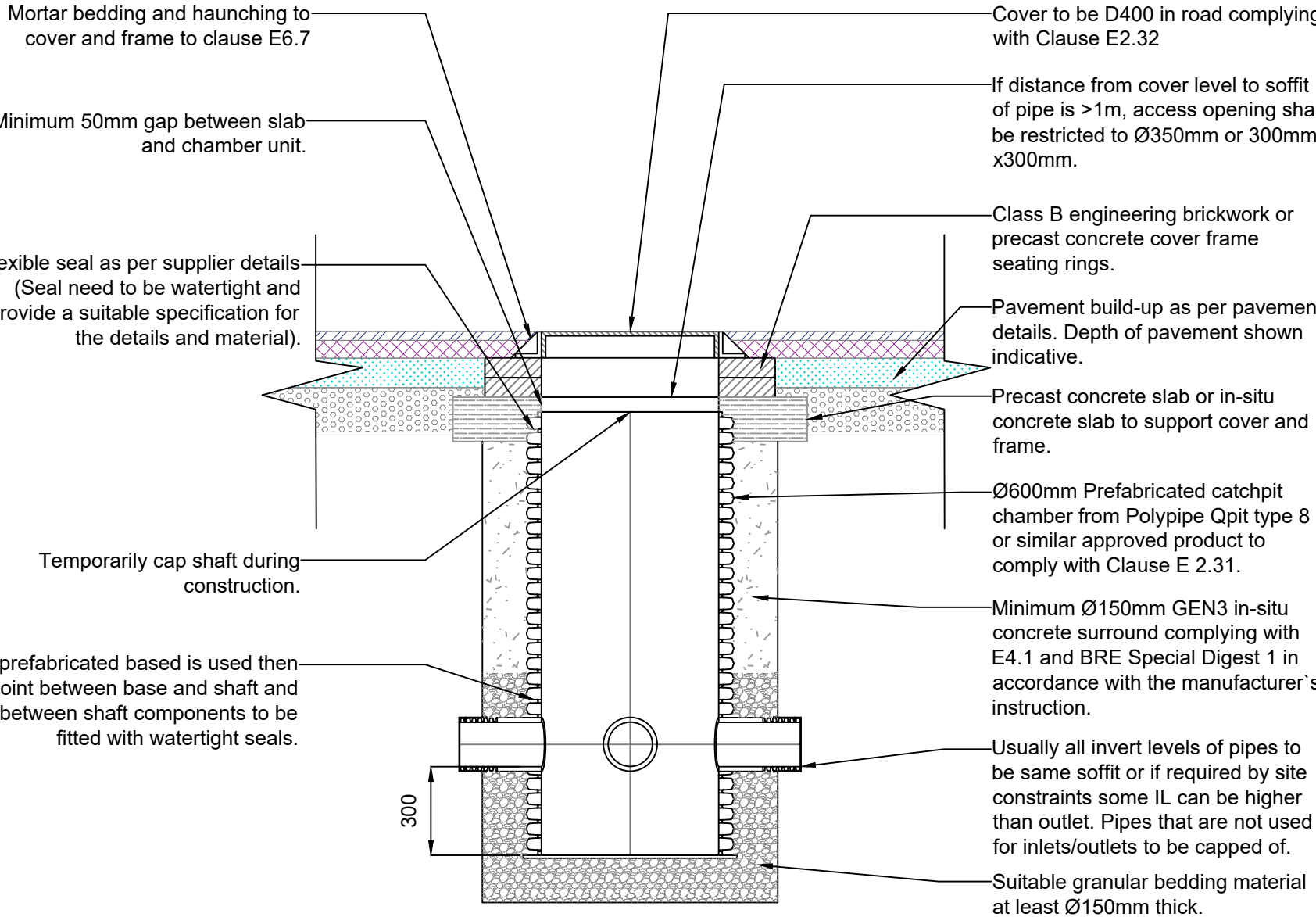
CATCHPIT CHAMBER PLAN
NOT TO SCALE



CATCHPIT CHAMBER
ELEVATION
NOT TO SCALE

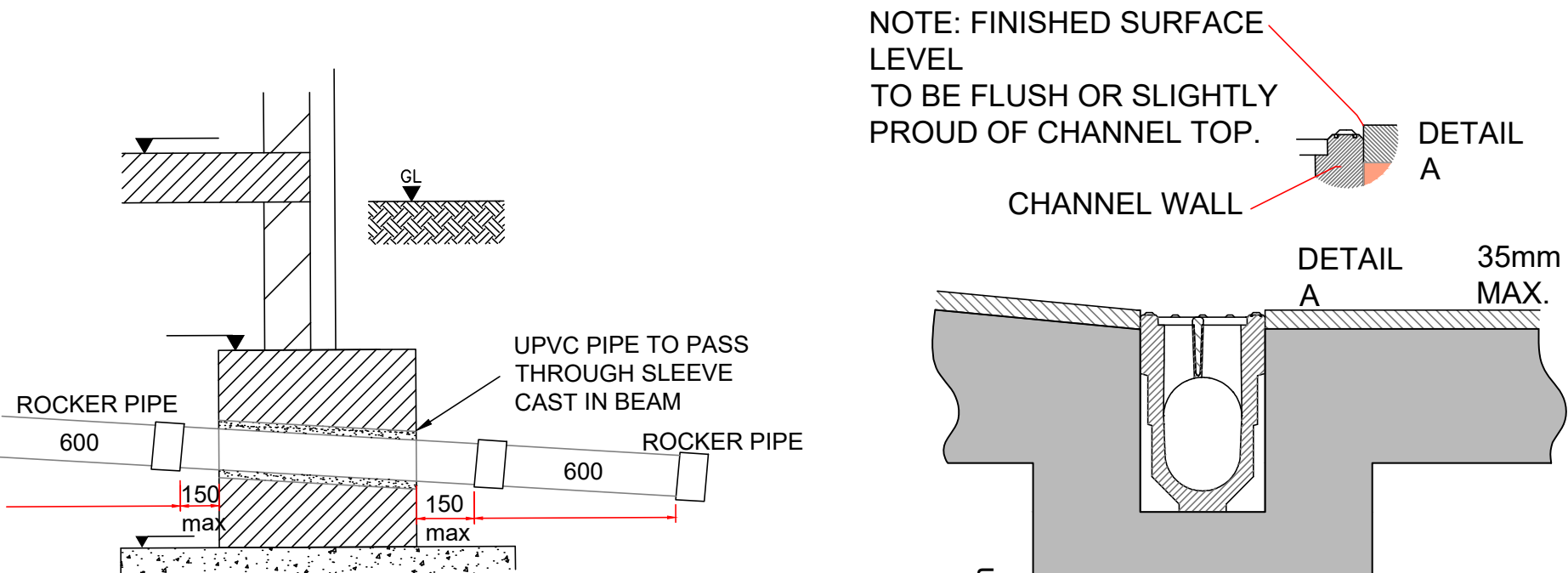


CATCHPIT CHAMBER
ELEVATION
NOT TO SCALE

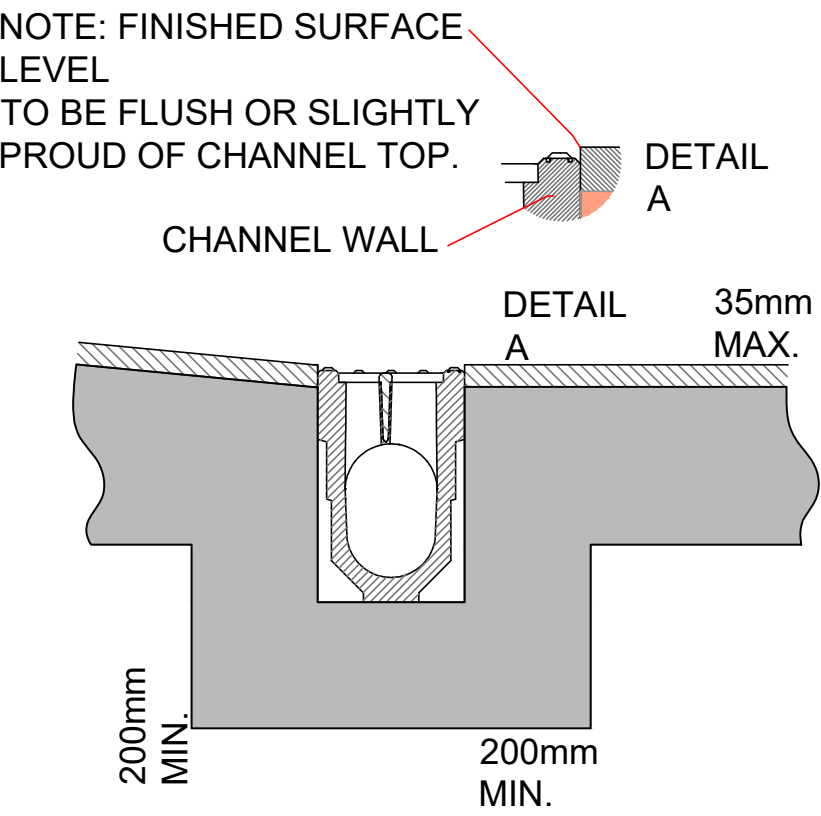


TYPICAL DETAIL FOR INSPECTION CATCHPIT CHAMBER IN ROAD
(ALL REFERENCES TO CLAUSES ARE FROM SEWERAGE SECTOR
GUIDANCE - FORMER SFA)

SCALE 1:20



DETAIL OF DRAIN PASSING
THROUGH GROUND BEAM OR
OTHER STRUCTURE
NOT TO SCALE



ACO ROAD DRAIN DETAIL
(FOR USE IN PRIVATE DETAIL)
NOT TO SCALE

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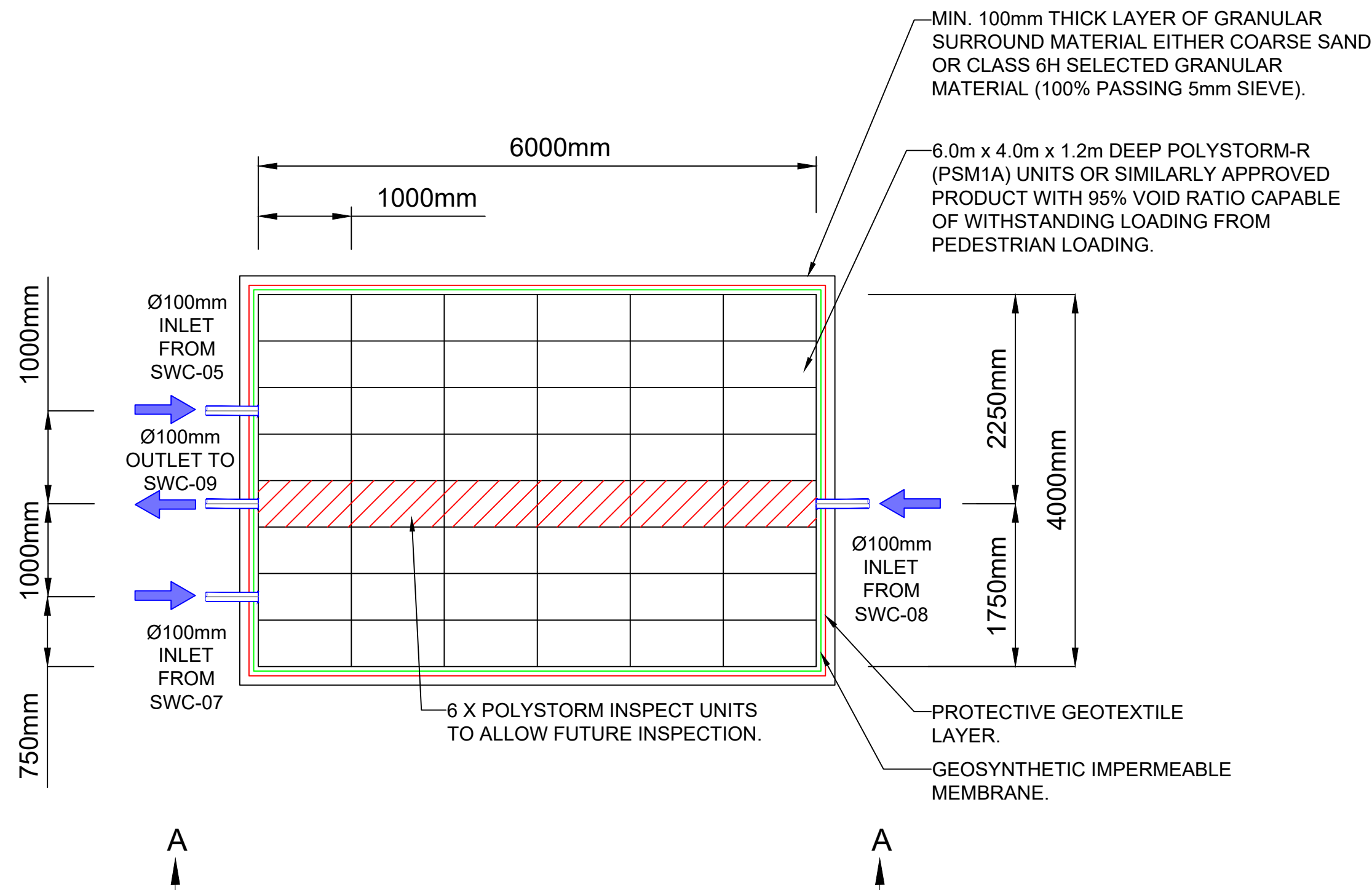
TITLE:
Standard Drainage Details - Sheet 01 from 03.

CLIENT: Mynshull House, 78 Churchgate
Stockport, Greater Manchester
SK1 1YJ
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david.higgins@39di.co.uk

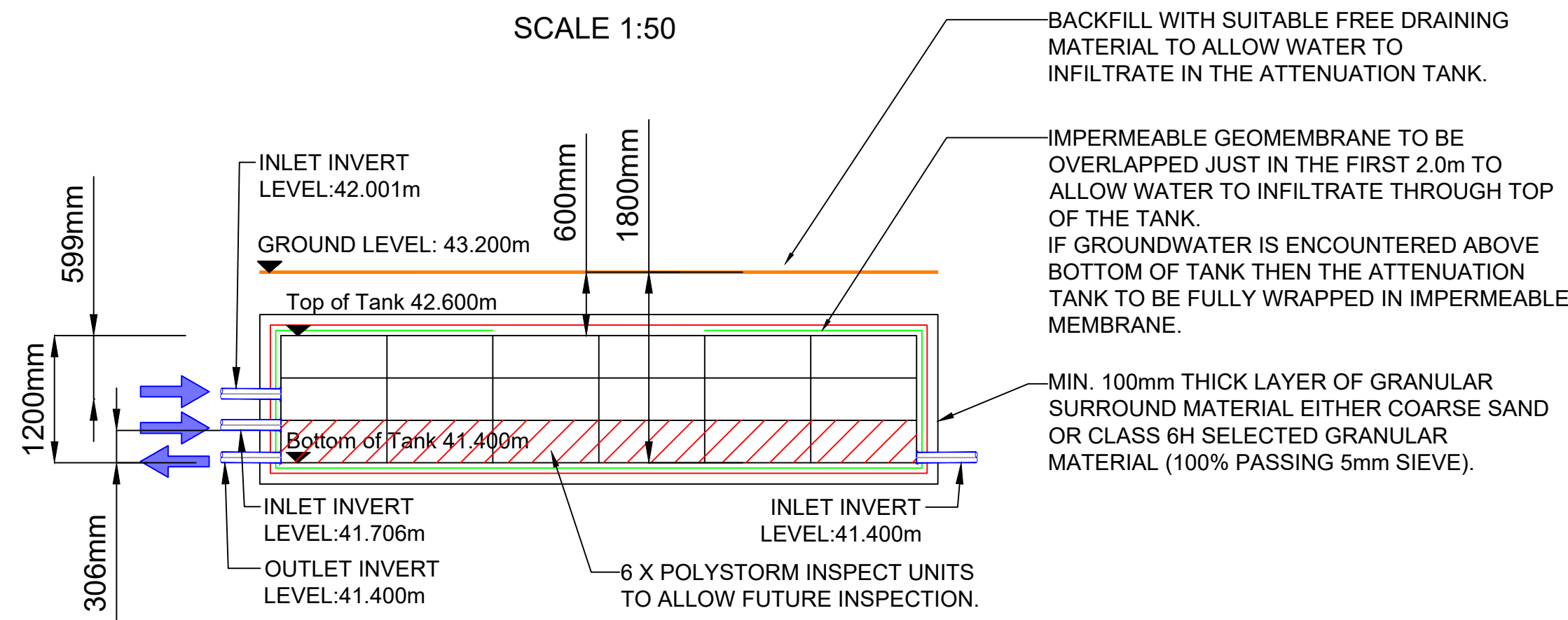
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M.H	N/A	C3592-08	B
DATE:	SIZE:		
03-08-25	A1		



ATTENUATION TANK - PLAN VIEW
SCALE 1:50

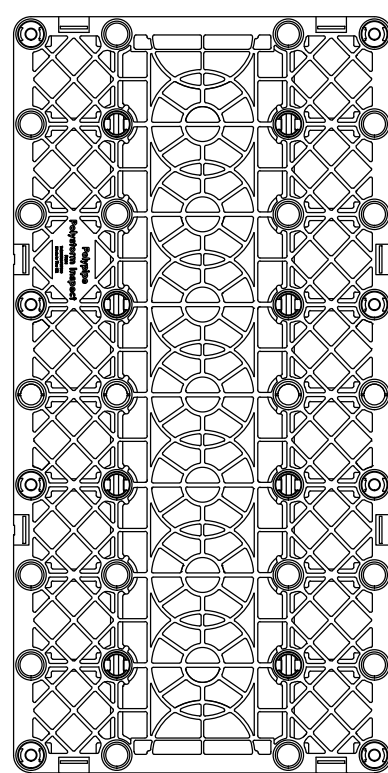


ATTENUATION TANK - SECTION A-A
SCALE 1:50

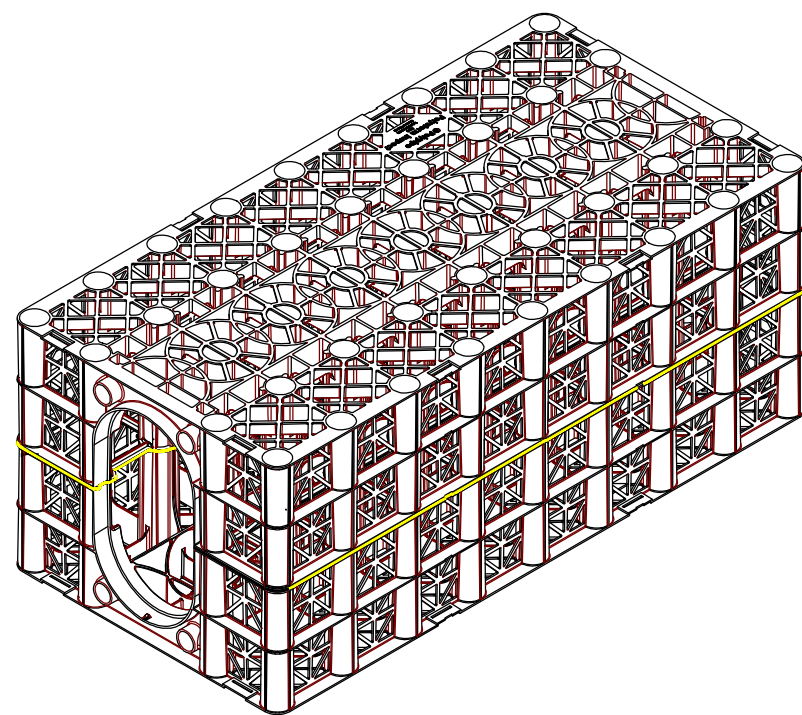
POLYSTORM CELL

Product Code: PSM4

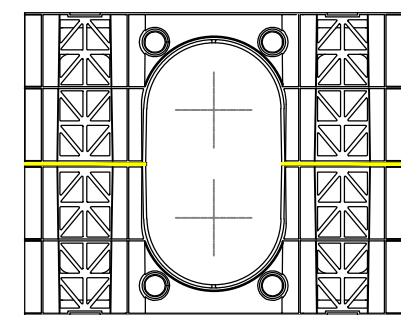
POLYSTORM TABLE								
NAME	CODE	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	A (mm)	VERTICAL STRENGTH (kN/m ²)	LATERAL STRENGTH (kN/m ²)	COLOUR
Polystorm Inspect	PSM4	1000	500	400	54	440	63	Grey
								Prime Polypropylene



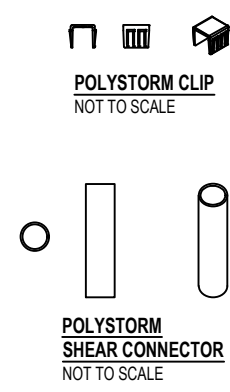
PLAN VIEW
NOT TO SCALE



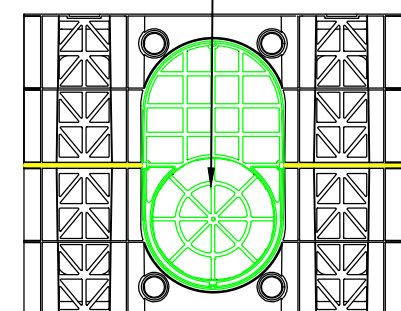
ISOMETRIC VIEW
NOT TO SCALE



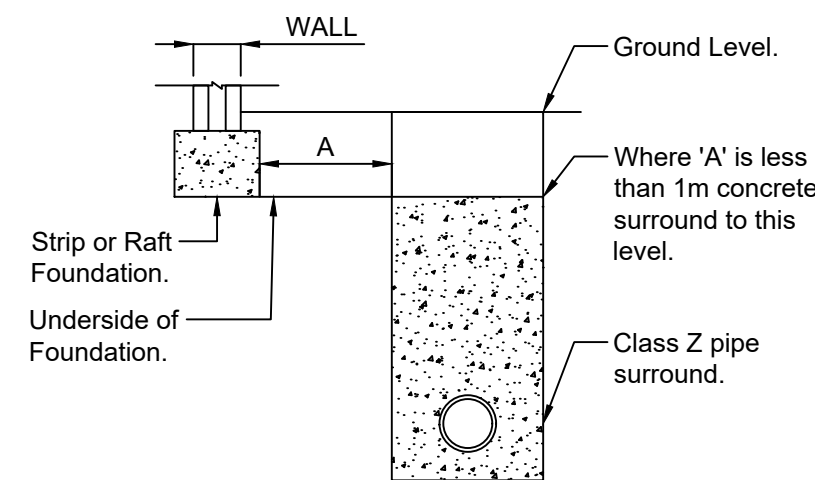
END ELEVATION
NOT TO SCALE



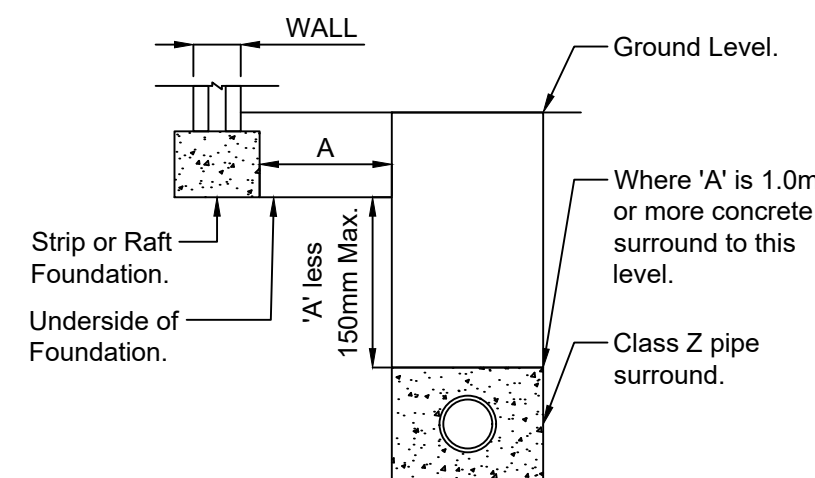
Optional:
Polystorm Inspect End Plate
Product Code: PSM4-E
Recessed 'knock-out' accepts
Ø160mm BS EN 1401-1 pipe



END ELEVATION
(Including Insert)
NOT TO SCALE



TYPICAL DETAIL FOR PIPE RUNS NEAR BUILDINGS
(A' LESS THAN 1m)
NOT TO SCALE

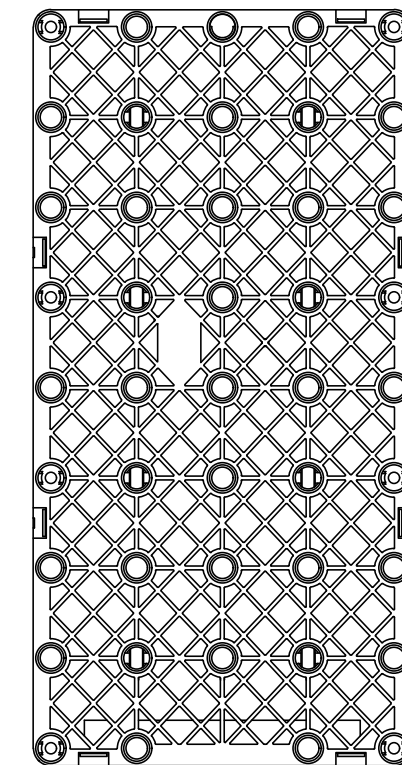


TYPICAL DETAIL FOR PIPE RUNS NEAR BUILDINGS
(A' GREATER THAN 1m)
NOT TO SCALE

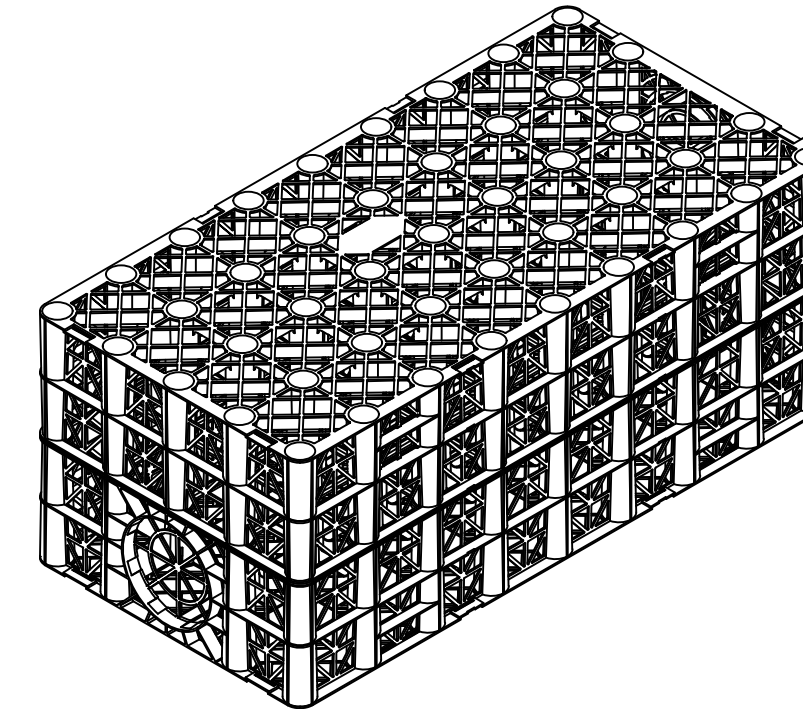
POLYSTORM CELLS

Product Code: PSM1, PSM1A & PSM2

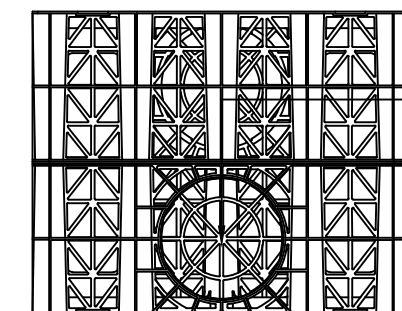
POLYSTORM TABLE									
NAME	CODE	LENGTH (mm)	WIDTH (mm)	HEIGHT (mm)	A (mm)	VERTICAL STRENGTH (kN/m ²)	LATERAL STRENGTH (kN/m ²)	COLOUR	MATERIAL
Polystorm	PSM1	1000	500	400	25	440	63	Grey	Prime Polypropylene
Polystorm - R	PSM1A	1000	500	400	25	610	63	Black	Recycled Polypropylene
Polystorm Lite	PSM2	1000	500	400	25	200	40	Black	Recycled Polypropylene



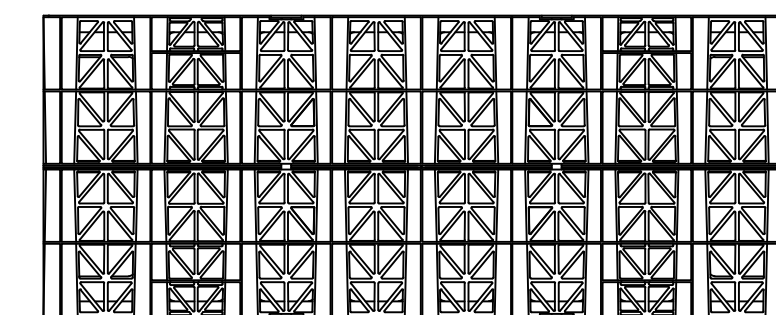
PLAN VIEW
NOT TO SCALE



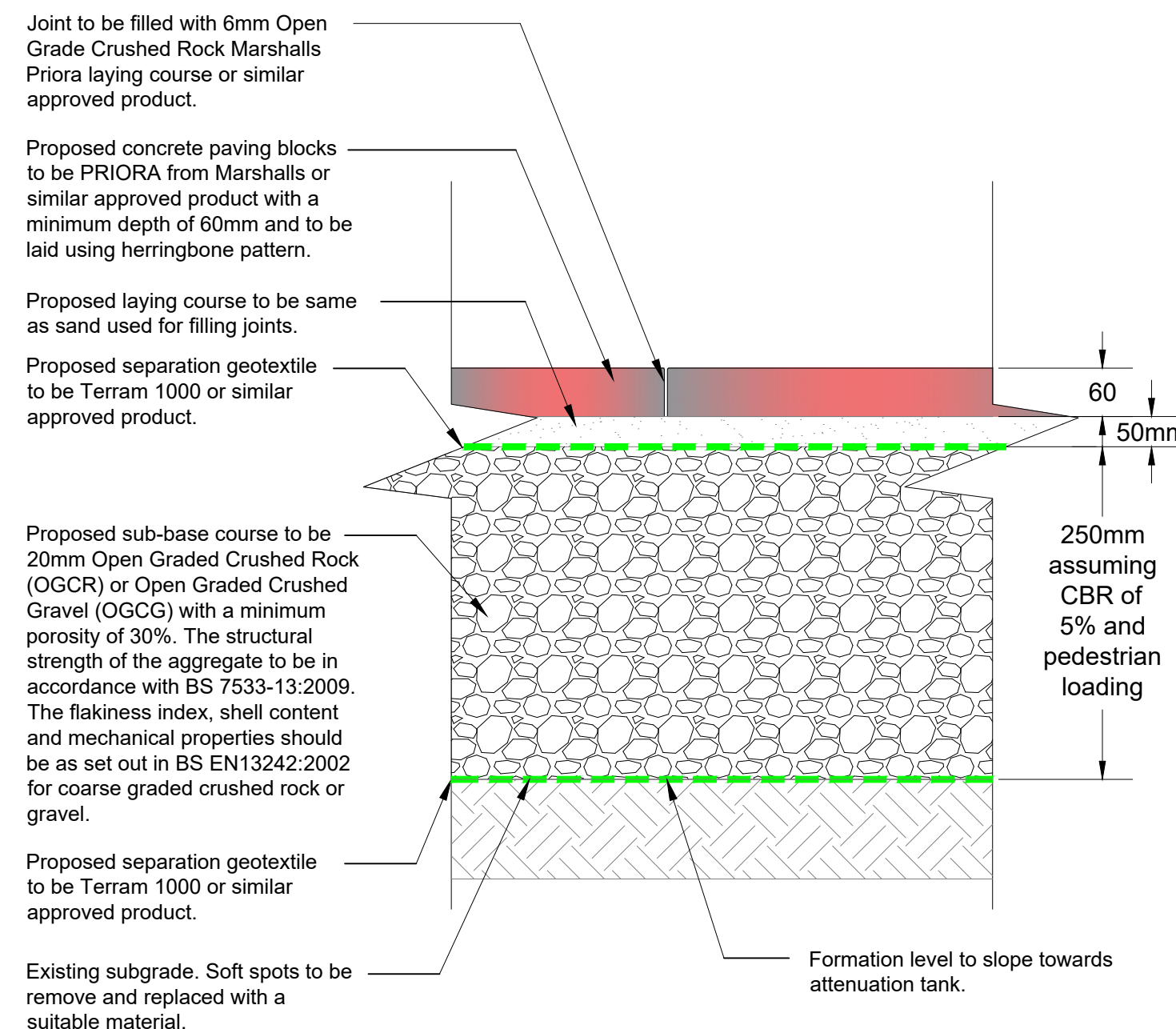
ISOMETRIC VIEW
NOT TO SCALE



END ELEVATION
NOT TO SCALE



SIDE ELEVATION
NOT TO SCALE



BLOCK PAVEMENT TYPE TYPICAL SECTION FOR SUBBASE ATTENUATION
(If Permeable Pavement from Marshall is used)
NOT TO SCALE

NOT FOR CONSTRUCTION

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PROJECT:

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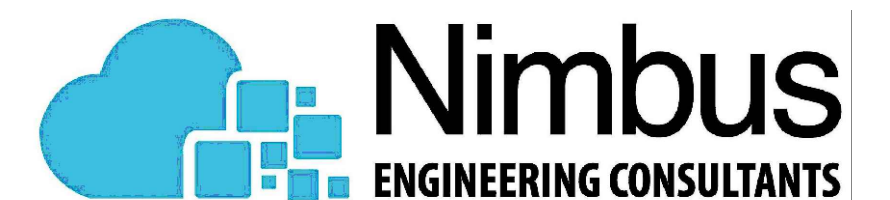
TITLE:

Standard Drainage Details - Sheet 02 from 03.

