East Midlands Gateway
Phase 2 (EMG2)

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ENVIRONMENTAL STATEMENT

Volume 2 Technical Appendices

Appendix 13L

Sustainable Drainage Statement (EMG1 Works)

July 2025

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The East Midlands Gateway Phase 2
and Highway Order 202X and The East Midlands Gateway
Rail Freight and Highway (Amendment) Order 202X

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Sustainable Drainage Statement – EMG1 Works

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1. INTRODUCTION

1.1 A Sustainable Drainage Statement (SDS) sets out the principles of drainage design for a development and summarises the reasoning behind the chosen design. This includes justification of specific flow rates, volumes of attenuated storage, as well as the appropriate level of treatment to be provided to surface water runoff.

1.2 This SDS has been produced by BWB Consulting on behalf of SEGRO (Properties) Ltd in respect of a Material Change Order (MCO) for East Midlands Gateway 1 (EMG1), which was previously consented and constructed under the East Midlands Gateway Rail Freight Interchange and Highway Development Consent Order (DCO) 2016. The MCO includes the following:

- Construction of new rail served warehouse at Plot 16 (Works No. 3A);
- Extension of the management offices (Works No. 3B);
- Construction of new road, footway/cycle way and drainage infrastructure to accommodate Works No. 3A (Works No. 5A);
- Construction of new road and footway/cycle way infrastructure to accommodate Works No. 3B (Works No. 5B);
- Construction of a secure parking area for buses (Works No. 5C);
- Hard and soft landscaping (Works No. 6A); and
- Change to the maximum height of the gantries at the rail port.

1.3 An extension to the existing substation within the EMG1 site is proposed to be covered under the EMG2 DCO (DCO works No. 20); however, as this substation is drained via the existing EMG1 drainage system, these specific works has also been assessed within this report.

1.4 The proposed EMG1 Rail Terminal works will not result in any changes to the existing drainage in place for the rail port. Therefore, these works do not need to be considered within this report.

1.5 A Flood Risk Assessment (FRA) has been produced for the site (reference: EMG2-BWB-ZZ-XX-T-W-0010_FRA) and this SDS accompanies the FRA.

1.6 The proposed development is to be submitted for a MCO, and as such the details have been developed in consultation with the relevant statutory bodies relating to flood risk and drainage for the site.

1.7 The Lead Local Flood Authority (LLFA) for the site are Leicestershire County Council. The LLFA are not the prescribed consultee under the MCO process; however North West Leicestershire District Council, the Local Planning Authority (LPA), are. As the LPA is not the LLFA for the site, the Environment Agency (EA) have been deferred to as the relevant body to comment on the surface water drainage strategy. Despite this, as the LLFA is the body responsible for surface water flood risk in relation to planning, Leicestershire County Council have been consulted through the MCO consultation stage and will comment of the surface water drainage proposals, via the EA.

1.8 Severn Trent Water are responsible for waste water disposal.

Situational Context & Associated Development

1.9 The proposed development comprises a number of interrelated component parts as follows, and collectively they are referred to as the EMG2 Project:

- **EMG2 Works:**
  - Construction of logistics and advanced manufacturing development and ancillary buildings (DCO, Works No. 1);
  - Construction of road infrastructure (DCO, Works No. 2);
  - Construction of bus interchange (DCO, Works No. 3);
  - Construction of HGV parking (DCO Works No. 4);
  - Provision of hard and soft landscaping (DCO Works No. 5);
  - Creation of a Community Park (DCO, Work No. 21); and
  - Upgrade of the EMG1 substation (DCO, Work No. 20)[1].
- **Highways Works**
  - A453 access junction works to the EMG2 Main Site (Works No. 6);
  - Hyam's Lane works (Works No. 7);
  - Works to the M1 northbound (Works No. 8);
  - Construction of link road from the M1 northbound to the A50 westbound (Works No. 9);
  - Works to the A50 westbound (Works No. 10);
  - Works to the link road from the M1 southbound and A50 eastbound to M1 Junction 24 (Works No. 11);
  - Works to the M1 Junction 24 roundabout and A453 northbound approaches (Works No. 12);
  - Improvements to the EMG1 access junction (Works No. 13);
  - Construction of the Active Travel Link between the EMG1 access junction and the A453 west of Finger Farm roundabout (Works No. 14);
  - Provision of an uncontrolled crossing of the A453 at the East Midland Airport signalised access junction (Works No. 15);
  - Works to M1 northbound signage on the approach to M1 Junction 23A (Works No. 16);
  - Works to Long Holden (Works No. 17);
  - Works to the A42/A453 Finger Farm roundabout (Works No. 18); and
  - Upgrade to public footpath L57 to a cycle track (Works No. 19).

[1] Note – As the existing substation is drained via the existing EMG1 drainage system, these specific works has also been assessed within this report.

- **EMG1 Works**
  - Construction of a new rail-served warehouse building on land adjacent to the rail-freight terminal referred to as Plot 16 (MCO, Works No. 3A) together with associated access and drainage infrastructure, (MCO, Works No. 5A) and landscaping (MCO, Works No. 6A).
  - Alterations to the existing rail-freight terminal to improve its operation and efficiency;
  - An expansion of the EMG1 Management Suite by the EMG1 site entrance to cater for the additional demand on management facilities resulting from EMG1 (MCO, Works No. 3B);
  - Enhancements to the Public Transport Interchange by way of the installation of EV charging infrastructure for buses and provision of a drop-off layby adjacent to the transport hub (MCO, Works No. 5B and 5C); and
  - Provision of a signalised crossing over the EMG1 exit road approach to the access junction to EMG1 (MCO, Works No. 8A).

1.10 An illustrative site location plan is provided as **Figure 1.1**, which also identifies the approximate extent of the development component parts.

1.11 This SDS has been prepared in relation to proposed Scheme on the 'EMG1 Works', referred to as 'the site' throughout. The EMG2 Main Site and Highway Works have been reviewed under separate cover (references: EMG2-BWB-ZZ-XX-RP-CD-0001_SDS (Main Site) and EMG2-BWB-ZZ-XX-RP-CD-0003_SDS (Highways Works), respectively.

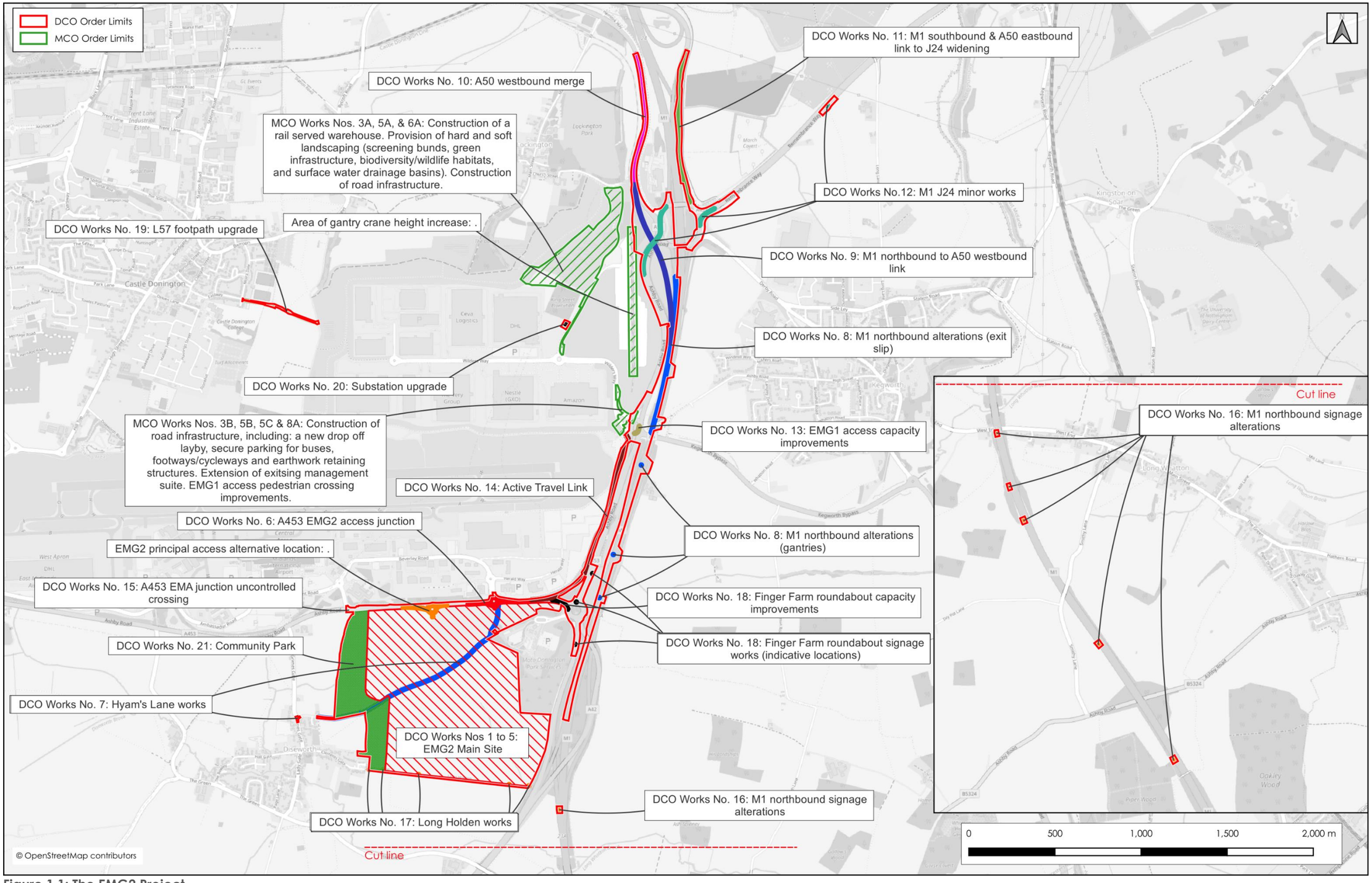


Figure 1.1: The EMG2 Project

1.12 The proposed site parameters plan is presented within **Appendix 1**, with contextual information provided within **Table 1.1**.

Table 1.1: Site Details

Site Name	EMG1 Works
NGR (approx.)	SK470270
MCO Application Site Area (ha)	19.16 (approx.)
Proposed Contributing Area (ha)	6.22 (approx.) – to be confirmed at detailed design
Development Type	Industrial/Commercial/Utilities and rail infrastructure
Lead Local Flood Authority	Leicestershire County Council
EA Area	East Midlands
Sewerage Undertaker	Severn Trent Water

Proposed Development

1.13 The proposed development comprises a number of additional works to the EMG1 site, these are summarised below and shown within **Figure 1.2**.

Plot 16 - Includes EMG1 Works No. 3A, 5A, 6A

1.14 Additional warehousing on land known as 'Plot 16', with associated hard and soft landscaping, access improvements and drainage infrastructure. It is proposed to access Plot 16 via the existing unnamed access road to the south-east.

1.15 This is located on land considered to be greenfield in nature. During the construction of EMG1, the area was used as temporary surface water drainage storage and treatment for runoff from the construction site. Within the completion of EMG1 and the permanent drainage infrastructure, the temporary drainage is no longer required and has since been decommissioned.

Rail-freight Interchange

1.16 Change to gantry height parameters to increase the permitted height of the cranes at the rail-freight terminal. The proposed works are associated with the existing terminal which does not represent a material change to its area.

Public transport Interchange - Includes EMG1 Works No. 3B, 5B, 5C

1.17 Improvements to the current EMG1 public transport interchange including the expansion of EMG1 management suite, secure parking and EV charging for buses, and a new drop-off layby.

Primary Sub-station – EMG2 DCO Works No. 20

1.18 Upgrade to the existing primary sub-station.

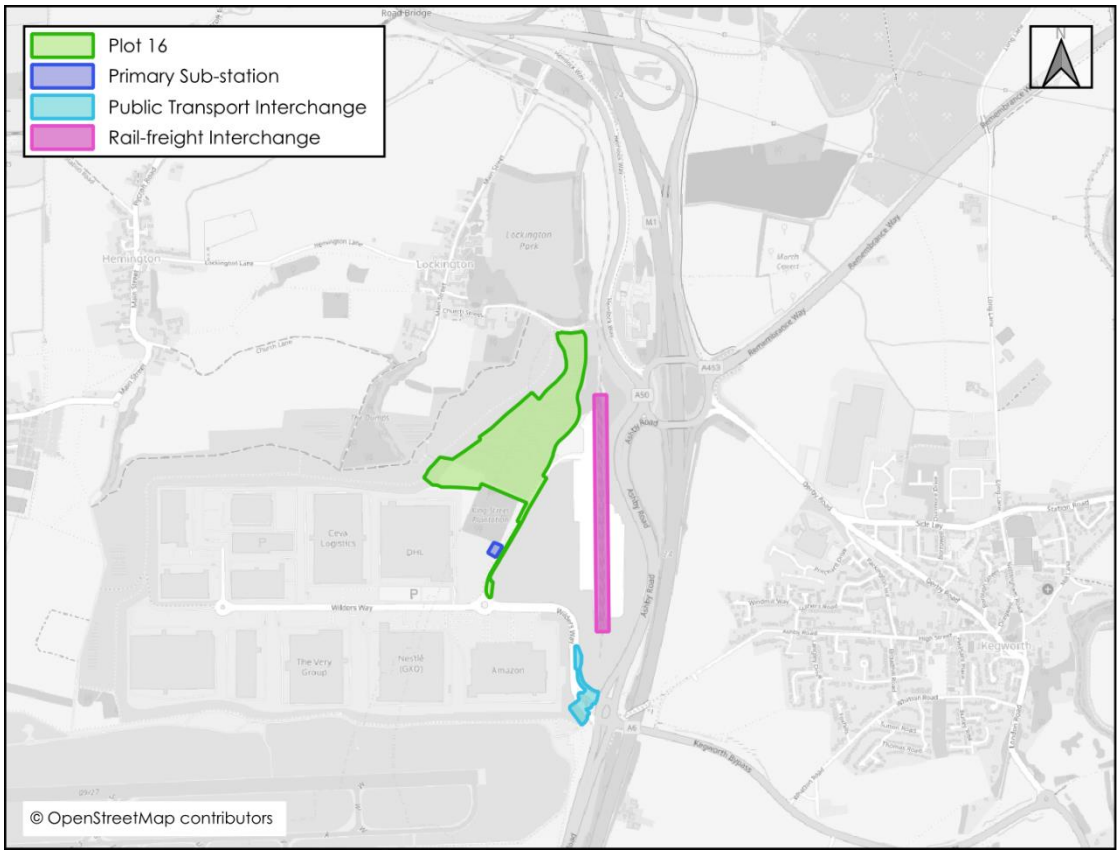


Figure 1.2: EMG1 Works

1.19 The proposed parameters plan is presented as **Appendix 1**.

Sustainable Drainage Guidance

Guidance Documents

1.20 This SDS and associated drainage strategy has been written with reference to the following guidance documents:

- Leicestershire County Council's Interim LLFA Guidance Note: Planning and Development in Leicestershire[2];
- The DEFRA Non-Statutory Technical Standards for SuDS[3];
- The National Policy Statement for National Networks[4] (NPSNN); and
- The CIRIA C753 SuDS Manual[5].

[2] Interim LLFA Guidance Note: Planning and Development in Leicestershire -Rev A (Leicestershire County Council, October 2018)
[3] 2015, DEFRA. Non-statutory technical standards for sustainable drainage systems
[4] National Policy Statement for National Networks, Department for Transport, March 2024
[5] The SuDS Manual Version 6 (CIRIA, 2019)

Climate Change and Urban Creep Allowances

1.21 The site is located within the Soar Management Catchment within the Humber River Basin District. Table 2 from the EA's 'Flood risk assessments: climate change allowances', included as **Table 1.2**, shows the anticipated changes in peak rainfall intensity for the site.

Table 1.2: Soar Management Catchment Peak Rainfall Allowances

Soar Management Catchment Allowance	Total Potential Change Anticipated for the '2050s' (Lifetime up to 2060)	Total Potential Change Anticipated for the '2070s' (2061 to 2125)
1 in 30-Year Rainfall Event		
Upper End	35%	35%
Central	20%	25%
1 in 100-Year Rainfall Event		
Upper End	40%	40%
Central	20%	25%

1.22 The proposed development is anticipated to have a lifespan of up to 75 years, therefore the 2070's epoch central allowance will be used to assess the impacts of climate change for the proposed surface water drainage strategy. Sensitivity testing has been undertaken using the 2070's epoch upper end allowance to ensure that there is no increase in flood risk elsewhere and the built development will be safe from surface water flooding over the anticipated lifetime of the proposed development.

1.23 Based on the above guidance, an allowance of 25% will be applied to the 1 in 100-year return period within the drainage design calculations, with sensitivity testing using a 40% allowance to the 1 in 100-year return period. During the detailed design stage a 25% climate change allowance, with a 35% sensitivity test, should be applied to the 1 in 30-year return period within the drainage design calculations. As the development is built out, the latest EA climate change allowance should be reviewed and used for the detailed design calculations for each phase of the development.

1.24 Based on the proposed development use, no urban creep allowance has been applied to the drainage design calculations.

2. EXISTING CONDITIONS

2.1 The site is located across four parcels within EMG1. They are located approximately 1.5km northeast of the EMG2 Main Site and are bound to the south and west by the existing EMG1 development, to the north by greenfield grassland, and to the east by the A453 and A50. Their location is shown within **Figure 2.1**.

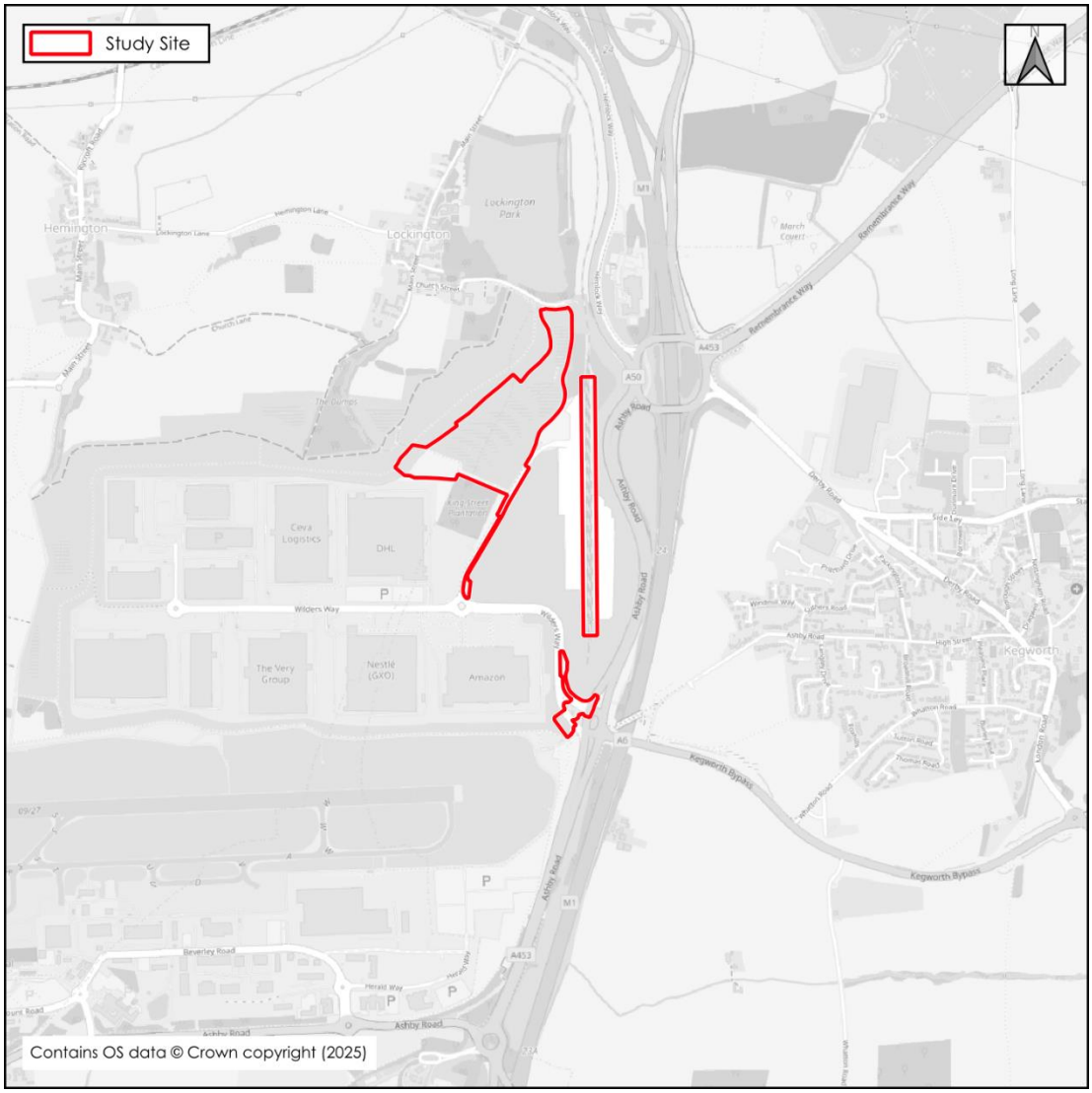


Figure 2.1: Site Location

2.2 EA LiDAR data provides an overview of the ground levels within the study site and in the wider area, an extract of mapping is included as **Figure 2.2**.

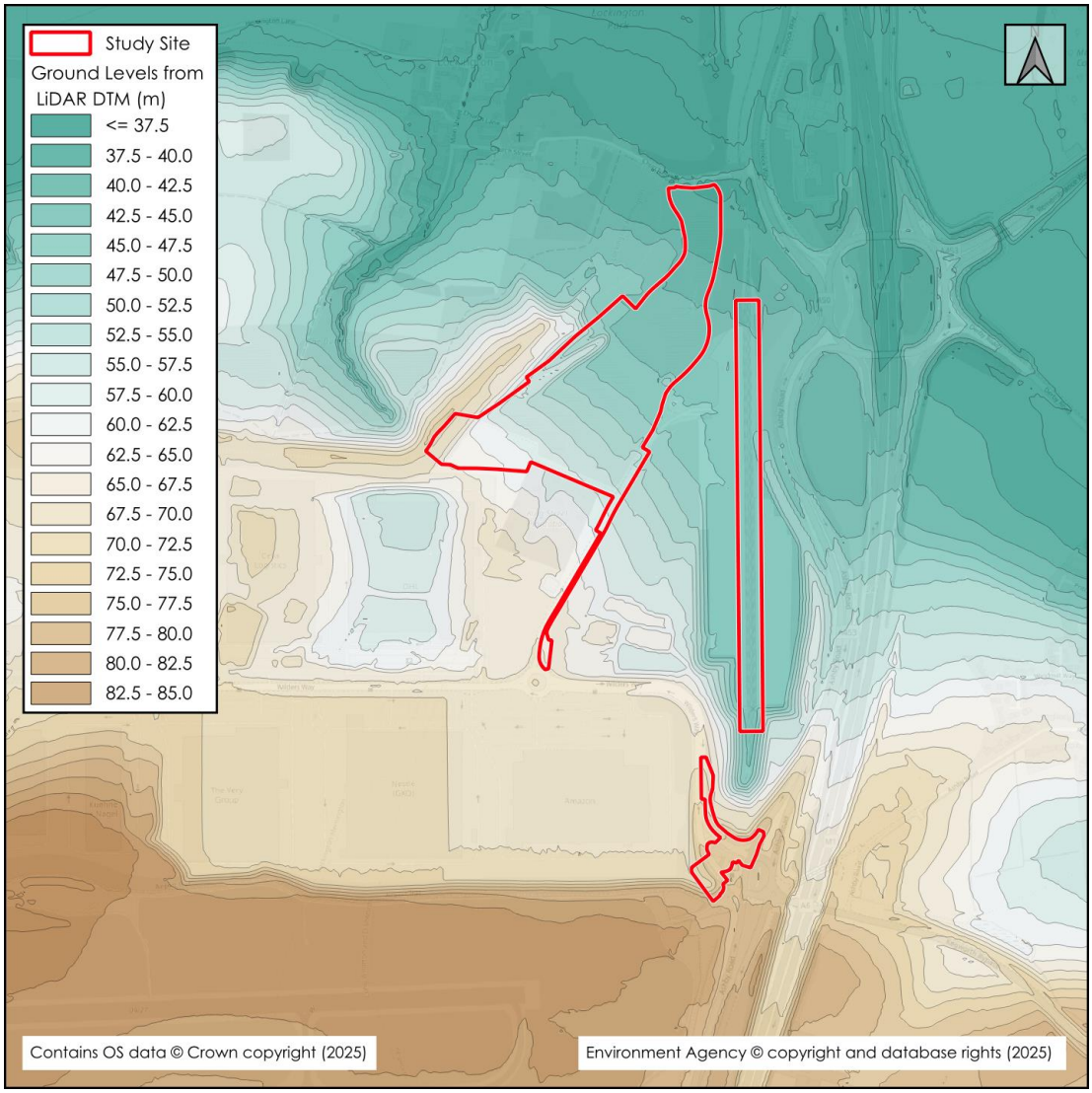


Figure 2.2: Site Topography

2.3 The LiDAR data identifies that the local area falls in a northerly direction, falling from a high point of approximately 80 metres Above Ordnance Datum (mAOD) at the southern entrance to EMG1 to a low point of approximately 38mAOD on the northern boundary.

2.4 The EMG1 site is served by an existing surface and foul drainage system.

2.5 The surface water drainage system within EMG1 that serves the MCO area is 'Network C' of the site wide drainage system. This drainage system conveys flows through the catchment to the north into two attenuation basins before draining to Lockington Park Brook, located approximately 300m to the north of the site, at a restricted rate. The sitewide drainage system drains at the greenfield Mean Annual Flow Rate (QBAR), as per the original DCO for EMG1, and Network C has a maximum allowable discharge rate of 144.5l/s, as outlined within the approved FRA (BWB reference: NTH/209/FRA/REV A, dated 06/06/2014). The sitewide surface water drainage network schematic for EMG1 is presented as **Appendix 2**.

2.6 The foul drainage network within EMG1 conveys flows to a terminal pumping station located on the unnamed road located, approximately 60m to the north of the Wilders Way roundabout, within the EMG1 industrial park. This terminal pumping station conveys flow through the verge of Wilders Way into a 300mm diameter foul public sewer located within the verge of the junction between Wilders Way and the A453. The relevant foul water drainage layout drawings are presented within **Appendix 3**.

2.7 The area proposed for Plot 16 was previously used as an area for the temporary surface water treatment system during the construction stage of EMG1. The settlement basins used in this area can be identified on the LiDAR data shown in **Figure 2.2**, and the surface water treatment strategy is presented as **Appendix 4**. These settlement ponds have since been decommissioned and filled in.

2.8 Severn Trent Water sewer asset plans (**Appendix 5**) show the existing spine drainage system within EMG1 and the foul outfall into the public sewer network in the A453, whereby flows are conveyed to the north east away from the site.

2.9 British Geological Survey (BGS) mapping identifies that the site is underlain by a number of bedrock geologies with superficial deposits, as shown in **Figure 2.3** and **Figure 2.4**. However, given the extensive earthworks and development of the site associated with EMG1 and decommissioned temporary surface water treatment system, which has now been infilled, the site is expected to be covered significantly by made ground.

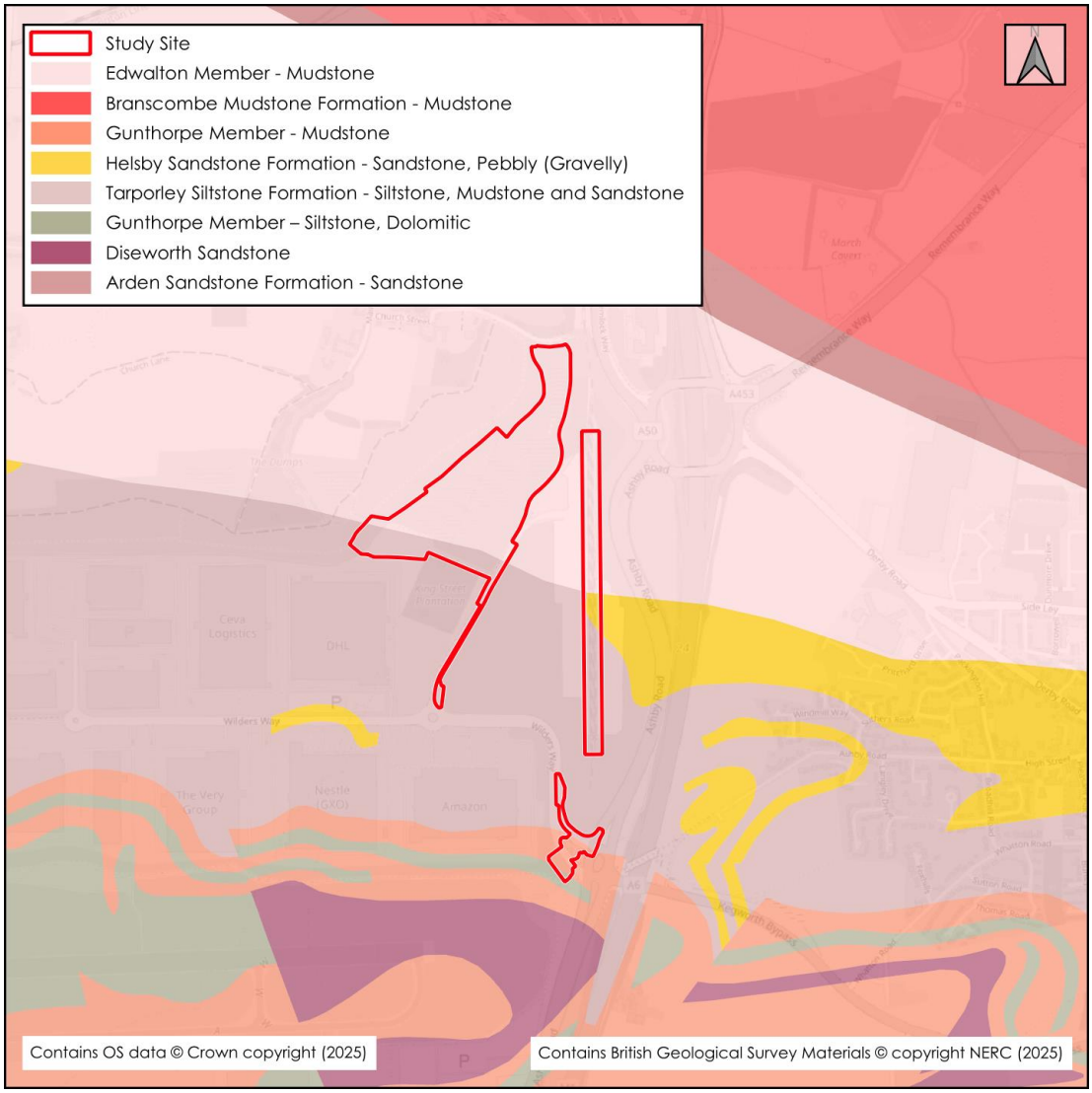


Figure 2.3: BGS Bedrock Geology

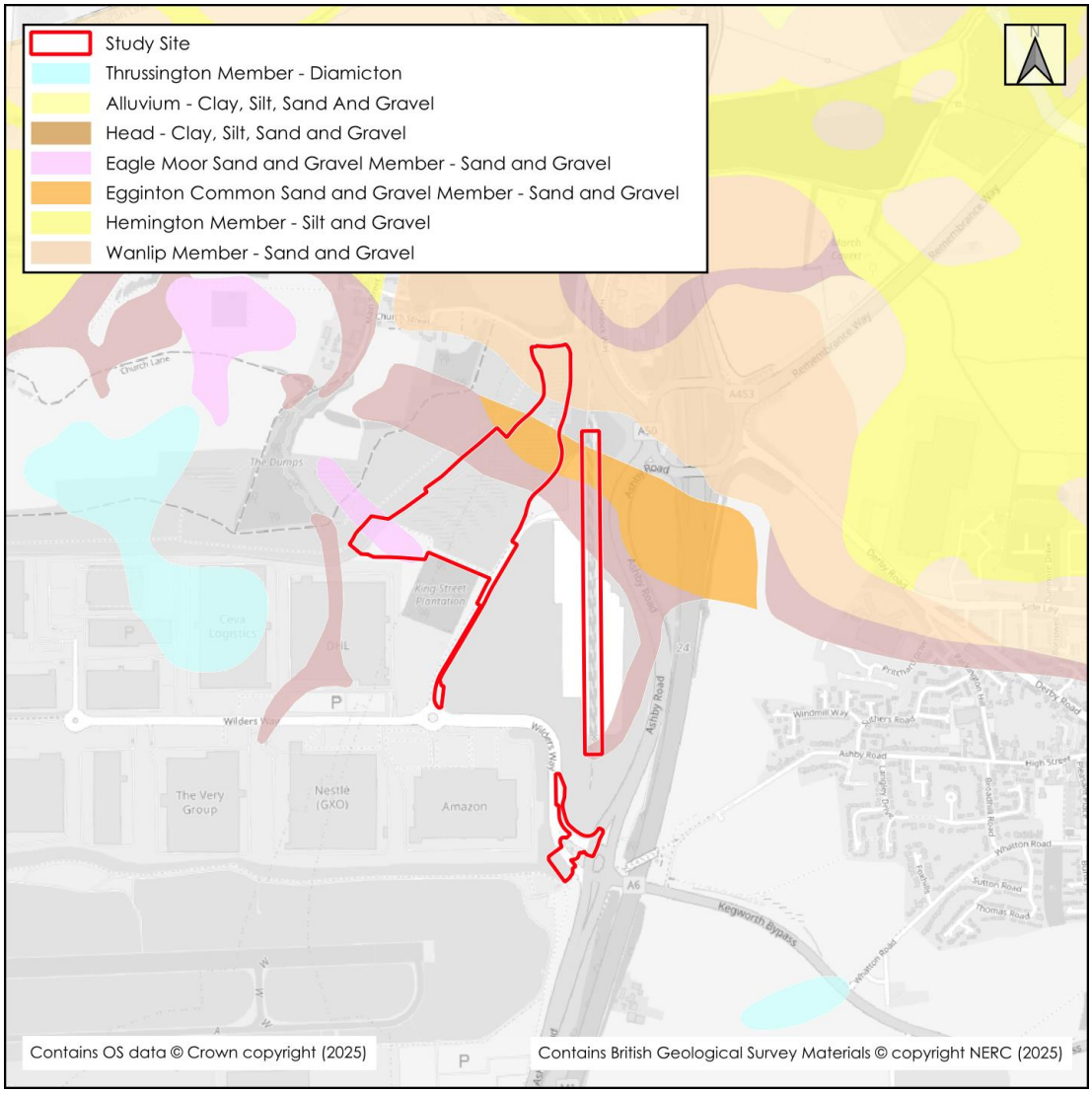


Figure 2.4: BGS Superficial Deposits

2.10 The site is located within Flood Zone 1 and has been assessed to be at low risk of flooding from all sources. More information is provided within the accompanying FRA.

2.11 Based on the above information the existing drainage regime at the site is anticipated to consist of limited infiltration from permeable surfaces prior to rapid runoff of surface water from permeable and impermeable surfaces into the existing sitewide surface water drainage system serving EMG1. The permeable land within the area of Plot 16 is anticipated to runoff and be intercepted by the EMG1 drainage system at greenfield rates.

Existing Runoff Rates

2.12 An assessment of the existing surface water runoff rates from the site has been undertaken on a litres per second per hectare basis. This is summarised within **Table 2.1**, with the associated calculations presented within **Appendix 6**.

2.13 The runoff rates have been estimated using the Flood Estimation Handbook (FEH) statistical method. This was undertaken using the UKSUDS Greenfield Runoff Rate Estimation Tool.

Table 2.1: Existing Runoff Rate per hectare from the Site

Return Period (Yrs.)	Runoff Rate (l/s/ha)
1	1.5
Mean Annual Flow Rate (QBAR)	1.8
30	3.6
100	4.6

2.14 The current runoff rates from the EMG site wide drainage system for the MCO area has been obtained from the latest MicroDrainage Network model for Network C. This is summarised within **Table 2.2**, with the supporting calculations provided as **Appendix 7**.

Table 2.2: Existing Runoff Rates for EMG1 Sitewide Drainage - Network C

Return Period (Yrs.)	Runoff Rate (l/s)
1	117.7
30	139.8
100 + 20%	139.8

Existing Runoff Volume

2.15 An assessment of the existing surface water runoff rates from the proposed contributing area used to inform the drainage design calculations has been made for a 1 in 100-year, 6 hour storm.

2.16 The existing site is permeable, the runoff volume has been calculated using the pre-development discharge calculator within Causeway Flow to be 1,344m^3, results are included within **Appendix 8**.

2.17 Per hectare this equates to a greenfield runoff volume of 216m^3.

3. SURFACE WATER DRAINAGE STRATEGY

3.1 The works associated with the MCO, excluding the construction of Plot 16, are for minor extensions to impermeable surfaces for parts of EMG1 that are currently served by an existing drainage system. Therefore, these areas (i.e., Works Nos. 3B, 5A, 5B, 5C and the DCO Works No. 20) will be assessed against the existing sitewide drainage model for EMG1 to assess the impact to the existing drainage system with the introduction of the new impermeable surfaces. This assessment will be conducted using the same parameters for which the original system was designed (i.e., Flood Studies Report rainfall data and a 20% climate change allowance).

3.2 Plot 16 will form a significant increase in impermeable area outside of the original approved DCO for EMG1, the drainage attenuation for Plot 16 will be designed in accordance with the latest local and national guidance (i.e., FEH rainfall data and a 25% climate change allowance, with a sensitivity test using a 40% allowance on the 1 in 100-year critical storm). It is proposed that Plot 16 will drain into the wider EMG1 drainage system upstream from the final vortex flow control and therefore the addition of Plot 16 has also been assessed within the original EMG1 drainage model using the original design parameters, which are outlined above.

3.3 A sensitivity test using a 40% climate change allowance has been undertaken on the post-development scenario within the wider drainage network model for the end of system flow control and storage.

3.4 A Concept Drainage Strategy is presented as **Appendix 9**, with the supporting attenuation calculations provided within **Appendix 10** and **Appendix 11**.

3.5 For Plot 16, the proposed contributing impermeable areas have been measured from the proposed parameters plan, presented within **Appendix 1**. The following impermeable area assumptions have been used:

- Development plots and adjoining highways = 90%;
- Embankments and bunds = 50%; and
- Attenuating SuDS basins = 100%.

3.6 For the other MCO works, the proposed contributing impermeable areas have been measured as 100% impermeable from the proposed illustrative masterplan plan, which is enclosed within **Appendix 9**. During the detailed design stage, the final contributing areas from these works will be confirmed and reassessed as necessary.

3.7 Based on the plans presented within **Appendix 1** and above impermeable area assumptions, the calculated total contributing impermeable area for the MCO is 6.22ha. Of the total contributing impermeable area, 5.93ha is associated with Plot 16, with 0.29ha associated with Works No. 3B, 5A, 5B, 5C and 20 (hereafter referred to as "wider MCO works").

3.8 Given the nature of the DCO and MCO applications being approved based on the parameters plan, as the development is built out, the contributing areas may change and therefore the final attenuation requirements and discharge rates from the proposed development may differ from the calculations outlined within this SDS. The principles set out within this report should be carried through as the development is built out.

Drainage Hierarchy

3.9 Surface water runoff from a development should be disposed of as high up the following hierarchy as reasonably practicable:

i. into the ground (infiltration);
ii. to a surface water body;
iii. to a surface water sewer, highway drain, or another drainage system;
iv. to a combined sewer.

3.10 The aim of this is approach is to manage surface water runoff close to where it falls and mimic natural drainage as closely as possible.

Infiltration

3.11 Based on the existing conditions across the site and the presence of the existing drainage system serving EMG1, the use of infiltration is not considered to be suitable to manage runoff from the newly proposed impermeable surfaces.

Surface water body

3.12 The existing EMG1 site wide drainage system ultimately drains into Lockington Park Brook to the north of the site. Therefore, it is proposed to drain the site into Lockington Brook, via the existing EMG1 site wide surface water drainage system. This is in accordance with the existing regime at the site.

Peak Flow Control

3.13 In order to comply with the Non-Statutory Technical Standards for Sustainable Drainage Systems S2-S3[6], runoff from greenfield developments should not exceed the equivalent greenfield rates for the 1 and 100-year return period events.

3.14 It is proposed to restrict the maximum discharge rate of Plot 16 to the equivalent greenfield QBAR rate, based on the proposed contributing area of 5.93ha, for all events up to the 1 in 100-year + 40% critical storm event. This is summarised within **Table 3.1**.

[6] 2015, DEFRA. Non-statutory technical standards for sustainable drainage systems

Table 3.1: Existing & Proposed Runoff Rates from Plot 16

Return Period (Yr.)	Existing Runoff Rate (l/s/ha)	Existing Runoff Rate (l/s) based on a contributing area of 5.93ha	Proposed Discharge Rate (l/s) based on a contributing area of 5.93ha
1	1.5	8.9	10.7
QBAR	1.8	10.7	
30	3.6	21.3	
100	4.6	27.3	
100 + 40%	-	-	

3.15 It is proposed that the wider MCO works will freely drain into the existing EMG1 site wide drainage system Network C.

3.16 Plot 16 will also drain at the proposed discharge rate outlined with **Table 3.1**, into the EMG1 site wide drainage system Network C upstream from the final flow control from the site (i.e., into "Basin C3").

3.17 The above approach has been tested in the existing EMG1 site wide MicroDrainage network model, with the impacts assessed within **Table 3.2** and supporting calculations presented as **Appendix 11**.

Table 3.2: Existing and Proposed Runoff Rates for EMG1 Sitewide Drainage - Network C

Return Period (Yrs.)	Existing (Pre-MCO) Runoff Rate (l/s)	Proposed (Post-MCO) Runoff Rate (l/s)	Difference (l/s)
1	117.7	119.4	+ 1.7
30	139.8	139.8	0
100 + 20%	139.8	139.8	0

3.18 As shown within **Table 3.2**, the proposals will not result in an increase in discharge rates from the EMG1 site wide drainage system during the 1 in 30-year or 1 in 100-year + 20% critical storm. The proposals will result in a minor increase (1.7l/s) to runoff rates from the drainage system during the 1 in 1-year return period; however, this post-development discharge rate of 119.4 remains below the maximum allowable discharge rate of 144.5l/s from the drainage network.

3.19 A sensitivity test of the post-development site wide drainage network has been undertaken using a 25% and 40% climate change allowance and confirms that the discharge rates do not exceed the allowable rate of 144.5l/s from the site during the a in 100-year + 40% critical storm. The sensitivity testing calculations are provided in **Appendix 12**.

Attenuated Storage and Modelling of Proposed Drainage Network

3.20 As the development proposals require a restricted runoff rate, it will be necessary to provide attenuated storage to balance the excess volume in a safe manner within the site.

3.21 The surface water storage should be located within the site in a position where it can receive runoff from the development and discharge from the site by gravity, and also in a position where it is hydraulically isolated from any fluvial floodplain or external surface water floodplain / overland flow route that may be present in the site.

3.22 Sufficient storage for events up to the 1 in 100-year storm with an allowance for climate change should be provided.

3.23 It is proposed that the attenuation for Plot 16 will be provided by both an above ground attenuation basin and below ground attenuation. It is proposed that the attenuation basin will be located between the existing EMG 1 Basins C1 and C3, with the below ground attenuation provided on plot.

3.24 Simulations have been run using Causeway Flow to identify the necessary storage provision for Plot 16 using FEH-22 rainfall data. The results are summarised in **Table 3.3** and calculations are included as **Appendix 10**.

Table 3.3: Plot 16 Attenuated Storage Requirements

Storage Structure	Critical Storm	Maximum Volume (m^3) – 1 in 100-year + 25%	Maximum Volume (m^3) – 1 in 100-year + 40%*
Attenuation Basin	10,080-min winter	2,165	2,085
Below Ground Attenuation	960-min winter	3,845	4,345
Total	**-**	**6,010**	**6,430**

* Sensitivity test to ensure that necessary storage is provided for upper end climate change allowance within basin design freeboard

3.25 At this conceptual stage it is expected that a minimum of 6,010m^3 of attenuated storage will be required within Plot 16 to cater for the maximum anticipated runoff volume for all storm durations up to the 1 in 100-year return period storm, including a 25% climate change allowance, extending to 6,430m^3 during the 1 in 100-year + 40% climate change critical storm, which will be provided within the basin freeboard above the design water level.

3.26 The attenuation for the wider MCO works will be provided within the existing EMG1 attenuation basins.

3.27 The additional impermeable areas associated with the wider MCO works, and the addition of Plot 16, has been added to the EMG1 site wide MicroDrainage network model to assess the impact of the development proposals. These calculations are presented as **Appendix 11**.

3.28 The addition of these new impermeable areas result in an increase in attenuation volume of 515m^3 across the existing drainage network with 210m^3 and 245m^3 of additional attenuation provided by basins C1 and C3, respectively, with the remaining 60m^3 provided within the wider network pipes and manholes.

3.29 The increased attenuation volume provided by the basins results in an increase in water level within basin C1 by 20mm and C3 by 45mm. The post-development freeboard provided for Basin C1 is 540mm and 1.04m for basin C3.

3.30 The proposals result in a 50m^3 increase of flooding of the system during short-duration rainfall events. This flooding will remain within the EMG1 industrial site and can be mitigated through the provision of minor upgrades to the existing drainage network at the locations of new impermeable surfacing. These mitigation measures will be confirmed during the detailed design once the extents of the new impermeable areas are confirmed.

3.31 It is envisaged that the final required attenuated storage volumes will be determined as development is built out following the approval of the MCO.

Runoff Volume Control

3.32 The Non-Statutory Technical Standards for Sustainable Drainage Systems S4-S6[7] states that where reasonably practical the runoff volume from a development for the 1 in 100-year 6 hour rainfall event should not exceed the runoff volume prior to development or redevelopment. Additionally, if practicable on previously developed sites, the runoff volume should not exceed the equivalent greenfield runoff volume. Where it is not reasonably practicable to constrain the volume of runoff from a development at or below the existing volume, then the runoff must be discharged in a manner that does not adversely affect flood risk, i.e.:

i. The additional runoff volume resulting from the development (the 'long term storage volume') should be discharged separately from the site at a rate of 2l/s/ha or less. Or,

ii. All the runoff volume from the development should be discharged at a rate equivalent to the mean annual flow rate (QBAR) rate under greenfield conditions or less. Or,

iii. All the runoff volume from the development should be discharged at a rate of 2l/s/ha or less.

3.33 Due to the increase in impermeable surfacing within the site post-development, the 1 in 100-year 6-hour runoff volume will increase. However, as the EMG1 site wide drainage system to limits the maximum discharge rate from the site to the existing greenfield QBAR rate for all events up to the 1 in 100-year + 40% critical storm, the volume criterion is met, and long-term storage is not required.

[7] 2015, DEFRA. Non-statutory technical standards for sustainable drainage systems

Sustainable Drainage Systems

3.34 Given the nature of the MCO application, the final SuDS systems for Plot 16 will be confirmed during the detailed design stage; however, at this conceptual stage it is proposed that the following SuDS should be utilised to manage surface water flows from the plot:

- Attenuation basin;
- Below ground attenuation;
- Permeable paving (or a bypass separator);
- Filter drains; and
- A full retention separator.

3.35 The attenuation basin has been designed to have a maximum design storage depth of 2m during the 1 in 100-year + 25% critical storm, with a 300mm freeboard and 1:3 side slopes and external tie in batters.

3.36 The new attenuation basin will be lined with an impermeable membrane to mitigate the risk of any potential pollutants infiltrating into the ground and contaminating the groundwater recharge in the vicinity of the site.

3.37 Based on the site's proximity to EMIA, the attenuation basin will be formed with a ridged base in a 'crinkle-cut' style to promote faster drain down times and discourage birds gathering during the lower return periods. This is in accordance with the existing basins associated with the EMG1 drainage system.

3.38 The new attenuation basin will have a low flow channel and the incorporation of any ecological features will be confirmed at detailed design.

3.39 All surface water that will be collected from service yard areas will be routed through a full retention separator prior to attenuation within the plot. Surface water from the car parking areas will need to be either passed through a bypass separator or permeable paving prior to attenuation.

3.40 The wider EMG1 works will be drained via the existing site wide drainage system towards the existing attenuation basins located in the north of the EMG 1 industrial park.

Water Quality

3.41 In accordance with the SuDS Manual a simple index approach to water quality risk management should be undertaken for the proposed development. This will be compiled to provide a comprehensive account of the water quality treatment provided by the proposed surface water drainage system.

3.42 The SuDS Manual Mitigation Index will be used to assess the treatment levels proposed in relation to the pollution hazard posed from the proposed land use(s). This methodology is adopted to ensure that surface water flows receive adequate treatment through all areas of the site prior to final outfall.

3.43 **Table 3.4** shows the pollution hazard indices for the land use classification(s) that are relevant to the proposed development, as described within table 26.2 in the SuDS Manual.

Table 3.4: Pollution Hazard Indices for Different Land Use Classifications

Land Use	Pollution Hazard Level	Total Suspended Solids (TSS)	Metals	Hydrocarbons
Industrial roofs	Low	0.3	0.2	0.05
Non-residential parking	Medium	0.7	0.6	0.7
Industrial sites	High	0.8	0.8	0.9

3.44 The SuDS Mitigation Indices that are relevant to the proposed development, at this stage, as described within table 26.3 of the SuDS Manual, are outlined in **Table 3.5.**

Table 3.5: SuDS Mitigation Indices

Type of SuDS Component	Mitigation Indices		
	TSS	Metals	Hydrocarbons
Permeable Paving	0.7	0.6	0.7
Attenuation Basin	0.5	0.5	0.6
Bypass Separator*	0.8	0.6	0.9
Full Retention Separator*	0.8	0.6	0.9

* Based on SPEL Enhanced Silt Retention bypass / full flow [8] range (other products may vary)

3.45 Both Plot 16 and the wider MCO works will be routed through two attenuation basins prior to discharge from the site as a minimum.

3.46 At this stage, it is anticipated that in addition to the site wide SuDS treatment system, the following on plot SuDS treatment measures will be incorporated, as a minimum:

- Full retention separators – for service yards; and
- Bypass separators or permeable block paving – for car parking areas;

3.47 The following SuDS treatment measures for each catchment land use is outlined within **Table 3.6**. The minor extensions to the existing highways within the wider MCO works have not been considered as these areas are extensions to the previously approved and constructed DCO. The new areas of the wider MCO works (i.e., extension to management offices and bus parking) have been assessed.

[8] SPEL Stormceptor Enhanced Silt Retention bypass (https://spelproducts.co.uk/spel-esr-bypass/) / full flow (https://spelproducts.co.uk/spel-esr-full-flow/) treatment system

Table 3.6: SuDS treatment measures for each catchment

Catchment	Land use	SuDS Treatment Measures
Plot 16	Industrial Roof	Detention basin (2no.)
	Non-residential Parking	Bypass Separator / Permeable Paving + Detention basin (2no.)
	Service Yards	Full Retention Separator + Detention basin (2no.)
Wider MCO Works	Commercial Roof	Detention basin (2no.)
	Non-residential Parking	Detention basin (2no.)

3.48 The pollution hazard rating and proposed SuDS Mitigation Index for each drainage Catchment is compared within **Table 3.7.** Where more than one SuDS component is proposed, a factor of 0.5 has been applied to the downstream (i.e., secondary and/or tertiary) treatment stages to account for the reduced performance due to reduced inflow concentrations.

Table 3.7: Comparison of Pollution Hazard Rating against Proposed Mitigation Index

Catchment	Land use	Pollution Hazard Rating			Proposed Mitigation Index			Sufficient Treatment Provided?
		TSS	Metals	Hydrocarbons	TSS	Metals	Hydrocarbons	
Plot 16	Industrial Roof	0.3	0.2	0.05	0.75	0.75	0.9	✓
	Non-residential Parking	0.7	0.6	0.7	1.2	1.1	1.3	✓
	Service Yards	0.8	0.8	0.9	1.3	1.1	1.5	✓
Wider MCO Works	Commercial Roof	0.3	0.2	0.05	0.75	0.75	0.9	✓
	Non-residential Parking	0.7	0.6	0.7	0.75	0.75	0.9	✓

3.49 **Table 3.7** demonstrates that the proposed drainage system will provide sufficient treatment to surface water prior to discharge from the proposed development. It should be noted that for the non-residential parking water quality assessment, to provide a robust assessment, it is assumed that permeable paving will be used as this SuDS treatment measure provides a lesser pollution mitigation index score compared to bypass separators.

3.50 A Construction Environmental Management Plan (CEMP) will be prepared to support the MCO application and to ensure that the surrounding watercourses are not adversely affected during the construction stages.

Residual Risk and Designing for Exceedance

3.51 It is recommended that the final layout uses the proposed road infrastructure to provide drainage exceedance (overland flood flow) routes through the development and towards the attenuation basins for events in excess of the capacity of the drainage system.

Plot 16

3.52 The new attenuation basin for Plot 16 has been designed to not flood during the 1 in 100-year + 40% critical storm, with additional freeboard provided above the sensitivity test events. In the event that the outfall for a basin becomes blocked, the flow control chamber will have a weir wall set above the anticipated 1 in 100-year +40% climate change critical storm water level, to provide a controlled location for water to overtop and drain into the downstream network, to be attenuated in the next attenuation basin (i.e., Basin C3), rather than immediately exceeding onto surrounding land.

3.53 External plot levels will be designed that exceedance flows on plot can be temporarily stored above ground safely within the external yark and car parking areas.

3.54 Illustrative exceedance routing is provided on the Concept Drainage Strategy presented as **Appendix 9**.

3.55 In addition to the volume of storage provided within the main attenuation, there will be capacity within upstream pipes and manholes which has not been accounted for at this stage and a further level of redundancy to the network will therefore be provided.

Wider MCO Works

3.56 Exceedance from the Wider MCO works will drain as per the current EMG1 site wide surface water drainage strategy. The development proposals result in a minor decrease to the additional attenuation volume provided within the existing attenuation basins; however, these structures still have a respective freeboard of 520mm and 1.04m above the design water level.

4. MAINTENANCE

4.1 A management company will be appointed to maintain the SuDS features, including vegetation maintenance, debris screen clearing and regular outfall inspections.

4.2 Requirements for ongoing maintenance of the drainage network should form part of the Operation and Maintenance manual for the site and should be undertaken by the site management. Any specialist or proprietary products that are specified at detailed design should have a manufacturer specific maintenance regime which should be included within the document.

4.3 It is envisaged that the Operation and Maintenance manual will be developed at the detailed design stage, but some examples for the proposed attenuation basin and permeable paving are provided overleaf in **Table 4.1** and **Table 4.2**.

Table 4.1: The SuDS Manual Typical Maintenance Schedule for Attenuation Basins

Maintenance Schedule	Typical Frequency	Required Action
Regular Maintenance	Monthly	• Remove litter and debris; • Inspect inlets, outlets and overflows for blockages, and clear if required; and • Inspect banksides, structures, pipework etc for evidence of physical damage.
	Monthly (during growing season, or as required	• Cut grass – for spillways and access routes.
	Monthly for first year, then annually or as required	• Inspect inlets and facility surface for silt accumulation. Establish appropriate silt removal frequencies.
	Monthly at start, then as required	• Manage other vegetation and remove nuisance plants.
	Half yearly (spring – before nesting season, and autumn	• Cut grass – meadow grass in and around basin.
	Annually	• Check any penstocks and other mechanical devices; • Tidy all dead growth before start of growing season; and • Manage wetland plants in outlet pool – where provided.
	Annually or as required	• Remove sediment from inlets, outlet and forebay.
Occasional Maintenance	As required	• Reseed areas of poor vegetation growth.
	Every 2 years, or as required	• Prune and trim any trees and remove cuttings.
	Every 5 years, or as required	• Remove sediment from inlets, outlets, forebay and main basin when required.
Remedial Action	As required	• Repair/rehabilitation of inlets, outlets and overflows; and • Relevel uneven surfaces and reinstate design levels.

Table 4.2: The SuDS Manual Typical Maintenance Schedule for Permeable Paving

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

5. FOUL WATER DRAINAGE

5.1 Foul water will be drained from the proposed development separately to surface water.

5.2 Based on level constraints within Plot 16 and the location of the nearby public sewerage infrastructure, foul flows from the plot cannot drain via gravity. Therefore, it is proposed that a package pump system will be located within the plot boundary that conveys flows through the existing EMG1 development towards the existing terminal pumping station located to the north of the roundabout at Wilders Way which ultimately drains into the existing foul public sewer network located within the A453.

5.3 The Wider MCO works are not anticipated to generate any foul water flows. If the extension to the existing management offices (i.e., Works 3B) require a new foul drainage connection, the connection should be made into the existing foul draining system serving the management offices.

5.4 A pre-development enquiry with Severn Trent Water (**Appendix 13**) indicates that a connection to the private EMG1 drainage system should be investigated, with an alternative connection to the public sewer network available at manhole 4801, which is located within the verge of the A453. The response states that the public sewer network within the A453 drains to the Kegworth Derby Road pumping station, which has previously identified capacity issues and hydraulic modelling of this sewer would need to be undertaken to confirm if a connection is acceptable without reinforcement works being required.

5.5 It is considered that a connection to the existing terminal pumping station within EMG1 is viable, although minor amendments to the existing pumping station attenuation capacity may be required to facilitate the connection of Plot 16 onto the system. The foul drainage strategy for the site is to be confirmed during the detailed design stage in consultation with Severn Trent Water.

5.6 A conceptual foul drainage strategy is presented on the Concept Drainage Strategy presented within **Appendix 9**.

5.7 At this conceptual stage, an indicative location for temporary foul water attenuation has been presented on the Concept Drainage Strategy; however, it should be noted that the requirement of any foul drainage attenuation is to be confirmed at the detailed design stage in consultation with Severn Trent Water.

6. SUMMARY

6.1 This statement and supporting appendices demonstrate that the drainage design for the development will comply with the relevant local and national standards, specifically the hierarchy of discharge, runoff rate and volume criterion.

6.2 This SDS is intended to support a MCO and as such the level of detail included is commensurate and subject to the nature of the proposals.

Table 6.1: Sustainable Drainage Statement Summary

		Existing Site	Proposed Development
MCO Application Area (Ha)		19.16 (approx.)	
Impermeable Area (Ha)		0	6.22 (approx.)
Outfall Location		Watercourse	Watercourse
Peak Runoff Rate* (l/s)	**1 in 1-Year**	117.7	119.4
	1 in 30-Year	139.8	139.8
	1 in 100-Year + CC	139.8	139.8
Volume Control		-	Discharge rate limited below QBAR
Proposed Storage Volume		-	6,525m^3
Flow Control Type		-	Vortex
SuDS Features		-	Detention Basins, Permeable Paving/Bypass Separator and Full Retention Separator
Maintenance Responsibility		-	Management Company

* Maximum allowable discharge rate of 144.5l/s

6.3 It is envisaged that the final drainage strategy will be determined during the detailed design stage, as the development layout is finalised.

APPENDICES

Appendix 1: Proposed Parameters Plan

- Dimensions are in millimeters, unless stated otherwise.
- Scaling of this drawing is not recommended.
- It is the recipients responsibility to print this document to the correct scale.
- All relevant drawings and specifications should be read in conjunction with this drawing.

EMG 1 Works - Development Schedule

Development Zone	Number of Units erected pursuant to the MCO	Maximum amount of floorspace to be erected pursuant to the MCO per zone (m^2)	Finished floor level (in metres above ordnance datum) [Allowable deviation +/- 1.5m]	Maximum Ridge Height (in metres above ordnance datum)
Plot 16	1 to 2	26,500	53.000	71.000
Maximum Total Floor Space for plot 16		**26,500**		

* This total floor space is the maximum floor space (excluding mezzanine space) that will be developed across Plot 16, In addition to this total floor space figure, up to 3,500 sqm of floor space can be provided in the form of mezzanine floor space.

Note: Maximum Buildings height is fixed by the maximum ridge height in metres above ordnance datum compared to the finished floor level. The finished floor level shown in the table above can vary 1.5m up or down. For example, if the finished floor level is constructed at the level shown in the table without variation the maximum building height plot 16 would be 18m being the difference between the maximum ridge height specified in the fifth column of the table and the finished floor level in the fourth column of the table.

In addition to the limits set out in the schedule above the following units and floor space are permitted

Access works (management suite extension)	1	500	
Substation Works	1	200	

Please Note:

- The Maximum ridge height specified excludes any associated fire escape stairwells or key clamp roof top handrails etc.

- all areas specified are gross internal area's (GIA's) unless otherwise stated.

Key

- EMG1 MCO order limits 46.65 ac 18.88 ha
- Gantry crane height increase (24m Maximum height)
- Development Area Plot 16 Including car parking, service yards, buildings, amenity building's on plot landscaping, roads, paths, utilities and infrastructure
- EMG1 Access works including access works to plot 16, shuttle bus parking, drop off lay-by, footway connection and extended management suite
- Open Land/Landscaping area to include substation, retained vegetation, mitigation mounding, proposed planting, paths, attenuation & SUDs, retaining walls, publicly accessible landscape space and other applicable features.

Plot 16

Sub-station works within EMG1 is dealt with by the EMG2 DCO

Wilders Way

EMG1 Rail Terminal

M1 J24

A453

M1

Parameters plan
Scale 1:2,500

DRAFT

50m SCALE 1:2500

Rev	Date	Details of issue / revision	Drw	Rev
P6	20.05.25	Boundary and schedule amended	LM	MS
P5	15.05.25	Substation area and schedule amended	LM	MS
P4	12.05.25	Schedule updated	LM	MS
P3	04.02.25	Plan annotation amended	LM	MS
P2	28.01.25	Title block changes	LM	MS
P1	27.01.25	Preliminary Issue	LM	MS

ISSUES & REVISIONS

SEGRO

THE EAST MIDLANDS GATEWAY RAIL FREIGHT INTERCHANGE AND HIGHWAY (AMENDMENT) ORDER 202[ ]

Drawing Title

PARAMETERS PLAN

Scale	1:2500	Drawn	LM
Size	A1	Reviewed	MS

Regulation
4(2)(e) and 16(2)(j)

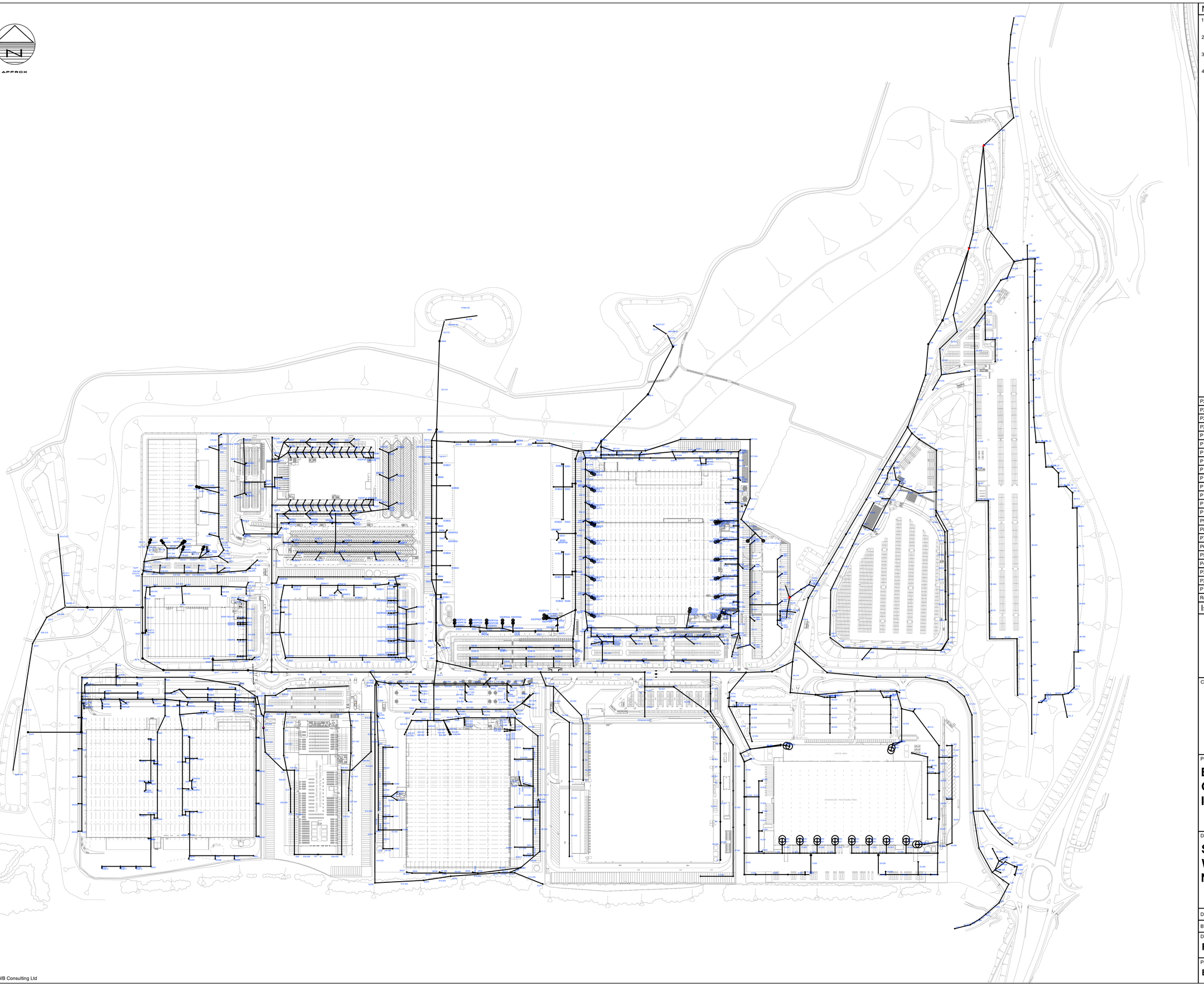
Document
MCO 2.5

Drawing Status
CONSULTATION DRAFT

Drawing No.
EMG1-UMC-SI-01-DR-A-0086

Revision
P6

Appendix 2: EMG1 Site Wide SWS Drainage Schematic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Appendix 3: EMG1 Existing Foul Water Drainage Layout

Rail Terminal Pumping Station

Pumping Station (including any emergency storage) to be designed and constructed as part of works for development zone C

Rising main to be designed by Contractor based on the following criteria:

- Maximum peak flow: 5l/s
- Incoming gravity foul connection at 38.66m AOD
- Maximum level difference between incoming east-west gravity sewer and the point of connection at MH FW18: 23.2m
- Length of rising main: 509m
- Pumps: 1 No. Duty and minimum 1 No. Standby, all easily removable for maintenance
- Direct DNO/IDNO LV supply (i.e. not via a private cabling system)
- Separate valve chamber from the wet well
- Controls: fully automatic operation with ultrasonic sensors
- Alarm indication in event of pump failure: light, sound and ability to send SMS or equivalent message to the management company

Refer to BWB drawing EMG-BWB-RDG-RAXX-DR-D-500 for Rail Terminal Drainage layout

Thrust block required at change in direction. Refer to BWB drawing EMG-BWB-HDG-XX-DR-D-0565 for construction details.

RA03

225mm Ø @ 1:225
22.860m Long

100mm duct for cable for override float switch, refer to TT pumps drawings A0-14954 1 and A0-14954 2

MH - FW42
CL 42.330m
IL 38.660m

40,000L Storage to be contained in 1 x 10m long 2.25mØ tank with 300mmØ connecting pipe. To be installed with 1:100 backfall towards the pumping station.
At turret:
CL: 42.230
IL: 38.715

Private foul rising main from rail terminal. Refer to BWB drawing EMG-BWB-DDG-SM6-DR-C-521 for further details. 100mm duct to be laid alongside rising main at 0.9m min cover.

Rail terminal (Zone C) 3DWF = 0.9l/s (Rising main to be designed for 5l/s)

OH06

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Notes

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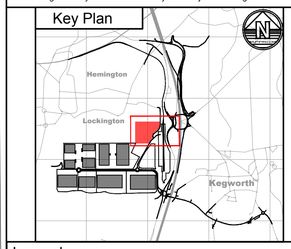
3. All dimensions in millimetres unless noted otherwise. All levels in metres unless noted otherwise.
4. Any discrepancies noted on site are to be reported to the engineer immediately.
5. Background layout is indicative only and subject to change.

Key Plan



Legend

- Proposed Private Foul Water Gravity Sewer System — [X.XXX] 300mm Dia. @ 1:XX ##### m Long
- Proposed Severn Trent Water Foul Water Gravity Sewer System — [X.XXX] 300mm Dia. @ 1:XX ##### m Long
- Existing Severn Trent Water Foul Water Gravity Sewer System to remain unaltered — [X.XXX] 300mm Dia. @ 1:XX ##### m Long
- Proposed Foul Water Gravity Sewer Spur — 300mm Dia. @ 1:XX ##### m Long
- Proposed Pumping Station Location and size shown as indicative. Design to be confirmed at Detail Design Stage
- Proposed Private Foul Water Rising Main Route
- 100mm duct for pumping station telemetry

Rev	Date	Details of issue / revision	Drw	Rev
C7	04.02.20	Construction Record	CC	SRH
C6	06.09.19	Background layout updated	JS	SRH
C5	11.02.19	Pumping station ducting added for telemetry	SRH	SRH
C4	29.01.19	Pumping station amended	SRH	SRH
C3	15.11.18	Pump Station cover level confirmed	IJ	SRH
C2	05.06.18	Rail Terminal Layout + Rising main amended to suit.	IJ	NL
C1	20.01.17	Construction Issue	GDJ	NL

Issues & Revisions

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Client

ROXHILL

Project Title

THE EAST MIDLANDS GATEWAY RAIL FREIGHT INTERCHANGE

Drawing Title

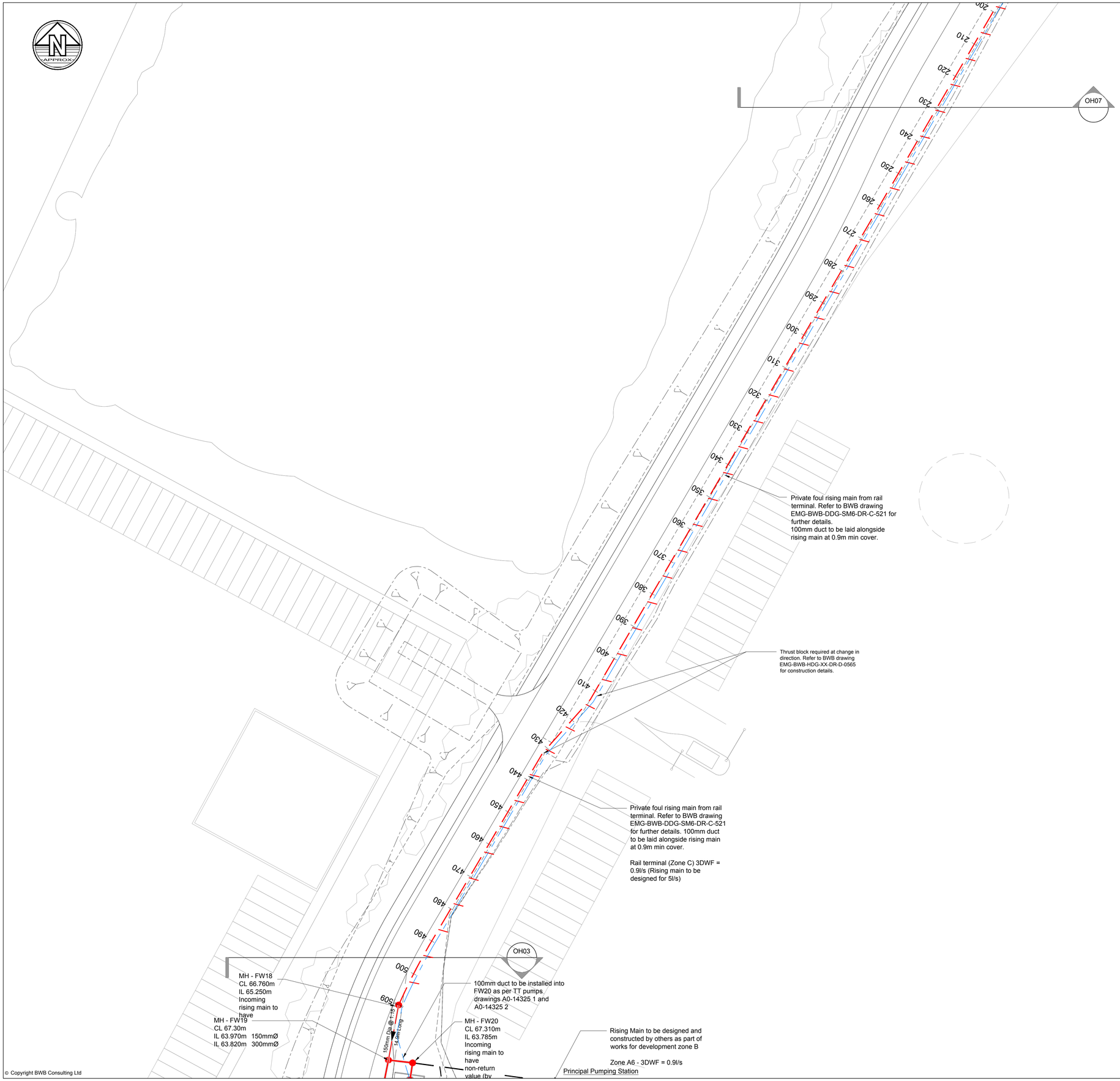
DEVELOPMENT FOUL DRAINAGE LAYOUT SHEET 7

Drawn:	G.Jones	Reviewed:	N. Lowe
BWB Ref:	NTH209	Date: 20.01.17	Scale@A1: 1:500

Drawing Status

CONSTRUCTION RECORD

Project - Originator - Zone - Level - Type - Role - Number	Status	Rev
EMG-BWB-DDG-OH07-DR-D-505	CR	C7



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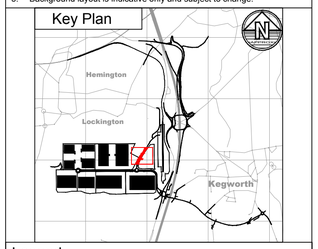
5. Background layout is indicative only and subject to change.

Key Plan



Legend

- Proposed Private Foul Water Gravity Sewer System — [X.XXX] 300mm Dia. @ 1:XX ##### m Long
- Proposed Severn Trent Water Foul Water Gravity Sewer System — [X.XXX] 300mm Dia. @ 1:XX ##### m Long
- Existing Severn Trent Water Foul Water Gravity Sewer System to remain unaltered — [X.XXX] 300mm Dia. @ 1:XX ##### m Long
- Proposed Foul Water Gravity Sewer Spur — 300mm Dia. @ 1:XX ##### m Long
- Proposed Pumping Station Location and size shown as indicative. Design to be confirmed at Detail Design Stage
- Proposed Private Foul Water Rising Main Route
- 100mm duct for pumping station telemetry

Rev	Date	Details of issue / revision	Drw	Rev
C4	04.02.20	Construction Record	CC	SRH
C3	11.02.19	Pumping station ducting added for telemetry	SRH	SRH
C2	05.06.18	Rail Terminal updated, Rising main amended to suit	IJ	NL
C1	23.06.17	Construction Issue	GDJ	NL

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Client

ROXHILL

Project Title

THE EAST MIDLANDS GATEWAY RAIL FREIGHT INTERCHANGE

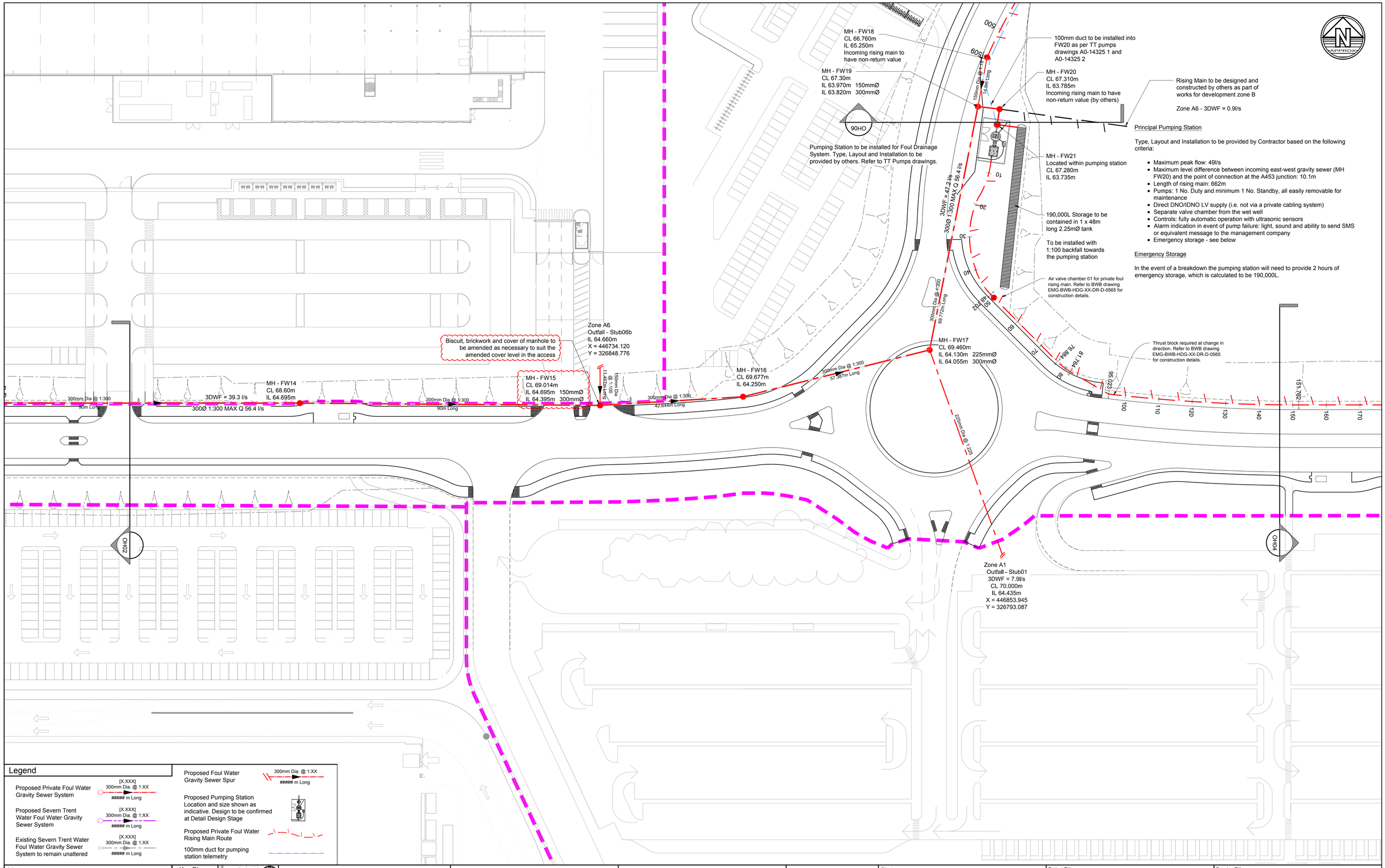
Drawing Title

DEVELOPMENT FOUL DRAINAGE LAYOUT SHEET 6

Drawn:	G.Jones		Reviewed:	N. Lowe	
BWB Ref:	NTH209	Date:	18.01.17	Scale@A1:	1:500

Drawing Status: **CONSTRUCTION RECORD**

Project - Originator - Zone - Level - Type - Role - Number	Status	Rev
EMG-BWB-DDG-OH06-DR-C-505	**CR**	**C4**



Legend

- Proposed Private Foul Water Gravity Sewer System — [X.XXX] 300mm Dia. @ 1:XX ##### m Long
- Proposed Severn Trent Water Foul Water Gravity Sewer System — [X.XXX] 300mm Dia. @ 1:XX ##### m Long
- Existing Severn Trent Water Foul Water Gravity Sewer System to remain unaltered — [X.XXX] 300mm Dia. @ 1:XX ##### m Long
- Proposed Foul Water Gravity Sewer Spur — 300mm Dia. @ 1:XX ##### m Long
- Proposed Pumping Station Location and size shown as indicative. Design to be confirmed at Detail Design Stage
- Proposed Private Foul Water Rising Main Route
- 100mm duct for pumping station telemetry

Notes

1. Do not scale this drawing. All dimensions must be checked/ verified on site. If in doubt ask.
2. This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.
3. All dimensions in metres unless noted otherwise. All levels in metres unless noted otherwise.
4. Any discrepancies noted on site are to be reported to the engineer immediately.
5. Foul Strategy Subject to Severn Trent Waters Approval.

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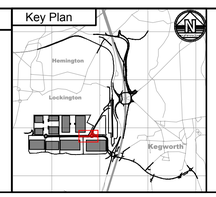
Key Plan



ISSUES & REVISIONS

Rev	Date	Details of issue / revision	Drw	Rev
C10	28.07.17	FOUL STORAGE TANKS AMENDED	LDH	NL
C11	18.09.17	FOUL STORAGE AMENDED	SRH	NL
C12	12.10.17	FOUL STORAGE TANK CONFIRMED. ONSITE EARTHWORKS ADJUSTED TO SUIT.	LDH	SRH
C13	11.02.19	Pumping station ducting added for telemetry	SRH	SRH
C14	04.02.20	Construction Record	CC	SRH
C15	18.09.20	See revision clouds	JS	SRH

ISSUES & REVISIONS

Rev	Date	Details of issue / revision	Drw	Rev
C1	18.01.17	CONSTRUCTION ISSUE	GDJ	NL
C2	24.04.17	RISING MAIN DETAILS UPDATED	LDH	SRH
C3	27.04.17	Pumping Station Design Notes reinstated.	LDH	SRH
C4	19.05.17	PUMPING STATION LOCATION AMENDED.	LDH	SRH
C5	19.05.17	ZONE A1 STUB LOCATION AMENDED	LDH	SRH
C6	23.06.17	COVER LEVELS UPDATED. FOUL RISING MAIN ROUTE REVISED TO SUIT COMMENTS.	LDH	SRH
C7	30.06.17	Thrust blocks amended	SRH	SRH
C8	05.07.17	Coordinates added to foul stubs	NL	SRH
C9	19.07.17	Pumping Station layby amended	NL	SRH

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Client: ROXHILL

Project Title: THE EAST MIDLANDS GATEWAY RAIL FREIGHT INTERCHANGE

Drawing Title: DEVELOPMENT FOUL DRAINAGE LAYOUT SHEET 3

Drawn:	J. Moriarty	Reviewed:	S. Hilditch	
BWB Ref:	NTH 209	Date:	28.06.16	Scale@A1: 1:500

Drawing Status: CONSTRUCTION

Project - Originator - Zone - Level - Type - Role - Number: EMG-BWB-DDG-OH03-DR-C-505

Status: A

Rev: C15

190,000L.

Rising main offset 1.4m from kerbline (0.8m from front face of VRS) to avoid VRS foundations and lighting columns.

Rising Main
3DWF = 49 l/s

Washout chamber 01 for private foul rising main. Refer to BWB drawing EMG-BWB-HDG-XX-DR-D-0565 for construction details.

Private foul rising main from main development. Refer to BWB drawing EMG-BWB-DDG-SM6-DR-C-520 for further details.

OH03

OH05

NG AREA

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Notes

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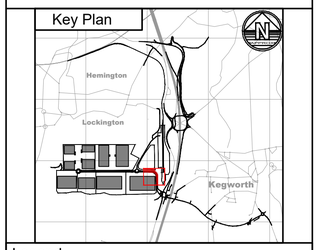
2. This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.
3. All dimensions in millimetres unless noted otherwise. All levels in metres unless noted otherwise.
4. Any discrepancies noted on site are to be reported to the engineer immediately.
5. Foul Strategy Subject to Severn Trent Waters Approval.

Key Plan



Legend

- Proposed Private Foul Water Gravity Sewer System — [X.XXX] 300mm Dia. @ 1:XX ##### m Long
- Proposed Severn Trent Water Foul Water Gravity Sewer System — [X.XXX] 300mm Dia. @ 1:XX ##### m Long
- Existing Severn Trent Water Foul Water Gravity Sewer System to remain unaltered — [X.XXX] 300mm Dia. @ 1:XX ##### m Long
- Proposed Foul Water Gravity Sewer Spur — 300mm Dia. @ 1:XX ##### m Long
- Proposed Pumping Station Location and size shown as indicative. Design to be confirmed at Detail Design Stage
- Proposed Private Foul Water Rising Main Route
- 100mm duct for pumping station telemetry

Rev	Date	Details of issue / revision	Drw	Rev
C6	04.02.20	Construction Record	CC	SH
C5	22.03.18	Bus Stop Added	GDJ	NL
C4	23.06.17	RISING MAIN ROUTING AMENDED	LDH	SRH
C3	19.05.17	RISING MAIN CHAINAGES UPDATED	LDH	SRH
C2	24.04.17	RISING MAIN DETAILS UPDATED	LDH	SRH
C1	18.01.17	CONSTRUCTION ISSUE	GDJ	NL
P1	28.06.16	ISSUED FOR PLANNING	JM	SH

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Client: ROXHILL

Project Title
THE EAST MIDLANDS GATEWAY RAIL FREIGHT INTERCHANGE

Drawing Title
DEVELOPMENT FOUL DRAINAGE LAYOUT SHEET 4

Drawn:	J. Moriarty	Reviewed:	S. Hilditch
BWB Ref:	NTH 209	Date: 28.06.16	Scale@A1: 1:500

Drawing Status: **CONSTRUCTION RECORD**

Project - Originator - Zone - Level - Type - Role - Number	Status	Rev
EMG-BWB-DDG-OH04-DR-C-505	CR	C6

Notes

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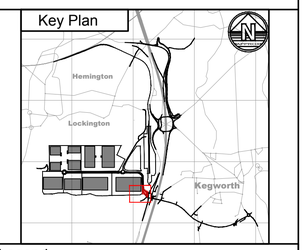
2. This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.
3. All dimensions in millimetres unless noted otherwise. All levels in metres unless noted otherwise.
4. Any discrepancies noted on site are to be reported to the engineer immediately.
5. Foul Strategy Subject to Severn Trent Waters Approval.

Key Plan



Legend

Proposed Severn Trent Water Foul Water Gravity Sewer System

Proposed Private Foul Water Gravity Sewer System — [X.XXX] #### @ 1:XX ###### m Long

Proposed Severn Trent Water Adoptable Foul Water Gravity Sewer System — [X.XXX] #### @ 1:XX ###### m Long

Existing Severn Trent Water Foul Water Gravity Sewer

Existing Severn Trent Water Foul Water Gravity Sewer System to remain unaltered — [X.XXX] #### @ 1:XX ###### m Long

Proposed Foul Water Gravity Sewer Spur — 300mm Dia. @ 1:XX ###### m Long

Proposed Pumping Station location and size shown as indicative. Design and location to be confirmed at Detail Design Stage.

Proposed Private Foul Water Rising Main Route

Proposed Pumping Station

C6	04.02.20	Construction Record	CC	SRH
C5	27.07.17	Private Spur added on to FW5 Chamber	LDH	SRH
C4	23.06.17	RISING MAIN ROUTING AMENDED	LDH	SRH
C3	19.05.17	RISING MAIN CHAINAGES UPDATED	LDH	SRH
C2	24.04.17	RISING MAIN DETAILS UPDATED	LDH	SRH
C1	18.01.17	CONSTRUCTION ISSUE	GDJ	NL
P1	28.06.16	ISSUED FOR PLANNING	JM	SH
Rev	Date	Details of issue / revision	Drw	Rev

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Client

ROXHILL

Project Title

THE EAST MIDLANDS GATEWAY RAIL FREIGHT INTERCHANGE

Drawing Title

DEVELOPMENT FOUL DRAINAGE LAYOUT SHEET 5

Drawn:	J. Moriarty	Reviewed:	S. Hilditch		
BWB Ref:	NTH 209	Date:	28.06.16	Scale@A1:	1:500

Drawing Status

CONSTRUCTION RECORD

Project - Originator - Zone - Level - Type - Role - Number	Status	Rev
EMG-BWB-DDG-OH05-DR-C-505	CR	C6

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Foul rising main to connect into gravity system. (Invert to invert connection)

Private foul rising main from main development. Refer to BWB drawing EMG-BWB-DDG-SM6-DR-C-520 for further details.

Section 106 Connection to Public Sewer

Private Spur from Security Lodge SVP
CL 76.130
IL 74.644

Private Spur from Bus Interchange SVP
CL 76.797
IL 74.485

Existing foul sewer and manholes within extent of diversion works to be abandoned

Existing STW Manhole 1302
Record CL 86.130
Record IL 84.900
Depth to IL 1.23m AOD

Surveyed CL 79.470
Assumed IL 78.240

Due to the difference in cover level between survey data and STW records, the depth to invert from record data has been applied to the surveyed CL and an assumed IL has been utilised for the purpose of design - actual invert level is to be surveyed and confirmed prior to construction

WinVic Survey Dated 8th February 2017
CL 79.497
IL 77.902

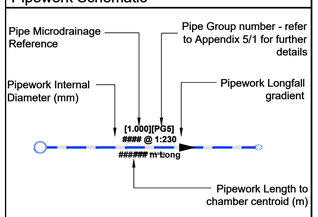
Survey Station 80.886

Exising Rising Main Chamber
CL 81.699
IL 79.344 (300)

FW1 FW2 FW3 FW4 FW5 FW6 FW7 FW8 FW9

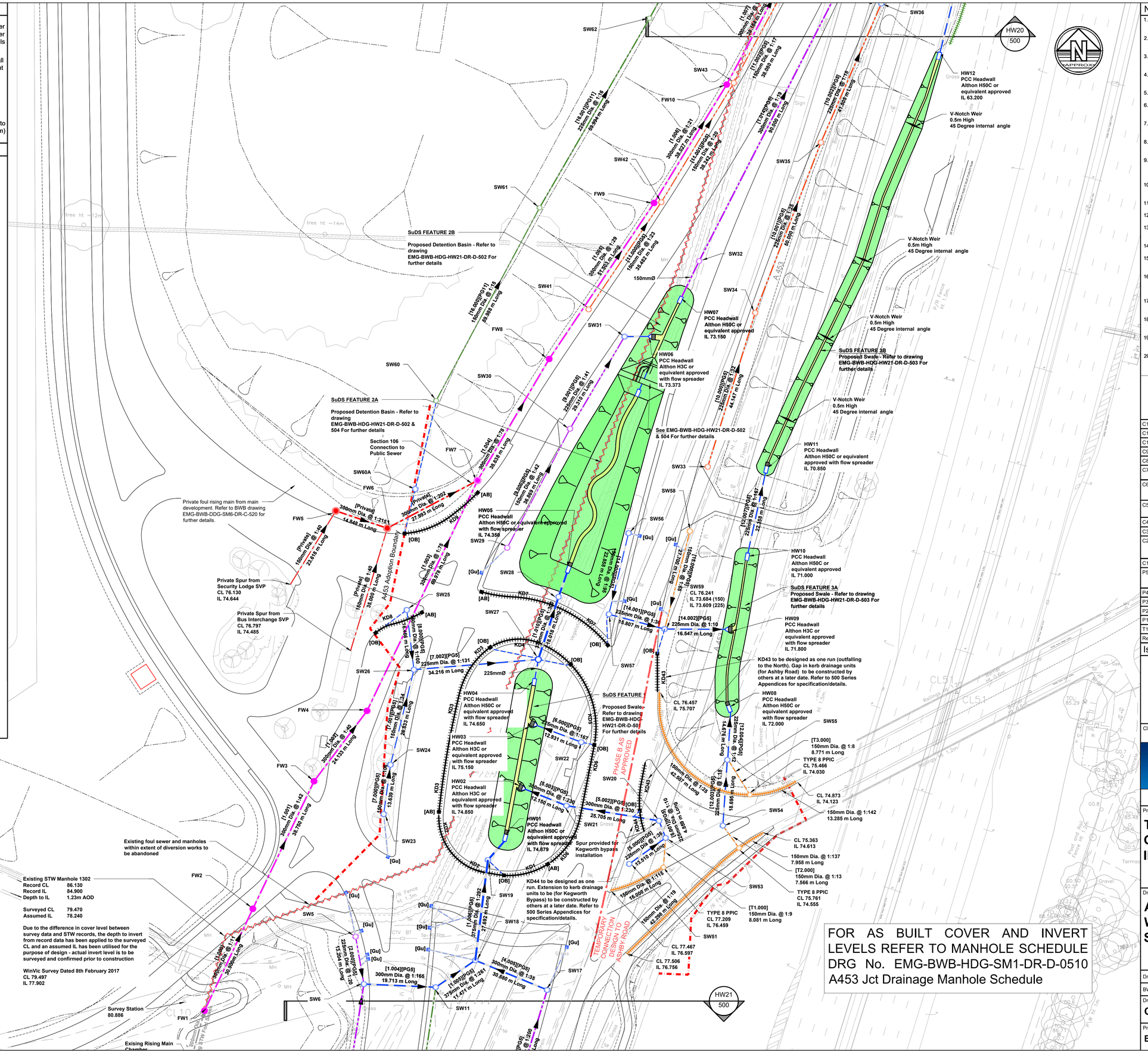
OH04

Pipework Schematic



Legend

- Proposed Surface Water Gravity Sewer System — [X.XXX][PGX] #### @ 1:XX ###### m Long
- Proposed Type H Combined Filter / Carrier Drain System — [X.XXX][PGX] #### @ 1:XX ###### m Long
- Proposed Type H Combined Filter / Carrier Drain System with impermeable membrane. Refer to drawing EMG-BWB-HDG-XX-DR-D-0560 For further details — [X.XXX][PGX] #### @ 1:XX ###### m Long
- Proposed Type H Landscape Filter Drain System — [X.XXX][PGX] #### @ 1:XX ###### m Long
- Proposed Private Foul Water Gravity Sewer System — [X.XXX] #### @ 1:XX ###### m Long
- Proposed Severn Trent Water Adoptable Foul Water Gravity Sewer System — [X.XXX] #### @ 1:XX ###### m Long
- Existing Severn Trent Water Foul Water Gravity Sewer System to remain unaltered — [X.XXX] #### @ 1:XX ###### m Long
- Existing Highway Drainage System to remain unaltered — #### @ 1:XX ###### m Long
- Proposed Landscape Gravel Trench / Grip
- Proposed Private Foul Water Rising Main Route
- Proposed Gully Pot and Lateral Connection to Sewer — [Gu]
- Proposed Linear Combined Kerb Drainage System - ACO Kerbdrain or equivalent approved — KD1
- Indicative position of Kerb/Channel drain access box - details to be confirmed by manufacturer — [AB]
- Indicative position of Kerb/Channel drain outlet point - details to be confirmed by manufacturer — [OB]
- Proposed Above-ground SuDS Feature - Refer to Relevant drawing for further detail
- Proposed Type H Temporary gravel trench (75mm cover of topsoil) with 150Ø6mm diameter pipe in base of trench.
- Proposed temporary 150Ø6mm diameter solid wall pipe.



Notes

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2. This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.
3. All dimensions in metres unless noted otherwise. All levels in metres unless noted otherwise.
4. Any discrepancies noted on site are to be reported to the engineer immediately.
5. Drawings should be printed in colour.
6. New Highway Chambers to be Type 7 as to HCD Drg F11 unless shown otherwise.
7. Trench and pipe bedding for all kerb drainage outfalls to be as HCD Drg F1 and as detailed in pipe schedule.
8. All gully gratings, manhole frames and covers to have hinged openings. For details of gully and manhole frames refer to Appendix 5/1.
9. Pipe Strengths and material type shall be in accordance with Appendix 5/1 of the Contract Specification and DMRB Volume 4 HA 40/01 Section 2, Part 5, Appendix C.
10. Precast concrete rings to be constructed to BS EN 1917 and BS EN 5911-3.
11. Mortar to be designation (I) to SHW Series 2400.
12. Pipes to be built into chamber with designation (I) mortar.
13. See SHW, sub-clause 507.7, regarding backfill arrangements/surrounds to chamber.
14. All ST concrete shall be to SHW Clause 2602.
15. Sump dimensions are indicative and are subject to manufacturers requirements upon final selection of flow control device.
16. The Contractor is to refer to Drg Nos. EMG-BWB-VTO-HW-DR-D-090 & EMG-BWB-VTO-HW-DR-D-091 for site specific/extraordinary hazards which have been identified during the detailed design stage.
17. For A50 Chainage plan refer to drawings EMG-BWB-HGT-SM2-DR-C-660 to 661
18. For M1 J24 Chainage plan refer to drawing EMG-BWB-HGT-HW11 to HW13
19. For A453 Junction Chainage plan refer to drawing EMG-BWB-HGT-SM1-DR-C-660 to 661
20. For Main Street Chainage plan refer to drawing EMG-BWB-HGT-HW02-DR-C-650

Rev	Date	Details of issue / revision	Drw	Rev
C12	04.12.19	Suds feature 2A amended	SRH	SRH
C11	28.05.19	SW60A added	SRH	SRH
C10	09.02.18	HW01 and HW06 amended	GDJ	NL
C9	11.01.18	Construction record updated	GDJ	NL
C8	12.12.17	Construction record issue	GDJ	NL
C7	03.10.17	Further drainage details added to Ashby Road to reflect HE comments.	LDH	NL
C6	12.09.17	Surface water drainage on Ashby Road amended to a temporary state. Gravel trench added to key and design amended. Phasing boundary added.	LDH	SRH
C5	09.06.17	HW Details added, Airport access drainage removed and shown on onsite drawings	JS	NL
C4	12.05.17	SW11a removed, SW18 relocated. HW text added	JS	NL
C3	15.03.17	SW11a added to avoid STW water main	JS	NL
C2	10.03.17	FW18 & FW2 updated to reflect drawing EMG-BWB-HDG-HW21-DR-D-0505. SW18 & SW19 Repositioned to avoid utility conflict	JS	NL
C1	06.01.17	CONSTRUCTION ISSUE	GDJ	NL
P5	21.12.16	Filter drain detail moved to detail drawing EMG-BWB-HDG-XX-DR-D-0560 Suitable reference added to key	JS	SRH
P4	25.11.16	Filter drain updated. Issued to HE for Approval	JM	NL
P3	23.11.16	Landscape drainage added to toe of embankment	JM	NL
P2	06.10.16	Updated to reflect latest hydraulic model	JS	NL
P1	05.05.16	Issued for Comment	JS	NL
T1	17.12.15	Tender	JM	NL

Issues & Revisions

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Client

ROXHILL

Project Title

THE EAST MIDLANDS GATEWAY RAIL FREIGHT INTERCHANGE

Drawing Title

A453 JUNCTION SURFACE WATER DRAINAGE LAYOUT SHEET 21

Drawn:	J.Moriarty	Reviewed:	N.Lowe	
BWB Ref:	NTH209	Date:	17.12.15	Scale@A1: 1:500

Drawing Status: **CONSTRUCTION RECORD**

Project - Originator - Zone - Level - Type - Role - Number	Status	Rev
EMG-BWB-HDG-HW21-DR-D-0500	CR	C12

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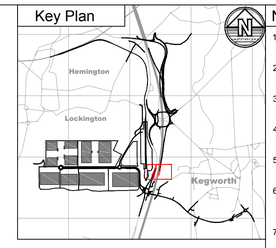
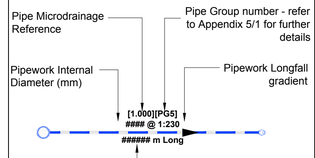
Key Plan



Notes

1. Do not scale this drawing. All dimensions must be checked/ verified on site. If in doubt ask.
2. This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.
3. All dimensions in metres unless noted otherwise. All levels in metres unless noted otherwise.
4. Any discrepancies noted on site are to be reported to the engineer immediately.
5. All STW Chambers shall be constructed in accordance with The Sewers for Adoption 7th Edition.
6. All proposed manhole covers and frames at a minimum of 675mm x 675mm to maintain clear opening, and to comply with Severn Trent Water Ltd current Health & Safety Standards
7. Pipe Strengths shall be in accordance with Appendix 5/1 of the Contract Specification and DMRB Volume 4 HA 40/01 Section 2, Part 5, Appendix C.
8. Pipe material type as approved by STW shall be Marley Quantum sewer PVC-U Twinwall pipes. Maximum pipe diameter shall be 300mm as agreed with STW.
9. Precast concrete rings to be constructed to BS EN 1917 and BS EN 5911-3.
10. Under no circumstances shall precast concrete manhole rings be cut down. It is recommended that engineered brick or concrete be laid in situ as an alternative.
11. Mortar to be designation (I) to SHW Series 2400.
12. Pipes to be built into chamber with designation (I) mortar.
13. See SHW, sub-clause 507.7, regarding backfill arrangements/surrounds to chamber.
14. All ST concrete shall be to SHW Clause 2602.
15. Sump dimensions are indicative and are subject to manufacturers requirements upon final selection of flow control device.

Pipework Schematic



Legend

Proposed Private Foul Water Gravity Sewer System — [X.XXX] #### @ 1:XX ###### m Long

Proposed Severn Trent Water Adoptable Foul Water Gravity Sewer System — [X.XXX] #### @ 1:XX ###### m Long

Existing Severn Trent Water Foul Water Gravity Sewer System to remain unaltered — [X.XXX] #### @ 1:XX ###### m Long

Proposed Private Foul Water Rising Main Route

Existing Severn Trent Water Foul Water Gravity Sewer to be abandoned.
Total Length to be abandoned = 563m

Extent of Easement for the proposed Public Sewer with Private Lane (Roxhill Development) - 5.0m Total width to be provided

Post & 4 Rail Fence - Refer to BWB drawing series EMG-BWB-HFE-HWXX-DR-D-0300 for further details.

Manhole Number	Cover Level	Connections	Pipe			Manhole Size	Types	
Coordinates	Depth To Soffit		Code	Inverts	Diams Inv-soff		Manhole	Cover
FW11	69.438	1	1 1.007	67.388	300	1200	B.12 TYPE 2	D400
	1.750	0	0 1.008	67.388	300			
E. 447353.015								
N. 326663.790								
FW12	66.953	1	1 1.008	64.866	300	1200	B.12 TYPE 2	D400
	1.787	0	0 1.009	64.866	300			
E. 447368.703								
N. 326697.420								
FW13	64.110	1	1 1.009	62.036	300	1200	B.12 TYPE 2	D400
	1.774	0	0 1.010	62.036	300			
E. 447383.044								
N. 326731.653								
FW14	61.065	1	1 1.010	58.861	300	1200	B.12 TYPE 2	D400
	1.904	0	0 1.011	58.861	300			
E. 447395.665								
N. 326767.446								
FW15	57.461	1	1 1.011	54.271	300	1200	B.12 TYPE 2	D400
	2.890	0	0 1.012	54.271	300			
E. 447411.357								
N. 326821.177								
FW16	55.527	1	1 1.012	50.830	300	1800	B.8 TYPE 1A	D400
	4.397	0	0 *Existing*	50.230	900			
E. 447421.800								
N. 326862.350								

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ISSUES & REVISIONS

Rev	Date	Details of issue / revision	Drw	Rev
T1	18.12.15	TENDER ISSUE	JM	NL
P1	10.06.16	Issued for Approval	JS	NL
P2	09.01.17	Updated to address STW comments	JM	NL
P3	28.02.17	FW16 updated from WinVic drainage Survey	JM	NL
C1	05.04.17	Issued for Construction. Notes updated	JM	NL
C2	15.11.17	Updated with As-Built construction information	LDH	SRH

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Client: ROXHILL

Project Title: **THE EAST MIDLANDS GATEWAY RAIL FREIGHT INTERCHANGE**

Drawing Title: **A453 JUNCTION FOUL WATER DRAINAGE LAYOUT SHEET 20**

Drawn:	J.Moriarty		Reviewed:	N.Lowe		
BWB Ref:	NTH209	Date:	18.12.15	Scale@A1:	1:500	

Drawing Status: **CONSTRUCTION RECORD**

Project - Originator - Zone - Level - Type - Role - Number	Status	Rev
EMG-BWB-HDG-HW20-DR-D-0505	CR	C2

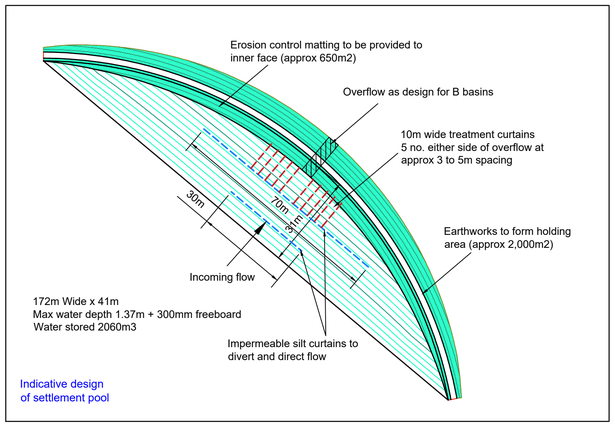
Appendix 4: EMG1 Strategy for Treatment of Surface Water Plan

APPROX

NOTES

Additional seeding and planting on all batter slopes and within basins to be in accordance with BCA drawings. It is important to establish this as quickly as possible.

For future development plots, when a contractor takes possession, they shall be required to manage surface water within their site and discharge into the wider drainage network at no greater than 20ntu.



Indicative design of settlement pool

Western boundary (A basins)

Vegetation to be fully established on all slopes, remedial works to be undertaken to slopes as necessary

Establish landscaping in basins as quickly as possible

Outfall to Hemington Brook

Flood Alleviation Basin

Bionet to be installed along the low flow channel

Basins to be vegetated

SA74

Basin A1

Bionet to be installed along the low flow channel

SA26

SA27

SA20

SA19

SA71A

SA18

SA17

SA16

SA66

SA65

SA64

SA63

Flocmats and siltmats to be installed on channel into basin

Top surface of plateau for Plot 4 to be decompacted and plateau and earthworks slope areas to be seeded; temporary ditch network to direct flows to SA67

SA67

Basin A2

Bionet to be installed along the low flow channel

Basin to be vegetated

Bionet to be installed along all temporary ditches

SA10

SA11

SA12

SA13

SB47

SB46

SB45

SB44

SB43

SB42

ZONE A5

CATCHMENT A1

ZONE A4

CATCHMENT A2

ZONE A3

Temporary drainage network within undeveloped plots to be amended to provide an outfall in the northeast corner behind Kings Plantation

ZONE A6

CATCHMENT B1

CATCHMENT B2

ZONE A2

ZONE A1

CATCHMENT C1

Southern (EMA) batter

Vegetation to be fully established

Remedial works required to slope and silts removed from within plots.

Plots 3 & 4: silt curtain to be provided (approx 400m length)

Retain flocmats and siltmats on B basin outfall channels

Outfalls to Lockington Brook

Basin B2

SB48

Basin to be vegetated

Bionet to be installed along the low flow channel

Basin to be vegetated

Basin B1

SB17

Bionet to be installed along the low flow channel

SB16

SB14

6 no. settlement pools for water treatment each to store 2,000m3 of water - see detail

Hydrobrake Maximum flow: 25l/s

Flow from undeveloped plots restricted to 100l/s with a hydrobrake, additional flow control provided to stop flow if water level in the basin is at capacity. (Potential storage in 1:5 year event of 22,500m3 on undeveloped plots, which would increase in less frequent events)

Drainage basin to store up to 7,500m3 of water
Maximum inflow: 100l/s
Maximum outflow: 25l/s

Top surface of plateau for Plot 33 (except hard paved areas) to be decompacted and plateau to be seeded; temporary ditch network to direct flows to existing sewer. Bionet to be installed along all temporary ditches

Outfall to raiway ditch and then into Lockington Brook

Railway ditch taking flow from C3: Bionet to be placed along ditch and vegetation established. Straw bales / silt mats to be added at regular intervals. Vegetation on rail embankments to be established as quickly as possible.

Bionet to be installed along the low flow channel

Basin C3

Basin to be vegetated

Basin to be vegetated

Bionet to be installed along the low flow channel

SC59

SC66

SC65

Basin C1

SC54

Connection into ditch to be closed

Temporary treatment area for east side of rail terminal
Excess of water to be pumped into main settlement basins if required

Straw bales / silt mats to be added at regular intervals in the ditch to slow down the flow and improve the water quality

Connect to drainage network if flow is sufficiently clean (<20ntu)

Rail terminal batter

Long term: vegetation fully established
Short term: Consider silt curtains or similar to avoid run off from slope entering drainage network.

CATCHMENT C2

Remedial works required to slope and silts removed.

ZONE 8

Straw bales / silt mats to be added at regular intervals in the ditch to slow down the flow and improve the water quality

ZONE C

CATCHMENT C3

CATCHMENT C4

Notes

1. Do not scale this drawing. All dimensions must be checked/ verified on site. If in doubt ask.
2. This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.
3. All dimensions in millimetres unless noted otherwise. All levels in metres unless noted otherwise.
4. Any discrepancies noted on site are to be reported to the engineer immediately.

Legend

- Flocculent insertion point - refer to Frog Environmental details
- Potential flocculent insertion point if additional treatment is required
- Manhole to be isolated from run-off from exposed earthworks / formation
- Undeveloped plot areas requiring temporary drainage system
- Undeveloped plot areas to be seeded and temporary drainage system provided
- Penstock to be provided on headwall at outlet from basin

Works generally completed but need maintenance as necessary

Works to be completed

Additional works to be undertaken

Rev	Date	Details of issue / revision	Drw	Rev
P7	10.07.20	General updates to reflect last position	SRH	SRH
P6	18.10.19	Agreed strategy	SRH	SRH
P5	05.09.19	Settlement pool updated	SRH	SRH
P4	05.09.19	Amended following meeting with Winvic	SRH	SRH
P3	29.08.19	Amended following meeting with Winvic	SRH	SRH
P2	27.08.19	Monitoring points added	SRH	SRH
P1	22.08.19	Preliminary Issue	SRH	SRH

Issues & Revisions

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Manchester | 0161 233 4260
Nottingham | 0115 924 1100
www.bwbconsulting.com

Client

ROXHILL

Project Title

EAST MIDLANDS GATEWAY RAIL FREIGHT INTERCHANGE

Drawing Title

STRATEGY FOR TREATMENT OF SURFACE WATER

Drawn:	S. Hilditch		Reviewed:	S. Hilditch	
BWB Ref:	NTH209	Date:	22.08.19	Scale@A1:	NTS

Drawing Status

FOR COMMENT

Project - Originator - Zone - Level - Type - Role - Number	Status	Rev
EMG-BWB-GEN-XX-SK-D-SK454	S3	P7

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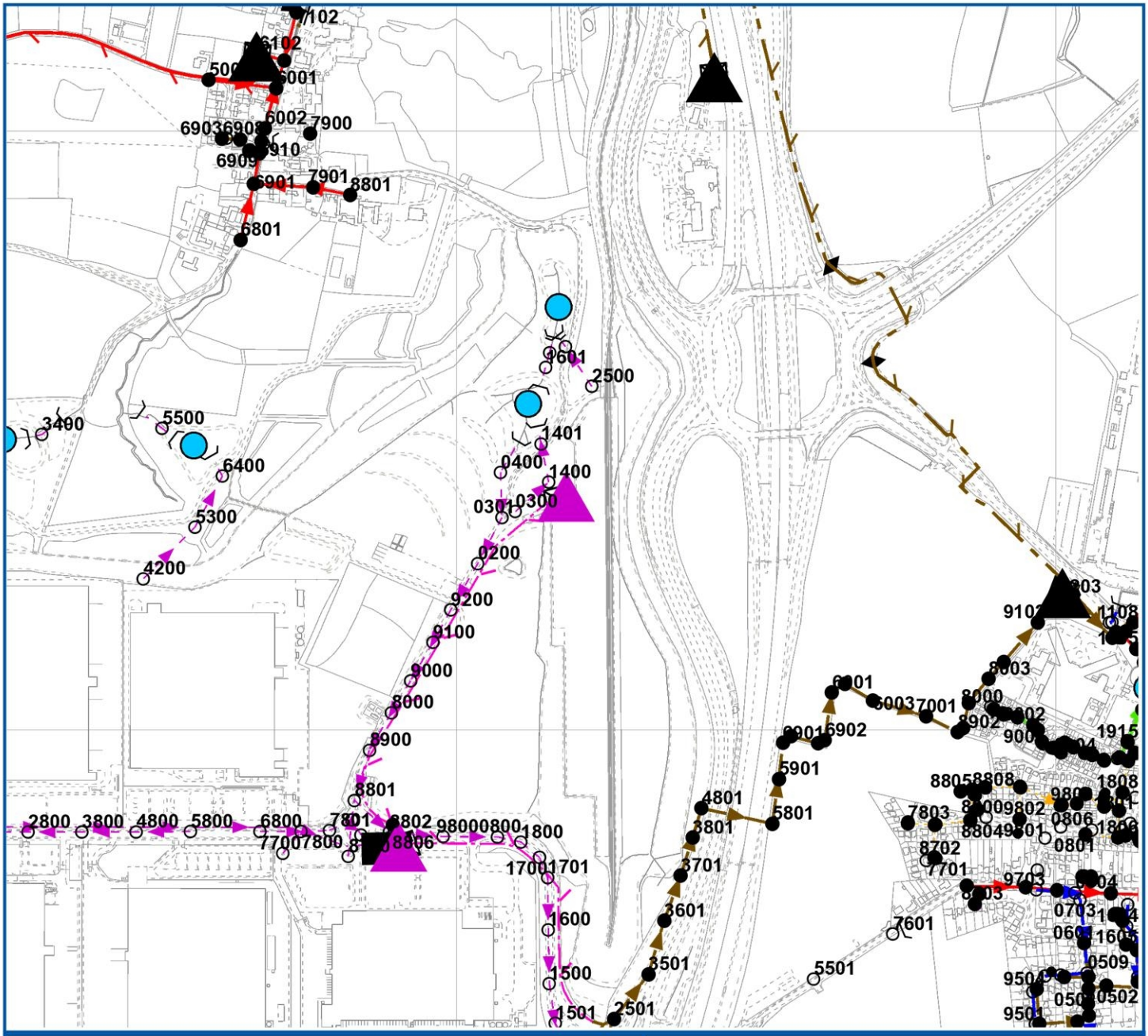
Appendix 5: Severn Trent Water Sewer Asset Plans



LEGEND

Operational Site

Waste Water Pump
- Transferred Asset
- S24
- S104
- S102
- Null Private
- Null
- None
- Highway Drain
- Adopted Sewer

Storage
- Disposal Site
- Off-Line Waste Water Storage
- On-Line Waste Water Storage
- Wet Well

Waste Water Process Structure
- Sewage Treatment Point
- Sewage Treatment Structure
- Sludge Treatment Point
- Sludge Treatment Structure

Manhole
- Foul Bifurcation Manhole
- Combined Bifurcation Manhole
- Surface Water Bifurcation Manhole
- Dual Manhole
- Foul Single Manhole
- Combined Single Manhole
- Surface Water Single Manhole
- Twin Manhole
- Foul Adopted Manhole
- Combined Adopted Manhole
- Surface Adopted Manhole
- Transferred Manhole
- Unsurveyed Manhole

Gravity Sewer Pipe
- Foul Gravity Sewer
- Combined Gravity Sewer
- Surface Water Gravity Sewer
- S104 Surface Water Gravity Sewer
- S104 Combined Gravity Sewer
- S104 Foul Gravity Sewer
- Private Surface Water Gravity Sewer
- Private Combined Gravity Sewer
- Private Foul Gravity Sewer
- Surface Water Unsurveyed Pipe
- Combined Unsurveyed Pipe
- Foul Unsurveyed Pipe
- Transferred Surface Water Sewer
- Transferred Combined Sewer
- Transferred Foul Sewer
- Disposal Pipe
- Overflow Pipe
- Culverted Water Course
- Waste Internal Site Pipe
- Sewer Service Connection
- Gravity Sewer Others

Pressure Sewer Pipe
- Surface Water Pressure Sewer
- Combined Pressure Sewer
- Foul Pressure Sewer
- S104 Surface Water Pressure Sewer
- S104 Combined Pressure Sewer
- S104 Foul Pressure Sewer
- Private Surface Water Pressure Sewe
- Private Combined Pressure Sewer
- Private Foul Pressure Sewer
- Surface Water Vacuum Sewer
- Foul Vacuum Sewer
- Combined Vacuum Sewer
- S104 Surface Water Vacuum Sewer
- S104 Combined Vacuum Sewer
- S104 Foul Vacuum Sewer
- Private Surface Water Vaccum Sewer
- Private Combined Vacuum Sewer
- Private Foul Vacuum Sewer
- Surface Water Siphon
- Combined Siphon
- Foul Siphon
- Private Surface Water Siphon
- Private Combined Siphon
- Private Foul Siphon
- S104 Surface Water Siphon
- S104 Combined Siphon
- S104 Foul Siphon
- Surface Water Unsurveyed Pipe
- Combined Unsurveyed Pipe
- Foul Unsurveyed Pipe
- Disposal Pipe

Service Pipe
- Surface Water Lateral Drain
- Combined Lateral Drain
- Foul Lateral Drain
- S104 Surface Water Lateral Drain
- S104 Combined Lateral Drain
- S104 Foul Lateral Drain
- Private Surface Water Lateral Drain
- Private Combined Lateral Drain
- Private Foul Lateral Drain
- Transferred Surface Water Lateral Dra
- Transferred Combined Lateral Drain
- Transferred Foul Lateral Drain

Ancillary
- Balancing Lagoon
- Grease Trap
- Interceptor
- Screen

Chamber
- Flushing Chamber
- Scalaway
- Overflow

Fitting
- Blind Shaft
- Facility Connector
- Head Node
- Lamphole
- Sewerage Air Valve
- Sewerage Chemical Injection Point
- Sewerage Hatch Box
- Sewerage Pressure Washout
- Vent Column
- Waste Water Outfall

Control Valve
- Hydrobrake
- Penstock
- Sewerage Isolation Valve
- Sewerage Non Return Valve

Manhole Annotation

Print1000mLine

Severn Trent Water Limited
Asset Data Management
PO Box 5344
Coventry
CV3 9FT
Telephone: 0345 601 6616

SEWER RECORD

O/S Map Scale: 1:10,000

This map is centred upon:

Date of Issue: 26-11-24

X: 447192.72 **Y:** 327356.23

Disclaimer Statement:

1 Do not scale off this Map.

2 This plan and any information supplied with it is furnished as a general guide, is only valid at the date of issue and no warranty as to its correctness is given or implied. In particular this plan and any information shown on it must not be relied upon in the event of any development or works (including but not limited to excavations) in the vicinity of SEVERN TRENT WATER assets or for the purposes of determining the suitability of a point of connection to the sewerage or distribution systems.

3 On 1 October 2011 most private sewers and private lateral drains in Severn Trent Water's sewerage area, which were connected to a public sewer as at 1 July 2011, Transferred to the ownership of Severn Trent Water and became public sewers and public lateral drains. A further transfer takes place on 1 October 2012. Private pumping stations, which form part of these sewers or lateral drains, will transfer to ownership of Severn Trent Water on or before 1 October 2016. Severn Trent Water does not possess complete records of these assets. These assets may not be displayed on the map.

