



Surface Water Drainage Technical Note

Job Details		
Issued by	Craddys 63 Macrae Road Eden Office Park Ham Green Bristol BS20 0DD	T: 01275 371333 E: Christos.Sibanda@Craddys.co.uk W: www.craddys.co.uk
		Craddy Pitchers Ltd incorporated in England and Wales registered no 4949876 • VAT no 397 4590 95 • Registered Address • 63 Macrae Road, Ham Green, Bristol, BS20 0DD
Project Name	NINE MILE RIDE	
Calculation Title	SURFACE WATER DRAINAGE TECHNICAL NOTE	
Calculation Reference	13555w0005	
Date	10/09/2025	
Surface Water Drainage Strategy		
Background and Proposed Surface Water Discharge Point	- It is proposed to construct 26 dwellings at a brownfield site at land off Nine Mile Ride, RG40 3QD. Refer to appendix A for the site location plan on a Thames Water asset map. - The site has Planning Permission from Wokingham Borough Council, application number 250655. - The Planning Permission is based on a surface water drainage strategy that includes the use of on-site soakaways. - The BRE 365 tests report by Geo-Environmental, number GE22003/WH01/230912, shows that the infiltration rates are of the order of 10^{-7} m/s, which is too low for the use of soakaways as a discharge point for surface water drainage. Refer to appendix B for pages from the BRE365 report. - There are no watercourses near the site. - It is therefore proposed to discharge surface water drainage offsite to the Thames Water surface water sewer which is situated along Nine Mile Ride. - The QBar greenfield runoff rate is 2.5 l/s. However, Thames Water have agreed to a maximum discharge rate of 3.3 l/s to their surface water sewer because of the site constraints which make it unpractical to discharge at the greenfield runoff rates. Refer to appendix C for the letter from Thames Water.	
Surface Water Drainage Design	Infodrainage was used to design the surface water drainage system. The Infodrainage simulation software was run for the 1 in 2 yr storm event, 1 in 30 yr storm event plus 35% climate change and for the 1 in 100 yr storm event plus 40% climate	





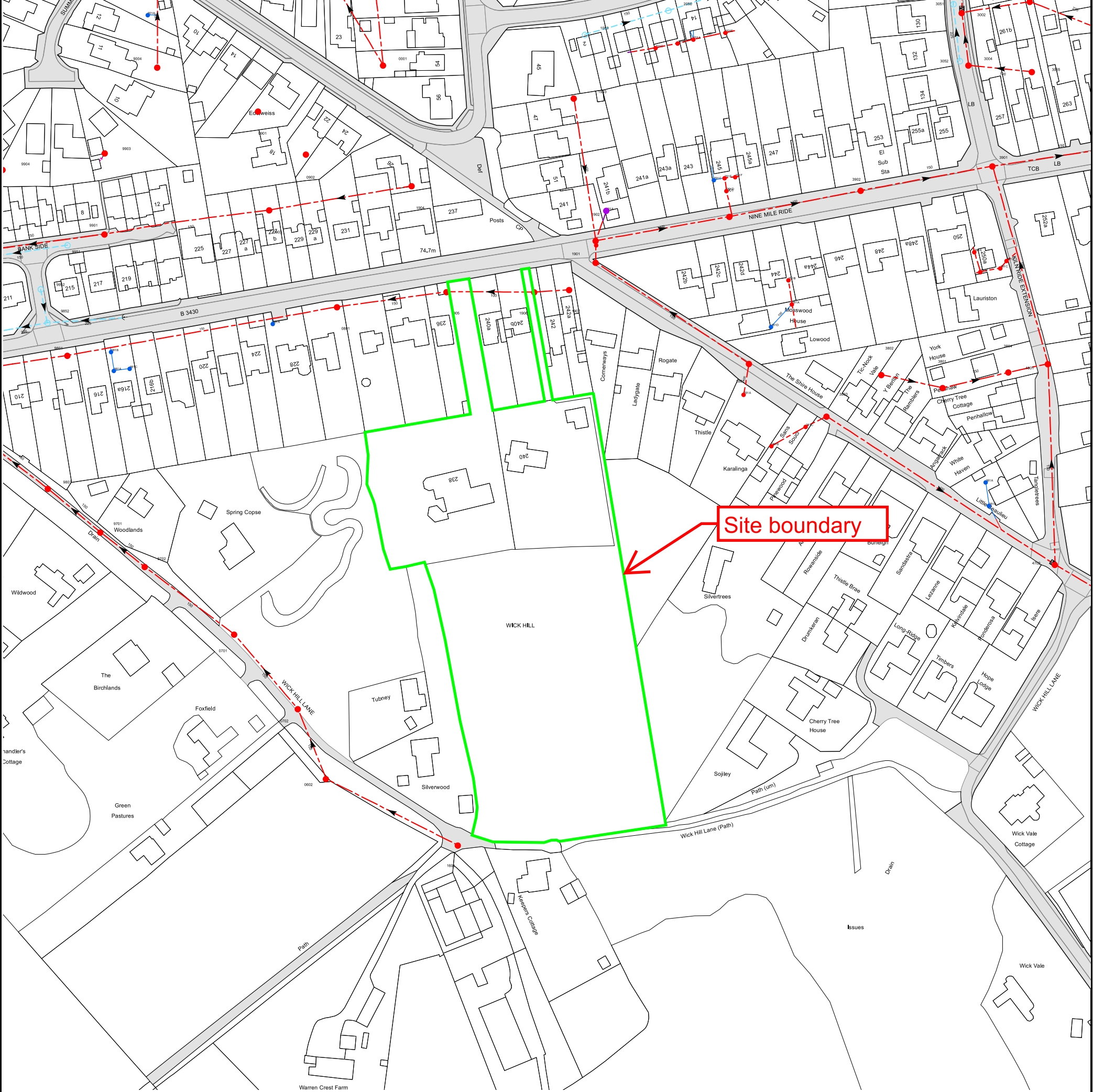
		change. Refer to appendix D for the drainage layout and appendix C for the calculations. – The flood exceedance route plan is in appendix F. – It is proposed to offer of the drainage for adoption by Thames Water. Refer to appendix D for the drainage layout which shows the extent of drainage being offered for adoption			
Document Revision Record					
Rev No	Date	Notes	Author	Checked	Approved
A	10.09.2025	First issue	CS	CM	AR



Project NINE MILE RIDE Sheet 13555w0005 Rev A
Section SURFACE WATER DRAINAGE TECHNICAL NOTE By CS Checked CM Date 10/25

APPENDIX A
Site Location Plan

Asset Location Search Sewer Map - ALS/ALS Standard/2020 4303805



The width of the displayed area is 500 m and the centre of the map is located at OS coordinates 480173,164791
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.

Based on the Ordnance Survey Map with the Sanction of the controller of H.M. Stationery Office, License no. 100019345 Crown Copyright Reserved.

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APPENDIX B
Pages from the BRE365 Infiltration Rate test Report

12th September 2023

Our ref: GE22003/WH01/230912

Paul McKeown
Elivia Homes Central,
Apollo House,
Mercury Park,
High Wycombe, HP10 0HH

Dear Paul,

RE: Nine Mile Ride, Finchampstead – Soakage Testing

Further to your instruction, we write to present the results of the soakage testing undertaken at the above site. The soakage tests were undertaken in broad accordance with BRE Digest 365 'Soakaway Design' BRE, 2016 with the testing limited to a two-day period.

A Geo-Environmental engineer attended the site on 7th and 8th September 2023 to undertake the intrusive investigation. Five hand excavated trial pits (HP05 – HP09) were completed to depths of 1.1 - 1.4m bgl (dependent on ground conditions) to assess ground, groundwater conditions and soakage infiltration rates.

The exploratory holes were positioned approximately adjacent to hand pits (HP105 – HP109) undertaken by Omnia Consulting (ref: A12057/1.0, May 2023). The exploratory hole locations are shown on Figure 2.

Site Description

The site comprised woodland south of No.238 & No.240 Nine Mile Ride. Access was via the rear garden of No.238. The site moderately sloped upwards towards the south. The site was covered by mature and semi-mature trees and bushes. Limited fly-tipping was noted, including asbestos roofing near HP08. A fire had been lit near the entrance of the site.

Low rise fencing defined the site boundaries. Residential properties were located to the north, east and west. Further woodland was located to the south of the site.

Ground Conditions

The ground conditions encountered comprised a mantle of Topsoil overlying the Camberley Sand Formation. A generalised summary of the encountered conditions is presented in Table 1.

Top (m bgl)	Base (m bgl)	Geology	Locations
0.00	0.05 – 0.09	TOPSOIL: Dark brown fine to medium sand with abundant organic material. Root bound.	All
0.05 – 0.09	0.27 – 0.50	CAMBERLEY SAND FORMATION: Grey to greyish brown slightly clayey fine to medium SAND with occasional rootlets and flint gravel.	All
0.27 – 0.40	1.10 – 1.20+	CAMBERLEY SAND FORMATION: Yellowish brown to brown slightly clayey fine to medium SAND with rare rootlets and frequent clay nodules.	HP05 – HP07 & HP09
0.50	1.40+	CAMBERLEY SAND FORMATION: Yellowish brown with slight grey mottling very clayey fine to medium SAND with frequent clay nodules and rare flint gravel.	HP08

Table 1 Summary of Ground Conditions

Geo-Environmental Services Ltd
Unit 7 Danworth Farm, Cuckfield Road, Hurstpierpoint, West Sussex BN6 9GL
+44(0)1273 832972 www.gesl.net

Environmental Consultants | Geotechnical Engineers | Site Investigations

Geo-Environmental Services Ltd incorporated in England number 3214980 VAT number 679544479



Roots and rootlets were encountered across the site to the maximum depth of 1.20m bgl. For further details of the ground conditions encountered, reference should be made to the trial pit logs included within Appendix A.

Obstructions

No manmade or were encountered during the investigation. The presence of obstructions elsewhere at the site cannot be discounted.

All intrusive positions refused before target depth due to the density of the ground conditions encountered.

Groundwater

No groundwater was recorded within the trial pits during the investigation. Monitoring to determine any possible variation in groundwater levels over time did not form part of the agreed scope of investigation.

Soakage Testing

Soakage testing was undertaken in broad accordance with BRE Digest 365 Soakaway Design within five hand excavated trial pits. Testing was undertaken in HP05 – HP09 at depths of 1.1 - 1.4m bgl. Due to the limited time on site (two days) three filling and drainage cycles were not possible. Two tests were completed within all positions.

The results of the testing are summarised in Table 2 below.

Location	Depth (m bgl)	Infiltration Rate (m/s)	
		Test 1	Test 2
HP05	1.1	$7.9 \times 10^{-7} *$	$7.1 \times 10^{-7} *$
HP06	1.1	$6.6 \times 10^{-7} *$	$2.6 \times 10^{-7} *$
HP07	1.2	$1.0 \times 10^{-6} *$	$9.3 \times 10^{-7} *$
HP08	1.4	$2.7 \times 10^{-8} *$	$6.9 \times 10^{-8} *$
HP09	1.2	$4.6 \times 10^{-7} *$	$2.8 \times 10^{-7} *$

*data extrapolated

Table 2: Soakage Test Results

The testing undertaken indicates that the clayey Sands of the Camberley Sand Formation have low infiltration rates and there is potential that attenuation and further consideration to other types of drainage solutions will be required.

Closure

We trust that we have interpreted your instructions correctly, and please do not hesitate to contact us should you have any queries.

Yours sincerely

For and on Behalf of Geo-Environmental



William Hughes MGeol (Hons), MSc, FGS



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Section SURFACE WATER DRAINAGE TECHNICAL NOTE By CS Checked CM Date 10/25

APPENDIX C
Drainage Connections Approval letter from Thames Water





Mr Christos Sibanda – Craddys
63 Macrae Road
Eden Office Park, Ham Green
BRISTOL
BS20 0DD

22 August 2025



Pre-planning enquiry: Confirmation of sufficient capacity

Site address: R/O 240 Nine Mile Ride, Finchampstead RG40 3QD

Dear Mr Sibanda,

Thank you for providing information on your [proposed development of 26 houses with:](#)

- [foul water discharge via gravity to the 100 mm Ø foul water sewer via manhole ref. SU80641906; and](#)
- [surface water discharge via gravity at 3.3 l/s to the 225 mm Ø surface water sewer via manhole ref. SU8064391H.](#)

We have completed the assessment of the [foul water and surface water](#) flows based on the information submitted in your application with the purpose of identifying sewerage capacity within the existing Thames Water sewer network.

As the development is located on a [brownfield](#) site there may be existing sewers or rising mains crossing the site. Where these are to become redundant or to be diverted, the full cost of administering and undertaking the works shall be financed [by the developer](#).

Foul Water

If your proposals progress in line with the details you've provided, we're pleased to confirm that there will be sufficient sewerage capacity in the nearby [foul water](#) sewer network to serve your development.

This confirmation is valid for 12 months or for the life of any planning approval that this information is used to support, up to a maximum of three years.

[You'll need to keep us informed of any changes to your design – for example, an increase in the number/density of units. Such changes could mean that there is no longer sufficient capacity.](#)



Surface Water

In accordance with the Building Act 2000 Clause H3.3, positive connection of surface water to a public sewer will only be consented when it can be demonstrated that the hierarchy of disposal methods have been examined and proven to be impracticable.

Discharges shall be attenuated to reduce the likelihood of flooding downstream of the point of connection. A discharge rate of 2 l/s/ha will be applied unless otherwise stated above. The system shall not show signs of flooding above ground for the worst 1 in 30-year storm and shall be tested for exceedance in a 1 in 100-year storm to demonstrate that any potential flooding will not flood properties.

In order for us to consider any potential surface water needs, you'll need [written approval from the lead local flood authority](#) that you have followed the sequential approach to the disposal of surface water and considered all practical means, as per the below hierarchy.

- 1) Storage and reuse (rainwater harvesting, blue roofs for irrigation, ...).
- 2) Infiltration to ground at or close to source.
- 3) Attenuation in green infrastructure features for gradual release (green roof, rain garden, ...).
- 4) Discharge direct to a watercourse (unless not appropriate).
- 5) Controlled discharge to a surface water sewer.
- 6) Controlled discharge to a combined water sewer.

Providing the above requirements are met, we're pleased to confirm that there will be sufficient sewerage capacity in the nearby [surface water](#) sewer network to serve your development.

This confirmation is valid for 12 months or for the life of any planning approval that this information is used to support, up to a maximum of three years.

[You'll need to keep us informed of any changes to your design – for example, an increase of the impermeable area. Such changes could mean that there is no longer sufficient capacity.](#)

What happens next?

Please make sure to submit your sewer connection application, giving us at least 21 days' notice of the date you wish to make your new connection(s).

If you have any queries, please give me a call on 07747 644 979 (9am to 5pm, Monday to Friday) or email developer.services@thameswater.co.uk.

Yours sincerely,

A handwritten signature in red ink, appearing to read "Nicholas Short", with a long horizontal line extending to the right.

Nicholas Short BSc (Hons)

Adoption & Pre-planning Engineer

Waste Adoptions Thames Valley & Home Counties

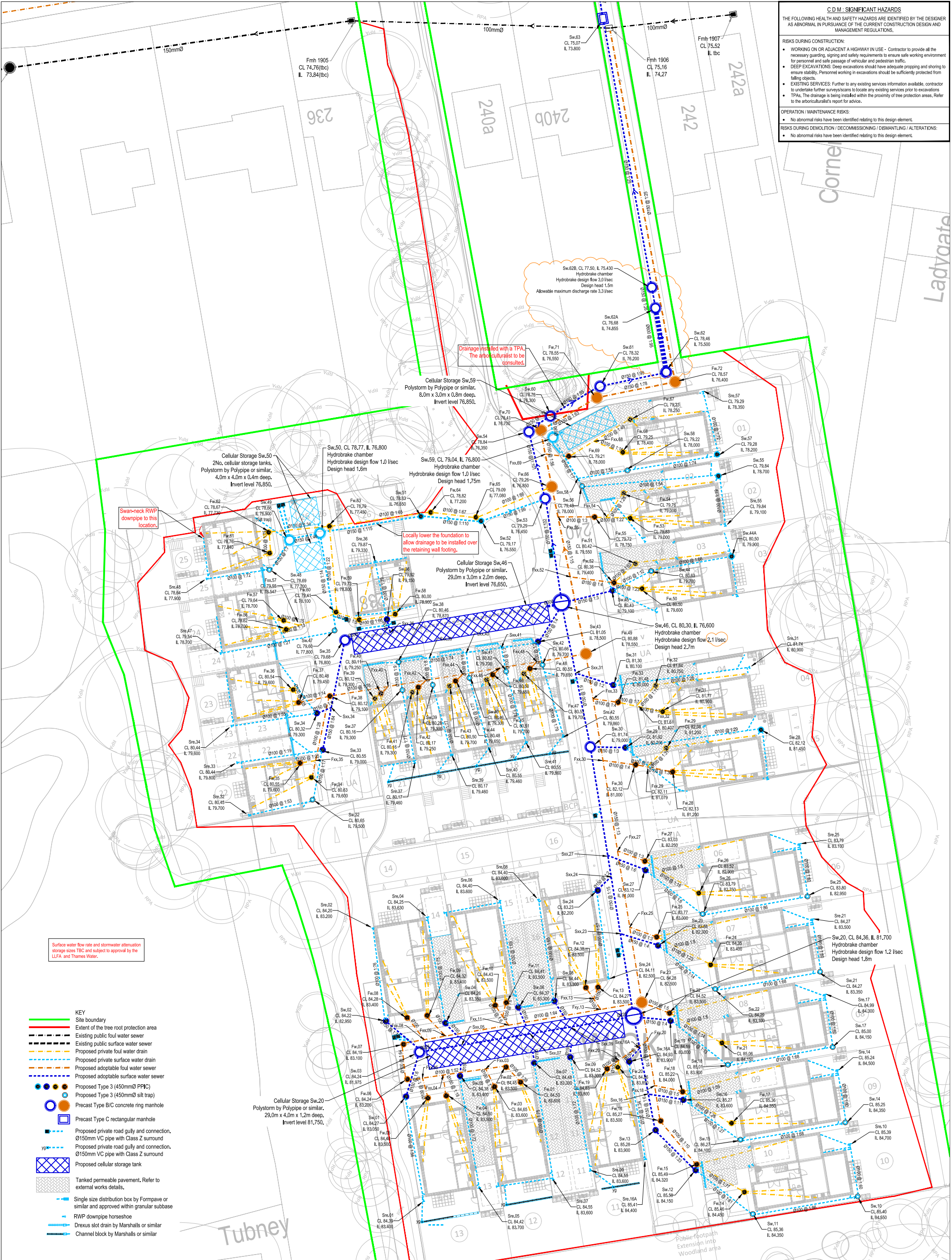
Service Delivery



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Section SURFACE WATER DRAINAGE TECHNICAL NOTE By CS Checked CM Date 10/25

APPENDIX D
Drainage layout





C D M : SIGNIFICANT HAZARDS
THE FOLLOWING HEALTH AND SAFETY HAZARDS ARE IDENTIFIED BY THE DESIGNER AS ABNORMAL IN PURSUANCE OF THE CURRENT CONSTRUCTION DESIGN AND MANAGEMENT REGULATIONS.

RISKS DURING CONSTRUCTION:

- WORKING ON OR ADJACENT A HIGHWAY IN USE - Contractor to provide all the necessary guarding, signing and safety requirements to ensure safe working environment for personnel and safe passage of vehicular and pedestrian traffic.
- DEEP EXCAVATIONS: Deep excavations should have adequate propping and shoring to ensure stability. Personnel working in excavations should be sufficiently protected from falling objects.
- EXISTING SERVICES: Further to any existing services information available, contractor to undertake further surveys/scans to locate any existing services prior to excavations
- TPAs, The drainage is being installed within the proximity of tree protection areas, Refer to the arboriculturalist's report for advice.

OPERATION / MAINTENANCE RISKS:

- No abnormal risks have been identified relating to this design element.

RISKS DURING DEMOLITION / DECOMMISSIONING / DISMANTLING / ALTERATIONS:

- No abnormal risks have been identified relating to this design element.