CLIENT:

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DRN BY: M.H	SCALE: N/A	DRAWING NUMBER: C3592-09	REV: B
DATE: 03-08-25	SIZE: A1		

Figure B 14
Typical manhole detail - Type C
Depth from cover level to soffit of pipe less than 1.5 m
Maximum pipe size 450 mm diameter
Rigid material construction

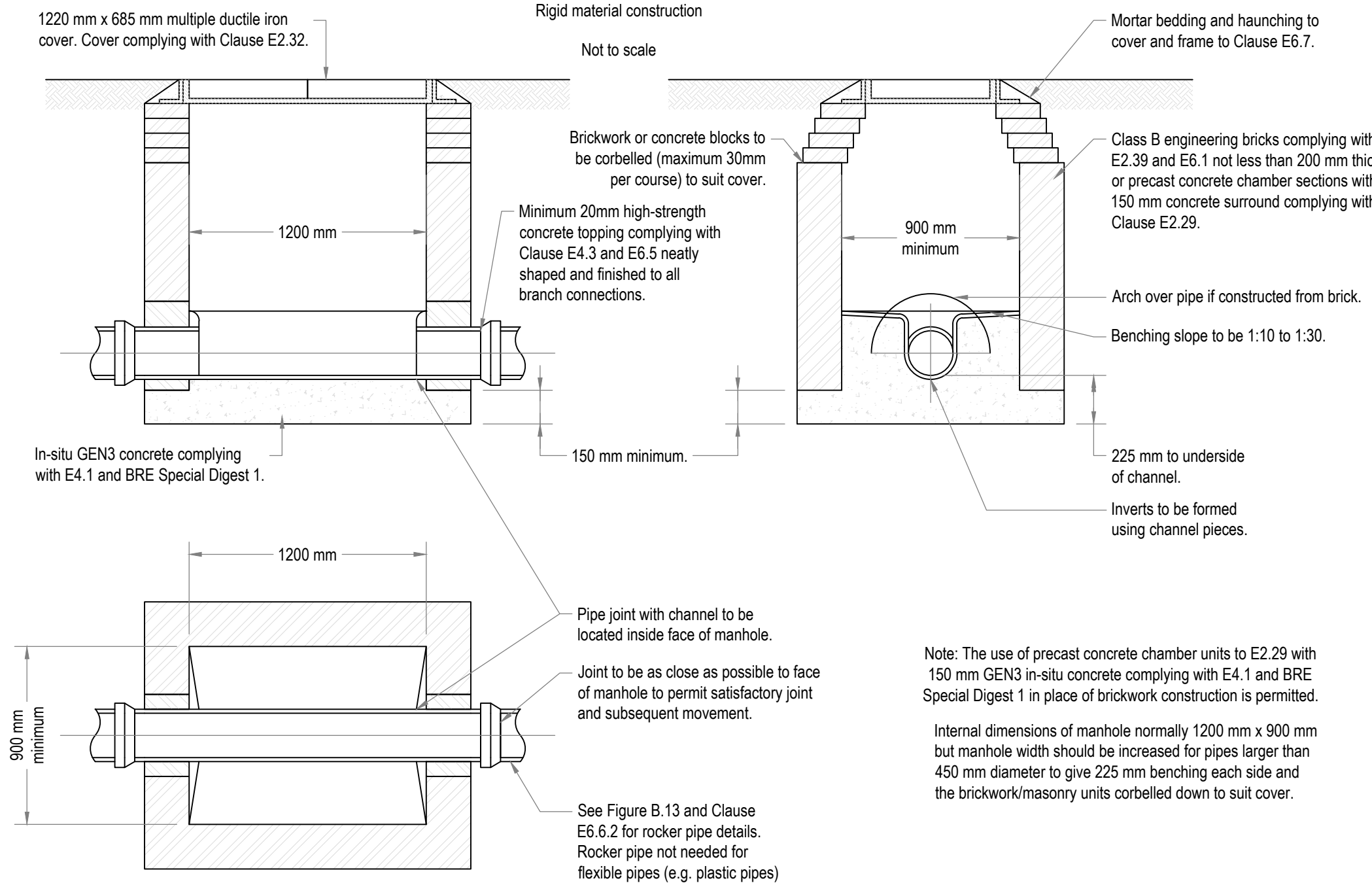
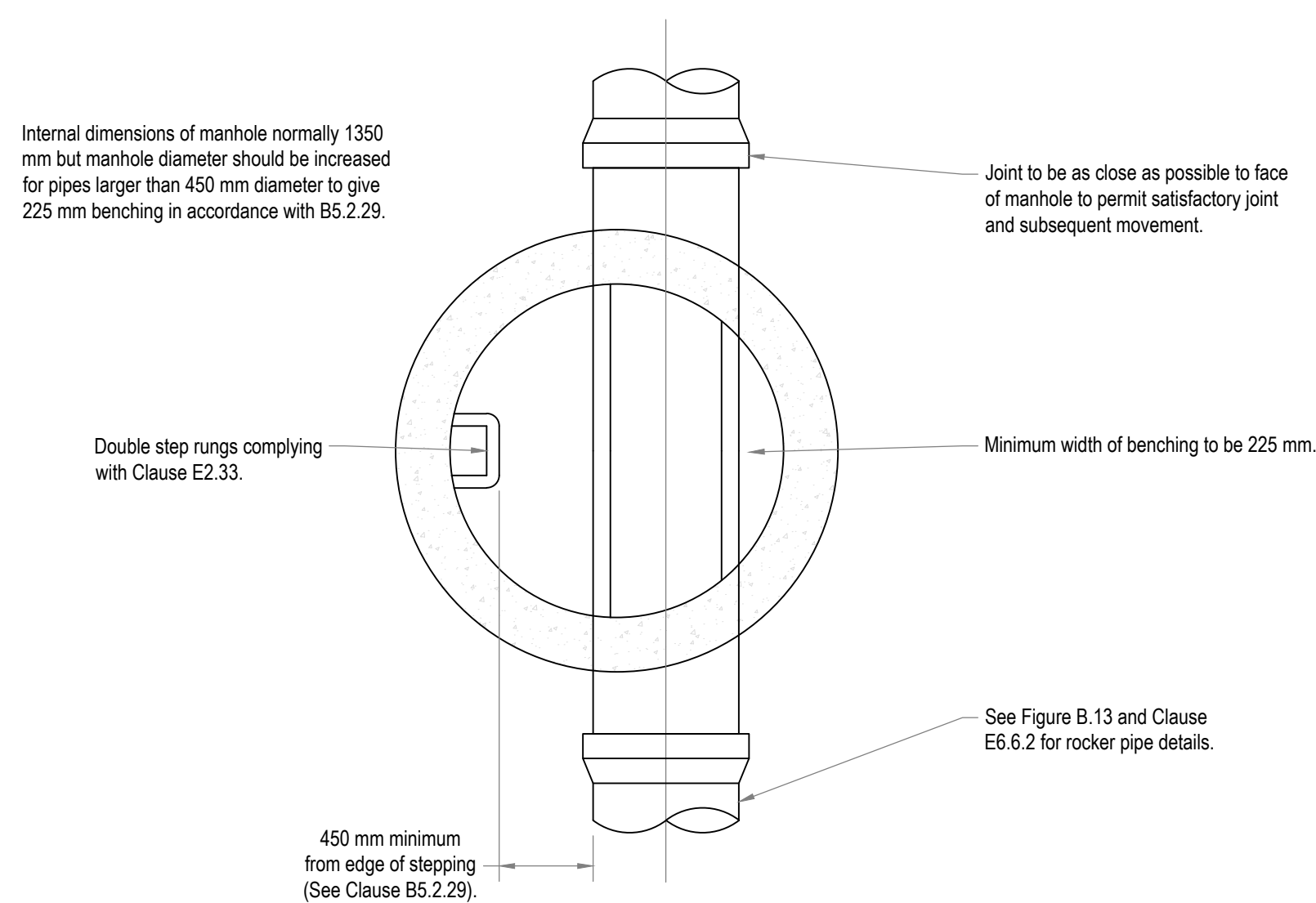
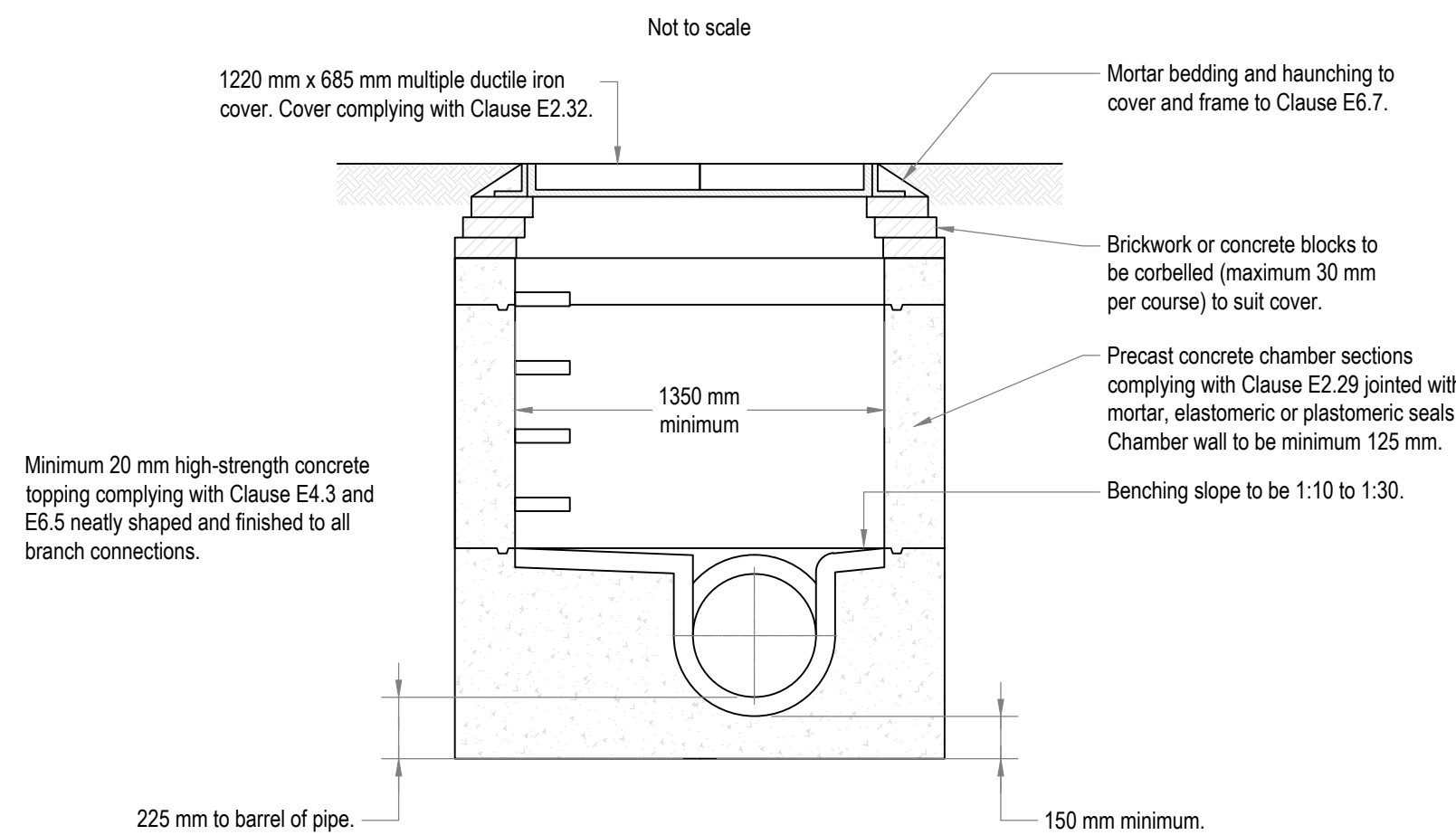
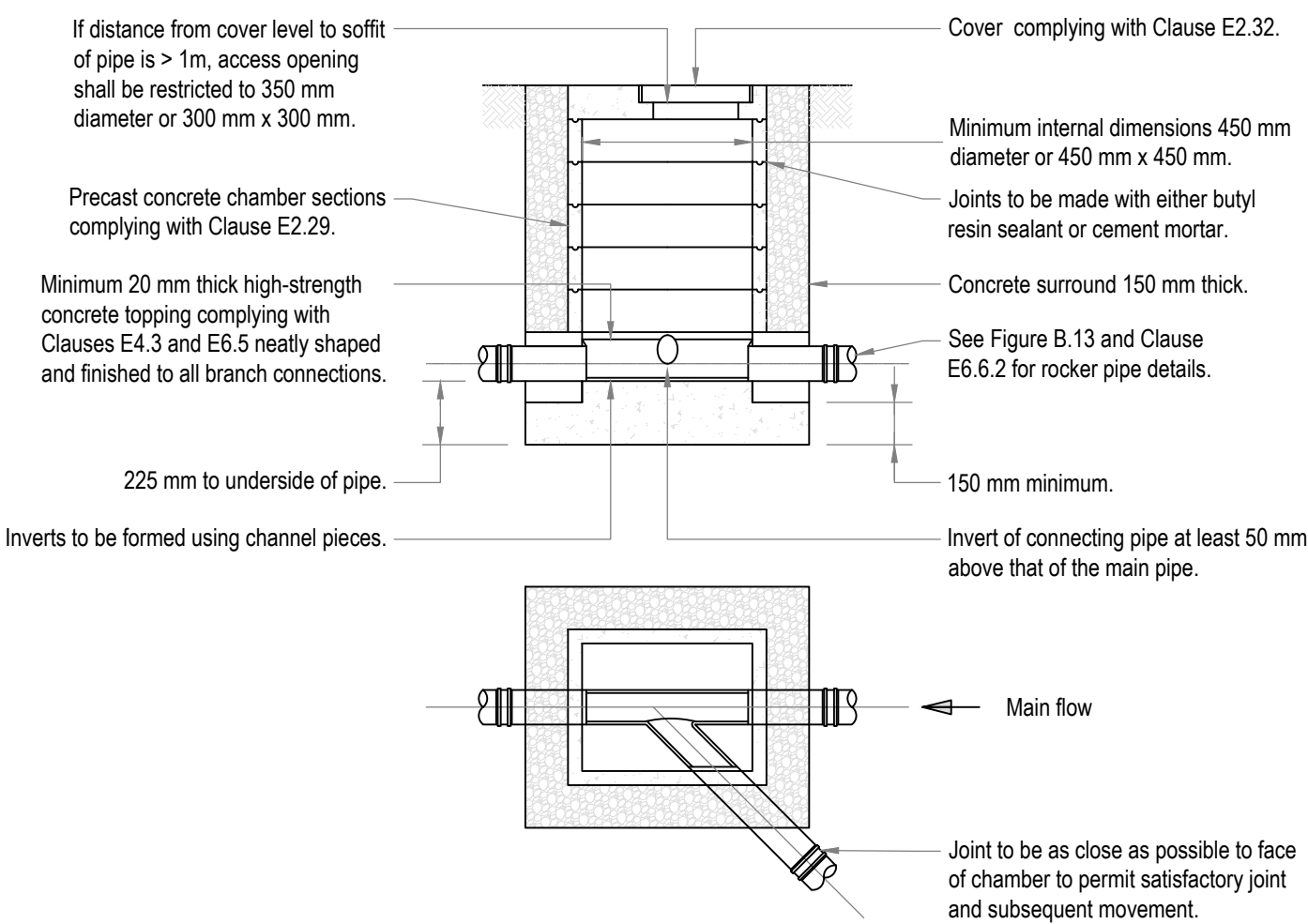


Figure B 15
Typical manhole detail - Type C
Depth from cover level to soffit of pipe less than 1.5 m
Maximum pipe size 450 mm diameter
Rigid material construction



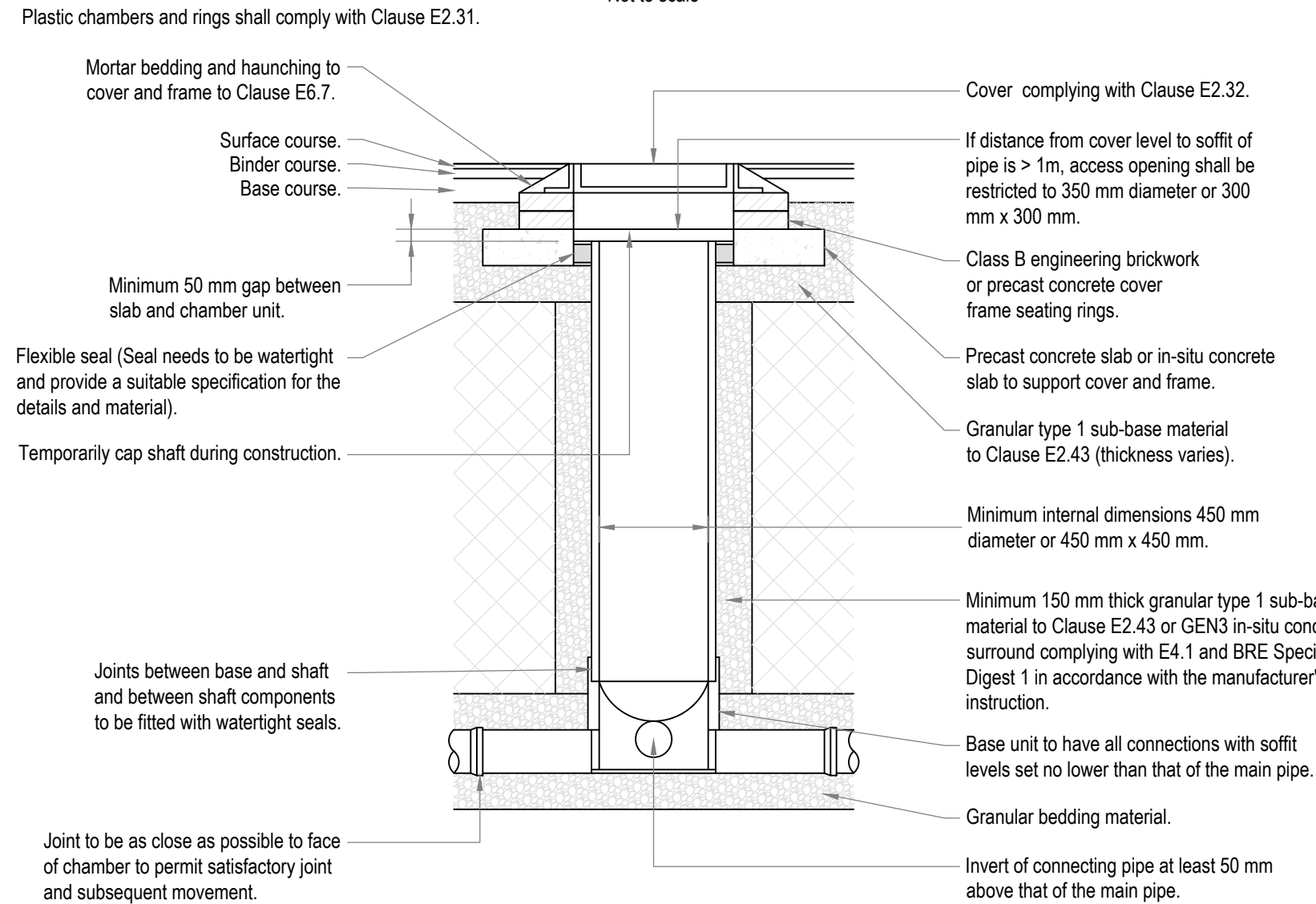
Note: The use of precast concrete chamber units to E2.29 with 150 mm GEN3 in-situ concrete complying with E4.1 and BRE Special Digest 1 in place of brickwork construction is permitted.

Figure B 21
Typical inspection chamber detail - Type D
Depth from cover level to soffit of pipe up to 3 m
Rigid material construction for use in areas subject to vehicle loading or landscaped areas
Not to scale



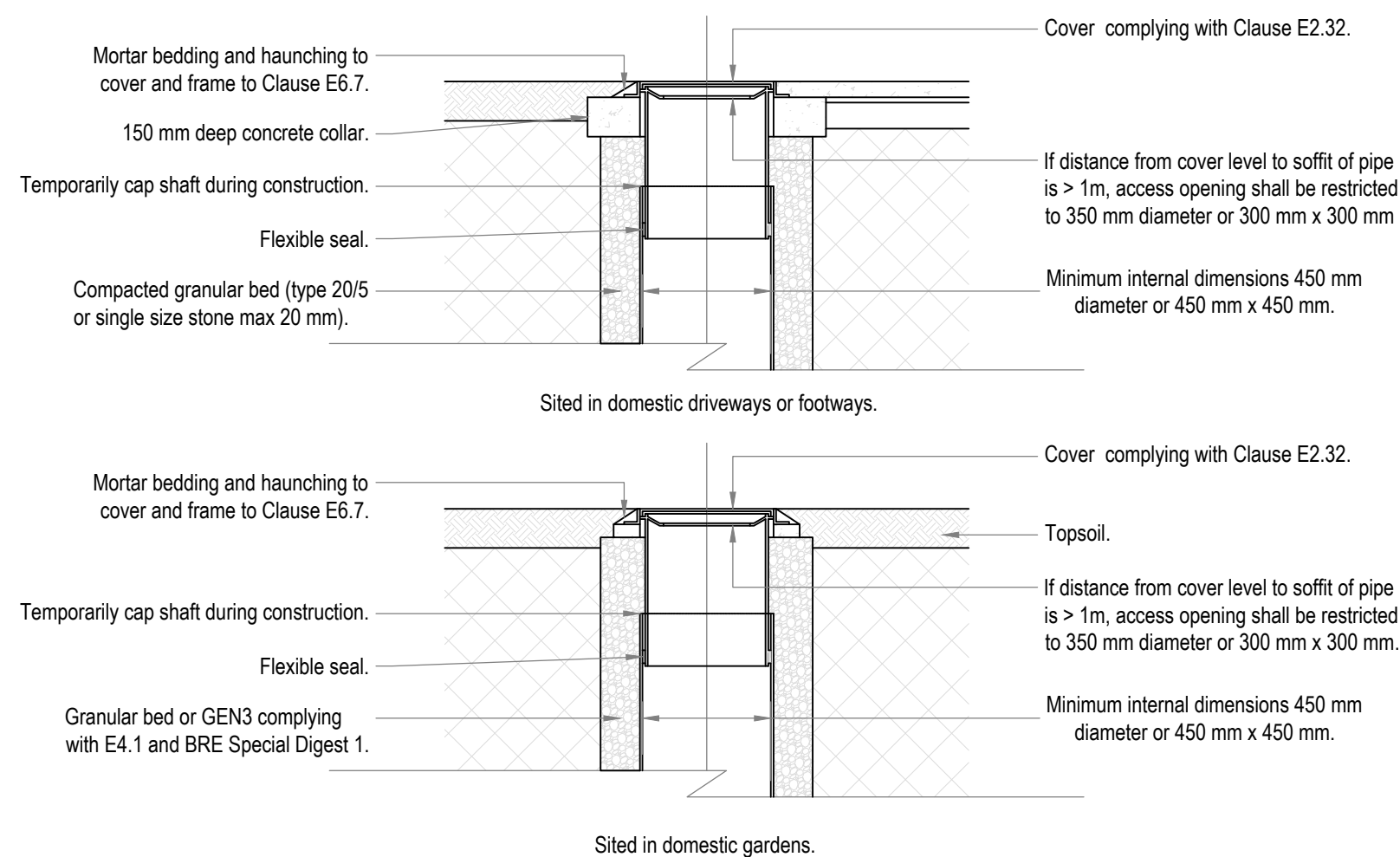
Note: Where the access chamber is in the highway (including any footway), the highway authority can have specific requirements.

Figure B 18
Typical manhole detail - Type D
Depth from cover level to soffit of pipe up to 3 m
Flexible material construction for use in areas subject to vehicle loading
Not to scale



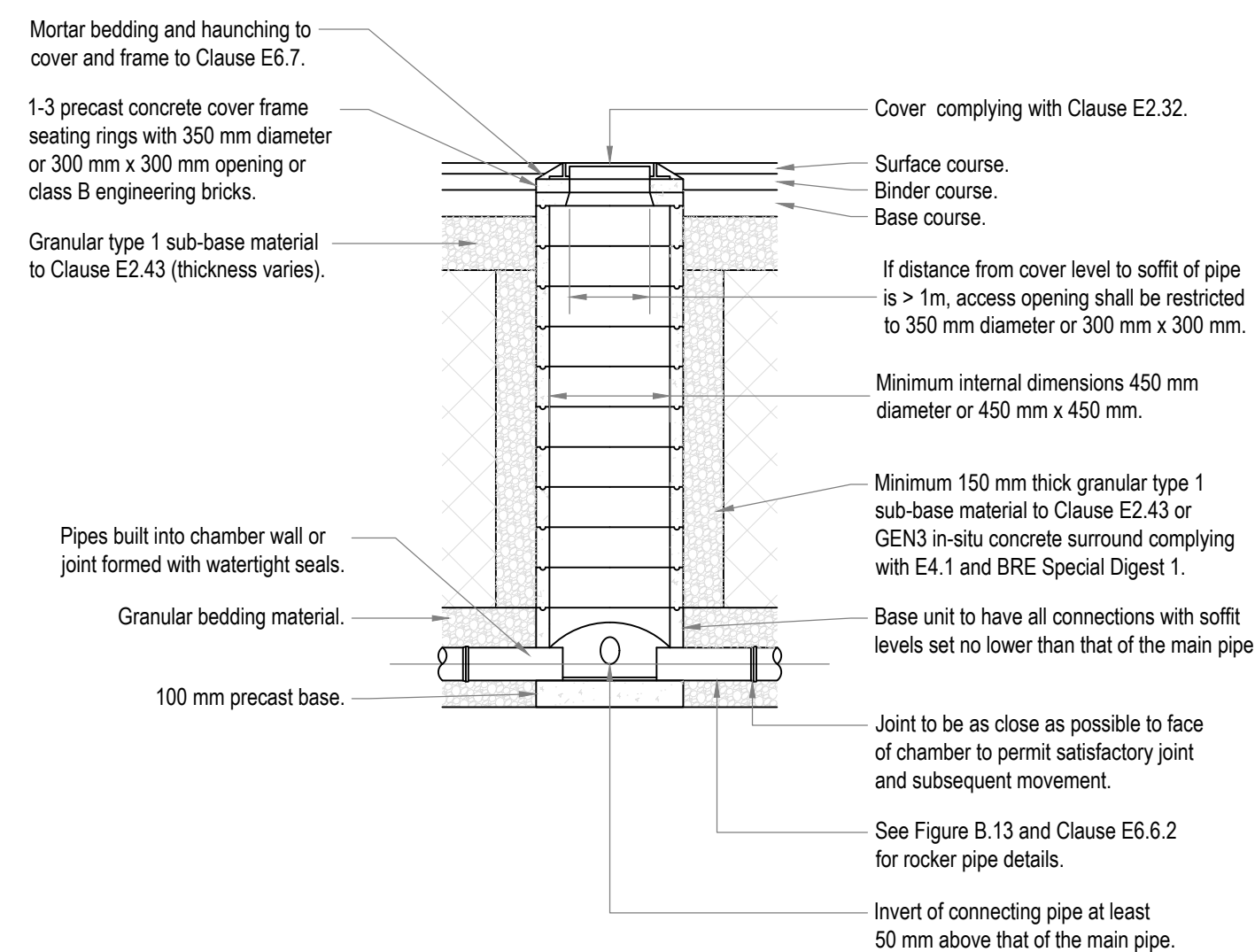
Note: Where the access chamber is in the highway (including any footway), the highway authority can have specific requirements.

Figure B 19
Typical manhole detail - Type D
Flexible material construction alternative top details for use in areas of light vehicle loading
or landscape areas



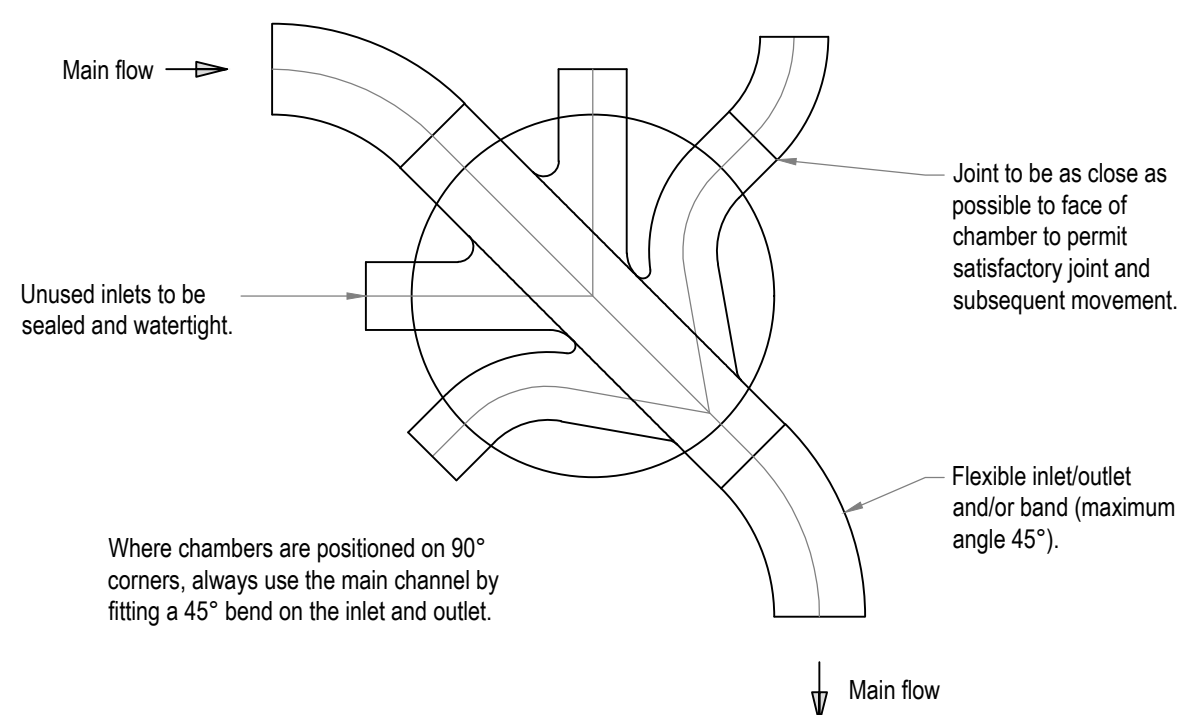
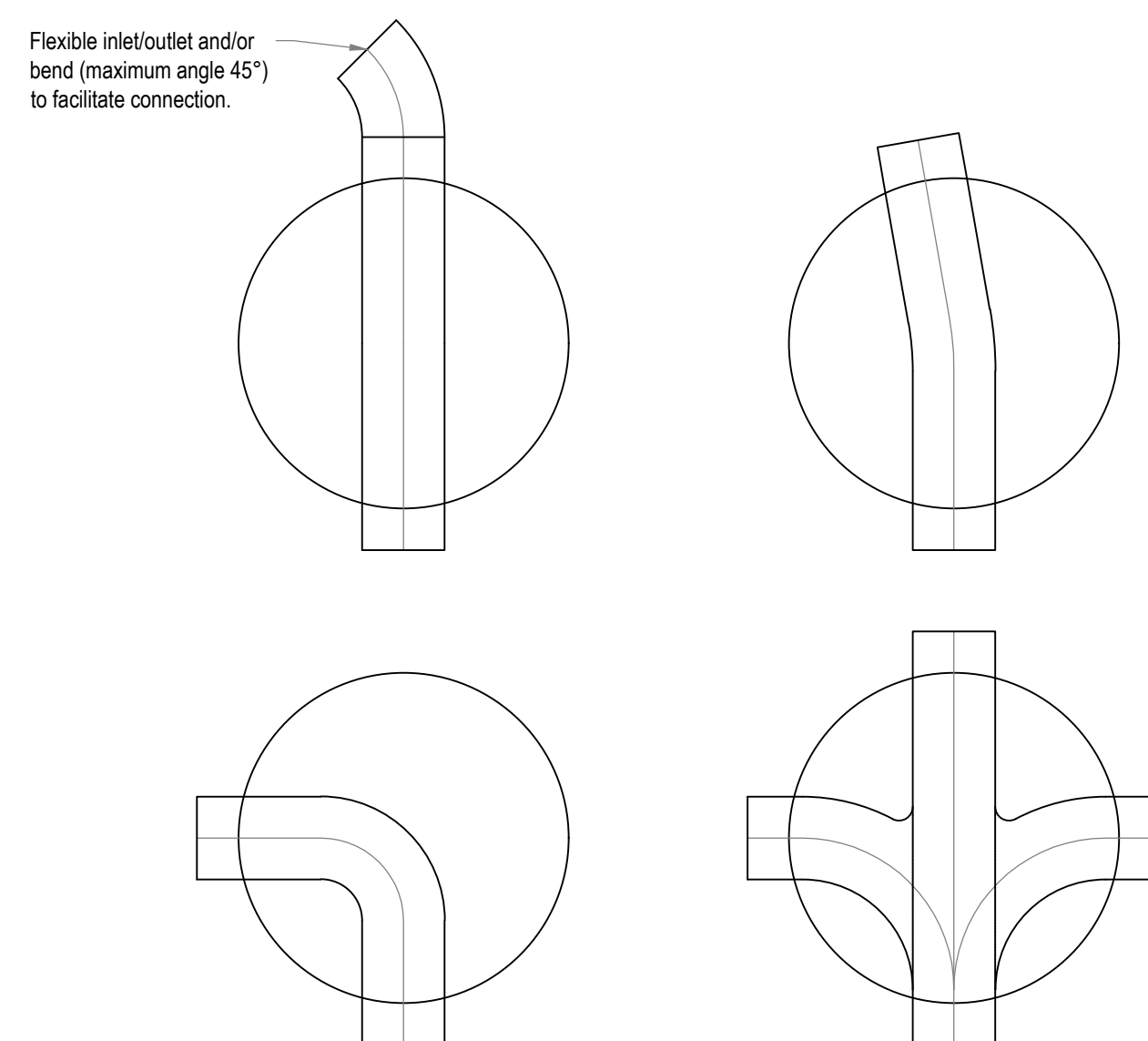
Note: Where the access chamber is in the highway (including any footway), the highway authority can have specific requirements.