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Sewer Node Sewer Pipe Data

Reference	Cover Level	Invert Level Upstream	Invert Level Downstream	Purpose	Material	Pipe Shape	Max Size	Min Size	Gradient	Year Laid
SK46286001	32.769	30.809	30.499	C	VC	C	225	<UNK>	152.9	31/12/1899 00:00:00
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SK47279102	35.8059	33.57	32.76	F	CO	C	300	<UNK>	66.46	31/12/1899 00:00:00
SK48260703	65.9599	64.35	63.79	S	VC	C	225	<UNK>	111.41	31/12/1899 00:00:00
SK48261810	<UNK>	<UNK>	<UNK>	F	VC	C	<UNK>	<UNK>	0	31/12/1899 00:00:00
SK47284201	<UNK>	0	0	F	PVC	<UNK>	<UNK>	<UNK>	<UNK>	10/02/2009 00:00:00
SK46268802	<UNK>	<UNK>	<UNK>	S	U	<UNK>	<UNK>	<UNK>	<UNK>	24/02/2023 00:00:00
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SK46268700	<UNK>	<UNK>	<UNK>	S	U	<UNK>	<UNK>	<UNK>	<UNK>	24/02/2023 00:00:00
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SK48260905	<UNK>	<UNK>	<UNK>	S	<UNK>	<UNK>	<UNK>	<UNK>	<UNK>	31/12/1899 00:00:00
SK47269501	62.86	61.55	61.2	S	VC	C	225	<UNK>	193.34	31/12/1899 00:00:00
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SK47269801	63.18	60.87	58.08	F	VC	C	150	<UNK>	19.71	31/12/1899 00:00:00
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SK48271101	34.3699	32.98	33.02	S	VC	C	300	<UNK>	<UNK>	31/12/1899 00:00:00
SK47265901	<UNK>	<UNK>	<UNK>	F	<UNK>	<UNK>	<UNK>	<UNK>	0	31/12/1899 00:00:00
SK47267803	<UNK>	<UNK>	<UNK>	F	VC	C	<UNK>	<UNK>	0	31/12/1899 00:00:00
SK48261602	63.36	61.9	61.36	F	VC	C	150	<UNK>	37.26	31/12/1899 00:00:00
SK48261301	57.0499	55.33	53.02	C	VC	C	150	<UNK>	24.34	31/12/1899 00:00:00
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Sewer Node Sewer Pipe Data

Reference	Cover Level	Invert Level Upstream	Invert Level Downstream	Purpose	Material	Pipe Shape	Max Size	Min Size	Gradient	Year Laid
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SK46285001	32.0769	31.15	30.809	C	VC	C	150	<UNK>	332.76	31/12/1899 00:00:00
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SK48260401	61.3989	59.689	52.087	S	VC	C	225	<UNK>	6.1	31/12/1899 00:00:00
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SK48261501	59.9399	58.55	56.8	C	VC	C	150	<UNK>	19.67	31/12/1899 00:00:00
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Sewer Node Sewer Pipe Data

Reference	Cover Level	Invert Level Upstream	Invert Level Downstream	Purpose	Material	Pipe Shape	Max Size	Min Size	Gradient	Year Laid
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SK48261911	<UNK>	<UNK>	<UNK>	F	U	U	225	<UNK>	0	31/12/1899 00:00:00
SK48261906	<UNK>	<UNK>	<UNK>	F	VC	C	<UNK>	<UNK>	0	31/12/1899 00:00:00
SK46276905	33.4659	32.07	31.78	F	VC	C	150	<UNK>	60.48	31/12/1899 00:00:00
SK48271110	34.6279	31.34	31.25	C	CO	C	375	<UNK>	216.56	31/12/1899 00:00:00
SK47269904	<UNK>	<UNK>	<UNK>	F	<UNK>	<UNK>	<UNK>	<UNK>	<UNK>	31/12/1899 00:00:00
SK48260701	64.11	62.83	60.01	C	VC	C	225	<UNK>	32.23	31/12/1899 00:00:00
SK47262405	<UNK>	<UNK>	<UNK>	F	U	<UNK>	<UNK>	<UNK>	<UNK>	24/02/2023 00:00:00
SK48261807	<UNK>	<UNK>	<UNK>	F	VC	C	<UNK>	<UNK>	0	31/12/1899 00:00:00
SK48261601	62.9399	61.33	60.57	F	VC	C	150	<UNK>	69.79	31/12/1899 00:00:00
SK48260909	<UNK>	<UNK>	<UNK>	F	<UNK>	<UNK>	<UNK>	<UNK>	<UNK>	31/12/1899 00:00:00
SK47279003	<UNK>	<UNK>	<UNK>	S	<UNK>	<UNK>	<UNK>	<UNK>	<UNK>	31/12/1899 00:00:00
SK47269901	60.7599	58.06	57.73	F	VC	C	225	<UNK>	229.3	31/12/1899 00:00:00
SK48261603	63.75	62.56	61.93	F	VC	C	150	<UNK>	64.21	31/12/1899 00:00:00
SK47276002	47.819	46.43	45.51	F	CO	C	300	<UNK>	58.87	31/12/1899 00:00:00
SK47261400	<UNK>	<UNK>	<UNK>	S	U	<UNK>	<UNK>	<UNK>	<UNK>	24/02/2023 00:00:00
SK47265902	<UNK>	<UNK>	48.59	F	<UNK>	<UNK>	<UNK>	<UNK>	0	31/12/1899 00:00:00
SK48260504	<UNK>	<UNK>	59.79	F	<UNK>	<UNK>	<UNK>	<UNK>	0	31/12/1899 00:00:00
SK46279100	<UNK>	<UNK>	<UNK>	S	U	<UNK>	<UNK>	<UNK>	<UNK>	24/02/2023 00:00:00
SK47265903	51.893	48.58	48.13	F	CO	C	300	<UNK>	103.53	31/12/1899 00:00:00
SK48261506	61.7299	59.97	58.88	S	VC	C	225	<UNK>	26.28	31/12/1899 00:00:00
SK47271602	<UNK>	<UNK>	<UNK>	S	U	<UNK>	<UNK>	<UNK>	<UNK>	24/02/2023 00:00:00
SK46287301	32.2529	30.603	29.984	C	CO	C	225	<UNK>	192.61	31/12/1899 00:00:00
SK46275500	<UNK>	<UNK>	<UNK>	S	U	<UNK>	<UNK>	<UNK>	<UNK>	24/02/2023 00:00:00
SK47263801	<UNK>	<UNK>	57.49	F	<UNK>	<UNK>	<UNK>	<UNK>	0	31/12/1899 00:00:00
SK48260702	66.72	65.54	62.87	C	VC	C	<UNK>	<UNK>	33.7	31/12/1899 00:00:00
SK48271001	34.3	33.07	32.5	C	VC	C	225	<UNK>	87.84	31/12/1899 00:00:00
SK47279101	<UNK>	<UNK>	33.61	F	<UNK>	C	300	<UNK>	0	31/12/1899 00:00:00
SK48262911	<UNK>	<UNK>	<UNK>	F	VC	C	<UNK>	<UNK>	0	31/12/1899 00:00:00
SK48261502	60.09	58.76	58.58	C	VC	C	150	<UNK>	45.83	31/12/1899 00:00:00
SK47268809	<UNK>	<UNK>	<UNK>	F	U	C	100	<UNK>	<UNK>	31/12/1899 00:00:00
SK47269905	<UNK>	<UNK>	<UNK>	F	<UNK>	<UNK>	<UNK>	<UNK>	<UNK>	31/12/1899 00:00:00
SK48270203	34.075	32.42	<UNK>	F	CO	C	300	<UNK>	0	31/12/1899 00:00:00
SK48271102	34.4199	32.48	32.09	C	VC	C	225	<UNK>	68.15	31/12/1899 00:00:00
SK46274200	<UNK>	<UNK>	<UNK>	S	U	<UNK>	<UNK>	<UNK>	<UNK>	24/02/2023 00:00:00
SK47269701	68.1299	66.98	65.57	C	VC	C	225	<UNK>	36.57	31/12/1899 00:00:00
SK48261504	61.9599	60.56	<UNK>	F	VC	C	150	<UNK>	0	31/12/1899 00:00:00
SK48260807	<UNK>	<UNK>	<UNK>	F	VC	C	<UNK>	<UNK>	0	31/12/1899 00:00:00
SK48261702	63.6699	62.29	62.21	S	VC	C	225	<UNK>	450.75	31/12/1899 00:00:00
SK46269800	<UNK>	<UNK>	<UNK>	S	U	<UNK>	<UNK>	<UNK>	<UNK>	24/02/2023 00:00:00
SK48260900	<UNK>	<UNK>	<UNK>	S	<UNK>	<UNK>	<UNK>	<UNK>	<UNK>	31/12/1899 00:00:00
SK47268806	<UNK>	<UNK>	<UNK>	F	U	C	150	<UNK>	<UNK>	31/12/1899 00:00:00

Sewer Node Sewer Pipe Data

Reference	Cover Level	Invert Level Upstream	Invert Level Downstream	Purpose	Material	Pipe Shape	Max Size	Min Size	Gradient	Year Laid
SK46267700	<UNK>	<UNK>	<UNK>	S	U	<UNK>	<UNK>	<UNK>	<UNK>	24/02/2023 00:00:00
SK47269503	64.3199	62.96	62.9	S	VC	C	225	<UNK>	434.67	31/12/1899 00:00:00
SK47278001	46.7709	42.45	40.34	F	CO	C	300	<UNK>	20.2	31/12/1899 00:00:00
SK46267800	<UNK>	<UNK>	<UNK>	S	U	<UNK>	<UNK>	<UNK>	<UNK>	24/02/2023 00:00:00
SK47261700	<UNK>	<UNK>	<UNK>	S	U	<UNK>	<UNK>	<UNK>	<UNK>	24/02/2023 00:00:00
SK48261405	54.29	52.44	51.59	S	VC	C	150	<UNK>	28.06	31/12/1899 00:00:00
SK47267802	<UNK>	<UNK>	<UNK>	F	VC	C	<UNK>	<UNK>	0	31/12/1899 00:00:00
SK48262909	<UNK>	<UNK>	<UNK>	F	VC	C	<UNK>	<UNK>	0	31/12/1899 00:00:00
SK46279200	<UNK>	<UNK>	<UNK>	S	U	<UNK>	<UNK>	<UNK>	<UNK>	24/02/2023 00:00:00
SK46264800	<UNK>	<UNK>	<UNK>	S	U	<UNK>	<UNK>	<UNK>	<UNK>	24/02/2023 00:00:00
SK47265801	57.0519	49.82	<UNK>	F	CO	C	300	<UNK>	0	31/12/1899 00:00:00
SK47268701	71.98	70.13	67	C	VC	C	225	<UNK>	31.38	31/12/1899 00:00:00
SK47269803	60.29	57.72	57.65	F	VC	C	225	<UNK>	360.14	31/12/1899 00:00:00
SK47271401	<UNK>	<UNK>	<UNK>	S	U	<UNK>	<UNK>	<UNK>	<UNK>	24/02/2023 00:00:00
SK47278003	38.06	35.34	<UNK>	F	CO	C	300	<UNK>	0	31/12/1899 00:00:00
SK48261604	63.6199	62.18	61.56	S	VC	C	225	<UNK>	44.61	31/12/1899 00:00:00
SK47268700	<UNK>	<UNK>	<UNK>	F	<UNK>	U	100	<UNK>	<UNK>	31/12/1899 00:00:00
SK46275300	<UNK>	<UNK>	<UNK>	S	U	<UNK>	<UNK>	<UNK>	<UNK>	24/02/2023 00:00:00
SK47261301	88.355	85.95	84.95	F	CO	C	300	<UNK>	34.08	31/12/1899 00:00:00
SK48261406	<UNK>	<UNK>	<UNK>	F	VC	C	150	<UNK>	0	31/12/1899 00:00:00
SK48261904	<UNK>	<UNK>	<UNK>	F	VC	C	<UNK>	<UNK>	0	31/12/1899 00:00:00
SK48260507	63.86	62.27	61.76	F	VC	C	150	<UNK>	79.02	31/12/1899 00:00:00
SK47269900	<UNK>	<UNK>	<UNK>	S	<UNK>	<UNK>	<UNK>	<UNK>	<UNK>	31/12/1899 00:00:00
SK47261302	86.134	84.9	80.34	F	CO	C	300	<UNK>	17.64	31/12/1899 00:00:00
SK48261909	<UNK>	<UNK>	<UNK>	F	U	U	225	<UNK>	0	31/12/1899 00:00:00
SK47266901	52.8429	48.1	48.06	F	CO	C	300	<UNK>	296.25	31/12/1899 00:00:00
SK47262402	<UNK>	<UNK>	<UNK>	S	U	<UNK>	<UNK>	<UNK>	<UNK>	24/02/2023 00:00:00
SK46276902	33.088	31.5	<UNK>	C	VC	C	225	<UNK>	0	31/12/1899 00:00:00
SK46268805	<UNK>	<UNK>	<UNK>	F	U	<UNK>	<UNK>	<UNK>	<UNK>	24/02/2023 00:00:00
SK48262312	55.09	54.63	47.92	S	VC	C	150	<UNK>	22.64	31/12/1899 00:00:00
SK48260502	62.0299	59.47	58.79	F	VC	C	150	<UNK>	77.91	31/12/1899 00:00:00
SK47267702	<UNK>	<UNK>	<UNK>	F	VC	C	<UNK>	<UNK>	0	31/12/1899 00:00:00
SK47268901	62.0699	59.27	58.08	F	VC	C	225	<UNK>	49.85	31/12/1899 00:00:00
SK48270103	<UNK>	<UNK>	31.55	F	VC	C	150	<UNK>	0	31/12/1899 00:00:00
SK46266800	<UNK>	<UNK>	<UNK>	S	U	<UNK>	<UNK>	<UNK>	<UNK>	24/02/2023 00:00:00
SK47279005	<UNK>	<UNK>	<UNK>	F	<UNK>	<UNK>	<UNK>	<UNK>	<UNK>	31/12/1899 00:00:00
SK46273400	<UNK>	<UNK>	<UNK>	S	U	<UNK>	<UNK>	<UNK>	<UNK>	24/02/2023 00:00:00
SK47270400	<UNK>	<UNK>	<UNK>	S	U	<UNK>	<UNK>	<UNK>	<UNK>	24/02/2023 00:00:00
SK47279001	<UNK>	<UNK>	<UNK>	S	<UNK>	<UNK>	<UNK>	<UNK>	<UNK>	31/12/1899 00:00:00
SK48260907	<UNK>	<UNK>	<UNK>	F	<UNK>	<UNK>	<UNK>	<UNK>	<UNK>	31/12/1899 00:00:00
SK48261913	<UNK>	<UNK>	<UNK>	S	CC	U	2100	800	0	31/12/1899 00:00:00
SK48271002	34.8699	33.49	33.07	C	VC	C	225	<UNK>	68.355	31/12/1899 00:00:00

Sewer Node Sewer Pipe Data

Reference	Cover Level	Invert Level Upstream	Invert Level Downstream	Purpose	Material	Pipe Shape	Max Size	Min Size	Gradient	Year Laid
SK46261801	<UNK>	<UNK>	<UNK>	S	U	<UNK>	<UNK>	<UNK>	<UNK>	24/02/2023 00:00:00
SK46278000	<UNK>	<UNK>	<UNK>	S	U	<UNK>	<UNK>	<UNK>	<UNK>	24/02/2023 00:00:00
SK46287102	32.534	29.964	29.589	C	CO	C	225	<UNK>	218.42	31/12/1899 00:00:00
SK48271106	34.6469	31.42	31.38	C	VC	C	225	<UNK>	203.25	31/12/1899 00:00:00
SK46287101	32.6489	29.549	28.91	C	VC	C	225	<UNK>	67.73	31/12/1899 00:00:00
SK47269502	63.86	62.19	61.56	S	VC	C	225	<UNK>	85.95	31/12/1899 00:00:00
SK46268806	<UNK>	<UNK>	<UNK>	F	U	<UNK>	<UNK>	<UNK>	<UNK>	24/02/2023 00:00:00
SK48260508	64.05	62.86	62.28	S	VC	C	<UNK>	<UNK>	76.17	31/12/1899 00:00:00
SK46276906	33.118	31.64	31.52	C	VC	C	225	<UNK>	164.67	31/12/1899 00:00:00
SK47269504	63.72	61.76	61.08	F	VC	C	150	<UNK>	84.03	31/12/1899 00:00:00
SK48261814	<UNK>	<UNK>	<UNK>	F	VC	C	<UNK>	<UNK>	0	31/12/1899 00:00:00
SK48271104	33.7	32.64	32.32	S	VC	C	300	<UNK>	114.16	31/12/1899 00:00:00
SK47268807	<UNK>	<UNK>	<UNK>	F	U	C	150	<UNK>	<UNK>	31/12/1899 00:00:00
SK47260800	<UNK>	<UNK>	<UNK>	S	U	<UNK>	<UNK>	<UNK>	<UNK>	24/02/2023 00:00:00
SK48260901	<UNK>	<UNK>	<UNK>	S	<UNK>	<UNK>	<UNK>	<UNK>	<UNK>	31/12/1899 00:00:00
SK47279006	<UNK>	<UNK>	<UNK>	F	<UNK>	<UNK>	<UNK>	<UNK>	<UNK>	31/12/1899 00:00:00
SK48261701	61.24	59.99	57.13	C	VC	C	225	<UNK>	25.34	31/12/1899 00:00:00
SK48261815	<UNK>	<UNK>	<UNK>	F	VC	C	<UNK>	<UNK>	0	31/12/1899 00:00:00
SK47261501	<UNK>	<UNK>	<UNK>	S	U	<UNK>	<UNK>	<UNK>	<UNK>	24/02/2023 00:00:00
SK48260510	62.25	60.74	79.729	S	VC	C	225	<UNK>	<UNK>	31/12/1899 00:00:00
SK48260704	65.72	64.82	64.37	S	VC	C	150	<UNK>	33.78	31/12/1899 00:00:00
SK48261907	<UNK>	<UNK>	<UNK>	S	<UNK>	<UNK>	<UNK>	<UNK>	<UNK>	31/12/1899 00:00:00
SK48261910	<UNK>	<UNK>	<UNK>	F	U	U	225	<UNK>	0	31/12/1899 00:00:00
SK48260910	<UNK>	<UNK>	<UNK>	F	<UNK>	<UNK>	<UNK>	<UNK>	<UNK>	31/12/1899 00:00:00
SK48262918	<UNK>	<UNK>	<UNK>	S	U	U	225	<UNK>	0	31/12/1899 00:00:00
SK48261605	63.4399	61.52	59.99	S	VC	C	225	<UNK>	41.84	31/12/1899 00:00:00
SK47269505	62.7299	61.06	60.71	F	VC	C	150	<UNK>	180.57	31/12/1899 00:00:00
SK48271107	34.7529	31.38	31.42	F	VC	C	225	<UNK>	<UNK>	31/12/1899 00:00:00
SK46279000	<UNK>	<UNK>	<UNK>	S	U	<UNK>	<UNK>	<UNK>	<UNK>	24/02/2023 00:00:00
SK46262800	<UNK>	<UNK>	<UNK>	S	U	<UNK>	<UNK>	<UNK>	<UNK>	24/02/2023 00:00:00
SK46277900	<UNK>	<UNK>	<UNK>	F	VC	U	150	<UNK>	<UNK>	31/12/1899 00:00:00
SK47270300	<UNK>	<UNK>	<UNK>	S	U	<UNK>	<UNK>	<UNK>	<UNK>	24/02/2023 00:00:00
SK46276400	<UNK>	<UNK>	<UNK>	S	U	<UNK>	<UNK>	<UNK>	<UNK>	24/02/2023 00:00:00
SK47266902	52.5559	48.05	47.28	F	CO	C	300	<UNK>	104.87	31/12/1899 00:00:00
SK47262401	83.632	80.31	74.83	F	CO	C	300	<UNK>	17.45	31/12/1899 00:00:00
SK48261508	61.2169	58.86	58.53	S	VC	C	225	<UNK>	81.61	31/12/1899 00:00:00
SK46268803	<UNK>	<UNK>	<UNK>	S	U	<UNK>	<UNK>	<UNK>	<UNK>	24/02/2023 00:00:00
SK48261403	53.08	51.59	51.17	S	VC	C	150	<UNK>	69.33	31/12/1899 00:00:00
SK47261500	<UNK>	<UNK>	<UNK>	S	U	<UNK>	<UNK>	<UNK>	<UNK>	24/02/2023 00:00:00
SK48261900	<UNK>	<UNK>	<UNK>	S	<UNK>	<UNK>	<UNK>	<UNK>	<UNK>	31/12/1899 00:00:00
SK48261809	<UNK>	<UNK>	<UNK>	F	VC	C	<UNK>	<UNK>	0	31/12/1899 00:00:00
SK48270104	34.7999	31.5	33.32	F	VC	C	225	<UNK>	<UNK>	31/12/1899 00:00:00

Sewer Node Sewer Pipe Data

Reference	Cover Level	Invert Level Upstream	Invert Level Downstream	Purpose	Material	Pipe Shape	Max Size	Min Size	Gradient	Year Laid
SK48261201	63.1319	62.55	57.91	S	VC	C	150	<UNK>	13.55	31/12/1899 00:00:00
SK48260501	62.7099	59.57	59.48	F	VC	C	150	<UNK>	327.78	31/12/1899 00:00:00
SK47278004	<UNK>	<UNK>	<UNK>	F	<UNK>	<UNK>	<UNK>	<UNK>	<UNK>	31/12/1899 00:00:00
SK48271105	34.63	32.06	31.62	C	VC	C	225	<UNK>	76.18	31/12/1899 00:00:00
SK47262501	76.716	74.79	70.18	F	CO	C	300	<UNK>	19.6	31/12/1899 00:00:00
SK48261903	<UNK>	<UNK>	<UNK>	F	VC	C	<UNK>	<UNK>	0	31/12/1899 00:00:00
SK46278801	39.2569	37.697	36.234	C	VC	C	150	<UNK>	43.38	31/12/1899 00:00:00
SK47277001	48.3629	43.7	42.65	F	CO	C	300	<UNK>	56.52	31/12/1899 00:00:00
SK47278002	42.1119	40.34	35.38	F	CO	C	300	<UNK>	10.47	31/12/1899 00:00:00
SK47262404	<UNK>	<UNK>	<UNK>	S	U	<UNK>	<UNK>	<UNK>	<UNK>	24/02/2023 00:00:00
SK46267801	<UNK>	<UNK>	<UNK>	S	U	<UNK>	<UNK>	<UNK>	<UNK>	24/02/2023 00:00:00
SK47263601	66.333	63.96	62.41	F	CO	C	300	<UNK>	51.72	31/12/1899 00:00:00
SK47268903	<UNK>	<UNK>	<UNK>	F	U	C	150	<UNK>	<UNK>	31/12/1899 00:00:00
SK47261701	<UNK>	<UNK>	<UNK>	S	U	<UNK>	<UNK>	<UNK>	<UNK>	24/02/2023 00:00:00
SK48260904	<UNK>	<UNK>	<UNK>	S	<UNK>	<UNK>	<UNK>	<UNK>	<UNK>	31/12/1899 00:00:00
SK48261808	<UNK>	<UNK>	<UNK>	F	VC	C	<UNK>	<UNK>	0	31/12/1899 00:00:00
SK47276003	49.354	45.48	43.74	F	CO	C	300	<UNK>	53.66	31/12/1899 00:00:00
SK47270200	<UNK>	<UNK>	<UNK>	S	U	<UNK>	<UNK>	<UNK>	<UNK>	24/02/2023 00:00:00
SK47278000	<UNK>	<UNK>	<UNK>	S	<UNK>	<UNK>	<UNK>	<UNK>	<UNK>	31/12/1899 00:00:00
SK47268804	<UNK>	<UNK>	<UNK>	F	U	C	225	<UNK>	<UNK>	31/12/1899 00:00:00
SK48260509	63.28	62.23	60.77	S	VC	C	<UNK>	<UNK>	26.85	31/12/1899 00:00:00
SK48261915	<UNK>	<UNK>	<UNK>	F	<UNK>	<UNK>	<UNK>	<UNK>	<UNK>	31/12/1899 00:00:00
SK47268703	<UNK>	<UNK>	<UNK>	F	<UNK>	U	100	<UNK>	<UNK>	31/12/1899 00:00:00
SK47271600	<UNK>	<UNK>	<UNK>	S	U	<UNK>	<UNK>	<UNK>	<UNK>	24/02/2023 00:00:00
SK46265800	<UNK>	<UNK>	<UNK>	S	U	<UNK>	<UNK>	<UNK>	<UNK>	24/02/2023 00:00:00
SK46268801	<UNK>	<UNK>	<UNK>	S	U	<UNK>	<UNK>	<UNK>	<UNK>	24/02/2023 00:00:00
SK48261407	<UNK>	<UNK>	<UNK>	F	VC	C	<UNK>	<UNK>	0	31/12/1899 00:00:00
SK48261813	<UNK>	<UNK>	<UNK>	F	VC	C	<UNK>	<UNK>	0	31/12/1899 00:00:00
SK48261912	<UNK>	<UNK>	<UNK>	S	CC	U	2100	800	0	31/12/1899 00:00:00
SK48271108	33.998	31.21	30.86	C	CO	C	375	<UNK>	211.6	31/12/1899 00:00:00
SK46286102	31.7469	28.87	28.69	C	VC	C	300	<UNK>	36.72	31/12/1899 00:00:00
SK48261806	<UNK>	<UNK>	<UNK>	F	VC	C	<UNK>	<UNK>	0	31/12/1899 00:00:00
<UNK>	<UNK>	<UNK>	<UNK>	F	VC	<UNK>	<UNK>	<UNK>	<UNK>	31/12/1899 00:00:00
<UNK>	<UNK>	<UNK>	<UNK>	F	VC	<UNK>	<UNK>	<UNK>	<UNK>	10/01/2021 00:00:00
<UNK>	<UNK>	<UNK>	<UNK>	F	VC	<UNK>	<UNK>	<UNK>	<UNK>	07/07/2020 00:00:00
<UNK>	<UNK>	<UNK>	<UNK>	F	VC	<UNK>	<UNK>	<UNK>	<UNK>	15/05/2020 00:00:00
<UNK>	<UNK>	<UNK>	<UNK>	F	VC	<UNK>	<UNK>	<UNK>	<UNK>	25/06/2022 00:00:00
<UNK>	<UNK>	<UNK>	<UNK>	F	VC	<UNK>	<UNK>	<UNK>	<UNK>	10/01/2021 00:00:00
<UNK>	<UNK>	<UNK>	<UNK>	F	VC	<UNK>	<UNK>	<UNK>	<UNK>	26/05/2023 00:00:00
<UNK>	<UNK>	<UNK>	<UNK>	F	<UNK>	<UNK>	<UNK>	<UNK>	<UNK>	07/06/2012 00:00:00
<UNK>	<UNK>	<UNK>	<UNK>	F	VC	<UNK>	<UNK>	<UNK>	<UNK>	26/05/2023 00:00:00
<UNK>	<UNK>	<UNK>	<UNK>	F	PVCMO	<UNK>	<UNK>	<UNK>	<UNK>	07/07/2020 00:00:00

Sewer Node Sewer Pipe Data

Reference	Cover Level	Invert Level Upstream	Invert Level Downstream	Purpose	Material	Pipe Shape	Max Size	Min Size	Gradient	Year Laid
<UNK>	<UNK>	<UNK>	<UNK>	F	VC	<UNK>	<UNK>	<UNK>	<UNK>	10/01/2021 00:00:00
<UNK>	<UNK>	<UNK>	<UNK>	F	VC	<UNK>	<UNK>	<UNK>	<UNK>	07/07/2020 00:00:00
<UNK>	<UNK>	<UNK>	<UNK>	F	VC	<UNK>	<UNK>	<UNK>	<UNK>	07/07/2020 00:00:00
<UNK>	<UNK>	<UNK>	<UNK>	S	<UNK>	<UNK>	<UNK>	<UNK>	<UNK>	07/06/2012 00:00:00
<UNK>	<UNK>	<UNK>	<UNK>	F	VC	<UNK>	<UNK>	<UNK>	<UNK>	02/01/2024 00:00:00
<UNK>	<UNK>	<UNK>	<UNK>	F	VC	<UNK>	<UNK>	<UNK>	<UNK>	31/12/1899 00:00:00
<UNK>	<UNK>	<UNK>	<UNK>	F	VC	<UNK>	<UNK>	<UNK>	<UNK>	26/05/2023 00:00:00

Appendix 6: Greenfield Runoff Rate Calculations

Greenfield runoff rate estimation tool

www.uksuds.com | Greenfield runoff rate estimation tool (https://www.uksuds.com/)

This is an estimation of the greenfield runoff rates that are used to meet normal best practice criteria in line with Environment Agency guidance "Rainfall runoff management for developments", SC030219 (2013), the SuDS Manual C753 (CIRIA, 2015) and the non-statutory standards for SuDS (Defra, 2015). This information on greenfield runoff rates may be the basis for setting consents for the drainage of surface water runoff from sites.

Project details

Date	02/06/2025
Calculated by	Matthew Bailey
Reference	EMG1 MCO
Model version	2.0.1

Location

Site name	East Midlands Gateway MCO
Site location	East Midlands Gateway

Site easting	446972
Site northing	327431

Site details

Total site area (ha)	1 ha

Greenfield runoff

Method

Method	FEH statistical

FEH statistical

	My value		Map value
SAAR (mm)	628 mm		624
BFIHOST	0.591		
QMed-QBar conversion	1.124		1.124
QMed (l/s)	1.59 l/s		
QBar (FEH statistical) (l/s)	1.8 l/s		

Growth curve factors

	My value		Map value
Hydrological region	4		4
1 year growth factor	0.83		
2 year growth factor	0.89		
10 year growth factor	1.49		
30 year growth factor	2		
100 year growth factor	2.57		
200 year growth factor	3.04		

Results

Method	FEH statistical
Flow rate 1 year (l/s)	1.5 l/s
Flow rate 2 year (l/s)	1.6 l/s
Flow rate 10 years (l/s)	2.7 l/s
Flow rate 30 years (l/s)	3.6 l/s
Flow rate 100 years (l/s)	4.6 l/s
Flow rate 200 years (l/s)	5.4 l/s

Disclaimer

This report was produced using the Greenfield runoff rate estimation tool (2.0.1) developed by HR Wallingford and available at uksuds.com (https://www.uksuds.com/). The use of this tool is subject to the UK SuDS terms and conditions and licence agreement, which can both be found at uksuds.com/terms-conditions (https://www.uksuds.com/terms-conditions). The outputs from this tool have been used to estimate Greenfield runoff rates. The use of these results is the responsibility of the users of this tool. No liability will be accepted by HR Wallingford, the Environment Agency, Centre for Ecology and Hydrology, Wallingford Hydrosolutions or any other organisation for the use of these data in the design or operational characteristics of any drainage scheme.

Appendix 7: EMG1 Pre-MCO MicroDrainage Network Model Calculations

STORM SEWER DESIGN by the Modified Rational Method

Design Criteria for Catchment C

Pipe Sizes STANDARD Manhole Sizes STANDARD

FEH Rainfall Model

Return Period (years)	1	D3 (1km)	0.243	PIMP (%)	100
		E (1km)	0.303	Add Flow / Climate Change (%)	0
FEH Rainfall Version	1999	F (1km)	2.358	Minimum Backdrop Height (m)	5.000
Site Location	GB 447050 329250 SK 47050 29250	Maximum Rainfall (mm/hr)	50	Maximum Backdrop Height (m)	0.000
C (1km)	-0.026	Maximum Time of Concentration (mins)	30	Min Design Depth for Optimisation (m)	1.200
D1 (1km)	0.351	Foul Sewage (l/s/ha)	0.000	Min Vel for Auto Design only (m/s)	1.00
D2 (1km)	0.352	Volumetric Runoff Coeff.	0.750	Min Slope for Optimisation (1:X)	500

Designed with Level Soffits

Time Area Diagram for Catchment C

Time (mins)	Area (ha)	Time (mins)	Area (ha)	Time (mins)	Area (ha)	Time (mins)	Area (ha)	Time (mins)	Area (ha)	Time (mins)	Area (ha)
0-4	1.900	4-8	10.326	8-12	17.190	12-16	6.889	16-20	0.784	20-24	0.017

Total Area Contributing (ha) = 37.106

Total Pipe Volume (m³) = 3460.206

Network Design Table for Catchment C

- Indicates pipe length does not match coordinates
« - Indicates pipe capacity < flow

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
9.000	35.300	0.120	294.2	0.510	5.00	0.0	0.600	oo	-4	Pipe/Conduit	
9.001	10.569	0.030	352.3	0.000	0.00	0.0	0.600	o	750	Pipe/Conduit	
10.000	4.500	0.015	300.0	0.270	5.00	0.0	0.600	o	375	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
9.000	50.00	5.36	67.720	0.510	0.0	0.0	0.0	1.63	1437.1	69.1
9.001	49.96	5.48	67.600	0.510	0.0	0.0	0.0	1.49	656.1	69.1
10.000	50.00	5.07	68.655	0.270	0.0	0.0	0.0	1.04	115.0	36.6

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Network Design Table for Catchment C

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
9.002	31.300	0.105	298.1	0.000	0.00	0.0	0.600	o	750	Pipe/Conduit	
9.003	58.659	0.280	209.5	0.000	0.00	0.0	0.600	o	750	Pipe/Conduit	
9.004	20.700	0.055	378.7	0.000	0.00	0.0	0.600	o	750	Pipe/Conduit	
9.005	38.900	0.235	165.3	0.000	0.00	0.0	0.600	o	750	Pipe/Conduit	
11.000	5.000	5.000	1.0	0.485	2.00	0.0	0.600	o	300	Pipe/Conduit	
11.001	5.000	5.000	1.0	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
11.002	15.900	0.450	35.3	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
11.003	32.300	0.110	293.6	0.000	0.00	0.0	0.600	o	525	Pipe/Conduit	
12.000	5.000	5.000	1.0	0.485	2.00	0.0	0.600	o	300	Pipe/Conduit	
12.001	5.000	5.000	1.0	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
12.002	15.900	0.165	96.4	0.000	0.00	0.0	0.600	o	375	Pipe/Conduit	
11.004	31.600	0.105	301.0	0.000	0.00	0.0	0.600	o	600	Pipe/Conduit	
13.000	5.000	5.000	1.0	0.485	2.00	0.0	0.600	o	300	Pipe/Conduit	
13.001	5.000	5.000	1.0	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
13.002	15.900	0.055	289.1	0.000	0.00	0.0	0.600	o	375	Pipe/Conduit	
11.005	32.031	0.110	291.2	0.000	0.00	0.0	0.600	o	825	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
9.002	48.14	5.80	67.570	0.780	0.0	0.0	0.0	1.62	713.8	101.7
9.003	45.59	6.31	67.465	0.780	0.0	0.0	0.0	1.93	852.5	101.7
9.004	44.50	6.55	67.185	0.780	0.0	0.0	0.0	1.43	632.7	101.7
9.005	43.23	6.85	67.130	0.780	0.0	0.0	0.0	2.17	960.4	101.7
11.000	50.00	2.01	79.350	0.485	0.0	0.0	0.0	15.84	1119.6	65.7
11.001	50.00	2.01	74.350	0.485	0.0	0.0	0.0	15.84	1119.6	65.7
11.002	50.00	2.11	67.900	0.485	0.0	0.0	0.0	2.65	187.6	65.7
11.003	50.00	2.52	67.450	0.485	0.0	0.0	0.0	1.30	281.8	65.7
12.000	50.00	2.01	79.350	0.485	0.0	0.0	0.0	15.84	1119.6	65.7
12.001	50.00	2.01	74.350	0.485	0.0	0.0	0.0	15.84	1119.6	65.7
12.002	50.00	2.15	67.900	0.485	0.0	0.0	0.0	1.85	203.9	65.7
11.004	50.00	2.90	67.340	0.970	0.0	0.0	0.0	1.40	395.4	131.4
13.000	50.00	2.01	79.350	0.485	0.0	0.0	0.0	15.84	1119.6	65.7
13.001	50.00	2.01	74.350	0.485	0.0	0.0	0.0	15.84	1119.6	65.7
13.002	50.00	2.26	67.900	0.485	0.0	0.0	0.0	1.06	117.1	65.7
11.005	50.00	3.21	67.235	1.455	0.0	0.0	0.0	1.73	927.3	197.0

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Network Design Table for Catchment C

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
14.000	5.000	5.000	1.0	0.485	2.00	0.0	0.600	o	300	Pipe/Conduit	
14.001	5.000	5.000	1.0	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
14.002	15.900	0.055	289.1	0.000	0.00	0.0	0.600	o	375	Pipe/Conduit	
11.006	33.395	0.090	371.1	0.000	0.00	0.0	0.600	o	825	Pipe/Conduit	
11.007	35.722	0.140	255.2	0.000	0.00	0.0	0.600	o	825	Pipe/Conduit	
9.006	51.300	0.170	301.8	0.000	0.00	0.0	0.600	o	825	Pipe/Conduit	
9.007	51.300	0.171	300.0	0.000	0.00	0.0	0.600	o	825	Pipe/Conduit	
15.000	5.958	0.136	43.8	0.198	5.00	0.0	0.600	o	375	Pipe/Conduit	
16.000	5.958	0.020	297.9	0.203	5.00	0.0	0.600	o	375	Pipe/Conduit	
16.001	37.428	0.146	256.4	0.000	0.00	0.0	0.600	o	375	Pipe/Conduit	
15.001	33.212	0.130	255.5	0.000	0.00	0.0	0.600	o	375	Pipe/Conduit	
17.000	5.959	0.140	42.6	0.290	5.00	0.0	0.600	o	300	Pipe/Conduit	
15.002	28.800	0.096	300.0	0.000	0.00	0.0	0.600	o	375	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
14.000	50.00	2.01	79.350	0.485	0.0	0.0	0.0	15.84	1119.6	65.7
14.001	50.00	2.01	74.350	0.485	0.0	0.0	0.0	15.84	1119.6	65.7
14.002	50.00	2.26	67.900	0.485	0.0	0.0	0.0	1.06	117.1	65.7
11.006	50.00	3.57	67.125	1.940	0.0	0.0	0.0	1.54	820.7	262.7
11.007	50.00	3.89	67.035	1.940	0.0	0.0	0.0	1.85	991.1	262.7
9.006	41.29	7.35	66.895	2.720	0.0	0.0	0.0	1.70	910.8	304.2
9.007	39.56	7.85	66.725	2.720	0.0	0.0	0.0	1.71	913.5	304.2
15.000	50.00	5.04	67.690	0.198	0.0	0.0	0.0	2.74	303.1	26.8
16.000	50.00	5.10	67.720	0.203	0.0	0.0	0.0	1.04	115.4	27.5
16.001	48.99	5.65	67.700	0.203	0.0	0.0	0.0	1.13	124.5	27.5
15.001	46.41	6.14	67.554	0.401	0.0	0.0	0.0	1.13	124.7	50.4
17.000	50.00	5.04	67.720	0.290	0.0	0.0	0.0	2.42	170.8	39.3
15.002	44.28	6.60	67.424	0.691	0.0	0.0	0.0	1.04	115.0	82.9

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Network Design Table for Catchment C

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
18.000	5.959	0.030	198.6	0.298	5.00	0.0	0.600	o	375	Pipe/Conduit	
18.001	28.800	0.096	300.0	0.000	0.00	0.0	0.600	o	375	Pipe/Conduit	
15.003	23.404	0.175	133.7	0.000	0.00	0.0	0.600	o	525	Pipe/Conduit	
15.004	2.977	0.010	297.7	0.000	0.00	0.0	0.600	o	525	Pipe/Conduit	
9.008	28.800	0.095	303.2	0.000	0.00	0.0	0.600	o	900	Pipe/Conduit	
9.009	34.900	0.220	158.6	0.000	0.00	0.0	0.600	o	900	Pipe/Conduit	
19.000	13.200	2.000	6.6	0.046	5.00	0.0	0.600	o	150	Pipe/Conduit	
9.010	16.300	0.055	296.4	0.000	0.00	0.0	0.600	o	900	Pipe/Conduit	
9.011	19.300	0.064	300.0	0.000	0.00	0.0	0.600	o	900	Pipe/Conduit	
20.000	5.000	5.000	1.0	0.352	2.00	0.0	0.600	o	300	Pipe/Conduit	
20.001	5.000	5.000	1.0	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
20.002	5.778	0.025	231.1	0.000	0.00	0.0	0.600	o	375	Pipe/Conduit	
20.003	56.042	0.130	431.2	0.000	0.00	0.0	0.600	o	375	Pipe/Conduit	
21.000	55.799	0.130	429.2	0.000	5.00	0.0	0.600	o	300	Pipe/Conduit	
9.012	86.500	0.285	303.5	0.000	0.00	0.0	0.600	o	900	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
18.000	50.00	5.08	67.720	0.298	0.0	0.0	0.0	1.28	141.6	40.4
18.001	49.62	5.54	67.690	0.298	0.0	0.0	0.0	1.04	115.0	40.4
15.003	43.42	6.80	67.328	0.989	0.0	0.0	0.0	1.94	418.9	116.3
15.004	43.26	6.84	67.153	0.989	0.0	0.0	0.0	1.29	279.9	116.3
9.008	38.71	8.12	66.554	3.709	0.0	0.0	0.0	1.79	1141.5	388.8
9.009	38.00	8.35	66.459	3.709	0.0	0.0	0.0	2.49	1581.1	388.8
19.000	50.00	5.06	68.240	0.046	0.0	0.0	0.0	3.95	69.8	6.2
9.010	37.57	8.50	66.239	3.755	0.0	0.0	0.0	1.81	1154.6	388.8
9.011	37.07	8.68	66.184	3.755	0.0	0.0	0.0	1.80	1147.5	388.8
20.000	50.00	2.01	79.350	0.352	0.0	0.0	0.0	15.84	1119.6	47.7
20.001	50.00	2.01	74.350	0.352	0.0	0.0	0.0	15.84	1119.6	47.7
20.002	50.00	2.09	67.900	0.352	0.0	0.0	0.0	1.19	131.2	47.7
20.003	50.00	3.17	67.875	0.352	0.0	0.0	0.0	0.87	95.7	47.7
21.000	45.94	6.24	67.875	0.000	0.0	0.0	0.0	0.75	53.2	0.0
9.012	34.99	9.48	66.120	4.107	0.0	0.0	0.0	1.79	1140.8	389.2

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Network Design Table for Catchment C

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
22.000	15.400	0.050	308.0	0.031	5.00	0.0	0.600	o	225	Pipe/Conduit	
22.001	17.010	0.055	309.3	0.098	0.00	0.0	0.600	o	300	Pipe/Conduit	
22.002	17.010	0.055	309.3	0.143	0.00	0.0	0.600	o	375	Pipe/Conduit	
22.003	14.553	0.055	264.6	0.181	0.00	0.0	0.600	o	450	Pipe/Conduit	
23.000	2.500	0.010	250.0	0.223	5.00	0.0	0.600	o	375	Pipe/Conduit	
22.004	24.200	0.080	302.5	0.000	0.00	0.0	0.600	o	450	Pipe/Conduit	
24.000	7.400	0.025	296.0	0.302	5.00	0.0	0.600	o	375	Pipe/Conduit	
22.005	3.204	0.105	30.5	0.000	0.00	0.0	0.600	o	525	Pipe/Conduit	
22.006	10.863	0.030	362.1	0.000	0.00	0.0	0.600	o	600	Pipe/Conduit	
9.013	15.800	0.055	287.3	0.000	0.00	0.0	0.600	o	900	Pipe/Conduit	
25.000	2.700	0.010	270.0	0.025	5.00	0.0	0.600	o	225	Pipe/Conduit	
9.014	10.300	0.208	49.5	0.049	0.00	0.0	0.600	o	900	Pipe/Conduit	
9.015	47.255	0.945	50.0	0.000	0.00	0.0	0.600	o	900	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
22.000	50.00	5.35	68.725	0.031	0.0	0.0	0.0	0.74	29.4	4.2
22.001	48.89	5.67	68.240	0.129	0.0	0.0	0.0	0.89	62.8	17.1
22.002	47.40	5.94	68.185	0.272	0.0	0.0	0.0	1.02	113.2	34.9
22.003	46.42	6.14	67.895	0.453	0.0	0.0	0.0	1.25	198.0	56.9
23.000	50.00	5.04	67.550	0.223	0.0	0.0	0.0	1.14	126.1	30.2
22.004	44.79	6.48	67.540	0.676	0.0	0.0	0.0	1.16	185.1	82.0
24.000	50.00	5.12	66.970	0.302	0.0	0.0	0.0	1.05	115.7	40.9
22.005	44.73	6.50	66.945	0.978	0.0	0.0	0.0	4.07	880.1	118.5
22.006	44.11	6.64	66.840	0.978	0.0	0.0	0.0	1.27	360.2	118.5
9.013	34.66	9.63	65.835	5.085	0.0	0.0	0.0	1.84	1172.8	477.3
25.000	50.00	5.06	67.185	0.025	0.0	0.0	0.0	0.79	31.4	3.4
9.014	34.57	9.67	65.780	5.159	0.0	0.0	0.0	4.46	2836.4	483.0
9.015	34.16	9.84	65.572	5.159	0.0	0.0	0.0	4.44	2822.5	483.0

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Network Design Table for Catchment C

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
26.000	71.968	0.720	100.0	0.288	5.00	0.0	0.600	o	300	Pipe/Conduit	
27.000	59.546	0.595	100.1	0.663	5.00	4.3	0.600	o	300	Pipe/Conduit	
27.001	89.149	0.297	300.2	0.209	0.00	0.0	0.600	o	375	Pipe/Conduit	
27.002	66.643	0.222	300.2	0.419	0.00	0.0	0.600	o	450	Pipe/Conduit	
27.003	83.506	0.418	199.8	0.202	0.00	0.0	0.600	o	450	Pipe/Conduit	
27.004	73.729	1.035	71.2	0.226	0.00	0.0	0.600	o	450	Pipe/Conduit	
27.005	32.014	0.800	40.0	0.000	0.00	0.0	0.600	o	450	Pipe/Conduit	
27.006	13.675	0.342	40.0	0.449	0.00	0.0	0.600	o	450	Pipe/Conduit	
27.007	25.758	0.400	64.4	0.000	0.00	0.0	0.600	o	600	Pipe/Conduit	
26.001	64.939	0.663	97.9	0.000	0.00	0.0	0.600	o	600	Pipe/Conduit	
9.016	47.284	0.946	50.0	0.350	0.00	0.0	0.600	o	900	Pipe/Conduit	
9.017	41.695	0.834	50.0	0.000	0.00	0.0	0.600	o	900	Pipe/Conduit	
28.000	35.380	0.120	294.8	0.682	5.00	0.0	0.600	oo	-5	Pipe/Conduit	
28.001	13.300	0.045	295.6	0.000	0.00	0.0	0.600	o	750	Pipe/Conduit	
29.000	5.222	0.020	261.1	0.268	5.00	0.0	0.600	o	375	Pipe/Conduit	
28.002	59.158	0.165	359.3	0.000	0.00	0.0	0.600	o	750	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
26.000	48.35	5.76	66.610	0.288	0.0	0.0	0.0	1.57	111.2	37.7
27.000	49.08	5.63	70.000	0.663	4.3	0.0	0.0	1.57	111.1	92.4
27.001	42.39	7.06	69.330	0.872	4.3	0.0	0.0	1.04	114.9	104.4
27.002	39.05	8.01	68.958	1.291	4.3	0.0	0.0	1.17	185.8	140.8
27.003	36.26	8.98	68.736	1.493	4.3	0.0	0.0	1.43	228.2	150.9
27.004	34.98	9.49	68.318	1.719	4.3	0.0	0.0	2.41	383.5	167.2
27.005	34.59	9.66	67.283	1.719	4.3	0.0	0.0	3.22	512.3	167.2
27.006	34.43	9.73	66.483	2.168	4.3	0.0	0.0	3.22	512.6	206.4
27.007	34.11	9.87	65.990	2.168	4.3	0.0	0.0	3.04	859.0	206.4
26.001	33.16	10.31	65.590	2.456	4.3	0.0	0.0	2.46	695.8	224.8
9.016	32.79	10.48	64.627	7.965	4.3	0.0	0.0	4.44	2822.7	711.6
9.017	32.48	10.64	63.681	7.965	4.3	0.0	0.0	4.44	2822.9	711.6
28.000	50.00	5.36	67.645	0.682	0.0	0.0	0.0	1.62	1435.5	92.4
28.001	49.84	5.50	67.525	0.682	0.0	0.0	0.0	1.62	716.8	92.4
29.000	50.00	5.08	68.295	0.268	0.0	0.0	0.0	1.12	123.3	36.3
28.002	46.26	6.17	67.480	0.950	0.0	0.0	0.0	1.47	649.7	119.0

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Network Design Table for Catchment C

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
30.000	23.060	0.080	288.3	0.190	5.00	0.0	0.600	o	375	Pipe/Conduit	
28.003	22.706	0.145	156.6	0.000	0.00	0.0	0.600	o	750	Pipe/Conduit	
28.004	12.689	0.040	317.2	0.000	0.00	0.0	0.600	o	750	Pipe/Conduit	
28.005	38.918	0.131	297.8	0.000	0.00	0.0	0.600	o	750	Pipe/Conduit	
31.000	5.000	5.000	1.0	0.482	2.00	0.0	0.600	o	300	Pipe/Conduit	
31.001	5.000	5.000	1.0	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
31.002	15.900	0.055	289.1	0.000	0.00	0.0	0.600	o	450	Pipe/Conduit	
31.003	31.600	0.105	301.0	0.000	0.00	0.0	0.600	o	525	Pipe/Conduit	
32.000	5.000	5.000	1.0	0.482	2.00	0.0	0.600	o	300	Pipe/Conduit	
32.001	5.000	5.000	1.0	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
32.002	15.900	0.160	99.4	0.000	0.00	0.0	0.600	o	375	Pipe/Conduit	
31.004	31.600	0.105	301.0	0.000	0.00	0.0	0.600	o	600	Pipe/Conduit	
33.000	5.000	5.000	1.0	0.482	2.00	0.0	0.600	o	300	Pipe/Conduit	
33.001	5.000	5.000	1.0	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
33.002	15.900	0.055	289.1	0.000	0.00	0.0	0.600	o	375	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
30.000	50.00	5.36	67.915	0.190	0.0	0.0	0.0	1.06	117.3	25.7
28.003	45.45	6.34	67.315	1.140	0.0	0.0	0.0	2.23	986.9	140.3
28.004	44.83	6.47	67.170	1.140	0.0	0.0	0.0	1.57	691.7	140.3
28.005	43.12	6.88	67.130	1.140	0.0	0.0	0.0	1.62	714.1	140.3
31.000	50.00	2.01	79.350	0.482	0.0	0.0	0.0	15.84	1119.6	65.3
31.001	50.00	2.01	74.350	0.482	0.0	0.0	0.0	15.84	1119.6	65.3
31.002	50.00	2.23	67.900	0.482	0.0	0.0	0.0	1.19	189.4	65.3
31.003	50.00	2.64	67.845	0.482	0.0	0.0	0.0	1.29	278.4	65.3
32.000	50.00	2.01	79.350	0.482	0.0	0.0	0.0	15.84	1119.6	65.3
32.001	50.00	2.01	74.350	0.482	0.0	0.0	0.0	15.84	1119.6	65.3
32.002	50.00	2.16	67.900	0.482	0.0	0.0	0.0	1.82	200.8	65.3
31.004	50.00	3.02	67.740	0.964	0.0	0.0	0.0	1.40	395.4	130.5
33.000	50.00	2.01	79.350	0.482	0.0	0.0	0.0	15.84	1119.6	65.3
33.001	50.00	2.01	74.350	0.482	0.0	0.0	0.0	15.84	1119.6	65.3
33.002	50.00	2.26	67.900	0.482	0.0	0.0	0.0	1.06	117.1	65.3

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Network Design Table for Catchment C

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
31.005	35.700	0.120	297.5	0.000	0.00	0.0	0.600	o	600	Pipe/Conduit	
34.000	5.000	5.000	1.0	0.482	2.00	0.0	0.600	o	300	Pipe/Conduit	
34.001	5.000	5.000	1.0	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
34.002	15.900	0.055	289.1	0.000	0.00	0.0	0.600	o	375	Pipe/Conduit	
31.006	57.500	0.195	294.9	0.000	0.00	0.0	0.600	o	600	Pipe/Conduit	
28.006	20.181	0.070	288.3	0.000	0.00	0.0	0.600	o	900	Pipe/Conduit	
35.000	5.000	5.000	1.0	0.249	2.00	0.0	0.600	o	375	Pipe/Conduit	
35.001	5.000	5.000	1.0	0.000	0.00	0.0	0.600	o	375	Pipe/Conduit	
35.002	5.100	0.015	340.0	0.000	0.00	0.0	0.600	o	375	Pipe/Conduit	
35.003	24.900	0.085	292.9	0.000	0.00	0.0	0.600	o	375	Pipe/Conduit	
28.007	42.100	0.140	300.7	0.000	0.00	0.0	0.600	o	900	Pipe/Conduit	
28.008	51.171	0.170	301.0	0.000	0.00	0.0	0.600	o	900	Pipe/Conduit	
28.009	32.200	0.105	306.7	0.000	0.00	0.0	0.600	o	900	Pipe/Conduit	
36.000	7.000	0.025	280.0	0.293	5.00	0.0	0.600	o	450	Pipe/Conduit	
36.001	83.400	0.280	297.9	0.000	0.00	0.0	0.600	o	450	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
31.005	50.00	3.44	67.635	1.446	0.0	0.0	0.0	1.41	397.7	195.8
34.000	50.00	2.01	79.350	0.482	0.0	0.0	0.0	15.84	1119.6	65.3
34.001	50.00	2.01	74.350	0.482	0.0	0.0	0.0	15.84	1119.6	65.3
34.002	50.00	2.26	67.900	0.482	0.0	0.0	0.0	1.06	117.1	65.3
31.006	50.00	4.12	67.515	1.928	0.0	0.0	0.0	1.41	399.5	261.1
28.006	42.39	7.06	67.000	3.068	0.0	0.0	0.0	1.84	1170.7	352.2
35.000	50.00	2.00	79.350	0.249	0.0	0.0	0.0	18.24	2014.2	33.7
35.001	50.00	2.01	74.350	0.249	0.0	0.0	0.0	18.24	2014.2	33.7
35.002	50.00	2.10	67.900	0.249	0.0	0.0	0.0	0.98	107.9	33.7
35.003	50.00	2.49	67.885	0.249	0.0	0.0	0.0	1.05	116.4	33.7
28.007	40.94	7.45	66.930	3.317	0.0	0.0	0.0	1.80	1146.1	367.8
28.008	39.33	7.92	66.790	3.317	0.0	0.0	0.0	1.80	1145.6	367.8
28.009	38.39	8.22	66.620	3.317	0.0	0.0	0.0	1.78	1134.9	367.8
36.000	50.00	5.10	68.405	0.293	0.0	0.0	0.0	1.21	192.4	39.7
36.001	45.72	6.28	68.380	0.293	0.0	0.0	0.0	1.17	186.5	39.7

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Network Design Table for Catchment C

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
37.000	29.677	0.090	329.7	0.154	5.00	0.0	0.600	o	225	Pipe/Conduit	
37.001	18.300	0.062	295.2	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit	
38.000	7.350	0.025	294.0	0.323	5.00	0.0	0.600	o	450	Pipe/Conduit	
37.002	11.300	0.040	282.5	0.000	0.00	0.0	0.600	o	450	Pipe/Conduit	
36.002	14.027	0.090	155.9	0.000	0.00	0.0	0.600	o	450	Pipe/Conduit	
36.003	6.798	0.025	271.9	0.000	0.00	0.0	0.600	o	450	Pipe/Conduit	
28.010	28.900	0.095	304.2	0.000	0.00	0.0	0.600	o	900	Pipe/Conduit	
39.000	9.900	0.035	282.9	0.026	5.00	0.0	0.600	o	225	Pipe/Conduit	
39.001	80.000	0.265	301.9	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit	
40.000	9.500	0.035	271.4	0.404	5.00	0.0	0.600	o	450	Pipe/Conduit	
39.002	76.000	0.405	187.7	0.000	0.00	0.0	0.600	o	450	Pipe/Conduit	
41.000	9.500	0.035	271.4	0.305	5.00	0.0	0.600	o	375	Pipe/Conduit	
41.001	21.200	0.075	282.7	0.000	0.00	0.0	0.600	o	375	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
37.000	48.74	5.69	68.755	0.154	0.0	0.0	0.0	0.71	28.4	20.3
37.001	46.62	6.10	68.665	0.154	0.0	0.0	0.0	0.76	30.1	20.3
38.000	50.00	5.10	68.705	0.323	0.0	0.0	0.0	1.18	187.8	43.7
37.002	45.86	6.25	68.603	0.477	0.0	0.0	0.0	1.20	191.6	59.2
36.002	45.06	6.43	68.100	0.770	0.0	0.0	0.0	1.63	258.6	94.0
36.003	44.64	6.52	68.010	0.770	0.0	0.0	0.0	1.23	195.3	94.0
28.010	37.60	8.49	66.515	4.087	0.0	0.0	0.0	1.79	1139.5	416.2
39.000	50.00	5.21	68.740	0.026	0.0	0.0	0.0	0.77	30.7	3.5
39.001	42.63	7.00	68.705	0.026	0.0	0.0	0.0	0.75	29.7	3.5
40.000	50.00	5.13	68.835	0.404	0.0	0.0	0.0	1.23	195.5	54.7
39.002	39.55	7.85	68.440	0.430	0.0	0.0	0.0	1.48	235.5	54.7
41.000	50.00	5.14	68.835	0.305	0.0	0.0	0.0	1.09	120.9	41.3
41.001	49.99	5.47	68.800	0.305	0.0	0.0	0.0	1.07	118.5	41.3

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Network Design Table for Catchment C

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
39.003	5.196	0.065	79.9	0.000	0.00	0.0	0.600	o	450	Pipe/Conduit	
39.004	18.526	0.065	285.0	0.000	0.00	0.0	0.600	o	450	Pipe/Conduit	
28.011	21.200	0.070	302.9	0.000	0.00	0.0	0.600	o	1050	Pipe/Conduit	
28.012	77.900	0.310	251.3	0.000	0.00	0.0	0.600	o	1050	Pipe/Conduit	
42.000	5.200	0.020	260.0	0.075	5.00	0.0	0.600	o	300	Pipe/Conduit	
28.013	21.600	0.070	308.6	0.000	0.00	0.0	0.600	o	1050	Pipe/Conduit	
43.000	5.000	5.000	1.0	0.352	2.00	0.0	0.600	o	300	Pipe/Conduit	
43.001	5.000	5.000	1.0	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
43.002	3.131	0.010	313.1	0.000	0.00	0.0	0.600	o	375	Pipe/Conduit	
43.003	16.067	0.060	267.8	0.000	0.00	0.0	0.600	o	375	Pipe/Conduit	
44.000	14.002	0.060	233.4	0.000	5.00	0.0	0.600	o	375	Pipe/Conduit	
43.004	59.768	0.150	398.5	0.000	0.00	0.0	0.600	o	450	Pipe/Conduit	
28.014	33.400	0.110	303.6	0.000	0.00	0.0	0.600	o	1050	Pipe/Conduit	
45.000	6.200	0.020	310.0	0.043	5.00	0.0	0.600	o	300	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
39.003	39.43	7.89	68.035	0.735	0.0	0.0	0.0	2.28	361.9	78.5
39.004	38.62	8.15	67.970	0.735	0.0	0.0	0.0	1.20	190.7	78.5
28.011	37.09	8.67	66.420	4.822	0.0	0.0	0.0	1.97	1710.1	484.4
28.012	35.52	9.27	66.350	4.822	0.0	0.0	0.0	2.17	1878.5	484.4
42.000	50.00	5.09	67.425	0.075	0.0	0.0	0.0	0.97	68.6	10.2
28.013	35.07	9.45	66.040	4.897	0.0	0.0	0.0	1.96	1694.1	484.4
43.000	50.00	2.01	79.350	0.352	0.0	0.0	0.0	15.84	1119.6	47.7
43.001	50.00	2.01	74.350	0.352	0.0	0.0	0.0	15.84	1119.6	47.7
43.002	50.00	2.06	67.900	0.352	0.0	0.0	0.0	1.02	112.5	47.7
43.003	50.00	2.30	67.890	0.352	0.0	0.0	0.0	1.10	121.8	47.7
44.000	50.00	5.20	67.890	0.000	0.0	0.0	0.0	1.18	130.5	0.0
43.004	46.20	6.18	67.830	0.352	0.0	0.0	0.0	1.01	161.0	47.7
28.014	34.41	9.74	65.970	5.249	0.0	0.0	0.0	1.97	1707.9	489.1
45.000	50.00	5.12	66.715	0.043	0.0	0.0	0.0	0.89	62.7	5.8

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Network Design Table for Catchment C

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
28.015	29.200	0.180	162.2	0.050	0.00	0.0	0.600	o	1050	Pipe/Conduit	
46.000	1.000#	0.010	100.0	0.074	5.00	0.0	0.600	o	300	Pipe/Conduit	
46.001	3.300	0.015	220.0	0.103	0.00	0.0	0.600	o	300	Pipe/Conduit	
47.000	17.010	0.060	283.5	0.319	5.00	0.0	0.600	o	450	Pipe/Conduit	
47.001	17.010	0.060	283.5	0.120	0.00	0.0	0.600	o	450	Pipe/Conduit	
47.002	17.010	0.460	37.0	0.120	0.00	0.0	0.600	o	450	Pipe/Conduit	
47.003	14.146	0.050	282.9	0.122	0.00	0.0	0.600	o	600	Pipe/Conduit	
46.002	7.473	0.075	99.6	0.000	0.00	0.0	0.600	o	600	Pipe/Conduit	
46.003	4.759	0.015	317.3	0.000	0.00	0.0	0.600	o	600	Pipe/Conduit	
46.004	12.600	0.045	280.0	0.000	0.00	0.0	0.600	o	600	Pipe/Conduit	
28.016	42.700	0.140	305.0	0.000	0.00	0.0	0.600	o	1050	Pipe/Conduit	
28.017	75.652	0.200	378.3	0.000	0.00	0.0	0.600	o	1050	Pipe/Conduit	
48.000	3.200	0.010	320.0	0.053	5.00	0.0	0.600	o	225	Pipe/Conduit	
48.001	9.700	0.110	88.2	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit	
49.000	17.010	0.060	283.5	0.146	5.00	0.0	0.600	o	300	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
28.015	34.00	9.92	65.860	5.342	0.0	0.0	0.0	2.70	2340.7	491.9
46.000	50.00	5.01	66.740	0.074	0.0	0.0	0.0	1.57	111.1	10.0
46.001	50.00	5.06	66.730	0.177	0.0	0.0	0.0	1.06	74.6	24.0
47.000	50.00	5.24	68.585	0.319	0.0	0.0	0.0	1.20	191.2	43.2
47.001	50.00	5.47	68.240	0.439	0.0	0.0	0.0	1.20	191.2	59.4
47.002	49.51	5.56	68.180	0.559	0.0	0.0	0.0	3.35	533.1	75.0
47.003	48.59	5.72	67.315	0.681	0.0	0.0	0.0	1.44	407.9	89.6
46.002	48.31	5.77	66.715	0.858	0.0	0.0	0.0	2.44	689.8	112.3
46.003	48.00	5.83	66.640	0.858	0.0	0.0	0.0	1.36	385.0	112.3
46.004	47.24	5.97	66.625	0.858	0.0	0.0	0.0	1.45	410.1	112.3
28.016	33.22	10.28	65.680	6.200	0.0	0.0	0.0	1.97	1704.1	557.8
28.017	31.80	10.99	65.540	6.200	0.0	0.0	0.0	1.77	1529.1	557.8
48.000	50.00	5.07	67.175	0.053	0.0	0.0	0.0	0.73	28.8	7.2
48.001	50.00	5.19	67.165	0.053	0.0	0.0	0.0	1.39	55.4	7.2
49.000	50.00	5.31	68.585	0.146	0.0	0.0	0.0	0.93	65.7	19.8

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Network Design Table for Catchment C

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
49.001	17.010	0.060	283.5	0.140	0.00	0.0	0.600	o	375	Pipe/Conduit	
49.002	17.010	0.060	283.5	0.140	0.00	0.0	0.600	o	450	Pipe/Conduit	
49.003	14.069	0.055	255.8	0.140	0.00	0.0	0.600	o	525	Pipe/Conduit	
50.000	2.500	0.120	20.8	0.139	5.00	0.0	0.600	o	225	Pipe/Conduit	
48.002	5.316	0.070	75.9	0.000	0.00	0.0	0.600	o	525	Pipe/Conduit	
48.003	4.968	0.015	331.2	0.000	0.00	0.0	0.600	o	525	Pipe/Conduit	
48.004	16.759	0.040	419.0	0.000	0.00	0.0	0.600	o	525	Pipe/Conduit	
28.018	45.940	0.185	248.3	0.000	0.00	0.0	0.600	o	1050	Pipe/Conduit	
28.019	56.530	2.153	26.3	0.000	0.00	0.0	0.600	o	900	Pipe/Conduit	
9.018	32.204	0.805	40.0	0.438	0.00	0.0	0.600	o	900	Pipe/Conduit	
51.000	29.251	1.465	20.0	0.042	5.00	0.0	0.600	o	150	Pipe/Conduit	
51.001	19.398	1.503	12.9	0.026	0.00	0.0	0.600	o	150	Pipe/Conduit	
51.002	15.009	1.274	11.8	0.026	0.00	0.0	0.600	o	150	Pipe/Conduit	
51.003	31.610	2.129	14.8	0.047	0.00	0.0	0.600	o	150	Pipe/Conduit	
51.004	38.361	0.412	93.1	0.062	0.00	0.0	0.600	o	225	Pipe/Conduit	
51.005	37.164	1.118	33.2	0.075	0.00	0.0	0.600	o	225	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
49.001	49.43	5.57	68.525	0.286	0.0	0.0	0.0	1.07	118.3	38.3
49.002	48.12	5.81	67.895	0.426	0.0	0.0	0.0	1.20	191.2	55.5
49.003	47.24	5.97	67.550	0.566	0.0	0.0	0.0	1.40	302.2	72.4
50.000	50.00	5.01	67.175	0.139	0.0	0.0	0.0	2.88	114.5	18.8
48.002	47.06	6.01	67.055	0.758	0.0	0.0	0.0	2.57	556.9	96.6
48.003	46.72	6.08	66.985	0.758	0.0	0.0	0.0	1.23	265.2	96.6
48.004	45.48	6.33	66.970	0.758	0.0	0.0	0.0	1.09	235.5	96.6
28.018	31.16	11.34	65.340	6.958	0.0	0.0	0.0	2.18	1889.7	587.2
28.019	30.89	11.50	65.000	6.958	0.0	0.0	0.0	6.13	3898.4	587.2
9.018	30.70	11.60	62.847	15.360	4.3	0.0	0.0	4.96	3156.8	1281.5
51.000	50.00	5.22	82.671	0.042	0.0	0.0	0.0	2.26	40.0	5.7
51.001	50.00	5.33	81.206	0.069	0.0	0.0	0.0	2.82	49.8	9.3
51.002	50.00	5.41	79.703	0.095	0.0	0.0	0.0	2.95	52.2	12.8
51.003	49.18	5.62	78.429	0.141	0.0	0.0	0.0	2.63	46.4	18.8
51.004	46.67	6.09	76.225	0.203	0.0	0.0	0.0	1.36	53.9	25.7
51.005	45.36	6.36	75.813	0.278	0.0	0.0	0.0	2.28	90.5	34.2

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Network Design Table for Catchment C

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
52.000	1.928	0.050	38.6	0.004	4.00	0.0	0.600	o	150	Pipe/Conduit	
52.001	15.780	0.160	98.6	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit	
52.002	4.952	0.050	100.0	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit	
53.000	1.733	0.050	34.7	0.006	4.00	0.0	0.600	o	150	Pipe/Conduit	
52.003	18.525	0.590	31.4	0.030	0.00	0.0	0.600	o	225	Pipe/Conduit	
52.004	24.065	0.174	138.3	0.055	0.00	0.0	0.600	o	300	Pipe/Conduit	
54.000	18.950	0.125	151.6	0.034	4.00	0.0	0.600	o	150	Pipe/Conduit	
54.001	6.260	0.040	156.5	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit	
55.000	15.774	0.160	98.6	0.008	4.00	0.0	0.600	o	150	Pipe/Conduit	
56.000	5.727	0.060	95.5	0.012	4.00	0.0	0.600	o	150	Pipe/Conduit	
54.002	18.256	0.115	158.7	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit	
57.000	11.202	0.115	97.4	0.013	5.00	0.0	0.600	o	150	Pipe/Conduit	
52.005	6.395	0.060	106.6	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
52.000	50.00	4.02	75.854	0.004	0.0	0.0	0.0	1.63	28.7	0.5
52.001	50.00	4.28	75.804	0.004	0.0	0.0	0.0	1.01	17.9	0.5
52.002	50.00	4.36	75.644	0.004	0.0	0.0	0.0	1.00	17.8	0.5
53.000	50.00	4.02	75.644	0.006	0.0	0.0	0.0	1.72	30.3	0.8
52.003	50.00	4.49	75.519	0.040	0.0	0.0	0.0	2.34	93.2	5.4
52.004	50.00	4.79	74.854	0.095	0.0	0.0	0.0	1.34	94.4	12.9
54.000	50.00	4.39	75.210	0.034	0.0	0.0	0.0	0.81	14.4	4.6
54.001	50.00	4.52	74.985	0.034	0.0	0.0	0.0	0.80	14.2	4.6
55.000	50.00	4.26	75.105	0.008	0.0	0.0	0.0	1.01	17.9	1.1
56.000	50.00	4.09	75.005	0.012	0.0	0.0	0.0	1.03	18.2	1.6
54.002	50.00	4.81	74.870	0.054	0.0	0.0	0.0	1.04	41.2	7.3
57.000	50.00	5.18	74.945	0.013	0.0	0.0	0.0	1.02	18.0	1.8
52.005	50.00	5.25	74.680	0.162	0.0	0.0	0.0	1.52	107.6	21.9

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Network Design Table for Catchment C

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
51.006	50.272	1.120	44.9	0.074	0.00	0.0	0.600	o	300	Pipe/Conduit	
51.007	67.775	2.508	27.0	0.106	0.00	0.0	0.600	o	300	Pipe/Conduit	
58.000	28.785	1.059	27.2	0.107	5.00	0.0	0.600	o	150	Pipe/Conduit	
58.001	24.601	1.033	23.8	0.051	0.00	0.0	0.600	o	150	Pipe/Conduit	
58.002	27.810	0.765	36.4	0.047	0.00	0.0	0.600	o	225	Pipe/Conduit	
58.003	18.906	0.083	227.8	0.000	0.00	0.0	0.600	o	375	Pipe/Conduit	
51.008	90.000	2.776	32.4	0.257	0.00	0.0	0.600	o	375	Pipe/Conduit	
51.009	85.700	2.880	29.8	0.228	0.00	0.0	0.600	o	375	Pipe/Conduit	
51.010	36.375	0.581	62.6	0.108	0.00	0.0	0.600	o	450	Pipe/Conduit	
51.011	40.619	0.136	298.7	0.127	0.00	0.0	0.600	o	600	Pipe/Conduit	
51.012	40.218	0.135	297.9	0.115	0.00	0.0	0.600	o	600	Pipe/Conduit	
51.013	90.000	0.300	300.0	0.240	0.00	0.0	0.600	o	600	Pipe/Conduit	
51.014	90.081	0.300	300.3	0.527	0.00	0.0	0.600	o	600	Pipe/Conduit	
51.015	78.018	1.242	62.8	0.000	0.00	0.0	0.600	o	600	Pipe/Conduit	
9.019	87.633	1.461	60.0	0.123	0.00	0.0	0.600	o	900	Pipe/Conduit	
9.020	23.371	0.426	54.9	0.133	0.00	0.0	0.600	o	900	Pipe/Conduit	
59.000	23.530	0.360	65.4	0.052	5.00	0.0	0.600	o	225	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
51.006	43.79	6.71	74.620	0.514	0.0	0.0	0.0	2.35	166.3	60.9
51.007	42.28	7.09	73.500	0.620	0.0	0.0	0.0	3.04	214.6	71.0
58.000	50.00	5.25	74.082	0.107	0.0	0.0	0.0	1.94	34.3	14.5
58.001	50.00	5.45	73.023	0.157	0.0	0.0	0.0	2.07	36.6	21.3
58.002	48.93	5.66	71.915	0.204	0.0	0.0	0.0	2.18	86.6	27.1
58.003	47.51	5.92	71.000	0.204	0.0	0.0	0.0	1.20	132.1	27.1
51.008	40.55	7.56	70.917	1.081	0.0	0.0	0.0	3.19	352.5	118.7
51.009	39.13	7.99	68.141	1.309	0.0	0.0	0.0	3.33	368.0	138.7
51.010	38.40	8.22	65.186	1.416	0.0	0.0	0.0	2.57	409.2	147.3
51.011	37.00	8.70	64.455	1.543	0.0	0.0	0.0	1.40	396.9	154.7
51.012	35.74	9.18	64.319	1.659	0.0	0.0	0.0	1.41	397.4	160.6
51.013	33.27	10.25	64.184	1.898	0.0	0.0	0.0	1.40	396.0	171.0
51.014	31.19	11.32	63.884	2.425	0.0	0.0	0.0	1.40	395.9	204.9
51.015	30.46	11.75	63.584	2.425	0.0	0.0	0.0	3.08	869.8	204.9
9.019	29.87	12.11	62.042	17.909	4.3	0.0	0.0	4.05	2576.0	1453.0
9.020	29.72	12.20	60.581	18.042	4.3	0.0	0.0	4.24	2694.3	1456.5
59.000	50.00	5.24	65.460	0.052	0.0	0.0	0.0	1.62	64.4	7.0

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Network Design Table for Catchment C

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
60.000	10.620	0.200	53.1	0.306	5.00	0.0	0.600	o	300	Pipe/Conduit	
59.001	50.500	0.205	246.3	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
61.000	10.940	0.045	243.1	0.267	5.00	0.0	0.600	o	450	Pipe/Conduit	
59.002	22.380	0.145	154.3	0.000	0.00	0.0	0.600	o	600	Pipe/Conduit	
62.000	10.620	0.080	132.8	0.102	5.00	0.0	0.600	o	225	Pipe/Conduit	
62.001	46.625	0.310	150.4	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit	
63.000	11.005	0.050	220.1	0.256	5.00	0.0	0.600	o	450	Pipe/Conduit	
62.002	49.400	0.200	247.0	0.000	0.00	0.0	0.600	o	450	Pipe/Conduit	
64.000	10.620	0.070	151.7	0.255	5.00	0.0	0.600	o	300	Pipe/Conduit	
62.003	13.865	0.100	138.7	0.000	0.00	0.0	0.600	o	600	Pipe/Conduit	
59.003	50.000	0.125	400.0	0.000	0.00	0.0	0.600	o	600	Pipe/Conduit	
65.000	10.622	0.265	40.1	0.033	5.00	0.0	0.600	o	150	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
60.000	50.00	5.08	65.150	0.306	0.0	0.0	0.0	2.16	152.9	41.4
59.001	46.67	6.09	64.950	0.358	0.0	0.0	0.0	1.00	70.5	45.3
61.000	50.00	5.14	64.640	0.267	0.0	0.0	0.0	1.30	206.7	36.2
59.002	45.75	6.28	64.445	0.625	0.0	0.0	0.0	1.96	553.6	77.4
62.000	50.00	5.16	65.365	0.102	0.0	0.0	0.0	1.13	45.1	13.8
62.001	47.69	5.89	65.285	0.102	0.0	0.0	0.0	1.06	42.3	13.8
63.000	50.00	5.13	64.800	0.256	0.0	0.0	0.0	1.37	217.3	34.7
62.002	44.61	6.53	64.750	0.358	0.0	0.0	0.0	1.29	205.0	43.2
64.000	50.00	5.14	64.770	0.255	0.0	0.0	0.0	1.27	90.1	34.5
62.003	44.12	6.64	64.400	0.613	0.0	0.0	0.0	2.07	584.2	73.2
59.003	41.38	7.33	64.300	1.238	0.0	0.0	0.0	1.21	342.5	138.7
65.000	50.00	5.11	66.000	0.033	0.0	0.0	0.0	1.59	28.2	4.5

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Network Design Table for Catchment C

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
65.001	32.700	0.445	73.5	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit	
66.000	10.623	0.105	101.2	0.066	5.00	0.0	0.600	o	225	Pipe/Conduit	
65.002	50.000	0.665	75.2	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit	
67.000	10.620	0.110	96.5	0.080	5.00	0.0	0.600	o	225	Pipe/Conduit	
59.004	28.360	0.075	378.1	0.000	0.00	0.0	0.600	o	600	Pipe/Conduit	
68.000	10.875	0.110	98.9	0.040	5.00	0.0	0.600	o	150	Pipe/Conduit	
68.001	7.990	0.080	99.9	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit	
59.005	4.895	0.015	326.3	0.000	0.00	0.0	0.600	o	750	Pipe/Conduit	
59.006	8.190	0.015	546.0	0.000	0.00	0.0	0.600	o	750	Pipe/Conduit	
59.007	8.490	0.025	339.6	0.000	0.00	0.0	0.600	o	750	Pipe/Conduit	
59.008	12.685	0.025	507.4	0.000	0.00	0.0	0.600	o	750	Pipe/Conduit	
69.000	15.960	1.355	11.8	0.329	8.00	0.0	0.600	o	225	Pipe/Conduit	
70.000	14.858	0.150	99.1	0.016	5.00	0.0	0.600	o	150	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
65.001	49.40	5.58	65.735	0.033	0.0	0.0	0.0	1.17	20.8	4.5
66.000	50.00	5.14	65.320	0.066	0.0	0.0	0.0	1.30	51.7	8.9
65.002	46.47	6.13	65.215	0.099	0.0	0.0	0.0	1.51	60.0	12.5
67.000	50.00	5.13	64.660	0.080	0.0	0.0	0.0	1.33	52.9	10.8
59.004	40.05	7.70	64.175	1.417	0.0	0.0	0.0	1.25	352.4	153.7
68.000	50.00	5.18	64.740	0.040	0.0	0.0	0.0	1.01	17.9	5.4
68.001	50.00	5.31	64.630	0.040	0.0	0.0	0.0	1.01	17.8	5.4
59.005	39.87	7.76	63.950	1.457	0.0	0.0	0.0	1.54	681.9	157.3
59.006	39.49	7.87	63.935	1.457	0.0	0.0	0.0	1.19	526.0	157.3
59.007	39.19	7.97	63.820	1.457	0.0	0.0	0.0	1.51	668.4	157.3
59.008	38.66	8.14	63.795	1.457	0.0	0.0	0.0	1.24	545.8	157.3
69.000	38.86	8.07	65.650	0.329	0.0	0.0	0.0	3.83	152.4	34.6
70.000	50.00	5.25	64.520	0.016	0.0	0.0	0.0	1.01	17.8	2.2

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Network Design Table for Catchment C

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
59.009	24.985	0.060	416.4	0.000	0.00	0.0	0.600	o	750	Pipe/Conduit	
71.000	25.835	0.255	101.3	0.177	8.00	0.0	0.600	o	225	Pipe/Conduit	
59.010	26.021	0.050	520.4	0.000	0.00	0.0	0.600	o	750	Pipe/Conduit	
59.011	16.915	1.090	15.5	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
72.000	10.000	0.000	0.0	0.162	5.00	0.0	0.600	o	150	Pipe/Conduit	
59.012	11.377	2.115	5.4	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit	
9.021	49.296	0.895	55.1	0.000	0.00	0.0	0.600	o	900	Pipe/Conduit	
9.022	61.788	2.057	30.0	0.117	0.00	0.0	0.600	o	900	Pipe/Conduit	
9.023	73.596	2.453	30.0	0.084	0.00	0.0	0.600	o	900	Pipe/Conduit	
9.024	61.681	1.543	40.0	0.164	0.00	0.0	0.600	o	900	Pipe/Conduit	
9.025	90.020	4.301	20.9	0.139	0.00	0.0	0.600	o	900	Pipe/Conduit	
73.000	30.924	0.344	89.9	0.024	5.00	0.0	0.600	o	150	Pipe/Conduit	
73.001	50.071	0.556	90.1	0.027	0.00	0.0	0.600	o	225	Pipe/Conduit	
74.000	26.203	5.676	4.6	0.066	5.00	0.0	0.600	o	150	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
59.009	37.74	8.44	63.770	1.802	0.0	0.0	0.0	1.37	603.1	184.2
71.000	38.07	8.33	65.040	0.177	0.0	0.0	0.0	1.30	51.6	18.2
59.010	36.75	8.80	63.710	1.979	0.0	0.0	0.0	1.22	538.9	196.9
59.011	36.56	8.87	63.660	1.979	0.0	0.0	0.0	4.01	283.5	196.9
72.000	43.44	6.80	62.570	0.162	0.0	0.0	0.0	0.09	1.6«	19.1
59.012	36.44	8.91	62.570	2.141	0.0	0.0	0.0	4.37	77.3«	211.3
9.021	29.42	12.39	59.705	20.183	4.3	0.0	0.0	4.23	2689.0	1612.3
9.022	29.14	12.57	59.260	20.300	4.3	0.0	0.0	5.73	3644.2	1612.3
9.023	28.83	12.79	57.203	20.385	4.3	0.0	0.0	5.73	3646.4	1612.3
9.024	28.53	12.99	54.750	20.549	4.3	0.0	0.0	4.96	3157.8	1612.3
9.025	28.22	13.21	53.207	20.688	4.3	0.0	0.0	6.87	4367.3	1612.3
73.000	49.92	5.49	57.850	0.024	0.0	0.0	0.0	1.06	18.7	3.2
73.001	46.64	6.09	57.431	0.051	0.0	0.0	0.0	1.38	54.8	6.4
74.000	50.00	5.09	62.680	0.066	0.0	0.0	0.0	4.72	83.5	8.9

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Network Design Table for Catchment C

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
73.002	50.077	0.589	85.0	0.038	0.00	0.0	0.600	o	300	Pipe/Conduit	
73.003	76.722	0.959	80.0	0.054	0.00	0.0	0.600	o	300	Pipe/Conduit	
73.004	24.593	0.492	50.0	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
75.000	20.942	0.413	50.7	0.012	5.00	0.0	0.600	o	150	Pipe/Conduit	
73.005	79.999	0.479	167.0	0.020	0.00	0.0	0.600	o	375	Pipe/Conduit	
73.006	70.000	0.583	120.1	0.019	0.00	0.0	0.600	o	375	Pipe/Conduit	
73.007	46.820	0.390	120.1	0.014	0.00	0.0	0.600	o	375	Pipe/Conduit	
73.008	42.407	0.363	116.8	0.015	0.00	0.0	0.600	o	375	Pipe/Conduit	
76.000	51.074	0.146	349.8	0.000	5.00	0.0	0.600	o	600	Pipe/Conduit	
76.001	38.924	0.111	350.7	0.000	0.00	0.0	0.600	o	750	Pipe/Conduit	
76.002	51.015	0.283	180.3	0.000	0.00	0.0	0.600	o	750	Pipe/Conduit	
76.003	18.985	0.190	99.9	0.000	0.00	0.0	0.600	o	750	Pipe/Conduit	
76.004	33.593	0.336	100.0	0.000	0.00	0.0	0.600	o	750	Pipe/Conduit	
76.005	9.323	0.093	100.2	0.000	0.00	0.0	0.600	o	750	Pipe/Conduit	
73.009	34.418	0.287	119.9	0.150	0.00	0.0	0.600	o	900	Pipe/Conduit	
77.000	81.302	0.487	166.9	0.063	5.00	0.0	0.600	o	225	Pipe/Conduit	
77.001	90.004	0.900	100.0	0.040	0.00	0.0	0.600	o	225	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
73.002	44.36	6.58	56.800	0.154	0.0	0.0	0.0	1.71	120.6	18.5
73.003	41.45	7.31	56.211	0.207	0.0	0.0	0.0	1.76	124.4	23.3
73.004	40.78	7.49	55.252	0.207	0.0	0.0	0.0	2.23	157.6	23.3
75.000	50.00	5.25	55.323	0.012	0.0	0.0	0.0	1.42	25.0	1.6
73.005	37.74	8.44	54.685	0.239	0.0	0.0	0.0	1.40	154.5	24.5
73.006	35.82	9.15	54.206	0.258	0.0	0.0	0.0	1.65	182.5	25.1
73.007	34.67	9.62	53.623	0.272	0.0	0.0	0.0	1.65	182.5	25.5
73.008	33.72	10.04	53.233	0.287	0.0	0.0	0.0	1.68	185.0	26.3
76.000	48.94	5.66	54.057	0.000	0.0	0.0	0.0	1.30	366.5	0.0
76.001	46.64	6.09	53.761	0.000	0.0	0.0	0.0	1.49	657.7	0.0
76.002	44.72	6.50	53.650	0.000	0.0	0.0	0.0	2.08	919.5	0.0
76.003	44.22	6.61	53.367	0.000	0.0	0.0	0.0	2.80	1236.9	0.0
76.004	43.37	6.81	53.177	0.000	0.0	0.0	0.0	2.80	1236.6	0.0
76.005	43.14	6.87	52.641	0.000	0.0	0.0	0.0	2.80	1234.9	0.0
73.009	33.29	10.24	52.345	0.438	0.0	0.0	0.0	2.86	1819.7	39.5
77.000	45.44	6.34	57.900	0.063	0.0	0.0	0.0	1.01	40.1	7.7
77.001	40.79	7.49	57.413	0.103	0.0	0.0	0.0	1.31	52.0	11.4

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Network Design Table for Catchment C

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
77.002	41.386	0.517	80.1	0.014	0.00	0.0	0.600	o	225	Pipe/Conduit	
78.000	45.848	0.429	106.9	0.034	5.00	0.0	0.600	o	150	Pipe/Conduit	
77.003	21.463	0.496	43.3	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit	
77.004	65.971	1.064	62.0	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit	
79.000	14.086	1.289	10.9	0.010	5.00	0.0	0.600	o	150	Pipe/Conduit	
77.005	29.146	0.600	48.6	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit	
80.000	21.114	0.212	99.6	0.000	5.00	0.0	0.600	o	150	Pipe/Conduit	
80.001	8.109	0.082	98.9	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit	
80.002	7.408	0.325	22.8	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit	
77.006	25.168	0.106	237.4	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
77.007	14.772	0.070	211.0	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
77.008	31.332	0.927	33.8	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
73.010	75.483	0.872	86.6	0.024	0.00	0.0	0.600	o	900	Pipe/Conduit	
73.011	37.304	0.730	51.1	0.015	0.00	0.0	0.600	o	900	Pipe/Conduit	
73.012	17.122	0.612	28.0	0.000	0.00	0.0	0.600	o	900	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
77.002	39.20	7.96	56.513	0.117	0.0	0.0	0.0	1.46	58.2	12.4
78.000	48.23	5.79	56.500	0.034	0.0	0.0	0.0	0.97	17.2	4.5
77.003	38.64	8.14	55.996	0.151	0.0	0.0	0.0	1.99	79.3	15.8
77.004	36.73	8.80	55.500	0.151	0.0	0.0	0.0	1.66	66.2	15.8
79.000	50.00	5.08	55.800	0.010	0.0	0.0	0.0	3.07	54.2	1.4
77.005	36.05	9.06	54.436	0.161	0.0	0.0	0.0	1.88	74.8	15.8
80.000	50.00	5.35	54.530	0.000	0.0	0.0	0.0	1.01	17.8	0.0
80.001	49.94	5.48	54.318	0.000	0.0	0.0	0.0	1.01	17.9	0.0
80.002	49.60	5.54	54.236	0.000	0.0	0.0	0.0	2.12	37.4	0.0
77.006	35.02	9.47	53.761	0.161	0.0	0.0	0.0	1.02	71.8	15.8
77.007	34.49	9.70	53.655	0.161	0.0	0.0	0.0	1.08	76.2	15.8
77.008	34.05	9.89	53.585	0.161	0.0	0.0	0.0	2.71	191.8	15.8
73.010	32.52	10.62	52.058	0.623	0.0	0.0	0.0	3.37	2143.3	54.8
73.011	32.24	10.76	51.186	0.637	0.0	0.0	0.0	4.39	2792.0	55.7
73.012	32.15	10.81	50.456	0.637	0.0	0.0	0.0	5.94	3776.3	55.7

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Network Design Table for Catchment C

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
81.000	31.194	1.076	29.0	0.032	5.00	0.0	0.600	o	150	Pipe/Conduit	
81.001	10.123	0.675	15.0	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit	
81.002	20.661	0.898	23.0	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit	
81.003	64.136	2.807	22.8	0.046	0.00	0.0	0.600	o	150	Pipe/Conduit	
73.013	13.767	0.938	14.7	3.635	0.00	0.0	0.600	o	1050	Pipe/Conduit	
9.026	99.980	4.286	23.3	0.248	0.00	0.0	0.600	o	1200	Pipe/Conduit	
9.027	56.666	1.890	30.0	0.000	0.00	0.0	0.600	o	1200	Pipe/Conduit	
9.028	50.477	1.430	35.3	0.000	0.00	0.0	0.600	o	1200	Pipe/Conduit	
9.029	18.000#	0.500	36.0	0.000	0.00	0.0	0.600	o	2100	Pipe/Conduit	
82.000	51.214	0.341	150.0	0.100	5.00	0.0	0.600	o	225	Pipe/Conduit	
83.000	31.800	3.036	10.5	0.040	5.00	0.0	0.600	o	150	Pipe/Conduit	
82.001	47.504	0.284	167.0	0.140	0.00	0.0	0.600	o	225	Pipe/Conduit	
82.002	44.321	0.265	167.0	0.015	0.00	0.0	0.600	o	300	Pipe/Conduit	
82.003	31.669	0.215	147.3	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
82.004	18.000#	0.700	25.7	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
81.000	50.00	5.28	56.050	0.032	0.0	0.0	0.0	1.88	33.2	4.3
81.001	50.00	5.34	54.974	0.032	0.0	0.0	0.0	2.61	46.2	4.3
81.002	49.81	5.50	54.299	0.032	0.0	0.0	0.0	2.11	37.3	4.3
81.003	47.05	6.01	53.401	0.078	0.0	0.0	0.0	2.12	37.4	9.9
73.013	32.10	10.83	49.694	4.350	0.0	0.0	0.0	9.02	7808.1	378.2
9.026	27.93	13.43	48.606	25.286	4.3	0.0	0.0	7.76	8777.5	1916.7
9.027	27.74	13.57	44.320	25.286	4.3	0.0	0.0	6.84	7740.5	1916.7
9.028	27.57	13.70	42.430	25.286	4.3	0.0	0.0	6.31	7132.7	1916.7
9.029	27.52	13.73	39.800	25.286	4.3	0.0	0.0	8.79	30429.1	1916.7
82.000	48.15	5.80	41.180	0.100	0.0	0.0	0.0	1.07	42.4	13.0
83.000	50.00	5.17	43.800	0.040	0.0	0.0	0.0	3.13	55.3	5.4
82.001	44.34	6.59	40.765	0.280	0.0	0.0	0.0	1.01	40.1	33.6
82.002	41.87	7.19	40.480	0.295	0.0	0.0	0.0	1.21	85.8	33.6
82.003	40.40	7.60	40.215	0.295	0.0	0.0	0.0	1.29	91.4	33.6
82.004	40.07	7.70	40.000	0.295	0.0	0.0	0.0	3.11	220.0	33.6

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Network Design Table for Catchment C

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
9.030	28.516	2.800	10.2	0.000	0.00	0.0	0.600	o	450	Pipe/Conduit	
9.031	13.000#	0.250	52.0	0.000	0.00	0.0	0.600	o	450	Pipe/Conduit	
84.000	39.878	0.083	480.5	0.310	5.00	0.0	0.600	o	600	Pipe/Conduit	
84.001	17.744	0.037	479.6	0.337	0.00	0.0	0.600	o	600	Pipe/Conduit	
84.002	49.336	0.102	483.7	0.000	0.00	0.0	0.600	o	600	Pipe/Conduit	
85.000	54.800	0.365	150.1	0.020	5.00	0.0	0.600	o	225	Pipe/Conduit	
85.001	48.426	0.290	167.0	0.100	0.00	0.0	0.600	o	225	Pipe/Conduit	
85.002	50.000	0.292	171.2	0.086	0.00	0.0	0.600	o	225	Pipe/Conduit	
85.003	49.000	0.300	163.3	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
85.004	96.099	0.250	384.4	0.097	0.00	0.0	0.600	o	450	Pipe/Conduit	
85.005	106.473	0.252	422.5	0.657	0.00	0.0	0.600	o	600	Pipe/Conduit	
85.006	21.512	0.106	202.9	0.735	0.00	0.0	0.600	o	600	Pipe/Conduit	
85.007	57.795	0.300	192.7	0.001	0.00	0.0	0.600	o	750	Pipe/Conduit	
85.008	95.144	0.160	594.7	0.503	0.00	0.0	0.600	o	750	Pipe/Conduit	
85.009	73.549	0.147	500.3	0.864	0.00	0.0	0.600	o	750	Pipe/Conduit	
85.010	89.144	0.178	500.8	0.750	0.00	0.0	0.600	o	750	Pipe/Conduit	
85.011	33.311	0.067	497.2	0.050	0.00	0.0	0.600	o	750	Pipe/Conduit	
84.003	14.823	0.028	529.4	0.123	0.00	0.0	0.600	o	750	Pipe/Conduit	
84.004	52.656	0.098	537.3	0.261	0.00	0.0	0.600	o	750	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
9.030	27.43	13.81	39.300	25.581	4.3	0.0	0.0	6.40	1017.7«	1916.7
9.031	27.33	13.88	36.500	25.581	4.3	0.0	0.0	2.82	449.2«	1916.7
84.000	49.25	5.60	40.600	0.310	0.0	0.0	0.0	1.10	312.2	41.4
84.001	47.78	5.87	40.517	0.647	0.0	0.0	0.0	1.11	312.5	83.7
84.002	44.21	6.62	40.480	0.647	0.0	0.0	0.0	1.10	311.2	83.7
85.000	47.84	5.86	43.349	0.020	0.0	0.0	0.0	1.06	42.3	2.6
85.001	44.03	6.66	42.984	0.120	0.0	0.0	0.0	1.01	40.1	14.3
85.002	40.77	7.49	42.692	0.206	0.0	0.0	0.0	1.00	39.6	22.7
85.003	38.58	8.16	42.400	0.206	0.0	0.0	0.0	1.23	86.8	22.7
85.004	34.46	9.71	41.950	0.303	0.0	0.0	0.0	1.03	164.0	28.3
85.005	31.38	11.22	41.550	0.960	0.0	0.0	0.0	1.18	333.2	81.6
85.006	31.00	11.43	41.298	1.695	0.0	0.0	0.0	1.71	482.3	142.3
85.007	30.19	11.91	41.080	1.696	0.0	0.0	0.0	2.01	889.2	142.3
85.008	28.10	13.30	40.780	2.199	0.0	0.0	0.0	1.14	503.8	167.4
85.009	26.83	14.28	40.620	3.063	0.0	0.0	0.0	1.24	549.7	222.6
85.010	25.47	15.48	40.473	3.813	0.0	0.0	0.0	1.24	549.4	263.0
85.011	25.00	15.92	40.295	3.863	0.0	0.0	0.0	1.25	551.4	263.0
84.003	24.80	16.13	40.228	4.633	0.0	0.0	0.0	1.21	534.2	311.1
84.004	24.09	16.86	40.200	4.893	0.0	0.0	0.0	1.20	530.2	319.3

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Network Design Table for Catchment C

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
84.005	11.901	0.022	541.0	0.000	0.00	0.0	0.600	o	750	Pipe/Conduit	
84.006	33.073	0.011	3011.6	0.000	0.00	0.0	0.600	o	900	Pipe/Conduit	
86.000	65.419	0.131	499.4	0.001	5.00	0.0	0.600	o	450	Pipe/Conduit	
86.001	58.469	0.117	499.7	0.043	0.00	0.0	0.600	o	450	Pipe/Conduit	
86.002	81.003	0.162	500.0	0.051	0.00	0.0	0.600	o	450	Pipe/Conduit	
86.003	81.004	0.162	500.0	0.073	0.00	0.0	0.600	o	450	Pipe/Conduit	
86.004	111.005	0.222	500.0	0.073	0.00	0.0	0.600	o	450	Pipe/Conduit	
86.005	111.005	0.222	500.0	0.100	0.00	0.0	0.600	o	450	Pipe/Conduit	
86.006	95.499	0.191	500.0	0.100	0.00	0.0	0.600	o	450	Pipe/Conduit	
86.007	95.501	0.191	500.0	0.086	0.00	0.0	0.600	o	450	Pipe/Conduit	
86.008	95.500	0.191	500.0	0.086	0.00	0.0	0.600	o	450	Pipe/Conduit	
86.009	70.529	0.191	369.3	0.086	0.00	0.0	0.600	o	450	Pipe/Conduit	
87.000	25.128	0.168	149.6	0.000	5.00	0.0	0.600	o	150	Pipe/Conduit	
88.000	5.121	0.064	80.0	0.011	5.00	0.0	0.600	o	150	Pipe/Conduit	
88.001	9.720	0.097	100.2	0.024	0.00	0.0	0.600	o	150	Pipe/Conduit	
88.002	6.690	0.067	99.9	0.015	0.00	0.0	0.600	o	150	Pipe/Conduit	
88.003	31.666	0.444	71.3	0.048	0.00	0.0	0.600	o	150	Pipe/Conduit	
89.000	41.702	12.925	3.2	0.248	5.00	0.0	0.600	o	150	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
84.005	23.94	17.02	40.102	4.893	0.0	0.0	0.0	1.20	528.4	319.3
84.006	23.08	18.01	39.930	4.893	0.0	0.0	0.0	0.56	357.0	319.3
86.000	46.08	6.21	42.893	0.001	0.0	0.0	0.0	0.90	143.6	0.1
86.001	41.52	7.29	42.762	0.044	0.0	0.0	0.0	0.90	143.6	4.9
86.002	36.78	8.78	42.645	0.095	0.0	0.0	0.0	0.90	143.5	9.5
86.003	33.21	10.28	42.483	0.168	0.0	0.0	0.0	0.90	143.5	15.1
86.004	29.52	12.33	42.321	0.241	0.0	0.0	0.0	0.90	143.5	19.3
86.005	26.71	14.38	42.099	0.341	0.0	0.0	0.0	0.90	143.5	24.7
86.006	24.78	16.14	41.877	0.441	0.0	0.0	0.0	0.90	143.5	29.6
86.007	23.17	17.91	41.686	0.527	0.0	0.0	0.0	0.90	143.5	33.1
86.008	21.80	19.67	41.495	0.613	0.0	0.0	0.0	0.90	143.5	36.2
86.009	21.03	20.79	41.304	0.699	0.0	0.0	0.0	1.05	167.3	39.8
87.000	49.78	5.51	41.600	0.000	0.0	0.0	0.0	0.82	14.5	0.0
88.000	50.00	5.08	42.965	0.011	0.0	0.0	0.0	1.12	19.9	1.6
88.001	50.00	5.24	42.901	0.036	0.0	0.0	0.0	1.00	17.7	4.8
88.002	50.00	5.35	42.804	0.051	0.0	0.0	0.0	1.01	17.8	6.9
88.003	48.20	5.79	42.737	0.099	0.0	0.0	0.0	1.19	21.1	12.9
89.000	50.00	5.12	55.218	0.248	0.0	0.0	0.0	5.65	99.9	33.6

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Network Design Table for Catchment C

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
88.004	10.721	0.071	151.0	0.094	0.00	0.0	0.600	o	300	Pipe/Conduit	
88.005	14.762	0.151	97.8	0.042	0.00	0.0	0.600	o	300	Pipe/Conduit	
88.006	65.006	0.202	321.8	0.436	0.00	0.0	0.600	o	450	Pipe/Conduit	
88.007	7.767	0.022	353.0	0.120	0.00	0.0	0.600	o	600	Pipe/Conduit	
88.008	50.178	0.143	350.9	0.480	0.00	0.0	0.600	o	600	Pipe/Conduit	
88.009	69.948	0.140	499.6	0.587	0.00	0.0	0.600	o	600	Pipe/Conduit	
88.010	70.000	0.140	500.0	0.546	0.00	0.0	0.600	o	750	Pipe/Conduit	
88.011	72.120	0.144	500.8	0.921	0.00	0.0	0.600	o	750	Pipe/Conduit	
88.012	7.902	0.016	493.9	0.036	0.00	0.0	0.600	o	750	Pipe/Conduit	
88.013	27.903	0.056	498.3	0.193	0.00	0.0	0.600	o	900	Pipe/Conduit	
88.014	15.790	0.032	493.4	0.072	0.00	0.0	0.600	o	900	Pipe/Conduit	
88.015	13.849	0.028	494.6	0.033	0.00	0.0	0.600	o	900	Pipe/Conduit	
88.016	24.979	0.050	499.6	0.132	0.00	0.0	0.600	o	900	Pipe/Conduit	
88.017	15.365	0.031	495.6	0.060	0.00	0.0	0.600	o	900	Pipe/Conduit	
88.018	11.978	0.024	499.1	0.012	0.00	0.0	0.600	o	900	Pipe/Conduit	
88.019	44.644	0.089	501.6	0.134	0.00	0.0	0.600	o	900	Pipe/Conduit	
88.020	14.811	0.030	493.7	0.008	0.00	0.0	0.600	o	900	Pipe/Conduit	
88.021	45.987	0.092	501.6	0.117	0.00	0.0	0.600	o	900	Pipe/Conduit	
88.022	67.963	0.135	503.4	0.061	0.00	0.0	0.600	o	900	Pipe/Conduit	
88.023	69.033	0.138	501.6	0.024	0.00	0.0	0.600	o	900	Pipe/Conduit	
88.024	7.731	0.015	515.4	0.024	0.00	0.0	0.600	o	900	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
88.004	47.46	5.93	42.143	0.442	0.0	0.0	0.0	1.28	90.3	56.8
88.005	46.67	6.09	42.071	0.483	0.0	0.0	0.0	1.59	112.4	61.1
88.006	42.44	7.05	41.770	0.919	0.0	0.0	0.0	1.13	179.4	105.6
88.007	42.05	7.15	41.418	1.040	0.0	0.0	0.0	1.29	364.8	118.4
88.008	39.75	7.79	41.396	1.520	0.0	0.0	0.0	1.29	365.9	163.6
88.009	36.55	8.87	41.253	2.107	0.0	0.0	0.0	1.08	306.1	208.5
88.010	34.24	9.81	40.963	2.653	0.0	0.0	0.0	1.24	549.9	246.0
88.011	32.22	10.77	40.823	3.574	0.0	0.0	0.0	1.24	549.4	311.8
88.012	32.01	10.88	40.678	3.610	0.0	0.0	0.0	1.25	553.3	313.0
88.013	31.39	11.21	40.513	3.803	0.0	0.0	0.0	1.40	888.6	323.4
88.014	31.06	11.40	40.457	3.876	0.0	0.0	0.0	1.40	893.0	326.0
88.015	30.77	11.56	40.425	3.908	0.0	0.0	0.0	1.40	891.9	326.0
88.016	30.27	11.86	40.398	4.041	0.0	0.0	0.0	1.39	887.4	331.2
88.017	29.97	12.04	40.348	4.100	0.0	0.0	0.0	1.40	891.0	332.8
88.018	29.74	12.19	40.317	4.112	0.0	0.0	0.0	1.40	887.9	332.8
88.019	28.92	12.72	40.293	4.247	0.0	0.0	0.0	1.39	885.6	332.8
88.020	28.66	12.90	40.204	4.255	0.0	0.0	0.0	1.40	892.8	332.8
88.021	27.90	13.45	40.174	4.372	0.0	0.0	0.0	1.39	885.6	332.8
88.022	26.85	14.26	40.082	4.434	0.0	0.0	0.0	1.39	884.0	332.8
88.023	25.89	15.09	39.947	4.457	0.0	0.0	0.0	1.39	885.6	332.8
88.024	25.78	15.18	39.809	4.481	0.0	0.0	0.0	1.37	873.6	332.8

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Network Design Table for Catchment C

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
88.025	66.023	0.132	500.2	0.046	0.00	0.0	0.600	o	900	Pipe/Conduit	
88.026	56.011	0.146	383.6	0.052	0.00	0.0	0.600	o	900	Pipe/Conduit	
88.027	22.433	0.046	487.7	0.000	0.00	0.0	0.600	o	900	Pipe/Conduit	
88.028	13.795	0.028	500.0	0.000	0.00	0.0	0.600	o	900	Pipe/Conduit	
86.010	24.711	0.049	500.0	0.084	0.00	0.0	0.600	o	900	Pipe/Conduit	
84.007	76.445	2.150	35.6	0.437	0.00	0.0	0.600	o	1200	Pipe/Conduit	
84.008	14.000#	0.350	40.0	0.000	0.00	0.0	0.600	o	1200	Pipe/Conduit	
9.032	75.151	0.712	105.5	0.832	0.00	0.0	0.600	o	450	Pipe/Conduit	
9.033	33.595	0.225	149.3	0.000	0.00	0.0	0.600	o	450	Pipe/Conduit	
9.034	65.169	1.128	57.8	0.000	0.00	0.0	0.600	o	450	Pipe/Conduit	
9.035	53.153	1.193	44.6	0.000	0.00	0.0	0.600	o	450	Pipe/Conduit	
9.036	31.803	0.110	289.1	0.000	0.00	0.0	0.600	o	450	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
88.025	24.95	15.97	39.794	4.527	0.0	0.0	0.0	1.39	886.9	332.8
88.026	24.37	16.56	39.662	4.579	0.0	0.0	0.0	1.59	1013.8	332.8
88.027	24.12	16.82	39.516	4.579	0.0	0.0	0.0	1.41	898.3	332.8
88.028	23.97	16.99	39.470	4.579	0.0	0.0	0.0	1.39	887.1	332.8
86.010	20.84	21.08	39.442	5.362	0.0	0.0	0.0	1.39	887.1	332.8
84.007	20.71	21.29	39.100	10.693	0.0	0.0	0.0	6.28	7106.8	599.7
84.008	20.68	21.33	36.950	10.693	0.0	0.0	0.0	5.92	6699.5	599.7
9.032	20.29	21.96	35.880	37.106	4.3	0.0	0.0	1.98	314.7«	2043.7
9.033	20.09	22.30	35.168	37.106	4.3	0.0	0.0	1.66	264.3«	2043.7
9.034	19.86	22.70	34.943	37.106	4.3	0.0	0.0	2.68	426.1«	2043.7
9.035	19.70	22.99	33.815	37.106	4.3	0.0	0.0	3.05	485.5«	2043.7
9.036	19.45	23.44	32.622	37.106	4.3	0.0	0.0	1.19	189.3«	2043.7

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Manhole Schedules for Catchment C

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam.,L*W (mm)	Pipe Out PN	Pipe Out Invert Level (m)	Pipe Out Diameter (mm)	Pipes In PN	Pipes In Invert Level (m)	Pipes In Diameter (mm)	Backdrop (mm)
OB9	68.920	1.200	Open Manhole	3000	9.000	67.720	-4				
S39	69.855	2.255	Open Manhole	3000	9.001	67.600	750	9.000	67.600	-4	
OB10	69.855	1.200	Open Manhole	1500	10.000	68.655	375				
S40 (BD)	69.855	2.285	Open Manhole	1800	9.002	67.570	750	9.001	67.570	750	
								10.000	68.640	375	695
S41	68.855	1.390	Open Manhole	1800	9.003	67.465	750	9.002	67.465	750	
Tank 6 - Full Retention	70.000	2.815	Open Manhole	1800	9.004	67.185	750	9.003	67.185	750	
S42	70.000	2.870	Open Manhole	1800	9.005	67.130	750	9.004	67.130	750	
4A	80.350	1.000	Open Manhole	1200	11.000	79.350	300				
4B	75.350	1.000	Open Manhole	1200	11.001	74.350	300	11.000	74.350	300	
SDP004	70.350	2.450	Open Manhole	1200	11.002	67.900	300	11.001	69.350	300	1450
S43 (V)	69.270	1.820	Open Manhole	1500	11.003	67.450	525	11.002	67.450	300	
3A	80.350	1.000	Open Manhole	1200	12.000	79.350	300				
3B	75.350	1.000	Open Manhole	1200	12.001	74.350	300	12.000	74.350	300	
SDP003	70.350	2.450	Open Manhole	1500	12.002	67.900	375	12.001	69.350	300	1375
S44 (V)	68.952	1.612	Open Manhole	1500	11.004	67.340	600	11.003	67.340	525	
								12.002	67.735	375	170
2A	80.350	1.000	Open Manhole	1200	13.000	79.350	300				
2B	75.350	1.000	Open Manhole	1200	13.001	74.350	300	13.000	74.350	300	
SDP002	70.350	2.450	Open Manhole	1500	13.002	67.900	375	13.001	69.350	300	1375
S45 (V)	68.952	1.717	Open Manhole	1800	11.005	67.235	825	11.004	67.235	600	
								13.002	67.845	375	160
1A	80.350	1.000	Open Manhole	1200	14.000	79.350	300				
1B	75.350	1.000	Open Manhole	1200	14.001	74.350	300	14.000	74.350	300	
SDP001	70.350	2.450	Open Manhole	1500	14.002	67.900	375	14.001	69.350	300	1375
S46 (V)	69.315	2.190	Open Manhole	1800	11.006	67.125	825	11.005	67.125	825	
								14.002	67.845	375	270
S47 (V)	69.315	2.280	Open Manhole	1800	11.007	67.035	825	11.006	67.035	825	
S48	70.000	3.105	Open Manhole	1800	9.006	66.895	825	9.005	66.895	750	
								11.007	66.895	825	
S49	70.000	3.275	Open Manhole	1800	9.007	66.725	825	9.006	66.725	825	
OB14	68.890	1.200	Open Manhole	1500	15.000	67.690	375				
OB13	68.890	1.170	Open Manhole	1500	16.000	67.720	375				
S50a	69.120	1.420	Open Manhole	1500	16.001	67.700	375	16.000	67.700	375	
S50	69.235	1.681	Open Manhole	1500	15.001	67.554	375	15.000	67.554	375	
								16.001	67.554	375	
OB11	68.890	1.170	Open Manhole	1200	17.000	67.720	300				
S51	69.235	1.811	Open Manhole	1500	15.002	67.424	375	15.001	67.424	375	

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Manhole Schedules for Catchment C

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam.,L*W (mm)	Pipe Out PN	Pipe Out Invert Level (m)	Pipe Out Diameter (mm)	Pipes In PN	Pipes In Invert Level (m)	Pipes In Diameter (mm)	Backdrop (mm)
								17.000	67.580	300	81
OB12	68.890	1.170	Open Manhole	1500	18.000	67.720	375				
S52	69.235	1.545	Open Manhole	1500	18.001	67.690	375	18.000	67.690	375	
S53	69.235	1.907	Open Manhole	1500	15.003	67.328	525	15.002	67.328	375	
								18.001	67.594	375	116
Tank 7 - Full Retention	70.000	2.847	Open Manhole	1500	15.004	67.153	525	15.003	67.153	525	
S54	70.000	3.446	Open Manhole	2100	9.008	66.554	900	9.007	66.554	825	
								15.004	67.143	525	214
S55	70.000	3.541	Open Manhole	2100	9.009	66.459	900	9.008	66.459	900	
KD17	69.440	1.200	Open Manhole	1200	19.000	68.240	150				
S56	70.000	3.761	Open Manhole	2100	9.010	66.239	900	9.009	66.239	900	
								19.000	66.240	150	
S57	70.000	3.816	Open Manhole	2100	9.011	66.184	900	9.010	66.184	900	
10A	80.350	1.000	Open Manhole	1200	20.000	79.350	300				
10B	75.350	1.000	Open Manhole	1200	20.001	74.350	300	20.000	74.350	300	
SDP010	70.350	2.450	Open Manhole	1500	20.002	67.900	375	20.001	69.350	300	1375
S59 (V)	70.150	2.275	Open Manhole	1500	20.003	67.875	375	20.002	67.875	375	
S58 (V)	70.150	2.275	Open Manhole	1200	21.000	67.875	300				
S60	70.000	3.880	Open Manhole	2100	9.012	66.120	900	9.011	66.120	900	
								20.003	67.745	375	1100
								21.000	67.745	300	1025
KD18	69.925	1.200	Open Manhole	1200	22.000	68.725	225				
KD19	69.440	1.200	Open Manhole	1200	22.001	68.240	300	22.000	68.675	225	360
KD20	69.095	0.910	Open Manhole	1500	22.002	68.185	375	22.001	68.185	300	
KD21	69.095	1.200	Open Manhole	1500	22.003	67.895	450	22.002	68.130	375	160
KD22	68.750	1.200	Open Manhole	1500	23.000	67.550	375				
S61	68.800	1.260	Open Manhole	1500	22.004	67.540	450	22.003	67.840	450	300
								23.000	67.540	375	
KD23	68.170	1.200	Open Manhole	1500	24.000	66.970	375				
S62	68.800	1.855	Open Manhole	1500	22.005	66.945	525	22.004	67.460	450	440
								24.000	66.945	375	
Tank 8 - Bypass	68.800	1.960	Open Manhole	1500	22.006	66.840	600	22.005	66.840	525	
S63	68.900	3.065	Open Manhole	2100	9.013	65.835	900	9.012	65.835	900	
								22.006	66.810	600	675
KD24	68.385	1.200	Open Manhole	1200	25.000	67.185	225				
S64	68.425	2.645	Open Manhole	2100	9.014	65.780	900	9.013	65.780	900	
								25.000	67.175	225	720
Ex SC15	70.000	4.428	Open Manhole	2100	9.015	65.572	900	9.014	65.572	900	

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Manhole Schedules for Catchment C

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam.,L*W (mm)	Pipe Out PN	Pipe Out Invert Level (m)	Pipe Out Diameter (mm)	Pipes In PN	Pipes In Invert Level (m)	Pipes In Diameter (mm)	Backdrop (mm)
C16a	68.110	1.500	Open Manhole	1200	26.000	66.610	300				
1	71.600	1.600	Open Manhole	1200	27.000	70.000	300				
2	71.180	1.850	Open Manhole	1500	27.001	69.330	375	27.000	69.405	300	
3	71.410	2.452	Open Manhole	1500	27.002	68.958	450	27.001	69.033	375	
4	71.410	2.674	Open Manhole	1500	27.003	68.736	450	27.002	68.736	450	
5	71.490	3.172	Open Manhole	1500	27.004	68.318	450	27.003	68.318	450	
6	70.600	3.317	Open Manhole	1500	27.005	67.283	450	27.004	67.283	450	
7	69.530	3.047	Open Manhole	1500	27.006	66.483	450	27.005	66.483	450	
8	69.030	3.040	Open Manhole	1500	27.007	65.990	600	27.006	66.141	450	1
C16	68.690	3.100	Open Manhole	1500	26.001	65.590	600	26.000	65.890	300	
								27.007	65.590	600	
C17	69.130	4.503	Open Manhole	2100	9.016	64.627	900	9.015	64.627	900	
								26.001	64.927	600	
C18	69.612	5.931	Open Manhole	2100	9.017	63.681	900	9.016	63.681	900	
OB1	68.920	1.275	Open Manhole	3000	28.000	67.645	-5				
S1	69.855	2.330	Open Manhole	3000	28.001	67.525	750	28.000	67.525	-5	
OB2	69.795	1.500	Open Manhole	1500	29.000	68.295	375				
S2 (BD)	69.855	2.375	Open Manhole	1800	28.002	67.480	750	28.001	67.480	750	
								29.000	68.275	375	420
OB3	69.340	1.425	Open Manhole	1500	30.000	67.915	375				
S3	69.855	2.540	Open Manhole	1800	28.003	67.315	750	28.002	67.315	750	
								30.000	67.835	375	145
Tank 1 -Full Retention	70.000	2.830	Open Manhole	1800	28.004	67.170	750	28.003	67.170	750	
S4	70.000	2.870	Open Manhole	1800	28.005	67.130	750	28.004	67.130	750	
5A	80.350	1.000	Open Manhole	1200	31.000	79.350	300				
5B	75.350	1.000	Open Manhole	1200	31.001	74.350	300	31.000	74.350	300	
SDP005	70.350	2.450	Open Manhole	1500	31.002	67.900	450	31.001	69.350	300	1300
S5 (V)	68.952	1.107	Open Manhole	1500	31.003	67.845	525	31.002	67.845	450	
6A	80.350	1.000	Open Manhole	1200	32.000	79.350	300				
6B	75.350	1.000	Open Manhole	1200	32.001	74.350	300	32.000	74.350	300	
SDP006	70.350	2.450	Open Manhole	1500	32.002	67.900	375	32.001	69.350	300	1375
S6 (V)	68.952	1.212	Open Manhole	1500	31.004	67.740	600	31.003	67.740	525	
								32.002	67.740	375	
7A	80.350	1.000	Open Manhole	1200	33.000	79.350	300				
7B	75.350	1.000	Open Manhole	1200	33.001	74.350	300	33.000	74.350	300	
SDP007	70.350	2.450	Open Manhole	1500	33.002	67.900	375	33.001	69.350	300	1375
S7 (V)	68.952	1.317	Open Manhole	1500	31.005	67.635	600	31.004	67.635	600	
								33.002	67.845	375	

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Manhole Schedules for Catchment C

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam.,L*W (mm)	Pipe Out PN	Pipe Out Invert Level (m)	Pipe Out Diameter (mm)	Pipes In PN	Pipes In Invert Level (m)	Pipes In Diameter (mm)	Backdrop (mm)
8A	80.350	1.000	Open Manhole	1200	34.000	79.350	300				
8B	75.350	1.000	Open Manhole	1200	34.001	74.350	300	34.000	74.350	300	
SDP008	70.350	2.450	Open Manhole	1500	34.002	67.900	375	34.001	69.350	300	1375
S8 (V)	68.952	1.437	Open Manhole	1500	31.006	67.515	600	31.005	67.515	600	
								34.002	67.845	375	105
S9 (V)	69.850	2.850	Open Manhole	2100	28.006	67.000	900	28.005	67.000	750	
								31.006	67.320	600	20
9A	80.350	1.000	Open Manhole	1500	35.000	79.350	375				
9B	75.350	1.000	Open Manhole	1500	35.001	74.350	375	35.000	74.350	375	
SDP009	70.350	2.450	Open Manhole	1500	35.002	67.900	375	35.001	69.350	375	1450
S10 (V)	70.130	2.245	Open Manhole	1500	35.003	67.885	375	35.002	67.885	375	
S11	70.092	3.162	Open Manhole	2100	28.007	66.930	900	28.006	66.930	900	
								35.003	67.800	375	345
S12	70.130	3.340	Open Manhole	2100	28.008	66.790	900	28.007	66.790	900	
S13	70.130	3.510	Open Manhole	2100	28.009	66.620	900	28.008	66.620	900	
OB4	69.905	1.500	Open Manhole	1500	36.000	68.405	450				
S14	70.025	1.645	Open Manhole	1500	36.001	68.380	450	36.000	68.380	450	
OB5	69.955	1.200	Open Manhole	1200	37.000	68.755	225				
S15	70.025	1.360	Open Manhole	1200	37.001	68.665	225	37.000	68.665	225	
OB6	69.905	1.200	Open Manhole	1500	38.000	68.705	450				
S16	70.025	1.422	Open Manhole	1500	37.002	68.603	450	37.001	68.603	225	
								38.000	68.680	450	77
S17	70.025	1.925	Open Manhole	1500	36.002	68.100	450	36.001	68.100	450	
								37.002	68.563	450	463
Tank 2 - Full Retention	70.015	2.005	Open Manhole	1500	36.003	68.010	450	36.002	68.010	450	
S18 (BD)	70.130	3.615	Open Manhole	2100	28.010	66.515	900	28.009	66.515	900	
								36.003	67.985	450	1020
KD1	70.240	1.500	Open Manhole	1200	39.000	68.740	225				
S19	70.000	1.295	Open Manhole	1200	39.001	68.705	225	39.000	68.705	225	
OB7	70.035	1.200	Open Manhole	1500	40.000	68.835	450				
S20	70.158	1.718	Open Manhole	1500	39.002	68.440	450	39.001	68.440	225	
								40.000	68.800	450	360
OB8	70.035	1.200	Open Manhole	1500	41.000	68.835	375				
S21	70.158	1.358	Open Manhole	1500	41.001	68.800	375	41.000	68.800	375	
S22	70.158	2.123	Open Manhole	1500	39.003	68.035	450	39.002	68.035	450	
								41.001	68.725	375	615
TANK 3 - Full Retention	70.092	2.122	Open Manhole	1500	39.004	67.970	450	39.003	67.970	450	
S23	70.130	3.710	Open Manhole	2100	28.011	66.420	1050	28.010	66.420	900	

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Manhole Schedules for Catchment C

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam.,L*W (mm)	Pipe Out PN	Pipe Out Invert Level (m)	Pipe Out Diameter (mm)	Pipes In PN	Pipes In Invert Level (m)	Pipes In Diameter (mm)	Backdrop (mm)
								39.004	67.905	450	885
S24	70.130	3.780	Open Manhole	2100	28.012	66.350	1050	28.011	66.350	1050	
KD2	68.625	1.200	Open Manhole	1200	42.000	67.425	300				
S25 (BD)	68.860	2.820	Open Manhole	2100	28.013	66.040	1050	28.012	66.040	1050	
								42.000	67.405	300	615
11A	80.350	1.000	Open Manhole	1200	43.000	79.350	300				
11B	75.350	1.000	Open Manhole	1200	43.001	74.350	300	43.000	74.350	300	
SDP011	70.350	2.450	Open Manhole	1500	43.002	67.900	375	43.001	69.350	300	1375
S26 (V)	70.075	2.185	Open Manhole	1500	43.003	67.890	375	43.002	67.890	375	
S27 (V)	70.075	2.185	Open Manhole	1500	44.000	67.890	375				
S28	70.325	2.495	Open Manhole	1500	43.004	67.830	450	43.003	67.830	375	
								44.000	67.830	375	
S29	68.700	2.730	Open Manhole	2100	28.014	65.970	1050	28.013	65.970	1050	
								43.004	67.680	450	1110
KD3	67.915	1.200	Open Manhole	1200	45.000	66.715	300				
S30	68.300	2.440	Open Manhole	2100	28.015	65.860	1050	28.014	65.860	1050	
								45.000	66.695	300	85
KD4	67.940	1.200	Open Manhole	1200	46.000	66.740	300				
KD9	67.970	1.240	Open Manhole	1200	46.001	66.730	300	46.000	66.730	300	
KD5	69.785	1.200	Open Manhole	1500	47.000	68.585	450				
KD6	69.440	1.200	Open Manhole	1500	47.001	68.240	450	47.000	68.525	450	285
KD7	69.095	0.915	Open Manhole	1500	47.002	68.180	450	47.001	68.180	450	
KD8	68.515	1.200	Open Manhole	1500	47.003	67.315	600	47.002	67.720	450	255
S31	68.050	1.335	Open Manhole	1500	46.002	66.715	600	46.001	66.715	300	
								47.003	67.265	600	550
Tank 4 - By Pass	68.050	1.410	Open Manhole	1500	46.003	66.640	600	46.002	66.640	600	
S32	68.050	1.425	Open Manhole	1500	46.004	66.625	600	46.003	66.625	600	
S33	68.208	2.528	Open Manhole	2100	28.016	65.680	1050	28.015	65.680	1050	
								46.004	66.580	600	450
S34	68.650	3.110	Open Manhole	2100	28.017	65.540	1050	28.016	65.540	1050	
KD10	68.375	1.200	Open Manhole	1200	48.000	67.175	225				
S35	68.455	1.290	Open Manhole	1200	48.001	67.165	225	48.000	67.165	225	
KD11	69.785	1.200	Open Manhole	1200	49.000	68.585	300				
KD12	69.440	0.915	Open Manhole	1500	49.001	68.525	375	49.000	68.525	300	
KD13	69.095	1.200	Open Manhole	1500	49.002	67.895	450	49.001	68.465	375	495
KD14	68.750	1.200	Open Manhole	1500	49.003	67.550	525	49.002	67.835	450	210
KD15	68.375	1.200	Open Manhole	1200	50.000	67.175	225				
S36	68.455	1.400	Open Manhole	1500	48.002	67.055	525	48.001	67.055	225	

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Manhole Schedules for Catchment C

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam.,L*W (mm)	Pipe Out PN	Pipe Out Invert Level (m)	Pipe Out Diameter (mm)	Pipes In PN	Pipes In Invert Level (m)	Pipes In Diameter (mm)	Backdrop (mm)
								49.003	67.495	525	440
								50.000	67.055	225	
Tank 5 - Bypass	68.455	1.470	Open Manhole	1500	48.003	66.985	525	48.002	66.985	525	
S37	68.455	1.485	Open Manhole	1500	48.004	66.970	525	48.003	66.970	525	
S38 (P)	68.625	3.285	Open Manhole	2100	28.018	65.340	1050	28.017	65.340	1050	
								48.004	66.930	525	1065
Ex SC41	70.000	5.000	Open Manhole	2100	28.019	65.000	900	28.018	65.155	1050	305
C44	69.398	6.551	Open Manhole	2100	9.018	62.847	900	9.017	62.847	900	
								28.019	62.847	900	
C19	83.721	1.050	Open Manhole	1200	51.000	82.671	150				
C20	82.256	1.050	Open Manhole	1200	51.001	81.206	150	51.000	81.206	150	
C21	80.753	1.050	Open Manhole	1200	51.002	79.703	150	51.001	79.703	150	
C22	79.479	1.050	Open Manhole	1200	51.003	78.429	150	51.002	78.429	150	
C23	79.479	3.254	Open Manhole	1200	51.004	76.225	225	51.003	76.300	150	
C24	77.829	2.016	Open Manhole	1200	51.005	75.813	225	51.004	75.813	225	
OB1	76.990	1.136	Open Manhole	1200	52.000	75.854	150				
PPIC1	77.050	1.246	Open Manhole	1200	52.001	75.804	150	52.000	75.804	150	
PPIC2	77.020	1.376	Open Manhole	1200	52.002	75.644	150	52.001	75.644	150	
BI RWP	77.000	1.356	Open Manhole	1200	53.000	75.644	150				
Ex. SC25	76.921	1.402	Open Manhole	1200	52.003	75.519	225	52.002	75.594	150	
								53.000	75.594	150	
Ex. SC26	76.304	1.450	Open Manhole	1200	52.004	74.854	300	52.003	74.929	225	
New gully	75.580	0.370	Open Manhole	1200	54.000	75.210	150				
Separator	76.300	1.315	Open Manhole	1200	54.001	74.985	150	54.000	75.085	150	100
OB2	76.140	1.035	Open Manhole	1200	55.000	75.105	150				
MS RWP	76.625	1.620	Open Manhole	1200	56.000	75.005	150				
PS3	76.550	1.680	Open Manhole	1200	54.002	74.870	225	54.001	74.945	150	
								55.000	74.945	150	
								56.000	74.945	150	
OB3	76.575	1.630	Open Manhole	1200	57.000	74.945	150				
PS4	76.575	1.895	Open Manhole	1200	52.005	74.680	300	52.004	74.680	300	
								54.002	74.755	225	
								57.000	74.830	150	
C27	76.336	1.716	Open Manhole	1200	51.006	74.620	300	51.005	74.695	225	
								52.005	74.620	300	
C28	74.920	1.420	Open Manhole	1200	51.007	73.500	300	51.006	73.500	300	
C29	75.557	1.475	Open Manhole	1200	58.000	74.082	150				
C30	74.373	1.350	Open Manhole	1200	58.001	73.023	150	58.000	73.023	150	

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Manhole Schedules for Catchment C

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam.,L*W (mm)	Pipe Out PN	Pipe Out Invert Level (m)	Pipe Out Diameter (mm)	Pipes In PN	Pipes In Invert Level (m)	Pipes In Diameter (mm)	Backdrop (mm)
C31	73.349	1.434	Open Manhole	1200	58.002	71.915	225	58.001	71.990	150	
C32	72.668	1.668	Open Manhole	1500	58.003	71.000	375	58.002	71.150	225	
C33	72.929	2.012	Open Manhole	1500	51.008	70.917	375	51.007	70.992	300	
								58.003	70.917	375	
C34	69.716	1.575	Open Manhole	1500	51.009	68.141	375	51.008	68.141	375	
C35	66.836	1.650	Open Manhole	1500	51.010	65.186	450	51.009	65.261	375	
C36	66.255	1.800	Open Manhole	1500	51.011	64.455	600	51.010	64.605	450	
C37	66.211	1.892	Open Manhole	1500	51.012	64.319	600	51.011	64.319	600	
C38	66.775	2.591	Open Manhole	1500	51.013	64.184	600	51.012	64.184	600	
C39	68.127	4.243	Open Manhole	1500	51.014	63.884	600	51.013	63.884	600	
C40	69.594	6.010	Open Manhole	1500	51.015	63.584	600	51.014	63.584	600	
C46	69.215	7.173	Open Manhole	2100	9.019	62.042	900	9.018	62.042	900	
								51.015	62.342	600	
C47	65.851	5.270	Open Manhole	2100	9.020	60.581	900	9.019	60.581	900	
OB1	66.530	1.070	Open Manhole	1200	59.000	65.460	225				
OB2	66.465	1.315	Open Manhole	1200	60.000	65.150	300				
S1	66.570	1.620	Open Manhole	1200	59.001	64.950	300	59.000	65.100	225	75
								60.000	64.950	300	
OB3	66.465	1.825	Open Manhole	1500	61.000	64.640	450				
S2	66.575	2.130	Open Manhole	1500	59.002	64.445	600	59.001	64.745	300	
								61.000	64.595	450	
OB4	66.610	1.245	Open Manhole	1200	62.000	65.365	225				
S3	66.715	1.430	Open Manhole	1200	62.001	65.285	225	62.000	65.285	225	
OB5	66.610	1.810	Open Manhole	1500	63.000	64.800	450				
S4	66.715	1.965	Open Manhole	1500	62.002	64.750	450	62.001	64.975	225	
								63.000	64.750	450	
OB6	66.610	1.840	Open Manhole	1200	64.000	64.770	300				
S5	66.715	2.315	Open Manhole	1500	62.003	64.400	600	62.002	64.550	450	
								64.000	64.700	300	
S6	66.715	2.415	Open Manhole	1500	59.003	64.300	600	59.002	64.300	600	
								62.003	64.300	600	
OB7	67.085	1.085	Open Manhole	1200	65.000	66.000	150				
S8	67.320	1.585	Open Manhole	1200	65.001	65.735	150	65.000	65.735	150	
OB8	67.085	1.765	Open Manhole	1200	66.000	65.320	225				
S9	67.320	2.105	Open Manhole	1200	65.002	65.215	225	65.001	65.290	150	
								66.000	65.215	225	
OB9	67.085	2.425	Open Manhole	1200	67.000	64.660	225				
S7	67.320	3.145	Open Manhole	1500	59.004	64.175	600	59.003	64.175	600	

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Manhole Schedules for Catchment C

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam.,L*W (mm)	Pipe Out PN	Pipe Out Invert Level (m)	Pipe Out Diameter (mm)	Pipes In PN	Pipes In Invert Level (m)	Pipes In Diameter (mm)	Backdrop (mm)
								65.002	64.550	225	
								67.000	64.550	225	
OB10	66.940	2.200	Open Manhole	1200	68.000	64.740	150				
S10	67.175	2.545	Open Manhole	1200	68.001	64.630	150	68.000	64.630	150	
S11	67.175	3.225	Open Manhole	1800	59.005	63.950	750	59.004	64.100	600	
								68.001	64.550	150	
S12	67.050	3.115	Open Manhole	1800	59.006	63.935	750	59.005	63.935	750	
FRS1	67.065	3.245	Open Manhole	1800	59.007	63.820	750	59.006	63.920	750	100
S13	67.125	3.330	Open Manhole	1800	59.008	63.795	750	59.007	63.795	750	
CP5	67.070	1.420	Open Manhole	1200	69.000	65.650	225				
G1	66.385	1.865	Open Manhole	1200	70.000	64.520	150				
S14	67.000	3.230	Open Manhole	1800	59.009	63.770	750	59.008	63.770	750	
								69.000	64.295	225	
								70.000	64.370	150	
CP8	67.215	2.175	Open Manhole	1200	71.000	65.040	225				
AT1	69.000	5.290	Open Manhole	1800	59.010	63.710	750	59.009	63.710	750	
								71.000	64.785	225	550
S15	66.050	2.390	Open Manhole	1800	59.011	63.660	300	59.010	63.660	750	
SSFD	63.720	1.150	Open Manhole	1200	72.000	62.570	150				
Ex SC72a	63.720	1.150	Open Manhole	1200	59.012	62.570	150	59.011	62.570	300	
								72.000	62.570	150	
Spur	64.435	4.730	Junction		9.021	59.705	900	9.020	60.155	900	450
								59.012	60.455	150	
C48	63.019	4.209	Open Manhole	2100	9.022	59.260	900	9.021	58.810	900	
C49	60.634	3.431	Open Manhole	2100	9.023	57.203	900	9.022	57.203	900	
C50	57.788	3.038	Open Manhole	2100	9.024	54.750	900	9.023	54.750	900	
C51	55.447	2.240	Open Manhole	2100	9.025	53.207	900	9.024	53.207	900	
SW01	58.600	0.750	Open Manhole	1200	73.000	57.850	150				
SW02	58.370	0.939	Open Manhole	1200	73.001	57.431	225	73.000	57.506	150	
SW02A	64.330	1.650	Open Manhole	1200	74.000	62.680	150				
SW03	57.754	0.954	Open Manhole	1200	73.002	56.800	300	73.001	56.875	225	
								74.000	57.004	150	54
SW04	57.214	1.003	Open Manhole	1200	73.003	56.211	300	73.002	56.211	300	
SW05	56.600	1.348	Open Manhole	1200	73.004	55.252	300	73.003	55.252	300	
SW05A	56.073	0.750	Open Manhole	1200	75.000	55.323	150				
SW06	55.886	1.201	Open Manhole	1500	73.005	54.685	375	73.004	54.760	300	
								75.000	54.910	150	
SW07	55.692	1.486	Open Manhole	1500	73.006	54.206	375	73.005	54.206	375	

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Manhole Schedules for Catchment C