GENERAL NOTES
DRAWINGS AND SPECIFICATIONS: This drawing is to be read in conjunction with all relevant Architects, Engineers and Specialists drawings together with the specification.
BUILDING REGULATIONS AND WARRANTY PROVIDER APPROVALS: Please note that it is the responsibility of the Client/Main Contractor to ensure that Building Regulations and warranty provider (e.g. NHBC) approval of all design and construction details is achieved prior to construction on site.
DRAINAGE NOTES
DRAINAGE STANDARDS: All private drainage works shall be in accordance with Building Regulations Document Part H. All adoptable drainage works shall be in accordance with Sewerage Sector Guidance Appendix C and Thames Water details.
WORKMANSHIP: Drainage installation shall be in accordance with the BS EN 1610:2015 and the BS 8000 1-14.
LAYING DRAINAGE: It is recommended that all drains be laid starting from the downstream connection and working upstream to the new development.

DRAINAGE PIPE SIZES: All foul water drains to be 100mm diameter unless noted otherwise. All surface water drains to be 150mm U.N.O.
MANHOLE COVER LEVELS: All manhole & inspection chamber cover levels are to be adjusted to suit the Architect's proposed finished surface levels. If the cover levels proposed in the drainage schedules vary from proposed surface level by more than 100mm, Contractor to notify Craddys.
ABOVE GROUND DRAINAGE: RWP/SVP drainage positions shown on Craddys drawings, upon which the below ground drainage is designed, are based upon the positions provided to us by the Architect and these are to be set out on the Architect's floor plans unless agreed otherwise. If above ground drainage positions change then Craddys will need to be informed of these changes in writing and the changes in position clearly noted or highlighted on a drawing, i.e. using revision clouds, with relevant CAD files provided to Craddys below ground drainage drawings to be updated. Note that should these changes occur following Craddys issue of Construction status drawings then there is a risk of the contractor undertaking abortive works.

IF YOU HAVE A QUERY CALL US
SCALING FROM THIS DRAWING OR OBTAINING DIMENSIONS ELECTRONICALLY MAY NOT PROVIDE ACCURATE INFORMATION AND SHOULD BE AVOIDED. WORK ONLY FROM FIGURED DIMENSIONS.

C05	FLOW CONTROL AND LARGE DIAMETER PIPE ADDED.	CS	14.08.25
C04	SURFACE WATER DRAINAGE ARRANGEMENTS FOR PLOTS 1 AND 6 TO 10 CHANGED.	CS	23.07.25
C03	ONE INVERT LEVEL CHANGED, TWO MANHOLE LABELS ADDED.	CS	16.07.25
C02	TEXT OVERLAPS AMENDED	CS	02.06.25
C01	TENDER ISSUE	CS	02.06.25
REV	REVISION DETAILS	BY	DATE

CRADDYS
Consulting Civil and Structural Engineers
www.craddys.co.uk

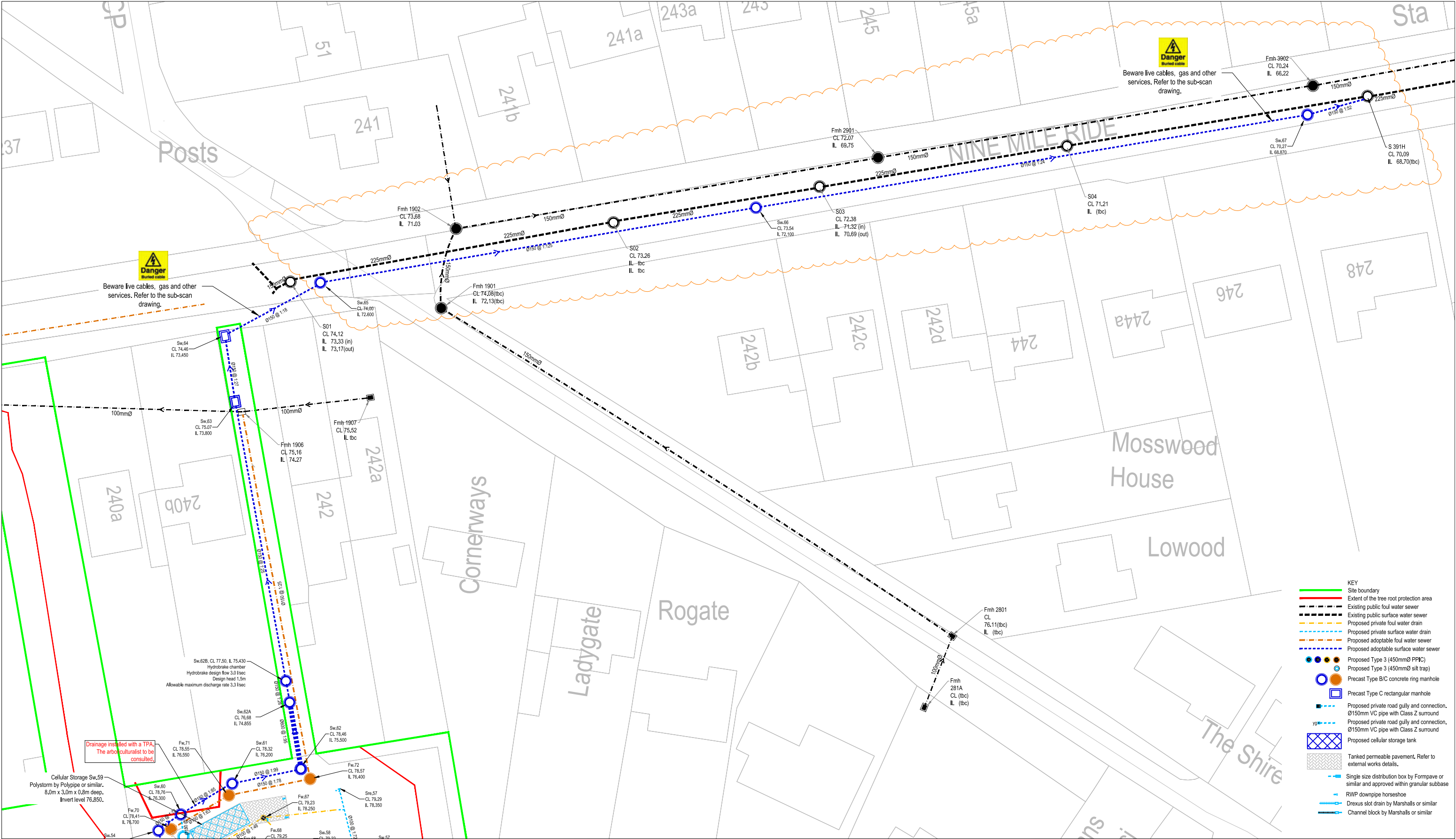
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PROJECT TITLE
RESIDENTIAL DEVELOPMENT
NINE MILE RIDE
FINCHAMPSTEAD

DRAWING TITLE
SECTION 104
DRAINAGE LAYOUT
SHEET 1 OF 2

SCALE AT A1	DRG SIZE	DRAWN	CHECKED	APPROVED
1:250	A1	CS	MTB	AR

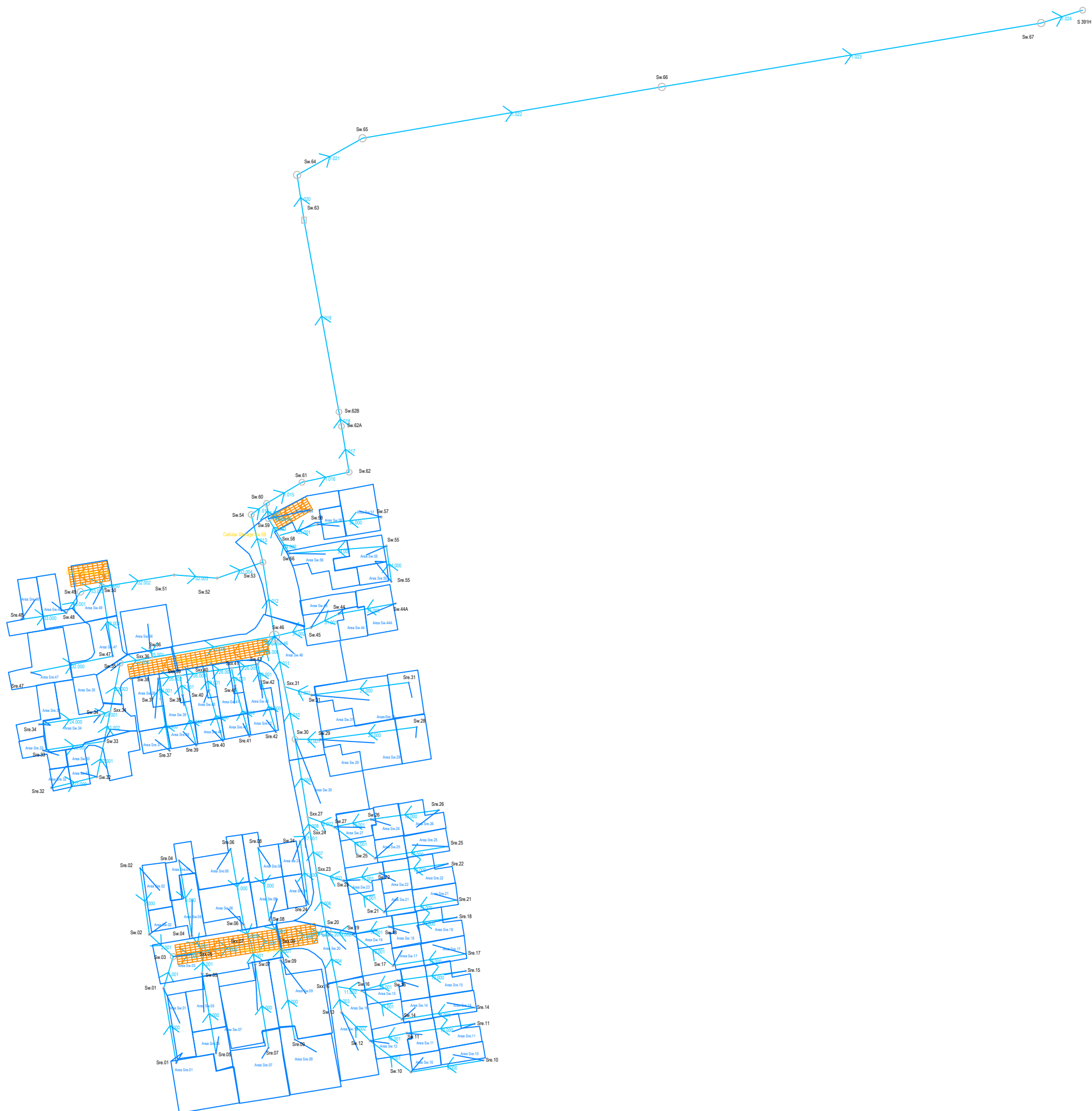
JOB NO.	DRAWING NUMBER	REV
13555	13555-CDY-XX-XX-D-D-0050	C05



IF YOU HAVE A QUERY CALL US SCALING FROM THIS DRAWING OR OBTAINING DIMENSIONS ELECTRONICALLY MAY NOT PROVIDE ACCURATE INFORMATION AND SHOULD BE AVOIDED. WORK ONLY FROM FIGURED DIMENSIONS.		WORKMANSHIP: Drainage installation shall be in accordance with the BS EN 1610:2015 and the BS 8000 1-14. LAYING DRAINAGE: It is recommended that all drains be laid starting from the downstream connection and working upstream to the new development. DRAINAGE PIPE SIZES: All foul water drains to be 100mm diameter unless noted otherwise. All surface water drains to be 150mm U.N.O. MANHOLE COVER LEVELS: All manhole & inspection chamber cover levels are to be adjusted to suit the Architect's proposed finished surface levels. If the cover levels proposed in the drainage schedules vary from proposed surface level by more than 100mm, Contractor to notify Craddys.		ABOVE GROUND DRAINAGE: RWP/SVP drainage positions shown on Craddys drawings, upon which the below ground drainage is designed, are based upon the positions provided to us by the Architect and these are to be set out on the Architect's floor plans unless agreed otherwise. If above ground drainage positions change then Craddys will need to be informed of these changes in writing and the changes in position clearly noted or highlighted on a drawing, i.e. using revision clouds, with relevant CAD files provided to Craddys below ground drainage drawings to be updated. Note that should these changes occur following Craddys issue of Construction status drawings then there is a risk of the contractor undertaking abortive works.		C D M : SIGNIFICANT HAZARDS THE FOLLOWING HEALTH AND SAFETY HAZARDS ARE IDENTIFIED BY THE DESIGNER AS ABNORMAL IN PURSUANCE OF THE CURRENT CONSTRUCTION DESIGN AND MANAGEMENT REGULATIONS. RISKS DURING CONSTRUCTION: - WORKING ON OR ADJACENT A HIGHWAY IN USE - Contractor to provide all the necessary guarding, signing and safety requirements to ensure safe working environment for personnel and safe passage of vehicular and pedestrian traffic. - DEEP EXCAVATIONS: Deep excavations should have adequate propping and shoring to ensure stability. Personnel working in excavations should be sufficiently protected from falling objects. - EXISTING SERVICES: Further to any existing services information available, contractor to undertake further surveys/scans to locate any existing services prior to excavations - TPAs: The drainage is being installed within the proximity of tree protection areas, Refer to the arboriculturalist's report for advice. OPERATION / MAINTENANCE RISKS: - No abnormal risks have been identified relating to this design element. RISKS DURING DEMOLITION / DECOMMISSIONING / DISMANTLING / ALTERATIONS: - No abnormal risks have been identified relating to this design element.		C05 SURFACE WATER DRAINAGE CONNECTION POINT CHANGED. C04 FLOW CONTROL AND LARGE DIAMETER PIPE ADDED. C03 SURFACE WATER DRAINAGE CONNECTION POINT CHANGED. C02 SURFACE WATER DRAINAGE CONNECTION POINT CHANGED, ALTERNATIVE SURFACE WATER DRAINAGE CONNECTION POINT ADDED. C01 TENDER ISSUE REV REVISION DETAILS		CS 10.08.25 CS 14.08.25 CS 01.07.25 CS 02.06.25 CS 02.06.25 BY DATE		CRADDYS Consulting Civil and Structural Engineers www.craddys.co.uk THIS DRAWING IS THE COPYRIGHT OF CRADDY PITCHERS LTD AND MUST NOT BE COPIED, REPRODUCED OR SUBMITTED TO OTHER PARTIES WITHOUT THEIR PERMISSION. CUSTOMER ELVIA HOMES (CENTRAL) LIMITED STATUS A4 - TENDER		PROJECT TITLE RESIDENTIAL DEVELOPMENT NINE MILE RIDE FINCHAMSTEAD DRAWING TITLE SECTION 104 DRAINAGE LAYOUT - SHEET 2 OF 2 SCALE AT A1 DRG SIZE 1:250 DRAWN CS CHECKED MTB APPROVED AR JOB NO. 13555 DRAWING NUMBER 13555-CDY-XX-XX-D-D-0051 REV C05	
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Section SURFACE WATER DRAINAGE TECHNICAL NOTE By CS Checked CM Date 10/25

APPENDIX E
Surface water Drainage Calculations



Project:	Date: 30/05/2025		
	Designed by: sibandac	Checked by:	Approved By:
	Company Address:		
Report Details: Type: Junctions Storm Phase: 13555 SW drainage			



Name	Junction Type	Easting (m)	Northing (m)	Cover Level (m)	Depth (m)	Invert Level (m)	Chamber Shape	Diameter (m)	Diameter (m)	Width (m)	Lock	Part Family
Sre.14	Manhole	480197.718	164744.425	86.563	0.463	86.100	Circular	0.300			None	Cylindrical Structure Slab Top Circular Frame SI
Sw.14	Manhole	480182.879	164742.027	86.383	2.483	83.900	Circular	0.450			None	Cylindrical Structure Slab Top Circular Frame SI
Sw.12	Manhole	480176.344	164737.614	85.498	1.348	84.150	Circular	0.450			None	Cylindrical Structure Slab Top Circular Frame SI
Sre.10	Manhole	480199.549	164733.601	85.400	0.700	84.700	Circular	0.300			None	Cylindrical Structure Slab Top Circular Frame SI
Sre.11	Manhole	480197.779	164741.091	85.396	0.696	84.700	Circular	0.300			None	Cylindrical Structure Slab Top Circular Frame SI
Sw.11	Manhole	480183.821	164739.168	85.391	1.041	84.350	Circular	0.450			None	Cylindrical Structure Slab Top Circular Frame SI
Sw.10	Manhole	480184.709	164731.203	85.356	0.956	84.400	Circular	0.450			None	Cylindrical Structure Slab Top Circular Frame SI
Sw.13	Manhole	480170.493	164743.441	85.278	1.378	83.900	Circular	0.450			None	Cylindrical Structure Slab Top Circular Frame SI
Sw.16	Manhole	480174.544	164747.900	85.270	1.620	83.650	Circular	0.450			None	Cylindrical Structure Slab Top Circular Frame SI
Sw.15	Manhole	480181.990	164749.992	85.248	1.398	83.850	Circular	0.300			None	Cylindrical Structure Slab Top Circular Frame SI
Sre.15	Manhole	480195.949	164751.915	85.246	1.146	84.100	Circular	0.300			None	Cylindrical Structure Slab Top Circular Frame SI

Project:					Date: 30/05/2025						I DRN	
					Designed by: sibandac			Checked by:		Approved By:		
Report Details: Type: Junctions Storm Phase: 13555 SW drainage					Company Address:							
Sxx.16	Manhole	480169.604	164748.712	85.085	1.530	83.555	Circular	0.300			None	Cylindrical Structure Slab Top Circular Frame SI
Sw.19	Manhole	480172.678	164759.462	84.591	1.591	83.000	Circular	0.450			None	Cylindrical Structure Slab Top Circular Frame SI
Sre.07	Manhole	480155.513	164736.215	84.550	0.950	83.600	Circular	0.300			None	Cylindrical Structure Slab Top Circular Frame SI
Sre.09	Manhole	480160.894	164737.875	84.549	0.949	83.600	Circular	0.300			None	Cylindrical Structure Slab Top Circular Frame SI
Sw.09	Manhole	480158.010	164754.131	84.515	1.215	83.300	Circular	0.450			None	Cylindrical Structure Slab Top Circular Frame SI
Sw.07	Manhole	480152.745	164753.290	84.480	1.180	83.300	Circular	0.450			None	Cylindrical Structure Slab Top Circular Frame SI
Sw.22	Manhole	480178.322	164772.018	84.259	0.909	83.350	Circular	0.450			None	Cylindrical Structure Slab Top Circular Frame SI
Sre.22	Manhole	480192.281	164773.941	84.270	0.670	83.600	Circular	0.300			None	Cylindrical Structure Slab Top Circular Frame SI
Sw.08	Manhole	480155.695	164762.363	84.439	1.139	83.300	Circular	0.450			None	Cylindrical Structure Slab Top Circular Frame SI
Sre.21	Manhole	480194.051	164766.452	84.275	0.675	83.600	Circular	0.300			None	Cylindrical Structure Slab Top Circular Frame SI
Sre.05	Manhole	480144.714	164735.030	84.425	0.725	83.700	Circular	0.300			None	Cylindrical Structure Slab Top Circular Frame SI
Sre.08	Manhole	480153.360	164777.188	84.401	0.801	83.600	Circular	0.300			None	Cylindrical Structure Slab Top Circular Frame SI

Project:					Date: 30/05/2025						I DRN	
					Designed by: sibandac			Checked by:		Approved By:		
Report Details: Type: Junctions Storm Phase: 13555 SW drainage					Company Address:							
Sre.06	Manhole	480147.738	164777.007	84.400	0.800	83.600	Circular	0.300			None	Cylindrical Structure Slab Top Circular Frame SI
Sw.21	Manhole	480179.211	164764.053	84.286	0.986	83.300	Circular	0.450			None	Cylindrical Structure Slab Top Circular Frame SI
Sre.01	Manhole	480136.586	164733.052	84.391	0.991	83.400	Circular	0.300			None	Cylindrical Structure Slab Top Circular Frame SI
Sw.05	Manhole	480141.887	164751.410	84.376	0.976	83.400	Circular	0.450			None	Cylindrical Structure Slab Top Circular Frame SI
Sw.06	Manhole	480150.415	164761.441	84.369	1.069	83.300	Circular	0.450			None	Cylindrical Structure Slab Top Circular Frame SI
Sw.20	Manhole	480167.279	164760.141	84.361	2.661	81.700	Circular	2.100			None	Cylindrical Structure Slab Top Circular Frame SI
Sxx.05	Manhole	480142.144	164755.925	84.305	2.384	81.921	Circular	0.300			None	Cylindrical Structure Slab Top Circular Frame SI
Sxx.07	Manhole	480151.949	164757.570	84.412	2.577	81.835	Circular	0.300			None	Cylindrical Structure Slab Top Circular Frame SI
Sw.01	Manhole	480134.005	164748.381	84.273	1.223	83.050	Circular	0.450			None	Cylindrical Structure Slab Top Circular Frame SI
Sw.03	Manhole	480135.973	164754.890	84.244	2.269	81.975	Circular	1.200			None	Cylindrical Structure Slab Top Circular Frame SI
Sw.04	Manhole	480139.770	164759.123	84.257	0.907	83.350	Circular	0.450			None	Cylindrical Structure Slab Top Circular Frame SI
Sre.04	Manhole	480137.141	164774.613	84.250	0.620	83.630	Circular	0.300			None	Cylindrical Structure Slab Top Circular Frame SI