Figure B 20
Typical inspection chamber detail - Type D
Depth from cover level to soffit of pipe up to 3 m
Rigid material construction for use in areas subject to vehicle loading
Not to scale



Note: Where the access chamber is in the highway (including any footway), the highway authority can have specific requirements.

Figure B 22
Typical inspection chamber detail - Type D chambers
Not to scale



Note: Where a bend is used immediately outside the manhole, this may be used as the rocker pipe.

NOT FOR CONSTRUCTION

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REV	DATE	DRAWN	DESCRIPTION	CHECK	APPR.
B	11-08-25	M.H	Client details updated.	SL	SL
A	03-08-25	M.H	For Information.	SL	SL

PROJECT:

C3592 - 43 London Street, Reading, RG1 4PS

TITLE:

Standard Drainage Details - Sheet 03 from 03.

CLIENT: Mynshull House, 78 Churchgate
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CHECKED BY: S.L	DATE: 03-08-25	APPROVED BY: S.L	DATE: 03-08-25
DRN BY: M.H	SCALE: N/A	DRAWING NUMBER: C3592-10	REV: B
DATE: 03-08-25	SIZE: A1		

APPENDIX B – SURFACE WATER RUN OFF CALCULATIONS & HYDRAULIC MODELLING RESULTS



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Job No.	C3592		
Sheet no.	1		
Date	04/08/25		
By	M.HAM	Checked	Reviewed

MasterDrain
HY 10.01

Project	43 London Street, Reading, RG1 4PS
Title	Pre & Post Development SW Runoff Calcs Prior to SuDS

Data:-

Hydrology (FSR):-

Location = READING

Long reference = 472172

M5-60 (mm) = 18

r = 0.40

Hyd. area = 7

Hydrograph = Summer

WRAP = 2

Grid reference = SU7272

SAAR (mm/yr) = 650

Soil = 0.30

Hyd. zone = 5

Area = England & Wales

Site values used in design:-

Total site area = 0.0804 ha

Pre-dev area drained = 0.0804 ha

Imperm runoff factor = 100%

Climate change factor = 45%

Post-dev area drained = 0.0804 ha

Perm runoff factor = 20%

Pre-development

Area to soakaways = 0.0000 ha

Perv. area to SU DS = 0.0000 ha

Area to other SU DS = 0.0000 ha

Pre-dev flow to drain = 0.00 l/s

Post-development

Area to soakaways = 0.0000 ha

Perv. area to SU DS = 0.0000 ha

Area to other SU DS = 0.0000 ha

Post-dev flow to drain = 0.00 l/s

Calculations:-

Revised Post-dev Imperm. area = 0.080 ha

Equiv. Post-dev Imperm. area = 0.080 ha

Equiv. Post-dev Perm. area = 0.000 ha

Total Pre-dev equiv. area ha = 0.080 ha

Total Post-dev equiv. area ha = 0.080 ha

100 yr 6 hour mean intensity = 9.53mm/hr

Results:-

Pre-dev peakflow runoff (l/s) (m^3/s)

R.P.	15	30	60	120	240	360	480	600	Max	CCF	Final	R.P.
1	24.6	15.8	10.1	6.3	3.9	2.9	2.4	2.0	24.6	N/A	24.6	1
30	59.5	38.8	24.2	14.7	8.7	6.4	5.1	4.3	59.5	N/A	59.5	30
100	77.0	50.6	31.8	19.3	11.5	8.3	6.6	5.6	77.0	N/A	77.0	100

Post-dev peakflow runoff (l/s)

R.P.	15	30	60	120	240	360	480	600	Max	CCF	Final	R.P.
1	24.6	15.8	10.1	6.3	3.9	2.9	2.4	2.0	24.6	45	35.7	1
30	59.5	38.8	24.2	14.7	8.7	6.4	5.1	4.3	59.5	45	86.3	30
100	77.0	50.6	31.8	19.3	11.5	8.3	6.6	5.6	77.0	45	111.6	100

100 year 6 hour (x Climate Change Factor) storm gives:-

Pre-dev runoff volume m^3 = 46.0 m^3

Post-dev rainfall volume = 66.6 m^3

Post-dev volume m^3 (excess above SU DS) = 66.6 m^3

100 yr 6 hour mean intensity = 9.53mm/hr

Pre-dev volume to drain at 0 l/s = 0.0 m^3

Post-dev volume to drain at 0 l/s = 0.0 m^3

Post-dev storage volume = 66.6 m^3

Post-dev 5mm imperm volume = 4.0 m^3

Post-dev 5mm perm volume = 0.0 m^3

$Q_{BAR(rural)}$ = 0.134 l/s or 1.671 l/s/ha or 0.000 cumecs - from IoH 124.

The rainfall rates are calculated using the location specific values above in accordance with the Wallingford procedure.



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Job No.	C3592	
Sheet no.	2	
Date	04/08/25	
By	M.HAM	Checked
		Reviewed

Project **43 London Street, Reading, RG1 4PS**

Title **Pre & Post Development SW Runoff Calcs Prior to SuDS**

Data summary.

Use the data below for the SUR1 form

Site areas:-

Total site area	=	0.0804 ha ;804.0 m ² [3A]
Pre-development impermeable area	=	0.0804 ha [3B]
Pre-development permeable area	=	0.0000 ha
Post-development impermeable area	=	0.0804 ha [3C]
Post-development permeable area	=	0.0000 ha

Peak runoff:-

Pre-development 1 year storm (15min)	=	24.6 l/s [6A]
Pre-development 100 year storm (15min)	=	77.0 l/s [6C]
Post-development 1 year storm (15min)	=	24.6 l/s [6B]
Post-development 100 year storm (15min)=		76.96 l/s [6D]

Greenfield runoff:-

$Q_{BAR(rural)} = 0.134 \text{ l/s}$ or 1.671 l/s/ha or 0.000 cumecs - from IoH 124.

Climate change factor:-

CCF = 45%

Volumes:-

Pre-development 100 yr/6hr storm [12A]	=	66.6m ³
Post-development 100 yr/6hr storm (add. volume with no SUDS) [12B]	=	66.6m ³
Post-development 100 yr/6hr storm (add. volume with SUDS)	=	66.6m ³
Post-development add. predicted volume (No SUDS) [12C]	=	0.0m ³

You may also require

Data relating to the infiltration test calculations (if applicable)
Evidence to show runoff reduction (if applicable)
Information on calculation methods (if applicable see next sheet)

Note

Numbers in square brackets relate to the
Nov. 2010 v1.1 / issued 11/02/10 copy of SUR1



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Job No.
C3592

Sheet no. **3**

Date **04/08/25**

Project **43 London Street, Reading, RG1 4PS**

Title **Pre & Post Development SW Runoff Calcs Prior to SuDS**

By **M.HAM** Checked Reviewed

Definitions and methods

Hydrology

The hydrological constants are derived from the Wallingford maps. They are used to calculate location specific rainfall figures.

Site values and factors

Areas of the site should be entered in hectares (10000 m²). If the Pre-development site is a green field, this box is blank.

Climate Change Factor is initially set at 20% - this may be changed as required.

Greenfield runoff is calculated using the method described in loH 124.

Runoff factors

The impermeable runoff factor is initially set at 98%

The permeable runoff factor is initially set at 20%

Note: the CCF and the runoff factors may be changed by the user to suit the development
The areas draining to soakaways and other SUDS are entered in the appropriate box (in hectares)

Calculations

The post-development area is reduced by subtracting the areas that drain to soakaways or other SUDS, to give a revised figure.

All areas are then multiplied by the appropriate runoff factor to give an equivalent area with 100% runoff.

These are then summated.

This gives a total pre-development equivalent area, and a similar figure for the post-development area.

The 'Post-dev volume to drain (no SUDS)' gives the total runoff to drain if no SUDS were used.

Results

The pre- and post-development areas are subjected to 1,30 and 100 year return period storms with a duration of 15 to 600 minutes.

The Revised Post-dev Imperm. area is the area (in ha) that is not going to SUDS x impervious runoff factor.

The runoff rates are calculated for the chosen hydrograph (Summer or Winter) as l/s. Figures in red indicate m³/s

The peak value is measured, multiplied by the CCF and the total maximum rate is shown.

The pre- and post-development volumes for a 100 year / 6 hour storm are calculated from the area under the hydrograph curve.

Post-dev volume (i.e. excess above SUDS) is that volume produced by the drained area that does not go to SUDS.

Qbar(rural) is calculated in accordance with the procedure laid down in loH 124

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:100 Years Storm Event + 45% Climate Change 5.0l/s Restricted Discharge Rate	Date: 03/08/2025		
	Designed by: M.H	Checked by: S.L	Approved By: S.L
	Report Details: Type: Junctions Storm Phase: Phase		
Kemp House:: 124 City Road London EC1V 2NX			

Outlets			
Junction	Outlet Name	Outgoing Connection	Outlet Type
SWC-01	Outlet	Pipe	Free Discharge
SWC-02	Outlet	Pipe (1)	Free Discharge
SWC-03	Outlet	Pipe (2)	Free Discharge
SWPS01	Outlet	Pipe (3)	Pump
	Invert Level (m)	38.445	
	Depth (m)	Outflow (L/s)	
	0.100	3.0	
	1.500	3.0	
SWC-04	Outlet	Pipe (4)	Free Discharge
SWC-05	Outlet	Pipe (5)	Free Discharge
SWC-06	Outlet	Pipe (10)	Free Discharge
SWC-07	Outlet	Pipe (11)	Free Discharge
SWC-08	Outlet	Pipe (12)	Free Discharge
SWC-09 (FC)	Outlet (1)	Pipe (14)	Orifice
	Diameter (m)	0.047	
	Coefficient of Discharge	0.600	
	Invert Level (m)	41.376	
MH1	Outlet	Pipe (6)	Free Discharge
MH2	Outlet	Pipe (7)	Free Discharge
MH3	Outlet	Pipe (8)	Free Discharge
SWPS02	Outlet	Pipe (9)	Pump
	Invert Level (m)	38.689	
	Depth (m)	Outflow (L/s)	
	0.100	3.0	
	2.000	3.0	

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:100 Years Storm Event + 45% Climate Change 5.0l/s Restricted Discharge Rate	Date: 03/08/2025		
	Designed by: M.H	Checked by: S.L	Approved By: S.L
	Report Details: Type: Stormwater Controls Storm Phase: Phase		
Kemp House:: 124 City Road London EC1V 2NX			



Attenuation Tank

Type : Cellular Storage

Dimensions

Exceedance Level (m)	43.200
Depth (m)	1.200
Base Level (m)	41.400
Number of Crates Long	6
Number of Crates Wide	8
Number of Crates High	3
Porosity (%)	95
Crate Length (m)	1
Crate Width (m)	0.5
Crate Height (m)	0.4
Total Volume (m³)	27.960

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:100 Years Storm Event + 45% Climate Change 5.0l/s Restricted Discharge Rate		Date: 03/08/2025		
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House:: 124 City Road London EC1V 2NX		

Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
SWC-01	40.445 39.345	Diameter / Length: 0.450					Manhole
E:471864.152 N:173142.292	1.100						
			{a} Pipe	Pipe	39.345	Diam/Width:100	Not Applicable
SWC-02	40.445 39.024	Diameter / Length: 0.450	{1} Pipe	Pipe	39.084	Diam/Width:100	Manhole
E:471860.947 N:173157.578	1.421						
			{a} Pipe (1)	Pipe	39.024	Diam/Width:100	Not Applicable
SWC-03	40.445 38.863	Diameter / Length: 0.300	{1} Pipe (1)	Pipe	38.863	Diam/Width:100	Manhole
E:471851.430 N:173156.230	1.582						
			{a} Pipe (2)	Pipe	38.863	Diam/Width:100	Not Applicable
SWPS01	40.445 38.445	Diameter / Length: 1.000	{1} Pipe (2)	Pipe	38.837	Diam/Width:100	Manhole
E:471849.886 N:173156.010	2.000						
			{a} Pipe (3)	Pipe	38.445	Diam/Width:100	Not Applicable
SWC-04	43.200 42.305	Diameter / Length: 0.450	{1} Pipe (3)	Pipe	42.305	Diam/Width:100	Manhole
E:471846.969 N:173148.073	0.895						
			{a} Pipe (4)	Pipe	42.305	Diam/Width:100	Not Applicable

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:100 Years Storm Event + 45% Climate Change 5.0l/s Restricted Discharge Rate		Date: 03/08/2025		
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House:: 124 City Road London EC1V 2NX		

Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
SWC-05	43.290 41.800	Diameter / Length: 0.450	{1} Pipe (4)	Pipe	41.850	Diam/Width:100	Manhole
E:471837.979 N:173146.733	1.490		{a} Pipe (5)	Pipe	41.800	Diam/Width:100	Not Applicable
SWC-06	43.205 42.305	Diameter / Length: 0.450	{1} Pipe (9)	Pipe	42.305	Diam/Width:100	Manhole
E:471822.083 N:173143.832	0.900		{a} Pipe (10)	Pipe	42.305	Diam/Width:100	Not Applicable
SWC-07	43.256 42.069	Diameter / Length: 0.300	{1} Pipe (10)	Pipe	42.069	Diam/Width:100	Manhole
E:471836.078 N:173145.923	1.187		{a} Pipe (11)	Pipe	42.069	Diam/Width:100	Not Applicable
SWC-08	43.260 41.500	Diameter / Length: 0.600					Manhole
E:471838.300 N:173137.818	1.760		{a} Pipe (12)	Pipe	41.500	Diam/Width:100	Not Applicable
SWC-09 (FC)	43.280 41.376	Diameter / Length: 0.600	{1} Pipe (13)	Pipe	41.376	Diam/Width:100	Manhole
E:471836.991 N:173146.583	1.904		{a} Pipe (14)	Pipe	41.376	Diam/Width:100	Not Applicable

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:100 Years Storm Event + 45% Climate Change 5.0/s Restricted Discharge Rate		Date: 03/08/2025		
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House:: 124 City Road London EC1V 2NX		

Name	Cover Level (m) Invert Level (m)		Connection Details				Type
Coordinates (m)	Depth (m)	Manhole Size (m)	Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
SWC-10	43.205 41.194	Diameter / Length: 0.450	{1} Pipe (14)	Pipe	41.194	Diam/Width:100	Manhole
E:471822.624 N:173144.419	2.011						Not Applicable
MH1	41.255 40.495	Diameter / Length: 0.450					Manhole
E:471797.393 N:173133.974	0.760		{a} Pipe (6)	Pipe	40.495	Diam/Width:100	Not Applicable
MH2	41.255 39.155	Diameter / Length: 0.450	{1} Pipe (6)	Pipe	39.155	Diam/Width:100	Manhole
E:471811.411 N:173135.559	2.100		{a} Pipe (7)	Pipe	39.155	Diam/Width:100	Not Applicable
MH3	40.340 38.840	Diameter / Length: 0.450	{1} Pipe (7)	Pipe	38.840	Diam/Width:100	Manhole
E:471818.407 N:173136.941	1.500		{a} Pipe (8)	Pipe	38.840	Diam/Width:100	Not Applicable
SWPS02	40.340 38.689	Diameter / Length: 1.000	{1} Pipe (8)	Pipe	38.689	Diam/Width:100	Manhole
E:471817.559 N:173139.373	1.651	Width: 1.000	{a} Pipe (9)	Pipe	38.689	Diam/Width:100	Not Applicable

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:100 Years Storm Event + 45% Climate Change 5.0l/s Restricted Discharge Rate		Date: 03/08/2025			
Report Details: Type: Inflow Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L		Approved By: S.L
		Kemp House: 124 City Road London EC1V 2NX			

Inflow Label	Connected To	Flow (L/s)	Runoff Method	Area (ha)	Percentage Impervious (%)	Urban Creep (%)	Adjusted Percentage Impervious (%)	Area Analysed (ha)
Catchment Area	SWC-01		Time of Concentration	0.012	100	0	100	0.012
Catchment Area (1)	SWC-02		Time of Concentration	0.009	100	0	100	0.009
Catchment Area (2)	SWC-03		Time of Concentration	0.004	100	0	100	0.004
Catchment Area (3)	SWC-04		Time of Concentration	0.016	100	0	100	0.016
Catchment Area (4)	SWC-08		Time of Concentration	0.002	100	0	100	0.002
Catchment Area (5)	Attenuation Tank		Time of Concentration	0.008	100	0	100	0.008
Catchment Area (6)	MH1		Time of Concentration	0.004	100	0	100	0.004
Catchment Area (7)	MH2		Time of Concentration	0.004	100	0	100	0.004
Catchment Area (8)	MH3		Time of Concentration	0.009	100	0	100	0.009
Catchment Area (9)	SWC-08		Time of Concentration	0.004	100	0	100	0.004
Catchment Area (10)	SWC-06		Time of Concentration	0.008	100	0	100	0.008
TOTAL		0.0		0.080				0.080

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:100 Years Storm Event + 45% Climate Change 5.0l/s Restricted Discharge Rate	Date: 03/08/2025		
	Designed by: M.H	Checked by: S.L	Approved By: S.L
Report Title: Rainfall Analysis Criteria	Kemp House: 124 City Road London EC1V 2NX		



Runoff Type	Dynamic
Output Interval (mins)	5
Time Step	Default
Urban Creep	Apply Global Value
Urban Creep Global Value (%)	0
Junction Flood Risk Margin (mm)	300
Perform No Discharge Analysis	☐

Rainfall

FSR

Type: FSR

Region	England And Wales
M5-60 (mm)	18.9
Ratio R	0.400
Summer	☒
Winter	☒

Return Period

Return Period (years)	Increase Rainfall (%)
100.0	45.000

Storm Durations

Duration (mins)	Run Time (mins)
15	30
30	60
60	120
120	240
180	360
240	480
360	720
480	960
600	1200
720	1440
960	1920
1440	2880

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:100 Years Storm Event + 45% Climate Change 5.0l/s Restricted Discharge Rate		Date: 03/08/2025		
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		



Critical Storm Per Item: Rank By: Max. Outflow

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
SWC-01	FSR: 100 years: +45 %: 15 mins: Summer	40.44 5	39.34 5	40.089	0.744	8.9	0.118	0.000	4.7	3.535	Surcharged
SWC-02	FSR: 100 years: +45 %: 15 mins: Summer	40.44 5	39.02 4	40.072	1.048	11.6	0.167	0.000	7.6	5.845	Surcharged
SWC-03	FSR: 100 years: +45 %: 15 mins: Summer	40.44 5	38.86 3	40.043	1.180	10.4	0.084	0.000	6.7	6.182	Surcharged
SWPS01	FSR: 100 years: +45 %: 15 mins: Summer	40.44 5	38.44 5	40.034	1.589	6.7	1.248	0.000	3.0	4.824	Surcharged
SWC-04	FSR: 100 years: +45 %: 15 mins: Summer	43.20 0	42.30 5	42.470	0.165	15.5	0.026	0.000	13.4	10.205	Surcharged
SWC-05	FSR: 100 years: +45 %: 15 mins: Summer	43.29 0	41.80 0	42.105	0.305	13.4	0.049	0.000	13.0	9.848	Surcharged
SWC-06	FSR: 100 years: +45 %: 15 mins: Summer	43.20 5	42.30 5	42.453	0.148	9.5	0.024	0.000	8.3	7.517	Surcharged
SWC-07	FSR: 100 years: +45 %: 15 mins: Winter	43.25 6	42.06 9	42.141	0.072	8.1	0.005	0.000	8.2	7.527	OK
SWC-08	FSR: 100 years: +45 %: 15 mins: Summer	43.26 0	41.50 0	42.098	0.598	4.8	0.169	0.000	3.4	1.445	Surcharged
SWC-09 (FC)	FSR: 100 years: +45 %: 120 mins: Winter	43.28 0	41.37 6	42.571	1.195	5.0	0.338	0.000	4.9	48.090	Surcharged
SWC-10	FSR: 100 years: +45 %: 120 mins: Winter	43.20 5	41.19 4	41.256	0.062	4.9	0.000	0.000	4.9	48.036	OK
MH1	FSR: 100 years: +45 %: 15 mins: Summer	41.25 5	40.49 5	40.522	0.027	3.2	0.004	0.000	3.2	1.402	OK
MH2	FSR: 100 years: +45 %: 30 mins: Summer	41.25 5	39.15 5	39.922	0.767	4.4	0.122	0.000	3.7	3.824	Surcharged
MH3	FSR: 100 years: +45 %: 15 mins: Summer	40.34 0	38.84 0	39.856	1.016	9.9	0.162	0.000	6.4	5.377	Surcharged
SWPS02	FSR: 100 years: +45 %: 15 mins: Summer	40.34 0	38.68 9	39.847	1.157	6.4	1.157	0.000	3.0	4.765	Surcharged

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:100 Years Storm Event + 45% Climate Change 5.0l/s Restricted Discharge Rate	Date: 03/08/2025		
	Designed by:	Checked by:	Approved By:
	M.H	S.L	S.L
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase	Kemp House:: 124 City Road London EC1V 2NX		



Critical Storm Per Item: Rank By: Max. Avg. Depth

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Residual Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Percentage Available (%)	Status
Attenuation Tank	FSR: 100 years: +45 %: 120 mins: Winter	42.588	42.588	1.188	1.188	13.9	27.092	0.000	0.000	5.0	48.397	3.103	OK

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:100 Years Storm Event + 45% Climate Change 5.0l/s Restricted Discharge Rate	Date: 03/08/2025		
	Designed by: M.H	Checked by: S.L	Approved By: S.L
	Report Details: Type: Junctions Storm Phase: Phase		
Kemp House:: 124 City Road London EC1V 2NX			

Outlets			
Junction	Outlet Name	Outgoing Connection	Outlet Type
SWC-01	Outlet	Pipe	Free Discharge
SWC-02	Outlet	Pipe (1)	Free Discharge
SWC-03	Outlet	Pipe (2)	Free Discharge
SWPS01	Outlet	Pipe (3)	Pump
	Invert Level (m)	38.445	
	Depth (m)	Outflow (L/s)	
	0.100	3.0	
	1.500	3.0	
SWC-04	Outlet	Pipe (4)	Free Discharge
SWC-05	Outlet	Pipe (5)	Free Discharge
SWC-06	Outlet	Pipe (10)	Free Discharge
SWC-07	Outlet	Pipe (11)	Free Discharge
SWC-08	Outlet	Pipe (12)	Free Discharge
SWC-09 (FC)	Outlet (1)	Pipe (14)	Orifice
	Diameter (m)	0.047	
	Coefficient of Discharge	0.600	
	Invert Level (m)	41.376	
MH1	Outlet	Pipe (6)	Free Discharge
MH2	Outlet	Pipe (7)	Free Discharge
MH3	Outlet	Pipe (8)	Free Discharge
SWPS02	Outlet	Pipe (9)	Pump
	Invert Level (m)	38.689	
	Depth (m)	Outflow (L/s)	
	0.100	3.0	
	2.000	3.0	

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:100 Years Storm Event + 45% Climate Change 5.0l/s Restricted Discharge Rate	Date: 03/08/2025		
	Designed by: M.H	Checked by: S.L	Approved By: S.L
	Report Details: Type: Stormwater Controls Storm Phase: Phase		
Kemp House:: 124 City Road London EC1V 2NX			



Attenuation Tank

Type : Cellular Storage

Dimensions	
Exceedance Level (m)	43.200
Depth (m)	1.200
Base Level (m)	41.400
Number of Crates Long	6
Number of Crates Wide	8
Number of Crates High	3
Porosity (%)	95
Crate Length (m)	1
Crate Width (m)	0.5
Crate Height (m)	0.4
Total Volume (m³)	27.960

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:100 Years Storm Event + 45% Climate Change 5.0l/s Restricted Discharge Rate		Date: 03/08/2025		
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House:: 124 City Road London EC1V 2NX		

Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
SWC-01	40.445 39.345	Diameter / Length: 0.450					Manhole
E:471864.152 N:173142.292	1.100						
			{a} Pipe	Pipe	39.345	Diam/Width:100	Not Applicable
SWC-02	40.445 39.024	Diameter / Length: 0.450	{1} Pipe	Pipe	39.084	Diam/Width:100	Manhole
E:471860.947 N:173157.578	1.421						
			{a} Pipe (1)	Pipe	39.024	Diam/Width:100	Not Applicable
SWC-03	40.445 38.863	Diameter / Length: 0.300	{1} Pipe (1)	Pipe	38.863	Diam/Width:100	Manhole
E:471851.430 N:173156.230	1.582						
			{a} Pipe (2)	Pipe	38.863	Diam/Width:100	Not Applicable
SWPS01	40.445 38.445	Diameter / Length: 1.000	{1} Pipe (2)	Pipe	38.837	Diam/Width:100	Manhole
E:471849.886 N:173156.010	2.000						
			{a} Pipe (3)	Pipe	38.445	Diam/Width:100	Not Applicable
SWC-04	43.200 42.305	Diameter / Length: 0.450	{1} Pipe (3)	Pipe	42.305	Diam/Width:100	Manhole
E:471846.969 N:173148.073	0.895						
			{a} Pipe (4)	Pipe	42.305	Diam/Width:100	Not Applicable

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:100 Years Storm Event + 45% Climate Change 5.0l/s Restricted Discharge Rate		Date: 03/08/2025		
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House:: 124 City Road London EC1V 2NX		

Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
SWC-05	43.290 41.800	Diameter / Length: 0.450	{1} Pipe (4)	Pipe	41.850	Diam/Width:100	Manhole
E:471837.979 N:173146.733	1.490		{a} Pipe (5)	Pipe	41.800	Diam/Width:100	Not Applicable
SWC-06	43.205 42.305	Diameter / Length: 0.450	{1} Pipe (9)	Pipe	42.305	Diam/Width:100	Manhole
E:471822.083 N:173143.832	0.900		{a} Pipe (10)	Pipe	42.305	Diam/Width:100	Not Applicable
SWC-07	43.256 42.069	Diameter / Length: 0.300	{1} Pipe (10)	Pipe	42.069	Diam/Width:100	Manhole
E:471836.078 N:173145.923	1.187		{a} Pipe (11)	Pipe	42.069	Diam/Width:100	Not Applicable
SWC-08	43.260 41.500	Diameter / Length: 0.600					Manhole
E:471838.300 N:173137.818	1.760		{a} Pipe (12)	Pipe	41.500	Diam/Width:100	Not Applicable
SWC-09 (FC)	43.280 41.376	Diameter / Length: 0.600	{1} Pipe (13)	Pipe	41.376	Diam/Width:100	Manhole
E:471836.991 N:173146.583	1.904		{a} Pipe (14)	Pipe	41.376	Diam/Width:100	Not Applicable

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:100 Years Storm Event + 45% Climate Change 5.0/s Restricted Discharge Rate		Date: 03/08/2025		
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House:: 124 City Road London EC1V 2NX		

Name	Cover Level (m) Invert Level (m)		Connection Details				Type
Coordinates (m)	Depth (m)	Manhole Size (m)	Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
SWC-10	43.205 41.194	Diameter / Length: 0.450	{1} Pipe (14)	Pipe	41.194	Diam/Width:100	Manhole
E:471822.624 N:173144.419	2.011						Not Applicable
MH1	41.255 40.495	Diameter / Length: 0.450					Manhole
E:471797.393 N:173133.974	0.760		{a} Pipe (6)	Pipe	40.495	Diam/Width:100	Not Applicable
MH2	41.255 39.155	Diameter / Length: 0.450	{1} Pipe (6)	Pipe	39.155	Diam/Width:100	Manhole
E:471811.411 N:173135.559	2.100		{a} Pipe (7)	Pipe	39.155	Diam/Width:100	Not Applicable
MH3	40.340 38.840	Diameter / Length: 0.450	{1} Pipe (7)	Pipe	38.840	Diam/Width:100	Manhole
E:471818.407 N:173136.941	1.500		{a} Pipe (8)	Pipe	38.840	Diam/Width:100	Not Applicable
SWPS02	40.340 38.689	Diameter / Length: 1.000	{1} Pipe (8)	Pipe	38.689	Diam/Width:100	Manhole
E:471817.559 N:173139.373	1.651	Width: 1.000	{a} Pipe (9)	Pipe	38.689	Diam/Width:100	Not Applicable

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:100 Years Storm Event + 45% Climate Change 5.0l/s Restricted Discharge Rate				Date: 03/08/2025		
Report Details: Type: Inflow Summary Storm Phase: Phase				Designed by:	Checked by:	Approved By:
				M.H	S.L	S.L
				Kemp House: 124 City Road London EC1V 2NX		



Inflow Label	Connected To	Flow (L/s)	Runoff Method	Area (ha)	Percentage Impervious (%)	Urban Creep (%)	Adjusted Percentage Impervious (%)	Area Analysed (ha)
Catchment Area	SWC-01		Time of Concentration	0.012	100	0	100	0.012
Catchment Area (1)	SWC-02		Time of Concentration	0.009	100	0	100	0.009
Catchment Area (2)	SWC-03		Time of Concentration	0.004	100	0	100	0.004
Catchment Area (3)	SWC-04		Time of Concentration	0.016	100	0	100	0.016
Catchment Area (4)	SWC-08		Time of Concentration	0.002	100	0	100	0.002
Catchment Area (5)	Attenuation Tank		Time of Concentration	0.008	100	0	100	0.008
Catchment Area (6)	MH1		Time of Concentration	0.004	100	0	100	0.004
Catchment Area (7)	MH2		Time of Concentration	0.004	100	0	100	0.004
Catchment Area (8)	MH3		Time of Concentration	0.009	100	0	100	0.009
Catchment Area (9)	SWC-08		Time of Concentration	0.004	100	0	100	0.004
Catchment Area (10)	SWC-06		Time of Concentration	0.008	100	0	100	0.008
TOTAL		0.0		0.080				0.080

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:100 Years Storm Event + 45% Climate Change 5.0l/s Restricted Discharge Rate	Date: 03/08/2025		
	Designed by: M.H	Checked by: S.L	Approved By: S.L
Report Title: Rainfall Analysis Criteria	Kemp House: 124 City Road London EC1V 2NX		



Runoff Type	Dynamic
Output Interval (mins)	5
Time Step	Default
Urban Creep	Apply Global Value
Urban Creep Global Value (%)	0
Junction Flood Risk Margin (mm)	300
Perform No Discharge Analysis	☐

Rainfall

FSR

Type: FSR

Region	England And Wales
M5-60 (mm)	18.9
Ratio R	0.400
Summer	☒
Winter	☒

Return Period

Return Period (years)	Increase Rainfall (%)
100.0	45.000

Storm Durations

Duration (mins)	Run Time (mins)
15	30
30	60
60	120
120	240
180	360
240	480
360	720
480	960
600	1200
720	1440
960	1920
1440	2880

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:100 Years Storm Event + 45% Climate Change 5.0l/s Restricted Discharge Rate	Date: 03/08/2025		
	Designed by: M.H	Checked by: S.L	Approved By: S.L
	Report Details: Type: Junctions Summary Storm Phase: Phase		
Kemp House: 124 City Road London EC1V 2NX			