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam.,L*W (mm)	Pipe Out PN	Pipe Out Invert Level (m)	Pipe Out Diameter (mm)	Pipes In PN	Pipes In Invert Level (m)	Pipes In Diameter (mm)	Backdrop (mm)
SW08	55.529	1.906	Open Manhole	1500	73.007	53.623	375	73.006	53.623	375	
SW09	55.422	2.189	Open Manhole	1500	73.008	53.233	375	73.007	53.233	375	
SW10	55.857	1.800	Open Manhole	1500	76.000	54.057	600				
SW11	55.738	1.977	Open Manhole	1800	76.001	53.761	750	76.000	53.911	600	
SW12	55.647	1.997	Open Manhole	1800	76.002	53.650	750	76.001	53.650	750	
SW13	55.528	2.161	Open Manhole	1800	76.003	53.367	750	76.002	53.367	750	
SW14	55.484	2.307	Open Manhole	1800	76.004	53.177	750	76.003	53.177	750	
SW15	55.612	2.971	Open Manhole	1800	76.005	52.641	750	76.004	52.841	750	200
SW16	55.589	3.244	Open Manhole	2100	73.009	52.345	900	73.008	52.870	375	
								76.005	52.548	750	53
SW17	58.606	0.706	Open Manhole	1200	77.000	57.900	225				
SW18	58.445	1.032	Open Manhole	1200	77.001	57.413	225	77.000	57.413	225	
SW19	57.723	1.210	Open Manhole	1200	77.002	56.513	225	77.001	56.513	225	
SW20	57.200	0.700	Open Manhole	1200	78.000	56.500	150				
SW21	57.444	1.448	Open Manhole	1200	77.003	55.996	225	77.002	55.996	225	
								78.000	56.071	150	
SW22	57.084	1.584	Open Manhole	1200	77.004	55.500	225	77.003	55.500	225	
Gully	56.774	0.974	Open Manhole	600	79.000	55.800	150				
SW23	56.562	2.126	Open Manhole	1200	77.005	54.436	225	77.004	54.436	225	
								79.000	54.511	150	
SW24	55.645	1.115	Open Manhole	1200	80.000	54.530	150				
SW25	56.340	2.022	Open Manhole	1200	80.001	54.318	150	80.000	54.318	150	
SW26	56.262	2.026	Open Manhole	1200	80.002	54.236	150	80.001	54.236	150	
SW27	56.310	2.549	Open Manhole	1200	77.006	53.761	300	77.005	53.836	225	
								80.002	53.911	150	
SW28	56.044	2.389	Open Manhole	1200	77.007	53.655	300	77.006	53.655	300	
SW29	55.892	2.307	Open Manhole	1200	77.008	53.585	300	77.007	53.585	300	
SW30	55.503	3.445	Open Manhole	2100	73.010	52.058	900	73.009	52.058	900	
								77.008	52.658	300	
SW31	55.327	4.141	Open Manhole	2100	73.011	51.186	900	73.010	51.186	900	
SW32	55.648	5.192	Open Manhole	2100	73.012	50.456	900	73.011	50.456	900	
HD01	57.100	1.050	Open Manhole	1200	81.000	56.050	150				
HD02	56.041	1.067	Open Manhole	1200	81.001	54.974	150	81.000	54.974	150	
HD03	55.655	1.356	Open Manhole	1200	81.002	54.299	150	81.001	54.299	150	
HD04	54.782	1.381	Open Manhole	1200	81.003	53.401	150	81.002	53.401	150	
36	51.350	1.656	Open Manhole	2100	73.013	49.694	1050	73.012	49.844	900	
								81.003	50.594	150	
C52	51.156	2.550	Open Manhole	2400	9.026	48.606	1200	9.025	48.906	900	

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Manhole Schedules for Catchment C

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam.,L*W (mm)	Pipe Out PN	Pipe Out Invert Level (m)	Pipe Out Diameter (mm)	Pipes In PN	Pipes In Invert Level (m)	Pipes In Diameter (mm)	Backdrop (mm)
								73.013	48.756	1050	
C53	46.900	2.580	Open Manhole	2100	9.027	44.320	1200	9.026	44.320	1200	
C54	45.580	3.150	Open Manhole	2400	9.028	42.430	1200	9.027	42.430	1200	
H20C	42.300	2.500	Open Manhole	3000	9.029	39.800	2100	9.028	41.000	1200	300
C55a	42.230	1.050	Open Manhole	1200	82.000	41.180	225				
C55b	45.150	1.350	Open Manhole	1200	83.000	43.800	150				
C55	43.800	3.036	Open Manhole	1200	82.001	40.765	225	82.000	40.839	225	74
								83.000	40.764	150	
56	44.900	4.420	Open Manhole	1200	82.002	40.480	300	82.001	40.481	225	
C57	44.300	4.085	Open Manhole	1200	82.003	40.215	300	82.002	40.215	300	
H7C	42.500	2.500	Open Manhole	1200	82.004	40.000	300	82.003	40.000	300	
BASIN C1	42.000	2.700	Open Manhole	3000	9.030	39.300	450	9.029	39.300	2100	
								82.004	39.300	300	
C59	38.600	2.100	Open Manhole	1500	9.031	36.500	450	9.030	36.500	450	
P2_29	42.400	1.800	Open Manhole	1500	84.000	40.600	600				
P2_30	42.343	1.826	Open Manhole	1500	84.001	40.517	600	84.000	40.517	600	
P2_31	42.162	1.682	Open Manhole	1800	84.002	40.480	600	84.001	40.480	600	
SC72	44.017	0.668	Open Manhole	1200	85.000	43.349	225				
SC73	43.907	0.923	Open Manhole	1200	85.001	42.984	225	85.000	42.984	225	
SC74	43.815	1.123	Open Manhole	1200	85.002	42.692	225	85.001	42.694	225	2
SC75	43.201	0.801	Open Manhole	1200	85.003	42.400	300	85.002	42.400	225	
SC76	43.103	1.153	Open Manhole	1500	85.004	41.950	450	85.003	42.100	300	
SC77	42.911	1.361	Open Manhole	1500	85.005	41.550	600	85.004	41.700	450	
SC78	42.668	1.370	Open Manhole	1500	85.006	41.298	600	85.005	41.298	600	
SC79	42.450	1.370	Open Manhole	1800	85.007	41.080	750	85.006	41.192	600	
SC80	42.222	1.442	Open Manhole	1800	85.008	40.780	750	85.007	40.780	750	
SC81	42.120	1.500	Open Manhole	1800	85.009	40.620	750	85.008	40.620	750	
SC82	42.609	2.136	Open Manhole	1800	85.010	40.473	750	85.009	40.473	750	
SC83	42.400	2.105	Open Manhole	1800	85.011	40.295	750	85.010	40.295	750	
P2_32	42.065	1.837	Open Manhole	1800	84.003	40.228	750	84.002	40.378	600	
								85.011	40.228	750	
P2_33	41.991	1.791	Open Manhole	1800	84.004	40.200	750	84.003	40.200	750	
P2_34	42.255	2.153	Open Manhole	1800	84.005	40.102	750	84.004	40.102	750	
P1 Slab	42.398	2.468	Open Manhole	1800	84.006	39.930	900	84.005	40.080	750	
C88	44.193	1.300	Open Manhole	1500	86.000	42.893	450				
C89	44.062	1.300	Open Manhole	1500	86.001	42.762	450	86.000	42.762	450	
C90	43.963	1.318	Open Manhole	1500	86.002	42.645	450	86.001	42.645	450	
C91	43.801	1.318	Open Manhole	1500	86.003	42.483	450	86.002	42.483	450	

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Manhole Schedules for Catchment C

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam.,L*W (mm)	Pipe Out PN	Pipe Out Invert Level (m)	Pipe Out Diameter (mm)	Pipes In PN	Pipes In Invert Level (m)	Pipes In Diameter (mm)	Backdrop (mm)
C92	43.639	1.318	Open Manhole	1500	86.004	42.321	450	86.003	42.321	450	
C93	43.417	1.318	Open Manhole	1500	86.005	42.099	450	86.004	42.099	450	
C94	43.195	1.318	Open Manhole	1500	86.006	41.877	450	86.005	41.877	450	
C95	43.004	1.318	Open Manhole	1500	86.007	41.686	450	86.006	41.686	450	
C96	42.813	1.318	Open Manhole	1500	86.008	41.495	450	86.007	41.495	450	
C97	42.622	1.318	Open Manhole	1500	86.009	41.304	450	86.008	41.304	450	
C87	42.450	0.850	Open Manhole	1200	87.000	41.600	150				
P2_1	44.315	1.350	Open Manhole	1200	88.000	42.965	150				
P2_2	44.251	1.350	Open Manhole	1200	88.001	42.901	150	88.000	42.901	150	
P2_3	44.154	1.350	Open Manhole	1200	88.002	42.804	150	88.001	42.804	150	
P2_4	44.141	1.404	Open Manhole	1200	88.003	42.737	150	88.002	42.737	150	
P2_5	56.568	1.350	Open Manhole	1200	89.000	55.218	150				
P2_6	43.748	1.605	Open Manhole	1200	88.004	42.143	300	88.003	42.293	150	
								89.000	42.293	150	
P2_7	43.614	1.543	Open Manhole	1200	88.005	42.071	300	88.004	42.072	300	1
P2_8	43.453	1.683	Open Manhole	1500	88.006	41.770	450	88.005	41.920	300	
P2_11	43.304	1.886	Open Manhole	1500	88.007	41.418	600	88.006	41.568	450	
P2_12	43.208	1.812	Open Manhole	1500	88.008	41.396	600	88.007	41.396	600	
P_13	43.102	1.849	Open Manhole	1500	88.009	41.253	600	88.008	41.253	600	
P2_14	42.969	2.006	Open Manhole	1800	88.010	40.963	750	88.009	41.113	600	
P2_15	42.830	2.007	Open Manhole	1800	88.011	40.823	750	88.010	40.823	750	
P2_16	42.683	2.005	Open Manhole	1800	88.012	40.678	750	88.011	40.679	750	1
P2_17	42.781	2.268	Open Manhole	2100	88.013	40.513	900	88.012	40.662	750	
P2_18	42.724	2.267	Open Manhole	2100	88.014	40.457	900	88.013	40.457	900	
P2_19	42.835	2.410	Open Manhole	2100	88.015	40.425	900	88.014	40.425	900	
P2_20	43.007	2.610	Open Manhole	2100	88.016	40.398	900	88.015	40.397	900	
P2_21	42.959	2.611	Open Manhole	2100	88.017	40.348	900	88.016	40.348	900	
P2_22	43.070	2.753	Open Manhole	2100	88.018	40.317	900	88.017	40.317	900	
P2_23	43.218	2.925	Open Manhole	2100	88.019	40.293	900	88.018	40.293	900	
P2_24	43.168	2.964	Open Manhole	2100	88.020	40.204	900	88.019	40.204	900	
P2_25	43.164	2.990	Open Manhole	2100	88.021	40.174	900	88.020	40.174	900	
P2_25A	43.078	2.996	Open Manhole	2100	88.022	40.082	900	88.021	40.082	900	
P2_26	42.941	2.994	Open Manhole	2100	88.023	39.947	900	88.022	39.947	900	
P2_26A	42.801	2.992	Open Manhole	2100	88.024	39.809	900	88.023	39.809	900	
P2_27	42.787	2.993	Open Manhole	2100	88.025	39.794	900	88.024	39.794	900	
P2_28	42.657	2.995	Open Manhole	2100	88.026	39.662	900	88.025	39.662	900	
P2_28A	42.181	2.665	Open Manhole	2100	88.027	39.516	900	88.026	39.516	900	
246	42.490	3.020	Open Manhole	2100	88.028	39.470	900	88.027	39.470	900	

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Manhole Schedules for Catchment C

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam.,L*W (mm)	Pipe Out PN	Pipe Out Invert Level (m)	Pipe Out Diameter (mm)	Pipes In PN	Pipes In Invert Level (m)	Pipes In Diameter (mm)	Backdrop (mm)
C98	42.480	3.038	Open Manhole	2100	86.010	39.442	900	86.009	41.113	450	1221
								87.000	41.432	150	1240
								88.028	39.442	900	
C65	42.458	3.358	Open Manhole	2400	84.007	39.100	1200	84.006	39.919	900	519
								86.010	39.393	900	
C66	38.800	1.850	Open Manhole	2400	84.008	36.950	1200	84.007	36.950	1200	
BASIN C3	38.500	2.620	Open Manhole	2400	9.032	35.880	450	9.031	36.250	450	370
								84.008	36.600	1200	1470
C68	36.717	1.549	Open Manhole	1500	9.033	35.168	450	9.032	35.168	450	
C69	36.300	1.357	Open Manhole	1500	9.034	34.943	450	9.033	34.943	450	
C70	34.865	1.050	Open Manhole	1500	9.035	33.815	450	9.034	33.815	450	
C71	33.672	1.050	Open Manhole	1500	9.036	32.622	450	9.035	32.622	450	
C OUTFALL	33.425	0.913	Open Manhole	450		OUTFALL		9.036	32.512	450	

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
OB9	446859.278	326497.180	446859.278	326497.180	Required	
S39	446859.278	326461.800	446859.278	326461.800	Required	
OB10	446848.709	326466.322	446848.709	326466.322	Required	
S40 (BD)	446848.709	326461.800	446848.709	326461.800	Required	
S41	446817.315	326461.800	446817.315	326461.800	Required	
Tank 6 - Full Retention	446758.656	326461.800	446758.656	326461.800	Required	
S42	446737.956	326461.800	446737.956	326461.800	Required	
SDP004	446903.183	326516.670	446903.183	326516.670	Required	

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Manhole Schedules for Catchment C

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
S43 (V)	446903.183	326500.717	446903.183	326500.717	Required	
SDP003	446870.704	326516.670	446870.704	326516.670	Required	
S44 (V)	446870.704	326500.717	446870.704	326500.717	Required	
SDP002	446839.104	326516.670	446839.104	326516.670	Required	
S45 (V)	446839.104	326500.717	446839.104	326500.717	Required	
SDP001	446807.073	326516.670	446807.073	326516.670	Required	
S46 (V)	446807.073	326500.717	446807.073	326500.717	Required	
S47 (V)	446773.678	326500.716	446773.678	326500.716	Required	
S48	446737.956	326500.717	446737.956	326500.717	Required	
S49	446737.956	326552.049	446737.956	326552.049	Required	
OB14	446770.295	326541.268	446770.295	326541.268	Required	
OB13	446770.295	326503.840	446770.295	326503.840	Required	
S50a	446764.337	326503.840	446764.337	326503.840	Required	
S50	446764.337	326541.268	446764.337	326541.268	Required	
OB11	446770.296	326574.482	446770.296	326574.482	Required	

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Manhole Schedules for Catchment C

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
S51	446764.337	326574.480	446764.337	326574.480	Required	
OB12	446770.296	326632.280	446770.296	326632.280	Required	
S52	446764.337	326632.281	446764.337	326632.281	Required	
S53	446764.337	326603.380	446764.337	326603.380	Required	
Tank 7 - Full Retention	446740.933	326603.381	446740.933	326603.381	Required	
S54	446737.956	326603.381	446737.956	326603.381	Required	
S55	446737.956	326632.281	446737.956	326632.281	Required	
KD17	446750.176	326672.511	446750.176	326672.511	Required	
S56	446737.956	326667.271	446737.956	326667.271	Required	
S57	446731.095	326682.070	446731.095	326682.070	Required	
SDP010	446809.785	326697.329	446809.785	326697.329	Required	
S59 (V)	446804.113	326698.432	446804.113	326698.432	Required	
S58 (V)	446804.113	326696.546	446804.113	326696.546	Required	
S60	446748.669	326690.265	446748.669	326690.265	Required	
KD18	446752.046	326704.076	446752.046	326704.076	Required	

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Manhole Schedules for Catchment C

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
KD19	446747.937	326718.990	446747.937	326718.990	Required	
KD20	446747.937	326736.000	446747.937	326736.000	Required	
KD21	446747.937	326753.010	446747.937	326753.010	Required	
KD22	446747.941	326770.020	446747.941	326770.020	Required	
S61	446747.938	326767.563	446747.938	326767.563	Required	
KD23	446723.737	326774.968	446723.737	326774.968	Required	
S62	446723.737	326767.563	446723.737	326767.563	Required	
Tank 8 - Bypass	446720.533	326767.563	446720.533	326767.563	Required	
S63	446709.670	326767.563	446709.670	326767.563	Required	
KD24	446707.658	326782.832	446707.658	326782.832	Required	
S64	446710.406	326783.388	446710.406	326783.388	Required	
Ex SC15	446710.880	326793.729	446710.880	326793.729	Required	
C16a	446604.342	326830.590	446604.342	326830.590	Required	
1	446658.052	326458.687	446658.052	326458.687	Required	
2	446717.598	326458.687	446717.598	326458.687	Required	

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Manhole Schedules for Catchment C

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
3	446717.598	326547.836	446717.598	326547.836	Required	
4	446717.598	326614.479	446717.598	326614.479	Required	
5	446717.498	326697.985	446717.498	326697.985	Required	
6	446676.320	326759.143	446676.320	326759.143	Required	
7	446676.309	326791.157	446676.309	326791.157	Required	
8	446676.309	326804.832	446676.309	326804.832	Required	
C16	446676.309	326830.590	446676.309	326830.590	Required	
C17	446741.245	326829.936	446741.245	326829.936	Required	
C18	446788.508	326831.388	446788.508	326831.388	Required	
OB1	446982.092	326497.180	446982.092	326497.180	Required	
S1	446982.092	326461.800	446982.092	326461.800	Required	
OB2	446995.464	326467.022	446995.464	326467.022	Required	
S2 (BD)	446995.464	326461.800	446995.464	326461.800	Required	
OB3	447054.622	326484.860	447054.622	326484.860	Required	
S3	447054.622	326461.800	447054.622	326461.800	Required	

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Manhole Schedules for Catchment C

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
Tank 1 -Full Retention	447077.328	326461.801	447077.328	326461.801	Required	
S4	447090.017	326461.800	447090.017	326461.800	Required	
SDP005	446933.714	326516.670	446933.714	326516.670	Required	
S5 (V)	446933.714	326500.717	446933.714	326500.717	Required	
SDP006	446965.314	326516.670	446965.314	326516.670	Required	
S6 (V)	446965.314	326500.717	446965.314	326500.717	Required	
SDP007	446996.914	326516.670	446996.914	326516.670	Required	
S7 (V)	446996.914	326500.717	446996.914	326500.717	Required	
SDP008	447032.694	326516.670	447032.694	326516.670	Required	
S8 (V)	447032.694	326500.717	447032.694	326500.717	Required	
S9 (V)	447090.263	326500.717	447090.263	326500.717	Required	
SDP009	447060.664	326516.670	447060.664	326516.670	Required	
S10 (V)	447065.818	326516.670	447065.818	326516.670	Required	
S11	447090.387	326520.898	447090.387	326520.898	Required	
S12	447092.636	326562.950	447092.636	326562.950	Required	

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Manhole Schedules for Catchment C

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
S13	447092.636	326614.121	447092.636	326614.121	Required	
OB4	447078.816	326562.950	447078.816	326562.950	Required	
S14	447071.811	326562.950	447071.811	326562.950	Required	
OB5	447043.018	326683.180	447043.018	326683.180	Required	
S15	447071.811	326675.989	447071.811	326675.989	Required	
OB6	447079.161	326657.680	447079.161	326657.680	Required	
S16	447071.811	326657.680	447071.811	326657.680	Required	
S17	447071.811	326646.355	447071.811	326646.355	Required	
Tank 2 - Full Retention	447085.838	326646.354	447085.838	326646.354	Required	
S18 (BD)	447092.636	326646.355	447092.636	326646.355	Required	
KD1	447106.951	326515.810	447106.951	326515.810	Required	
S19	447116.358	326519.186	447116.358	326519.186	Required	
OB7	447106.851	326599.186	447106.851	326599.186	Required	
S20	447116.358	326599.186	447116.358	326599.186	Required	
OB8	447106.851	326696.586	447106.851	326696.586	Required	

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Manhole Schedules for Catchment C

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
S21	447116.358	326696.586	447116.358	326696.586	Required	
S22	447116.358	326675.325	447116.358	326675.325	Required	
TANK 3 - Full Retention	447111.162	326675.325	447111.162	326675.325	Required	
S23	447092.636	326675.325	447092.636	326675.325	Required	
S24	447092.636	326696.586	447092.636	326696.586	Required	
KD2	447048.471	326763.103	447048.471	326763.103	Required	
S25 (BD)	447045.561	326758.764	447045.561	326758.764	Required	
SDP011	447007.973	326697.329	447007.973	326697.329	Required	
S26 (V)	447008.904	326700.318	447008.904	326700.318	Required	
S27 (V)	447012.027	326697.753	447012.027	326697.753	Required	
S28	447024.529	326704.059	447024.529	326704.059	Required	
S29	447024.529	326763.827	447024.529	326763.827	Required	
KD3	447020.721	326793.485	447020.721	326793.485	Required	
S30	447014.876	326795.828	447014.876	326795.828	Required	
KD4	447004.689	326787.780	447004.689	326787.780	Required	

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Manhole Schedules for Catchment C

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
KD9	447004.689	326787.480	447004.689	326787.480	Required	
KD5	447004.689	326719.440	447004.689	326719.440	Required	
KD6	447004.685	326736.450	447004.685	326736.450	Required	
KD7	447004.689	326753.460	447004.689	326753.460	Required	
KD8	447004.685	326770.470	447004.685	326770.470	Required	
S31	447003.582	326784.573	447003.582	326784.573	Required	
Tank 4 - By Pass	446996.109	326784.573	446996.109	326784.573	Required	
S32	446991.350	326784.513	446991.350	326784.513	Required	
S33	446985.674	326795.828	446985.674	326795.828	Required	
S34	446942.928	326795.828	446942.928	326795.828	Required	
KD10	446903.734	326787.780	446903.734	326787.780	Required	
S35	446903.730	326784.526	446903.730	326784.526	Required	
KD11	446893.940	326719.440	446893.940	326719.440	Required	
KD12	446893.940	326736.450	446893.940	326736.450	Required	
KD13	446893.940	326753.460	446893.940	326753.460	Required	

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Manhole Schedules for Catchment C

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
KD14	446893.940	326770.470	446893.940	326770.470	Required	
KD15	446893.944	326787.030	446893.944	326787.030	Required	
S36	446893.941	326784.539	446893.941	326784.539	Required	
Tank 5 - Bypass	446888.625	326784.573	446888.625	326784.573	Required	
S37	446883.657	326784.573	446883.657	326784.573	Required	
S38 (P)	446867.563	326789.248	446867.563	326789.248	Required	
Ex SC41	446821.799	326793.264	446821.799	326793.264	Required	
C44	446825.997	326849.638	446825.997	326849.638	Required	
C19	447121.166	326363.296	447121.166	326363.296	Required	
C20	447149.534	326370.426	447149.534	326370.426	Required	
C21	447166.254	326380.260	447166.254	326380.260	Required	
C22	447177.930	326389.691	447177.930	326389.691	Required	
C23	447201.928	326410.264	447201.928	326410.264	Required	
C24	447219.657	326444.282	447219.657	326444.282	Required	
OB1	447229.932	326462.027	447229.932	326462.027	Required	

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Manhole Schedules for Catchment C

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
PPIC1	447231.090	326460.486	447231.090	326460.486	Required	
PPIC2	447234.627	326475.863	447234.627	326475.863	Required	
BI RWP	447230.277	326475.573	447230.277	326475.573	Required	
Ex. SC25	447229.875	326477.259	447229.875	326477.259	Required	
Ex. SC26	447213.073	326485.060	447213.073	326485.060	Required	
New gully	447190.052	326508.931	447190.052	326508.931	Required	
Separator	447198.854	326492.149	447198.854	326492.149	Required	
OB2	447215.986	326493.423	447215.986	326493.423	Required	
MS RWP	447207.089	326484.501	447207.089	326484.501	Required	
PS3	447201.762	326486.604	447201.762	326486.604	Required	
OB3	447204.630	326465.394	447204.630	326465.394	Required	
PS4	447194.378	326469.908	447194.378	326469.908	Required	
C27	447189.412	326465.878	447189.412	326465.878	Required	
C28	447165.300	326509.990	447165.300	326509.990	Required	
C29	447226.243	326516.334	447226.243	326516.334	Required	

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Manhole Schedules for Catchment C

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
C30	447203.830	326534.396	447203.830	326534.396	Required	
C31	447188.940	326553.980	447188.940	326553.980	Required	
C32	447173.964	326577.413	447173.964	326577.413	Required	
C33	447155.062	326576.987	447155.062	326576.987	Required	
C34	447153.914	326666.980	447153.914	326666.980	Required	
C35	447152.522	326752.669	447152.522	326752.669	Required	
C36	447138.738	326786.331	447138.738	326786.331	Required	
C37	447107.625	326812.443	447107.625	326812.443	Required	
C38	447068.362	326821.158	447068.362	326821.158	Required	
C39	446978.362	326821.284	446978.362	326821.284	Required	
C40	446888.677	326829.718	446888.677	326829.718	Required	
C46	446830.361	326881.545	446830.361	326881.545	Required	
C47	446854.572	326965.766	446854.572	326965.766	Required	
OB1	446725.664	326874.113	446725.664	326874.113	Required	
OB2	446756.665	326873.686	446756.665	326873.686	Required	

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Manhole Schedules for Catchment C

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
S1	446748.364	326880.313	446748.364	326880.313	Required	
OB3	446756.665	326923.686	446756.665	326923.686	Required	
S2	446748.364	326930.813	446748.364	326930.813	Required	
OB4	446756.664	327069.713	446756.664	327069.713	Required	
S3	446748.362	327063.086	446748.362	327063.086	Required	
OB5	446756.664	327023.687	446756.664	327023.687	Required	
S4	446748.364	327016.459	446748.364	327016.459	Required	
OB6	446756.665	326973.687	446756.665	326973.687	Required	
S5	446748.364	326967.059	446748.364	326967.059	Required	
S6	446748.364	326953.192	446748.364	326953.192	Required	
OB7	446806.663	327042.519	446806.663	327042.519	Required	
S8	446798.362	327035.892	446798.362	327035.892	Required	
OB8	446806.664	327009.819	446806.664	327009.819	Required	
S9	446798.362	327003.192	446798.362	327003.192	Required	
OB9	446806.664	326959.819	446806.664	326959.819	Required	

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Manhole Schedules for Catchment C

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
S7	446798.362	326953.192	446798.362	326953.192	Required	
OB10	446806.664	326909.819	446806.664	326909.819	Required	
S10	446798.363	326916.846	446798.363	326916.846	Required	
S11	446798.362	326924.832	446798.362	326924.832	Required	
S12	446803.256	326924.832	446803.256	326924.832	Required	
FRS1	446803.256	326933.019	446803.256	326933.019	Required	
S13	446803.256	326941.506	446803.256	326941.506	Required	
CP5	446814.615	326925.602	446814.615	326925.602	Required	
G1	446830.770	326939.223	446830.770	326939.223	Required	
S14	446815.939	326941.506	446815.939	326941.506	Required	
CP8	446812.015	326990.703	446812.015	326990.703	Required	
AT1	446820.047	326966.149	446820.047	326966.149	Required	
S15	446841.412	326981.003	446841.412	326981.003	Required	
Ex SC72a	446855.849	326989.818	446855.849	326989.818	Required	
Spur	446866.450	326985.894			No Entry	

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Manhole Schedules for Catchment C

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
C48	446892.016	327028.042	446892.016	327028.042	Required	
C49	446923.119	327081.431	446923.119	327081.431	Required	
C50	446960.397	327144.887	446960.397	327144.887	Required	
C51	446990.000	327199.000	446990.000	327199.000	Required	
SW01	446894.486	326893.074	446894.486	326893.074	Required	
SW02	446919.446	326874.817	446919.446	326874.817	Required	
SW02A	446952.654	326853.358	446952.654	326853.358	Required	
SW03	446969.498	326873.430	446969.498	326873.430	Required	
SW04	447019.549	326871.814	447019.549	326871.814	Required	
SW05	447096.246	326869.849	447096.246	326869.849	Required	
SW05A	447099.421	326872.212	447099.421	326872.212	Required	
SW06	447109.452	326890.596	447109.452	326890.596	Required	
SW07	447109.286	326970.595	447109.286	326970.595	Required	
SW08	447108.665	327040.592	447108.665	327040.592	Required	
SW09	447107.668	327087.401	447107.668	327087.401	Required	

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Manhole Schedules for Catchment C

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
SW10	447104.731	326925.782	447104.731	326925.782	Required	
SW11	447104.326	326976.854	447104.326	326976.854	Required	
SW12	447103.966	327015.776	447103.966	327015.776	Required	
SW13	447103.494	327066.789	447103.494	327066.789	Required	
SW14	447103.318	327085.773	447103.318	327085.773	Required	
SW15	447087.056	327115.168	447087.056	327115.168	Required	
SW16	447087.107	327124.490	447087.107	327124.490	Required	
SW17	446893.837	326898.314	446893.837	326898.314	Required	
SW18	446895.288	326979.603	446895.288	326979.603	Required	
SW19	446934.756	327060.492	446934.756	327060.492	Required	
SW20	446973.743	327138.522	446973.743	327138.522	Required	
SW21	446952.764	327097.755	446952.764	327097.755	Required	
SW22	446971.964	327088.162	446971.964	327088.162	Required	
Gully	446988.669	327146.256	446988.669	327146.256	Required	
SW23	447002.753	327146.507	447002.753	327146.507	Required	

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Manhole Schedules for Catchment C

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
SW24	447010.347	327202.303	447010.347	327202.303	Required	
SW25	447014.422	327181.586	447014.422	327181.586	Required	
SW26	447021.529	327177.681	447021.529	327177.681	Required	
SW27	447018.958	327170.733	447018.958	327170.733	Required	
SW28	447042.519	327161.884	447042.519	327161.884	Required	
SW29	447056.097	327156.066	447056.097	327156.066	Required	
SW30	447087.300	327158.908	447087.300	327158.908	Required	
SW31	447087.866	327234.389	447087.866	327234.389	Required	
SW32	447056.325	327254.308	447056.325	327254.308	Required	
HD01	446982.540	327155.708	446982.540	327155.708	Required	
HD02	446997.898	327182.859	446997.898	327182.859	Required	
HD03	446999.297	327192.885	446999.297	327192.885	Required	
HD04	447009.912	327210.610	447009.912	327210.610	Required	
36	447043.271	327265.387	447043.271	327265.387	Required	
C52	447035.440	327276.710	447035.440	327276.710	Required	

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Manhole Schedules for Catchment C

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
C53	447068.079	327371.212	447068.079	327371.212	Required	
C54	447073.057	327427.659	447073.057	327427.659	Required	
H20C	447098.996	327470.961	447098.996	327470.961	Required	
C55a	447147.778	327379.027	447147.778	327379.027	Required	
C55b	447081.106	327344.393	447081.106	327344.393	Required	
C55	447097.062	327371.900	447097.062	327371.900	Required	
56	447094.071	327419.310	447094.071	327419.310	Required	
C57	447125.818	327450.237	447125.818	327450.237	Required	
H7C	447118.839	327481.127	447118.839	327481.127	Required	
BASIN C1	447146.873	327600.868	447146.873	327600.868	Required	
C59	447154.420	327628.367	447154.420	327628.367	Required	
P2_29	447195.142	327396.037	447195.142	327396.037	Required	
P2_30	447194.762	327435.913	447194.762	327435.913	Required	
P2_31	447177.019	327435.745	447177.019	327435.745	Required	
SC72	447235.758	326788.028	447235.758	326788.028	Required	

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Manhole Schedules for Catchment C

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
SC73	447235.228	326842.825	447235.228	326842.825	Required	
SC74	447234.759	326891.249	447234.759	326891.249	Required	
SC75	447184.759	326891.028	447184.759	326891.028	Required	
SC76	447184.287	326940.025	447184.287	326940.025	Required	
SC77	447183.360	327036.120	447183.360	327036.120	Required	
SC78	447182.334	327142.588	447182.334	327142.588	Required	
SC79	447160.822	327142.588	447160.822	327142.588	Required	
SC80	447160.263	327200.380	447160.263	327200.380	Required	
SC81	447159.341	327295.520	447159.341	327295.520	Required	
SC82	447158.522	327369.065	447158.522	327369.065	Required	
SC83	447156.810	327458.192	447156.810	327458.192	Required	
P2_32	447176.476	327485.078	447176.476	327485.078	Required	
P2_33	447176.315	327499.900	447176.315	327499.900	Required	
P2_34	447205.123	327543.977	447205.123	327543.977	Required	
P1 Slab	447216.432	327547.687	447216.432	327547.687	Required	

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Manhole Schedules for Catchment C

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
C88	447261.415	326717.681	447261.415	326717.681	Required	
C89	447261.463	326783.100	447261.463	326783.100	Required	
C90	447260.897	326841.566	447260.897	326841.566	Required	
C91	447260.112	326922.565	447260.112	326922.565	Required	
C92	447259.328	327003.565	447259.328	327003.565	Required	
C93	447258.253	327114.565	447258.253	327114.565	Required	
C94	447257.178	327225.565	447257.178	327225.565	Required	
C95	447256.406	327321.061	447256.406	327321.061	Required	
C96	447255.329	327416.556	447255.329	327416.556	Required	
C97	447254.404	327512.052	447254.404	327512.052	Required	
C87	447253.478	327607.704	447253.478	327607.704	Required	
P2_1	447274.209	326775.397	447274.209	326775.397	Required	
P2_2	447279.330	326775.446	447279.330	326775.446	Required	
P2_3	447286.077	326782.443	447286.077	326782.443	Required	
P2_4	447286.077	326789.133	447286.077	326789.133	Required	

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Manhole Schedules for Catchment C

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
P2_5	447326.076	326748.534	447326.076	326748.534	Required	
P2_6	447317.742	326789.394	447317.742	326789.394	Required	
P2_7	447328.217	326791.679	447328.217	326791.679	Required	
P2_8	447338.684	326802.089	447338.684	326802.089	Required	
P2_11	447338.484	326867.095	447338.484	326867.095	Required	
P2_12	447346.250	326867.216	447346.250	326867.216	Required	
P_13	447345.972	326917.393	447345.972	326917.393	Required	
P2_14	447345.295	326987.338	447345.295	326987.338	Required	
P2_15	447344.617	327057.335	447344.617	327057.335	Required	
P2_16	447343.862	327129.451	447343.862	327129.451	Required	
P2_17	447335.960	327129.441	447335.960	327129.441	Required	
P2_18	447335.680	327157.343	447335.680	327157.343	Required	
P2_19	447324.407	327168.399	447324.407	327168.399	Required	
P2_20	447310.560	327168.144	447310.560	327168.144	Required	
P2_21	447310.188	327193.120	447310.188	327193.120	Required	

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Manhole Schedules for Catchment C

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
P2_22	447299.338	327204.001	447299.338	327204.001	Required	
P2_23	447287.360	327203.953	447287.360	327203.953	Required	
P2_24	447284.277	327248.490	447284.277	327248.490	Required	
P2_25	447269.467	327248.681	447269.467	327248.681	Required	
P2_25A	447265.139	327294.464	447265.139	327294.464	Required	
P2_26	447264.478	327362.424	447264.478	327362.424	Required	
P2_26A	447263.807	327431.454	447263.807	327431.454	Required	
P2_27	447267.104	327438.447	447267.104	327438.447	Required	
P2_28	447266.426	327504.466	447266.426	327504.466	Required	
P2_28A	447266.712	327560.476	447266.712	327560.476	Required	
246	447267.581	327582.892	447267.581	327582.892	Required	
C98	447253.789	327582.578	447253.789	327582.578	Required	
C65	447229.492	327578.072	447229.492	327578.072	Required	
C66	447181.757	327637.781	447181.757	327637.781	Required	
BASIN C3	447173.412	327788.816	447173.412	327788.816	Required	

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Manhole Schedules for Catchment C

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
C68	447228.588	327839.838	447228.588	327839.838	Required	
C69	447223.300	327873.014	447223.300	327873.014	Required	
C70	447219.180	327938.053	447219.180	327938.053	Required	
C71	447223.213	327991.053	447223.213	327991.053	Required	
C OUTFALL	447229.134	328022.300			No Entry	

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PIPELINE SCHEDULES for Catchment C

Upstream Manhole

- Indicates pipe length does not match coordinates

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
9.000	oo	-4	OB9	68.920	67.720	0.450	Open Manhole	3000
9.001	o	750	S39	69.855	67.600	1.505	Open Manhole	3000
10.000	o	375	OB10	69.855	68.655	0.825	Open Manhole	1500
9.002	o	750	S40 (BD)	69.855	67.570	1.535	Open Manhole	1800
9.003	o	750	S41	68.855	67.465	0.640	Open Manhole	1800
9.004	o	750	Tank 6 - Full Retention	70.000	67.185	2.065	Open Manhole	1800
9.005	o	750	S42	70.000	67.130	2.120	Open Manhole	1800
11.000	o	300	4A	80.350	79.350	0.700	Open Manhole	1200
11.001	o	300	4B	75.350	74.350	0.700	Open Manhole	1200
11.002	o	300	SDP004	70.350	67.900	2.150	Open Manhole	1200
11.003	o	525	S43 (V)	69.270	67.450	1.295	Open Manhole	1500
12.000	o	300	3A	80.350	79.350	0.700	Open Manhole	1200
12.001	o	300	3B	75.350	74.350	0.700	Open Manhole	1200
12.002	o	375	SDP003	70.350	67.900	2.075	Open Manhole	1500

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
9.000	35.300	294.2	S39	69.855	67.600	1.505	Open Manhole	3000
9.001	10.569	352.3	S40 (BD)	69.855	67.570	1.535	Open Manhole	1800
10.000	4.500	300.0	S40 (BD)	69.855	68.640	0.840	Open Manhole	1800
9.002	31.300	298.1	S41	68.855	67.465	0.640	Open Manhole	1800
9.003	58.659	209.5	Tank 6 - Full Retention	70.000	67.185	2.065	Open Manhole	1800
9.004	20.700	378.7	S42	70.000	67.130	2.120	Open Manhole	1800
9.005	38.900	165.3	S48	70.000	66.895	2.355	Open Manhole	1800
11.000	5.000	1.0	4B	75.350	74.350	0.700	Open Manhole	1200
11.001	5.000	1.0	SDP004	70.350	69.350	0.700	Open Manhole	1200
11.002	15.900	35.3	S43 (V)	69.270	67.450	1.520	Open Manhole	1500
11.003	32.300	293.6	S44 (V)	68.952	67.340	1.087	Open Manhole	1500
12.000	5.000	1.0	3B	75.350	74.350	0.700	Open Manhole	1200
12.001	5.000	1.0	SDP003	70.350	69.350	0.700	Open Manhole	1500
12.002	15.900	96.4	S44 (V)	68.952	67.735	0.842	Open Manhole	1500

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PIPELINE SCHEDULES for Catchment C

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
11.004	o	600	S44 (V)	68.952	67.340	1.012	Open Manhole	1500
13.000	o	300	2A	80.350	79.350	0.700	Open Manhole	1200
13.001	o	300	2B	75.350	74.350	0.700	Open Manhole	1200
13.002	o	375	SDP002	70.350	67.900	2.075	Open Manhole	1500
11.005	o	825	S45 (V)	68.952	67.235	0.892	Open Manhole	1800
14.000	o	300	1A	80.350	79.350	0.700	Open Manhole	1200
14.001	o	300	1B	75.350	74.350	0.700	Open Manhole	1200
14.002	o	375	SDP001	70.350	67.900	2.075	Open Manhole	1500
11.006	o	825	S46 (V)	69.315	67.125	1.365	Open Manhole	1800
11.007	o	825	S47 (V)	69.315	67.035	1.455	Open Manhole	1800
9.006	o	825	S48	70.000	66.895	2.280	Open Manhole	1800
9.007	o	825	S49	70.000	66.725	2.450	Open Manhole	1800
15.000	o	375	OB14	68.890	67.690	0.825	Open Manhole	1500
16.000	o	375	OB13	68.890	67.720	0.795	Open Manhole	1500

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
11.004	31.600	301.0	S45 (V)	68.952	67.235	1.117	Open Manhole	1800
13.000	5.000	1.0	2B	75.350	74.350	0.700	Open Manhole	1200
13.001	5.000	1.0	SDP002	70.350	69.350	0.700	Open Manhole	1500
13.002	15.900	289.1	S45 (V)	68.952	67.845	0.732	Open Manhole	1800
11.005	32.031	291.2	S46 (V)	69.315	67.125	1.365	Open Manhole	1800
14.000	5.000	1.0	1B	75.350	74.350	0.700	Open Manhole	1200
14.001	5.000	1.0	SDP001	70.350	69.350	0.700	Open Manhole	1500
14.002	15.900	289.1	S46 (V)	69.315	67.845	1.095	Open Manhole	1800
11.006	33.395	371.1	S47 (V)	69.315	67.035	1.455	Open Manhole	1800
11.007	35.722	255.2	S48	70.000	66.895	2.280	Open Manhole	1800
9.006	51.300	301.8	S49	70.000	66.725	2.450	Open Manhole	1800
9.007	51.300	300.0	S54	70.000	66.554	2.621	Open Manhole	2100
15.000	5.958	43.8	S50	69.235	67.554	1.306	Open Manhole	1500
16.000	5.958	297.9	S50a	69.120	67.700	1.045	Open Manhole	1500

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PIPELINE SCHEDULES for Catchment C

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
16.001	o	375	S50a	69.120	67.700	1.045	Open Manhole	1500
15.001	o	375	S50	69.235	67.554	1.306	Open Manhole	1500
17.000	o	300	OB11	68.890	67.720	0.870	Open Manhole	1200
15.002	o	375	S51	69.235	67.424	1.436	Open Manhole	1500
18.000	o	375	OB12	68.890	67.720	0.795	Open Manhole	1500
18.001	o	375	S52	69.235	67.690	1.170	Open Manhole	1500
15.003	o	525	S53	69.235	67.328	1.382	Open Manhole	1500
15.004	o	525	Tank 7 - Full Retention	70.000	67.153	2.322	Open Manhole	1500
9.008	o	900	S54	70.000	66.554	2.546	Open Manhole	2100
9.009	o	900	S55	70.000	66.459	2.641	Open Manhole	2100
19.000	o	150	KD17	69.440	68.240	1.050	Open Manhole	1200
9.010	o	900	S56	70.000	66.239	2.861	Open Manhole	2100
9.011	o	900	S57	70.000	66.184	2.916	Open Manhole	2100

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
16.001	37.428	256.4	S50	69.235	67.554	1.306	Open Manhole	1500
15.001	33.212	255.5	S51	69.235	67.424	1.436	Open Manhole	1500
17.000	5.959	42.6	S51	69.235	67.580	1.355	Open Manhole	1500
15.002	28.800	300.0	S53	69.235	67.328	1.532	Open Manhole	1500
18.000	5.959	198.6	S52	69.235	67.690	1.170	Open Manhole	1500
18.001	28.800	300.0	S53	69.235	67.594	1.266	Open Manhole	1500
15.003	23.404	133.7	Tank 7 - Full Retention	70.000	67.153	2.322	Open Manhole	1500
15.004	2.977	297.7	S54	70.000	67.143	2.332	Open Manhole	2100
9.008	28.800	303.2	S55	70.000	66.459	2.641	Open Manhole	2100
9.009	34.900	158.6	S56	70.000	66.239	2.861	Open Manhole	2100
19.000	13.200	6.6	S56	70.000	66.240	3.610	Open Manhole	2100
9.010	16.300	296.4	S57	70.000	66.184	2.916	Open Manhole	2100
9.011	19.300	300.0	S60	70.000	66.120	2.980	Open Manhole	2100

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PIPELINE SCHEDULES for Catchment C

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
20.000	o	300	10A	80.350	79.350	0.700	Open Manhole	1200
20.001	o	300	10B	75.350	74.350	0.700	Open Manhole	1200
20.002	o	375	SDP010	70.350	67.900	2.075	Open Manhole	1500
20.003	o	375	S59 (V)	70.150	67.875	1.900	Open Manhole	1500
21.000	o	300	S58 (V)	70.150	67.875	1.975	Open Manhole	1200
9.012	o	900	S60	70.000	66.120	2.980	Open Manhole	2100
22.000	o	225	KD18	69.925	68.725	0.975	Open Manhole	1200
22.001	o	300	KD19	69.440	68.240	0.900	Open Manhole	1200
22.002	o	375	KD20	69.095	68.185	0.535	Open Manhole	1500
22.003	o	450	KD21	69.095	67.895	0.750	Open Manhole	1500
23.000	o	375	KD22	68.750	67.550	0.825	Open Manhole	1500
22.004	o	450	S61	68.800	67.540	0.810	Open Manhole	1500
24.000	o	375	KD23	68.170	66.970	0.825	Open Manhole	1500

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
20.000	5.000	1.0	10B	75.350	74.350	0.700	Open Manhole	1200
20.001	5.000	1.0	SDP010	70.350	69.350	0.700	Open Manhole	1500
20.002	5.778	231.1	S59 (V)	70.150	67.875	1.900	Open Manhole	1500
20.003	56.042	431.2	S60	70.000	67.745	1.880	Open Manhole	2100
21.000	55.799	429.2	S60	70.000	67.745	1.955	Open Manhole	2100
9.012	86.500	303.5	S63	68.900	65.835	2.165	Open Manhole	2100
22.000	15.400	308.0	KD19	69.440	68.675	0.540	Open Manhole	1200
22.001	17.010	309.3	KD20	69.095	68.185	0.610	Open Manhole	1500
22.002	17.010	309.3	KD21	69.095	68.130	0.590	Open Manhole	1500
22.003	14.553	264.6	S61	68.800	67.840	0.510	Open Manhole	1500
23.000	2.500	250.0	S61	68.800	67.540	0.885	Open Manhole	1500
22.004	24.200	302.5	S62	68.800	67.460	0.890	Open Manhole	1500
24.000	7.400	296.0	S62	68.800	66.945	1.480	Open Manhole	1500

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PIPELINE SCHEDULES for Catchment C

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
22.005	o	525	S62	68.800	66.945	1.330	Open Manhole	1500
22.006	o	600	Tank 8 - Bypass	68.800	66.840	1.360	Open Manhole	1500
9.013	o	900	S63	68.900	65.835	2.165	Open Manhole	2100
25.000	o	225	KD24	68.385	67.185	0.975	Open Manhole	1200
9.014	o	900	S64	68.425	65.780	1.745	Open Manhole	2100
9.015	o	900	Ex SC15	70.000	65.572	3.528	Open Manhole	2100
26.000	o	300	C16a	68.110	66.610	1.200	Open Manhole	1200
27.000	o	300	1	71.600	70.000	1.300	Open Manhole	1200
27.001	o	375	2	71.180	69.330	1.475	Open Manhole	1500
27.002	o	450	3	71.410	68.958	2.002	Open Manhole	1500
27.003	o	450	4	71.410	68.736	2.224	Open Manhole	1500
27.004	o	450	5	71.490	68.318	2.722	Open Manhole	1500
27.005	o	450	6	70.600	67.283	2.867	Open Manhole	1500
27.006	o	450	7	69.530	66.483	2.597	Open Manhole	1500
27.007	o	600	8	69.030	65.990	2.440	Open Manhole	1500

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
22.005	3.204	30.5	Tank 8 - Bypass	68.800	66.840	1.435	Open Manhole	1500
22.006	10.863	362.1	S63	68.900	66.810	1.490	Open Manhole	2100
9.013	15.800	287.3	S64	68.425	65.780	1.745	Open Manhole	2100
25.000	2.700	270.0	S64	68.425	67.175	1.025	Open Manhole	2100
9.014	10.300	49.5	Ex SC15	70.000	65.572	3.528	Open Manhole	2100
9.015	47.255	50.0	C17	69.130	64.627	3.603	Open Manhole	2100
26.000	71.968	100.0	C16	68.690	65.890	2.500	Open Manhole	1500
27.000	59.546	100.1	2	71.180	69.405	1.475	Open Manhole	1500
27.001	89.149	300.2	3	71.410	69.033	2.002	Open Manhole	1500
27.002	66.643	300.2	4	71.410	68.736	2.224	Open Manhole	1500
27.003	83.506	199.8	5	71.490	68.318	2.722	Open Manhole	1500
27.004	73.729	71.2	6	70.600	67.283	2.867	Open Manhole	1500
27.005	32.014	40.0	7	69.530	66.483	2.597	Open Manhole	1500
27.006	13.675	40.0	8	69.030	66.141	2.439	Open Manhole	1500
27.007	25.758	64.4	C16	68.690	65.590	2.500	Open Manhole	1500

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PIPELINE SCHEDULES for Catchment C

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
26.001	o	600	C16	68.690	65.590	2.500	Open Manhole	1500
9.016	o	900	C17	69.130	64.627	3.603	Open Manhole	2100
9.017	o	900	C18	69.612	63.681	5.031	Open Manhole	2100
28.000	oo	-5	OB1	68.920	67.645	0.525	Open Manhole	3000
28.001	o	750	S1	69.855	67.525	1.580	Open Manhole	3000
29.000	o	375	OB2	69.795	68.295	1.125	Open Manhole	1500
28.002	o	750	S2 (BD)	69.855	67.480	1.625	Open Manhole	1800
30.000	o	375	OB3	69.340	67.915	1.050	Open Manhole	1500
28.003	o	750	S3	69.855	67.315	1.790	Open Manhole	1800
28.004	o	750	Tank 1 -Full Retention	70.000	67.170	2.080	Open Manhole	1800
28.005	o	750	S4	70.000	67.130	2.120	Open Manhole	1800
31.000	o	300	5A	80.350	79.350	0.700	Open Manhole	1200
31.001	o	300	5B	75.350	74.350	0.700	Open Manhole	1200
31.002	o	450	SDP005	70.350	67.900	2.000	Open Manhole	1500

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
26.001	64.939	97.9	C17	69.130	64.927	3.603	Open Manhole	2100
9.016	47.284	50.0	C18	69.612	63.681	5.031	Open Manhole	2100
9.017	41.695	50.0	C44	69.398	62.847	5.651	Open Manhole	2100
28.000	35.380	294.8	S1	69.855	67.525	1.580	Open Manhole	3000
28.001	13.300	295.6	S2 (BD)	69.855	67.480	1.625	Open Manhole	1800
29.000	5.222	261.1	S2 (BD)	69.855	68.275	1.205	Open Manhole	1800
28.002	59.158	359.3	S3	69.855	67.315	1.790	Open Manhole	1800
30.000	23.060	288.3	S3	69.855	67.835	1.645	Open Manhole	1800
28.003	22.706	156.6	Tank 1 -Full Retention	70.000	67.170	2.080	Open Manhole	1800
28.004	12.689	317.2	S4	70.000	67.130	2.120	Open Manhole	1800
28.005	38.918	297.8	S9 (V)	69.850	67.000	2.100	Open Manhole	2100
31.000	5.000	1.0	5B	75.350	74.350	0.700	Open Manhole	1200
31.001	5.000	1.0	SDP005	70.350	69.350	0.700	Open Manhole	1500
31.002	15.900	289.1	S5 (V)	68.952	67.845	0.657	Open Manhole	1500

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PIPELINE SCHEDULES for Catchment C

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
31.003	o	525	S5 (V)	68.952	67.845	0.582	Open Manhole	1500
32.000	o	300	6A	80.350	79.350	0.700	Open Manhole	1200
32.001	o	300	6B	75.350	74.350	0.700	Open Manhole	1200
32.002	o	375	SDP006	70.350	67.900	2.075	Open Manhole	1500
31.004	o	600	S6 (V)	68.952	67.740	0.612	Open Manhole	1500
33.000	o	300	7A	80.350	79.350	0.700	Open Manhole	1200
33.001	o	300	7B	75.350	74.350	0.700	Open Manhole	1200
33.002	o	375	SDP007	70.350	67.900	2.075	Open Manhole	1500
31.005	o	600	S7 (V)	68.952	67.635	0.717	Open Manhole	1500
34.000	o	300	8A	80.350	79.350	0.700	Open Manhole	1200
34.001	o	300	8B	75.350	74.350	0.700	Open Manhole	1200
34.002	o	375	SDP008	70.350	67.900	2.075	Open Manhole	1500
31.006	o	600	S8 (V)	68.952	67.515	0.837	Open Manhole	1500
28.006	o	900	S9 (V)	69.850	67.000	1.950	Open Manhole	2100

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
31.003	31.600	301.0	S6 (V)	68.952	67.740	0.687	Open Manhole	1500
32.000	5.000	1.0	6B	75.350	74.350	0.700	Open Manhole	1200
32.001	5.000	1.0	SDP006	70.350	69.350	0.700	Open Manhole	1500
32.002	15.900	99.4	S6 (V)	68.952	67.740	0.837	Open Manhole	1500
31.004	31.600	301.0	S7 (V)	68.952	67.635	0.717	Open Manhole	1500
33.000	5.000	1.0	7B	75.350	74.350	0.700	Open Manhole	1200
33.001	5.000	1.0	SDP007	70.350	69.350	0.700	Open Manhole	1500
33.002	15.900	289.1	S7 (V)	68.952	67.845	0.732	Open Manhole	1500
31.005	35.700	297.5	S8 (V)	68.952	67.515	0.837	Open Manhole	1500
34.000	5.000	1.0	8B	75.350	74.350	0.700	Open Manhole	1200
34.001	5.000	1.0	SDP008	70.350	69.350	0.700	Open Manhole	1500
34.002	15.900	289.1	S8 (V)	68.952	67.845	0.732	Open Manhole	1500
31.006	57.500	294.9	S9 (V)	69.850	67.320	1.930	Open Manhole	2100
28.006	20.181	288.3	S11	70.092	66.930	2.262	Open Manhole	2100

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PIPELINE SCHEDULES for Catchment C

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
35.000	o	375	9A	80.350	79.350	0.625	Open Manhole	1500
35.001	o	375	9B	75.350	74.350	0.625	Open Manhole	1500
35.002	o	375	SDP009	70.350	67.900	2.075	Open Manhole	1500
35.003	o	375	S10 (V)	70.130	67.885	1.870	Open Manhole	1500
28.007	o	900	S11	70.092	66.930	2.262	Open Manhole	2100
28.008	o	900	S12	70.130	66.790	2.440	Open Manhole	2100
28.009	o	900	S13	70.130	66.620	2.610	Open Manhole	2100
36.000	o	450	OB4	69.905	68.405	1.050	Open Manhole	1500
36.001	o	450	S14	70.025	68.380	1.195	Open Manhole	1500
37.000	o	225	OB5	69.955	68.755	0.975	Open Manhole	1200
37.001	o	225	S15	70.025	68.665	1.135	Open Manhole	1200
38.000	o	450	OB6	69.905	68.705	0.750	Open Manhole	1500
37.002	o	450	S16	70.025	68.603	0.972	Open Manhole	1500
36.002	o	450	S17	70.025	68.100	1.475	Open Manhole	1500

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
35.000	5.000	1.0	9B	75.350	74.350	0.625	Open Manhole	1500
35.001	5.000	1.0	SDP009	70.350	69.350	0.625	Open Manhole	1500
35.002	5.100	340.0	S10 (V)	70.130	67.885	1.870	Open Manhole	1500
35.003	24.900	292.9	S11	70.092	67.800	1.917	Open Manhole	2100
28.007	42.100	300.7	S12	70.130	66.790	2.440	Open Manhole	2100
28.008	51.171	301.0	S13	70.130	66.620	2.610	Open Manhole	2100
28.009	32.200	306.7	S18 (BD)	70.130	66.515	2.715	Open Manhole	2100
36.000	7.000	280.0	S14	70.025	68.380	1.195	Open Manhole	1500
36.001	83.400	297.9	S17	70.025	68.100	1.475	Open Manhole	1500
37.000	29.677	329.7	S15	70.025	68.665	1.135	Open Manhole	1200
37.001	18.300	295.2	S16	70.025	68.603	1.197	Open Manhole	1500
38.000	7.350	294.0	S16	70.025	68.680	0.895	Open Manhole	1500
37.002	11.300	282.5	S17	70.025	68.563	1.012	Open Manhole	1500
36.002	14.027	155.9	Tank 2 - Full Retention	70.015	68.010	1.555	Open Manhole	1500

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PIPELINE SCHEDULES for Catchment C

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
36.003	o	450	Tank 2 - Full Retention	70.015	68.010	1.555	Open Manhole	1500
28.010	o	900	S18 (BD)	70.130	66.515	2.715	Open Manhole	2100
39.000	o	225	KD1	70.240	68.740	1.275	Open Manhole	1200
39.001	o	225	S19	70.000	68.705	1.070	Open Manhole	1200
40.000	o	450	OB7	70.035	68.835	0.750	Open Manhole	1500
39.002	o	450	S20	70.158	68.440	1.268	Open Manhole	1500
41.000	o	375	OB8	70.035	68.835	0.825	Open Manhole	1500
41.001	o	375	S21	70.158	68.800	0.983	Open Manhole	1500
39.003	o	450	S22	70.158	68.035	1.673	Open Manhole	1500
39.004	o	450	TANK 3 - Full Retention	70.092	67.970	1.672	Open Manhole	1500
28.011	o	1050	S23	70.130	66.420	2.660	Open Manhole	2100
28.012	o	1050	S24	70.130	66.350	2.730	Open Manhole	2100
42.000	o	300	KD2	68.625	67.425	0.900	Open Manhole	1200

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
36.003	6.798	271.9	S18 (BD)	70.130	67.985	1.695	Open Manhole	2100
28.010	28.900	304.2	S23	70.130	66.420	2.810	Open Manhole	2100
39.000	9.900	282.9	S19	70.000	68.705	1.070	Open Manhole	1200
39.001	80.000	301.9	S20	70.158	68.440	1.493	Open Manhole	1500
40.000	9.500	271.4	S20	70.158	68.800	0.908	Open Manhole	1500
39.002	76.000	187.7	S22	70.158	68.035	1.673	Open Manhole	1500
41.000	9.500	271.4	S21	70.158	68.800	0.983	Open Manhole	1500
41.001	21.200	282.7	S22	70.158	68.725	1.058	Open Manhole	1500
39.003	5.196	79.9	TANK 3 - Full Retention	70.092	67.970	1.672	Open Manhole	1500
39.004	18.526	285.0	S23	70.130	67.905	1.775	Open Manhole	2100
28.011	21.200	302.9	S24	70.130	66.350	2.730	Open Manhole	2100
28.012	77.900	251.3	S25 (BD)	68.860	66.040	1.770	Open Manhole	2100
42.000	5.200	260.0	S25 (BD)	68.860	67.405	1.155	Open Manhole	2100

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PIPELINE SCHEDULES for Catchment C

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
28.013	o	1050	S25 (BD)	68.860	66.040	1.770	Open Manhole	2100
43.000	o	300	11A	80.350	79.350	0.700	Open Manhole	1200
43.001	o	300	11B	75.350	74.350	0.700	Open Manhole	1200
43.002	o	375	SDP011	70.350	67.900	2.075	Open Manhole	1500
43.003	o	375	S26 (V)	70.075	67.890	1.810	Open Manhole	1500
44.000	o	375	S27 (V)	70.075	67.890	1.810	Open Manhole	1500
43.004	o	450	S28	70.325	67.830	2.045	Open Manhole	1500
28.014	o	1050	S29	68.700	65.970	1.680	Open Manhole	2100
45.000	o	300	KD3	67.915	66.715	0.900	Open Manhole	1200
28.015	o	1050	S30	68.300	65.860	1.390	Open Manhole	2100
46.000	o	300	KD4	67.940	66.740	0.900	Open Manhole	1200
46.001	o	300	KD9	67.970	66.730	0.940	Open Manhole	1200

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
28.013	21.600	308.6	S29	68.700	65.970	1.680	Open Manhole	2100
43.000	5.000	1.0	11B	75.350	74.350	0.700	Open Manhole	1200
43.001	5.000	1.0	SDP011	70.350	69.350	0.700	Open Manhole	1500
43.002	3.131	313.1	S26 (V)	70.075	67.890	1.810	Open Manhole	1500
43.003	16.067	267.8	S28	70.325	67.830	2.120	Open Manhole	1500
44.000	14.002	233.4	S28	70.325	67.830	2.120	Open Manhole	1500
43.004	59.768	398.5	S29	68.700	67.680	0.570	Open Manhole	2100
28.014	33.400	303.6	S30	68.300	65.860	1.390	Open Manhole	2100
45.000	6.200	310.0	S30	68.300	66.695	1.305	Open Manhole	2100
28.015	29.200	162.2	S33	68.208	65.680	1.478	Open Manhole	2100
46.000	1.000#	100.0	KD9	67.970	66.730	0.940	Open Manhole	1200
46.001	3.300	220.0	S31	68.050	66.715	1.035	Open Manhole	1500

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PIPELINE SCHEDULES for Catchment C

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
47.000	o	450	KD5	69.785	68.585	0.750	Open Manhole	1500
47.001	o	450	KD6	69.440	68.240	0.750	Open Manhole	1500
47.002	o	450	KD7	69.095	68.180	0.465	Open Manhole	1500
47.003	o	600	KD8	68.515	67.315	0.600	Open Manhole	1500
46.002	o	600	S31	68.050	66.715	0.735	Open Manhole	1500
46.003	o	600	Tank 4 - By Pass	68.050	66.640	0.810	Open Manhole	1500
46.004	o	600	S32	68.050	66.625	0.825	Open Manhole	1500
28.016	o	1050	S33	68.208	65.680	1.478	Open Manhole	2100
28.017	o	1050	S34	68.650	65.540	2.060	Open Manhole	2100
48.000	o	225	KD10	68.375	67.175	0.975	Open Manhole	1200
48.001	o	225	S35	68.455	67.165	1.065	Open Manhole	1200
49.000	o	300	KD11	69.785	68.585	0.900	Open Manhole	1200
49.001	o	375	KD12	69.440	68.525	0.540	Open Manhole	1500
49.002	o	450	KD13	69.095	67.895	0.750	Open Manhole	1500
49.003	o	525	KD14	68.750	67.550	0.675	Open Manhole	1500
50.000	o	225	KD15	68.375	67.175	0.975	Open Manhole	1200

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
47.000	17.010	283.5	KD6	69.440	68.525	0.465	Open Manhole	1500
47.001	17.010	283.5	KD7	69.095	68.180	0.465	Open Manhole	1500
47.002	17.010	37.0	KD8	68.515	67.720	0.345	Open Manhole	1500
47.003	14.146	282.9	S31	68.050	67.265	0.185	Open Manhole	1500
46.002	7.473	99.6	Tank 4 - By Pass	68.050	66.640	0.810	Open Manhole	1500
46.003	4.759	317.3	S32	68.050	66.625	0.825	Open Manhole	1500
46.004	12.600	280.0	S33	68.208	66.580	1.028	Open Manhole	2100
28.016	42.700	305.0	S34	68.650	65.540	2.060	Open Manhole	2100
28.017	75.652	378.3	S38 (P)	68.625	65.340	2.235	Open Manhole	2100
48.000	3.200	320.0	S35	68.455	67.165	1.065	Open Manhole	1200
48.001	9.700	88.2	S36	68.455	67.055	1.175	Open Manhole	1500
49.000	17.010	283.5	KD12	69.440	68.525	0.615	Open Manhole	1500
49.001	17.010	283.5	KD13	69.095	68.465	0.255	Open Manhole	1500
49.002	17.010	283.5	KD14	68.750	67.835	0.465	Open Manhole	1500
49.003	14.069	255.8	S36	68.455	67.495	0.435	Open Manhole	1500
50.000	2.500	20.8	S36	68.455	67.055	1.175	Open Manhole	1500

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PIPELINE SCHEDULES for Catchment C

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
48.002	o	525	S36	68.455	67.055	0.875	Open Manhole	1500
48.003	o	525	Tank 5 - Bypass	68.455	66.985	0.945	Open Manhole	1500
48.004	o	525	S37	68.455	66.970	0.960	Open Manhole	1500
28.018	o	1050	S38 (P)	68.625	65.340	2.235	Open Manhole	2100
28.019	o	900	Ex SC41	70.000	65.000	4.100	Open Manhole	2100
9.018	o	900	C44	69.398	62.847	5.651	Open Manhole	2100
51.000	o	150	C19	83.721	82.671	0.900	Open Manhole	1200
51.001	o	150	C20	82.256	81.206	0.900	Open Manhole	1200
51.002	o	150	C21	80.753	79.703	0.900	Open Manhole	1200
51.003	o	150	C22	79.479	78.429	0.900	Open Manhole	1200
51.004	o	225	C23	79.479	76.225	3.029	Open Manhole	1200
51.005	o	225	C24	77.829	75.813	1.791	Open Manhole	1200
52.000	o	150	OB1	76.990	75.854	0.986	Open Manhole	1200
52.001	o	150	PPIC1	77.050	75.804	1.096	Open Manhole	1200
52.002	o	150	PPIC2	77.020	75.644	1.226	Open Manhole	1200

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
48.002	5.316	75.9	Tank 5 - Bypass	68.455	66.985	0.945	Open Manhole	1500
48.003	4.968	331.2	S37	68.455	66.970	0.960	Open Manhole	1500
48.004	16.759	419.0	S38 (P)	68.625	66.930	1.170	Open Manhole	2100
28.018	45.940	248.3	Ex SC41	70.000	65.155	3.795	Open Manhole	2100
28.019	56.530	26.3	C44	69.398	62.847	5.651	Open Manhole	2100
9.018	32.204	40.0	C46	69.215	62.042	6.273	Open Manhole	2100
51.000	29.251	20.0	C20	82.256	81.206	0.900	Open Manhole	1200
51.001	19.398	12.9	C21	80.753	79.703	0.900	Open Manhole	1200
51.002	15.009	11.8	C22	79.479	78.429	0.900	Open Manhole	1200
51.003	31.610	14.8	C23	79.479	76.300	3.029	Open Manhole	1200
51.004	38.361	93.1	C24	77.829	75.813	1.791	Open Manhole	1200
51.005	37.164	33.2	C27	76.336	74.695	1.416	Open Manhole	1200
52.000	1.928	38.6	PPIC1	77.050	75.804	1.096	Open Manhole	1200
52.001	15.780	98.6	PPIC2	77.020	75.644	1.226	Open Manhole	1200
52.002	4.952	100.0	Ex. SC25	76.921	75.594	1.177	Open Manhole	1200

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PIPELINE SCHEDULES for Catchment C

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
53.000	o	150	BI RWP	77.000	75.644	1.206	Open Manhole	1200
52.003	o	225	Ex. SC25	76.921	75.519	1.177	Open Manhole	1200
52.004	o	300	Ex. SC26	76.304	74.854	1.150	Open Manhole	1200
54.000	o	150	New gully	75.580	75.210	0.220	Open Manhole	1200
54.001	o	150	Separator	76.300	74.985	1.165	Open Manhole	1200
55.000	o	150	OB2	76.140	75.105	0.885	Open Manhole	1200
56.000	o	150	MS RWP	76.625	75.005	1.470	Open Manhole	1200
54.002	o	225	PS3	76.550	74.870	1.455	Open Manhole	1200
57.000	o	150	OB3	76.575	74.945	1.480	Open Manhole	1200
52.005	o	300	PS4	76.575	74.680	1.595	Open Manhole	1200
51.006	o	300	C27	76.336	74.620	1.416	Open Manhole	1200
51.007	o	300	C28	74.920	73.500	1.120	Open Manhole	1200

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
53.000	1.733	34.7	Ex. SC25	76.921	75.594	1.177	Open Manhole	1200
52.003	18.525	31.4	Ex. SC26	76.304	74.929	1.150	Open Manhole	1200
52.004	24.065	138.3	PS4	76.575	74.680	1.595	Open Manhole	1200
54.000	18.950	151.6	Separator	76.300	75.085	1.065	Open Manhole	1200
54.001	6.260	156.5	PS3	76.550	74.945	1.455	Open Manhole	1200
55.000	15.774	98.6	PS3	76.550	74.945	1.455	Open Manhole	1200
56.000	5.727	95.5	PS3	76.550	74.945	1.455	Open Manhole	1200
54.002	18.256	158.7	PS4	76.575	74.755	1.595	Open Manhole	1200
57.000	11.202	97.4	PS4	76.575	74.830	1.595	Open Manhole	1200
52.005	6.395	106.6	C27	76.336	74.620	1.416	Open Manhole	1200
51.006	50.272	44.9	C28	74.920	73.500	1.120	Open Manhole	1200
51.007	67.775	27.0	C33	72.929	70.992	1.637	Open Manhole	1500

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PIPELINE SCHEDULES for Catchment C

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
58.000	o	150	C29	75.557	74.082	1.325	Open Manhole	1200
58.001	o	150	C30	74.373	73.023	1.200	Open Manhole	1200
58.002	o	225	C31	73.349	71.915	1.209	Open Manhole	1200
58.003	o	375	C32	72.668	71.000	1.293	Open Manhole	1500
51.008	o	375	C33	72.929	70.917	1.637	Open Manhole	1500
51.009	o	375	C34	69.716	68.141	1.200	Open Manhole	1500
51.010	o	450	C35	66.836	65.186	1.200	Open Manhole	1500
51.011	o	600	C36	66.255	64.455	1.200	Open Manhole	1500
51.012	o	600	C37	66.211	64.319	1.292	Open Manhole	1500
51.013	o	600	C38	66.775	64.184	1.991	Open Manhole	1500
51.014	o	600	C39	68.127	63.884	3.643	Open Manhole	1500
51.015	o	600	C40	69.594	63.584	5.410	Open Manhole	1500
9.019	o	900	C46	69.215	62.042	6.273	Open Manhole	2100
9.020	o	900	C47	65.851	60.581	4.370	Open Manhole	2100
59.000	o	225	OB1	66.530	65.460	0.845	Open Manhole	1200
60.000	o	300	OB2	66.465	65.150	1.015	Open Manhole	1200

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
58.000	28.785	27.2	C30	74.373	73.023	1.200	Open Manhole	1200
58.001	24.601	23.8	C31	73.349	71.990	1.209	Open Manhole	1200
58.002	27.810	36.4	C32	72.668	71.150	1.293	Open Manhole	1500
58.003	18.906	227.8	C33	72.929	70.917	1.637	Open Manhole	1500
51.008	90.000	32.4	C34	69.716	68.141	1.200	Open Manhole	1500
51.009	85.700	29.8	C35	66.836	65.261	1.200	Open Manhole	1500
51.010	36.375	62.6	C36	66.255	64.605	1.200	Open Manhole	1500
51.011	40.619	298.7	C37	66.211	64.319	1.292	Open Manhole	1500
51.012	40.218	297.9	C38	66.775	64.184	1.991	Open Manhole	1500
51.013	90.000	300.0	C39	68.127	63.884	3.643	Open Manhole	1500
51.014	90.081	300.3	C40	69.594	63.584	5.410	Open Manhole	1500
51.015	78.018	62.8	C46	69.215	62.342	6.273	Open Manhole	2100
9.019	87.633	60.0	C47	65.851	60.581	4.370	Open Manhole	2100
9.020	23.371	54.9	Spur	64.435	60.155	3.380	Junction	
59.000	23.530	65.4	S1	66.570	65.100	1.245	Open Manhole	1200
60.000	10.620	53.1	S1	66.570	64.950	1.320	Open Manhole	1200

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PIPELINE SCHEDULES for Catchment C

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
59.001	o	300	S1	66.570	64.950	1.320	Open Manhole	1200
61.000	o	450	OB3	66.465	64.640	1.375	Open Manhole	1500
59.002	o	600	S2	66.575	64.445	1.530	Open Manhole	1500
62.000	o	225	OB4	66.610	65.365	1.020	Open Manhole	1200
62.001	o	225	S3	66.715	65.285	1.205	Open Manhole	1200
63.000	o	450	OB5	66.610	64.800	1.360	Open Manhole	1500
62.002	o	450	S4	66.715	64.750	1.515	Open Manhole	1500
64.000	o	300	OB6	66.610	64.770	1.540	Open Manhole	1200
62.003	o	600	S5	66.715	64.400	1.715	Open Manhole	1500
59.003	o	600	S6	66.715	64.300	1.815	Open Manhole	1500
65.000	o	150	OB7	67.085	66.000	0.935	Open Manhole	1200
65.001	o	150	S8	67.320	65.735	1.435	Open Manhole	1200

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
59.001	50.500	246.3	S2	66.575	64.745	1.530	Open Manhole	1500
61.000	10.940	243.1	S2	66.575	64.595	1.530	Open Manhole	1500
59.002	22.380	154.3	S6	66.715	64.300	1.815	Open Manhole	1500
62.000	10.620	132.8	S3	66.715	65.285	1.205	Open Manhole	1200
62.001	46.625	150.4	S4	66.715	64.975	1.515	Open Manhole	1500
63.000	11.005	220.1	S4	66.715	64.750	1.515	Open Manhole	1500
62.002	49.400	247.0	S5	66.715	64.550	1.715	Open Manhole	1500
64.000	10.620	151.7	S5	66.715	64.700	1.715	Open Manhole	1500
62.003	13.865	138.7	S6	66.715	64.300	1.815	Open Manhole	1500
59.003	50.000	400.0	S7	67.320	64.175	2.545	Open Manhole	1500
65.000	10.622	40.1	S8	67.320	65.735	1.435	Open Manhole	1200
65.001	32.700	73.5	S9	67.320	65.290	1.880	Open Manhole	1200

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PIPELINE SCHEDULES for Catchment C

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
66.000	o	225	OB8	67.085	65.320	1.540	Open Manhole	1200
65.002	o	225	S9	67.320	65.215	1.880	Open Manhole	1200
67.000	o	225	OB9	67.085	64.660	2.200	Open Manhole	1200
59.004	o	600	S7	67.320	64.175	2.545	Open Manhole	1500
68.000	o	150	OB10	66.940	64.740	2.050	Open Manhole	1200
68.001	o	150	S10	67.175	64.630	2.395	Open Manhole	1200
59.005	o	750	S11	67.175	63.950	2.475	Open Manhole	1800
59.006	o	750	S12	67.050	63.935	2.365	Open Manhole	1800
59.007	o	750	FRS1	67.065	63.820	2.495	Open Manhole	1800
59.008	o	750	S13	67.125	63.795	2.580	Open Manhole	1800
69.000	o	225	CP5	67.070	65.650	1.195	Open Manhole	1200
70.000	o	150	G1	66.385	64.520	1.715	Open Manhole	1200

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
66.000	10.623	101.2	S9	67.320	65.215	1.880	Open Manhole	1200
65.002	50.000	75.2	S7	67.320	64.550	2.545	Open Manhole	1500
67.000	10.620	96.5	S7	67.320	64.550	2.545	Open Manhole	1500
59.004	28.360	378.1	S11	67.175	64.100	2.475	Open Manhole	1800
68.000	10.875	98.9	S10	67.175	64.630	2.395	Open Manhole	1200
68.001	7.990	99.9	S11	67.175	64.550	2.475	Open Manhole	1800
59.005	4.895	326.3	S12	67.050	63.935	2.365	Open Manhole	1800
59.006	8.190	546.0	FRS1	67.065	63.920	2.395	Open Manhole	1800
59.007	8.490	339.6	S13	67.125	63.795	2.580	Open Manhole	1800
59.008	12.685	507.4	S14	67.000	63.770	2.480	Open Manhole	1800
69.000	15.960	11.8	S14	67.000	64.295	2.480	Open Manhole	1800
70.000	14.858	99.1	S14	67.000	64.370	2.480	Open Manhole	1800

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PIPELINE SCHEDULES for Catchment C

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
59.009	o	750	S14	67.000	63.770	2.480	Open Manhole	1800
71.000	o	225	CP8	67.215	65.040	1.950	Open Manhole	1200
59.010	o	750	AT1	69.000	63.710	4.540	Open Manhole	1800
59.011	o	300	S15	66.050	63.660	2.090	Open Manhole	1800
72.000	o	150	SSFD	63.720	62.570	1.000	Open Manhole	1200
59.012	o	150	Ex SC72a	63.720	62.570	1.000	Open Manhole	1200
9.021	o	900	Spur	64.435	59.705	3.830	Junction	
9.022	o	900	C48	63.019	59.260	2.859	Open Manhole	2100
9.023	o	900	C49	60.634	57.203	2.531	Open Manhole	2100
9.024	o	900	C50	57.788	54.750	2.138	Open Manhole	2100
9.025	o	900	C51	55.447	53.207	1.340	Open Manhole	2100
73.000	o	150	SW01	58.600	57.850	0.600	Open Manhole	1200
73.001	o	225	SW02	58.370	57.431	0.714	Open Manhole	1200
74.000	o	150	SW02A	64.330	62.680	1.500	Open Manhole	1200

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
59.009	24.985	416.4	AT1	69.000	63.710	4.540	Open Manhole	1800
71.000	25.835	101.3	AT1	69.000	64.785	3.990	Open Manhole	1800
59.010	26.021	520.4	S15	66.050	63.660	1.640	Open Manhole	1800
59.011	16.915	15.5	Ex SC72a	63.720	62.570	0.850	Open Manhole	1200
72.000	10.000	0.0	Ex SC72a	63.720	62.570	1.000	Open Manhole	1200
59.012	11.377	5.4	Spur	64.435	60.455	3.830	Junction	
9.021	49.296	55.1	C48	63.019	58.810	3.309	Open Manhole	2100
9.022	61.788	30.0	C49	60.634	57.203	2.531	Open Manhole	2100
9.023	73.596	30.0	C50	57.788	54.750	2.138	Open Manhole	2100
9.024	61.681	40.0	C51	55.447	53.207	1.340	Open Manhole	2100
9.025	90.020	20.9	C52	51.156	48.906	1.350	Open Manhole	2400
73.000	30.924	89.9	SW02	58.370	57.506	0.714	Open Manhole	1200
73.001	50.071	90.1	SW03	57.754	56.875	0.654	Open Manhole	1200
74.000	26.203	4.6	SW03	57.754	57.004	0.600	Open Manhole	1200

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PIPELINE SCHEDULES for Catchment C

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
73.002	o	300	SW03	57.754	56.800	0.654	Open Manhole	1200
73.003	o	300	SW04	57.214	56.211	0.703	Open Manhole	1200
73.004	o	300	SW05	56.600	55.252	1.048	Open Manhole	1200
75.000	o	150	SW05A	56.073	55.323	0.600	Open Manhole	1200
73.005	o	375	SW06	55.886	54.685	0.826	Open Manhole	1500
73.006	o	375	SW07	55.692	54.206	1.111	Open Manhole	1500
73.007	o	375	SW08	55.529	53.623	1.531	Open Manhole	1500
73.008	o	375	SW09	55.422	53.233	1.814	Open Manhole	1500
76.000	o	600	SW10	55.857	54.057	1.200	Open Manhole	1500
76.001	o	750	SW11	55.738	53.761	1.227	Open Manhole	1800
76.002	o	750	SW12	55.647	53.650	1.247	Open Manhole	1800
76.003	o	750	SW13	55.528	53.367	1.411	Open Manhole	1800
76.004	o	750	SW14	55.484	53.177	1.557	Open Manhole	1800
76.005	o	750	SW15	55.612	52.641	2.221	Open Manhole	1800
73.009	o	900	SW16	55.589	52.345	2.344	Open Manhole	2100

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
73.002	50.077	85.0	SW04	57.214	56.211	0.703	Open Manhole	1200
73.003	76.722	80.0	SW05	56.600	55.252	1.048	Open Manhole	1200
73.004	24.593	50.0	SW06	55.886	54.760	0.826	Open Manhole	1500
75.000	20.942	50.7	SW06	55.886	54.910	0.826	Open Manhole	1500
73.005	79.999	167.0	SW07	55.692	54.206	1.111	Open Manhole	1500
73.006	70.000	120.1	SW08	55.529	53.623	1.531	Open Manhole	1500
73.007	46.820	120.1	SW09	55.422	53.233	1.814	Open Manhole	1500
73.008	42.407	116.8	SW16	55.589	52.870	2.344	Open Manhole	2100
76.000	51.074	349.8	SW11	55.738	53.911	1.227	Open Manhole	1800
76.001	38.924	350.7	SW12	55.647	53.650	1.247	Open Manhole	1800
76.002	51.015	180.3	SW13	55.528	53.367	1.411	Open Manhole	1800
76.003	18.985	99.9	SW14	55.484	53.177	1.557	Open Manhole	1800
76.004	33.593	100.0	SW15	55.612	52.841	2.021	Open Manhole	1800
76.005	9.323	100.2	SW16	55.589	52.548	2.291	Open Manhole	2100
73.009	34.418	119.9	SW30	55.503	52.058	2.545	Open Manhole	2100

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PIPELINE SCHEDULES for Catchment C

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
77.000	o	225	SW17	58.606	57.900	0.481	Open Manhole	1200
77.001	o	225	SW18	58.445	57.413	0.807	Open Manhole	1200
77.002	o	225	SW19	57.723	56.513	0.985	Open Manhole	1200
78.000	o	150	SW20	57.200	56.500	0.550	Open Manhole	1200
77.003	o	225	SW21	57.444	55.996	1.223	Open Manhole	1200
77.004	o	225	SW22	57.084	55.500	1.359	Open Manhole	1200
79.000	o	150	Gully	56.774	55.800	0.824	Open Manhole	600
77.005	o	225	SW23	56.562	54.436	1.901	Open Manhole	1200
80.000	o	150	SW24	55.645	54.530	0.965	Open Manhole	1200
80.001	o	150	SW25	56.340	54.318	1.872	Open Manhole	1200
80.002	o	150	SW26	56.262	54.236	1.876	Open Manhole	1200
77.006	o	300	SW27	56.310	53.761	2.249	Open Manhole	1200
77.007	o	300	SW28	56.044	53.655	2.089	Open Manhole	1200
77.008	o	300	SW29	55.892	53.585	2.007	Open Manhole	1200

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
77.000	81.302	166.9	SW18	58.445	57.413	0.807	Open Manhole	1200
77.001	90.004	100.0	SW19	57.723	56.513	0.985	Open Manhole	1200
77.002	41.386	80.1	SW21	57.444	55.996	1.223	Open Manhole	1200
78.000	45.848	106.9	SW21	57.444	56.071	1.223	Open Manhole	1200
77.003	21.463	43.3	SW22	57.084	55.500	1.359	Open Manhole	1200
77.004	65.971	62.0	SW23	56.562	54.436	1.901	Open Manhole	1200
79.000	14.086	10.9	SW23	56.562	54.511	1.901	Open Manhole	1200
77.005	29.146	48.6	SW27	56.310	53.836	2.249	Open Manhole	1200
80.000	21.114	99.6	SW25	56.340	54.318	1.872	Open Manhole	1200
80.001	8.109	98.9	SW26	56.262	54.236	1.876	Open Manhole	1200
80.002	7.408	22.8	SW27	56.310	53.911	2.249	Open Manhole	1200
77.006	25.168	237.4	SW28	56.044	53.655	2.089	Open Manhole	1200
77.007	14.772	211.0	SW29	55.892	53.585	2.007	Open Manhole	1200
77.008	31.332	33.8	SW30	55.503	52.658	2.545	Open Manhole	2100

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PIPELINE SCHEDULES for Catchment C

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
73.010	o	900	SW30	55.503	52.058	2.545	Open Manhole	2100
73.011	o	900	SW31	55.327	51.186	3.241	Open Manhole	2100
73.012	o	900	SW32	55.648	50.456	4.292	Open Manhole	2100
81.000	o	150	HD01	57.100	56.050	0.900	Open Manhole	1200
81.001	o	150	HD02	56.041	54.974	0.917	Open Manhole	1200
81.002	o	150	HD03	55.655	54.299	1.206	Open Manhole	1200
81.003	o	150	HD04	54.782	53.401	1.231	Open Manhole	1200
73.013	o	1050	36	51.350	49.694	0.606	Open Manhole	2100
9.026	o	1200	C52	51.156	48.606	1.350	Open Manhole	2400
9.027	o	1200	C53	46.900	44.320	1.380	Open Manhole	2100
9.028	o	1200	C54	45.580	42.430	1.950	Open Manhole	2400
9.029	o	2100	H20C	42.300	39.800	0.400	Open Manhole	3000
82.000	o	225	C55a	42.230	41.180	0.825	Open Manhole	1200
83.000	o	150	C55b	45.150	43.800	1.200	Open Manhole	1200
82.001	o	225	C55	43.800	40.765	2.810	Open Manhole	1200

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
73.010	75.483	86.6	SW31	55.327	51.186	3.241	Open Manhole	2100
73.011	37.304	51.1	SW32	55.648	50.456	4.292	Open Manhole	2100
73.012	17.122	28.0	36	51.350	49.844	0.606	Open Manhole	2100
81.000	31.194	29.0	HD02	56.041	54.974	0.917	Open Manhole	1200
81.001	10.123	15.0	HD03	55.655	54.299	1.206	Open Manhole	1200
81.002	20.661	23.0	HD04	54.782	53.401	1.231	Open Manhole	1200
81.003	64.136	22.8	36	51.350	50.594	0.606	Open Manhole	2100
73.013	13.767	14.7	C52	51.156	48.756	1.350	Open Manhole	2400
9.026	99.980	23.3	C53	46.900	44.320	1.380	Open Manhole	2100
9.027	56.666	30.0	C54	45.580	42.430	1.950	Open Manhole	2400
9.028	50.477	35.3	H20C	42.300	41.000	0.100	Open Manhole	3000
9.029	18.000#	36.0	BASIN C1	42.000	39.300	0.600	Open Manhole	3000
82.000	51.214	150.0	C55	43.800	40.839	2.736	Open Manhole	1200
83.000	31.800	10.5	C55	43.800	40.764	2.886	Open Manhole	1200
82.001	47.504	167.0	56	44.900	40.481	4.194	Open Manhole	1200

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PIPELINE SCHEDULES for Catchment C

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
82.002	o	300	56	44.900	40.480	4.120	Open Manhole	1200
82.003	o	300	C57	44.300	40.215	3.785	Open Manhole	1200
82.004	o	300	H7C	42.500	40.000	2.200	Open Manhole	1200
9.030	o	450	BASIN C1	42.000	39.300	2.250	Open Manhole	3000
9.031	o	450	C59	38.600	36.500	1.650	Open Manhole	1500
84.000	o	600	P2_29	42.400	40.600	1.200	Open Manhole	1500
84.001	o	600	P2_30	42.343	40.517	1.226	Open Manhole	1500
84.002	o	600	P2_31	42.162	40.480	1.082	Open Manhole	1800
85.000	o	225	SC72	44.017	43.349	0.443	Open Manhole	1200
85.001	o	225	SC73	43.907	42.984	0.698	Open Manhole	1200
85.002	o	225	SC74	43.815	42.692	0.898	Open Manhole	1200
85.003	o	300	SC75	43.201	42.400	0.501	Open Manhole	1200
85.004	o	450	SC76	43.103	41.950	0.703	Open Manhole	1500
85.005	o	600	SC77	42.911	41.550	0.761	Open Manhole	1500
85.006	o	600	SC78	42.668	41.298	0.770	Open Manhole	1500
85.007	o	750	SC79	42.450	41.080	0.620	Open Manhole	1800
85.008	o	750	SC80	42.222	40.780	0.692	Open Manhole	1800
85.009	o	750	SC81	42.120	40.620	0.750	Open Manhole	1800

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
82.002	44.321	167.0	C57	44.300	40.215	3.785	Open Manhole	1200
82.003	31.669	147.3	H7C	42.500	40.000	2.200	Open Manhole	1200
82.004	18.000#	25.7	BASIN C1	42.000	39.300	2.400	Open Manhole	3000
9.030	28.516	10.2	C59	38.600	36.500	1.650	Open Manhole	1500
9.031	13.000#	52.0	BASIN C3	38.500	36.250	1.800	Open Manhole	2400
84.000	39.878	480.5	P2_30	42.343	40.517	1.226	Open Manhole	1500
84.001	17.744	479.6	P2_31	42.162	40.480	1.082	Open Manhole	1800
84.002	49.336	483.7	P2_32	42.065	40.378	1.087	Open Manhole	1800
85.000	54.800	150.1	SC73	43.907	42.984	0.698	Open Manhole	1200
85.001	48.426	167.0	SC74	43.815	42.694	0.896	Open Manhole	1200
85.002	50.000	171.2	SC75	43.201	42.400	0.576	Open Manhole	1200
85.003	49.000	163.3	SC76	43.103	42.100	0.703	Open Manhole	1500
85.004	96.099	384.4	SC77	42.911	41.700	0.761	Open Manhole	1500
85.005	106.473	422.5	SC78	42.668	41.298	0.770	Open Manhole	1500
85.006	21.512	202.9	SC79	42.450	41.192	0.658	Open Manhole	1800
85.007	57.795	192.7	SC80	42.222	40.780	0.692	Open Manhole	1800
85.008	95.144	594.7	SC81	42.120	40.620	0.750	Open Manhole	1800
85.009	73.549	500.3	SC82	42.609	40.473	1.386	Open Manhole	1800

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PIPELINE SCHEDULES for Catchment C

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
85.010	o	750	SC82	42.609	40.473	1.386	Open Manhole	1800
85.011	o	750	SC83	42.400	40.295	1.355	Open Manhole	1800
84.003	o	750	P2_32	42.065	40.228	1.087	Open Manhole	1800
84.004	o	750	P2_33	41.991	40.200	1.041	Open Manhole	1800
84.005	o	750	P2_34	42.255	40.102	1.403	Open Manhole	1800
84.006	o	900	P1 Slab	42.398	39.930	1.568	Open Manhole	1800
86.000	o	450	C88	44.193	42.893	0.850	Open Manhole	1500
86.001	o	450	C89	44.062	42.762	0.850	Open Manhole	1500
86.002	o	450	C90	43.963	42.645	0.868	Open Manhole	1500
86.003	o	450	C91	43.801	42.483	0.868	Open Manhole	1500
86.004	o	450	C92	43.639	42.321	0.868	Open Manhole	1500
86.005	o	450	C93	43.417	42.099	0.868	Open Manhole	1500
86.006	o	450	C94	43.195	41.877	0.868	Open Manhole	1500
86.007	o	450	C95	43.004	41.686	0.868	Open Manhole	1500
86.008	o	450	C96	42.813	41.495	0.868	Open Manhole	1500
86.009	o	450	C97	42.622	41.304	0.868	Open Manhole	1500
87.000	o	150	C87	42.450	41.600	0.700	Open Manhole	1200

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
85.010	89.144	500.8	SC83	42.400	40.295	1.355	Open Manhole	1800
85.011	33.311	497.2	P2_32	42.065	40.228	1.087	Open Manhole	1800
84.003	14.823	529.4	P2_33	41.991	40.200	1.041	Open Manhole	1800
84.004	52.656	537.3	P2_34	42.255	40.102	1.403	Open Manhole	1800
84.005	11.901	541.0	P1 Slab	42.398	40.080	1.568	Open Manhole	1800
84.006	33.073	3011.6	C65	42.458	39.919	1.639	Open Manhole	2400
86.000	65.419	499.4	C89	44.062	42.762	0.850	Open Manhole	1500
86.001	58.469	499.7	C90	43.963	42.645	0.868	Open Manhole	1500
86.002	81.003	500.0	C91	43.801	42.483	0.868	Open Manhole	1500
86.003	81.004	500.0	C92	43.639	42.321	0.868	Open Manhole	1500
86.004	111.005	500.0	C93	43.417	42.099	0.868	Open Manhole	1500
86.005	111.005	500.0	C94	43.195	41.877	0.868	Open Manhole	1500
86.006	95.499	500.0	C95	43.004	41.686	0.868	Open Manhole	1500
86.007	95.501	500.0	C96	42.813	41.495	0.868	Open Manhole	1500
86.008	95.500	500.0	C97	42.622	41.304	0.868	Open Manhole	1500
86.009	70.529	369.3	C98	42.480	41.113	0.917	Open Manhole	2100
87.000	25.128	149.6	C98	42.480	41.432	0.898	Open Manhole	2100

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PIPELINE SCHEDULES for Catchment C

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
88.000	o	150	P2_1	44.315	42.965	1.200	Open Manhole	1200
88.001	o	150	P2_2	44.251	42.901	1.200	Open Manhole	1200
88.002	o	150	P2_3	44.154	42.804	1.200	Open Manhole	1200
88.003	o	150	P2_4	44.141	42.737	1.254	Open Manhole	1200
89.000	o	150	P2_5	56.568	55.218	1.200	Open Manhole	1200
88.004	o	300	P2_6	43.748	42.143	1.305	Open Manhole	1200
88.005	o	300	P2_7	43.614	42.071	1.243	Open Manhole	1200
88.006	o	450	P2_8	43.453	41.770	1.233	Open Manhole	1500
88.007	o	600	P2_11	43.304	41.418	1.286	Open Manhole	1500
88.008	o	600	P2_12	43.208	41.396	1.212	Open Manhole	1500
88.009	o	600	P_13	43.102	41.253	1.249	Open Manhole	1500
88.010	o	750	P2_14	42.969	40.963	1.256	Open Manhole	1800
88.011	o	750	P2_15	42.830	40.823	1.257	Open Manhole	1800
88.012	o	750	P2_16	42.683	40.678	1.255	Open Manhole	1800
88.013	o	900	P2_17	42.781	40.513	1.368	Open Manhole	2100
88.014	o	900	P2_18	42.724	40.457	1.367	Open Manhole	2100
88.015	o	900	P2_19	42.835	40.425	1.510	Open Manhole	2100
88.016	o	900	P2_20	43.007	40.398	1.709	Open Manhole	2100
88.017	o	900	P2_21	42.959	40.348	1.711	Open Manhole	2100

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
88.000	5.121	80.0	P2_2	44.251	42.901	1.200	Open Manhole	1200
88.001	9.720	100.2	P2_3	44.154	42.804	1.200	Open Manhole	1200
88.002	6.690	99.9	P2_4	44.141	42.737	1.254	Open Manhole	1200
88.003	31.666	71.3	P2_6	43.748	42.293	1.305	Open Manhole	1200
89.000	41.702	3.2	P2_6	43.748	42.293	1.305	Open Manhole	1200
88.004	10.721	151.0	P2_7	43.614	42.072	1.242	Open Manhole	1200
88.005	14.762	97.8	P2_8	43.453	41.920	1.233	Open Manhole	1500
88.006	65.006	321.8	P2_11	43.304	41.568	1.286	Open Manhole	1500
88.007	7.767	353.0	P2_12	43.208	41.396	1.212	Open Manhole	1500
88.008	50.178	350.9	P_13	43.102	41.253	1.249	Open Manhole	1500
88.009	69.948	499.6	P2_14	42.969	41.113	1.256	Open Manhole	1800
88.010	70.000	500.0	P2_15	42.830	40.823	1.257	Open Manhole	1800
88.011	72.120	500.8	P2_16	42.683	40.679	1.254	Open Manhole	1800
88.012	7.902	493.9	P2_17	42.781	40.662	1.369	Open Manhole	2100
88.013	27.903	498.3	P2_18	42.724	40.457	1.367	Open Manhole	2100
88.014	15.790	493.4	P2_19	42.835	40.425	1.510	Open Manhole	2100
88.015	13.849	494.6	P2_20	43.007	40.397	1.710	Open Manhole	2100
88.016	24.979	499.6	P2_21	42.959	40.348	1.711	Open Manhole	2100
88.017	15.365	495.6	P2_22	43.070	40.317	1.853	Open Manhole	2100

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PIPELINE SCHEDULES for Catchment C

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
88.018	o	900	P2_22	43.070	40.317	1.853	Open Manhole	2100
88.019	o	900	P2_23	43.218	40.293	2.025	Open Manhole	2100
88.020	o	900	P2_24	43.168	40.204	2.064	Open Manhole	2100
88.021	o	900	P2_25	43.164	40.174	2.090	Open Manhole	2100
88.022	o	900	P2_25A	43.078	40.082	2.096	Open Manhole	2100
88.023	o	900	P2_26	42.941	39.947	2.094	Open Manhole	2100
88.024	o	900	P2_26A	42.801	39.809	2.092	Open Manhole	2100
88.025	o	900	P2_27	42.787	39.794	2.093	Open Manhole	2100
88.026	o	900	P2_28	42.657	39.662	2.095	Open Manhole	2100
88.027	o	900	P2_28A	42.181	39.516	1.765	Open Manhole	2100
88.028	o	900	246	42.490	39.470	2.120	Open Manhole	2100
86.010	o	900	C98	42.480	39.442	2.138	Open Manhole	2100
84.007	o	1200	C65	42.458	39.100	2.158	Open Manhole	2400
84.008	o	1200	C66	38.800	36.950	0.650	Open Manhole	2400
9.032	o	450	BASIN C3	38.500	35.880	2.170	Open Manhole	2400
9.033	o	450	C68	36.717	35.168	1.099	Open Manhole	1500
9.034	o	450	C69	36.300	34.943	0.907	Open Manhole	1500
9.035	o	450	C70	34.865	33.815	0.600	Open Manhole	1500

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
88.018	11.978	499.1	P2_23	43.218	40.293	2.025	Open Manhole	2100
88.019	44.644	501.6	P2_24	43.168	40.204	2.064	Open Manhole	2100
88.020	14.811	493.7	P2_25	43.164	40.174	2.090	Open Manhole	2100
88.021	45.987	501.6	P2_25A	43.078	40.082	2.096	Open Manhole	2100
88.022	67.963	503.4	P2_26	42.941	39.947	2.094	Open Manhole	2100
88.023	69.033	501.6	P2_26A	42.801	39.809	2.092	Open Manhole	2100
88.024	7.731	515.4	P2_27	42.787	39.794	2.093	Open Manhole	2100
88.025	66.023	500.2	P2_28	42.657	39.662	2.095	Open Manhole	2100
88.026	56.011	383.6	P2_28A	42.181	39.516	1.765	Open Manhole	2100
88.027	22.433	487.7	246	42.490	39.470	2.120	Open Manhole	2100
88.028	13.795	500.0	C98	42.480	39.442	2.138	Open Manhole	2100
86.010	24.711	500.0	C65	42.458	39.393	2.165	Open Manhole	2400
84.007	76.445	35.6	C66	38.800	36.950	0.650	Open Manhole	2400
84.008	14.000#	40.0	BASIN C3	38.500	36.600	0.700	Open Manhole	2400
9.032	75.151	105.5	C68	36.717	35.168	1.099	Open Manhole	1500
9.033	33.595	149.3	C69	36.300	34.943	0.907	Open Manhole	1500
9.034	65.169	57.8	C70	34.865	33.815	0.600	Open Manhole	1500
9.035	53.153	44.6	C71	33.672	32.622	0.600	Open Manhole	1500

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PIPELINE SCHEDULES for Catchment C

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
9.036	o	450	C71	33.672	32.622	0.600	Open Manhole	1500

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
9.036	31.803	289.1	C OUTFALL	33.425	32.512	0.463	Open Manhole	450

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Area Summary for Catchment C

Pipe Number	PIMP Type	PIMP Name	PIMP (%)	Gross Area (ha)	Imp. Area (ha)	Pipe Total (ha)
9.000	-	-	100	0.510	0.510	0.510
9.001	-	-	100	0.000	0.000	0.000
10.000	-	-	100	0.270	0.270	0.270
9.002	-	-	100	0.000	0.000	0.000
9.003	-	-	100	0.000	0.000	0.000
9.004	-	-	100	0.000	0.000	0.000
9.005	-	-	100	0.000	0.000	0.000
11.000	-	-	100	0.485	0.485	0.485
11.001	-	-	100	0.000	0.000	0.000
11.002	-	-	100	0.000	0.000	0.000
11.003	-	-	100	0.000	0.000	0.000
12.000	-	-	100	0.485	0.485	0.485
12.001	-	-	100	0.000	0.000	0.000
12.002	-	-	100	0.000	0.000	0.000
11.004	-	-	100	0.000	0.000	0.000
13.000	-	-	100	0.485	0.485	0.485
13.001	-	-	100	0.000	0.000	0.000
13.002	-	-	100	0.000	0.000	0.000
11.005	-	-	100	0.000	0.000	0.000
14.000	-	-	100	0.485	0.485	0.485
14.001	-	-	100	0.000	0.000	0.000
14.002	-	-	100	0.000	0.000	0.000
11.006	-	-	100	0.000	0.000	0.000
11.007	-	-	100	0.000	0.000	0.000
9.006	-	-	100	0.000	0.000	0.000
9.007	-	-	100	0.000	0.000	0.000
15.000	-	-	100	0.198	0.198	0.198
16.000	-	-	100	0.203	0.203	0.203
16.001	-	-	100	0.000	0.000	0.000
15.001	-	-	100	0.000	0.000	0.000
17.000	-	-	100	0.290	0.290	0.290
15.002	-	-	100	0.000	0.000	0.000
18.000	-	-	100	0.298	0.298	0.298
18.001	-	-	100	0.000	0.000	0.000
15.003	-	-	100	0.000	0.000	0.000
15.004	-	-	100	0.000	0.000	0.000
9.008	-	-	100	0.000	0.000	0.000
9.009	-	-	100	0.000	0.000	0.000
19.000	-	-	100	0.046	0.046	0.046
9.010	-	-	100	0.000	0.000	0.000
9.011	-	-	100	0.000	0.000	0.000
20.000	-	-	100	0.352	0.352	0.352
20.001	-	-	100	0.000	0.000	0.000
20.002	-	-	100	0.000	0.000	0.000
20.003	-	-	100	0.000	0.000	0.000
21.000	-	-	100	0.000	0.000	0.000
9.012	-	-	100	0.000	0.000	0.000
22.000	-	-	100	0.031	0.031	0.031
22.001	-	-	100	0.098	0.098	0.098
22.002	-	-	100	0.143	0.143	0.143
22.003	-	-	100	0.181	0.181	0.181

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Area Summary for Catchment C

Pipe Number	PIMP Type	PIMP Name	PIMP (%)	Gross Area (ha)	Imp. Area (ha)	Pipe Total (ha)
23.000	-	-	100	0.223	0.223	0.223
22.004	-	-	100	0.000	0.000	0.000
24.000	-	-	100	0.302	0.302	0.302
22.005	-	-	100	0.000	0.000	0.000
22.006	-	-	100	0.000	0.000	0.000
9.013	-	-	100	0.000	0.000	0.000
25.000	-	-	100	0.025	0.025	0.025
9.014	-	-	100	0.049	0.049	0.049
9.015	-	-	100	0.000	0.000	0.000
26.000	User	-	100	0.288	0.288	0.288
27.000	-	-	100	0.663	0.663	0.663
27.001	-	-	100	0.209	0.209	0.209
27.002	-	-	100	0.419	0.419	0.419
27.003	-	-	100	0.202	0.202	0.202
27.004	-	-	100	0.226	0.226	0.226
27.005	-	-	100	0.000	0.000	0.000
27.006	-	-	100	0.449	0.449	0.449
27.007	-	-	100	0.000	0.000	0.000
26.001	-	-	100	0.000	0.000	0.000
9.016	User	-	100	0.172	0.172	0.172
	User	-	100	0.178	0.178	0.350
9.017	-	-	100	0.000	0.000	0.000
28.000	-	-	100	0.682	0.682	0.682
28.001	-	-	100	0.000	0.000	0.000
29.000	-	-	100	0.268	0.268	0.268
28.002	-	-	100	0.000	0.000	0.000
30.000	-	-	100	0.190	0.190	0.190
28.003	-	-	100	0.000	0.000	0.000
28.004	-	-	100	0.000	0.000	0.000
28.005	-	-	100	0.000	0.000	0.000
31.000	-	-	100	0.482	0.482	0.482
31.001	-	-	100	0.000	0.000	0.000
31.002	-	-	100	0.000	0.000	0.000
31.003	-	-	100	0.000	0.000	0.000
32.000	-	-	100	0.482	0.482	0.482
32.001	-	-	100	0.000	0.000	0.000
32.002	-	-	100	0.000	0.000	0.000
31.004	-	-	100	0.000	0.000	0.000
33.000	-	-	100	0.482	0.482	0.482
33.001	-	-	100	0.000	0.000	0.000
33.002	-	-	100	0.000	0.000	0.000
31.005	-	-	100	0.000	0.000	0.000
34.000	-	-	100	0.482	0.482	0.482
34.001	-	-	100	0.000	0.000	0.000
34.002	-	-	100	0.000	0.000	0.000
31.006	-	-	100	0.000	0.000	0.000
28.006	-	-	100	0.000	0.000	0.000
35.000	-	-	100	0.249	0.249	0.249
35.001	-	-	100	0.000	0.000	0.000
35.002	-	-	100	0.000	0.000	0.000
35.003	-	-	100	0.000	0.000	0.000

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Area Summary for Catchment C

Pipe Number	PIMP Type	PIMP Name	PIMP (%)	Gross Area (ha)	Imp. Area (ha)	Pipe Total (ha)
28.007	-	-	100	0.000	0.000	0.000
28.008	-	-	100	0.000	0.000	0.000
28.009	-	-	100	0.000	0.000	0.000
36.000	-	-	100	0.293	0.293	0.293
36.001	-	-	100	0.000	0.000	0.000
37.000	-	-	100	0.154	0.154	0.154
37.001	-	-	100	0.000	0.000	0.000
38.000	-	-	100	0.323	0.323	0.323
37.002	-	-	100	0.000	0.000	0.000
36.002	-	-	100	0.000	0.000	0.000
36.003	-	-	100	0.000	0.000	0.000
28.010	-	-	100	0.000	0.000	0.000
39.000	-	-	100	0.026	0.026	0.026
39.001	-	-	100	0.000	0.000	0.000
40.000	-	-	100	0.404	0.404	0.404
39.002	-	-	100	0.000	0.000	0.000
41.000	-	-	100	0.305	0.305	0.305
41.001	-	-	100	0.000	0.000	0.000
39.003	-	-	100	0.000	0.000	0.000
39.004	-	-	100	0.000	0.000	0.000
28.011	-	-	100	0.000	0.000	0.000
28.012	-	-	100	0.000	0.000	0.000
42.000	-	-	100	0.075	0.075	0.075
28.013	-	-	100	0.000	0.000	0.000
43.000	-	-	100	0.352	0.352	0.352
43.001	-	-	100	0.000	0.000	0.000
43.002	-	-	100	0.000	0.000	0.000
43.003	-	-	100	0.000	0.000	0.000
44.000	-	-	100	0.000	0.000	0.000
43.004	-	-	100	0.000	0.000	0.000
28.014	-	-	100	0.000	0.000	0.000
45.000	-	-	100	0.043	0.043	0.043
28.015	-	-	100	0.050	0.050	0.050
46.000	-	-	100	0.074	0.074	0.074
46.001	-	-	100	0.103	0.103	0.103
47.000	-	-	100	0.319	0.319	0.319
47.001	-	-	100	0.120	0.120	0.120
47.002	-	-	100	0.120	0.120	0.120
47.003	-	-	100	0.122	0.122	0.122
46.002	-	-	100	0.000	0.000	0.000
46.003	-	-	100	0.000	0.000	0.000
46.004	-	-	100	0.000	0.000	0.000
28.016	-	-	100	0.000	0.000	0.000
28.017	-	-	100	0.000	0.000	0.000
48.000	-	-	100	0.053	0.053	0.053
48.001	-	-	100	0.000	0.000	0.000
49.000	-	-	100	0.146	0.146	0.146
49.001	-	-	100	0.140	0.140	0.140
49.002	-	-	100	0.140	0.140	0.140
49.003	-	-	100	0.140	0.140	0.140
50.000	-	-	100	0.139	0.139	0.139

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Area Summary for Catchment C

Pipe Number	PIMP Type	PIMP Name	PIMP (%)	Gross Area (ha)	Imp. Area (ha)	Pipe Total (ha)
48.002	-	-	100	0.000	0.000	0.000
48.003	-	-	100	0.000	0.000	0.000
48.004	-	-	100	0.000	0.000	0.000
28.018	-	-	100	0.000	0.000	0.000
28.019	-	-	100	0.000	0.000	0.000
9.018	User	-	100	0.438	0.438	0.438
51.000	User	-	100	0.042	0.042	0.042
51.001	User	-	100	0.026	0.026	0.026
51.002	User	-	100	0.026	0.026	0.026
51.003	User	-	100	0.047	0.047	0.047
51.004	User	-	100	0.062	0.062	0.062
51.005	User	-	100	0.073	0.073	0.073
	User	-	20	0.012	0.002	0.075
52.000	-	-	100	0.004	0.004	0.004
52.001	-	-	100	0.000	0.000	0.000
52.002	-	-	100	0.000	0.000	0.000
53.000	-	-	100	0.006	0.006	0.006
52.003	-	-	100	0.030	0.030	0.030
52.004	-	-	100	0.055	0.055	0.055
54.000	-	-	100	0.034	0.034	0.034
54.001	-	-	100	0.000	0.000	0.000
55.000	-	-	100	0.008	0.008	0.008
56.000	-	-	100	0.012	0.012	0.012
54.002	-	-	100	0.000	0.000	0.000
57.000	-	-	100	0.013	0.013	0.013
52.005	-	-	100	0.000	0.000	0.000
51.006	User	-	100	0.074	0.074	0.074
51.007	User	-	20	0.034	0.007	0.007
	User	-	100	0.085	0.085	0.091
	User	-	100	0.015	0.015	0.106
58.000	User	-	100	0.096	0.096	0.096
	User	-	20	0.054	0.011	0.107
58.001	User	-	100	0.044	0.044	0.044
	User	-	20	0.032	0.006	0.051
58.002	User	-	100	0.039	0.039	0.039
	User	-	20	0.037	0.007	0.047
58.003	-	-	100	0.000	0.000	0.000
51.008	User	-	100	0.257	0.257	0.257
51.009	User	-	100	0.228	0.228	0.228
51.010	User	-	100	0.108	0.108	0.108
51.011	User	-	100	0.127	0.127	0.127
51.012	User	-	100	0.115	0.115	0.115
51.013	User	-	100	0.240	0.240	0.240
51.014	User	-	100	0.253	0.253	0.253
	User	-	20	1.372	0.274	0.527
51.015	-	-	100	0.000	0.000	0.000
9.019	User	-	100	0.123	0.123	0.123
9.020	User	-	100	0.133	0.133	0.133
59.000	-	-	100	0.052	0.052	0.052
60.000	-	-	100	0.306	0.306	0.306
59.001	-	-	100	0.000	0.000	0.000

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Area Summary for Catchment C

Pipe Number	PIMP Type	PIMP Name	PIMP (%)	Gross Area (ha)	Imp. Area (ha)	Pipe Total (ha)
61.000	-	-	100	0.267	0.267	0.267
59.002	-	-	100	0.000	0.000	0.000
62.000	-	-	100	0.102	0.102	0.102
62.001	-	-	100	0.000	0.000	0.000
63.000	-	-	100	0.256	0.256	0.256
62.002	-	-	100	0.000	0.000	0.000
64.000	-	-	100	0.255	0.255	0.255
62.003	-	-	100	0.000	0.000	0.000
59.003	-	-	100	0.000	0.000	0.000
65.000	-	-	100	0.033	0.033	0.033
65.001	-	-	100	0.000	0.000	0.000
66.000	-	-	100	0.066	0.066	0.066
65.002	-	-	100	0.000	0.000	0.000
67.000	-	-	100	0.080	0.080	0.080
59.004	-	-	100	0.000	0.000	0.000
68.000	-	-	100	0.040	0.040	0.040
68.001	-	-	100	0.000	0.000	0.000
59.005	-	-	100	0.000	0.000	0.000
59.006	-	-	100	0.000	0.000	0.000
59.007	-	-	100	0.000	0.000	0.000
59.008	-	-	100	0.000	0.000	0.000
69.000	-	-	100	0.329	0.329	0.329
70.000	-	-	100	0.016	0.016	0.016
59.009	-	-	100	0.000	0.000	0.000
71.000	-	-	100	0.177	0.177	0.177
59.010	-	-	100	0.000	0.000	0.000
59.011	-	-	100	0.000	0.000	0.000
72.000	-	-	100	0.162	0.162	0.162
59.012	-	-	100	0.000	0.000	0.000
9.021	-	-	100	0.000	0.000	0.000
9.022	User	-	100	0.117	0.117	0.117
9.023	User	-	100	0.084	0.084	0.084
9.024	User	-	100	0.164	0.164	0.164
9.025	User	-	100	0.139	0.139	0.139
73.000	User	-	20	0.118	0.024	0.024
73.001	User	-	20	0.135	0.027	0.027
74.000	User	-	20	0.328	0.066	0.066
73.002	User	-	20	0.188	0.038	0.038
73.003	User	-	20	0.268	0.054	0.054
73.004	-	-	100	0.000	0.000	0.000
75.000	User	-	20	0.060	0.012	0.012
73.005	User	-	20	0.100	0.020	0.020
73.006	User	-	20	0.095	0.019	0.019
73.007	User	-	20	0.068	0.014	0.014
73.008	User	-	20	0.077	0.015	0.015
76.000	-	-	100	0.000	0.000	0.000
76.001	-	-	100	0.000	0.000	0.000
76.002	-	-	100	0.000	0.000	0.000
76.003	-	-	100	0.000	0.000	0.000
76.004	-	-	100	0.000	0.000	0.000
76.005	-	-	100	0.000	0.000	0.000

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Area Summary for Catchment C

Pipe Number	PIMP Type	PIMP Name	PIMP (%)	Gross Area (ha)	Imp. Area (ha)	Pipe Total (ha)
73.009	User	-	20	0.052	0.010	0.010
	User	-	20	0.700	0.140	0.150
77.000	User	-	20	0.314	0.063	0.063
77.001	User	-	20	0.200	0.040	0.040
77.002	User	-	20	0.069	0.014	0.014
78.000	User	-	50	0.068	0.034	0.034
77.003	-	-	100	0.000	0.000	0.000
77.004	-	-	100	0.000	0.000	0.000
79.000	User	-	100	0.010	0.010	0.010
77.005	-	-	100	0.000	0.000	0.000
80.000	-	-	100	0.000	0.000	0.000
80.001	-	-	100	0.000	0.000	0.000
80.002	-	-	100	0.000	0.000	0.000
77.006	-	-	100	0.000	0.000	0.000
77.007	-	-	100	0.000	0.000	0.000
77.008	-	-	100	0.000	0.000	0.000
73.010	User	-	20	0.120	0.024	0.024
73.011	User	-	20	0.073	0.015	0.015
73.012	-	-	100	0.000	0.000	0.000
81.000	User	-	100	0.017	0.017	0.017
	User	-	20	0.075	0.015	0.032
81.001	-	-	100	0.000	0.000	0.000
81.002	-	-	100	0.000	0.000	0.000
81.003	User	-	100	0.015	0.015	0.015
	User	-	20	0.025	0.005	0.020
	User	-	20	0.130	0.026	0.046
73.013	-	-	100	3.635	3.635	3.635
9.026	User	-	100	0.248	0.248	0.248
9.027	-	-	100	0.000	0.000	0.000
9.028	-	-	100	0.000	0.000	0.000
9.029	-	-	100	0.000	0.000	0.000
82.000	-	-	100	0.100	0.100	0.100
83.000	-	-	100	0.040	0.040	0.040
82.001	-	-	100	0.140	0.140	0.140
82.002	-	-	100	0.015	0.015	0.015
82.003	-	-	100	0.000	0.000	0.000
82.004	-	-	100	0.000	0.000	0.000
9.030	-	-	100	0.000	0.000	0.000
9.031	-	-	100	0.000	0.000	0.000
84.000	User	-	100	0.305	0.305	0.305
	User	-	50	0.010	0.005	0.310
84.001	User	-	100	0.327	0.327	0.327
	User	-	50	0.020	0.010	0.337
84.002	-	-	100	0.000	0.000	0.000
85.000	-	-	100	0.020	0.020	0.020
85.001	-	-	100	0.100	0.100	0.100
85.002	-	-	100	0.086	0.086	0.086
85.003	-	-	100	0.000	0.000	0.000
85.004	-	-	100	0.097	0.097	0.097
85.005	-	-	100	0.657	0.657	0.657
85.006	-	-	100	0.735	0.735	0.735

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Area Summary for Catchment C

Pipe Number	PIMP Type	PIMP Name	PIMP (%)	Gross Area (ha)	Imp. Area (ha)	Pipe Total (ha)
85.007	-	-	100	0.001	0.001	0.001
85.008	-	-	100	0.503	0.503	0.503
85.009	-	-	100	0.864	0.864	0.864
85.010	-	-	100	0.750	0.750	0.750
85.011	-	-	100	0.050	0.050	0.050
84.003	User	-	50	0.011	0.005	0.005
	User	-	100	0.117	0.117	0.123
84.004	User	-	100	0.261	0.261	0.261
84.005	-	-	100	0.000	0.000	0.000
84.006	-	-	100	0.000	0.000	0.000
86.000	-	-	100	0.001	0.001	0.001
86.001	-	-	100	0.043	0.043	0.043
86.002	-	-	100	0.051	0.051	0.051
86.003	-	-	100	0.073	0.073	0.073
86.004	-	-	100	0.073	0.073	0.073
86.005	-	-	100	0.100	0.100	0.100
86.006	-	-	100	0.100	0.100	0.100
86.007	-	-	100	0.086	0.086	0.086
86.008	-	-	100	0.086	0.086	0.086
86.009	-	-	100	0.086	0.086	0.086
87.000	-	-	100	0.000	0.000	0.000
88.000	User	-	50	0.023	0.011	0.011
88.001	User	-	100	0.006	0.006	0.006
	User	-	50	0.037	0.018	0.024
88.002	User	-	100	0.012	0.012	0.012
	User	-	50	0.007	0.004	0.015
88.003	User	-	50	0.089	0.044	0.044
	User	-	100	0.004	0.004	0.048
89.000	User	-	50	0.497	0.248	0.248
88.004	User	-	50	0.189	0.094	0.094
88.005	User	-	100	0.040	0.040	0.040
	User	-	50	0.003	0.002	0.042
88.006	User	-	100	0.427	0.427	0.427
	User	-	50	0.006	0.003	0.429
	User	-	100	0.006	0.006	0.436
88.007	User	-	50	0.241	0.120	0.120
88.008	User	-	50	0.220	0.110	0.110
	User	-	100	0.371	0.371	0.480
88.009	User	-	50	0.130	0.065	0.065
	User	-	100	0.522	0.522	0.587
88.010	User	-	100	0.516	0.516	0.516
	User	-	50	0.060	0.030	0.546
88.011	User	-	50	0.776	0.388	0.388
	User	-	100	0.533	0.533	0.921
88.012	User	-	100	0.012	0.012	0.012
	User	-	50	0.049	0.025	0.036
88.013	User	-	50	0.006	0.003	0.003
	User	-	100	0.190	0.190	0.193
88.014	User	-	100	0.070	0.070	0.070
	User	-	50	0.004	0.002	0.072
88.015	User	-	50	0.041	0.021	0.021

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Area Summary for Catchment C

Pipe Number	PIMP Type	PIMP Name	PIMP (%)	Gross Area (ha)	Imp. Area (ha)	Pipe Total (ha)
	User	-	100	0.012	0.012	0.033
88.016	User	-	50	0.050	0.025	0.025
	User	-	100	0.108	0.108	0.132
88.017	User	-	50	0.030	0.015	0.015
	User	-	100	0.045	0.045	0.060
88.018	User	-	100	0.005	0.005	0.005
	User	-	50	0.014	0.007	0.012
88.019	User	-	50	0.119	0.059	0.059
	User	-	100	0.075	0.075	0.134
88.020	User	-	50	0.012	0.006	0.006
	User	-	100	0.002	0.002	0.008
88.021	User	-	50	0.235	0.117	0.117
88.022	User	-	50	0.110	0.055	0.055
	User	-	100	0.006	0.006	0.061
88.023	User	-	100	0.024	0.024	0.024
88.024	User	-	100	0.024	0.024	0.024
88.025	User	-	50	0.089	0.044	0.044
	User	-	100	0.002	0.002	0.046
88.026	User	-	50	0.105	0.052	0.052
88.027	-	-	100	0.000	0.000	0.000
88.028	-	-	100	0.000	0.000	0.000
86.010	-	-	100	0.084	0.084	0.084
84.007	-	-	100	0.437	0.437	0.437
84.008	-	-	100	0.000	0.000	0.000
9.032	User	-	20	4.160	0.832	0.832
9.033	-	-	100	0.000	0.000	0.000
9.034	-	-	100	0.000	0.000	0.000
9.035	-	-	100	0.000	0.000	0.000
9.036	-	-	100	0.000	0.000	0.000
				Total	Total	Total
				45.850	37.106	37.106

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Network Classifications for Catchment C

PN	USMH Name	Pipe Dia (mm)	Min Cover Depth (m)	Max Cover Depth (m)	Pipe Type	MH Dia (mm)	MH Width (mm)	MH Ring Depth (m)	MH Type
9.000	OB9	-4	0.450	1.505	Unclassified	3000	0	0.450	Unclassified
9.001	S39	750	1.505	1.535	Unclassified	3000	0	1.505	Unclassified
10.000	OB10	375	0.825	0.840	Unclassified	1500	0	0.825	Unclassified
9.002	S40 (BD)	750	0.640	1.535	Unclassified	1800	0	1.535	Unclassified
9.003	S41	750	0.640	2.065	Unclassified	1800	0	0.640	Unclassified
9.004	Tank 6 - Full Retention	750	2.065	2.120	Unclassified	1800	0	2.065	Unclassified
9.005	S42	750	2.120	2.355	Unclassified	1800	0	2.120	Unclassified
11.000	4A	300	0.700	0.700	Unclassified	1200	0	0.700	Unclassified
11.001	4B	300	0.700	0.700	Unclassified	1200	0	0.700	Unclassified
11.002	SDP004	300	1.520	2.150	Unclassified	1200	0	2.150	Unclassified
11.003	S43 (V)	525	1.087	1.295	Unclassified	1500	0	1.295	Unclassified
12.000	3A	300	0.700	0.700	Unclassified	1200	0	0.700	Unclassified
12.001	3B	300	0.700	0.700	Unclassified	1200	0	0.700	Unclassified
12.002	SDP003	375	0.842	2.075	Unclassified	1500	0	2.075	Unclassified
11.004	S44 (V)	600	1.012	1.117	Unclassified	1500	0	1.012	Unclassified
13.000	2A	300	0.700	0.700	Unclassified	1200	0	0.700	Unclassified
13.001	2B	300	0.700	0.700	Unclassified	1200	0	0.700	Unclassified
13.002	SDP002	375	0.732	2.075	Unclassified	1500	0	2.075	Unclassified
11.005	S45 (V)	825	0.892	1.365	Unclassified	1800	0	0.892	Unclassified
14.000	1A	300	0.700	0.700	Unclassified	1200	0	0.700	Unclassified
14.001	1B	300	0.700	0.700	Unclassified	1200	0	0.700	Unclassified
14.002	SDP001	375	1.095	2.075	Unclassified	1500	0	2.075	Unclassified
11.006	S46 (V)	825	1.365	1.455	Unclassified	1800	0	1.365	Unclassified
11.007	S47 (V)	825	1.455	2.280	Unclassified	1800	0	1.455	Unclassified
9.006	S48	825	2.280	2.450	Unclassified	1800	0	2.280	Unclassified
9.007	S49	825	2.450	2.621	Unclassified	1800	0	2.450	Unclassified
15.000	OB14	375	0.825	1.306	Unclassified	1500	0	0.825	Unclassified
16.000	OB13	375	0.795	1.045	Unclassified	1500	0	0.795	Unclassified
16.001	S50a	375	1.045	1.306	Unclassified	1500	0	1.045	Unclassified
15.001	S50	375	1.306	1.436	Unclassified	1500	0	1.306	Unclassified
17.000	OB11	300	0.870	1.355	Unclassified	1200	0	0.870	Unclassified
15.002	S51	375	1.436	1.532	Unclassified	1500	0	1.436	Unclassified
18.000	OB12	375	0.795	1.170	Unclassified	1500	0	0.795	Unclassified
18.001	S52	375	1.170	1.266	Unclassified	1500	0	1.170	Unclassified
15.003	S53	525	1.382	2.322	Unclassified	1500	0	1.382	Unclassified
15.004	Tank 7 - Full Retention	525	2.322	2.332	Unclassified	1500	0	2.322	Unclassified
9.008	S54	900	2.546	2.641	Unclassified	2100	0	2.546	Unclassified
9.009	S55	900	2.641	2.861	Unclassified	2100	0	2.641	Unclassified
19.000	KD17	150	1.050	3.610	Unclassified	1200	0	1.050	Unclassified
9.010	S56	900	2.861	2.916	Unclassified	2100	0	2.861	Unclassified
9.011	S57	900	2.916	2.980	Unclassified	2100	0	2.916	Unclassified
20.000	10A	300	0.700	0.700	Unclassified	1200	0	0.700	Unclassified
20.001	10B	300	0.700	0.700	Unclassified	1200	0	0.700	Unclassified
20.002	SDP010	375	1.900	2.075	Unclassified	1500	0	2.075	Unclassified
20.003	S59 (V)	375	1.880	1.900	Unclassified	1500	0	1.900	Unclassified
21.000	S58 (V)	300	1.955	1.975	Unclassified	1200	0	1.975	Unclassified
9.012	S60	900	2.165	2.980	Unclassified	2100	0	2.980	Unclassified
22.000	KD18	225	0.540	0.975	Unclassified	1200	0	0.975	Unclassified
22.001	KD19	300	0.610	0.900	Unclassified	1200	0	0.900	Unclassified
22.002	KD20	375	0.535	0.590	Unclassified	1500	0	0.535	Unclassified
22.003	KD21	450	0.510	0.750	Unclassified	1500	0	0.750	Unclassified
23.000	KD22	375	0.825	0.885	Unclassified	1500	0	0.825	Unclassified
22.004	S61	450	0.810	0.890	Unclassified	1500	0	0.810	Unclassified
24.000	KD23	375	0.825	1.480	Unclassified	1500	0	0.825	Unclassified
22.005	S62	525	1.330	1.435	Unclassified	1500	0	1.330	Unclassified
22.006	Tank 8 - Bypass	600	1.360	1.490	Unclassified	1500	0	1.360	Unclassified
9.013	S63	900	1.745	2.165	Unclassified	2100	0	2.165	Unclassified
25.000	KD24	225	0.975	1.025	Unclassified	1200	0	0.975	Unclassified
9.014	S64	900	1.745	3.528	Unclassified	2100	0	1.745	Unclassified
9.015	Ex SC15	900	3.528	3.603	Unclassified	2100	0	3.528	Unclassified
26.000	C16a	300	1.200	2.500	Unclassified	1200	0	1.200	Unclassified
27.000	1	300	1.300	1.475	Unclassified	1200	0	1.300	Unclassified
27.001	2	375	1.475	2.002	Unclassified	1500	0	1.475	Unclassified
27.002	3	450	2.002	2.224	Unclassified	1500	0	2.002	Unclassified
27.003	4	450	2.224	2.722	Unclassified	1500	0	2.224	Unclassified
27.004	5	450	2.722	2.867	Unclassified	1500	0	2.722	Unclassified
27.005	6	450	2.597	2.867	Unclassified	1500	0	2.867	Unclassified
27.006	7	450	2.439	2.597	Unclassified	1500	0	2.597	Unclassified
27.007	8	600	2.440	2.500	Unclassified	1500	0	2.440	Unclassified
26.001	C16	600	2.500	3.603	Unclassified	1500	0	2.500	Unclassified
9.016	C17	900	3.603	5.031	Unclassified	2100	0	3.603	Unclassified
9.017	C18	900	5.031	5.651	Unclassified	2100	0	5.031	Unclassified
28.000	OB1	-5	0.525	1.580	Unclassified	3000	0	0.525	Unclassified
28.001	S1	750	1.580	1.625	Unclassified	3000	0	1.580	Unclassified
29.000	OB2	375	1.125	1.205	Unclassified	1500	0	1.125	Unclassified
28.002	S2 (BD)	750	1.625	1.790	Unclassified	1800	0	1.625	Unclassified
30.000	OB3	375	1.050	1.645	Unclassified	1500	0	1.050	Unclassified
28.003	S3	750	1.790	2.080	Unclassified	1800	0	1.790	Unclassified
28.004	Tank 1 -Full Retention	750	2.080	2.120	Unclassified	1800	0	2.080	Unclassified
28.005	S4	750	2.100	2.120	Unclassified	1800	0	2.120	Unclassified
31.000	5A	300	0.700	0.700	Unclassified	1200	0	0.700	Unclassified
31.001	5B	300	0.700	0.700	Unclassified	1200	0	0.700	Unclassified
31.002	SDP005	450	0.657	2.000	Unclassified	1500	0	2.000	Unclassified
31.003	S5 (V)	525	0.582	0.687	Unclassified	1500	0	0.582	Unclassified
32.000	6A	300	0.700	0.700	Unclassified	1200	0	0.700	Unclassified
32.001	6B	300	0.700	0.700	Unclassified	1200	0	0.700	Unclassified
32.002	SDP006	375	0.837	2.075	Unclassified	1500	0	2.075	Unclassified
31.004	S6 (V)	600	0.612	0.717	Unclassified	1500	0	0.612	Unclassified
33.000	7A	300	0.700	0.700	Unclassified	1200	0	0.700	Unclassified
33.001	7B	300	0.700	0.700	Unclassified	1200	0	0.700	Unclassified
33.002	SDP007	375	0.732	2.075	Unclassified	1500	0	2.075	Unclassified
31.005	S7 (V)	600	0.717	0.837	Unclassified	1500	0	0.717	Unclassified
34.000	8A	300	0.700	0.700	Unclassified	1200	0	0.700	Unclassified
34.001	8B	300	0.700	0.700	Unclassified	1200	0	0.700	Unclassified
34.002	SDP008	375	0.732	2.075	Unclassified	1500	0	2.075	Unclassified
31.006	S8 (V)	600	0.837	1.930	Unclassified	1500	0	0.837	Unclassified
28.006	S9 (V)	900	1.950	2.262	Unclassified	2100	0	1.950	Unclassified
35.000	9A	375	0.625	0.625	Unclassified	1500	0	0.625	Unclassified