Project:					Date: 30/05/2025							I DRN	
					Designed by: sibandac			Checked by:		Approved By:			
Report Details: Type: Junctions Storm Phase: 13555 SW drainage					Company Address:								
Sw.02	Manhole	480131.062	164759.442	84.217	1.267	82.950	Circular	0.450			None	Cylindrical Structure Slab Top Circular Frame SI	
Sre.02	Manhole	480129.172	164773.019	84.203	1.003	83.200	Circular	0.300			None	Cylindrical Structure Slab Top Circular Frame SI	
Sw.23	Manhole	480170.846	164770.464	83.855	1.555	82.300	Circular	0.450			None	Cylindrical Structure Slab Top Circular Frame SI	
Sxx.09	Manhole	480158.061	164758.595	84.479	2.698	81.781	Circular	0.300			None	Cylindrical Structure Slab Top Circular Frame SI	
Sw.24	Manhole	480162.030	164778.515	83.233	1.033	82.200	Circular	0.450			None	Cylindrical Structure Slab Top Circular Frame SI	
Sw.27	Manhole	480169.006	164781.477	83.119	2.119	81.000	Circular	0.450			None	Cylindrical Structure Slab Top Circular Frame SI	
Sw.18	Manhole	480180.164	164761.011	84.985	0.885	84.100	Circular	0.450			None	Cylindrical Structure Slab Top Circular Frame SI	
Sre.18	Manhole	480194.123	164762.934	85.000	0.700	84.300	Circular	0.300			None	Cylindrical Structure Slab Top Circular Frame SI	
Sw.29	Manhole	480166.063	164799.404	81.921	1.221	80.700	Circular	0.450			None	Cylindrical Structure Slab Top Circular Frame SI	
Sw.30	Manhole	480160.942	164799.503	81.737	2.737	79.000	Circular	1.200			None	Cylindrical Structure Slab Top Circular Frame SI	
Sw.31	Manhole	480164.302	164808.553	81.301	1.201	80.100	Circular	0.450			None	Cylindrical Structure Slab Top Circular Frame SI	
Sre.17	Manhole	480195.893	164755.439	85.000	0.600	84.400	Circular	0.300			None	Cylindrical Structure Slab Top Circular Frame SI	

Project:						Date: 30/05/2025					I DRN	
						Designed by: sibandac		Checked by:		Approved By:		
Report Details: Type: Junctions Storm Phase: 13555 SW drainage						Company Address:						
Sw.43	Manhole	480153.293	164814.878	80.662	2.162	78.500	Circular	0.450			None	Cylindrical Structure Slab Top Circular Frame SI
Sw.45	Manhole	480164.186	164822.375	80.432	1.332	79.100	Circular	0.450			None	Cylindrical Structure Slab Top Circular Frame SI
Sw.46	Manhole	480156.720	164820.624	80.687	4.087	76.600	Circular	2.100			None	Cylindrical Structure Slab Top Circular Frame SI
Sw.34	Manhole	480120.950	164804.448	80.317	2.017	78.300	Circular	0.450			None	Cylindrical Structure Slab Top Circular Frame SI
Sw.38	Manhole	480132.910	164811.907	80.072	1.202	78.870	Circular	0.450			None	Cylindrical Structure Slab Top Circular Frame SI
Sre.55	Manhole	480180.708	164831.813	79.842	0.743	79.100	Circular	0.300			None	Cylindrical Structure Slab Top Circular Frame SI
Sw.55	Manhole	480179.666	164839.109	79.841	1.141	78.700	Circular	0.450			None	Cylindrical Structure Slab Top Circular Frame SI
Sw.59	Manhole	480155.481	164844.757	79.036	2.236	76.800	Circular	1.200			None	Cylindrical Structure Slab Top Circular Frame SI
Sw.17	Manhole	480181.053	164753.045	85.012	0.862	84.150	Circular	0.450			None	Cylindrical Structure Slab Top Circular Frame SI
Sw.56	Manhole	480159.752	164837.626	79.469	1.119	78.350	Circular	0.450			None	Cylindrical Structure Slab Top Circular Frame SI
Sw.58	Manhole	480165.563	164843.570	79.295	1.095	78.200	Circular	0.450			None	Cylindrical Structure Slab Top Circular Frame SI
Sw.57	Manhole	480178.598	164845.085	79.292	0.842	78.450	Circular	0.450			None	Cylindrical Structure Slab Top Circular Frame SI

Project:					Date: 30/05/2025							I DRN	
					Designed by: sibandac			Checked by:		Approved By:			
Report Details: Type: Junctions Storm Phase: 13555 SW drainage					Company Address:								
Sw.53	Manhole	480154.338	164835.808	79.285	2.835	76.450	Circular	1.200			None	Cylindrical Structure Slab Top Circular Frame SI	
Sxx.58	Manhole	480157.583	164841.247	79.242	1.667	77.575	Circular	0.300			None	Cylindrical Structure Slab Top Circular Frame SI	
Sw.52	Manhole	480144.980	164832.540	79.170	2.620	76.550	Circular	0.450			None	Cylindrical Structure Slab Top Circular Frame SI	
Sw.54	Manhole	480151.959	164845.590	78.839	2.489	76.350	Circular	1.200			None	Cylindrical Structure Slab Top Circular Frame SI	
Sw.51	Manhole	480136.171	164833.205	78.830	2.180	76.650	Circular	0.450			None	Cylindrical Structure Slab Top Circular Frame SI	
Sw.50	Manhole	480121.412	164830.761	78.771	1.971	76.800	Circular	1.200			None	Cylindrical Structure Slab Top Circular Frame SI	
Sw.60	Manhole	480155.108	164847.878	78.757	2.457	76.300	Circular	1.200			None	Cylindrical Structure Slab Top Circular Frame SI	
Sw.48	Manhole	480114.023	164825.419	78.685	0.985	77.700	Circular	0.450			None	Cylindrical Structure Slab Top Circular Frame SI	
Sw.49	Manhole	480116.956	164829.739	78.656	1.756	76.900	Circular	1.350			None	Cylindrical Structure Slab Top Circular Frame SI	
Sw.62	Manhole	480172.037	164854.296	78.457	2.807	75.650	Circular	1.200			None	Cylindrical Structure Slab Top Circular Frame SI	
Sw.61	Manhole	480162.360	164852.220	78.321	2.121	76.200	Circular	1.200			None	Cylindrical Structure Slab Top Circular Frame SI	
Sw.63	Manhole	480162.788	164906.017	75.066	1.266	73.800	Rectangular		1.240	0.900	None	Rectangular Junction Structure NF SI	

Project:					Date: 30/05/2025						I DRN	
					Designed by: sibandac			Checked by:		Approved By:		
Report Details: Type: Junctions Storm Phase: 13555 SW drainage					Company Address:							
Sw.64	Manhole	480161.370	164915.270	74.459	1.009	73.450	Circular	1.500			None	Cylindrical Structure Slab Top Circular Frame SI
Sw.65	Manhole	480174.788	164922.813	74.000	1.400	72.600	Circular	1.500			None	Cylindrical Structure Slab Top Circular Frame SI
Sre.24	Manhole	480163.668	164765.614	84.112	1.612	82.500	Circular	0.300			None	Cylindrical Structure Slab Top Circular Frame SI
Sw.26	Manhole	480176.483	164783.031	83.339	0.989	82.350	Circular	0.450			None	Cylindrical Structure Slab Top Circular Frame SI
Sre.26	Manhole	480190.441	164784.954	83.793	1.193	82.600	Circular	0.300			None	Cylindrical Structure Slab Top Circular Frame SI
Sw.25	Manhole	480177.371	164775.066	83.794	0.694	83.100	Circular	0.450			None	Cylindrical Structure Slab Top Circular Frame SI
Sxx.27	Manhole	480163.510	164783.549	82.800	2.706	80.094	Circular	0.300			None	Cylindrical Structure Slab Top Circular Frame SI
Sre.25	Manhole	480192.212	164777.460	83.809	0.409	83.400	Circular	0.300			None	Cylindrical Structure Slab Top Circular Frame SI
Sxx.24	Manhole	480163.978	164780.624	82.995	2.692	80.303	Circular	0.300			None	Cylindrical Structure Slab Top Circular Frame SI
Sxx.23	Manhole	480165.342	164772.171	83.559	2.684	80.875	Circular	0.300			None	Cylindrical Structure Slab Top Circular Frame SI
Sw.28	Manhole	480185.895	164802.007	82.115	0.665	81.450	Circular	0.300			None	Cylindrical Structure Slab Top Circular Frame SI
Sre.31	Manhole	480184.231	164811.128	81.742	0.842	80.900	Circular	0.300			None	Cylindrical Structure Slab Top Circular Frame SI

Project:	Date: 30/05/2025			
	Designed by: sibandac	Checked by:	Approved By:	
	Company Address:			
Report Details: Type: Junctions Storm Phase: 13555 SW drainage				

Sxx.31	Manhole	480158.791	164810.263	81.004	3.227	77.777	Circular	0.300			None	Cylindrical Structure Slab Top Circular Frame SI
Sw.42	Manhole	480153.949	164811.507	80.658	0.958	79.700	Circular	0.450			None	Cylindrical Structure Slab Top Circular Frame SI
Sw.44	Manhole	480169.846	164825.210	80.631	0.931	79.700	Circular	0.450			None	Cylindrical Structure Slab Top Circular Frame SI
Sw.41	Manhole	480148.626	164810.540	80.624	0.924	79.700	Circular	0.450			None	Cylindrical Structure Slab Top Circular Frame SI
Sre.40	Manhole	480146.157	164799.128	80.545	1.085	79.460	Circular	0.300			None	Cylindrical Structure Slab Top Circular Frame SI
Sre.41	Manhole	480151.594	164800.037	80.545	0.685	79.860	Circular	0.300			None	Cylindrical Structure Slab Top Circular Frame SI
Sre.42	Manhole	480157.031	164800.946	80.545	0.685	79.860	Circular	0.300			None	Cylindrical Structure Slab Top Circular Frame SI
Sw.44A	Manhole	480181.590	164827.360	80.501	0.601	79.900	Circular	0.300			None	Cylindrical Structure Slab Top Circular Frame SI
Sw.40	Manhole	480143.259	164809.581	80.463	1.163	79.300	Circular	0.450			None	Cylindrical Structure Slab Top Circular Frame SI
Sxx.34	Manhole	480123.071	164805.264	80.254	1.330	78.925	Circular	0.300			None	Cylindrical Structure Slab Top Circular Frame SI
Sre.34	Manhole	480108.457	164802.542	80.439	0.839	79.600	Circular	0.300			None	Cylindrical Structure Slab Top Circular Frame SI
Sre.33	Manhole	480109.288	164797.207	80.437	0.637	79.800	Circular	0.300			None	Cylindrical Structure Slab Top Circular Frame SI

Project:					Date: 30/05/2025						I DRN	
					Designed by: sibandac			Checked by:		Approved By:		
Report Details: Type: Junctions Storm Phase: 13555 SW drainage					Company Address:							
Sxx.39	Manhole	480137.414	164812.563	80.192	1.453	78.738	Circular	0.300			None	Cylindrical Structure Slab Top Circular Frame SI
Sxx.40	Manhole	480142.782	164813.346	80.336	1.672	78.664	Circular	0.300			None	Cylindrical Structure Slab Top Circular Frame SI
Sw.39	Manhole	480137.893	164808.579	80.282	0.982	79.300	Circular	0.450			None	Cylindrical Structure Slab Top Circular Frame SI
Sre.32	Manhole	480111.013	164789.517	80.446	0.746	79.700	Circular	0.450			None	Cylindrical Structure Slab Top Circular Frame SI
Sxx.41	Manhole	480147.931	164814.096	80.399	1.805	78.594	Circular	0.300			None	Cylindrical Structure Slab Top Circular Frame SI
Sre.39	Manhole	480140.720	164798.218	80.170	0.710	79.460	Circular	0.300			None	Cylindrical Structure Slab Top Circular Frame SI
Sre.37	Manhole	480135.236	164797.121	80.168	0.708	79.460	Circular	0.300			None	Cylindrical Structure Slab Top Circular Frame SI
Sw.37	Manhole	480133.457	164807.801	80.158	0.858	79.300	Circular	0.450			None	Cylindrical Structure Slab Top Circular Frame SI
Sw.33	Manhole	480121.809	164799.079	80.550	1.550	79.000	Circular	0.450			None	Cylindrical Structure Slab Top Circular Frame SI
Sw.32	Manhole	480120.326	164791.793	80.646	1.146	79.500	Circular	0.450			None	Cylindrical Structure Slab Top Circular Frame SI
Sw.47	Manhole	480123.544	164816.526	79.597	1.797	77.800	Circular	0.450			None	Cylindrical Structure Slab Top Circular Frame SI
Sre.47	Manhole	480106.853	164813.186	79.543	0.843	78.700	Circular	0.300			None	Cylindrical Structure Slab Top Circular Frame SI

Project:	Date: 30/05/2025		
	Designed by: sibandac	Checked by:	Approved By:
Report Details: Type: Junctions Storm Phase: 13555 SW drainage	Company Address:		



Sre.48	Manhole	480104.825	164824.073	78.639	0.739	77.900	Circular	0.300		None	Cylindrical Structure Slab Top Circular Frame SI
Sw.35	Manhole	480125.079	164815.110	79.685	2.885	76.800	Circular	1.200		None	Cylindrical Structure Slab Top Circular Frame SI
Sxx.36	Manhole	480131.721	164816.268	79.933	3.175	76.758	Circular	0.300		None	Cylindrical Structure Slab Top Circular Frame SI
Sw.36	Manhole	480131.208	164818.156	79.917	0.767	79.150	Circular	0.450		None	Cylindrical Structure Slab Top Circular Frame SI
Sw.62A	Manhole	480170.462	164863.694	77.679	2.129	75.550	Circular	1.200		None	
Sw.62B	Manhole	480169.960	164866.667	77.496	2.066	75.430	Circular	1.200		None	
Sw.66	Manhole	480236.166	164933.349	73.538	1.438	72.100	Circular	1.500		None	
Sw.67	Manhole	480313.939	164946.448	70.268	1.398	68.870	Circular	1.500		None	
S 391H	Manhole	480322.441	164949.092	70.090	1.390	68.700	Circular	1.200		None	

Outlets

Junction	Outlet Name	Outgoing Connection	Outlet Type
Sre.14	Outlet	11.000	Free Discharge
Sw.14	Outlet	11.001	Free Discharge
Sw.12	Outlet	9.002	Free Discharge
Sre.10	Outlet	9.000	Free Discharge
Sre.11	Outlet	10.000	Free Discharge
Sw.11	Outlet	10.001	Free Discharge
Sw.10	Outlet	9.001	Free Discharge
Sw.13	Outlet	9.003	Free Discharge
Sw.16	Outlet	11.002	Free Discharge
Sw.15	Outlet	12.001	Free Discharge
Sre.15	Outlet	12.000	Free Discharge
Sxx.16	Outlet	9.004	Free Discharge
Sw.19	Outlet	13.002	Free Discharge
Sre.07	Outlet	6.000	Free Discharge
Sre.09	Outlet	8.000	Free Discharge
Sw.09	Outlet	8.001	Free Discharge
Sw.07	Outlet	6.001	Free Discharge
Sw.22	Outlet	16.001	Free Discharge
Sre.22	Outlet	16.000	Free Discharge
Sw.08	Outlet	7.001	Free Discharge
Sre.21	Outlet	15.000	Free Discharge
Sre.05	Outlet	3.000	Free Discharge

Project:

Report Details:
Type: Junctions
Storm Phase: 13555 SW drainage

Date:
30/05/2025

Designed by:
sibandac

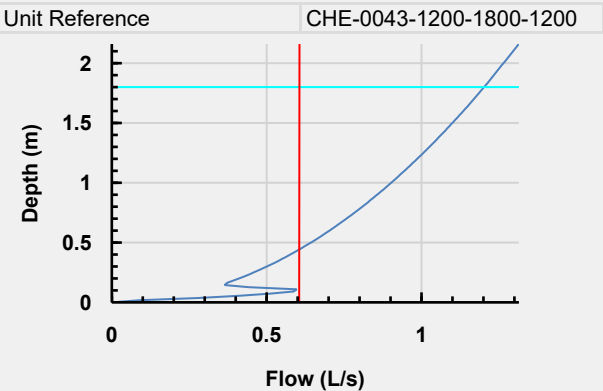
Checked by:

Approved By:

Company Address:

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DRN

Junction	Outlet Name	Outgoing Connection	Outlet Type
Sre.08	Outlet	7.000	Free Discharge
Sre.06	Outlet	5.000	Free Discharge
Sw.21	Outlet	15.001	Free Discharge
Sre.01	Outlet	1.000	Free Discharge
Sw.05	Outlet	3.001	Free Discharge
Sw.06	Outlet	5.001	Free Discharge
Sw.20	Outlet	1.006	Hydro-Brake®
	Invert Level (m)	81.700	
	Design Depth (m)	1.800	
	Design Flow (L/s)	1.2	
	Objective	Minimise Upstream Storage Requirements	
	Application	Surface Water Only	
	Sump Available	☐	
	Unit Reference	CHE-0043-1200-1800-1200	
			
Sxx.05	Outlet	1.003	Free Discharge
Sxx.07	Outlet	1.004	Free Discharge
Sw.01	Outlet	1.001	Free Discharge
Sw.03	Outlet	1.002	Free Discharge
Sw.04	Outlet	4.001	Free Discharge
Sre.04	Outlet	4.000	Free Discharge
Sw.02	Outlet	2.001	Free Discharge
Sre.02	Outlet	2.000	Free Discharge
Sw.23	Outlet	15.002	Free Discharge
Sxx.09	Outlet	1.005	Free Discharge
Sw.24	Outlet	17.001	Free Discharge
Sw.27	Outlet	18.002	Free Discharge
Sw.18	Outlet	14.001	Free Discharge
Sre.18	Outlet	14.000	Free Discharge
Sw.29	Outlet	20.001	Free Discharge

Project:

Report Details:
Type: Junctions
Storm Phase: 13555 SW drainage

Date:
30/05/2025

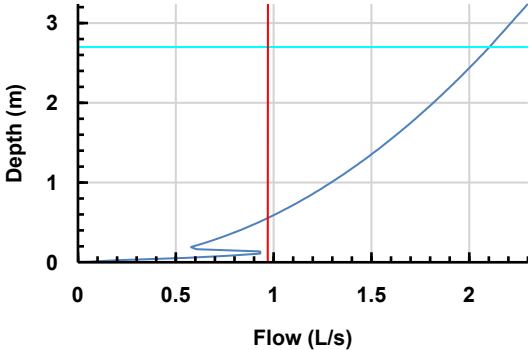
Designed by:
sibandac

Company Address:

Checked by:

Approved By:



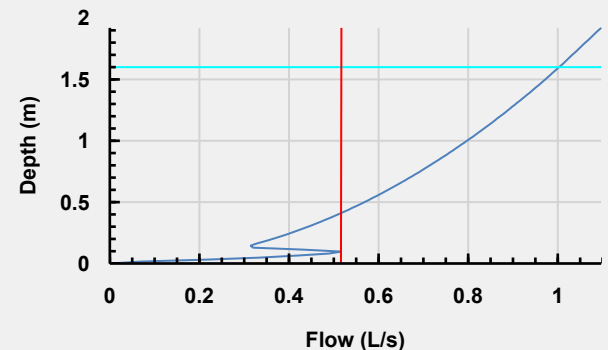
Junction	Outlet Name	Outgoing Connection	Outlet Type
Sw.30	Outlet	1.010	Free Discharge
Sw.31	Outlet	21.001	Free Discharge
Sre.17	Outlet	13.000	Free Discharge
Sw.43	Outlet	26.006	Free Discharge
Sw.45	Outlet	31.002	Free Discharge
Sw.46	Outlet	1.012	Hydro-Brake®
	Invert Level (m)	76.600	
	Design Depth (m)	2.700	
	Design Flow (L/s)	2.1	
	Objective	Minimise Upstream Storage Requirements	
	Application	Surface Water Only	
	Sump Available	☐	
	Unit Reference	CHE-0052-2100-2700-2100	
			
Sw.34	Outlet	24.001	Free Discharge
Sw.38	Outlet	26.002	Free Discharge
Sre.55	Outlet	34.000	Free Discharge
Sw.55	Outlet	34.001	Free Discharge
	Outlet	34.004	Hydro-Brake®

Project:	Date: 30/05/2025		
	Designed by: sibandac	Checked by:	Approved By:
Report Details: Type: Junctions Storm Phase: 13555 SW drainage	Company Address:		



Junction	Outlet Name	Outgoing Connection	Outlet Type
Sw.59	Invert Level (m)	76.800	
	Design Depth (m)	1.750	
	Design Flow (L/s)	1.0	
	Objective	Minimise Upstream Storage Requirements	
	Application	Surface Water Only	
	Sump Available	☐	
	Unit Reference	CHE-0040-1000-1750-1000	
Sw.17	Outlet	13.001	Free Discharge
Sw.56	Outlet	34.002	Free Discharge
Sw.58	Outlet	35.001	Free Discharge
Sw.57	Outlet	35.000	Free Discharge
Sw.53	Outlet	1.013	Free Discharge
Sxx.58	Outlet	34.003	Free Discharge
Sw.52	Outlet	32.004	Free Discharge
Sw.54	Outlet	1.014	Free Discharge
Sw.51	Outlet	32.003	Free Discharge
	Outlet	32.002	Hydro-Brake®

Project:	Date: 30/05/2025		
	Designed by: sibandac	Checked by:	
Report Details:	Company Address:		
Type: Junctions			
Storm Phase: 13555 SW drainage			

Junction	Outlet Name	Outgoing Connection	Outlet Type
Sw.50	Invert Level (m)	76.800	
	Design Depth (m)	1.600	
	Design Flow (L/s)	1.0	
	Objective	Minimise Upstream Storage Requirements	
	Application	Surface Water Only	
	Sump Available	☐	
	Unit Reference	CHE-0040-1000-1600-1000	
			

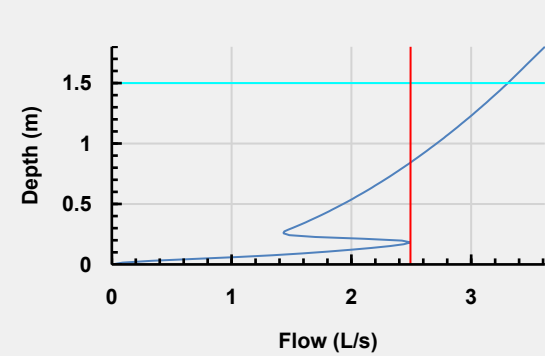
Sw.60	Outlet	1.015	Free Discharge
Sw.48	Outlet	33.001	Free Discharge
Sw.49	Outlet	33.002	Free Discharge
Sw.62	Outlet	1.017	Free Discharge
Sw.61	Outlet	1.016	Free Discharge
Sw.63	Outlet	1.020	Free Discharge
Sw.64	Outlet	1.021	Free Discharge
Sw.65	Outlet	1.022	Free Discharge
Sre.24	Outlet	17.000	Free Discharge
Sw.26	Outlet	19.001	Free Discharge
Sre.26	Outlet	19.000	Free Discharge
Sw.25	Outlet	18.001	Free Discharge
Sxx.27	Outlet	1.009	Free Discharge
Sre.25	Outlet	18.000	Free Discharge
Sxx.24	Outlet	1.008	Free Discharge
Sxx.23	Outlet	1.007	Free Discharge
Sw.28	Outlet	20.000	Free Discharge
Sre.31	Outlet	21.000	Free Discharge
Sxx.31	Outlet	1.011	Free Discharge
Sw.42	Outlet	30.001	Free Discharge
Sw.44	Outlet	31.001	Free Discharge
Sw.41	Outlet	29.001	Free Discharge

Project:	Date: 30/05/2025		
	Designed by: sibandac	Checked by:	Approved By:
Report Details: Type: Junctions Storm Phase: 13555 SW drainage	Company Address:		



Junction	Outlet Name	Outgoing Connection	Outlet Type
Sre.40	Outlet	28.000	Free Discharge
Sre.41	Outlet	29.000	Free Discharge
Sre.42	Outlet	30.000	Free Discharge
Sw.44A	Outlet	31.000	Free Discharge
Sw.40	Outlet	28.001	Free Discharge
Sxx.34	Outlet	22.003	Free Discharge
Sre.34	Outlet	24.000	Free Discharge
Sre.33	Outlet	23.000	Free Discharge
Sxx.39	Outlet	26.003	Free Discharge
Sxx.40	Outlet	26.004	Free Discharge
Sw.39	Outlet	27.001	Free Discharge
Sre.32	Outlet	22.000	Free Discharge
Sxx.41	Outlet	26.005	Free Discharge
Sre.39	Outlet	27.000	Free Discharge
Sre.37	Outlet	26.000	Free Discharge
Sw.37	Outlet	26.001	Free Discharge
Sw.33	Outlet	22.002	Free Discharge
Sw.32	Outlet	22.001	Free Discharge
Sw.47	Outlet	32.001	Free Discharge
Sre.47	Outlet	32.000	Free Discharge
Sre.48	Outlet	33.000	Free Discharge
Sw.35	Outlet	22.004	Free Discharge
Sxx.36	Outlet	22.005	Free Discharge
Sw.36	Outlet	25.001	Free Discharge
Sw.62A	Outlet	1.018	Free Discharge
	Outlet	1.019	Hydro-Brake®

Project:	Date: 30/05/2025		
	Designed by: sibandac	Checked by:	
Report Details: Type: Junctions Storm Phase: 13555 SW drainage	Company Address:		

Junction	Outlet Name	Outgoing Connection	Outlet Type
Sw.62B	Invert Level (m)	75.430	
	Design Depth (m)	1.500	
	Design Flow (L/s)	3.3	
	Objective	Minimise Upstream Storage Requirements	
	Application	Surface Water Only	
	Sump Available	☐	
	Unit Reference	CHE-0075-3300-1500-3300	
			
Sw.66	Outlet	1.023	Free Discharge
Sw.67	Outlet	1.024	Free Discharge

Project:	Date: 30/05/2025			
	Designed by: sibandac	Checked by:	Approved By:	
	Report Details: Type: Stormwater Controls Storm Phase: 13555 SW drainage			
Company Address:				



Cellular Storage Sw.20

Type : Cellular Storage

Dimensions

Exceedance Level (m)	84.243
Depth (m)	1.200
Base Level (m)	81.750
Number of Crates Long	29
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)	133.533



Cellular Storage Sw.46

Type : Cellular Storage

Dimensions

Exceedance Level (m)	79.754
Depth (m)	2.000
Base Level (m)	76.650
Number of Crates Long	29
Number of Crates Wide	6
Number of Crates High	5
Porosity (%)	96
Crate Length (m)	1
Crate Width (m)	0.5
Crate Height (m)	0.4
Total Volume (m³)	168.144

Project:	Date: 30/05/2025			
	Designed by: sibandac	Checked by:	Approved By:	
	Company Address:			
Report Details: Type: Stormwater Controls Storm Phase: 13555 SW drainage				



Cellular Storage Sw.50

Type : Cellular Storage

Dimensions

Exceedance Level (m)	78.379
Depth (m)	0.400
Base Level (m)	76.850
Number of Crates Long	8
Number of Crates Wide	8
Number of Crates High	1
Porosity (%)	95
Crate Length (m)	1
Crate Width (m)	0.5
Crate Height (m)	0.4
Total Volume (m³)	13.289



Cellular Storage Sw.59

Type : Cellular Storage

Dimensions

Exceedance Level (m)	78.655
Depth (m)	0.800
Base Level (m)	76.850
Number of Crates Long	8
Number of Crates Wide	6
Number of Crates High	2
Porosity (%)	95
Crate Length (m)	1
Crate Width (m)	0.5
Crate Height (m)	0.4
Total Volume (m³)	19.245

Project:	Date: 30/05/2025		
	Designed by: sibandac	Checked by:	Approved By:
	Company Address:		
Report Details: Type: Connections Storm Phase: 13555 SW drainage			



Name	Length (m)	Connection Type	Slope (1:X)	Manning's n	Colebrook-White Roughness (mm)	Diameter / Base Width (mm)	Upstream Cover Level (m)	Upstream Invert Level (m)	Downstream Cover Level (m)	Downstream Invert Level (m)	Lock	Flow Restriction (L/s)
9.003	5.346	Pipe	15.489		0.6	150	85.278	83.900	85.085	83.555	None	
22.000	9.588	Pipe	47.938		0.6	100	80.446	79.700	80.646	79.500	None	
1.012	15.369	Pipe	102.463		0.6	150	80.687	76.600	79.285	76.450	None	2.30
1.013	10.067	Pipe	100.674		0.6	150	79.285	76.450	78.839	76.350	None	
1.014	3.892	Pipe	77.850		0.6	150	78.839	76.350	78.757	76.300	None	
1.016	9.898	Pipe	98.979		0.6	150	78.321	76.200	78.457	76.100	None	
1.021	15.393	Pipe	18.110		0.6	150	74.459	73.450	74.000	72.600	None	
2.001	6.696	Pipe	6.868		0.6	150	84.217	82.950	84.244	81.975	None	
24.001	2.272	Pipe	-3.636		0.6	150	80.317	78.300	80.254	78.925	None	
9.002	8.258	Pipe	33.032		0.6	150	85.498	84.150	85.278	83.900	None	
2.000	13.708	Pipe	54.833		0.6	100	84.203	83.200	84.217	82.950	None	
1.017	9.529	Pipe	95.289		0.6	600	78.457	75.650	77.679	75.550	None	
33.001	5.221	Pipe	6.526		0.6	150	78.685	77.700	78.656	76.900	None	
33.002	4.572	Pipe	45.716		0.6	150	78.656	76.900	78.771	76.800	None	
32.003	8.834	Pipe	88.342		0.6	150	78.830	76.650	79.170	76.550	None	
32.004	9.912	Pipe	99.123		0.6	150	79.170	76.550	79.285	76.450	None	
1.015	8.452	Pipe	84.525		0.6	150	78.757	76.300	78.321	76.200	None	
32.002	14.960	Pipe	99.732		0.6	150	78.771	76.800	78.830	76.650	None	1.10
35.000	13.123	Pipe	52.493		0.6	100	79.292	78.450	79.295	78.200	None	
35.001	8.311	Pipe	13.297		0.6	100	79.295	78.200	79.242	77.575	None	
34.004	3.143	Pipe	6.285		0.6	150	79.036	76.800	78.757	76.300	None	1.10
34.000	7.371	Pipe	18.427		0.6	100	79.842	79.100	79.841	78.700	None	
34.001	19.969	Pipe	57.055		0.6	100	79.841	78.700	79.469	78.350	None	
34.002	4.221	Pipe	5.446		0.6	100	79.469	78.350	79.242	77.575	None	
34.003	4.092	Pipe	5.280		0.6	100	79.242	77.575	79.036	76.800	None	
1.010	10.974	Pipe	8.973		0.6	150	81.737	79.000	81.004	77.777	None	
1.000	15.544	Pipe	44.411		0.6	100	84.391	83.400	84.273	83.050	None	
1.001	6.800	Pipe	6.326		0.6	150	84.273	83.050	84.244	81.975	None	
3.000	16.622	Pipe	55.408		0.6	100	84.425	83.700	84.376	83.400	None	
3.001	4.522	Pipe	3.057		0.6	150	84.376	83.400	84.305	81.921	None	
4.000	15.711	Pipe	56.112		0.6	100	84.250	83.630	84.257	83.350	None	
4.001	3.983	Pipe	2.787		0.6	150	84.257	83.350	84.305	81.921	None	
5.000	15.794	Pipe	68.670		0.6	100	84.400	83.600	84.369	83.370	None	
5.001	4.164	Pipe	2.842		0.6	150	84.369	83.300	84.412	81.835	None	
7.000	15.008	Pipe	50.026		0.6	100	84.401	83.600	84.439	83.300	None	
7.001	4.449	Pipe	2.929		0.6	150	84.439	83.300	84.479	81.781	None	
6.000	17.298	Pipe	57.659		0.6	100	84.550	83.600	84.480	83.300	None	
6.001	4.353	Pipe	2.971		0.6	150	84.480	83.300	84.412	81.835	None	
8.000	16.510	Pipe	55.034		0.6	100	84.549	83.600	84.515	83.300	None	
1.002	6.257	Pipe	115.432		0.6	225	84.244	81.975	84.305	81.921	None	

Project:	Date: 30/05/2025			
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Report Details: Type: Connections Storm Phase: 13555 SW drainage	Company Address:			

8.001	4.464	Pipe	2.939	0.6	150	84.515	83.300	84.479	81.781	None	
9.000	15.032	Pipe	50.108	0.6	100	85.400	84.700	85.356	84.400	None	
9.001	10.539	Pipe	42.157	0.6	150	85.356	84.400	85.498	84.150	None	
10.000	14.090	Pipe	40.258	0.6	100	85.396	84.700	85.391	84.350	None	
10.001	7.636	Pipe	38.182	0.6	150	85.391	84.350	85.498	84.150	None	
11.000	15.032	Pipe	6.833	0.6	150	86.563	86.100	86.383	83.900	None	
11.001	10.196	Pipe	40.784	0.6	100	86.383	83.900	85.270	83.650	None	
9.004	11.663	Pipe	6.288	0.6	150	85.085	83.555	84.361	81.700	None	
11.002	5.006	Pipe	52.624	0.6	150	85.270	83.650	85.085	83.555	None	
12.000	14.090	Pipe	56.362	0.6	150	85.246	84.100	85.248	83.850	None	
12.001	7.734	Pipe	38.671	0.6	100	85.248	83.850	85.270	83.650	None	
13.002	5.442	Pipe	4.186	0.6	150	84.591	83.000	84.361	81.700	None	
15.002	5.762	Pipe	4.043	0.6	150	83.855	82.300	83.559	80.875	None	
1.006	12.185	Pipe	14.766	0.6	150	84.361	81.700	83.559	80.875	None	1.31
18.000	15.032	Pipe	50.108	0.6	100	83.809	83.400	83.794	83.100	None	
20.001	5.122	Pipe	3.013	0.6	150	81.921	80.700	81.737	79.000	None	
21.001	5.770	Pipe	2.484	0.6	150	81.301	80.100	81.004	77.777	None	
26.002	4.551	Pipe	34.511	0.6	150	80.072	78.870	80.192	78.738	None	
26.006	6.691	Pipe	3.521	0.6	150	80.662	78.500	80.687	76.600	None	
31.002	7.668	Pipe	3.067	0.6	150	80.432	79.100	80.687	76.600	None	
17.001	2.871	Pipe	1.513	0.6	150	83.233	82.200	82.995	80.303	None	
1.020	9.361	Pipe	26.746	0.6	150	75.066	73.800	74.459	73.450	None	
32.001	14.393	Pipe	14.393	0.6	150	79.597	77.800	78.771	76.800	None	
33.000	9.296	Pipe	46.480	0.6	100	78.639	77.900	78.685	77.700	None	
24.000	12.638	Pipe	9.722	0.6	100	80.439	79.600	80.317	78.300	None	
32.000	17.023	Pipe	18.914	0.6	100	79.543	78.700	79.597	77.800	None	
23.000	12.660	Pipe	15.825	0.6	100	80.437	79.800	80.550	79.000	None	
26.000	10.827	Pipe	67.668	0.6	100	80.168	79.460	80.158	79.300	None	
26.001	4.142	Pipe	9.632	0.6	100	80.158	79.300	80.072	78.870	None	
27.000	10.740	Pipe	67.125	0.6	100	80.170	79.460	80.282	79.300	None	
27.001	4.012	Pipe	7.141	0.6	100	80.282	79.300	80.192	78.738	None	
28.000	10.848	Pipe	67.798	0.6	100	80.545	79.460	80.463	79.300	None	
28.001	3.795	Pipe	5.971	0.6	100	80.463	79.300	80.336	78.664	None	
29.000	10.915	Pipe	68.216	0.6	100	80.545	79.860	80.624	79.700	None	
29.001	3.624	Pipe	3.275	0.6	100	80.624	79.700	80.399	78.594	None	
30.000	11.001	Pipe	68.758	0.6	100	80.545	79.860	80.658	79.700	None	
30.001	3.435	Pipe	2.862	0.6	100	80.658	79.700	80.662	78.500	None	
31.000	11.940	Pipe	59.698	0.6	100	80.501	79.900	80.631	79.700	None	
31.001	6.330	Pipe	10.550	0.6	100	80.631	79.700	80.432	79.100	None	
21.000	20.095	Pipe	25.118	0.6	100	81.742	80.900	81.301	80.100	None	
20.000	20.002	Pipe	26.669	0.6	100	82.115	81.450	81.921	80.700	None	
15.000	15.032	Pipe	50.108	0.6	100	84.275	83.600	84.286	83.300	None	
15.001	10.539	Pipe	10.539	0.6	100	84.286	83.300	83.855	82.300	None	

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16.000	14.090	Pipe	56.362	0.6	100	84.270	83.600	84.259	83.350	None	
16.001	7.636	Pipe	7.273	0.6	100	84.259	83.350	83.855	82.300	None	
13.000	15.032	Pipe	60.130	0.6	100	85.000	84.400	85.012	84.150	None	
13.001	10.550	Pipe	9.174	0.6	100	85.012	84.150	84.591	83.000	None	
14.000	14.090	Pipe	70.452	0.6	100	85.000	84.300	84.985	84.100	None	
14.001	7.644	Pipe	6.949	0.6	100	84.985	84.100	84.591	83.000	None	
17.000	13.004	Pipe	43.346	0.6	100	84.112	82.500	83.233	82.200	None	
18.001	10.539	Pipe	5.019	0.6	100	83.794	83.100	83.119	81.000	None	
18.002	5.874	Pipe	6.483	0.6	150	83.119	81.000	82.800	80.094	None	
19.000	14.090	Pipe	56.362	0.6	100	83.793	82.600	83.339	82.350	None	
19.001	7.636	Pipe	5.657	0.6	100	83.339	82.350	83.119	81.000	None	
1.003	9.942	Pipe	115.432	0.6	225	84.305	81.921	84.412	81.835	None	
1.004	6.197	Pipe	115.432	0.6	225	84.412	81.835	84.479	81.781	None	
1.005	9.347	Pipe	115.432	0.6	225	84.479	81.781	84.361	81.700	None	
1.007	8.562	Pipe	14.973	0.6	150	83.559	80.875	82.995	80.303	None	
1.008	2.962	Pipe	14.179	0.6	150	82.995	80.303	82.800	80.094	None	
1.009	16.159	Pipe	14.770	0.6	150	82.800	80.094	81.737	79.000	None	
1.011	10.566	Pipe	8.977	0.6	150	81.004	77.777	80.687	76.600	None	
26.003	5.426	Pipe	73.564	0.6	150	80.192	78.738	80.336	78.664	None	
26.004	5.203	Pipe	73.564	0.6	150	80.336	78.664	80.399	78.594	None	
26.005	5.419	Pipe	57.856	0.6	150	80.399	78.594	80.662	78.500	None	
22.001	7.435	Pipe	14.870	0.6	100	80.646	79.500	80.550	79.000	None	
22.002	6.312	Pipe	84.051	0.6	150	80.550	79.000	80.254	78.925	None	
22.004	6.742	Pipe	160.591	0.6	300	79.685	76.800	79.933	76.758	None	
22.003	10.049	Pipe	4.729	0.6	150	80.254	78.925	79.685	76.800	None	
PipeSw.20	2.799	Pipe	55.984	0.6	225	84.398	81.750	84.361	81.700	None	
25.001	1.957	Pipe	0.818	0.6	150	79.917	79.150	79.933	76.758	None	
22.005	25.376	Pipe	160.591	0.6	300	79.933	76.758	80.687	76.600	None	
PipeSw.46	3.252	Pipe	65.033	0.6	300	80.611	76.650	80.687	76.600	None	
PipeSw50	1.316	Pipe	26.311	0.6	150	78.706	76.850	78.771	76.800	None	
PipeSw59	2.004	Pipe	40.087	0.6	150	78.973	76.850	79.036	76.800	None	
1.018	3.015	Pipe	25.128	0.6	150	77.679	75.550	77.496	75.430	None	
1.019	39.998	Pipe	24.539	0.6	150	77.496	75.430	75.066	73.800	None	3.61
1.022	62.275	Pipe	124.550	0.6	150	74.000	72.600	73.538	72.100	None	
1.023	78.869	Pipe	24.418	0.6	150	73.538	72.100	70.268	68.870	None	
1.024	8.903	Pipe	52.372	0.6	150	70.268	68.870	70.090	68.700	None	