Summary Results for SWC-01: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FSR: 100 years: +45 %: 15 mins: Summer	40.445	39.345	40.089	0.744	8.9	0.118	0.000	4.7	3.535	Surcharged
FSR: 100 years: +45 %: 15 mins: Winter	40.445	39.345	40.064	0.719	8.4	0.114	0.000	4.5	3.543	Surcharged
FSR: 100 years: +45 %: 30 mins: Summer	40.445	39.345	40.207	0.862	5.9	0.137	0.000	4.7	5.080	Flood Risk
FSR: 100 years: +45 %: 30 mins: Winter	40.445	39.345	40.180	0.835	5.5	0.133	0.000	4.3	5.081	Flood Risk
FSR: 100 years: +45 %: 60 mins: Summer	40.445	39.345	40.165	0.820	5.1	0.130	0.000	3.9	6.382	Flood Risk
FSR: 100 years: +45 %: 60 mins: Winter	40.445	39.345	40.099	0.754	4.1	0.120	0.000	3.0	6.383	Surcharged
FSR: 100 years: +45 %: 120 mins: Summer	40.445	39.345	39.924	0.579	3.7	0.092	0.000	3.6	7.746	Surcharged
FSR: 100 years: +45 %: 120 mins: Winter	40.445	39.345	39.695	0.350	2.6	0.056	0.000	2.6	7.731	Surcharged
FSR: 100 years: +45 %: 180 mins: Summer	40.445	39.345	39.661	0.316	2.9	0.050	0.000	2.9	8.546	Surcharged
FSR: 100 years: +45 %: 180 mins: Winter	40.445	39.345	39.380	0.035	2.0	0.006	0.000	2.0	8.544	OK
FSR: 100 years: +45 %: 240 mins: Summer	40.445	39.345	39.428	0.083	2.4	0.013	0.000	2.4	9.137	OK
FSR: 100 years: +45 %: 240 mins: Winter	40.445	39.345	39.376	0.031	1.6	0.005	0.000	1.6	9.131	OK
FSR: 100 years: +45 %: 360 mins: Summer	40.445	39.345	39.378	0.033	1.8	0.005	0.000	1.8	9.940	OK
FSR: 100 years: +45 %: 360 mins: Winter	40.445	39.345	39.372	0.027	1.2	0.004	0.000	1.2	9.953	OK
FSR: 100 years: +45 %: 480 mins: Summer	40.445	39.345	39.375	0.030	1.4	0.005	0.000	1.4	10.594	OK
FSR: 100 years: +45 %: 480 mins: Winter	40.445	39.345	39.369	0.024	0.9	0.004	0.000	0.9	10.577	OK
FSR: 100 years: +45 %: 600 mins: Summer	40.445	39.345	39.372	0.027	1.2	0.004	0.000	1.2	11.080	OK
FSR: 100 years: +45 %: 600 mins: Winter	40.445	39.345	39.367	0.022	0.8	0.003	0.000	0.8	11.093	OK
FSR: 100 years: +45 %: 720 mins: Summer	40.445	39.345	39.370	0.025	1.0	0.004	0.000	1.0	11.500	OK

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:100 Years Storm Event + 45% Climate Change 5.0l/s Restricted Discharge Rate		Date: 03/08/2025	
		Designed by: M.H	Checked by: S.L
		Approved By: S.L	
Report Details: Type: Junctions Summary Storm Phase: Phase		Kemp House:: 124 City Road London EC1V 2NX	



FSR: 100 years: +45 %: 720 mins: Winter	40.44 5	39.34 5	39.365	0.020	0.7	0.003	0.000	0.7	11.495	OK
FSR: 100 years: +45 %: 960 mins: Summer	40.44 5	39.34 5	39.367	0.022	0.8	0.004	0.000	0.8	12.190	OK
FSR: 100 years: +45 %: 960 mins: Winter	40.44 5	39.34 5	39.363	0.018	0.5	0.003	0.000	0.5	12.209	OK
FSR: 100 years: +45 %: 1440 mins: Summer	40.44 5	39.34 5	39.364	0.019	0.6	0.003	0.000	0.6	13.252	OK
FSR: 100 years: +45 %: 1440 mins: Winter	40.44 5	39.34 5	39.360	0.015	0.4	0.002	0.000	0.4	13.283	OK

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:100 Years Storm Event + 45% Climate Change 5.0l/s Restricted Discharge Rate		Date: 03/08/2025		
		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
Report Details: Type: Junctions Summary Storm Phase: Phase		Kemp House: 124 City Road London EC1V 2NX		



Summary Results for SWC-02: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FSR: 100 years: +45 %: 15 mins: Summer	40.445	39.024	40.072	1.048	11.6	0.167	0.000	7.6	5.845	Surcharged
FSR: 100 years: +45 %: 15 mins: Winter	40.445	39.024	40.045	1.021	11.0	0.162	0.000	7.3	5.862	Surcharged
FSR: 100 years: +45 %: 30 mins: Summer	40.445	39.024	40.196	1.172	9.2	0.186	0.000	6.7	9.030	Flood Risk
FSR: 100 years: +45 %: 30 mins: Winter	40.445	39.024	40.171	1.147	8.6	0.182	0.000	6.4	9.033	Flood Risk
FSR: 100 years: +45 %: 60 mins: Summer	40.445	39.024	40.158	1.134	7.9	0.180	0.000	6.0	11.345	Flood Risk
FSR: 100 years: +45 %: 60 mins: Winter	40.445	39.024	40.089	1.065	6.2	0.169	0.000	5.0	11.350	Surcharged
FSR: 100 years: +45 %: 120 mins: Summer	40.445	39.024	39.914	0.890	6.5	0.141	0.000	4.9	13.768	Surcharged
FSR: 100 years: +45 %: 120 mins: Winter	40.445	39.024	39.685	0.661	4.7	0.105	0.000	4.1	13.743	Surcharged
FSR: 100 years: +45 %: 180 mins: Summer	40.445	39.024	39.651	0.627	5.1	0.100	0.000	4.1	15.195	Surcharged
FSR: 100 years: +45 %: 180 mins: Winter	40.445	39.024	39.292	0.268	3.5	0.043	0.000	3.5	15.186	Surcharged
FSR: 100 years: +45 %: 240 mins: Summer	40.445	39.024	39.418	0.394	4.2	0.063	0.000	4.1	16.225	Surcharged
FSR: 100 years: +45 %: 240 mins: Winter	40.445	39.024	39.066	0.042	2.8	0.007	0.000	2.8	16.216	OK
FSR: 100 years: +45 %: 360 mins: Summer	40.445	39.024	39.069	0.045	3.1	0.007	0.000	3.1	17.650	OK
FSR: 100 years: +45 %: 360 mins: Winter	40.445	39.024	39.059	0.035	2.1	0.006	0.000	2.1	17.680	OK
FSR: 100 years: +45 %: 480 mins: Summer	40.445	39.024	39.064	0.040	2.5	0.006	0.000	2.5	18.796	OK
FSR: 100 years: +45 %: 480 mins: Winter	40.445	39.024	39.055	0.031	1.6	0.005	0.000	1.6	18.808	OK
FSR: 100 years: +45 %: 600 mins: Summer	40.445	39.024	39.060	0.036	2.2	0.006	0.000	2.2	19.690	OK
FSR: 100 years: +45 %: 600 mins: Winter	40.445	39.024	39.053	0.029	1.4	0.005	0.000	1.4	19.720	OK
FSR: 100 years: +45 %: 720 mins: Summer	40.445	39.024	39.057	0.033	1.9	0.005	0.000	1.9	20.434	OK

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:100 Years Storm Event + 45% Climate Change 5.0l/s Restricted Discharge Rate		Date: 03/08/2025	
		Designed by: M.H	Checked by: S.L
		Approved By: S.L	
Report Details: Type: Junctions Summary Storm Phase: Phase		Kemp House:: 124 City Road London EC1V 2NX	



FSR: 100 years: +45 %: 720 mins: Winter	40.44 5	39.02 4	39.050	0.026	1.2	0.004	0.000	1.2	20.434	OK
FSR: 100 years: +45 %: 960 mins: Summer	40.44 5	39.02 4	39.053	0.029	1.5	0.005	0.000	1.5	21.646	OK
FSR: 100 years: +45 %: 960 mins: Winter	40.44 5	39.02 4	39.048	0.024	1.0	0.004	0.000	1.0	21.646	OK
FSR: 100 years: +45 %: 1440 mins: Summer	40.44 5	39.02 4	39.049	0.025	1.1	0.004	0.000	1.1	23.530	OK
FSR: 100 years: +45 %: 1440 mins: Winter	40.44 5	39.02 4	39.044	0.020	0.7	0.003	0.000	0.7	23.506	OK

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:100 Years Storm Event + 45% Climate Change 5.0l/s Restricted Discharge Rate	Date: 03/08/2025		
	Designed by: M.H	Checked by: S.L	Approved By: S.L
Report Details: Type: Junctions Summary Storm Phase: Phase	Kemp House:: 124 City Road London EC1V 2NX		



Summary Results for SWC-03: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FSR: 100 years: +45 %: 15 mins: Summer	40.44 5	38.86 3	40.043	1.180	10.4	0.084	0.000	6.7	6.182	Surcharged
FSR: 100 years: +45 %: 15 mins: Winter	40.44 5	38.86 3	40.013	1.150	9.9	0.082	0.000	6.4	6.213	Surcharged
FSR: 100 years: +45 %: 30 mins: Summer	40.44 5	38.86 3	40.175	1.312	8.6	0.093	0.000	5.8	10.491	Flood Risk
FSR: 100 years: +45 %: 30 mins: Winter	40.44 5	38.86 3	40.158	1.295	8.1	0.092	0.000	5.6	10.509	Flood Risk
FSR: 100 years: +45 %: 60 mins: Summer	40.44 5	38.86 3	40.144	1.281	7.6	0.091	0.000	5.3	13.354	Surcharged
FSR: 100 years: +45 %: 60 mins: Winter	40.44 5	38.86 3	40.071	1.208	6.3	0.086	0.000	5.6	13.362	Surcharged
FSR: 100 years: +45 %: 120 mins: Summer	40.44 5	38.86 3	39.894	1.031	6.0	0.073	0.000	5.1	16.199	Surcharged
FSR: 100 years: +45 %: 120 mins: Winter	40.44 5	38.86 3	39.667	0.804	4.8	0.057	0.000	3.9	16.176	Surcharged
FSR: 100 years: +45 %: 180 mins: Summer	40.44 5	38.86 3	39.634	0.771	5.0	0.055	0.000	4.6	17.887	Surcharged
FSR: 100 years: +45 %: 180 mins: Winter	40.44 5	38.86 3	39.272	0.409	4.1	0.029	0.000	3.8	17.867	Surcharged
FSR: 100 years: +45 %: 240 mins: Summer	40.44 5	38.86 3	39.400	0.537	4.9	0.038	0.000	4.1	19.081	Surcharged
FSR: 100 years: +45 %: 240 mins: Winter	40.44 5	38.86 3	38.916	0.053	3.3	0.004	0.000	3.3	19.077	OK
FSR: 100 years: +45 %: 360 mins: Summer	40.44 5	38.86 3	38.969	0.106	3.7	0.008	0.000	3.7	20.751	Surcharged
FSR: 100 years: +45 %: 360 mins: Winter	40.44 5	38.86 3	38.907	0.044	2.4	0.003	0.000	2.4	20.805	OK
FSR: 100 years: +45 %: 480 mins: Summer	40.44 5	38.86 3	38.912	0.049	3.0	0.004	0.000	3.0	22.100	OK
FSR: 100 years: +45 %: 480 mins: Winter	40.44 5	38.86 3	38.901	0.038	1.9	0.003	0.000	1.9	22.095	OK
FSR: 100 years: +45 %: 600 mins: Summer	40.44 5	38.86 3	38.908	0.045	2.5	0.003	0.000	2.5	23.144	OK
FSR: 100 years: +45 %: 600 mins: Winter	40.44 5	38.86 3	38.898	0.035	1.6	0.002	0.000	1.6	23.157	OK
FSR: 100 years: +45 %: 720 mins: Summer	40.44 5	38.86 3	38.904	0.041	2.2	0.003	0.000	2.2	24.050	OK

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:100 Years Storm Event + 45% Climate Change 5.0l/s Restricted Discharge Rate		Date: 03/08/2025	
		Designed by: M.H	Checked by: S.L
		Approved By: S.L	
Report Details: Type: Junctions Summary Storm Phase: Phase		Kemp House:: 124 City Road London EC1V 2NX	



FSR: 100 years: +45 %: 720 mins: Winter	40.44 5	38.86 3	38.895	0.032	1.4	0.002	0.000	1.4	24.051	OK
FSR: 100 years: +45 %: 960 mins: Summer	40.44 5	38.86 3	38.899	0.036	1.7	0.003	0.000	1.7	25.442	OK
FSR: 100 years: +45 %: 960 mins: Winter	40.44 5	38.86 3	38.891	0.028	1.1	0.002	0.000	1.1	25.479	OK
FSR: 100 years: +45 %: 1440 mins: Summer	40.44 5	38.86 3	38.893	0.030	1.3	0.002	0.000	1.3	27.710	OK
FSR: 100 years: +45 %: 1440 mins: Winter	40.44 5	38.86 3	38.887	0.024	0.8	0.002	0.000	0.8	27.621	OK

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:100 Years Storm Event + 45% Climate Change 5.0l/s Restricted Discharge Rate	Date: 03/08/2025		
	Designed by: M.H	Checked by: S.L	Approved By: S.L
	Report Details: Type: Junctions Summary Storm Phase: Phase		
Kemp House:: 124 City Road London EC1V 2NX			

Summary Results for SWPS01: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FSR: 100 years: +45 %: 15 mins: Summer	40.445	38.445	40.034	1.589	6.7	1.248	0.000	3.0	4.824	Surcharged
FSR: 100 years: +45 %: 15 mins: Winter	40.445	38.445	40.004	1.559	6.4	1.224	0.000	3.0	4.866	Surcharged
FSR: 100 years: +45 %: 30 mins: Summer	40.445	38.445	40.168	1.723	5.8	1.353	0.000	3.0	9.870	Flood Risk
FSR: 100 years: +45 %: 30 mins: Winter	40.445	38.445	40.153	1.708	5.6	1.341	0.000	3.0	9.902	Flood Risk
FSR: 100 years: +45 %: 60 mins: Summer	40.445	38.445	40.138	1.693	5.3	1.329	0.000	3.0	13.360	Surcharged
FSR: 100 years: +45 %: 60 mins: Winter	40.445	38.445	40.064	1.619	5.6	1.271	0.000	3.0	13.368	Surcharged
FSR: 100 years: +45 %: 120 mins: Summer	40.445	38.445	39.887	1.442	5.1	1.132	0.000	3.0	16.204	Surcharged
FSR: 100 years: +45 %: 120 mins: Winter	40.445	38.445	39.660	1.215	3.9	0.954	0.000	3.0	16.180	Surcharged
FSR: 100 years: +45 %: 180 mins: Summer	40.445	38.445	39.628	1.183	4.6	0.929	0.000	3.0	17.892	Surcharged
FSR: 100 years: +45 %: 180 mins: Winter	40.445	38.445	39.265	0.820	3.8	0.643	0.000	3.0	17.868	Surcharged
FSR: 100 years: +45 %: 240 mins: Summer	40.445	38.445	39.393	0.948	4.1	0.744	0.000	3.0	19.083	Surcharged
FSR: 100 years: +45 %: 240 mins: Winter	40.445	38.445	38.816	0.371	3.3	0.292	0.000	3.0	19.077	Surcharged
FSR: 100 years: +45 %: 360 mins: Summer	40.445	38.445	38.962	0.517	3.7	0.406	0.000	3.0	20.751	Surcharged
FSR: 100 years: +45 %: 360 mins: Winter	40.445	38.445	38.526	0.081	2.4	0.063	0.000	2.4	20.805	OK
FSR: 100 years: +45 %: 480 mins: Summer	40.445	38.445	38.545	0.100	3.0	0.078	0.000	3.0	22.100	OK
FSR: 100 years: +45 %: 480 mins: Winter	40.445	38.445	38.510	0.065	1.9	0.051	0.000	1.9	22.095	OK
FSR: 100 years: +45 %: 600 mins: Summer	40.445	38.445	38.529	0.084	2.5	0.066	0.000	2.5	23.144	OK
FSR: 100 years: +45 %: 600 mins: Winter	40.445	38.445	38.499	0.054	1.6	0.042	0.000	1.6	23.157	OK
FSR: 100 years: +45 %: 720 mins: Summer	40.445	38.445	38.518	0.073	2.2	0.057	0.000	2.2	24.050	OK

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:100 Years Storm Event + 45% Climate Change 5.0l/s Restricted Discharge Rate		Date: 03/08/2025	
		Designed by: M.H	Checked by: S.L
		Approved By: S.L	
Report Details: Type: Junctions Summary Storm Phase: Phase		Kemp House:: 124 City Road London EC1V 2NX	



FSR: 100 years: +45 %: 720 mins: Winter	40.44 5	38.44 5	38.492	0.047	1.4	0.037	0.000	1.4	24.051	OK
FSR: 100 years: +45 %: 960 mins: Summer	40.44 5	38.44 5	38.503	0.058	1.7	0.045	0.000	1.7	25.442	OK
FSR: 100 years: +45 %: 960 mins: Winter	40.44 5	38.44 5	38.483	0.038	1.1	0.030	0.000	1.1	25.479	OK
FSR: 100 years: +45 %: 1440 mins: Summer	40.44 5	38.44 5	38.487	0.042	1.3	0.033	0.000	1.3	27.710	OK
FSR: 100 years: +45 %: 1440 mins: Winter	40.44 5	38.44 5	38.472	0.027	0.8	0.021	0.000	0.8	27.621	OK

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:100 Years Storm Event + 45% Climate Change 5.0l/s Restricted Discharge Rate	Date: 03/08/2025		
	Designed by: M.H	Checked by: S.L	Approved By: S.L
	Report Details: Type: Junctions Summary Storm Phase: Phase		
Kemp House:: 124 City Road London EC1V 2NX			



Summary Results for SWC-04: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FSR: 100 years: +45 %: 15 mins: Summer	43.20 0	42.30 5	42.470	0.165	15.5	0.026	0.000	13.4	10.205	Surcharged
FSR: 100 years: +45 %: 15 mins: Winter	43.20 0	42.30 5	42.438	0.133	14.7	0.021	0.000	13.2	10.243	Surcharged
FSR: 100 years: +45 %: 30 mins: Summer	43.20 0	42.30 5	42.380	0.075	11.2	0.012	0.000	11.2	16.958	OK
FSR: 100 years: +45 %: 30 mins: Winter	43.20 0	42.30 5	42.377	0.072	10.7	0.012	0.000	10.7	16.995	OK
FSR: 100 years: +45 %: 60 mins: Summer	43.20 0	42.30 5	42.522	0.217	10.1	0.035	0.000	10.1	22.307	Surcharged
FSR: 100 years: +45 %: 60 mins: Winter	43.20 0	42.30 5	42.526	0.221	8.8	0.035	0.000	8.8	22.318	Surcharged
FSR: 100 years: +45 %: 120 mins: Summer	43.20 0	42.30 5	42.618	0.313	8.1	0.050	0.000	8.1	27.051	Surcharged
FSR: 100 years: +45 %: 120 mins: Winter	43.20 0	42.30 5	42.633	0.328	6.7	0.052	0.000	6.7	27.016	Surcharged
FSR: 100 years: +45 %: 180 mins: Summer	43.20 0	42.30 5	42.614	0.309	7.0	0.049	0.000	7.0	29.851	Surcharged
FSR: 100 years: +45 %: 180 mins: Winter	43.20 0	42.30 5	42.622	0.317	5.8	0.050	0.000	5.8	29.827	Surcharged
FSR: 100 years: +45 %: 240 mins: Summer	43.20 0	42.30 5	42.596	0.291	6.3	0.046	0.000	6.3	31.866	Surcharged
FSR: 100 years: +45 %: 240 mins: Winter	43.20 0	42.30 5	42.525	0.220	5.2	0.035	0.000	5.2	31.851	Surcharged
FSR: 100 years: +45 %: 360 mins: Summer	43.20 0	42.30 5	42.480	0.175	5.5	0.028	0.000	5.5	34.658	Surcharged
FSR: 100 years: +45 %: 360 mins: Winter	43.20 0	42.30 5	42.369	0.064	4.0	0.010	0.000	4.0	34.730	OK
FSR: 100 years: +45 %: 480 mins: Summer	43.20 0	42.30 5	42.370	0.065	5.0	0.010	0.000	5.0	36.890	OK
FSR: 100 years: +45 %: 480 mins: Winter	43.20 0	42.30 5	42.338	0.033	3.2	0.005	0.000	3.2	36.884	OK
FSR: 100 years: +45 %: 600 mins: Summer	43.20 0	42.30 5	42.343	0.038	4.2	0.006	0.000	4.2	38.635	OK
FSR: 100 years: +45 %: 600 mins: Winter	43.20 0	42.30 5	42.336	0.031	2.7	0.005	0.000	2.7	38.665	OK
FSR: 100 years: +45 %: 720 mins: Summer	43.20 0	42.30 5	42.340	0.035	3.6	0.006	0.000	3.6	40.141	OK

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:100 Years Storm Event + 45% Climate Change 5.0l/s Restricted Discharge Rate		Date: 03/08/2025		
		Designed by: M.H	Checked by: S.L	Approved By: S.L
Report Details: Type: Junctions Summary Storm Phase: Phase		Kemp House:: 124 City Road London EC1V 2NX		



FSR: 100 years: +45 %: 720 mins: Winter	43.20 0	42.30 5	42.334	0.029	2.3	0.005	0.000	2.3	40.147	OK
FSR: 100 years: +45 %: 960 mins: Summer	43.20 0	42.30 5	42.337	0.032	2.9	0.005	0.000	2.9	42.493	OK
FSR: 100 years: +45 %: 960 mins: Winter	43.20 0	42.30 5	42.331	0.026	1.9	0.004	0.000	1.9	42.548	OK
FSR: 100 years: +45 %: 1440 mins: Summer	43.20 0	42.30 5	42.332	0.027	2.1	0.004	0.000	2.1	46.201	OK
FSR: 100 years: +45 %: 1440 mins: Winter	43.20 0	42.30 5	42.327	0.022	1.4	0.003	0.000	1.4	46.154	OK

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:100 Years Storm Event + 45% Climate Change 5.0l/s Restricted Discharge Rate	Date: 03/08/2025		
	Designed by: M.H	Checked by: S.L	Approved By: S.L
	Report Details: Type: Junctions Summary Storm Phase: Phase		
Kemp House:: 124 City Road London EC1V 2NX			

Summary Results for SWC-05: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FSR: 100 years: +45 %: 15 mins: Summer	43.290	41.800	42.105	0.305	13.4	0.049	0.000	13.0	9.848	Surcharged
FSR: 100 years: +45 %: 15 mins: Winter	43.290	41.800	42.107	0.307	13.2	0.049	0.000	12.5	9.885	Surcharged
FSR: 100 years: +45 %: 30 mins: Summer	43.290	41.800	42.324	0.524	11.2	0.083	0.000	10.9	16.377	Surcharged
FSR: 100 years: +45 %: 30 mins: Winter	43.290	41.800	42.325	0.525	10.7	0.084	0.000	10.4	16.415	Surcharged
FSR: 100 years: +45 %: 60 mins: Summer	43.290	41.800	42.497	0.697	10.1	0.111	0.000	8.9	21.913	Surcharged
FSR: 100 years: +45 %: 60 mins: Winter	43.290	41.800	42.500	0.700	8.8	0.111	0.000	8.0	21.927	Surcharged
FSR: 100 years: +45 %: 120 mins: Summer	43.290	41.800	42.584	0.784	8.1	0.125	0.000	7.5	27.051	Surcharged
FSR: 100 years: +45 %: 120 mins: Winter	43.290	41.800	42.598	0.798	6.7	0.127	0.000	6.2	27.016	Surcharged
FSR: 100 years: +45 %: 180 mins: Summer	43.290	41.800	42.580	0.780	7.0	0.124	0.000	6.5	29.851	Surcharged
FSR: 100 years: +45 %: 180 mins: Winter	43.290	41.800	42.584	0.784	5.8	0.125	0.000	5.4	29.826	Surcharged
FSR: 100 years: +45 %: 240 mins: Summer	43.290	41.800	42.559	0.759	6.3	0.121	0.000	5.9	31.865	Surcharged
FSR: 100 years: +45 %: 240 mins: Winter	43.290	41.800	42.507	0.707	5.2	0.112	0.000	4.9	31.850	Surcharged
FSR: 100 years: +45 %: 360 mins: Summer	43.290	41.800	42.454	0.654	5.5	0.104	0.000	5.1	34.657	Surcharged
FSR: 100 years: +45 %: 360 mins: Winter	43.290	41.800	42.356	0.556	4.0	0.088	0.000	3.8	34.729	Surcharged
FSR: 100 years: +45 %: 480 mins: Summer	43.290	41.800	42.356	0.556	5.0	0.088	0.000	4.7	36.889	Surcharged
FSR: 100 years: +45 %: 480 mins: Winter	43.290	41.800	42.224	0.424	3.2	0.067	0.000	3.1	36.883	Surcharged
FSR: 100 years: +45 %: 600 mins: Summer	43.290	41.800	42.270	0.470	4.2	0.075	0.000	4.0	38.635	Surcharged
FSR: 100 years: +45 %: 600 mins: Winter	43.290	41.800	42.116	0.316	2.7	0.050	0.000	2.6	38.665	Surcharged
FSR: 100 years: +45 %: 720 mins: Summer	43.290	41.800	42.192	0.392	3.6	0.062	0.000	3.5	40.140	Surcharged

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:100 Years Storm Event + 45% Climate Change 5.0l/s Restricted Discharge Rate		Date: 03/08/2025		
		Designed by: M.H	Checked by: S.L	Approved By: S.L
Report Details: Type: Junctions Summary Storm Phase: Phase		Kemp House:: 124 City Road London EC1V 2NX		



FSR: 100 years: +45 %: 720 mins: Winter	43.29 0	41.80 0	42.023	0.223	2.3	0.036	0.000	2.3	40.146	Surcharged
FSR: 100 years: +45 %: 960 mins: Summer	43.29 0	41.80 0	42.066	0.266	2.9	0.042	0.000	2.8	42.492	Surcharged
FSR: 100 years: +45 %: 960 mins: Winter	43.29 0	41.80 0	41.884	0.084	1.9	0.013	0.000	1.9	42.546	OK
FSR: 100 years: +45 %: 1440 mins: Summer	43.29 0	41.80 0	41.888	0.088	2.1	0.014	0.000	2.1	46.199	OK
FSR: 100 years: +45 %: 1440 mins: Winter	43.29 0	41.80 0	41.823	0.023	1.4	0.004	0.000	1.4	46.153	OK

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:100 Years Storm Event + 45% Climate Change 5.0l/s Restricted Discharge Rate	Date: 03/08/2025		
	Designed by: M.H	Checked by: S.L	Approved By: S.L
	Report Details: Type: Junctions Summary Storm Phase: Phase		
Kemp House:: 124 City Road London EC1V 2NX			



Summary Results for SWC-06: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FSR: 100 years: +45 %: 15 mins: Summer	43.20 5	42.30 5	42.453	0.148	9.5	0.024	0.000	8.3	7.517	Surcharged
FSR: 100 years: +45 %: 15 mins: Winter	43.20 5	42.30 5	42.433	0.128	9.1	0.020	0.000	8.1	7.570	Surcharged
FSR: 100 years: +45 %: 30 mins: Summer	43.20 5	42.30 5	42.387	0.082	7.3	0.013	0.000	7.3	11.464	OK
FSR: 100 years: +45 %: 30 mins: Winter	43.20 5	42.30 5	42.385	0.080	7.0	0.013	0.000	7.0	11.464	OK
FSR: 100 years: +45 %: 60 mins: Summer	43.20 5	42.30 5	42.523	0.218	6.7	0.035	0.000	6.7	14.389	Surcharged
FSR: 100 years: +45 %: 60 mins: Winter	43.20 5	42.30 5	42.533	0.228	6.0	0.036	0.000	6.0	14.388	Surcharged
FSR: 100 years: +45 %: 120 mins: Summer	43.20 5	42.30 5	42.607	0.302	5.7	0.048	0.000	5.8	17.419	Surcharged
FSR: 100 years: +45 %: 120 mins: Winter	43.20 5	42.30 5	42.600	0.295	4.9	0.047	0.000	4.9	17.412	Surcharged
FSR: 100 years: +45 %: 180 mins: Summer	43.20 5	42.30 5	42.581	0.276	5.1	0.044	0.000	5.1	19.245	Surcharged
FSR: 100 years: +45 %: 180 mins: Winter	43.20 5	42.30 5	42.581	0.276	4.4	0.044	0.000	4.4	19.225	Surcharged
FSR: 100 years: +45 %: 240 mins: Summer	43.20 5	42.30 5	42.555	0.250	4.7	0.040	0.000	4.7	20.544	Surcharged
FSR: 100 years: +45 %: 240 mins: Winter	43.20 5	42.30 5	42.515	0.210	3.6	0.033	0.000	3.6	20.500	Surcharged
FSR: 100 years: +45 %: 360 mins: Summer	43.20 5	42.30 5	42.462	0.157	4.0	0.025	0.000	4.0	22.354	Surcharged
FSR: 100 years: +45 %: 360 mins: Winter	43.20 5	42.30 5	42.363	0.058	2.6	0.009	0.000	2.6	22.342	OK
FSR: 100 years: +45 %: 480 mins: Summer	43.20 5	42.30 5	42.364	0.059	3.2	0.009	0.000	3.2	23.793	OK
FSR: 100 years: +45 %: 480 mins: Winter	43.20 5	42.30 5	42.342	0.037	2.1	0.006	0.000	2.1	23.757	OK
FSR: 100 years: +45 %: 600 mins: Summer	43.20 5	42.30 5	42.348	0.043	2.7	0.007	0.000	2.7	24.903	OK
FSR: 100 years: +45 %: 600 mins: Winter	43.20 5	42.30 5	42.339	0.034	1.7	0.005	0.000	1.7	24.885	OK
FSR: 100 years: +45 %: 720 mins: Summer	43.20 5	42.30 5	42.345	0.040	2.4	0.006	0.000	2.4	25.815	OK

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:100 Years Storm Event + 45% Climate Change 5.0l/s Restricted Discharge Rate		Date: 03/08/2025	
		Designed by: M.H	Checked by: S.L
		Approved By: S.L	
Report Details: Type: Junctions Summary Storm Phase: Phase		Kemp House:: 124 City Road London EC1V 2NX	



FSR: 100 years: +45 %: 720 mins: Winter	43.20 5	42.30 5	42.336	0.031	1.5	0.005	0.000	1.5	25.845	OK
FSR: 100 years: +45 %: 960 mins: Summer	43.20 5	42.30 5	42.340	0.035	1.9	0.006	0.000	1.9	27.423	OK
FSR: 100 years: +45 %: 960 mins: Winter	43.20 5	42.30 5	42.333	0.028	1.2	0.004	0.000	1.2	27.393	OK
FSR: 100 years: +45 %: 1440 mins: Summer	43.20 5	42.30 5	42.334	0.029	1.4	0.005	0.000	1.4	29.691	OK
FSR: 100 years: +45 %: 1440 mins: Winter	43.20 5	42.30 5	42.329	0.024	0.9	0.004	0.000	0.9	29.692	OK

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:100 Years Storm Event + 45% Climate Change 5.0l/s Restricted Discharge Rate	Date: 03/08/2025		
	Designed by: M.H	Checked by: S.L	Approved By: S.L
	Report Details: Type: Junctions Summary Storm Phase: Phase		
Kemp House:: 124 City Road London EC1V 2NX			



Summary Results for SWC-07: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FSR: 100 years: +45 %: 15 mins: Summer	43.25 6	42.06 9	42.141	0.072	8.3	0.005	0.000	8.1	7.474	OK
FSR: 100 years: +45 %: 15 mins: Winter	43.25 6	42.06 9	42.141	0.072	8.1	0.005	0.000	8.2	7.527	OK
FSR: 100 years: +45 %: 30 mins: Summer	43.25 6	42.06 9	42.317	0.248	7.3	0.018	0.000	7.3	11.210	Surcharged
FSR: 100 years: +45 %: 30 mins: Winter	43.25 6	42.06 9	42.318	0.249	7.0	0.018	0.000	7.0	11.209	Surcharged
FSR: 100 years: +45 %: 60 mins: Summer	43.25 6	42.06 9	42.489	0.420	6.7	0.030	0.000	6.6	14.310	Surcharged
FSR: 100 years: +45 %: 60 mins: Winter	43.25 6	42.06 9	42.495	0.426	6.0	0.030	0.000	5.9	14.313	Surcharged
FSR: 100 years: +45 %: 120 mins: Summer	43.25 6	42.06 9	42.574	0.505	5.8	0.036	0.000	5.6	17.421	Surcharged
FSR: 100 years: +45 %: 120 mins: Winter	43.25 6	42.06 9	42.589	0.520	4.9	0.037	0.000	4.9	17.413	Surcharged
FSR: 100 years: +45 %: 180 mins: Summer	43.25 6	42.06 9	42.571	0.502	5.1	0.036	0.000	5.1	19.246	Surcharged
FSR: 100 years: +45 %: 180 mins: Winter	43.25 6	42.06 9	42.574	0.505	4.4	0.036	0.000	4.4	19.224	Surcharged
FSR: 100 years: +45 %: 240 mins: Summer	43.25 6	42.06 9	42.549	0.480	4.7	0.034	0.000	4.6	20.544	Surcharged
FSR: 100 years: +45 %: 240 mins: Winter	43.25 6	42.06 9	42.504	0.435	3.6	0.031	0.000	3.6	20.499	Surcharged
FSR: 100 years: +45 %: 360 mins: Summer	43.25 6	42.06 9	42.451	0.382	4.0	0.027	0.000	3.9	22.354	Surcharged
FSR: 100 years: +45 %: 360 mins: Winter	43.25 6	42.06 9	42.353	0.284	2.6	0.020	0.000	2.6	22.341	Surcharged
FSR: 100 years: +45 %: 480 mins: Summer	43.25 6	42.06 9	42.354	0.285	3.2	0.020	0.000	3.3	23.792	Surcharged
FSR: 100 years: +45 %: 480 mins: Winter	43.25 6	42.06 9	42.222	0.153	2.1	0.011	0.000	2.1	23.756	Surcharged
FSR: 100 years: +45 %: 600 mins: Summer	43.25 6	42.06 9	42.267	0.198	2.7	0.014	0.000	2.7	24.902	Surcharged
FSR: 100 years: +45 %: 600 mins: Winter	43.25 6	42.06 9	42.114	0.045	1.7	0.003	0.000	1.7	24.885	OK
FSR: 100 years: +45 %: 720 mins: Summer	43.25 6	42.06 9	42.190	0.121	2.4	0.009	0.000	2.4	25.814	Surcharged