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Network Classifications for Catchment C

PN	USMH Name	Pipe Dia (mm)	Min Cover Depth (m)	Max Cover Depth (m)	Pipe Type	MH Dia (mm)	MH Width (mm)	MH Ring Depth (m)	MH Type
35.001	9B	375	0.625	0.625	Unclassified	1500	0	0.625	Unclassified
35.002	SDP009	375	1.870	2.075	Unclassified	1500	0	2.075	Unclassified
35.003	S10 (V)	375	1.870	1.917	Unclassified	1500	0	1.870	Unclassified
28.007	S11	900	2.262	2.440	Unclassified	2100	0	2.262	Unclassified
28.008	S12	900	2.440	2.610	Unclassified	2100	0	2.440	Unclassified
28.009	S13	900	2.610	2.715	Unclassified	2100	0	2.610	Unclassified
36.000	OB4	450	1.050	1.195	Unclassified	1500	0	1.050	Unclassified
36.001	S14	450	1.195	1.475	Unclassified	1500	0	1.195	Unclassified
37.000	OB5	225	0.975	1.135	Unclassified	1200	0	0.975	Unclassified
37.001	S15	225	1.135	1.197	Unclassified	1200	0	1.135	Unclassified
38.000	OB6	450	0.750	0.895	Unclassified	1500	0	0.750	Unclassified
37.002	S16	450	0.972	1.012	Unclassified	1500	0	0.972	Unclassified
36.002	S17	450	1.475	1.555	Unclassified	1500	0	1.475	Unclassified
36.003	Tank 2 - Full Retention	450	1.555	1.695	Unclassified	1500	0	1.555	Unclassified
28.010	S18 (BD)	900	2.715	2.810	Unclassified	2100	0	2.715	Unclassified
39.000	KD1	225	1.070	1.275	Unclassified	1200	0	1.275	Unclassified
39.001	S19	225	1.070	1.493	Unclassified	1200	0	1.070	Unclassified
40.000	OB7	450	0.750	0.908	Unclassified	1500	0	0.750	Unclassified
39.002	S20	450	1.268	1.673	Unclassified	1500	0	1.268	Unclassified
41.000	OB8	375	0.825	0.983	Unclassified	1500	0	0.825	Unclassified
41.001	S21	375	0.983	1.058	Unclassified	1500	0	0.983	Unclassified
39.003	S22	450	1.672	1.673	Unclassified	1500	0	1.673	Unclassified
39.004	TANK 3 - Full Retention	450	1.672	1.775	Unclassified	1500	0	1.672	Unclassified
28.011	S23	1050	2.660	2.730	Unclassified	2100	0	2.660	Unclassified
28.012	S24	1050	1.770	2.730	Unclassified	2100	0	2.730	Unclassified
42.000	KD2	300	0.900	1.155	Unclassified	1200	0	0.900	Unclassified
28.013	S25 (BD)	1050	1.680	1.770	Unclassified	2100	0	1.770	Unclassified
43.000	11A	300	0.700	0.700	Unclassified	1200	0	0.700	Unclassified
43.001	11B	300	0.700	0.700	Unclassified	1200	0	0.700	Unclassified
43.002	SDP011	375	1.810	2.075	Unclassified	1500	0	2.075	Unclassified
43.003	S26 (V)	375	1.810	2.120	Unclassified	1500	0	1.810	Unclassified
44.000	S27 (V)	375	1.810	2.120	Unclassified	1500	0	1.810	Unclassified
43.004	S28	450	0.570	2.045	Unclassified	1500	0	2.045	Unclassified
28.014	S29	1050	1.390	1.680	Unclassified	2100	0	1.680	Unclassified
45.000	KD3	300	0.900	1.305	Unclassified	1200	0	0.900	Unclassified
28.015	S30	1050	1.390	1.478	Unclassified	2100	0	1.390	Unclassified
46.000	KD4	300	0.900	0.940	Unclassified	1200	0	0.900	Unclassified
46.001	KD9	300	0.940	1.035	Unclassified	1200	0	0.940	Unclassified
47.000	KD5	450	0.465	0.750	Unclassified	1500	0	0.750	Unclassified
47.001	KD6	450	0.465	0.750	Unclassified	1500	0	0.750	Unclassified
47.002	KD7	450	0.345	0.465	Unclassified	1500	0	0.465	Unclassified
47.003	KD8	600	0.185	0.600	Unclassified	1500	0	0.600	Unclassified
46.002	S31	600	0.735	0.810	Unclassified	1500	0	0.735	Unclassified
46.003	Tank 4 - By Pass	600	0.810	0.825	Unclassified	1500	0	0.810	Unclassified
46.004	S32	600	0.825	1.028	Unclassified	1500	0	0.825	Unclassified
28.016	S33	1050	1.478	2.060	Unclassified	2100	0	1.478	Unclassified
28.017	S34	1050	2.060	2.235	Unclassified	2100	0	2.060	Unclassified
48.000	KD10	225	0.975	1.065	Unclassified	1200	0	0.975	Unclassified
48.001	S35	225	1.065	1.175	Unclassified	1200	0	1.065	Unclassified
49.000	KD11	300	0.615	0.900	Unclassified	1200	0	0.900	Unclassified
49.001	KD12	375	0.255	0.540	Unclassified	1500	0	0.540	Unclassified
49.002	KD13	450	0.465	0.750	Unclassified	1500	0	0.750	Unclassified
49.003	KD14	525	0.435	0.675	Unclassified	1500	0	0.675	Unclassified
50.000	KD15	225	0.975	1.175	Unclassified	1200	0	0.975	Unclassified
48.002	S36	525	0.875	0.945	Unclassified	1500	0	0.875	Unclassified
48.003	Tank 5 - Bypass	525	0.945	0.960	Unclassified	1500	0	0.945	Unclassified
48.004	S37	525	0.960	1.170	Unclassified	1500	0	0.960	Unclassified
28.018	S38 (P)	1050	2.235	3.795	Unclassified	2100	0	2.235	Unclassified
28.019	Ex SC41	900	4.100	5.651	Unclassified	2100	0	4.100	Unclassified
9.018	C44	900	5.651	6.273	Unclassified	2100	0	5.651	Unclassified
51.000	C19	150	0.900	0.900	Unclassified	1200	0	0.900	Unclassified
51.001	C20	150	0.900	0.900	Unclassified	1200	0	0.900	Unclassified
51.002	C21	150	0.900	0.900	Unclassified	1200	0	0.900	Unclassified
51.003	C22	150	0.900	3.029	Unclassified	1200	0	0.900	Unclassified
51.004	C23	225	1.791	3.029	Unclassified	1200	0	3.029	Unclassified
51.005	C24	225	1.416	1.791	Unclassified	1200	0	1.791	Unclassified
52.000	OB1	150	0.986	1.096	Unclassified	1200	0	0.986	Unclassified
52.001	PPIC1	150	1.096	1.226	Unclassified	1200	0	1.096	Unclassified
52.002	PPIC2	150	1.177	1.226	Unclassified	1200	0	1.226	Unclassified
53.000	BI RWP	150	1.177	1.206	Unclassified	1200	0	1.206	Unclassified
52.003	Ex. SC25	225	1.150	1.177	Unclassified	1200	0	1.177	Unclassified
52.004	Ex. SC26	300	1.150	1.595	Unclassified	1200	0	1.150	Unclassified
54.000	New gully	150	0.220	1.065	Unclassified	1200	0	0.220	Unclassified
54.001	Separator	150	1.165	1.455	Unclassified	1200	0	1.165	Unclassified
55.000	OB2	150	0.885	1.455	Unclassified	1200	0	0.885	Unclassified
56.000	MS RWP	150	1.455	1.470	Unclassified	1200	0	1.470	Unclassified
54.002	PS3	225	1.455	1.595	Unclassified	1200	0	1.455	Unclassified
57.000	OB3	150	1.480	1.595	Unclassified	1200	0	1.480	Unclassified
52.005	PS4	300	1.416	1.595	Unclassified	1200	0	1.595	Unclassified
51.006	C27	300	1.120	1.416	Unclassified	1200	0	1.416	Unclassified
51.007	C28	300	1.120	1.637	Unclassified	1200	0	1.120	Unclassified
58.000	C29	150	1.200	1.325	Unclassified	1200	0	1.325	Unclassified
58.001	C30	150	1.200	1.209	Unclassified	1200	0	1.200	Unclassified
58.002	C31	225	1.209	1.293	Unclassified	1200	0	1.209	Unclassified
58.003	C32	375	1.293	1.637	Unclassified	1500	0	1.293	Unclassified
51.008	C33	375	1.200	1.637	Unclassified	1500	0	1.637	Unclassified
51.009	C34	375	1.200	1.200	Unclassified	1500	0	1.200	Unclassified
51.010	C35	450	1.200	1.200	Unclassified	1500	0	1.200	Unclassified
51.011	C36	600	1.200	1.292	Unclassified	1500	0	1.200	Unclassified
51.012	C37	600	1.292	1.991	Unclassified	1500	0	1.292	Unclassified
51.013	C38	600	1.991	3.643	Unclassified	1500	0	1.991	Unclassified
51.014	C39	600	3.643	5.410	Unclassified	1500	0	3.643	Unclassified
51.015	C40	600	5.410	6.273	Unclassified	1500	0	5.410	Unclassified
9.019	C46	900	4.370	6.273	Unclassified	2100	0	6.273	Unclassified
9.020	C47	900	3.380	4.370	Unclassified	2100	0	4.370	Unclassified
59.000	OB1	225	0.845	1.245	Unclassified	1200	0	0.845	Unclassified
60.000	OB2	300	1.015	1.320	Unclassified	1200	0	1.015	Unclassified
59.001	S1	300	1.320	1.530	Unclassified	1200	0	1.320	Unclassified

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Network Classifications for Catchment C

PN	USMH Name	Pipe Dia (mm)	Min Cover Depth (m)	Max Cover Depth (m)	Pipe Type	MH Dia (mm)	MH Width (mm)	MH Ring Depth (m)	MH Type
61.000	OB3	450	1.375	1.530	Unclassified	1500	0	1.375	Unclassified
59.002	S2	600	1.530	1.815	Unclassified	1500	0	1.530	Unclassified
62.000	OB4	225	1.020	1.205	Unclassified	1200	0	1.020	Unclassified
62.001	S3	225	1.205	1.515	Unclassified	1200	0	1.205	Unclassified
63.000	OB5	450	1.360	1.515	Unclassified	1500	0	1.360	Unclassified
62.002	S4	450	1.515	1.715	Unclassified	1500	0	1.515	Unclassified
64.000	OB6	300	1.540	1.715	Unclassified	1200	0	1.540	Unclassified
62.003	S5	600	1.715	1.815	Unclassified	1500	0	1.715	Unclassified
59.003	S6	600	1.815	2.545	Unclassified	1500	0	1.815	Unclassified
65.000	OB7	150	0.935	1.435	Unclassified	1200	0	0.935	Unclassified
65.001	S8	150	1.435	1.880	Unclassified	1200	0	1.435	Unclassified
66.000	OB8	225	1.540	1.880	Unclassified	1200	0	1.540	Unclassified
65.002	S9	225	1.880	2.545	Unclassified	1200	0	1.880	Unclassified
67.000	OB9	225	2.200	2.545	Unclassified	1200	0	2.200	Unclassified
59.004	S7	600	2.475	2.545	Unclassified	1500	0	2.545	Unclassified
68.000	OB10	150	2.050	2.395	Unclassified	1200	0	2.050	Unclassified
68.001	S10	150	2.395	2.475	Unclassified	1200	0	2.395	Unclassified
59.005	S11	750	2.365	2.475	Unclassified	1800	0	2.475	Unclassified
59.006	S12	750	2.365	2.395	Unclassified	1800	0	2.365	Unclassified
59.007	FRS1	750	2.495	2.580	Unclassified	1800	0	2.495	Unclassified
59.008	S13	750	2.480	2.580	Unclassified	1800	0	2.580	Unclassified
69.000	CP5	225	1.195	2.480	Unclassified	1200	0	1.195	Unclassified
70.000	G1	150	1.715	2.480	Unclassified	1200	0	1.715	Unclassified
59.009	S14	750	2.480	4.540	Unclassified	1800	0	2.480	Unclassified
71.000	CP8	225	1.950	3.990	Unclassified	1200	0	1.950	Unclassified
59.010	AT1	750	1.640	4.540	Unclassified	1800	0	4.540	Unclassified
59.011	S15	300	0.850	2.090	Unclassified	1800	0	2.090	Unclassified
72.000	SSFD	150	1.000	1.000	Unclassified	1200	0	1.000	Unclassified
59.012	Ex SC72a	150	1.000	3.830	Unclassified	1200	0	1.000	Unclassified
9.021	Spur	900	3.309	3.830	Unclassified				Junction
9.022	C48	900	2.531	2.859	Unclassified	2100	0	2.859	Unclassified
9.023	C49	900	2.138	2.531	Unclassified	2100	0	2.531	Unclassified
9.024	C50	900	1.340	2.138	Unclassified	2100	0	2.138	Unclassified
9.025	C51	900	1.340	1.350	Unclassified	2100	0	1.340	Unclassified
73.000	SW01	150	0.510	0.714	Unclassified	1200	0	0.600	Unclassified
73.001	SW02	225	0.654	0.714	Unclassified	1200	0	0.714	Unclassified
74.000	SW02A	150	0.600	1.512	Unclassified	1200	0	1.500	Unclassified
73.002	SW03	300	0.654	0.703	Unclassified	1200	0	0.654	Unclassified
73.003	SW04	300	0.703	1.048	Unclassified	1200	0	0.703	Unclassified
73.004	SW05	300	0.649	1.048	Unclassified	1200	0	1.048	Unclassified
75.000	SW05A	150	0.600	0.826	Unclassified	1200	0	0.600	Unclassified
73.005	SW06	375	0.826	1.111	Unclassified	1500	0	0.826	Unclassified
73.006	SW07	375	1.111	1.531	Unclassified	1500	0	1.111	Unclassified
73.007	SW08	375	1.531	1.814	Unclassified	1500	0	1.531	Unclassified
73.008	SW09	375	1.814	2.344	Unclassified	1500	0	1.814	Unclassified
76.000	SW10	600	1.200	1.227	Unclassified	1500	0	1.200	Unclassified
76.001	SW11	750	1.227	1.247	Unclassified	1800	0	1.227	Unclassified
76.002	SW12	750	1.247	1.411	Unclassified	1800	0	1.247	Unclassified
76.003	SW13	750	1.411	1.557	Unclassified	1800	0	1.411	Unclassified
76.004	SW14	750	1.557	2.021	Unclassified	1800	0	1.557	Unclassified
76.005	SW15	750	2.221	2.291	Unclassified	1800	0	2.221	Unclassified
73.009	SW16	900	2.344	2.545	Unclassified	2100	0	2.344	Unclassified
77.000	SW17	225	0.481	0.807	Unclassified	1200	0	0.481	Unclassified
77.001	SW18	225	0.807	0.985	Unclassified	1200	0	0.807	Unclassified
77.002	SW19	225	0.985	1.223	Unclassified	1200	0	0.985	Unclassified
78.000	SW20	150	0.544	1.223	Unclassified	1200	0	0.550	Unclassified
77.003	SW21	225	1.165	1.359	Unclassified	1200	0	1.223	Unclassified
77.004	SW22	225	1.359	1.901	Unclassified	1200	0	1.359	Unclassified
79.000	Gully	150	0.824	1.901	Unclassified	600	0	0.824	Unclassified
77.005	SW23	225	1.901	2.249	Unclassified	1200	0	1.901	Unclassified
80.000	SW24	150	0.965	1.872	Unclassified	1200	0	0.965	Unclassified
80.001	SW25	150	1.872	1.889	Unclassified	1200	0	1.872	Unclassified
80.002	SW26	150	1.876	2.249	Unclassified	1200	0	1.876	Unclassified
77.006	SW27	300	2.089	2.249	Unclassified	1200	0	2.249	Unclassified
77.007	SW28	300	2.007	2.089	Unclassified	1200	0	2.089	Unclassified
77.008	SW29	300	2.007	2.545	Unclassified	1200	0	2.007	Unclassified
73.010	SW30	900	2.545	3.241	Unclassified	2100	0	2.545	Unclassified
73.011	SW31	900	3.241	4.292	Unclassified	2100	0	3.241	Unclassified
73.012	SW32	900	0.606	4.292	Unclassified	2100	0	4.292	Unclassified
81.000	HD01	150	0.900	0.967	Unclassified	1200	0	0.900	Unclassified
81.001	HD02	150	0.917	1.206	Unclassified	1200	0	0.917	Unclassified
81.002	HD03	150	1.206	1.457	Unclassified	1200	0	1.206	Unclassified
81.003	HD04	150	0.606	1.231	Unclassified	1200	0	1.231	Unclassified
73.013	36	1050	0.606	1.350	Unclassified	2100	0	0.606	Unclassified
9.026	C52	1200	1.350	1.380	Unclassified	2400	0	1.350	Unclassified
9.027	C53	1200	1.380	1.950	Unclassified	2100	0	1.380	Unclassified
9.028	C54	1200	0.100	1.950	Unclassified	2400	0	1.950	Unclassified
9.029	H20C	2100	0.400	0.600	Unclassified	3000	0	0.400	Unclassified
82.000	C55a	225	0.825	2.736	Unclassified	1200	0	0.825	Unclassified
83.000	C55b	150	1.200	2.886	Unclassified	1200	0	1.200	Unclassified
82.001	C55	225	2.810	4.194	Unclassified	1200	0	2.810	Unclassified
82.002	56	300	3.785	4.120	Unclassified	1200	0	4.120	Unclassified
82.003	C57	300	2.200	3.785	Unclassified	1200	0	3.785	Unclassified
82.004	H7C	300	2.200	2.400	Unclassified	1200	0	2.200	Unclassified
9.030	BASIN C1	450	1.650	2.250	Unclassified	3000	0	2.250	Unclassified
9.031	C59	450	1.650	1.800	Unclassified	1500	0	1.650	Unclassified
84.000	P2_29	600	1.060	1.226	Unclassified	1500	0	1.200	Unclassified
84.001	P2_30	600	1.022	1.226	Unclassified	1500	0	1.226	Unclassified
84.002	P2_31	600	1.082	1.087	Unclassified	1800	0	1.082	Unclassified
85.000	SC72	225	0.443	0.698	Unclassified	1200	0	0.443	Unclassified
85.001	SC73	225	0.698	0.896	Unclassified	1200	0	0.698	Unclassified
85.002	SC74	225	0.576	0.898	Unclassified	1200	0	0.898	Unclassified
85.003	SC75	300	0.501	0.703	Unclassified	1200	0	0.501	Unclassified
85.004	SC76	450	0.703	0.761	Unclassified	1500	0	0.703	Unclassified
85.005	SC77	600	0.761	0.770	Unclassified	1500	0	0.761	Unclassified
85.006	SC78	600	0.658	0.776	Unclassified	1500	0	0.770	Unclassified
85.007	SC79	750	0.620	0.692	Unclassified	1800	0	0.620	Unclassified
85.008	SC80	750	0.692	0.750	Unclassified	1800	0	0.692	Unclassified

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Network Classifications for Catchment C

PN	USMH Name	Pipe Dia (mm)	Min Cover Depth (m)	Max Cover Depth (m)	Pipe Type	MH Dia (mm)	MH Width (mm)	MH Ring Depth (m)	MH Type
85.009	SC81	750	0.750	1.386	Unclassified	1800	0	0.750	Unclassified
85.010	SC82	750	1.355	1.386	Unclassified	1800	0	1.386	Unclassified
85.011	SC83	750	1.087	1.355	Unclassified	1800	0	1.355	Unclassified
84.003	P2_32	750	1.041	1.088	Unclassified	1800	0	1.087	Unclassified
84.004	P2_33	750	1.041	1.403	Unclassified	1800	0	1.041	Unclassified
84.005	P2_34	750	1.403	1.568	Unclassified	1800	0	1.403	Unclassified
84.006	P1 Slab	900	1.568	1.639	Unclassified	1800	0	1.568	Unclassified
86.000	C88	450	0.850	0.850	Unclassified	1500	0	0.850	Unclassified
86.001	C89	450	0.850	0.868	Unclassified	1500	0	0.850	Unclassified
86.002	C90	450	0.868	0.868	Unclassified	1500	0	0.868	Unclassified
86.003	C91	450	0.868	0.868	Unclassified	1500	0	0.868	Unclassified
86.004	C92	450	0.868	0.868	Unclassified	1500	0	0.868	Unclassified
86.005	C93	450	0.868	0.868	Unclassified	1500	0	0.868	Unclassified
86.006	C94	450	0.868	0.868	Unclassified	1500	0	0.868	Unclassified
86.007	C95	450	0.868	0.868	Unclassified	1500	0	0.868	Unclassified
86.008	C96	450	0.868	0.868	Unclassified	1500	0	0.868	Unclassified
86.009	C97	450	0.868	0.917	Unclassified	1500	0	0.868	Unclassified
87.000	C87	150	0.700	0.898	Unclassified	1200	0	0.700	Unclassified
88.000	P2_1	150	1.200	1.201	Unclassified	1200	0	1.200	Unclassified
88.001	P2_2	150	1.200	1.200	Unclassified	1200	0	1.200	Unclassified
88.002	P2_3	150	1.200	1.254	Unclassified	1200	0	1.200	Unclassified
88.003	P2_4	150	1.254	1.305	Unclassified	1200	0	1.254	Unclassified
89.000	P2_5	150	0.941	1.305	Unclassified	1200	0	1.200	Unclassified
88.004	P2_6	300	1.242	1.305	Unclassified	1200	0	1.305	Unclassified
88.005	P2_7	300	1.233	1.243	Unclassified	1200	0	1.243	Unclassified
88.006	P2_8	450	1.233	1.333	Unclassified	1500	0	1.233	Unclassified
88.007	P2_11	600	1.212	1.286	Unclassified	1500	0	1.286	Unclassified
88.008	P2_12	600	1.212	1.249	Unclassified	1500	0	1.212	Unclassified
88.009	P_13	600	1.249	1.256	Unclassified	1500	0	1.249	Unclassified
88.010	P2_14	750	1.256	1.257	Unclassified	1800	0	1.256	Unclassified
88.011	P2_15	750	1.254	1.257	Unclassified	1800	0	1.257	Unclassified
88.012	P2_16	750	1.255	1.369	Unclassified	1800	0	1.255	Unclassified
88.013	P2_17	900	1.367	1.368	Unclassified	2100	0	1.368	Unclassified
88.014	P2_18	900	1.367	1.510	Unclassified	2100	0	1.367	Unclassified
88.015	P2_19	900	1.510	1.710	Unclassified	2100	0	1.510	Unclassified
88.016	P2_20	900	1.709	1.711	Unclassified	2100	0	1.709	Unclassified
88.017	P2_21	900	1.711	1.853	Unclassified	2100	0	1.711	Unclassified
88.018	P2_22	900	1.853	2.025	Unclassified	2100	0	1.853	Unclassified
88.019	P2_23	900	2.025	2.064	Unclassified	2100	0	2.025	Unclassified
88.020	P2_24	900	2.064	2.090	Unclassified	2100	0	2.064	Unclassified
88.021	P2_25	900	2.037	2.096	Unclassified	2100	0	2.090	Unclassified
88.022	P2_25A	900	1.959	2.096	Unclassified	2100	0	2.096	Unclassified
88.023	P2_26	900	2.092	2.094	Unclassified	2100	0	2.094	Unclassified
88.024	P2_26A	900	2.092	2.093	Unclassified	2100	0	2.092	Unclassified
88.025	P2_27	900	2.093	2.095	Unclassified	2100	0	2.093	Unclassified
88.026	P2_28	900	1.765	2.096	Unclassified	2100	0	2.095	Unclassified
88.027	P2_28A	900	1.765	2.120	Unclassified	2100	0	1.765	Unclassified
88.028	246	900	2.120	2.138	Unclassified	2100	0	2.120	Unclassified
86.010	C98	900	2.138	2.165	Unclassified	2100	0	2.138	Unclassified
84.007	C65	1200	0.650	2.158	Unclassified	2400	0	2.158	Unclassified
84.008	C66	1200	0.650	0.700	Unclassified	2400	0	0.650	Unclassified
9.032	BASIN C3	450	1.099	2.170	Unclassified	2400	0	2.170	Unclassified
9.033	C68	450	0.907	1.099	Unclassified	1500	0	1.099	Unclassified
9.034	C69	450	0.600	0.907	Unclassified	1500	0	0.907	Unclassified
9.035	C70	450	0.600	0.600	Unclassified	1500	0	0.600	Unclassified
9.036	C71	450	0.463	0.600	Unclassified	1500	0	0.600	Unclassified

Free Flowing Outfall Details for Catchment C

Outfall Pipe Number	Outfall Name	C. Level (m)	I. Level (m)	Min I. Level (m)	D,L (mm)	W (mm)
9.036	C OUTFALL	33.425	32.512	32.512	450	0

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Simulation Criteria for Catchment C

Volumetric Runoff Coeff	0.840	Hot Start Level (mm)	0	Additional Flow - % of Total Flow	0.000	Flow per Person per Day (l/per/day)	0.000		
Areal Reduction Factor	1.000	Manhole Headloss Coeff (Global)	0.500	MADD Factor * 10m³/ha Storage	0.000	Run Time (mins)	2880		
Hot Start (mins)	0	Foul Sewage per hectare (l/s)	0.000	Inlet Coeffiecient	0.800	Output Interval (mins)	24		

Number of Input Hydrographs 0 Number of Online Controls 16 Number of Offline Controls 12 Number of Storage Structures 8 Number of Time/Area Diagrams 0 Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall Model	FEH	D1 (1km)	0.351	Summer Storms	No
Return Period (years)	1	D2 (1km)	0.352	Winter Storms	Yes
FEH Rainfall Version	1999	D3 (1km)	0.243	Cv (Summer)	0.750
Site Location	GB 447050 329250 SK 47050 29250	E (1km)	0.303	Cv (Winter)	0.840
C (1km)	-0.026	F (1km)	2.358	Storm Duration (mins)	1440

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Online Controls for Catchment C

Depth/Flow Relationship Manhole: 4B, DS/PN: 11.001, Volume (m³): 1.4

Invert Level (m) 74.350

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	142.0000	0.500	142.0000	0.900	142.0000	1.300	142.0000	1.700	142.0000	2.100	142.0000	2.500	142.0000	2.900	142.0000
0.200	142.0000	0.600	142.0000	1.000	142.0000	1.400	142.0000	1.800	142.0000	2.200	142.0000	2.600	142.0000	3.000	142.0000
0.300	142.0000	0.700	142.0000	1.100	142.0000	1.500	142.0000	1.900	142.0000	2.300	142.0000	2.700	142.0000		
0.400	142.0000	0.800	142.0000	1.200	142.0000	1.600	142.0000	2.000	142.0000	2.400	142.0000	2.800	142.0000		

Depth/Flow Relationship Manhole: 3B, DS/PN: 12.001, Volume (m³): 1.4

Invert Level (m) 74.350

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	142.0000	0.500	142.0000	0.900	142.0000	1.300	142.0000	1.700	142.0000	2.100	142.0000	2.500	142.0000	2.900	142.0000
0.200	142.0000	0.600	142.0000	1.000	142.0000	1.400	142.0000	1.800	142.0000	2.200	142.0000	2.600	142.0000	3.000	142.0000
0.300	142.0000	0.700	142.0000	1.100	142.0000	1.500	142.0000	1.900	142.0000	2.300	142.0000	2.700	142.0000		
0.400	142.0000	0.800	142.0000	1.200	142.0000	1.600	142.0000	2.000	142.0000	2.400	142.0000	2.800	142.0000		

Depth/Flow Relationship Manhole: 2B, DS/PN: 13.001, Volume (m³): 1.4

Invert Level (m) 74.350

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	142.0000	0.500	142.0000	0.900	142.0000	1.300	142.0000	1.700	142.0000	2.100	142.0000	2.500	142.0000	2.900	142.0000
0.200	142.0000	0.600	142.0000	1.000	142.0000	1.400	142.0000	1.800	142.0000	2.200	142.0000	2.600	142.0000	3.000	142.0000
0.300	142.0000	0.700	142.0000	1.100	142.0000	1.500	142.0000	1.900	142.0000	2.300	142.0000	2.700	142.0000		
0.400	142.0000	0.800	142.0000	1.200	142.0000	1.600	142.0000	2.000	142.0000	2.400	142.0000	2.800	142.0000		

Depth/Flow Relationship Manhole: 1B, DS/PN: 14.001, Volume (m³): 1.4

Invert Level (m) 74.350

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	142.0000	0.500	142.0000	0.900	142.0000	1.300	142.0000	1.700	142.0000	2.100	142.0000	2.500	142.0000	2.900	142.0000
0.200	142.0000	0.600	142.0000	1.000	142.0000	1.400	142.0000	1.800	142.0000	2.200	142.0000	2.600	142.0000	3.000	142.0000
0.300	142.0000	0.700	142.0000	1.100	142.0000	1.500	142.0000	1.900	142.0000	2.300	142.0000	2.700	142.0000		
0.400	142.0000	0.800	142.0000	1.200	142.0000	1.600	142.0000	2.000	142.0000	2.400	142.0000	2.800	142.0000		

Depth/Flow Relationship Manhole: 10B, DS/PN: 20.001, Volume (m³): 1.4

Invert Level (m) 74.350

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Depth/Flow Relationship Manhole: 10B, DS/PN: 20.001, Volume (m³): 1.4

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	104.0000	0.500	104.0000	0.900	104.0000	1.300	104.0000	1.700	104.0000	2.100	104.0000	2.500	104.0000	2.900	104.0000
0.200	104.0000	0.600	104.0000	1.000	104.0000	1.400	104.0000	1.800	104.0000	2.200	104.0000	2.600	104.0000	3.000	104.0000
0.300	104.0000	0.700	104.0000	1.100	104.0000	1.500	104.0000	1.900	104.0000	2.300	104.0000	2.700	104.0000		
0.400	104.0000	0.800	104.0000	1.200	104.0000	1.600	104.0000	2.000	104.0000	2.400	104.0000	2.800	104.0000		

Depth/Flow Relationship Manhole: 5B, DS/PN: 31.001, Volume (m³): 1.4

Invert Level (m) 74.350

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	142.0000	0.500	142.0000	0.900	142.0000	1.300	142.0000	1.700	142.0000	2.100	142.0000	2.500	142.0000	2.900	142.0000
0.200	142.0000	0.600	142.0000	1.000	142.0000	1.400	142.0000	1.800	142.0000	2.200	142.0000	2.600	142.0000	3.000	142.0000
0.300	142.0000	0.700	142.0000	1.100	142.0000	1.500	142.0000	1.900	142.0000	2.300	142.0000	2.700	142.0000		
0.400	142.0000	0.800	142.0000	1.200	142.0000	1.600	142.0000	2.000	142.0000	2.400	142.0000	2.800	142.0000		

Depth/Flow Relationship Manhole: 6B, DS/PN: 32.001, Volume (m³): 1.4

Invert Level (m) 74.350

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	142.0000	0.500	142.0000	0.900	142.0000	1.300	142.0000	1.700	142.0000	2.100	142.0000	2.500	142.0000	2.900	142.0000
0.200	142.0000	0.600	142.0000	1.000	142.0000	1.400	142.0000	1.800	142.0000	2.200	142.0000	2.600	142.0000	3.000	142.0000
0.300	142.0000	0.700	142.0000	1.100	142.0000	1.500	142.0000	1.900	142.0000	2.300	142.0000	2.700	142.0000		
0.400	142.0000	0.800	142.0000	1.200	142.0000	1.600	142.0000	2.000	142.0000	2.400	142.0000	2.800	142.0000		

Depth/Flow Relationship Manhole: 7B, DS/PN: 33.001, Volume (m³): 1.4

Invert Level (m) 74.350

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	142.0000	0.500	142.0000	0.900	142.0000	1.300	142.0000	1.700	142.0000	2.100	142.0000	2.500	142.0000	2.900	142.0000
0.200	142.0000	0.600	142.0000	1.000	142.0000	1.400	142.0000	1.800	142.0000	2.200	142.0000	2.600	142.0000	3.000	142.0000
0.300	142.0000	0.700	142.0000	1.100	142.0000	1.500	142.0000	1.900	142.0000	2.300	142.0000	2.700	142.0000		
0.400	142.0000	0.800	142.0000	1.200	142.0000	1.600	142.0000	2.000	142.0000	2.400	142.0000	2.800	142.0000		

Depth/Flow Relationship Manhole: 8B, DS/PN: 34.001, Volume (m³): 1.4

Invert Level (m) 74.350

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	142.0000	0.500	142.0000	0.900	142.0000	1.300	142.0000	1.700	142.0000	2.100	142.0000	2.500	142.0000	2.900	142.0000
0.200	142.0000	0.600	142.0000	1.000	142.0000	1.400	142.0000	1.800	142.0000	2.200	142.0000	2.600	142.0000	3.000	142.0000
0.300	142.0000	0.700	142.0000	1.100	142.0000	1.500	142.0000	1.900	142.0000	2.300	142.0000	2.700	142.0000		
0.400	142.0000	0.800	142.0000	1.200	142.0000	1.600	142.0000	2.000	142.0000	2.400	142.0000	2.800	142.0000		

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Depth/Flow Relationship Manhole: 9B, DS/PN: 35.001, Volume (m³): 2.2

Invert Level (m) 74.350

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	74.0000	0.500	74.0000	0.900	74.0000	1.300	74.0000	1.700	74.0000	2.100	74.0000	2.500	74.0000	2.900	74.0000
0.200	74.0000	0.600	74.0000	1.000	74.0000	1.400	74.0000	1.800	74.0000	2.200	74.0000	2.600	74.0000	3.000	74.0000
0.300	74.0000	0.700	74.0000	1.100	74.0000	1.500	74.0000	1.900	74.0000	2.300	74.0000	2.700	74.0000		
0.400	74.0000	0.800	74.0000	1.200	74.0000	1.600	74.0000	2.000	74.0000	2.400	74.0000	2.800	74.0000		

Depth/Flow Relationship Manhole: 11B, DS/PN: 43.001, Volume (m³): 1.4

Invert Level (m) 74.350

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	104.0000	0.500	104.0000	0.900	104.0000	1.300	104.0000	1.700	104.0000	2.100	104.0000	2.500	104.0000	2.900	104.0000
0.200	104.0000	0.600	104.0000	1.000	104.0000	1.400	104.0000	1.800	104.0000	2.200	104.0000	2.600	104.0000	3.000	104.0000
0.300	104.0000	0.700	104.0000	1.100	104.0000	1.500	104.0000	1.900	104.0000	2.300	104.0000	2.700	104.0000		
0.400	104.0000	0.800	104.0000	1.200	104.0000	1.600	104.0000	2.000	104.0000	2.400	104.0000	2.800	104.0000		

Orifice Manhole: S11, DS/PN: 59.005, Volume (m³): 15.9

Diameter (m) 0.375 Discharge Coefficient 0.600 Invert Level (m) 63.950

Depth/Flow Relationship Manhole: AT1, DS/PN: 59.010, Volume (m³): 24.7

Invert Level (m) 63.710

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.200	45.0000	1.000	45.0000	1.800	45.0000	2.600	45.0000	3.400	45.0000	4.200	45.0000	5.000	45.0000	5.800	45.0000
0.400	45.0000	1.200	45.0000	2.000	45.0000	2.800	45.0000	3.600	45.0000	4.400	45.0000	5.200	45.0000	6.000	45.0000
0.600	45.0000	1.400	45.0000	2.200	45.0000	3.000	45.0000	3.800	45.0000	4.600	45.0000	5.400	45.0000		
0.800	45.0000	1.600	45.0000	2.400	45.0000	3.200	45.0000	4.000	45.0000	4.800	45.0000	5.600	45.0000		

Depth/Flow Relationship Manhole: Ex SC72a, DS/PN: 59.012, Volume (m³): 2.5

Invert Level (m) 62.570

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.200	75.0000	1.000	75.0000	1.800	75.0000	2.600	75.0000	3.400	75.0000	4.200	75.0000	5.000	75.0000	5.800	75.0000
0.400	75.0000	1.200	75.0000	2.000	75.0000	2.800	75.0000	3.600	75.0000	4.400	75.0000	5.200	75.0000	6.000	75.0000
0.600	75.0000	1.400	75.0000	2.200	75.0000	3.000	75.0000	3.800	75.0000	4.600	75.0000	5.400	75.0000		
0.800	75.0000	1.600	75.0000	2.400	75.0000	3.200	75.0000	4.000	75.0000	4.800	75.0000	5.600	75.0000		

Depth/Flow Relationship Manhole: BASIN C1, DS/PN: 9.030, Volume (m³): 72.2

Invert Level (m) 39.300

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Depth/Flow Relationship Manhole: BASIN C1, DS/PN: 9.030, Volume (m³): 72.2

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	0.0000	0.400	46.7400	0.800	56.1800	1.400	58.5700	2.000	70.0000	2.600	79.8100	3.200	88.5400	3.800	96.4900
0.200	10.9800	0.500	52.5600	1.000	54.4600	1.600	62.6100	2.200	73.4200	2.800	82.8300	3.400	91.2700		
0.300	25.2800	0.600	55.5700	1.200	54.4700	1.800	66.4100	2.400	76.6800	3.000	85.7300	3.600	93.9100		

Depth/Flow Relationship Manhole: BASIN C3, DS/PN: 9.032, Volume (m³): 26.7

Invert Level (m) 35.880

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	16.7900	0.400	87.1400	0.800	135.0300	1.400	135.2000	2.000	144.5000	2.600	164.7600	3.200	182.7800	3.800	199.1800
0.200	41.1700	0.500	104.9900	1.000	139.8300	1.600	133.8700	2.200	151.5500	2.800	170.9700	3.400	188.4000		
0.300	65.5100	0.600	118.7600	1.200	138.3200	1.800	137.0800	2.400	158.2900	3.000	176.9800	3.600	193.8700		

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Offline Controls for Catchment C

Weir Manhole: 4B, DS/PN: 11.001, Loop to PN: 9.000

Discharge Coef 0.544 Width (m) 1.000 Invert Level (m) 74.650

Weir Manhole: 3B, DS/PN: 12.001, Loop to PN: 9.000

Discharge Coef 0.544 Width (m) 1.000 Invert Level (m) 74.650

Weir Manhole: 2B, DS/PN: 13.001, Loop to PN: 9.000

Discharge Coef 0.544 Width (m) 1.000 Invert Level (m) 74.650

Weir Manhole: 2B, DS/PN: 13.001, Loop to PN: 9.000

Discharge Coef 0.544 Width (m) 1.000 Invert Level (m) 74.650

Weir Manhole: 1B, DS/PN: 14.001, Loop to PN: 9.000

Discharge Coef 0.544 Width (m) 1.000 Invert Level (m) 74.650

Weir Manhole: 10B, DS/PN: 20.001, Loop to PN: 21.000

Discharge Coef 0.544 Width (m) 1.000 Invert Level (m) 74.650

Weir Manhole: 5B, DS/PN: 31.001, Loop to PN: 28.000

Discharge Coef 0.544 Width (m) 1.000 Invert Level (m) 74.650

Weir Manhole: 6B, DS/PN: 32.001, Loop to PN: 28.000

Discharge Coef 0.544 Width (m) 1.000 Invert Level (m) 74.650

Weir Manhole: 7B, DS/PN: 33.001, Loop to PN: 28.000

Discharge Coef 0.544 Width (m) 1.000 Invert Level (m) 74.650

Weir Manhole: 8B, DS/PN: 34.001, Loop to PN: 28.000

Discharge Coef 0.544 Width (m) 1.000 Invert Level (m) 74.650

Weir Manhole: 9B, DS/PN: 35.001, Loop to PN: 36.000

Discharge Coef 0.544 Width (m) 1.000 Invert Level (m) 74.650

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Weir Manhole: 11B, DS/PN: 43.001, Loop to PN: 44.000

Discharge Coef 0.544 Width (m) 1.000 Invert Level (m) 74.650

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Storage Structures for Catchment C

Tank or Pond Manhole: S39, DS/PN: 9.001

Invert Level (m) 67.600

Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)
0.000	275.0	0.300	275.0	0.600	275.0	0.900	275.0	1.200	0.0	1.500	0.0	1.800	0.0	2.100	0.0	2.400	0.0
0.100	275.0	0.400	275.0	0.700	275.0	1.000	275.0	1.300	0.0	1.600	0.0	1.900	0.0	2.200	0.0	2.500	0.0
0.200	275.0	0.500	275.0	0.800	275.0	1.100	0.0	1.400	0.0	1.700	0.0	2.000	0.0	2.300	0.0		

Tank or Pond Manhole: S1, DS/PN: 28.001

Invert Level (m) 67.525

Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)
0.000	325.0	0.300	325.0	0.600	325.0	0.900	325.0	1.200	0.0	1.500	0.0	1.800	0.0	2.100	0.0	2.400	0.0
0.100	325.0	0.400	325.0	0.700	325.0	1.000	325.0	1.300	0.0	1.600	0.0	1.900	0.0	2.200	0.0	2.500	0.0
0.200	325.0	0.500	325.0	0.800	325.0	1.100	0.0	1.400	0.0	1.700	0.0	2.000	0.0	2.300	0.0		

Filter Drain Manhole: CP5, DS/PN: 69.000

Infiltration Coefficient Base (m/hr)	0.00000	Invert Level (m)	65.650	Pipe Depth above Invert (m)	0.300	Cap Infiltration Depth (m)	1.000
Infiltration Coefficient Side (m/hr)	0.00000	Trench Width (m)	0.6	Number of Pipes	1		
Safety Factor	2.0	Trench Length (m)	154.6	Slope (1:X)	500.0		
Porosity	0.30	Pipe Diameter (m)	0.150	Cap Volume Depth (m)	1.000		

Filter Drain Manhole: CP8, DS/PN: 71.000

Infiltration Coefficient Base (m/hr)	0.00000	Invert Level (m)	65.040	Pipe Depth above Invert (m)	0.300	Cap Infiltration Depth (m)	1.000
Infiltration Coefficient Side (m/hr)	0.00000	Trench Width (m)	0.6	Number of Pipes	1		
Safety Factor	2.0	Trench Length (m)	130.4	Slope (1:X)	500.0		
Porosity	0.30	Pipe Diameter (m)	0.150	Cap Volume Depth (m)	1.000		

Tank or Pond Manhole: AT1, DS/PN: 59.010

Invert Level (m) 63.710

Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)
0.000	250.0	0.600	250.0	1.200	250.0	1.800	250.0	2.400	0.0	3.000	0.0	3.600	0.0	4.200	0.0	4.800	0.0
0.200	250.0	0.800	250.0	1.400	250.0	2.000	0.0	2.600	0.0	3.200	0.0	3.800	0.0	4.400	0.0	5.000	0.0
0.400	250.0	1.000	250.0	1.600	250.0	2.200	0.0	2.800	0.0	3.400	0.0	4.000	0.0	4.600	0.0		

Filter Drain Manhole: SSFD, DS/PN: 72.000

Infiltration Coefficient Base (m/hr)	0.00000	Porosity	0.30	Trench Length (m)	32.0	Number of Pipes	1
Infiltration Coefficient Side (m/hr)	0.00000	Invert Level (m)	62.570	Pipe Diameter (m)	0.150	Slope (1:X)	60.0
Safety Factor	2.0	Trench Width (m)	0.5	Pipe Depth above Invert (m)	0.300	Cap Volume Depth (m)	1.000

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Filter Drain Manhole: SSFD, DS/PN: 72.000

Cap Infiltration Depth (m) 1.000

Tank or Pond Manhole: BASIN C1, DS/PN: 9.030

Invert Level (m) 39.500

Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)
0.000	0.0	0.100	1193.0	0.200	3828.0	0.300	7424.0	0.400	7676.0	0.500	7829.0	1.000	8608.0	1.500	9418.0	2.000	10257.0	2.500	11129.0

Tank or Pond Manhole: BASIN C3, DS/PN: 9.032

Invert Level (m) 35.980

Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)
0.000	0.0	0.120	1198.0	0.320	3824.0	0.520	4072.0	1.520	5366.0	2.520	6753.0
0.020	53.4	0.220	2469.0	0.420	3948.0	1.020	4708.0	2.020	6048.0		

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1 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Catchment C

Simulation Criteria

Areal Reduction Factor 1.000 Hot Start Level (mm) 0 Foul Sewage per hectare (l/s) 0.000 MADD Factor * 10m³/ha Storage 0.000 Flow per Person per Day (l/per/day) 0.000
Hot Start (mins) 0 Manhole Headloss Coeff (Global) 0.500 Additional Flow - % of Total Flow 0.000 Inlet Coeffiecient 0.800

Number of Input Hydrographs 0 Number of Online Controls 16 Number of Offline Controls 12 Number of Storage Structures 8 Number of Time/Area Diagrams 0 Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall Model FSR Region England and Wales M5-60 (mm) 18.500 Ratio R 0.400 Cv (Summer) 0.750 Cv (Winter) 0.840

Margin for Flood Risk Warning (mm) 400.0 Analysis Timestep Fine DTS Status OFF DVD Status ON Inertia Status ON

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 240, 360, 480, 600, 960, 1440, 2160
Return Period(s) (years)	1, 30, 100
Climate Change (%)	0, 0, 20

PN	US/MH Name	Event	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Maximum Vol (m³)	Discharge Vol (m³)	Pipe Flow (l/s)	Status
9.000	OB9	15 minute 1 year Winter I+0%	68.920	67.824	-0.646	0.000	0.06		0.702	30.605	64.6	OK
9.001	S39	60 minute 1 year Winter I+0%	69.855	67.709	-0.641	0.000	0.05		31.593	43.234	18.2	OK
10.000	OB10	15 minute 1 year Winter I+0%	69.855	68.831	-0.199	0.000	0.44		0.302	16.204	34.5	OK
9.002	S40 (BD)	15 minute 1 year Winter I+0%	69.855	67.688	-0.632	0.000	0.06		0.405	35.776	32.5	OK
9.003	S41	15 minute 1 year Winter I+0%	68.855	67.565	-0.650	0.000	0.04		0.507	35.559	31.8	OK
9.004	Tank 6 - Full Retention	15 minute 1 year Winter I+0%	70.000	67.324	-0.611	0.000	0.07		1.068	35.338	30.5	OK
9.005	S42	15 minute 1 year Winter I+0%	70.000	67.272	-0.609	0.000	0.04		0.806	35.184	31.5	OK
11.000	4A	15 minute 1 year Summer I+0%	80.350	79.427	-0.223	0.000	0.15		0.081	26.012	83.9	OK
11.001	4B	15 minute 1 year Summer I+0%	75.350	74.409	-0.241	0.000	0.15	0.0	0.062	26.012	83.9	OK
11.002	SDP004	15 minute 1 year Summer I+0%	70.350	68.055	-0.145	0.000	0.53		0.170	26.015	83.9	OK
11.003	S43 (V)	15 minute 1 year Summer I+0%	69.270	67.709	-0.266	0.000	0.32		0.697	26.014	77.2	OK
12.000	3A	15 minute 1 year Summer I+0%	80.350	79.427	-0.223	0.000	0.15		0.081	26.012	83.9	OK
12.001	3B	15 minute 1 year Summer I+0%	75.350	74.409	-0.241	0.000	0.15	0.0	0.062	26.012	83.9	OK
12.002	SDP003	15 minute 1 year Summer I+0%	70.350	68.094	-0.181	0.000	0.53		0.335	26.014	84.0	OK
11.004	S44 (V)	15 minute 1 year Summer I+0%	68.952	67.654	-0.286	0.000	0.47		3.740	52.027	151.4	OK
13.000	2A	15 minute 1 year Summer I+0%	80.350	79.427	-0.223	0.000	0.15		0.081	26.012	83.9	OK
13.001	2B	15 minute 1 year Summer I+0%	75.350	74.409	-0.241	0.000	0.15	0.0	0.062	26.012	83.9	OK
13.002	SDP002	15 minute 1 year Summer I+0%	70.350	68.175	-0.100	0.000	0.89		0.476	26.011	84.0	OK
11.005	S45 (V)	15 minute 1 year Summer I+0%	68.952	67.578	-0.482	0.000	0.30		4.698	78.040	214.0	OK
14.000	1A	15 minute 1 year Summer I+0%	80.350	79.427	-0.223	0.000	0.15		0.081	26.012	83.9	OK
14.001	1B	15 minute 1 year Summer I+0%	75.350	74.409	-0.241	0.000	0.15	0.0	0.062	26.012	83.9	OK
14.002	SDP001	15 minute 1 year Summer I+0%	70.350	68.175	-0.100	0.000	0.89		0.476	26.011	84.0	OK
11.006	S46 (V)	15 minute 1 year Summer I+0%	69.315	67.509	-0.441	0.000	0.43		6.227	104.053	271.3	OK
11.007	S47 (V)	15 minute 1 year Summer I+0%	69.315	67.368	-0.492	0.000	0.34		5.117	104.053	260.7	OK
9.006	S48	15 minute 1 year Winter I+0%	70.000	67.240	-0.480	0.000	0.35		9.948	151.413	266.5	OK
9.007	S49	15 minute 1 year Winter I+0%	70.000	67.088	-0.462	0.000	0.33		8.636	151.133	252.8	OK
15.000	OB14	15 minute 1 year Winter I+0%	68.890	67.796	-0.269	0.000	0.18		0.179	11.884	25.4	OK
16.000	OB13	15 minute 1 year Winter I+0%	68.890	67.874	-0.221	0.000	0.35		0.264	12.183	26.0	OK
16.001	S50a	15 minute 1 year Winter I+0%	69.120	67.823	-0.252	0.000	0.23		0.290	12.183	25.6	OK
15.001	S50	15 minute 1 year Winter I+0%	69.235	67.744	-0.185	0.000	0.43		1.522	24.067	48.4	OK
17.000	OB11	15 minute 1 year Winter I+0%	68.890	67.852	-0.168	0.000	0.40		0.144	17.405	37.2	OK

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1 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Catchment C

PN	US/MH Name	Event	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Maximum Vol (m³)	Discharge Vol (m³)	Pipe Flow (l/s)	Status
15.002	S51	15 minute 1 year Winter I+0%	69.235	67.684	-0.115	0.000	0.81		2.265	41.472	81.8	OK
18.000	OB12	15 minute 1 year Winter I+0%	68.890	67.890	-0.205	0.000	0.42		0.292	17.884	38.1	OK
18.001	S52	15 minute 1 year Winter I+0%	69.235	67.851	-0.214	0.000	0.38		0.414	17.884	38.4	OK
15.003	S53	15 minute 1 year Winter I+0%	69.235	67.548	-0.305	0.000	0.37		1.679	59.357	117.6	OK
15.004	Tank 7 - Full Retention	15 minute 1 year Winter I+0%	70.000	67.474	-0.204	0.000	0.68		2.545	59.357	116.1	OK
9.008	S54	15 minute 1 year Winter I+0%	70.000	66.967	-0.487	0.000	0.43		11.021	210.261	360.7	OK
9.009	S55	15 minute 1 year Winter I+0%	70.000	66.821	-0.538	0.000	0.34		5.528	210.078	357.4	OK
19.000	KD17	15 minute 1 year Winter I+0%	69.440	68.271	-0.119	0.000	0.09		0.029	2.761	5.9	OK
9.010	S56	15 minute 1 year Winter I+0%	70.000	66.686	-0.453	0.000	0.49		8.616	212.668	356.6	OK
9.011	S57	15 minute 1 year Winter I+0%	70.000	66.621	-0.463	0.000	0.47		4.669	212.525	356.4	OK
20.000	10A	15 minute 1 year Summer I+0%	80.350	79.416	-0.234	0.000	0.11		0.069	18.880	60.9	OK
20.001	10B	15 minute 1 year Summer I+0%	75.350	74.409	-0.241	0.000	0.11	0.0	0.061	18.880	60.9	OK
20.002	SDP010	15 minute 1 year Summer I+0%	70.350	68.143	-0.132	0.000	0.73		0.420	18.880	61.1	OK
20.003	S59 (V)	15 minute 1 year Summer I+0%	70.150	68.103	-0.147	0.000	0.68		0.626	18.879	60.6	OK
21.000	S58 (V)	15 minute 1 year Summer I+0%	70.150	67.875	-0.300	0.000	0.00		0.000	0.000	0.0	OK
9.012	S60	15 minute 1 year Winter I+0%	70.000	66.496	-0.523	0.000	0.35		4.247	233.333	354.3	OK
22.000	KD18	15 minute 1 year Winter I+0%	69.925	68.784	-0.166	0.000	0.15		0.061	1.860	3.9	OK
22.001	KD19	15 minute 1 year Winter I+0%	69.440	68.364	-0.176	0.000	0.27		0.135	7.742	14.5	OK
22.002	KD20	15 minute 1 year Winter I+0%	69.095	68.332	-0.228	0.000	0.32		0.635	16.324	30.0	OK
22.003	KD21	15 minute 1 year Winter I+0%	69.095	68.073	-0.272	0.000	0.33		0.305	27.187	49.3	OK
23.000	KD22	15 minute 1 year Winter I+0%	68.750	67.770	-0.155	0.000	0.33		0.381	13.383	28.1	OK
22.004	S61	15 minute 1 year Winter I+0%	68.800	67.766	-0.224	0.000	0.50		0.444	40.570	77.1	OK
24.000	KD23	15 minute 1 year Winter I+0%	68.170	67.208	-0.137	0.000	0.48		0.412	18.124	38.1	OK
22.005	S62	15 minute 1 year Winter I+0%	68.800	67.196	-0.274	0.000	0.46		0.803	58.694	114.5	OK
22.006	Tank 8 - Bypass	15 minute 1 year Winter I+0%	68.800	67.154	-0.286	0.000	0.54		0.725	58.694	114.0	OK
9.013	S63	15 minute 1 year Winter I+0%	68.900	66.307	-0.428	0.000	0.54		19.325	291.799	395.1	OK
25.000	KD24	15 minute 1 year Winter I+0%	68.385	67.236	-0.174	0.000	0.12		0.052	1.500	3.2	OK
9.014	S64	15 minute 1 year Winter I+0%	68.425	66.167	-0.513	0.000	0.38		3.800	296.127	395.3	OK
9.015	Ex SC15	15 minute 1 year Winter I+0%	70.000	65.829	-0.643	0.000	0.18		1.486	296.052	394.6	OK
26.000	C16a	15 minute 1 year Winter I+0%	68.110	66.732	-0.178	0.000	0.35		0.133	17.286	37.1	OK
27.000	1	15 minute 1 year Winter I+0%	71.600	70.214	-0.086	0.000	0.83		0.237	54.995	87.5	OK
27.001	2	15 minute 1 year Winter I+0%	71.180	69.631	-0.074	0.000	0.93		1.066	67.057	101.9	OK
27.002	3	15 minute 1 year Winter I+0%	71.410	69.270	-0.138	0.000	0.80		2.701	91.833	137.6	OK
27.003	4	15 minute 1 year Winter I+0%	71.410	69.019	-0.167	0.000	0.69		4.115	103.494	149.3	OK
27.004	5	15 minute 1 year Winter I+0%	71.490	68.533	-0.235	0.000	0.46		1.681	116.831	164.5	OK
27.005	6	15 minute 1 year Winter I+0%	70.600	67.472	-0.261	0.000	0.37		0.676	116.749	164.7	OK
27.006	7	15 minute 1 year Winter I+0%	69.530	66.734	-0.199	0.000	0.59		0.813	143.590	193.5	OK
27.007	8	15 minute 1 year Winter I+0%	69.030	66.218	-0.372	0.000	0.30		0.423	143.524	193.2	OK
26.001	C16	15 minute 1 year Winter I+0%	68.690	65.831	-0.359	0.000	0.34		1.071	160.645	214.1	OK
9.016	C17	15 minute 1 year Winter I+0%	69.130	64.945	-0.582	0.000	0.27		2.340	477.539	590.7	OK
9.017	C18	15 minute 1 year Winter I+0%	69.612	64.009	-0.572	0.000	0.29		2.472	477.387	591.3	OK
28.000	OB1	15 minute 1 year Winter I+0%	68.920	67.766	-0.629	0.000	0.08		0.818	40.928	86.4	OK
28.001	S1	60 minute 1 year Winter I+0%	69.855	67.641	-0.634	0.000	0.06		39.348	59.671	25.0	OK
29.000	OB2	15 minute 1 year Winter I+0%	69.795	68.473	-0.197	0.000	0.45		0.305	16.084	34.3	OK
28.002	S2 (BD)	30 minute 1 year Winter I+0%	69.855	67.606	-0.624	0.000	0.06		0.502	56.170	35.1	OK
30.000	OB3	15 minute 1 year Winter I+0%	69.340	68.041	-0.249	0.000	0.24		0.213	11.403	24.0	OK
28.003	S3	15 minute 1 year Winter I+0%	69.855	67.474	-0.591	0.000	0.09		2.062	55.323	52.2	OK
28.004	Tank 1 -Full Retention	15 minute 1 year Winter I+0%	70.000	67.422	-0.499	0.000	0.13		2.279	55.108	56.3	OK
28.005	S4	15 minute 1 year Winter I+0%	70.000	67.410	-0.470	0.000	0.10		1.751	54.878	60.7	OK

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1 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Catchment C

PN	US/MH Name	Event	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Maximum Vol (m³)	Discharge Vol (m³)	Pipe Flow (l/s)	Status
31.000	5A	15 minute 1 year Summer I+0%	80.350	79.427	-0.223	0.000	0.15		0.081	25.851	83.4	OK
31.001	5B	15 minute 1 year Summer I+0%	75.350	74.409	-0.241	0.000	0.15	0.0	0.061	25.851	83.4	OK
31.002	SDP005	15 minute 1 year Summer I+0%	70.350	68.151	-0.199	0.000	0.57		0.435	25.851	83.4	OK
31.003	S5 (V)	15 minute 1 year Summer I+0%	68.952	68.104	-0.266	0.000	0.32		1.491	25.845	75.3	OK
32.000	6A	15 minute 1 year Summer I+0%	80.350	79.427	-0.223	0.000	0.15		0.081	25.851	83.4	OK
32.001	6B	15 minute 1 year Summer I+0%	75.350	74.409	-0.241	0.000	0.15	0.0	0.061	25.851	83.4	OK
32.002	SDP006	15 minute 1 year Summer I+0%	70.350	68.100	-0.175	0.000	0.53		0.345	25.853	83.4	OK
31.004	S6 (V)	15 minute 1 year Summer I+0%	68.952	68.052	-0.288	0.000	0.44		4.678	51.697	141.9	OK
33.000	7A	15 minute 1 year Summer I+0%	80.350	79.427	-0.223	0.000	0.15		0.081	25.851	83.4	OK
33.001	7B	15 minute 1 year Summer I+0%	75.350	74.409	-0.241	0.000	0.15	0.0	0.061	25.851	83.4	OK
33.002	SDP007	15 minute 1 year Summer I+0%	70.350	68.173	-0.102	0.000	0.88		0.474	25.851	83.2	OK
31.005	S7 (V)	15 minute 1 year Summer I+0%	68.952	67.995	-0.240	0.000	0.58		5.193	77.544	194.8	OK
34.000	8A	15 minute 1 year Summer I+0%	80.350	79.427	-0.223	0.000	0.15		0.081	25.851	83.4	OK
34.001	8B	15 minute 1 year Summer I+0%	75.350	74.409	-0.241	0.000	0.15	0.0	0.061	25.851	83.4	OK
34.002	SDP008	15 minute 1 year Summer I+0%	70.350	68.173	-0.102	0.000	0.88		0.474	25.851	83.4	OK
31.006	S8 (V)	15 minute 1 year Summer I+0%	68.952	67.898	-0.217	0.000	0.73		5.936	103.396	258.7	OK
28.006	S9 (V)	15 minute 1 year Winter I+0%	69.850	67.376	-0.524	0.000	0.37		7.460	170.410	286.9	OK
35.000	9A	15 minute 1 year Summer I+0%	80.350	79.403	-0.322	0.000	0.05		0.085	13.356	43.1	OK
35.001	9B	15 minute 1 year Summer I+0%	75.350	74.408	-0.317	0.000	0.05	0.0	0.094	13.356	43.1	OK
35.002	SDP009	15 minute 1 year Summer I+0%	70.350	68.107	-0.168	0.000	0.57		0.356	13.356	43.3	OK
35.003	S10 (V)	15 minute 1 year Summer I+0%	70.130	68.056	-0.204	0.000	0.42		0.417	13.355	42.5	OK
28.007	S11	15 minute 1 year Winter I+0%	70.092	67.291	-0.539	0.000	0.33		4.127	185.104	303.2	OK
28.008	S12	15 minute 1 year Winter I+0%	70.130	67.154	-0.535	0.000	0.31		7.753	184.771	290.5	OK
28.009	S13	15 minute 1 year Winter I+0%	70.130	67.023	-0.497	0.000	0.33		10.866	184.464	282.6	OK
36.000	OB4	15 minute 1 year Winter I+0%	69.905	68.577	-0.278	0.000	0.31		0.296	17.584	37.5	OK
36.001	S14	15 minute 1 year Winter I+0%	70.025	68.521	-0.309	0.000	0.20		0.381	17.584	34.8	OK
37.000	OB5	15 minute 1 year Winter I+0%	69.955	68.902	-0.078	0.000	0.73		0.160	9.243	19.3	OK
37.001	S15	15 minute 1 year Winter I+0%	70.025	68.845	-0.045	0.000	0.72		0.874	9.243	19.5	OK
38.000	OB6	15 minute 1 year Winter I+0%	69.905	68.888	-0.267	0.000	0.34		0.315	19.385	41.4	OK
37.002	S16	15 minute 1 year Winter I+0%	70.025	68.808	-0.245	0.000	0.42		1.003	28.627	58.4	OK
36.002	S17	15 minute 1 year Winter I+0%	70.025	68.341	-0.209	0.000	0.53		3.039	46.212	90.0	OK
36.003	Tank 2 - Full Retention	15 minute 1 year Winter I+0%	70.015	68.299	-0.161	0.000	0.73		1.580	46.212	89.1	OK
28.010	S18 (BD)	15 minute 1 year Winter I+0%	70.130	66.952	-0.462	0.000	0.43		8.228	230.404	359.0	OK
39.000	KD1	15 minute 1 year Winter I+0%	70.240	68.794	-0.171	0.000	0.13		0.056	1.560	3.3	OK
39.001	S19	15 minute 1 year Winter I+0%	70.000	68.756	-0.174	0.000	0.10		0.100	1.560	3.0	OK
40.000	OB7	15 minute 1 year Winter I+0%	70.035	69.030	-0.255	0.000	0.39		0.335	24.246	51.7	OK
39.002	S20	15 minute 1 year Winter I+0%	70.158	68.592	-0.298	0.000	0.23		0.858	25.806	51.8	OK
41.000	OB8	15 minute 1 year Winter I+0%	70.035	69.011	-0.199	0.000	0.44		0.302	18.304	39.0	OK
41.001	S21	15 minute 1 year Winter I+0%	70.158	68.963	-0.212	0.000	0.39		0.536	18.304	39.2	OK
39.003	S22	15 minute 1 year Winter I+0%	70.158	68.270	-0.215	0.000	0.53		1.961	44.111	90.1	OK
39.004	TANK 3 - Full Retention	15 minute 1 year Winter I+0%	70.092	68.219	-0.201	0.000	0.59		0.684	44.111	90.1	OK
28.011	S23	15 minute 1 year Winter I+0%	70.130	66.872	-0.597	0.000	0.39		7.895	274.286	422.4	OK
28.012	S24	15 minute 1 year Winter I+0%	70.130	66.715	-0.685	0.000	0.26		4.430	273.967	414.1	OK
42.000	KD2	15 minute 1 year Winter I+0%	68.625	67.518	-0.207	0.000	0.21		0.100	4.501	9.6	OK
28.013	S25 (BD)	15 minute 1 year Winter I+0%	68.860	66.485	-0.604	0.000	0.37		16.391	278.200	408.2	OK
43.000	11A	15 minute 1 year Summer I+0%	80.350	79.416	-0.234	0.000	0.11		0.069	18.880	60.9	OK
43.001	11B	15 minute 1 year Summer I+0%	75.350	74.409	-0.241	0.000	0.11	0.0	0.061	18.880	60.9	OK
43.002	SDP011	15 minute 1 year Summer I+0%	70.350	68.144	-0.131	0.000	0.74		0.423	18.880	61.1	OK
43.003	S26 (V)	15 minute 1 year Summer I+0%	70.075	68.103	-0.162	0.000	0.60		0.448	18.878	59.0	OK

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1 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Catchment C

PN	US/MH Name	Event	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Maximum Vol (m³)	Discharge Vol (m³)	Pipe Flow (l/s)	Status
44.000	S27 (V)	15 minute 1 year Summer I+0%	70.075	68.022	-0.243	0.000	0.01		0.224	0.000	1.2	OK
43.004	S28	15 minute 1 year Summer I+0%	70.325	68.023	-0.257	0.000	0.39		1.469	18.878	58.1	OK
28.014	S29	15 minute 1 year Winter I+0%	68.700	66.391	-0.628	0.000	0.34		5.687	299.108	418.9	OK
45.000	KD3	15 minute 1 year Winter I+0%	67.915	66.786	-0.229	0.000	0.13		0.075	2.581	5.5	OK
28.015	S30	15 minute 1 year Winter I+0%	68.300	66.251	-0.659	0.000	0.30		7.261	304.482	417.3	OK
46.000	KD4	15 minute 1 year Winter I+0%	67.940	66.954	-0.086	0.000	0.16		0.237	4.441	9.1	OK
46.001	KD9	15 minute 1 year Winter I+0%	67.970	66.953	-0.077	0.000	0.40		0.251	10.623	20.0	OK
47.000	KD5	15 minute 1 year Winter I+0%	69.785	68.745	-0.290	0.000	0.27		0.275	19.145	40.5	OK
47.001	KD6	15 minute 1 year Winter I+0%	69.440	68.427	-0.263	0.000	0.36		0.322	26.347	53.6	OK
47.002	KD7	15 minute 1 year Winter I+0%	69.095	68.307	-0.323	0.000	0.18		0.524	33.549	67.0	OK
47.003	KD8	15 minute 1 year Winter I+0%	68.515	67.532	-0.383	0.000	0.28		0.374	40.871	80.1	OK
46.002	S31	15 minute 1 year Winter I+0%	68.050	66.947	-0.368	0.000	0.29		0.494	51.493	99.8	OK
46.003	Tank 4 - By Pass	15 minute 1 year Winter I+0%	68.050	66.926	-0.314	0.000	0.46		1.068	51.494	99.1	OK
46.004	S32	15 minute 1 year Winter I+0%	68.050	66.875	-0.350	0.000	0.36		0.678	51.494	99.4	OK
28.016	S33	15 minute 1 year Winter I+0%	68.208	66.105	-0.625	0.000	0.34		7.451	355.702	447.3	OK
28.017	S34	15 minute 1 year Winter I+0%	68.650	65.964	-0.625	0.000	0.34		10.402	355.234	440.0	OK
48.000	KD10	15 minute 1 year Winter I+0%	68.375	67.290	-0.110	0.000	0.24		0.124	3.181	6.5	OK
48.001	S35	15 minute 1 year Winter I+0%	68.455	67.286	-0.104	0.000	0.14		0.163	3.181	6.3	OK
49.000	KD11	15 minute 1 year Winter I+0%	69.785	68.718	-0.167	0.000	0.33		0.144	8.763	18.4	OK
49.001	KD12	15 minute 1 year Winter I+0%	69.440	68.678	-0.222	0.000	0.35		0.677	17.165	33.7	OK
49.002	KD13	15 minute 1 year Winter I+0%	69.095	68.071	-0.274	0.000	0.32		0.303	25.567	48.8	OK
49.003	KD14	15 minute 1 year Winter I+0%	68.750	67.743	-0.332	0.000	0.29		0.332	33.970	63.6	OK
50.000	KD15	15 minute 1 year Winter I+0%	68.375	67.286	-0.114	0.000	0.36		0.120	8.342	17.5	OK
48.002	S36	15 minute 1 year Winter I+0%	68.455	67.278	-0.302	0.000	0.35		0.659	45.493	86.5	OK
48.003	Tank 5 - Bypass	15 minute 1 year Winter I+0%	68.455	67.263	-0.247	0.000	0.53		0.812	45.493	85.7	OK
48.004	S37	15 minute 1 year Winter I+0%	68.455	67.247	-0.248	0.000	0.54		0.779	45.492	86.2	OK
28.018	S38 (P)	15 minute 1 year Winter I+0%	68.625	65.749	-0.640	0.000	0.32		16.526	400.367	454.4	OK
28.019	Ex SC41	15 minute 1 year Winter I+0%	70.000	65.223	-0.677	0.000	0.14		0.962	400.281	455.4	OK
9.018	C44	15 minute 1 year Winter I+0%	69.398	63.301	-0.446	0.000	0.51		6.040	903.639	1023.4	OK
51.000	C19	15 minute 1 year Winter I+0%	83.721	82.709	-0.112	0.000	0.14		0.037	2.548	5.4	OK
51.001	C20	15 minute 1 year Winter I+0%	82.256	81.249	-0.107	0.000	0.18		0.047	4.119	8.2	OK
51.002	C21	15 minute 1 year Winter I+0%	80.753	79.752	-0.101	0.000	0.23		0.053	5.678	11.0	OK
51.003	C22	15 minute 1 year Winter I+0%	79.479	78.492	-0.087	0.000	0.36		0.069	8.480	16.1	OK
51.004	C23	15 minute 1 year Winter I+0%	79.479	76.331	-0.119	0.000	0.45		0.115	12.201	22.8	OK
51.005	C24	15 minute 1 year Winter I+0%	77.829	75.906	-0.132	0.000	0.36		0.157	16.705	30.7	OK
52.000	OB1	15 minute 1 year Summer I+0%	76.990	75.873	-0.131	0.000	0.04		0.016	0.214	0.6	OK
52.001	PPIC1	15 minute 1 year Summer I+0%	77.050	75.822	-0.132	0.000	0.03		0.015	0.214	0.5	OK
52.002	PPIC2	15 minute 1 year Summer I+0%	77.020	75.663	-0.131	0.000	0.04		0.023	0.214	0.5	OK
53.000	BI RWP	15 minute 1 year Summer I+0%	77.000	75.667	-0.127	0.000	0.06		0.021	0.322	0.8	OK
52.003	Ex. SC25	15 minute 1 year Winter I+0%	76.921	75.553	-0.191	0.000	0.05		0.033	2.401	4.6	OK
52.004	Ex. SC26	15 minute 1 year Winter I+0%	76.304	74.925	-0.229	0.000	0.13		0.075	5.702	10.5	OK
54.000	New gully	15 minute 1 year Winter I+0%	75.580	75.271	-0.089	0.000	0.35		0.063	2.041	4.7	FLOOD RISK
54.001	Separator	15 minute 1 year Winter I+0%	76.300	75.050	-0.085	0.000	0.39		0.068	2.041	4.6	OK
55.000	OB2	15 minute 1 year Winter I+0%	76.140	75.130	-0.125	0.000	0.07		0.023	0.480	1.1	OK
56.000	MS RWP	15 minute 1 year Summer I+0%	76.625	75.038	-0.117	0.000	0.11		0.032	0.643	1.7	OK
54.002	PS3	15 minute 1 year Winter I+0%	76.550	74.938	-0.157	0.000	0.20		0.075	3.241	7.3	OK
57.000	OB3	15 minute 1 year Winter I+0%	76.575	74.977	-0.118	0.000	0.10		0.031	0.780	1.7	OK
52.005	PS4	15 minute 1 year Winter I+0%	76.575	74.796	-0.184	0.000	0.32		0.311	9.723	19.5	OK
51.006	C27	15 minute 1 year Winter I+0%	76.336	74.746	-0.174	0.000	0.37		0.244	30.839	57.3	OK

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1 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Catchment C

PN	US/MH Name	Event	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Maximum Vol (m³)	Discharge Vol (m³)	Pipe Flow (l/s)	Status
51.007	C28	15 minute 1 year Winter I+0%	74.920	73.620	-0.180	0.000	0.33		0.191	37.210	68.2	OK
58.000	C29	15 minute 1 year Winter I+0%	75.557	74.150	-0.082	0.000	0.42		0.071	6.405	13.7	OK
58.001	C30	15 minute 1 year Winter I+0%	74.373	73.103	-0.070	0.000	0.55		0.096	9.440	19.1	OK
58.002	C31	15 minute 1 year Winter I+0%	73.349	72.000	-0.140	0.000	0.30		0.091	12.260	24.1	OK
58.003	C32	15 minute 1 year Winter I+0%	72.668	71.124	-0.251	0.000	0.22		0.211	12.260	24.3	OK
51.008	C33	15 minute 1 year Winter I+0%	72.929	71.071	-0.221	0.000	0.35		0.764	64.874	117.4	OK
51.009	C34	15 minute 1 year Winter I+0%	69.716	68.306	-0.210	0.000	0.40		0.394	78.559	139.7	OK
51.010	C35	15 minute 1 year Winter I+0%	66.836	65.388	-0.248	0.000	0.42		0.396	85.017	149.6	OK
51.011	C36	15 minute 1 year Winter I+0%	66.255	64.747	-0.308	0.000	0.47		0.660	92.625	159.9	OK
51.012	C37	15 minute 1 year Winter I+0%	66.211	64.619	-0.300	0.000	0.49		4.372	99.543	167.1	OK
51.013	C38	15 minute 1 year Winter I+0%	66.775	64.488	-0.296	0.000	0.49		4.439	113.921	180.0	OK
51.014	C39	15 minute 1 year Winter I+0%	68.127	64.220	-0.264	0.000	0.58		7.349	145.560	213.8	OK
51.015	C40	15 minute 1 year Winter I+0%	69.594	63.794	-0.390	0.000	0.27		2.552	145.558	211.6	OK
9.019	C46	15 minute 1 year Winter I+0%	69.215	62.515	-0.427	0.000	0.54		4.462	1056.164	1230.2	OK
9.020	C47	15 minute 1 year Winter I+0%	65.851	61.212	-0.269	0.000	0.84		9.852	1063.793	1231.6	OK
59.000	OB1	15 minute 1 year Winter I+0%	66.530	65.510	-0.175	0.000	0.11		0.051	3.121	6.7	OK
60.000	OB2	15 minute 1 year Winter I+0%	66.465	65.273	-0.177	0.000	0.35		0.134	18.366	39.3	OK
59.001	S1	15 minute 1 year Winter I+0%	66.570	65.136	-0.114	0.000	0.69		0.386	21.487	45.9	OK
61.000	OB3	15 minute 1 year Winter I+0%	66.465	64.812	-0.278	0.000	0.23		0.295	16.024	34.2	OK
59.002	S2	15 minute 1 year Winter I+0%	66.575	64.808	-0.237	0.000	0.20		1.251	37.512	77.0	OK
62.000	OB4	15 minute 1 year Winter I+0%	66.610	65.457	-0.133	0.000	0.35		0.098	6.122	13.1	OK
62.001	S3	15 minute 1 year Winter I+0%	66.715	65.373	-0.137	0.000	0.33		0.164	6.122	13.2	OK
63.000	OB5	15 minute 1 year Winter I+0%	66.610	64.941	-0.309	0.000	0.21		0.240	15.364	32.8	OK
62.002	S4	15 minute 1 year Winter I+0%	66.715	64.901	-0.299	0.000	0.24		0.532	21.486	44.6	OK
64.000	OB6	15 minute 1 year Winter I+0%	66.610	64.920	-0.150	0.000	0.49		0.164	15.304	32.7	OK
62.003	S5	15 minute 1 year Winter I+0%	66.715	64.797	-0.203	0.000	0.20		2.937	36.790	70.9	OK
59.003	S6	15 minute 1 year Winter I+0%	66.715	64.773	-0.127	0.000	0.42		7.442	74.297	126.5	OK
65.000	OB7	15 minute 1 year Winter I+0%	67.085	66.041	-0.109	0.000	0.17		0.041	1.981	4.2	OK
65.001	S8	15 minute 1 year Winter I+0%	67.320	65.782	-0.103	0.000	0.21		0.056	1.981	4.2	OK
66.000	OB8	15 minute 1 year Winter I+0%	67.085	65.388	-0.157	0.000	0.19		0.071	3.961	8.5	OK
65.002	S9	15 minute 1 year Winter I+0%	67.320	65.287	-0.153	0.000	0.22		0.119	5.942	12.6	OK
67.000	OB9	15 minute 1 year Winter I+0%	67.085	64.733	-0.152	0.000	0.23		0.077	4.801	10.3	OK
59.004	S7	15 minute 1 year Winter I+0%	67.320	64.707	-0.068	0.000	0.39		12.498	85.039	109.7	OK
68.000	OB10	15 minute 1 year Winter I+0%	66.940	64.799	-0.091	0.000	0.32		0.061	2.401	5.1	OK
68.001	S10	15 minute 1 year Winter I+0%	67.175	64.690	-0.090	0.000	0.33		0.089	2.401	5.1	OK
59.005	S11	15 minute 1 year Winter I+0%	67.175	64.641	-0.059	0.000	0.31		8.166	87.440	108.0	OK
59.006	S12	15 minute 1 year Winter I+0%	67.050	64.259	-0.426	0.000	0.39		1.203	87.439	108.4	OK
59.007	FRS1	15 minute 1 year Winter I+0%	67.065	64.148	-0.422	0.000	0.32		1.234	87.439	108.2	OK
59.008	S13	15 minute 1 year Winter I+0%	67.125	64.131	-0.414	0.000	0.41		1.739	87.437	107.5	OK
69.000	CP5	15 minute 1 year Winter I+0%	67.070	65.726	-0.149	0.000	0.25		0.337	19.749	33.4	OK
70.000	G1	15 minute 1 year Winter I+0%	66.385	64.555	-0.115	0.000	0.12		0.034	0.960	2.0	OK
59.009	S14	60 minute 1 year Winter I+0%	67.000	64.096	-0.424	0.000	0.23		2.201	177.541	101.5	OK
71.000	CP8	15 minute 1 year Winter I+0%	67.215	65.135	-0.130	0.000	0.37		0.511	10.623	17.9	OK
59.010	AT1	60 minute 1 year Winter I+0%	69.000	64.078	-0.382	0.000	0.11		96.504	187.372	45.0	OK
59.011	S15	60 minute 1 year Winter I+0%	66.050	63.747	-0.213	0.000	0.19		0.397	187.167	45.0	OK
72.000	SSFD	15 minute 1 year Winter I+0%	63.720	62.881	0.161	0.000	3.55		0.780	9.644	20.1	SURCHARGED
59.012 Ex	SC72a	60 minute 1 year Winter I+0%	63.720	62.712	-0.008	0.000	0.75		0.301	203.002	52.6	OK
9.021	Spur	30 minute 1 year Winter I+0%	64.435	60.208	-0.397	0.000	0.60		0.512	1495.938	1275.7	OK*
9.022	C48	30 minute 1 year Winter I+0%	63.019	59.664	-0.496	0.000	0.42		16.682	1498.080	1281.5	OK

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1 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Catchment C

PN	US/MH Name	Event	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Maximum Vol (m³)	Discharge Vol (m³)	Pipe Flow (l/s)	Status
9.023	C49	30 minute 1 year Winter I+0%	60.634	57.602	-0.501	0.000	0.41		2.661	1503.876	1284.5	OK
9.024	C50	30 minute 1 year Winter I+0%	57.788	55.192	-0.458	0.000	0.48		3.191	1515.814	1289.4	OK
9.025	C51	30 minute 1 year Winter I+0%	55.447	53.565	-0.542	0.000	0.33		2.586	1525.936	1292.8	OK
73.000	SW01	15 minute 1 year Winter I+0%	58.600	57.891	-0.109	0.000	0.17		0.041	1.421	3.0	OK
73.001	SW02	15 minute 1 year Winter I+0%	58.370	57.482	-0.174	0.000	0.11		0.052	3.043	6.0	OK
74.000	SW02A	15 minute 1 year Winter I+0%	64.330	62.713	-0.117	0.000	0.11		0.031	3.933	8.4	OK
73.002	SW03	15 minute 1 year Winter I+0%	57.754	56.881	-0.219	0.000	0.16		0.087	9.228	18.1	OK
73.003	SW04	15 minute 1 year Winter I+0%	57.214	56.302	-0.209	0.000	0.19		0.157	12.445	23.2	OK
73.004	SW05	15 minute 1 year Winter I+0%	56.600	55.334	-0.218	0.000	0.17		0.138	12.445	23.3	OK
75.000	SW05A	15 minute 1 year Winter I+0%	56.073	55.348	-0.125	0.000	0.06		0.023	0.720	1.5	OK
73.005	SW06	15 minute 1 year Winter I+0%	55.886	54.792	-0.268	0.000	0.17		0.184	14.367	25.6	OK
73.006	SW07	15 minute 1 year Winter I+0%	55.692	54.306	-0.275	0.000	0.16		0.318	15.511	26.8	OK
73.007	SW08	15 minute 1 year Winter I+0%	55.529	53.725	-0.273	0.000	0.17		0.283	16.332	27.8	OK
73.008	SW09	15 minute 1 year Winter I+0%	55.422	53.337	-0.271	0.000	0.17		0.285	17.254	28.7	OK
76.000	SW10	15 minute 1 year Summer I+0%	55.857	54.057	-0.600	0.000	0.00		0.000	0.000	0.0	OK
76.001	SW11	15 minute 1 year Summer I+0%	55.738	53.761	-0.750	0.000	0.00		0.000	0.000	0.0	OK
76.002	SW12	15 minute 1 year Summer I+0%	55.647	53.650	-0.750	0.000	0.00		0.000	0.000	0.0	OK
76.003	SW13	15 minute 1 year Summer I+0%	55.528	53.367	-0.750	0.000	0.00		0.000	0.000	0.0	OK
76.004	SW14	15 minute 1 year Summer I+0%	55.484	53.177	-0.750	0.000	0.00		0.000	0.000	0.0	OK
76.005	SW15	15 minute 1 year Summer I+0%	55.612	52.641	-0.750	0.000	0.00		0.000	0.000	0.0	OK
73.009	SW16	15 minute 1 year Winter I+0%	55.589	52.452	-0.793	0.000	0.03		0.353	26.282	39.8	OK
77.000	SW17	15 minute 1 year Winter I+0%	58.606	57.969	-0.156	0.000	0.19		0.073	3.774	7.4	OK
77.001	SW18	15 minute 1 year Winter I+0%	58.445	57.486	-0.152	0.000	0.22		0.158	6.177	11.1	OK
77.002	SW19	15 minute 1 year Winter I+0%	57.723	56.585	-0.153	0.000	0.22		0.123	7.001	12.3	OK
78.000	SW20	15 minute 1 year Winter I+0%	57.200	56.552	-0.098	0.000	0.26		0.054	2.047	4.4	OK
77.003	SW21	15 minute 1 year Winter I+0%	57.444	56.068	-0.153	0.000	0.23		0.114	9.048	16.3	OK
77.004	SW22	15 minute 1 year Winter I+0%	57.084	55.577	-0.148	0.000	0.25		0.103	9.048	16.0	OK
79.000	Gully	15 minute 1 year Winter I+0%	56.774	55.816	-0.134	0.000	0.03		0.003	0.611	1.3	OK
77.005	SW23	15 minute 1 year Winter I+0%	56.562	54.511	-0.150	0.000	0.24		0.110	9.660	16.9	OK
80.000	SW24	15 minute 1 year Summer I+0%	55.645	54.530	-0.150	0.000	0.00		0.000	0.000	0.0	OK
80.001	SW25	15 minute 1 year Summer I+0%	56.340	54.318	-0.150	0.000	0.00		0.000	0.000	0.0	OK
80.002	SW26	15 minute 1 year Summer I+0%	56.262	54.236	-0.150	0.000	0.00		0.000	0.000	0.0	OK
77.006	SW27	15 minute 1 year Winter I+0%	56.310	53.865	-0.196	0.000	0.26		0.113	9.659	16.7	OK
77.007	SW28	15 minute 1 year Winter I+0%	56.044	53.759	-0.196	0.000	0.26		0.303	9.659	16.7	OK
77.008	SW29	15 minute 1 year Winter I+0%	55.892	53.647	-0.238	0.000	0.10		0.154	9.659	16.7	OK
73.010	SW30	15 minute 1 year Winter I+0%	55.503	52.162	-0.796	0.000	0.03		0.516	37.376	57.8	OK
73.011	SW31	15 minute 1 year Winter I+0%	55.327	51.289	-0.797	0.000	0.03		0.468	38.253	58.7	OK
73.012	SW32	15 minute 1 year Winter I+0%	55.648	50.563	-0.793	0.000	0.03		0.433	38.252	59.0	OK
81.000	HD01	15 minute 1 year Winter I+0%	57.100	56.086	-0.114	0.000	0.13		0.035	1.900	4.0	OK
81.001	HD02	15 minute 1 year Winter I+0%	56.041	55.006	-0.118	0.000	0.10		0.034	1.900	4.0	OK
81.002	HD03	15 minute 1 year Winter I+0%	55.655	54.333	-0.116	0.000	0.12		0.035	1.900	4.1	OK
81.003	HD04	15 minute 1 year Winter I+0%	54.782	53.452	-0.099	0.000	0.25		0.057	4.659	9.0	OK
73.013	36	15 minute 1 year Winter I+0%	51.350	49.958	-0.786	0.000	0.14		0.962	261.064	425.6	OK
9.026	C52	30 minute 1 year Winter I+0%	51.156	48.970	-0.836	0.000	0.20		1.785	1883.590	1508.2	OK
9.027	C53	30 minute 1 year Winter I+0%	46.900	44.746	-0.774	0.000	0.27		2.887	1882.879	1508.5	OK
9.028	C54	30 minute 1 year Winter I+0%	45.580	42.889	-0.741	0.000	0.31		4.227	1882.053	1507.9	OK
9.029	H20C	30 minute 1 year Winter I+0%	42.300	40.384	-1.516	0.000	0.17		4.092	1880.630	1506.8	OK
82.000	C55a	15 minute 1 year Winter I+0%	42.230	41.267	-0.138	0.000	0.31		0.093	6.002	12.4	OK
83.000	C55b	15 minute 1 year Winter I+0%	45.150	43.831	-0.119	0.000	0.10		0.030	2.401	5.1	OK

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1 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Catchment C

PN	US/MH Name	Event	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Maximum Vol (m³)	Discharge Vol (m³)	Pipe Flow (l/s)	Status
82.001	C55	15 minute 1 year Winter I+0%	43.800	40.926	-0.064	0.000	0.82		0.297	16.804	31.5	OK
82.002	56	15 minute 1 year Winter I+0%	44.900	40.615	-0.165	0.000	0.41		0.395	17.705	32.8	OK
82.003	C57	15 minute 1 year Winter I+0%	44.300	40.345	-0.170	0.000	0.39		0.430	17.705	32.6	OK
82.004	H7C	480 minute 1 year Winter I+0%	42.500	40.128	-0.172	0.000	0.02		0.373	53.799	4.7	OK
9.030	BASIN C1	480 minute 1 year Winter I+0%	42.000	40.127	0.377	0.000	0.06		3387.807	2962.872	56.2	SURCHARGED
9.031	C59	360 minute 1 year Winter I+0%	38.600	36.636	-0.314	0.000	0.20		0.255	2217.636	56.2	OK
84.000	P2_29	30 minute 1 year Winter I+0%	42.400	40.852	-0.348	0.000	0.11		0.437	24.167	30.3	OK
84.001	P2_30	30 minute 1 year Winter I+0%	42.343	40.849	-0.268	0.000	0.29		5.259	50.443	57.3	OK
84.002	P2_31	30 minute 1 year Winter I+0%	42.162	40.840	-0.240	0.000	0.19		3.136	50.442	53.0	OK
85.000	SC72	15 minute 1 year Winter I+0%	44.017	43.386	-0.188	0.000	0.06		0.036	1.200	2.5	OK
85.001	SC73	15 minute 1 year Winter I+0%	43.907	43.076	-0.133	0.000	0.34		0.190	7.202	12.9	OK
85.002	SC74	15 minute 1 year Winter I+0%	43.815	42.815	-0.102	0.000	0.56		0.328	12.363	21.5	OK
85.003	SC75	15 minute 1 year Winter I+0%	43.201	42.504	-0.196	0.000	0.26		0.231	12.363	21.4	OK
85.004	SC76	15 minute 1 year Winter I+0%	43.103	42.085	-0.315	0.000	0.18		0.237	18.185	28.5	OK
85.005	SC77	15 minute 1 year Winter I+0%	42.911	41.774	-0.376	0.000	0.28		0.651	57.615	88.7	OK
85.006	SC78	15 minute 1 year Winter I+0%	42.668	41.580	-0.318	0.000	0.45		6.830	101.726	155.4	OK
85.007	SC79	15 minute 1 year Winter I+0%	42.450	41.312	-0.518	0.000	0.20		0.926	101.785	153.7	OK
85.008	SC80	15 minute 1 year Winter I+0%	42.222	41.158	-0.372	0.000	0.40		7.390	131.973	182.9	OK
85.009	SC81	30 minute 1 year Winter I+0%	42.120	41.036	-0.334	0.000	0.45		18.612	238.712	217.1	OK
85.010	SC82	30 minute 1 year Winter I+0%	42.609	40.942	-0.281	0.000	0.50		17.800	297.165	247.9	OK
85.011	SC83	30 minute 1 year Winter I+0%	42.400	40.861	-0.184	0.000	0.55		26.888	301.001	238.4	OK
84.003	P2_32	30 minute 1 year Winter I+0%	42.065	40.815	-0.163	0.000	0.99		20.191	360.842	260.6	OK
84.004	P2_33	30 minute 1 year Winter I+0%	41.991	40.754	-0.196	0.000	0.59		5.209	380.926	265.7	OK
84.005	P2_34	30 minute 1 year Winter I+0%	42.255	40.684	-0.168	0.000	1.10		17.380	380.440	264.7	OK
84.006	P1 Slab	30 minute 1 year Winter I+0%	42.398	40.481	-0.349	0.000	0.69		3.219	380.092	264.6	OK
86.000	C88	15 minute 1 year Winter I+0%	44.193	42.895	-0.448	0.000	0.00		0.000	0.060	0.1	OK
86.001	C89	15 minute 1 year Winter I+0%	44.062	42.818	-0.394	0.000	0.03		0.357	2.640	4.4	OK
86.002	C90	15 minute 1 year Winter I+0%	43.963	42.723	-0.372	0.000	0.06		0.510	5.701	8.7	OK
86.003	C91	15 minute 1 year Winter I+0%	43.801	42.583	-0.350	0.000	0.11		0.672	10.082	14.3	OK
86.004	C92	15 minute 1 year Winter I+0%	43.639	42.434	-0.337	0.000	0.13		0.899	14.463	18.5	OK
86.005	C93	15 minute 1 year Winter I+0%	43.417	42.226	-0.323	0.000	0.17		1.256	20.465	23.0	OK
86.006	C94	30 minute 1 year Winter I+0%	43.195	42.016	-0.311	0.000	0.20		1.557	34.367	27.8	OK
86.007	C95	30 minute 1 year Winter I+0%	43.004	41.832	-0.304	0.000	0.23		1.728	41.058	30.9	OK
86.008	C96	30 minute 1 year Winter I+0%	42.813	41.647	-0.298	0.000	0.24		1.859	47.662	33.3	OK
86.009	C97	30 minute 1 year Winter I+0%	42.622	41.449	-0.305	0.000	0.23		1.700	54.126	35.7	OK
87.000	C87	15 minute 1 year Summer I+0%	42.450	41.600	-0.150	0.000	0.00		0.000	0.000	0.0	OK
88.000	P2_1	15 minute 1 year Winter I+0%	44.315	42.996	-0.119	0.000	0.09		0.029	0.690	1.5	OK
88.001	P2_2	15 minute 1 year Winter I+0%	44.251	42.953	-0.098	0.000	0.26		0.068	2.134	4.1	OK
88.002	P2_3	15 minute 1 year Winter I+0%	44.154	42.869	-0.085	0.000	0.38		0.096	3.046	5.7	OK
88.003	P2_4	15 minute 1 year Winter I+0%	44.141	42.816	-0.071	0.000	0.54		0.115	5.930	10.9	OK
89.000	P2_5	15 minute 1 year Winter I+0%	56.568	55.278	-0.090	0.000	0.33		0.062	14.906	31.9	OK
88.004	P2_6	15 minute 1 year Winter I+0%	43.748	42.347	-0.096	0.000	0.78		0.233	26.501	52.2	OK
88.005	P2_7	15 minute 1 year Winter I+0%	43.614	42.242	-0.129	0.000	0.61		0.472	29.000	57.2	OK
88.006	P2_8	15 minute 1 year Winter I+0%	43.453	42.030	-0.190	0.000	0.60		0.567	55.163	100.1	OK
88.007	P2_11	15 minute 1 year Winter I+0%	43.304	41.754	-0.264	0.000	0.56		2.130	62.390	109.9	OK
88.008	P2_12	15 minute 1 year Winter I+0%	43.208	41.731	-0.265	0.000	0.48		1.359	91.228	153.4	OK
88.009	P_13	15 minute 1 year Winter I+0%	43.102	41.645	-0.208	0.000	0.73		8.011	126.429	203.8	OK
88.010	P2_14	15 minute 1 year Winter I+0%	42.969	41.409	-0.304	0.000	0.49		7.641	159.195	236.6	OK
88.011	P2_15	15 minute 1 year Winter I+0%	42.830	41.317	-0.256	0.000	0.59		18.272	214.496	286.5	OK

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1 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Catchment C

PN	US/MH Name	Event	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Maximum Vol (m³)	Discharge Vol (m³)	Pipe Flow (l/s)	Status
88.012	P2_16	15 minute 1 year Winter I+0%	42.683	41.216	-0.212	0.000	0.99		21.129	216.685	283.0	OK
88.013	P2_17	15 minute 1 year Winter I+0%	42.781	41.054	-0.359	0.000	0.44		2.898	228.275	285.8	OK
88.014	P2_18	30 minute 1 year Winter I+0%	42.724	41.018	-0.339	0.000	0.62		10.494	302.046	275.3	OK
88.015	P2_19	30 minute 1 year Winter I+0%	42.835	40.978	-0.347	0.000	0.67		6.356	304.579	275.1	OK
88.016	P2_20	30 minute 1 year Winter I+0%	43.007	40.937	-0.361	0.000	0.44		5.536	314.905	277.0	OK
88.017	P2_21	30 minute 1 year Winter I+0%	42.959	40.901	-0.347	0.000	0.64		9.349	319.525	277.5	OK
88.018	P2_22	30 minute 1 year Winter I+0%	43.070	40.858	-0.359	0.000	0.71		6.023	320.428	277.7	OK
88.019	P2_23	30 minute 1 year Winter I+0%	43.218	40.797	-0.396	0.000	0.39		4.510	330.789	278.2	OK
88.020	P2_24	30 minute 1 year Winter I+0%	43.168	40.736	-0.368	0.000	0.65		14.853	331.216	276.6	OK
88.021	P2_25	30 minute 1 year Winter I+0%	43.164	40.607	-0.467	0.000	0.39		4.274	340.132	276.3	OK
88.022	P2_25A	30 minute 1 year Winter I+0%	43.078	40.508	-0.474	0.000	0.36		10.809	344.429	271.3	OK
88.023	P2_26	30 minute 1 year Winter I+0%	42.941	40.390	-0.457	0.000	0.35		16.574	345.356	264.0	OK
88.024	P2_26A	30 minute 1 year Winter I+0%	42.801	40.290	-0.419	0.000	0.61		19.115	346.247	262.9	OK
88.025	P2_27	30 minute 1 year Winter I+0%	42.787	40.207	-0.487	0.000	0.35		2.550	348.781	260.7	OK
88.026	P2_28	30 minute 1 year Winter I+0%	42.657	40.090	-0.472	0.000	0.30		15.188	351.025	252.3	OK
88.027	P2_28A	30 minute 1 year Winter I+0%	42.181	40.014	-0.402	0.000	0.42		16.577	348.268	248.0	OK
88.028	246	30 minute 1 year Winter I+0%	42.490	39.976	-0.394	0.000	0.61		7.500	346.322	247.3	OK
86.010	C98	30 minute 1 year Winter I+0%	42.480	39.856	-0.486	0.000	0.44		3.791	405.228	270.4	OK
84.007	C65	30 minute 1 year Winter I+0%	42.458	39.325	-0.975	0.000	0.08		0.994	818.719	467.3	OK
84.008	C66	30 minute 1 year Winter I+0%	38.800	37.310	-0.840	0.000	0.20		3.067	817.648	467.5	OK
9.032	BASIN C3	360 minute 1 year Winter I+0%	38.500	36.472	0.142	0.000	0.40		1222.187	3844.503	117.7	SURCHARGED
9.033	C68	360 minute 1 year Winter I+0%	36.717	35.396	-0.222	0.000	0.51		1.198	3841.959	117.7	OK
9.034	C69	360 minute 1 year Winter I+0%	36.300	35.110	-0.283	0.000	0.30		0.855	3839.614	117.7	OK
9.035	C70	360 minute 1 year Winter I+0%	34.865	33.972	-0.293	0.000	0.27		0.466	3838.667	117.7	OK
9.036	C71	360 minute 1 year Winter I+0%	33.672	32.905	-0.167	0.000	0.72		1.046	3835.179	117.7	OK

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30 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Catchment C

Simulation Criteria

Areal Reduction Factor 1.000 Hot Start Level (mm) 0 Foul Sewage per hectare (l/s) 0.000 MADD Factor * 10m³/ha Storage 0.000 Flow per Person per Day (l/per/day) 0.000
Hot Start (mins) 0 Manhole Headloss Coeff (Global) 0.500 Additional Flow - % of Total Flow 0.000 Inlet Coeffiecient 0.800

Number of Input Hydrographs 0 Number of Online Controls 16 Number of Offline Controls 12 Number of Storage Structures 8 Number of Time/Area Diagrams 0 Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall Model FSR Region England and Wales M5-60 (mm) 18.500 Ratio R 0.400 Cv (Summer) 0.750 Cv (Winter) 0.840

Margin for Flood Risk Warning (mm) 400.0 Analysis Timestep Fine DTS Status OFF DVD Status ON Inertia Status ON

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 240, 360, 480, 600, 960, 1440, 2160
Return Period(s) (years)	1, 30, 100
Climate Change (%)	0, 0, 20

PN	US/MH Name	Event	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Maximum Vol (m³)	Discharge Vol (m³)	Pipe Flow (l/s)	Status
9.000	OB9	15 minute 30 year Summer I+0%	68.920	68.018	-0.452	0.000	0.33		2.068	97.778	375.7	OK
9.001	S39	15 minute 30 year Summer I+0%	69.855	67.847	-0.503	0.000	0.24		74.833	81.108	84.2	OK
10.000	OB10	15 minute 30 year Summer I+0%	69.855	69.030	0.000	0.000	1.01		0.654	35.441	79.0	OK
9.002	S40 (BD)	15 minute 30 year Summer I+0%	69.855	67.816	-0.504	0.000	0.23		1.234	116.317	128.6	OK
9.003	S41	15 minute 30 year Winter I+0%	68.855	67.677	-0.538	0.000	0.17		2.130	118.265	121.7	OK
9.004	Tank 6 - Full Retention	15 minute 30 year Winter I+0%	70.000	67.531	-0.404	0.000	0.30		6.570	117.913	134.8	OK
9.005	S42	15 minute 30 year Winter I+0%	70.000	67.506	-0.374	0.000	0.19		4.027	117.675	144.8	OK
11.000	4A	15 minute 30 year Summer I+0%	80.350	79.475	-0.175	0.000	0.37		0.136	63.716	205.5	OK
11.001	4B	15 minute 30 year Summer I+0%	75.350	74.762	0.112	0.000	0.25	63.8	0.474	56.015	141.8	SURCHARGED
11.002	SDP004	15 minute 30 year Winter I+0%	70.350	68.307	0.107	0.000	0.89		0.454	66.127	141.0	SURCHARGED
11.003	S43 (V)	15 minute 30 year Winter I+0%	69.270	67.948	-0.027	0.000	0.58		1.650	66.122	137.8	OK
12.000	3A	15 minute 30 year Summer I+0%	80.350	79.475	-0.175	0.000	0.37		0.136	63.716	205.5	OK
12.001	3B	15 minute 30 year Summer I+0%	75.350	74.762	0.112	0.000	0.25	63.8	0.474	56.015	141.8	SURCHARGED
12.002	SDP003	15 minute 30 year Winter I+0%	70.350	68.176	-0.099	0.000	0.89		0.479	66.127	141.9	OK
11.004	S44 (V)	15 minute 30 year Winter I+0%	68.952	67.854	-0.086	0.000	0.84		7.086	132.243	272.5	OK
13.000	2A	15 minute 30 year Summer I+0%	80.350	79.475	-0.175	0.000	0.37		0.136	63.716	205.5	OK
13.001	2B	15 minute 30 year Summer I+0%	75.350	74.731	0.081	0.000	0.25	63.7	0.438	56.004	141.8	SURCHARGED
13.002	SDP002	15 minute 30 year Winter I+0%	70.350	68.333	0.058	0.000	1.50		0.756	66.115	141.9	SURCHARGED
11.005	S45 (V)	15 minute 30 year Winter I+0%	68.952	67.777	-0.283	0.000	0.58		8.507	198.360	411.4	OK
14.000	1A	15 minute 30 year Summer I+0%	80.350	79.475	-0.175	0.000	0.37		0.136	63.716	205.5	OK
14.001	1B	15 minute 30 year Summer I+0%	75.350	74.762	0.112	0.000	0.25	63.8	0.474	56.015	141.8	SURCHARGED
14.002	SDP001	30 minute 30 year Summer I+0%	70.350	68.333	0.058	0.000	1.50		0.756	81.705	141.9	SURCHARGED
11.006	S46 (V)	15 minute 30 year Winter I+0%	69.315	67.715	-0.235	0.000	0.86		11.787	264.482	543.5	OK
11.007	S47 (V)	15 minute 30 year Winter I+0%	69.315	67.549	-0.311	0.000	0.69		10.111	264.482	531.3	OK
9.006	S48	15 minute 30 year Winter I+0%	70.000	67.453	-0.267	0.000	0.72		21.876	381.721	545.9	OK
9.007	S49	15 minute 30 year Winter I+0%	70.000	67.328	-0.222	0.000	0.69		18.799	381.290	522.0	OK
15.000	OB14	15 minute 30 year Winter I+0%	68.890	68.386	0.321	0.000	0.38		1.220	29.111	54.3	SURCHARGED
16.000	OB13	15 minute 30 year Winter I+0%	68.890	68.372	0.277	0.000	0.76		1.143	29.844	56.7	SURCHARGED
16.001	S50a	15 minute 30 year Winter I+0%	69.120	68.358	0.283	0.000	0.46		1.647	29.848	52.2	SURCHARGED
15.001	S50	15 minute 30 year Winter I+0%	69.235	68.261	0.332	0.000	0.92		5.700	58.961	102.3	SURCHARGED
17.000	OB11	15 minute 30 year Winter I+0%	68.890	68.289	0.269	0.000	0.92		0.638	42.636	86.1	SURCHARGED

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30 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Catchment C

PN	US/MH Name	Event	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Maximum Vol (m³)	Discharge Vol (m³)	Pipe Flow (l/s)	Status
15.002	S51	15 minute 30 year Winter I+0%	69.235	68.159	0.360	0.000	1.75		5.119	101.586	176.8	SURCHARGED
18.000	OB12	15 minute 30 year Winter I+0%	68.890	68.095	0.000	0.000	1.00		0.653	43.811	91.0	OK
18.001	S52	15 minute 30 year Winter I+0%	69.235	67.967	-0.098	0.000	0.90		0.804	43.812	90.7	OK
15.003	S53	15 minute 30 year Winter I+0%	69.235	67.886	0.033	0.000	0.79		5.994	145.386	253.4	SURCHARGED
15.004	Tank 7 - Full Retention	15 minute 30 year Winter I+0%	70.000	67.754	0.076	0.000	1.47		5.619	145.386	251.0	SURCHARGED
9.008	S54	15 minute 30 year Winter I+0%	70.000	67.223	-0.231	0.000	0.91		21.984	526.325	755.7	OK
9.009	S55	15 minute 30 year Winter I+0%	70.000	67.088	-0.271	0.000	0.70		12.643	526.043	737.0	OK
19.000	KD17	15 minute 30 year Winter I+0%	69.440	68.289	-0.101	0.000	0.23		0.049	6.764	14.5	OK
9.010	S56	15 minute 30 year Winter I+0%	70.000	67.012	-0.127	0.000	1.00		18.967	532.538	722.7	OK
9.011	S57	15 minute 30 year Winter I+0%	70.000	66.946	-0.138	0.000	0.95		9.754	532.315	717.1	OK
20.000	10A	15 minute 30 year Summer I+0%	80.350	79.455	-0.195	0.000	0.27		0.113	46.248	149.2	OK
20.001	10B	15 minute 30 year Summer I+0%	75.350	74.743	0.093	0.000	0.19	45.4	0.452	40.846	103.8	SURCHARGED
20.002	SDP010	15 minute 30 year Summer I+0%	70.350	68.320	0.045	0.000	1.24		0.734	40.846	103.7	SURCHARGED
20.003	S59 (V)	15 minute 30 year Winter I+0%	70.150	68.278	0.028	0.000	1.16		1.163	48.229	103.9	SURCHARGED
21.000	S58 (V)	15 minute 30 year Summer I+0%	70.150	68.098	-0.077	0.000	0.90		0.247	5.404	45.2	OK
9.012	S60	15 minute 30 year Winter I+0%	70.000	66.889	-0.131	0.000	0.72		11.393	583.572	727.8	OK
22.000	KD18	15 minute 30 year Winter I+0%	69.925	68.821	-0.129	0.000	0.37		0.103	4.558	9.6	OK
22.001	KD19	15 minute 30 year Winter I+0%	69.440	68.555	0.015	0.000	0.77		0.351	18.965	41.5	SURCHARGED
22.002	KD20	15 minute 30 year Winter I+0%	69.095	68.479	-0.081	0.000	0.94		1.512	39.989	87.4	OK
22.003	KD21	15 minute 30 year Winter I+0%	69.095	68.254	-0.091	0.000	0.97		0.937	66.599	146.2	OK
23.000	KD22	15 minute 30 year Winter I+0%	68.750	68.123	0.198	0.000	0.81		1.003	32.785	68.8	SURCHARGED
22.004	S61	15 minute 30 year Winter I+0%	68.800	68.049	0.059	0.000	1.40		1.663	99.390	215.6	SURCHARGED
24.000	KD23	15 minute 30 year Summer I+0%	68.170	67.654	0.309	0.000	1.14		1.201	39.642	89.8	SURCHARGED
22.005	S62	15 minute 30 year Winter I+0%	68.800	67.607	0.137	0.000	1.25		2.442	143.789	309.6	SURCHARGED
22.006	Tank 8 - Bypass	15 minute 30 year Winter I+0%	68.800	67.440	0.000	0.000	1.46		1.418	143.789	308.7	OK
9.013	S63	30 minute 30 year Winter I+0%	68.900	66.740	0.005	0.000	1.14		50.787	947.397	829.9	SURCHARGED
25.000	KD24	15 minute 30 year Winter I+0%	68.385	67.267	-0.143	0.000	0.29		0.087	3.675	7.8	OK
9.014	S64	30 minute 30 year Winter I+0%	68.425	66.397	-0.283	0.000	0.81		7.364	961.207	830.7	OK
9.015	Ex SC15	30 minute 30 year Winter I+0%	70.000	65.956	-0.516	0.000	0.38		2.683	960.987	833.2	OK
26.000	C16a	15 minute 30 year Winter I+0%	68.110	66.825	-0.085	0.000	0.83		0.237	42.346	88.3	OK
27.000	1	15 minute 30 year Winter I+0%	71.600	71.615	1.315	15.520	1.43		17.268	112.668	150.9	FLOOD
27.001	2	15 minute 30 year Winter I+0%	71.180	71.039	1.334	0.000	1.59		7.126	142.901	174.6	FLOOD RISK
27.002	3	15 minute 30 year Winter I+0%	71.410	70.327	0.919	0.000	1.58		12.090	204.131	271.9	SURCHARGED
27.003	4	15 minute 30 year Winter I+0%	71.410	69.699	0.513	0.000	1.40		12.054	233.368	300.2	SURCHARGED
27.004	5	15 minute 30 year Winter I+0%	71.490	68.664	-0.104	0.000	0.93		4.585	266.366	332.7	OK
27.005	6	15 minute 30 year Winter I+0%	70.600	67.576	-0.157	0.000	0.74		1.463	266.284	330.3	OK
27.006	7	15 minute 30 year Winter I+0%	69.530	67.098	0.165	0.000	1.22		3.414	332.189	402.5	SURCHARGED
27.007	8	15 minute 30 year Winter I+0%	69.030	66.339	-0.251	0.000	0.63		0.814	332.123	401.1	OK
26.001	C16	15 minute 30 year Winter I+0%	68.690	65.991	-0.199	0.000	0.78		2.873	374.308	485.9	OK
9.016	C17	30 minute 30 year Winter I+0%	69.130	65.524	-0.003	0.000	0.56		24.423	1511.449	1235.9	OK
9.017	C18	30 minute 30 year Winter I+0%	69.612	65.229	0.648	0.000	0.57		32.785	1511.136	1165.9	SURCHARGED
28.000	OB1	15 minute 30 year Summer I+0%	68.920	67.963	-0.432	0.000	0.36		2.212	119.706	416.3	OK
28.001	S1	15 minute 30 year Winter I+0%	69.855	67.789	-0.486	0.000	0.23		93.369	101.676	105.3	OK
29.000	OB2	15 minute 30 year Winter I+0%	69.795	68.670	0.000	0.000	1.11		0.654	39.400	84.6	OK
28.002	S2 (BD)	15 minute 30 year Winter I+0%	69.855	67.765	-0.465	0.000	0.23		1.800	140.617	128.9	OK
30.000	OB3	15 minute 30 year Winter I+0%	69.340	68.125	-0.165	0.000	0.59		0.363	27.934	58.8	OK
28.003	S3	15 minute 30 year Winter I+0%	69.855	67.681	-0.384	0.000	0.28		9.545	168.141	166.8	OK
28.004	Tank 1 -Full Retention	15 minute 30 year Winter I+0%	70.000	67.657	-0.263	0.000	0.41		6.337	167.809	171.8	OK
28.005	S4	15 minute 30 year Winter I+0%	70.000	67.642	-0.239	0.000	0.30		4.147	167.466	176.7	OK

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30 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Catchment C

PN	US/MH Name	Event	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Maximum Vol (m³)	Discharge Vol (m³)	Pipe Flow (l/s)	Status
31.000	5A	15 minute 30 year Summer I+0%	80.350	79.475	-0.175	0.000	0.36		0.136	63.322	204.3	OK
31.001	5B	15 minute 30 year Summer I+0%	75.350	74.760	0.110	0.000	0.25	62.5	0.472	55.781	141.8	SURCHARGED
31.002	SDP005	15 minute 30 year Winter I+0%	70.350	68.669	0.319	0.000	0.96		1.351	65.879	140.8	SURCHARGED
31.003	S5 (V)	15 minute 30 year Winter I+0%	68.952	68.621	0.251	0.000	0.57		3.653	65.882	134.4	FLOOD RISK
32.000	6A	15 minute 30 year Summer I+0%	80.350	79.475	-0.175	0.000	0.36		0.136	63.322	204.3	OK
32.001	6B	15 minute 30 year Summer I+0%	75.350	74.760	0.110	0.000	0.25	62.5	0.472	55.781	141.8	SURCHARGED
32.002	SDP006	15 minute 30 year Winter I+0%	70.350	68.715	0.440	0.000	0.89		1.432	65.880	138.8	SURCHARGED
31.004	S6 (V)	15 minute 30 year Winter I+0%	68.952	68.579	0.239	0.000	0.83		9.580	131.786	268.5	FLOOD RISK
33.000	7A	15 minute 30 year Summer I+0%	80.350	79.475	-0.175	0.000	0.36		0.136	63.322	204.3	OK
33.001	7B	15 minute 30 year Summer I+0%	75.350	74.760	0.110	0.000	0.25	62.5	0.472	55.781	141.8	SURCHARGED
33.002	SDP007	15 minute 30 year Winter I+0%	70.350	68.630	0.355	0.000	1.48		1.282	65.868	139.8	SURCHARGED
31.005	S7 (V)	15 minute 30 year Winter I+0%	68.952	68.503	0.268	0.000	1.20		11.627	197.722	399.4	SURCHARGED
34.000	8A	15 minute 30 year Summer I+0%	80.350	79.475	-0.175	0.000	0.36		0.136	63.322	204.3	OK
34.001	8B	15 minute 30 year Summer I+0%	75.350	74.760	0.110	0.000	0.25	62.5	0.472	55.781	141.8	SURCHARGED
34.002	SDP008	15 minute 30 year Winter I+0%	70.350	68.453	0.178	0.000	1.50		0.968	65.881	141.6	SURCHARGED
31.006	S8 (V)	15 minute 30 year Winter I+0%	68.952	68.325	0.210	0.000	1.43		12.683	263.600	507.0	SURCHARGED
28.006	S9 (V)	15 minute 30 year Winter I+0%	69.850	67.584	-0.316	0.000	0.74		17.213	430.675	581.6	OK
35.000	9A	15 minute 30 year Summer I+0%	80.350	79.436	-0.289	0.000	0.12		0.143	32.718	105.5	OK
35.001	9B	15 minute 30 year Summer I+0%	75.350	74.732	0.007	0.000	0.08	31.6	0.681	29.197	73.9	SURCHARGED
35.002	SDP009	15 minute 30 year Winter I+0%	70.350	68.195	-0.080	0.000	0.97		0.513	34.424	74.0	OK
35.003	S10 (V)	15 minute 30 year Winter I+0%	70.130	68.125	-0.135	0.000	0.74		0.626	34.425	74.0	OK
28.007	S11	15 minute 30 year Winter I+0%	70.092	67.505	-0.325	0.000	0.68		8.206	464.707	614.5	OK
28.008	S12	15 minute 30 year Winter I+0%	70.130	67.399	-0.291	0.000	0.63		17.096	464.203	588.4	OK
28.009	S13	15 minute 30 year Winter I+0%	70.130	67.296	-0.223	0.000	0.69		23.600	463.734	586.6	OK
36.000	OB4	15 minute 30 year Summer I+0%	69.905	68.855	0.000	0.000	0.92		0.786	41.981	111.7	OK
36.001	S14	15 minute 30 year Winter I+0%	70.025	68.825	-0.005	0.000	0.51		1.566	45.283	89.6	OK
37.000	OB5	15 minute 30 year Winter I+0%	69.955	69.468	0.488	0.000	1.70		0.801	22.641	45.0	SURCHARGED
37.001	S15	15 minute 30 year Winter I+0%	70.025	69.205	0.315	0.000	1.67		1.737	22.639	45.1	SURCHARGED
38.000	OB6	15 minute 30 year Winter I+0%	69.905	69.056	-0.099	0.000	0.84		0.612	47.486	101.3	OK
37.002	S16	15 minute 30 year Winter I+0%	70.025	69.036	-0.017	0.000	1.00		2.098	70.125	137.5	OK
36.002	S17	15 minute 30 year Winter I+0%	70.025	68.711	0.161	0.000	1.27		13.787	115.408	214.0	SURCHARGED
36.003	Tank 2 - Full Retention	15 minute 30 year Winter I+0%	70.015	68.562	0.102	0.000	1.76		2.951	115.408	214.9	SURCHARGED
28.010	S18 (BD)	15 minute 30 year Winter I+0%	70.130	67.236	-0.179	0.000	0.90		16.644	578.731	752.2	OK
39.000	KD1	15 minute 30 year Winter I+0%	70.240	68.828	-0.137	0.000	0.32		0.094	3.822	8.2	OK
39.001	S19	15 minute 30 year Winter I+0%	70.000	68.787	-0.143	0.000	0.25		0.168	3.822	7.3	OK
40.000	OB7	15 minute 30 year Winter I+0%	70.035	69.184	-0.101	0.000	0.94		0.607	59.394	126.7	OK
39.002	S20	15 minute 30 year Winter I+0%	70.158	68.701	-0.189	0.000	0.57		2.137	63.217	126.8	OK
41.000	OB8	15 minute 30 year Summer I+0%	70.035	69.234	0.024	0.000	1.01		0.696	40.036	88.5	SURCHARGED
41.001	S21	15 minute 30 year Winter I+0%	70.158	69.095	-0.080	0.000	0.96		1.143	44.841	96.4	OK
39.003	S22	15 minute 30 year Winter I+0%	70.158	68.604	0.119	0.000	1.21		10.208	108.058	203.9	SURCHARGED
39.004	TANK 3 - Full Retention	15 minute 30 year Winter I+0%	70.092	68.469	0.049	0.000	1.35		1.450	108.052	206.1	SURCHARGED
28.011	S23	15 minute 30 year Winter I+0%	70.130	67.156	-0.314	0.000	0.83		15.462	686.445	909.8	OK
28.012	S24	15 minute 30 year Winter I+0%	70.130	66.932	-0.468	0.000	0.56		9.222	685.962	889.7	OK
42.000	KD2	15 minute 30 year Winter I+0%	68.625	67.578	-0.147	0.000	0.51		0.168	11.026	23.6	OK
28.013	S25 (BD)	15 minute 30 year Winter I+0%	68.860	66.760	-0.330	0.000	0.80		38.029	696.569	877.9	OK
43.000	11A	15 minute 30 year Summer I+0%	80.350	79.455	-0.195	0.000	0.27		0.113	46.248	149.2	OK
43.001	11B	15 minute 30 year Summer I+0%	75.350	74.743	0.093	0.000	0.19	45.4	0.452	40.846	103.8	SURCHARGED
43.002	SDP011	15 minute 30 year Summer I+0%	70.350	68.332	0.057	0.000	1.26		0.755	40.846	104.1	SURCHARGED
43.003	S26 (V)	15 minute 30 year Summer I+0%	70.075	68.278	0.013	0.000	1.04		0.847	40.839	102.1	SURCHARGED

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30 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Catchment C

PN	US/MH Name	Event	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Maximum Vol (m³)	Discharge Vol (m³)	Pipe Flow (l/s)	Status
44.000	S27 (V)	15 minute 30 year Summer I+0%	70.075	68.484	0.219	0.000	0.37		1.040	5.402	38.1	SURCHARGED
43.004	S28	15 minute 30 year Summer I+0%	70.325	68.183	-0.097	0.000	0.97		3.177	46.243	143.8	OK
28.014	S29	15 minute 30 year Winter I+0%	68.700	66.642	-0.378	0.000	0.73		11.510	747.991	905.3	OK
45.000	KD3	15 minute 30 year Winter I+0%	67.915	66.830	-0.185	0.000	0.31		0.125	6.322	13.5	OK
28.015	S30	15 minute 30 year Winter I+0%	68.300	66.474	-0.436	0.000	0.64		14.989	761.345	900.0	OK
46.000	KD4	15 minute 30 year Winter I+0%	67.940	67.512	0.472	0.000	0.41		0.867	10.879	23.6	SURCHARGED
46.001	KD9	15 minute 30 year Summer I+0%	67.970	67.444	0.414	0.000	1.06		0.809	23.234	53.2	SURCHARGED
47.000	KD5	15 minute 30 year Winter I+0%	69.785	68.857	-0.178	0.000	0.66		0.472	46.900	99.5	OK
47.001	KD6	15 minute 30 year Winter I+0%	69.440	68.585	-0.105	0.000	0.91		0.703	64.541	137.1	OK
47.002	KD7	15 minute 30 year Winter I+0%	69.095	68.398	-0.232	0.000	0.46		1.219	82.183	175.2	OK
47.003	KD8	15 minute 30 year Winter I+0%	68.515	67.715	-0.200	0.000	0.75		0.698	100.119	213.6	OK
46.002	S31	15 minute 30 year Summer I+0%	68.050	67.365	0.050	0.000	0.77		1.451	112.624	265.9	SURCHARGED
46.003	Tank 4 - By Pass	30 minute 30 year Summer I+0%	68.050	67.240	0.000	0.000	1.04		2.629	146.760	225.2	OK
46.004	S32	15 minute 30 year Winter I+0%	68.050	67.102	-0.123	0.000	0.99		1.506	126.141	272.9	OK
28.016	S33	30 minute 30 year Winter I+0%	68.208	66.355	-0.375	0.000	0.74		15.182	1154.951	959.2	OK
28.017	S34	30 minute 30 year Winter I+0%	68.650	66.216	-0.374	0.000	0.74		21.626	1153.578	952.7	OK
48.000	KD10	15 minute 30 year Winter I+0%	68.375	67.697	0.297	0.000	0.62		0.585	7.792	16.5	SURCHARGED
48.001	S35	15 minute 30 year Winter I+0%	68.455	67.687	0.297	0.000	0.37		0.664	7.792	16.9	SURCHARGED
49.000	KD11	15 minute 30 year Winter I+0%	69.785	68.898	0.013	0.000	0.79		0.349	21.462	44.5	SURCHARGED
49.001	KD12	15 minute 30 year Winter I+0%	69.440	68.814	-0.086	0.000	0.93		1.480	42.045	89.5	OK
49.002	KD13	15 minute 30 year Winter I+0%	69.095	68.235	-0.110	0.000	0.89		0.591	62.628	133.6	OK
49.003	KD14	15 minute 30 year Winter I+0%	68.750	67.921	-0.154	0.000	0.82		0.815	83.210	178.1	OK
50.000	KD15	15 minute 30 year Winter I+0%	68.375	67.785	0.385	0.000	0.89		0.684	20.436	43.6	SURCHARGED
48.002	S36	15 minute 30 year Winter I+0%	68.455	67.665	0.085	0.000	0.97		1.885	111.438	240.1	SURCHARGED
48.003	Tank 5 - Bypass	15 minute 30 year Winter I+0%	68.455	67.552	0.042	0.000	1.50		1.788	111.438	241.9	SURCHARGED
48.004	S37	15 minute 30 year Winter I+0%	68.455	67.505	0.010	0.000	1.53		1.635	111.430	242.2	SURCHARGED
28.018	S38 (P)	30 minute 30 year Winter I+0%	68.625	66.007	-0.382	0.000	0.73		36.635	1297.669	1024.1	OK
28.019	Ex SC41	30 minute 30 year Winter I+0%	70.000	65.346	-0.554	0.000	0.32		3.020	1297.409	1024.7	OK
9.018	C44	30 minute 30 year Winter I+0%	69.398	64.941	1.194	0.000	1.04		58.766	2891.617	2113.7	SURCHARGED
51.000	C19	15 minute 30 year Winter I+0%	83.721	82.732	-0.089	0.000	0.35		0.064	6.243	13.4	OK
51.001	C20	15 minute 30 year Winter I+0%	82.256	81.279	-0.077	0.000	0.47		0.084	10.091	22.0	OK
51.002	C21	15 minute 30 year Winter I+0%	80.753	79.791	-0.062	0.000	0.64		0.099	13.908	30.6	OK
51.003	C22	15 minute 30 year Winter I+0%	79.479	78.731	0.152	0.000	0.98		0.378	20.772	43.9	SURCHARGED
51.004	C23	15 minute 30 year Winter I+0%	79.479	76.673	0.223	0.000	1.23		0.576	29.885	63.0	SURCHARGED
51.005	C24	15 minute 30 year Winter I+0%	77.829	76.013	-0.025	0.000	1.00		0.523	40.916	85.5	OK
52.000	OB1	15 minute 30 year Summer I+0%	76.990	75.885	-0.119	0.000	0.10		0.030	0.525	1.4	OK
52.001	PPIC1	15 minute 30 year Summer I+0%	77.050	75.832	-0.122	0.000	0.08		0.028	0.525	1.3	OK
52.002	PPIC2	15 minute 30 year Summer I+0%	77.020	75.675	-0.119	0.000	0.10		0.043	0.525	1.3	OK
53.000	BI RWP	15 minute 30 year Summer I+0%	77.000	75.682	-0.112	0.000	0.14		0.037	0.788	2.0	OK
52.003	Ex. SC25	15 minute 30 year Winter I+0%	76.921	75.579	-0.165	0.000	0.16		0.063	5.881	13.4	OK
52.004	Ex. SC26	15 minute 30 year Winter I+0%	76.304	74.982	-0.172	0.000	0.38		0.148	13.967	31.7	OK
54.000	New gully	15 minute 30 year Winter I+0%	75.580	75.316	-0.044	0.000	0.85		0.115	4.999	11.5	FLOOD RISK
54.001	Separator	15 minute 30 year Winter I+0%	76.300	75.102	-0.033	0.000	0.95		0.136	4.999	11.3	OK
55.000	OB2	15 minute 30 year Winter I+0%	76.140	75.145	-0.110	0.000	0.16		0.040	1.176	2.7	OK
56.000	MS RWP	15 minute 30 year Summer I+0%	76.625	75.058	-0.097	0.000	0.27		0.054	1.575	4.0	OK
54.002	PS3	15 minute 30 year Winter I+0%	76.550	74.982	-0.113	0.000	0.48		0.139	7.939	17.8	OK
57.000	OB3	15 minute 30 year Winter I+0%	76.575	74.996	-0.099	0.000	0.25		0.052	1.911	4.1	OK
52.005	PS4	15 minute 30 year Winter I+0%	76.575	74.913	-0.067	0.000	0.84		1.326	23.817	51.4	OK
51.006	C27	15 minute 30 year Winter I+0%	76.336	74.889	-0.031	0.000	1.00		0.702	75.538	156.5	OK