Project:	Date: 30/05/2025		
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Report Details: Type: Inflow Summary Storm Phase: 13555 SW drainage			



Inflow Label	Connected To	Flow (L/s)	Runoff Method	Area (m²)	Percentage Impervious (%)	Urban Creep (%)	Adjusted Percentage Impervious (%)	Area Analysed (m²)
Area Sre.55	Sre.55		Time of Concentration	23.536	100	0	100	23.536
Area Sre.02	Sre.02		Time of Concentration	44.950	100	0	100	44.950
Area Sre.04	Sre.04		Time of Concentration	42.484	100	0	100	42.484
Area Sre.05	Sre.05		Time of Concentration	47.475	100	0	100	47.475
Area Sre.06	Sre.06		Time of Concentration	79.773	100	0	100	79.773
Area Sre.07	Sre.07		Time of Concentration	124.692	100	0	100	124.692
Area Sre.08	Sre.08		Time of Concentration	57.695	100	0	100	57.695
Area Sre.09	Sre.09		Time of Concentration	125.051	100	0	100	125.051
Area Sre.10	Sre.01		Time of Concentration	122.529	100	0	100	122.529
Area Sre.10 (1)	Sre.10		Time of Concentration	29.936	100	0	100	29.936
Area Sre.11	Sre.11		Time of Concentration	46.777	100	0	100	46.777
Area Sre.14	Sre.14		Time of Concentration	39.047	100	0	100	39.047
Area Sre.15	Sre.15		Time of Concentration	46.794	100	0	100	46.794
Area Sre.17	Sre.17		Time of Concentration	41.687	100	0	100	41.687
Area Sre.18	Sre.18		Time of Concentration	46.511	100	0	100	46.511
Area Sre.21	Sre.21		Time of Concentration	40.036	100	0	100	40.036
Area Sre.22	Sre.22		Time of Concentration	47.550	100	0	100	47.550
Area Sre.24	Sre.24		Time of Concentration	25.727	100	0	100	25.727
Area Sre.25	Sre.25		Time of Concentration	40.006	100	0	100	40.006
Area Sre.26	Sre.26		Time of Concentration	45.867	100	0	100	45.867
Area Sre.32	Sre.32		Time of Concentration	16.800	100	0	100	16.800
Area Sre.33	Sre.33		Time of Concentration	32.281	100	0	100	32.281
Area Sre.34	Sre.34		Time of Concentration	46.956	100	0	100	46.956
Area Sre.37	Sre.37		Time of Concentration	25.773	100	0	100	25.773
Area Sre.39	Sre.39		Time of Concentration	25.292	100	0	100	25.292
Area Sre.40	Sre.40		Time of Concentration	24.250	100	0	100	24.250
Area Sre.41	Sre.41		Time of Concentration	24.072	100	0	100	24.072
Area Sre.42	Sre.42		Time of Concentration	25.886	100	0	100	25.886
Area Sre.47	Sre.47		Time of Concentration	101.760	100	0	100	101.760
Area Sre.48	Sre.48		Time of Concentration	53.614	100	0	100	53.614
Area Sw.01	Sw.01		Time of Concentration	51.185	100	0	100	51.185
Area Sw.02	Sw.02		Time of Concentration	22.100	100	0	100	22.100
Area Sw.03	Sw.03		Time of Concentration	199.141	100	0	100	199.141
Area Sw.04	Sw.04		Time of Concentration	57.462	100	0	100	57.462
Area Sw.05	Sw.05		Time of Concentration	66.188	100	0	100	66.188
Area Sw.06	Sw.06		Time of Concentration	81.780	100	0	100	81.780
Area Sw.07	Sw.07		Time of Concentration	139.630	100	0	100	139.630
Area Sw.08	Sw.08		Time of Concentration	54.771	100	0	100	54.771
Area Sw.09	Sw.09		Time of Concentration	143.024	100	0	100	143.024
Area Sw.10	Sw.10		Time of Concentration	18.831	100	0	100	18.831
Area Sw.11	Sw.11		Time of Concentration	37.419	100	0	100	37.419

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Area Sw.12	Sw.12		Time of Concentration	48.045	100	0	100	48.045
Area Sw.13	Sw.13		Time of Concentration	155.414	100	0	100	155.414
Area Sw.14	Sw.14		Time of Concentration	25.768	100	0	100	25.768
Area Sw.15	Sw.15		Time of Concentration	35.763	100	0	100	35.763
Area Sw.16	Sw.16		Time of Concentration	44.305	100	0	100	44.305
Area Sw.17	Sw.17		Time of Concentration	25.933	100	0	100	25.933
Area Sw.18	Sw.18		Time of Concentration	36.257	100	0	100	36.257
Area Sw.19	Sw.19		Time of Concentration	41.337	100	0	100	41.337
Area Sw.20	Sw.20		Time of Concentration	126.339	100	0	100	126.339
Area Sw.21	Sw.21		Time of Concentration	28.230	100	0	100	28.230
Area Sw.22	Sw.22		Time of Concentration	35.863	100	0	100	35.863
Area Sw.23	Sw.23		Time of Concentration	37.484	100	0	100	37.484
Area Sw.24	Sw.24		Time of Concentration	26.068	100	0	100	26.068
Area Sw.25	Sw.25		Time of Concentration	28.400	100	0	100	28.400
Area Sw.26	Sw.26		Time of Concentration	37.417	100	0	100	37.417
Area Sw.27	Sw.27		Time of Concentration	41.085	100	0	100	41.085
Area Sw.28	Sw.28		Time of Concentration	56.994	100	0	100	56.994
Area Sw.29	Sw.29		Time of Concentration	107.672	100	0	100	107.672
Area Sw.30	Sw.30		Time of Concentration	326.874	100	0	100	326.874
Area Sw.31	Sw.31		Time of Concentration	105.961	100	0	100	105.961
Area sw.32	Sw.32		Time of Concentration	16.394	100	0	100	16.394
Area Sw.33	Sw.33		Time of Concentration	72.008	100	0	100	72.008
Area Sw.34	Sw.34		Time of Concentration	140.913	100	0	100	140.913
Area Sw.35	Sw.35		Time of Concentration	90.513	100	0	100	90.513
Area Sw.36	Sw.36		Time of Concentration	83.515	100	0	100	83.515
Area Sw.38	Sw.38		Time of Concentration	47.916	100	0	100	47.916
Area Sw.39	Sw.39		Time of Concentration	48.049	100	0	100	48.049
Area Sw.40	Sw.40		Time of Concentration	48.184	100	0	100	48.184
Area Sw.41	Sw.41		Time of Concentration	46.383	100	0	100	46.383
Area Sw.42	Sw.42		Time of Concentration	46.106	100	0	100	46.106
Area Sw.44	Sw.44		Time of Concentration	32.763	100	0	100	32.763
Area Sw.44A	Sw.44A		Time of Concentration	60.678	100	0	100	60.678
Area Sw.45	Sw.45		Time of Concentration	36.650	100	0	100	36.650
Area Sw.46	Sw.46		Time of Concentration	382.573	100	0	100	382.573
Area Sw.47	Sw.47		Time of Concentration	74.831	100	0	100	74.831
Area Sw.48	Sw.48		Time of Concentration	53.275	100	0	100	53.275
Area Sw.49	Sw.50		Time of Concentration	89.989	100	0	100	89.989
Area Sw.55	Sw.55		Time of Concentration	48.390	100	0	100	48.390
Area Sw.56	Sw.56		Time of Concentration	72.307	100	0	100	72.307
Area Sw.57	Sw.57		Time of Concentration	67.971	100	0	100	67.971
Area Sw.58	Sw.58		Time of Concentration	27.999	100	0	100	27.999
Area Sw.59	Sw.59		Time of Concentration	211.288	100	0	100	211.288
AreavSre.31	Sre.31		Time of Concentration	57.781	100	0	100	57.781

Project:		Date: 30/05/2025						
		Designed by: sibandac	Checked by:	Approved By:				
Report Details: Type: Inflow Summary Storm Phase: 13555 SW drainage		Company Address:						
TOTAL		0.0		5594.020				

Project:	Date: 30/05/2025			
	Designed by: sibandac	Checked by:	Approved By:	
	Report Details: Type: Outfall Details Storm Phase: 13555 SW drainage			
Company Address:				

Outfalls

Outfall	Outfall Type	Gated	Fixed Surcharged Level (m)	Level Curve
S 391H	Free Discharge			

Project:	Date: 30/05/2025			
	Designed by: sibandac	Checked by:	Approved By:	
Report Title: Rainfall Analysis Criteria	Company Address:			

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

FEH		Type: FEH
Site Location	GB 480084 164839 SU 80084 64839	
Rainfall Version	2022	
Summer	☒	
Winter	☒	

Return Period

Return Period (years)	Increase Rainfall (%)
2.0	0.000
30.0	35.000
100.0	40.000

Storm Durations

Duration (hrs)	Run Time (hrs)
0.25	0.50
0.50	1.00
1.00	2.00
2.00	4.00
4.00	8.00
6.00	12.00
8.00	16.00
16.00	32.00
24.00	48.00

Project:	Date: 30/05/2025			
	Designed by: sibandac	Checked by:	Approved By:	
Report Details: Type: Junctions Summary Storm Phase: 13555 SW drainage	Company Address:			



FEH: 2 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Depth

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
Sre.14	FEH: 2 years: +0 %: 0.25 hrs: Winter	86.563	86.100	86.110	0.010	0.6	0.001	0.000	0.6	0.302	OK
Sw.14	FEH: 2 years: +0 %: 0.25 hrs: Winter	86.383	83.900	83.922	0.022	1.1	0.004	0.000	1.0	0.502	OK
Sw.12	FEH: 2 years: +0 %: 0.25 hrs: Winter	85.498	84.150	84.181	0.031	2.9	0.005	0.000	2.8	1.381	OK
Sre.10	FEH: 2 years: +0 %: 0.25 hrs: Winter	85.400	84.700	84.716	0.016	0.5	0.001	0.000	0.5	0.226	OK
Sre.11	FEH: 2 years: +0 %: 0.25 hrs: Winter	85.396	84.700	84.719	0.019	0.8	0.001	0.000	0.8	0.358	OK
Sw.11	FEH: 2 years: +0 %: 0.25 hrs: Winter	85.391	84.350	84.372	0.022	1.4	0.004	0.000	1.3	0.645	OK
Sw.10	FEH: 2 years: +0 %: 0.25 hrs: Winter	85.356	84.400	84.417	0.017	0.8	0.003	0.000	0.8	0.366	OK
Sw.13	FEH: 2 years: +0 %: 0.25 hrs: Winter	85.278	83.900	83.937	0.037	5.4	0.006	0.000	5.4	2.578	OK
Sw.16	FEH: 2 years: +0 %: 0.25 hrs: Winter	85.270	83.650	83.688	0.038	3.1	0.006	0.000	3.0	1.474	OK
Sw.15	FEH: 2 years: +0 %: 0.25 hrs: Winter	85.248	83.850	83.875	0.025	1.4	0.002	0.000	1.3	0.633	OK
Sre.15	FEH: 2 years: +0 %: 0.25 hrs: Winter	85.246	84.100	84.118	0.018	0.8	0.001	0.000	0.8	0.359	OK
Sxx.16	FEH: 2 years: +0 %: 0.25 hrs: Winter	85.085	83.555	83.588	0.033	8.4	0.002	0.000	8.3	4.050	OK
Sw.19	FEH: 2 years: +0 %: 0.25 hrs: Winter	84.591	83.000	83.018	0.018	3.1	0.003	0.000	3.1	1.477	OK
Sre.07	FEH: 2 years: +0 %: 0.25 hrs: Winter	84.550	83.600	83.638	0.038	2.1	0.003	0.000	2.0	0.958	OK
Sre.09	FEH: 2 years: +0 %: 0.25 hrs: Winter	84.549	83.600	83.638	0.038	2.1	0.003	0.000	2.0	0.961	OK
Sw.09	FEH: 2 years: +0 %: 0.25 hrs: Winter	84.515	83.300	83.319	0.019	4.4	0.003	0.000	4.4	2.061	OK
Sw.07	FEH: 2 years: +0 %: 0.25 hrs: Winter	84.480	83.300	83.319	0.019	4.3	0.003	0.000	4.3	2.034	OK
Sw.22	FEH: 2 years: +0 %: 0.25 hrs: Winter	84.259	83.350	83.366	0.016	1.4	0.003	0.000	1.3	0.636	OK
Sre.22	FEH: 2 years: +0 %: 0.25 hrs: Winter	84.270	83.600	83.622	0.022	0.8	0.002	0.000	0.8	0.361	OK
Sw.08	FEH: 2 years: +0 %: 0.25 hrs: Winter	84.439	83.300	83.313	0.013	1.8	0.002	0.000	1.8	0.864	OK

Project:					Date: 30/05/2025							
					Designed by: sibandac			Checked by:		Approved By:		
Report Details: Type: Junctions Summary Storm Phase: 13555 SW drainage					Company Address:							
Sre.21	FEH: 2 years: +0 %: 0.25 hrs: Winter	84.275	83.600	83.619	0.019	0.7	0.001	0.000	0.6	0.307	OK	
Sre.05	FEH: 2 years: +0 %: 0.25 hrs: Winter	84.425	83.700	83.723	0.023	0.8	0.002	0.000	0.8	0.361	OK	
Sre.08	FEH: 2 years: +0 %: 0.25 hrs: Winter	84.401	83.600	83.625	0.025	1.0	0.002	0.000	0.9	0.442	OK	
Sre.06	FEH: 2 years: +0 %: 0.25 hrs: Winter	84.400	83.600	83.629	0.029	1.3	0.002	0.000	1.3	0.613	OK	
Sw.21	FEH: 2 years: +0 %: 0.25 hrs: Winter	84.286	83.300	83.316	0.016	1.1	0.003	0.000	1.1	0.525	OK	
Sre.01	FEH: 2 years: +0 %: 0.25 hrs: Winter	84.391	83.400	83.435	0.035	2.0	0.002	0.000	2.0	0.943	OK	
Sw.05	FEH: 2 years: +0 %: 0.25 hrs: Winter	84.376	83.400	83.413	0.013	1.9	0.002	0.000	1.8	0.873	OK	
Sw.06	FEH: 2 years: +0 %: 0.25 hrs: Winter	84.369	83.300	83.315	0.015	2.6	0.002	0.000	2.6	1.245	OK	
Sw.20	FEH: 2 years: +0 %: 8.00 hrs: Winter	84.361	81.700	82.134	0.434	5.1	1.503	0.000	0.6	72.000	Surcharged	
Sxx.05	FEH: 2 years: +0 %: 0.25 hrs: Summer	84.305	81.921	82.165	0.244	8.9	0.017	0.000	8.3	4.487	Surcharged	
Sxx.07	FEH: 2 years: +0 %: 0.25 hrs: Summer	84.412	81.835	82.159	0.324	14.9	0.023	0.000	14.6	7.340	Surcharged	
Sw.01	FEH: 2 years: +0 %: 0.25 hrs: Winter	84.273	83.050	83.069	0.019	2.8	0.003	0.000	2.8	1.335	OK	
Sw.03	FEH: 2 years: +0 %: 0.25 hrs: Summer	84.244	81.975	82.168	0.193	6.8	0.218	0.000	5.7	3.020	OK	
Sw.04	FEH: 2 years: +0 %: 0.25 hrs: Winter	84.257	83.350	83.361	0.011	1.6	0.002	0.000	1.6	0.768	OK	
Sre.04	FEH: 2 years: +0 %: 0.25 hrs: Winter	84.250	83.630	83.652	0.022	0.7	0.002	0.000	0.7	0.325	OK	
Sw.02	FEH: 2 years: +0 %: 0.25 hrs: Winter	84.217	82.950	82.962	0.012	1.1	0.002	0.000	1.1	0.513	OK	
Sre.02	FEH: 2 years: +0 %: 0.25 hrs: Winter	84.203	83.200	83.222	0.022	0.7	0.002	0.000	0.7	0.343	OK	
Sw.23	FEH: 2 years: +0 %: 0.25 hrs: Winter	83.855	82.300	82.319	0.019	3.0	0.003	0.000	3.0	1.451	OK	
Sxx.09	FEH: 2 years: +0 %: 0.25 hrs: Summer	84.479	81.781	82.149	0.368	20.5	0.026	0.000	20.3	9.753	Surcharged	
Sw.24	FEH: 2 years: +0 %: 0.25 hrs: Winter	83.233	82.200	82.208	0.008	0.8	0.001	0.000	0.8	0.403	OK	
Sw.27	FEH: 2 years: +0 %: 0.25 hrs: Winter	83.119	81.000	81.021	0.021	3.1	0.003	0.000	3.1	1.481	OK	
Sw.18	FEH: 2 years: +0 %: 0.25 hrs: Winter	84.985	84.100	84.116	0.016	1.4	0.003	0.000	1.3	0.636	OK	
Sre.18	FEH: 2 years: +0 %: 0.25 hrs: Winter	85.000	84.300	84.323	0.023	0.8	0.002	0.000	0.7	0.358	OK	
Sw.29	FEH: 2 years: +0 %: 0.25 hrs: Winter	81.921	80.700	80.717	0.017	2.7	0.003	0.000	2.7	1.266	OK	