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:100 Years Storm Event + 45% Climate Change 5.0l/s Restricted Discharge Rate		Date: 03/08/2025	
		Designed by: M.H	Checked by: S.L
		Approved By: S.L	
Report Details: Type: Junctions Summary Storm Phase: Phase		Kemp House:: 124 City Road London EC1V 2NX	



FSR: 100 years: +45 %: 720 mins: Winter	43.25 6	42.06 9	42.094	0.025	1.5	0.002	0.000	1.5	25.844	OK
FSR: 100 years: +45 %: 960 mins: Summer	43.25 6	42.06 9	42.097	0.028	1.9	0.002	0.000	1.9	27.422	OK
FSR: 100 years: +45 %: 960 mins: Winter	43.25 6	42.06 9	42.091	0.022	1.2	0.002	0.000	1.2	27.392	OK
FSR: 100 years: +45 %: 1440 mins: Summer	43.25 6	42.06 9	42.093	0.024	1.4	0.002	0.000	1.4	29.690	OK
FSR: 100 years: +45 %: 1440 mins: Winter	43.25 6	42.06 9	42.088	0.019	0.9	0.001	0.000	0.9	29.691	OK

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:100 Years Storm Event + 45% Climate Change 5.0l/s Restricted Discharge Rate	Date: 03/08/2025		
	Designed by: M.H	Checked by: S.L	Approved By: S.L
	Report Details: Type: Junctions Summary Storm Phase: Phase		
Kemp House:: 124 City Road London EC1V 2NX			

Summary Results for SWC-08: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FSR: 100 years: +45 %: 15 mins: Summer	43.260	41.500	42.098	0.598	4.8	0.169	0.000	3.4	1.445	Surcharged
FSR: 100 years: +45 %: 15 mins: Winter	43.260	41.500	42.100	0.600	4.5	0.170	0.000	3.1	1.437	Surcharged
FSR: 100 years: +45 %: 30 mins: Summer	43.260	41.500	42.317	0.817	3.2	0.231	0.000	2.2	1.877	Surcharged
FSR: 100 years: +45 %: 30 mins: Winter	43.260	41.500	42.318	0.818	3.0	0.231	0.000	2.0	1.881	Surcharged
FSR: 100 years: +45 %: 60 mins: Summer	43.260	41.500	42.489	0.989	2.7	0.280	0.000	1.9	2.691	Surcharged
FSR: 100 years: +45 %: 60 mins: Winter	43.260	41.500	42.492	0.992	2.2	0.281	0.000	1.5	2.696	Surcharged
FSR: 100 years: +45 %: 120 mins: Summer	43.260	41.500	42.574	1.074	2.0	0.304	0.000	1.4	3.989	Surcharged
FSR: 100 years: +45 %: 120 mins: Winter	43.260	41.500	42.588	1.088	1.4	0.308	0.000	1.0	4.001	Surcharged
FSR: 100 years: +45 %: 180 mins: Summer	43.260	41.500	42.570	1.070	1.5	0.303	0.000	1.0	4.579	Surcharged
FSR: 100 years: +45 %: 180 mins: Winter	43.260	41.500	42.573	1.073	1.1	0.304	0.000	0.7	4.582	Surcharged
FSR: 100 years: +45 %: 240 mins: Summer	43.260	41.500	42.549	1.049	1.3	0.297	0.000	0.8	4.890	Surcharged
FSR: 100 years: +45 %: 240 mins: Winter	43.260	41.500	42.502	1.002	0.9	0.284	0.000	0.6	4.895	Surcharged
FSR: 100 years: +45 %: 360 mins: Summer	43.260	41.500	42.450	0.950	0.9	0.269	0.000	0.6	5.340	Surcharged
FSR: 100 years: +45 %: 360 mins: Winter	43.260	41.500	42.352	0.852	0.6	0.241	0.000	0.4	5.334	Surcharged
FSR: 100 years: +45 %: 480 mins: Summer	43.260	41.500	42.352	0.852	0.8	0.241	0.000	0.5	5.658	Surcharged
FSR: 100 years: +45 %: 480 mins: Winter	43.260	41.500	42.221	0.721	0.5	0.204	0.000	0.4	5.658	Surcharged
FSR: 100 years: +45 %: 600 mins: Summer	43.260	41.500	42.266	0.766	0.6	0.217	0.000	0.4	5.964	Surcharged
FSR: 100 years: +45 %: 600 mins: Winter	43.260	41.500	42.113	0.613	0.4	0.173	0.000	0.3	5.904	Surcharged
FSR: 100 years: +45 %: 720 mins: Summer	43.260	41.500	42.188	0.688	0.6	0.195	0.000	0.4	6.180	Surcharged

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:100 Years Storm Event + 45% Climate Change 5.0l/s Restricted Discharge Rate		Date: 03/08/2025	
		Designed by: M.H	Checked by: S.L
		Approved By: S.L	
Report Details: Type: Junctions Summary Storm Phase: Phase		Kemp House:: 124 City Road London EC1V 2NX	



FSR: 100 years: +45 %: 720 mins: Winter	43.26 0	41.50 0	42.021	0.521	0.4	0.147	0.000	0.3	6.138	Surcharged
FSR: 100 years: +45 %: 960 mins: Summer	43.26 0	41.50 0	42.063	0.563	0.4	0.159	0.000	0.3	6.552	Surcharged
FSR: 100 years: +45 %: 960 mins: Winter	43.26 0	41.50 0	41.882	0.382	0.3	0.108	0.000	0.3	6.576	Surcharged
FSR: 100 years: +45 %: 1440 mins: Summer	43.26 0	41.50 0	41.886	0.386	0.3	0.109	0.000	0.3	7.080	Surcharged
FSR: 100 years: +45 %: 1440 mins: Winter	43.26 0	41.50 0	41.709	0.209	0.2	0.059	0.000	0.2	7.086	Surcharged

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:100 Years Storm Event + 45% Climate Change 5.0l/s Restricted Discharge Rate	Date: 03/08/2025		
	Designed by: M.H	Checked by: S.L	Approved By: S.L
	Report Details: Type: Junctions Summary Storm Phase: Phase		
	Kemp House:: 124 City Road London EC1V 2NX		



Nimbus
ENGINEERING CONSULTANTS



Summary Results for SWC-09 (FC): Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FSR: 100 years: +45 %: 15 mins: Summer	43.28 0	41.37 6	42.086	0.710	3.8	0.201	0.000	3.7	4.708	Surcharged
FSR: 100 years: +45 %: 15 mins: Winter	43.28 0	41.37 6	42.088	0.712	3.9	0.201	0.000	3.7	4.739	Surcharged
FSR: 100 years: +45 %: 30 mins: Summer	43.28 0	41.37 6	42.302	0.926	4.3	0.262	0.000	4.3	11.664	Surcharged
FSR: 100 years: +45 %: 30 mins: Winter	43.28 0	41.37 6	42.304	0.928	4.3	0.262	0.000	4.3	11.699	Surcharged
FSR: 100 years: +45 %: 60 mins: Summer	43.28 0	41.37 6	42.473	1.097	4.7	0.311	0.000	4.7	25.751	Surcharged
FSR: 100 years: +45 %: 60 mins: Winter	43.28 0	41.37 6	42.476	1.100	4.8	0.311	0.000	4.7	25.838	Surcharged
FSR: 100 years: +45 %: 120 mins: Summer	43.28 0	41.37 6	42.557	1.181	4.9	0.334	0.000	4.9	47.986	Surcharged
FSR: 100 years: +45 %: 120 mins: Winter	43.28 0	41.37 6	42.571	1.195	5.0	0.338	0.000	4.9	48.090	Surcharged
FSR: 100 years: +45 %: 180 mins: Summer	43.28 0	41.37 6	42.553	1.177	4.9	0.333	0.000	4.9	59.503	Surcharged
FSR: 100 years: +45 %: 180 mins: Winter	43.28 0	41.37 6	42.555	1.179	4.9	0.334	0.000	4.9	59.462	Surcharged
FSR: 100 years: +45 %: 240 mins: Summer	43.28 0	41.37 6	42.532	1.156	4.8	0.327	0.000	4.8	63.719	Surcharged
FSR: 100 years: +45 %: 240 mins: Winter	43.28 0	41.37 6	42.486	1.110	4.7	0.314	0.000	4.7	63.648	Surcharged
FSR: 100 years: +45 %: 360 mins: Summer	43.28 0	41.37 6	42.434	1.058	4.6	0.299	0.000	4.6	69.366	Surcharged
FSR: 100 years: +45 %: 360 mins: Winter	43.28 0	41.37 6	42.337	0.961	4.4	0.272	0.000	4.4	69.448	Surcharged
FSR: 100 years: +45 %: 480 mins: Summer	43.28 0	41.37 6	42.338	0.962	4.4	0.272	0.000	4.4	73.822	Surcharged
FSR: 100 years: +45 %: 480 mins: Winter	43.28 0	41.37 6	42.208	0.832	4.1	0.235	0.000	4.1	73.777	Surcharged
FSR: 100 years: +45 %: 600 mins: Summer	43.28 0	41.37 6	42.252	0.876	4.2	0.248	0.000	4.2	77.338	Surcharged
FSR: 100 years: +45 %: 600 mins: Winter	43.28 0	41.37 6	42.101	0.725	3.8	0.205	0.000	3.8	77.305	Surcharged
FSR: 100 years: +45 %: 720 mins: Summer	43.28 0	41.37 6	42.176	0.800	4.0	0.226	0.000	4.0	80.285	Surcharged

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:100 Years Storm Event + 45% Climate Change 5.0l/s Restricted Discharge Rate		Date: 03/08/2025	
		Designed by: M.H	Checked by: S.L
		Approved By: S.L	
Report Details: Type: Junctions Summary Storm Phase: Phase		Kemp House:: 124 City Road London EC1V 2NX	



FSR: 100 years: +45 %: 720 mins: Winter	43.28 0	41.37 6	42.010	0.634	3.5	0.180	0.000	3.5	80.246	Surcharged
FSR: 100 years: +45 %: 960 mins: Summer	43.28 0	41.37 6	42.052	0.676	3.6	0.191	0.000	3.6	85.129	Surcharged
FSR: 100 years: +45 %: 960 mins: Winter	43.28 0	41.37 6	41.874	0.498	3.1	0.141	0.000	3.1	85.220	Surcharged
FSR: 100 years: +45 %: 1440 mins: Summer	43.28 0	41.37 6	41.878	0.502	3.1	0.142	0.000	3.1	92.401	Surcharged
FSR: 100 years: +45 %: 1440 mins: Winter	43.28 0	41.37 6	41.703	0.327	2.5	0.093	0.000	2.5	92.324	Surcharged

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:100 Years Storm Event + 45% Climate Change 5.0l/s Restricted Discharge Rate	Date: 03/08/2025		
	Designed by: M.H	Checked by: S.L	Approved By: S.L
Report Details: Type: Junctions Summary Storm Phase: Phase	Kemp House:: 124 City Road London EC1V 2NX		



Summary Results for SWC-10: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FSR: 100 years: +45 %: 15 mins: Summer	43.205	41.194	41.247	0.053	3.7	0.000	0.000	3.7	4.640	OK
FSR: 100 years: +45 %: 15 mins: Winter	43.205	41.194	41.247	0.053	3.7	0.000	0.000	3.7	4.671	OK
FSR: 100 years: +45 %: 30 mins: Summer	43.205	41.194	41.251	0.057	4.3	0.000	0.000	4.3	11.589	OK
FSR: 100 years: +45 %: 30 mins: Winter	43.205	41.194	41.251	0.057	4.3	0.000	0.000	4.3	11.625	OK
FSR: 100 years: +45 %: 60 mins: Summer	43.205	41.194	41.255	0.061	4.7	0.000	0.000	4.7	25.679	OK
FSR: 100 years: +45 %: 60 mins: Winter	43.205	41.194	41.255	0.061	4.7	0.000	0.000	4.7	25.766	OK
FSR: 100 years: +45 %: 120 mins: Summer	43.205	41.194	41.256	0.062	4.9	0.000	0.000	4.9	47.931	OK
FSR: 100 years: +45 %: 120 mins: Winter	43.205	41.194	41.256	0.062	4.9	0.000	0.000	4.9	48.036	OK
FSR: 100 years: +45 %: 180 mins: Summer	43.205	41.194	41.256	0.062	4.9	0.000	0.000	4.9	59.488	OK
FSR: 100 years: +45 %: 180 mins: Winter	43.205	41.194	41.256	0.062	4.9	0.000	0.000	4.9	59.448	OK
FSR: 100 years: +45 %: 240 mins: Summer	43.205	41.194	41.256	0.062	4.8	0.000	0.000	4.8	63.717	OK
FSR: 100 years: +45 %: 240 mins: Winter	43.205	41.194	41.255	0.061	4.7	0.000	0.000	4.7	63.646	OK
FSR: 100 years: +45 %: 360 mins: Summer	43.205	41.194	41.254	0.060	4.6	0.000	0.000	4.6	69.364	OK
FSR: 100 years: +45 %: 360 mins: Winter	43.205	41.194	41.252	0.058	4.4	0.000	0.000	4.4	69.446	OK
FSR: 100 years: +45 %: 480 mins: Summer	43.205	41.194	41.252	0.058	4.4	0.000	0.000	4.4	73.819	OK
FSR: 100 years: +45 %: 480 mins: Winter	43.205	41.194	41.249	0.055	4.1	0.000	0.000	4.1	73.775	OK
FSR: 100 years: +45 %: 600 mins: Summer	43.205	41.194	41.250	0.056	4.2	0.000	0.000	4.2	77.336	OK
FSR: 100 years: +45 %: 600 mins: Winter	43.205	41.194	41.247	0.053	3.8	0.000	0.000	3.8	77.303	OK
FSR: 100 years: +45 %: 720 mins: Summer	43.205	41.194	41.249	0.055	4.0	0.000	0.000	4.0	80.282	OK

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:100 Years Storm Event + 45% Climate Change 5.0l/s Restricted Discharge Rate		Date: 03/08/2025	
		Designed by: M.H	Checked by: S.L
		Approved By: S.L	
Report Details: Type: Junctions Summary Storm Phase: Phase		Kemp House:: 124 City Road London EC1V 2NX	



FSR: 100 years: +45 %: 720 mins: Winter	43.20 5	41.19 4	41.245	0.051	3.5	0.000	0.000	3.5	80.244	OK
FSR: 100 years: +45 %: 960 mins: Summer	43.20 5	41.19 4	41.246	0.052	3.6	0.000	0.000	3.6	85.120	OK
FSR: 100 years: +45 %: 960 mins: Winter	43.20 5	41.19 4	41.241	0.047	3.1	0.000	0.000	3.1	85.197	OK
FSR: 100 years: +45 %: 1440 mins: Summer	43.20 5	41.19 4	41.241	0.047	3.1	0.000	0.000	3.1	92.370	OK
FSR: 100 years: +45 %: 1440 mins: Winter	43.20 5	41.19 4	41.235	0.041	2.5	0.000	0.000	2.5	92.293	OK

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:100 Years Storm Event + 45% Climate Change 5.0l/s Restricted Discharge Rate		Date: 03/08/2025		
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		



Summary Results for MH1: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FSR: 100 years: +45 %: 15 mins: Summer	41.25 5	40.49 5	40.522	0.027	3.2	0.004	0.000	3.2	1.402	OK
FSR: 100 years: +45 %: 15 mins: Winter	41.25 5	40.49 5	40.521	0.026	3.0	0.004	0.000	3.0	1.402	OK
FSR: 100 years: +45 %: 30 mins: Summer	41.25 5	40.49 5	40.518	0.023	2.1	0.004	0.000	2.1	1.843	OK
FSR: 100 years: +45 %: 30 mins: Winter	41.25 5	40.49 5	40.517	0.022	2.0	0.003	0.000	2.0	1.849	OK
FSR: 100 years: +45 %: 60 mins: Summer	41.25 5	40.49 5	40.516	0.021	1.9	0.003	0.000	1.8	2.312	OK
FSR: 100 years: +45 %: 60 mins: Winter	41.25 5	40.49 5	40.514	0.019	1.5	0.003	0.000	1.5	2.318	OK
FSR: 100 years: +45 %: 120 mins: Summer	41.25 5	40.49 5	40.513	0.018	1.3	0.003	0.000	1.3	2.798	OK
FSR: 100 years: +45 %: 120 mins: Winter	41.25 5	40.49 5	40.510	0.015	1.0	0.002	0.000	1.0	2.803	OK
FSR: 100 years: +45 %: 180 mins: Summer	41.25 5	40.49 5	40.511	0.016	1.0	0.003	0.000	1.0	3.097	OK
FSR: 100 years: +45 %: 180 mins: Winter	41.25 5	40.49 5	40.508	0.013	0.7	0.002	0.000	0.7	3.096	OK
FSR: 100 years: +45 %: 240 mins: Summer	41.25 5	40.49 5	40.510	0.015	0.9	0.002	0.000	0.9	3.312	OK
FSR: 100 years: +45 %: 240 mins: Winter	41.25 5	40.49 5	40.507	0.012	0.6	0.002	0.000	0.6	3.293	OK
FSR: 100 years: +45 %: 360 mins: Summer	41.25 5	40.49 5	40.508	0.013	0.6	0.002	0.000	0.6	3.599	OK
FSR: 100 years: +45 %: 360 mins: Winter	41.25 5	40.49 5	40.505	0.010	0.4	0.002	0.000	0.4	3.587	OK
FSR: 100 years: +45 %: 480 mins: Summer	41.25 5	40.49 5	40.507	0.012	0.5	0.002	0.000	0.5	3.833	OK
FSR: 100 years: +45 %: 480 mins: Winter	41.25 5	40.49 5	40.504	0.009	0.3	0.002	0.000	0.3	3.833	OK
FSR: 100 years: +45 %: 600 mins: Summer	41.25 5	40.49 5	40.506	0.011	0.4	0.002	0.000	0.4	4.025	OK
FSR: 100 years: +45 %: 600 mins: Winter	41.25 5	40.49 5	40.504	0.009	0.3	0.001	0.000	0.3	4.007	OK
FSR: 100 years: +45 %: 720 mins: Summer	41.25 5	40.49 5	40.505	0.010	0.4	0.002	0.000	0.4	4.139	OK

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:100 Years Storm Event + 45% Climate Change 5.0l/s Restricted Discharge Rate		Date: 03/08/2025	
		Designed by: M.H	Checked by: S.L
		Approved By: S.L	
Report Details: Type: Junctions Summary Storm Phase: Phase		Kemp House:: 124 City Road London EC1V 2NX	



FSR: 100 years: +45 %: 720 mins: Winter	41.25 5	40.49 5	40.503	0.008	0.2	0.001	0.000	0.2	4.127	OK
FSR: 100 years: +45 %: 960 mins: Summer	41.25 5	40.49 5	40.504	0.009	0.3	0.001	0.000	0.3	4.409	OK
FSR: 100 years: +45 %: 960 mins: Winter	41.25 5	40.49 5	40.502	0.007	0.2	0.001	0.000	0.2	4.373	OK
FSR: 100 years: +45 %: 1440 mins: Summer	41.25 5	40.49 5	40.503	0.008	0.2	0.001	0.000	0.2	4.775	OK
FSR: 100 years: +45 %: 1440 mins: Winter	41.25 5	40.49 5	40.501	0.006	0.1	0.001	0.000	0.1	4.751	OK

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:100 Years Storm Event + 45% Climate Change 5.0l/s Restricted Discharge Rate		Date: 03/08/2025		
		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
Report Details: Type: Junctions Summary Storm Phase: Phase		Kemp House:: 124 City Road London EC1V 2NX		



Summary Results for MH2: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FSR: 100 years: +45 %: 15 mins: Summer	41.255	39.155	39.861	0.706	6.7	0.112	0.000	3.0	2.831	Surcharged
FSR: 100 years: +45 %: 15 mins: Winter	41.255	39.155	39.828	0.673	6.3	0.107	0.000	2.9	2.848	Surcharged
FSR: 100 years: +45 %: 30 mins: Summer	41.255	39.155	39.922	0.767	4.4	0.122	0.000	3.7	3.824	Surcharged
FSR: 100 years: +45 %: 30 mins: Winter	41.255	39.155	39.877	0.722	4.1	0.115	0.000	3.5	3.830	Surcharged
FSR: 100 years: +45 %: 60 mins: Summer	41.255	39.155	39.818	0.663	3.8	0.105	0.000	3.4	4.811	Surcharged
FSR: 100 years: +45 %: 60 mins: Winter	41.255	39.155	39.689	0.534	3.1	0.085	0.000	2.7	4.808	Surcharged
FSR: 100 years: +45 %: 120 mins: Summer	41.255	39.155	39.510	0.355	2.8	0.056	0.000	2.7	5.822	Surcharged
FSR: 100 years: +45 %: 120 mins: Winter	41.255	39.155	39.221	0.066	2.0	0.011	0.000	2.0	5.817	OK
FSR: 100 years: +45 %: 180 mins: Summer	41.255	39.155	39.236	0.081	2.2	0.013	0.000	2.2	6.423	OK
FSR: 100 years: +45 %: 180 mins: Winter	41.255	39.155	39.178	0.023	1.5	0.004	0.000	1.5	6.426	OK
FSR: 100 years: +45 %: 240 mins: Summer	41.255	39.155	39.180	0.025	1.8	0.004	0.000	1.8	6.870	OK
FSR: 100 years: +45 %: 240 mins: Winter	41.255	39.155	39.176	0.021	1.2	0.003	0.000	1.2	6.851	OK
FSR: 100 years: +45 %: 360 mins: Summer	41.255	39.155	39.177	0.022	1.3	0.003	0.000	1.3	7.487	OK
FSR: 100 years: +45 %: 360 mins: Winter	41.255	39.155	39.173	0.018	0.9	0.003	0.000	0.9	7.451	OK
FSR: 100 years: +45 %: 480 mins: Summer	41.255	39.155	39.175	0.020	1.1	0.003	0.000	1.1	7.949	OK
FSR: 100 years: +45 %: 480 mins: Winter	41.255	39.155	39.171	0.016	0.7	0.003	0.000	0.7	7.943	OK
FSR: 100 years: +45 %: 600 mins: Summer	41.255	39.155	39.173	0.018	0.9	0.003	0.000	0.9	8.339	OK
FSR: 100 years: +45 %: 600 mins: Winter	41.255	39.155	39.170	0.015	0.6	0.002	0.000	0.6	8.285	OK
FSR: 100 years: +45 %: 720 mins: Summer	41.255	39.155	39.172	0.017	0.8	0.003	0.000	0.8	8.603	OK

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:100 Years Storm Event + 45% Climate Change 5.0l/s Restricted Discharge Rate		Date: 03/08/2025	
		Designed by: M.H	Checked by: S.L
		Approved By: S.L	
Report Details: Type: Junctions Summary Storm Phase: Phase		Kemp House:: 124 City Road London EC1V 2NX	



FSR: 100 years: +45 %: 720 mins: Winter	41.25 5	39.15 5	39.169	0.014	0.5	0.002	0.000	0.5	8.615	OK
FSR: 100 years: +45 %: 960 mins: Summer	41.25 5	39.15 5	39.170	0.015	0.6	0.002	0.000	0.6	9.149	OK
FSR: 100 years: +45 %: 960 mins: Winter	41.25 5	39.15 5	39.167	0.012	0.4	0.002	0.000	0.4	9.131	OK
FSR: 100 years: +45 %: 1440 mins: Summer	41.25 5	39.15 5	39.168	0.013	0.4	0.002	0.000	0.4	9.899	OK
FSR: 100 years: +45 %: 1440 mins: Winter	41.25 5	39.15 5	39.166	0.011	0.3	0.002	0.000	0.3	9.953	OK

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:100 Years Storm Event + 45% Climate Change 5.0l/s Restricted Discharge Rate	Date: 03/08/2025		
	Designed by: M.H	Checked by: S.L	Approved By: S.L
	Report Details: Type: Junctions Summary Storm Phase: Phase		
Kemp House:: 124 City Road London EC1V 2NX			

Summary Results for MH3: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FSR: 100 years: +45 %: 15 mins: Summer	40.340	38.840	39.856	1.016	9.9	0.162	0.000	6.4	5.377	Surcharged
FSR: 100 years: +45 %: 15 mins: Winter	40.340	38.840	39.823	0.983	9.4	0.156	0.000	6.1	5.412	Surcharged
FSR: 100 years: +45 %: 30 mins: Summer	40.340	38.840	39.918	1.078	8.3	0.171	0.000	5.8	7.761	Surcharged
FSR: 100 years: +45 %: 30 mins: Winter	40.340	38.840	39.872	1.032	7.8	0.164	0.000	5.5	7.767	Surcharged
FSR: 100 years: +45 %: 60 mins: Summer	40.340	38.840	39.813	0.973	7.4	0.155	0.000	5.3	9.745	Surcharged
FSR: 100 years: +45 %: 60 mins: Winter	40.340	38.840	39.684	0.844	5.9	0.134	0.000	4.6	9.752	Surcharged
FSR: 100 years: +45 %: 120 mins: Summer	40.340	38.840	39.505	0.665	5.6	0.106	0.000	4.3	11.795	Surcharged
FSR: 100 years: +45 %: 120 mins: Winter	40.340	38.840	39.215	0.375	4.0	0.060	0.000	3.5	11.791	Surcharged
FSR: 100 years: +45 %: 180 mins: Summer	40.340	38.840	39.231	0.391	4.4	0.062	0.000	3.7	13.035	Surcharged
FSR: 100 years: +45 %: 180 mins: Winter	40.340	38.840	38.871	0.031	3.0	0.005	0.000	3.0	13.023	OK
FSR: 100 years: +45 %: 240 mins: Summer	40.340	38.840	38.993	0.153	3.6	0.024	0.000	3.6	13.914	Surcharged
FSR: 100 years: +45 %: 240 mins: Winter	40.340	38.840	38.868	0.028	2.4	0.005	0.000	2.4	13.893	OK
FSR: 100 years: +45 %: 360 mins: Summer	40.340	38.840	38.870	0.030	2.7	0.005	0.000	2.7	15.152	OK
FSR: 100 years: +45 %: 360 mins: Winter	40.340	38.840	38.865	0.025	1.8	0.004	0.000	1.8	15.134	OK
FSR: 100 years: +45 %: 480 mins: Summer	40.340	38.840	38.867	0.027	2.2	0.004	0.000	2.2	16.113	OK
FSR: 100 years: +45 %: 480 mins: Winter	40.340	38.840	38.862	0.022	1.4	0.003	0.000	1.4	16.095	OK
FSR: 100 years: +45 %: 600 mins: Summer	40.340	38.840	38.865	0.025	1.8	0.004	0.000	1.8	16.880	OK
FSR: 100 years: +45 %: 600 mins: Winter	40.340	38.840	38.860	0.020	1.2	0.003	0.000	1.2	16.857	OK
FSR: 100 years: +45 %: 720 mins: Summer	40.340	38.840	38.863	0.023	1.6	0.004	0.000	1.6	17.492	OK

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:100 Years Storm Event + 45% Climate Change 5.0l/s Restricted Discharge Rate		Date: 03/08/2025			
		Designed by: M.H	Checked by: S.L		Approved By: S.L
Report Details: Type: Junctions Summary Storm Phase: Phase		Kemp House:: 124 City Road London EC1V 2NX			

FSR: 100 years: +45 %: 720 mins: Winter	40.34 0	38.84 0	38.859	0.019	1.0	0.003	0.000	1.0	17.481	OK
FSR: 100 years: +45 %: 960 mins: Summer	40.34 0	38.84 0	38.861	0.021	1.3	0.003	0.000	1.3	18.566	OK
FSR: 100 years: +45 %: 960 mins: Winter	40.34 0	38.84 0	38.857	0.017	0.8	0.003	0.000	0.8	18.531	OK
FSR: 100 years: +45 %: 1440 mins: Summer	40.34 0	38.84 0	38.858	0.018	0.9	0.003	0.000	0.9	20.090	OK
FSR: 100 years: +45 %: 1440 mins: Winter	40.34 0	38.84 0	38.854	0.014	0.6	0.002	0.000	0.6	20.097	OK

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:100 Years Storm Event + 45% Climate Change 5.0l/s Restricted Discharge Rate		Date: 03/08/2025		
		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
Report Details: Type: Junctions Summary Storm Phase: Phase		Kemp House: 124 City Road London EC1V 2NX		



Summary Results for SWPS02: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FSR: 100 years: +45 %: 15 mins: Summer	40.34 0	38.68 9	39.847	1.157	6.4	1.157	0.000	3.0	4.765	Surcharged
FSR: 100 years: +45 %: 15 mins: Winter	40.34 0	38.68 9	39.813	1.123	6.1	1.123	0.000	3.0	4.818	Surcharged
FSR: 100 years: +45 %: 30 mins: Summer	40.34 0	38.68 9	39.910	1.221	5.8	1.221	0.000	3.0	7.759	Surcharged
FSR: 100 years: +45 %: 30 mins: Winter	40.34 0	38.68 9	39.863	1.174	5.5	1.174	0.000	3.0	7.765	Surcharged
FSR: 100 years: +45 %: 60 mins: Summer	40.34 0	38.68 9	39.803	1.113	5.3	1.113	0.000	3.0	9.747	Surcharged
FSR: 100 years: +45 %: 60 mins: Winter	40.34 0	38.68 9	39.676	0.987	4.6	0.987	0.000	3.0	9.753	Surcharged
FSR: 100 years: +45 %: 120 mins: Summer	40.34 0	38.68 9	39.497	0.807	4.3	0.807	0.000	3.0	11.800	Surcharged
FSR: 100 years: +45 %: 120 mins: Winter	40.34 0	38.68 9	39.205	0.516	3.5	0.516	0.000	3.0	11.796	Surcharged
FSR: 100 years: +45 %: 180 mins: Summer	40.34 0	38.68 9	39.221	0.532	3.7	0.532	0.000	3.0	13.040	Surcharged
FSR: 100 years: +45 %: 180 mins: Winter	40.34 0	38.68 9	38.789	0.100	3.0	0.100	0.000	3.0	13.024	OK
FSR: 100 years: +45 %: 240 mins: Summer	40.34 0	38.68 9	38.982	0.293	3.6	0.293	0.000	3.0	13.916	Surcharged
FSR: 100 years: +45 %: 240 mins: Winter	40.34 0	38.68 9	38.770	0.081	2.4	0.081	0.000	2.4	13.894	OK
FSR: 100 years: +45 %: 360 mins: Summer	40.34 0	38.68 9	38.779	0.090	2.7	0.090	0.000	2.7	15.153	OK
FSR: 100 years: +45 %: 360 mins: Winter	40.34 0	38.68 9	38.748	0.059	1.8	0.059	0.000	1.8	15.136	OK
FSR: 100 years: +45 %: 480 mins: Summer	40.34 0	38.68 9	38.762	0.073	2.2	0.073	0.000	2.2	16.113	OK
FSR: 100 years: +45 %: 480 mins: Winter	40.34 0	38.68 9	38.737	0.047	1.4	0.047	0.000	1.4	16.096	OK
FSR: 100 years: +45 %: 600 mins: Summer	40.34 0	38.68 9	38.751	0.061	1.8	0.061	0.000	1.8	16.881	OK
FSR: 100 years: +45 %: 600 mins: Winter	40.34 0	38.68 9	38.729	0.039	1.2	0.039	0.000	1.2	16.858	OK
FSR: 100 years: +45 %: 720 mins: Summer	40.34 0	38.68 9	38.743	0.053	1.6	0.053	0.000	1.6	17.493	OK

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:100 Years Storm Event + 45% Climate Change 5.0l/s Restricted Discharge Rate		Date: 03/08/2025	
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L
		Approved By: S.L	
		Kemp House:: 124 City Road London EC1V 2NX	



FSR: 100 years: +45 %: 720 mins: Winter	40.34 0	38.68 9	38.723	0.034	1.0	0.034	0.000	1.0	17.482	OK
FSR: 100 years: +45 %: 960 mins: Summer	40.34 0	38.68 9	38.731	0.042	1.3	0.042	0.000	1.3	18.567	OK
FSR: 100 years: +45 %: 960 mins: Winter	40.34 0	38.68 9	38.716	0.027	0.8	0.027	0.000	0.8	18.532	OK
FSR: 100 years: +45 %: 1440 mins: Summer	40.34 0	38.68 9	38.720	0.030	0.9	0.030	0.000	0.9	20.091	OK
FSR: 100 years: +45 %: 1440 mins: Winter	40.34 0	38.68 9	38.709	0.020	0.6	0.020	0.000	0.6	20.098	OK