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30 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Catchment C

PN	US/MH Name	Event	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Maximum Vol (m³)	Discharge Vol (m³)	Pipe Flow (l/s)	Status
51.007	C28	15 minute 30 year Winter I+0%	74.920	73.728	-0.072	0.000	0.91		0.507	91.142	187.7	OK
58.000	C29	15 minute 30 year Winter I+0%	75.557	74.627	0.395	0.000	0.91		0.610	15.691	29.9	SURCHARGED
58.001	C30	15 minute 30 year Winter I+0%	74.373	73.728	0.555	0.000	1.23		1.079	23.126	42.9	SURCHARGED
58.002	C31	15 minute 30 year Winter I+0%	73.349	72.057	-0.083	0.000	0.70		0.163	30.034	56.4	OK
58.003	C32	15 minute 30 year Winter I+0%	72.668	71.278	-0.097	0.000	0.51		0.531	30.035	56.0	OK
51.008	C33	15 minute 30 year Winter I+0%	72.929	71.237	-0.055	0.000	0.94		2.213	158.904	315.8	OK
51.009	C34	15 minute 30 year Winter I+0%	69.716	68.926	0.410	0.000	1.02		3.464	192.408	357.5	SURCHARGED
51.010	C35	15 minute 30 year Winter I+0%	66.836	66.084	0.448	0.000	1.04		3.612	208.240	373.4	SURCHARGED
51.011	C36	15 minute 30 year Winter I+0%	66.255	65.515	0.460	0.000	1.12		7.217	226.872	379.7	SURCHARGED
51.012	C37	15 minute 30 year Winter I+0%	66.211	65.348	0.429	0.000	1.15		12.871	243.797	390.5	SURCHARGED
51.013	C38	15 minute 30 year Winter I+0%	66.775	65.167	0.383	0.000	1.14		12.676	279.027	416.2	SURCHARGED
51.014	C39	15 minute 30 year Winter I+0%	68.127	64.766	0.282	0.000	1.36		26.490	356.527	498.3	SURCHARGED
51.015	C40	30 minute 30 year Winter I+0%	69.594	64.318	0.134	0.000	0.56		24.799	464.615	442.5	SURCHARGED
9.019	C46	30 minute 30 year Winter I+0%	69.215	64.065	1.123	0.000	1.09		47.551	3378.913	2468.9	SURCHARGED
9.020	C47	30 minute 30 year Winter I+0%	65.851	62.347	0.866	0.000	1.68		53.431	3403.536	2464.9	SURCHARGED
59.000	OB1	15 minute 30 year Winter I+0%	66.530	65.945	0.260	0.000	0.25		0.543	7.646	15.0	SURCHARGED
60.000	OB2	15 minute 30 year Winter I+0%	66.465	66.061	0.611	0.000	0.82		1.024	44.990	91.4	SURCHARGED
59.001	S1	15 minute 30 year Winter I+0%	66.570	65.928	0.678	0.000	1.37		2.654	52.638	91.3	SURCHARGED
61.000	OB3	15 minute 30 year Winter I+0%	66.465	65.725	0.635	0.000	0.52		1.909	39.253	76.8	SURCHARGED
59.002	S2	15 minute 30 year Winter I+0%	66.575	65.705	0.660	0.000	0.40		7.194	91.891	152.5	SURCHARGED
62.000	OB4	15 minute 30 year Winter I+0%	66.610	65.897	0.307	0.000	0.85		0.597	14.996	32.0	SURCHARGED
62.001	S3	15 minute 30 year Winter I+0%	66.715	65.867	0.357	0.000	0.74		1.027	15.003	30.1	SURCHARGED
63.000	OB5	15 minute 30 year Winter I+0%	66.610	65.842	0.592	0.000	0.48		1.833	37.636	73.8	SURCHARGED
62.002	S4	15 minute 30 year Winter I+0%	66.715	65.812	0.612	0.000	0.45		5.181	52.611	83.8	SURCHARGED
64.000	OB6	15 minute 30 year Winter I+0%	66.610	65.799	0.729	0.000	1.11		1.158	37.489	73.3	SURCHARGED
62.003	S5	15 minute 30 year Winter I+0%	66.715	65.701	0.701	0.000	0.38		10.563	90.101	132.8	SURCHARGED
59.003	S6	15 minute 30 year Winter I+0%	66.715	65.682	0.782	0.000	0.86		11.833	181.744	257.9	SURCHARGED
65.000	OB7	15 minute 30 year Winter I+0%	67.085	66.067	-0.083	0.000	0.41		0.070	4.852	10.4	OK
65.001	S8	15 minute 30 year Winter I+0%	67.320	65.812	-0.073	0.000	0.51		0.096	4.852	10.3	OK
66.000	OB8	15 minute 30 year Winter I+0%	67.085	65.685	0.140	0.000	0.48		0.407	9.703	20.8	SURCHARGED
65.002	S9	15 minute 30 year Winter I+0%	67.320	65.668	0.228	0.000	0.53		1.253	14.554	30.4	SURCHARGED
67.000	OB9	15 minute 30 year Winter I+0%	67.085	65.631	0.746	0.000	0.51		1.092	11.761	22.9	SURCHARGED
59.004	S7	15 minute 30 year Winter I+0%	67.320	65.609	0.834	0.000	0.98		18.542	205.883	278.7	SURCHARGED
68.000	OB10	15 minute 30 year Winter I+0%	66.940	65.594	0.704	0.000	0.71		0.960	5.881	11.5	SURCHARGED
68.001	S10	15 minute 30 year Winter I+0%	67.175	65.565	0.785	0.000	0.69		1.223	5.881	10.7	SURCHARGED
59.005	S11	15 minute 30 year Winter I+0%	67.175	65.540	0.840	0.000	0.81		11.701	208.796	281.3	SURCHARGED
59.006	S12	60 minute 30 year Winter I+0%	67.050	64.804	0.119	0.000	0.69		3.555	332.616	193.1	SURCHARGED
59.007	FRS1	60 minute 30 year Winter I+0%	67.065	64.801	0.231	0.000	0.55		5.293	329.685	187.7	SURCHARGED
59.008	S13	60 minute 30 year Winter I+0%	67.125	64.799	0.254	0.000	0.70		5.497	326.025	182.6	SURCHARGED
69.000	CP5	15 minute 30 year Winter I+0%	67.070	65.777	-0.098	0.000	0.61		0.860	48.376	81.8	OK
70.000	G1	60 minute 30 year Winter I+0%	66.385	64.796	0.126	0.000	0.16		0.307	3.823	2.6	SURCHARGED
59.009	S14	60 minute 30 year Winter I+0%	67.000	64.795	0.275	0.000	0.50		7.803	403.084	224.5	SURCHARGED
71.000	CP8	15 minute 30 year Winter I+0%	67.215	65.209	-0.056	0.000	0.91		1.467	26.022	43.5	OK
59.010	AT1	60 minute 30 year Winter I+0%	69.000	64.790	0.330	0.000	0.11		282.958	272.609	45.0	SURCHARGED
59.011	S15	30 minute 30 year Winter I+0%	66.050	63.747	-0.213	0.000	0.19		0.397	125.202	45.0	OK
72.000	SSFD	15 minute 30 year Winter I+0%	63.720	63.420	0.700	0.000	7.07		4.108	23.540	40.0	FLOOD RISK
59.012	Ex SC72a	15 minute 30 year Winter I+0%	63.720	62.962	0.242	0.000	1.08		0.831	157.931	75.0	SURCHARGED
9.021	Spur	30 minute 30 year Winter I+0%	64.435	61.055	0.450	0.000	1.19		13.958	3557.984	2530.2	SURCHARGED*
9.022	C48	30 minute 30 year Winter I+0%	63.019	59.885	-0.275	0.000	0.83		24.465	3572.577	2536.0	OK

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30 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Catchment C

PN	US/MH Name	Event	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Maximum Vol (m³)	Discharge Vol (m³)	Pipe Flow (l/s)	Status
9.023	C49	30 minute 30 year Winter I+0%	60.634	57.818	-0.285	0.000	0.81		5.694	3587.567	2539.1	OK
9.024	C50	30 minute 30 year Winter I+0%	57.788	55.447	-0.203	0.000	0.96		7.172	3617.784	2544.8	OK
9.025	C51	30 minute 30 year Winter I+0%	55.447	53.743	-0.364	0.000	0.66		5.323	3643.339	2551.9	OK
73.000	SW01	15 minute 30 year Winter I+0%	58.600	57.918	-0.082	0.000	0.41		0.071	3.481	7.4	OK
73.001	SW02	15 minute 30 year Winter I+0%	58.370	57.518	-0.138	0.000	0.30		0.094	7.456	15.8	OK
74.000	SW02A	15 minute 30 year Winter I+0%	64.330	62.732	-0.098	0.000	0.26		0.053	9.635	20.7	OK
73.002	SW03	15 minute 30 year Winter I+0%	57.754	56.938	-0.162	0.000	0.42		0.188	22.606	47.7	OK
73.003	SW04	15 minute 30 year Winter I+0%	57.214	56.371	-0.140	0.000	0.53		0.406	30.487	63.1	OK
73.004	SW05	15 minute 30 year Winter I+0%	56.600	55.393	-0.159	0.000	0.45		0.320	30.487	62.7	OK
75.000	SW05A	15 minute 30 year Winter I+0%	56.073	55.363	-0.110	0.000	0.16		0.040	1.765	3.8	OK
73.005	SW06	15 minute 30 year Winter I+0%	55.886	54.871	-0.189	0.000	0.47		0.377	35.194	69.1	OK
73.006	SW07	15 minute 30 year Winter I+0%	55.692	54.376	-0.205	0.000	0.41		0.892	37.995	71.4	OK
73.007	SW08	15 minute 30 year Winter I+0%	55.529	53.797	-0.201	0.000	0.43		0.747	40.007	72.7	OK
73.008	SW09	15 minute 30 year Winter I+0%	55.422	53.408	-0.200	0.000	0.44		0.751	42.266	74.8	OK
76.000	SW10	15 minute 30 year Summer I+0%	55.857	54.057	-0.600	0.000	0.00		0.000	0.000	0.0	OK
76.001	SW11	15 minute 30 year Summer I+0%	55.738	53.761	-0.750	0.000	0.00		0.000	0.000	0.0	OK
76.002	SW12	15 minute 30 year Summer I+0%	55.647	53.650	-0.750	0.000	0.00		0.000	0.000	0.0	OK
76.003	SW13	15 minute 30 year Summer I+0%	55.528	53.367	-0.750	0.000	0.00		0.000	0.000	0.0	OK
76.004	SW14	15 minute 30 year Summer I+0%	55.484	53.177	-0.750	0.000	0.00		0.000	0.000	0.0	OK
76.005	SW15	15 minute 30 year Summer I+0%	55.612	52.641	-0.750	0.000	0.00		0.000	0.000	0.0	OK
73.009	SW16	15 minute 30 year Winter I+0%	55.589	52.521	-0.724	0.000	0.08		0.593	64.380	98.2	OK
77.000	SW17	15 minute 30 year Winter I+0%	58.606	58.014	-0.111	0.000	0.47		0.124	9.245	18.3	OK
77.001	SW18	15 minute 30 year Winter I+0%	58.445	57.540	-0.098	0.000	0.56		0.356	15.132	28.5	OK
77.002	SW19	15 minute 30 year Winter I+0%	57.723	56.637	-0.101	0.000	0.57		0.258	17.150	31.8	OK
78.000	SW20	15 minute 30 year Winter I+0%	57.200	56.588	-0.062	0.000	0.63		0.094	5.015	10.5	OK
77.003	SW21	15 minute 30 year Winter I+0%	57.444	56.119	-0.102	0.000	0.58		0.248	22.165	41.7	OK
77.004	SW22	15 minute 30 year Winter I+0%	57.084	55.632	-0.093	0.000	0.64		0.203	22.165	40.8	OK
79.000	Gully	15 minute 30 year Winter I+0%	56.774	55.825	-0.125	0.000	0.06		0.006	1.498	3.2	OK
77.005	SW23	15 minute 30 year Winter I+0%	56.562	54.565	-0.096	0.000	0.62		0.228	23.663	43.2	OK
80.000	SW24	15 minute 30 year Summer I+0%	55.645	54.530	-0.150	0.000	0.00		0.000	0.000	0.0	OK
80.001	SW25	15 minute 30 year Summer I+0%	56.340	54.318	-0.150	0.000	0.00		0.000	0.000	0.0	OK
80.002	SW26	15 minute 30 year Summer I+0%	56.262	54.236	-0.150	0.000	0.00		0.000	0.000	0.0	OK
77.006	SW27	15 minute 30 year Winter I+0%	56.310	53.941	-0.120	0.000	0.67		0.243	23.663	42.8	OK
77.007	SW28	15 minute 30 year Winter I+0%	56.044	53.836	-0.119	0.000	0.67		0.873	23.663	42.8	OK
77.008	SW29	15 minute 30 year Winter I+0%	55.892	53.685	-0.200	0.000	0.25		0.258	23.662	42.9	OK
73.010	SW30	15 minute 30 year Winter I+0%	55.503	52.222	-0.736	0.000	0.08		1.192	91.557	140.2	OK
73.011	SW31	15 minute 30 year Winter I+0%	55.327	51.346	-0.740	0.000	0.07		0.997	93.708	142.0	OK
73.012	SW32	15 minute 30 year Winter I+0%	55.648	50.626	-0.730	0.000	0.08		0.866	93.707	141.9	OK
81.000	HD01	15 minute 30 year Winter I+0%	57.100	56.108	-0.092	0.000	0.31		0.060	4.655	9.9	OK
81.001	HD02	15 minute 30 year Winter I+0%	56.041	55.024	-0.100	0.000	0.24		0.058	4.655	9.8	OK
81.002	HD03	15 minute 30 year Winter I+0%	55.655	54.354	-0.095	0.000	0.28		0.060	4.655	9.9	OK
81.003	HD04	15 minute 30 year Winter I+0%	54.782	53.493	-0.058	0.000	0.67		0.109	11.414	24.5	OK
73.013	36	15 minute 30 year Winter I+0%	51.350	50.140	-0.604	0.000	0.37		2.077	639.524	1101.1	OK
9.026	C52	30 minute 30 year Winter I+0%	51.156	49.140	-0.666	0.000	0.41		3.207	4523.132	3053.7	OK
9.027	C53	30 minute 30 year Winter I+0%	46.900	44.960	-0.560	0.000	0.55		5.990	4522.019	3055.1	OK
9.028	C54	30 minute 30 year Winter I+0%	45.580	43.126	-0.504	0.000	0.64		8.902	4520.712	3054.6	OK
9.029	H20C	960 minute 30 year Winter I+0%	42.300	40.817	-1.083	0.000	0.06		7.155	12342.003	517.6	OK
82.000	C55a	15 minute 30 year Winter I+0%	42.230	42.066	0.661	0.000	0.72		0.997	14.700	29.2	FLOOD RISK
83.000	C55b	15 minute 30 year Winter I+0%	45.150	43.850	-0.100	0.000	0.24		0.050	5.882	12.6	OK

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30 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Catchment C

PN	US/MH Name	Event	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Maximum Vol (m³)	Discharge Vol (m³)	Pipe Flow (l/s)	Status
82.001	C55	15 minute 30 year Winter I+0%	43.800	41.895	0.905	0.000	1.97		3.452	41.163	75.5	SURCHARGED
82.002	56	960 minute 30 year Winter I+0%	44.900	40.807	0.027	0.000	0.08		1.678	138.382	6.0	SURCHARGED
82.003	C57	960 minute 30 year Winter I+0%	44.300	40.806	0.291	0.000	0.07		3.704	136.946	6.0	SURCHARGED
82.004	H7C	960 minute 30 year Winter I+0%	42.500	40.805	0.505	0.000	0.03		3.059	134.367	5.5	SURCHARGED
9.030	BASIN C1	960 minute 30 year Winter I+0%	42.000	40.805	1.055	0.000	0.07		9210.403	6289.238	60.7	SURCHARGED
9.031	C59	360 minute 30 year Winter I+0%	38.600	37.088	0.138	0.000	0.21		1.564	2339.799	59.2	SURCHARGED
84.000	P2_29	30 minute 30 year Winter I+0%	42.400	41.492	0.292	0.000	0.27		1.568	59.402	72.3	SURCHARGED
84.001	P2_30	30 minute 30 year Winter I+0%	42.343	41.481	0.364	0.000	0.74		12.547	123.998	145.3	SURCHARGED
84.002	P2_31	30 minute 30 year Winter I+0%	42.162	41.465	0.385	0.000	0.47		7.045	123.890	126.9	SURCHARGED
85.000	SC72	15 minute 30 year Winter I+0%	44.017	43.409	-0.165	0.000	0.15		0.063	2.940	6.1	OK
85.001	SC73	15 minute 30 year Winter I+0%	43.907	43.363	0.154	0.000	0.81		1.946	17.643	31.3	SURCHARGED
85.002	SC74	15 minute 30 year Winter I+0%	43.815	43.178	0.261	0.000	1.35		2.388	30.285	51.4	SURCHARGED
85.003	SC75	15 minute 30 year Winter I+0%	43.201	42.572	-0.128	0.000	0.62		0.624	30.285	50.7	OK
85.004	SC76	30 minute 30 year Winter I+0%	43.103	42.331	-0.069	0.000	0.40		1.627	58.050	62.0	OK
85.005	SC77	30 minute 30 year Winter I+0%	42.911	42.252	0.102	0.000	0.61		15.109	183.890	190.9	SURCHARGED
85.006	SC78	30 minute 30 year Winter I+0%	42.668	42.202	0.304	0.000	0.95		31.269	324.704	328.7	SURCHARGED
85.007	SC79	30 minute 30 year Winter I+0%	42.450	42.141	0.311	0.000	0.38		8.303	324.872	290.6	FLOOD RISK
85.008	SC80	30 minute 30 year Winter I+0%	42.222	41.973	0.443	0.000	0.68		27.757	421.257	311.5	FLOOD RISK
85.009	SC81	30 minute 30 year Winter I+0%	42.120	41.899	0.529	0.000	0.92		44.481	586.600	447.8	FLOOD RISK
85.010	SC82	30 minute 30 year Winter I+0%	42.609	41.782	0.559	0.000	1.12		35.016	729.144	556.8	SURCHARGED
85.011	SC83	30 minute 30 year Winter I+0%	42.400	41.555	0.510	0.000	1.29		41.780	735.134	560.2	SURCHARGED
84.003	P2_32	30 minute 30 year Winter I+0%	42.065	41.442	0.464	0.000	2.54		30.439	879.280	664.5	SURCHARGED
84.004	P2_33	30 minute 30 year Winter I+0%	41.991	41.263	0.313	0.000	1.51		8.446	925.443	682.5	SURCHARGED
84.005	P2_34	30 minute 30 year Winter I+0%	42.255	41.036	0.184	0.000	2.85		24.832	919.708	684.1	SURCHARGED
84.006	P1 Slab	30 minute 30 year Winter I+0%	42.398	40.844	0.014	0.000	1.78		6.538	916.251	682.1	SURCHARGED
86.000	C88	15 minute 30 year Winter I+0%	44.193	42.902	-0.441	0.000	0.00		0.007	0.147	0.3	OK
86.001	C89	15 minute 30 year Winter I+0%	44.062	42.866	-0.346	0.000	0.10		0.697	6.468	13.4	OK
86.002	C90	15 minute 30 year Winter I+0%	43.963	42.783	-0.312	0.000	0.19		1.409	13.966	25.3	OK
86.003	C91	15 minute 30 year Winter I+0%	43.801	42.658	-0.275	0.000	0.29		2.396	24.698	39.6	OK
86.004	C92	15 minute 30 year Winter I+0%	43.639	42.516	-0.255	0.000	0.35		2.886	35.430	48.2	OK
86.005	C93	15 minute 30 year Winter I+0%	43.417	42.313	-0.236	0.000	0.42		3.580	50.132	58.2	OK
86.006	C94	30 minute 30 year Winter I+0%	43.195	42.108	-0.219	0.000	0.51		4.317	84.482	69.2	OK
86.007	C95	30 minute 30 year Winter I+0%	43.004	41.930	-0.206	0.000	0.56		4.731	100.940	76.1	OK
86.008	C96	30 minute 30 year Winter I+0%	42.813	41.748	-0.197	0.000	0.60		5.092	117.259	81.3	OK
86.009	C97	30 minute 30 year Winter I+0%	42.622	41.543	-0.211	0.000	0.55		4.524	133.418	86.1	OK
87.000	C87	15 minute 30 year Summer I+0%	42.450	41.600	-0.150	0.000	0.00		0.000	0.000	0.0	OK
88.000	P2_1	15 minute 30 year Winter I+0%	44.315	43.811	0.696	0.000	0.31		0.951	1.691	4.9	SURCHARGED
88.001	P2_2	15 minute 30 year Winter I+0%	44.251	43.805	0.754	0.000	0.68		1.086	5.227	10.7	SURCHARGED
88.002	P2_3	15 minute 30 year Winter I+0%	44.154	43.778	0.824	0.000	1.03		1.246	7.462	15.6	FLOOD RISK
88.003	P2_4	15 minute 30 year Winter I+0%	44.141	43.745	0.858	0.000	1.15		1.232	14.525	23.2	FLOOD RISK
89.000	P2_5	15 minute 30 year Winter I+0%	56.568	55.321	-0.047	0.000	0.81		0.111	36.516	78.3	OK
88.004	P2_6	15 minute 30 year Winter I+0%	43.748	43.499	1.056	0.000	1.70		2.129	64.918	113.7	FLOOD RISK
88.005	P2_7	15 minute 30 year Winter I+0%	43.614	43.318	0.947	0.000	1.33		2.078	71.039	125.1	FLOOD RISK
88.006	P2_8	15 minute 30 year Winter I+0%	43.453	43.109	0.889	0.000	1.47		3.305	135.129	244.2	FLOOD RISK
88.007	P2_11	15 minute 30 year Winter I+0%	43.304	42.739	0.721	0.000	1.39		12.426	152.832	271.7	SURCHARGED
88.008	P2_12	15 minute 30 year Winter I+0%	43.208	42.710	0.714	0.000	1.23		4.086	223.468	393.7	SURCHARGED
88.009	P_13	15 minute 30 year Winter I+0%	43.102	42.562	0.709	0.000	1.78		16.068	309.717	494.5	SURCHARGED
88.010	P2_14	15 minute 30 year Winter I+0%	42.969	42.231	0.518	0.000	1.19		22.524	389.979	576.9	SURCHARGED
88.011	P2_15	15 minute 30 year Winter I+0%	42.830	42.055	0.482	0.000	1.50		33.253	525.482	730.3	SURCHARGED

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30 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Catchment C

PN	US/MH Name	Event	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Maximum Vol (m³)	Discharge Vol (m³)	Pipe Flow (l/s)	Status
88.012	P2_16	15 minute 30 year Winter I+0%	42.683	41.734	0.306	0.000	2.55		33.741	530.844	728.8	SURCHARGED
88.013	P2_17	30 minute 30 year Winter I+0%	42.781	41.529	0.116	0.000	1.09		6.122	728.531	703.4	SURCHARGED
88.014	P2_18	30 minute 30 year Winter I+0%	42.724	41.467	0.110	0.000	1.59		19.772	741.995	705.3	SURCHARGED
88.015	P2_19	15 minute 30 year Winter I+0%	42.835	41.420	0.095	0.000	1.77		12.023	574.675	730.2	SURCHARGED
88.016	P2_20	15 minute 30 year Winter I+0%	43.007	41.373	0.075	0.000	1.18		10.668	594.133	736.5	SURCHARGED
88.017	P2_21	15 minute 30 year Winter I+0%	42.959	41.309	0.061	0.000	1.69		17.428	602.883	728.1	SURCHARGED
88.018	P2_22	15 minute 30 year Winter I+0%	43.070	41.254	0.037	0.000	1.86		11.310	604.621	727.7	SURCHARGED
88.019	P2_23	15 minute 30 year Winter I+0%	43.218	41.201	0.008	0.000	1.01		9.054	624.279	713.5	SURCHARGED
88.020	P2_24	30 minute 30 year Winter I+0%	43.168	41.118	0.014	0.000	1.70		28.760	808.958	721.7	SURCHARGED
88.021	P2_25	30 minute 30 year Winter I+0%	43.164	41.074	0.000	0.000	0.99		10.676	829.374	707.6	OK
88.022	P2_25A	30 minute 30 year Winter I+0%	43.078	40.983	0.001	0.000	0.88		29.286	836.442	665.2	SURCHARGED
88.023	P2_26	30 minute 30 year Winter I+0%	42.941	40.849	0.002	0.000	0.80		42.468	832.808	603.7	SURCHARGED
88.024	P2_26A	30 minute 30 year Winter I+0%	42.801	40.709	0.000	0.000	1.41		42.983	829.699	604.4	OK
88.025	P2_27	30 minute 30 year Winter I+0%	42.787	40.578	-0.116	0.000	0.78		5.630	831.986	589.8	OK
88.026	P2_28	30 minute 30 year Winter I+0%	42.657	40.474	-0.088	0.000	0.64		37.375	830.219	540.4	OK
88.027	P2_28A	30 minute 30 year Winter I+0%	42.181	40.357	-0.059	0.000	0.85		33.045	818.217	504.3	OK
88.028	246	30 minute 30 year Winter I+0%	42.490	40.300	-0.070	0.000	1.23		14.078	811.150	500.7	OK
86.010	C98	30 minute 30 year Winter I+0%	42.480	40.123	-0.219	0.000	0.93		7.453	954.868	576.3	OK
84.007	C65	60 minute 30 year Winter I+0%	42.458	39.449	-0.851	0.000	0.19		1.657	2555.702	1091.0	OK
84.008	C66	60 minute 30 year Winter I+0%	38.800	37.521	-0.629	0.000	0.46		6.934	2555.702	1091.5	OK
9.032	BASIN C3	360 minute 30 year Winter I+0%	38.500	36.917	0.587	0.000	0.47		3146.911	5151.078	139.8	SURCHARGED
9.033	C68	360 minute 30 year Winter I+0%	36.717	35.421	-0.197	0.000	0.61		1.478	5146.921	139.8	OK
9.034	C69	360 minute 30 year Winter I+0%	36.300	35.127	-0.266	0.000	0.35		0.999	5143.144	139.8	OK
9.035	C70	480 minute 30 year Winter I+0%	34.865	33.988	-0.277	0.000	0.32		0.536	6748.427	139.8	OK
9.036	C71	480 minute 30 year Winter I+0%	33.672	32.942	-0.130	0.000	0.85		1.283	6741.998	139.8	OK

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100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Catchment C

Simulation Criteria

Areal Reduction Factor 1.000 Hot Start Level (mm) 0 Foul Sewage per hectare (l/s) 0.000 MADD Factor * 10m³/ha Storage 0.000 Flow per Person per Day (l/per/day) 0.000
Hot Start (mins) 0 Manhole Headloss Coeff (Global) 0.500 Additional Flow - % of Total Flow 0.000 Inlet Coeffiecient 0.800

Number of Input Hydrographs 0 Number of Online Controls 16 Number of Offline Controls 12 Number of Storage Structures 8 Number of Time/Area Diagrams 0 Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall Model FSR Region England and Wales M5-60 (mm) 18.500 Ratio R 0.400 Cv (Summer) 0.750 Cv (Winter) 0.840

Margin for Flood Risk Warning (mm) 400.0 Analysis Timestep Fine DTS Status OFF DVD Status ON Inertia Status ON

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 240, 360, 480, 600, 960, 1440, 2160
Return Period(s) (years)	1, 30, 100
Climate Change (%)	0, 0, 20

PN	US/MH Name	Event	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Maximum Vol (m³)	Discharge Vol (m³)	Pipe Flow (l/s)	Status
9.000	OB9	15 minute 100 year Summer I+20%	68.920	68.257	-0.213	0.000	0.74		3.764	211.305	855.1	OK
9.001	S39	30 minute 100 year Winter I+20%	69.855	68.169	-0.181	0.000	0.52		180.022	159.934	184.1	OK
10.000	OB10	15 minute 100 year Winter I+20%	69.855	69.112	0.082	0.000	1.68		0.799	61.639	131.8	SURCHARGED
9.002	S40 (BD)	30 minute 100 year Winter I+20%	69.855	68.238	-0.082	0.000	0.49		4.697	239.661	272.0	OK
9.003	S41	30 minute 100 year Winter I+20%	68.855	68.275	0.060	0.000	0.32		14.816	237.448	237.3	SURCHARGED
9.004	Tank 6 - Full Retention	30 minute 100 year Winter I+20%	70.000	68.324	0.389	0.000	0.53		28.002	235.115	240.1	SURCHARGED
9.005	S42	30 minute 100 year Winter I+20%	70.000	68.329	0.448	0.000	0.31		11.387	233.440	232.7	SURCHARGED
11.000	4A	15 minute 100 year Summer I+20%	80.350	79.512	-0.138	0.000	0.57		0.178	98.941	319.2	OK
11.001	4B	15 minute 100 year Summer I+20%	75.350	74.872	0.222	0.000	0.25	177.3	0.604	72.129	141.9	SURCHARGED
11.002	SDP004	30 minute 100 year Winter I+20%	70.350	69.502	1.302	0.000	0.90		1.807	131.829	141.8	SURCHARGED
11.003	S43 (V)	30 minute 100 year Winter I+20%	69.270	69.054	1.079	0.000	0.59		3.854	131.818	141.7	FLOOD RISK
12.000	3A	15 minute 100 year Summer I+20%	80.350	79.512	-0.138	0.000	0.57		0.178	98.941	319.2	OK
12.001	3B	15 minute 100 year Summer I+20%	75.350	74.872	0.222	0.000	0.25	177.3	0.604	72.129	141.9	SURCHARGED
12.002	SDP003	30 minute 100 year Winter I+20%	70.350	69.374	1.099	0.000	0.89		2.596	131.827	141.9	SURCHARGED
11.004	S44 (V)	30 minute 100 year Winter I+20%	68.952	68.955	1.015	4.820	0.87		13.663	263.755	282.9	FLOOD
13.000	2A	15 minute 100 year Summer I+20%	80.350	79.512	-0.138	0.000	0.57		0.178	98.941	319.2	OK
13.001	2B	15 minute 100 year Summer I+20%	75.350	74.790	0.140	0.000	0.25	177.2	0.507	72.111	141.9	SURCHARGED
13.002	SDP002	30 minute 100 year Winter I+20%	70.350	69.022	0.747	0.000	1.50		1.974	131.819	141.9	SURCHARGED
11.005	S45 (V)	30 minute 100 year Winter I+20%	68.952	68.954	0.894	4.287	0.60		16.416	395.604	423.8	FLOOD
14.000	1A	15 minute 100 year Summer I+20%	80.350	79.512	-0.138	0.000	0.57		0.178	98.941	319.2	OK
14.001	1B	15 minute 100 year Summer I+20%	75.350	74.872	0.222	0.000	0.25	177.3	0.604	72.129	141.9	SURCHARGED
14.002	SDP001	30 minute 100 year Winter I+20%	70.350	68.515	0.240	0.000	1.50		1.079	131.907	141.9	SURCHARGED
11.006	S46 (V)	30 minute 100 year Winter I+20%	69.315	68.423	0.473	0.000	0.89		21.024	527.442	563.3	SURCHARGED
11.007	S47 (V)	30 minute 100 year Winter I+20%	69.315	68.388	0.528	0.000	0.71		20.319	527.388	545.4	SURCHARGED
9.006	S48	30 minute 100 year Winter I+20%	70.000	68.349	0.629	0.000	0.79		38.211	756.996	600.0	SURCHARGED
9.007	S49	30 minute 100 year Winter I+20%	70.000	68.312	0.762	0.000	0.69		30.486	752.871	524.3	SURCHARGED
15.000	OB14	15 minute 100 year Winter I+20%	68.890	68.892	0.827	1.857	0.54		3.969	45.207	77.4	FLOOD
16.000	OB13	15 minute 100 year Winter I+20%	68.890	68.898	0.803	7.946	0.99		9.968	46.344	73.6	FLOOD
16.001	S50a	15 minute 100 year Winter I+20%	69.120	68.888	0.813	0.000	0.66		2.582	46.348	73.9	FLOOD RISK
15.001	S50	15 minute 100 year Winter I+20%	69.235	68.867	0.938	0.000	1.19		6.772	91.544	132.9	FLOOD RISK
17.000	OB11	15 minute 100 year Winter I+20%	68.890	68.892	0.872	1.607	1.33		2.922	66.208	124.9	FLOOD

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100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Catchment C

PN	US/MH Name	Event	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Maximum Vol (m³)	Discharge Vol (m³)	Pipe Flow (l/s)	Status
15.002	S51	15 minute 100 year Winter I+20%	69.235	68.693	0.894	0.000	2.40		6.061	157.753	242.4	SURCHARGED
18.000	OB12	30 minute 100 year Winter I+20%	68.890	68.610	0.515	0.000	1.23		1.564	89.453	112.1	FLOOD RISK
18.001	S52	30 minute 100 year Winter I+20%	69.235	68.546	0.481	0.000	1.09		1.997	89.447	110.6	SURCHARGED
15.003	S53	30 minute 100 year Winter I+20%	69.235	68.444	0.591	0.000	1.06		7.994	296.840	341.2	SURCHARGED
15.004	Tank 7 - Full Retention	30 minute 100 year Winter I+20%	70.000	68.299	0.621	0.000	1.99		6.758	296.840	341.2	SURCHARGED
9.008	S54	30 minute 100 year Winter I+20%	70.000	68.273	0.819	0.000	0.96		32.571	1046.357	804.1	SURCHARGED
9.009	S55	30 minute 100 year Winter I+20%	70.000	68.228	0.869	0.000	0.72		23.097	1043.698	758.1	SURCHARGED
19.000	KD17	15 minute 100 year Winter I+20%	69.440	68.302	-0.088	0.000	0.35		0.064	10.503	22.5	OK
9.010	S56	30 minute 100 year Winter I+20%	70.000	68.180	1.041	0.000	1.03		27.765	1055.066	746.5	SURCHARGED
9.011	S57	30 minute 100 year Winter I+20%	70.000	68.140	1.056	0.000	0.96		15.790	1053.177	728.5	SURCHARGED
20.000	10A	15 minute 100 year Summer I+20%	80.350	79.484	-0.166	0.000	0.41		0.146	71.814	231.6	OK
20.001	10B	15 minute 100 year Summer I+20%	75.350	74.828	0.178	0.000	0.19	127.8	0.553	52.647	103.9	SURCHARGED
20.002	SDP010	15 minute 100 year Winter I+20%	70.350	68.318	0.043	0.000	1.24		0.729	60.611	103.9	SURCHARGED
20.003	S59 (V)	60 minute 100 year Summer I+20%	70.150	68.279	0.029	0.000	1.16		1.168	115.647	103.4	SURCHARGED
21.000	S58 (V)	15 minute 100 year Summer I+20%	70.150	68.864	0.689	0.000	2.47		1.113	19.166	124.4	SURCHARGED
9.012	S60	30 minute 100 year Winter I+20%	70.000	68.097	1.077	0.000	0.76		25.888	1153.333	767.5	SURCHARGED
22.000	KD18	15 minute 100 year Winter I+20%	69.925	68.849	-0.101	0.000	0.58		0.135	7.077	15.0	OK
22.001	KD19	15 minute 100 year Winter I+20%	69.440	68.701	0.161	0.000	1.22		0.555	29.452	65.2	SURCHARGED
22.002	KD20	15 minute 100 year Winter I+20%	69.095	68.617	0.057	0.000	1.49		1.861	62.097	138.4	SURCHARGED
22.003	KD21	15 minute 100 year Winter I+20%	69.095	68.475	0.130	0.000	1.53		2.471	103.418	229.9	SURCHARGED
23.000	KD22	15 minute 100 year Winter I+20%	68.750	68.378	0.453	0.000	1.24		1.454	50.910	105.4	FLOOD RISK
22.004	S61	15 minute 100 year Winter I+20%	68.800	68.329	0.339	0.000	2.10		3.506	154.337	324.5	SURCHARGED
24.000	KD23	30 minute 100 year Winter I+20%	68.170	68.120	0.775	0.000	1.43		2.023	90.654	113.0	FLOOD RISK
22.005	S62	30 minute 100 year Winter I+20%	68.800	68.102	0.632	0.000	1.49		6.283	293.552	371.1	SURCHARGED
22.006	Tank 8 - Bypass	30 minute 100 year Winter I+20%	68.800	68.009	0.569	0.000	1.75		2.427	293.552	369.8	SURCHARGED
9.013	S63	30 minute 100 year Winter I+20%	68.900	67.986	1.251	0.000	1.46		63.690	1442.770	1062.7	SURCHARGED
25.000	KD24	30 minute 100 year Winter I+20%	68.385	67.934	0.524	0.000	0.35		0.841	7.504	9.6	SURCHARGED
9.014	S64	30 minute 100 year Winter I+20%	68.425	67.932	1.252	0.000	1.00		16.194	1463.113	1029.7	SURCHARGED
9.015	Ex SC15	30 minute 100 year Winter I+20%	70.000	67.871	1.399	0.000	0.43		13.162	1461.850	938.9	SURCHARGED
26.000	C16a	30 minute 100 year Winter I+20%	68.110	68.049	1.139	0.000	1.02		1.622	86.442	108.6	FLOOD RISK
27.000	1	15 minute 100 year Winter I+20%	71.600	71.667	1.367	66.846	1.57		68.600	166.540	165.6	FLOOD
27.001	2	15 minute 100 year Winter I+20%	71.180	71.207	1.502	27.304	2.01		34.516	213.822	221.2	FLOOD
27.002	3	15 minute 100 year Winter I+20%	71.410	71.225	1.817	0.000	1.84		13.677	309.097	317.3	FLOOD RISK
27.003	4	15 minute 100 year Winter I+20%	71.410	70.841	1.655	0.000	1.75		14.071	354.741	377.0	SURCHARGED
27.004	5	30 minute 100 year Winter I+20%	71.490	69.834	1.066	0.000	1.16		15.713	529.678	416.7	SURCHARGED
27.005	6	30 minute 100 year Winter I+20%	70.600	69.020	1.287	0.000	0.87		14.548	529.596	385.0	SURCHARGED
27.006	7	30 minute 100 year Winter I+20%	69.530	68.621	1.688	0.000	1.55		8.622	664.270	512.1	SURCHARGED
27.007	8	30 minute 100 year Winter I+20%	69.030	68.105	1.515	0.000	0.80		5.665	664.204	504.9	SURCHARGED
26.001	C16	30 minute 100 year Winter I+20%	68.690	67.872	1.682	0.000	0.96		15.875	750.429	601.2	SURCHARGED
9.016	C17	30 minute 100 year Winter I+20%	69.130	67.569	2.042	0.000	0.66		56.751	2315.897	1453.0	SURCHARGED
9.017	C18	30 minute 100 year Winter I+20%	69.612	67.222	2.641	0.000	0.69		40.991	2314.531	1413.5	SURCHARGED
28.000	OB1	15 minute 100 year Winter I+20%	68.920	68.300	-0.095	0.000	0.73		4.592	264.659	834.5	OK
28.001	S1	15 minute 100 year Winter I+20%	69.855	68.227	-0.048	0.000	0.56		258.087	207.628	252.8	OK
29.000	OB2	30 minute 100 year Winter I+20%	69.795	69.498	0.828	0.000	1.35		2.118	80.448	102.9	FLOOD RISK
28.002	S2 (BD)	30 minute 100 year Winter I+20%	69.855	68.937	0.707	0.000	0.41		8.905	244.619	227.9	SURCHARGED
30.000	OB3	30 minute 100 year Winter I+20%	69.340	69.345	1.055	6.818	1.56		7.774	57.026	156.7	FLOOD
28.003	S3	30 minute 100 year Winter I+20%	69.855	69.525	1.459	0.000	0.41		33.314	297.256	245.8	FLOOD RISK
28.004	Tank 1 -Full Retention	30 minute 100 year Winter I+20%	70.000	69.698	1.778	0.000	0.54		15.657	294.297	225.0	FLOOD RISK
28.005	S4	30 minute 100 year Winter I+20%	70.000	69.779	1.898	0.000	0.35		11.538	290.673	204.2	FLOOD RISK

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100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Catchment C

PN	US/MH Name	Event	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Maximum Vol (m³)	Discharge Vol (m³)	Pipe Flow (l/s)	Status
31.000	5A	15 minute 100 year Summer I+20%	80.350	79.512	-0.138	0.000	0.57		0.177	98.329	317.2	OK
31.001	5B	15 minute 100 year Summer I+20%	75.350	74.870	0.220	0.000	0.25	175.3	0.602	71.898	141.9	SURCHARGED
31.002	SDP005	60 minute 100 year Winter I+20%	70.350	69.183	0.833	0.000	0.85		2.258	181.525	125.2	SURCHARGED
31.003	S5 (V)	30 minute 100 year Winter I+20%	68.952	68.978	0.608	25.830	0.60		30.064	131.362	141.4	FLOOD
32.000	6A	15 minute 100 year Summer I+20%	80.350	79.512	-0.138	0.000	0.57		0.177	98.329	317.2	OK
32.001	6B	15 minute 100 year Summer I+20%	75.350	74.870	0.220	0.000	0.25	175.3	0.602	71.898	141.9	SURCHARGED
32.002	SDP006	60 minute 100 year Winter I+20%	70.350	69.250	0.975	0.000	0.79		2.377	181.528	124.2	SURCHARGED
31.004	S6 (V)	30 minute 100 year Winter I+20%	68.952	68.980	0.640	28.267	0.87		38.477	262.753	282.6	FLOOD
33.000	7A	15 minute 100 year Summer I+20%	80.350	79.512	-0.138	0.000	0.57		0.177	98.329	317.2	OK
33.001	7B	15 minute 100 year Summer I+20%	75.350	74.870	0.220	0.000	0.25	175.3	0.602	71.898	141.9	SURCHARGED
33.002	SDP007	60 minute 100 year Winter I+20%	70.350	69.269	0.994	0.000	1.31		2.411	181.526	124.3	SURCHARGED
31.005	S7 (V)	30 minute 100 year Winter I+20%	68.952	68.981	0.746	29.107	1.27		41.525	394.108	424.2	FLOOD
34.000	8A	15 minute 100 year Summer I+20%	80.350	79.512	-0.138	0.000	0.57		0.177	98.329	317.2	OK
34.001	8B	15 minute 100 year Summer I+20%	75.350	74.870	0.220	0.000	0.25	175.3	0.602	71.898	141.9	SURCHARGED
34.002	SDP008	60 minute 100 year Winter I+20%	70.350	69.267	0.992	0.000	1.31		2.406	181.526	124.4	SURCHARGED
31.006	S8 (V)	30 minute 100 year Winter I+20%	68.952	69.001	0.886	50.808	1.59		62.347	525.338	564.6	FLOOD
28.006	S9 (V)	30 minute 100 year Winter I+20%	69.850	69.862	1.962	22.066	0.91		54.050	811.623	707.8	FLOOD
35.000	9A	15 minute 100 year Summer I+20%	80.350	79.459	-0.266	0.000	0.19		0.184	50.805	163.9	OK
35.001	9B	15 minute 100 year Summer I+20%	75.350	74.791	0.066	0.000	0.08	89.9	0.789	37.614	74.0	SURCHARGED
35.002	SDP009	30 minute 100 year Winter I+20%	70.350	69.898	1.623	0.000	0.97		3.549	68.410	74.0	SURCHARGED
35.003	S10 (V)	30 minute 100 year Winter I+20%	70.130	69.690	1.430	0.000	0.86		3.579	68.374	86.2	SURCHARGED
28.007	S11	30 minute 100 year Winter I+20%	70.092	69.653	1.823	2.900	0.81		23.468	875.336	733.1	FLOOD
28.008	S12	30 minute 100 year Winter I+20%	70.130	69.422	1.732	3.841	0.71		34.548	869.735	669.1	FLOOD
28.009	S13	15 minute 100 year Winter I+20%	70.130	69.527	2.007	0.653	0.78		41.269	662.429	664.1	FLOOD
36.000	OB4	30 minute 100 year Winter I+20%	69.905	69.906	1.051	0.649	1.08		3.201	94.302	131.4	FLOOD
36.001	S14	15 minute 100 year Winter I+20%	70.025	69.542	0.712	0.000	0.96		2.919	80.553	168.3	SURCHARGED
37.000	OB5	15 minute 100 year Winter I+20%	69.955	69.958	0.978	2.859	2.43		4.211	35.164	64.6	FLOOD
37.001	S15	30 minute 100 year Winter I+20%	70.025	69.704	0.814	0.000	2.11		2.302	46.222	56.9	FLOOD RISK
38.000	OB6	30 minute 100 year Winter I+20%	69.905	69.906	0.751	0.722	1.03		2.830	96.957	123.9	FLOOD
37.002	S16	30 minute 100 year Winter I+20%	70.025	69.650	0.597	0.000	1.28		3.446	143.180	175.8	FLOOD RISK
36.002	S17	15 minute 100 year Winter I+20%	70.025	69.284	0.734	0.000	2.17		16.668	189.446	367.6	SURCHARGED
36.003	Tank 2 - Full Retention	15 minute 100 year Winter I+20%	70.015	69.259	0.799	0.000	3.01		4.190	189.446	367.2	SURCHARGED
28.010	S18 (BD)	15 minute 100 year Winter I+20%	70.130	69.795	2.380	0.000	1.11		31.287	846.991	922.7	FLOOD RISK
39.000	KD1	15 minute 100 year Winter I+20%	70.240	69.313	0.348	0.000	0.44		0.643	5.936	11.4	SURCHARGED
39.001	S19	15 minute 100 year Winter I+20%	70.000	69.301	0.371	0.000	0.43		1.014	5.934	12.4	SURCHARGED
40.000	OB7	30 minute 100 year Winter I+20%	70.035	69.777	0.492	0.000	1.15		1.656	121.272	155.1	FLOOD RISK
39.002	S20	15 minute 100 year Winter I+20%	70.158	69.266	0.376	0.000	0.82		5.775	98.246	180.6	SURCHARGED
41.000	OB8	30 minute 100 year Winter I+20%	70.035	69.721	0.511	0.000	1.33		1.557	91.554	117.1	FLOOD RISK
41.001	S21	15 minute 100 year Winter I+20%	70.158	69.251	0.076	0.000	1.47		1.662	69.630	147.8	SURCHARGED
39.003	S22	30 minute 100 year Summer I+20%	70.158	68.987	0.502	0.000	1.66		14.832	196.964	280.4	SURCHARGED
39.004	TANK 3 - Full Retention	15 minute 100 year Winter I+20%	70.092	69.341	0.921	0.000	2.09		3.001	167.913	318.6	SURCHARGED
28.011	S23	15 minute 100 year Winter I+20%	70.130	69.833	2.363	0.000	1.08		31.514	1010.308	1187.9	FLOOD RISK
28.012	S24	15 minute 100 year Winter I+20%	70.130	69.316	1.916	0.000	0.70		26.796	1004.893	1123.2	SURCHARGED
42.000	KD2	15 minute 100 year Winter I+20%	68.625	68.349	0.624	0.000	0.80		1.040	17.122	36.6	FLOOD RISK
28.013	S25 (BD)	15 minute 100 year Winter I+20%	68.860	68.340	1.250	0.938	0.93		73.836	1018.356	1018.1	FLOOD
43.000	11A	15 minute 100 year Summer I+20%	80.350	79.484	-0.166	0.000	0.41		0.146	71.814	231.6	OK
43.001	11B	15 minute 100 year Summer I+20%	75.350	74.828	0.178	0.000	0.19	127.8	0.553	52.647	103.9	SURCHARGED
43.002	SDP011	15 minute 100 year Summer I+20%	70.350	68.571	0.296	0.000	1.28		1.176	52.647	106.1	SURCHARGED
43.003	S26 (V)	15 minute 100 year Summer I+20%	70.075	68.542	0.277	0.000	1.10		1.323	52.644	108.9	SURCHARGED

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100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Catchment C

PN	US/MH Name	Event	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Maximum Vol (m³)	Discharge Vol (m³)	Pipe Flow (l/s)	Status
44.000	S27 (V)	15 minute 100 year Summer I+20%	70.075	68.805	0.540	0.000	1.22		1.608	19.168	125.5	SURCHARGED
43.004	S28	15 minute 100 year Summer I+20%	70.325	68.457	0.177	0.000	1.42		4.090	71.789	211.4	SURCHARGED
28.014	S29	15 minute 100 year Winter I+20%	68.700	68.115	1.095	0.000	0.86		31.682	1094.993	1056.9	SURCHARGED
45.000	KD3	15 minute 100 year Winter I+20%	67.915	67.915	0.900	0.356	0.48		1.620	9.817	21.0	FLOOD
28.015	S30	30 minute 100 year Winter I+20%	68.300	67.640	0.731	1.515	0.72		33.574	1455.985	1015.6	FLOOD
46.000	KD4	30 minute 100 year Winter I+20%	67.940	67.945	0.905	5.072	0.68		6.185	22.213	39.4	FLOOD
46.001	KD9	30 minute 100 year Winter I+20%	67.970	67.972	0.942	1.610	1.35		2.948	53.132	68.1	FLOOD
47.000	KD5	15 minute 100 year Winter I+20%	69.785	69.045	0.010	0.000	1.01		0.805	72.824	152.2	SURCHARGED
47.001	KD6	15 minute 100 year Winter I+20%	69.440	68.753	0.063	0.000	1.40		1.813	100.224	210.3	SURCHARGED
47.002	KD7	15 minute 100 year Winter I+20%	69.095	68.464	-0.166	0.000	0.71		1.788	127.619	270.1	OK
47.003	KD8	30 minute 100 year Winter I+20%	68.515	68.128	0.213	0.000	0.92		2.389	204.422	261.7	FLOOD RISK
46.002	S31	30 minute 100 year Winter I+20%	68.050	67.944	0.629	0.362	0.95		5.829	257.553	328.7	FLOOD
46.003	Tank 4 - By Pass	30 minute 100 year Winter I+20%	68.050	67.762	0.522	0.000	1.52		3.662	257.554	330.1	FLOOD RISK
46.004	S32	30 minute 100 year Winter I+20%	68.050	67.810	0.585	0.577	1.20		3.007	257.554	330.9	FLOOD
28.016	S33	30 minute 100 year Winter I+20%	68.208	68.193	1.463	0.900	0.95		35.206	1707.808	1236.4	FLOOD
28.017	S34	30 minute 100 year Winter I+20%	68.650	67.974	1.384	0.000	0.86		43.569	1698.054	1116.8	SURCHARGED
48.000	KD10	15 minute 100 year Winter I+20%	68.375	68.211	0.811	0.000	0.86		1.166	12.100	22.9	FLOOD RISK
48.001	S35	15 minute 100 year Winter I+20%	68.455	68.152	0.762	0.000	0.54		1.191	12.100	24.6	FLOOD RISK
49.000	KD11	15 minute 100 year Winter I+20%	69.785	69.058	0.173	0.000	1.25		0.529	33.331	70.2	SURCHARGED
49.001	KD12	15 minute 100 year Winter I+20%	69.440	68.958	0.058	0.000	1.46		1.864	65.300	141.3	SURCHARGED
49.002	KD13	15 minute 100 year Winter I+20%	69.095	68.412	0.067	0.000	1.40		0.906	97.250	210.9	SURCHARGED
49.003	KD14	15 minute 100 year Winter I+20%	68.750	68.190	0.115	0.000	1.26		2.881	129.211	275.7	SURCHARGED
50.000	KD15	15 minute 100 year Winter I+20%	68.375	68.289	0.889	0.000	1.33		1.254	31.734	64.8	FLOOD RISK
48.002	S36	15 minute 100 year Winter I+20%	68.455	68.075	0.495	0.000	1.43		4.838	173.045	355.6	FLOOD RISK
48.003	Tank 5 - Bypass	15 minute 100 year Winter I+20%	68.455	67.861	0.351	0.000	2.19		2.365	173.045	353.7	SURCHARGED
48.004	S37	15 minute 100 year Winter I+20%	68.455	67.645	0.150	0.000	2.24		1.934	173.049	355.3	SURCHARGED
28.018	S38 (P)	30 minute 100 year Winter I+20%	68.625	67.401	1.011	0.000	0.85		73.401	1917.158	1197.1	SURCHARGED
28.019	Ex SC41	30 minute 100 year Winter I+20%	70.000	67.323	1.423	0.000	0.37		45.988	1915.570	1202.0	SURCHARGED
9.018	C44	30 minute 100 year Winter I+20%	69.398	66.866	3.119	0.000	1.25		73.718	4358.030	2518.7	SURCHARGED
51.000	C19	15 minute 100 year Winter I+20%	83.721	82.750	-0.071	0.000	0.54		0.084	9.694	20.8	OK
51.001	C20	15 minute 100 year Winter I+20%	82.256	81.309	-0.047	0.000	0.73		0.121	15.670	34.1	OK
51.002	C21	15 minute 100 year Winter I+20%	80.753	80.548	0.695	0.000	0.91		1.114	21.598	43.8	FLOOD RISK
51.003	C22	15 minute 100 year Winter I+20%	79.479	79.483	0.904	3.785	1.13		5.119	32.263	50.2	FLOOD
51.004	C23	15 minute 100 year Winter I+20%	79.479	77.716	1.266	0.000	1.36		2.024	46.411	69.3	SURCHARGED
51.005	C24	15 minute 100 year Winter I+20%	77.829	77.036	0.998	0.000	1.13		2.855	63.538	96.8	SURCHARGED
52.000	OB1	15 minute 100 year Summer I+20%	76.990	75.893	-0.111	0.000	0.15		0.038	0.815	2.1	OK
52.001	PPIC1	15 minute 100 year Summer I+20%	77.050	75.839	-0.115	0.000	0.13		0.037	0.815	2.1	OK
52.002	PPIC2	15 minute 100 year Winter I+20%	77.020	75.797	0.003	0.000	0.25		0.287	0.913	3.5	SURCHARGED
53.000	BI RWP	15 minute 100 year Winter I+20%	77.000	75.800	0.006	0.000	0.22		0.171	1.370	3.1	SURCHARGED
52.003	Ex. SC25	15 minute 100 year Winter I+20%	76.921	75.799	0.055	0.000	0.25		0.381	9.132	20.9	SURCHARGED
52.004	Ex. SC26	15 minute 100 year Winter I+20%	76.304	75.777	0.623	0.000	0.50		1.727	21.687	42.1	SURCHARGED
54.000	New gully	15 minute 100 year Winter I+20%	75.580	75.582	0.222	2.496	1.50		2.887	7.763	20.2	FLOOD
54.001	Separator	15 minute 100 year Winter I+20%	76.300	75.651	0.516	0.000	1.92		1.062	7.763	22.9	SURCHARGED
55.000	OB2	15 minute 100 year Winter I+20%	76.140	75.702	0.447	0.000	0.25		0.670	1.829	4.2	SURCHARGED
56.000	MS RWP	15 minute 100 year Winter I+20%	76.625	75.699	0.544	0.000	0.34		0.779	2.740	5.1	SURCHARGED
54.002	PS3	15 minute 100 year Winter I+20%	76.550	75.688	0.593	0.000	0.83		1.347	12.339	30.7	SURCHARGED
57.000	OB3	15 minute 100 year Winter I+20%	76.575	75.705	0.610	0.000	0.39		0.854	2.968	6.3	SURCHARGED
52.005	PS4	15 minute 100 year Winter I+20%	76.575	75.686	0.706	0.000	0.99		3.603	36.994	60.6	SURCHARGED
51.006	C27	15 minute 100 year Winter I+20%	76.336	75.617	0.697	0.000	1.02		2.516	117.320	159.5	SURCHARGED

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100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Catchment C

PN	US/MH Name	Event	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Maximum Vol (m³)	Discharge Vol (m³)	Pipe Flow (l/s)	Status
51.007	C28	15 minute 100 year Winter I+20%	74.920	74.582	0.782	0.000	0.95		4.087	141.540	194.6	FLOOD RISK
58.000	C29	15 minute 100 year Winter I+20%	75.557	75.559	1.327	2.156	1.06		3.815	24.366	34.7	FLOOD
58.001	C30	15 minute 100 year Winter I+20%	74.373	74.375	1.202	2.488	1.45		4.495	35.964	50.4	FLOOD
58.002	C31	15 minute 100 year Winter I+20%	73.349	73.037	0.897	0.000	0.80		1.644	46.693	64.6	FLOOD RISK
58.003	C32	15 minute 100 year Winter I+20%	72.668	72.637	1.262	0.000	0.64		3.936	46.700	70.9	FLOOD RISK
51.008	C33	15 minute 100 year Winter I+20%	72.929	72.550	1.258	0.000	1.00		7.426	246.812	336.2	FLOOD RISK
51.009	C34	15 minute 100 year Winter I+20%	69.716	69.728	1.212	12.542	1.06		20.091	298.830	373.6	FLOOD
51.010	C35	30 minute 100 year Winter I+20%	66.836	66.845	1.209	9.426	1.04		16.775	425.151	375.3	FLOOD
51.011	C36	30 minute 100 year Winter I+20%	66.255	66.331	1.276	76.474	1.22		85.035	463.208	413.3	FLOOD
51.012	C37	30 minute 100 year Winter I+20%	66.211	66.252	1.333	41.590	1.30		55.500	497.779	441.2	FLOOD
51.013	C38	15 minute 100 year Winter I+20%	66.775	66.440	1.656	0.000	1.38		14.924	433.292	506.3	FLOOD RISK
51.014	C39	30 minute 100 year Winter I+20%	68.127	66.306	1.822	0.000	1.70		29.294	728.099	622.5	SURCHARGED
51.015	C40	30 minute 100 year Winter I+20%	69.594	66.026	1.842	0.000	0.73		29.352	727.958	578.9	SURCHARGED
9.019	C46	30 minute 100 year Winter I+20%	69.215	65.685	2.743	0.000	1.26		53.303	5117.173	2870.7	SURCHARGED
9.020	C47	30 minute 100 year Winter I+20%	65.851	63.316	1.835	0.000	1.96		63.868	5153.149	2885.9	SURCHARGED
59.000	OB1	15 minute 100 year Winter I+20%	66.530	66.531	0.846	0.621	0.37		1.826	11.908	22.2	FLOOD
60.000	OB2	30 minute 100 year Winter I+20%	66.465	66.491	1.041	26.451	0.83		27.933	91.844	92.7	FLOOD
59.001	S1	15 minute 100 year Winter I+20%	66.570	66.515	1.265	0.000	1.70		3.318	81.771	113.2	FLOOD RISK
61.000	OB3	15 minute 100 year Winter I+20%	66.465	66.479	1.389	13.776	0.80		16.989	60.731	118.2	FLOOD
59.002	S2	15 minute 100 year Winter I+20%	66.575	66.510	1.465	0.000	0.57		8.617	141.766	217.3	FLOOD RISK
62.000	OB4	15 minute 100 year Winter I+20%	66.610	66.615	1.025	4.515	1.03		5.912	23.287	38.9	FLOOD
62.001	S3	15 minute 100 year Summer I+20%	66.715	66.618	1.108	0.000	0.95		1.876	20.798	38.3	FLOOD RISK
63.000	OB5	15 minute 100 year Winter I+20%	66.610	66.616	1.366	6.125	0.73		9.200	58.443	113.8	FLOOD
62.002	S4	30 minute 100 year Winter I+20%	66.715	66.600	1.400	0.000	0.56		6.572	104.182	103.3	FLOOD RISK
64.000	OB6	15 minute 100 year Winter I+20%	66.610	66.612	1.542	2.183	1.66		4.258	58.215	109.7	FLOOD
62.003	S5	15 minute 100 year Winter I+20%	66.715	66.542	1.542	0.000	0.58		12.049	138.169	201.5	FLOOD RISK
59.003	S6	15 minute 100 year Winter I+20%	66.715	66.509	1.609	0.000	1.19		13.295	273.037	357.9	FLOOD RISK
65.000	OB7	15 minute 100 year Winter I+20%	67.085	66.715	0.565	0.000	0.64		0.804	7.534	16.1	FLOOD RISK
65.001	S8	15 minute 100 year Winter I+20%	67.320	66.644	0.759	0.000	0.75		1.189	7.541	15.0	SURCHARGED
66.000	OB8	15 minute 100 year Winter I+20%	67.085	66.672	1.127	0.000	0.68		1.524	15.069	29.6	SURCHARGED
65.002	S9	15 minute 100 year Winter I+20%	67.320	66.565	1.125	0.000	0.66		2.452	22.609	37.8	SURCHARGED
67.000	OB9	15 minute 100 year Winter I+20%	67.085	66.575	1.690	0.000	0.78		2.160	18.179	34.9	SURCHARGED
59.004	S7	15 minute 100 year Summer I+20%	67.320	66.449	1.674	0.000	1.29		20.026	271.611	367.2	SURCHARGED
68.000	OB10	15 minute 100 year Winter I+20%	66.940	66.585	1.695	0.000	1.06		2.081	9.132	17.0	FLOOD RISK
68.001	S10	15 minute 100 year Winter I+20%	67.175	66.444	1.664	0.000	1.44		2.217	9.011	22.3	SURCHARGED
59.005	S11	15 minute 100 year Summer I+20%	67.175	66.345	1.645	0.000	1.03		13.749	271.406	356.6	SURCHARGED
59.006	S12	120 minute 100 year Winter I+20%	67.050	66.004	1.319	0.000	0.70		6.619	629.199	196.8	SURCHARGED
59.007	FRS1	120 minute 100 year Winter I+20%	67.065	65.995	1.425	0.000	0.57		8.346	624.707	195.1	SURCHARGED
59.008	S13	120 minute 100 year Winter I+20%	67.125	65.985	1.440	0.000	0.74		8.515	619.715	193.9	SURCHARGED
69.000	CP5	120 minute 100 year Winter I+20%	67.070	65.988	0.113	0.000	0.38		5.508	150.181	51.7	SURCHARGED
70.000	G1	120 minute 100 year Winter I+20%	66.385	65.983	1.313	0.000	0.15		1.649	6.832	2.5	SURCHARGED
59.009	S14	120 minute 100 year Winter I+20%	67.000	65.979	1.459	0.000	0.54		11.229	769.449	243.0	SURCHARGED
71.000	CP8	120 minute 100 year Winter I+20%	67.215	65.945	0.680	0.000	0.58		20.805	80.511	27.6	SURCHARGED
59.010	AT1	120 minute 100 year Winter I+20%	69.000	65.976	1.516	0.000	0.11		483.630	584.535	45.0	SURCHARGED
59.011	S15	60 minute 100 year Summer I+20%	66.050	63.747	-0.213	0.000	0.19		0.397	278.596	45.0	OK
72.000	SSFD	30 minute 100 year Winter I+20%	63.720	63.727	1.007	6.846	6.71		12.676	48.353	37.9	FLOOD
59.012 Ex	SC72a	30 minute 100 year Winter I+20%	63.720	63.517	0.797	0.000	1.08		2.015	177.492	75.0	FLOOD RISK
9.021	Spur	15 minute 100 year Summer I+20%	64.435	61.055	0.450	0.000	1.29		15.823	3772.840	2746.2	SURCHARGED*
9.022	C48	30 minute 100 year Winter I+20%	63.019	59.995	-0.165	0.000	0.96		27.935	5350.984	2945.3	OK

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100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Catchment C

PN	US/MH Name	Event	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Maximum Vol (m³)	Discharge Vol (m³)	Pipe Flow (l/s)	Status
9.023	C49	30 minute 100 year Winter I+20%	60.634	58.131	0.028	0.000	0.93		11.921	5372.769	2942.5	SURCHARGED
9.024	C50	30 minute 100 year Winter I+20%	57.788	55.986	0.336	0.000	1.11		18.748	5418.353	2963.1	SURCHARGED
9.025	C51	30 minute 100 year Winter I+20%	55.447	53.803	-0.304	0.000	0.77		6.475	5456.671	2974.8	OK
73.000	SW01	15 minute 100 year Winter I+20%	58.600	57.938	-0.062	0.000	0.63		0.094	5.405	11.3	OK
73.001	SW02	15 minute 100 year Winter I+20%	58.370	57.542	-0.114	0.000	0.46		0.126	11.577	24.4	OK
74.000	SW02A	15 minute 100 year Winter I+20%	64.330	62.746	-0.084	0.000	0.40		0.070	14.962	32.1	OK
73.002	SW03	15 minute 100 year Winter I+20%	57.754	56.981	-0.119	0.000	0.65		0.281	35.104	74.1	OK
73.003	SW04	15 minute 100 year Winter I+20%	57.214	56.425	-0.086	0.000	0.82		0.650	47.341	98.0	OK
73.004	SW05	15 minute 100 year Winter I+20%	56.600	55.437	-0.115	0.000	0.69		0.494	47.341	97.3	OK
75.000	SW05A	15 minute 100 year Winter I+20%	56.073	55.374	-0.099	0.000	0.25		0.052	2.741	5.9	OK
73.005	SW06	15 minute 100 year Winter I+20%	55.886	54.932	-0.128	0.000	0.73		0.589	54.651	107.2	OK
73.006	SW07	15 minute 100 year Winter I+20%	55.692	54.428	-0.153	0.000	0.64		1.444	59.000	111.0	OK
73.007	SW08	15 minute 100 year Winter I+20%	55.529	53.849	-0.149	0.000	0.67		1.187	62.125	111.9	OK
73.008	SW09	15 minute 100 year Winter I+20%	55.422	53.462	-0.146	0.000	0.68		1.208	65.631	115.7	OK
76.000	SW10	15 minute 100 year Summer I+20%	55.857	54.057	-0.600	0.000	0.00		0.000	0.000	0.0	OK
76.001	SW11	15 minute 100 year Summer I+20%	55.738	53.761	-0.750	0.000	0.00		0.000	0.000	0.0	OK
76.002	SW12	15 minute 100 year Summer I+20%	55.647	53.650	-0.750	0.000	0.00		0.000	0.000	0.0	OK
76.003	SW13	15 minute 100 year Summer I+20%	55.528	53.367	-0.750	0.000	0.00		0.000	0.000	0.0	OK
76.004	SW14	15 minute 100 year Summer I+20%	55.484	53.177	-0.750	0.000	0.00		0.000	0.000	0.0	OK
76.005	SW15	15 minute 100 year Summer I+20%	55.612	52.641	-0.750	0.000	0.00		0.000	0.000	0.0	OK
73.009	SW16	15 minute 100 year Winter I+20%	55.589	52.562	-0.683	0.000	0.13		0.743	99.975	152.0	OK
77.000	SW17	15 minute 100 year Winter I+20%	58.606	58.052	-0.073	0.000	0.73		0.167	14.356	28.4	OK
77.001	SW18	15 minute 100 year Winter I+20%	58.445	57.585	-0.053	0.000	0.87		0.617	23.497	44.2	OK
77.002	SW19	15 minute 100 year Winter I+20%	57.723	56.681	-0.057	0.000	0.89		0.429	26.631	49.3	OK
78.000	SW20	15 minute 100 year Winter I+20%	57.200	56.626	-0.024	0.000	0.97		0.137	7.788	16.2	OK
77.003	SW21	15 minute 100 year Winter I+20%	57.444	56.163	-0.058	0.000	0.90		0.431	34.419	64.7	OK
77.004	SW22	15 minute 100 year Winter I+20%	57.084	55.698	-0.027	0.000	0.99		0.355	34.418	63.4	OK
79.000	Gully	15 minute 100 year Winter I+20%	56.774	55.832	-0.118	0.000	0.10		0.008	2.326	5.0	OK
77.005	SW23	15 minute 100 year Winter I+20%	56.562	54.611	-0.050	0.000	0.96		0.361	36.745	66.7	OK
80.000	SW24	15 minute 100 year Summer I+20%	55.645	54.530	-0.150	0.000	0.00		0.000	0.000	0.0	OK
80.001	SW25	15 minute 100 year Summer I+20%	56.340	54.318	-0.150	0.000	0.00		0.000	0.000	0.0	OK
80.002	SW26	15 minute 100 year Summer I+20%	56.262	54.236	-0.150	0.000	0.00		0.000	0.000	0.0	OK
77.006	SW27	15 minute 100 year Winter I+20%	56.310	54.061	0.000	0.000	1.01		0.558	36.745	65.0	OK
77.007	SW28	15 minute 100 year Winter I+20%	56.044	53.907	-0.048	0.000	1.00		1.405	36.745	63.8	OK
77.008	SW29	15 minute 100 year Winter I+20%	55.892	53.710	-0.175	0.000	0.36		0.369	36.745	63.8	OK
73.010	SW30	15 minute 100 year Winter I+20%	55.503	52.262	-0.696	0.000	0.12		1.650	142.178	214.4	OK
73.011	SW31	15 minute 100 year Winter I+20%	55.327	51.386	-0.700	0.000	0.11		1.373	145.518	217.7	OK
73.012	SW32	15 minute 100 year Winter I+20%	55.648	50.665	-0.691	0.000	0.12		1.146	145.518	217.5	OK
81.000	HD01	15 minute 100 year Winter I+20%	57.100	56.124	-0.076	0.000	0.48		0.078	7.228	15.3	OK
81.001	HD02	15 minute 100 year Winter I+20%	56.041	55.038	-0.086	0.000	0.37		0.076	7.229	15.2	OK
81.002	HD03	15 minute 100 year Winter I+20%	55.655	54.369	-0.080	0.000	0.44		0.078	7.229	15.4	OK
81.003	HD04	15 minute 100 year Winter I+20%	54.782	53.615	0.064	0.000	1.01		0.288	17.721	37.0	SURCHARGED
73.013	36	15 minute 100 year Winter I+20%	51.350	50.272	-0.472	0.000	0.58		3.298	993.088	1710.8	OK
9.026	C52	30 minute 100 year Winter I+20%	51.156	49.238	-0.568	0.000	0.54		4.393	6833.459	4062.6	OK
9.027	C53	30 minute 100 year Winter I+20%	46.900	45.090	-0.430	0.000	0.74		8.472	6829.916	4061.6	OK
9.028	C54	30 minute 100 year Winter I+20%	45.580	43.276	-0.354	0.000	0.85		12.913	6825.983	4057.1	OK
9.029	H20C	1440 minute 100 year Winter I+20%	42.300	41.472	-0.428	0.000	0.07		14.611	20560.044	578.9	OK
82.000	C55a	15 minute 100 year Winter I+20%	42.230	42.240	0.835	9.932	1.37		11.110	22.833	55.5	FLOOD
83.000	C55b	15 minute 100 year Winter I+20%	45.150	43.863	-0.087	0.000	0.37		0.066	9.133	19.6	OK

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100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Catchment C

PN	US/MH Name	Event	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Maximum Vol (m³)	Discharge Vol (m³)	Pipe Flow (l/s)	Status
82.001	C55	15 minute 100 year Summer I+20%	43.800	42.413	1.423	0.000	2.21		4.132	57.067	84.9	SURCHARGED
82.002	56	1440 minute 100 year Winter I+20%	44.900	41.444	0.664	0.000	0.08		2.925	229.083	6.5	SURCHARGED
82.003	C57	1440 minute 100 year Winter I+20%	44.300	41.443	0.928	0.000	0.07		4.431	225.287	6.0	SURCHARGED
82.004	H7C	1440 minute 100 year Winter I+20%	42.500	41.441	1.141	0.000	0.03		3.778	222.142	6.0	SURCHARGED
9.030	BASIN C1	1440 minute 100 year Winter I+20%	42.000	41.441	1.691	0.000	0.08		15350.653	10870.396	72.4	SURCHARGED
9.031	C59	480 minute 100 year Winter I+20%	38.600	37.587	0.637	0.000	0.25		3.189	3609.102	70.5	SURCHARGED
84.000	P2_29	15 minute 100 year Winter I+20%	42.400	42.078	0.878	0.000	0.54		2.602	70.738	142.4	FLOOD RISK
84.001	P2_30	15 minute 100 year Winter I+20%	42.343	42.050	0.933	0.000	1.52		13.551	147.661	299.5	FLOOD RISK
84.002	P2_31	15 minute 100 year Winter I+20%	42.162	42.009	0.929	0.000	0.94		8.428	147.413	256.1	FLOOD RISK
85.000	SC72	15 minute 100 year Winter I+20%	44.017	43.939	0.365	0.000	0.20		0.662	4.567	8.3	FLOOD RISK
85.001	SC73	15 minute 100 year Winter I+20%	43.907	43.910	0.701	3.152	1.11		6.082	27.400	42.6	FLOOD
85.002	SC74	15 minute 100 year Winter I+20%	43.815	43.815	0.898	0.324	1.78		3.454	47.031	67.5	FLOOD
85.003	SC75	15 minute 100 year Winter I+20%	43.201	43.201	0.501	0.000	0.75		2.840	47.038	60.9	FLOOD RISK
85.004	SC76	60 minute 100 year Summer I+20%	43.103	43.103	0.703	0.024	0.43		5.421	101.633	66.5	FLOOD
85.005	SC77	15 minute 100 year Winter I+20%	42.911	42.912	0.762	0.876	0.90		18.200	219.066	280.5	FLOOD
85.006	SC78	15 minute 100 year Winter I+20%	42.668	42.671	0.773	3.396	1.47		35.489	386.770	511.3	FLOOD
85.007	SC79	30 minute 100 year Winter I+20%	42.450	42.461	0.631	10.593	0.63		19.681	507.134	483.5	FLOOD
85.008	SC80	30 minute 100 year Winter I+20%	42.222	42.331	0.801	108.680	0.83		137.036	647.913	381.8	FLOOD
85.009	SC81	30 minute 100 year Winter I+20%	42.120	42.220	0.850	99.850	1.19		144.768	886.669	578.4	FLOOD
85.010	SC82	15 minute 100 year Winter I+20%	42.609	42.198	0.975	0.000	1.28		36.075	868.436	636.5	SURCHARGED
85.011	SC83	15 minute 100 year Winter I+20%	42.400	42.078	1.033	0.000	1.46		43.113	874.613	636.5	FLOOD RISK
84.003	P2_32	15 minute 100 year Winter I+20%	42.065	41.947	0.969	0.000	3.29		31.723	1045.682	862.0	FLOOD RISK
84.004	P2_33	30 minute 100 year Winter I+20%	41.991	41.635	0.685	0.000	2.00		9.393	1361.822	902.3	FLOOD RISK
84.005	P2_34	15 minute 100 year Winter I+20%	42.255	41.227	0.375	0.000	3.69		25.317	1094.211	886.1	SURCHARGED
84.006	P1 Slab	15 minute 100 year Winter I+20%	42.398	40.895	0.065	0.000	2.32		6.791	1090.262	888.1	SURCHARGED
86.000	C88	15 minute 100 year Winter I+20%	44.193	42.911	-0.432	0.000	0.00		0.023	0.228	0.4	OK
86.001	C89	15 minute 100 year Winter I+20%	44.062	42.893	-0.319	0.000	0.15		1.294	10.045	19.4	OK
86.002	C90	15 minute 100 year Winter I+20%	43.963	42.819	-0.276	0.000	0.28		2.171	21.688	38.0	OK
86.003	C91	15 minute 100 year Winter I+20%	43.801	42.705	-0.228	0.000	0.45		3.736	38.353	60.8	OK
86.004	C92	15 minute 100 year Winter I+20%	43.639	42.572	-0.199	0.000	0.54		4.752	55.018	74.1	OK
86.005	C93	15 minute 100 year Winter I+20%	43.417	42.376	-0.173	0.000	0.65		6.339	77.848	88.6	OK
86.006	C94	30 minute 100 year Winter I+20%	43.195	42.182	-0.145	0.000	0.78		7.564	132.374	106.0	OK
86.007	C95	30 minute 100 year Winter I+20%	43.004	42.011	-0.125	0.000	0.85		8.000	158.154	116.0	OK
86.008	C96	30 minute 100 year Winter I+20%	42.813	41.833	-0.112	0.000	0.91		8.569	183.714	123.7	OK
86.009	C97	30 minute 100 year Winter I+20%	42.622	41.620	-0.134	0.000	0.84		7.628	209.119	130.7	OK
87.000	C87	15 minute 100 year Summer I+20%	42.450	41.600	-0.150	0.000	0.00		0.000	0.000	0.0	OK
88.000	P2_1	15 minute 100 year Summer I+20%	44.315	44.273	1.158	0.000	0.47		1.474	2.347	7.5	FLOOD RISK
88.001	P2_2	15 minute 100 year Winter I+20%	44.251	44.251	1.200	0.170	0.99		1.760	8.120	15.6	FLOOD
88.002	P2_3	15 minute 100 year Winter I+20%	44.154	44.157	1.203	3.346	1.37		5.008	11.591	20.7	FLOOD
88.003	P2_4	15 minute 100 year Winter I+20%	44.141	44.142	1.255	1.048	1.24		2.727	22.553	25.1	FLOOD
89.000	P2_5	15 minute 100 year Winter I+20%	56.568	56.570	1.202	1.886	1.00		3.384	56.704	96.4	FLOOD
88.004	P2_6	15 minute 100 year Winter I+20%	43.748	43.766	1.323	18.613	1.74		20.810	100.807	115.9	FLOOD
88.005	P2_7	15 minute 100 year Winter I+20%	43.614	43.620	1.249	5.855	1.22		8.190	110.312	114.7	FLOOD
88.006	P2_8	15 minute 100 year Winter I+20%	43.453	43.478	1.258	25.067	1.55		28.980	209.853	258.4	FLOOD
88.007	P2_11	15 minute 100 year Winter I+20%	43.304	43.275	1.257	0.000	1.50		13.374	237.343	293.5	FLOOD RISK
88.008	P2_12	30 minute 100 year Winter I+20%	43.208	43.240	1.244	32.009	1.25		36.958	456.285	401.1	FLOOD
88.009	P_13	30 minute 100 year Winter I+20%	43.102	43.152	1.299	49.663	1.92		66.617	632.076	532.3	FLOOD
88.010	P2_14	15 minute 100 year Winter I+20%	42.969	42.974	1.261	4.958	1.41		29.347	605.518	683.3	FLOOD
88.011	P2_15	30 minute 100 year Winter I+20%	42.830	42.839	1.266	8.598	1.89		43.810	1064.593	921.0	FLOOD

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100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Catchment C

PN	US/MH Name	Event	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Maximum Vol (m³)	Discharge Vol (m³)	Pipe Flow (l/s)	Status
88.012	P2_16	30 minute 100 year Winter I+20%	42.683	42.515	1.087	0.000	3.20		35.729	1067.732	914.7	FLOOD RISK
88.013	P2_17	30 minute 100 year Winter I+20%	42.781	42.246	0.833	0.000	1.48		8.615	1121.819	954.7	SURCHARGED
88.014	P2_18	30 minute 100 year Winter I+20%	42.724	42.151	0.794	0.000	2.16		22.266	1136.842	958.9	SURCHARGED
88.015	P2_19	30 minute 100 year Winter I+20%	42.835	42.070	0.745	0.000	2.29		14.391	1141.784	946.7	SURCHARGED
88.016	P2_20	30 minute 100 year Winter I+20%	43.007	41.989	0.691	0.000	1.55		12.971	1176.061	974.1	SURCHARGED
88.017	P2_21	30 minute 100 year Winter I+20%	42.959	41.857	0.609	0.000	2.26		19.765	1187.001	974.8	SURCHARGED
88.018	P2_22	30 minute 100 year Winter I+20%	43.070	41.767	0.550	0.000	2.47		13.443	1186.632	965.3	SURCHARGED
88.019	P2_23	60 minute 100 year Winter I+20%	43.218	41.652	0.459	0.000	1.28		10.974	1599.323	904.2	SURCHARGED
88.020	P2_24	60 minute 100 year Winter I+20%	43.168	41.545	0.441	0.000	2.12		31.692	1602.228	898.8	SURCHARGED
88.021	P2_25	60 minute 100 year Winter I+20%	43.164	41.480	0.406	0.000	1.29		12.593	1646.410	917.5	SURCHARGED
88.022	P2_25A	60 minute 100 year Winter I+20%	43.078	41.359	0.377	0.000	1.21		32.325	1669.595	916.8	SURCHARGED
88.023	P2_26	60 minute 100 year Winter I+20%	42.941	41.193	0.346	0.000	1.20		46.199	1678.461	906.6	SURCHARGED
88.024	P2_26A	60 minute 100 year Winter I+20%	42.801	41.030	0.321	0.000	2.10		46.793	1687.414	904.8	SURCHARGED
88.025	P2_27	60 minute 100 year Winter I+20%	42.787	40.969	0.275	0.000	1.18		7.630	1704.783	894.3	SURCHARGED
88.026	P2_28	60 minute 100 year Winter I+20%	42.657	40.796	0.234	0.000	1.06		44.462	1724.596	896.7	SURCHARGED
88.027	P2_28A	60 minute 100 year Winter I+20%	42.181	40.634	0.218	0.000	1.51		38.034	1724.591	890.5	SURCHARGED
88.028	246	60 minute 100 year Winter I+20%	42.490	40.537	0.167	0.000	2.18		16.544	1724.457	890.7	SURCHARGED
86.010	C98	60 minute 100 year Winter I+20%	42.480	40.457	0.115	0.000	1.65		10.882	2019.155	1024.8	SURCHARGED
84.007	C65	60 minute 100 year Winter I+20%	42.458	39.556	-0.744	0.000	0.31		2.755	4026.569	1799.1	OK
84.008	C66	60 minute 100 year Winter I+20%	38.800	37.741	-0.409	0.000	0.76		12.879	4025.889	1805.1	OK
9.032	BASIN C3	480 minute 100 year Winter I+20%	38.500	37.416	1.086	0.000	0.47		5611.538	7074.476	139.7	SURCHARGED
9.033	C68	960 minute 100 year Summer I+20%	36.717	35.421	-0.197	0.000	0.61		1.478	13787.114	139.7	OK
9.034	C69	600 minute 100 year Summer I+20%	36.300	35.127	-0.266	0.000	0.35		0.999	8892.356	139.8	OK
9.035	C70	2160 minute 100 year Winter I+20%	34.865	33.988	-0.277	0.000	0.32		0.536	25457.828	139.7	OK
9.036	C71	480 minute 100 year Summer I+20%	33.672	32.942	-0.130	0.000	0.85		1.283	7073.284	139.8	OK

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Appendix 8: Pre-development Runoff Volume Calculations

Design Settings

Rainfall Methodology	FSR	Maximum Time of Concentration (mins)	30.00
Return Period (years)		Maximum Rainfall (mm/hr)	50.0
Additional Flow (%)	0	Minimum Velocity (m/s)	1.00
FSR Region	England and Wales	Connection Type	Level Soffits
M5-60 (mm)		Minimum Backdrop Height (m)	0.200
Ratio-R		Preferred Cover Depth (m)	1.200
CV	0.750	Include Intermediate Ground	✓
Time of Entry (mins)		Enforce best practice design rules	✓

Simulation Settings

Rainfall Methodology	FEH-22	Analysis Speed	Normal	Starting Level (m)		100 year (l/s)	4.6
Rainfall Events	Singular	Skip Steady State	x	Check Discharge Rate(s)	✓	Check Discharge Volume	✓
Summer CV	0.750	Drain Down Time (mins)	240	1 year (l/s)	1.5	100 year 360 minute (m³)	1344
Winter CV	0.840	Additional Storage (m³/ha)	20.0	30 year (l/s)	3.6		

Storm Durations

15	60	180	360	600	960	2160	4320	7200	10080
30	120	240	480	720	1440	2880	5760	8640	

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)	Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
1	0	0	0	100	25	0	0
30	0	0	0	100	40	0	0

Pre-development Discharge Rate

Site Makeup	Greenfield	BFIHost	0.591	Growth Factor 100 year	2.57	Q 30 year (l/s)	22.1
Greenfield Method	FEH	Region	4	Betterment (%)	0	Q 100 year (l/s)	28.6
Positively Drained Area (ha)	6.220	QBar/QMed conversion factor	1.124	QMed	9.9		
SAAR (mm)	628	Growth Factor 1 year	0.83	QBar	11.1		
Host	1	Growth Factor 30 year	1.99	Q 1 year (l/s)	9.2		

Pre-development Discharge Volume

Site Makeup	Greenfield	Soil Index	1	Return Period (years)	100	Betterment (%)	0
Greenfield Method	FSR/FEH	SPR	0.33	Climate Change (%)	0	PR	0.304
Positively Drained Area (ha)	6.220	CWI	94.519	Storm Duration (mins)	360	Runoff Volume (m³)	1344

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Appendix 9: Concept Drainage Strategy

Legend

- Development Consent Order Boundary
- Material Consent Order Boundary
- Existing Watercourse
- Rail Terminal Works Excluded from Strategy
- Existing Foul Public Sewer
- Existing Foul Private EMG1 Sewer
- Existing Foul Private Terminal Pumping Station
- Existing Foul Pumping Station Attenuation Area
- Existing Foul Private EMG1 Rising Main
- Existing EMG1 Site Wide Surface Water System
- Plot 16 Development Area (Plot and Highways)
- Plot 16 Development Area (Embankment)
- Plot 16 Area to drain directly to SuDS Basin
- EMG1 MCO New Impermeable Areas
- Indicative Direction of Flow for Surface Water
- Proposed Surface Water Sewer
- Filter Drain
- Proposed Foul Sewer
- Proposed Headwall
- Proposed Flow Control
- Proposed Underground Attenuation Tank
- Proposed Permeable Paving
- Proposed Full Retention Separator
- Proposed SuDS Basin
- Proposed SuDS Basin Earthworks Tie in extent
- Proposed Private Package Foul Pumping Station
- Indicative Foul Attenuation Area (To be Confirmed)
- Proposed Foul Rising Main
- Indicate Surface Exceedance Routing

Plan View 1
Scale (1:1250)

Plan View 2
Scale (1:1250)

Refer to Plan View 1

Refer to Plan View 2

Proposed Surface Water Outfall from Plot 16
Plot 16 to drain into EMG1 Catchment C Detention Basin 3 upstream from final flow control within wider drainage system. The proposed connection of Plot 16 into existing EMG1 drainage system has been tested and does not result in adverse impacts to the existing network.

Existing Detention Basin C3
Additional post-development storage volume of 245m³. Maximum design water level to increase by 45mm, reducing design freeboard to 1.04m

Detention Basin
CL: 40.00
IL: 37.70
Maximum water depth*: 2.0m
Minimum freeboard*: 300mm
Maximum water volume*: 2,165m³
Total approximate footprint: 1,700m²
Maximum discharge rate*: 10.7l/s
*During the 1 in 100-year + 25% critical storm.

3m maintenance walkway buffer.
1:3 minimum internal side slopes.
Structure base to have ridge and furrows and low flow channel.

Vortex Flow Control
CL: 40.00
IL: 37.70
Design head: 2.0m
Design flow: 10.7s

Existing Detention Basin C1
Additional post-development storage volume of 210m³. Maximum design water level to increase by 20mm, reducing design freeboard to 540mm

Plot 16
Measured Plot Hardstanding and Highways (90%): 5.443ha
Embankments / Bunds (50%): 0.314ha
SuDS Basins (100%): 0.169ha
Total Contributing Area: 5.926ha

FFL: 53.00

Full Retention Separator
To be utilised to treat surface water flows from service yard.
Separator location and specification to be confirmed at detailed design.

Area anticipated to bypass on-plot attenuation and drain freely into Plot 16 detention basin due to anticipated level constraints within Plot boundary. On-plot drainage strategy to be confirmed at detailed design.

Vortex Flow Control
CL: 51.20 (TBC)
IL: 48.00 (TBC)
Design head: 2.0m
Design flow: 13.2l/s

Indicative Foul Water Temporary Storage
Requirement, location and volume (if required) of foul water attenuation to be confirmed at detailed design in consultation with Severn Trent Water

Permeable Paving
To be utilised on car parking spaces to treat surface water flows from office car parking areas. If permeable paving is not used, a bypass separator should be used instead to treat surface water. Permeable paving location and specification to be confirmed at detailed design.

Foul Water Package Pumping Station
Location and specification to be confirmed at detailed design.

Cellular Storage Attenuation Tank
Minimum CL: 51.20 (TBC)
IL: 48.00 (TBC)
95% Void ratio
Tank dimensions: 2m(d) x 40m(w) x 56m(l)
Minimum cover above tank soffit: 1.2m
Maximum available storage volume: 4,255m³

Rail Terminal works to have no drainage impacts

82m² (0.008ha) into SC52

Indicative Foul Water Temporary Storage
Requirement, location and volume (if required) of foul water attenuation to be confirmed at detailed design in consultation with Severn Trent Water

Foul Water Package Pumping Station
Location and specification to be confirmed at detailed design.

478m² (0.048ha) into SC51

Rail Terminal works to have no drainage impacts

671m² (0.067ha) into SSSFD

Proposed Foul Water Outfall
Proposed foul outfall upstream from existing EMG1 Foul Terminal Pumping Station. Proposed connection to be confirmed at detailed design in consultation with Severn Trent Water

Existing Foul Water Pumping Station
Minor amendments to existing pumping station attenuation capacity may be required to facilitate the connection of Plot 16 onto the existing system. Any amendments to be confirmed at detailed design.

OFFICE AREA

WAREHOUSE / PROCESSING AREA

387m² (0.039ha) into SC34

Additional impermeable areas connecting into existing EMG1 drainage system based on Illustrative Masterplan and are to confirmed and reassessed during the detailed design stage, once the final impermeable area extents are confirmed.

207m² (0.021ha) into SC32

185m² (0.019ha) into SC29

118m² (0.012ha) into SP4

44m² (0.004ha) into SC25

712m² (0.071ha) into SC27

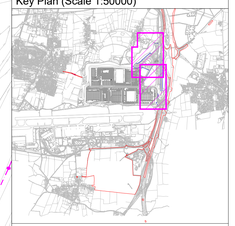
Drawing Notes

1. Do not scale this drawing. All dimensions must be checked/ verified on site. If in doubt ask.
2. This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.
3. All dimensions in millimetres unless noted otherwise. All levels in metres unless noted otherwise.
4. Any discrepancies noted on site are to be reported to the engineer immediately.
5. Enclosed Illustrative Masterplan based on UMC Architects drawing "EMG1-UMC-SI-01-DR-A-0085_P5" dated 21/05/25.
6. Enclosed topographical survey based on drawing "EMG Contract 1 Asbuilt".
7. Enclosed existing sitewide drainage schematic based on BWB drawing "EMG-BWB-GEN-XX-SK-D-SK365_S2_P23" dated 23/08/23.
8. Enclosed existing EMG1 foul drainage route based on BWB drawing "EMG-BWB-SMS-XX-M2-D-500".
9. Enclosed existing A453 drainage layout based on BWB drawing "EMG-BWB-SM1-XX-M2-C-500".
10. Do not construct from this drawing. This concept strategy is a proof of concept only and is to be agreed with the Lead Local Flood Authority, Severn Trent Water and the Environment Agency.

Drainage Notes

11. The maximum proposed discharge rate from Plot 16 has been limited to the greenfield QBAR rate calculated for the plot using Flood Estimation Handbook (FEH) statistical method to be 1.8l/s/ha, prorated based on the proposed impermeable area of Plot 16 (5.926ha) to total 10.7l/s. It is proposed to connect the new Plot 16 drainage system into the EMG1 site wide drainage system upstream from the final flow control (i.e., into Catchment C basin 3).
12. The following impermeable area assumptions have been used for the Plot 16 calculations, as measured of the UMC Architects parameters plan, drawing "EMG1-UMC-SI-01-DR-A-0086_P5", dated 19/06/25:
    - Plot hard standing areas and highways = 90%
    - Embankments and bunds = 50%
    - Attenuating SuDS basins = 100%
13. The additional impermeable areas associated with the Material Consent Order (MCO) outside of Plot 16 are proposed to freely drain into the existing EMG1 site wide drainage system.
14. The new impermeable areas associated with the MCO works have been taken as 100% impermeable based on the UMC Architects Illustrative Masterplan and will be confirmed at detailed design.
15. The additional of Plot 16 and the additional MCO impermeable surfaces has been tested in the existing site wide drainage model and no adverse impact to the existing drainage system is anticipated.
16. The new SuDS detention basin has been designed with internal side slopes and external tie in batters of 1:3 and a maximum design water depth below 2m and a minimum 300mm freeboard during the 1 in 100-year + 25% critical storm event, with a sensitivity test undertaken using the 1 in 100-year + 40% critical storm to ensure that the basins have sufficient capacity to accommodate the additional volume of during this event.
17. The new detention basin have been designed to have a maximum storage capacity during the 1 in 100-year + 40% critical storm below 10,000m³. The basin will be designed to overflow safely for events in excess of the 1 in 100-year + 40% critical storm.
18. Due to the potential risk of bird strike associated with East Midlands Airport, the new SuDS detention basin will have a dry base and other necessary design elements, such as a ridge and furrowed base, to discourage birds from gathering and improve drain down times.
19. Detention basins to have low flow channel and incorporation of ecological features is to be confirmed at detailed design.
20. The proposed foul drainage solution is to be confirmed in consultation with Severn Trent Water and the Client. The location and type of pumping station, and necessary on site foul attenuation, and ultimate outfall location is to be confirmed at detailed design.

Key Plan (Scale 1:50000)



Rev	Date	Details of issue / revision	Drw	Rev
P3	25.06.25	Removed Illustrative Plot Details	MPB	RG
P2	12.06.25	Revised Order Limits, Foul Outfall Route and Added Basin Low Flow Channel	MPB	RJ
P1	03.06.25	For Information	MPB	GSL

Issues & Revisions

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Client

SEGRO

Project Title

East Midlands Gateway 2

Drawing Title

EMG1 MCO Concept Drainage Strategy

Drawn:	M. Bailey		Reviewed:	G. Littlewood	
BWB Ref:	220500	Date:	03.06.25	Scale@A0:	1:1250

Drawing Status

For Information

Project - Originator - Zone - Level - Type - Role - Number	Status	Rev
EMG2-BWB-WAT-ZZ-DR-CD-0502	S2	P3

J:\2022\220500-East Midlands Gateway Phase 2\Project\Delivery\01-WIP\Drawings\EM2-BWB-WAT-ZZ-DR-CD-0502_EMG1 MCO Conceptual Drainage Strategy.dwg

Appendix 10: Plot 16 Conceptual Drainage Strategy Calculations

Design Settings

Rainfall Methodology	FSR	Maximum Time of Concentration (mins)	30.00
Return Period (years)		Maximum Rainfall (mm/hr)	50.0
Additional Flow (%)	0	Minimum Velocity (m/s)	1.00
FSR Region	England and Wales	Connection Type	Level Soffits
M5-60 (mm)		Minimum Backdrop Height (m)	0.200
Ratio-R		Preferred Cover Depth (m)	1.200
CV	0.750	Include Intermediate Ground	✓
Time of Entry (mins)		Enforce best practice design rules	✓

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Easting (m)	Northing (m)	Depth (m)
Basin	0.872	5.00	40.000	43.472	71.889	2.300
Tank	5.054	0.00	51.200	26.718	27.043	3.200

Simulation Settings

Rainfall Methodology	FEH-22	Analysis Speed	Normal	Starting Level (m)		100 year (l/s)	4.6
Rainfall Events	Singular	Skip Steady State	x	Check Discharge Rate(s)	✓	Check Discharge Volume	✓
Summer CV	0.750	Drain Down Time (mins)	240	1 year (l/s)	1.5	100 year 360 minute (m³)	1344
Winter CV	0.840	Additional Storage (m³/ha)	20.0	30 year (l/s)	3.6		

Storm Durations

15	60	180	360	600	960	2160	4320	7200	10080
30	120	240	480	720	1440	2880	5760	8640	

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)	Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
1	0	0	0	100	25	0	0
30	0	0	0	100	40	0	0

Pre-development Discharge Rate

Site Makeup	Greenfield	BFIHost	0.591	Growth Factor 100 year	2.57	Q 30 year (l/s)	22.1
Greenfield Method	FEH	Region	4	Betterment (%)	0	Q 100 year (l/s)	28.6
Positively Drained Area (ha)	6.220	QBar/QMed conversion factor	1.124	QMed	9.9		
SAAR (mm)	628	Growth Factor 1 year	0.83	QBar	11.1		
Host	1	Growth Factor 30 year	1.99	Q 1 year (l/s)	9.2		

Pre-development Discharge Volume

Site Makeup	Greenfield	Soil Index	1	Return Period (years)	100	Betterment (%)	0
Greenfield Method	FSR/FEH	SPR	0.33	Climate Change (%)	0	PR	0.304
Positively Drained Area (ha)	6.220	CWI	94.519	Storm Duration (mins)	360	Runoff Volume (m³)	1344

Node Tank Offline Hydro-Brake® Control

Flap Valve	x	Design Flow (l/s)	13.2	Min Outlet Diameter (m)	0.225
Loop to Node	Basin	Objective	(HE) Minimise upstream storage	Min Node Diameter (mm)	1800
Invert Level (m)	48.000	Sump Available	✓		
Design Depth (m)	2.000	Product Number	CTL-SHE-0150-1320-2000-1320		

Node Basin Offline Hydro-Brake® Control

Flap Valve	x	Design Flow (l/s)	10.7	Min Outlet Diameter (m)	0.150
Loop to Node		Objective	(HE) Minimise upstream storage	Min Node Diameter (mm)	1500
Invert Level (m)	37.700	Sump Available	✓		
Design Depth (m)	2.000	Product Number	CTL-SHE-0136-1070-2000-1070		

Node Basin Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	37.700
Side Inf Coefficient (m/hr)	0.00000	Porosity	1.00	Time to half empty (mins)	

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	635.0	0.0	2.300	1700.0	0.0

Node Tank Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	48.000
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	Time to half empty (mins)	

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	2240.0	0.0	2.000	2240.0	0.0	2.001	0.0	0.0

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Rainfall

Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)	Event	Peak Intensity (mm/hr)	Average Intensity (mm/hr)
1 year 15 minute summer	77.138	21.827	100 year +25% CC 15 minute summer	456.917	129.292
1 year 15 minute winter	54.132	21.827	100 year +25% CC 15 minute winter	320.643	129.292
1 year 30 minute summer	49.171	13.914	100 year +25% CC 30 minute summer	300.549	85.045
1 year 30 minute winter	34.506	13.914	100 year +25% CC 30 minute winter	210.911	85.045
1 year 60 minute summer	32.757	8.657	100 year +25% CC 60 minute summer	201.655	53.291
1 year 60 minute winter	21.763	8.657	100 year +25% CC 60 minute winter	133.974	53.291
1 year 120 minute summer	24.514	6.478	100 year +25% CC 120 minute summer	125.914	33.275
1 year 120 minute winter	16.287	6.478	100 year +25% CC 120 minute winter	83.654	33.275
1 year 180 minute summer	20.287	5.221	100 year +25% CC 180 minute summer	97.080	24.982
1 year 180 minute winter	13.187	5.221	100 year +25% CC 180 minute winter	63.104	24.982
1 year 240 minute summer	16.663	4.403	100 year +25% CC 240 minute summer	76.555	20.231
1 year 240 minute winter	11.070	4.403	100 year +25% CC 240 minute winter	50.862	20.231
1 year 360 minute summer	13.156	3.386	100 year +25% CC 360 minute summer	57.595	14.821
1 year 360 minute winter	8.552	3.386	100 year +25% CC 360 minute winter	37.438	14.821
1 year 480 minute summer	10.469	2.767	100 year +25% CC 480 minute summer	44.500	11.760
1 year 480 minute winter	6.955	2.767	100 year +25% CC 480 minute winter	29.565	11.760
1 year 600 minute summer	8.587	2.349	100 year +25% CC 600 minute summer	35.721	9.771
1 year 600 minute winter	5.867	2.349	100 year +25% CC 600 minute winter	24.407	9.771
1 year 720 minute summer	7.635	2.046	100 year +25% CC 720 minute summer	31.225	8.369
1 year 720 minute winter	5.131	2.046	100 year +25% CC 720 minute winter	20.985	8.369
1 year 960 minute summer	6.209	1.635	100 year +25% CC 960 minute summer	24.737	6.514
1 year 960 minute winter	4.113	1.635	100 year +25% CC 960 minute winter	16.386	6.514
1 year 1440 minute summer	4.419	1.184	100 year +25% CC 1440 minute summer	16.911	4.532
1 year 1440 minute winter	2.970	1.184	100 year +25% CC 1440 minute winter	11.365	4.532
1 year 2160 minute summer	3.096	0.856	100 year +25% CC 2160 minute summer	11.376	3.144
1 year 2160 minute winter	2.133	0.856	100 year +25% CC 2160 minute winter	7.839	3.144
1 year 2880 minute summer	2.545	0.682	100 year +25% CC 2880 minute summer	9.077	2.433
1 year 2880 minute winter	1.711	0.682	100 year +25% CC 2880 minute winter	6.101	2.433
1 year 4320 minute summer	1.927	0.504	100 year +25% CC 4320 minute summer	6.562	1.716
1 year 4320 minute winter	1.269	0.504	100 year +25% CC 4320 minute winter	4.321	1.716
1 year 5760 minute summer	1.609	0.412	100 year +25% CC 5760 minute summer	5.290	1.354
1 year 5760 minute winter	1.041	0.412	100 year +25% CC 5760 minute winter	3.424	1.354
1 year 7200 minute summer	1.396	0.356	100 year +25% CC 7200 minute summer	4.474	1.141
1 year 7200 minute winter	0.901	0.356	100 year +25% CC 7200 minute winter	2.888	1.141
1 year 8640 minute summer	1.250	0.319	100 year +25% CC 8640 minute summer	3.925	1.001
1 year 8640 minute winter	0.807	0.319	100 year +25% CC 8640 minute winter	2.533	1.001
1 year 10080 minute summer	1.144	0.292	100 year +25% CC 10080 minute summer	3.539	0.903
1 year 10080 minute winter	0.738	0.292	100 year +25% CC 10080 minute winter	2.284	0.903
30 year 15 minute summer	279.901	79.202	100 year +40% CC 15 minute summer	511.747	144.807
30 year 15 minute winter	196.422	79.202	100 year +40% CC 15 minute winter	359.120	144.807
30 year 30 minute summer	182.668	51.689	100 year +40% CC 30 minute summer	336.614	95.250
30 year 30 minute winter	128.188	51.689	100 year +40% CC 30 minute winter	236.221	95.250
30 year 60 minute summer	121.799	32.188	100 year +40% CC 60 minute summer	225.853	59.686
30 year 60 minute winter	80.921	32.188	100 year +40% CC 60 minute winter	150.051	59.686
30 year 120 minute summer	75.779	20.026	100 year +40% CC 120 minute summer	141.024	37.269
30 year 120 minute winter	50.346	20.026	100 year +40% CC 120 minute winter	93.693	37.269
30 year 180 minute summer	58.303	15.003	100 year +40% CC 180 minute summer	108.729	27.980
30 year 180 minute winter	37.899	15.003	100 year +40% CC 180 minute winter	70.677	27.980
30 year 240 minute summer	45.947	12.142	100 year +40% CC 240 minute summer	85.742	22.659
30 year 240 minute winter	30.526	12.142	100 year +40% CC 240 minute winter	56.965	22.659
30 year 360 minute summer	34.605	8.905	100 year +40% CC 360 minute summer	64.506	16.600
30 year 360 minute winter	22.494	8.905	100 year +40% CC 360 minute winter	41.931	16.600
30 year 480 minute summer	26.775	7.076	100 year +40% CC 480 minute summer	49.840	13.171
30 year 480 minute winter	17.789	7.076	100 year +40% CC 480 minute winter	33.113	13.171
30 year 600 minute summer	21.545	5.893	100 year +40% CC 600 minute summer	40.008	10.943
30 year 600 minute winter	14.721	5.893	100 year +40% CC 600 minute winter	27.336	10.943
30 year 720 minute summer	18.888	5.062	100 year +40% CC 720 minute summer	34.973	9.373
30 year 720 minute winter	12.694	5.062	100 year +40% CC 720 minute winter	23.504	9.373
30 year 960 minute summer	15.063	3.966	100 year +40% CC 960 minute summer	27.706	7.296
30 year 960 minute winter	9.978	3.966	100 year +40% CC 960 minute winter	18.353	7.296
30 year 1440 minute summer	10.430	2.795	100 year +40% CC 1440 minute summer	18.940	5.076
30 year 1440 minute winter	7.009	2.795	100 year +40% CC 1440 minute winter	12.729	5.076
30 year 2160 minute summer	7.132	1.971	100 year +40% CC 2160 minute summer	12.741	3.521
30 year 2160 minute winter	4.914	1.971	100 year +40% CC 2160 minute winter	8.779	3.521
30 year 2880 minute summer	5.768	1.546	100 year +40% CC 2880 minute summer	10.167	2.725
30 year 2880 minute winter	3.877	1.546	100 year +40% CC 2880 minute winter	6.833	2.725
30 year 4320 minute summer	4.262	1.114	100 year +40% CC 4320 minute summer	7.349	1.921
30 year 4320 minute winter	2.807	1.114	100 year +40% CC 4320 minute winter	4.840	1.921
30 year 5760 minute summer	3.494	0.894	100 year +40% CC 5760 minute summer	5.925	1.517
30 year 5760 minute winter	2.262	0.894	100 year +40% CC 5760 minute winter	3.835	1.517
30 year 7200 minute summer	2.991	0.763	100 year +40% CC 7200 minute summer	5.011	1.278
30 year 7200 minute winter	1.930	0.763	100 year +40% CC 7200 minute winter	3.234	1.278
30 year 8640 minute summer	2.647	0.675	100 year +40% CC 8640 minute summer	4.396	1.121
30 year 8640 minute winter	1.708	0.675	100 year +40% CC 8640 minute winter	2.837	1.121
30 year 10080 minute summer	2.402	0.613	100 year +40% CC 10080 minute summer	3.964	1.011
30 year 10080 minute winter	1.551	0.613	100 year +40% CC 10080 minute winter	2.558	1.011

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Results for 1 year Critical Storm Duration. Lowest mass balance: 99.97%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
2160 minute winter	Basin	2160	38.158	0.458	15.6	342.6458	0.0000	OK
720 minute winter	Tank	570	48.341	0.341	60.5	736.1431	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Discharge Vol (m³)
2160 minute winter	Basin	Hydro-Brake®		10.6	979.2
720 minute winter	Tank	Hydro-Brake®	Basin	12.5	504.3

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Results for 30 year Critical Storm Duration. Lowest mass balance: 99.97%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
5760 minute winter	Basin	6000	39.025	1.325	17.4	1257.4870	0.0000	OK
720 minute winter	Tank	705	49.004	1.004	149.7	2168.0700	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Discharge Vol (m³)
5760 minute winter	Basin	Hydro-Brake®		10.7	2706.7
720 minute winter	Tank	Hydro-Brake®	Basin	13.2	588.3

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Results for 100 year +25% CC Critical Storm Duration. Lowest mass balance: 99.97%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
10080 minute winter	Basin	10320	39.670	1.970	17.8	2163.6870	0.0000	OK
960 minute winter	Tank	945	49.780	1.780	193.2	3843.5110	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Discharge Vol (m³)
10080 minute winter	Basin	Hydro-Brake®		10.7	4978.9
960 minute winter	Tank	Hydro-Brake®	Basin	13.2	756.9

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Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.97%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
10080 minute winter	Basin	10320	39.618	1.918	18.4	2083.5550	0.0000	OK
960 minute winter	Tank	945	50.799	2.799	216.4	4345.4740	0.0000	OK

Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Discharge Vol (m³)
10080 minute winter	Basin	Hydro-Brake®		10.7	5043.2
960 minute winter	Tank	Hydro-Brake®	Basin	15.5	799.0

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Appendix 11: EMG 1 Post-MCO MicroDrainage Network Model Calculations

STORM SEWER DESIGN by the Modified Rational Method

Design Criteria for Catchment C

Pipe Sizes STANDARD Manhole Sizes STANDARD

FEH Rainfall Model

Return Period (years)	1	D3 (1km)	0.243	PIMP (%)	100
		E (1km)	0.303	Add Flow / Climate Change (%)	0
FEH Rainfall Version	1999	F (1km)	2.358	Minimum Backdrop Height (m)	5.000
Site Location	GB 447050 329250 SK 47050 29250	Maximum Rainfall (mm/hr)	50	Maximum Backdrop Height (m)	0.000
C (1km)	-0.026	Maximum Time of Concentration (mins)	30	Min Design Depth for Optimisation (m)	1.200
D1 (1km)	0.351	Foul Sewage (l/s/ha)	0.000	Min Vel for Auto Design only (m/s)	1.00
D2 (1km)	0.352	Volumetric Runoff Coeff.	0.750	Min Slope for Optimisation (1:X)	500

Designed with Level Soffits

Time Area Diagram for Catchment C

Time (mins)	Area (ha)	Time (mins)	Area (ha)	Time (mins)	Area (ha)	Time (mins)	Area (ha)	Time (mins)	Area (ha)	Time (mins)	Area (ha)
0-4	1.914	4-8	10.997	8-12	22.622	12-16	6.987	16-20	0.784	20-24	0.017

Total Area Contributing (ha) = 43.321

Total Pipe Volume (m³) = 3483.166

Network Design Table for Catchment C

- Indicates pipe length does not match coordinates
« - Indicates pipe capacity < flow

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
9.000	35.300	0.120	294.2	0.510	5.00	0.0	0.600	oo	-4	Pipe/Conduit	
9.001	10.569	0.030	352.3	0.000	0.00	0.0	0.600	o	750	Pipe/Conduit	
10.000	4.500	0.015	300.0	0.270	5.00	0.0	0.600	o	375	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
9.000	50.00	5.36	67.720	0.510	0.0	0.0	0.0	1.63	1437.1	69.1
9.001	49.96	5.48	67.600	0.510	0.0	0.0	0.0	1.49	656.1	69.1
10.000	50.00	5.07	68.655	0.270	0.0	0.0	0.0	1.04	115.0	36.6

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Network Design Table for Catchment C

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
9.002	31.300	0.105	298.1	0.000	0.00	0.0	0.600	o	750	Pipe/Conduit	
9.003	58.659	0.280	209.5	0.000	0.00	0.0	0.600	o	750	Pipe/Conduit	
9.004	20.700	0.055	378.7	0.000	0.00	0.0	0.600	o	750	Pipe/Conduit	
9.005	38.900	0.235	165.3	0.000	0.00	0.0	0.600	o	750	Pipe/Conduit	
11.000	5.000	5.000	1.0	0.485	2.00	0.0	0.600	o	300	Pipe/Conduit	
11.001	5.000	5.000	1.0	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
11.002	15.900	0.450	35.3	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
11.003	32.300	0.110	293.6	0.000	0.00	0.0	0.600	o	525	Pipe/Conduit	
12.000	5.000	5.000	1.0	0.485	2.00	0.0	0.600	o	300	Pipe/Conduit	
12.001	5.000	5.000	1.0	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
12.002	15.900	0.165	96.4	0.000	0.00	0.0	0.600	o	375	Pipe/Conduit	
11.004	31.600	0.105	301.0	0.000	0.00	0.0	0.600	o	600	Pipe/Conduit	
13.000	5.000	5.000	1.0	0.485	2.00	0.0	0.600	o	300	Pipe/Conduit	
13.001	5.000	5.000	1.0	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
13.002	15.900	0.055	289.1	0.000	0.00	0.0	0.600	o	375	Pipe/Conduit	
11.005	32.031	0.110	291.2	0.000	0.00	0.0	0.600	o	825	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
9.002	48.14	5.80	67.570	0.780	0.0	0.0	0.0	1.62	713.8	101.7
9.003	45.59	6.31	67.465	0.780	0.0	0.0	0.0	1.93	852.5	101.7
9.004	44.50	6.55	67.185	0.780	0.0	0.0	0.0	1.43	632.7	101.7
9.005	43.23	6.85	67.130	0.780	0.0	0.0	0.0	2.17	960.4	101.7
11.000	50.00	2.01	79.350	0.485	0.0	0.0	0.0	15.84	1119.6	65.7
11.001	50.00	2.01	74.350	0.485	0.0	0.0	0.0	15.84	1119.6	65.7
11.002	50.00	2.11	67.900	0.485	0.0	0.0	0.0	2.65	187.6	65.7
11.003	50.00	2.52	67.450	0.485	0.0	0.0	0.0	1.30	281.8	65.7
12.000	50.00	2.01	79.350	0.485	0.0	0.0	0.0	15.84	1119.6	65.7
12.001	50.00	2.01	74.350	0.485	0.0	0.0	0.0	15.84	1119.6	65.7
12.002	50.00	2.15	67.900	0.485	0.0	0.0	0.0	1.85	203.9	65.7
11.004	50.00	2.90	67.340	0.970	0.0	0.0	0.0	1.40	395.4	131.4
13.000	50.00	2.01	79.350	0.485	0.0	0.0	0.0	15.84	1119.6	65.7
13.001	50.00	2.01	74.350	0.485	0.0	0.0	0.0	15.84	1119.6	65.7
13.002	50.00	2.26	67.900	0.485	0.0	0.0	0.0	1.06	117.1	65.7
11.005	50.00	3.21	67.235	1.455	0.0	0.0	0.0	1.73	927.3	197.0

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Network Design Table for Catchment C

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
14.000	5.000	5.000	1.0	0.485	2.00	0.0	0.600	o	300	Pipe/Conduit	
14.001	5.000	5.000	1.0	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
14.002	15.900	0.055	289.1	0.000	0.00	0.0	0.600	o	375	Pipe/Conduit	
11.006	33.395	0.090	371.1	0.000	0.00	0.0	0.600	o	825	Pipe/Conduit	
11.007	35.722	0.140	255.2	0.000	0.00	0.0	0.600	o	825	Pipe/Conduit	
9.006	51.300	0.170	301.8	0.000	0.00	0.0	0.600	o	825	Pipe/Conduit	
9.007	51.300	0.171	300.0	0.000	0.00	0.0	0.600	o	825	Pipe/Conduit	
15.000	5.958	0.136	43.8	0.198	5.00	0.0	0.600	o	375	Pipe/Conduit	
16.000	5.958	0.020	297.9	0.203	5.00	0.0	0.600	o	375	Pipe/Conduit	
16.001	37.428	0.146	256.4	0.000	0.00	0.0	0.600	o	375	Pipe/Conduit	
15.001	33.212	0.130	255.5	0.000	0.00	0.0	0.600	o	375	Pipe/Conduit	
17.000	5.959	0.140	42.6	0.290	5.00	0.0	0.600	o	300	Pipe/Conduit	
15.002	28.800	0.096	300.0	0.000	0.00	0.0	0.600	o	375	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
14.000	50.00	2.01	79.350	0.485	0.0	0.0	0.0	15.84	1119.6	65.7
14.001	50.00	2.01	74.350	0.485	0.0	0.0	0.0	15.84	1119.6	65.7
14.002	50.00	2.26	67.900	0.485	0.0	0.0	0.0	1.06	117.1	65.7
11.006	50.00	3.57	67.125	1.940	0.0	0.0	0.0	1.54	820.7	262.7
11.007	50.00	3.89	67.035	1.940	0.0	0.0	0.0	1.85	991.1	262.7
9.006	41.29	7.35	66.895	2.720	0.0	0.0	0.0	1.70	910.8	304.2
9.007	39.56	7.85	66.725	2.720	0.0	0.0	0.0	1.71	913.5	304.2
15.000	50.00	5.04	67.690	0.198	0.0	0.0	0.0	2.74	303.1	26.8
16.000	50.00	5.10	67.720	0.203	0.0	0.0	0.0	1.04	115.4	27.5
16.001	48.99	5.65	67.700	0.203	0.0	0.0	0.0	1.13	124.5	27.5
15.001	46.41	6.14	67.554	0.401	0.0	0.0	0.0	1.13	124.7	50.4
17.000	50.00	5.04	67.720	0.290	0.0	0.0	0.0	2.42	170.8	39.3
15.002	44.28	6.60	67.424	0.691	0.0	0.0	0.0	1.04	115.0	82.9

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Network Design Table for Catchment C

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
18.000	5.959	0.030	198.6	0.298	5.00	0.0	0.600	o	375	Pipe/Conduit	
18.001	28.800	0.096	300.0	0.000	0.00	0.0	0.600	o	375	Pipe/Conduit	
15.003	23.404	0.175	133.7	0.000	0.00	0.0	0.600	o	525	Pipe/Conduit	
15.004	2.977	0.010	297.7	0.000	0.00	0.0	0.600	o	525	Pipe/Conduit	
9.008	28.800	0.095	303.2	0.000	0.00	0.0	0.600	o	900	Pipe/Conduit	
9.009	34.900	0.220	158.6	0.000	0.00	0.0	0.600	o	900	Pipe/Conduit	
19.000	13.200	2.000	6.6	0.046	5.00	0.0	0.600	o	150	Pipe/Conduit	
9.010	16.300	0.055	296.4	0.000	0.00	0.0	0.600	o	900	Pipe/Conduit	
9.011	19.300	0.064	300.0	0.000	0.00	0.0	0.600	o	900	Pipe/Conduit	
20.000	5.000	5.000	1.0	0.352	2.00	0.0	0.600	o	300	Pipe/Conduit	
20.001	5.000	5.000	1.0	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
20.002	5.778	0.025	231.1	0.000	0.00	0.0	0.600	o	375	Pipe/Conduit	
20.003	56.042	0.130	431.2	0.000	0.00	0.0	0.600	o	375	Pipe/Conduit	
21.000	55.799	0.130	429.2	0.000	5.00	0.0	0.600	o	300	Pipe/Conduit	
9.012	86.500	0.285	303.5	0.000	0.00	0.0	0.600	o	900	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
18.000	50.00	5.08	67.720	0.298	0.0	0.0	0.0	1.28	141.6	40.4
18.001	49.62	5.54	67.690	0.298	0.0	0.0	0.0	1.04	115.0	40.4
15.003	43.42	6.80	67.328	0.989	0.0	0.0	0.0	1.94	418.9	116.3
15.004	43.26	6.84	67.153	0.989	0.0	0.0	0.0	1.29	279.9	116.3
9.008	38.71	8.12	66.554	3.709	0.0	0.0	0.0	1.79	1141.5	388.8
9.009	38.00	8.35	66.459	3.709	0.0	0.0	0.0	2.49	1581.1	388.8
19.000	50.00	5.06	68.240	0.046	0.0	0.0	0.0	3.95	69.8	6.2
9.010	37.57	8.50	66.239	3.755	0.0	0.0	0.0	1.81	1154.6	388.8
9.011	37.07	8.68	66.184	3.755	0.0	0.0	0.0	1.80	1147.5	388.8
20.000	50.00	2.01	79.350	0.352	0.0	0.0	0.0	15.84	1119.6	47.7
20.001	50.00	2.01	74.350	0.352	0.0	0.0	0.0	15.84	1119.6	47.7
20.002	50.00	2.09	67.900	0.352	0.0	0.0	0.0	1.19	131.2	47.7
20.003	50.00	3.17	67.875	0.352	0.0	0.0	0.0	0.87	95.7	47.7
21.000	45.94	6.24	67.875	0.000	0.0	0.0	0.0	0.75	53.2	0.0
9.012	34.99	9.48	66.120	4.107	0.0	0.0	0.0	1.79	1140.8	389.2

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Network Design Table for Catchment C

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
22.000	15.400	0.050	308.0	0.031	5.00	0.0	0.600	o	225	Pipe/Conduit	
22.001	17.010	0.055	309.3	0.098	0.00	0.0	0.600	o	300	Pipe/Conduit	
22.002	17.010	0.055	309.3	0.143	0.00	0.0	0.600	o	375	Pipe/Conduit	
22.003	14.553	0.055	264.6	0.181	0.00	0.0	0.600	o	450	Pipe/Conduit	
23.000	2.500	0.010	250.0	0.223	5.00	0.0	0.600	o	375	Pipe/Conduit	
22.004	24.200	0.080	302.5	0.000	0.00	0.0	0.600	o	450	Pipe/Conduit	
24.000	7.400	0.025	296.0	0.302	5.00	0.0	0.600	o	375	Pipe/Conduit	
22.005	3.204	0.105	30.5	0.000	0.00	0.0	0.600	o	525	Pipe/Conduit	
22.006	10.863	0.030	362.1	0.000	0.00	0.0	0.600	o	600	Pipe/Conduit	
9.013	15.800	0.055	287.3	0.000	0.00	0.0	0.600	o	900	Pipe/Conduit	
25.000	2.700	0.010	270.0	0.025	5.00	0.0	0.600	o	225	Pipe/Conduit	
9.014	10.300	0.208	49.5	0.049	0.00	0.0	0.600	o	900	Pipe/Conduit	
9.015	47.255	0.945	50.0	0.000	0.00	0.0	0.600	o	900	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
22.000	50.00	5.35	68.725	0.031	0.0	0.0	0.0	0.74	29.4	4.2
22.001	48.89	5.67	68.240	0.129	0.0	0.0	0.0	0.89	62.8	17.1
22.002	47.40	5.94	68.185	0.272	0.0	0.0	0.0	1.02	113.2	34.9
22.003	46.42	6.14	67.895	0.453	0.0	0.0	0.0	1.25	198.0	56.9
23.000	50.00	5.04	67.550	0.223	0.0	0.0	0.0	1.14	126.1	30.2
22.004	44.79	6.48	67.540	0.676	0.0	0.0	0.0	1.16	185.1	82.0
24.000	50.00	5.12	66.970	0.302	0.0	0.0	0.0	1.05	115.7	40.9
22.005	44.73	6.50	66.945	0.978	0.0	0.0	0.0	4.07	880.1	118.5
22.006	44.11	6.64	66.840	0.978	0.0	0.0	0.0	1.27	360.2	118.5
9.013	34.66	9.63	65.835	5.085	0.0	0.0	0.0	1.84	1172.8	477.3
25.000	50.00	5.06	67.185	0.025	0.0	0.0	0.0	0.79	31.4	3.4
9.014	34.57	9.67	65.780	5.159	0.0	0.0	0.0	4.46	2836.4	483.0
9.015	34.16	9.84	65.572	5.159	0.0	0.0	0.0	4.44	2822.5	483.0

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Network Design Table for Catchment C

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
26.000	71.968	0.720	100.0	0.288	5.00	0.0	0.600	o	300	Pipe/Conduit	
27.000	59.546	0.595	100.1	0.663	5.00	4.3	0.600	o	300	Pipe/Conduit	
27.001	89.149	0.297	300.2	0.209	0.00	0.0	0.600	o	375	Pipe/Conduit	
27.002	66.643	0.222	300.2	0.419	0.00	0.0	0.600	o	450	Pipe/Conduit	
27.003	83.506	0.418	199.8	0.202	0.00	0.0	0.600	o	450	Pipe/Conduit	
27.004	73.729	1.035	71.2	0.226	0.00	0.0	0.600	o	450	Pipe/Conduit	
27.005	32.014	0.800	40.0	0.000	0.00	0.0	0.600	o	450	Pipe/Conduit	
27.006	13.675	0.342	40.0	0.449	0.00	0.0	0.600	o	450	Pipe/Conduit	
27.007	25.758	0.400	64.4	0.000	0.00	0.0	0.600	o	600	Pipe/Conduit	
26.001	64.939	0.663	97.9	0.000	0.00	0.0	0.600	o	600	Pipe/Conduit	
9.016	47.284	0.946	50.0	0.350	0.00	0.0	0.600	o	900	Pipe/Conduit	
9.017	41.695	0.834	50.0	0.000	0.00	0.0	0.600	o	900	Pipe/Conduit	
28.000	35.380	0.120	294.8	0.682	5.00	0.0	0.600	oo	-5	Pipe/Conduit	
28.001	13.300	0.045	295.6	0.000	0.00	0.0	0.600	o	750	Pipe/Conduit	
29.000	5.222	0.020	261.1	0.268	5.00	0.0	0.600	o	375	Pipe/Conduit	
28.002	59.158	0.165	359.3	0.000	0.00	0.0	0.600	o	750	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
26.000	48.35	5.76	66.610	0.288	0.0	0.0	0.0	1.57	111.2	37.7
27.000	49.08	5.63	70.000	0.663	4.3	0.0	0.0	1.57	111.1	92.4
27.001	42.39	7.06	69.330	0.872	4.3	0.0	0.0	1.04	114.9	104.4
27.002	39.05	8.01	68.958	1.291	4.3	0.0	0.0	1.17	185.8	140.8
27.003	36.26	8.98	68.736	1.493	4.3	0.0	0.0	1.43	228.2	150.9
27.004	34.98	9.49	68.318	1.719	4.3	0.0	0.0	2.41	383.5	167.2
27.005	34.59	9.66	67.283	1.719	4.3	0.0	0.0	3.22	512.3	167.2
27.006	34.43	9.73	66.483	2.168	4.3	0.0	0.0	3.22	512.6	206.4
27.007	34.11	9.87	65.990	2.168	4.3	0.0	0.0	3.04	859.0	206.4
26.001	33.16	10.31	65.590	2.456	4.3	0.0	0.0	2.46	695.8	224.8
9.016	32.79	10.48	64.627	7.965	4.3	0.0	0.0	4.44	2822.7	711.6
9.017	32.48	10.64	63.681	7.965	4.3	0.0	0.0	4.44	2822.9	711.6
28.000	50.00	5.36	67.645	0.682	0.0	0.0	0.0	1.62	1435.5	92.4
28.001	49.84	5.50	67.525	0.682	0.0	0.0	0.0	1.62	716.8	92.4
29.000	50.00	5.08	68.295	0.268	0.0	0.0	0.0	1.12	123.3	36.3
28.002	46.26	6.17	67.480	0.950	0.0	0.0	0.0	1.47	649.7	119.0

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Network Design Table for Catchment C