Project:					Date: 30/05/2025							
					Designed by: sibandac			Checked by:		Approved By:		
Report Details: Type: Junctions Summary Storm Phase: 13555 SW drainage					Company Address:							
Sw.30	FEH: 2 years: +0 %: 0.25 hrs: Winter	81.737	79.000	79.054	0.054	15.5	0.061	0.000	15.2	7.753	OK	
Sw.31	FEH: 2 years: +0 %: 0.25 hrs: Winter	81.301	80.100	80.116	0.016	2.7	0.002	0.000	2.7	1.261	OK	
Sre.17	FEH: 2 years: +0 %: 0.25 hrs: Winter	85.000	84.400	84.421	0.021	0.7	0.001	0.000	0.7	0.322	OK	
Sw.43	FEH: 2 years: +0 %: 0.25 hrs: Winter	80.662	78.500	78.523	0.023	5.5	0.004	0.000	5.5	2.766	OK	
Sw.45	FEH: 2 years: +0 %: 0.25 hrs: Winter	80.432	79.100	79.114	0.014	2.1	0.002	0.000	2.1	0.994	OK	
Sw.46	FEH: 2 years: +0 %: 16.00 hrs: Winter	80.687	76.600	77.242	0.642	3.5	2.225	0.000	1.0	146.416	Surcharged	
Sw.34	FEH: 2 years: +0 %: 0.25 hrs: Winter	80.317	78.300	78.951	0.651	3.1	0.103	0.000	3.1	0.891	Surcharged	
Sw.38	FEH: 2 years: +0 %: 0.25 hrs: Winter	80.072	78.870	78.890	0.020	1.2	0.003	0.000	1.2	0.568	OK	
Sre.55	FEH: 2 years: +0 %: 0.25 hrs: Winter	79.842	79.100	79.111	0.011	0.4	0.001	0.000	0.4	0.182	OK	
Sw.55	FEH: 2 years: +0 %: 0.25 hrs: Winter	79.841	78.700	78.727	0.027	1.2	0.004	0.000	1.1	0.555	OK	
Sw.59	FEH: 2 years: +0 %: 4.00 hrs: Winter	79.036	76.800	77.066	0.266	1.7	0.301	0.000	0.5	14.690	Surcharged	
Sw.17	FEH: 2 years: +0 %: 0.25 hrs: Winter	85.012	84.150	84.166	0.016	1.1	0.003	0.000	1.1	0.522	OK	
Sw.56	FEH: 2 years: +0 %: 0.25 hrs: Winter	79.469	78.350	78.370	0.020	2.3	0.003	0.000	2.3	1.114	OK	
Sw.58	FEH: 2 years: +0 %: 0.25 hrs: Winter	79.295	78.200	78.221	0.021	1.6	0.003	0.000	1.5	0.744	OK	
Sw.57	FEH: 2 years: +0 %: 0.25 hrs: Winter	79.292	78.450	78.476	0.026	1.1	0.004	0.000	1.1	0.526	OK	
Sw.53	FEH: 2 years: +0 %: 6.00 hrs: Winter	79.285	76.450	76.481	0.031	1.5	0.035	0.000	1.5	46.319	OK	
Sxx.58	FEH: 2 years: +0 %: 0.25 hrs: Winter	79.242	77.575	77.599	0.024	3.9	0.002	0.000	3.8	1.856	OK	
Sw.52	FEH: 2 years: +0 %: 0.50 hrs: Winter	79.170	76.550	76.568	0.018	0.5	0.003	0.000	0.5	1.423	OK	
Sw.54	FEH: 2 years: +0 %: 6.00 hrs: Winter	78.839	76.350	76.380	0.030	1.5	0.033	0.000	1.5	46.281	OK	
Sw.51	FEH: 2 years: +0 %: 8.00 hrs: Summer	78.830	76.650	76.667	0.017	0.5	0.003	0.000	0.5	8.728	OK	
Sw.50	FEH: 2 years: +0 %: 0.25 hrs: Summer	78.771	76.800	76.967	0.167	5.9	0.189	0.000	0.5	2.595	Surcharged	
Sw.60	FEH: 2 years: +0 %: 6.00 hrs: Winter	78.757	76.300	76.332	0.032	1.9	0.037	0.000	1.9	57.203	OK	
Sw.48	FEH: 2 years: +0 %: 0.25 hrs: Winter	78.685	77.700	77.716	0.016	1.8	0.003	0.000	1.7	0.822	OK	
Sw.49	FEH: 2 years: +0 %: 0.25 hrs: Summer	78.656	76.900	76.969	0.069	1.6	0.098	0.000	1.7	0.737	OK	

Project:	Date: 30/05/2025		
	Designed by: sibandac	Checked by:	Approved By:
Report Details: Type: Junctions Summary Storm Phase: 13555 SW drainage	Company Address:		



Sw.62	FEH: 2 years: +0 %: 6.00 hrs: Winter	78.457	75.650	75.673	0.023	1.9	0.026	0.000	1.9	57.124	OK
Sw.61	FEH: 2 years: +0 %: 6.00 hrs: Winter	78.321	76.200	76.234	0.034	1.9	0.038	0.000	1.9	57.151	OK
Sw.63	FEH: 2 years: +0 %: 6.00 hrs: Winter	75.066	73.800	73.825	0.025	1.9	0.028	0.000	1.9	56.932	OK
Sw.64	FEH: 2 years: +0 %: 6.00 hrs: Winter	74.459	73.450	73.472	0.022	1.9	0.038	0.000	1.9	56.893	OK
Sw.65	FEH: 2 years: +0 %: 6.00 hrs: Winter	74.000	72.600	72.637	0.037	1.9	0.066	0.000	1.9	56.772	OK
Sre.24	FEH: 2 years: +0 %: 0.25 hrs: Winter	84.112	82.500	82.516	0.016	0.4	0.001	0.000	0.4	0.200	OK
Sw.26	FEH: 2 years: +0 %: 0.25 hrs: Winter	83.339	82.350	82.366	0.016	1.4	0.002	0.000	1.3	0.642	OK
Sre.26	FEH: 2 years: +0 %: 0.25 hrs: Winter	83.793	82.600	82.622	0.022	0.8	0.002	0.000	0.7	0.355	OK
Sw.25	FEH: 2 years: +0 %: 0.25 hrs: Winter	83.794	83.100	83.114	0.014	1.1	0.002	0.000	1.1	0.525	OK
Sxx.27	FEH: 2 years: +0 %: 0.25 hrs: Winter	82.800	80.094	80.134	0.040	7.4	0.003	0.000	7.3	3.985	OK
Sre.25	FEH: 2 years: +0 %: 0.25 hrs: Winter	83.809	83.400	83.420	0.020	0.7	0.001	0.000	0.6	0.307	OK
Sxx.24	FEH: 2 years: +0 %: 0.25 hrs: Winter	82.995	80.303	80.335	0.033	4.4	0.002	0.000	4.3	2.516	OK
Sxx.23	FEH: 2 years: +0 %: 0.25 hrs: Winter	83.559	80.875	80.903	0.028	3.6	0.002	0.000	3.6	2.124	OK
Sw.28	FEH: 2 years: +0 %: 0.25 hrs: Winter	82.115	81.450	81.470	0.020	0.9	0.001	0.000	0.9	0.440	OK
Sre.31	FEH: 2 years: +0 %: 0.25 hrs: Winter	81.742	80.900	80.920	0.020	1.0	0.001	0.000	0.9	0.443	OK
Sxx.31	FEH: 2 years: +0 %: 0.25 hrs: Winter	81.004	77.777	77.832	0.055	17.9	0.004	0.000	17.8	9.005	OK
Sw.42	FEH: 2 years: +0 %: 0.25 hrs: Winter	80.658	79.700	79.712	0.012	1.2	0.002	0.000	1.2	0.555	OK
Sw.44	FEH: 2 years: +0 %: 0.25 hrs: Winter	80.631	79.700	79.721	0.021	1.5	0.003	0.000	1.5	0.717	OK
Sw.41	FEH: 2 years: +0 %: 0.25 hrs: Winter	80.624	79.700	79.713	0.013	1.1	0.002	0.000	1.1	0.540	OK
Sre.40	FEH: 2 years: +0 %: 0.25 hrs: Winter	80.545	79.460	79.476	0.016	0.4	0.001	0.000	0.4	0.184	OK
Sre.41	FEH: 2 years: +0 %: 0.25 hrs: Winter	80.545	79.860	79.876	0.016	0.4	0.001	0.000	0.4	0.184	OK
Sre.42	FEH: 2 years: +0 %: 0.25 hrs: Winter	80.545	79.860	79.877	0.017	0.4	0.001	0.000	0.4	0.199	OK
Sw.44A	FEH: 2 years: +0 %: 0.25 hrs: Winter	80.501	79.900	79.925	0.025	1.0	0.002	0.000	1.0	0.463	OK
Sw.40	FEH: 2 years: +0 %: 0.25 hrs: Winter	80.463	79.300	79.315	0.015	1.2	0.002	0.000	1.2	0.555	OK

Project:					Date: 30/05/2025						
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Report Details: Type: Junctions Summary Storm Phase: 13555 SW drainage					Company Address:						
Sxx.34	FEH: 2 years: +0 %: 0.25 hrs: Winter	80.254	78.925	78.949	0.024	5.2	0.002	0.000	5.2	1.942	OK
Sre.34	FEH: 2 years: +0 %: 0.25 hrs: Winter	80.439	79.600	79.613	0.013	0.8	0.001	0.000	0.8	0.358	OK
Sre.33	FEH: 2 years: +0 %: 0.25 hrs: Winter	80.437	79.800	79.813	0.013	0.5	0.001	0.000	0.5	0.251	OK
Sxx.39	FEH: 2 years: +0 %: 0.25 hrs: Winter	80.192	78.738	78.773	0.035	2.3	0.003	0.000	2.3	1.127	OK
Sxx.40	FEH: 2 years: +0 %: 0.25 hrs: Winter	80.336	78.664	78.708	0.044	3.4	0.003	0.000	3.3	1.678	OK
Sw.39	FEH: 2 years: +0 %: 0.25 hrs: Winter	80.282	79.300	79.315	0.015	1.2	0.002	0.000	1.2	0.561	OK
Sre.32	FEH: 2 years: +0 %: 0.25 hrs: Winter	80.446	79.700	79.712	0.012	0.3	0.002	0.000	0.3	0.131	OK
Sxx.41	FEH: 2 years: +0 %: 0.25 hrs: Winter	80.399	78.594	78.642	0.049	4.5	0.003	0.000	4.4	2.214	OK
Sre.39	FEH: 2 years: +0 %: 0.25 hrs: Winter	80.170	79.460	79.476	0.016	0.4	0.001	0.000	0.4	0.190	OK
Sre.37	FEH: 2 years: +0 %: 0.25 hrs: Winter	80.168	79.460	79.477	0.017	0.4	0.001	0.000	0.4	0.199	OK
Sw.37	FEH: 2 years: +0 %: 0.25 hrs: Winter	80.158	79.300	79.310	0.010	0.4	0.002	0.000	0.4	0.198	OK
Sw.33	FEH: 2 years: +0 %: 0.25 hrs: Winter	80.550	79.000	79.036	0.036	2.2	0.006	0.000	2.2	1.053	OK
Sw.32	FEH: 2 years: +0 %: 0.25 hrs: Winter	80.646	79.500	79.512	0.012	0.5	0.002	0.000	0.5	0.252	OK
Sw.47	FEH: 2 years: +0 %: 0.25 hrs: Winter	79.597	77.800	77.824	0.024	2.9	0.004	0.000	2.9	1.363	OK
Sre.47	FEH: 2 years: +0 %: 0.25 hrs: Winter	79.543	78.700	78.724	0.024	1.7	0.002	0.000	1.7	0.784	OK
Sre.48	FEH: 2 years: +0 %: 0.25 hrs: Winter	78.639	77.900	77.923	0.023	0.9	0.002	0.000	0.9	0.412	OK
Sw.35	FEH: 2 years: +0 %: 16.00 hrs: Winter	79.685	76.800	77.242	0.442	0.5	0.500	0.000	0.5	11.158	Surcharged
Sxx.36	FEH: 2 years: +0 %: 16.00 hrs: Winter	79.933	76.758	77.242	0.484	0.6	0.034	0.000	0.5	12.786	Surcharged
Sw.36	FEH: 2 years: +0 %: 0.25 hrs: Winter	79.917	79.150	79.158	0.008	1.4	0.001	0.000	1.4	0.645	OK
Sw.62A	FEH: 2 years: +0 %: 6.00 hrs: Winter	77.679	75.550	75.572	0.022	1.9	0.025	0.000	1.9	57.096	OK
Sw.62B	FEH: 2 years: +0 %: 6.00 hrs: Winter	77.496	75.430	75.565	0.135	1.9	0.153	0.000	1.9	57.003	OK
Sw.66	FEH: 2 years: +0 %: 6.00 hrs: Winter	73.538	72.100	72.123	0.023	1.9	0.041	0.000	1.9	56.667	OK
Sw.67	FEH: 2 years: +0 %: 6.00 hrs: Winter	70.268	68.870	68.899	0.029	1.9	0.051	0.000	1.9	56.566	OK
S 391H	FEH: 2 years: +0 %: 6.00 hrs: Winter	70.090	68.700	68.728	0.028	1.9	0.000	0.000	1.9	56.566	OK

Project:	Date: 30/05/2025		
	Designed by: sibandac	Checked by:	Approved By:
Report Details: Type: Junctions Summary Storm Phase: 13555 SW drainage	Company Address:		



FEH: 30 years: Increase Rainfall (%): +35: Critical Storm Per Item: Rank By: Max. Depth

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
Sre.14	FEH: 30 years: +35 %: 0.25 hrs: Winter	86.563	86.100	86.118	0.018	2.1	0.001	0.000	2.1	0.990	OK
Sw.14	FEH: 30 years: +35 %: 0.25 hrs: Winter	86.383	83.900	83.942	0.042	3.5	0.007	0.000	3.4	1.639	OK
Sw.12	FEH: 30 years: +35 %: 0.25 hrs: Winter	85.498	84.150	84.210	0.060	9.7	0.010	0.000	9.5	4.568	OK
Sre.10	FEH: 30 years: +35 %: 0.25 hrs: Winter	85.400	84.700	84.730	0.030	1.6	0.002	0.000	1.6	0.755	OK
Sre.11	FEH: 30 years: +35 %: 0.25 hrs: Winter	85.396	84.700	84.735	0.035	2.6	0.002	0.000	2.5	1.181	OK
Sw.11	FEH: 30 years: +35 %: 0.25 hrs: Winter	85.391	84.350	84.390	0.040	4.5	0.006	0.000	4.5	2.125	OK
Sw.10	FEH: 30 years: +35 %: 0.25 hrs: Winter	85.356	84.400	84.431	0.031	2.6	0.005	0.000	2.6	1.230	OK
Sw.13	FEH: 30 years: +35 %: 0.25 hrs: Winter	85.278	83.900	83.974	0.074	18.0	0.012	0.000	17.8	8.497	OK
Sw.16	FEH: 30 years: +35 %: 0.25 hrs: Winter	85.270	83.650	83.725	0.075	10.2	0.012	0.000	10.0	4.842	OK
Sw.15	FEH: 30 years: +35 %: 0.25 hrs: Winter	85.248	83.850	83.898	0.048	4.5	0.003	0.000	4.3	2.085	OK
Sre.15	FEH: 30 years: +35 %: 0.25 hrs: Winter	85.246	84.100	84.133	0.033	2.6	0.002	0.000	2.5	1.181	OK
Sxx.16	FEH: 30 years: +35 %: 0.25 hrs: Winter	85.085	83.555	83.619	0.064	27.9	0.005	0.000	27.7	13.333	OK
Sw.19	FEH: 30 years: +35 %: 0.25 hrs: Winter	84.591	83.000	83.033	0.033	10.3	0.005	0.000	10.2	4.844	OK
Sre.07	FEH: 30 years: +35 %: 0.25 hrs: Winter	84.550	83.600	83.679	0.079	6.8	0.006	0.000	6.6	3.152	OK
Sre.09	FEH: 30 years: +35 %: 0.25 hrs: Winter	84.549	83.600	83.678	0.078	6.8	0.006	0.000	6.6	3.158	OK
Sw.09	FEH: 30 years: +35 %: 0.25 hrs: Winter	84.515	83.300	83.336	0.036	14.5	0.006	0.000	14.4	6.775	OK
Sw.07	FEH: 30 years: +35 %: 0.25 hrs: Winter	84.480	83.300	83.335	0.035	14.3	0.006	0.000	14.2	6.682	OK
Sw.22	FEH: 30 years: +35 %: 0.25 hrs: Winter	84.259	83.350	83.381	0.031	4.5	0.005	0.000	4.5	2.110	OK
Sre.22	FEH: 30 years: +35 %: 0.25 hrs: Winter	84.270	83.600	83.641	0.041	2.6	0.003	0.000	2.5	1.202	OK
Sw.08	FEH: 30 years: +35 %: 0.25 hrs: Winter	84.439	83.300	83.323	0.023	6.1	0.004	0.000	6.0	2.842	OK

Project:					Date: 30/05/2025							
					Designed by: sibandac			Checked by:		Approved By:		
Report Details: Type: Junctions Summary Storm Phase: 13555 SW drainage					Company Address:							
Sre.21	FEH: 30 years: +35 %: 0.25 hrs: Winter	84.275	83.600	83.636	0.036	2.2	0.003	0.000	2.1	1.010	OK	
Sre.05	FEH: 30 years: +35 %: 0.25 hrs: Winter	84.425	83.700	83.742	0.042	2.6	0.003	0.000	2.5	1.199	OK	
Sre.08	FEH: 30 years: +35 %: 0.25 hrs: Winter	84.401	83.600	83.646	0.046	3.2	0.003	0.000	3.1	1.457	OK	
Sre.06	FEH: 30 years: +35 %: 0.25 hrs: Winter	84.400	83.600	83.657	0.057	4.4	0.004	0.000	4.2	2.018	OK	
Sw.21	FEH: 30 years: +35 %: 0.25 hrs: Winter	84.286	83.300	83.330	0.030	3.7	0.005	0.000	3.6	1.726	OK	
Sre.01	FEH: 30 years: +35 %: 0.25 hrs: Winter	84.391	83.400	83.471	0.071	6.7	0.005	0.000	6.5	3.098	OK	
Sw.05	FEH: 30 years: +35 %: 0.25 hrs: Winter	84.376	83.400	83.423	0.023	6.1	0.004	0.000	6.1	2.874	OK	
Sw.06	FEH: 30 years: +35 %: 0.25 hrs: Winter	84.369	83.300	83.327	0.027	8.7	0.004	0.000	8.6	4.087	OK	
Sw.20	FEH: 30 years: +35 %: 8.00 hrs: Winter	84.361	81.700	82.883	1.183	13.1	4.098	0.000	1.0	171.614	Surcharged	
Sxx.05	FEH: 30 years: +35 %: 0.25 hrs: Winter	84.305	81.921	82.887	0.966	32.6	0.069	0.000	30.0	15.685	Surcharged	
Sxx.07	FEH: 30 years: +35 %: 8.00 hrs: Winter	84.412	81.835	82.883	1.048	6.1	0.074	0.000	6.0	69.301	Surcharged	
Sw.01	FEH: 30 years: +35 %: 0.25 hrs: Winter	84.273	83.050	83.085	0.035	9.3	0.006	0.000	9.3	4.393	OK	
Sw.03	FEH: 30 years: +35 %: 0.25 hrs: Winter	84.244	81.975	82.904	0.929	23.7	1.051	0.000	21.1	10.655	Surcharged	
Sw.04	FEH: 30 years: +35 %: 0.25 hrs: Winter	84.257	83.350	83.371	0.021	5.4	0.003	0.000	5.4	2.529	OK	
Sre.04	FEH: 30 years: +35 %: 0.25 hrs: Winter	84.250	83.630	83.670	0.040	2.3	0.003	0.000	2.3	1.076	OK	
Sw.02	FEH: 30 years: +35 %: 0.25 hrs: Winter	84.217	82.950	82.972	0.022	3.6	0.004	0.000	3.6	1.692	OK	
Sre.02	FEH: 30 years: +35 %: 0.25 hrs: Winter	84.203	83.200	83.241	0.041	2.5	0.003	0.000	2.4	1.133	OK	
Sw.23	FEH: 30 years: +35 %: 0.25 hrs: Winter	83.855	82.300	82.334	0.034	10.1	0.005	0.000	10.1	4.780	OK	
Sxx.09	FEH: 30 years: +35 %: 8.00 hrs: Winter	84.479	81.781	82.883	1.102	8.2	0.078	0.000	8.1	93.694	Surcharged	
Sw.24	FEH: 30 years: +35 %: 0.25 hrs: Winter	83.233	82.200	82.213	0.013	2.8	0.002	0.000	2.8	1.306	OK	
Sw.27	FEH: 30 years: +35 %: 0.25 hrs: Winter	83.119	81.000	81.039	0.039	10.3	0.006	0.000	10.3	4.873	OK	
Sw.18	FEH: 30 years: +35 %: 0.25 hrs: Winter	84.985	84.100	84.130	0.030	4.5	0.005	0.000	4.4	2.092	OK	
Sre.18	FEH: 30 years: +35 %: 0.25 hrs: Winter	85.000	84.300	84.343	0.043	2.5	0.003	0.000	2.5	1.178	OK	
Sw.29	FEH: 30 years: +35 %: 0.25 hrs: Winter	81.921	80.700	80.729	0.029	8.9	0.005	0.000	8.9	4.163	OK	