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:100 Years Storm Event + 45% Climate Change 5.0l/s Restricted Discharge Rate	Date: 03/08/2025		
	Designed by: M.H	Checked by: S.L	Approved By: S.L
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase	Kemp House:: 124 City Road London EC1V 2NX		



Summary Results for Attenuation Tank: Rank By: Max. Avg. Depth

Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Residual Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Percentage Available (%)	Status
FSR: 100 years: +45 %: 15 mins: Summer	42.098	42.098	0.698	0.698	30.8	15.912	0.000	0.000	3.8	5.602	43.091	OK
FSR: 100 years: +45 %: 15 mins: Winter	42.100	42.100	0.700	0.700	29.7	15.956	0.000	0.000	3.9	5.635	42.932	OK
FSR: 100 years: +45 %: 30 mins: Summer	42.317	42.317	0.917	0.917	24.2	20.899	0.000	0.000	4.3	12.782	25.252	OK
FSR: 100 years: +45 %: 30 mins: Winter	42.318	42.318	0.918	0.918	23.1	20.925	0.000	0.000	4.3	12.816	25.160	OK
FSR: 100 years: +45 %: 60 mins: Summer	42.489	42.489	1.089	1.089	21.0	24.842	0.000	0.000	4.7	26.641	11.151	OK
FSR: 100 years: +45 %: 60 mins: Winter	42.492	42.492	1.092	1.092	18.3	24.903	0.000	0.000	4.8	26.722	10.933	OK
FSR: 100 years: +45 %: 120 mins: Summer	42.574	42.574	1.174	1.174	16.9	26.764	0.000	0.000	4.9	48.299	4.278	OK
FSR: 100 years: +45 %: 120 mins: Winter	42.588	42.588	1.188	1.188	13.9	27.092	0.000	0.000	5.0	48.397	3.103	OK
FSR: 100 years: +45 %: 180 mins: Summer	42.570	42.570	1.170	1.170	14.5	26.677	0.000	0.000	4.9	59.526	4.588	OK
FSR: 100 years: +45 %: 180 mins: Winter	42.573	42.573	1.173	1.173	11.8	26.739	0.000	0.000	4.9	59.484	4.368	OK
FSR: 100 years: +45 %: 240 mins: Summer	42.549	42.549	1.149	1.149	13.0	26.188	0.000	0.000	4.8	63.723	6.338	OK
FSR: 100 years: +45 %: 240 mins: Winter	42.502	42.502	1.102	1.102	10.2	25.125	0.000	0.000	4.7	63.653	10.138	OK
FSR: 100 years: +45 %: 360 mins: Summer	42.450	42.450	1.050	1.050	10.8	23.932	0.000	0.000	4.6	69.368	14.406	OK
FSR: 100 years: +45 %: 360 mins: Winter	42.352	42.352	0.952	0.952	7.7	21.696	0.000	0.000	4.4	69.450	22.404	OK

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:100 Years Storm Event + 45% Climate Change 5.0l/s Restricted Discharge Rate	Date: 03/08/2025		
	Designed by: M.H	Checked by: S.L	Approved By: S.L
	Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		
Kemp House: 124 City Road London EC1V 2NX			

FSR: 100 years: +45 %: 480 mins: Summer	42.352	42.352	0.952	0.952	9.5	21.711	0.000	0.000	4.4	73.821	22.350	OK
FSR: 100 years: +45 %: 480 mins: Winter	42.221	42.221	0.821	0.821	6.2	18.710	0.000	0.000	4.1	73.778	33.084	OK
FSR: 100 years: +45 %: 600 mins: Summer	42.266	42.266	0.866	0.866	8.0	19.741	0.000	0.000	4.2	77.334	29.396	OK
FSR: 100 years: +45 %: 600 mins: Winter	42.113	42.113	0.713	0.713	5.2	16.257	0.000	0.000	3.8	77.304	41.858	OK
FSR: 100 years: +45 %: 720 mins: Summer	42.188	42.188	0.788	0.788	7.0	17.972	0.000	0.000	4.0	80.276	35.723	OK
FSR: 100 years: +45 %: 720 mins: Winter	42.021	42.021	0.621	0.621	4.6	14.149	0.000	0.000	3.5	80.240	49.397	OK
FSR: 100 years: +45 %: 960 mins: Summer	42.063	42.063	0.663	0.663	5.6	15.109	0.000	0.000	3.6	85.102	45.963	OK
FSR: 100 years: +45 %: 960 mins: Winter	41.882	41.882	0.482	0.482	3.7	10.997	0.000	0.000	3.1	85.180	60.669	OK
FSR: 100 years: +45 %: 1440 mins: Summer	41.886	41.886	0.486	0.486	4.1	11.090	0.000	0.000	3.1	92.358	60.338	OK
FSR: 100 years: +45 %: 1440 mins: Winter	41.709	41.709	0.309	0.309	2.7	7.036	0.000	0.000	2.5	92.283	74.835	OK

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:30 Years Storm Event + 40% Climate Change 5.0l/s Restricted Discharge Rate	Date: 03/08/2025		
	Designed by: M.H	Checked by: S.L	Approved By: S.L
Report Details: Type: Junctions Storm Phase: Phase	Kemp House:: 124 City Road London EC1V 2NX		



Outlets			
Junction	Outlet Name	Outgoing Connection	Outlet Type
SWC-01	Outlet	Pipe	Free Discharge
SWC-02	Outlet	Pipe (1)	Free Discharge
SWC-03	Outlet	Pipe (2)	Free Discharge
SWPS01	Outlet	Pipe (3)	Pump
	Invert Level (m)	38.445	
	Depth (m)	Outflow (L/s)	
	0.100	3.0	
	1.500	3.0	
SWC-04	Outlet	Pipe (4)	Free Discharge
SWC-05	Outlet	Pipe (5)	Free Discharge
SWC-06	Outlet	Pipe (10)	Free Discharge
SWC-07	Outlet	Pipe (11)	Free Discharge
SWC-08	Outlet	Pipe (12)	Free Discharge
SWC-09 (FC)	Outlet (1)	Pipe (14)	Orifice
	Diameter (m)	0.047	
	Coefficient of Discharge	0.600	
	Invert Level (m)	41.376	
MH1	Outlet	Pipe (6)	Free Discharge
MH2	Outlet	Pipe (7)	Free Discharge
MH3	Outlet	Pipe (8)	Free Discharge
SWPS02	Outlet	Pipe (9)	Pump
	Invert Level (m)	38.689	
	Depth (m)	Outflow (L/s)	
	0.100	3.0	
	2.000	3.0	

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:30 Years Storm Event + 40% Climate Change 5.0l/s Restricted Discharge Rate	Date: 03/08/2025		
	Designed by: M.H	Checked by: S.L	Approved By: S.L
	Report Details: Type: Stormwater Controls Storm Phase: Phase		
Kemp House:: 124 City Road London EC1V 2NX			



Attenuation Tank

Type : Cellular Storage

Dimensions	
Exceedance Level (m)	43.200
Depth (m)	1.200
Base Level (m)	41.400
Number of Crates Long	6
Number of Crates Wide	8
Number of Crates High	3
Porosity (%)	95
Crate Length (m)	1
Crate Width (m)	0.5
Crate Height (m)	0.4
Total Volume (m³)	27.960

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:30 Years Storm Event + 40% Climate Change 5.0l/s Restricted Discharge Rate	Date: 03/08/2025		
	Designed by: M.H	Checked by: S.L	Approved By: S.L
	Report Details: Type: Manhole Schedule Storm Phase: Phase		
Kemp House:: 124 City Road London EC1V 2NX			

Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
SWC-01	40.445 39.345	Diameter / Length: 0.450					Manhole
E:471864.152 N:173142.292	1.100						
			{a} Pipe	Pipe	39.345	Diam/Width:100	Not Applicable
SWC-02	40.445 39.024	Diameter / Length: 0.450	{1} Pipe	Pipe	39.084	Diam/Width:100	Manhole
E:471860.947 N:173157.578	1.421						
			{a} Pipe (1)	Pipe	39.024	Diam/Width:100	Not Applicable
SWC-03	40.445 38.863	Diameter / Length: 0.300	{1} Pipe (1)	Pipe	38.863	Diam/Width:100	Manhole
E:471851.430 N:173156.230	1.582						
			{a} Pipe (2)	Pipe	38.863	Diam/Width:100	Not Applicable
SWPS01	40.445 38.445	Diameter / Length: 1.000	{1} Pipe (2)	Pipe	38.837	Diam/Width:100	Manhole
E:471849.886 N:173156.010	2.000						
			{a} Pipe (3)	Pipe	38.445	Diam/Width:100	Not Applicable
SWC-04	43.200 42.305	Diameter / Length: 0.450	{1} Pipe (3)	Pipe	42.305	Diam/Width:100	Manhole
E:471846.969 N:173148.073	0.895						
			{a} Pipe (4)	Pipe	42.305	Diam/Width:100	Not Applicable

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:30 Years Storm Event + 40% Climate Change 5.0l/s Restricted Discharge Rate		Date: 03/08/2025		
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House:: 124 City Road London EC1V 2NX		

Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
SWC-05	43.290 41.800	Diameter / Length: 0.450	{1} Pipe (4)	Pipe	41.850	Diam/Width:100	Manhole
E:471837.979 N:173146.733	1.490		{a} Pipe (5)	Pipe	41.800	Diam/Width:100	Not Applicable
SWC-06	43.205 42.305	Diameter / Length: 0.450	{1} Pipe (9)	Pipe	42.305	Diam/Width:100	Manhole
E:471822.083 N:173143.832	0.900		{a} Pipe (10)	Pipe	42.305	Diam/Width:100	Not Applicable
SWC-07	43.256 42.069	Diameter / Length: 0.300	{1} Pipe (10)	Pipe	42.069	Diam/Width:100	Manhole
E:471836.078 N:173145.923	1.187		{a} Pipe (11)	Pipe	42.069	Diam/Width:100	Not Applicable
SWC-08	43.260 41.500	Diameter / Length: 0.600					Manhole
E:471838.300 N:173137.818	1.760		{a} Pipe (12)	Pipe	41.500	Diam/Width:100	Not Applicable
SWC-09 (FC)	43.280 41.376	Diameter / Length: 0.600	{1} Pipe (13)	Pipe	41.376	Diam/Width:100	Manhole
E:471836.991 N:173146.583	1.904		{a} Pipe (14)	Pipe	41.376	Diam/Width:100	Not Applicable

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:30 Years Storm Event + 40% Climate Change 5.0/s Restricted Discharge Rate		Date: 03/08/2025		
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House:: 124 City Road London EC1V 2NX		

Name	Cover Level (m) Invert Level (m)		Connection Details				Type
Coordinates (m)	Depth (m)	Manhole Size (m)	Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
SWC-10	43.205 41.194	Diameter / Length: 0.450	{1} Pipe (14)	Pipe	41.194	Diam/Width:100	Manhole
E:471822.624 N:173144.419	2.011						Not Applicable
MH1	41.255 40.495	Diameter / Length: 0.450					Manhole
E:471797.393 N:173133.974	0.760		{a} Pipe (6)	Pipe	40.495	Diam/Width:100	Not Applicable
MH2	41.255 39.155	Diameter / Length: 0.450	{1} Pipe (6)	Pipe	39.155	Diam/Width:100	Manhole
E:471811.411 N:173135.559	2.100		{a} Pipe (7)	Pipe	39.155	Diam/Width:100	Not Applicable
MH3	40.340 38.840	Diameter / Length: 0.450	{1} Pipe (7)	Pipe	38.840	Diam/Width:100	Manhole
E:471818.407 N:173136.941	1.500		{a} Pipe (8)	Pipe	38.840	Diam/Width:100	Not Applicable
SWPS02	40.340 38.689	Diameter / Length: 1.000	{1} Pipe (8)	Pipe	38.689	Diam/Width:100	Manhole
E:471817.559 N:173139.373	1.651	Width: 1.000	{a} Pipe (9)	Pipe	38.689	Diam/Width:100	Not Applicable

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:30 Years Storm Event + 40% Climate Change 5.0l/s Restricted Discharge Rate		Date: 03/08/2025			
Report Details: Type: Inflow Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L		Approved By: S.L
		Kemp House: 124 City Road London EC1V 2NX			

Inflow Label	Connected To	Flow (L/s)	Runoff Method	Area (ha)	Percentage Impervious (%)	Urban Creep (%)	Adjusted Percentage Impervious (%)	Area Analysed (ha)
Catchment Area	SWC-01		Time of Concentration	0.012	100	0	100	0.012
Catchment Area (1)	SWC-02		Time of Concentration	0.009	100	0	100	0.009
Catchment Area (2)	SWC-03		Time of Concentration	0.004	100	0	100	0.004
Catchment Area (3)	SWC-04		Time of Concentration	0.016	100	0	100	0.016
Catchment Area (4)	SWC-08		Time of Concentration	0.002	100	0	100	0.002
Catchment Area (5)	Attenuation Tank		Time of Concentration	0.008	100	0	100	0.008
Catchment Area (6)	MH1		Time of Concentration	0.004	100	0	100	0.004
Catchment Area (7)	MH2		Time of Concentration	0.004	100	0	100	0.004
Catchment Area (8)	MH3		Time of Concentration	0.009	100	0	100	0.009
Catchment Area (9)	SWC-08		Time of Concentration	0.004	100	0	100	0.004
Catchment Area (10)	SWC-06		Time of Concentration	0.008	100	0	100	0.008
TOTAL		0.0		0.080				0.080

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:30 Years Storm Event + 40% Climate Change 5.0l/s Restricted Discharge Rate	Date: 03/08/2025		
	Designed by: M.H	Checked by: S.L	Approved By: S.L
Report Title: Rainfall Analysis Criteria	Kemp House: 124 City Road London EC1V 2NX		



Runoff Type	Dynamic
Output Interval (mins)	5
Time Step	Default
Urban Creep	Apply Global Value
Urban Creep Global Value (%)	0
Junction Flood Risk Margin (mm)	300
Perform No Discharge Analysis	☐

Rainfall

FSR

Type: FSR

Region	England And Wales
M5-60 (mm)	18.9
Ratio R	0.400
Summer	☒
Winter	☒

Return Period

Return Period (years)	Increase Rainfall (%)
30.0	40.000

Storm Durations

Duration (mins)	Run Time (mins)
15	30
30	60
60	120
120	240
180	360
240	480
360	720
480	960
600	1200
720	1440
960	1920
1440	2880

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:30 Years Storm Event + 40% Climate Change 5.0l/s Restricted Discharge Rate		Date: 03/08/2025		
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		



Critical Storm Per Item: Rank By: Max. Outflow

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
SWC-01	FSR: 30 years: +40 %: 15 mins: Summer	40.44 5	39.34 5	39.698	0.353	6.7	0.056	0.000	4.3	2.864	Surcharged
SWC-02	FSR: 30 years: +40 %: 15 mins: Summer	40.44 5	39.02 4	39.686	0.662	9.5	0.105	0.000	6.9	4.956	Surcharged
SWC-03	FSR: 30 years: +40 %: 15 mins: Summer	40.44 5	38.86 3	39.664	0.801	9.0	0.057	0.000	6.0	5.527	Surcharged
SWPS01	FSR: 30 years: +40 %: 15 mins: Summer	40.44 5	38.44 5	39.656	1.211	6.0	0.951	0.000	3.0	4.712	Surcharged
SWC-04	FSR: 30 years: +40 %: 15 mins: Summer	43.20 0	42.30 5	42.387	0.082	12.3	0.013	0.000	12.1	8.713	OK
SWC-05	FSR: 30 years: +40 %: 15 mins: Summer	43.29 0	41.80 0	41.983	0.183	12.1	0.029	0.000	11.4	8.500	Surcharged
SWC-06	FSR: 30 years: +40 %: 15 mins: Summer	43.20 5	42.30 5	42.393	0.088	7.8	0.014	0.000	7.6	6.459	OK
SWC-07	FSR: 30 years: +40 %: 15 mins: Summer	43.25 6	42.06 9	42.137	0.068	7.6	0.005	0.000	7.5	6.444	OK
SWC-08	FSR: 30 years: +40 %: 15 mins: Summer	43.26 0	41.50 0	41.974	0.474	3.6	0.134	0.000	2.4	1.058	Surcharged
SWC-09 (FC)	FSR: 30 years: +40 %: 120 mins: Summer	43.28 0	41.37 6	42.271	0.895	4.3	0.253	0.000	4.2	37.809	Surcharged
SWC-10	FSR: 30 years: +40 %: 120 mins: Summer	43.20 5	41.19 4	41.251	0.057	4.2	0.000	0.000	4.2	37.767	OK
MH1	FSR: 30 years: +40 %: 15 mins: Summer	41.25 5	40.49 5	40.519	0.024	2.4	0.004	0.000	2.4	1.046	OK
MH2	FSR: 30 years: +40 %: 30 mins: Summer	41.25 5	39.15 5	39.476	0.321	3.3	0.051	0.000	3.1	2.818	Surcharged
MH3	FSR: 30 years: +40 %: 15 mins: Summer	40.34 0	38.84 0	39.495	0.655	7.6	0.104	0.000	5.4	4.390	Surcharged
SWPS02	FSR: 30 years: +40 %: 15 mins: Summer	40.34 0	38.68 9	39.487	0.797	5.4	0.797	0.000	3.0	4.384	Surcharged

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:30 Years Storm Event + 40% Climate Change 5.0l/s Restricted Discharge Rate	Date: 03/08/2025		
	Designed by:	Checked by:	Approved By:
	M.H	S.L	S.L
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase	Kemp House:: 124 City Road London EC1V 2NX		



Critical Storm Per Item: Rank By: Max. Avg. Depth

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Residual Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Percentage Available (%)	Status
Attenuation Tank	FSR: 30 years: +40 %: 120 mins: Summer	42.285	42.285	0.885	0.885	14.6	20.185	0.000	0.000	4.3	37.925	27.807	OK

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:30 Years Storm Event + 0% Climate Change 5.0l/s Restricted Discharge Rate	Date: 03/08/2025		
	Designed by: M.H	Checked by: S.L	Approved By: S.L
	Report Details: Type: Junctions Storm Phase: Phase		
Kemp House:: 124 City Road London EC1V 2NX			

Outlets			
Junction	Outlet Name	Outgoing Connection	Outlet Type
SWC-01	Outlet	Pipe	Free Discharge
SWC-02	Outlet	Pipe (1)	Free Discharge
SWC-03	Outlet	Pipe (2)	Free Discharge
SWPS01	Outlet	Pipe (3)	Pump
	Invert Level (m)	38.445	
	Depth (m)	Outflow (L/s)	
	0.100	3.0	
	1.500	3.0	
SWC-04	Outlet	Pipe (4)	Free Discharge
SWC-05	Outlet	Pipe (5)	Free Discharge
SWC-06	Outlet	Pipe (10)	Free Discharge
SWC-07	Outlet	Pipe (11)	Free Discharge
SWC-08	Outlet	Pipe (12)	Free Discharge
SWC-09 (FC)	Outlet (1)	Pipe (14)	Orifice
	Diameter (m)	0.047	
	Coefficient of Discharge	0.600	
	Invert Level (m)	41.376	
MH1	Outlet	Pipe (6)	Free Discharge
MH2	Outlet	Pipe (7)	Free Discharge
MH3	Outlet	Pipe (8)	Free Discharge
SWPS02	Outlet	Pipe (9)	Pump
	Invert Level (m)	38.689	
	Depth (m)	Outflow (L/s)	
	0.100	3.0	
	2.000	3.0	

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:30 Years Storm Event + 0% Climate Change 5.0l/s Restricted Discharge Rate	Date: 03/08/2025		
	Designed by: M.H	Checked by: S.L	Approved By: S.L
	Report Details: Type: Stormwater Controls Storm Phase: Phase		
Kemp House:: 124 City Road London EC1V 2NX			



Attenuation Tank

Type : Cellular Storage

Dimensions

Exceedance Level (m)	43.200
Depth (m)	1.200
Base Level (m)	41.400
Number of Crates Long	6
Number of Crates Wide	8
Number of Crates High	3
Porosity (%)	95
Crate Length (m)	1
Crate Width (m)	0.5
Crate Height (m)	0.4
Total Volume (m³)	27.960

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:30 Years Storm Event + 0% Climate Change 5.0l/s Restricted Discharge Rate	Date: 03/08/2025		
	Designed by: M.H	Checked by: S.L	Approved By: S.L
	Report Details: Type: Manhole Schedule Storm Phase: Phase		
Kemp House:: 124 City Road London EC1V 2NX			

Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
SWC-01	40.445 39.345	Diameter / Length: 0.450					Manhole
E:471864.152 N:173142.292	1.100		{a} Pipe	Pipe	39.345	Diam/Width:100	Not Applicable
SWC-02	40.445 39.024	Diameter / Length: 0.450	{1} Pipe	Pipe	39.084	Diam/Width:100	Manhole
E:471860.947 N:173157.578	1.421		{a} Pipe (1)	Pipe	39.024	Diam/Width:100	Not Applicable
SWC-03	40.445 38.863	Diameter / Length: 0.300	{1} Pipe (1)	Pipe	38.863	Diam/Width:100	Manhole
E:471851.430 N:173156.230	1.582		{a} Pipe (2)	Pipe	38.863	Diam/Width:100	Not Applicable
SWPS01	40.445 38.445	Diameter / Length: 1.000	{1} Pipe (2)	Pipe	38.837	Diam/Width:100	Manhole
E:471849.886 N:173156.010	2.000		{a} Pipe (3)	Pipe	38.445	Diam/Width:100	Not Applicable
SWC-04	43.200 42.305	Diameter / Length: 0.450	{1} Pipe (3)	Pipe	42.305	Diam/Width:100	Manhole
E:471846.969 N:173148.073	0.895		{a} Pipe (4)	Pipe	42.305	Diam/Width:100	Not Applicable

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:30 Years Storm Event + 0% Climate Change 5.0l/s Restricted Discharge Rate		Date: 03/08/2025		
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House:: 124 City Road London EC1V 2NX		

Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
SWC-05	43.290 41.800	Diameter / Length: 0.450	{1} Pipe (4)	Pipe	41.850	Diam/Width:100	Manhole
E:471837.979 N:173146.733	1.490		{a} Pipe (5)	Pipe	41.800	Diam/Width:100	Not Applicable
SWC-06	43.205 42.305	Diameter / Length: 0.450	{1} Pipe (9)	Pipe	42.305	Diam/Width:100	Manhole
E:471822.083 N:173143.832	0.900		{a} Pipe (10)	Pipe	42.305	Diam/Width:100	Not Applicable
SWC-07	43.256 42.069	Diameter / Length: 0.300	{1} Pipe (10)	Pipe	42.069	Diam/Width:100	Manhole
E:471836.078 N:173145.923	1.187		{a} Pipe (11)	Pipe	42.069	Diam/Width:100	Not Applicable
SWC-08	43.260 41.500	Diameter / Length: 0.600					Manhole
E:471838.300 N:173137.818	1.760		{a} Pipe (12)	Pipe	41.500	Diam/Width:100	Not Applicable
SWC-09 (FC)	43.280 41.376	Diameter / Length: 0.600	{1} Pipe (13)	Pipe	41.376	Diam/Width:100	Manhole
E:471836.991 N:173146.583	1.904		{a} Pipe (14)	Pipe	41.376	Diam/Width:100	Not Applicable

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:30 Years Storm Event + 0% Climate Change 5.0/s Restricted Discharge Rate		Date: 03/08/2025		
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House:: 124 City Road London EC1V 2NX		

Name	Cover Level (m) Invert Level (m)		Connection Details				Type
Coordinates (m)	Depth (m)	Manhole Size (m)	Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
SWC-10	43.205 41.194	Diameter / Length: 0.450	{1} Pipe (14)	Pipe	41.194	Diam/Width:100	Manhole
E:471822.624 N:173144.419	2.011						Not Applicable
MH1	41.255 40.495	Diameter / Length: 0.450					Manhole
E:471797.393 N:173133.974	0.760		{a} Pipe (6)	Pipe	40.495	Diam/Width:100	Not Applicable
MH2	41.255 39.155	Diameter / Length: 0.450	{1} Pipe (6)	Pipe	39.155	Diam/Width:100	Manhole
E:471811.411 N:173135.559	2.100		{a} Pipe (7)	Pipe	39.155	Diam/Width:100	Not Applicable
MH3	40.340 38.840	Diameter / Length: 0.450	{1} Pipe (7)	Pipe	38.840	Diam/Width:100	Manhole
E:471818.407 N:173136.941	1.500		{a} Pipe (8)	Pipe	38.840	Diam/Width:100	Not Applicable
SWPS02	40.340 38.689	Diameter / Length: 1.000	{1} Pipe (8)	Pipe	38.689	Diam/Width:100	Manhole
E:471817.559 N:173139.373	1.651	Width: 1.000	{a} Pipe (9)	Pipe	38.689	Diam/Width:100	Not Applicable

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:30 Years Storm Event + 0% Climate Change 5.0l/s Restricted Discharge Rate		Date: 03/08/2025		
		Designed by:	Checked by:	Approved By:
		M.H	S.L	S.L
Report Details: Type: Inflow Summary Storm Phase: Phase		Kemp House:: 124 City Road London EC1V 2NX		



Inflow Label	Connected To	Flow (L/s)	Runoff Method	Area (ha)	Percentage Impervious (%)	Urban Creep (%)	Adjusted Percentage Impervious (%)	Area Analysed (ha)
Catchment Area	SWC-01		Time of Concentration	0.012	100	0	100	0.012
Catchment Area (1)	SWC-02		Time of Concentration	0.009	100	0	100	0.009
Catchment Area (2)	SWC-03		Time of Concentration	0.004	100	0	100	0.004
Catchment Area (3)	SWC-04		Time of Concentration	0.016	100	0	100	0.016
Catchment Area (4)	SWC-08		Time of Concentration	0.002	100	0	100	0.002
Catchment Area (5)	Attenuation Tank		Time of Concentration	0.008	100	0	100	0.008
Catchment Area (6)	MH1		Time of Concentration	0.004	100	0	100	0.004
Catchment Area (7)	MH2		Time of Concentration	0.004	100	0	100	0.004
Catchment Area (8)	MH3		Time of Concentration	0.009	100	0	100	0.009
Catchment Area (9)	SWC-08		Time of Concentration	0.004	100	0	100	0.004
Catchment Area (10)	SWC-06		Time of Concentration	0.008	100	0	100	0.008
TOTAL		0.0		0.080				0.080

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:30 Years Storm Event + 0% Climate Change 5.0l/s Restricted Discharge Rate	Date: 03/08/2025		
	Designed by: M.H	Checked by: S.L	Approved By: S.L
Report Title: Rainfall Analysis Criteria	Kemp House: 124 City Road London EC1V 2NX		



Runoff Type	Dynamic
Output Interval (mins)	5
Time Step	Default
Urban Creep	Apply Global Value
Urban Creep Global Value (%)	0
Junction Flood Risk Margin (mm)	300
Perform No Discharge Analysis	☐

Rainfall

FSR

Type: FSR

Region	England And Wales
M5-60 (mm)	18.9
Ratio R	0.400
Summer	☒
Winter	☒

Return Period

Return Period (years)	Increase Rainfall (%)
30.0	0.000

Storm Durations

Duration (mins)	Run Time (mins)
15	30
30	60
60	120
120	240
180	360
240	480
360	720
480	960
600	1200
720	1440
960	1920
1440	2880

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:30 Years Storm Event + 0% Climate Change 5.0l/s Restricted Discharge Rate				Date: 03/08/2025				
Report Details: Type: Junctions Summary Storm Phase: Phase				Designed by: M.H	Checked by: S.L	Approved By: S.L		
				Kemp House: 124 City Road London EC1V 2NX				



Critical Storm Per Item: Rank By: Max. Outflow

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
SWC-01	FSR: 30 years: +0 %: 15 mins: Summer	40.44 5	39.34 5	39.402	0.057	4.8	0.009	0.000	4.8	2.043	OK
SWC-02	FSR: 30 years: +0 %: 15 mins: Summer	40.44 5	39.02 4	39.373	0.349	8.5	0.056	0.000	5.9	3.642	Surcharged
SWC-03	FSR: 30 years: +0 %: 30 mins: Summer	40.44 5	38.86 3	39.337	0.474	6.2	0.034	0.000	6.0	5.591	Surcharged
SWPS01	FSR: 30 years: +0 %: 15 mins: Summer	40.44 5	38.44 5	39.349	0.904	5.2	0.710	0.000	3.0	4.279	Surcharged
SWC-04	FSR: 30 years: +0 %: 15 mins: Summer	43.20 0	42.30 5	42.372	0.067	9.7	0.011	0.000	9.5	7.154	OK
SWC-05	FSR: 30 years: +0 %: 15 mins: Summer	43.29 0	41.80 0	41.877	0.077	9.5	0.012	0.000	9.4	7.121	OK
SWC-06	FSR: 30 years: +0 %: 15 mins: Summer	43.20 5	42.30 5	42.378	0.073	6.4	0.012	0.000	6.4	4.626	OK
SWC-07	FSR: 30 years: +0 %: 15 mins: Summer	43.25 6	42.06 9	42.129	0.060	6.4	0.004	0.000	6.3	4.623	OK
SWC-08	FSR: 30 years: +0 %: 15 mins: Summer	43.26 0	41.50 0	41.836	0.336	2.6	0.095	0.000	1.6	0.756	Surcharged
SWC-09 (FC)	FSR: 30 years: +0 %: 60 mins: Winter	43.28 0	41.37 6	42.009	0.633	3.6	0.179	0.000	3.5	17.673	Surcharged
SWC-10	FSR: 30 years: +0 %: 60 mins: Winter	43.20 5	41.19 4	41.245	0.051	3.5	0.000	0.000	3.5	17.619	OK
MH1	FSR: 30 years: +0 %: 15 mins: Summer	41.25 5	40.49 5	40.515	0.020	1.7	0.003	0.000	1.7	0.743	OK
MH2	FSR: 30 years: +0 %: 15 mins: Summer	41.25 5	39.15 5	39.208	0.053	3.5	0.008	0.000	3.5	1.542	OK
MH3	FSR: 30 years: +0 %: 15 mins: Summer	40.34 0	38.84 0	39.203	0.363	7.1	0.058	0.000	5.0	3.133	Surcharged
SWPS02	FSR: 30 years: +0 %: 15 mins: Summer	40.34 0	38.68 9	39.196	0.507	5.0	0.507	0.000	3.0	3.132	Surcharged

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:30 Years Storm Event + 0% Climate Change 5.0l/s Restricted Discharge Rate		Date: 03/08/2025		
		Designed by: M.H	Checked by: S.L	Approved By: S.L
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Kemp House:: 124 City Road London EC1V 2NX		



Critical Storm Per Item: Rank By: Max. Avg. Depth

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Residual Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Percentage Available (%)	Status
Attenuation Tank	FSR: 30 years: +0 %: 60 mins: Winter	42.019	42.019	0.619	0.619	12.7	14.120	0.000	0.000	3.6	17.966	49.500	OK

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:1 Years Storm Event + 0% Climate Change 5.0l/s Restricted Discharge Rate	Date: 03/08/2025		
	Designed by: M.H	Checked by: S.L	Approved By: S.L
Report Details: Type: Junctions Storm Phase: Phase	Kemp House:: 124 City Road London EC1V 2NX		



Outlets			
Junction	Outlet Name	Outgoing Connection	Outlet Type
SWC-01	Outlet	Pipe	Free Discharge
SWC-02	Outlet	Pipe (1)	Free Discharge
SWC-03	Outlet	Pipe (2)	Free Discharge
SWPS01	Outlet	Pipe (3)	Pump
	Invert Level (m)	38.445	
	Depth (m)	Outflow (L/s)	
	0.100	3.0	
	1.500	3.0	
SWC-04	Outlet	Pipe (4)	Free Discharge
SWC-05	Outlet	Pipe (5)	Free Discharge
SWC-06	Outlet	Pipe (10)	Free Discharge
SWC-07	Outlet	Pipe (11)	Free Discharge
SWC-08	Outlet	Pipe (12)	Free Discharge
SWC-09 (FC)	Outlet (1)	Pipe (14)	Orifice
	Diameter (m)	0.047	
	Coefficient of Discharge	0.600	
	Invert Level (m)	41.376	
MH1	Outlet	Pipe (6)	Free Discharge
MH2	Outlet	Pipe (7)	Free Discharge
MH3	Outlet	Pipe (8)	Free Discharge
SWPS02	Outlet	Pipe (9)	Pump
	Invert Level (m)	38.689	
	Depth (m)	Outflow (L/s)	
	0.100	3.0	
	2.000	3.0	

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:1 Years Storm Event + 0% Climate Change 5.0l/s Restricted Discharge Rate	Date: 03/08/2025		
	Designed by: M.H	Checked by: S.L	Approved By: S.L
Report Details: Type: Stormwater Controls Storm Phase: Phase	Kemp House:: 124 City Road London EC1V 2NX		