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
30.000	23.060	0.080	288.3	0.190	5.00	0.0	0.600	o	375	Pipe/Conduit	
28.003	22.706	0.145	156.6	0.000	0.00	0.0	0.600	o	750	Pipe/Conduit	
28.004	12.689	0.040	317.2	0.000	0.00	0.0	0.600	o	750	Pipe/Conduit	
28.005	38.918	0.131	297.8	0.000	0.00	0.0	0.600	o	750	Pipe/Conduit	
31.000	5.000	5.000	1.0	0.482	2.00	0.0	0.600	o	300	Pipe/Conduit	
31.001	5.000	5.000	1.0	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
31.002	15.900	0.055	289.1	0.000	0.00	0.0	0.600	o	450	Pipe/Conduit	
31.003	31.600	0.105	301.0	0.000	0.00	0.0	0.600	o	525	Pipe/Conduit	
32.000	5.000	5.000	1.0	0.482	2.00	0.0	0.600	o	300	Pipe/Conduit	
32.001	5.000	5.000	1.0	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
32.002	15.900	0.160	99.4	0.000	0.00	0.0	0.600	o	375	Pipe/Conduit	
31.004	31.600	0.105	301.0	0.000	0.00	0.0	0.600	o	600	Pipe/Conduit	
33.000	5.000	5.000	1.0	0.482	2.00	0.0	0.600	o	300	Pipe/Conduit	
33.001	5.000	5.000	1.0	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
33.002	15.900	0.055	289.1	0.000	0.00	0.0	0.600	o	375	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
30.000	50.00	5.36	67.915	0.190	0.0	0.0	0.0	1.06	117.3	25.7
28.003	45.45	6.34	67.315	1.140	0.0	0.0	0.0	2.23	986.9	140.3
28.004	44.83	6.47	67.170	1.140	0.0	0.0	0.0	1.57	691.7	140.3
28.005	43.12	6.88	67.130	1.140	0.0	0.0	0.0	1.62	714.1	140.3
31.000	50.00	2.01	79.350	0.482	0.0	0.0	0.0	15.84	1119.6	65.3
31.001	50.00	2.01	74.350	0.482	0.0	0.0	0.0	15.84	1119.6	65.3
31.002	50.00	2.23	67.900	0.482	0.0	0.0	0.0	1.19	189.4	65.3
31.003	50.00	2.64	67.845	0.482	0.0	0.0	0.0	1.29	278.4	65.3
32.000	50.00	2.01	79.350	0.482	0.0	0.0	0.0	15.84	1119.6	65.3
32.001	50.00	2.01	74.350	0.482	0.0	0.0	0.0	15.84	1119.6	65.3
32.002	50.00	2.16	67.900	0.482	0.0	0.0	0.0	1.82	200.8	65.3
31.004	50.00	3.02	67.740	0.964	0.0	0.0	0.0	1.40	395.4	130.5
33.000	50.00	2.01	79.350	0.482	0.0	0.0	0.0	15.84	1119.6	65.3
33.001	50.00	2.01	74.350	0.482	0.0	0.0	0.0	15.84	1119.6	65.3
33.002	50.00	2.26	67.900	0.482	0.0	0.0	0.0	1.06	117.1	65.3

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Network Design Table for Catchment C

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
31.005	35.700	0.120	297.5	0.000	0.00	0.0	0.600	o	600	Pipe/Conduit	
34.000	5.000	5.000	1.0	0.482	2.00	0.0	0.600	o	300	Pipe/Conduit	
34.001	5.000	5.000	1.0	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
34.002	15.900	0.055	289.1	0.000	0.00	0.0	0.600	o	375	Pipe/Conduit	
31.006	57.500	0.195	294.9	0.000	0.00	0.0	0.600	o	600	Pipe/Conduit	
28.006	20.181	0.070	288.3	0.000	0.00	0.0	0.600	o	900	Pipe/Conduit	
35.000	5.000	5.000	1.0	0.249	2.00	0.0	0.600	o	375	Pipe/Conduit	
35.001	5.000	5.000	1.0	0.000	0.00	0.0	0.600	o	375	Pipe/Conduit	
35.002	5.100	0.015	340.0	0.000	0.00	0.0	0.600	o	375	Pipe/Conduit	
35.003	24.900	0.085	292.9	0.000	0.00	0.0	0.600	o	375	Pipe/Conduit	
28.007	42.100	0.140	300.7	0.000	0.00	0.0	0.600	o	900	Pipe/Conduit	
28.008	51.171	0.170	301.0	0.000	0.00	0.0	0.600	o	900	Pipe/Conduit	
28.009	32.200	0.105	306.7	0.000	0.00	0.0	0.600	o	900	Pipe/Conduit	
36.000	7.000	0.025	280.0	0.293	5.00	0.0	0.600	o	450	Pipe/Conduit	
36.001	83.400	0.280	297.9	0.000	0.00	0.0	0.600	o	450	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
31.005	50.00	3.44	67.635	1.446	0.0	0.0	0.0	1.41	397.7	195.8
34.000	50.00	2.01	79.350	0.482	0.0	0.0	0.0	15.84	1119.6	65.3
34.001	50.00	2.01	74.350	0.482	0.0	0.0	0.0	15.84	1119.6	65.3
34.002	50.00	2.26	67.900	0.482	0.0	0.0	0.0	1.06	117.1	65.3
31.006	50.00	4.12	67.515	1.928	0.0	0.0	0.0	1.41	399.5	261.1
28.006	42.39	7.06	67.000	3.068	0.0	0.0	0.0	1.84	1170.7	352.2
35.000	50.00	2.00	79.350	0.249	0.0	0.0	0.0	18.24	2014.2	33.7
35.001	50.00	2.01	74.350	0.249	0.0	0.0	0.0	18.24	2014.2	33.7
35.002	50.00	2.10	67.900	0.249	0.0	0.0	0.0	0.98	107.9	33.7
35.003	50.00	2.49	67.885	0.249	0.0	0.0	0.0	1.05	116.4	33.7
28.007	40.94	7.45	66.930	3.317	0.0	0.0	0.0	1.80	1146.1	367.8
28.008	39.33	7.92	66.790	3.317	0.0	0.0	0.0	1.80	1145.6	367.8
28.009	38.39	8.22	66.620	3.317	0.0	0.0	0.0	1.78	1134.9	367.8
36.000	50.00	5.10	68.405	0.293	0.0	0.0	0.0	1.21	192.4	39.7
36.001	45.72	6.28	68.380	0.293	0.0	0.0	0.0	1.17	186.5	39.7

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Network Design Table for Catchment C

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
37.000	29.677	0.090	329.7	0.154	5.00	0.0	0.600	o	225	Pipe/Conduit	
37.001	18.300	0.062	295.2	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit	
38.000	7.350	0.025	294.0	0.323	5.00	0.0	0.600	o	450	Pipe/Conduit	
37.002	11.300	0.040	282.5	0.000	0.00	0.0	0.600	o	450	Pipe/Conduit	
36.002	14.027	0.090	155.9	0.000	0.00	0.0	0.600	o	450	Pipe/Conduit	
36.003	6.798	0.025	271.9	0.000	0.00	0.0	0.600	o	450	Pipe/Conduit	
28.010	28.900	0.095	304.2	0.000	0.00	0.0	0.600	o	900	Pipe/Conduit	
39.000	9.900	0.035	282.9	0.026	5.00	0.0	0.600	o	225	Pipe/Conduit	
39.001	80.000	0.265	301.9	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit	
40.000	9.500	0.035	271.4	0.404	5.00	0.0	0.600	o	450	Pipe/Conduit	
39.002	76.000	0.405	187.7	0.000	0.00	0.0	0.600	o	450	Pipe/Conduit	
41.000	9.500	0.035	271.4	0.305	5.00	0.0	0.600	o	375	Pipe/Conduit	
41.001	21.200	0.075	282.7	0.000	0.00	0.0	0.600	o	375	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
37.000	48.74	5.69	68.755	0.154	0.0	0.0	0.0	0.71	28.4	20.3
37.001	46.62	6.10	68.665	0.154	0.0	0.0	0.0	0.76	30.1	20.3
38.000	50.00	5.10	68.705	0.323	0.0	0.0	0.0	1.18	187.8	43.7
37.002	45.86	6.25	68.603	0.477	0.0	0.0	0.0	1.20	191.6	59.2
36.002	45.06	6.43	68.100	0.770	0.0	0.0	0.0	1.63	258.6	94.0
36.003	44.64	6.52	68.010	0.770	0.0	0.0	0.0	1.23	195.3	94.0
28.010	37.60	8.49	66.515	4.087	0.0	0.0	0.0	1.79	1139.5	416.2
39.000	50.00	5.21	68.740	0.026	0.0	0.0	0.0	0.77	30.7	3.5
39.001	42.63	7.00	68.705	0.026	0.0	0.0	0.0	0.75	29.7	3.5
40.000	50.00	5.13	68.835	0.404	0.0	0.0	0.0	1.23	195.5	54.7
39.002	39.55	7.85	68.440	0.430	0.0	0.0	0.0	1.48	235.5	54.7
41.000	50.00	5.14	68.835	0.305	0.0	0.0	0.0	1.09	120.9	41.3
41.001	49.99	5.47	68.800	0.305	0.0	0.0	0.0	1.07	118.5	41.3

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Network Design Table for Catchment C

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
39.003	5.196	0.065	79.9	0.000	0.00	0.0	0.600	o	450	Pipe/Conduit	
39.004	18.526	0.065	285.0	0.000	0.00	0.0	0.600	o	450	Pipe/Conduit	
28.011	21.200	0.070	302.9	0.000	0.00	0.0	0.600	o	1050	Pipe/Conduit	
28.012	77.900	0.310	251.3	0.000	0.00	0.0	0.600	o	1050	Pipe/Conduit	
42.000	5.200	0.020	260.0	0.075	5.00	0.0	0.600	o	300	Pipe/Conduit	
28.013	21.600	0.070	308.6	0.000	0.00	0.0	0.600	o	1050	Pipe/Conduit	
43.000	5.000	5.000	1.0	0.352	2.00	0.0	0.600	o	300	Pipe/Conduit	
43.001	5.000	5.000	1.0	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
43.002	3.131	0.010	313.1	0.000	0.00	0.0	0.600	o	375	Pipe/Conduit	
43.003	16.067	0.060	267.8	0.000	0.00	0.0	0.600	o	375	Pipe/Conduit	
44.000	14.002	0.060	233.4	0.000	5.00	0.0	0.600	o	375	Pipe/Conduit	
43.004	59.768	0.150	398.5	0.000	0.00	0.0	0.600	o	450	Pipe/Conduit	
28.014	33.400	0.110	303.6	0.000	0.00	0.0	0.600	o	1050	Pipe/Conduit	
45.000	6.200	0.020	310.0	0.043	5.00	0.0	0.600	o	300	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
39.003	39.43	7.89	68.035	0.735	0.0	0.0	0.0	2.28	361.9	78.5
39.004	38.62	8.15	67.970	0.735	0.0	0.0	0.0	1.20	190.7	78.5
28.011	37.09	8.67	66.420	4.822	0.0	0.0	0.0	1.97	1710.1	484.4
28.012	35.52	9.27	66.350	4.822	0.0	0.0	0.0	2.17	1878.5	484.4
42.000	50.00	5.09	67.425	0.075	0.0	0.0	0.0	0.97	68.6	10.2
28.013	35.07	9.45	66.040	4.897	0.0	0.0	0.0	1.96	1694.1	484.4
43.000	50.00	2.01	79.350	0.352	0.0	0.0	0.0	15.84	1119.6	47.7
43.001	50.00	2.01	74.350	0.352	0.0	0.0	0.0	15.84	1119.6	47.7
43.002	50.00	2.06	67.900	0.352	0.0	0.0	0.0	1.02	112.5	47.7
43.003	50.00	2.30	67.890	0.352	0.0	0.0	0.0	1.10	121.8	47.7
44.000	50.00	5.20	67.890	0.000	0.0	0.0	0.0	1.18	130.5	0.0
43.004	46.20	6.18	67.830	0.352	0.0	0.0	0.0	1.01	161.0	47.7
28.014	34.41	9.74	65.970	5.249	0.0	0.0	0.0	1.97	1707.9	489.1
45.000	50.00	5.12	66.715	0.043	0.0	0.0	0.0	0.89	62.7	5.8

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Network Design Table for Catchment C

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
28.015	29.200	0.180	162.2	0.050	0.00	0.0	0.600	o	1050	Pipe/Conduit	
46.000	1.000#	0.010	100.0	0.074	5.00	0.0	0.600	o	300	Pipe/Conduit	
46.001	3.300	0.015	220.0	0.103	0.00	0.0	0.600	o	300	Pipe/Conduit	
47.000	17.010	0.060	283.5	0.319	5.00	0.0	0.600	o	450	Pipe/Conduit	
47.001	17.010	0.060	283.5	0.120	0.00	0.0	0.600	o	450	Pipe/Conduit	
47.002	17.010	0.460	37.0	0.120	0.00	0.0	0.600	o	450	Pipe/Conduit	
47.003	14.146	0.050	282.9	0.122	0.00	0.0	0.600	o	600	Pipe/Conduit	
46.002	7.473	0.075	99.6	0.000	0.00	0.0	0.600	o	600	Pipe/Conduit	
46.003	4.759	0.015	317.3	0.000	0.00	0.0	0.600	o	600	Pipe/Conduit	
46.004	12.600	0.045	280.0	0.000	0.00	0.0	0.600	o	600	Pipe/Conduit	
28.016	42.700	0.140	305.0	0.000	0.00	0.0	0.600	o	1050	Pipe/Conduit	
28.017	75.652	0.200	378.3	0.000	0.00	0.0	0.600	o	1050	Pipe/Conduit	
48.000	3.200	0.010	320.0	0.053	5.00	0.0	0.600	o	225	Pipe/Conduit	
48.001	9.700	0.110	88.2	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit	
49.000	17.010	0.060	283.5	0.146	5.00	0.0	0.600	o	300	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
28.015	34.00	9.92	65.860	5.342	0.0	0.0	0.0	2.70	2340.7	491.9
46.000	50.00	5.01	66.740	0.074	0.0	0.0	0.0	1.57	111.1	10.0
46.001	50.00	5.06	66.730	0.177	0.0	0.0	0.0	1.06	74.6	24.0
47.000	50.00	5.24	68.585	0.319	0.0	0.0	0.0	1.20	191.2	43.2
47.001	50.00	5.47	68.240	0.439	0.0	0.0	0.0	1.20	191.2	59.4
47.002	49.51	5.56	68.180	0.559	0.0	0.0	0.0	3.35	533.1	75.0
47.003	48.59	5.72	67.315	0.681	0.0	0.0	0.0	1.44	407.9	89.6
46.002	48.31	5.77	66.715	0.858	0.0	0.0	0.0	2.44	689.8	112.3
46.003	48.00	5.83	66.640	0.858	0.0	0.0	0.0	1.36	385.0	112.3
46.004	47.24	5.97	66.625	0.858	0.0	0.0	0.0	1.45	410.1	112.3
28.016	33.22	10.28	65.680	6.200	0.0	0.0	0.0	1.97	1704.1	557.8
28.017	31.80	10.99	65.540	6.200	0.0	0.0	0.0	1.77	1529.1	557.8
48.000	50.00	5.07	67.175	0.053	0.0	0.0	0.0	0.73	28.8	7.2
48.001	50.00	5.19	67.165	0.053	0.0	0.0	0.0	1.39	55.4	7.2
49.000	50.00	5.31	68.585	0.146	0.0	0.0	0.0	0.93	65.7	19.8

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Network Design Table for Catchment C

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
49.001	17.010	0.060	283.5	0.140	0.00	0.0	0.600	o	375	Pipe/Conduit	
49.002	17.010	0.060	283.5	0.140	0.00	0.0	0.600	o	450	Pipe/Conduit	
49.003	14.069	0.055	255.8	0.140	0.00	0.0	0.600	o	525	Pipe/Conduit	
50.000	2.500	0.120	20.8	0.139	5.00	0.0	0.600	o	225	Pipe/Conduit	
48.002	5.316	0.070	75.9	0.000	0.00	0.0	0.600	o	525	Pipe/Conduit	
48.003	4.968	0.015	331.2	0.000	0.00	0.0	0.600	o	525	Pipe/Conduit	
48.004	16.759	0.040	419.0	0.000	0.00	0.0	0.600	o	525	Pipe/Conduit	
28.018	45.940	0.185	248.3	0.000	0.00	0.0	0.600	o	1050	Pipe/Conduit	
28.019	56.530	2.153	26.3	0.000	0.00	0.0	0.600	o	900	Pipe/Conduit	
9.018	32.204	0.805	40.0	0.438	0.00	0.0	0.600	o	900	Pipe/Conduit	
51.000	29.251	1.465	20.0	0.042	5.00	0.0	0.600	o	150	Pipe/Conduit	
51.001	19.398	1.503	12.9	0.026	0.00	0.0	0.600	o	150	Pipe/Conduit	
51.002	15.009	1.274	11.8	0.026	0.00	0.0	0.600	o	150	Pipe/Conduit	
51.003	31.610	2.129	14.8	0.047	0.00	0.0	0.600	o	150	Pipe/Conduit	
51.004	38.361	0.412	93.1	0.062	0.00	0.0	0.600	o	225	Pipe/Conduit	
51.005	37.164	1.118	33.2	0.075	0.00	0.0	0.600	o	225	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
49.001	49.43	5.57	68.525	0.286	0.0	0.0	0.0	1.07	118.3	38.3
49.002	48.12	5.81	67.895	0.426	0.0	0.0	0.0	1.20	191.2	55.5
49.003	47.24	5.97	67.550	0.566	0.0	0.0	0.0	1.40	302.2	72.4
50.000	50.00	5.01	67.175	0.139	0.0	0.0	0.0	2.88	114.5	18.8
48.002	47.06	6.01	67.055	0.758	0.0	0.0	0.0	2.57	556.9	96.6
48.003	46.72	6.08	66.985	0.758	0.0	0.0	0.0	1.23	265.2	96.6
48.004	45.48	6.33	66.970	0.758	0.0	0.0	0.0	1.09	235.5	96.6
28.018	31.16	11.34	65.340	6.958	0.0	0.0	0.0	2.18	1889.7	587.2
28.019	30.89	11.50	65.000	6.958	0.0	0.0	0.0	6.13	3898.4	587.2
9.018	30.70	11.60	62.847	15.360	4.3	0.0	0.0	4.96	3156.8	1281.5
51.000	50.00	5.22	82.671	0.042	0.0	0.0	0.0	2.26	40.0	5.7
51.001	50.00	5.33	81.206	0.069	0.0	0.0	0.0	2.82	49.8	9.3
51.002	50.00	5.41	79.703	0.095	0.0	0.0	0.0	2.95	52.2	12.8
51.003	49.18	5.62	78.429	0.141	0.0	0.0	0.0	2.63	46.4	18.8
51.004	46.67	6.09	76.225	0.203	0.0	0.0	0.0	1.36	53.9	25.7
51.005	45.36	6.36	75.813	0.278	0.0	0.0	0.0	2.28	90.5	34.2

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Network Design Table for Catchment C

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
52.000	1.928	0.050	38.6	0.004	4.00	0.0	0.600	o	150	Pipe/Conduit	
52.001	15.780	0.160	98.6	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit	
52.002	4.952	0.050	100.0	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit	
53.000	1.733	0.050	34.7	0.006	4.00	0.0	0.600	o	150	Pipe/Conduit	
52.003	18.525	0.590	31.4	0.034	0.00	0.0	0.600	o	225	Pipe/Conduit	
52.004	24.065	0.174	138.3	0.055	0.00	0.0	0.600	o	300	Pipe/Conduit	
54.000	18.950	0.125	151.6	0.034	4.00	0.0	0.600	o	150	Pipe/Conduit	
54.001	6.260	0.040	156.5	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit	
55.000	15.774	0.160	98.6	0.008	4.00	0.0	0.600	o	150	Pipe/Conduit	
56.000	5.727	0.060	95.5	0.012	4.00	0.0	0.600	o	150	Pipe/Conduit	
54.002	18.256	0.115	158.7	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit	
57.000	11.202	0.115	97.4	0.013	5.00	0.0	0.600	o	150	Pipe/Conduit	
52.005	6.395	0.060	106.6	0.012	0.00	0.0	0.600	o	300	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
52.000	50.00	4.02	75.854	0.004	0.0	0.0	0.0	1.63	28.7	0.5
52.001	50.00	4.28	75.804	0.004	0.0	0.0	0.0	1.01	17.9	0.5
52.002	50.00	4.36	75.644	0.004	0.0	0.0	0.0	1.00	17.8	0.5
53.000	50.00	4.02	75.644	0.006	0.0	0.0	0.0	1.72	30.3	0.8
52.003	50.00	4.49	75.519	0.044	0.0	0.0	0.0	2.34	93.2	6.0
52.004	50.00	4.79	74.854	0.099	0.0	0.0	0.0	1.34	94.4	13.4
54.000	50.00	4.39	75.210	0.034	0.0	0.0	0.0	0.81	14.4	4.6
54.001	50.00	4.52	74.985	0.034	0.0	0.0	0.0	0.80	14.2	4.6
55.000	50.00	4.26	75.105	0.008	0.0	0.0	0.0	1.01	17.9	1.1
56.000	50.00	4.09	75.005	0.012	0.0	0.0	0.0	1.03	18.2	1.6
54.002	50.00	4.81	74.870	0.054	0.0	0.0	0.0	1.04	41.2	7.3
57.000	50.00	5.18	74.945	0.013	0.0	0.0	0.0	1.02	18.0	1.8
52.005	50.00	5.25	74.680	0.178	0.0	0.0	0.0	1.52	107.6	24.1

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Network Design Table for Catchment C

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
51.006	50.272	1.120	44.9	0.145	0.00	0.0	0.600	o	300	Pipe/Conduit	
51.007	67.775	2.508	27.0	0.106	0.00	0.0	0.600	o	300	Pipe/Conduit	
58.000	28.785	1.059	27.2	0.126	5.00	0.0	0.600	o	150	Pipe/Conduit	
58.001	24.601	1.033	23.8	0.051	0.00	0.0	0.600	o	150	Pipe/Conduit	
58.002	27.810	0.765	36.4	0.047	0.00	0.0	0.600	o	225	Pipe/Conduit	
58.003	18.906	0.083	227.8	0.021	0.00	0.0	0.600	o	375	Pipe/Conduit	
51.008	90.000	2.776	32.4	0.257	0.00	0.0	0.600	o	375	Pipe/Conduit	
51.009	85.700	2.880	29.8	0.267	0.00	0.0	0.600	o	375	Pipe/Conduit	
51.010	36.375	0.581	62.6	0.108	0.00	0.0	0.600	o	450	Pipe/Conduit	
51.011	40.619	0.136	298.7	0.127	0.00	0.0	0.600	o	600	Pipe/Conduit	
51.012	40.218	0.135	297.9	0.115	0.00	0.0	0.600	o	600	Pipe/Conduit	
51.013	90.000	0.300	300.0	0.240	0.00	0.0	0.600	o	600	Pipe/Conduit	
51.014	90.081	0.300	300.3	0.527	0.00	0.0	0.600	o	600	Pipe/Conduit	
51.015	78.018	1.242	62.8	0.000	0.00	0.0	0.600	o	600	Pipe/Conduit	
9.019	87.633	1.461	60.0	0.123	0.00	0.0	0.600	o	900	Pipe/Conduit	
9.020	23.371	0.426	54.9	0.133	0.00	0.0	0.600	o	900	Pipe/Conduit	
59.000	23.530	0.360	65.4	0.052	5.00	0.0	0.600	o	225	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
51.006	43.79	6.71	74.620	0.601	0.0	0.0	0.0	2.35	166.3	71.3
51.007	42.28	7.09	73.500	0.707	0.0	0.0	0.0	3.04	214.6	81.0
58.000	50.00	5.25	74.082	0.126	0.0	0.0	0.0	1.94	34.3	17.1
58.001	50.00	5.45	73.023	0.177	0.0	0.0	0.0	2.07	36.6	23.9
58.002	48.93	5.66	71.915	0.224	0.0	0.0	0.0	2.18	86.6	29.6
58.003	47.51	5.92	71.000	0.245	0.0	0.0	0.0	1.20	132.1	31.5
51.008	40.55	7.56	70.917	1.209	0.0	0.0	0.0	3.19	352.5	132.7
51.009	39.13	7.99	68.141	1.476	0.0	0.0	0.0	3.33	368.0	156.4
51.010	38.40	8.22	65.186	1.583	0.0	0.0	0.0	2.57	409.2	164.6
51.011	37.00	8.70	64.455	1.710	0.0	0.0	0.0	1.40	396.9	171.4
51.012	35.74	9.18	64.319	1.825	0.0	0.0	0.0	1.41	397.4	176.7
51.013	33.27	10.25	64.184	2.065	0.0	0.0	0.0	1.40	396.0	186.1
51.014	31.19	11.32	63.884	2.592	0.0	0.0	0.0	1.40	395.9	219.0
51.015	30.46	11.75	63.584	2.592	0.0	0.0	0.0	3.08	869.8	219.0
9.019	29.87	12.11	62.042	18.076	4.3	0.0	0.0	4.05	2576.0	1466.4
9.020	29.72	12.20	60.581	18.209	4.3	0.0	0.0	4.24	2694.3	1470.0
59.000	50.00	5.24	65.460	0.052	0.0	0.0	0.0	1.62	64.4	7.0

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Network Design Table for Catchment C

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
60.000	10.620	0.200	53.1	0.306	5.00	0.0	0.600	o	300	Pipe/Conduit	
59.001	50.500	0.205	246.3	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
61.000	10.940	0.045	243.1	0.267	5.00	0.0	0.600	o	450	Pipe/Conduit	
59.002	22.380	0.145	154.3	0.000	0.00	0.0	0.600	o	600	Pipe/Conduit	
62.000	10.620	0.080	132.8	0.102	5.00	0.0	0.600	o	225	Pipe/Conduit	
62.001	46.625	0.310	150.4	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit	
63.000	11.005	0.050	220.1	0.256	5.00	0.0	0.600	o	450	Pipe/Conduit	
62.002	49.400	0.200	247.0	0.000	0.00	0.0	0.600	o	450	Pipe/Conduit	
64.000	10.620	0.070	151.7	0.255	5.00	0.0	0.600	o	300	Pipe/Conduit	
62.003	13.865	0.100	138.7	0.000	0.00	0.0	0.600	o	600	Pipe/Conduit	
59.003	50.000	0.125	400.0	0.000	0.00	0.0	0.600	o	600	Pipe/Conduit	
65.000	10.622	0.265	40.1	0.033	5.00	0.0	0.600	o	150	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
60.000	50.00	5.08	65.150	0.306	0.0	0.0	0.0	2.16	152.9	41.4
59.001	46.67	6.09	64.950	0.358	0.0	0.0	0.0	1.00	70.5	45.3
61.000	50.00	5.14	64.640	0.267	0.0	0.0	0.0	1.30	206.7	36.2
59.002	45.75	6.28	64.445	0.625	0.0	0.0	0.0	1.96	553.6	77.4
62.000	50.00	5.16	65.365	0.102	0.0	0.0	0.0	1.13	45.1	13.8
62.001	47.69	5.89	65.285	0.102	0.0	0.0	0.0	1.06	42.3	13.8
63.000	50.00	5.13	64.800	0.256	0.0	0.0	0.0	1.37	217.3	34.7
62.002	44.61	6.53	64.750	0.358	0.0	0.0	0.0	1.29	205.0	43.2
64.000	50.00	5.14	64.770	0.255	0.0	0.0	0.0	1.27	90.1	34.5
62.003	44.12	6.64	64.400	0.613	0.0	0.0	0.0	2.07	584.2	73.2
59.003	41.38	7.33	64.300	1.238	0.0	0.0	0.0	1.21	342.5	138.7
65.000	50.00	5.11	66.000	0.033	0.0	0.0	0.0	1.59	28.2	4.5

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Network Design Table for Catchment C

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
65.001	32.700	0.445	73.5	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit	
66.000	10.623	0.105	101.2	0.066	5.00	0.0	0.600	o	225	Pipe/Conduit	
65.002	50.000	0.665	75.2	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit	
67.000	10.620	0.110	96.5	0.080	5.00	0.0	0.600	o	225	Pipe/Conduit	
59.004	28.360	0.075	378.1	0.000	0.00	0.0	0.600	o	600	Pipe/Conduit	
68.000	10.875	0.110	98.9	0.040	5.00	0.0	0.600	o	150	Pipe/Conduit	
68.001	7.990	0.080	99.9	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit	
59.005	4.895	0.015	326.3	0.000	0.00	0.0	0.600	o	750	Pipe/Conduit	
59.006	8.190	0.015	546.0	0.000	0.00	0.0	0.600	o	750	Pipe/Conduit	
59.007	8.490	0.025	339.6	0.000	0.00	0.0	0.600	o	750	Pipe/Conduit	
59.008	12.685	0.025	507.4	0.000	0.00	0.0	0.600	o	750	Pipe/Conduit	
69.000	15.960	1.355	11.8	0.329	8.00	0.0	0.600	o	225	Pipe/Conduit	
70.000	14.858	0.150	99.1	0.016	5.00	0.0	0.600	o	150	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
65.001	49.40	5.58	65.735	0.033	0.0	0.0	0.0	1.17	20.8	4.5
66.000	50.00	5.14	65.320	0.066	0.0	0.0	0.0	1.30	51.7	8.9
65.002	46.47	6.13	65.215	0.099	0.0	0.0	0.0	1.51	60.0	12.5
67.000	50.00	5.13	64.660	0.080	0.0	0.0	0.0	1.33	52.9	10.8
59.004	40.05	7.70	64.175	1.417	0.0	0.0	0.0	1.25	352.4	153.7
68.000	50.00	5.18	64.740	0.040	0.0	0.0	0.0	1.01	17.9	5.4
68.001	50.00	5.31	64.630	0.040	0.0	0.0	0.0	1.01	17.8	5.4
59.005	39.87	7.76	63.950	1.457	0.0	0.0	0.0	1.54	681.9	157.3
59.006	39.49	7.87	63.935	1.457	0.0	0.0	0.0	1.19	526.0	157.3
59.007	39.19	7.97	63.820	1.457	0.0	0.0	0.0	1.51	668.4	157.3
59.008	38.66	8.14	63.795	1.457	0.0	0.0	0.0	1.24	545.8	157.3
69.000	38.86	8.07	65.650	0.329	0.0	0.0	0.0	3.83	152.4	34.6
70.000	50.00	5.25	64.520	0.016	0.0	0.0	0.0	1.01	17.8	2.2

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Network Design Table for Catchment C

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
59.009	24.985	0.060	416.4	0.000	0.00	0.0	0.600	o	750	Pipe/Conduit	
71.000	25.835	0.255	101.3	0.177	8.00	0.0	0.600	o	225	Pipe/Conduit	
59.010	26.021	0.050	520.4	0.000	0.00	0.0	0.600	o	750	Pipe/Conduit	
59.011	16.915	1.090	15.5	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
72.000	10.000	0.000	0.0	0.229	5.00	0.0	0.600	o	150	Pipe/Conduit	
59.012	11.377	2.115	5.4	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit	
9.021	49.296	0.895	55.1	0.000	0.00	0.0	0.600	o	900	Pipe/Conduit	
9.022	61.788	2.057	30.0	0.117	0.00	0.0	0.600	o	900	Pipe/Conduit	
9.023	73.596	2.453	30.0	0.084	0.00	0.0	0.600	o	900	Pipe/Conduit	
9.024	61.829	1.543	40.1	0.164	0.00	0.0	0.600	o	900	Pipe/Conduit	
9.025	89.875	4.301	20.9	0.187	0.00	0.0	0.600	o	900	Pipe/Conduit	
73.000	30.924	0.344	89.9	0.024	5.00	0.0	0.600	o	150	Pipe/Conduit	
73.001	50.071	0.556	90.1	0.027	0.00	0.0	0.600	o	225	Pipe/Conduit	
74.000	26.203	5.676	4.6	0.066	5.00	0.0	0.600	o	150	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
59.009	37.74	8.44	63.770	1.802	0.0	0.0	0.0	1.37	603.1	184.2
71.000	38.07	8.33	65.040	0.177	0.0	0.0	0.0	1.30	51.6	18.2
59.010	36.75	8.80	63.710	1.979	0.0	0.0	0.0	1.22	538.9	196.9
59.011	36.56	8.87	63.660	1.979	0.0	0.0	0.0	4.01	283.5	196.9
72.000	43.44	6.80	62.570	0.229	0.0	0.0	0.0	0.09	1.6«	26.9
59.012	36.44	8.91	62.570	2.208	0.0	0.0	0.0	4.37	77.3«	217.9
9.021	29.42	12.39	59.705	20.417	4.3	0.0	0.0	4.23	2689.0	1630.9
9.022	29.14	12.57	59.260	20.534	4.3	0.0	0.0	5.73	3644.2	1630.9
9.023	28.83	12.79	57.203	20.618	4.3	0.0	0.0	5.73	3646.4	1630.9
9.024	28.53	12.99	54.750	20.782	4.3	0.0	0.0	4.96	3154.1	1630.9
9.025	28.22	13.21	53.207	20.969	4.3	0.0	0.0	6.87	4370.9	1630.9
73.000	49.92	5.49	57.850	0.024	0.0	0.0	0.0	1.06	18.7	3.2
73.001	46.64	6.09	57.431	0.051	0.0	0.0	0.0	1.38	54.8	6.4
74.000	50.00	5.09	62.680	0.066	0.0	0.0	0.0	4.72	83.5	8.9

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Network Design Table for Catchment C

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
73.002	50.077	0.589	85.0	0.038	0.00	0.0	0.600	o	300	Pipe/Conduit	
73.003	76.722	0.959	80.0	0.054	0.00	0.0	0.600	o	300	Pipe/Conduit	
73.004	24.593	0.492	50.0	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
75.000	20.942	0.413	50.7	0.012	5.00	0.0	0.600	o	150	Pipe/Conduit	
73.005	79.999	0.479	167.0	0.020	0.00	0.0	0.600	o	375	Pipe/Conduit	
73.006	70.000	0.583	120.1	0.019	0.00	0.0	0.600	o	375	Pipe/Conduit	
73.007	46.820	0.390	120.1	0.014	0.00	0.0	0.600	o	375	Pipe/Conduit	
73.008	42.407	0.363	116.8	0.015	0.00	0.0	0.600	o	375	Pipe/Conduit	
76.000	51.074	0.146	349.8	0.000	5.00	0.0	0.600	o	600	Pipe/Conduit	
76.001	38.924	0.111	350.7	0.000	0.00	0.0	0.600	o	750	Pipe/Conduit	
76.002	51.015	0.283	180.3	0.000	0.00	0.0	0.600	o	750	Pipe/Conduit	
76.003	18.985	0.190	99.9	0.000	0.00	0.0	0.600	o	750	Pipe/Conduit	
76.004	33.593	0.336	100.0	0.000	0.00	0.0	0.600	o	750	Pipe/Conduit	
76.005	9.323	0.093	100.2	0.000	0.00	0.0	0.600	o	750	Pipe/Conduit	
73.009	34.418	0.287	119.9	0.150	0.00	0.0	0.600	o	900	Pipe/Conduit	
77.000	81.302	0.487	166.9	0.063	5.00	0.0	0.600	o	225	Pipe/Conduit	
77.001	90.004	0.900	100.0	0.040	0.00	0.0	0.600	o	225	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
73.002	44.36	6.58	56.800	0.154	0.0	0.0	0.0	1.71	120.6	18.5
73.003	41.45	7.31	56.211	0.207	0.0	0.0	0.0	1.76	124.4	23.3
73.004	40.78	7.49	55.252	0.207	0.0	0.0	0.0	2.23	157.6	23.3
75.000	50.00	5.25	55.323	0.012	0.0	0.0	0.0	1.42	25.0	1.6
73.005	37.74	8.44	54.685	0.239	0.0	0.0	0.0	1.40	154.5	24.5
73.006	35.82	9.15	54.206	0.258	0.0	0.0	0.0	1.65	182.5	25.1
73.007	34.67	9.62	53.623	0.272	0.0	0.0	0.0	1.65	182.5	25.5
73.008	33.72	10.04	53.233	0.287	0.0	0.0	0.0	1.68	185.0	26.3
76.000	48.94	5.66	54.057	0.000	0.0	0.0	0.0	1.30	366.5	0.0
76.001	46.64	6.09	53.761	0.000	0.0	0.0	0.0	1.49	657.7	0.0
76.002	44.72	6.50	53.650	0.000	0.0	0.0	0.0	2.08	919.5	0.0
76.003	44.22	6.61	53.367	0.000	0.0	0.0	0.0	2.80	1236.9	0.0
76.004	43.37	6.81	53.177	0.000	0.0	0.0	0.0	2.80	1236.6	0.0
76.005	43.14	6.87	52.641	0.000	0.0	0.0	0.0	2.80	1234.9	0.0
73.009	33.29	10.24	52.345	0.438	0.0	0.0	0.0	2.86	1819.7	39.5
77.000	45.44	6.34	57.900	0.063	0.0	0.0	0.0	1.01	40.1	7.7
77.001	40.79	7.49	57.413	0.103	0.0	0.0	0.0	1.31	52.0	11.4

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Network Design Table for Catchment C

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
77.002	41.386	0.517	80.1	0.014	0.00	0.0	0.600	o	225	Pipe/Conduit	
78.000	45.848	0.429	106.9	0.034	5.00	0.0	0.600	o	150	Pipe/Conduit	
77.003	21.463	0.496	43.3	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit	
77.004	65.971	1.064	62.0	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit	
79.000	14.086	1.289	10.9	0.010	5.00	0.0	0.600	o	150	Pipe/Conduit	
77.005	29.146	0.600	48.6	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit	
80.000	21.114	0.212	99.6	0.000	5.00	0.0	0.600	o	150	Pipe/Conduit	
80.001	8.109	0.082	98.9	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit	
80.002	7.408	0.325	22.8	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit	
77.006	25.168	0.106	237.4	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
77.007	14.772	0.070	211.0	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
77.008	31.332	0.927	33.8	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
73.010	75.483	0.872	86.6	0.024	0.00	0.0	0.600	o	900	Pipe/Conduit	
73.011	37.304	0.730	51.1	0.015	0.00	0.0	0.600	o	900	Pipe/Conduit	
73.012	17.122	0.612	28.0	0.000	0.00	0.0	0.600	o	900	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
77.002	39.20	7.96	56.513	0.117	0.0	0.0	0.0	1.46	58.2	12.4
78.000	48.23	5.79	56.500	0.034	0.0	0.0	0.0	0.97	17.2	4.5
77.003	38.64	8.14	55.996	0.151	0.0	0.0	0.0	1.99	79.3	15.8
77.004	36.73	8.80	55.500	0.151	0.0	0.0	0.0	1.66	66.2	15.8
79.000	50.00	5.08	55.800	0.010	0.0	0.0	0.0	3.07	54.2	1.4
77.005	36.05	9.06	54.436	0.161	0.0	0.0	0.0	1.88	74.8	15.8
80.000	50.00	5.35	54.530	0.000	0.0	0.0	0.0	1.01	17.8	0.0
80.001	49.94	5.48	54.318	0.000	0.0	0.0	0.0	1.01	17.9	0.0
80.002	49.60	5.54	54.236	0.000	0.0	0.0	0.0	2.12	37.4	0.0
77.006	35.02	9.47	53.761	0.161	0.0	0.0	0.0	1.02	71.8	15.8
77.007	34.49	9.70	53.655	0.161	0.0	0.0	0.0	1.08	76.2	15.8
77.008	34.05	9.89	53.585	0.161	0.0	0.0	0.0	2.71	191.8	15.8
73.010	32.52	10.62	52.058	0.623	0.0	0.0	0.0	3.37	2143.3	54.8
73.011	32.24	10.76	51.186	0.637	0.0	0.0	0.0	4.39	2792.0	55.7
73.012	32.15	10.81	50.456	0.637	0.0	0.0	0.0	5.94	3776.3	55.7

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Network Design Table for Catchment C

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
81.000	31.194	1.076	29.0	0.032	5.00	0.0	0.600	o	150	Pipe/Conduit	
81.001	10.123	0.675	15.0	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit	
81.002	20.661	0.898	23.0	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit	
81.003	64.136	2.807	22.8	0.046	0.00	0.0	0.600	o	150	Pipe/Conduit	
73.013	13.767	0.938	14.7	3.635	0.00	0.0	0.600	o	1050	Pipe/Conduit	
9.026	99.980	4.286	23.3	0.256	0.00	0.0	0.600	o	1200	Pipe/Conduit	
9.027	56.666	1.890	30.0	0.000	0.00	0.0	0.600	o	1200	Pipe/Conduit	
9.028	50.477	1.430	35.3	0.000	0.00	0.0	0.600	o	1200	Pipe/Conduit	
9.029	18.000#	0.500	36.0	0.000	0.00	0.0	0.600	o	2100	Pipe/Conduit	
82.000	51.214	0.341	150.0	0.100	5.00	0.0	0.600	o	225	Pipe/Conduit	
83.000	31.800	3.036	10.5	0.040	5.00	0.0	0.600	o	150	Pipe/Conduit	
82.001	47.504	0.284	167.0	0.140	0.00	0.0	0.600	o	225	Pipe/Conduit	
82.002	44.321	0.265	167.0	0.015	0.00	0.0	0.600	o	300	Pipe/Conduit	
82.003	31.669	0.215	147.3	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
82.004	18.000#	0.700	25.7	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
81.000	50.00	5.28	56.050	0.032	0.0	0.0	0.0	1.88	33.2	4.3
81.001	50.00	5.34	54.974	0.032	0.0	0.0	0.0	2.61	46.2	4.3
81.002	49.81	5.50	54.299	0.032	0.0	0.0	0.0	2.11	37.3	4.3
81.003	47.05	6.01	53.401	0.078	0.0	0.0	0.0	2.12	37.4	9.9
73.013	32.10	10.83	49.694	4.350	0.0	0.0	0.0	9.02	7808.1	378.2
9.026	27.93	13.43	48.606	25.575	4.3	0.0	0.0	7.76	8777.5	1938.6
9.027	27.74	13.57	44.320	25.575	4.3	0.0	0.0	6.84	7740.5	1938.6
9.028	27.57	13.70	42.430	25.575	4.3	0.0	0.0	6.31	7132.7	1938.6
9.029	27.52	13.73	39.800	25.575	4.3	0.0	0.0	8.79	30429.1	1938.6
82.000	48.15	5.80	41.180	0.100	0.0	0.0	0.0	1.07	42.4	13.0
83.000	50.00	5.17	43.800	0.040	0.0	0.0	0.0	3.13	55.3	5.4
82.001	44.34	6.59	40.765	0.280	0.0	0.0	0.0	1.01	40.1	33.6
82.002	41.87	7.19	40.480	0.295	0.0	0.0	0.0	1.21	85.8	33.6
82.003	40.40	7.60	40.215	0.295	0.0	0.0	0.0	1.29	91.4	33.6
82.004	40.07	7.70	40.000	0.295	0.0	0.0	0.0	3.11	220.0	33.6

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Network Design Table for Catchment C

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
9.030	28.516	2.800	10.2	0.000	0.00	0.0	0.600	o	450	Pipe/Conduit	
9.031	13.000#	0.250	52.0	0.000	0.00	0.0	0.600	o	450	Pipe/Conduit	
84.000	39.878	0.083	480.5	0.310	5.00	0.0	0.600	o	600	Pipe/Conduit	
84.001	17.744	0.037	479.6	0.337	0.00	0.0	0.600	o	600	Pipe/Conduit	
84.002	49.336	0.102	483.7	0.000	0.00	0.0	0.600	o	600	Pipe/Conduit	
85.000	54.800	0.365	150.1	0.020	5.00	0.0	0.600	o	225	Pipe/Conduit	
85.001	48.426	0.290	167.0	0.100	0.00	0.0	0.600	o	225	Pipe/Conduit	
85.002	50.000	0.292	171.2	0.086	0.00	0.0	0.600	o	225	Pipe/Conduit	
85.003	49.000	0.300	163.3	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
85.004	96.099	0.250	384.4	0.097	0.00	0.0	0.600	o	450	Pipe/Conduit	
85.005	106.473	0.252	422.5	0.657	0.00	0.0	0.600	o	600	Pipe/Conduit	
85.006	21.512	0.106	202.9	0.735	0.00	0.0	0.600	o	600	Pipe/Conduit	
85.007	57.795	0.300	192.7	0.001	0.00	0.0	0.600	o	750	Pipe/Conduit	
85.008	95.144	0.160	594.7	0.503	0.00	0.0	0.600	o	750	Pipe/Conduit	
85.009	73.549	0.147	500.3	0.864	0.00	0.0	0.600	o	750	Pipe/Conduit	
85.010	89.144	0.178	500.8	0.750	0.00	0.0	0.600	o	750	Pipe/Conduit	
85.011	33.311	0.067	497.2	0.050	0.00	0.0	0.600	o	750	Pipe/Conduit	
84.003	14.823	0.028	529.4	0.123	0.00	0.0	0.600	o	750	Pipe/Conduit	
84.004	52.656	0.098	537.3	0.261	0.00	0.0	0.600	o	750	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
9.030	27.43	13.81	39.300	25.870	4.3	0.0	0.0	6.40	1017.7«	1938.6
9.031	27.33	13.88	36.500	25.870	4.3	0.0	0.0	2.82	449.2«	1938.6
84.000	49.25	5.60	40.600	0.310	0.0	0.0	0.0	1.10	312.2	41.4
84.001	47.78	5.87	40.517	0.647	0.0	0.0	0.0	1.11	312.5	83.7
84.002	44.21	6.62	40.480	0.647	0.0	0.0	0.0	1.10	311.2	83.7
85.000	47.84	5.86	43.349	0.020	0.0	0.0	0.0	1.06	42.3	2.6
85.001	44.03	6.66	42.984	0.120	0.0	0.0	0.0	1.01	40.1	14.3
85.002	40.77	7.49	42.692	0.206	0.0	0.0	0.0	1.00	39.6	22.7
85.003	38.58	8.16	42.400	0.206	0.0	0.0	0.0	1.23	86.8	22.7
85.004	34.46	9.71	41.950	0.303	0.0	0.0	0.0	1.03	164.0	28.3
85.005	31.38	11.22	41.550	0.960	0.0	0.0	0.0	1.18	333.2	81.6
85.006	31.00	11.43	41.298	1.695	0.0	0.0	0.0	1.71	482.3	142.3
85.007	30.19	11.91	41.080	1.696	0.0	0.0	0.0	2.01	889.2	142.3
85.008	28.10	13.30	40.780	2.199	0.0	0.0	0.0	1.14	503.8	167.4
85.009	26.83	14.28	40.620	3.063	0.0	0.0	0.0	1.24	549.7	222.6
85.010	25.47	15.48	40.473	3.813	0.0	0.0	0.0	1.24	549.4	263.0
85.011	25.00	15.92	40.295	3.863	0.0	0.0	0.0	1.25	551.4	263.0
84.003	24.80	16.13	40.228	4.633	0.0	0.0	0.0	1.21	534.2	311.1
84.004	24.09	16.86	40.200	4.893	0.0	0.0	0.0	1.20	530.2	319.3

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Network Design Table for Catchment C

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
84.005	11.901	0.022	541.0	0.000	0.00	0.0	0.600	o	750	Pipe/Conduit	
84.006	33.073	0.011	3011.6	0.000	0.00	0.0	0.600	o	900	Pipe/Conduit	
86.000	65.419	0.131	499.4	0.001	5.00	0.0	0.600	o	450	Pipe/Conduit	
86.001	58.469	0.117	499.7	0.043	0.00	0.0	0.600	o	450	Pipe/Conduit	
86.002	81.003	0.162	500.0	0.051	0.00	0.0	0.600	o	450	Pipe/Conduit	
86.003	81.004	0.162	500.0	0.073	0.00	0.0	0.600	o	450	Pipe/Conduit	
86.004	111.005	0.222	500.0	0.073	0.00	0.0	0.600	o	450	Pipe/Conduit	
86.005	111.005	0.222	500.0	0.100	0.00	0.0	0.600	o	450	Pipe/Conduit	
86.006	95.499	0.191	500.0	0.100	0.00	0.0	0.600	o	450	Pipe/Conduit	
86.007	95.501	0.191	500.0	0.086	0.00	0.0	0.600	o	450	Pipe/Conduit	
86.008	95.500	0.191	500.0	0.086	0.00	0.0	0.600	o	450	Pipe/Conduit	
86.009	70.529	0.191	369.3	0.086	0.00	0.0	0.600	o	450	Pipe/Conduit	
87.000	25.128	0.168	149.6	0.000	5.00	0.0	0.600	o	150	Pipe/Conduit	
88.000	5.121	0.064	80.0	0.011	5.00	0.0	0.600	o	150	Pipe/Conduit	
88.001	9.720	0.097	100.2	0.024	0.00	0.0	0.600	o	150	Pipe/Conduit	
88.002	6.690	0.067	99.9	0.015	0.00	0.0	0.600	o	150	Pipe/Conduit	
88.003	31.666	0.444	71.3	0.048	0.00	0.0	0.600	o	150	Pipe/Conduit	
89.000	41.702	12.925	3.2	0.248	5.00	0.0	0.600	o	150	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
84.005	23.94	17.02	40.102	4.893	0.0	0.0	0.0	1.20	528.4	319.3
84.006	23.08	18.01	39.930	4.893	0.0	0.0	0.0	0.56	357.0	319.3
86.000	46.08	6.21	42.893	0.001	0.0	0.0	0.0	0.90	143.6	0.1
86.001	41.52	7.29	42.762	0.044	0.0	0.0	0.0	0.90	143.6	4.9
86.002	36.78	8.78	42.645	0.095	0.0	0.0	0.0	0.90	143.5	9.5
86.003	33.21	10.28	42.483	0.168	0.0	0.0	0.0	0.90	143.5	15.1
86.004	29.52	12.33	42.321	0.241	0.0	0.0	0.0	0.90	143.5	19.3
86.005	26.71	14.38	42.099	0.341	0.0	0.0	0.0	0.90	143.5	24.7
86.006	24.78	16.14	41.877	0.441	0.0	0.0	0.0	0.90	143.5	29.6
86.007	23.17	17.91	41.686	0.527	0.0	0.0	0.0	0.90	143.5	33.1
86.008	21.80	19.67	41.495	0.613	0.0	0.0	0.0	0.90	143.5	36.2
86.009	21.03	20.79	41.304	0.699	0.0	0.0	0.0	1.05	167.3	39.8
87.000	49.78	5.51	41.600	0.000	0.0	0.0	0.0	0.82	14.5	0.0
88.000	50.00	5.08	42.965	0.011	0.0	0.0	0.0	1.12	19.9	1.6
88.001	50.00	5.24	42.901	0.036	0.0	0.0	0.0	1.00	17.7	4.8
88.002	50.00	5.35	42.804	0.051	0.0	0.0	0.0	1.01	17.8	6.9
88.003	48.20	5.79	42.737	0.099	0.0	0.0	0.0	1.19	21.1	12.9
89.000	50.00	5.12	55.218	0.248	0.0	0.0	0.0	5.65	99.9	33.6

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Network Design Table for Catchment C

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
88.004	10.721	0.071	151.0	0.094	0.00	0.0	0.600	o	300	Pipe/Conduit	
88.005	14.762	0.151	97.8	0.042	0.00	0.0	0.600	o	300	Pipe/Conduit	
88.006	65.006	0.202	321.8	0.436	0.00	0.0	0.600	o	450	Pipe/Conduit	
88.007	7.767	0.022	353.0	0.120	0.00	0.0	0.600	o	600	Pipe/Conduit	
88.008	50.178	0.143	350.9	0.480	0.00	0.0	0.600	o	600	Pipe/Conduit	
88.009	69.948	0.140	499.6	0.587	0.00	0.0	0.600	o	600	Pipe/Conduit	
88.010	70.000	0.140	500.0	0.546	0.00	0.0	0.600	o	750	Pipe/Conduit	
88.011	72.120	0.144	500.8	0.921	0.00	0.0	0.600	o	750	Pipe/Conduit	
88.012	7.902	0.016	493.9	0.036	0.00	0.0	0.600	o	750	Pipe/Conduit	
88.013	27.903	0.056	498.3	0.193	0.00	0.0	0.600	o	900	Pipe/Conduit	
88.014	15.790	0.032	493.4	0.072	0.00	0.0	0.600	o	900	Pipe/Conduit	
88.015	13.849	0.028	494.6	0.033	0.00	0.0	0.600	o	900	Pipe/Conduit	
88.016	24.979	0.050	499.6	0.132	0.00	0.0	0.600	o	900	Pipe/Conduit	
88.017	15.365	0.031	495.6	0.060	0.00	0.0	0.600	o	900	Pipe/Conduit	
88.018	11.978	0.024	499.1	0.012	0.00	0.0	0.600	o	900	Pipe/Conduit	
88.019	44.644	0.089	501.6	0.134	0.00	0.0	0.600	o	900	Pipe/Conduit	
88.020	14.811	0.030	493.7	0.008	0.00	0.0	0.600	o	900	Pipe/Conduit	
88.021	45.987	0.092	501.6	0.117	0.00	0.0	0.600	o	900	Pipe/Conduit	
88.022	67.963	0.135	503.4	0.061	0.00	0.0	0.600	o	900	Pipe/Conduit	
88.023	69.033	0.138	501.6	0.024	0.00	0.0	0.600	o	900	Pipe/Conduit	
88.024	7.731	0.015	515.4	0.024	0.00	0.0	0.600	o	900	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
88.004	47.46	5.93	42.143	0.442	0.0	0.0	0.0	1.28	90.3	56.8
88.005	46.67	6.09	42.071	0.483	0.0	0.0	0.0	1.59	112.4	61.1
88.006	42.44	7.05	41.770	0.919	0.0	0.0	0.0	1.13	179.4	105.6
88.007	42.05	7.15	41.418	1.040	0.0	0.0	0.0	1.29	364.8	118.4
88.008	39.75	7.79	41.396	1.520	0.0	0.0	0.0	1.29	365.9	163.6
88.009	36.55	8.87	41.253	2.107	0.0	0.0	0.0	1.08	306.1	208.5
88.010	34.24	9.81	40.963	2.653	0.0	0.0	0.0	1.24	549.9	246.0
88.011	32.22	10.77	40.823	3.574	0.0	0.0	0.0	1.24	549.4	311.8
88.012	32.01	10.88	40.678	3.610	0.0	0.0	0.0	1.25	553.3	313.0
88.013	31.39	11.21	40.513	3.803	0.0	0.0	0.0	1.40	888.6	323.4
88.014	31.06	11.40	40.457	3.876	0.0	0.0	0.0	1.40	893.0	326.0
88.015	30.77	11.56	40.425	3.908	0.0	0.0	0.0	1.40	891.9	326.0
88.016	30.27	11.86	40.398	4.041	0.0	0.0	0.0	1.39	887.4	331.2
88.017	29.97	12.04	40.348	4.100	0.0	0.0	0.0	1.40	891.0	332.8
88.018	29.74	12.19	40.317	4.112	0.0	0.0	0.0	1.40	887.9	332.8
88.019	28.92	12.72	40.293	4.247	0.0	0.0	0.0	1.39	885.6	332.8
88.020	28.66	12.90	40.204	4.255	0.0	0.0	0.0	1.40	892.8	332.8
88.021	27.90	13.45	40.174	4.372	0.0	0.0	0.0	1.39	885.6	332.8
88.022	26.85	14.26	40.082	4.434	0.0	0.0	0.0	1.39	884.0	332.8
88.023	25.89	15.09	39.947	4.457	0.0	0.0	0.0	1.39	885.6	332.8
88.024	25.78	15.18	39.809	4.481	0.0	0.0	0.0	1.37	873.6	332.8

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Network Design Table for Catchment C

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
88.025	66.023	0.132	500.2	0.046	0.00	0.0	0.600	o	900	Pipe/Conduit	
88.026	56.011	0.146	383.6	0.052	0.00	0.0	0.600	o	900	Pipe/Conduit	
88.027	22.433	0.046	487.7	0.000	0.00	0.0	0.600	o	900	Pipe/Conduit	
88.028	13.795	0.028	500.0	0.000	0.00	0.0	0.600	o	900	Pipe/Conduit	
86.010	24.711	0.049	500.0	0.084	0.00	0.0	0.600	o	900	Pipe/Conduit	
84.007	76.445	2.150	35.6	0.437	0.00	0.0	0.600	o	1200	Pipe/Conduit	
84.008	14.000#	0.350	40.0	0.000	0.00	0.0	0.600	o	1200	Pipe/Conduit	
90.000	22.005	3.000	7.3	0.000	5.00	0.0	0.600	o	225	Pipe/Conduit	
90.001	366.400#	10.300	35.6	5.054	0.00	0.0	0.600	o	225	Pipe/Conduit	
90.002	189.000#	1.115	169.5	0.872	0.00	0.0	0.600	o	225	Pipe/Conduit	
9.032	75.151	0.712	105.5	0.832	0.00	0.0	0.600	o	450	Pipe/Conduit	
9.033	33.595	0.225	149.3	0.000	0.00	0.0	0.600	o	450	Pipe/Conduit	
9.034	65.169	1.128	57.8	0.000	0.00	0.0	0.600	o	450	Pipe/Conduit	
9.035	53.153	1.193	44.6	0.000	0.00	0.0	0.600	o	450	Pipe/Conduit	
9.036	31.803	0.110	289.1	0.000	0.00	0.0	0.600	o	450	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
88.025	24.95	15.97	39.794	4.527	0.0	0.0	0.0	1.39	886.9	332.8
88.026	24.37	16.56	39.662	4.579	0.0	0.0	0.0	1.59	1013.8	332.8
88.027	24.12	16.82	39.516	4.579	0.0	0.0	0.0	1.41	898.3	332.8
88.028	23.97	16.99	39.470	4.579	0.0	0.0	0.0	1.39	887.1	332.8
86.010	20.84	21.08	39.442	5.362	0.0	0.0	0.0	1.39	887.1	332.8
84.007	20.71	21.29	39.100	10.693	0.0	0.0	0.0	6.28	7106.8	599.7
84.008	20.68	21.33	36.950	10.693	0.0	0.0	0.0	5.92	6699.5	599.7
90.000	50.00	5.08	51.000	0.000	0.0	0.0	0.0	4.86	193.3	0.0
90.001	39.56	7.85	48.000	5.054	0.0	0.0	0.0	2.20	87.5«	541.5
90.002	31.79	11.00	37.700	5.926	0.0	0.0	0.0	1.00	39.8«	541.5
9.032	20.29	21.96	35.880	43.321	4.3	0.0	0.0	1.98	314.7«	2385.3
9.033	20.09	22.30	35.168	43.321	4.3	0.0	0.0	1.66	264.3«	2385.3
9.034	19.86	22.70	34.943	43.321	4.3	0.0	0.0	2.68	426.1«	2385.3
9.035	19.70	22.99	33.815	43.321	4.3	0.0	0.0	3.05	485.5«	2385.3
9.036	19.45	23.44	32.622	43.321	4.3	0.0	0.0	1.19	189.3«	2385.3

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Manhole Schedules for Catchment C

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam.,L*W (mm)	Pipe Out PN	Pipe Out Invert Level (m)	Pipe Out Diameter (mm)	Pipes In PN	Pipes In Invert Level (m)	Pipes In Diameter (mm)	Backdrop (mm)
OB9	68.920	1.200	Open Manhole	3000	9.000	67.720	-4				
S39	69.855	2.255	Open Manhole	3000	9.001	67.600	750	9.000	67.600	-4	
OB10	69.855	1.200	Open Manhole	1500	10.000	68.655	375				
S40 (BD)	69.855	2.285	Open Manhole	1800	9.002	67.570	750	9.001	67.570	750	
								10.000	68.640	375	695
S41	68.855	1.390	Open Manhole	1800	9.003	67.465	750	9.002	67.465	750	
Tank 6 - Full Retention	70.000	2.815	Open Manhole	1800	9.004	67.185	750	9.003	67.185	750	
S42	70.000	2.870	Open Manhole	1800	9.005	67.130	750	9.004	67.130	750	
4A	80.350	1.000	Open Manhole	1200	11.000	79.350	300				
4B	75.350	1.000	Open Manhole	1200	11.001	74.350	300	11.000	74.350	300	
SDP004	70.350	2.450	Open Manhole	1200	11.002	67.900	300	11.001	69.350	300	1450
S43 (V)	69.270	1.820	Open Manhole	1500	11.003	67.450	525	11.002	67.450	300	
3A	80.350	1.000	Open Manhole	1200	12.000	79.350	300				
3B	75.350	1.000	Open Manhole	1200	12.001	74.350	300	12.000	74.350	300	
SDP003	70.350	2.450	Open Manhole	1500	12.002	67.900	375	12.001	69.350	300	1375
S44 (V)	68.952	1.612	Open Manhole	1500	11.004	67.340	600	11.003	67.340	525	
								12.002	67.735	375	170
2A	80.350	1.000	Open Manhole	1200	13.000	79.350	300				
2B	75.350	1.000	Open Manhole	1200	13.001	74.350	300	13.000	74.350	300	
SDP002	70.350	2.450	Open Manhole	1500	13.002	67.900	375	13.001	69.350	300	1375
S45 (V)	68.952	1.717	Open Manhole	1800	11.005	67.235	825	11.004	67.235	600	
								13.002	67.845	375	160
1A	80.350	1.000	Open Manhole	1200	14.000	79.350	300				
1B	75.350	1.000	Open Manhole	1200	14.001	74.350	300	14.000	74.350	300	
SDP001	70.350	2.450	Open Manhole	1500	14.002	67.900	375	14.001	69.350	300	1375
S46 (V)	69.315	2.190	Open Manhole	1800	11.006	67.125	825	11.005	67.125	825	
								14.002	67.845	375	270
S47 (V)	69.315	2.280	Open Manhole	1800	11.007	67.035	825	11.006	67.035	825	
S48	70.000	3.105	Open Manhole	1800	9.006	66.895	825	9.005	66.895	750	
								11.007	66.895	825	
S49	70.000	3.275	Open Manhole	1800	9.007	66.725	825	9.006	66.725	825	
OB14	68.890	1.200	Open Manhole	1500	15.000	67.690	375				
OB13	68.890	1.170	Open Manhole	1500	16.000	67.720	375				
S50a	69.120	1.420	Open Manhole	1500	16.001	67.700	375	16.000	67.700	375	
S50	69.235	1.681	Open Manhole	1500	15.001	67.554	375	15.000	67.554	375	
								16.001	67.554	375	
OB11	68.890	1.170	Open Manhole	1200	17.000	67.720	300				
S51	69.235	1.811	Open Manhole	1500	15.002	67.424	375	15.001	67.424	375	

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Manhole Schedules for Catchment C

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam.,L*W (mm)	Pipe Out PN	Pipe Out Invert Level (m)	Pipe Out Diameter (mm)	Pipes In PN	Pipes In Invert Level (m)	Pipes In Diameter (mm)	Backdrop (mm)
								17.000	67.580	300	81
OB12	68.890	1.170	Open Manhole	1500	18.000	67.720	375				
S52	69.235	1.545	Open Manhole	1500	18.001	67.690	375	18.000	67.690	375	
S53	69.235	1.907	Open Manhole	1500	15.003	67.328	525	15.002	67.328	375	
								18.001	67.594	375	116
Tank 7 - Full Retention	70.000	2.847	Open Manhole	1500	15.004	67.153	525	15.003	67.153	525	
S54	70.000	3.446	Open Manhole	2100	9.008	66.554	900	9.007	66.554	825	
								15.004	67.143	525	214
S55	70.000	3.541	Open Manhole	2100	9.009	66.459	900	9.008	66.459	900	
KD17	69.440	1.200	Open Manhole	1200	19.000	68.240	150				
S56	70.000	3.761	Open Manhole	2100	9.010	66.239	900	9.009	66.239	900	
								19.000	66.240	150	
S57	70.000	3.816	Open Manhole	2100	9.011	66.184	900	9.010	66.184	900	
10A	80.350	1.000	Open Manhole	1200	20.000	79.350	300				
10B	75.350	1.000	Open Manhole	1200	20.001	74.350	300	20.000	74.350	300	
SDP010	70.350	2.450	Open Manhole	1500	20.002	67.900	375	20.001	69.350	300	1375
S59 (V)	70.150	2.275	Open Manhole	1500	20.003	67.875	375	20.002	67.875	375	
S58 (V)	70.150	2.275	Open Manhole	1200	21.000	67.875	300				
S60	70.000	3.880	Open Manhole	2100	9.012	66.120	900	9.011	66.120	900	
								20.003	67.745	375	1100
								21.000	67.745	300	1025
KD18	69.925	1.200	Open Manhole	1200	22.000	68.725	225				
KD19	69.440	1.200	Open Manhole	1200	22.001	68.240	300	22.000	68.675	225	360
KD20	69.095	0.910	Open Manhole	1500	22.002	68.185	375	22.001	68.185	300	
KD21	69.095	1.200	Open Manhole	1500	22.003	67.895	450	22.002	68.130	375	160
KD22	68.750	1.200	Open Manhole	1500	23.000	67.550	375				
S61	68.800	1.260	Open Manhole	1500	22.004	67.540	450	22.003	67.840	450	300
								23.000	67.540	375	
KD23	68.170	1.200	Open Manhole	1500	24.000	66.970	375				
S62	68.800	1.855	Open Manhole	1500	22.005	66.945	525	22.004	67.460	450	440
								24.000	66.945	375	
Tank 8 - Bypass	68.800	1.960	Open Manhole	1500	22.006	66.840	600	22.005	66.840	525	
S63	68.900	3.065	Open Manhole	2100	9.013	65.835	900	9.012	65.835	900	
								22.006	66.810	600	675
KD24	68.385	1.200	Open Manhole	1200	25.000	67.185	225				
S64	68.425	2.645	Open Manhole	2100	9.014	65.780	900	9.013	65.780	900	
								25.000	67.175	225	720
Ex SC15	70.000	4.428	Open Manhole	2100	9.015	65.572	900	9.014	65.572	900	

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Manhole Schedules for Catchment C

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam.,L*W (mm)	Pipe Out PN	Pipe Out Invert Level (m)	Pipe Out Diameter (mm)	Pipes In PN	Pipes In Invert Level (m)	Pipes In Diameter (mm)	Backdrop (mm)
C16a	68.110	1.500	Open Manhole	1200	26.000	66.610	300				
1	71.600	1.600	Open Manhole	1200	27.000	70.000	300				
2	71.180	1.850	Open Manhole	1500	27.001	69.330	375	27.000	69.405	300	
3	71.410	2.452	Open Manhole	1500	27.002	68.958	450	27.001	69.033	375	
4	71.410	2.674	Open Manhole	1500	27.003	68.736	450	27.002	68.736	450	
5	71.490	3.172	Open Manhole	1500	27.004	68.318	450	27.003	68.318	450	
6	70.600	3.317	Open Manhole	1500	27.005	67.283	450	27.004	67.283	450	
7	69.530	3.047	Open Manhole	1500	27.006	66.483	450	27.005	66.483	450	
8	69.030	3.040	Open Manhole	1500	27.007	65.990	600	27.006	66.141	450	1
C16	68.690	3.100	Open Manhole	1500	26.001	65.590	600	26.000	65.890	300	
								27.007	65.590	600	
C17	69.130	4.503	Open Manhole	2100	9.016	64.627	900	9.015	64.627	900	
								26.001	64.927	600	
C18	69.612	5.931	Open Manhole	2100	9.017	63.681	900	9.016	63.681	900	
OB1	68.920	1.275	Open Manhole	3000	28.000	67.645	-5				
S1	69.855	2.330	Open Manhole	3000	28.001	67.525	750	28.000	67.525	-5	
OB2	69.795	1.500	Open Manhole	1500	29.000	68.295	375				
S2 (BD)	69.855	2.375	Open Manhole	1800	28.002	67.480	750	28.001	67.480	750	
								29.000	68.275	375	420
OB3	69.340	1.425	Open Manhole	1500	30.000	67.915	375				
S3	69.855	2.540	Open Manhole	1800	28.003	67.315	750	28.002	67.315	750	
								30.000	67.835	375	145
Tank 1 -Full Retention	70.000	2.830	Open Manhole	1800	28.004	67.170	750	28.003	67.170	750	
S4	70.000	2.870	Open Manhole	1800	28.005	67.130	750	28.004	67.130	750	
5A	80.350	1.000	Open Manhole	1200	31.000	79.350	300				
5B	75.350	1.000	Open Manhole	1200	31.001	74.350	300	31.000	74.350	300	
SDP005	70.350	2.450	Open Manhole	1500	31.002	67.900	450	31.001	69.350	300	1300
S5 (V)	68.952	1.107	Open Manhole	1500	31.003	67.845	525	31.002	67.845	450	
6A	80.350	1.000	Open Manhole	1200	32.000	79.350	300				
6B	75.350	1.000	Open Manhole	1200	32.001	74.350	300	32.000	74.350	300	
SDP006	70.350	2.450	Open Manhole	1500	32.002	67.900	375	32.001	69.350	300	1375
S6 (V)	68.952	1.212	Open Manhole	1500	31.004	67.740	600	31.003	67.740	525	
								32.002	67.740	375	
7A	80.350	1.000	Open Manhole	1200	33.000	79.350	300				
7B	75.350	1.000	Open Manhole	1200	33.001	74.350	300	33.000	74.350	300	
SDP007	70.350	2.450	Open Manhole	1500	33.002	67.900	375	33.001	69.350	300	1375
S7 (V)	68.952	1.317	Open Manhole	1500	31.005	67.635	600	31.004	67.635	600	
								33.002	67.845	375	

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Manhole Schedules for Catchment C

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam.,L*W (mm)	Pipe Out PN	Pipe Out Invert Level (m)	Pipe Out Diameter (mm)	Pipes In PN	Pipes In Invert Level (m)	Pipes In Diameter (mm)	Backdrop (mm)
8A	80.350	1.000	Open Manhole	1200	34.000	79.350	300				
8B	75.350	1.000	Open Manhole	1200	34.001	74.350	300	34.000	74.350	300	
SDP008	70.350	2.450	Open Manhole	1500	34.002	67.900	375	34.001	69.350	300	1375
S8 (V)	68.952	1.437	Open Manhole	1500	31.006	67.515	600	31.005	67.515	600	
								34.002	67.845	375	105
S9 (V)	69.850	2.850	Open Manhole	2100	28.006	67.000	900	28.005	67.000	750	
								31.006	67.320	600	20
9A	80.350	1.000	Open Manhole	1500	35.000	79.350	375				
9B	75.350	1.000	Open Manhole	1500	35.001	74.350	375	35.000	74.350	375	
SDP009	70.350	2.450	Open Manhole	1500	35.002	67.900	375	35.001	69.350	375	1450
S10 (V)	70.130	2.245	Open Manhole	1500	35.003	67.885	375	35.002	67.885	375	
S11	70.092	3.162	Open Manhole	2100	28.007	66.930	900	28.006	66.930	900	
								35.003	67.800	375	345
S12	70.130	3.340	Open Manhole	2100	28.008	66.790	900	28.007	66.790	900	
S13	70.130	3.510	Open Manhole	2100	28.009	66.620	900	28.008	66.620	900	
OB4	69.905	1.500	Open Manhole	1500	36.000	68.405	450				
S14	70.025	1.645	Open Manhole	1500	36.001	68.380	450	36.000	68.380	450	
OB5	69.955	1.200	Open Manhole	1200	37.000	68.755	225				
S15	70.025	1.360	Open Manhole	1200	37.001	68.665	225	37.000	68.665	225	
OB6	69.905	1.200	Open Manhole	1500	38.000	68.705	450				
S16	70.025	1.422	Open Manhole	1500	37.002	68.603	450	37.001	68.603	225	
								38.000	68.680	450	77
S17	70.025	1.925	Open Manhole	1500	36.002	68.100	450	36.001	68.100	450	
								37.002	68.563	450	463
Tank 2 - Full Retention	70.015	2.005	Open Manhole	1500	36.003	68.010	450	36.002	68.010	450	
S18 (BD)	70.130	3.615	Open Manhole	2100	28.010	66.515	900	28.009	66.515	900	
								36.003	67.985	450	1020
KD1	70.240	1.500	Open Manhole	1200	39.000	68.740	225				
S19	70.000	1.295	Open Manhole	1200	39.001	68.705	225	39.000	68.705	225	
OB7	70.035	1.200	Open Manhole	1500	40.000	68.835	450				
S20	70.158	1.718	Open Manhole	1500	39.002	68.440	450	39.001	68.440	225	
								40.000	68.800	450	360
OB8	70.035	1.200	Open Manhole	1500	41.000	68.835	375				
S21	70.158	1.358	Open Manhole	1500	41.001	68.800	375	41.000	68.800	375	
S22	70.158	2.123	Open Manhole	1500	39.003	68.035	450	39.002	68.035	450	
								41.001	68.725	375	615
TANK 3 - Full Retention	70.092	2.122	Open Manhole	1500	39.004	67.970	450	39.003	67.970	450	
S23	70.130	3.710	Open Manhole	2100	28.011	66.420	1050	28.010	66.420	900	

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Manhole Schedules for Catchment C

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam.,L*W (mm)	Pipe Out PN	Pipe Out Invert Level (m)	Pipe Out Diameter (mm)	Pipes In PN	Pipes In Invert Level (m)	Pipes In Diameter (mm)	Backdrop (mm)
								39.004	67.905	450	885
S24	70.130	3.780	Open Manhole	2100	28.012	66.350	1050	28.011	66.350	1050	
KD2	68.625	1.200	Open Manhole	1200	42.000	67.425	300				
S25 (BD)	68.860	2.820	Open Manhole	2100	28.013	66.040	1050	28.012	66.040	1050	
								42.000	67.405	300	615
11A	80.350	1.000	Open Manhole	1200	43.000	79.350	300				
11B	75.350	1.000	Open Manhole	1200	43.001	74.350	300	43.000	74.350	300	
SDP011	70.350	2.450	Open Manhole	1500	43.002	67.900	375	43.001	69.350	300	1375
S26 (V)	70.075	2.185	Open Manhole	1500	43.003	67.890	375	43.002	67.890	375	
S27 (V)	70.075	2.185	Open Manhole	1500	44.000	67.890	375				
S28	70.325	2.495	Open Manhole	1500	43.004	67.830	450	43.003	67.830	375	
								44.000	67.830	375	
S29	68.700	2.730	Open Manhole	2100	28.014	65.970	1050	28.013	65.970	1050	
								43.004	67.680	450	1110
KD3	67.915	1.200	Open Manhole	1200	45.000	66.715	300				
S30	68.300	2.440	Open Manhole	2100	28.015	65.860	1050	28.014	65.860	1050	
								45.000	66.695	300	85
KD4	67.940	1.200	Open Manhole	1200	46.000	66.740	300				
KD9	67.970	1.240	Open Manhole	1200	46.001	66.730	300	46.000	66.730	300	
KD5	69.785	1.200	Open Manhole	1500	47.000	68.585	450				
KD6	69.440	1.200	Open Manhole	1500	47.001	68.240	450	47.000	68.525	450	285
KD7	69.095	0.915	Open Manhole	1500	47.002	68.180	450	47.001	68.180	450	
KD8	68.515	1.200	Open Manhole	1500	47.003	67.315	600	47.002	67.720	450	255
S31	68.050	1.335	Open Manhole	1500	46.002	66.715	600	46.001	66.715	300	
								47.003	67.265	600	550
Tank 4 - By Pass	68.050	1.410	Open Manhole	1500	46.003	66.640	600	46.002	66.640	600	
S32	68.050	1.425	Open Manhole	1500	46.004	66.625	600	46.003	66.625	600	
S33	68.208	2.528	Open Manhole	2100	28.016	65.680	1050	28.015	65.680	1050	
								46.004	66.580	600	450
S34	68.650	3.110	Open Manhole	2100	28.017	65.540	1050	28.016	65.540	1050	
KD10	68.375	1.200	Open Manhole	1200	48.000	67.175	225				
S35	68.455	1.290	Open Manhole	1200	48.001	67.165	225	48.000	67.165	225	
KD11	69.785	1.200	Open Manhole	1200	49.000	68.585	300				
KD12	69.440	0.915	Open Manhole	1500	49.001	68.525	375	49.000	68.525	300	
KD13	69.095	1.200	Open Manhole	1500	49.002	67.895	450	49.001	68.465	375	495
KD14	68.750	1.200	Open Manhole	1500	49.003	67.550	525	49.002	67.835	450	210
KD15	68.375	1.200	Open Manhole	1200	50.000	67.175	225				
S36	68.455	1.400	Open Manhole	1500	48.002	67.055	525	48.001	67.055	225	

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Manhole Schedules for Catchment C

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam.,L*W (mm)	Pipe Out PN	Pipe Out Invert Level (m)	Pipe Out Diameter (mm)	Pipes In PN	Pipes In Invert Level (m)	Pipes In Diameter (mm)	Backdrop (mm)
								49.003	67.495	525	440
								50.000	67.055	225	
Tank 5 - Bypass	68.455	1.470	Open Manhole	1500	48.003	66.985	525	48.002	66.985	525	
S37	68.455	1.485	Open Manhole	1500	48.004	66.970	525	48.003	66.970	525	
S38 (P)	68.625	3.285	Open Manhole	2100	28.018	65.340	1050	28.017	65.340	1050	
								48.004	66.930	525	1065
Ex SC41	70.000	5.000	Open Manhole	2100	28.019	65.000	900	28.018	65.155	1050	305
C44	69.398	6.551	Open Manhole	2100	9.018	62.847	900	9.017	62.847	900	
								28.019	62.847	900	
C19	83.721	1.050	Open Manhole	1200	51.000	82.671	150				
C20	82.256	1.050	Open Manhole	1200	51.001	81.206	150	51.000	81.206	150	
C21	80.753	1.050	Open Manhole	1200	51.002	79.703	150	51.001	79.703	150	
C22	79.479	1.050	Open Manhole	1200	51.003	78.429	150	51.002	78.429	150	
C23	79.479	3.254	Open Manhole	1200	51.004	76.225	225	51.003	76.300	150	
C24	77.829	2.016	Open Manhole	1200	51.005	75.813	225	51.004	75.813	225	
OB1	76.990	1.136	Open Manhole	1200	52.000	75.854	150				
PPIC1	77.050	1.246	Open Manhole	1200	52.001	75.804	150	52.000	75.804	150	
PPIC2	77.020	1.376	Open Manhole	1200	52.002	75.644	150	52.001	75.644	150	
BI RWP	77.000	1.356	Open Manhole	1200	53.000	75.644	150				
Ex. SC25	76.921	1.402	Open Manhole	1200	52.003	75.519	225	52.002	75.594	150	
								53.000	75.594	150	
Ex. SC26	76.304	1.450	Open Manhole	1200	52.004	74.854	300	52.003	74.929	225	
New gully	75.580	0.370	Open Manhole	1200	54.000	75.210	150				
Separator	76.300	1.315	Open Manhole	1200	54.001	74.985	150	54.000	75.085	150	100
OB2	76.140	1.035	Open Manhole	1200	55.000	75.105	150				
MS RWP	76.625	1.620	Open Manhole	1200	56.000	75.005	150				
PS3	76.550	1.680	Open Manhole	1200	54.002	74.870	225	54.001	74.945	150	
								55.000	74.945	150	
								56.000	74.945	150	
OB3	76.575	1.630	Open Manhole	1200	57.000	74.945	150				
PS4	76.575	1.895	Open Manhole	1200	52.005	74.680	300	52.004	74.680	300	
								54.002	74.755	225	
								57.000	74.830	150	
C27	76.336	1.716	Open Manhole	1200	51.006	74.620	300	51.005	74.695	225	
								52.005	74.620	300	
C28	74.920	1.420	Open Manhole	1200	51.007	73.500	300	51.006	73.500	300	
C29	75.557	1.475	Open Manhole	1200	58.000	74.082	150				
C30	74.373	1.350	Open Manhole	1200	58.001	73.023	150	58.000	73.023	150	

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Manhole Schedules for Catchment C

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam.,L*W (mm)	Pipe Out PN	Pipe Out Invert Level (m)	Pipe Out Diameter (mm)	Pipes In PN	Pipes In Invert Level (m)	Pipes In Diameter (mm)	Backdrop (mm)
C31	73.349	1.434	Open Manhole	1200	58.002	71.915	225	58.001	71.990	150	
C32	72.668	1.668	Open Manhole	1500	58.003	71.000	375	58.002	71.150	225	
C33	72.929	2.012	Open Manhole	1500	51.008	70.917	375	51.007	70.992	300	
								58.003	70.917	375	
C34	69.716	1.575	Open Manhole	1500	51.009	68.141	375	51.008	68.141	375	
C35	66.836	1.650	Open Manhole	1500	51.010	65.186	450	51.009	65.261	375	
C36	66.255	1.800	Open Manhole	1500	51.011	64.455	600	51.010	64.605	450	
C37	66.211	1.892	Open Manhole	1500	51.012	64.319	600	51.011	64.319	600	
C38	66.775	2.591	Open Manhole	1500	51.013	64.184	600	51.012	64.184	600	
C39	68.127	4.243	Open Manhole	1500	51.014	63.884	600	51.013	63.884	600	
C40	69.594	6.010	Open Manhole	1500	51.015	63.584	600	51.014	63.584	600	
C46	69.215	7.173	Open Manhole	2100	9.019	62.042	900	9.018	62.042	900	
								51.015	62.342	600	
C47	65.851	5.270	Open Manhole	2100	9.020	60.581	900	9.019	60.581	900	
OB1	66.530	1.070	Open Manhole	1200	59.000	65.460	225				
OB2	66.465	1.315	Open Manhole	1200	60.000	65.150	300				
S1	66.570	1.620	Open Manhole	1200	59.001	64.950	300	59.000	65.100	225	75
								60.000	64.950	300	
OB3	66.465	1.825	Open Manhole	1500	61.000	64.640	450				
S2	66.575	2.130	Open Manhole	1500	59.002	64.445	600	59.001	64.745	300	
								61.000	64.595	450	
OB4	66.610	1.245	Open Manhole	1200	62.000	65.365	225				
S3	66.715	1.430	Open Manhole	1200	62.001	65.285	225	62.000	65.285	225	
OB5	66.610	1.810	Open Manhole	1500	63.000	64.800	450				
S4	66.715	1.965	Open Manhole	1500	62.002	64.750	450	62.001	64.975	225	
								63.000	64.750	450	
OB6	66.610	1.840	Open Manhole	1200	64.000	64.770	300				
S5	66.715	2.315	Open Manhole	1500	62.003	64.400	600	62.002	64.550	450	
								64.000	64.700	300	
S6	66.715	2.415	Open Manhole	1500	59.003	64.300	600	59.002	64.300	600	
								62.003	64.300	600	
OB7	67.085	1.085	Open Manhole	1200	65.000	66.000	150				
S8	67.320	1.585	Open Manhole	1200	65.001	65.735	150	65.000	65.735	150	
OB8	67.085	1.765	Open Manhole	1200	66.000	65.320	225				
S9	67.320	2.105	Open Manhole	1200	65.002	65.215	225	65.001	65.290	150	
								66.000	65.215	225	
OB9	67.085	2.425	Open Manhole	1200	67.000	64.660	225				
S7	67.320	3.145	Open Manhole	1500	59.004	64.175	600	59.003	64.175	600	

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Manhole Schedules for Catchment C

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam.,L*W (mm)	Pipe Out PN	Pipe Out Invert Level (m)	Pipe Out Diameter (mm)	Pipes In PN	Pipes In Invert Level (m)	Pipes In Diameter (mm)	Backdrop (mm)
								65.002	64.550	225	
								67.000	64.550	225	
OB10	66.940	2.200	Open Manhole	1200	68.000	64.740	150				
S10	67.175	2.545	Open Manhole	1200	68.001	64.630	150	68.000	64.630	150	
S11	67.175	3.225	Open Manhole	1800	59.005	63.950	750	59.004	64.100	600	
								68.001	64.550	150	
S12	67.050	3.115	Open Manhole	1800	59.006	63.935	750	59.005	63.935	750	
FRS1	67.065	3.245	Open Manhole	1800	59.007	63.820	750	59.006	63.920	750	100
S13	67.125	3.330	Open Manhole	1800	59.008	63.795	750	59.007	63.795	750	
CP5	67.070	1.420	Open Manhole	1200	69.000	65.650	225				
G1	66.385	1.865	Open Manhole	1200	70.000	64.520	150				
S14	67.000	3.230	Open Manhole	1800	59.009	63.770	750	59.008	63.770	750	
								69.000	64.295	225	
								70.000	64.370	150	
CP8	67.215	2.175	Open Manhole	1200	71.000	65.040	225				
AT1	69.000	5.290	Open Manhole	1800	59.010	63.710	750	59.009	63.710	750	
								71.000	64.785	225	550
S15	66.050	2.390	Open Manhole	1800	59.011	63.660	300	59.010	63.660	750	
SSFD	63.720	1.150	Open Manhole	1200	72.000	62.570	150				
Ex SC72a	63.720	1.150	Open Manhole	1200	59.012	62.570	150	59.011	62.570	300	
								72.000	62.570	150	
Spur	64.435	4.730	Junction		9.021	59.705	900	9.020	60.155	900	450
								59.012	60.455	150	
C48	63.019	4.209	Open Manhole	2100	9.022	59.260	900	9.021	58.810	900	
C49	60.634	3.431	Open Manhole	2100	9.023	57.203	900	9.022	57.203	900	
C50	57.788	3.038	Open Manhole	2100	9.024	54.750	900	9.023	54.750	900	
C51	55.447	2.240	Open Manhole	2100	9.025	53.207	900	9.024	53.207	900	
SW01	58.600	0.750	Open Manhole	1200	73.000	57.850	150				
SW02	58.370	0.939	Open Manhole	1200	73.001	57.431	225	73.000	57.506	150	
SW02A	64.330	1.650	Open Manhole	1200	74.000	62.680	150				
SW03	57.754	0.954	Open Manhole	1200	73.002	56.800	300	73.001	56.875	225	
								74.000	57.004	150	54
SW04	57.214	1.003	Open Manhole	1200	73.003	56.211	300	73.002	56.211	300	
SW05	56.600	1.348	Open Manhole	1200	73.004	55.252	300	73.003	55.252	300	
SW05A	56.073	0.750	Open Manhole	1200	75.000	55.323	150				
SW06	55.886	1.201	Open Manhole	1500	73.005	54.685	375	73.004	54.760	300	
								75.000	54.910	150	
SW07	55.692	1.486	Open Manhole	1500	73.006	54.206	375	73.005	54.206	375	

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Manhole Schedules for Catchment C

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam.,L*W (mm)	Pipe Out PN	Pipe Out Invert Level (m)	Pipe Out Diameter (mm)	Pipes In PN	Pipes In Invert Level (m)	Pipes In Diameter (mm)	Backdrop (mm)
SW08	55.529	1.906	Open Manhole	1500	73.007	53.623	375	73.006	53.623	375	
SW09	55.422	2.189	Open Manhole	1500	73.008	53.233	375	73.007	53.233	375	
SW10	55.857	1.800	Open Manhole	1500	76.000	54.057	600				
SW11	55.738	1.977	Open Manhole	1800	76.001	53.761	750	76.000	53.911	600	
SW12	55.647	1.997	Open Manhole	1800	76.002	53.650	750	76.001	53.650	750	
SW13	55.528	2.161	Open Manhole	1800	76.003	53.367	750	76.002	53.367	750	
SW14	55.484	2.307	Open Manhole	1800	76.004	53.177	750	76.003	53.177	750	
SW15	55.612	2.971	Open Manhole	1800	76.005	52.641	750	76.004	52.841	750	200
SW16	55.589	3.244	Open Manhole	2100	73.009	52.345	900	73.008	52.870	375	
								76.005	52.548	750	53
SW17	58.606	0.706	Open Manhole	1200	77.000	57.900	225				
SW18	58.445	1.032	Open Manhole	1200	77.001	57.413	225	77.000	57.413	225	
SW19	57.723	1.210	Open Manhole	1200	77.002	56.513	225	77.001	56.513	225	
SW20	57.200	0.700	Open Manhole	1200	78.000	56.500	150				
SW21	57.444	1.448	Open Manhole	1200	77.003	55.996	225	77.002	55.996	225	
								78.000	56.071	150	
SW22	57.084	1.584	Open Manhole	1200	77.004	55.500	225	77.003	55.500	225	
Gully	56.774	0.974	Open Manhole	600	79.000	55.800	150				
SW23	56.562	2.126	Open Manhole	1200	77.005	54.436	225	77.004	54.436	225	
								79.000	54.511	150	
SW24	55.645	1.115	Open Manhole	1200	80.000	54.530	150				
SW25	56.340	2.022	Open Manhole	1200	80.001	54.318	150	80.000	54.318	150	
SW26	56.262	2.026	Open Manhole	1200	80.002	54.236	150	80.001	54.236	150	
SW27	56.310	2.549	Open Manhole	1200	77.006	53.761	300	77.005	53.836	225	
								80.002	53.911	150	
SW28	56.044	2.389	Open Manhole	1200	77.007	53.655	300	77.006	53.655	300	
SW29	55.892	2.307	Open Manhole	1200	77.008	53.585	300	77.007	53.585	300	
SW30	55.503	3.445	Open Manhole	2100	73.010	52.058	900	73.009	52.058	900	
								77.008	52.658	300	
SW31	55.327	4.141	Open Manhole	2100	73.011	51.186	900	73.010	51.186	900	
SW32	55.648	5.192	Open Manhole	2100	73.012	50.456	900	73.011	50.456	900	
HD01	57.100	1.050	Open Manhole	1200	81.000	56.050	150				
HD02	56.041	1.067	Open Manhole	1200	81.001	54.974	150	81.000	54.974	150	
HD03	55.655	1.356	Open Manhole	1200	81.002	54.299	150	81.001	54.299	150	
HD04	54.782	1.381	Open Manhole	1200	81.003	53.401	150	81.002	53.401	150	
36	51.350	1.656	Open Manhole	2100	73.013	49.694	1050	73.012	49.844	900	
								81.003	50.594	150	
C52	51.156	2.550	Open Manhole	2400	9.026	48.606	1200	9.025	48.906	900	

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Manhole Schedules for Catchment C

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam.,L*W (mm)	Pipe Out PN	Pipe Out Invert Level (m)	Pipe Out Diameter (mm)	Pipes In PN	Pipes In Invert Level (m)	Pipes In Diameter (mm)	Backdrop (mm)
								73.013	48.756	1050	
C53	46.900	2.580	Open Manhole	2100	9.027	44.320	1200	9.026	44.320	1200	
C54	45.580	3.150	Open Manhole	2400	9.028	42.430	1200	9.027	42.430	1200	
H20C	42.300	2.500	Open Manhole	3000	9.029	39.800	2100	9.028	41.000	1200	300
C55a	42.230	1.050	Open Manhole	1200	82.000	41.180	225				
C55b	45.150	1.350	Open Manhole	1200	83.000	43.800	150				
C55	43.800	3.036	Open Manhole	1200	82.001	40.765	225	82.000	40.839	225	74
								83.000	40.764	150	
56	44.900	4.420	Open Manhole	1200	82.002	40.480	300	82.001	40.481	225	
C57	44.300	4.085	Open Manhole	1200	82.003	40.215	300	82.002	40.215	300	
H7C	42.500	2.500	Open Manhole	1200	82.004	40.000	300	82.003	40.000	300	
BASIN C1	42.000	2.700	Open Manhole	3000	9.030	39.300	450	9.029	39.300	2100	
								82.004	39.300	300	
C59	38.600	2.100	Open Manhole	1500	9.031	36.500	450	9.030	36.500	450	
P2_29	42.400	1.800	Open Manhole	1500	84.000	40.600	600				
P2_30	42.343	1.826	Open Manhole	1500	84.001	40.517	600	84.000	40.517	600	
P2_31	42.162	1.682	Open Manhole	1800	84.002	40.480	600	84.001	40.480	600	
SC72	44.017	0.668	Open Manhole	1200	85.000	43.349	225				
SC73	43.907	0.923	Open Manhole	1200	85.001	42.984	225	85.000	42.984	225	
SC74	43.815	1.123	Open Manhole	1200	85.002	42.692	225	85.001	42.694	225	2
SC75	43.201	0.801	Open Manhole	1200	85.003	42.400	300	85.002	42.400	225	
SC76	43.103	1.153	Open Manhole	1500	85.004	41.950	450	85.003	42.100	300	
SC77	42.911	1.361	Open Manhole	1500	85.005	41.550	600	85.004	41.700	450	
SC78	42.668	1.370	Open Manhole	1500	85.006	41.298	600	85.005	41.298	600	
SC79	42.450	1.370	Open Manhole	1800	85.007	41.080	750	85.006	41.192	600	
SC80	42.222	1.442	Open Manhole	1800	85.008	40.780	750	85.007	40.780	750	
SC81	42.120	1.500	Open Manhole	1800	85.009	40.620	750	85.008	40.620	750	
SC82	42.609	2.136	Open Manhole	1800	85.010	40.473	750	85.009	40.473	750	
SC83	42.400	2.105	Open Manhole	1800	85.011	40.295	750	85.010	40.295	750	
P2_32	42.065	1.837	Open Manhole	1800	84.003	40.228	750	84.002	40.378	600	
								85.011	40.228	750	
P2_33	41.991	1.791	Open Manhole	1800	84.004	40.200	750	84.003	40.200	750	
P2_34	42.255	2.153	Open Manhole	1800	84.005	40.102	750	84.004	40.102	750	
P1 Slab	42.398	2.468	Open Manhole	1800	84.006	39.930	900	84.005	40.080	750	
C88	44.193	1.300	Open Manhole	1500	86.000	42.893	450				
C89	44.062	1.300	Open Manhole	1500	86.001	42.762	450	86.000	42.762	450	
C90	43.963	1.318	Open Manhole	1500	86.002	42.645	450	86.001	42.645	450	
C91	43.801	1.318	Open Manhole	1500	86.003	42.483	450	86.002	42.483	450	

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Manhole Schedules for Catchment C

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam.,L*W (mm)	Pipe Out PN	Pipe Out Invert Level (m)	Pipe Out Diameter (mm)	Pipes In PN	Pipes In Invert Level (m)	Pipes In Diameter (mm)	Backdrop (mm)
C92	43.639	1.318	Open Manhole	1500	86.004	42.321	450	86.003	42.321	450	
C93	43.417	1.318	Open Manhole	1500	86.005	42.099	450	86.004	42.099	450	
C94	43.195	1.318	Open Manhole	1500	86.006	41.877	450	86.005	41.877	450	
C95	43.004	1.318	Open Manhole	1500	86.007	41.686	450	86.006	41.686	450	
C96	42.813	1.318	Open Manhole	1500	86.008	41.495	450	86.007	41.495	450	
C97	42.622	1.318	Open Manhole	1500	86.009	41.304	450	86.008	41.304	450	
C87	42.450	0.850	Open Manhole	1200	87.000	41.600	150				
P2_1	44.315	1.350	Open Manhole	1200	88.000	42.965	150				
P2_2	44.251	1.350	Open Manhole	1200	88.001	42.901	150	88.000	42.901	150	
P2_3	44.154	1.350	Open Manhole	1200	88.002	42.804	150	88.001	42.804	150	
P2_4	44.141	1.404	Open Manhole	1200	88.003	42.737	150	88.002	42.737	150	
P2_5	56.568	1.350	Open Manhole	1200	89.000	55.218	150				
P2_6	43.748	1.605	Open Manhole	1200	88.004	42.143	300	88.003	42.293	150	
								89.000	42.293	150	
P2_7	43.614	1.543	Open Manhole	1200	88.005	42.071	300	88.004	42.072	300	1
P2_8	43.453	1.683	Open Manhole	1500	88.006	41.770	450	88.005	41.920	300	
P2_11	43.304	1.886	Open Manhole	1500	88.007	41.418	600	88.006	41.568	450	
P2_12	43.208	1.812	Open Manhole	1500	88.008	41.396	600	88.007	41.396	600	
P_13	43.102	1.849	Open Manhole	1500	88.009	41.253	600	88.008	41.253	600	
P2_14	42.969	2.006	Open Manhole	1800	88.010	40.963	750	88.009	41.113	600	
P2_15	42.830	2.007	Open Manhole	1800	88.011	40.823	750	88.010	40.823	750	
P2_16	42.683	2.005	Open Manhole	1800	88.012	40.678	750	88.011	40.679	750	1
P2_17	42.781	2.268	Open Manhole	2100	88.013	40.513	900	88.012	40.662	750	
P2_18	42.724	2.267	Open Manhole	2100	88.014	40.457	900	88.013	40.457	900	
P2_19	42.835	2.410	Open Manhole	2100	88.015	40.425	900	88.014	40.425	900	
P2_20	43.007	2.610	Open Manhole	2100	88.016	40.398	900	88.015	40.397	900	
P2_21	42.959	2.611	Open Manhole	2100	88.017	40.348	900	88.016	40.348	900	
P2_22	43.070	2.753	Open Manhole	2100	88.018	40.317	900	88.017	40.317	900	
P2_23	43.218	2.925	Open Manhole	2100	88.019	40.293	900	88.018	40.293	900	
P2_24	43.168	2.964	Open Manhole	2100	88.020	40.204	900	88.019	40.204	900	
P2_25	43.164	2.990	Open Manhole	2100	88.021	40.174	900	88.020	40.174	900	
P2_25A	43.078	2.996	Open Manhole	2100	88.022	40.082	900	88.021	40.082	900	
P2_26	42.941	2.994	Open Manhole	2100	88.023	39.947	900	88.022	39.947	900	
P2_26A	42.801	2.992	Open Manhole	2100	88.024	39.809	900	88.023	39.809	900	
P2_27	42.787	2.993	Open Manhole	2100	88.025	39.794	900	88.024	39.794	900	
P2_28	42.657	2.995	Open Manhole	2100	88.026	39.662	900	88.025	39.662	900	
P2_28A	42.181	2.665	Open Manhole	2100	88.027	39.516	900	88.026	39.516	900	
246	42.490	3.020	Open Manhole	2100	88.028	39.470	900	88.027	39.470	900	

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Manhole Schedules for Catchment C

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam.,L*W (mm)	Pipe Out PN	Pipe Out Invert Level (m)	Pipe Out Diameter (mm)	Pipes In PN	Pipes In Invert Level (m)	Pipes In Diameter (mm)	Backdrop (mm)
C98	42.480	3.038	Open Manhole	2100	86.010	39.442	900	86.009	41.113	450	1221
								87.000	41.432	150	1240
								88.028	39.442	900	
C65	42.458	3.358	Open Manhole	2400	84.007	39.100	1200	84.006	39.919	900	519
								86.010	39.393	900	
C66	38.800	1.850	Open Manhole	2400	84.008	36.950	1200	84.007	36.950	1200	
P16 - Dummy	54.000	3.000	Open Manhole	1200	90.000	51.000	225				
P16 - Tank	51.200	3.200	Open Manhole	1200	90.001	48.000	225	90.000	48.000	225	
P16 - Basin	40.000	2.300	Open Manhole	1200	90.002	37.700	225	90.001	37.700	225	
BASIN C3	38.500	2.620	Open Manhole	2400	9.032	35.880	450	9.031	36.250	450	370
								84.008	36.600	1200	1470
								90.002	36.585	225	480
C68	36.717	1.549	Open Manhole	1500	9.033	35.168	450	9.032	35.168	450	
C69	36.300	1.357	Open Manhole	1500	9.034	34.943	450	9.033	34.943	450	
C70	34.865	1.050	Open Manhole	1500	9.035	33.815	450	9.034	33.815	450	
C71	33.672	1.050	Open Manhole	1500	9.036	32.622	450	9.035	32.622	450	
C OUTFALL	33.425	0.913	Open Manhole	450		OUTFALL		9.036	32.512	450	

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
OB9	446859.278	326497.180	446859.278	326497.180	Required	
S39	446859.278	326461.800	446859.278	326461.800	Required	
OB10	446848.709	326466.322	446848.709	326466.322	Required	
S40 (BD)	446848.709	326461.800	446848.709	326461.800	Required	
S41	446817.315	326461.800	446817.315	326461.800	Required	
Tank 6 - Full Retention	446758.656	326461.800	446758.656	326461.800	Required	

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Manhole Schedules for Catchment C

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
S42	446737.956	326461.800	446737.956	326461.800	Required	
SDP004	446903.183	326516.670	446903.183	326516.670	Required	
S43 (V)	446903.183	326500.717	446903.183	326500.717	Required	
SDP003	446870.704	326516.670	446870.704	326516.670	Required	
S44 (V)	446870.704	326500.717	446870.704	326500.717	Required	
SDP002	446839.104	326516.670	446839.104	326516.670	Required	
S45 (V)	446839.104	326500.717	446839.104	326500.717	Required	
SDP001	446807.073	326516.670	446807.073	326516.670	Required	
S46 (V)	446807.073	326500.717	446807.073	326500.717	Required	
S47 (V)	446773.678	326500.716	446773.678	326500.716	Required	
S48	446737.956	326500.717	446737.956	326500.717	Required	
S49	446737.956	326552.049	446737.956	326552.049	Required	
OB14	446770.295	326541.268	446770.295	326541.268	Required	
OB13	446770.295	326503.840	446770.295	326503.840	Required	
S50a	446764.337	326503.840	446764.337	326503.840	Required	

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Manhole Schedules for Catchment C

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
S50	446764.337	326541.268	446764.337	326541.268	Required	
OB11	446770.296	326574.482	446770.296	326574.482	Required	
S51	446764.337	326574.480	446764.337	326574.480	Required	
OB12	446770.296	326632.280	446770.296	326632.280	Required	
S52	446764.337	326632.281	446764.337	326632.281	Required	
S53	446764.337	326603.380	446764.337	326603.380	Required	
Tank 7 - Full Retention	446740.933	326603.381	446740.933	326603.381	Required	
S54	446737.956	326603.381	446737.956	326603.381	Required	
S55	446737.956	326632.281	446737.956	326632.281	Required	
KD17	446750.176	326672.511	446750.176	326672.511	Required	
S56	446737.956	326667.271	446737.956	326667.271	Required	
S57	446731.095	326682.070	446731.095	326682.070	Required	
SDP010	446809.785	326697.329	446809.785	326697.329	Required	
S59 (V)	446804.113	326698.432	446804.113	326698.432	Required	
S58 (V)	446804.113	326696.546	446804.113	326696.546	Required	

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Manhole Schedules for Catchment C

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
S60	446748.669	326690.265	446748.669	326690.265	Required	
KD18	446752.046	326704.076	446752.046	326704.076	Required	
KD19	446747.937	326718.990	446747.937	326718.990	Required	
KD20	446747.937	326736.000	446747.937	326736.000	Required	
KD21	446747.937	326753.010	446747.937	326753.010	Required	
KD22	446747.941	326770.020	446747.941	326770.020	Required	
S61	446747.938	326767.563	446747.938	326767.563	Required	
KD23	446723.737	326774.968	446723.737	326774.968	Required	
S62	446723.737	326767.563	446723.737	326767.563	Required	
Tank 8 - Bypass	446720.533	326767.563	446720.533	326767.563	Required	
S63	446709.670	326767.563	446709.670	326767.563	Required	
KD24	446707.658	326782.832	446707.658	326782.832	Required	
S64	446710.406	326783.388	446710.406	326783.388	Required	
Ex SC15	446710.880	326793.729	446710.880	326793.729	Required	
C16a	446604.342	326830.590	446604.342	326830.590	Required	

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Manhole Schedules for Catchment C

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
1	446658.052	326458.687	446658.052	326458.687	Required	
2	446717.598	326458.687	446717.598	326458.687	Required	
3	446717.598	326547.836	446717.598	326547.836	Required	
4	446717.598	326614.479	446717.598	326614.479	Required	
5	446717.498	326697.985	446717.498	326697.985	Required	
6	446676.320	326759.143	446676.320	326759.143	Required	
7	446676.309	326791.157	446676.309	326791.157	Required	
8	446676.309	326804.832	446676.309	326804.832	Required	
C16	446676.309	326830.590	446676.309	326830.590	Required	
C17	446741.245	326829.936	446741.245	326829.936	Required	
C18	446788.508	326831.388	446788.508	326831.388	Required	
OB1	446982.092	326497.180	446982.092	326497.180	Required	
S1	446982.092	326461.800	446982.092	326461.800	Required	
OB2	446995.464	326467.022	446995.464	326467.022	Required	
S2 (BD)	446995.464	326461.800	446995.464	326461.800	Required	

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Manhole Schedules for Catchment C

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
OB3	447054.622	326484.860	447054.622	326484.860	Required	
S3	447054.622	326461.800	447054.622	326461.800	Required	
Tank 1 -Full Retention	447077.328	326461.801	447077.328	326461.801	Required	
S4	447090.017	326461.800	447090.017	326461.800	Required	
SDP005	446933.714	326516.670	446933.714	326516.670	Required	
S5 (V)	446933.714	326500.717	446933.714	326500.717	Required	
SDP006	446965.314	326516.670	446965.314	326516.670	Required	
S6 (V)	446965.314	326500.717	446965.314	326500.717	Required	
SDP007	446996.914	326516.670	446996.914	326516.670	Required	
S7 (V)	446996.914	326500.717	446996.914	326500.717	Required	
SDP008	447032.694	326516.670	447032.694	326516.670	Required	
S8 (V)	447032.694	326500.717	447032.694	326500.717	Required	
S9 (V)	447090.263	326500.717	447090.263	326500.717	Required	
SDP009	447060.664	326516.670	447060.664	326516.670	Required	
S10 (V)	447065.818	326516.670	447065.818	326516.670	Required	

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Manhole Schedules for Catchment C

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
S11	447090.387	326520.898	447090.387	326520.898	Required	
S12	447092.636	326562.950	447092.636	326562.950	Required	
S13	447092.636	326614.121	447092.636	326614.121	Required	
OB4	447078.816	326562.950	447078.816	326562.950	Required	
S14	447071.811	326562.950	447071.811	326562.950	Required	
OB5	447043.018	326683.180	447043.018	326683.180	Required	
S15	447071.811	326675.989	447071.811	326675.989	Required	
OB6	447079.161	326657.680	447079.161	326657.680	Required	
S16	447071.811	326657.680	447071.811	326657.680	Required	
S17	447071.811	326646.355	447071.811	326646.355	Required	
Tank 2 - Full Retention	447085.838	326646.354	447085.838	326646.354	Required	
S18 (BD)	447092.636	326646.355	447092.636	326646.355	Required	
KD1	447106.951	326515.810	447106.951	326515.810	Required	
S19	447116.358	326519.186	447116.358	326519.186	Required	
OB7	447106.851	326599.186	447106.851	326599.186	Required	

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Manhole Schedules for Catchment C

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
S20	447116.358	326599.186	447116.358	326599.186	Required	
OB8	447106.851	326696.586	447106.851	326696.586	Required	
S21	447116.358	326696.586	447116.358	326696.586	Required	
S22	447116.358	326675.325	447116.358	326675.325	Required	
TANK 3 - Full Retention	447111.162	326675.325	447111.162	326675.325	Required	
S23	447092.636	326675.325	447092.636	326675.325	Required	
S24	447092.636	326696.586	447092.636	326696.586	Required	
KD2	447048.471	326763.103	447048.471	326763.103	Required	
S25 (BD)	447045.561	326758.764	447045.561	326758.764	Required	
SDP011	447007.973	326697.329	447007.973	326697.329	Required	
S26 (V)	447008.904	326700.318	447008.904	326700.318	Required	
S27 (V)	447012.027	326697.753	447012.027	326697.753	Required	
S28	447024.529	326704.059	447024.529	326704.059	Required	
S29	447024.529	326763.827	447024.529	326763.827	Required	
KD3	447020.721	326793.485	447020.721	326793.485	Required	

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Manhole Schedules for Catchment C

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
S30	447014.876	326795.828	447014.876	326795.828	Required	
KD4	447004.689	326787.780	447004.689	326787.780	Required	
KD9	447004.689	326787.480	447004.689	326787.480	Required	
KD5	447004.689	326719.440	447004.689	326719.440	Required	
KD6	447004.685	326736.450	447004.685	326736.450	Required	
KD7	447004.689	326753.460	447004.689	326753.460	Required	
KD8	447004.685	326770.470	447004.685	326770.470	Required	
S31	447003.582	326784.573	447003.582	326784.573	Required	
Tank 4 - By Pass	446996.109	326784.573	446996.109	326784.573	Required	
S32	446991.350	326784.513	446991.350	326784.513	Required	
S33	446985.674	326795.828	446985.674	326795.828	Required	
S34	446942.928	326795.828	446942.928	326795.828	Required	
KD10	446903.734	326787.780	446903.734	326787.780	Required	
S35	446903.730	326784.526	446903.730	326784.526	Required	
KD11	446893.940	326719.440	446893.940	326719.440	Required	

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Manhole Schedules for Catchment C

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
KD12	446893.940	326736.450	446893.940	326736.450	Required	
KD13	446893.940	326753.460	446893.940	326753.460	Required	
KD14	446893.940	326770.470	446893.940	326770.470	Required	
KD15	446893.944	326787.030	446893.944	326787.030	Required	
S36	446893.941	326784.539	446893.941	326784.539	Required	
Tank 5 - Bypass	446888.625	326784.573	446888.625	326784.573	Required	
S37	446883.657	326784.573	446883.657	326784.573	Required	
S38 (P)	446867.563	326789.248	446867.563	326789.248	Required	
Ex SC41	446821.799	326793.264	446821.799	326793.264	Required	
C44	446825.997	326849.638	446825.997	326849.638	Required	
C19	447121.166	326363.296	447121.166	326363.296	Required	
C20	447149.534	326370.426	447149.534	326370.426	Required	
C21	447166.254	326380.260	447166.254	326380.260	Required	
C22	447177.930	326389.691	447177.930	326389.691	Required	
C23	447201.928	326410.264	447201.928	326410.264	Required	

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Manhole Schedules for Catchment C

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
C24	447219.657	326444.282	447219.657	326444.282	Required	
OB1	447229.932	326462.027	447229.932	326462.027	Required	
PPIC1	447231.090	326460.486	447231.090	326460.486	Required	
PPIC2	447234.627	326475.863	447234.627	326475.863	Required	
BI RWP	447230.277	326475.573	447230.277	326475.573	Required	
Ex. SC25	447229.875	326477.259	447229.875	326477.259	Required	
Ex. SC26	447213.073	326485.060	447213.073	326485.060	Required	
New gully	447190.052	326508.931	447190.052	326508.931	Required	
Separator	447198.854	326492.149	447198.854	326492.149	Required	
OB2	447215.986	326493.423	447215.986	326493.423	Required	
MS RWP	447207.089	326484.501	447207.089	326484.501	Required	
PS3	447201.762	326486.604	447201.762	326486.604	Required	
OB3	447204.630	326465.394	447204.630	326465.394	Required	
PS4	447194.378	326469.908	447194.378	326469.908	Required	
C27	447189.412	326465.878	447189.412	326465.878	Required	

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Manhole Schedules for Catchment C

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
C28	447165.300	326509.990	447165.300	326509.990	Required	
C29	447226.243	326516.334	447226.243	326516.334	Required	
C30	447203.830	326534.396	447203.830	326534.396	Required	
C31	447188.940	326553.980	447188.940	326553.980	Required	
C32	447173.964	326577.413	447173.964	326577.413	Required	
C33	447155.062	326576.987	447155.062	326576.987	Required	
C34	447153.914	326666.980	447153.914	326666.980	Required	
C35	447152.522	326752.669	447152.522	326752.669	Required	
C36	447138.738	326786.331	447138.738	326786.331	Required	
C37	447107.625	326812.443	447107.625	326812.443	Required	
C38	447068.362	326821.158	447068.362	326821.158	Required	
C39	446978.362	326821.284	446978.362	326821.284	Required	
C40	446888.677	326829.718	446888.677	326829.718	Required	
C46	446830.361	326881.545	446830.361	326881.545	Required	
C47	446854.572	326965.766	446854.572	326965.766	Required	

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Manhole Schedules for Catchment C

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
OB1	446725.664	326874.113	446725.664	326874.113	Required	
OB2	446756.665	326873.686	446756.665	326873.686	Required	
S1	446748.364	326880.313	446748.364	326880.313	Required	
OB3	446756.665	326923.686	446756.665	326923.686	Required	
S2	446748.364	326930.813	446748.364	326930.813	Required	
OB4	446756.664	327069.713	446756.664	327069.713	Required	
S3	446748.362	327063.086	446748.362	327063.086	Required	
OB5	446756.664	327023.687	446756.664	327023.687	Required	
S4	446748.364	327016.459	446748.364	327016.459	Required	
OB6	446756.665	326973.687	446756.665	326973.687	Required	
S5	446748.364	326967.059	446748.364	326967.059	Required	
S6	446748.364	326953.192	446748.364	326953.192	Required	
OB7	446806.663	327042.519	446806.663	327042.519	Required	
S8	446798.362	327035.892	446798.362	327035.892	Required	
OB8	446806.664	327009.819	446806.664	327009.819	Required	

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Manhole Schedules for Catchment C

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
S9	446798.362	327003.192	446798.362	327003.192	Required	
OB9	446806.664	326959.819	446806.664	326959.819	Required	
S7	446798.362	326953.192	446798.362	326953.192	Required	
OB10	446806.664	326909.819	446806.664	326909.819	Required	
S10	446798.363	326916.846	446798.363	326916.846	Required	
S11	446798.362	326924.832	446798.362	326924.832	Required	
S12	446803.256	326924.832	446803.256	326924.832	Required	
FRS1	446803.256	326933.019	446803.256	326933.019	Required	
S13	446803.256	326941.506	446803.256	326941.506	Required	
CP5	446814.615	326925.602	446814.615	326925.602	Required	
G1	446830.770	326939.223	446830.770	326939.223	Required	
S14	446815.939	326941.506	446815.939	326941.506	Required	
CP8	446812.015	326990.703	446812.015	326990.703	Required	
AT1	446820.047	326966.149	446820.047	326966.149	Required	
S15	446841.412	326981.003	446841.412	326981.003	Required	

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Manhole Schedules for Catchment C

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
Ex SC72a	446855.849	326989.818	446855.849	326989.818	Required	
Spur	446866.450	326985.894			No Entry	
C48	446892.016	327028.042	446892.016	327028.042	Required	
C49	446923.119	327081.431	446923.119	327081.431	Required	
C50	446960.397	327144.887	446960.397	327144.887	Required	
C51	446990.000	327199.169	446990.000	327199.169	Required	
SW01	446894.486	326893.074	446894.486	326893.074	Required	
SW02	446919.446	326874.817	446919.446	326874.817	Required	
SW02A	446952.654	326853.358	446952.654	326853.358	Required	
SW03	446969.498	326873.430	446969.498	326873.430	Required	
SW04	447019.549	326871.814	447019.549	326871.814	Required	
SW05	447096.246	326869.849	447096.246	326869.849	Required	
SW05A	447099.421	326872.212	447099.421	326872.212	Required	
SW06	447109.452	326890.596	447109.452	326890.596	Required	
SW07	447109.286	326970.595	447109.286	326970.595	Required	

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Manhole Schedules for Catchment C

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
SW08	447108.665	327040.592	447108.665	327040.592	Required	
SW09	447107.668	327087.401	447107.668	327087.401	Required	
SW10	447104.731	326925.782	447104.731	326925.782	Required	
SW11	447104.326	326976.854	447104.326	326976.854	Required	
SW12	447103.966	327015.776	447103.966	327015.776	Required	
SW13	447103.494	327066.789	447103.494	327066.789	Required	
SW14	447103.318	327085.773	447103.318	327085.773	Required	
SW15	447087.056	327115.168	447087.056	327115.168	Required	
SW16	447087.107	327124.490	447087.107	327124.490	Required	
SW17	446893.837	326898.314	446893.837	326898.314	Required	
SW18	446895.288	326979.603	446895.288	326979.603	Required	
SW19	446934.756	327060.492	446934.756	327060.492	Required	
SW20	446973.743	327138.522	446973.743	327138.522	Required	
SW21	446952.764	327097.755	446952.764	327097.755	Required	
SW22	446971.964	327088.162	446971.964	327088.162	Required	

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Manhole Schedules for Catchment C

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
Gully	446988.669	327146.256	446988.669	327146.256	Required	
SW23	447002.753	327146.507	447002.753	327146.507	Required	
SW24	447010.347	327202.303	447010.347	327202.303	Required	
SW25	447014.422	327181.586	447014.422	327181.586	Required	
SW26	447021.529	327177.681	447021.529	327177.681	Required	
SW27	447018.958	327170.733	447018.958	327170.733	Required	
SW28	447042.519	327161.884	447042.519	327161.884	Required	
SW29	447056.097	327156.066	447056.097	327156.066	Required	
SW30	447087.300	327158.908	447087.300	327158.908	Required	
SW31	447087.866	327234.389	447087.866	327234.389	Required	
SW32	447056.325	327254.308	447056.325	327254.308	Required	
HD01	446982.540	327155.708	446982.540	327155.708	Required	
HD02	446997.898	327182.859	446997.898	327182.859	Required	
HD03	446999.297	327192.885	446999.297	327192.885	Required	
HD04	447009.912	327210.610	447009.912	327210.610	Required	

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Manhole Schedules for Catchment C

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
36	447043.271	327265.387	447043.271	327265.387	Required	
C52	447035.440	327276.710	447035.440	327276.710	Required	
C53	447068.079	327371.212	447068.079	327371.212	Required	
C54	447073.057	327427.659	447073.057	327427.659	Required	
H20C	447098.996	327470.961	447098.996	327470.961	Required	
C55a	447147.778	327379.027	447147.778	327379.027	Required	
C55b	447081.106	327344.393	447081.106	327344.393	Required	
C55	447097.062	327371.900	447097.062	327371.900	Required	
56	447094.071	327419.310	447094.071	327419.310	Required	
C57	447125.818	327450.237	447125.818	327450.237	Required	
H7C	447118.839	327481.127	447118.839	327481.127	Required	
BASIN C1	447146.873	327600.868	447146.873	327600.868	Required	
C59	447154.420	327628.367	447154.420	327628.367	Required	
P2_29	447195.142	327396.037	447195.142	327396.037	Required	
P2_30	447194.762	327435.913	447194.762	327435.913	Required	

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Manhole Schedules for Catchment C

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
P2_31	447177.019	327435.745	447177.019	327435.745	Required	
SC72	447235.758	326788.028	447235.758	326788.028	Required	
SC73	447235.228	326842.825	447235.228	326842.825	Required	
SC74	447234.759	326891.249	447234.759	326891.249	Required	
SC75	447184.759	326891.028	447184.759	326891.028	Required	
SC76	447184.287	326940.025	447184.287	326940.025	Required	
SC77	447183.360	327036.120	447183.360	327036.120	Required	
SC78	447182.334	327142.588	447182.334	327142.588	Required	
SC79	447160.822	327142.588	447160.822	327142.588	Required	
SC80	447160.263	327200.380	447160.263	327200.380	Required	
SC81	447159.341	327295.520	447159.341	327295.520	Required	
SC82	447158.522	327369.065	447158.522	327369.065	Required	
SC83	447156.810	327458.192	447156.810	327458.192	Required	
P2_32	447176.476	327485.078	447176.476	327485.078	Required	
P2_33	447176.315	327499.900	447176.315	327499.900	Required	

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Manhole Schedules for Catchment C

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
P2_34	447205.123	327543.977	447205.123	327543.977	Required	
P1 Slab	447216.432	327547.687	447216.432	327547.687	Required	
C88	447261.415	326717.681	447261.415	326717.681	Required	
C89	447261.463	326783.100	447261.463	326783.100	Required	
C90	447260.897	326841.566	447260.897	326841.566	Required	
C91	447260.112	326922.565	447260.112	326922.565	Required	
C92	447259.328	327003.565	447259.328	327003.565	Required	
C93	447258.253	327114.565	447258.253	327114.565	Required	
C94	447257.178	327225.565	447257.178	327225.565	Required	
C95	447256.406	327321.061	447256.406	327321.061	Required	
C96	447255.329	327416.556	447255.329	327416.556	Required	
C97	447254.404	327512.052	447254.404	327512.052	Required	
C87	447253.478	327607.704	447253.478	327607.704	Required	
P2_1	447274.209	326775.397	447274.209	326775.397	Required	
P2_2	447279.330	326775.446	447279.330	326775.446	Required	

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Manhole Schedules for Catchment C

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
P2_3	447286.077	326782.443	447286.077	326782.443	Required	
P2_4	447286.077	326789.133	447286.077	326789.133	Required	
P2_5	447326.076	326748.534	447326.076	326748.534	Required	
P2_6	447317.742	326789.394	447317.742	326789.394	Required	
P2_7	447328.217	326791.679	447328.217	326791.679	Required	
P2_8	447338.684	326802.089	447338.684	326802.089	Required	
P2_11	447338.484	326867.095	447338.484	326867.095	Required	
P2_12	447346.250	326867.216	447346.250	326867.216	Required	
P_13	447345.972	326917.393	447345.972	326917.393	Required	
P2_14	447345.295	326987.338	447345.295	326987.338	Required	
P2_15	447344.617	327057.335	447344.617	327057.335	Required	
P2_16	447343.862	327129.451	447343.862	327129.451	Required	
P2_17	447335.960	327129.441	447335.960	327129.441	Required	
P2_18	447335.680	327157.343	447335.680	327157.343	Required	
P2_19	447324.407	327168.399	447324.407	327168.399	Required	

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Manhole Schedules for Catchment C

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
P2_20	447310.560	327168.144	447310.560	327168.144	Required	
P2_21	447310.188	327193.120	447310.188	327193.120	Required	
P2_22	447299.338	327204.001	447299.338	327204.001	Required	
P2_23	447287.360	327203.953	447287.360	327203.953	Required	
P2_24	447284.277	327248.490	447284.277	327248.490	Required	
P2_25	447269.467	327248.681	447269.467	327248.681	Required	
P2_25A	447265.139	327294.464	447265.139	327294.464	Required	
P2_26	447264.478	327362.424	447264.478	327362.424	Required	
P2_26A	447263.807	327431.454	447263.807	327431.454	Required	
P2_27	447267.104	327438.447	447267.104	327438.447	Required	
P2_28	447266.426	327504.466	447266.426	327504.466	Required	
P2_28A	447266.712	327560.476	447266.712	327560.476	Required	
246	447267.581	327582.892	447267.581	327582.892	Required	
C98	447253.789	327582.578	447253.789	327582.578	Required	
C65	447229.492	327578.072	447229.492	327578.072	Required	

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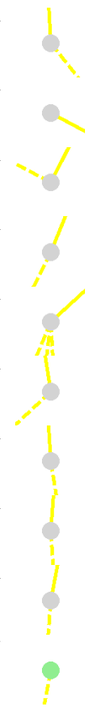
Manhole Schedules for Catchment C

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
C66	447181.757	327637.781	447181.757	327637.781	Required	
P16 - Dummy	446960.953	327385.696	446960.953	327385.696	Required	
P16 - Tank	446980.366	327375.334	446980.366	327375.334	Required	
P16 - Basin	447102.254	327616.518	447102.254	327616.518	Required	
BASIN C3	447173.412	327788.816	447173.412	327788.816	Required	
C68	447228.588	327839.838	447228.588	327839.838	Required	
C69	447223.300	327873.014	447223.300	327873.014	Required	
C70	447219.180	327938.053	447219.180	327938.053	Required	
C71	447223.213	327991.053	447223.213	327991.053	Required	
C OUTFALL	447229.134	328022.300			No Entry	



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PIPELINE SCHEDULES for Catchment C

Upstream Manhole

- Indicates pipe length does not match coordinates

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
9.000	oo	-4	OB9	68.920	67.720	0.450	Open Manhole	3000
9.001	o	750	S39	69.855	67.600	1.505	Open Manhole	3000
10.000	o	375	OB10	69.855	68.655	0.825	Open Manhole	1500
9.002	o	750	S40 (BD)	69.855	67.570	1.535	Open Manhole	1800
9.003	o	750	S41	68.855	67.465	0.640	Open Manhole	1800
9.004	o	750	Tank 6 - Full Retention	70.000	67.185	2.065	Open Manhole	1800
9.005	o	750	S42	70.000	67.130	2.120	Open Manhole	1800
11.000	o	300	4A	80.350	79.350	0.700	Open Manhole	1200
11.001	o	300	4B	75.350	74.350	0.700	Open Manhole	1200
11.002	o	300	SDP004	70.350	67.900	2.150	Open Manhole	1200
11.003	o	525	S43 (V)	69.270	67.450	1.295	Open Manhole	1500
12.000	o	300	3A	80.350	79.350	0.700	Open Manhole	1200
12.001	o	300	3B	75.350	74.350	0.700	Open Manhole	1200
12.002	o	375	SDP003	70.350	67.900	2.075	Open Manhole	1500

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
9.000	35.300	294.2	S39	69.855	67.600	1.505	Open Manhole	3000
9.001	10.569	352.3	S40 (BD)	69.855	67.570	1.535	Open Manhole	1800
10.000	4.500	300.0	S40 (BD)	69.855	68.640	0.840	Open Manhole	1800
9.002	31.300	298.1	S41	68.855	67.465	0.640	Open Manhole	1800
9.003	58.659	209.5	Tank 6 - Full Retention	70.000	67.185	2.065	Open Manhole	1800
9.004	20.700	378.7	S42	70.000	67.130	2.120	Open Manhole	1800
9.005	38.900	165.3	S48	70.000	66.895	2.355	Open Manhole	1800
11.000	5.000	1.0	4B	75.350	74.350	0.700	Open Manhole	1200
11.001	5.000	1.0	SDP004	70.350	69.350	0.700	Open Manhole	1200
11.002	15.900	35.3	S43 (V)	69.270	67.450	1.520	Open Manhole	1500
11.003	32.300	293.6	S44 (V)	68.952	67.340	1.087	Open Manhole	1500
12.000	5.000	1.0	3B	75.350	74.350	0.700	Open Manhole	1200
12.001	5.000	1.0	SDP003	70.350	69.350	0.700	Open Manhole	1500
12.002	15.900	96.4	S44 (V)	68.952	67.735	0.842	Open Manhole	1500

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PIPELINE SCHEDULES for Catchment C

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
11.004	o	600	S44 (V)	68.952	67.340	1.012	Open Manhole	1500
13.000	o	300	2A	80.350	79.350	0.700	Open Manhole	1200
13.001	o	300	2B	75.350	74.350	0.700	Open Manhole	1200
13.002	o	375	SDP002	70.350	67.900	2.075	Open Manhole	1500
11.005	o	825	S45 (V)	68.952	67.235	0.892	Open Manhole	1800
14.000	o	300	1A	80.350	79.350	0.700	Open Manhole	1200
14.001	o	300	1B	75.350	74.350	0.700	Open Manhole	1200
14.002	o	375	SDP001	70.350	67.900	2.075	Open Manhole	1500
11.006	o	825	S46 (V)	69.315	67.125	1.365	Open Manhole	1800
11.007	o	825	S47 (V)	69.315	67.035	1.455	Open Manhole	1800
9.006	o	825	S48	70.000	66.895	2.280	Open Manhole	1800
9.007	o	825	S49	70.000	66.725	2.450	Open Manhole	1800
15.000	o	375	OB14	68.890	67.690	0.825	Open Manhole	1500
16.000	o	375	OB13	68.890	67.720	0.795	Open Manhole	1500

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
11.004	31.600	301.0	S45 (V)	68.952	67.235	1.117	Open Manhole	1800
13.000	5.000	1.0	2B	75.350	74.350	0.700	Open Manhole	1200
13.001	5.000	1.0	SDP002	70.350	69.350	0.700	Open Manhole	1500
13.002	15.900	289.1	S45 (V)	68.952	67.845	0.732	Open Manhole	1800
11.005	32.031	291.2	S46 (V)	69.315	67.125	1.365	Open Manhole	1800
14.000	5.000	1.0	1B	75.350	74.350	0.700	Open Manhole	1200
14.001	5.000	1.0	SDP001	70.350	69.350	0.700	Open Manhole	1500
14.002	15.900	289.1	S46 (V)	69.315	67.845	1.095	Open Manhole	1800
11.006	33.395	371.1	S47 (V)	69.315	67.035	1.455	Open Manhole	1800
11.007	35.722	255.2	S48	70.000	66.895	2.280	Open Manhole	1800
9.006	51.300	301.8	S49	70.000	66.725	2.450	Open Manhole	1800
9.007	51.300	300.0	S54	70.000	66.554	2.621	Open Manhole	2100
15.000	5.958	43.8	S50	69.235	67.554	1.306	Open Manhole	1500
16.000	5.958	297.9	S50a	69.120	67.700	1.045	Open Manhole	1500