Project:					Date: 30/05/2025						
					Designed by: sibandac		Checked by:		Approved By:		
Report Details: Type: Junctions Summary Storm Phase: 13555 SW drainage					Company Address:						
Sw.30	FEH: 30 years: +35 %: 0.25 hrs: Winter	81.737	79.000	79.107	0.107	50.2	0.121	0.000	49.6	24.406	OK
Sw.31	FEH: 30 years: +35 %: 0.25 hrs: Winter	81.301	80.100	80.126	0.026	8.9	0.004	0.000	8.9	4.138	OK
Sre.17	FEH: 30 years: +35 %: 0.25 hrs: Winter	85.000	84.400	84.439	0.039	2.3	0.003	0.000	2.2	1.055	OK
Sw.43	FEH: 30 years: +35 %: 0.25 hrs: Winter	80.662	78.500	78.543	0.043	18.8	0.007	0.000	18.7	9.128	OK
Sw.45	FEH: 30 years: +35 %: 0.25 hrs: Winter	80.432	79.100	79.125	0.025	7.0	0.004	0.000	6.9	3.290	OK
Sw.46	FEH: 30 years: +35 %: 16.00 hrs: Winter	80.687	76.600	78.348	1.748	8.5	6.055	0.000	1.7	299.392	Surcharged
Sw.34	FEH: 30 years: +35 %: 0.25 hrs: Winter	80.317	78.300	79.009	0.709	10.2	0.113	0.000	10.0	4.194	Surcharged
Sw.38	FEH: 30 years: +35 %: 0.25 hrs: Winter	80.072	78.870	78.908	0.038	4.0	0.006	0.000	3.9	1.862	OK
Sre.55	FEH: 30 years: +35 %: 0.25 hrs: Winter	79.842	79.100	79.120	0.020	1.3	0.001	0.000	1.3	0.596	OK
Sw.55	FEH: 30 years: +35 %: 0.25 hrs: Winter	79.841	78.700	78.752	0.052	3.9	0.008	0.000	3.8	1.816	OK
Sw.59	FEH: 30 years: +35 %: 4.00 hrs: Winter	79.036	76.800	77.663	0.863	4.7	0.976	0.000	0.7	34.590	Surcharged
Sw.17	FEH: 30 years: +35 %: 0.25 hrs: Winter	85.012	84.150	84.179	0.029	3.6	0.005	0.000	3.6	1.708	OK
Sw.56	FEH: 30 years: +35 %: 0.25 hrs: Winter	79.469	78.350	78.389	0.039	7.7	0.006	0.000	7.7	3.645	OK
Sw.58	FEH: 30 years: +35 %: 0.25 hrs: Winter	79.295	78.200	78.238	0.038	5.2	0.006	0.000	5.1	2.419	OK
Sw.57	FEH: 30 years: +35 %: 0.25 hrs: Winter	79.292	78.450	78.499	0.049	3.7	0.008	0.000	3.6	1.715	OK
Sw.53	FEH: 30 years: +35 %: 4.00 hrs: Winter	79.285	76.450	76.488	0.038	2.3	0.043	0.000	2.3	52.736	OK
Sxx.58	FEH: 30 years: +35 %: 4.00 hrs: Winter	79.242	77.575	77.663	0.088	2.5	0.006	0.000	2.5	14.217	OK
Sw.52	FEH: 30 years: +35 %: 4.00 hrs: Winter	79.170	76.550	76.571	0.021	0.8	0.003	0.000	0.8	14.316	OK
Sw.54	FEH: 30 years: +35 %: 8.00 hrs: Winter	78.839	76.350	76.468	0.118	2.2	0.134	0.000	2.2	103.526	OK
Sw.51	FEH: 30 years: +35 %: 4.00 hrs: Winter	78.830	76.650	76.671	0.021	0.8	0.003	0.000	0.8	14.334	OK
Sw.50	FEH: 30 years: +35 %: 4.00 hrs: Winter	78.771	76.800	77.720	0.920	3.7	1.041	0.000	0.8	27.027	Surcharged
Sw.60	FEH: 30 years: +35 %: 8.00 hrs: Winter	78.757	76.300	76.467	0.167	2.9	0.189	0.000	2.9	131.373	Surcharged
Sw.48	FEH: 30 years: +35 %: 0.25 hrs: Winter	78.685	77.700	77.728	0.028	5.8	0.004	0.000	5.7	2.703	OK
Sw.49	FEH: 30 years: +35 %: 4.00 hrs: Winter	78.656	76.900	77.720	0.820	1.1	1.174	0.000	0.9	6.045	Surcharged

Project:					Date: 30/05/2025						
					Designed by: sibandac		Checked by:		Approved By:		
Report Details: Type: Junctions Summary Storm Phase: 13555 SW drainage					Company Address:						
Sw.62	FEH: 30 years: +35 %: 8.00 hrs: Winter	78.457	75.650	76.462	0.812	2.9	0.918	0.000	2.7	129.346	Surcharged
Sw.61	FEH: 30 years: +35 %: 8.00 hrs: Winter	78.321	76.200	76.465	0.265	2.9	0.299	0.000	2.9	131.284	Surcharged
Sw.63	FEH: 30 years: +35 %: 8.00 hrs: Winter	75.066	73.800	73.830	0.030	2.7	0.033	0.000	2.7	126.140	OK
Sw.64	FEH: 30 years: +35 %: 8.00 hrs: Winter	74.459	73.450	73.476	0.026	2.7	0.046	0.000	2.7	126.075	OK
Sw.65	FEH: 30 years: +35 %: 8.00 hrs: Winter	74.000	72.600	72.645	0.045	2.7	0.080	0.000	2.7	125.855	OK
Sre.24	FEH: 30 years: +35 %: 0.25 hrs: Winter	84.112	82.500	82.529	0.029	1.4	0.002	0.000	1.4	0.650	OK
Sw.26	FEH: 30 years: +35 %: 0.25 hrs: Winter	83.339	82.350	82.378	0.028	4.5	0.004	0.000	4.4	2.104	OK
Sre.26	FEH: 30 years: +35 %: 0.25 hrs: Winter	83.793	82.600	82.640	0.040	2.5	0.003	0.000	2.4	1.160	OK
Sw.25	FEH: 30 years: +35 %: 0.25 hrs: Winter	83.794	83.100	83.125	0.025	3.7	0.004	0.000	3.6	1.729	OK
Sxx.27	FEH: 30 years: +35 %: 0.25 hrs: Winter	82.800	80.094	80.169	0.075	23.7	0.005	0.000	23.5	12.006	OK
Sre.25	FEH: 30 years: +35 %: 0.25 hrs: Winter	83.809	83.400	83.437	0.037	2.2	0.003	0.000	2.1	1.010	OK
Sxx.24	FEH: 30 years: +35 %: 0.25 hrs: Winter	82.995	80.303	80.367	0.064	13.5	0.005	0.000	13.4	7.149	OK
Sxx.23	FEH: 30 years: +35 %: 0.25 hrs: Winter	83.559	80.875	80.925	0.050	10.9	0.004	0.000	10.8	5.857	OK
Sw.28	FEH: 30 years: +35 %: 0.25 hrs: Winter	82.115	81.450	81.487	0.037	3.1	0.003	0.000	3.1	1.439	OK
Sre.31	FEH: 30 years: +35 %: 0.25 hrs: Winter	81.742	80.900	80.937	0.037	3.2	0.003	0.000	3.1	1.460	OK
Sxx.31	FEH: 30 years: +35 %: 16.00 hrs: Winter	81.004	77.777	78.349	0.572	4.3	0.041	0.000	4.3	170.172	Surcharged
Sw.42	FEH: 30 years: +35 %: 0.25 hrs: Winter	80.658	79.700	79.722	0.022	3.9	0.003	0.000	3.9	1.819	OK
Sw.44	FEH: 30 years: +35 %: 0.25 hrs: Winter	80.631	79.700	79.739	0.039	5.0	0.006	0.000	5.0	2.365	OK
Sw.41	FEH: 30 years: +35 %: 0.25 hrs: Winter	80.624	79.700	79.722	0.022	3.8	0.004	0.000	3.8	1.780	OK
Sre.40	FEH: 30 years: +35 %: 0.25 hrs: Winter	80.545	79.460	79.489	0.029	1.3	0.002	0.000	1.3	0.614	OK
Sre.41	FEH: 30 years: +35 %: 0.25 hrs: Winter	80.545	79.860	79.890	0.030	1.3	0.002	0.000	1.3	0.611	OK
Sre.42	FEH: 30 years: +35 %: 0.25 hrs: Winter	80.545	79.860	79.891	0.031	1.4	0.002	0.000	1.4	0.653	OK
Sw.44A	FEH: 30 years: +35 %: 0.25 hrs: Winter	80.501	79.900	79.947	0.047	3.3	0.003	0.000	3.2	1.538	OK
Sw.40	FEH: 30 years: +35 %: 0.25 hrs: Winter	80.463	79.300	79.327	0.027	3.9	0.004	0.000	3.9	1.831	OK

Project:					Date: 30/05/2025						
					Designed by: sibandac		Checked by:		Approved By:		
Report Details: Type: Junctions Summary Storm Phase: 13555 SW drainage					Company Address:						
Sxx.34	FEH: 30 years: +35 %: 0.25 hrs: Winter	80.254	78.925	78.970	0.045	17.2	0.003	0.000	17.2	7.665	OK
Sre.34	FEH: 30 years: +35 %: 0.25 hrs: Winter	80.439	79.600	79.624	0.024	2.6	0.002	0.000	2.5	1.183	OK
Sre.33	FEH: 30 years: +35 %: 0.25 hrs: Winter	80.437	79.800	79.823	0.023	1.8	0.002	0.000	1.7	0.818	OK
Sxx.39	FEH: 30 years: +35 %: 0.25 hrs: Winter	80.192	78.738	78.812	0.074	7.8	0.005	0.000	7.7	3.711	OK
Sxx.40	FEH: 30 years: +35 %: 0.25 hrs: Winter	80.336	78.664	78.758	0.094	11.5	0.007	0.000	11.3	5.538	OK
Sw.39	FEH: 30 years: +35 %: 0.25 hrs: Winter	80.282	79.300	79.328	0.028	4.0	0.004	0.000	3.9	1.852	OK
Sre.32	FEH: 30 years: +35 %: 0.25 hrs: Winter	80.446	79.700	79.722	0.022	0.9	0.003	0.000	0.9	0.425	OK
Sxx.41	FEH: 30 years: +35 %: 0.25 hrs: Winter	80.399	78.594	78.689	0.096	15.1	0.007	0.000	14.9	7.314	OK
Sre.39	FEH: 30 years: +35 %: 0.25 hrs: Winter	80.170	79.460	79.490	0.030	1.4	0.002	0.000	1.3	0.638	OK
Sre.37	FEH: 30 years: +35 %: 0.25 hrs: Winter	80.168	79.460	79.492	0.032	1.4	0.002	0.000	1.4	0.650	OK
Sw.37	FEH: 30 years: +35 %: 0.25 hrs: Winter	80.158	79.300	79.318	0.018	1.4	0.003	0.000	1.3	0.648	OK
Sw.33	FEH: 30 years: +35 %: 0.25 hrs: Winter	80.550	79.000	79.068	0.068	7.4	0.011	0.000	7.3	3.476	OK
Sw.32	FEH: 30 years: +35 %: 0.25 hrs: Winter	80.646	79.500	79.522	0.022	1.8	0.004	0.000	1.8	0.838	OK
Sw.47	FEH: 30 years: +35 %: 0.25 hrs: Winter	79.597	77.800	77.844	0.044	9.6	0.007	0.000	9.5	4.451	OK
Sre.47	FEH: 30 years: +35 %: 0.25 hrs: Winter	79.543	78.700	78.745	0.045	5.6	0.003	0.000	5.5	2.574	OK
Sre.48	FEH: 30 years: +35 %: 0.25 hrs: Winter	78.639	77.900	77.942	0.042	2.9	0.003	0.000	2.9	1.355	OK
Sw.35	FEH: 30 years: +35 %: 16.00 hrs: Winter	79.685	76.800	78.348	1.548	1.3	1.751	0.000	1.2	28.516	Surcharged
Sxx.36	FEH: 30 years: +35 %: 16.00 hrs: Winter	79.933	76.758	78.348	1.590	1.5	0.113	0.000	1.4	32.645	Surcharged
Sw.36	FEH: 30 years: +35 %: 0.25 hrs: Winter	79.917	79.150	79.164	0.014	4.6	0.002	0.000	4.6	2.112	OK
Sw.62A	FEH: 30 years: +35 %: 8.00 hrs: Winter	77.679	75.550	76.462	0.912	2.7	1.031	0.000	2.7	127.193	Surcharged
Sw.62B	FEH: 30 years: +35 %: 8.00 hrs: Winter	77.496	75.430	76.460	1.030	2.7	1.165	0.000	2.7	126.269	Surcharged
Sw.66	FEH: 30 years: +35 %: 8.00 hrs: Winter	73.538	72.100	72.128	0.028	2.7	0.049	0.000	2.7	125.662	OK
Sw.67	FEH: 30 years: +35 %: 8.00 hrs: Winter	70.268	68.870	68.905	0.035	2.7	0.062	0.000	2.7	125.479	OK
S 391H	FEH: 30 years: +35 %: 8.00 hrs: Winter	70.090	68.700	68.733	0.033	2.7	0.000	0.000	2.7	125.479	OK

Project:	Date: 30/05/2025		
	Designed by: sibandac	Checked by:	Approved By:
	Report Details: Type: Junctions Summary Storm Phase: 13555 SW drainage		
Company Address:			





FEH: 100 years: Increase Rainfall (%): +40: Critical Storm Per Item: Rank By: Max. Depth

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
Sre.14	FEH: 100 years: +40 %: 0.25 hrs: Winter	86.563	86.100	86.121	0.021	2.8	0.001	0.000	2.8	1.308	OK
Sw.14	FEH: 100 years: +40 %: 8.00 hrs: Winter	86.383	83.900	84.211	0.311	0.5	0.049	0.000	0.5	5.603	Surcharged
Sw.12	FEH: 100 years: +40 %: 0.25 hrs: Winter	85.498	84.150	84.221	0.071	12.8	0.011	0.000	12.6	6.071	OK
Sre.10	FEH: 100 years: +40 %: 0.25 hrs: Winter	85.400	84.700	84.735	0.035	2.2	0.002	0.000	2.1	1.007	OK
Sre.11	FEH: 100 years: +40 %: 0.25 hrs: Winter	85.396	84.700	84.741	0.041	3.4	0.003	0.000	3.3	1.571	OK
Sw.11	FEH: 100 years: +40 %: 0.25 hrs: Winter	85.391	84.350	84.397	0.047	6.0	0.008	0.000	5.9	2.824	OK
Sw.10	FEH: 100 years: +40 %: 0.25 hrs: Winter	85.356	84.400	84.436	0.036	3.5	0.006	0.000	3.4	1.638	OK
Sw.13	FEH: 100 years: +40 %: 8.00 hrs: Winter	85.278	83.900	84.211	0.311	2.6	0.049	0.000	2.6	29.213	Surcharged
Sw.16	FEH: 100 years: +40 %: 8.00 hrs: Winter	85.270	83.650	84.211	0.561	1.5	0.089	0.000	1.5	16.644	Surcharged
Sw.15	FEH: 100 years: +40 %: 8.00 hrs: Winter	85.248	83.850	84.211	0.361	0.6	0.026	0.000	0.6	7.193	Surcharged
Sre.15	FEH: 100 years: +40 %: 8.00 hrs: Winter	85.246	84.100	84.211	0.111	0.4	0.008	0.000	0.4	4.073	OK
Sxx.16	FEH: 100 years: +40 %: 8.00 hrs: Winter	85.085	83.555	84.211	0.656	4.0	0.047	0.000	4.0	45.844	Surcharged
Sw.19	FEH: 100 years: +40 %: 8.00 hrs: Winter	84.591	83.000	84.211	1.211	2.0	0.193	0.000	1.5	16.719	Surcharged
Sre.07	FEH: 100 years: +40 %: 8.00 hrs: Winter	84.550	83.600	84.211	0.611	0.9	0.043	0.000	1.0	10.850	Surcharged
Sre.09	FEH: 100 years: +40 %: 8.00 hrs: Winter	84.549	83.600	84.211	0.611	0.9	0.043	0.000	1.0	10.873	Surcharged
Sw.09	FEH: 100 years: +40 %: 8.00 hrs: Winter	84.515	83.300	84.211	0.911	2.0	0.145	0.000	2.0	23.282	Surcharged
Sw.07	FEH: 100 years: +40 %: 8.00 hrs: Winter	84.480	83.300	84.211	0.911	2.0	0.145	0.000	2.0	22.995	Flood Risk
Sw.22	FEH: 100 years: +40 %: 0.25 hrs: Winter	84.259	83.350	83.386	0.036	6.0	0.006	0.000	5.9	2.797	OK
Sre.22	FEH: 100 years: +40 %: 0.25 hrs: Winter	84.270	83.600	83.648	0.048	3.5	0.003	0.000	3.4	1.595	OK
Sw.08	FEH: 100 years: +40 %: 8.00 hrs: Winter	84.439	83.300	84.211	0.911	0.9	0.145	0.000	0.9	9.996	Flood Risk

Project:					Date: 30/05/2025							
					Designed by: sibandac			Checked by:		Approved By:		
Report Details: Type: Junctions Summary Storm Phase: 13555 SW drainage					Company Address:							
Sre.21	FEH: 100 years: +40 %: 0.25 hrs: Winter	84.275	83.600	83.642	0.042	2.9	0.003	0.000	2.8	1.340	OK	
Sre.05	FEH: 100 years: +40 %: 8.00 hrs: Winter	84.425	83.700	84.211	0.511	0.4	0.036	0.000	0.4	4.207	Flood Risk	
Sre.08	FEH: 100 years: +40 %: 8.00 hrs: Winter	84.401	83.600	84.211	0.611	0.4	0.043	0.000	0.4	5.085	Flood Risk	
Sre.06	FEH: 100 years: +40 %: 8.00 hrs: Winter	84.400	83.600	84.211	0.611	0.6	0.043	0.000	0.6	6.957	Flood Risk	
Sw.21	FEH: 100 years: +40 %: 0.25 hrs: Winter	84.286	83.300	83.335	0.035	4.9	0.006	0.000	4.8	2.284	OK	
Sre.01	FEH: 100 years: +40 %: 8.00 hrs: Winter	84.391	83.400	84.211	0.811	0.9	0.058	0.000	0.9	10.652	Flood Risk	
Sw.05	FEH: 100 years: +40 %: 8.00 hrs: Winter	84.376	83.400	84.211	0.811	0.9	0.129	0.000	0.9	10.065	Flood Risk	
Sw.06	FEH: 100 years: +40 %: 8.00 hrs: Winter	84.369	83.300	84.211	0.911	1.2	0.145	0.000	1.2	14.064	Flood Risk	
Sw.20	FEH: 100 years: +40 %: 8.00 hrs: Winter	84.361	81.700	84.211	2.511	16.9	8.698	0.000	1.3	193.254	Flood Risk	
Sxx.05	FEH: 100 years: +40 %: 8.00 hrs: Winter	84.305	81.921	84.211	2.290	4.8	0.163	0.000	4.6	57.986	Flood Risk	
Sxx.07	FEH: 100 years: +40 %: 8.00 hrs: Winter	84.412	81.835	84.211	2.376	7.9	0.169	0.000	7.7	91.821	Flood Risk	
Sw.01	FEH: 100 years: +40 %: 8.00 hrs: Winter	84.273	83.050	84.211	1.161	1.3	0.185	0.000	1.3	15.260	Flood Risk	
Sw.03	FEH: 100 years: +40 %: 8.00 hrs: Winter	84.244	81.975	84.211	2.236	3.3	2.529	0.000	3.2	42.224	Flood Risk	
Sw.04	FEH: 100 years: +40 %: 8.00 hrs: Winter	84.257	83.350	84.211	0.861	0.8	0.137	0.000	0.8	9.076	Flood Risk	
Sre.04	FEH: 100 years: +40 %: 8.00 hrs: Winter	84.250	83.630	84.211	0.581	0.4	0.041	0.000	0.3	3.867	Flood Risk	
Sw.02	FEH: 100 years: +40 %: 8.00 hrs: Winter	84.217	82.950	84.210	1.260	1.6	0.200	0.000	1.3	11.732	Flood Risk	
Sre.02	FEH: 100 years: +40 %: 8.00 hrs: Winter	84.203	83.200	84.205	1.005	1.4	2.138	2.067	1.3	6.381	Flood	
Sw.23	FEH: 100 years: +40 %: 0.25 hrs: Winter	83.855	82.300	82.339	0.039	13.5	0.006	0.000	13.4	6.337	OK	
Sxx.09	FEH: 100 years: +40 %: 8.00 hrs: Winter	84.479	81.781	84.211	2.430	10.6	0.173	0.000	10.5	121.851	Flood Risk	
Sw.24	FEH: 100 years: +40 %: 0.25 hrs: Winter	83.233	82.200	82.215	0.015	3.7	0.002	0.000	3.7	1.735	OK	
Sw.27	FEH: 100 years: +40 %: 0.25 hrs: Winter	83.119	81.000	81.045	0.045	13.8	0.007	0.000	13.7	6.465	OK	
Sw.18	FEH: 100 years: +40 %: 8.00 hrs: Winter	84.985	84.100	84.211	0.111	0.6	0.018	0.000	0.6	7.191	Surcharged	
Sre.18	FEH: 100 years: +40 %: 0.25 hrs: Winter	85.000	84.300	84.351	0.051	3.4	0.004	0.000	3.3	1.559	OK	
Sw.29	FEH: 100 years: +40 %: 0.25 hrs: Winter	81.921	80.700	80.732	0.032	11.9	0.005	0.000	11.8	5.529	OK	