Attenuation Tank

Type : Cellular Storage

Dimensions	
Exceedance Level (m)	43.200
Depth (m)	1.200
Base Level (m)	41.400
Number of Crates Long	6
Number of Crates Wide	8
Number of Crates High	3
Porosity (%)	95
Crate Length (m)	1
Crate Width (m)	0.5
Crate Height (m)	0.4
Total Volume (m³)	27.960

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:1 Years Storm Event + 0% Climate Change 5.0l/s Restricted Discharge Rate	Date: 03/08/2025		
	Designed by: M.H	Checked by: S.L	Approved By: S.L
	Report Details: Type: Manhole Schedule Storm Phase: Phase		
Kemp House:: 124 City Road London EC1V 2NX			

Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
SWC-01	40.445 39.345	Diameter / Length: 0.450					Manhole
E:471864.152 N:173142.292	1.100						
			{a} Pipe	Pipe	39.345	Diam/Width:100	Not Applicable
SWC-02	40.445 39.024	Diameter / Length: 0.450	{1} Pipe	Pipe	39.084	Diam/Width:100	Manhole
E:471860.947 N:173157.578	1.421						
			{a} Pipe (1)	Pipe	39.024	Diam/Width:100	Not Applicable
SWC-03	40.445 38.863	Diameter / Length: 0.300	{1} Pipe (1)	Pipe	38.863	Diam/Width:100	Manhole
E:471851.430 N:173156.230	1.582						
			{a} Pipe (2)	Pipe	38.863	Diam/Width:100	Not Applicable
SWPS01	40.445 38.445	Diameter / Length: 1.000	{1} Pipe (2)	Pipe	38.837	Diam/Width:100	Manhole
E:471849.886 N:173156.010	2.000						
			{a} Pipe (3)	Pipe	38.445	Diam/Width:100	Not Applicable
SWC-04	43.200 42.305	Diameter / Length: 0.450	{1} Pipe (3)	Pipe	42.305	Diam/Width:100	Manhole
E:471846.969 N:173148.073	0.895						
			{a} Pipe (4)	Pipe	42.305	Diam/Width:100	Not Applicable

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:1 Years Storm Event + 0% Climate Change 5.0l/s Restricted Discharge Rate	Date: 03/08/2025		
	Designed by: M.H	Checked by: S.L	Approved By: S.L
	Report Details: Type: Manhole Schedule Storm Phase: Phase		
Kemp House:: 124 City Road London EC1V 2NX			

Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
SWC-05	43.290 41.800	Diameter / Length: 0.450	{1} Pipe (4)	Pipe	41.850	Diam/Width:100	Manhole
E:471837.979 N:173146.733	1.490						
			{a} Pipe (5)	Pipe	41.800	Diam/Width:100	Not Applicable
SWC-06	43.205 42.305	Diameter / Length: 0.450	{1} Pipe (9)	Pipe	42.305	Diam/Width:100	Manhole
E:471822.083 N:173143.832	0.900						
			{a} Pipe (10)	Pipe	42.305	Diam/Width:100	Not Applicable
SWC-07	43.256 42.069	Diameter / Length: 0.300	{1} Pipe (10)	Pipe	42.069	Diam/Width:100	Manhole
E:471836.078 N:173145.923	1.187						
			{a} Pipe (11)	Pipe	42.069	Diam/Width:100	Not Applicable
SWC-08	43.260 41.500	Diameter / Length: 0.600					Manhole
E:471838.300 N:173137.818	1.760						
			{a} Pipe (12)	Pipe	41.500	Diam/Width:100	Not Applicable
SWC-09 (FC)	43.280 41.376	Diameter / Length: 0.600	{1} Pipe (13)	Pipe	41.376	Diam/Width:100	Manhole
E:471836.991 N:173146.583	1.904						
			{a} Pipe (14)	Pipe	41.376	Diam/Width:100	Not Applicable

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:1 Years Storm Event + 0% Climate Change 5.0/s Restricted Discharge Rate		Date: 03/08/2025		
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House:: 124 City Road London EC1V 2NX		

Name	Cover Level (m) Invert Level (m)		Connection Details				Type
Coordinates (m)	Depth (m)	Manhole Size (m)	Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
SWC-10	43.205 41.194	Diameter / Length: 0.450	{1} Pipe (14)	Pipe	41.194	Diam/Width:100	Manhole
E:471822.624 N:173144.419	2.011						Not Applicable
MH1	41.255 40.495	Diameter / Length: 0.450					Manhole
E:471797.393 N:173133.974	0.760		{a} Pipe (6)	Pipe	40.495	Diam/Width:100	Not Applicable
MH2	41.255 39.155	Diameter / Length: 0.450	{1} Pipe (6)	Pipe	39.155	Diam/Width:100	Manhole
E:471811.411 N:173135.559	2.100		{a} Pipe (7)	Pipe	39.155	Diam/Width:100	Not Applicable
MH3	40.340 38.840	Diameter / Length: 0.450	{1} Pipe (7)	Pipe	38.840	Diam/Width:100	Manhole
E:471818.407 N:173136.941	1.500		{a} Pipe (8)	Pipe	38.840	Diam/Width:100	Not Applicable
SWPS02	40.340 38.689	Diameter / Length: 1.000	{1} Pipe (8)	Pipe	38.689	Diam/Width:100	Manhole
E:471817.559 N:173139.373	1.651	Width: 1.000	{a} Pipe (9)	Pipe	38.689	Diam/Width:100	Not Applicable

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:1 Years Storm Event + 0% Climate Change 5.0l/s Restricted Discharge Rate		Date: 03/08/2025		
		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
Report Details: Type: Inflow Summary Storm Phase: Phase		Kemp House: 124 City Road London EC1V 2NX		

Inflow Label	Connected To	Flow (L/s)	Runoff Method	Area (ha)	Percentage Impervious (%)	Urban Creep (%)	Adjusted Percentage Impervious (%)	Area Analysed (ha)
Catchment Area	SWC-01		Time of Concentration	0.012	100	0	100	0.012
Catchment Area (1)	SWC-02		Time of Concentration	0.009	100	0	100	0.009
Catchment Area (2)	SWC-03		Time of Concentration	0.004	100	0	100	0.004
Catchment Area (3)	SWC-04		Time of Concentration	0.016	100	0	100	0.016
Catchment Area (4)	SWC-08		Time of Concentration	0.002	100	0	100	0.002
Catchment Area (5)	Attenuation Tank		Time of Concentration	0.008	100	0	100	0.008
Catchment Area (6)	MH1		Time of Concentration	0.004	100	0	100	0.004
Catchment Area (7)	MH2		Time of Concentration	0.004	100	0	100	0.004
Catchment Area (8)	MH3		Time of Concentration	0.009	100	0	100	0.009
Catchment Area (9)	SWC-08		Time of Concentration	0.004	100	0	100	0.004
Catchment Area (10)	SWC-06		Time of Concentration	0.008	100	0	100	0.008
TOTAL		0.0		0.080				0.080

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:1 Years Storm Event + 0% Climate Change 5.0l/s Restricted Discharge Rate	Date: 03/08/2025		
	Designed by: M.H	Checked by: S.L	Approved By: S.L
Report Title: Rainfall Analysis Criteria	Kemp House: 124 City Road London EC1V 2NX		



Runoff Type	Dynamic
Output Interval (mins)	5
Time Step	Default
Urban Creep	Apply Global Value
Urban Creep Global Value (%)	0
Junction Flood Risk Margin (mm)	300
Perform No Discharge Analysis	☐

Rainfall

FSR

Type: FSR

Region	England And Wales
M5-60 (mm)	18.9
Ratio R	0.400
Summer	☒
Winter	☒

Return Period

Return Period (years)	Increase Rainfall (%)
1.0	0.000

Storm Durations

Duration (mins)	Run Time (mins)
15	30
30	60
60	120
120	240
180	360
240	480
360	720
480	960
600	1200
720	1440
960	1920
1440	2880

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:1 Years Storm Event + 0% Climate Change 5.0l/s Restricted Discharge Rate		Date: 03/08/2025		
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		



Critical Storm Per Item: Rank By: Max. Outflow

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
SWC-01	FSR: 1 years: +0 %: 15 mins: Summer	40.44 5	39.34 5	39.379	0.034	1.9	0.005	0.000	1.9	0.838	OK
SWC-02	FSR: 1 years: +0 %: 15 mins: Summer	40.44 5	39.02 4	39.071	0.047	3.4	0.007	0.000	3.3	1.486	OK
SWC-03	FSR: 1 years: +0 %: 15 mins: Summer	40.44 5	38.86 3	38.920	0.057	3.9	0.004	0.000	3.8	1.750	OK
SWPS01	FSR: 1 years: +0 %: 15 mins: Summer	40.44 5	38.44 5	38.561	0.116	3.8	0.091	0.000	3.0	1.750	Surcharged
SWC-04	FSR: 1 years: +0 %: 15 mins: Summer	43.20 0	42.30 5	42.352	0.047	5.7	0.008	0.000	5.7	2.923	OK
SWC-05	FSR: 1 years: +0 %: 15 mins: Summer	43.29 0	41.80 0	41.853	0.053	5.7	0.008	0.000	5.6	2.919	OK
SWC-06	FSR: 1 years: +0 %: 15 mins: Summer	43.20 5	42.30 5	42.358	0.053	4.0	0.008	0.000	3.8	1.884	OK
SWC-07	FSR: 1 years: +0 %: 15 mins: Summer	43.25 6	42.06 9	42.112	0.043	3.8	0.003	0.000	3.8	1.882	OK
SWC-08	FSR: 1 years: +0 %: 15 mins: Summer	43.26 0	41.50 0	41.583	0.083	1.0	0.024	0.000	1.0	0.397	OK
SWC-09 (FC)	FSR: 1 years: +0 %: 60 mins: Summer	43.28 0	41.37 6	41.624	0.248	2.2	0.070	0.000	2.1	9.156	Surcharged
SWC-10	FSR: 1 years: +0 %: 60 mins: Summer	43.20 5	41.19 4	41.232	0.038	2.1	0.000	0.000	2.1	9.125	OK
MH1	FSR: 1 years: +0 %: 15 mins: Summer	41.25 5	40.49 5	40.508	0.013	0.7	0.002	0.000	0.7	0.305	OK
MH2	FSR: 1 years: +0 %: 15 mins: Summer	41.25 5	39.15 5	39.178	0.023	1.4	0.004	0.000	1.4	0.633	OK
MH3	FSR: 1 years: +0 %: 15 mins: Summer	40.34 0	38.84 0	38.871	0.031	2.9	0.005	0.000	2.9	1.279	OK
SWPS02	FSR: 1 years: +0 %: 15 mins: Summer	40.34 0	38.68 9	38.774	0.085	2.9	0.085	0.000	2.6	1.279	OK

C3592 - 43 London Street, Reading, RG1 4PS: Proposed 21 Residential Units 1:1 Years Storm Event + 0% Climate Change 5.0l/s Restricted Discharge Rate	Date: 03/08/2025		
	Designed by:	Checked by:	Approved By:
	M.H	S.L	S.L
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase	Kemp House:: 124 City Road London EC1V 2NX		



Critical Storm Per Item: Rank By: Max. Avg. Depth

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Residual Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Percentage Available (%)	Status
Attenuation Tank	FSR: 1 years: +0 %: 60 mins: Summer	41.628	41.628	0.228	0.228	7.4	5.207	0.000	0.000	2.2	9.204	81.378	OK

APPENDIX C – LOCAL AUTHORITY ASSET PLANS

SearchFlow Limited
42
Kings Hill Avenue
Kings Hill
West Malling
ME19 4AJKent

Search address supplied	43, London Street, READING, RG1 4PS
Your reference	CH/M10090-0001/4
Our reference	CDWS/CDWS Standard/2025_5114770
Received date	4 February 2025
Search date	4 February 2025

Keeping you up-to-date

Notification of Price Changes

From 1st April 2024 Thames Water Property Searches will be increasing the price of its CON29DW Residential and Commercial searches, along with the Asset Location Search.

Costs will rise in line with RPI as per previous years, which is sat at 6%. Customers will have been emailed with the new prices by February 28th 2024. Any orders received with higher payments prior to 1st April 2024 will be non-refundable. For further details on the price increase please visit our website at www.thameswater-propertysearches.co.uk.



Thames Water Utilities Ltd
Property Searches, PO Box 3189, Slough SL1 4WW



searches@thameswater.co.uk
www.thameswater-propertysearches.co.uk



0800 009 4540



DRAINAGE + WATER
SEARCHES NETWORK
DWSN



Question

Summary Answer

Maps

1.1	Where relevant, please include a copy of an extract from the public sewer map.	Map Provided
1.2	Where relevant, please include a copy of an extract from the map of waterworks.	Map Provided

Drainage

2.1	Does foul water from the property drain to a public sewer?	Connected
2.2	Does surface water from the property drain to a public sewer?	Connected
2.3	Is a surface water drainage charge payable?	See Details
2.4	Does the public sewer map indicate any public sewer, disposal main or lateral drain within the boundaries of the property?	Yes
2.4.1	Does the public sewer map indicate any public pumping station or ancillary apparatus within the boundaries of the property?	No
2.5	Does the public sewer map indicate any public sewer within 30.48 metres (100 feet) of any buildings within the property?	Yes
2.5.1	Does the public sewer map indicate any public pumping station or any other ancillary apparatus within 50 metres (164.04 feet) of any buildings within the property?	No
2.6	Are any sewers or lateral drains serving or which are proposed to serve the property the subject of an existing adoption agreement or an application for such an agreement?	No
2.7	Has a Sewerage Undertaker approved or been consulted about any plans to erect a building or extension on the property over or in the vicinity of a public sewer, disposal main or drain?	No
2.8	Is any building which is, or forms part of the property, at risk of internal flooding due to overloaded public sewers?	Not At Risk
2.9	Please state the distance from the property to the nearest boundary of the nearest sewage treatment works.	2.617 Kilometres

Water

3.1	Is the property connected to mains water supply?	Connected
3.2	Are there any water mains, resource mains or discharge pipes within the boundaries of the property?	No
3.3	Is any water main or service pipe serving, or which is proposed to serve the property, the subject of an existing adoption agreement or an application for such an agreement?	No
3.4	Is this property at risk of receiving low water pressure or flow?	No
3.5	What is the classification of the water supply for the property?	Hard
3.6	Is there a meter installed at the property?	Yes
3.7	Please include details of the location of any water meter serving the property.	See Details

Question

Summary Answer

Charging

4.1.1	Who is responsible for providing the sewerage services for the property?	Thames Water
4.1.2	Who is responsible for providing the water services for the property?	Thames Water
4.2	Who bills the property for sewerage services?	See Details
4.3	Who bills the property for water services?	See Details

Trade Effluent

5.1	Is there a Consent to discharge Trade Effluent under S118 of the Water Industry Act (1991) into the public sewer system?	No
-----	--	----

Wayleaves, Easements, Manhole Cover and Invert levels

6.1	Is there a wayleave/easement agreement giving the Water and/or Sewerage Undertaker the right to lay or maintain assets or right of access to pass through private land in order to reach the Company's assets?	No
6.2	On the copy extract from the public sewer map, please show manhole cover, depth and invert levels where the information is available.	See Details

Search address supplied: 43, London Street, READING, RG1 4PS

Any new owner or occupier will need to contact Thames Water on 0800 316 9800 or log onto our website www.thameswater.co.uk and complete our online form to change the water and drainage services bills to their name.

The following records were searched in compiling this report: - the map of public sewers, the map of waterworks, water and sewer billing records, adoption of public sewer records, building over public sewer records, the register of properties subject to internal foul flooding, the register of properties subject to poor water pressure and the drinking water register.

Thames Water Utilities Ltd (TWUL) holds all of these.

TWUL, trading as Property Searches, are responsible in respect of the following:-

- (i) any negligent or incorrect entry in the records searched
- (ii) any negligent or incorrect interpretation of the records searched
- (iii) any negligent or incorrect recording of that interpretation in the search report
- (iv) and compensation payments

Maps

1.1 Where relevant, please include a copy of an extract from the public sewer map.

A copy of an extract of the public sewer map is included, showing the public sewers, disposal mains and lateral drains in the vicinity of the property.

1.2 Where relevant, please include a copy of an extract from the map of waterworks.

A copy of an extract of the map of waterworks is included, showing water mains, resource mains or discharge pipes in the vicinity of the property.

Drainage

2.1 Does foul water from the property drain to a public sewer?

Records indicate that foul water from the property drains to a public sewer.

2.2 Does surface water from the property drain to a public sewer?

Records indicate that surface water from the property drains to a public sewer.

2.3 Is a surface water drainage charge payable?

Records indicate that a surface water charge is applicable at this property.

2.4 Does the public sewer map indicate any public sewer, disposal main or lateral drain within the boundary of the property?

The public sewer map included indicates that there is a public sewer, disposal main or lateral drain within the boundaries of the property. However, from the 1st October 2011 there may be additional public sewers, disposal mains or lateral drains which are not recorded on the public sewer map but which may further prevent or restrict development of the property.

2.4.1 Does the public sewer map indicate any public pumping station or ancillary apparatus within the boundaries of the property?

The public sewer map included indicates that there is no public pumping station within the boundaries of the property.

2.5 Does the public sewer map indicate any public sewer within 30.48 metres (100 feet) of any buildings within the property?

The public sewer map included indicates that there is a public sewer within 30.48 metres (100 feet) of a building within the property.

2.5.1 Does the public sewer map indicate any public pumping station or any other ancillary apparatus within 50 metres (164.04 feet) of any buildings within the property?

The public sewer map included indicates that there is no public pumping station within 50 metres of any buildings within the property.

2.6 Are any sewers or lateral drains serving or which are proposed to serve the property the subject of an existing adoption agreement or an application for such an agreement?

Records confirm that Foul sewers serving the development, of which the property forms part are not the subject of an existing adoption agreement or an application for such an agreement.

The Surface Water sewer(s) and/or Surface Water lateral drain(s) are not the subject of an adoption agreement.

2.7 Has a Sewerage Undertaker approved or been consulted about any plans to erect a building or extension on the property over or in the vicinity of a public sewer, disposal main or drain?

There are no records in relation to any approval or consultation about plans to erect a building or extension on the property over or in the vicinity of a public sewer, disposal main or drain. However, the sewerage undertaker might not be aware of a building or extension on the property over or in the vicinity of a public sewer, disposal main or drain.

2.8 Is any building which is, or forms part of the property, at risk of internal flooding due to overloaded public sewers?

The property is not recorded as being at risk of internal flooding due to overloaded public sewers.

From the 1st October 2011 most private sewers, disposal mains and lateral drains were transferred into public ownership. It is therefore possible that a property may be at risk of internal flooding due to an overloaded public sewer which the sewerage undertaker is not aware of. For further information it is recommended that enquiries are made of the vendor.

2.9 Please state the distance from the property to the nearest boundary of the nearest sewage treatment works.

The nearest sewage treatment works is Reading STW which is 2.617 kilometres to the south of the property.

Water

3.1 Is the property connected to mains water supply?

Records indicate that the property is connected to mains water supply.

3.2 Are there any water mains, resource mains or discharge pipes within the boundary of the property?

The map of waterworks does not indicate any water mains, resource mains or discharge pipes within the boundaries of the property.

3.3 Is any water main or service pipe serving, or which is proposed to serve, the property the subject of an existing adoption agreement or an application for such an agreement?

Records confirm that water mains or service pipes serving the property are not the subject of an existing adoption agreement or an application for such an agreement.

3.4 Is this property at risk of receiving low water pressure or flow?

Records confirm that the property is not recorded on a register kept by the water undertaker as being at risk of receiving low water pressure or flow.

3.5 What is the classification of the water supply for the property?

The water supplied to the property has an average water hardness of 128.9mg/l calcium which is defined as HARD by ThamesWater.

3.6 Is there a meter installed at the property?

Records indicate that there is a meter installed at this property.

3.7 Please include details of the location of any water meter serving the property.

Records indicate that the property is served by a water meter, which is not located within the property.

Charging

4.1.1 – Who is responsible for providing the sewerage services for the property?

Thames Water Utilities Limited, Clearwater Court, Reading, RG1 8DB is the sewerage undertaker for the area.

4.1.2 – Who is responsible for providing the water services for the property?

Thames Water Utilities Limited, Clearwater Court, Reading, RG1 8DB is the water undertaker for the area.

4.2 Who bills the property for sewerage services?

If you wish to know who bills the sewerage services for this property then you will need to contact the current owner. For a list of all potential retailers of sewerage services for the property please visit www.open-water.org.uk

4.3 Who bills the property for water services?

If you wish to know who bills the water services for this property then you will need to contact the current owner. For a list of all potential retailers of water services for the property please visit www.open-water.org.uk

Trade Effluent

5.1 Is there a Consent to discharge Trade Effluent under S118 of the Water Industry Act (1991) into the public sewer system?

No.

Wayleaves, Easements, Manhole Cover and Invert levels

6.1 Is there a wayleave/easement agreement giving the Water and/or Sewerage Undertaker the right to lay or maintain assets or right of access to pass through private land in order to reach the Company's assets?

No.

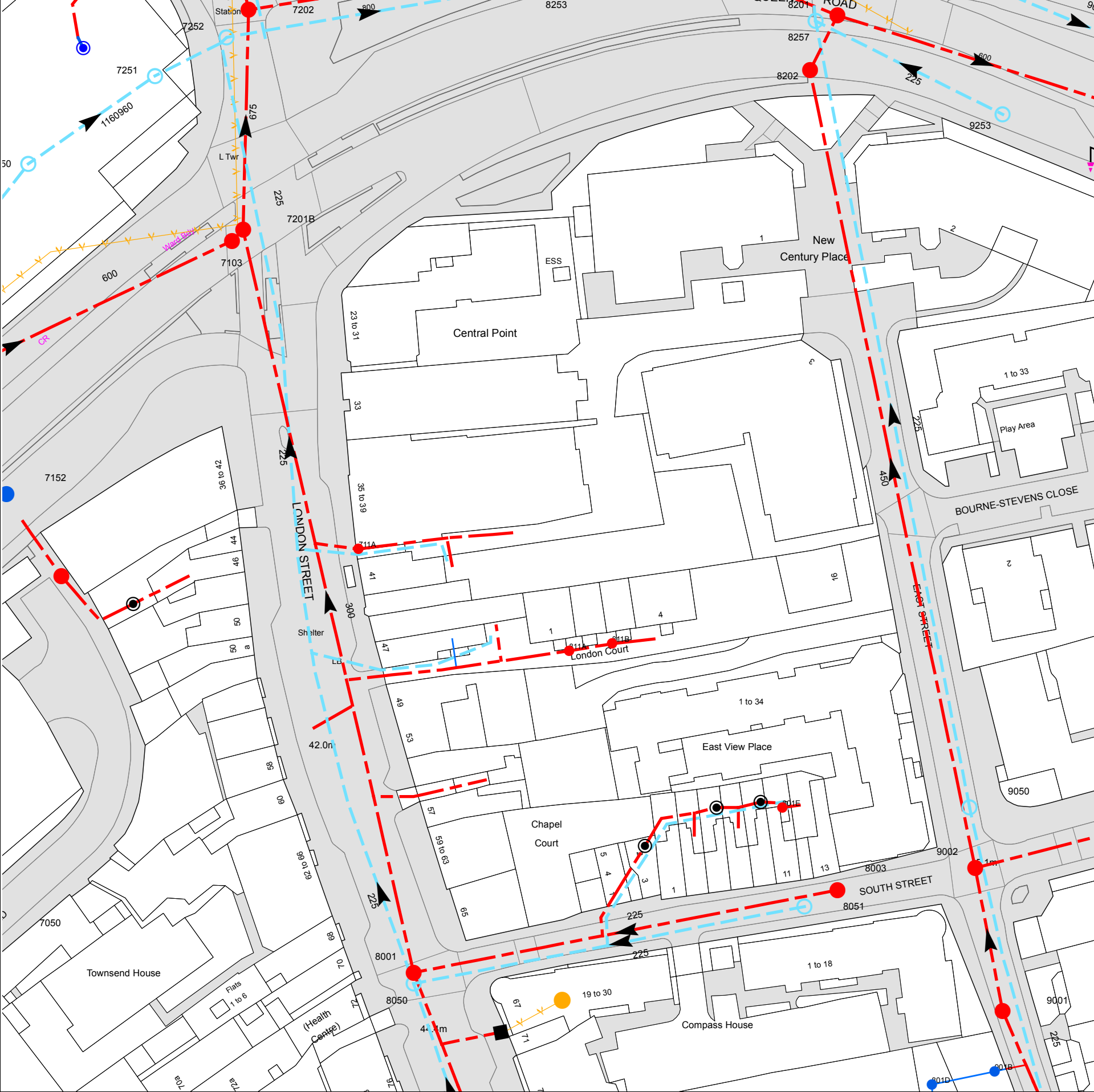
6.2 On the copy extract from the public sewer map, please show manhole cover, depth, and invert levels where the information is available.

Details of any manhole cover and invert levels applicable to this site are enclosed.

Payment for this Search

A charge of £155.16 will be added to your account.

CommercialDW Drainage and Water Enquiry Sewer Map- CDWS/CDWS Standard/2025 5114770



The width of the displayed area is 200m

The position of the apparatus shown on this plan is given without obligation and warranty, and the accuracy cannot be guaranteed. Service pipes are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Thames Water for any error or omission. The actual position of mains and services must be verified and established on site before any works are undertaken.

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NB. Levels quoted in metres Ordnance Newlyn Datum. The value -9999.00 indicates no survey information is available.

Manhole Reference	Manhole Cover Level	Manhole Invert Level
801E	n/a	n/a
8051	45.66	44.14
8202	38.17	n/a
8257	n/a	n/a
8201	38.24	34.65
8003	45.56	42.4
801D	n/a	n/a
9050	44.24	42.8
9002	44.85	41.02
901B	n/a	n/a
9001	45.8	41.54
9253	n/a	n/a
7103	n/a	n/a
7201B	38.96	n/a
7250	38.6	n/a
7251	38.48	36.2
7252	38.41	n/a
7202	38.45	34.9
7152	38.68	n/a
71YY	n/a	n/a
711A	n/a	n/a
8001	44.12	n/a
8050	44.16	42.19
811A	n/a	n/a
811B	n/a	n/a

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Con29DW Commercial Drainage and Water Search - Sewer Key

Public Sewer Types (Operated and maintained by Thames Water)

	Foul Sewer: A sewer designed to convey waste water from domestic and industrial sources to a treatment works.
	Surface Water Sewer: A sewer designed to convey surface water (e.g. rain water from roofs, yards and car parks) to rivers or watercourses.
	Combined Sewer: A sewer designed to convey both waste water and surface water from domestic and industrial sources to a treatment works.
	Storm Sewer
	Sludge Sewer
	Foul Trunk Sewer
	Surface Trunk Sewer
	Combined Trunk Sewer
	Foul Rising Main
	Surface Water Rising Main
	Combined Rising Main
	Vacuum
	Thames Water Proposed
	Vent Pipe
	Gallery

Other Sewer Types (Not operated and maintained by Thames Water)

	Sewer
	Culverted Watercourse
	Proposed
	Decommissioned Sewer
	Content of this drainage network is currently unknown
	Ownership of this drainage network is currently unknown

Notes:

- 1) All levels associated with the plans are to Ordnance Datum Newlyn.
- 2) All measurements on the plan are metric.
- 3) Arrows (on gravity fed sewers) or flecks (on rising mains) indicate the direction of flow.
- 4) Most private pipes are not shown on our plans, as in the past, this information has not been recorded.

Sewer Fittings

A feature in a sewer that does not affect the flow in the pipe. Example: a vent is a fitting as the function of a vent is to release excess gas.

	Air Valve		Meter
	Dam Chase		Vent
	Fitting		

Operational Controls

A feature in a sewer that changes or diverts the flow in the sewer. Example: A hydrobrake limits the flow passing downstream.

	Ancillary		Drop Pipe
	Control Valve		Weir

End Items

End symbols appear at the start or end of a sewer pipe. Examples: an Undefined End at the start of a sewer indicates that Thames Water has no knowledge of the position of the sewer upstream of that symbol. Outfall on a surface water sewer indicates that the pipe discharges into a stream or river.

	Inlet		Outfall
	Undefined End		

Other Symbols

Symbols used on maps which do not fall under other general categories.

	Change of Characteristic Indicator		Public / Private Pumping Station
	Invert Level		Summit

Areas

Lines denoting areas of underground surveys, etc.

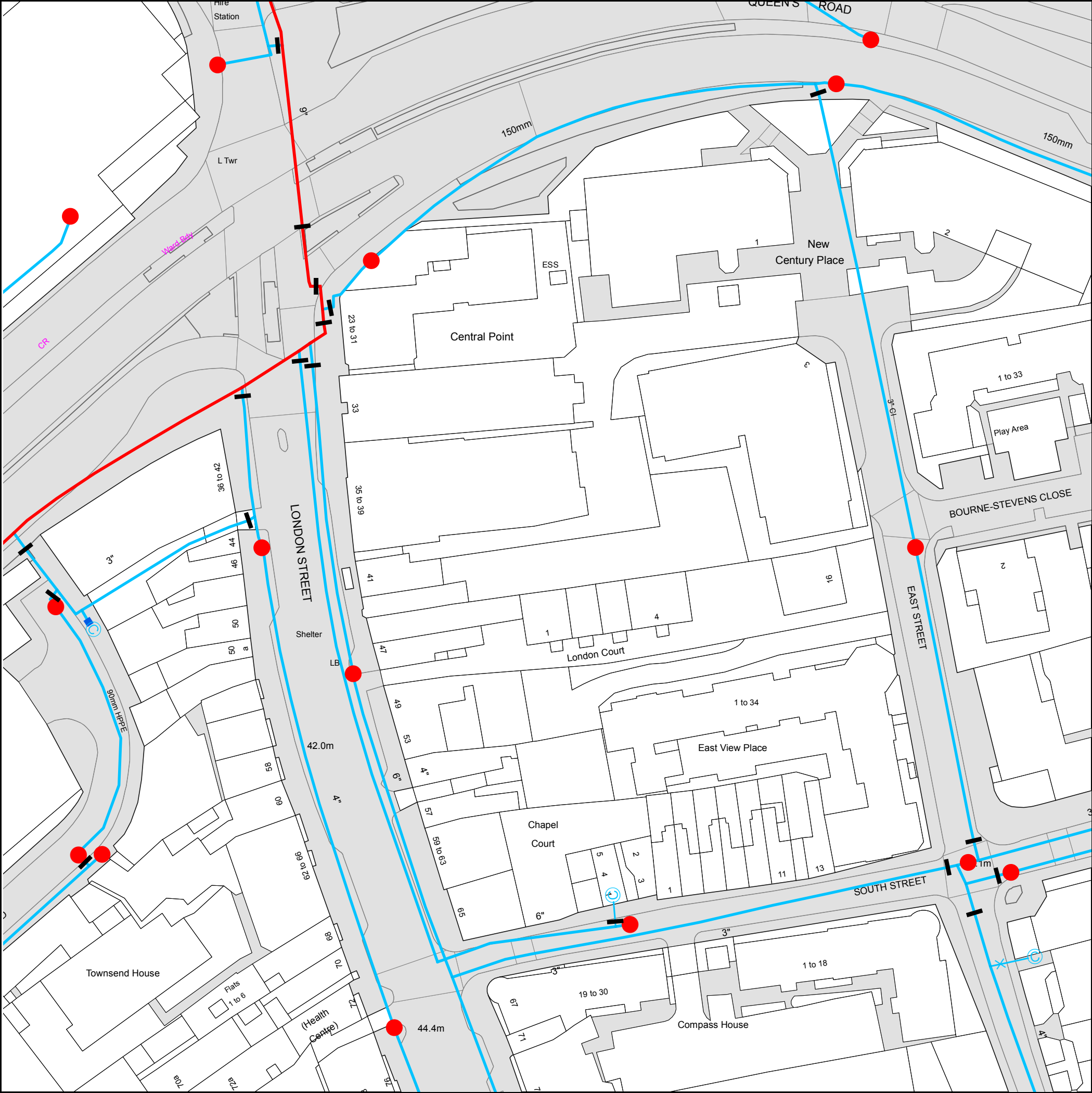
	Agreement
	Chamber
	Operational Site

Ducts or Crossings

	Casement	Ducts may contain high voltage cables. Please check with Thames Water.
	Conduit Bridge	
	Subway	
	Tunnel	

5) 'na' or '0' on a manhole indicates that data is unavailable.

6) The text appearing alongside a sewer line indicates the internal diameter of the pipe in millimeters. Text next to a manhole indicates the manhole reference number and should not be taken as a measurement. If you are unsure about any text or symbology, please contact Property Searches on 0800 009 4540.



The width of the displayed area is 200m

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Con29DW Commercial Drainage and Water Search - Water Key

Water Pipes (Operated & Maintained by Thames Water)

-  **Distribution Main:** The most common pipe shown on water maps. With few exceptions, domestic connections are only made to distribution mains.
-  **Trunk Main:** A main carrying water from a source of supply to a treatment plant or reservoir, or from one treatment plant or reservoir to another. Also a main transferring water in bulk to smaller water mains used for supplying individual customers.
-  **Supply Main:** A supply main indicates that the water main is used as a supply for a single property or group of properties.
-  **Fire Main:** Where a pipe is used as a fire supply, the word FIRE will be displayed along the pipe.
-  **Metered Pipe:** A metered main indicates that the pipe in question supplies water for a single property or group of properties and that quantity of water passing through the pipe is metered even though there may be no meter symbol shown.
-  **Transmission Tunnel:** A very large diameter water pipe. Most tunnels are buried very deep underground. These pipes are not expected to affect the structural integrity of buildings shown on the map provided.
-  **Proposed Main:** A main that is still in the planning stages or in the process of being laid. More details of the proposed main and its reference number are generally included near the main.