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PIPELINE SCHEDULES for Catchment C

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
16.001	o	375	S50a	69.120	67.700	1.045	Open Manhole	1500
15.001	o	375	S50	69.235	67.554	1.306	Open Manhole	1500
17.000	o	300	OB11	68.890	67.720	0.870	Open Manhole	1200
15.002	o	375	S51	69.235	67.424	1.436	Open Manhole	1500
18.000	o	375	OB12	68.890	67.720	0.795	Open Manhole	1500
18.001	o	375	S52	69.235	67.690	1.170	Open Manhole	1500
15.003	o	525	S53	69.235	67.328	1.382	Open Manhole	1500
15.004	o	525	Tank 7 - Full Retention	70.000	67.153	2.322	Open Manhole	1500
9.008	o	900	S54	70.000	66.554	2.546	Open Manhole	2100
9.009	o	900	S55	70.000	66.459	2.641	Open Manhole	2100
19.000	o	150	KD17	69.440	68.240	1.050	Open Manhole	1200
9.010	o	900	S56	70.000	66.239	2.861	Open Manhole	2100
9.011	o	900	S57	70.000	66.184	2.916	Open Manhole	2100

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
16.001	37.428	256.4	S50	69.235	67.554	1.306	Open Manhole	1500
15.001	33.212	255.5	S51	69.235	67.424	1.436	Open Manhole	1500
17.000	5.959	42.6	S51	69.235	67.580	1.355	Open Manhole	1500
15.002	28.800	300.0	S53	69.235	67.328	1.532	Open Manhole	1500
18.000	5.959	198.6	S52	69.235	67.690	1.170	Open Manhole	1500
18.001	28.800	300.0	S53	69.235	67.594	1.266	Open Manhole	1500
15.003	23.404	133.7	Tank 7 - Full Retention	70.000	67.153	2.322	Open Manhole	1500
15.004	2.977	297.7	S54	70.000	67.143	2.332	Open Manhole	2100
9.008	28.800	303.2	S55	70.000	66.459	2.641	Open Manhole	2100
9.009	34.900	158.6	S56	70.000	66.239	2.861	Open Manhole	2100
19.000	13.200	6.6	S56	70.000	66.240	3.610	Open Manhole	2100
9.010	16.300	296.4	S57	70.000	66.184	2.916	Open Manhole	2100
9.011	19.300	300.0	S60	70.000	66.120	2.980	Open Manhole	2100

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PIPELINE SCHEDULES for Catchment C

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
20.000	o	300	10A	80.350	79.350	0.700	Open Manhole	1200
20.001	o	300	10B	75.350	74.350	0.700	Open Manhole	1200
20.002	o	375	SDP010	70.350	67.900	2.075	Open Manhole	1500
20.003	o	375	S59 (V)	70.150	67.875	1.900	Open Manhole	1500
21.000	o	300	S58 (V)	70.150	67.875	1.975	Open Manhole	1200
9.012	o	900	S60	70.000	66.120	2.980	Open Manhole	2100
22.000	o	225	KD18	69.925	68.725	0.975	Open Manhole	1200
22.001	o	300	KD19	69.440	68.240	0.900	Open Manhole	1200
22.002	o	375	KD20	69.095	68.185	0.535	Open Manhole	1500
22.003	o	450	KD21	69.095	67.895	0.750	Open Manhole	1500
23.000	o	375	KD22	68.750	67.550	0.825	Open Manhole	1500
22.004	o	450	S61	68.800	67.540	0.810	Open Manhole	1500
24.000	o	375	KD23	68.170	66.970	0.825	Open Manhole	1500

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
20.000	5.000	1.0	10B	75.350	74.350	0.700	Open Manhole	1200
20.001	5.000	1.0	SDP010	70.350	69.350	0.700	Open Manhole	1500
20.002	5.778	231.1	S59 (V)	70.150	67.875	1.900	Open Manhole	1500
20.003	56.042	431.2	S60	70.000	67.745	1.880	Open Manhole	2100
21.000	55.799	429.2	S60	70.000	67.745	1.955	Open Manhole	2100
9.012	86.500	303.5	S63	68.900	65.835	2.165	Open Manhole	2100
22.000	15.400	308.0	KD19	69.440	68.675	0.540	Open Manhole	1200
22.001	17.010	309.3	KD20	69.095	68.185	0.610	Open Manhole	1500
22.002	17.010	309.3	KD21	69.095	68.130	0.590	Open Manhole	1500
22.003	14.553	264.6	S61	68.800	67.840	0.510	Open Manhole	1500
23.000	2.500	250.0	S61	68.800	67.540	0.885	Open Manhole	1500
22.004	24.200	302.5	S62	68.800	67.460	0.890	Open Manhole	1500
24.000	7.400	296.0	S62	68.800	66.945	1.480	Open Manhole	1500

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PIPELINE SCHEDULES for Catchment C

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
22.005	o	525	S62	68.800	66.945	1.330	Open Manhole	1500
22.006	o	600	Tank 8 - Bypass	68.800	66.840	1.360	Open Manhole	1500
9.013	o	900	S63	68.900	65.835	2.165	Open Manhole	2100
25.000	o	225	KD24	68.385	67.185	0.975	Open Manhole	1200
9.014	o	900	S64	68.425	65.780	1.745	Open Manhole	2100
9.015	o	900	Ex SC15	70.000	65.572	3.528	Open Manhole	2100
26.000	o	300	C16a	68.110	66.610	1.200	Open Manhole	1200
27.000	o	300	1	71.600	70.000	1.300	Open Manhole	1200
27.001	o	375	2	71.180	69.330	1.475	Open Manhole	1500
27.002	o	450	3	71.410	68.958	2.002	Open Manhole	1500
27.003	o	450	4	71.410	68.736	2.224	Open Manhole	1500
27.004	o	450	5	71.490	68.318	2.722	Open Manhole	1500
27.005	o	450	6	70.600	67.283	2.867	Open Manhole	1500
27.006	o	450	7	69.530	66.483	2.597	Open Manhole	1500
27.007	o	600	8	69.030	65.990	2.440	Open Manhole	1500

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
22.005	3.204	30.5	Tank 8 - Bypass	68.800	66.840	1.435	Open Manhole	1500
22.006	10.863	362.1	S63	68.900	66.810	1.490	Open Manhole	2100
9.013	15.800	287.3	S64	68.425	65.780	1.745	Open Manhole	2100
25.000	2.700	270.0	S64	68.425	67.175	1.025	Open Manhole	2100
9.014	10.300	49.5	Ex SC15	70.000	65.572	3.528	Open Manhole	2100
9.015	47.255	50.0	C17	69.130	64.627	3.603	Open Manhole	2100
26.000	71.968	100.0	C16	68.690	65.890	2.500	Open Manhole	1500
27.000	59.546	100.1	2	71.180	69.405	1.475	Open Manhole	1500
27.001	89.149	300.2	3	71.410	69.033	2.002	Open Manhole	1500
27.002	66.643	300.2	4	71.410	68.736	2.224	Open Manhole	1500
27.003	83.506	199.8	5	71.490	68.318	2.722	Open Manhole	1500
27.004	73.729	71.2	6	70.600	67.283	2.867	Open Manhole	1500
27.005	32.014	40.0	7	69.530	66.483	2.597	Open Manhole	1500
27.006	13.675	40.0	8	69.030	66.141	2.439	Open Manhole	1500
27.007	25.758	64.4	C16	68.690	65.590	2.500	Open Manhole	1500

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PIPELINE SCHEDULES for Catchment C

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
26.001	o	600	C16	68.690	65.590	2.500	Open Manhole	1500
9.016	o	900	C17	69.130	64.627	3.603	Open Manhole	2100
9.017	o	900	C18	69.612	63.681	5.031	Open Manhole	2100
28.000	oo	-5	OB1	68.920	67.645	0.525	Open Manhole	3000
28.001	o	750	S1	69.855	67.525	1.580	Open Manhole	3000
29.000	o	375	OB2	69.795	68.295	1.125	Open Manhole	1500
28.002	o	750	S2 (BD)	69.855	67.480	1.625	Open Manhole	1800
30.000	o	375	OB3	69.340	67.915	1.050	Open Manhole	1500
28.003	o	750	S3	69.855	67.315	1.790	Open Manhole	1800
28.004	o	750	Tank 1 -Full Retention	70.000	67.170	2.080	Open Manhole	1800
28.005	o	750	S4	70.000	67.130	2.120	Open Manhole	1800
31.000	o	300	5A	80.350	79.350	0.700	Open Manhole	1200
31.001	o	300	5B	75.350	74.350	0.700	Open Manhole	1200
31.002	o	450	SDP005	70.350	67.900	2.000	Open Manhole	1500

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
26.001	64.939	97.9	C17	69.130	64.927	3.603	Open Manhole	2100
9.016	47.284	50.0	C18	69.612	63.681	5.031	Open Manhole	2100
9.017	41.695	50.0	C44	69.398	62.847	5.651	Open Manhole	2100
28.000	35.380	294.8	S1	69.855	67.525	1.580	Open Manhole	3000
28.001	13.300	295.6	S2 (BD)	69.855	67.480	1.625	Open Manhole	1800
29.000	5.222	261.1	S2 (BD)	69.855	68.275	1.205	Open Manhole	1800
28.002	59.158	359.3	S3	69.855	67.315	1.790	Open Manhole	1800
30.000	23.060	288.3	S3	69.855	67.835	1.645	Open Manhole	1800
28.003	22.706	156.6	Tank 1 -Full Retention	70.000	67.170	2.080	Open Manhole	1800
28.004	12.689	317.2	S4	70.000	67.130	2.120	Open Manhole	1800
28.005	38.918	297.8	S9 (V)	69.850	67.000	2.100	Open Manhole	2100
31.000	5.000	1.0	5B	75.350	74.350	0.700	Open Manhole	1200
31.001	5.000	1.0	SDP005	70.350	69.350	0.700	Open Manhole	1500
31.002	15.900	289.1	S5 (V)	68.952	67.845	0.657	Open Manhole	1500

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PIPELINE SCHEDULES for Catchment C

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
31.003	o	525	S5 (V)	68.952	67.845	0.582	Open Manhole	1500
32.000	o	300	6A	80.350	79.350	0.700	Open Manhole	1200
32.001	o	300	6B	75.350	74.350	0.700	Open Manhole	1200
32.002	o	375	SDP006	70.350	67.900	2.075	Open Manhole	1500
31.004	o	600	S6 (V)	68.952	67.740	0.612	Open Manhole	1500
33.000	o	300	7A	80.350	79.350	0.700	Open Manhole	1200
33.001	o	300	7B	75.350	74.350	0.700	Open Manhole	1200
33.002	o	375	SDP007	70.350	67.900	2.075	Open Manhole	1500
31.005	o	600	S7 (V)	68.952	67.635	0.717	Open Manhole	1500
34.000	o	300	8A	80.350	79.350	0.700	Open Manhole	1200
34.001	o	300	8B	75.350	74.350	0.700	Open Manhole	1200
34.002	o	375	SDP008	70.350	67.900	2.075	Open Manhole	1500
31.006	o	600	S8 (V)	68.952	67.515	0.837	Open Manhole	1500
28.006	o	900	S9 (V)	69.850	67.000	1.950	Open Manhole	2100

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
31.003	31.600	301.0	S6 (V)	68.952	67.740	0.687	Open Manhole	1500
32.000	5.000	1.0	6B	75.350	74.350	0.700	Open Manhole	1200
32.001	5.000	1.0	SDP006	70.350	69.350	0.700	Open Manhole	1500
32.002	15.900	99.4	S6 (V)	68.952	67.740	0.837	Open Manhole	1500
31.004	31.600	301.0	S7 (V)	68.952	67.635	0.717	Open Manhole	1500
33.000	5.000	1.0	7B	75.350	74.350	0.700	Open Manhole	1200
33.001	5.000	1.0	SDP007	70.350	69.350	0.700	Open Manhole	1500
33.002	15.900	289.1	S7 (V)	68.952	67.845	0.732	Open Manhole	1500
31.005	35.700	297.5	S8 (V)	68.952	67.515	0.837	Open Manhole	1500
34.000	5.000	1.0	8B	75.350	74.350	0.700	Open Manhole	1200
34.001	5.000	1.0	SDP008	70.350	69.350	0.700	Open Manhole	1500
34.002	15.900	289.1	S8 (V)	68.952	67.845	0.732	Open Manhole	1500
31.006	57.500	294.9	S9 (V)	69.850	67.320	1.930	Open Manhole	2100
28.006	20.181	288.3	S11	70.092	66.930	2.262	Open Manhole	2100

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PIPELINE SCHEDULES for Catchment C

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
35.000	o	375	9A	80.350	79.350	0.625	Open Manhole	1500
35.001	o	375	9B	75.350	74.350	0.625	Open Manhole	1500
35.002	o	375	SDP009	70.350	67.900	2.075	Open Manhole	1500
35.003	o	375	S10 (V)	70.130	67.885	1.870	Open Manhole	1500
28.007	o	900	S11	70.092	66.930	2.262	Open Manhole	2100
28.008	o	900	S12	70.130	66.790	2.440	Open Manhole	2100
28.009	o	900	S13	70.130	66.620	2.610	Open Manhole	2100
36.000	o	450	OB4	69.905	68.405	1.050	Open Manhole	1500
36.001	o	450	S14	70.025	68.380	1.195	Open Manhole	1500
37.000	o	225	OB5	69.955	68.755	0.975	Open Manhole	1200
37.001	o	225	S15	70.025	68.665	1.135	Open Manhole	1200
38.000	o	450	OB6	69.905	68.705	0.750	Open Manhole	1500
37.002	o	450	S16	70.025	68.603	0.972	Open Manhole	1500
36.002	o	450	S17	70.025	68.100	1.475	Open Manhole	1500

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
35.000	5.000	1.0	9B	75.350	74.350	0.625	Open Manhole	1500
35.001	5.000	1.0	SDP009	70.350	69.350	0.625	Open Manhole	1500
35.002	5.100	340.0	S10 (V)	70.130	67.885	1.870	Open Manhole	1500
35.003	24.900	292.9	S11	70.092	67.800	1.917	Open Manhole	2100
28.007	42.100	300.7	S12	70.130	66.790	2.440	Open Manhole	2100
28.008	51.171	301.0	S13	70.130	66.620	2.610	Open Manhole	2100
28.009	32.200	306.7	S18 (BD)	70.130	66.515	2.715	Open Manhole	2100
36.000	7.000	280.0	S14	70.025	68.380	1.195	Open Manhole	1500
36.001	83.400	297.9	S17	70.025	68.100	1.475	Open Manhole	1500
37.000	29.677	329.7	S15	70.025	68.665	1.135	Open Manhole	1200
37.001	18.300	295.2	S16	70.025	68.603	1.197	Open Manhole	1500
38.000	7.350	294.0	S16	70.025	68.680	0.895	Open Manhole	1500
37.002	11.300	282.5	S17	70.025	68.563	1.012	Open Manhole	1500
36.002	14.027	155.9	Tank 2 - Full Retention	70.015	68.010	1.555	Open Manhole	1500

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PIPELINE SCHEDULES for Catchment C

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
36.003	o	450	Tank 2 - Full Retention	70.015	68.010	1.555	Open Manhole	1500
28.010	o	900	S18 (BD)	70.130	66.515	2.715	Open Manhole	2100
39.000	o	225	KD1	70.240	68.740	1.275	Open Manhole	1200
39.001	o	225	S19	70.000	68.705	1.070	Open Manhole	1200
40.000	o	450	OB7	70.035	68.835	0.750	Open Manhole	1500
39.002	o	450	S20	70.158	68.440	1.268	Open Manhole	1500
41.000	o	375	OB8	70.035	68.835	0.825	Open Manhole	1500
41.001	o	375	S21	70.158	68.800	0.983	Open Manhole	1500
39.003	o	450	S22	70.158	68.035	1.673	Open Manhole	1500
39.004	o	450	TANK 3 - Full Retention	70.092	67.970	1.672	Open Manhole	1500
28.011	o	1050	S23	70.130	66.420	2.660	Open Manhole	2100
28.012	o	1050	S24	70.130	66.350	2.730	Open Manhole	2100
42.000	o	300	KD2	68.625	67.425	0.900	Open Manhole	1200

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
36.003	6.798	271.9	S18 (BD)	70.130	67.985	1.695	Open Manhole	2100
28.010	28.900	304.2	S23	70.130	66.420	2.810	Open Manhole	2100
39.000	9.900	282.9	S19	70.000	68.705	1.070	Open Manhole	1200
39.001	80.000	301.9	S20	70.158	68.440	1.493	Open Manhole	1500
40.000	9.500	271.4	S20	70.158	68.800	0.908	Open Manhole	1500
39.002	76.000	187.7	S22	70.158	68.035	1.673	Open Manhole	1500
41.000	9.500	271.4	S21	70.158	68.800	0.983	Open Manhole	1500
41.001	21.200	282.7	S22	70.158	68.725	1.058	Open Manhole	1500
39.003	5.196	79.9	TANK 3 - Full Retention	70.092	67.970	1.672	Open Manhole	1500
39.004	18.526	285.0	S23	70.130	67.905	1.775	Open Manhole	2100
28.011	21.200	302.9	S24	70.130	66.350	2.730	Open Manhole	2100
28.012	77.900	251.3	S25 (BD)	68.860	66.040	1.770	Open Manhole	2100
42.000	5.200	260.0	S25 (BD)	68.860	67.405	1.155	Open Manhole	2100

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PIPELINE SCHEDULES for Catchment C

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
28.013	o	1050	S25 (BD)	68.860	66.040	1.770	Open Manhole	2100
43.000	o	300	11A	80.350	79.350	0.700	Open Manhole	1200
43.001	o	300	11B	75.350	74.350	0.700	Open Manhole	1200
43.002	o	375	SDP011	70.350	67.900	2.075	Open Manhole	1500
43.003	o	375	S26 (V)	70.075	67.890	1.810	Open Manhole	1500
44.000	o	375	S27 (V)	70.075	67.890	1.810	Open Manhole	1500
43.004	o	450	S28	70.325	67.830	2.045	Open Manhole	1500
28.014	o	1050	S29	68.700	65.970	1.680	Open Manhole	2100
45.000	o	300	KD3	67.915	66.715	0.900	Open Manhole	1200
28.015	o	1050	S30	68.300	65.860	1.390	Open Manhole	2100
46.000	o	300	KD4	67.940	66.740	0.900	Open Manhole	1200
46.001	o	300	KD9	67.970	66.730	0.940	Open Manhole	1200

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
28.013	21.600	308.6	S29	68.700	65.970	1.680	Open Manhole	2100
43.000	5.000	1.0	11B	75.350	74.350	0.700	Open Manhole	1200
43.001	5.000	1.0	SDP011	70.350	69.350	0.700	Open Manhole	1500
43.002	3.131	313.1	S26 (V)	70.075	67.890	1.810	Open Manhole	1500
43.003	16.067	267.8	S28	70.325	67.830	2.120	Open Manhole	1500
44.000	14.002	233.4	S28	70.325	67.830	2.120	Open Manhole	1500
43.004	59.768	398.5	S29	68.700	67.680	0.570	Open Manhole	2100
28.014	33.400	303.6	S30	68.300	65.860	1.390	Open Manhole	2100
45.000	6.200	310.0	S30	68.300	66.695	1.305	Open Manhole	2100
28.015	29.200	162.2	S33	68.208	65.680	1.478	Open Manhole	2100
46.000	1.000#	100.0	KD9	67.970	66.730	0.940	Open Manhole	1200
46.001	3.300	220.0	S31	68.050	66.715	1.035	Open Manhole	1500

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PIPELINE SCHEDULES for Catchment C

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
47.000	o	450	KD5	69.785	68.585	0.750	Open Manhole	1500
47.001	o	450	KD6	69.440	68.240	0.750	Open Manhole	1500
47.002	o	450	KD7	69.095	68.180	0.465	Open Manhole	1500
47.003	o	600	KD8	68.515	67.315	0.600	Open Manhole	1500
46.002	o	600	S31	68.050	66.715	0.735	Open Manhole	1500
46.003	o	600	Tank 4 - By Pass	68.050	66.640	0.810	Open Manhole	1500
46.004	o	600	S32	68.050	66.625	0.825	Open Manhole	1500
28.016	o	1050	S33	68.208	65.680	1.478	Open Manhole	2100
28.017	o	1050	S34	68.650	65.540	2.060	Open Manhole	2100
48.000	o	225	KD10	68.375	67.175	0.975	Open Manhole	1200
48.001	o	225	S35	68.455	67.165	1.065	Open Manhole	1200
49.000	o	300	KD11	69.785	68.585	0.900	Open Manhole	1200
49.001	o	375	KD12	69.440	68.525	0.540	Open Manhole	1500
49.002	o	450	KD13	69.095	67.895	0.750	Open Manhole	1500
49.003	o	525	KD14	68.750	67.550	0.675	Open Manhole	1500
50.000	o	225	KD15	68.375	67.175	0.975	Open Manhole	1200

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
47.000	17.010	283.5	KD6	69.440	68.525	0.465	Open Manhole	1500
47.001	17.010	283.5	KD7	69.095	68.180	0.465	Open Manhole	1500
47.002	17.010	37.0	KD8	68.515	67.720	0.345	Open Manhole	1500
47.003	14.146	282.9	S31	68.050	67.265	0.185	Open Manhole	1500
46.002	7.473	99.6	Tank 4 - By Pass	68.050	66.640	0.810	Open Manhole	1500
46.003	4.759	317.3	S32	68.050	66.625	0.825	Open Manhole	1500
46.004	12.600	280.0	S33	68.208	66.580	1.028	Open Manhole	2100
28.016	42.700	305.0	S34	68.650	65.540	2.060	Open Manhole	2100
28.017	75.652	378.3	S38 (P)	68.625	65.340	2.235	Open Manhole	2100
48.000	3.200	320.0	S35	68.455	67.165	1.065	Open Manhole	1200
48.001	9.700	88.2	S36	68.455	67.055	1.175	Open Manhole	1500
49.000	17.010	283.5	KD12	69.440	68.525	0.615	Open Manhole	1500
49.001	17.010	283.5	KD13	69.095	68.465	0.255	Open Manhole	1500
49.002	17.010	283.5	KD14	68.750	67.835	0.465	Open Manhole	1500
49.003	14.069	255.8	S36	68.455	67.495	0.435	Open Manhole	1500
50.000	2.500	20.8	S36	68.455	67.055	1.175	Open Manhole	1500

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PIPELINE SCHEDULES for Catchment C

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
48.002	o	525	S36	68.455	67.055	0.875	Open Manhole	1500
48.003	o	525	Tank 5 - Bypass	68.455	66.985	0.945	Open Manhole	1500
48.004	o	525	S37	68.455	66.970	0.960	Open Manhole	1500
28.018	o	1050	S38 (P)	68.625	65.340	2.235	Open Manhole	2100
28.019	o	900	Ex SC41	70.000	65.000	4.100	Open Manhole	2100
9.018	o	900	C44	69.398	62.847	5.651	Open Manhole	2100
51.000	o	150	C19	83.721	82.671	0.900	Open Manhole	1200
51.001	o	150	C20	82.256	81.206	0.900	Open Manhole	1200
51.002	o	150	C21	80.753	79.703	0.900	Open Manhole	1200
51.003	o	150	C22	79.479	78.429	0.900	Open Manhole	1200
51.004	o	225	C23	79.479	76.225	3.029	Open Manhole	1200
51.005	o	225	C24	77.829	75.813	1.791	Open Manhole	1200
52.000	o	150	OB1	76.990	75.854	0.986	Open Manhole	1200
52.001	o	150	PPIC1	77.050	75.804	1.096	Open Manhole	1200
52.002	o	150	PPIC2	77.020	75.644	1.226	Open Manhole	1200

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
48.002	5.316	75.9	Tank 5 - Bypass	68.455	66.985	0.945	Open Manhole	1500
48.003	4.968	331.2	S37	68.455	66.970	0.960	Open Manhole	1500
48.004	16.759	419.0	S38 (P)	68.625	66.930	1.170	Open Manhole	2100
28.018	45.940	248.3	Ex SC41	70.000	65.155	3.795	Open Manhole	2100
28.019	56.530	26.3	C44	69.398	62.847	5.651	Open Manhole	2100
9.018	32.204	40.0	C46	69.215	62.042	6.273	Open Manhole	2100
51.000	29.251	20.0	C20	82.256	81.206	0.900	Open Manhole	1200
51.001	19.398	12.9	C21	80.753	79.703	0.900	Open Manhole	1200
51.002	15.009	11.8	C22	79.479	78.429	0.900	Open Manhole	1200
51.003	31.610	14.8	C23	79.479	76.300	3.029	Open Manhole	1200
51.004	38.361	93.1	C24	77.829	75.813	1.791	Open Manhole	1200
51.005	37.164	33.2	C27	76.336	74.695	1.416	Open Manhole	1200
52.000	1.928	38.6	PPIC1	77.050	75.804	1.096	Open Manhole	1200
52.001	15.780	98.6	PPIC2	77.020	75.644	1.226	Open Manhole	1200
52.002	4.952	100.0	Ex. SC25	76.921	75.594	1.177	Open Manhole	1200

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PIPELINE SCHEDULES for Catchment C

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
53.000	o	150	BI RWP	77.000	75.644	1.206	Open Manhole	1200
52.003	o	225	Ex. SC25	76.921	75.519	1.177	Open Manhole	1200
52.004	o	300	Ex. SC26	76.304	74.854	1.150	Open Manhole	1200
54.000	o	150	New gully	75.580	75.210	0.220	Open Manhole	1200
54.001	o	150	Separator	76.300	74.985	1.165	Open Manhole	1200
55.000	o	150	OB2	76.140	75.105	0.885	Open Manhole	1200
56.000	o	150	MS RWP	76.625	75.005	1.470	Open Manhole	1200
54.002	o	225	PS3	76.550	74.870	1.455	Open Manhole	1200
57.000	o	150	OB3	76.575	74.945	1.480	Open Manhole	1200
52.005	o	300	PS4	76.575	74.680	1.595	Open Manhole	1200
51.006	o	300	C27	76.336	74.620	1.416	Open Manhole	1200
51.007	o	300	C28	74.920	73.500	1.120	Open Manhole	1200

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
53.000	1.733	34.7	Ex. SC25	76.921	75.594	1.177	Open Manhole	1200
52.003	18.525	31.4	Ex. SC26	76.304	74.929	1.150	Open Manhole	1200
52.004	24.065	138.3	PS4	76.575	74.680	1.595	Open Manhole	1200
54.000	18.950	151.6	Separator	76.300	75.085	1.065	Open Manhole	1200
54.001	6.260	156.5	PS3	76.550	74.945	1.455	Open Manhole	1200
55.000	15.774	98.6	PS3	76.550	74.945	1.455	Open Manhole	1200
56.000	5.727	95.5	PS3	76.550	74.945	1.455	Open Manhole	1200
54.002	18.256	158.7	PS4	76.575	74.755	1.595	Open Manhole	1200
57.000	11.202	97.4	PS4	76.575	74.830	1.595	Open Manhole	1200
52.005	6.395	106.6	C27	76.336	74.620	1.416	Open Manhole	1200
51.006	50.272	44.9	C28	74.920	73.500	1.120	Open Manhole	1200
51.007	67.775	27.0	C33	72.929	70.992	1.637	Open Manhole	1500

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PIPELINE SCHEDULES for Catchment C

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
58.000	o	150	C29	75.557	74.082	1.325	Open Manhole	1200
58.001	o	150	C30	74.373	73.023	1.200	Open Manhole	1200
58.002	o	225	C31	73.349	71.915	1.209	Open Manhole	1200
58.003	o	375	C32	72.668	71.000	1.293	Open Manhole	1500
51.008	o	375	C33	72.929	70.917	1.637	Open Manhole	1500
51.009	o	375	C34	69.716	68.141	1.200	Open Manhole	1500
51.010	o	450	C35	66.836	65.186	1.200	Open Manhole	1500
51.011	o	600	C36	66.255	64.455	1.200	Open Manhole	1500
51.012	o	600	C37	66.211	64.319	1.292	Open Manhole	1500
51.013	o	600	C38	66.775	64.184	1.991	Open Manhole	1500
51.014	o	600	C39	68.127	63.884	3.643	Open Manhole	1500
51.015	o	600	C40	69.594	63.584	5.410	Open Manhole	1500
9.019	o	900	C46	69.215	62.042	6.273	Open Manhole	2100
9.020	o	900	C47	65.851	60.581	4.370	Open Manhole	2100
59.000	o	225	OB1	66.530	65.460	0.845	Open Manhole	1200
60.000	o	300	OB2	66.465	65.150	1.015	Open Manhole	1200

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
58.000	28.785	27.2	C30	74.373	73.023	1.200	Open Manhole	1200
58.001	24.601	23.8	C31	73.349	71.990	1.209	Open Manhole	1200
58.002	27.810	36.4	C32	72.668	71.150	1.293	Open Manhole	1500
58.003	18.906	227.8	C33	72.929	70.917	1.637	Open Manhole	1500
51.008	90.000	32.4	C34	69.716	68.141	1.200	Open Manhole	1500
51.009	85.700	29.8	C35	66.836	65.261	1.200	Open Manhole	1500
51.010	36.375	62.6	C36	66.255	64.605	1.200	Open Manhole	1500
51.011	40.619	298.7	C37	66.211	64.319	1.292	Open Manhole	1500
51.012	40.218	297.9	C38	66.775	64.184	1.991	Open Manhole	1500
51.013	90.000	300.0	C39	68.127	63.884	3.643	Open Manhole	1500
51.014	90.081	300.3	C40	69.594	63.584	5.410	Open Manhole	1500
51.015	78.018	62.8	C46	69.215	62.342	6.273	Open Manhole	2100
9.019	87.633	60.0	C47	65.851	60.581	4.370	Open Manhole	2100
9.020	23.371	54.9	Spur	64.435	60.155	3.380	Junction	
59.000	23.530	65.4	S1	66.570	65.100	1.245	Open Manhole	1200
60.000	10.620	53.1	S1	66.570	64.950	1.320	Open Manhole	1200

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PIPELINE SCHEDULES for Catchment C

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
59.001	o	300	S1	66.570	64.950	1.320	Open Manhole	1200
61.000	o	450	OB3	66.465	64.640	1.375	Open Manhole	1500
59.002	o	600	S2	66.575	64.445	1.530	Open Manhole	1500
62.000	o	225	OB4	66.610	65.365	1.020	Open Manhole	1200
62.001	o	225	S3	66.715	65.285	1.205	Open Manhole	1200
63.000	o	450	OB5	66.610	64.800	1.360	Open Manhole	1500
62.002	o	450	S4	66.715	64.750	1.515	Open Manhole	1500
64.000	o	300	OB6	66.610	64.770	1.540	Open Manhole	1200
62.003	o	600	S5	66.715	64.400	1.715	Open Manhole	1500
59.003	o	600	S6	66.715	64.300	1.815	Open Manhole	1500
65.000	o	150	OB7	67.085	66.000	0.935	Open Manhole	1200
65.001	o	150	S8	67.320	65.735	1.435	Open Manhole	1200

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
59.001	50.500	246.3	S2	66.575	64.745	1.530	Open Manhole	1500
61.000	10.940	243.1	S2	66.575	64.595	1.530	Open Manhole	1500
59.002	22.380	154.3	S6	66.715	64.300	1.815	Open Manhole	1500
62.000	10.620	132.8	S3	66.715	65.285	1.205	Open Manhole	1200
62.001	46.625	150.4	S4	66.715	64.975	1.515	Open Manhole	1500
63.000	11.005	220.1	S4	66.715	64.750	1.515	Open Manhole	1500
62.002	49.400	247.0	S5	66.715	64.550	1.715	Open Manhole	1500
64.000	10.620	151.7	S5	66.715	64.700	1.715	Open Manhole	1500
62.003	13.865	138.7	S6	66.715	64.300	1.815	Open Manhole	1500
59.003	50.000	400.0	S7	67.320	64.175	2.545	Open Manhole	1500
65.000	10.622	40.1	S8	67.320	65.735	1.435	Open Manhole	1200
65.001	32.700	73.5	S9	67.320	65.290	1.880	Open Manhole	1200

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PIPELINE SCHEDULES for Catchment C

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
66.000	o	225	OB8	67.085	65.320	1.540	Open Manhole	1200
65.002	o	225	S9	67.320	65.215	1.880	Open Manhole	1200
67.000	o	225	OB9	67.085	64.660	2.200	Open Manhole	1200
59.004	o	600	S7	67.320	64.175	2.545	Open Manhole	1500
68.000	o	150	OB10	66.940	64.740	2.050	Open Manhole	1200
68.001	o	150	S10	67.175	64.630	2.395	Open Manhole	1200
59.005	o	750	S11	67.175	63.950	2.475	Open Manhole	1800
59.006	o	750	S12	67.050	63.935	2.365	Open Manhole	1800
59.007	o	750	FRS1	67.065	63.820	2.495	Open Manhole	1800
59.008	o	750	S13	67.125	63.795	2.580	Open Manhole	1800
69.000	o	225	CP5	67.070	65.650	1.195	Open Manhole	1200
70.000	o	150	G1	66.385	64.520	1.715	Open Manhole	1200

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
66.000	10.623	101.2	S9	67.320	65.215	1.880	Open Manhole	1200
65.002	50.000	75.2	S7	67.320	64.550	2.545	Open Manhole	1500
67.000	10.620	96.5	S7	67.320	64.550	2.545	Open Manhole	1500
59.004	28.360	378.1	S11	67.175	64.100	2.475	Open Manhole	1800
68.000	10.875	98.9	S10	67.175	64.630	2.395	Open Manhole	1200
68.001	7.990	99.9	S11	67.175	64.550	2.475	Open Manhole	1800
59.005	4.895	326.3	S12	67.050	63.935	2.365	Open Manhole	1800
59.006	8.190	546.0	FRS1	67.065	63.920	2.395	Open Manhole	1800
59.007	8.490	339.6	S13	67.125	63.795	2.580	Open Manhole	1800
59.008	12.685	507.4	S14	67.000	63.770	2.480	Open Manhole	1800
69.000	15.960	11.8	S14	67.000	64.295	2.480	Open Manhole	1800
70.000	14.858	99.1	S14	67.000	64.370	2.480	Open Manhole	1800

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PIPELINE SCHEDULES for Catchment C

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
59.009	o	750	S14	67.000	63.770	2.480	Open Manhole	1800
71.000	o	225	CP8	67.215	65.040	1.950	Open Manhole	1200
59.010	o	750	AT1	69.000	63.710	4.540	Open Manhole	1800
59.011	o	300	S15	66.050	63.660	2.090	Open Manhole	1800
72.000	o	150	SSFD	63.720	62.570	1.000	Open Manhole	1200
59.012	o	150	Ex SC72a	63.720	62.570	1.000	Open Manhole	1200
9.021	o	900	Spur	64.435	59.705	3.830	Junction	
9.022	o	900	C48	63.019	59.260	2.859	Open Manhole	2100
9.023	o	900	C49	60.634	57.203	2.531	Open Manhole	2100
9.024	o	900	C50	57.788	54.750	2.138	Open Manhole	2100
9.025	o	900	C51	55.447	53.207	1.340	Open Manhole	2100
73.000	o	150	SW01	58.600	57.850	0.600	Open Manhole	1200
73.001	o	225	SW02	58.370	57.431	0.714	Open Manhole	1200
74.000	o	150	SW02A	64.330	62.680	1.500	Open Manhole	1200

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
59.009	24.985	416.4	AT1	69.000	63.710	4.540	Open Manhole	1800
71.000	25.835	101.3	AT1	69.000	64.785	3.990	Open Manhole	1800
59.010	26.021	520.4	S15	66.050	63.660	1.640	Open Manhole	1800
59.011	16.915	15.5	Ex SC72a	63.720	62.570	0.850	Open Manhole	1200
72.000	10.000	0.0	Ex SC72a	63.720	62.570	1.000	Open Manhole	1200
59.012	11.377	5.4	Spur	64.435	60.455	3.830	Junction	
9.021	49.296	55.1	C48	63.019	58.810	3.309	Open Manhole	2100
9.022	61.788	30.0	C49	60.634	57.203	2.531	Open Manhole	2100
9.023	73.596	30.0	C50	57.788	54.750	2.138	Open Manhole	2100
9.024	61.829	40.1	C51	55.447	53.207	1.340	Open Manhole	2100
9.025	89.875	20.9	C52	51.156	48.906	1.350	Open Manhole	2400
73.000	30.924	89.9	SW02	58.370	57.506	0.714	Open Manhole	1200
73.001	50.071	90.1	SW03	57.754	56.875	0.654	Open Manhole	1200
74.000	26.203	4.6	SW03	57.754	57.004	0.600	Open Manhole	1200

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PIPELINE SCHEDULES for Catchment C

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
73.002	o	300	SW03	57.754	56.800	0.654	Open Manhole	1200
73.003	o	300	SW04	57.214	56.211	0.703	Open Manhole	1200
73.004	o	300	SW05	56.600	55.252	1.048	Open Manhole	1200
75.000	o	150	SW05A	56.073	55.323	0.600	Open Manhole	1200
73.005	o	375	SW06	55.886	54.685	0.826	Open Manhole	1500
73.006	o	375	SW07	55.692	54.206	1.111	Open Manhole	1500
73.007	o	375	SW08	55.529	53.623	1.531	Open Manhole	1500
73.008	o	375	SW09	55.422	53.233	1.814	Open Manhole	1500
76.000	o	600	SW10	55.857	54.057	1.200	Open Manhole	1500
76.001	o	750	SW11	55.738	53.761	1.227	Open Manhole	1800
76.002	o	750	SW12	55.647	53.650	1.247	Open Manhole	1800
76.003	o	750	SW13	55.528	53.367	1.411	Open Manhole	1800
76.004	o	750	SW14	55.484	53.177	1.557	Open Manhole	1800
76.005	o	750	SW15	55.612	52.641	2.221	Open Manhole	1800
73.009	o	900	SW16	55.589	52.345	2.344	Open Manhole	2100

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
73.002	50.077	85.0	SW04	57.214	56.211	0.703	Open Manhole	1200
73.003	76.722	80.0	SW05	56.600	55.252	1.048	Open Manhole	1200
73.004	24.593	50.0	SW06	55.886	54.760	0.826	Open Manhole	1500
75.000	20.942	50.7	SW06	55.886	54.910	0.826	Open Manhole	1500
73.005	79.999	167.0	SW07	55.692	54.206	1.111	Open Manhole	1500
73.006	70.000	120.1	SW08	55.529	53.623	1.531	Open Manhole	1500
73.007	46.820	120.1	SW09	55.422	53.233	1.814	Open Manhole	1500
73.008	42.407	116.8	SW16	55.589	52.870	2.344	Open Manhole	2100
76.000	51.074	349.8	SW11	55.738	53.911	1.227	Open Manhole	1800
76.001	38.924	350.7	SW12	55.647	53.650	1.247	Open Manhole	1800
76.002	51.015	180.3	SW13	55.528	53.367	1.411	Open Manhole	1800
76.003	18.985	99.9	SW14	55.484	53.177	1.557	Open Manhole	1800
76.004	33.593	100.0	SW15	55.612	52.841	2.021	Open Manhole	1800
76.005	9.323	100.2	SW16	55.589	52.548	2.291	Open Manhole	2100
73.009	34.418	119.9	SW30	55.503	52.058	2.545	Open Manhole	2100

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PIPELINE SCHEDULES for Catchment C

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
77.000	o	225	SW17	58.606	57.900	0.481	Open Manhole	1200
77.001	o	225	SW18	58.445	57.413	0.807	Open Manhole	1200
77.002	o	225	SW19	57.723	56.513	0.985	Open Manhole	1200
78.000	o	150	SW20	57.200	56.500	0.550	Open Manhole	1200
77.003	o	225	SW21	57.444	55.996	1.223	Open Manhole	1200
77.004	o	225	SW22	57.084	55.500	1.359	Open Manhole	1200
79.000	o	150	Gully	56.774	55.800	0.824	Open Manhole	600
77.005	o	225	SW23	56.562	54.436	1.901	Open Manhole	1200
80.000	o	150	SW24	55.645	54.530	0.965	Open Manhole	1200
80.001	o	150	SW25	56.340	54.318	1.872	Open Manhole	1200
80.002	o	150	SW26	56.262	54.236	1.876	Open Manhole	1200
77.006	o	300	SW27	56.310	53.761	2.249	Open Manhole	1200
77.007	o	300	SW28	56.044	53.655	2.089	Open Manhole	1200
77.008	o	300	SW29	55.892	53.585	2.007	Open Manhole	1200

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
77.000	81.302	166.9	SW18	58.445	57.413	0.807	Open Manhole	1200
77.001	90.004	100.0	SW19	57.723	56.513	0.985	Open Manhole	1200
77.002	41.386	80.1	SW21	57.444	55.996	1.223	Open Manhole	1200
78.000	45.848	106.9	SW21	57.444	56.071	1.223	Open Manhole	1200
77.003	21.463	43.3	SW22	57.084	55.500	1.359	Open Manhole	1200
77.004	65.971	62.0	SW23	56.562	54.436	1.901	Open Manhole	1200
79.000	14.086	10.9	SW23	56.562	54.511	1.901	Open Manhole	1200
77.005	29.146	48.6	SW27	56.310	53.836	2.249	Open Manhole	1200
80.000	21.114	99.6	SW25	56.340	54.318	1.872	Open Manhole	1200
80.001	8.109	98.9	SW26	56.262	54.236	1.876	Open Manhole	1200
80.002	7.408	22.8	SW27	56.310	53.911	2.249	Open Manhole	1200
77.006	25.168	237.4	SW28	56.044	53.655	2.089	Open Manhole	1200
77.007	14.772	211.0	SW29	55.892	53.585	2.007	Open Manhole	1200
77.008	31.332	33.8	SW30	55.503	52.658	2.545	Open Manhole	2100

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PIPELINE SCHEDULES for Catchment C

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
73.010	o	900	SW30	55.503	52.058	2.545	Open Manhole	2100
73.011	o	900	SW31	55.327	51.186	3.241	Open Manhole	2100
73.012	o	900	SW32	55.648	50.456	4.292	Open Manhole	2100
81.000	o	150	HD01	57.100	56.050	0.900	Open Manhole	1200
81.001	o	150	HD02	56.041	54.974	0.917	Open Manhole	1200
81.002	o	150	HD03	55.655	54.299	1.206	Open Manhole	1200
81.003	o	150	HD04	54.782	53.401	1.231	Open Manhole	1200
73.013	o	1050	36	51.350	49.694	0.606	Open Manhole	2100
9.026	o	1200	C52	51.156	48.606	1.350	Open Manhole	2400
9.027	o	1200	C53	46.900	44.320	1.380	Open Manhole	2100
9.028	o	1200	C54	45.580	42.430	1.950	Open Manhole	2400
9.029	o	2100	H20C	42.300	39.800	0.400	Open Manhole	3000
82.000	o	225	C55a	42.230	41.180	0.825	Open Manhole	1200
83.000	o	150	C55b	45.150	43.800	1.200	Open Manhole	1200
82.001	o	225	C55	43.800	40.765	2.810	Open Manhole	1200

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
73.010	75.483	86.6	SW31	55.327	51.186	3.241	Open Manhole	2100
73.011	37.304	51.1	SW32	55.648	50.456	4.292	Open Manhole	2100
73.012	17.122	28.0	36	51.350	49.844	0.606	Open Manhole	2100
81.000	31.194	29.0	HD02	56.041	54.974	0.917	Open Manhole	1200
81.001	10.123	15.0	HD03	55.655	54.299	1.206	Open Manhole	1200
81.002	20.661	23.0	HD04	54.782	53.401	1.231	Open Manhole	1200
81.003	64.136	22.8	36	51.350	50.594	0.606	Open Manhole	2100
73.013	13.767	14.7	C52	51.156	48.756	1.350	Open Manhole	2400
9.026	99.980	23.3	C53	46.900	44.320	1.380	Open Manhole	2100
9.027	56.666	30.0	C54	45.580	42.430	1.950	Open Manhole	2400
9.028	50.477	35.3	H20C	42.300	41.000	0.100	Open Manhole	3000
9.029	18.000#	36.0	BASIN C1	42.000	39.300	0.600	Open Manhole	3000
82.000	51.214	150.0	C55	43.800	40.839	2.736	Open Manhole	1200
83.000	31.800	10.5	C55	43.800	40.764	2.886	Open Manhole	1200
82.001	47.504	167.0	56	44.900	40.481	4.194	Open Manhole	1200

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PIPELINE SCHEDULES for Catchment C

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
82.002	o	300	56	44.900	40.480	4.120	Open Manhole	1200
82.003	o	300	C57	44.300	40.215	3.785	Open Manhole	1200
82.004	o	300	H7C	42.500	40.000	2.200	Open Manhole	1200
9.030	o	450	BASIN C1	42.000	39.300	2.250	Open Manhole	3000
9.031	o	450	C59	38.600	36.500	1.650	Open Manhole	1500
84.000	o	600	P2_29	42.400	40.600	1.200	Open Manhole	1500
84.001	o	600	P2_30	42.343	40.517	1.226	Open Manhole	1500
84.002	o	600	P2_31	42.162	40.480	1.082	Open Manhole	1800
85.000	o	225	SC72	44.017	43.349	0.443	Open Manhole	1200
85.001	o	225	SC73	43.907	42.984	0.698	Open Manhole	1200
85.002	o	225	SC74	43.815	42.692	0.898	Open Manhole	1200
85.003	o	300	SC75	43.201	42.400	0.501	Open Manhole	1200
85.004	o	450	SC76	43.103	41.950	0.703	Open Manhole	1500
85.005	o	600	SC77	42.911	41.550	0.761	Open Manhole	1500
85.006	o	600	SC78	42.668	41.298	0.770	Open Manhole	1500
85.007	o	750	SC79	42.450	41.080	0.620	Open Manhole	1800
85.008	o	750	SC80	42.222	40.780	0.692	Open Manhole	1800
85.009	o	750	SC81	42.120	40.620	0.750	Open Manhole	1800

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
82.002	44.321	167.0	C57	44.300	40.215	3.785	Open Manhole	1200
82.003	31.669	147.3	H7C	42.500	40.000	2.200	Open Manhole	1200
82.004	18.000#	25.7	BASIN C1	42.000	39.300	2.400	Open Manhole	3000
9.030	28.516	10.2	C59	38.600	36.500	1.650	Open Manhole	1500
9.031	13.000#	52.0	BASIN C3	38.500	36.250	1.800	Open Manhole	2400
84.000	39.878	480.5	P2_30	42.343	40.517	1.226	Open Manhole	1500
84.001	17.744	479.6	P2_31	42.162	40.480	1.082	Open Manhole	1800
84.002	49.336	483.7	P2_32	42.065	40.378	1.087	Open Manhole	1800
85.000	54.800	150.1	SC73	43.907	42.984	0.698	Open Manhole	1200
85.001	48.426	167.0	SC74	43.815	42.694	0.896	Open Manhole	1200
85.002	50.000	171.2	SC75	43.201	42.400	0.576	Open Manhole	1200
85.003	49.000	163.3	SC76	43.103	42.100	0.703	Open Manhole	1500
85.004	96.099	384.4	SC77	42.911	41.700	0.761	Open Manhole	1500
85.005	106.473	422.5	SC78	42.668	41.298	0.770	Open Manhole	1500
85.006	21.512	202.9	SC79	42.450	41.192	0.658	Open Manhole	1800
85.007	57.795	192.7	SC80	42.222	40.780	0.692	Open Manhole	1800
85.008	95.144	594.7	SC81	42.120	40.620	0.750	Open Manhole	1800
85.009	73.549	500.3	SC82	42.609	40.473	1.386	Open Manhole	1800

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PIPELINE SCHEDULES for Catchment C

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
85.010	o	750	SC82	42.609	40.473	1.386	Open Manhole	1800
85.011	o	750	SC83	42.400	40.295	1.355	Open Manhole	1800
84.003	o	750	P2_32	42.065	40.228	1.087	Open Manhole	1800
84.004	o	750	P2_33	41.991	40.200	1.041	Open Manhole	1800
84.005	o	750	P2_34	42.255	40.102	1.403	Open Manhole	1800
84.006	o	900	P1 Slab	42.398	39.930	1.568	Open Manhole	1800
86.000	o	450	C88	44.193	42.893	0.850	Open Manhole	1500
86.001	o	450	C89	44.062	42.762	0.850	Open Manhole	1500
86.002	o	450	C90	43.963	42.645	0.868	Open Manhole	1500
86.003	o	450	C91	43.801	42.483	0.868	Open Manhole	1500
86.004	o	450	C92	43.639	42.321	0.868	Open Manhole	1500
86.005	o	450	C93	43.417	42.099	0.868	Open Manhole	1500
86.006	o	450	C94	43.195	41.877	0.868	Open Manhole	1500
86.007	o	450	C95	43.004	41.686	0.868	Open Manhole	1500
86.008	o	450	C96	42.813	41.495	0.868	Open Manhole	1500
86.009	o	450	C97	42.622	41.304	0.868	Open Manhole	1500
87.000	o	150	C87	42.450	41.600	0.700	Open Manhole	1200

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
85.010	89.144	500.8	SC83	42.400	40.295	1.355	Open Manhole	1800
85.011	33.311	497.2	P2_32	42.065	40.228	1.087	Open Manhole	1800
84.003	14.823	529.4	P2_33	41.991	40.200	1.041	Open Manhole	1800
84.004	52.656	537.3	P2_34	42.255	40.102	1.403	Open Manhole	1800
84.005	11.901	541.0	P1 Slab	42.398	40.080	1.568	Open Manhole	1800
84.006	33.073	3011.6	C65	42.458	39.919	1.639	Open Manhole	2400
86.000	65.419	499.4	C89	44.062	42.762	0.850	Open Manhole	1500
86.001	58.469	499.7	C90	43.963	42.645	0.868	Open Manhole	1500
86.002	81.003	500.0	C91	43.801	42.483	0.868	Open Manhole	1500
86.003	81.004	500.0	C92	43.639	42.321	0.868	Open Manhole	1500
86.004	111.005	500.0	C93	43.417	42.099	0.868	Open Manhole	1500
86.005	111.005	500.0	C94	43.195	41.877	0.868	Open Manhole	1500
86.006	95.499	500.0	C95	43.004	41.686	0.868	Open Manhole	1500
86.007	95.501	500.0	C96	42.813	41.495	0.868	Open Manhole	1500
86.008	95.500	500.0	C97	42.622	41.304	0.868	Open Manhole	1500
86.009	70.529	369.3	C98	42.480	41.113	0.917	Open Manhole	2100
87.000	25.128	149.6	C98	42.480	41.432	0.898	Open Manhole	2100

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PIPELINE SCHEDULES for Catchment C

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
88.000	o	150	P2_1	44.315	42.965	1.200	Open Manhole	1200
88.001	o	150	P2_2	44.251	42.901	1.200	Open Manhole	1200
88.002	o	150	P2_3	44.154	42.804	1.200	Open Manhole	1200
88.003	o	150	P2_4	44.141	42.737	1.254	Open Manhole	1200
89.000	o	150	P2_5	56.568	55.218	1.200	Open Manhole	1200
88.004	o	300	P2_6	43.748	42.143	1.305	Open Manhole	1200
88.005	o	300	P2_7	43.614	42.071	1.243	Open Manhole	1200
88.006	o	450	P2_8	43.453	41.770	1.233	Open Manhole	1500
88.007	o	600	P2_11	43.304	41.418	1.286	Open Manhole	1500
88.008	o	600	P2_12	43.208	41.396	1.212	Open Manhole	1500
88.009	o	600	P_13	43.102	41.253	1.249	Open Manhole	1500
88.010	o	750	P2_14	42.969	40.963	1.256	Open Manhole	1800
88.011	o	750	P2_15	42.830	40.823	1.257	Open Manhole	1800
88.012	o	750	P2_16	42.683	40.678	1.255	Open Manhole	1800
88.013	o	900	P2_17	42.781	40.513	1.368	Open Manhole	2100
88.014	o	900	P2_18	42.724	40.457	1.367	Open Manhole	2100
88.015	o	900	P2_19	42.835	40.425	1.510	Open Manhole	2100
88.016	o	900	P2_20	43.007	40.398	1.709	Open Manhole	2100
88.017	o	900	P2_21	42.959	40.348	1.711	Open Manhole	2100

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
88.000	5.121	80.0	P2_2	44.251	42.901	1.200	Open Manhole	1200
88.001	9.720	100.2	P2_3	44.154	42.804	1.200	Open Manhole	1200
88.002	6.690	99.9	P2_4	44.141	42.737	1.254	Open Manhole	1200
88.003	31.666	71.3	P2_6	43.748	42.293	1.305	Open Manhole	1200
89.000	41.702	3.2	P2_6	43.748	42.293	1.305	Open Manhole	1200
88.004	10.721	151.0	P2_7	43.614	42.072	1.242	Open Manhole	1200
88.005	14.762	97.8	P2_8	43.453	41.920	1.233	Open Manhole	1500
88.006	65.006	321.8	P2_11	43.304	41.568	1.286	Open Manhole	1500
88.007	7.767	353.0	P2_12	43.208	41.396	1.212	Open Manhole	1500
88.008	50.178	350.9	P_13	43.102	41.253	1.249	Open Manhole	1500
88.009	69.948	499.6	P2_14	42.969	41.113	1.256	Open Manhole	1800
88.010	70.000	500.0	P2_15	42.830	40.823	1.257	Open Manhole	1800
88.011	72.120	500.8	P2_16	42.683	40.679	1.254	Open Manhole	1800
88.012	7.902	493.9	P2_17	42.781	40.662	1.369	Open Manhole	2100
88.013	27.903	498.3	P2_18	42.724	40.457	1.367	Open Manhole	2100
88.014	15.790	493.4	P2_19	42.835	40.425	1.510	Open Manhole	2100
88.015	13.849	494.6	P2_20	43.007	40.397	1.710	Open Manhole	2100
88.016	24.979	499.6	P2_21	42.959	40.348	1.711	Open Manhole	2100
88.017	15.365	495.6	P2_22	43.070	40.317	1.853	Open Manhole	2100

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PIPELINE SCHEDULES for Catchment C

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
88.018	o	900	P2_22	43.070	40.317	1.853	Open Manhole	2100
88.019	o	900	P2_23	43.218	40.293	2.025	Open Manhole	2100
88.020	o	900	P2_24	43.168	40.204	2.064	Open Manhole	2100
88.021	o	900	P2_25	43.164	40.174	2.090	Open Manhole	2100
88.022	o	900	P2_25A	43.078	40.082	2.096	Open Manhole	2100
88.023	o	900	P2_26	42.941	39.947	2.094	Open Manhole	2100
88.024	o	900	P2_26A	42.801	39.809	2.092	Open Manhole	2100
88.025	o	900	P2_27	42.787	39.794	2.093	Open Manhole	2100
88.026	o	900	P2_28	42.657	39.662	2.095	Open Manhole	2100
88.027	o	900	P2_28A	42.181	39.516	1.765	Open Manhole	2100
88.028	o	900	246	42.490	39.470	2.120	Open Manhole	2100
86.010	o	900	C98	42.480	39.442	2.138	Open Manhole	2100
84.007	o	1200	C65	42.458	39.100	2.158	Open Manhole	2400
84.008	o	1200	C66	38.800	36.950	0.650	Open Manhole	2400
90.000	o	225	P16 - Dummy	54.000	51.000	2.775	Open Manhole	1200
90.001	o	225	P16 - Tank	51.200	48.000	2.975	Open Manhole	1200
90.002	o	225	P16 - Basin	40.000	37.700	2.075	Open Manhole	1200

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
88.018	11.978	499.1	P2_23	43.218	40.293	2.025	Open Manhole	2100
88.019	44.644	501.6	P2_24	43.168	40.204	2.064	Open Manhole	2100
88.020	14.811	493.7	P2_25	43.164	40.174	2.090	Open Manhole	2100
88.021	45.987	501.6	P2_25A	43.078	40.082	2.096	Open Manhole	2100
88.022	67.963	503.4	P2_26	42.941	39.947	2.094	Open Manhole	2100
88.023	69.033	501.6	P2_26A	42.801	39.809	2.092	Open Manhole	2100
88.024	7.731	515.4	P2_27	42.787	39.794	2.093	Open Manhole	2100
88.025	66.023	500.2	P2_28	42.657	39.662	2.095	Open Manhole	2100
88.026	56.011	383.6	P2_28A	42.181	39.516	1.765	Open Manhole	2100
88.027	22.433	487.7	246	42.490	39.470	2.120	Open Manhole	2100
88.028	13.795	500.0	C98	42.480	39.442	2.138	Open Manhole	2100
86.010	24.711	500.0	C65	42.458	39.393	2.165	Open Manhole	2400
84.007	76.445	35.6	C66	38.800	36.950	0.650	Open Manhole	2400
84.008	14.000#	40.0	BASIN C3	38.500	36.600	0.700	Open Manhole	2400
90.000	22.005	7.3	P16 - Tank	51.200	48.000	2.975	Open Manhole	1200
90.001	366.400#	35.6	P16 - Basin	40.000	37.700	2.075	Open Manhole	1200
90.002	189.000#	169.5	BASIN C3	38.500	36.585	1.690	Open Manhole	2400

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PIPELINE SCHEDULES for Catchment C

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
9.032	o	450	BASIN C3	38.500	35.880	2.170	Open Manhole	2400
9.033	o	450	C68	36.717	35.168	1.099	Open Manhole	1500
9.034	o	450	C69	36.300	34.943	0.907	Open Manhole	1500
9.035	o	450	C70	34.865	33.815	0.600	Open Manhole	1500
9.036	o	450	C71	33.672	32.622	0.600	Open Manhole	1500

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
9.032	75.151	105.5	C68	36.717	35.168	1.099	Open Manhole	1500
9.033	33.595	149.3	C69	36.300	34.943	0.907	Open Manhole	1500
9.034	65.169	57.8	C70	34.865	33.815	0.600	Open Manhole	1500
9.035	53.153	44.6	C71	33.672	32.622	0.600	Open Manhole	1500
9.036	31.803	289.1	C OUTFALL	33.425	32.512	0.463	Open Manhole	450

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Area Summary for Catchment C

Pipe Number	PIMP Type	PIMP Name	PIMP (%)	Gross Area (ha)	Imp. Area (ha)	Pipe Total (ha)
9.000	-	-	100	0.510	0.510	0.510
9.001	-	-	100	0.000	0.000	0.000
10.000	-	-	100	0.270	0.270	0.270
9.002	-	-	100	0.000	0.000	0.000
9.003	-	-	100	0.000	0.000	0.000
9.004	-	-	100	0.000	0.000	0.000
9.005	-	-	100	0.000	0.000	0.000
11.000	-	-	100	0.485	0.485	0.485
11.001	-	-	100	0.000	0.000	0.000
11.002	-	-	100	0.000	0.000	0.000
11.003	-	-	100	0.000	0.000	0.000
12.000	-	-	100	0.485	0.485	0.485
12.001	-	-	100	0.000	0.000	0.000
12.002	-	-	100	0.000	0.000	0.000
11.004	-	-	100	0.000	0.000	0.000
13.000	-	-	100	0.485	0.485	0.485
13.001	-	-	100	0.000	0.000	0.000
13.002	-	-	100	0.000	0.000	0.000
11.005	-	-	100	0.000	0.000	0.000
14.000	-	-	100	0.485	0.485	0.485
14.001	-	-	100	0.000	0.000	0.000
14.002	-	-	100	0.000	0.000	0.000
11.006	-	-	100	0.000	0.000	0.000
11.007	-	-	100	0.000	0.000	0.000
9.006	-	-	100	0.000	0.000	0.000
9.007	-	-	100	0.000	0.000	0.000
15.000	-	-	100	0.198	0.198	0.198
16.000	-	-	100	0.203	0.203	0.203
16.001	-	-	100	0.000	0.000	0.000
15.001	-	-	100	0.000	0.000	0.000
17.000	-	-	100	0.290	0.290	0.290
15.002	-	-	100	0.000	0.000	0.000
18.000	-	-	100	0.298	0.298	0.298
18.001	-	-	100	0.000	0.000	0.000
15.003	-	-	100	0.000	0.000	0.000
15.004	-	-	100	0.000	0.000	0.000
9.008	-	-	100	0.000	0.000	0.000
9.009	-	-	100	0.000	0.000	0.000
19.000	-	-	100	0.046	0.046	0.046
9.010	-	-	100	0.000	0.000	0.000
9.011	-	-	100	0.000	0.000	0.000
20.000	-	-	100	0.352	0.352	0.352
20.001	-	-	100	0.000	0.000	0.000
20.002	-	-	100	0.000	0.000	0.000
20.003	-	-	100	0.000	0.000	0.000
21.000	-	-	100	0.000	0.000	0.000
9.012	-	-	100	0.000	0.000	0.000
22.000	-	-	100	0.031	0.031	0.031
22.001	-	-	100	0.098	0.098	0.098
22.002	-	-	100	0.143	0.143	0.143
22.003	-	-	100	0.181	0.181	0.181

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Area Summary for Catchment C

Pipe Number	PIMP Type	PIMP Name	PIMP (%)	Gross Area (ha)	Imp. Area (ha)	Pipe Total (ha)
23.000	-	-	100	0.223	0.223	0.223
22.004	-	-	100	0.000	0.000	0.000
24.000	-	-	100	0.302	0.302	0.302
22.005	-	-	100	0.000	0.000	0.000
22.006	-	-	100	0.000	0.000	0.000
9.013	-	-	100	0.000	0.000	0.000
25.000	-	-	100	0.025	0.025	0.025
9.014	-	-	100	0.049	0.049	0.049
9.015	-	-	100	0.000	0.000	0.000
26.000	User	-	100	0.288	0.288	0.288
27.000	-	-	100	0.663	0.663	0.663
27.001	-	-	100	0.209	0.209	0.209
27.002	-	-	100	0.419	0.419	0.419
27.003	-	-	100	0.202	0.202	0.202
27.004	-	-	100	0.226	0.226	0.226
27.005	-	-	100	0.000	0.000	0.000
27.006	-	-	100	0.449	0.449	0.449
27.007	-	-	100	0.000	0.000	0.000
26.001	-	-	100	0.000	0.000	0.000
9.016	User	-	100	0.172	0.172	0.172
	User	-	100	0.178	0.178	0.350
9.017	-	-	100	0.000	0.000	0.000
28.000	-	-	100	0.682	0.682	0.682
28.001	-	-	100	0.000	0.000	0.000
29.000	-	-	100	0.268	0.268	0.268
28.002	-	-	100	0.000	0.000	0.000
30.000	-	-	100	0.190	0.190	0.190
28.003	-	-	100	0.000	0.000	0.000
28.004	-	-	100	0.000	0.000	0.000
28.005	-	-	100	0.000	0.000	0.000
31.000	-	-	100	0.482	0.482	0.482
31.001	-	-	100	0.000	0.000	0.000
31.002	-	-	100	0.000	0.000	0.000
31.003	-	-	100	0.000	0.000	0.000
32.000	-	-	100	0.482	0.482	0.482
32.001	-	-	100	0.000	0.000	0.000
32.002	-	-	100	0.000	0.000	0.000
31.004	-	-	100	0.000	0.000	0.000
33.000	-	-	100	0.482	0.482	0.482
33.001	-	-	100	0.000	0.000	0.000
33.002	-	-	100	0.000	0.000	0.000
31.005	-	-	100	0.000	0.000	0.000
34.000	-	-	100	0.482	0.482	0.482
34.001	-	-	100	0.000	0.000	0.000
34.002	-	-	100	0.000	0.000	0.000
31.006	-	-	100	0.000	0.000	0.000
28.006	-	-	100	0.000	0.000	0.000
35.000	-	-	100	0.249	0.249	0.249
35.001	-	-	100	0.000	0.000	0.000
35.002	-	-	100	0.000	0.000	0.000
35.003	-	-	100	0.000	0.000	0.000

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Area Summary for Catchment C

Pipe Number	PIMP Type	PIMP Name	PIMP (%)	Gross Area (ha)	Imp. Area (ha)	Pipe Total (ha)
28.007	-	-	100	0.000	0.000	0.000
28.008	-	-	100	0.000	0.000	0.000
28.009	-	-	100	0.000	0.000	0.000
36.000	-	-	100	0.293	0.293	0.293
36.001	-	-	100	0.000	0.000	0.000
37.000	-	-	100	0.154	0.154	0.154
37.001	-	-	100	0.000	0.000	0.000
38.000	-	-	100	0.323	0.323	0.323
37.002	-	-	100	0.000	0.000	0.000
36.002	-	-	100	0.000	0.000	0.000
36.003	-	-	100	0.000	0.000	0.000
28.010	-	-	100	0.000	0.000	0.000
39.000	-	-	100	0.026	0.026	0.026
39.001	-	-	100	0.000	0.000	0.000
40.000	-	-	100	0.404	0.404	0.404
39.002	-	-	100	0.000	0.000	0.000
41.000	-	-	100	0.305	0.305	0.305
41.001	-	-	100	0.000	0.000	0.000
39.003	-	-	100	0.000	0.000	0.000
39.004	-	-	100	0.000	0.000	0.000
28.011	-	-	100	0.000	0.000	0.000
28.012	-	-	100	0.000	0.000	0.000
42.000	-	-	100	0.075	0.075	0.075
28.013	-	-	100	0.000	0.000	0.000
43.000	-	-	100	0.352	0.352	0.352
43.001	-	-	100	0.000	0.000	0.000
43.002	-	-	100	0.000	0.000	0.000
43.003	-	-	100	0.000	0.000	0.000
44.000	-	-	100	0.000	0.000	0.000
43.004	-	-	100	0.000	0.000	0.000
28.014	-	-	100	0.000	0.000	0.000
45.000	-	-	100	0.043	0.043	0.043
28.015	-	-	100	0.050	0.050	0.050
46.000	-	-	100	0.074	0.074	0.074
46.001	-	-	100	0.103	0.103	0.103
47.000	-	-	100	0.319	0.319	0.319
47.001	-	-	100	0.120	0.120	0.120
47.002	-	-	100	0.120	0.120	0.120
47.003	-	-	100	0.122	0.122	0.122
46.002	-	-	100	0.000	0.000	0.000
46.003	-	-	100	0.000	0.000	0.000
46.004	-	-	100	0.000	0.000	0.000
28.016	-	-	100	0.000	0.000	0.000
28.017	-	-	100	0.000	0.000	0.000
48.000	-	-	100	0.053	0.053	0.053
48.001	-	-	100	0.000	0.000	0.000
49.000	-	-	100	0.146	0.146	0.146
49.001	-	-	100	0.140	0.140	0.140
49.002	-	-	100	0.140	0.140	0.140
49.003	-	-	100	0.140	0.140	0.140
50.000	-	-	100	0.139	0.139	0.139

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Area Summary for Catchment C

Pipe Number	PIMP Type	PIMP Name	PIMP (%)	Gross Area (ha)	Imp. Area (ha)	Pipe Total (ha)
48.002	-	-	100	0.000	0.000	0.000
48.003	-	-	100	0.000	0.000	0.000
48.004	-	-	100	0.000	0.000	0.000
28.018	-	-	100	0.000	0.000	0.000
28.019	-	-	100	0.000	0.000	0.000
9.018	User	-	100	0.438	0.438	0.438
51.000	User	-	100	0.042	0.042	0.042
51.001	User	-	100	0.026	0.026	0.026
51.002	User	-	100	0.026	0.026	0.026
51.003	User	-	100	0.047	0.047	0.047
51.004	User	-	100	0.062	0.062	0.062
51.005	User	-	100	0.073	0.073	0.073
	User	-	20	0.012	0.002	0.075
52.000	-	-	100	0.004	0.004	0.004
52.001	-	-	100	0.000	0.000	0.000
52.002	-	-	100	0.000	0.000	0.000
53.000	-	-	100	0.006	0.006	0.006
52.003	-	-	100	0.034	0.034	0.034
52.004	-	-	100	0.055	0.055	0.055
54.000	-	-	100	0.034	0.034	0.034
54.001	-	-	100	0.000	0.000	0.000
55.000	-	-	100	0.008	0.008	0.008
56.000	-	-	100	0.012	0.012	0.012
54.002	-	-	100	0.000	0.000	0.000
57.000	-	-	100	0.013	0.013	0.013
52.005	-	-	100	0.012	0.012	0.012
51.006	-	-	100	0.145	0.145	0.145
51.007	User	-	20	0.034	0.007	0.007
	User	-	100	0.085	0.085	0.091
	User	-	100	0.015	0.015	0.106
58.000	-	-	100	0.126	0.126	0.126
58.001	User	-	100	0.044	0.044	0.044
	User	-	20	0.032	0.006	0.051
58.002	User	-	100	0.039	0.039	0.039
	User	-	20	0.037	0.007	0.047
58.003	-	-	100	0.021	0.021	0.021
51.008	User	-	100	0.257	0.257	0.257
51.009	-	-	100	0.267	0.267	0.267
51.010	User	-	100	0.108	0.108	0.108
51.011	User	-	100	0.127	0.127	0.127
51.012	User	-	100	0.115	0.115	0.115
51.013	User	-	100	0.240	0.240	0.240
51.014	User	-	100	0.253	0.253	0.253
	User	-	20	1.372	0.274	0.527
51.015	-	-	100	0.000	0.000	0.000
9.019	User	-	100	0.123	0.123	0.123
9.020	User	-	100	0.133	0.133	0.133
59.000	-	-	100	0.052	0.052	0.052
60.000	-	-	100	0.306	0.306	0.306
59.001	-	-	100	0.000	0.000	0.000
61.000	-	-	100	0.267	0.267	0.267

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Area Summary for Catchment C

Pipe Number	PIMP Type	PIMP Name	PIMP (%)	Gross Area (ha)	Imp. Area (ha)	Pipe Total (ha)
59.002	-	-	100	0.000	0.000	0.000
62.000	-	-	100	0.102	0.102	0.102
62.001	-	-	100	0.000	0.000	0.000
63.000	-	-	100	0.256	0.256	0.256
62.002	-	-	100	0.000	0.000	0.000
64.000	-	-	100	0.255	0.255	0.255
62.003	-	-	100	0.000	0.000	0.000
59.003	-	-	100	0.000	0.000	0.000
65.000	-	-	100	0.033	0.033	0.033
65.001	-	-	100	0.000	0.000	0.000
66.000	-	-	100	0.066	0.066	0.066
65.002	-	-	100	0.000	0.000	0.000
67.000	-	-	100	0.080	0.080	0.080
59.004	-	-	100	0.000	0.000	0.000
68.000	-	-	100	0.040	0.040	0.040
68.001	-	-	100	0.000	0.000	0.000
59.005	-	-	100	0.000	0.000	0.000
59.006	-	-	100	0.000	0.000	0.000
59.007	-	-	100	0.000	0.000	0.000
59.008	-	-	100	0.000	0.000	0.000
69.000	-	-	100	0.329	0.329	0.329
70.000	-	-	100	0.016	0.016	0.016
59.009	-	-	100	0.000	0.000	0.000
71.000	-	-	100	0.177	0.177	0.177
59.010	-	-	100	0.000	0.000	0.000
59.011	-	-	100	0.000	0.000	0.000
72.000	-	-	100	0.229	0.229	0.229
59.012	-	-	100	0.000	0.000	0.000
9.021	-	-	100	0.000	0.000	0.000
9.022	User	-	100	0.117	0.117	0.117
9.023	User	-	100	0.084	0.084	0.084
9.024	User	-	100	0.164	0.164	0.164
9.025	-	-	100	0.187	0.187	0.187
73.000	User	-	20	0.118	0.024	0.024
73.001	User	-	20	0.135	0.027	0.027
74.000	User	-	20	0.328	0.066	0.066
73.002	User	-	20	0.188	0.038	0.038
73.003	User	-	20	0.268	0.054	0.054
73.004	-	-	100	0.000	0.000	0.000
75.000	User	-	20	0.060	0.012	0.012
73.005	User	-	20	0.100	0.020	0.020
73.006	User	-	20	0.095	0.019	0.019
73.007	User	-	20	0.068	0.014	0.014
73.008	User	-	20	0.077	0.015	0.015
76.000	-	-	100	0.000	0.000	0.000
76.001	-	-	100	0.000	0.000	0.000
76.002	-	-	100	0.000	0.000	0.000
76.003	-	-	100	0.000	0.000	0.000
76.004	-	-	100	0.000	0.000	0.000
76.005	-	-	100	0.000	0.000	0.000
73.009	User	-	20	0.052	0.010	0.010

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Area Summary for Catchment C

Pipe Number	PIMP Type	PIMP Name	PIMP (%)	Gross Area (ha)	Imp. Area (ha)	Pipe Total (ha)
	User	-	20	0.700	0.140	0.150
77.000	User	-	20	0.314	0.063	0.063
77.001	User	-	20	0.200	0.040	0.040
77.002	User	-	20	0.069	0.014	0.014
78.000	User	-	50	0.068	0.034	0.034
77.003	-	-	100	0.000	0.000	0.000
77.004	-	-	100	0.000	0.000	0.000
79.000	User	-	100	0.010	0.010	0.010
77.005	-	-	100	0.000	0.000	0.000
80.000	-	-	100	0.000	0.000	0.000
80.001	-	-	100	0.000	0.000	0.000
80.002	-	-	100	0.000	0.000	0.000
77.006	-	-	100	0.000	0.000	0.000
77.007	-	-	100	0.000	0.000	0.000
77.008	-	-	100	0.000	0.000	0.000
73.010	User	-	20	0.120	0.024	0.024
73.011	User	-	20	0.073	0.015	0.015
73.012	-	-	100	0.000	0.000	0.000
81.000	User	-	100	0.017	0.017	0.017
	User	-	20	0.075	0.015	0.032
81.001	-	-	100	0.000	0.000	0.000
81.002	-	-	100	0.000	0.000	0.000
81.003	User	-	100	0.015	0.015	0.015
	User	-	20	0.025	0.005	0.020
	User	-	20	0.130	0.026	0.046
73.013	-	-	100	3.635	3.635	3.635
9.026	-	-	100	0.256	0.256	0.256
9.027	-	-	100	0.000	0.000	0.000
9.028	-	-	100	0.000	0.000	0.000
9.029	-	-	100	0.000	0.000	0.000
82.000	-	-	100	0.100	0.100	0.100
83.000	-	-	100	0.040	0.040	0.040
82.001	-	-	100	0.140	0.140	0.140
82.002	-	-	100	0.015	0.015	0.015
82.003	-	-	100	0.000	0.000	0.000
82.004	-	-	100	0.000	0.000	0.000
9.030	-	-	100	0.000	0.000	0.000
9.031	-	-	100	0.000	0.000	0.000
84.000	User	-	100	0.305	0.305	0.305
	User	-	50	0.010	0.005	0.310
84.001	User	-	100	0.327	0.327	0.327
	User	-	50	0.020	0.010	0.337
84.002	-	-	100	0.000	0.000	0.000
85.000	-	-	100	0.020	0.020	0.020
85.001	-	-	100	0.100	0.100	0.100
85.002	-	-	100	0.086	0.086	0.086
85.003	-	-	100	0.000	0.000	0.000
85.004	-	-	100	0.097	0.097	0.097
85.005	-	-	100	0.657	0.657	0.657
85.006	-	-	100	0.735	0.735	0.735
85.007	-	-	100	0.001	0.001	0.001

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Area Summary for Catchment C

Pipe Number	PIMP Type	PIMP Name	PIMP (%)	Gross Area (ha)	Imp. Area (ha)	Pipe Total (ha)
85.008	-	-	100	0.503	0.503	0.503
85.009	-	-	100	0.864	0.864	0.864
85.010	-	-	100	0.750	0.750	0.750
85.011	-	-	100	0.050	0.050	0.050
84.003	User	-	50	0.011	0.005	0.005
	User	-	100	0.117	0.117	0.123
84.004	User	-	100	0.261	0.261	0.261
84.005	-	-	100	0.000	0.000	0.000
84.006	-	-	100	0.000	0.000	0.000
86.000	-	-	100	0.001	0.001	0.001
86.001	-	-	100	0.043	0.043	0.043
86.002	-	-	100	0.051	0.051	0.051
86.003	-	-	100	0.073	0.073	0.073
86.004	-	-	100	0.073	0.073	0.073
86.005	-	-	100	0.100	0.100	0.100
86.006	-	-	100	0.100	0.100	0.100
86.007	-	-	100	0.086	0.086	0.086
86.008	-	-	100	0.086	0.086	0.086
86.009	-	-	100	0.086	0.086	0.086
87.000	-	-	100	0.000	0.000	0.000
88.000	User	-	50	0.023	0.011	0.011
88.001	User	-	100	0.006	0.006	0.006
	User	-	50	0.037	0.018	0.024
88.002	User	-	100	0.012	0.012	0.012
	User	-	50	0.007	0.004	0.015
88.003	User	-	50	0.089	0.044	0.044
	User	-	100	0.004	0.004	0.048
89.000	User	-	50	0.497	0.248	0.248
88.004	User	-	50	0.189	0.094	0.094
88.005	User	-	100	0.040	0.040	0.040
	User	-	50	0.003	0.002	0.042
88.006	User	-	100	0.427	0.427	0.427
	User	-	50	0.006	0.003	0.429
	User	-	100	0.006	0.006	0.436
88.007	User	-	50	0.241	0.120	0.120
88.008	User	-	50	0.220	0.110	0.110
	User	-	100	0.371	0.371	0.480
88.009	User	-	50	0.130	0.065	0.065
	User	-	100	0.522	0.522	0.587
88.010	User	-	100	0.516	0.516	0.516
	User	-	50	0.060	0.030	0.546
88.011	User	-	50	0.776	0.388	0.388
	User	-	100	0.533	0.533	0.921
88.012	User	-	100	0.012	0.012	0.012
	User	-	50	0.049	0.025	0.036
88.013	User	-	50	0.006	0.003	0.003
	User	-	100	0.190	0.190	0.193
88.014	User	-	100	0.070	0.070	0.070
	User	-	50	0.004	0.002	0.072
88.015	User	-	50	0.041	0.021	0.021
	User	-	100	0.012	0.012	0.033

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Area Summary for Catchment C

Pipe Number	PIMP Type	PIMP Name	PIMP (%)	Gross Area (ha)	Imp. Area (ha)	Pipe Total (ha)
88.016	User	-	50	0.050	0.025	0.025
	User	-	100	0.108	0.108	0.132
88.017	User	-	50	0.030	0.015	0.015
	User	-	100	0.045	0.045	0.060
88.018	User	-	100	0.005	0.005	0.005
	User	-	50	0.014	0.007	0.012
88.019	User	-	50	0.119	0.059	0.059
	User	-	100	0.075	0.075	0.134
88.020	User	-	50	0.012	0.006	0.006
	User	-	100	0.002	0.002	0.008
88.021	User	-	50	0.235	0.117	0.117
88.022	User	-	50	0.110	0.055	0.055
	User	-	100	0.006	0.006	0.061
88.023	User	-	100	0.024	0.024	0.024
88.024	User	-	100	0.024	0.024	0.024
88.025	User	-	50	0.089	0.044	0.044
	User	-	100	0.002	0.002	0.046
88.026	User	-	50	0.105	0.052	0.052
88.027	-	-	100	0.000	0.000	0.000
88.028	-	-	100	0.000	0.000	0.000
86.010	-	-	100	0.084	0.084	0.084
84.007	-	-	100	0.437	0.437	0.437
84.008	-	-	100	0.000	0.000	0.000
90.000	-	-	100	0.000	0.000	0.000
90.001	-	-	100	5.054	5.054	5.054
90.002	-	-	100	0.872	0.872	0.872
9.032	User	-	20	4.160	0.832	0.832
9.033	-	-	100	0.000	0.000	0.000
9.034	-	-	100	0.000	0.000	0.000
9.035	-	-	100	0.000	0.000	0.000
9.036	-	-	100	0.000	0.000	0.000
				Total	Total	Total
				52.022	43.321	43.321

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Network Classifications for Catchment C

PN	USMH Name	Pipe Dia (mm)	Min Cover Depth (m)	Max Cover Depth (m)	Pipe Type	MH Dia (mm)	MH Width (mm)	MH Ring Depth (m)	MH Type
9.000	OB9	-4	0.450	1.505	Unclassified	3000	0	0.450	Unclassified
9.001	S39	750	1.505	1.535	Unclassified	3000	0	1.505	Unclassified
10.000	OB10	375	0.825	0.840	Unclassified	1500	0	0.825	Unclassified
9.002	S40 (BD)	750	0.640	1.535	Unclassified	1800	0	1.535	Unclassified
9.003	S41	750	0.640	2.065	Unclassified	1800	0	0.640	Unclassified
9.004	Tank 6 - Full Retention	750	2.065	2.120	Unclassified	1800	0	2.065	Unclassified
9.005	S42	750	2.120	2.355	Unclassified	1800	0	2.120	Unclassified
11.000	4A	300	0.700	0.700	Unclassified	1200	0	0.700	Unclassified
11.001	4B	300	0.700	0.700	Unclassified	1200	0	0.700	Unclassified
11.002	SDP004	300	1.520	2.150	Unclassified	1200	0	2.150	Unclassified
11.003	S43 (V)	525	1.087	1.295	Unclassified	1500	0	1.295	Unclassified
12.000	3A	300	0.700	0.700	Unclassified	1200	0	0.700	Unclassified
12.001	3B	300	0.700	0.700	Unclassified	1200	0	0.700	Unclassified
12.002	SDP003	375	0.842	2.075	Unclassified	1500	0	2.075	Unclassified
11.004	S44 (V)	600	1.012	1.117	Unclassified	1500	0	1.012	Unclassified
13.000	2A	300	0.700	0.700	Unclassified	1200	0	0.700	Unclassified
13.001	2B	300	0.700	0.700	Unclassified	1200	0	0.700	Unclassified
13.002	SDP002	375	0.732	2.075	Unclassified	1500	0	2.075	Unclassified
11.005	S45 (V)	825	0.892	1.365	Unclassified	1800	0	0.892	Unclassified
14.000	1A	300	0.700	0.700	Unclassified	1200	0	0.700	Unclassified
14.001	1B	300	0.700	0.700	Unclassified	1200	0	0.700	Unclassified
14.002	SDP001	375	1.095	2.075	Unclassified	1500	0	2.075	Unclassified
11.006	S46 (V)	825	1.365	1.455	Unclassified	1800	0	1.365	Unclassified
11.007	S47 (V)	825	1.455	2.280	Unclassified	1800	0	1.455	Unclassified
9.006	S48	825	2.280	2.450	Unclassified	1800	0	2.280	Unclassified
9.007	S49	825	2.450	2.621	Unclassified	1800	0	2.450	Unclassified
15.000	OB14	375	0.825	1.306	Unclassified	1500	0	0.825	Unclassified
16.000	OB13	375	0.795	1.045	Unclassified	1500	0	0.795	Unclassified
16.001	S50a	375	1.045	1.306	Unclassified	1500	0	1.045	Unclassified
15.001	S50	375	1.306	1.436	Unclassified	1500	0	1.306	Unclassified
17.000	OB11	300	0.870	1.355	Unclassified	1200	0	0.870	Unclassified
15.002	S51	375	1.436	1.532	Unclassified	1500	0	1.436	Unclassified
18.000	OB12	375	0.795	1.170	Unclassified	1500	0	0.795	Unclassified
18.001	S52	375	1.170	1.266	Unclassified	1500	0	1.170	Unclassified
15.003	S53	525	1.382	2.322	Unclassified	1500	0	1.382	Unclassified
15.004	Tank 7 - Full Retention	525	2.322	2.332	Unclassified	1500	0	2.322	Unclassified
9.008	S54	900	2.546	2.641	Unclassified	2100	0	2.546	Unclassified
9.009	S55	900	2.641	2.861	Unclassified	2100	0	2.641	Unclassified
19.000	KD17	150	1.050	3.610	Unclassified	1200	0	1.050	Unclassified
9.010	S56	900	2.861	2.916	Unclassified	2100	0	2.861	Unclassified
9.011	S57	900	2.916	2.980	Unclassified	2100	0	2.916	Unclassified
20.000	10A	300	0.700	0.700	Unclassified	1200	0	0.700	Unclassified
20.001	10B	300	0.700	0.700	Unclassified	1200	0	0.700	Unclassified
20.002	SDP010	375	1.900	2.075	Unclassified	1500	0	2.075	Unclassified
20.003	S59 (V)	375	1.880	1.900	Unclassified	1500	0	1.900	Unclassified
21.000	S58 (V)	300	1.955	1.975	Unclassified	1200	0	1.975	Unclassified
9.012	S60	900	2.165	2.980	Unclassified	2100	0	2.980	Unclassified
22.000	KD18	225	0.540	0.975	Unclassified	1200	0	0.975	Unclassified
22.001	KD19	300	0.610	0.900	Unclassified	1200	0	0.900	Unclassified
22.002	KD20	375	0.535	0.590	Unclassified	1500	0	0.535	Unclassified
22.003	KD21	450	0.510	0.750	Unclassified	1500	0	0.750	Unclassified
23.000	KD22	375	0.825	0.885	Unclassified	1500	0	0.825	Unclassified
22.004	S61	450	0.810	0.890	Unclassified	1500	0	0.810	Unclassified
24.000	KD23	375	0.825	1.480	Unclassified	1500	0	0.825	Unclassified
22.005	S62	525	1.330	1.435	Unclassified	1500	0	1.330	Unclassified
22.006	Tank 8 - Bypass	600	1.360	1.490	Unclassified	1500	0	1.360	Unclassified
9.013	S63	900	1.745	2.165	Unclassified	2100	0	2.165	Unclassified
25.000	KD24	225	0.975	1.025	Unclassified	1200	0	0.975	Unclassified
9.014	S64	900	1.745	3.528	Unclassified	2100	0	1.745	Unclassified
9.015	Ex SC15	900	3.528	3.603	Unclassified	2100	0	3.528	Unclassified
26.000	C16a	300	1.200	2.500	Unclassified	1200	0	1.200	Unclassified
27.000	1	300	1.300	1.475	Unclassified	1200	0	1.300	Unclassified
27.001	2	375	1.475	2.002	Unclassified	1500	0	1.475	Unclassified
27.002	3	450	2.002	2.224	Unclassified	1500	0	2.002	Unclassified
27.003	4	450	2.224	2.722	Unclassified	1500	0	2.224	Unclassified
27.004	5	450	2.722	2.867	Unclassified	1500	0	2.722	Unclassified
27.005	6	450	2.597	2.867	Unclassified	1500	0	2.867	Unclassified
27.006	7	450	2.439	2.597	Unclassified	1500	0	2.597	Unclassified
27.007	8	600	2.440	2.500	Unclassified	1500	0	2.440	Unclassified
26.001	C16	600	2.500	3.603	Unclassified	1500	0	2.500	Unclassified
9.016	C17	900	3.603	5.031	Unclassified	2100	0	3.603	Unclassified
9.017	C18	900	5.031	5.651	Unclassified	2100	0	5.031	Unclassified
28.000	OB1	-5	0.525	1.580	Unclassified	3000	0	0.525	Unclassified
28.001	S1	750	1.580	1.625	Unclassified	3000	0	1.580	Unclassified
29.000	OB2	375	1.125	1.205	Unclassified	1500	0	1.125	Unclassified
28.002	S2 (BD)	750	1.625	1.790	Unclassified	1800	0	1.625	Unclassified
30.000	OB3	375	1.050	1.645	Unclassified	1500	0	1.050	Unclassified
28.003	S3	750	1.790	2.080	Unclassified	1800	0	1.790	Unclassified
28.004	Tank 1 -Full Retention	750	2.080	2.120	Unclassified	1800	0	2.080	Unclassified
28.005	S4	750	2.100	2.120	Unclassified	1800	0	2.120	Unclassified
31.000	5A	300	0.700	0.700	Unclassified	1200	0	0.700	Unclassified
31.001	5B	300	0.700	0.700	Unclassified	1200	0	0.700	Unclassified
31.002	SDP005	450	0.657	2.000	Unclassified	1500	0	2.000	Unclassified
31.003	S5 (V)	525	0.582	0.687	Unclassified	1500	0	0.582	Unclassified
32.000	6A	300	0.700	0.700	Unclassified	1200	0	0.700	Unclassified
32.001	6B	300	0.700	0.700	Unclassified	1200	0	0.700	Unclassified
32.002	SDP006	375	0.837	2.075	Unclassified	1500	0	2.075	Unclassified
31.004	S6 (V)	600	0.612	0.717	Unclassified	1500	0	0.612	Unclassified
33.000	7A	300	0.700	0.700	Unclassified	1200	0	0.700	Unclassified
33.001	7B	300	0.700	0.700	Unclassified	1200	0	0.700	Unclassified
33.002	SDP007	375	0.732	2.075	Unclassified	1500	0	2.075	Unclassified
31.005	S7 (V)	600	0.717	0.837	Unclassified	1500	0	0.717	Unclassified
34.000	8A	300	0.700	0.700	Unclassified	1200	0	0.700	Unclassified
34.001	8B	300	0.700	0.700	Unclassified	1200	0	0.700	Unclassified
34.002	SDP008	375	0.732	2.075	Unclassified	1500	0	2.075	Unclassified
31.006	S8 (V)	600	0.837	1.930	Unclassified	1500	0	0.837	Unclassified
28.006	S9 (V)	900	1.950	2.262	Unclassified	2100	0	1.950	Unclassified
35.000	9A	375	0.625	0.625	Unclassified	1500	0	0.625	Unclassified

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Network Classifications for Catchment C

PN	USMH Name	Pipe Dia (mm)	Min Cover Depth (m)	Max Cover Depth (m)	Pipe Type	MH Dia (mm)	MH Width (mm)	MH Ring Depth (m)	MH Type
35.001	9B	375	0.625	0.625	Unclassified	1500	0	0.625	Unclassified
35.002	SDP009	375	1.870	2.075	Unclassified	1500	0	2.075	Unclassified
35.003	S10 (V)	375	1.870	1.917	Unclassified	1500	0	1.870	Unclassified
28.007	S11	900	2.262	2.440	Unclassified	2100	0	2.262	Unclassified
28.008	S12	900	2.440	2.610	Unclassified	2100	0	2.440	Unclassified
28.009	S13	900	2.610	2.715	Unclassified	2100	0	2.610	Unclassified
36.000	OB4	450	1.050	1.195	Unclassified	1500	0	1.050	Unclassified
36.001	S14	450	1.195	1.475	Unclassified	1500	0	1.195	Unclassified
37.000	OB5	225	0.975	1.135	Unclassified	1200	0	0.975	Unclassified
37.001	S15	225	1.135	1.197	Unclassified	1200	0	1.135	Unclassified
38.000	OB6	450	0.750	0.895	Unclassified	1500	0	0.750	Unclassified
37.002	S16	450	0.972	1.012	Unclassified	1500	0	0.972	Unclassified
36.002	S17	450	1.475	1.555	Unclassified	1500	0	1.475	Unclassified
36.003	Tank 2 - Full Retention	450	1.555	1.695	Unclassified	1500	0	1.555	Unclassified
28.010	S18 (BD)	900	2.715	2.810	Unclassified	2100	0	2.715	Unclassified
39.000	KD1	225	1.070	1.275	Unclassified	1200	0	1.275	Unclassified
39.001	S19	225	1.070	1.493	Unclassified	1200	0	1.070	Unclassified
40.000	OB7	450	0.750	0.908	Unclassified	1500	0	0.750	Unclassified
39.002	S20	450	1.268	1.673	Unclassified	1500	0	1.268	Unclassified
41.000	OB8	375	0.825	0.983	Unclassified	1500	0	0.825	Unclassified
41.001	S21	375	0.983	1.058	Unclassified	1500	0	0.983	Unclassified
39.003	S22	450	1.672	1.673	Unclassified	1500	0	1.673	Unclassified
39.004	TANK 3 - Full Retention	450	1.672	1.775	Unclassified	1500	0	1.672	Unclassified
28.011	S23	1050	2.660	2.730	Unclassified	2100	0	2.660	Unclassified
28.012	S24	1050	1.770	2.730	Unclassified	2100	0	2.730	Unclassified
42.000	KD2	300	0.900	1.155	Unclassified	1200	0	0.900	Unclassified
28.013	S25 (BD)	1050	1.680	1.770	Unclassified	2100	0	1.770	Unclassified
43.000	11A	300	0.700	0.700	Unclassified	1200	0	0.700	Unclassified
43.001	11B	300	0.700	0.700	Unclassified	1200	0	0.700	Unclassified
43.002	SDP011	375	1.810	2.075	Unclassified	1500	0	2.075	Unclassified
43.003	S26 (V)	375	1.810	2.120	Unclassified	1500	0	1.810	Unclassified
44.000	S27 (V)	375	1.810	2.120	Unclassified	1500	0	1.810	Unclassified
43.004	S28	450	0.570	2.045	Unclassified	1500	0	2.045	Unclassified
28.014	S29	1050	1.390	1.680	Unclassified	2100	0	1.680	Unclassified
45.000	KD3	300	0.900	1.305	Unclassified	1200	0	0.900	Unclassified
28.015	S30	1050	1.390	1.478	Unclassified	2100	0	1.390	Unclassified
46.000	KD4	300	0.900	0.940	Unclassified	1200	0	0.900	Unclassified
46.001	KD9	300	0.940	1.035	Unclassified	1200	0	0.940	Unclassified
47.000	KD5	450	0.465	0.750	Unclassified	1500	0	0.750	Unclassified
47.001	KD6	450	0.465	0.750	Unclassified	1500	0	0.750	Unclassified
47.002	KD7	450	0.345	0.465	Unclassified	1500	0	0.465	Unclassified
47.003	KD8	600	0.185	0.600	Unclassified	1500	0	0.600	Unclassified
46.002	S31	600	0.735	0.810	Unclassified	1500	0	0.735	Unclassified
46.003	Tank 4 - By Pass	600	0.810	0.825	Unclassified	1500	0	0.810	Unclassified
46.004	S32	600	0.825	1.028	Unclassified	1500	0	0.825	Unclassified
28.016	S33	1050	1.478	2.060	Unclassified	2100	0	1.478	Unclassified
28.017	S34	1050	2.060	2.235	Unclassified	2100	0	2.060	Unclassified
48.000	KD10	225	0.975	1.065	Unclassified	1200	0	0.975	Unclassified
48.001	S35	225	1.065	1.175	Unclassified	1200	0	1.065	Unclassified
49.000	KD11	300	0.615	0.900	Unclassified	1200	0	0.900	Unclassified
49.001	KD12	375	0.255	0.540	Unclassified	1500	0	0.540	Unclassified
49.002	KD13	450	0.465	0.750	Unclassified	1500	0	0.750	Unclassified
49.003	KD14	525	0.435	0.675	Unclassified	1500	0	0.675	Unclassified
50.000	KD15	225	0.975	1.175	Unclassified	1200	0	0.975	Unclassified
48.002	S36	525	0.875	0.945	Unclassified	1500	0	0.875	Unclassified
48.003	Tank 5 - Bypass	525	0.945	0.960	Unclassified	1500	0	0.945	Unclassified
48.004	S37	525	0.960	1.170	Unclassified	1500	0	0.960	Unclassified
28.018	S38 (P)	1050	2.235	3.795	Unclassified	2100	0	2.235	Unclassified
28.019	Ex SC41	900	4.100	5.651	Unclassified	2100	0	4.100	Unclassified
9.018	C44	900	5.651	6.273	Unclassified	2100	0	5.651	Unclassified
51.000	C19	150	0.900	0.900	Unclassified	1200	0	0.900	Unclassified
51.001	C20	150	0.900	0.900	Unclassified	1200	0	0.900	Unclassified
51.002	C21	150	0.900	0.900	Unclassified	1200	0	0.900	Unclassified
51.003	C22	150	0.900	3.029	Unclassified	1200	0	0.900	Unclassified
51.004	C23	225	1.791	3.029	Unclassified	1200	0	3.029	Unclassified
51.005	C24	225	1.416	1.791	Unclassified	1200	0	1.791	Unclassified
52.000	OB1	150	0.986	1.096	Unclassified	1200	0	0.986	Unclassified
52.001	PPIC1	150	1.096	1.226	Unclassified	1200	0	1.096	Unclassified
52.002	PPIC2	150	1.177	1.226	Unclassified	1200	0	1.226	Unclassified
53.000	BI RWP	150	1.177	1.206	Unclassified	1200	0	1.206	Unclassified
52.003	Ex. SC25	225	1.150	1.177	Unclassified	1200	0	1.177	Unclassified
52.004	Ex. SC26	300	1.150	1.595	Unclassified	1200	0	1.150	Unclassified
54.000	New gully	150	0.220	1.065	Unclassified	1200	0	0.220	Unclassified
54.001	Separator	150	1.165	1.455	Unclassified	1200	0	1.165	Unclassified
55.000	OB2	150	0.885	1.455	Unclassified	1200	0	0.885	Unclassified
56.000	MS RWP	150	1.455	1.470	Unclassified	1200	0	1.470	Unclassified
54.002	PS3	225	1.455	1.595	Unclassified	1200	0	1.455	Unclassified
57.000	OB3	150	1.480	1.595	Unclassified	1200	0	1.480	Unclassified
52.005	PS4	300	1.416	1.595	Unclassified	1200	0	1.595	Unclassified
51.006	C27	300	1.120	1.416	Unclassified	1200	0	1.416	Unclassified
51.007	C28	300	1.120	1.637	Unclassified	1200	0	1.120	Unclassified
58.000	C29	150	1.200	1.325	Unclassified	1200	0	1.325	Unclassified
58.001	C30	150	1.200	1.209	Unclassified	1200	0	1.200	Unclassified
58.002	C31	225	1.209	1.293	Unclassified	1200	0	1.209	Unclassified
58.003	C32	375	1.293	1.637	Unclassified	1500	0	1.293	Unclassified
51.008	C33	375	1.200	1.637	Unclassified	1500	0	1.637	Unclassified
51.009	C34	375	1.200	1.200	Unclassified	1500	0	1.200	Unclassified
51.010	C35	450	1.200	1.200	Unclassified	1500	0	1.200	Unclassified
51.011	C36	600	1.200	1.292	Unclassified	1500	0	1.200	Unclassified
51.012	C37	600	1.292	1.991	Unclassified	1500	0	1.292	Unclassified
51.013	C38	600	1.991	3.643	Unclassified	1500	0	1.991	Unclassified
51.014	C39	600	3.643	5.410	Unclassified	1500	0	3.643	Unclassified
51.015	C40	600	5.410	6.273	Unclassified	1500	0	5.410	Unclassified
9.019	C46	900	4.370	6.273	Unclassified	2100	0	6.273	Unclassified
9.020	C47	900	3.380	4.370	Unclassified	2100	0	4.370	Unclassified
59.000	OB1	225	0.845	1.245	Unclassified	1200	0	0.845	Unclassified
60.000	OB2	300	1.015	1.320	Unclassified	1200	0	1.015	Unclassified
59.001	S1	300	1.320	1.530	Unclassified	1200	0	1.320	Unclassified

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Network Classifications for Catchment C

PN	USMH Name	Pipe Dia (mm)	Min Cover Depth (m)	Max Cover Depth (m)	Pipe Type	MH Dia (mm)	MH Width (mm)	MH Ring Depth (m)	MH Type
61.000	OB3	450	1.375	1.530	Unclassified	1500	0	1.375	Unclassified
59.002	S2	600	1.530	1.815	Unclassified	1500	0	1.530	Unclassified
62.000	OB4	225	1.020	1.205	Unclassified	1200	0	1.020	Unclassified
62.001	S3	225	1.205	1.515	Unclassified	1200	0	1.205	Unclassified
63.000	OB5	450	1.360	1.515	Unclassified	1500	0	1.360	Unclassified
62.002	S4	450	1.515	1.715	Unclassified	1500	0	1.515	Unclassified
64.000	OB6	300	1.540	1.715	Unclassified	1200	0	1.540	Unclassified
62.003	S5	600	1.715	1.815	Unclassified	1500	0	1.715	Unclassified
59.003	S6	600	1.815	2.545	Unclassified	1500	0	1.815	Unclassified
65.000	OB7	150	0.935	1.435	Unclassified	1200	0	0.935	Unclassified
65.001	S8	150	1.435	1.880	Unclassified	1200	0	1.435	Unclassified
66.000	OB8	225	1.540	1.880	Unclassified	1200	0	1.540	Unclassified
65.002	S9	225	1.880	2.545	Unclassified	1200	0	1.880	Unclassified
67.000	OB9	225	2.200	2.545	Unclassified	1200	0	2.200	Unclassified
59.004	S7	600	2.475	2.545	Unclassified	1500	0	2.545	Unclassified
68.000	OB10	150	2.050	2.395	Unclassified	1200	0	2.050	Unclassified
68.001	S10	150	2.395	2.475	Unclassified	1200	0	2.395	Unclassified
59.005	S11	750	2.365	2.475	Unclassified	1800	0	2.475	Unclassified
59.006	S12	750	2.365	2.395	Unclassified	1800	0	2.365	Unclassified
59.007	FRS1	750	2.495	2.580	Unclassified	1800	0	2.495	Unclassified
59.008	S13	750	2.480	2.580	Unclassified	1800	0	2.580	Unclassified
69.000	CP5	225	1.195	2.480	Unclassified	1200	0	1.195	Unclassified
70.000	G1	150	1.715	2.480	Unclassified	1200	0	1.715	Unclassified
59.009	S14	750	2.480	4.540	Unclassified	1800	0	2.480	Unclassified
71.000	CP8	225	1.950	3.990	Unclassified	1200	0	1.950	Unclassified
59.010	AT1	750	1.640	4.540	Unclassified	1800	0	4.540	Unclassified
59.011	S15	300	0.850	2.090	Unclassified	1800	0	2.090	Unclassified
72.000	SSFD	150	1.000	1.000	Unclassified	1200	0	1.000	Unclassified
59.012	Ex SC72a	150	1.000	3.830	Unclassified	1200	0	1.000	Unclassified
9.021	Spur	900	3.309	3.830	Unclassified				Junction
9.022	C48	900	2.531	2.859	Unclassified	2100	0	2.859	Unclassified
9.023	C49	900	2.138	2.531	Unclassified	2100	0	2.531	Unclassified
9.024	C50	900	1.340	2.138	Unclassified	2100	0	2.138	Unclassified
9.025	C51	900	1.340	1.350	Unclassified	2100	0	1.340	Unclassified
73.000	SW01	150	0.510	0.714	Unclassified	1200	0	0.600	Unclassified
73.001	SW02	225	0.654	0.714	Unclassified	1200	0	0.714	Unclassified
74.000	SW02A	150	0.600	1.512	Unclassified	1200	0	1.500	Unclassified
73.002	SW03	300	0.654	0.703	Unclassified	1200	0	0.654	Unclassified
73.003	SW04	300	0.703	1.048	Unclassified	1200	0	0.703	Unclassified
73.004	SW05	300	0.649	1.048	Unclassified	1200	0	1.048	Unclassified
75.000	SW05A	150	0.600	0.826	Unclassified	1200	0	0.600	Unclassified
73.005	SW06	375	0.826	1.111	Unclassified	1500	0	0.826	Unclassified
73.006	SW07	375	1.111	1.531	Unclassified	1500	0	1.111	Unclassified
73.007	SW08	375	1.531	1.814	Unclassified	1500	0	1.531	Unclassified
73.008	SW09	375	1.814	2.344	Unclassified	1500	0	1.814	Unclassified
76.000	SW10	600	1.200	1.227	Unclassified	1500	0	1.200	Unclassified
76.001	SW11	750	1.227	1.247	Unclassified	1800	0	1.227	Unclassified
76.002	SW12	750	1.247	1.411	Unclassified	1800	0	1.247	Unclassified
76.003	SW13	750	1.411	1.557	Unclassified	1800	0	1.411	Unclassified
76.004	SW14	750	1.557	2.021	Unclassified	1800	0	1.557	Unclassified
76.005	SW15	750	2.221	2.291	Unclassified	1800	0	2.221	Unclassified
73.009	SW16	900	2.344	2.545	Unclassified	2100	0	2.344	Unclassified
77.000	SW17	225	0.481	0.807	Unclassified	1200	0	0.481	Unclassified
77.001	SW18	225	0.807	0.985	Unclassified	1200	0	0.807	Unclassified
77.002	SW19	225	0.985	1.223	Unclassified	1200	0	0.985	Unclassified
78.000	SW20	150	0.544	1.223	Unclassified	1200	0	0.550	Unclassified
77.003	SW21	225	1.165	1.359	Unclassified	1200	0	1.223	Unclassified
77.004	SW22	225	1.359	1.901	Unclassified	1200	0	1.359	Unclassified
79.000	Gully	150	0.824	1.901	Unclassified	600	0	0.824	Unclassified
77.005	SW23	225	1.901	2.249	Unclassified	1200	0	1.901	Unclassified
80.000	SW24	150	0.965	1.872	Unclassified	1200	0	0.965	Unclassified
80.001	SW25	150	1.872	1.889	Unclassified	1200	0	1.872	Unclassified
80.002	SW26	150	1.876	2.249	Unclassified	1200	0	1.876	Unclassified
77.006	SW27	300	2.089	2.249	Unclassified	1200	0	2.249	Unclassified
77.007	SW28	300	2.007	2.089	Unclassified	1200	0	2.089	Unclassified
77.008	SW29	300	2.007	2.545	Unclassified	1200	0	2.007	Unclassified
73.010	SW30	900	2.545	3.241	Unclassified	2100	0	2.545	Unclassified
73.011	SW31	900	3.241	4.292	Unclassified	2100	0	3.241	Unclassified
73.012	SW32	900	0.606	4.292	Unclassified	2100	0	4.292	Unclassified
81.000	HD01	150	0.900	0.967	Unclassified	1200	0	0.900	Unclassified
81.001	HD02	150	0.917	1.206	Unclassified	1200	0	0.917	Unclassified
81.002	HD03	150	1.206	1.457	Unclassified	1200	0	1.206	Unclassified
81.003	HD04	150	0.606	1.231	Unclassified	1200	0	1.231	Unclassified
73.013	36	1050	0.606	1.350	Unclassified	2100	0	0.606	Unclassified
9.026	C52	1200	1.350	1.380	Unclassified	2400	0	1.350	Unclassified
9.027	C53	1200	1.380	1.950	Unclassified	2100	0	1.380	Unclassified
9.028	C54	1200	0.100	1.950	Unclassified	2400	0	1.950	Unclassified
9.029	H20C	2100	0.400	0.600	Unclassified	3000	0	0.400	Unclassified
82.000	C55a	225	0.825	2.736	Unclassified	1200	0	0.825	Unclassified
83.000	C55b	150	1.200	2.886	Unclassified	1200	0	1.200	Unclassified
82.001	C55	225	2.810	4.194	Unclassified	1200	0	2.810	Unclassified
82.002	56	300	3.785	4.120	Unclassified	1200	0	4.120	Unclassified
82.003	C57	300	2.200	3.785	Unclassified	1200	0	3.785	Unclassified
82.004	H7C	300	2.200	2.400	Unclassified	1200	0	2.200	Unclassified
9.030	BASIN C1	450	1.650	2.250	Unclassified	3000	0	2.250	Unclassified
9.031	C59	450	1.650	1.800	Unclassified	1500	0	1.650	Unclassified
84.000	P2_29	600	1.060	1.226	Unclassified	1500	0	1.200	Unclassified
84.001	P2_30	600	1.022	1.226	Unclassified	1500	0	1.226	Unclassified
84.002	P2_31	600	1.082	1.087	Unclassified	1800	0	1.082	Unclassified
85.000	SC72	225	0.443	0.698	Unclassified	1200	0	0.443	Unclassified
85.001	SC73	225	0.698	0.896	Unclassified	1200	0	0.698	Unclassified
85.002	SC74	225	0.576	0.898	Unclassified	1200	0	0.898	Unclassified
85.003	SC75	300	0.501	0.703	Unclassified	1200	0	0.501	Unclassified
85.004	SC76	450	0.703	0.761	Unclassified	1500	0	0.703	Unclassified
85.005	SC77	600	0.761	0.770	Unclassified	1500	0	0.761	Unclassified
85.006	SC78	600	0.658	0.776	Unclassified	1500	0	0.770	Unclassified
85.007	SC79	750	0.620	0.692	Unclassified	1800	0	0.620	Unclassified
85.008	SC80	750	0.692	0.750	Unclassified	1800	0	0.692	Unclassified

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Network Classifications for Catchment C

PN	USMH Name	Pipe Dia (mm)	Min Cover Depth (m)	Max Cover Depth (m)	Pipe Type	MH Dia (mm)	MH Width (mm)	MH Ring Depth (m)	MH Type	PN	USMH Name	Pipe Dia (mm)	Min Cover Depth (m)	Max Cover Depth (m)	Pipe Type	MH Dia (mm)	MH Width (mm)	MH Ring Depth (m)	MH Type
85.009	SC81	750	0.750	1.386	Unclassified	1800	0	0.750	Unclassified	88.011	P2_15	750	1.254	1.257	Unclassified	1800	0	1.257	Unclassified
85.010	SC82	750	1.355	1.386	Unclassified	1800	0	1.386	Unclassified	88.012	P2_16	750	1.255	1.369	Unclassified	1800	0	1.255	Unclassified
85.011	SC83	750	1.087	1.355	Unclassified	1800	0	1.355	Unclassified	88.013	P2_17	900	1.367	1.368	Unclassified	2100	0	1.368	Unclassified
84.003	P2_32	750	1.041	1.088	Unclassified	1800	0	1.087	Unclassified	88.014	P2_18	900	1.367	1.510	Unclassified	2100	0	1.367	Unclassified
84.004	P2_33	750	1.041	1.403	Unclassified	1800	0	1.041	Unclassified	88.015	P2_19	900	1.510	1.710	Unclassified	2100	0	1.510	Unclassified
84.005	P2_34	750	1.403	1.568	Unclassified	1800	0	1.403	Unclassified	88.016	P2_20	900	1.709	1.711	Unclassified	2100	0	1.709	Unclassified
84.006	P1 Slab	900	1.568	1.639	Unclassified	1800	0	1.568	Unclassified	88.017	P2_21	900	1.711	1.853	Unclassified	2100	0	1.711	Unclassified
86.000	C88	450	0.850	0.850	Unclassified	1500	0	0.850	Unclassified	88.018	P2_22	900	1.853	2.025	Unclassified	2100	0	1.853	Unclassified
86.001	C89	450	0.850	0.868	Unclassified	1500	0	0.850	Unclassified	88.019	P2_23	900	2.025	2.064	Unclassified	2100	0	2.025	Unclassified
86.002	C90	450	0.868	0.868	Unclassified	1500	0	0.868	Unclassified	88.020	P2_24	900	2.064	2.090	Unclassified	2100	0	2.064	Unclassified
86.003	C91	450	0.868	0.868	Unclassified	1500	0	0.868	Unclassified	88.021	P2_25	900	2.037	2.096	Unclassified	2100	0	2.090	Unclassified
86.004	C92	450	0.868	0.868	Unclassified	1500	0	0.868	Unclassified	88.022	P2_25A	900	1.959	2.096	Unclassified	2100	0	2.096	Unclassified
86.005	C93	450	0.868	0.868	Unclassified	1500	0	0.868	Unclassified	88.023	P2_26	900	2.092	2.094	Unclassified	2100	0	2.094	Unclassified
86.006	C94	450	0.868	0.868	Unclassified	1500	0	0.868	Unclassified	88.024	P2_26A	900	2.092	2.093	Unclassified	2100	0	2.092	Unclassified
86.007	C95	450	0.868	0.868	Unclassified	1500	0	0.868	Unclassified	88.025	P2_27	900	2.093	2.095	Unclassified	2100	0	2.093	Unclassified
86.008	C96	450	0.868	0.868	Unclassified	1500	0	0.868	Unclassified	88.026	P2_28	900	1.765	2.096	Unclassified	2100	0	2.095	Unclassified
86.009	C97	450	0.868	0.917	Unclassified	1500	0	0.868	Unclassified	88.027	P2_28A	900	1.765	2.120	Unclassified	2100	0	1.765	Unclassified
87.000	C87	150	0.700	0.898	Unclassified	1200	0	0.700	Unclassified	88.028	246	900	2.120	2.138	Unclassified	2100	0	2.120	Unclassified
88.000	P2_1	150	1.200	1.201	Unclassified	1200	0	1.200	Unclassified	86.010	C98	900	2.138	2.165	Unclassified	2100	0	2.138	Unclassified
88.001	P2_2	150	1.200	1.200	Unclassified	1200	0	1.200	Unclassified	84.007	C65	1200	0.650	2.158	Unclassified	2400	0	2.158	Unclassified
88.002	P2_3	150	1.200	1.254	Unclassified	1200	0	1.200	Unclassified	84.008	C66	1200	0.650	0.700	Unclassified	2400	0	0.650	Unclassified
88.003	P2_4	150	1.254	1.305	Unclassified	1200	0	1.254	Unclassified	90.000	P16 - Dummy	225	2.775	2.975	Unclassified	1200	0	2.775	Unclassified
89.000	P2_5	150	0.941	1.305	Unclassified	1200	0	1.200	Unclassified	90.001	P16 - Tank	225	2.075	2.975	Unclassified	1200	0	2.975	Unclassified
88.004	P2_6	300	1.242	1.305	Unclassified	1200	0	1.305	Unclassified	90.002	P16 - Basin	225	1.690	2.075	Unclassified	1200	0	2.075	Unclassified
88.005	P2_7	300	1.233	1.243	Unclassified	1200	0	1.243	Unclassified	9.032	BASIN C3	450	1.099	2.170	Unclassified	2400	0	2.170	Unclassified
88.006	P2_8	450	1.233	1.333	Unclassified	1500	0	1.233	Unclassified	9.033	C68	450	0.907	1.099	Unclassified	1500	0	1.099	Unclassified
88.007	P2_11	600	1.212	1.286	Unclassified	1500	0	1.286	Unclassified	9.034	C69	450	0.600	0.907	Unclassified	1500	0	0.907	Unclassified
88.008	P2_12	600	1.212	1.249	Unclassified	1500	0	1.212	Unclassified	9.035	C70	450	0.600	0.600	Unclassified	1500	0	0.600	Unclassified
88.009	P_13	600	1.249	1.256	Unclassified	1500	0	1.249	Unclassified	9.036	C71	450	0.463	0.600	Unclassified	1500	0	0.600	Unclassified
88.010	P2_14	750	1.256	1.257	Unclassified	1800	0	1.256	Unclassified										

Free Flowing Outfall Details for Catchment C

Outfall Pipe Number	Outfall Name	C. Level (m)	I. Level (m)	Min I. Level (m)	D,L (mm)	W (mm)
9.036	C OUTFALL	33.425	32.512	32.512	450	0

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Simulation Criteria for Catchment C

Volumetric Runoff Coeff	0.840	Hot Start Level (mm)	0	Additional Flow - % of Total Flow	0.000	Flow per Person per Day (l/per/day)	0.000
Areal Reduction Factor	1.000	Manhole Headloss Coeff (Global)	0.500	MADD Factor * 10m³/ha Storage	0.000	Run Time (mins)	2880
Hot Start (mins)	0	Foul Sewage per hectare (l/s)	0.000	Inlet Coeffiecient	0.800	Output Interval (mins)	24

Number of Input Hydrographs 0 Number of Online Controls 18 Number of Offline Controls 12 Number of Storage Structures 10 Number of Time/Area Diagrams 0 Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall Model	FEH	D1 (1km)	0.351	Summer Storms	No
Return Period (years)	1	D2 (1km)	0.352	Winter Storms	Yes
FEH Rainfall Version	1999	D3 (1km)	0.243	Cv (Summer)	0.750
Site Location	GB 447050 329250 SK 47050 29250	E (1km)	0.303	Cv (Winter)	0.840
C (1km)	-0.026	F (1km)	2.358	Storm Duration (mins)	1440

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Online Controls for Catchment C

Depth/Flow Relationship Manhole: 4B, DS/PN: 11.001, Volume (m³): 1.4

Invert Level (m) 74.350

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	142.0000	0.500	142.0000	0.900	142.0000	1.300	142.0000	1.700	142.0000	2.100	142.0000	2.500	142.0000	2.900	142.0000
0.200	142.0000	0.600	142.0000	1.000	142.0000	1.400	142.0000	1.800	142.0000	2.200	142.0000	2.600	142.0000	3.000	142.0000
0.300	142.0000	0.700	142.0000	1.100	142.0000	1.500	142.0000	1.900	142.0000	2.300	142.0000	2.700	142.0000		
0.400	142.0000	0.800	142.0000	1.200	142.0000	1.600	142.0000	2.000	142.0000	2.400	142.0000	2.800	142.0000		

Depth/Flow Relationship Manhole: 3B, DS/PN: 12.001, Volume (m³): 1.4

Invert Level (m) 74.350

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	142.0000	0.500	142.0000	0.900	142.0000	1.300	142.0000	1.700	142.0000	2.100	142.0000	2.500	142.0000	2.900	142.0000
0.200	142.0000	0.600	142.0000	1.000	142.0000	1.400	142.0000	1.800	142.0000	2.200	142.0000	2.600	142.0000	3.000	142.0000
0.300	142.0000	0.700	142.0000	1.100	142.0000	1.500	142.0000	1.900	142.0000	2.300	142.0000	2.700	142.0000		
0.400	142.0000	0.800	142.0000	1.200	142.0000	1.600	142.0000	2.000	142.0000	2.400	142.0000	2.800	142.0000		

Depth/Flow Relationship Manhole: 2B, DS/PN: 13.001, Volume (m³): 1.4

Invert Level (m) 74.350

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	142.0000	0.500	142.0000	0.900	142.0000	1.300	142.0000	1.700	142.0000	2.100	142.0000	2.500	142.0000	2.900	142.0000
0.200	142.0000	0.600	142.0000	1.000	142.0000	1.400	142.0000	1.800	142.0000	2.200	142.0000	2.600	142.0000	3.000	142.0000
0.300	142.0000	0.700	142.0000	1.100	142.0000	1.500	142.0000	1.900	142.0000	2.300	142.0000	2.700	142.0000		
0.400	142.0000	0.800	142.0000	1.200	142.0000	1.600	142.0000	2.000	142.0000	2.400	142.0000	2.800	142.0000		

Depth/Flow Relationship Manhole: 1B, DS/PN: 14.001, Volume (m³): 1.4

Invert Level (m) 74.350

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	142.0000	0.500	142.0000	0.900	142.0000	1.300	142.0000	1.700	142.0000	2.100	142.0000	2.500	142.0000	2.900	142.0000
0.200	142.0000	0.600	142.0000	1.000	142.0000	1.400	142.0000	1.800	142.0000	2.200	142.0000	2.600	142.0000	3.000	142.0000
0.300	142.0000	0.700	142.0000	1.100	142.0000	1.500	142.0000	1.900	142.0000	2.300	142.0000	2.700	142.0000		
0.400	142.0000	0.800	142.0000	1.200	142.0000	1.600	142.0000	2.000	142.0000	2.400	142.0000	2.800	142.0000		

Depth/Flow Relationship Manhole: 10B, DS/PN: 20.001, Volume (m³): 1.4

Invert Level (m) 74.350

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Depth/Flow Relationship Manhole: 10B, DS/PN: 20.001, Volume (m³): 1.4

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	104.0000	0.500	104.0000	0.900	104.0000	1.300	104.0000	1.700	104.0000	2.100	104.0000	2.500	104.0000	2.900	104.0000
0.200	104.0000	0.600	104.0000	1.000	104.0000	1.400	104.0000	1.800	104.0000	2.200	104.0000	2.600	104.0000	3.000	104.0000
0.300	104.0000	0.700	104.0000	1.100	104.0000	1.500	104.0000	1.900	104.0000	2.300	104.0000	2.700	104.0000		
0.400	104.0000	0.800	104.0000	1.200	104.0000	1.600	104.0000	2.000	104.0000	2.400	104.0000	2.800	104.0000		

Depth/Flow Relationship Manhole: 5B, DS/PN: 31.001, Volume (m³): 1.4

Invert Level (m) 74.350

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	142.0000	0.500	142.0000	0.900	142.0000	1.300	142.0000	1.700	142.0000	2.100	142.0000	2.500	142.0000	2.900	142.0000
0.200	142.0000	0.600	142.0000	1.000	142.0000	1.400	142.0000	1.800	142.0000	2.200	142.0000	2.600	142.0000	3.000	142.0000
0.300	142.0000	0.700	142.0000	1.100	142.0000	1.500	142.0000	1.900	142.0000	2.300	142.0000	2.700	142.0000		
0.400	142.0000	0.800	142.0000	1.200	142.0000	1.600	142.0000	2.000	142.0000	2.400	142.0000	2.800	142.0000		

Depth/Flow Relationship Manhole: 6B, DS/PN: 32.001, Volume (m³): 1.4

Invert Level (m) 74.350

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	142.0000	0.500	142.0000	0.900	142.0000	1.300	142.0000	1.700	142.0000	2.100	142.0000	2.500	142.0000	2.900	142.0000
0.200	142.0000	0.600	142.0000	1.000	142.0000	1.400	142.0000	1.800	142.0000	2.200	142.0000	2.600	142.0000	3.000	142.0000
0.300	142.0000	0.700	142.0000	1.100	142.0000	1.500	142.0000	1.900	142.0000	2.300	142.0000	2.700	142.0000		
0.400	142.0000	0.800	142.0000	1.200	142.0000	1.600	142.0000	2.000	142.0000	2.400	142.0000	2.800	142.0000		

Depth/Flow Relationship Manhole: 7B, DS/PN: 33.001, Volume (m³): 1.4

Invert Level (m) 74.350

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	142.0000	0.500	142.0000	0.900	142.0000	1.300	142.0000	1.700	142.0000	2.100	142.0000	2.500	142.0000	2.900	142.0000
0.200	142.0000	0.600	142.0000	1.000	142.0000	1.400	142.0000	1.800	142.0000	2.200	142.0000	2.600	142.0000	3.000	142.0000
0.300	142.0000	0.700	142.0000	1.100	142.0000	1.500	142.0000	1.900	142.0000	2.300	142.0000	2.700	142.0000		
0.400	142.0000	0.800	142.0000	1.200	142.0000	1.600	142.0000	2.000	142.0000	2.400	142.0000	2.800	142.0000		

Depth/Flow Relationship Manhole: 8B, DS/PN: 34.001, Volume (m³): 1.4

Invert Level (m) 74.350

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	142.0000	0.500	142.0000	0.900	142.0000	1.300	142.0000	1.700	142.0000	2.100	142.0000	2.500	142.0000	2.900	142.0000
0.200	142.0000	0.600	142.0000	1.000	142.0000	1.400	142.0000	1.800	142.0000	2.200	142.0000	2.600	142.0000	3.000	142.0000
0.300	142.0000	0.700	142.0000	1.100	142.0000	1.500	142.0000	1.900	142.0000	2.300	142.0000	2.700	142.0000		
0.400	142.0000	0.800	142.0000	1.200	142.0000	1.600	142.0000	2.000	142.0000	2.400	142.0000	2.800	142.0000		

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Depth/Flow Relationship Manhole: 9B, DS/PN: 35.001, Volume (m³): 2.2

Invert Level (m) 74.350

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	74.0000	0.500	74.0000	0.900	74.0000	1.300	74.0000	1.700	74.0000	2.100	74.0000	2.500	74.0000	2.900	74.0000
0.200	74.0000	0.600	74.0000	1.000	74.0000	1.400	74.0000	1.800	74.0000	2.200	74.0000	2.600	74.0000	3.000	74.0000
0.300	74.0000	0.700	74.0000	1.100	74.0000	1.500	74.0000	1.900	74.0000	2.300	74.0000	2.700	74.0000		
0.400	74.0000	0.800	74.0000	1.200	74.0000	1.600	74.0000	2.000	74.0000	2.400	74.0000	2.800	74.0000		

Depth/Flow Relationship Manhole: 11B, DS/PN: 43.001, Volume (m³): 1.4

Invert Level (m) 74.350

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	104.0000	0.500	104.0000	0.900	104.0000	1.300	104.0000	1.700	104.0000	2.100	104.0000	2.500	104.0000	2.900	104.0000
0.200	104.0000	0.600	104.0000	1.000	104.0000	1.400	104.0000	1.800	104.0000	2.200	104.0000	2.600	104.0000	3.000	104.0000
0.300	104.0000	0.700	104.0000	1.100	104.0000	1.500	104.0000	1.900	104.0000	2.300	104.0000	2.700	104.0000		
0.400	104.0000	0.800	104.0000	1.200	104.0000	1.600	104.0000	2.000	104.0000	2.400	104.0000	2.800	104.0000		

Orifice Manhole: S11, DS/PN: 59.005, Volume (m³): 15.9

Diameter (m) 0.375 Discharge Coefficient 0.600 Invert Level (m) 63.950

Depth/Flow Relationship Manhole: AT1, DS/PN: 59.010, Volume (m³): 24.7

Invert Level (m) 63.710

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.200	45.0000	1.000	45.0000	1.800	45.0000	2.600	45.0000	3.400	45.0000	4.200	45.0000	5.000	45.0000	5.800	45.0000
0.400	45.0000	1.200	45.0000	2.000	45.0000	2.800	45.0000	3.600	45.0000	4.400	45.0000	5.200	45.0000	6.000	45.0000
0.600	45.0000	1.400	45.0000	2.200	45.0000	3.000	45.0000	3.800	45.0000	4.600	45.0000	5.400	45.0000		
0.800	45.0000	1.600	45.0000	2.400	45.0000	3.200	45.0000	4.000	45.0000	4.800	45.0000	5.600	45.0000		

Depth/Flow Relationship Manhole: Ex SC72a, DS/PN: 59.012, Volume (m³): 2.5

Invert Level (m) 62.570

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.200	75.0000	1.000	75.0000	1.800	75.0000	2.600	75.0000	3.400	75.0000	4.200	75.0000	5.000	75.0000	5.800	75.0000
0.400	75.0000	1.200	75.0000	2.000	75.0000	2.800	75.0000	3.600	75.0000	4.400	75.0000	5.200	75.0000	6.000	75.0000
0.600	75.0000	1.400	75.0000	2.200	75.0000	3.000	75.0000	3.800	75.0000	4.600	75.0000	5.400	75.0000		
0.800	75.0000	1.600	75.0000	2.400	75.0000	3.200	75.0000	4.000	75.0000	4.800	75.0000	5.600	75.0000		

Depth/Flow Relationship Manhole: BASIN C1, DS/PN: 9.030, Volume (m³): 72.2

Invert Level (m) 39.300

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Depth/Flow Relationship Manhole: BASIN C1, DS/PN: 9.030, Volume (m³): 72.2

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	0.0000	0.400	46.7400	0.800	56.1800	1.400	58.5700	2.000	70.0000	2.600	79.8100	3.200	88.5400	3.800	96.4900
0.200	10.9800	0.500	52.5600	1.000	54.4600	1.600	62.6100	2.200	73.4200	2.800	82.8300	3.400	91.2700		
0.300	25.2800	0.600	55.5700	1.200	54.4700	1.800	66.4100	2.400	76.6800	3.000	85.7300	3.600	93.9100		