Project:					Date: 30/05/2025						 DRN
					Designed by: sibandac			Checked by:		Approved By:	
Report Details: Type: Junctions Summary Storm Phase: 13555 SW drainage					Company Address:						
Sw.30	FEH: 100 years: +40 %: 0.25 hrs: Winter	81.737	79.000	79.700	0.700	66.6	0.791	0.000	55.1	32.198	Surcharged
Sw.31	FEH: 100 years: +40 %: 0.25 hrs: Winter	81.301	80.100	80.130	0.030	11.8	0.005	0.000	11.8	5.490	OK
Sre.17	FEH: 100 years: +40 %: 0.25 hrs: Winter	85.000	84.400	84.445	0.045	3.0	0.003	0.000	2.9	1.400	OK
Sw.43	FEH: 100 years: +40 %: 16.00 hrs: Winter	80.662	78.500	79.686	1.186	1.5	0.189	0.000	1.5	40.119	Surcharged
Sw.45	FEH: 100 years: +40 %: 16.00 hrs: Winter	80.432	79.100	79.686	0.586	0.5	0.093	0.000	0.5	12.350	Surcharged
Sw.46	FEH: 100 years: +40 %: 16.00 hrs: Winter	80.687	76.600	79.686	3.086	10.8	10.689	0.000	2.2	358.213	Surcharged
Sw.34	FEH: 100 years: +40 %: 16.00 hrs: Winter	80.317	78.300	79.686	1.386	0.8	0.220	0.000	0.8	17.206	Surcharged
Sw.38	FEH: 100 years: +40 %: 16.00 hrs: Winter	80.072	78.870	79.686	0.816	0.3	0.130	0.000	0.3	8.335	Surcharged
Sre.55	FEH: 100 years: +40 %: 0.25 hrs: Winter	79.842	79.100	79.123	0.023	1.7	0.002	0.000	1.7	0.788	OK
Sw.55	FEH: 100 years: +40 %: 0.25 hrs: Winter	79.841	78.700	78.762	0.062	5.2	0.010	0.000	5.0	2.413	OK
Sw.59	FEH: 100 years: +40 %: 4.00 hrs: Winter	79.036	76.800	78.711	1.911	6.1	2.161	0.000	1.0	41.206	Surcharged
Sw.17	FEH: 100 years: +40 %: 8.00 hrs: Winter	85.012	84.150	84.211	0.061	0.5	0.010	0.000	0.5	5.882	OK
Sw.56	FEH: 100 years: +40 %: 4.00 hrs: Winter	79.469	78.350	78.712	0.362	1.9	0.058	0.000	1.9	11.122	Surcharged
Sw.58	FEH: 100 years: +40 %: 4.00 hrs: Winter	79.295	78.200	78.712	0.512	1.3	0.081	0.000	1.3	7.481	Surcharged
Sw.57	FEH: 100 years: +40 %: 4.00 hrs: Winter	79.292	78.450	78.712	0.262	0.9	0.042	0.000	0.9	5.248	Surcharged
Sw.53	FEH: 100 years: +40 %: 8.00 hrs: Winter	79.285	76.450	76.964	0.514	2.7	0.582	0.000	2.7	122.179	Surcharged
Sxx.58	FEH: 100 years: +40 %: 4.00 hrs: Winter	79.242	77.575	78.711	1.136	3.2	0.081	0.000	3.2	18.605	Surcharged
Sw.52	FEH: 100 years: +40 %: 8.00 hrs: Winter	79.170	76.550	76.965	0.415	0.9	0.066	0.000	0.9	28.968	Surcharged
Sw.54	FEH: 100 years: +40 %: 8.00 hrs: Winter	78.839	76.350	76.962	0.612	2.7	0.692	0.000	2.7	121.888	Surcharged
Sw.51	FEH: 100 years: +40 %: 8.00 hrs: Winter	78.830	76.650	76.965	0.315	0.9	0.050	0.000	0.9	28.985	Surcharged
Sw.50	FEH: 100 years: +40 %: 2.00 hrs: Winter	78.771	76.800	78.393	1.593	8.1	1.802	0.000	1.0	25.064	Surcharged
Sw.60	FEH: 100 years: +40 %: 8.00 hrs: Winter	78.757	76.300	76.960	0.660	3.7	0.747	0.000	3.7	155.670	Surcharged
Sw.48	FEH: 100 years: +40 %: 2.00 hrs: Winter	78.685	77.700	78.393	0.693	2.4	0.110	0.000	2.4	7.117	Flood Risk
Sw.49	FEH: 100 years: +40 %: 2.00 hrs: Winter	78.656	76.900	78.393	1.493	2.4	2.137	0.000	2.1	7.053	Flood Risk

Project:					Date: 30/05/2025							
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Report Details: Type: Junctions Summary Storm Phase: 13555 SW drainage					Company Address:							
Sw.62	FEH: 100 years: +40 %: 8.00 hrs: Winter	78.457	75.650	76.952	1.302	3.6	1.473	0.000	3.3	152.711	Surcharged	
Sw.61	FEH: 100 years: +40 %: 8.00 hrs: Winter	78.321	76.200	76.956	0.756	3.7	0.855	0.000	3.6	155.141	Surcharged	
Sw.63	FEH: 100 years: +40 %: 8.00 hrs: Winter	75.066	73.800	73.833	0.033	3.3	0.037	0.000	3.3	148.739	OK	
Sw.64	FEH: 100 years: +40 %: 8.00 hrs: Winter	74.459	73.450	73.478	0.028	3.3	0.050	0.000	3.3	148.668	OK	
Sw.65	FEH: 100 years: +40 %: 8.00 hrs: Winter	74.000	72.600	72.650	0.050	3.3	0.088	0.000	3.3	148.423	OK	
Sre.24	FEH: 100 years: +40 %: 0.25 hrs: Winter	84.112	82.500	82.534	0.034	1.9	0.002	0.000	1.8	0.860	OK	
Sw.26	FEH: 100 years: +40 %: 0.25 hrs: Winter	83.339	82.350	82.383	0.033	6.0	0.005	0.000	5.9	2.794	OK	
Sre.26	FEH: 100 years: +40 %: 0.25 hrs: Winter	83.793	82.600	82.648	0.048	3.3	0.003	0.000	3.3	1.541	OK	
Sw.25	FEH: 100 years: +40 %: 0.25 hrs: Winter	83.794	83.100	83.128	0.028	4.9	0.005	0.000	4.9	2.296	OK	
Sxx.27	FEH: 100 years: +40 %: 0.25 hrs: Winter	82.800	80.094	80.185	0.091	31.3	0.006	0.000	31.1	15.716	OK	
Sre.25	FEH: 100 years: +40 %: 0.25 hrs: Winter	83.809	83.400	83.443	0.043	2.9	0.003	0.000	2.8	1.340	OK	
Sxx.24	FEH: 100 years: +40 %: 0.25 hrs: Winter	82.995	80.303	80.379	0.077	17.8	0.005	0.000	17.6	9.281	OK	
Sxx.23	FEH: 100 years: +40 %: 0.25 hrs: Winter	83.559	80.875	80.933	0.058	14.2	0.004	0.000	14.1	7.561	OK	
Sw.28	FEH: 100 years: +40 %: 0.25 hrs: Winter	82.115	81.450	81.493	0.043	4.1	0.003	0.000	4.1	1.916	OK	
Sre.31	FEH: 100 years: +40 %: 0.25 hrs: Winter	81.742	80.900	80.943	0.043	4.2	0.003	0.000	4.1	1.937	OK	
Sxx.31	FEH: 100 years: +40 %: 16.00 hrs: Winter	81.004	77.777	79.687	1.910	5.4	0.136	0.000	5.4	212.394	Surcharged	
Sw.42	FEH: 100 years: +40 %: 0.25 hrs: Winter	80.658	79.700	79.725	0.025	5.2	0.004	0.000	5.1	2.413	OK	
Sw.44	FEH: 100 years: +40 %: 0.25 hrs: Winter	80.631	79.700	79.746	0.046	6.7	0.007	0.000	6.6	3.133	OK	
Sw.41	FEH: 100 years: +40 %: 0.25 hrs: Winter	80.624	79.700	79.726	0.026	5.1	0.004	0.000	5.0	2.362	OK	
Sre.40	FEH: 100 years: +40 %: 16.00 hrs: Winter	80.545	79.460	79.686	0.226	0.1	0.016	0.000	0.1	2.464	Surcharged	
Sre.41	FEH: 100 years: +40 %: 0.25 hrs: Winter	80.545	79.860	79.895	0.035	1.7	0.002	0.000	1.7	0.806	OK	
Sre.42	FEH: 100 years: +40 %: 0.25 hrs: Winter	80.545	79.860	79.896	0.036	1.9	0.003	0.000	1.8	0.869	OK	
Sw.44A	FEH: 100 years: +40 %: 0.25 hrs: Winter	80.501	79.900	79.956	0.056	4.4	0.004	0.000	4.3	2.036	OK	
Sw.40	FEH: 100 years: +40 %: 16.00 hrs: Winter	80.463	79.300	79.686	0.386	0.3	0.061	0.000	0.3	7.226	Surcharged	

Project:					Date: 30/05/2025						
					Designed by: sibandac			Checked by:		Approved By:	
Report Details: Type: Junctions Summary Storm Phase: 13555 SW drainage					Company Address:						
Sxx.34	FEH: 100 years: +40 %: 16.00 hrs: Winter	80.254	78.925	79.685	0.761	1.4	0.054	0.000	1.4	30.160	Surcharged
Sre.34	FEH: 100 years: +40 %: 16.00 hrs: Winter	80.439	79.600	79.686	0.086	0.2	0.006	0.000	0.2	4.441	OK
Sre.33	FEH: 100 years: +40 %: 0.25 hrs: Winter	80.437	79.800	79.826	0.026	2.3	0.002	0.000	2.3	1.082	OK
Sxx.39	FEH: 100 years: +40 %: 16.00 hrs: Winter	80.192	78.738	79.686	0.948	0.6	0.067	0.000	0.6	16.541	Surcharged
Sxx.40	FEH: 100 years: +40 %: 16.00 hrs: Winter	80.336	78.664	79.686	1.022	0.9	0.073	0.000	0.9	25.131	Surcharged
Sw.39	FEH: 100 years: +40 %: 16.00 hrs: Winter	80.282	79.300	79.686	0.386	0.3	0.061	0.000	0.3	7.314	Surcharged
Sre.32	FEH: 100 years: +40 %: 0.25 hrs: Winter	80.446	79.700	79.725	0.025	1.2	0.004	0.000	1.2	0.563	OK
Sxx.41	FEH: 100 years: +40 %: 16.00 hrs: Winter	80.399	78.594	79.685	1.092	1.2	0.078	0.000	1.2	32.784	Surcharged
Sre.39	FEH: 100 years: +40 %: 16.00 hrs: Winter	80.170	79.460	79.686	0.226	0.1	0.016	0.000	0.1	2.559	Surcharged
Sre.37	FEH: 100 years: +40 %: 16.00 hrs: Winter	80.168	79.460	79.686	0.226	0.1	0.016	0.000	0.1	2.596	Surcharged
Sw.37	FEH: 100 years: +40 %: 16.00 hrs: Winter	80.158	79.300	79.686	0.386	0.1	0.061	0.000	0.1	3.109	Surcharged
Sw.33	FEH: 100 years: +40 %: 16.00 hrs: Winter	80.550	79.000	79.686	0.686	0.6	0.109	0.000	0.6	13.023	Surcharged
Sw.32	FEH: 100 years: +40 %: 16.00 hrs: Winter	80.646	79.500	79.686	0.186	0.1	0.030	0.000	0.1	3.197	Surcharged
Sw.47	FEH: 100 years: +40 %: 2.00 hrs: Winter	79.597	77.800	78.394	0.594	4.0	0.094	0.000	4.0	11.665	Surcharged
Sre.47	FEH: 100 years: +40 %: 0.25 hrs: Winter	79.543	78.700	78.753	0.053	7.4	0.004	0.000	7.3	3.414	OK
Sre.48	FEH: 100 years: +40 %: 2.00 hrs: Winter	78.639	77.900	78.394	0.494	1.2	0.035	0.000	1.2	3.568	Flood Risk
Sw.35	FEH: 100 years: +40 %: 16.00 hrs: Winter	79.685	76.800	79.686	2.886	1.7	3.860	0.597	1.6	36.820	Flood
Sxx.36	FEH: 100 years: +40 %: 16.00 hrs: Winter	79.933	76.758	79.686	2.928	2.0	0.208	0.000	1.8	42.650	Flood Risk
Sw.36	FEH: 100 years: +40 %: 16.00 hrs: Winter	79.917	79.150	79.686	0.536	0.3	0.085	0.000	0.4	7.973	Flood Risk
Sw.62A	FEH: 100 years: +40 %: 8.00 hrs: Winter	77.679	75.550	76.952	1.402	3.3	1.586	0.000	3.3	150.146	Surcharged
Sw.62B	FEH: 100 years: +40 %: 8.00 hrs: Winter	77.496	75.430	76.950	1.520	3.3	1.720	0.000	3.3	148.883	Surcharged
Sw.66	FEH: 100 years: +40 %: 8.00 hrs: Winter	73.538	72.100	72.131	0.031	3.3	0.054	0.000	3.3	148.208	OK
Sw.67	FEH: 100 years: +40 %: 8.00 hrs: Winter	70.268	68.870	68.909	0.039	3.3	0.068	0.000	3.3	148.005	OK
S 391H	FEH: 100 years: +40 %: 8.00 hrs: Winter	70.090	68.700	68.737	0.037	3.3	0.000	0.000	3.3	148.005	OK

Project:	Date: 30/05/2025		
	Designed by: sibandac	Checked by:	Approved By:
	Company Address:		
Report Details: Type: Stormwater Controls Summary Storm Phase: 13555 SW drainage			





FEH: 2 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Flooded Volume

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. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Percentage Available (%)	Status
Cellular Storage Sw.20	FEH: 2 years: +0 %: 0.25 hrs: Summer	81.877	81.877	0.127	0.127	32.2	13.971	0.000	0.000	0.3	0.094	89.538	OK
Cellular Storage Sw.46	FEH: 2 years: +0 %: 0.25 hrs: Summer	76.815	76.815	0.165	0.165	33.8	13.812	0.000	0.000	0.1	0.038	91.786	OK
Cellular Storage Sw.50	FEH: 2 years: +0 %: 0.25 hrs: Summer	76.911	76.911	0.061	0.061	5.7	1.857	0.000	0.000	0.4	0.266	86.026	OK
Cellular Storage Sw.59	FEH: 2 years: +0 %: 0.25 hrs: Summer	76.960	76.960	0.110	0.110	6.5	2.515	0.000	0.000	0.3	0.151	86.931	OK

Project:	Date: 30/05/2025		
	Designed by: sibandac	Checked by:	Approved By:
	Company Address:		
Report Details: Type: Stormwater Controls Summary Storm Phase: 13555 SW drainage			





FEH: 30 years: Increase Rainfall (%): +35: Critical Storm Per Item: Rank By: Max. Flooded Volume

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. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Percentage Available (%)	Status
Cellular Storage Sw.20	FEH: 30 years: +35 %: 0.25 hrs: Summer	82.175	82.175	0.425	0.425	105.1	46.832	0.000	0.000	0.5	0.210	64.929	OK
Cellular Storage Sw.46	FEH: 30 years: +35 %: 0.25 hrs: Summer	77.230	77.230	0.580	0.580	112.0	48.456	0.000	0.000	0.3	0.081	71.182	OK
Cellular Storage Sw.50	FEH: 30 years: +35 %: 0.25 hrs: Summer	77.083	77.083	0.233	0.233	17.6	7.079	0.000	0.000	0.4	0.206	46.725	OK
Cellular Storage Sw.59	FEH: 30 years: +35 %: 0.25 hrs: Summer	77.250	77.250	0.400	0.400	21.1	9.126	0.000	0.000	0.5	0.251	52.581	OK

Project:	Date: 30/05/2025		
	Designed by: sibandac	Checked by:	Approved By:
	Company Address:		
Report Details: Type: Stormwater Controls Summary Storm Phase: 13555 SW drainage			





FEH: 100 years: Increase Rainfall (%): +40: Critical Storm Per Item: Rank By: Max. Flooded Volume

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. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Percentage Available (%)	Status
Cellular Storage Sw.20	FEH: 100 years: +40 %: 0.25 hrs: Summer	82.318	82.318	0.568	0.568	143.1	62.562	0.000	0.000	0.8	0.242	53.149	OK
Cellular Storage Sw.46	FEH: 100 years: +40 %: 0.25 hrs: Summer	77.433	77.433	0.783	0.783	140.8	65.396	0.000	0.000	0.4	0.103	61.107	OK
Cellular Storage Sw.50	FEH: 100 years: +40 %: 2.00 hrs: Winter	78.393	78.393	1.543	1.543	7.3	13.678	0.432	0.000	0.8	1.372	-2.928	Flood
Cellular Storage Sw.59	FEH: 100 years: +40 %: 4.00 hrs: Winter	78.711	78.711	1.861	1.861	5.2	20.476	1.272	0.000	0.8	7.171	-6.400	Flood

Project NINE MILE RIDE Sheet 13555w0005 Rev A
Section SURFACE WATER DRAINAGE TECHNICAL NOTE By CS Checked CM Date 10/25

APPENDIX F
Flood Exceedance Route Plan



C D M : SIGNIFICANT HAZARDS	
THE FOLLOWING HEALTH AND SAFETY HAZARDS ARE IDENTIFIED BY THE DESIGNER AS ABNORMAL IN PURSUANCE OF THE CURRENT CONSTRUCTION DESIGN AND MANAGEMENT REGULATIONS.	
RISKS DURING CONSTRUCTION:	
- WORKING ON OR ADJACENT A HIGHWAY IN USE - Contractor to provide all the necessary guarding, signing and safety requirements to ensure safe working environment for personnel and safe passage of vehicular and pedestrian traffic. - DEEP EXCAVATIONS: Deep excavations should have adequate propping and shoring to ensure stability. Personnel working in excavations should be sufficiently protected from falling objects. - EXISTING SERVICES: Further to any existing services information available, contractor to undertake further surveys/scans to locate any existing services prior to excavations. - TPAs, The drainage is being installed within the proximity of tree protection areas, Refer to the arboriculturalist's report for advice.	
OPERATION / MAINTENANCE RISKS:	
No abnormal risks have been identified relating to this design element.	
RISKS DURING DEMOLITION / DECOMMISSIONING / DISMANTLING / ALTERATIONS:	
No abnormal risks have been identified relating to this design element.	

GENERAL NOTES

DRAWINGS AND SPECIFICATIONS: This drawing is to be read in conjunction with all relevant Architects, Engineers and Specialists drawings together with the specification.

BUILDING REGULATIONS AND WARRANTY PROVIDER APPROVALS: Please note that it is the responsibility of the Client/Main Contractor to ensure that Building Regulations and warranty provider (e.g. NHBC) approval of all design and construction details is achieved prior to construction on site.

IF YOU HAVE A QUERY CALL US

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PROJECT TITLE

RESIDENTIAL DEVELOPMENT

NINE MILE RIDE

FINCHAMPSTEAD

DRAWING TITLE

FLOOD EXCEEDANCE ROUTE PLAN

A	FIRST ISSUE	CS	10.09.25	STATUS
REV	REVISION DETAILS	BY	DATE	INFORMATION

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JOB NO.	13555	DRAWING NUMBER	13555sk0025	CM	AR	REV