PIPE DIAMETER	DEPTH BELOW GROUND
Up to 300mm (12")	900mm (3')
300mm - 600mm (12" - 24")	1100mm (3' 8")
600mm and bigger (24" plus)	1200mm (4')

Valves

-  General Purpose Valve
-  Air Valve
-  Pressure Control Valve
-  Customer Valve

Hydrants

-  Single Hydrant

Meters

-  Meter

End Items

Symbol indicating what happens at the end of a water main.

-  Blank Flange
-  Capped End
-  Emptying Pit
-  Undefined End
-  Manifold
-  Customer Supply
-  Fire Supply

Operational Sites

-  Booster Station
-  Other
-  Other (Proposed)
-  Pumping Station
-  Service Reservoir
-  Shaft Inspection
-  Treatment Works
-  Unknown
-  Water Tower

Other Symbols

-  Data Logger
-  **Casement:** Ducts may contain high voltage cables. Please check with Thames Water.

Other Water Pipes (Not Operated or Maintained by Thames Water)

-  **Other Water Company Main:** Occasionally other water company water pipes may overlap the border of our clean water coverage area. These mains are denoted in purple and in most cases have the owner of the pipe displayed along them.
-  **Private Main:** Indicates that the water main in question is not owned by Thames Water. These mains normally have text associated with them indicating the diameter and owner of the pipe.

For your guidance:

- **Thames Water Property Searches Complaints Procedure:**

- Thames Water Property Searches offers a robust complaints procedure. Complaints can be made by telephone, in writing, by email (onlinecustomers@thameswater.co.uk) or through our website (www.thameswater-propertysearches.co.uk)
- A complaint should be acknowledged within 5 working days from receipt.

As a minimum standard Thames Water Property Searches will:

- endeavour to resolve any contact or complaint at the time of receipt. If this isn't possible, we will advise of timescales;
- investigate and research the matter in detail to identify the issue raised (in some cases third party consultation will be required);
- provide a response to the customer within 10 working days of receipt of the complaint;
- provide compensation if no response or acknowledgment that we are investigating the case is given within 10 working days of receipt of the complaint;
- keep you informed of the progress and, depending on the scale of investigation required, update with new timescales as necessary;
- provide an amended search, free of charge, if required;
- provide a refund if we find your complaint to be justified; take the necessary action within our power to put things right.

If you want us to liaise with a third party on your behalf, just let us know.

If you are still not satisfied with the outcome provided, we will refer the matter to a Senior Manager, for resolution, who will respond again within 5 working days.

If you are still dissatisfied with our final response, and in certain circumstances such as you are buying a residential property or commercial property within certain parameters, The Property Ombudsman will investigate your case and give an independent view. The Ombudsman can award compensation of up to £25,000 to you if he finds that you have suffered actual financial loss and/or aggravation, distress, or inconvenience because of your search not keeping to the Code. Further information can be obtained by visiting www.tpos.co.uk or by sending an email to admin@tpos.co.uk.

Question 1.1

For your guidance:

- The Water Industry Act 1991 defines Public Sewers as those which Thames Water have responsibility for. Other assets and rivers, watercourses, ponds, culverts, or highway drains may be shown for information purposes only.
- The company is not generally responsible for SuDS (sustainable urban drainage system), rivers, watercourses, ponds, culverts, or highway drains. If any of these are shown on the copy extract, they are shown for information only.
- Any private sewers or lateral drains which are indicated on the extract of the public sewer map as being subject to an agreement under Section 104 of the Water Industry Act 1991 are not an 'as constructed' record. It is recommended these details be checked with the housing developer.
- Assets other than public sewers may be shown on the copy extract, for information.

Question 1.2

For your guidance:

- The "water mains" in this context are those, which are vested in and maintainable by the water company under statute.
- Assets other than public water mains may be shown on the plan, for information only.
- Water companies are not responsible for private supply pipes connecting the property to the public water main and do not hold details of these. These may pass through land outside of the control of the seller or may be shared with adjacent properties. The buyer may wish to investigate whether separate rights or easements are needed for their inspection, repair, or renewal.
- If an extract of the public water main record is enclosed, this will show known public water mains in the vicinity of the property. It should be possible to estimate the length and route of any private water supply pipe connecting the property to the public water network.

Question 2.1

For your guidance:

- Water companies are not responsible for any private drains that connect the property to the public sewerage system and do not hold details of these. The property owner will normally have sole responsibility for private drains serving the property. These may pass through land outside the control of the seller and the buyer may wish to investigate whether separate rights or easements are needed for their inspection, repair, or renewal.
- If foul water does not drain to the public sewerage system, the property may have private facilities in the form of a cesspit, septic tank, or other type of treatment plant.
- An extract from the public sewer map is enclosed. This will show known public sewers in the vicinity of the property, and it should be possible to estimate the length and route of any private drains and/or sewers connecting the property to the public sewerage system.

Question 2.2

For your guidance:

- Sewerage Undertakers are not responsible for any private drains that connect the property to the public sewerage system, and do not hold details of these.
- The property owner will normally have sole responsibility for private drains serving the property. These private drains may pass through land outside of the control of the seller and the buyer may wish to investigate whether separate rights or easements are needed for their inspection, repair, or renewal.
- In some cases, 'Sewerage Undertakers' records do not distinguish between foul and surface water connections to the public sewerage system.
- At the time of privatisation in 1989, Sewerage Undertakers were sold with poorly kept records of sewerage infrastructure. The records did not always show which properties were connected for surface water drainage purposes. Accordingly, billing records have been used to provide an answer for this element of the drainage and water search.
- Due to the potential inadequacy of 'Sewerage Undertakers' infrastructure records with respect to surface water drainage, it is the customer's responsibility to inform the Sewerage Undertaker that they do not receive the surface water drainage service. If on inspection, the buyer finds that surface water from the property does not drain to a public sewer, then the property may be eligible for a rebate of the surface water drainage charge. If you wish to know who bills the sewerage services for this property, then you will need to contact the current owner. For a list of all potential retailers of sewerage services for the property please visit www.open-water.org.uk.
- If surface water from the property does not drain to the public sewerage system, the property may have private facilities in the form of a soakaway, private connection to a watercourse or there may be a sustainable urban drainage system (SuDS). Sustainable drainage systems are a collection of water management practices that aim to align modern drainage systems with natural water processes and are part of a larger green infrastructure strategy.
- An extract from the public sewer map is enclosed. This will show known public sewers in the vicinity of the property, and it should be possible to estimate the length and route of any private drains and/or sewers connecting the property to the public sewerage system.

Question 2.3

For your guidance:

- If surface water from the property drains to a public sewer, then a surface water drainage charge is payable.
- Where a surface water drainage charge is currently included in the property's water and sewerage bill but, on inspection, the buyer finds that surface water from the property does not drain to a public sewer, then the property may be eligible for a rebate of the surface water drainage charge. If you wish to know who bills the sewerage services for this property, then you will need to contact the current owner. For a list of all potential retailers of sewerage services for the property please visit www.open-water.org.uk.

Question 2.4

For your guidance:

- Thames Water has a statutory right of access to carry out work on its assets. Employees of Thames Water or its contractors may, therefore, need to enter the property to carry out work.
- Please note if the property was constructed after 1st July 2011 any sewers and/or lateral drain within the boundary of the property are the responsibility of the householder.
- The approximate boundary of the property has been determined by reference to the Ordnance Survey Record or the map supplied.
- The presence of a public sewer running within the boundary of the property may restrict further development. The Company has a statutory right of access to carry out work on its assets, subject to notice. This may result in employees of the Company, or its contractors, needing to enter the property to carry out work.
- Any private sewers or lateral drains which are indicated on the extract of the public sewer map as being subject to an agreement under Section 104 of the Water Industry Act 1991 are not an 'as constructed' record. It is recommended these details be checked with the housing developer.

Question 2.4.1

For your guidance:

- Private pumping stations installed before 1st July 2011 will be transferred into the ownership of the sewerage undertaker.
- From the 1st October 2016 private pumping stations which serve more than one property have been transferred into public ownership but may not be recorded on the public sewer map.
- The approximate boundary of the property has been determined by reference to the Ordnance Survey Record or the map supplied.
- The presence of a public pumping station within the boundary of the property may restrict further development. The company has a statutory right of access to carry out work on its assets, subject to notice. This may result in employees of the company, or its contractors, needing to enter the property to carry out work.
- Any private sewers or lateral drains which are indicated on the extract of the public sewer map as being subject to an agreement under Section 104 of the Water Industry Act 1991 are not an 'as constructed' record. It is recommended these details be checked with the housing developer.

Question 2.5

For your guidance:

- From the 1st October 2011 there may be additional lateral drains and/or public sewers which are not recorded on the public sewer map but are also within 30.48 metres (100 feet) of a building within the property.
- The presence of a public foul sewer within 30.48 metres (100 feet) of the building(s) within the property can result in the local authority requiring a property to be connected to the public sewer.
- The measurement is estimated from the Ordnance Survey record, between the building(s) within the boundary of the property and the nearest public foul sewer.
- Any private sewers or lateral drains which are indicated on the extract of the public sewer map as being subject to an agreement under Section 104 of the Water Industry Act 1991 are not an 'as constructed' record. It is recommended these details be checked with the housing developer.

Question 2.5.1

For your guidance:

- Private pumping stations installed before 1st July 2011 will be transferred into the ownership of the sewerage undertaker.
- From the 1st October 2016 private pumping stations which serve more than one property have been transferred into public ownership but may not be recorded on the public sewer map.
- The presence of a public pumping station within 50 metres of the building(s) within the property can result in the local authority requiring a property to be connected to the public sewer.
- The measurement is estimated from the Ordnance Survey record, between the building(s) within the boundary of the property and the nearest public sewer.
- Any private sewers or lateral drains which are indicated on the extract of the public sewer map as being subject to an agreement under Section 104 of the Water Industry Act 1991 are not an 'as constructed' record. It is recommended these details be checked with the housing developer.

Question 2.6

For your guidance:

- Any sewers and/or lateral drains within the boundary of the property are not the subject of an adoption agreement and remain the responsibility of the householder. Adoptable sewers are normally those situated in the public highway.
- This enquiry is of interest to purchasers who will want to know whether or not the property will be linked to a public sewer.
- Where the property is part of a very recent or ongoing development and the sewers are not the subject of an adoption application, buyers should consult with the developer to ascertain the extent of private drains and sewers for which they will hold maintenance and renewal liabilities.
- Final adoption is subject to the developer complying with the terms of the adoption agreement under Section 104 of the Water Industry Act 1991 and meeting the requirements of 'Sewers for Adoption' 7th Edition.
- For further information on any buildover and/or adoption agreements please contact our developer services team by sending an email to developer.services@thameswater.co.uk or 0800 009 3921.

Question 2.7

For your guidance:

- From the 1st October 2011 most private sewers, disposal mains and lateral drains were transferred into public ownership and the sewerage undertaker may not have been approved or consulted about any plans to erect a building or extension on the property over or in the vicinity of these.
- Buildings or extensions erected over a sewer in contravention of building controls may have to be removed or altered.
- For further information on any buildover and/or adoption agreements please contact our developer services team by sending an email to developer.services@thameswater.co.uk or 0800 009 3921.

Question 2.8

For your guidance:

- For reporting purposes buildings are restricted to those normally occupied and used for residential, public, commercial, business, or industrial purposes.
- A sewer is “overloaded” when the flow from a storm is unable to pass through it due to a permanent problem (e.g. flat gradient, small diameter). Flooding because of temporary problems such as blockages, siltation, collapses and equipment or operational failures are excluded.
- “Internal flooding” from public sewers is defined as flooding, which enters a building or passes below a suspended floor. For reporting purposes, buildings are restricted to those normally occupied and used for residential, public, commercial, business, or industrial purposes.
- “At Risk” properties are those that the water company is required to include in the Regulatory Register that is presented annually to the Director General of Water Services. These are defined as properties that have suffered, or are likely to suffer, internal flooding from public foul, combined or surface water sewers due to overloading of the sewerage system more frequently than the relevant reference period (either once or twice in ten years) as determined by the Company’s reporting procedure.
- Flooding as a result of storm events proven to be exceptional and beyond the reference period of one in ten years are not included on the At-Risk Register.
- Properties may be at risk of flooding but not included on the Register where flooding incidents have not been reported to the Company.
- Public Sewers are defined as those for which the Company holds statutory responsibility under the Water Industry Act 1991.
- It should be noted that flooding can occur from private sewers and drains which are not the responsibility of the Company. This report excludes flooding from private sewers and drains and the Company makes no comment upon this matter.
- For further information please contact Thames Water Utilities Ltd on Tel: 0800 316 9800 or website www.thameswater.co.uk

Question 2.9

For your guidance:

- The nearest sewage treatment works will not always be the sewage treatment works serving the catchment within which the property is situated.
- The sewerage undertaker’s records were inspected to determine the nearest sewage treatment works.
- It should be noted that there may be a private sewage treatment works closer than the one detailed above that has not been identified.
- As a responsible utility operator, Thames Water Utilities Ltd seeks to manage the impact of odour from operational sewage works on the surrounding area. This is done in accordance with the Code of Practice on Odour Nuisance from Sewage Treatment Works issued via the Department of Environment, Food and Rural Affairs (DEFRA). This Code recognises that odour from sewage treatment works can have a detrimental impact on the quality of the local environment for those living close to works. However, DEFRA also recognises that sewage treatment works provide important services to communities and are essential for maintaining standards in water quality and protecting aquatic-based environments. For more information visit www.thameswater.co.uk

Question 3.1

For your guidance:

- The Company does not keep details of private supplies. The situation should be checked with the current owner of the property.

Question 3.2

For your guidance:

- The boundary of the property has been determined by reference to the plan supplied. Where a plan was not supplied, the Ordnance Survey Record was used. If the Water undertaker mentioned in Question 4.1.2 is not Thames Water Utilities Ltd the boundary of the property has been determined by Ordnance Survey data.
- The presence of a public water main within the boundary of the property may restrict further development within it. Water companies have a statutory right of access to carry out work on their assets, subject to notice. This may result in employees of the Company, or its contractors, needing to enter the property to carry out work.

Question 3.3

For your guidance:

- This enquiry is of interest to purchasers who will want to know whether the property will be linked to the mains water supply.

Question 3.4

For your guidance:

- “Low water pressure” means water pressure below the regulatory reference level, which is the minimum pressure when demand on the system is not abnormal.
- Water Companies are required to include in the Regulatory Register that is presented annually to Ofwat, properties receiving pressure below the reference level, provided that allowable exclusions do not apply (i.e. events which can cause pressure to temporarily fall below the reference level) and a solution has not yet been implemented.
- The reference level of service is a flow of 9 litres/minute at a pressure of 10metres / head on the customer's side of the outside stop valve (osv). The reference level of service must be applied on the customer's side of a meter or any other company fittings that are on the customer's side of the main stop tap. The reference level applies to a single property. Where more than one property is served by a common service pipe (shared supply), the flow assumed in the reference level must be appropriately increased to take account of the total number of properties served.
 - For two properties, a flow of 13.5 litres/min at a pressure of 10m head on the customers' side of the OSV is appropriate.
 - For three or more properties the appropriate flow should be calculated from the standard loadings provided in Service Pipe Manual 1993.
- **Allowable exclusions** The Company is required to include in the Regulatory Register properties receiving pressure below the reference level, provided that allowable exclusions listed below do not apply.
- **Abnormal demand:** This exclusion is intended to cover abnormal peaks in demand and not the daily, weekly or monthly peaks in demand, which are normally expected. Companies should exclude from the reported figures properties which are affected by low pressure only on those days with the highest peak demands. During the report year companies may exclude, for each property, up to five days of low pressure caused by peak demand.
- **Planned maintenance:** Companies should not report low pressures caused by planned maintenance. It is not intended that companies identify the number of properties affected in each instance. However, companies must maintain sufficiently accurate records to verify that low-pressure incidents that are excluded because of planned maintenance are actually caused by maintenance.
- **One-off incidents:** This exclusion covers a number of causes of low pressure; mains bursts; failures of company equipment (such as pressure reducing valves or booster pumps); firefighting; and action by a third party. However, if problems of this type affect a property frequently, they cannot be classed as one-off events and further investigation will be required before they can be excluded.
- **Low-pressure incidents of short duration:** Properties affected by low pressure, which only occur for a short period, and for which there is evidence that incidents of a longer duration would not occur during the year, may be excluded from the reported figures.
- Please contact your water undertaker mentioned in Question 4.1.2 if you require further information on water pressure.

Question 3.5

For your guidance:

- Water hardness can be expressed in various indices for example the hardness settings for dishwashers are commonly expressed in Clark's degrees however, check with the manufacturer as there are also other units. The following table shows the normal ranges of hardness.

Thames Water Hardness Category	Calcium (mg/l)	Calcium Carbonate (mg/l)	English Clarke degrees	French degrees	General/ German degrees
Soft	0 to 40	0 to 100	0 to 7	0 to 10	0 to 5.6
Medium	41 to 80	101 to 200	8 to 14	11 to 20	5.7 to 11.2
Hard	Over 80	Over 200	Over 14	Over 20	over 11.2

- Please contact your water undertaker mentioned in Question 4.1.2 if you require further information on water hardness.

Question 3.6

For your guidance:

- The Water Industry Act 1991 Section 150, The Water Resale Order 2001 provides protection for people who buy their water or sewerage services from a person or company instead of directly from a water or sewerage company. Details are available from the Office of Water Services (OFWAT) website is www.ofwat.gov.uk.
- The Company may install a meter at the premises where a buyer makes a change of use of the property or where the buyer uses water for:
 - Watering the garden other than by hand (this includes the use of sprinklers).
 - Automatically replenishing a pond or swimming pool with a capacity greater than 10,000 litres.
 - A bath with a capacity more than 230 litres.
 - A reverse osmosis unit Where a meter does not serve the property and the customer wishes to consider this method of charging, they should contact the current owner if they wish to know who bills the sewerage and water services for this property. For a list of all potential retailers of sewerage and water services for the property please visit www.open-water.org.uk.

Question 3.7

For your guidance:

- Where a meter does not serve the property and the customer wishes to consider this method of charging, they should contact the current owner if they wish to know who bills the water services for this property. For a list of all potential retailers of water services for the property please visit www.open-water.org.uk.

Question 5.1

For your guidance:

- If a Trade effluent consent applies to the premises which are the subject of this search, it is for the applicant to satisfy itself as to the suitability of the consent for its client's requirements. The occupier of any trade premises in the area of a sewerage undertaker may discharge any trade effluent proceeding from those premises into the undertaker's public sewers if he does so with the undertaker's consent. If, in the case of any trade premises, any trade effluent is discharged without such consent or other authorisation, the occupier of the premises shall be guilty of an offence.
- Please note any existing consent is dependent on the business being carried out at the property and will not transfer automatically upon change of ownership.
- For further information regarding Trade Effluent consents please contact: Trade Effluent Control, Crossness STW, Belvedere Road, Abbey Wood London SE2 9AQ.

Question 6.1

For your guidance:

- This question relates only to private agreements between the water company acting in a private capacity and a landowner. Such contracts may often be part of a conveyance or land transfer, or a deed of grant of easement.
- If there is no formal easement, then a sewer or water main may have been constructed following the service of notice under the provisions of the Public Health Act 1936, Water Act 1945, Water Act 1989 or Water Industry Act 1991 as applicable. The company does not hold copies of these notices. However, in the absence of evidence to the contrary there is a legal presumption that all matters were properly dealt with. All rights and obligations relating to sewers and water mains are now covered by the Water Industry Act 1991. Where rights exist at the boundary of the property, but we are not sure of the exact correlation, we will answer "Yes" to this question. A documentary right can exist even if the physical asset itself has not yet been laid, or has been moved, or removed. Likewise, the position of the right and of the asset may differ.
- You may also find that an asset is protected both with contractual rights and statutory rights. Please consult your solicitor as to why this may happen, and its effects.
- We refer to "defined" assets for the following reasons: Often a contract may give the water company an expressed right to install and maintain assets within an area but without stating the exact position or route of such assets. Also, the law may imply rights where none have been mentioned specifically in a related contract, such as a conveyance. Finally, rights may come into being through long use. In any of these cases the rights are undefined, and although the water company may need to rely on them from time to time, as we cannot map the rights accurately, we will answer "no" to this question.
- Information obtainable from physical inspection (including Trial Bore Holes) overrides information contained in the report.
- Any error in answering this question is not to be regarded as a waiver of the water company's rights or title, or an agreement or representation that the water company is prepared to vary or discharge any of its rights or title.

The Customer and the Client are asked to note these terms and conditions, which govern the basis on which the CON29DW Commercial Drainage & Water Enquiry is supplied.

Definitions

"Apparatus" means the public assets shown on the Company's map keys relevant to the Report.

"Client" means the person, company or body who is the intended recipient of the Report with an actual or potential interest in the Property.

"Company" means the company who produces the Report, being Thames Water Utilities Limited, a company registered in England and Wales with company number 02366661 and whose registered office is at Clearwater Court, Vastern Road, Reading, Berkshire, RG1 8DB.

"Customer" means the person, company, firm or other legal body placing the Order, either on their own behalf as Client, or, as an agent for a Client.

"Order" means any request completed by the Customer requesting the Report from the Company.

"Property" means the address or location supplied by the Customer in the Order.

"Report" means the drainage and/or water report prepared by the Company in respect of the Property, including any maps provided as part of such reports.

1. Agreement

1.1 The Company agrees to supply the Report to the Customer and the Client subject to these terms and conditions in this Agreement. The scope and limitations of the Report are described in clause 2 of this Agreement. Where the Customer is acting as an agent for the Client then the Customer shall be responsible for bringing these terms and conditions to the attention of the Client.

1.2 The Customer and the Client agree that the placing of an Order for a Report and the subsequent provision of a copy of the Report to the Client indicates their acceptance of these terms and conditions.

2. The Report

Whilst the Company will use reasonable care and skill in producing the Report, it is provided to the Customer and the Client on the basis that they acknowledge and agree to the following:-

2.1 The information contained in the Report can change on a regular basis so the Company cannot be responsible to the Customer or the Client for any change in the information contained in the Report after the date on which the Report was produced.

2.2 The Report does not give details about the actual state or condition of the Property nor should it be used or taken to indicate or exclude actual suitability or unsuitability of the Property for any particular purpose, or relied upon for determining saleability or value, or used as substitute for any physical investigation or inspection. Further advice and information from appropriate experts and professionals should always be obtained.

2.3 The information contained in the Report is based upon the accuracy, completeness and legibility of the address and other information supplied by the Customer or Client when placing the Order.

2.4 The Report provides information as to the indicative location and connection of existing services and other information in relation to drainage and water enquiries and should not be relied on for any other purpose.

2.5 The Report is produced only for use in relation to transactions which require the provision of drainage and water information.

2.6 The Customer shall only use the Report for the purpose set out above in clause 2.5, for which it is supplied in accordance with these terms and conditions.

2.7 The position and depth of Apparatus shown on any maps attached to the Report are approximate, and are furnished as a general guide only, and no warranty as to its correctness is given or implied. The exact positions and depths should be obtained by excavation trial holes and the maps must not be relied on in the event of excavation or other works made in the vicinity of Apparatus shown on any maps.

3. Disclaimers

3.1 Without prejudice to any other terms and conditions set out herein, the Company accepts responsibility for any inaccuracy in the location of Apparatus, or missing Apparatus contained in the maps within the Report only where such inaccuracies or errors arise as a direct result of the negligence of the Company and the existence of which the Company should reasonably have been aware.

4. Liability

4.1 The Company shall not be liable to the Customer or Client in contract, tort, negligence, breach of statutory duty, misrepresentation or otherwise for any inaccuracies, mistakes or omissions in the Report unless any such liability arises as a direct consequence of the Company's negligence and the existence of which the Company should reasonably have been aware.

4.2 Where the Customer sells this report to a Client (other than in the case of a bona fide legal adviser recharging the cost of the Report as a disbursement) the Company shall not in any circumstances (whether for breach of contract, negligence or any other tort, under statute or statutory duty or otherwise at all) be liable for any loss or damage whatsoever and the Customer shall indemnify the Company in respect of any claim by the Client.

4.3 Notwithstanding clause 4.1 above, the Company does not exclude liability for (a) death or personal injury arising from its negligence, (b) fraud or fraudulent misrepresentation, and (c) any other liability which cannot be excluded or limited by law.

4.4 Subject to clause 4.3 above, the Company's total liability to the Customer or Client, whether for breach of contract, tort, negligence, breach of statutory duty, misrepresentation or otherwise, arising under or in connection with these terms and conditions and/or the provision of a Report shall be limited to £10 million in aggregate.

5. Copyright and Confidentiality

5.1 The Customer and the Client acknowledge that the Report is confidential and is intended for the personal use of the Client. The copyright and any other intellectual property rights in the Report shall remain the property of the Company and/or its licensors. No intellectual or other property rights are transferred or licensed to the Customer or the Client except to the extent expressly provided in these terms and conditions.

5.2 The Customer or Client is entitled to make copies of the Report for their own internal purposes but may only copy Ordnance Survey mapping or data contained in or attached to the Report if they have an appropriate licence from the originating source of that mapping or data.

5.3 The Customer and the Client agree (in respect of both the original and any copies made) to respect and not to alter any trademark, copyright notice or other property marking which appears on the Report.

5.4 The maps contained in the Report are protected by Crown Copyright and must not be used for any purpose outside the context of the Report.

5.5 The enquiries in the Report are protected by copyright by the Law Society of 113 Chancery Lane, London WC2A 1PL and must not be used for any purpose outside the context of the Report.

5.6 The Customer and the Client agree to indemnify the Company against any losses, costs, claims, and damage suffered by the Company as a result of any breach by either of them of clauses 5.1 to 5.5 inclusive.

6. Payment

6.1 Unless otherwise stated all prices are inclusive of VAT. The Customer shall pay for the price of the Report specified by the Company, without any set off, deduction or counterclaim. Unless otherwise agreed in writing between the parties, the Company must receive full payment for the Report in advance of the Report being produced. Where the parties agree that payment is not required in advance, the Customer must pay for the Report in full within 14 days of the date of the invoice, unless otherwise agreed in writing between the parties.

7. Cancellations or Alterations

As a consumer

7.1 Where the Customer is an individual consumer (and not acting for purposes wholly or mainly relating to his or her trade, business, craft or profession), the Customer has specific legal rights relating to cancellation of any Order the Customer may place. The Customer may cancel his or her Order at any time within 14 days after the day on which the Order is entered into ("Cancellation Period").

7.2 To exercise the right to cancel, the Customer must inform the Company in writing of his or her decision to cancel the Order.

7.3 Where the Customer is ordering a Report as a consumer, due to the Customer's cancellation rights, the Company will not process the Order or provide the Report to the Customer before the end of the Cancellation Period unless the Customer provides his or her express consent and acknowledges that he or she will lose the right to cancel the contract under regulation 29(1) of the Consumer Contracts (Information, Cancellation, and Additional Charges) Regulations 2013.

CON29DW Commercial Drainage & Water Enquiry Terms and Conditions (2)

- 7.4 Notwithstanding above clauses 7.1 to 7.3 (cancellation rights), should the Customer wish to cancel the Order beyond the Cancellation Period and/ or despite its consent to waiver the Cancellation Period, the Company may still consider a Customer's cancellation request of any Order and any such cancellation shall be in accordance with its cancellation policy, which can be found on the Company's [website](#).

As a business

- 7.5 The Cancellation Period does not apply to the Customer's Order if the Customer is placing the Order wholly or mainly for purposes relating to their trade, business, craft or profession.

- 7.6 If the Customer cancels the Order other than in accordance with this clause the Customer may be liable for fees as detailed in the Company's cancellation policy which can be found on the Company's [website](#).

8. Complaints

- 8.1 The Company's complaints procedure is available on the Company's website.
- 8.2 The Company should acknowledge a complaint within 5 working days from receipt.
- 8.3 If the Customer follows the Company's complaints procedure but is dissatisfied with the response, the Customer may refer the complaint for consideration under The Property Ombudsman Scheme (TPOs) who can award compensation up to £25,000. Further information can be obtained by visiting www.tpos.co.uk or by sending an email to admin@tpos.co.uk.
- 8.4 In addition to TPO redress scheme covering consumers, TPO will also provide redress to small businesses (including Charities and Trusts) that meet the following criteria:
- A small business (or group of companies) with an annual turnover of less than £3 million;
 - A charity with an annual income of less than £3 million;
 - A trust with a net asset value of less than £3 million.

9. General

- 9.1 We are a member of the Drainage and Water Searches Network (DWSN), a membership organisation for companies who are responsible for compiling full and complete responses to the Law Society's CON29DW Residential and CON29DW Commercial products. For more information please visit www.con29dw.co.uk. The DWSN Standards are:
- Promotion of best practice and quality.
 - Maintain adequate insurance.
 - Display the appropriate logos to signify high standards.
 - Respond to complaints in a timely fashion and provide an appropriate escalation procedure.
 - Comply with all applicable UK legislation, regulations and industry standards.
 - Act in a professional and honest manner and provide a service with due care and skill.
- 9.2 These terms and conditions are the only terms and conditions that shall apply to any Order and the provision of a Report by the Company to the Customer and shall constitute the entire agreement between the Customer and the Company and supersede, replace and extinguish any previous arrangement, understanding or agreement between the parties relating to such Report.
- 9.3 In the event of any conflict of inconsistency between any information on the Company's website describing the features of the Report and these terms and conditions, then these terms and conditions shall prevail.
- 9.4 Where the Customer is acting wholly or mainly in the normal course of his or her trade, business, craft or profession, the Client is entitled to the benefit of these terms and conditions. Save as provided in this clause 9.4, it is not intended that any other person who is not a party to these terms and conditions has any right to enforce any term or these terms and conditions under the Contracts (Rights of Third Parties) Act 1999.
- 9.5 If any provision of these terms and conditions is or becomes invalid or unenforceable, it will be taken to be removed from the rest of these terms and conditions to the extent that it is invalid or unenforceable. No other provision of these terms and conditions shall be affected.
- 9.6 These terms and conditions shall be governed by English law and all parties submit to the exclusive jurisdiction of the English courts.

- 9.7 Nothing in these terms and conditions shall in any way restrict the Customer or Client's statutory or any other rights of access to the information contained in the Report.

These Terms & Conditions are available in larger print for those with impaired vision.

Payment Terms and Conditions

All sales are made in accordance with Thames Water Utilities Limited (TWUL) standard terms and conditions unless previously agreed in writing.

1. All goods remain in the property of Thames Water Utilities Ltd until full payment is received.
2. Provision of service will be in accordance with all legal requirements and published TWUL policies.
3. All invoices are strictly due for payment within 14 days of the date of the invoice. Any other terms must be accepted/agreed in writing prior to provision of goods or service or will be held to be invalid.
4. Penalty interest may be invoked by TWUL in the event of unjustifiable payment delay. Interest charges will be in line with UK Statute Law 'The Late Payment of Commercial Debts (Interest) Act 1998'.
5. Interest will be charged in line with current Court Interest Charges, if legal action is taken.
6. A charge may be made at the discretion of the company for increased administration costs.

A copy of Thames Water's standard terms and conditions are available from the Commercial Billing Team (cashoperations@thameswater.co.uk).

We publish several Codes of Practice including a guaranteed standards scheme. You can obtain copies of these leaflets by calling us on 0800 980 8800.

If you are unhappy with our service, you can speak to your original goods or customer service provider. If you are still not satisfied with the outcome provided, we will refer the matter to a Senior Manager for resolution who will provide you with a response.

If you are still dissatisfied with our final response, and in certain circumstances such as you are buying a residential property or commercial property within certain parameters, The Property Ombudsman will investigate your case and give an independent view. The Ombudsman can award compensation of up to £25,000 to you if he finds that you have suffered actual financial loss and/or aggravation, distress, or inconvenience because of your search not keeping to the Code. Further information can be obtained by visiting www.tpos.co.uk or by sending an email to admin@tpos.co.uk.

If the Goods or Services covered by this invoice falls under the regulation of the 1991 Water Industry Act, and you remain dissatisfied you can refer your complaint to Consumer Council for Water on 0300 034 2222 or write to them at Consumer Council for Water, 1st Floor, Victoria Square House, Victoria Square, Birmingham, B2 4AJ.

Ways to pay your bill

Credit Card	BACS Payment	Telephone Banking
Please call 0800 009 4540 quoting your invoice number starting CBA or ADS	Account Number 90478703 Sort code 60-00-01 A remittance advice must be sent to Thames Water Utilities Ltd. PO Box 3189 Slough SL14WW or email ps.billing@thameswater.co.uk	By calling your bank and quoting Account number 90478703 Sort code 60-00-01 and your invoice number

Thames Water Utilities Ltd Registered in England & Wales No. 2366661 Registered Office Clearwater Court, Vastern Rd, Reading, Berks, RG1 8DB.