Hydro-Brake® Optimum Manhole: P16 - Tank, DS/PN: 90.001, Volume (m³): 4.4

Unit Reference	MD-SHE-0150-1320-2000-1320	Objective	Minimise upstream storage	Invert Level (m)	48.000
Design Head (m)	2.000	Application	Surface	Minimum Outlet Pipe Diameter (mm)	225
Design Flow (l/s)	13.2	Sump Available	Yes	Suggested Manhole Diameter (mm)	1500
Flush-Flo™	Calculated	Diameter (mm)	150		

Control Points	Head (m)	Flow (l/s)	Control Points	Head (m)	Flow (l/s)	Control Points	Head (m)	Flow (l/s)	Control Points	Head (m)	Flow (l/s)
Design Point (Calculated)	2.000	13.2	Flush-Flo™	0.590	13.2	Kick-Flo®	1.220	10.5	Mean Flow over Head Range	-	11.6

The hydrological calculations have been based on the Head/Discharge relationship for the Hydro-Brake® Optimum as specified. Should another type of control device other than a Hydro-Brake Optimum® be utilised then these storage routing calculations will be invalidated

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	5.4	0.500	13.1	1.200	10.7	2.000	13.2	3.000	16.0	5.000	20.4	7.000	24.0	9.000	27.1
0.200	11.0	0.600	13.2	1.400	11.2	2.200	13.8	3.500	17.2	5.500	21.4	7.500	24.8	9.500	27.8
0.300	12.2	0.800	13.0	1.600	11.9	2.400	14.4	4.000	18.4	6.000	22.3	8.000	25.6		
0.400	12.9	1.000	12.3	1.800	12.6	2.600	14.9	4.500	19.4	6.500	23.2	8.500	26.4		

Hydro-Brake® Optimum Manhole: P16 - Basin, DS/PN: 90.002, Volume (m³): 17.1

Unit Reference	MD-SHE-0136-1070-2000-1070	Objective	Minimise upstream storage	Invert Level (m)	37.700
Design Head (m)	2.000	Application	Surface	Minimum Outlet Pipe Diameter (mm)	150
Design Flow (l/s)	10.7	Sump Available	Yes	Suggested Manhole Diameter (mm)	1500
Flush-Flo™	Calculated	Diameter (mm)	136		

Control Points	Head (m)	Flow (l/s)	Control Points	Head (m)	Flow (l/s)	Control Points	Head (m)	Flow (l/s)	Control Points	Head (m)	Flow (l/s)
Design Point (Calculated)	2.000	10.7	Flush-Flo™	0.588	10.7	Kick-Flo®	1.207	8.4	Mean Flow over Head Range	-	9.4

The hydrological calculations have been based on the Head/Discharge relationship for the Hydro-Brake® Optimum as specified. Should another type of control device other than a Hydro-Brake Optimum® be utilised then these storage routing calculations will be invalidated

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	4.9	0.500	10.6	1.200	8.5	2.000	10.7	3.000	13.0	5.000	16.5	7.000	19.4	9.000	21.9
0.200	8.9	0.600	10.7	1.400	9.0	2.200	11.2	3.500	13.9	5.500	17.3	7.500	20.1	9.500	22.5
0.300	9.9	0.800	10.5	1.600	9.6	2.400	11.7	4.000	14.9	6.000	18.0	8.000	20.7		
0.400	10.4	1.000	9.9	1.800	10.2	2.600	12.1	4.500	15.7	6.500	18.7	8.500	21.3		

Depth/Flow Relationship Manhole: BASIN C3, DS/PN: 9.032, Volume (m³): 34.2

Invert Level (m) 35.880

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Depth/Flow Relationship Manhole: BASIN C3, DS/PN: 9.032, Volume (m³): 34.2

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	16.7900	0.400	87.1400	0.800	135.0300	1.400	135.2000	2.000	144.5000	2.600	164.7600	3.200	182.7800	3.800	199.1800
0.200	41.1700	0.500	104.9900	1.000	139.8300	1.600	133.8700	2.200	151.5500	2.800	170.9700	3.400	188.4000		
0.300	65.5100	0.600	118.7600	1.200	138.3200	1.800	137.0800	2.400	158.2900	3.000	176.9800	3.600	193.8700		

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Offline Controls for Catchment C

Weir Manhole: 4B, DS/PN: 11.001, Loop to PN: 9.000

Discharge Coef 0.544 Width (m) 1.000 Invert Level (m) 74.650

Weir Manhole: 3B, DS/PN: 12.001, Loop to PN: 9.000

Discharge Coef 0.544 Width (m) 1.000 Invert Level (m) 74.650

Weir Manhole: 2B, DS/PN: 13.001, Loop to PN: 9.000

Discharge Coef 0.544 Width (m) 1.000 Invert Level (m) 74.650

Weir Manhole: 2B, DS/PN: 13.001, Loop to PN: 9.000

Discharge Coef 0.544 Width (m) 1.000 Invert Level (m) 74.650

Weir Manhole: 1B, DS/PN: 14.001, Loop to PN: 9.000

Discharge Coef 0.544 Width (m) 1.000 Invert Level (m) 74.650

Weir Manhole: 10B, DS/PN: 20.001, Loop to PN: 21.000

Discharge Coef 0.544 Width (m) 1.000 Invert Level (m) 74.650

Weir Manhole: 5B, DS/PN: 31.001, Loop to PN: 28.000

Discharge Coef 0.544 Width (m) 1.000 Invert Level (m) 74.650

Weir Manhole: 6B, DS/PN: 32.001, Loop to PN: 28.000

Discharge Coef 0.544 Width (m) 1.000 Invert Level (m) 74.650

Weir Manhole: 7B, DS/PN: 33.001, Loop to PN: 28.000

Discharge Coef 0.544 Width (m) 1.000 Invert Level (m) 74.650

Weir Manhole: 8B, DS/PN: 34.001, Loop to PN: 28.000

Discharge Coef 0.544 Width (m) 1.000 Invert Level (m) 74.650

Weir Manhole: 9B, DS/PN: 35.001, Loop to PN: 36.000

Discharge Coef 0.544 Width (m) 1.000 Invert Level (m) 74.650

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Weir Manhole: 11B, DS/PN: 43.001, Loop to PN: 44.000

Discharge Coef 0.544 Width (m) 1.000 Invert Level (m) 74.650

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Storage Structures for Catchment C

Tank or Pond Manhole: S39, DS/PN: 9.001

Invert Level (m) 67.600

Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)
0.000	275.0	0.300	275.0	0.600	275.0	0.900	275.0	1.200	0.0	1.500	0.0	1.800	0.0	2.100	0.0	2.400	0.0
0.100	275.0	0.400	275.0	0.700	275.0	1.000	275.0	1.300	0.0	1.600	0.0	1.900	0.0	2.200	0.0	2.500	0.0
0.200	275.0	0.500	275.0	0.800	275.0	1.100	0.0	1.400	0.0	1.700	0.0	2.000	0.0	2.300	0.0		

Tank or Pond Manhole: S1, DS/PN: 28.001

Invert Level (m) 67.525

Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)
0.000	325.0	0.300	325.0	0.600	325.0	0.900	325.0	1.200	0.0	1.500	0.0	1.800	0.0	2.100	0.0	2.400	0.0
0.100	325.0	0.400	325.0	0.700	325.0	1.000	325.0	1.300	0.0	1.600	0.0	1.900	0.0	2.200	0.0	2.500	0.0
0.200	325.0	0.500	325.0	0.800	325.0	1.100	0.0	1.400	0.0	1.700	0.0	2.000	0.0	2.300	0.0		

Filter Drain Manhole: CP5, DS/PN: 69.000

Infiltration Coefficient Base (m/hr)	0.00000	Invert Level (m)	65.650	Pipe Depth above Invert (m)	0.300	Cap Infiltration Depth (m)	1.000
Infiltration Coefficient Side (m/hr)	0.00000	Trench Width (m)	0.6	Number of Pipes	1		
Safety Factor	2.0	Trench Length (m)	154.6	Slope (1:X)	500.0		
Porosity	0.30	Pipe Diameter (m)	0.150	Cap Volume Depth (m)	1.000		

Filter Drain Manhole: CP8, DS/PN: 71.000

Infiltration Coefficient Base (m/hr)	0.00000	Invert Level (m)	65.040	Pipe Depth above Invert (m)	0.300	Cap Infiltration Depth (m)	1.000
Infiltration Coefficient Side (m/hr)	0.00000	Trench Width (m)	0.6	Number of Pipes	1		
Safety Factor	2.0	Trench Length (m)	130.4	Slope (1:X)	500.0		
Porosity	0.30	Pipe Diameter (m)	0.150	Cap Volume Depth (m)	1.000		

Tank or Pond Manhole: AT1, DS/PN: 59.010

Invert Level (m) 63.710

Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)
0.000	250.0	0.600	250.0	1.200	250.0	1.800	250.0	2.400	0.0	3.000	0.0	3.600	0.0	4.200	0.0	4.800	0.0
0.200	250.0	0.800	250.0	1.400	250.0	2.000	0.0	2.600	0.0	3.200	0.0	3.800	0.0	4.400	0.0	5.000	0.0
0.400	250.0	1.000	250.0	1.600	250.0	2.200	0.0	2.800	0.0	3.400	0.0	4.000	0.0	4.600	0.0		

Filter Drain Manhole: SSFD, DS/PN: 72.000

Infiltration Coefficient Base (m/hr)	0.00000	Porosity	0.30	Trench Length (m)	32.0	Number of Pipes	1
Infiltration Coefficient Side (m/hr)	0.00000	Invert Level (m)	62.570	Pipe Diameter (m)	0.150	Slope (1:X)	60.0
Safety Factor	2.0	Trench Width (m)	0.5	Pipe Depth above Invert (m)	0.300	Cap Volume Depth (m)	1.000

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Filter Drain Manhole: SSFD, DS/PN: 72.000

Cap Infiltration Depth (m) 1.000

Tank or Pond Manhole: BASIN C1, DS/PN: 9.030

Invert Level (m) 39.500

Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)
0.000	0.0	0.100	1193.0	0.200	3828.0	0.300	7424.0	0.400	7676.0	0.500	7829.0	1.000	8608.0	1.500	9418.0	2.000	10257.0	2.500	11129.0

Cellular Storage Manhole: P16 - Tank, DS/PN: 90.001

Invert Level (m) 48.000 Infiltration Coefficient Side (m/hr) 0.00000 Porosity 0.95
Infiltration Coefficient Base (m/hr) 0.00000 Safety Factor 2.0

Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)
0.000	2240.0	0.0	2.000	2240.0	0.0	2.001	0.0	0.0

Tank or Pond Manhole: P16 - Basin, DS/PN: 90.002

Invert Level (m) 37.700

Depth (m)	Area (m²)	Depth (m)	Area (m²)
0.000	635.0	2.300	1700.0

Tank or Pond Manhole: BASIN C3, DS/PN: 9.032

Invert Level (m) 35.980

Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)
0.000	0.0	0.120	1198.0	0.320	3824.0	0.520	4072.0	1.520	5366.0	2.520	6753.0
0.020	53.4	0.220	2469.0	0.420	3948.0	1.020	4708.0	2.020	6048.0		

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1 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Catchment C

Simulation Criteria

Areal Reduction Factor 1.000 Hot Start Level (mm) 0 Foul Sewage per hectare (l/s) 0.000 MADD Factor * 10m³/ha Storage 0.000 Flow per Person per Day (l/per/day) 0.000
Hot Start (mins) 0 Manhole Headloss Coeff (Global) 0.500 Additional Flow - % of Total Flow 0.000 Inlet Coeffiecient 0.800

Number of Input Hydrographs 0 Number of Online Controls 18 Number of Offline Controls 12 Number of Storage Structures 10 Number of Time/Area Diagrams 0 Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall Model FSR Region England and Wales M5-60 (mm) 18.500 Ratio R 0.400 Cv (Summer) 0.750 Cv (Winter) 0.840

Margin for Flood Risk Warning (mm) 400.0 Analysis Timestep Fine DTS Status OFF DVD Status ON Inertia Status ON

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 240, 360, 480, 600, 960, 1440, 2160
Return Period(s) (years)	1, 30, 100
Climate Change (%)	0, 0, 20

PN	US/MH Name	Event	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Maximum Vol (m³)	Discharge Vol (m³)	Pipe Flow (l/s)	Status
9.000	OB9	15 minute 1 year Winter I+0%	68.920	67.824	-0.646	0.000	0.06		0.702	30.605	64.6	OK
9.001	S39	60 minute 1 year Winter I+0%	69.855	67.709	-0.641	0.000	0.05		31.593	43.234	18.2	OK
10.000	OB10	15 minute 1 year Winter I+0%	69.855	68.831	-0.199	0.000	0.44		0.302	16.204	34.5	OK
9.002	S40 (BD)	15 minute 1 year Winter I+0%	69.855	67.688	-0.632	0.000	0.06		0.405	35.776	32.5	OK
9.003	S41	15 minute 1 year Winter I+0%	68.855	67.565	-0.650	0.000	0.04		0.507	35.559	31.8	OK
9.004	Tank 6 - Full Retention	15 minute 1 year Winter I+0%	70.000	67.324	-0.611	0.000	0.07		1.068	35.338	30.5	OK
9.005	S42	15 minute 1 year Winter I+0%	70.000	67.272	-0.609	0.000	0.04		0.806	35.184	31.5	OK
11.000	4A	15 minute 1 year Summer I+0%	80.350	79.427	-0.223	0.000	0.15		0.081	26.012	83.9	OK
11.001	4B	15 minute 1 year Summer I+0%	75.350	74.409	-0.241	0.000	0.15	0.0	0.062	26.012	83.9	OK
11.002	SDP004	15 minute 1 year Summer I+0%	70.350	68.055	-0.145	0.000	0.53		0.170	26.015	83.9	OK
11.003	S43 (V)	15 minute 1 year Summer I+0%	69.270	67.709	-0.266	0.000	0.32		0.697	26.014	77.2	OK
12.000	3A	15 minute 1 year Summer I+0%	80.350	79.427	-0.223	0.000	0.15		0.081	26.012	83.9	OK
12.001	3B	15 minute 1 year Summer I+0%	75.350	74.409	-0.241	0.000	0.15	0.0	0.062	26.012	83.9	OK
12.002	SDP003	15 minute 1 year Summer I+0%	70.350	68.094	-0.181	0.000	0.53		0.335	26.014	84.0	OK
11.004	S44 (V)	15 minute 1 year Summer I+0%	68.952	67.654	-0.286	0.000	0.47		3.740	52.027	151.4	OK
13.000	2A	15 minute 1 year Summer I+0%	80.350	79.427	-0.223	0.000	0.15		0.081	26.012	83.9	OK
13.001	2B	15 minute 1 year Summer I+0%	75.350	74.409	-0.241	0.000	0.15	0.0	0.062	26.012	83.9	OK
13.002	SDP002	15 minute 1 year Summer I+0%	70.350	68.175	-0.100	0.000	0.89		0.476	26.011	84.0	OK
11.005	S45 (V)	15 minute 1 year Summer I+0%	68.952	67.578	-0.482	0.000	0.30		4.698	78.040	214.0	OK
14.000	1A	15 minute 1 year Summer I+0%	80.350	79.427	-0.223	0.000	0.15		0.081	26.012	83.9	OK
14.001	1B	15 minute 1 year Summer I+0%	75.350	74.409	-0.241	0.000	0.15	0.0	0.062	26.012	83.9	OK
14.002	SDP001	15 minute 1 year Summer I+0%	70.350	68.175	-0.100	0.000	0.89		0.476	26.011	84.0	OK
11.006	S46 (V)	15 minute 1 year Summer I+0%	69.315	67.509	-0.441	0.000	0.43		6.227	104.053	271.3	OK
11.007	S47 (V)	15 minute 1 year Summer I+0%	69.315	67.368	-0.492	0.000	0.34		5.117	104.053	260.7	OK
9.006	S48	15 minute 1 year Winter I+0%	70.000	67.240	-0.480	0.000	0.35		9.948	151.413	266.5	OK
9.007	S49	15 minute 1 year Winter I+0%	70.000	67.088	-0.462	0.000	0.33		8.636	151.133	252.8	OK
15.000	OB14	15 minute 1 year Winter I+0%	68.890	67.796	-0.269	0.000	0.18		0.179	11.884	25.4	OK
16.000	OB13	15 minute 1 year Winter I+0%	68.890	67.874	-0.221	0.000	0.35		0.264	12.183	26.0	OK
16.001	S50a	15 minute 1 year Winter I+0%	69.120	67.823	-0.252	0.000	0.23		0.290	12.183	25.6	OK
15.001	S50	15 minute 1 year Winter I+0%	69.235	67.744	-0.185	0.000	0.43		1.522	24.067	48.4	OK
17.000	OB11	15 minute 1 year Winter I+0%	68.890	67.852	-0.168	0.000	0.40		0.144	17.405	37.2	OK

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1 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Catchment C

PN	US/MH Name	Event	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Maximum Vol (m³)	Discharge Vol (m³)	Pipe Flow (l/s)	Status
15.002	S51	15 minute 1 year Winter I+0%	69.235	67.684	-0.115	0.000	0.81		2.265	41.472	81.8	OK
18.000	OB12	15 minute 1 year Winter I+0%	68.890	67.890	-0.205	0.000	0.42		0.292	17.884	38.1	OK
18.001	S52	15 minute 1 year Winter I+0%	69.235	67.851	-0.214	0.000	0.38		0.414	17.884	38.4	OK
15.003	S53	15 minute 1 year Winter I+0%	69.235	67.548	-0.305	0.000	0.37		1.679	59.357	117.6	OK
15.004	Tank 7 - Full Retention	15 minute 1 year Winter I+0%	70.000	67.474	-0.204	0.000	0.68		2.545	59.357	116.1	OK
9.008	S54	15 minute 1 year Winter I+0%	70.000	66.967	-0.487	0.000	0.43		11.021	210.261	360.7	OK
9.009	S55	15 minute 1 year Winter I+0%	70.000	66.821	-0.538	0.000	0.34		5.528	210.078	357.4	OK
19.000	KD17	15 minute 1 year Winter I+0%	69.440	68.271	-0.119	0.000	0.09		0.029	2.761	5.9	OK
9.010	S56	15 minute 1 year Winter I+0%	70.000	66.686	-0.453	0.000	0.49		8.616	212.668	356.6	OK
9.011	S57	15 minute 1 year Winter I+0%	70.000	66.621	-0.463	0.000	0.47		4.669	212.525	356.4	OK
20.000	10A	15 minute 1 year Summer I+0%	80.350	79.416	-0.234	0.000	0.11		0.069	18.880	60.9	OK
20.001	10B	15 minute 1 year Summer I+0%	75.350	74.409	-0.241	0.000	0.11	0.0	0.061	18.880	60.9	OK
20.002	SDP010	15 minute 1 year Summer I+0%	70.350	68.143	-0.132	0.000	0.73		0.420	18.880	61.1	OK
20.003	S59 (V)	15 minute 1 year Summer I+0%	70.150	68.103	-0.147	0.000	0.68		0.626	18.879	60.6	OK
21.000	S58 (V)	15 minute 1 year Summer I+0%	70.150	67.875	-0.300	0.000	0.00		0.000	0.000	0.0	OK
9.012	S60	15 minute 1 year Winter I+0%	70.000	66.496	-0.523	0.000	0.35		4.247	233.333	354.3	OK
22.000	KD18	15 minute 1 year Winter I+0%	69.925	68.784	-0.166	0.000	0.15		0.061	1.860	3.9	OK
22.001	KD19	15 minute 1 year Winter I+0%	69.440	68.364	-0.176	0.000	0.27		0.135	7.742	14.5	OK
22.002	KD20	15 minute 1 year Winter I+0%	69.095	68.332	-0.228	0.000	0.32		0.635	16.324	30.0	OK
22.003	KD21	15 minute 1 year Winter I+0%	69.095	68.073	-0.272	0.000	0.33		0.305	27.187	49.3	OK
23.000	KD22	15 minute 1 year Winter I+0%	68.750	67.770	-0.155	0.000	0.33		0.381	13.383	28.1	OK
22.004	S61	15 minute 1 year Winter I+0%	68.800	67.766	-0.224	0.000	0.50		0.444	40.570	77.1	OK
24.000	KD23	15 minute 1 year Winter I+0%	68.170	67.208	-0.137	0.000	0.48		0.412	18.124	38.1	OK
22.005	S62	15 minute 1 year Winter I+0%	68.800	67.196	-0.274	0.000	0.46		0.803	58.694	114.5	OK
22.006	Tank 8 - Bypass	15 minute 1 year Winter I+0%	68.800	67.154	-0.286	0.000	0.54		0.725	58.694	114.0	OK
9.013	S63	15 minute 1 year Winter I+0%	68.900	66.307	-0.428	0.000	0.54		19.325	291.799	395.1	OK
25.000	KD24	15 minute 1 year Winter I+0%	68.385	67.236	-0.174	0.000	0.12		0.052	1.500	3.2	OK
9.014	S64	15 minute 1 year Winter I+0%	68.425	66.167	-0.513	0.000	0.38		3.800	296.127	395.3	OK
9.015	Ex SC15	15 minute 1 year Winter I+0%	70.000	65.829	-0.643	0.000	0.18		1.486	296.052	394.6	OK
26.000	C16a	15 minute 1 year Winter I+0%	68.110	66.732	-0.178	0.000	0.35		0.133	17.286	37.1	OK
27.000	1	15 minute 1 year Winter I+0%	71.600	70.214	-0.086	0.000	0.83		0.237	54.995	87.5	OK
27.001	2	15 minute 1 year Winter I+0%	71.180	69.631	-0.074	0.000	0.93		1.066	67.057	101.9	OK
27.002	3	15 minute 1 year Winter I+0%	71.410	69.270	-0.138	0.000	0.80		2.701	91.833	137.6	OK
27.003	4	15 minute 1 year Winter I+0%	71.410	69.019	-0.167	0.000	0.69		4.115	103.494	149.3	OK
27.004	5	15 minute 1 year Winter I+0%	71.490	68.533	-0.235	0.000	0.46		1.681	116.831	164.5	OK
27.005	6	15 minute 1 year Winter I+0%	70.600	67.472	-0.261	0.000	0.37		0.676	116.749	164.7	OK
27.006	7	15 minute 1 year Winter I+0%	69.530	66.734	-0.199	0.000	0.59		0.813	143.590	193.5	OK
27.007	8	15 minute 1 year Winter I+0%	69.030	66.218	-0.372	0.000	0.30		0.423	143.524	193.2	OK
26.001	C16	15 minute 1 year Winter I+0%	68.690	65.831	-0.359	0.000	0.34		1.071	160.645	214.1	OK
9.016	C17	15 minute 1 year Winter I+0%	69.130	64.945	-0.582	0.000	0.27		2.340	477.539	590.7	OK
9.017	C18	15 minute 1 year Winter I+0%	69.612	64.009	-0.572	0.000	0.29		2.472	477.387	591.3	OK
28.000	OB1	15 minute 1 year Winter I+0%	68.920	67.766	-0.629	0.000	0.08		0.818	40.928	86.4	OK
28.001	S1	60 minute 1 year Winter I+0%	69.855	67.641	-0.634	0.000	0.06		39.348	59.671	25.0	OK
29.000	OB2	15 minute 1 year Winter I+0%	69.795	68.473	-0.197	0.000	0.45		0.305	16.084	34.3	OK
28.002	S2 (BD)	30 minute 1 year Winter I+0%	69.855	67.606	-0.624	0.000	0.06		0.502	56.170	35.1	OK
30.000	OB3	15 minute 1 year Winter I+0%	69.340	68.041	-0.249	0.000	0.24		0.213	11.403	24.0	OK
28.003	S3	15 minute 1 year Winter I+0%	69.855	67.474	-0.591	0.000	0.09		2.062	55.323	52.2	OK
28.004	Tank 1 -Full Retention	15 minute 1 year Winter I+0%	70.000	67.422	-0.499	0.000	0.13		2.279	55.108	56.3	OK
28.005	S4	15 minute 1 year Winter I+0%	70.000	67.410	-0.470	0.000	0.10		1.751	54.878	60.7	OK

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1 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Catchment C

PN	US/MH Name	Event	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Maximum Vol (m³)	Discharge Vol (m³)	Pipe Flow (l/s)	Status
31.000	5A	15 minute 1 year Summer I+0%	80.350	79.427	-0.223	0.000	0.15		0.081	25.851	83.4	OK
31.001	5B	15 minute 1 year Summer I+0%	75.350	74.409	-0.241	0.000	0.15	0.0	0.061	25.851	83.4	OK
31.002	SDP005	15 minute 1 year Summer I+0%	70.350	68.151	-0.199	0.000	0.57		0.435	25.851	83.4	OK
31.003	S5 (V)	15 minute 1 year Summer I+0%	68.952	68.104	-0.266	0.000	0.32		1.491	25.845	75.3	OK
32.000	6A	15 minute 1 year Summer I+0%	80.350	79.427	-0.223	0.000	0.15		0.081	25.851	83.4	OK
32.001	6B	15 minute 1 year Summer I+0%	75.350	74.409	-0.241	0.000	0.15	0.0	0.061	25.851	83.4	OK
32.002	SDP006	15 minute 1 year Summer I+0%	70.350	68.100	-0.175	0.000	0.53		0.345	25.853	83.4	OK
31.004	S6 (V)	15 minute 1 year Summer I+0%	68.952	68.052	-0.288	0.000	0.44		4.678	51.697	141.9	OK
33.000	7A	15 minute 1 year Summer I+0%	80.350	79.427	-0.223	0.000	0.15		0.081	25.851	83.4	OK
33.001	7B	15 minute 1 year Summer I+0%	75.350	74.409	-0.241	0.000	0.15	0.0	0.061	25.851	83.4	OK
33.002	SDP007	15 minute 1 year Summer I+0%	70.350	68.173	-0.102	0.000	0.88		0.474	25.851	83.2	OK
31.005	S7 (V)	15 minute 1 year Summer I+0%	68.952	67.995	-0.240	0.000	0.58		5.193	77.544	194.8	OK
34.000	8A	15 minute 1 year Summer I+0%	80.350	79.427	-0.223	0.000	0.15		0.081	25.851	83.4	OK
34.001	8B	15 minute 1 year Summer I+0%	75.350	74.409	-0.241	0.000	0.15	0.0	0.061	25.851	83.4	OK
34.002	SDP008	15 minute 1 year Summer I+0%	70.350	68.173	-0.102	0.000	0.88		0.474	25.851	83.4	OK
31.006	S8 (V)	15 minute 1 year Summer I+0%	68.952	67.898	-0.217	0.000	0.73		5.936	103.396	258.7	OK
28.006	S9 (V)	15 minute 1 year Winter I+0%	69.850	67.376	-0.524	0.000	0.37		7.460	170.410	286.9	OK
35.000	9A	15 minute 1 year Summer I+0%	80.350	79.403	-0.322	0.000	0.05		0.085	13.356	43.1	OK
35.001	9B	15 minute 1 year Summer I+0%	75.350	74.408	-0.317	0.000	0.05	0.0	0.094	13.356	43.1	OK
35.002	SDP009	15 minute 1 year Summer I+0%	70.350	68.107	-0.168	0.000	0.57		0.356	13.356	43.3	OK
35.003	S10 (V)	15 minute 1 year Summer I+0%	70.130	68.056	-0.204	0.000	0.42		0.417	13.355	42.5	OK
28.007	S11	15 minute 1 year Winter I+0%	70.092	67.291	-0.539	0.000	0.33		4.127	185.104	303.2	OK
28.008	S12	15 minute 1 year Winter I+0%	70.130	67.154	-0.535	0.000	0.31		7.753	184.771	290.5	OK
28.009	S13	15 minute 1 year Winter I+0%	70.130	67.023	-0.497	0.000	0.33		10.866	184.464	282.6	OK
36.000	OB4	15 minute 1 year Winter I+0%	69.905	68.577	-0.278	0.000	0.31		0.296	17.584	37.5	OK
36.001	S14	15 minute 1 year Winter I+0%	70.025	68.521	-0.309	0.000	0.20		0.381	17.584	34.8	OK
37.000	OB5	15 minute 1 year Winter I+0%	69.955	68.902	-0.078	0.000	0.73		0.160	9.243	19.3	OK
37.001	S15	15 minute 1 year Winter I+0%	70.025	68.845	-0.045	0.000	0.72		0.874	9.243	19.5	OK
38.000	OB6	15 minute 1 year Winter I+0%	69.905	68.888	-0.267	0.000	0.34		0.315	19.385	41.4	OK
37.002	S16	15 minute 1 year Winter I+0%	70.025	68.808	-0.245	0.000	0.42		1.003	28.627	58.4	OK
36.002	S17	15 minute 1 year Winter I+0%	70.025	68.341	-0.209	0.000	0.53		3.039	46.212	90.0	OK
36.003	Tank 2 - Full Retention	15 minute 1 year Winter I+0%	70.015	68.299	-0.161	0.000	0.73		1.580	46.212	89.1	OK
28.010	S18 (BD)	15 minute 1 year Winter I+0%	70.130	66.952	-0.462	0.000	0.43		8.228	230.404	359.0	OK
39.000	KD1	15 minute 1 year Winter I+0%	70.240	68.794	-0.171	0.000	0.13		0.056	1.560	3.3	OK
39.001	S19	15 minute 1 year Winter I+0%	70.000	68.756	-0.174	0.000	0.10		0.100	1.560	3.0	OK
40.000	OB7	15 minute 1 year Winter I+0%	70.035	69.030	-0.255	0.000	0.39		0.335	24.246	51.7	OK
39.002	S20	15 minute 1 year Winter I+0%	70.158	68.592	-0.298	0.000	0.23		0.858	25.806	51.8	OK
41.000	OB8	15 minute 1 year Winter I+0%	70.035	69.011	-0.199	0.000	0.44		0.302	18.304	39.0	OK
41.001	S21	15 minute 1 year Winter I+0%	70.158	68.963	-0.212	0.000	0.39		0.536	18.304	39.2	OK
39.003	S22	15 minute 1 year Winter I+0%	70.158	68.270	-0.215	0.000	0.53		1.961	44.111	90.1	OK
39.004	TANK 3 - Full Retention	15 minute 1 year Winter I+0%	70.092	68.219	-0.201	0.000	0.59		0.684	44.111	90.1	OK
28.011	S23	15 minute 1 year Winter I+0%	70.130	66.872	-0.597	0.000	0.39		7.895	274.286	422.4	OK
28.012	S24	15 minute 1 year Winter I+0%	70.130	66.715	-0.685	0.000	0.26		4.430	273.967	414.1	OK
42.000	KD2	15 minute 1 year Winter I+0%	68.625	67.518	-0.207	0.000	0.21		0.100	4.501	9.6	OK
28.013	S25 (BD)	15 minute 1 year Winter I+0%	68.860	66.485	-0.604	0.000	0.37		16.391	278.200	408.2	OK
43.000	11A	15 minute 1 year Summer I+0%	80.350	79.416	-0.234	0.000	0.11		0.069	18.880	60.9	OK
43.001	11B	15 minute 1 year Summer I+0%	75.350	74.409	-0.241	0.000	0.11	0.0	0.061	18.880	60.9	OK
43.002	SDP011	15 minute 1 year Summer I+0%	70.350	68.144	-0.131	0.000	0.74		0.423	18.880	61.1	OK
43.003	S26 (V)	15 minute 1 year Summer I+0%	70.075	68.103	-0.162	0.000	0.60		0.448	18.878	59.0	OK

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1 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Catchment C

PN	US/MH Name	Event	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Maximum Vol (m³)	Discharge Vol (m³)	Pipe Flow (l/s)	Status
44.000	S27 (V)	15 minute 1 year Summer I+0%	70.075	68.022	-0.243	0.000	0.01		0.224	0.000	1.2	OK
43.004	S28	15 minute 1 year Summer I+0%	70.325	68.023	-0.257	0.000	0.39		1.469	18.878	58.1	OK
28.014	S29	15 minute 1 year Winter I+0%	68.700	66.391	-0.628	0.000	0.34		5.687	299.108	418.9	OK
45.000	KD3	15 minute 1 year Winter I+0%	67.915	66.786	-0.229	0.000	0.13		0.075	2.581	5.5	OK
28.015	S30	15 minute 1 year Winter I+0%	68.300	66.251	-0.659	0.000	0.30		7.261	304.482	417.3	OK
46.000	KD4	15 minute 1 year Winter I+0%	67.940	66.954	-0.086	0.000	0.16		0.237	4.441	9.1	OK
46.001	KD9	15 minute 1 year Winter I+0%	67.970	66.953	-0.077	0.000	0.40		0.251	10.623	20.0	OK
47.000	KD5	15 minute 1 year Winter I+0%	69.785	68.745	-0.290	0.000	0.27		0.275	19.145	40.5	OK
47.001	KD6	15 minute 1 year Winter I+0%	69.440	68.427	-0.263	0.000	0.36		0.322	26.347	53.6	OK
47.002	KD7	15 minute 1 year Winter I+0%	69.095	68.307	-0.323	0.000	0.18		0.524	33.549	67.0	OK
47.003	KD8	15 minute 1 year Winter I+0%	68.515	67.532	-0.383	0.000	0.28		0.374	40.871	80.1	OK
46.002	S31	15 minute 1 year Winter I+0%	68.050	66.947	-0.368	0.000	0.29		0.494	51.493	99.8	OK
46.003	Tank 4 - By Pass	15 minute 1 year Winter I+0%	68.050	66.926	-0.314	0.000	0.46		1.068	51.494	99.1	OK
46.004	S32	15 minute 1 year Winter I+0%	68.050	66.875	-0.350	0.000	0.36		0.678	51.494	99.4	OK
28.016	S33	15 minute 1 year Winter I+0%	68.208	66.105	-0.625	0.000	0.34		7.451	355.702	447.3	OK
28.017	S34	15 minute 1 year Winter I+0%	68.650	65.964	-0.625	0.000	0.34		10.402	355.234	440.0	OK
48.000	KD10	15 minute 1 year Winter I+0%	68.375	67.290	-0.110	0.000	0.24		0.124	3.181	6.5	OK
48.001	S35	15 minute 1 year Winter I+0%	68.455	67.286	-0.104	0.000	0.14		0.163	3.181	6.3	OK
49.000	KD11	15 minute 1 year Winter I+0%	69.785	68.718	-0.167	0.000	0.33		0.144	8.763	18.4	OK
49.001	KD12	15 minute 1 year Winter I+0%	69.440	68.678	-0.222	0.000	0.35		0.677	17.165	33.7	OK
49.002	KD13	15 minute 1 year Winter I+0%	69.095	68.071	-0.274	0.000	0.32		0.303	25.567	48.8	OK
49.003	KD14	15 minute 1 year Winter I+0%	68.750	67.743	-0.332	0.000	0.29		0.332	33.970	63.6	OK
50.000	KD15	15 minute 1 year Winter I+0%	68.375	67.286	-0.114	0.000	0.36		0.120	8.342	17.5	OK
48.002	S36	15 minute 1 year Winter I+0%	68.455	67.278	-0.302	0.000	0.35		0.659	45.493	86.5	OK
48.003	Tank 5 - Bypass	15 minute 1 year Winter I+0%	68.455	67.263	-0.247	0.000	0.53		0.812	45.493	85.7	OK
48.004	S37	15 minute 1 year Winter I+0%	68.455	67.247	-0.248	0.000	0.54		0.779	45.492	86.2	OK
28.018	S38 (P)	15 minute 1 year Winter I+0%	68.625	65.749	-0.640	0.000	0.32		16.526	400.367	454.4	OK
28.019	Ex SC41	15 minute 1 year Winter I+0%	70.000	65.223	-0.677	0.000	0.14		0.962	400.281	455.4	OK
9.018	C44	15 minute 1 year Winter I+0%	69.398	63.301	-0.446	0.000	0.51		6.040	903.639	1023.4	OK
51.000	C19	15 minute 1 year Winter I+0%	83.721	82.709	-0.112	0.000	0.14		0.037	2.548	5.4	OK
51.001	C20	15 minute 1 year Winter I+0%	82.256	81.249	-0.107	0.000	0.18		0.047	4.119	8.2	OK
51.002	C21	15 minute 1 year Winter I+0%	80.753	79.752	-0.101	0.000	0.23		0.053	5.678	11.0	OK
51.003	C22	15 minute 1 year Winter I+0%	79.479	78.492	-0.087	0.000	0.36		0.069	8.480	16.1	OK
51.004	C23	15 minute 1 year Winter I+0%	79.479	76.331	-0.119	0.000	0.45		0.115	12.201	22.8	OK
51.005	C24	15 minute 1 year Winter I+0%	77.829	75.906	-0.132	0.000	0.36		0.157	16.705	30.7	OK
52.000	OB1	15 minute 1 year Summer I+0%	76.990	75.873	-0.131	0.000	0.04		0.016	0.214	0.6	OK
52.001	PPIC1	15 minute 1 year Summer I+0%	77.050	75.822	-0.132	0.000	0.03		0.015	0.214	0.5	OK
52.002	PPIC2	15 minute 1 year Summer I+0%	77.020	75.663	-0.131	0.000	0.04		0.023	0.214	0.5	OK
53.000	BI RWP	15 minute 1 year Summer I+0%	77.000	75.667	-0.127	0.000	0.06		0.021	0.322	0.8	OK
52.003	Ex. SC25	15 minute 1 year Winter I+0%	76.921	75.555	-0.189	0.000	0.06		0.035	2.641	5.0	OK
52.004	Ex. SC26	15 minute 1 year Winter I+0%	76.304	74.926	-0.228	0.000	0.13		0.077	5.942	11.0	OK
54.000	New gully	15 minute 1 year Winter I+0%	75.580	75.271	-0.089	0.000	0.35		0.063	2.041	4.7	FLOOD RISK
54.001	Separator	15 minute 1 year Winter I+0%	76.300	75.050	-0.085	0.000	0.39		0.068	2.041	4.6	OK
55.000	OB2	15 minute 1 year Winter I+0%	76.140	75.130	-0.125	0.000	0.07		0.023	0.480	1.1	OK
56.000	MS RWP	15 minute 1 year Summer I+0%	76.625	75.038	-0.117	0.000	0.11		0.032	0.643	1.7	OK
54.002	PS3	15 minute 1 year Winter I+0%	76.550	74.938	-0.157	0.000	0.20		0.075	3.241	7.3	OK
57.000	OB3	15 minute 1 year Winter I+0%	76.575	74.977	-0.118	0.000	0.10		0.031	0.780	1.7	OK
52.005	PS4	15 minute 1 year Winter I+0%	76.575	74.801	-0.179	0.000	0.35		0.354	10.683	21.2	OK
51.006	C27	15 minute 1 year Winter I+0%	76.336	74.757	-0.163	0.000	0.43		0.277	36.090	66.7	OK

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1 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Catchment C

PN	US/MH Name	Event	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Maximum Vol (m³)	Discharge Vol (m³)	Pipe Flow (l/s)	Status
51.007	C28	15 minute 1 year Winter I+0%	74.920	73.628	-0.172	0.000	0.38		0.213	42.460	77.3	OK
58.000	C29	15 minute 1 year Winter I+0%	75.557	74.157	-0.075	0.000	0.49		0.079	7.562	16.2	OK
58.001	C30	15 minute 1 year Winter I+0%	74.373	73.110	-0.063	0.000	0.62		0.104	10.597	21.5	OK
58.002	C31	15 minute 1 year Winter I+0%	73.349	72.005	-0.135	0.000	0.33		0.097	13.417	26.6	OK
58.003	C32	15 minute 1 year Winter I+0%	72.668	71.135	-0.240	0.000	0.26		0.231	14.677	29.0	OK
51.008	C33	15 minute 1 year Winter I+0%	72.929	71.081	-0.211	0.000	0.39		0.840	72.537	131.3	OK
51.009	C34	15 minute 1 year Winter I+0%	69.716	68.318	-0.198	0.000	0.45		0.431	88.562	157.5	OK
51.010	C35	15 minute 1 year Winter I+0%	66.836	65.402	-0.234	0.000	0.46		0.437	95.019	167.3	OK
51.011	C36	15 minute 1 year Winter I+0%	66.255	64.766	-0.289	0.000	0.52		0.739	102.631	177.5	OK
51.012	C37	15 minute 1 year Winter I+0%	66.211	64.637	-0.282	0.000	0.54		4.813	109.549	184.5	OK
51.013	C38	15 minute 1 year Winter I+0%	66.775	64.504	-0.280	0.000	0.54		4.835	123.927	196.6	OK
51.014	C39	15 minute 1 year Winter I+0%	68.127	64.234	-0.250	0.000	0.63		8.035	155.565	228.9	OK
51.015	C40	15 minute 1 year Winter I+0%	69.594	63.802	-0.382	0.000	0.29		2.839	155.563	227.0	OK
9.019	C46	15 minute 1 year Winter I+0%	69.215	62.519	-0.423	0.000	0.55		4.530	1066.168	1245.9	OK
9.020	C47	15 minute 1 year Winter I+0%	65.851	61.218	-0.263	0.000	0.85		10.038	1073.797	1246.9	OK
59.000	OB1	15 minute 1 year Winter I+0%	66.530	65.510	-0.175	0.000	0.11		0.051	3.121	6.7	OK
60.000	OB2	15 minute 1 year Winter I+0%	66.465	65.273	-0.177	0.000	0.35		0.134	18.366	39.3	OK
59.001	S1	15 minute 1 year Winter I+0%	66.570	65.136	-0.114	0.000	0.69		0.386	21.487	45.9	OK
61.000	OB3	15 minute 1 year Winter I+0%	66.465	64.812	-0.278	0.000	0.23		0.295	16.024	34.2	OK
59.002	S2	15 minute 1 year Winter I+0%	66.575	64.808	-0.237	0.000	0.20		1.251	37.512	77.0	OK
62.000	OB4	15 minute 1 year Winter I+0%	66.610	65.457	-0.133	0.000	0.35		0.098	6.122	13.1	OK
62.001	S3	15 minute 1 year Winter I+0%	66.715	65.373	-0.137	0.000	0.33		0.164	6.122	13.2	OK
63.000	OB5	15 minute 1 year Winter I+0%	66.610	64.941	-0.309	0.000	0.21		0.240	15.364	32.8	OK
62.002	S4	15 minute 1 year Winter I+0%	66.715	64.901	-0.299	0.000	0.24		0.532	21.486	44.6	OK
64.000	OB6	15 minute 1 year Winter I+0%	66.610	64.920	-0.150	0.000	0.49		0.164	15.304	32.7	OK
62.003	S5	15 minute 1 year Winter I+0%	66.715	64.797	-0.203	0.000	0.20		2.937	36.790	70.9	OK
59.003	S6	15 minute 1 year Winter I+0%	66.715	64.773	-0.127	0.000	0.42		7.442	74.297	126.5	OK
65.000	OB7	15 minute 1 year Winter I+0%	67.085	66.041	-0.109	0.000	0.17		0.041	1.981	4.2	OK
65.001	S8	15 minute 1 year Winter I+0%	67.320	65.782	-0.103	0.000	0.21		0.056	1.981	4.2	OK
66.000	OB8	15 minute 1 year Winter I+0%	67.085	65.388	-0.157	0.000	0.19		0.071	3.961	8.5	OK
65.002	S9	15 minute 1 year Winter I+0%	67.320	65.287	-0.153	0.000	0.22		0.119	5.942	12.6	OK
67.000	OB9	15 minute 1 year Winter I+0%	67.085	64.733	-0.152	0.000	0.23		0.077	4.801	10.3	OK
59.004	S7	15 minute 1 year Winter I+0%	67.320	64.707	-0.068	0.000	0.39		12.498	85.039	109.7	OK
68.000	OB10	15 minute 1 year Winter I+0%	66.940	64.799	-0.091	0.000	0.32		0.061	2.401	5.1	OK
68.001	S10	15 minute 1 year Winter I+0%	67.175	64.690	-0.090	0.000	0.33		0.089	2.401	5.1	OK
59.005	S11	15 minute 1 year Winter I+0%	67.175	64.641	-0.059	0.000	0.31		8.166	87.440	108.0	OK
59.006	S12	15 minute 1 year Winter I+0%	67.050	64.259	-0.426	0.000	0.39		1.203	87.439	108.4	OK
59.007	FRS1	15 minute 1 year Winter I+0%	67.065	64.148	-0.422	0.000	0.32		1.234	87.439	108.2	OK
59.008	S13	15 minute 1 year Winter I+0%	67.125	64.131	-0.414	0.000	0.41		1.739	87.437	107.5	OK
69.000	CP5	15 minute 1 year Winter I+0%	67.070	65.726	-0.149	0.000	0.25		0.337	19.749	33.4	OK
70.000	G1	15 minute 1 year Winter I+0%	66.385	64.555	-0.115	0.000	0.12		0.034	0.960	2.0	OK
59.009	S14	60 minute 1 year Winter I+0%	67.000	64.096	-0.424	0.000	0.23		2.201	177.541	101.5	OK
71.000	CP8	15 minute 1 year Winter I+0%	67.215	65.135	-0.130	0.000	0.37		0.511	10.623	17.9	OK
59.010	AT1	60 minute 1 year Winter I+0%	69.000	64.078	-0.382	0.000	0.11		96.504	187.372	45.0	OK
59.011	S15	60 minute 1 year Winter I+0%	66.050	63.747	-0.213	0.000	0.19		0.397	187.167	45.0	OK
72.000	SSFD	15 minute 1 year Winter I+0%	63.720	63.012	0.292	0.000	4.70		1.422	13.654	26.6	SURCHARGED
59.012 Ex	SC72a	60 minute 1 year Winter I+0%	63.720	62.722	0.002	0.000	0.81		0.322	209.598	56.1	SURCHARGED
9.021	Spur	15 minute 1 year Winter I+0%	64.435	60.212	-0.393	0.000	0.60		0.520	1185.819	1289.3	OK*
9.022	C48	30 minute 1 year Winter I+0%	63.019	59.667	-0.493	0.000	0.42		16.787	1516.271	1297.5	OK

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1 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Catchment C

PN	US/MH Name	Event	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Maximum Vol (m³)	Discharge Vol (m³)	Pipe Flow (l/s)	Status
9.023	C49	30 minute 1 year Winter I+0%	60.634	57.605	-0.498	0.000	0.41		2.689	1522.067	1300.5	OK
9.024	C50	30 minute 1 year Winter I+0%	57.788	55.195	-0.455	0.000	0.49		3.237	1534.004	1305.5	OK
9.025	C51	30 minute 1 year Winter I+0%	55.447	53.568	-0.539	0.000	0.34		2.622	1547.828	1310.5	OK
73.000	SW01	15 minute 1 year Winter I+0%	58.600	57.891	-0.109	0.000	0.17		0.041	1.421	3.0	OK
73.001	SW02	15 minute 1 year Winter I+0%	58.370	57.482	-0.174	0.000	0.11		0.052	3.043	6.0	OK
74.000	SW02A	15 minute 1 year Winter I+0%	64.330	62.713	-0.117	0.000	0.11		0.031	3.933	8.4	OK
73.002	SW03	15 minute 1 year Winter I+0%	57.754	56.881	-0.219	0.000	0.16		0.087	9.228	18.1	OK
73.003	SW04	15 minute 1 year Winter I+0%	57.214	56.302	-0.209	0.000	0.19		0.157	12.445	23.2	OK
73.004	SW05	15 minute 1 year Winter I+0%	56.600	55.334	-0.218	0.000	0.17		0.138	12.445	23.3	OK
75.000	SW05A	15 minute 1 year Winter I+0%	56.073	55.348	-0.125	0.000	0.06		0.023	0.720	1.5	OK
73.005	SW06	15 minute 1 year Winter I+0%	55.886	54.792	-0.268	0.000	0.17		0.184	14.367	25.6	OK
73.006	SW07	15 minute 1 year Winter I+0%	55.692	54.306	-0.275	0.000	0.16		0.318	15.511	26.8	OK
73.007	SW08	15 minute 1 year Winter I+0%	55.529	53.725	-0.273	0.000	0.17		0.283	16.332	27.8	OK
73.008	SW09	15 minute 1 year Winter I+0%	55.422	53.337	-0.271	0.000	0.17		0.285	17.254	28.7	OK
76.000	SW10	15 minute 1 year Summer I+0%	55.857	54.057	-0.600	0.000	0.00		0.000	0.000	0.0	OK
76.001	SW11	15 minute 1 year Summer I+0%	55.738	53.761	-0.750	0.000	0.00		0.000	0.000	0.0	OK
76.002	SW12	15 minute 1 year Summer I+0%	55.647	53.650	-0.750	0.000	0.00		0.000	0.000	0.0	OK
76.003	SW13	15 minute 1 year Summer I+0%	55.528	53.367	-0.750	0.000	0.00		0.000	0.000	0.0	OK
76.004	SW14	15 minute 1 year Summer I+0%	55.484	53.177	-0.750	0.000	0.00		0.000	0.000	0.0	OK
76.005	SW15	15 minute 1 year Summer I+0%	55.612	52.641	-0.750	0.000	0.00		0.000	0.000	0.0	OK
73.009	SW16	15 minute 1 year Winter I+0%	55.589	52.452	-0.793	0.000	0.03		0.353	26.282	39.8	OK
77.000	SW17	15 minute 1 year Winter I+0%	58.606	57.969	-0.156	0.000	0.19		0.073	3.774	7.4	OK
77.001	SW18	15 minute 1 year Winter I+0%	58.445	57.486	-0.152	0.000	0.22		0.158	6.177	11.1	OK
77.002	SW19	15 minute 1 year Winter I+0%	57.723	56.585	-0.153	0.000	0.22		0.123	7.001	12.3	OK
78.000	SW20	15 minute 1 year Winter I+0%	57.200	56.552	-0.098	0.000	0.26		0.054	2.047	4.4	OK
77.003	SW21	15 minute 1 year Winter I+0%	57.444	56.068	-0.153	0.000	0.23		0.114	9.048	16.3	OK
77.004	SW22	15 minute 1 year Winter I+0%	57.084	55.577	-0.148	0.000	0.25		0.103	9.048	16.0	OK
79.000	Gully	15 minute 1 year Winter I+0%	56.774	55.816	-0.134	0.000	0.03		0.003	0.611	1.3	OK
77.005	SW23	15 minute 1 year Winter I+0%	56.562	54.511	-0.150	0.000	0.24		0.110	9.660	16.9	OK
80.000	SW24	15 minute 1 year Summer I+0%	55.645	54.530	-0.150	0.000	0.00		0.000	0.000	0.0	OK
80.001	SW25	15 minute 1 year Summer I+0%	56.340	54.318	-0.150	0.000	0.00		0.000	0.000	0.0	OK
80.002	SW26	15 minute 1 year Summer I+0%	56.262	54.236	-0.150	0.000	0.00		0.000	0.000	0.0	OK
77.006	SW27	15 minute 1 year Winter I+0%	56.310	53.865	-0.196	0.000	0.26		0.113	9.659	16.7	OK
77.007	SW28	15 minute 1 year Winter I+0%	56.044	53.759	-0.196	0.000	0.26		0.303	9.659	16.7	OK
77.008	SW29	15 minute 1 year Winter I+0%	55.892	53.647	-0.238	0.000	0.10		0.154	9.659	16.7	OK
73.010	SW30	15 minute 1 year Winter I+0%	55.503	52.162	-0.796	0.000	0.03		0.516	37.376	57.8	OK
73.011	SW31	15 minute 1 year Winter I+0%	55.327	51.289	-0.797	0.000	0.03		0.468	38.253	58.7	OK
73.012	SW32	15 minute 1 year Winter I+0%	55.648	50.563	-0.793	0.000	0.03		0.433	38.252	59.0	OK
81.000	HD01	15 minute 1 year Winter I+0%	57.100	56.086	-0.114	0.000	0.13		0.035	1.900	4.0	OK
81.001	HD02	15 minute 1 year Winter I+0%	56.041	55.006	-0.118	0.000	0.10		0.034	1.900	4.0	OK
81.002	HD03	15 minute 1 year Winter I+0%	55.655	54.333	-0.116	0.000	0.12		0.035	1.900	4.1	OK
81.003	HD04	15 minute 1 year Winter I+0%	54.782	53.452	-0.099	0.000	0.25		0.057	4.659	9.0	OK
73.013	36	15 minute 1 year Winter I+0%	51.350	49.958	-0.786	0.000	0.14		0.962	261.064	425.6	OK
9.026	C52	30 minute 1 year Winter I+0%	51.156	48.972	-0.834	0.000	0.20		1.799	1906.096	1527.6	OK
9.027	C53	30 minute 1 year Winter I+0%	46.900	44.749	-0.771	0.000	0.28		2.925	1905.384	1528.0	OK
9.028	C54	30 minute 1 year Winter I+0%	45.580	42.892	-0.738	0.000	0.32		4.281	1904.557	1527.5	OK
9.029	H20C	30 minute 1 year Winter I+0%	42.300	40.388	-1.512	0.000	0.18		4.122	1903.117	1526.4	OK
82.000	C55a	15 minute 1 year Winter I+0%	42.230	41.267	-0.138	0.000	0.31		0.093	6.002	12.4	OK
83.000	C55b	15 minute 1 year Winter I+0%	45.150	43.831	-0.119	0.000	0.10		0.030	2.401	5.1	OK

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1 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Catchment C

PN	US/MH Name	Event	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Maximum Vol (m³)	Discharge Vol (m³)	Pipe Flow (l/s)	Status
82.001	C55	15 minute 1 year Winter I+0%	43.800	40.926	-0.064	0.000	0.82		0.297	16.804	31.5	OK
82.002	56	15 minute 1 year Winter I+0%	44.900	40.615	-0.165	0.000	0.41		0.395	17.705	32.8	OK
82.003	C57	15 minute 1 year Winter I+0%	44.300	40.345	-0.170	0.000	0.39		0.430	17.705	32.6	OK
82.004	H7C	600 minute 1 year Winter I+0%	42.500	40.134	-0.166	0.000	0.02		0.411	57.112	4.0	OK
9.030	BASIN C1	480 minute 1 year Winter I+0%	42.000	40.133	0.383	0.000	0.06		3438.429	2964.642	56.2	SURCHARGED
9.031	C59	360 minute 1 year Winter I+0%	38.600	36.636	-0.314	0.000	0.20		0.255	2218.969	56.2	OK
84.000	P2_29	30 minute 1 year Winter I+0%	42.400	40.852	-0.348	0.000	0.11		0.437	24.167	30.3	OK
84.001	P2_30	30 minute 1 year Winter I+0%	42.343	40.849	-0.268	0.000	0.29		5.259	50.443	57.3	OK
84.002	P2_31	30 minute 1 year Winter I+0%	42.162	40.840	-0.240	0.000	0.19		3.136	50.442	53.0	OK
85.000	SC72	15 minute 1 year Winter I+0%	44.017	43.386	-0.188	0.000	0.06		0.036	1.200	2.5	OK
85.001	SC73	15 minute 1 year Winter I+0%	43.907	43.076	-0.133	0.000	0.34		0.190	7.202	12.9	OK
85.002	SC74	15 minute 1 year Winter I+0%	43.815	42.815	-0.102	0.000	0.56		0.328	12.363	21.5	OK
85.003	SC75	15 minute 1 year Winter I+0%	43.201	42.504	-0.196	0.000	0.26		0.231	12.363	21.4	OK
85.004	SC76	15 minute 1 year Winter I+0%	43.103	42.085	-0.315	0.000	0.18		0.237	18.185	28.5	OK
85.005	SC77	15 minute 1 year Winter I+0%	42.911	41.774	-0.376	0.000	0.28		0.651	57.615	88.7	OK
85.006	SC78	15 minute 1 year Winter I+0%	42.668	41.580	-0.318	0.000	0.45		6.830	101.726	155.4	OK
85.007	SC79	15 minute 1 year Winter I+0%	42.450	41.312	-0.518	0.000	0.20		0.926	101.785	153.7	OK
85.008	SC80	15 minute 1 year Winter I+0%	42.222	41.158	-0.372	0.000	0.40		7.390	131.973	182.9	OK
85.009	SC81	30 minute 1 year Winter I+0%	42.120	41.036	-0.334	0.000	0.45		18.612	238.712	217.1	OK
85.010	SC82	30 minute 1 year Winter I+0%	42.609	40.942	-0.281	0.000	0.50		17.800	297.165	247.9	OK
85.011	SC83	30 minute 1 year Winter I+0%	42.400	40.861	-0.184	0.000	0.55		26.888	301.001	238.4	OK
84.003	P2_32	30 minute 1 year Winter I+0%	42.065	40.815	-0.163	0.000	0.99		20.191	360.842	260.6	OK
84.004	P2_33	30 minute 1 year Winter I+0%	41.991	40.754	-0.196	0.000	0.59		5.209	380.926	265.7	OK
84.005	P2_34	30 minute 1 year Winter I+0%	42.255	40.684	-0.168	0.000	1.10		17.380	380.440	264.7	OK
84.006	P1 Slab	30 minute 1 year Winter I+0%	42.398	40.481	-0.349	0.000	0.69		3.219	380.092	264.6	OK
86.000	C88	15 minute 1 year Winter I+0%	44.193	42.895	-0.448	0.000	0.00		0.000	0.060	0.1	OK
86.001	C89	15 minute 1 year Winter I+0%	44.062	42.818	-0.394	0.000	0.03		0.357	2.640	4.4	OK
86.002	C90	15 minute 1 year Winter I+0%	43.963	42.723	-0.372	0.000	0.06		0.510	5.701	8.7	OK
86.003	C91	15 minute 1 year Winter I+0%	43.801	42.583	-0.350	0.000	0.11		0.672	10.082	14.3	OK
86.004	C92	15 minute 1 year Winter I+0%	43.639	42.434	-0.337	0.000	0.13		0.899	14.463	18.5	OK
86.005	C93	15 minute 1 year Winter I+0%	43.417	42.226	-0.323	0.000	0.17		1.256	20.465	23.0	OK
86.006	C94	30 minute 1 year Winter I+0%	43.195	42.016	-0.311	0.000	0.20		1.557	34.367	27.8	OK
86.007	C95	30 minute 1 year Winter I+0%	43.004	41.832	-0.304	0.000	0.23		1.728	41.058	30.9	OK
86.008	C96	30 minute 1 year Winter I+0%	42.813	41.647	-0.298	0.000	0.24		1.859	47.662	33.3	OK
86.009	C97	30 minute 1 year Winter I+0%	42.622	41.449	-0.305	0.000	0.23		1.700	54.126	35.7	OK
87.000	C87	15 minute 1 year Summer I+0%	42.450	41.600	-0.150	0.000	0.00		0.000	0.000	0.0	OK
88.000	P2_1	15 minute 1 year Winter I+0%	44.315	42.996	-0.119	0.000	0.09		0.029	0.690	1.5	OK
88.001	P2_2	15 minute 1 year Winter I+0%	44.251	42.953	-0.098	0.000	0.26		0.068	2.134	4.1	OK
88.002	P2_3	15 minute 1 year Winter I+0%	44.154	42.869	-0.085	0.000	0.38		0.096	3.046	5.7	OK
88.003	P2_4	15 minute 1 year Winter I+0%	44.141	42.816	-0.071	0.000	0.54		0.115	5.930	10.9	OK
89.000	P2_5	15 minute 1 year Winter I+0%	56.568	55.278	-0.090	0.000	0.33		0.062	14.906	31.9	OK
88.004	P2_6	15 minute 1 year Winter I+0%	43.748	42.347	-0.096	0.000	0.78		0.233	26.501	52.2	OK
88.005	P2_7	15 minute 1 year Winter I+0%	43.614	42.242	-0.129	0.000	0.61		0.472	29.000	57.2	OK
88.006	P2_8	15 minute 1 year Winter I+0%	43.453	42.030	-0.190	0.000	0.60		0.567	55.163	100.1	OK
88.007	P2_11	15 minute 1 year Winter I+0%	43.304	41.754	-0.264	0.000	0.56		2.130	62.390	109.9	OK
88.008	P2_12	15 minute 1 year Winter I+0%	43.208	41.731	-0.265	0.000	0.48		1.359	91.228	153.4	OK
88.009	P_13	15 minute 1 year Winter I+0%	43.102	41.645	-0.208	0.000	0.73		8.011	126.429	203.8	OK
88.010	P2_14	15 minute 1 year Winter I+0%	42.969	41.409	-0.304	0.000	0.49		7.641	159.195	236.6	OK
88.011	P2_15	15 minute 1 year Winter I+0%	42.830	41.317	-0.256	0.000	0.59		18.272	214.496	286.5	OK

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1 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Catchment C

PN	US/MH Name	Event	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Maximum Vol (m³)	Discharge Vol (m³)	Pipe Flow (l/s)	Status
88.012	P2_16	15 minute 1 year Winter I+0%	42.683	41.216	-0.212	0.000	0.99		21.129	216.685	283.0	OK
88.013	P2_17	15 minute 1 year Winter I+0%	42.781	41.054	-0.359	0.000	0.44		2.898	228.275	285.8	OK
88.014	P2_18	30 minute 1 year Winter I+0%	42.724	41.018	-0.339	0.000	0.62		10.494	302.046	275.3	OK
88.015	P2_19	30 minute 1 year Winter I+0%	42.835	40.978	-0.347	0.000	0.67		6.356	304.579	275.1	OK
88.016	P2_20	30 minute 1 year Winter I+0%	43.007	40.937	-0.361	0.000	0.44		5.536	314.905	277.0	OK
88.017	P2_21	30 minute 1 year Winter I+0%	42.959	40.901	-0.347	0.000	0.64		9.349	319.525	277.5	OK
88.018	P2_22	30 minute 1 year Winter I+0%	43.070	40.858	-0.359	0.000	0.71		6.023	320.428	277.7	OK
88.019	P2_23	30 minute 1 year Winter I+0%	43.218	40.797	-0.396	0.000	0.39		4.510	330.789	278.2	OK
88.020	P2_24	30 minute 1 year Winter I+0%	43.168	40.736	-0.368	0.000	0.65		14.853	331.216	276.6	OK
88.021	P2_25	30 minute 1 year Winter I+0%	43.164	40.607	-0.467	0.000	0.39		4.274	340.132	276.3	OK
88.022	P2_25A	30 minute 1 year Winter I+0%	43.078	40.508	-0.474	0.000	0.36		10.809	344.429	271.3	OK
88.023	P2_26	30 minute 1 year Winter I+0%	42.941	40.390	-0.457	0.000	0.35		16.574	345.356	264.0	OK
88.024	P2_26A	30 minute 1 year Winter I+0%	42.801	40.290	-0.419	0.000	0.61		19.115	346.247	262.9	OK
88.025	P2_27	30 minute 1 year Winter I+0%	42.787	40.207	-0.487	0.000	0.35		2.550	348.781	260.7	OK
88.026	P2_28	30 minute 1 year Winter I+0%	42.657	40.090	-0.472	0.000	0.30		15.188	351.025	252.3	OK
88.027	P2_28A	30 minute 1 year Winter I+0%	42.181	40.014	-0.402	0.000	0.42		16.577	348.268	248.0	OK
88.028	246	30 minute 1 year Winter I+0%	42.490	39.976	-0.394	0.000	0.61		7.500	346.322	247.3	OK
86.010	C98	30 minute 1 year Winter I+0%	42.480	39.856	-0.486	0.000	0.44		3.791	405.228	270.4	OK
84.007	C65	30 minute 1 year Winter I+0%	42.458	39.325	-0.975	0.000	0.08		0.994	818.719	467.3	OK
84.008	C66	30 minute 1 year Winter I+0%	38.800	37.310	-0.840	0.000	0.20		3.067	817.648	467.5	OK
90.000	P16 - Dummy	15 minute 1 year Summer I+0%	54.000	51.000	-0.225	0.000	0.00		0.000	0.000	0.0	OK
90.001	P16 - Tank	960 minute 1 year Winter I+0%	51.200	48.339	0.114	0.000	0.14		721.865	950.290	12.5	SURCHARGED
90.002	P16 - Basin	2160 minute 1 year Winter I+0%	40.000	38.243	0.318	0.000	0.26		400.081	1551.890	10.2	SURCHARGED
9.032	BASIN C3	360 minute 1 year Winter I+0%	38.500	36.487	0.157	0.000	0.41		1283.497	4002.764	119.4	SURCHARGED
9.033	C68	360 minute 1 year Winter I+0%	36.717	35.398	-0.220	0.000	0.52		1.219	3999.887	119.4	OK
9.034	C69	360 minute 1 year Winter I+0%	36.300	35.112	-0.281	0.000	0.30		0.866	3997.219	119.4	OK
9.035	C70	360 minute 1 year Winter I+0%	34.865	33.973	-0.292	0.000	0.27		0.471	3996.141	119.4	OK
9.036	C71	360 minute 1 year Winter I+0%	33.672	32.908	-0.164	0.000	0.73		1.062	3992.161	119.4	OK

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30 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Catchment C

Simulation Criteria

Areal Reduction Factor 1.000 Hot Start Level (mm) 0 Foul Sewage per hectare (l/s) 0.000 MADD Factor * 10m³/ha Storage 0.000 Flow per Person per Day (l/per/day) 0.000
Hot Start (mins) 0 Manhole Headloss Coeff (Global) 0.500 Additional Flow - % of Total Flow 0.000 Inlet Coeffiecient 0.800

Number of Input Hydrographs 0 Number of Online Controls 18 Number of Offline Controls 12 Number of Storage Structures 10 Number of Time/Area Diagrams 0 Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall Model FSR Region England and Wales M5-60 (mm) 18.500 Ratio R 0.400 Cv (Summer) 0.750 Cv (Winter) 0.840

Margin for Flood Risk Warning (mm) 400.0 Analysis Timestep Fine DTS Status OFF DVD Status ON Inertia Status ON

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 240, 360, 480, 600, 960, 1440, 2160
Return Period(s) (years)	1, 30, 100
Climate Change (%)	0, 0, 20

PN	US/MH Name	Event	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Maximum Vol (m³)	Discharge Vol (m³)	Pipe Flow (l/s)	Status
9.000	OB9	15 minute 30 year Summer I+0%	68.920	68.018	-0.452	0.000	0.33		2.068	97.778	375.7	OK
9.001	S39	15 minute 30 year Summer I+0%	69.855	67.847	-0.503	0.000	0.24		74.833	81.108	84.2	OK
10.000	OB10	15 minute 30 year Summer I+0%	69.855	69.030	0.000	0.000	1.01		0.654	35.441	79.0	OK
9.002	S40 (BD)	15 minute 30 year Summer I+0%	69.855	67.816	-0.504	0.000	0.23		1.234	116.317	128.6	OK
9.003	S41	15 minute 30 year Winter I+0%	68.855	67.677	-0.538	0.000	0.17		2.130	118.265	121.7	OK
9.004	Tank 6 - Full Retention	15 minute 30 year Winter I+0%	70.000	67.531	-0.404	0.000	0.30		6.570	117.913	134.8	OK
9.005	S42	15 minute 30 year Winter I+0%	70.000	67.506	-0.374	0.000	0.19		4.027	117.675	144.8	OK
11.000	4A	15 minute 30 year Summer I+0%	80.350	79.475	-0.175	0.000	0.37		0.136	63.716	205.5	OK
11.001	4B	15 minute 30 year Summer I+0%	75.350	74.762	0.112	0.000	0.25	63.8	0.474	56.015	141.8	SURCHARGED
11.002	SDP004	15 minute 30 year Winter I+0%	70.350	68.307	0.107	0.000	0.89		0.454	66.127	141.0	SURCHARGED
11.003	S43 (V)	15 minute 30 year Winter I+0%	69.270	67.948	-0.027	0.000	0.58		1.650	66.122	137.8	OK
12.000	3A	15 minute 30 year Summer I+0%	80.350	79.475	-0.175	0.000	0.37		0.136	63.716	205.5	OK
12.001	3B	15 minute 30 year Summer I+0%	75.350	74.762	0.112	0.000	0.25	63.8	0.474	56.015	141.8	SURCHARGED
12.002	SDP003	15 minute 30 year Winter I+0%	70.350	68.176	-0.099	0.000	0.89		0.479	66.127	141.9	OK
11.004	S44 (V)	15 minute 30 year Winter I+0%	68.952	67.854	-0.086	0.000	0.84		7.086	132.243	272.5	OK
13.000	2A	15 minute 30 year Summer I+0%	80.350	79.475	-0.175	0.000	0.37		0.136	63.716	205.5	OK
13.001	2B	15 minute 30 year Summer I+0%	75.350	74.731	0.081	0.000	0.25	63.7	0.438	56.004	141.8	SURCHARGED
13.002	SDP002	15 minute 30 year Winter I+0%	70.350	68.333	0.058	0.000	1.50		0.756	66.115	141.9	SURCHARGED
11.005	S45 (V)	15 minute 30 year Winter I+0%	68.952	67.777	-0.283	0.000	0.58		8.507	198.360	411.4	OK
14.000	1A	15 minute 30 year Summer I+0%	80.350	79.475	-0.175	0.000	0.37		0.136	63.716	205.5	OK
14.001	1B	15 minute 30 year Summer I+0%	75.350	74.762	0.112	0.000	0.25	63.8	0.474	56.015	141.8	SURCHARGED
14.002	SDP001	30 minute 30 year Summer I+0%	70.350	68.333	0.058	0.000	1.50		0.756	81.705	141.9	SURCHARGED
11.006	S46 (V)	15 minute 30 year Winter I+0%	69.315	67.715	-0.235	0.000	0.86		11.787	264.482	543.5	OK
11.007	S47 (V)	15 minute 30 year Winter I+0%	69.315	67.549	-0.311	0.000	0.69		10.111	264.482	531.3	OK
9.006	S48	15 minute 30 year Winter I+0%	70.000	67.453	-0.267	0.000	0.72		21.876	381.721	545.9	OK
9.007	S49	15 minute 30 year Winter I+0%	70.000	67.328	-0.222	0.000	0.69		18.799	381.290	522.0	OK
15.000	OB14	15 minute 30 year Winter I+0%	68.890	68.386	0.321	0.000	0.38		1.220	29.111	54.3	SURCHARGED
16.000	OB13	15 minute 30 year Winter I+0%	68.890	68.372	0.277	0.000	0.76		1.143	29.844	56.7	SURCHARGED
16.001	S50a	15 minute 30 year Winter I+0%	69.120	68.358	0.283	0.000	0.46		1.647	29.848	52.2	SURCHARGED
15.001	S50	15 minute 30 year Winter I+0%	69.235	68.261	0.332	0.000	0.92		5.700	58.961	102.3	SURCHARGED
17.000	OB11	15 minute 30 year Winter I+0%	68.890	68.289	0.269	0.000	0.92		0.638	42.636	86.1	SURCHARGED

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30 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Catchment C

PN	US/MH Name	Event	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Maximum Vol (m³)	Discharge Vol (m³)	Pipe Flow (l/s)	Status
15.002	S51	15 minute 30 year Winter I+0%	69.235	68.159	0.360	0.000	1.75		5.119	101.586	176.8	SURCHARGED
18.000	OB12	15 minute 30 year Winter I+0%	68.890	68.095	0.000	0.000	1.00		0.653	43.811	91.0	OK
18.001	S52	15 minute 30 year Winter I+0%	69.235	67.967	-0.098	0.000	0.90		0.804	43.812	90.7	OK
15.003	S53	15 minute 30 year Winter I+0%	69.235	67.886	0.033	0.000	0.79		5.994	145.386	253.4	SURCHARGED
15.004	Tank 7 - Full Retention	15 minute 30 year Winter I+0%	70.000	67.754	0.076	0.000	1.47		5.619	145.386	251.0	SURCHARGED
9.008	S54	15 minute 30 year Winter I+0%	70.000	67.223	-0.231	0.000	0.91		21.984	526.325	755.7	OK
9.009	S55	15 minute 30 year Winter I+0%	70.000	67.088	-0.271	0.000	0.70		12.643	526.043	737.0	OK
19.000	KD17	15 minute 30 year Winter I+0%	69.440	68.289	-0.101	0.000	0.23		0.049	6.764	14.5	OK
9.010	S56	15 minute 30 year Winter I+0%	70.000	67.012	-0.127	0.000	1.00		18.967	532.538	722.7	OK
9.011	S57	15 minute 30 year Winter I+0%	70.000	66.946	-0.138	0.000	0.95		9.754	532.315	717.1	OK
20.000	10A	15 minute 30 year Summer I+0%	80.350	79.455	-0.195	0.000	0.27		0.113	46.248	149.2	OK
20.001	10B	15 minute 30 year Summer I+0%	75.350	74.743	0.093	0.000	0.19	45.4	0.452	40.846	103.8	SURCHARGED
20.002	SDP010	15 minute 30 year Summer I+0%	70.350	68.320	0.045	0.000	1.24		0.734	40.846	103.7	SURCHARGED
20.003	S59 (V)	15 minute 30 year Winter I+0%	70.150	68.278	0.028	0.000	1.16		1.163	48.229	103.9	SURCHARGED
21.000	S58 (V)	15 minute 30 year Summer I+0%	70.150	68.098	-0.077	0.000	0.90		0.247	5.404	45.2	OK
9.012	S60	15 minute 30 year Winter I+0%	70.000	66.889	-0.131	0.000	0.72		11.393	583.572	727.8	OK
22.000	KD18	15 minute 30 year Winter I+0%	69.925	68.821	-0.129	0.000	0.37		0.103	4.558	9.6	OK
22.001	KD19	15 minute 30 year Winter I+0%	69.440	68.555	0.015	0.000	0.77		0.351	18.965	41.5	SURCHARGED
22.002	KD20	15 minute 30 year Winter I+0%	69.095	68.479	-0.081	0.000	0.94		1.512	39.989	87.4	OK
22.003	KD21	15 minute 30 year Winter I+0%	69.095	68.254	-0.091	0.000	0.97		0.937	66.599	146.2	OK
23.000	KD22	15 minute 30 year Winter I+0%	68.750	68.123	0.198	0.000	0.81		1.003	32.785	68.8	SURCHARGED
22.004	S61	15 minute 30 year Winter I+0%	68.800	68.049	0.059	0.000	1.40		1.663	99.390	215.6	SURCHARGED
24.000	KD23	15 minute 30 year Summer I+0%	68.170	67.654	0.309	0.000	1.14		1.201	39.642	89.8	SURCHARGED
22.005	S62	15 minute 30 year Winter I+0%	68.800	67.607	0.137	0.000	1.25		2.442	143.789	309.6	SURCHARGED
22.006	Tank 8 - Bypass	15 minute 30 year Winter I+0%	68.800	67.440	0.000	0.000	1.46		1.418	143.789	308.7	OK
9.013	S63	30 minute 30 year Winter I+0%	68.900	66.740	0.005	0.000	1.14		50.787	947.397	829.9	SURCHARGED
25.000	KD24	15 minute 30 year Winter I+0%	68.385	67.267	-0.143	0.000	0.29		0.087	3.675	7.8	OK
9.014	S64	30 minute 30 year Winter I+0%	68.425	66.397	-0.283	0.000	0.81		7.364	961.207	830.7	OK
9.015	Ex SC15	30 minute 30 year Winter I+0%	70.000	65.956	-0.516	0.000	0.38		2.683	960.987	833.2	OK
26.000	C16a	15 minute 30 year Winter I+0%	68.110	66.825	-0.085	0.000	0.83		0.237	42.346	88.3	OK
27.000	1	15 minute 30 year Winter I+0%	71.600	71.615	1.315	15.520	1.43		17.268	112.668	150.9	FLOOD
27.001	2	15 minute 30 year Winter I+0%	71.180	71.039	1.334	0.000	1.59		7.126	142.901	174.6	FLOOD RISK
27.002	3	15 minute 30 year Winter I+0%	71.410	70.327	0.919	0.000	1.58		12.090	204.131	271.9	SURCHARGED
27.003	4	15 minute 30 year Winter I+0%	71.410	69.699	0.513	0.000	1.40		12.054	233.368	300.2	SURCHARGED
27.004	5	15 minute 30 year Winter I+0%	71.490	68.664	-0.104	0.000	0.93		4.585	266.366	332.7	OK
27.005	6	15 minute 30 year Winter I+0%	70.600	67.576	-0.157	0.000	0.74		1.463	266.284	330.3	OK
27.006	7	15 minute 30 year Winter I+0%	69.530	67.098	0.165	0.000	1.22		3.414	332.189	402.5	SURCHARGED
27.007	8	15 minute 30 year Winter I+0%	69.030	66.339	-0.251	0.000	0.63		0.814	332.123	401.1	OK
26.001	C16	15 minute 30 year Winter I+0%	68.690	65.991	-0.199	0.000	0.78		2.873	374.308	485.9	OK
9.016	C17	30 minute 30 year Winter I+0%	69.130	65.592	0.065	0.000	0.56		28.504	1511.449	1228.1	SURCHARGED
9.017	C18	30 minute 30 year Winter I+0%	69.612	65.253	0.672	0.000	0.56		33.122	1511.136	1158.2	SURCHARGED
28.000	OB1	15 minute 30 year Summer I+0%	68.920	67.963	-0.432	0.000	0.36		2.212	119.706	416.3	OK
28.001	S1	15 minute 30 year Winter I+0%	69.855	67.789	-0.486	0.000	0.23		93.369	101.676	105.3	OK
29.000	OB2	15 minute 30 year Winter I+0%	69.795	68.670	0.000	0.000	1.11		0.654	39.400	84.6	OK
28.002	S2 (BD)	15 minute 30 year Winter I+0%	69.855	67.765	-0.465	0.000	0.23		1.800	140.617	128.9	OK
30.000	OB3	15 minute 30 year Winter I+0%	69.340	68.125	-0.165	0.000	0.59		0.363	27.934	58.8	OK
28.003	S3	15 minute 30 year Winter I+0%	69.855	67.681	-0.384	0.000	0.28		9.545	168.141	166.8	OK
28.004	Tank 1 -Full Retention	15 minute 30 year Winter I+0%	70.000	67.657	-0.263	0.000	0.41		6.337	167.809	171.8	OK
28.005	S4	15 minute 30 year Winter I+0%	70.000	67.642	-0.239	0.000	0.30		4.147	167.466	176.7	OK

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30 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Catchment C

PN	US/MH Name	Event	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Maximum Vol (m³)	Discharge Vol (m³)	Pipe Flow (l/s)	Status
31.000	5A	15 minute 30 year Summer I+0%	80.350	79.475	-0.175	0.000	0.36		0.136	63.322	204.3	OK
31.001	5B	15 minute 30 year Summer I+0%	75.350	74.760	0.110	0.000	0.25	62.5	0.472	55.781	141.8	SURCHARGED
31.002	SDP005	15 minute 30 year Winter I+0%	70.350	68.669	0.319	0.000	0.96		1.351	65.879	140.8	SURCHARGED
31.003	S5 (V)	15 minute 30 year Winter I+0%	68.952	68.621	0.251	0.000	0.57		3.653	65.882	134.4	FLOOD RISK
32.000	6A	15 minute 30 year Summer I+0%	80.350	79.475	-0.175	0.000	0.36		0.136	63.322	204.3	OK
32.001	6B	15 minute 30 year Summer I+0%	75.350	74.760	0.110	0.000	0.25	62.5	0.472	55.781	141.8	SURCHARGED
32.002	SDP006	15 minute 30 year Winter I+0%	70.350	68.715	0.440	0.000	0.89		1.432	65.880	138.8	SURCHARGED
31.004	S6 (V)	15 minute 30 year Winter I+0%	68.952	68.579	0.239	0.000	0.83		9.580	131.786	268.5	FLOOD RISK
33.000	7A	15 minute 30 year Summer I+0%	80.350	79.475	-0.175	0.000	0.36		0.136	63.322	204.3	OK
33.001	7B	15 minute 30 year Summer I+0%	75.350	74.760	0.110	0.000	0.25	62.5	0.472	55.781	141.8	SURCHARGED
33.002	SDP007	15 minute 30 year Winter I+0%	70.350	68.630	0.355	0.000	1.48		1.282	65.868	139.8	SURCHARGED
31.005	S7 (V)	15 minute 30 year Winter I+0%	68.952	68.503	0.268	0.000	1.20		11.627	197.722	399.4	SURCHARGED
34.000	8A	15 minute 30 year Summer I+0%	80.350	79.475	-0.175	0.000	0.36		0.136	63.322	204.3	OK
34.001	8B	15 minute 30 year Summer I+0%	75.350	74.760	0.110	0.000	0.25	62.5	0.472	55.781	141.8	SURCHARGED
34.002	SDP008	15 minute 30 year Winter I+0%	70.350	68.453	0.178	0.000	1.50		0.968	65.881	141.6	SURCHARGED
31.006	S8 (V)	15 minute 30 year Winter I+0%	68.952	68.325	0.210	0.000	1.43		12.683	263.600	507.0	SURCHARGED
28.006	S9 (V)	15 minute 30 year Winter I+0%	69.850	67.584	-0.316	0.000	0.74		17.213	430.675	581.6	OK
35.000	9A	15 minute 30 year Summer I+0%	80.350	79.436	-0.289	0.000	0.12		0.143	32.718	105.5	OK
35.001	9B	15 minute 30 year Summer I+0%	75.350	74.732	0.007	0.000	0.08	31.6	0.681	29.197	73.9	SURCHARGED
35.002	SDP009	15 minute 30 year Winter I+0%	70.350	68.195	-0.080	0.000	0.97		0.513	34.424	74.0	OK
35.003	S10 (V)	15 minute 30 year Winter I+0%	70.130	68.125	-0.135	0.000	0.74		0.626	34.425	74.0	OK
28.007	S11	15 minute 30 year Winter I+0%	70.092	67.505	-0.325	0.000	0.68		8.206	464.707	614.5	OK
28.008	S12	15 minute 30 year Winter I+0%	70.130	67.399	-0.291	0.000	0.63		17.096	464.203	588.4	OK
28.009	S13	15 minute 30 year Winter I+0%	70.130	67.296	-0.223	0.000	0.69		23.600	463.734	586.6	OK
36.000	OB4	15 minute 30 year Summer I+0%	69.905	68.855	0.000	0.000	0.92		0.786	41.981	111.7	OK
36.001	S14	15 minute 30 year Winter I+0%	70.025	68.825	-0.005	0.000	0.51		1.566	45.283	89.6	OK
37.000	OB5	15 minute 30 year Winter I+0%	69.955	69.468	0.488	0.000	1.70		0.801	22.641	45.0	SURCHARGED
37.001	S15	15 minute 30 year Winter I+0%	70.025	69.205	0.315	0.000	1.67		1.737	22.639	45.1	SURCHARGED
38.000	OB6	15 minute 30 year Winter I+0%	69.905	69.056	-0.099	0.000	0.84		0.612	47.486	101.3	OK
37.002	S16	15 minute 30 year Winter I+0%	70.025	69.036	-0.017	0.000	1.00		2.098	70.125	137.5	OK
36.002	S17	15 minute 30 year Winter I+0%	70.025	68.711	0.161	0.000	1.27		13.787	115.408	214.0	SURCHARGED
36.003	Tank 2 - Full Retention	15 minute 30 year Winter I+0%	70.015	68.562	0.102	0.000	1.76		2.951	115.408	214.9	SURCHARGED
28.010	S18 (BD)	15 minute 30 year Winter I+0%	70.130	67.236	-0.179	0.000	0.90		16.644	578.731	752.2	OK
39.000	KD1	15 minute 30 year Winter I+0%	70.240	68.828	-0.137	0.000	0.32		0.094	3.822	8.2	OK
39.001	S19	15 minute 30 year Winter I+0%	70.000	68.787	-0.143	0.000	0.25		0.168	3.822	7.3	OK
40.000	OB7	15 minute 30 year Winter I+0%	70.035	69.184	-0.101	0.000	0.94		0.607	59.394	126.7	OK
39.002	S20	15 minute 30 year Winter I+0%	70.158	68.701	-0.189	0.000	0.57		2.137	63.217	126.8	OK
41.000	OB8	15 minute 30 year Summer I+0%	70.035	69.234	0.024	0.000	1.01		0.696	40.036	88.5	SURCHARGED
41.001	S21	15 minute 30 year Winter I+0%	70.158	69.095	-0.080	0.000	0.96		1.143	44.841	96.4	OK
39.003	S22	15 minute 30 year Winter I+0%	70.158	68.604	0.119	0.000	1.21		10.208	108.058	203.9	SURCHARGED
39.004	TANK 3 - Full Retention	15 minute 30 year Winter I+0%	70.092	68.469	0.049	0.000	1.35		1.450	108.052	206.1	SURCHARGED
28.011	S23	15 minute 30 year Winter I+0%	70.130	67.156	-0.314	0.000	0.83		15.462	686.445	909.8	OK
28.012	S24	15 minute 30 year Winter I+0%	70.130	66.932	-0.468	0.000	0.56		9.222	685.962	889.7	OK
42.000	KD2	15 minute 30 year Winter I+0%	68.625	67.578	-0.147	0.000	0.51		0.168	11.026	23.6	OK
28.013	S25 (BD)	15 minute 30 year Winter I+0%	68.860	66.760	-0.330	0.000	0.80		38.029	696.569	877.9	OK
43.000	11A	15 minute 30 year Summer I+0%	80.350	79.455	-0.195	0.000	0.27		0.113	46.248	149.2	OK
43.001	11B	15 minute 30 year Summer I+0%	75.350	74.743	0.093	0.000	0.19	45.4	0.452	40.846	103.8	SURCHARGED
43.002	SDP011	15 minute 30 year Summer I+0%	70.350	68.332	0.057	0.000	1.26		0.755	40.846	104.1	SURCHARGED
43.003	S26 (V)	15 minute 30 year Summer I+0%	70.075	68.278	0.013	0.000	1.04		0.847	40.839	102.1	SURCHARGED

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30 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Catchment C

PN	US/MH Name	Event	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Maximum Vol (m³)	Discharge Vol (m³)	Pipe Flow (l/s)	Status
44.000	S27 (V)	15 minute 30 year Summer I+0%	70.075	68.484	0.219	0.000	0.37		1.040	5.402	38.1	SURCHARGED
43.004	S28	15 minute 30 year Summer I+0%	70.325	68.183	-0.097	0.000	0.97		3.177	46.243	143.8	OK
28.014	S29	15 minute 30 year Winter I+0%	68.700	66.642	-0.378	0.000	0.73		11.510	747.991	905.3	OK
45.000	KD3	15 minute 30 year Winter I+0%	67.915	66.830	-0.185	0.000	0.31		0.125	6.322	13.5	OK
28.015	S30	15 minute 30 year Winter I+0%	68.300	66.474	-0.436	0.000	0.64		14.989	761.345	900.0	OK
46.000	KD4	15 minute 30 year Winter I+0%	67.940	67.512	0.472	0.000	0.41		0.867	10.879	23.6	SURCHARGED
46.001	KD9	15 minute 30 year Summer I+0%	67.970	67.444	0.414	0.000	1.06		0.809	23.234	53.2	SURCHARGED
47.000	KD5	15 minute 30 year Winter I+0%	69.785	68.857	-0.178	0.000	0.66		0.472	46.900	99.5	OK
47.001	KD6	15 minute 30 year Winter I+0%	69.440	68.585	-0.105	0.000	0.91		0.703	64.541	137.1	OK
47.002	KD7	15 minute 30 year Winter I+0%	69.095	68.398	-0.232	0.000	0.46		1.219	82.183	175.2	OK
47.003	KD8	15 minute 30 year Winter I+0%	68.515	67.715	-0.200	0.000	0.75		0.698	100.119	213.6	OK
46.002	S31	15 minute 30 year Summer I+0%	68.050	67.365	0.050	0.000	0.77		1.451	112.624	265.9	SURCHARGED
46.003	Tank 4 - By Pass	30 minute 30 year Summer I+0%	68.050	67.240	0.000	0.000	1.04		2.629	146.760	225.2	OK
46.004	S32	15 minute 30 year Winter I+0%	68.050	67.102	-0.123	0.000	0.99		1.506	126.141	272.9	OK
28.016	S33	30 minute 30 year Winter I+0%	68.208	66.355	-0.375	0.000	0.74		15.182	1154.951	959.2	OK
28.017	S34	30 minute 30 year Winter I+0%	68.650	66.216	-0.374	0.000	0.74		21.626	1153.578	952.7	OK
48.000	KD10	15 minute 30 year Winter I+0%	68.375	67.697	0.297	0.000	0.62		0.585	7.792	16.5	SURCHARGED
48.001	S35	15 minute 30 year Winter I+0%	68.455	67.687	0.297	0.000	0.37		0.664	7.792	16.9	SURCHARGED
49.000	KD11	15 minute 30 year Winter I+0%	69.785	68.898	0.013	0.000	0.79		0.349	21.462	44.5	SURCHARGED
49.001	KD12	15 minute 30 year Winter I+0%	69.440	68.814	-0.086	0.000	0.93		1.480	42.045	89.5	OK
49.002	KD13	15 minute 30 year Winter I+0%	69.095	68.235	-0.110	0.000	0.89		0.591	62.628	133.6	OK
49.003	KD14	15 minute 30 year Winter I+0%	68.750	67.921	-0.154	0.000	0.82		0.815	83.210	178.1	OK
50.000	KD15	15 minute 30 year Winter I+0%	68.375	67.785	0.385	0.000	0.89		0.684	20.436	43.6	SURCHARGED
48.002	S36	15 minute 30 year Winter I+0%	68.455	67.665	0.085	0.000	0.97		1.885	111.438	240.1	SURCHARGED
48.003	Tank 5 - Bypass	15 minute 30 year Winter I+0%	68.455	67.552	0.042	0.000	1.50		1.788	111.438	241.9	SURCHARGED
48.004	S37	15 minute 30 year Winter I+0%	68.455	67.505	0.010	0.000	1.53		1.635	111.430	242.2	SURCHARGED
28.018	S38 (P)	30 minute 30 year Winter I+0%	68.625	66.007	-0.382	0.000	0.73		36.635	1297.669	1024.1	OK
28.019	Ex SC41	30 minute 30 year Winter I+0%	70.000	65.346	-0.554	0.000	0.32		3.020	1297.409	1024.7	OK
9.018	C44	30 minute 30 year Winter I+0%	69.398	64.963	1.216	0.000	1.04		59.200	2891.617	2101.6	SURCHARGED
51.000	C19	15 minute 30 year Winter I+0%	83.721	82.732	-0.089	0.000	0.35		0.064	6.243	13.4	OK
51.001	C20	15 minute 30 year Winter I+0%	82.256	81.279	-0.077	0.000	0.47		0.084	10.091	22.0	OK
51.002	C21	15 minute 30 year Winter I+0%	80.753	79.791	-0.062	0.000	0.64		0.099	13.908	30.6	OK
51.003	C22	15 minute 30 year Winter I+0%	79.479	78.731	0.152	0.000	0.98		0.379	20.772	43.8	SURCHARGED
51.004	C23	15 minute 30 year Winter I+0%	79.479	76.679	0.229	0.000	1.22		0.583	29.886	62.5	SURCHARGED
51.005	C24	15 minute 30 year Winter I+0%	77.829	76.065	0.027	0.000	0.97		0.765	40.920	82.6	SURCHARGED
52.000	OB1	15 minute 30 year Summer I+0%	76.990	75.885	-0.119	0.000	0.10		0.030	0.525	1.4	OK
52.001	PPIC1	15 minute 30 year Summer I+0%	77.050	75.832	-0.122	0.000	0.08		0.028	0.525	1.3	OK
52.002	PPIC2	15 minute 30 year Summer I+0%	77.020	75.675	-0.119	0.000	0.10		0.043	0.525	1.3	OK
53.000	BI RWP	15 minute 30 year Summer I+0%	77.000	75.682	-0.112	0.000	0.14		0.037	0.788	2.0	OK
52.003	Ex. SC25	15 minute 30 year Winter I+0%	76.921	75.582	-0.162	0.000	0.18		0.067	6.469	14.7	OK
52.004	Ex. SC26	15 minute 30 year Winter I+0%	76.304	75.200	0.046	0.000	0.36		0.565	14.555	30.4	SURCHARGED
54.000	New gully	15 minute 30 year Winter I+0%	75.580	75.316	-0.044	0.000	0.85		0.115	4.999	11.5	FLOOD RISK
54.001	Separator	15 minute 30 year Winter I+0%	76.300	75.161	0.026	0.000	0.94		0.249	4.999	11.2	SURCHARGED
55.000	OB2	15 minute 30 year Winter I+0%	76.140	75.150	-0.105	0.000	0.16		0.045	1.176	2.7	OK
56.000	MS RWP	15 minute 30 year Winter I+0%	76.625	75.144	-0.011	0.000	0.26		0.152	1.764	3.9	OK
54.002	PS3	15 minute 30 year Winter I+0%	76.550	75.139	0.044	0.000	0.46		0.623	7.944	16.9	SURCHARGED
57.000	OB3	15 minute 30 year Winter I+0%	76.575	75.126	0.031	0.000	0.24		0.199	1.911	3.9	SURCHARGED
52.005	PS4	15 minute 30 year Winter I+0%	76.575	75.117	0.137	0.000	0.84		2.922	26.175	51.7	SURCHARGED
51.006	C27	15 minute 30 year Winter I+0%	76.336	75.035	0.115	0.000	1.05		1.116	88.405	163.8	SURCHARGED

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30 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Catchment C

PN	US/MH Name	Event	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Maximum Vol (m³)	Discharge Vol (m³)	Pipe Flow (l/s)	Status
51.007	C28	15 minute 30 year Winter I+0%	74.920	73.736	-0.064	0.000	0.95		0.537	104.008	194.6	OK
58.000	C29	15 minute 30 year Winter I+0%	75.557	75.051	0.819	0.000	1.03		1.090	18.525	33.7	SURCHARGED
58.001	C30	15 minute 30 year Winter I+0%	74.373	73.909	0.736	0.000	1.31		1.367	25.960	45.4	SURCHARGED
58.002	C31	15 minute 30 year Winter I+0%	73.349	72.060	-0.080	0.000	0.72		0.167	32.868	58.2	OK
58.003	C32	15 minute 30 year Winter I+0%	72.668	71.617	0.242	0.000	0.59		1.564	35.959	64.7	SURCHARGED
51.008	C33	15 minute 30 year Winter I+0%	72.929	71.543	0.251	0.000	0.93		3.760	177.688	314.7	SURCHARGED
51.009	C34	15 minute 30 year Winter I+0%	69.716	69.216	0.700	0.000	1.05		5.005	216.918	368.2	SURCHARGED
51.010	C35	15 minute 30 year Winter I+0%	66.836	66.219	0.583	0.000	1.06		4.291	232.727	380.8	SURCHARGED
51.011	C36	15 minute 30 year Winter I+0%	66.255	65.620	0.565	0.000	1.15		7.544	251.348	389.8	SURCHARGED
51.012	C37	15 minute 30 year Winter I+0%	66.211	65.450	0.531	0.000	1.19		13.051	268.307	404.7	SURCHARGED
51.013	C38	15 minute 30 year Winter I+0%	66.775	65.257	0.473	0.000	1.18		12.835	303.519	431.6	SURCHARGED
51.014	C39	15 minute 30 year Winter I+0%	68.127	64.814	0.330	0.000	1.41		26.657	381.025	515.3	SURCHARGED
51.015	C40	30 minute 30 year Winter I+0%	69.594	64.400	0.216	0.000	0.58		26.149	496.572	464.7	SURCHARGED
9.019	C46	30 minute 30 year Winter I+0%	69.215	64.116	1.174	0.000	1.09		47.765	3410.650	2483.3	SURCHARGED
9.020	C47	30 minute 30 year Winter I+0%	65.851	62.379	0.898	0.000	1.68		54.459	3435.272	2475.7	SURCHARGED
59.000	OB1	15 minute 30 year Winter I+0%	66.530	65.945	0.260	0.000	0.25		0.543	7.646	15.0	SURCHARGED
60.000	OB2	15 minute 30 year Winter I+0%	66.465	66.061	0.611	0.000	0.82		1.024	44.990	91.4	SURCHARGED
59.001	S1	15 minute 30 year Winter I+0%	66.570	65.928	0.678	0.000	1.37		2.654	52.638	91.3	SURCHARGED
61.000	OB3	15 minute 30 year Winter I+0%	66.465	65.725	0.635	0.000	0.52		1.909	39.253	76.8	SURCHARGED
59.002	S2	15 minute 30 year Winter I+0%	66.575	65.705	0.660	0.000	0.40		7.194	91.891	152.5	SURCHARGED
62.000	OB4	15 minute 30 year Winter I+0%	66.610	65.897	0.307	0.000	0.85		0.597	14.996	32.0	SURCHARGED
62.001	S3	15 minute 30 year Winter I+0%	66.715	65.867	0.357	0.000	0.74		1.027	15.003	30.1	SURCHARGED
63.000	OB5	15 minute 30 year Winter I+0%	66.610	65.842	0.592	0.000	0.48		1.833	37.636	73.8	SURCHARGED
62.002	S4	15 minute 30 year Winter I+0%	66.715	65.812	0.612	0.000	0.45		5.181	52.611	83.8	SURCHARGED
64.000	OB6	15 minute 30 year Winter I+0%	66.610	65.799	0.729	0.000	1.11		1.158	37.489	73.3	SURCHARGED
62.003	S5	15 minute 30 year Winter I+0%	66.715	65.701	0.701	0.000	0.38		10.563	90.101	132.8	SURCHARGED
59.003	S6	15 minute 30 year Winter I+0%	66.715	65.682	0.782	0.000	0.86		11.833	181.744	257.9	SURCHARGED
65.000	OB7	15 minute 30 year Winter I+0%	67.085	66.067	-0.083	0.000	0.41		0.070	4.852	10.4	OK
65.001	S8	15 minute 30 year Winter I+0%	67.320	65.812	-0.073	0.000	0.51		0.096	4.852	10.3	OK
66.000	OB8	15 minute 30 year Winter I+0%	67.085	65.685	0.140	0.000	0.48		0.407	9.703	20.8	SURCHARGED
65.002	S9	15 minute 30 year Winter I+0%	67.320	65.668	0.228	0.000	0.53		1.253	14.554	30.4	SURCHARGED
67.000	OB9	15 minute 30 year Winter I+0%	67.085	65.631	0.746	0.000	0.51		1.092	11.761	22.9	SURCHARGED
59.004	S7	15 minute 30 year Winter I+0%	67.320	65.609	0.834	0.000	0.98		18.542	205.883	278.7	SURCHARGED
68.000	OB10	15 minute 30 year Winter I+0%	66.940	65.594	0.704	0.000	0.71		0.960	5.881	11.5	SURCHARGED
68.001	S10	15 minute 30 year Winter I+0%	67.175	65.565	0.785	0.000	0.69		1.223	5.881	10.7	SURCHARGED
59.005	S11	15 minute 30 year Winter I+0%	67.175	65.540	0.840	0.000	0.81		11.701	208.796	281.3	SURCHARGED
59.006	S12	60 minute 30 year Winter I+0%	67.050	64.804	0.119	0.000	0.69		3.555	332.616	193.1	SURCHARGED
59.007	FRS1	60 minute 30 year Winter I+0%	67.065	64.801	0.231	0.000	0.55		5.293	329.685	187.7	SURCHARGED
59.008	S13	60 minute 30 year Winter I+0%	67.125	64.799	0.254	0.000	0.70		5.497	326.025	182.6	SURCHARGED
69.000	CP5	15 minute 30 year Winter I+0%	67.070	65.777	-0.098	0.000	0.61		0.860	48.376	81.8	OK
70.000	G1	60 minute 30 year Winter I+0%	66.385	64.796	0.126	0.000	0.16		0.307	3.823	2.6	SURCHARGED
59.009	S14	60 minute 30 year Winter I+0%	67.000	64.795	0.275	0.000	0.50		7.803	403.084	224.5	SURCHARGED
71.000	CP8	15 minute 30 year Winter I+0%	67.215	65.209	-0.056	0.000	0.91		1.467	26.022	43.5	OK
59.010	AT1	60 minute 30 year Winter I+0%	69.000	64.790	0.330	0.000	0.11		282.958	272.609	45.0	SURCHARGED
59.011	S15	30 minute 30 year Winter I+0%	66.050	63.747	-0.213	0.000	0.19		0.397	125.202	45.0	OK
72.000	SSFD	30 minute 30 year Winter I+0%	63.720	63.722	1.002	2.113	7.12		7.943	43.560	40.2	FLOOD
59.012 Ex	SC72a	30 minute 30 year Winter I+0%	63.720	63.353	0.633	0.000	1.08		1.664	168.119	75.0	FLOOD RISK
9.021	Spur	30 minute 30 year Winter I+0%	64.435	61.055	0.450	0.000	1.20		14.205	3602.522	2550.1	SURCHARGED*
9.022	C48	30 minute 30 year Winter I+0%	63.019	59.890	-0.270	0.000	0.83		24.601	3617.115	2557.4	OK

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30 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Catchment C

PN	US/MH Name	Event	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Maximum Vol (m³)	Discharge Vol (m³)	Pipe Flow (l/s)	Status
9.023	C49	30 minute 30 year Winter I+0%	60.634	57.822	-0.281	0.000	0.81		5.766	3632.105	2561.6	OK
9.024	C50	30 minute 30 year Winter I+0%	57.788	55.451	-0.199	0.000	0.97		7.249	3662.322	2568.2	OK
9.025	C51	30 minute 30 year Winter I+0%	55.447	53.746	-0.361	0.000	0.67		5.387	3696.983	2574.8	OK
73.000	SW01	15 minute 30 year Winter I+0%	58.600	57.918	-0.082	0.000	0.41		0.071	3.481	7.4	OK
73.001	SW02	15 minute 30 year Winter I+0%	58.370	57.518	-0.138	0.000	0.30		0.094	7.456	15.8	OK
74.000	SW02A	15 minute 30 year Winter I+0%	64.330	62.732	-0.098	0.000	0.26		0.053	9.635	20.7	OK
73.002	SW03	15 minute 30 year Winter I+0%	57.754	56.938	-0.162	0.000	0.42		0.188	22.606	47.7	OK
73.003	SW04	15 minute 30 year Winter I+0%	57.214	56.371	-0.140	0.000	0.53		0.406	30.487	63.1	OK
73.004	SW05	15 minute 30 year Winter I+0%	56.600	55.393	-0.159	0.000	0.45		0.320	30.487	62.7	OK
75.000	SW05A	15 minute 30 year Winter I+0%	56.073	55.363	-0.110	0.000	0.16		0.040	1.765	3.8	OK
73.005	SW06	15 minute 30 year Winter I+0%	55.886	54.871	-0.189	0.000	0.47		0.377	35.194	69.1	OK
73.006	SW07	15 minute 30 year Winter I+0%	55.692	54.376	-0.205	0.000	0.41		0.892	37.995	71.4	OK
73.007	SW08	15 minute 30 year Winter I+0%	55.529	53.797	-0.201	0.000	0.43		0.747	40.007	72.7	OK
73.008	SW09	15 minute 30 year Winter I+0%	55.422	53.408	-0.200	0.000	0.44		0.751	42.266	74.8	OK
76.000	SW10	15 minute 30 year Summer I+0%	55.857	54.057	-0.600	0.000	0.00		0.000	0.000	0.0	OK
76.001	SW11	15 minute 30 year Summer I+0%	55.738	53.761	-0.750	0.000	0.00		0.000	0.000	0.0	OK
76.002	SW12	15 minute 30 year Summer I+0%	55.647	53.650	-0.750	0.000	0.00		0.000	0.000	0.0	OK
76.003	SW13	15 minute 30 year Summer I+0%	55.528	53.367	-0.750	0.000	0.00		0.000	0.000	0.0	OK
76.004	SW14	15 minute 30 year Summer I+0%	55.484	53.177	-0.750	0.000	0.00		0.000	0.000	0.0	OK
76.005	SW15	15 minute 30 year Summer I+0%	55.612	52.641	-0.750	0.000	0.00		0.000	0.000	0.0	OK
73.009	SW16	15 minute 30 year Winter I+0%	55.589	52.521	-0.724	0.000	0.08		0.593	64.380	98.2	OK
77.000	SW17	15 minute 30 year Winter I+0%	58.606	58.014	-0.111	0.000	0.47		0.124	9.245	18.3	OK
77.001	SW18	15 minute 30 year Winter I+0%	58.445	57.540	-0.098	0.000	0.56		0.356	15.132	28.5	OK
77.002	SW19	15 minute 30 year Winter I+0%	57.723	56.637	-0.101	0.000	0.57		0.258	17.150	31.8	OK
78.000	SW20	15 minute 30 year Winter I+0%	57.200	56.588	-0.062	0.000	0.63		0.094	5.015	10.5	OK
77.003	SW21	15 minute 30 year Winter I+0%	57.444	56.119	-0.102	0.000	0.58		0.248	22.165	41.7	OK
77.004	SW22	15 minute 30 year Winter I+0%	57.084	55.632	-0.093	0.000	0.64		0.203	22.165	40.8	OK
79.000	Gully	15 minute 30 year Winter I+0%	56.774	55.825	-0.125	0.000	0.06		0.006	1.498	3.2	OK
77.005	SW23	15 minute 30 year Winter I+0%	56.562	54.565	-0.096	0.000	0.62		0.228	23.663	43.2	OK
80.000	SW24	15 minute 30 year Summer I+0%	55.645	54.530	-0.150	0.000	0.00		0.000	0.000	0.0	OK
80.001	SW25	15 minute 30 year Summer I+0%	56.340	54.318	-0.150	0.000	0.00		0.000	0.000	0.0	OK
80.002	SW26	15 minute 30 year Summer I+0%	56.262	54.236	-0.150	0.000	0.00		0.000	0.000	0.0	OK
77.006	SW27	15 minute 30 year Winter I+0%	56.310	53.941	-0.120	0.000	0.67		0.243	23.663	42.8	OK
77.007	SW28	15 minute 30 year Winter I+0%	56.044	53.836	-0.119	0.000	0.67		0.873	23.663	42.8	OK
77.008	SW29	15 minute 30 year Winter I+0%	55.892	53.685	-0.200	0.000	0.25		0.258	23.662	42.9	OK
73.010	SW30	15 minute 30 year Winter I+0%	55.503	52.222	-0.736	0.000	0.08		1.192	91.557	140.2	OK
73.011	SW31	15 minute 30 year Winter I+0%	55.327	51.346	-0.740	0.000	0.07		0.997	93.708	142.0	OK
73.012	SW32	15 minute 30 year Winter I+0%	55.648	50.626	-0.730	0.000	0.08		0.866	93.707	141.9	OK
81.000	HD01	15 minute 30 year Winter I+0%	57.100	56.108	-0.092	0.000	0.31		0.060	4.655	9.9	OK
81.001	HD02	15 minute 30 year Winter I+0%	56.041	55.024	-0.100	0.000	0.24		0.058	4.655	9.8	OK
81.002	HD03	15 minute 30 year Winter I+0%	55.655	54.354	-0.095	0.000	0.28		0.060	4.655	9.9	OK
81.003	HD04	15 minute 30 year Winter I+0%	54.782	53.493	-0.058	0.000	0.67		0.109	11.414	24.5	OK
73.013	36	15 minute 30 year Winter I+0%	51.350	50.140	-0.604	0.000	0.37		2.077	639.524	1101.1	OK
9.026	C52	30 minute 30 year Winter I+0%	51.156	49.141	-0.665	0.000	0.41		3.222	4578.284	3067.3	OK
9.027	C53	30 minute 30 year Winter I+0%	46.900	44.962	-0.558	0.000	0.56		6.025	4577.171	3069.3	OK
9.028	C54	30 minute 30 year Winter I+0%	45.580	43.128	-0.502	0.000	0.64		8.956	4575.864	3069.7	OK
9.029	H20C	960 minute 30 year Winter I+0%	42.300	40.831	-1.069	0.000	0.06		7.254	12477.592	523.5	OK
82.000	C55a	15 minute 30 year Winter I+0%	42.230	42.066	0.661	0.000	0.72		0.997	14.700	29.2	FLOOD RISK
83.000	C55b	15 minute 30 year Winter I+0%	45.150	43.850	-0.100	0.000	0.24		0.050	5.882	12.6	OK

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30 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Catchment C

PN	US/MH Name	Event	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Maximum Vol (m³)	Discharge Vol (m³)	Pipe Flow (l/s)	Status
82.001	C55	15 minute 30 year Winter I+0%	43.800	41.895	0.905	0.000	1.97		3.452	41.163	75.5	SURCHARGED
82.002	56	960 minute 30 year Winter I+0%	44.900	40.820	0.040	0.000	0.08		1.761	138.374	6.0	SURCHARGED
82.003	C57	960 minute 30 year Winter I+0%	44.300	40.820	0.305	0.000	0.07		3.727	136.787	6.0	SURCHARGED
82.004	H7C	960 minute 30 year Winter I+0%	42.500	40.819	0.519	0.000	0.03		3.074	134.177	5.5	SURCHARGED
9.030	BASIN C1	960 minute 30 year Winter I+0%	42.000	40.819	1.069	0.000	0.07		9337.096	6312.098	61.0	SURCHARGED
9.031	C59	360 minute 30 year Winter I+0%	38.600	37.115	0.165	0.000	0.21		1.652	2347.401	59.4	SURCHARGED
84.000	P2_29	30 minute 30 year Winter I+0%	42.400	41.492	0.292	0.000	0.27		1.568	59.402	72.3	SURCHARGED
84.001	P2_30	30 minute 30 year Winter I+0%	42.343	41.481	0.364	0.000	0.74		12.547	123.998	145.3	SURCHARGED
84.002	P2_31	30 minute 30 year Winter I+0%	42.162	41.465	0.385	0.000	0.47		7.045	123.890	126.9	SURCHARGED
85.000	SC72	15 minute 30 year Winter I+0%	44.017	43.409	-0.165	0.000	0.15		0.063	2.940	6.1	OK
85.001	SC73	15 minute 30 year Winter I+0%	43.907	43.363	0.154	0.000	0.81		1.946	17.643	31.3	SURCHARGED
85.002	SC74	15 minute 30 year Winter I+0%	43.815	43.178	0.261	0.000	1.35		2.388	30.285	51.4	SURCHARGED
85.003	SC75	15 minute 30 year Winter I+0%	43.201	42.572	-0.128	0.000	0.62		0.624	30.285	50.7	OK
85.004	SC76	30 minute 30 year Winter I+0%	43.103	42.331	-0.069	0.000	0.40		1.627	58.050	62.0	OK
85.005	SC77	30 minute 30 year Winter I+0%	42.911	42.252	0.102	0.000	0.61		15.109	183.890	190.9	SURCHARGED
85.006	SC78	30 minute 30 year Winter I+0%	42.668	42.202	0.304	0.000	0.95		31.269	324.704	328.7	SURCHARGED
85.007	SC79	30 minute 30 year Winter I+0%	42.450	42.141	0.311	0.000	0.38		8.303	324.872	290.6	FLOOD RISK
85.008	SC80	30 minute 30 year Winter I+0%	42.222	41.973	0.443	0.000	0.68		27.757	421.257	311.5	FLOOD RISK
85.009	SC81	30 minute 30 year Winter I+0%	42.120	41.899	0.529	0.000	0.92		44.481	586.600	447.8	FLOOD RISK
85.010	SC82	30 minute 30 year Winter I+0%	42.609	41.782	0.559	0.000	1.12		35.016	729.144	556.8	SURCHARGED
85.011	SC83	30 minute 30 year Winter I+0%	42.400	41.555	0.510	0.000	1.29		41.780	735.134	560.2	SURCHARGED
84.003	P2_32	30 minute 30 year Winter I+0%	42.065	41.442	0.464	0.000	2.54		30.439	879.280	664.5	SURCHARGED
84.004	P2_33	30 minute 30 year Winter I+0%	41.991	41.263	0.313	0.000	1.51		8.446	925.443	682.5	SURCHARGED
84.005	P2_34	30 minute 30 year Winter I+0%	42.255	41.036	0.184	0.000	2.85		24.832	919.708	684.1	SURCHARGED
84.006	P1 Slab	30 minute 30 year Winter I+0%	42.398	40.844	0.014	0.000	1.78		6.538	916.251	682.1	SURCHARGED
86.000	C88	15 minute 30 year Winter I+0%	44.193	42.902	-0.441	0.000	0.00		0.007	0.147	0.3	OK
86.001	C89	15 minute 30 year Winter I+0%	44.062	42.866	-0.346	0.000	0.10		0.697	6.468	13.4	OK
86.002	C90	15 minute 30 year Winter I+0%	43.963	42.783	-0.312	0.000	0.19		1.409	13.966	25.3	OK
86.003	C91	15 minute 30 year Winter I+0%	43.801	42.658	-0.275	0.000	0.29		2.396	24.698	39.6	OK
86.004	C92	15 minute 30 year Winter I+0%	43.639	42.516	-0.255	0.000	0.35		2.886	35.430	48.2	OK
86.005	C93	15 minute 30 year Winter I+0%	43.417	42.313	-0.236	0.000	0.42		3.580	50.132	58.2	OK
86.006	C94	30 minute 30 year Winter I+0%	43.195	42.108	-0.219	0.000	0.51		4.317	84.482	69.2	OK
86.007	C95	30 minute 30 year Winter I+0%	43.004	41.930	-0.206	0.000	0.56		4.731	100.940	76.1	OK
86.008	C96	30 minute 30 year Winter I+0%	42.813	41.748	-0.197	0.000	0.60		5.092	117.259	81.3	OK
86.009	C97	30 minute 30 year Winter I+0%	42.622	41.543	-0.211	0.000	0.55		4.524	133.418	86.1	OK
87.000	C87	15 minute 30 year Summer I+0%	42.450	41.600	-0.150	0.000	0.00		0.000	0.000	0.0	OK
88.000	P2_1	15 minute 30 year Winter I+0%	44.315	43.811	0.696	0.000	0.31		0.951	1.691	4.9	SURCHARGED
88.001	P2_2	15 minute 30 year Winter I+0%	44.251	43.805	0.754	0.000	0.68		1.086	5.227	10.7	SURCHARGED
88.002	P2_3	15 minute 30 year Winter I+0%	44.154	43.778	0.824	0.000	1.03		1.246	7.462	15.6	FLOOD RISK
88.003	P2_4	15 minute 30 year Winter I+0%	44.141	43.745	0.858	0.000	1.15		1.232	14.525	23.2	FLOOD RISK
89.000	P2_5	15 minute 30 year Winter I+0%	56.568	55.321	-0.047	0.000	0.81		0.111	36.516	78.3	OK
88.004	P2_6	15 minute 30 year Winter I+0%	43.748	43.499	1.056	0.000	1.70		2.129	64.918	113.7	FLOOD RISK
88.005	P2_7	15 minute 30 year Winter I+0%	43.614	43.318	0.947	0.000	1.33		2.078	71.039	125.1	FLOOD RISK
88.006	P2_8	15 minute 30 year Winter I+0%	43.453	43.109	0.889	0.000	1.47		3.305	135.129	244.2	FLOOD RISK
88.007	P2_11	15 minute 30 year Winter I+0%	43.304	42.739	0.721	0.000	1.39		12.426	152.832	271.7	SURCHARGED
88.008	P2_12	15 minute 30 year Winter I+0%	43.208	42.710	0.714	0.000	1.23		4.086	223.468	393.7	SURCHARGED
88.009	P_13	15 minute 30 year Winter I+0%	43.102	42.562	0.709	0.000	1.78		16.068	309.717	494.5	SURCHARGED
88.010	P2_14	15 minute 30 year Winter I+0%	42.969	42.231	0.518	0.000	1.19		22.524	389.979	576.9	SURCHARGED
88.011	P2_15	15 minute 30 year Winter I+0%	42.830	42.055	0.482	0.000	1.50		33.253	525.482	730.3	SURCHARGED

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30 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Catchment C

PN	US/MH Name	Event	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Maximum Vol (m³)	Discharge Vol (m³)	Pipe Flow (l/s)	Status
88.012	P2_16	15 minute 30 year Winter I+0%	42.683	41.734	0.306	0.000	2.55		33.741	530.844	728.8	SURCHARGED
88.013	P2_17	30 minute 30 year Winter I+0%	42.781	41.529	0.116	0.000	1.09		6.122	728.531	703.4	SURCHARGED
88.014	P2_18	30 minute 30 year Winter I+0%	42.724	41.467	0.110	0.000	1.59		19.772	741.995	705.3	SURCHARGED
88.015	P2_19	15 minute 30 year Winter I+0%	42.835	41.420	0.095	0.000	1.77		12.023	574.675	730.2	SURCHARGED
88.016	P2_20	15 minute 30 year Winter I+0%	43.007	41.373	0.075	0.000	1.18		10.668	594.133	736.5	SURCHARGED
88.017	P2_21	15 minute 30 year Winter I+0%	42.959	41.309	0.061	0.000	1.69		17.428	602.883	728.1	SURCHARGED
88.018	P2_22	15 minute 30 year Winter I+0%	43.070	41.254	0.037	0.000	1.86		11.310	604.621	727.7	SURCHARGED
88.019	P2_23	15 minute 30 year Winter I+0%	43.218	41.201	0.008	0.000	1.01		9.054	624.279	713.5	SURCHARGED
88.020	P2_24	30 minute 30 year Winter I+0%	43.168	41.118	0.014	0.000	1.70		28.760	808.958	721.7	SURCHARGED
88.021	P2_25	30 minute 30 year Winter I+0%	43.164	41.074	0.000	0.000	0.99		10.676	829.374	707.6	OK
88.022	P2_25A	30 minute 30 year Winter I+0%	43.078	40.983	0.001	0.000	0.88		29.286	836.442	665.2	SURCHARGED
88.023	P2_26	30 minute 30 year Winter I+0%	42.941	40.849	0.002	0.000	0.80		42.468	832.808	603.7	SURCHARGED
88.024	P2_26A	30 minute 30 year Winter I+0%	42.801	40.709	0.000	0.000	1.41		42.983	829.699	604.4	OK
88.025	P2_27	30 minute 30 year Winter I+0%	42.787	40.578	-0.116	0.000	0.78		5.630	831.986	589.8	OK
88.026	P2_28	30 minute 30 year Winter I+0%	42.657	40.474	-0.088	0.000	0.64		37.375	830.219	540.4	OK
88.027	P2_28A	30 minute 30 year Winter I+0%	42.181	40.357	-0.059	0.000	0.85		33.045	818.217	504.3	OK
88.028	246	30 minute 30 year Winter I+0%	42.490	40.300	-0.070	0.000	1.23		14.078	811.150	500.7	OK
86.010	C98	30 minute 30 year Winter I+0%	42.480	40.123	-0.219	0.000	0.93		7.453	954.868	576.3	OK
84.007	C65	60 minute 30 year Winter I+0%	42.458	39.449	-0.851	0.000	0.19		1.657	2555.702	1091.0	OK
84.008	C66	60 minute 30 year Winter I+0%	38.800	37.521	-0.629	0.000	0.46		6.934	2555.702	1091.5	OK
90.000	P16 - Dummy	15 minute 30 year Summer I+0%	54.000	51.000	-0.225	0.000	0.00		0.000	0.000	0.0	OK
90.001	P16 - Tank	960 minute 30 year Winter I+0%	51.200	48.858	0.633	0.000	0.15		1827.178	1303.341	13.2	SURCHARGED
90.002	P16 - Basin	2160 minute 30 year Winter I+0%	40.000	38.904	0.979	0.000	0.27		1049.815	2191.327	10.5	SURCHARGED
9.032	BASIN C3	360 minute 30 year Winter I+0%	38.500	36.944	0.614	0.000	0.47		3273.410	5201.386	139.8	SURCHARGED
9.033	C68	480 minute 30 year Winter I+0%	36.717	35.421	-0.197	0.000	0.61		1.478	6880.441	139.8	OK
9.034	C69	480 minute 30 year Winter I+0%	36.300	35.127	-0.266	0.000	0.35		0.999	6876.015	139.8	OK
9.035	C70	360 minute 30 year Winter I+0%	34.865	33.988	-0.277	0.000	0.32		0.536	5191.504	139.8	OK
9.036	C71	360 minute 30 year Winter I+0%	33.672	32.942	-0.130	0.000	0.85		1.283	5185.539	139.8	OK

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100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Catchment C

Simulation Criteria

Areal Reduction Factor 1.000 Hot Start Level (mm) 0 Foul Sewage per hectare (l/s) 0.000 MADD Factor * 10m³/ha Storage 0.000 Flow per Person per Day (l/per/day) 0.000
Hot Start (mins) 0 Manhole Headloss Coeff (Global) 0.500 Additional Flow - % of Total Flow 0.000 Inlet Coeffiecient 0.800

Number of Input Hydrographs 0 Number of Online Controls 18 Number of Offline Controls 12 Number of Storage Structures 10 Number of Time/Area Diagrams 0 Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall Model FSR Region England and Wales M5-60 (mm) 18.500 Ratio R 0.400 Cv (Summer) 0.750 Cv (Winter) 0.840

Margin for Flood Risk Warning (mm) 400.0 Analysis Timestep Fine DTS Status OFF DVD Status ON Inertia Status ON

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 240, 360, 480, 600, 960, 1440, 2160
Return Period(s) (years)	1, 30, 100
Climate Change (%)	0, 0, 20

PN	US/MH Name	Event	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Maximum Vol (m³)	Discharge Vol (m³)	Pipe Flow (l/s)	Status
9.000	OB9	15 minute 100 year Summer I+20%	68.920	68.257	-0.213	0.000	0.74		3.764	211.305	855.1	OK
9.001	S39	30 minute 100 year Winter I+20%	69.855	68.171	-0.179	0.000	0.52		180.804	159.406	184.1	OK
10.000	OB10	15 minute 100 year Winter I+20%	69.855	69.112	0.082	0.000	1.68		0.799	61.639	131.8	SURCHARGED
9.002	S40 (BD)	30 minute 100 year Winter I+20%	69.855	68.243	-0.077	0.000	0.49		4.737	239.135	272.0	OK
9.003	S41	30 minute 100 year Winter I+20%	68.855	68.294	0.079	0.000	0.32		14.920	236.763	237.3	SURCHARGED
9.004	Tank 6 - Full Retention	30 minute 100 year Winter I+20%	70.000	68.326	0.391	0.000	0.53		28.006	234.423	239.3	SURCHARGED
9.005	S42	30 minute 100 year Winter I+20%	70.000	68.322	0.442	0.000	0.30		11.371	232.774	227.4	SURCHARGED
11.000	4A	15 minute 100 year Summer I+20%	80.350	79.512	-0.138	0.000	0.57		0.178	98.941	319.2	OK
11.001	4B	15 minute 100 year Summer I+20%	75.350	74.872	0.222	0.000	0.25	177.3	0.604	72.129	141.9	SURCHARGED
11.002	SDP004	30 minute 100 year Winter I+20%	70.350	69.498	1.298	0.000	0.90		1.803	131.829	141.8	SURCHARGED
11.003	S43 (V)	30 minute 100 year Winter I+20%	69.270	69.076	1.101	0.000	0.59		3.892	131.766	141.7	FLOOD RISK
12.000	3A	15 minute 100 year Summer I+20%	80.350	79.512	-0.138	0.000	0.57		0.178	98.941	319.2	OK
12.001	3B	15 minute 100 year Summer I+20%	75.350	74.872	0.222	0.000	0.25	177.3	0.604	72.129	141.9	SURCHARGED
12.002	SDP003	30 minute 100 year Winter I+20%	70.350	69.341	1.066	0.000	0.89		2.538	131.827	141.9	SURCHARGED
11.004	S44 (V)	30 minute 100 year Winter I+20%	68.952	68.955	1.015	5.879	0.87		14.163	263.695	282.9	FLOOD
13.000	2A	15 minute 100 year Summer I+20%	80.350	79.512	-0.138	0.000	0.57		0.178	98.941	319.2	OK
13.001	2B	15 minute 100 year Summer I+20%	75.350	74.790	0.140	0.000	0.25	177.2	0.507	72.111	141.9	SURCHARGED
13.002	SDP002	30 minute 100 year Winter I+20%	70.350	69.010	0.735	0.000	1.50		1.953	131.819	141.9	SURCHARGED
11.005	S45 (V)	30 minute 100 year Winter I+20%	68.952	68.954	0.894	5.427	0.60		16.712	395.519	423.8	FLOOD
14.000	1A	15 minute 100 year Summer I+20%	80.350	79.512	-0.138	0.000	0.57		0.178	98.941	319.2	OK
14.001	1B	15 minute 100 year Summer I+20%	75.350	74.872	0.222	0.000	0.25	177.3	0.604	72.129	141.9	SURCHARGED
14.002	SDP001	30 minute 100 year Winter I+20%	70.350	68.513	0.238	0.000	1.50		1.075	131.848	141.9	SURCHARGED
11.006	S46 (V)	30 minute 100 year Winter I+20%	69.315	68.421	0.471	0.000	0.89		21.019	527.311	563.3	SURCHARGED
11.007	S47 (V)	30 minute 100 year Winter I+20%	69.315	68.383	0.523	0.000	0.71		20.307	527.284	545.4	SURCHARGED
9.006	S48	30 minute 100 year Winter I+20%	70.000	68.342	0.622	0.000	0.79		38.193	756.104	600.0	SURCHARGED
9.007	S49	30 minute 100 year Winter I+20%	70.000	68.303	0.753	0.000	0.69		30.465	751.892	524.3	SURCHARGED
15.000	OB14	15 minute 100 year Winter I+20%	68.890	68.892	0.827	1.857	0.54		3.969	45.207	77.4	FLOOD
16.000	OB13	15 minute 100 year Winter I+20%	68.890	68.898	0.803	7.946	0.99		9.968	46.344	73.6	FLOOD
16.001	S50a	15 minute 100 year Winter I+20%	69.120	68.888	0.813	0.000	0.65		2.582	46.347	73.6	FLOOD RISK
15.001	S50	15 minute 100 year Winter I+20%	69.235	68.867	0.938	0.000	1.19		6.772	91.541	132.5	FLOOD RISK
17.000	OB11	15 minute 100 year Winter I+20%	68.890	68.892	0.872	1.607	1.33		2.922	66.208	124.9	FLOOD

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100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Catchment C

PN	US/MH Name	Event	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Maximum Vol (m³)	Discharge Vol (m³)	Pipe Flow (l/s)	Status
15.002	S51	15 minute 100 year Winter I+20%	69.235	68.693	0.894	0.000	2.40		6.061	157.751	242.4	SURCHARGED
18.000	OB12	30 minute 100 year Winter I+20%	68.890	68.635	0.540	0.000	1.23		1.609	89.453	112.1	FLOOD RISK
18.001	S52	30 minute 100 year Winter I+20%	69.235	68.542	0.477	0.000	1.09		1.989	89.446	110.6	SURCHARGED
15.003	S53	30 minute 100 year Winter I+20%	69.235	68.438	0.585	0.000	1.06		7.984	296.840	341.2	SURCHARGED
15.004	Tank 7 - Full Retention	30 minute 100 year Winter I+20%	70.000	68.291	0.613	0.000	1.99		6.744	296.840	341.2	SURCHARGED
9.008	S54	30 minute 100 year Winter I+20%	70.000	68.264	0.810	0.000	0.96		32.543	1045.235	804.1	SURCHARGED
9.009	S55	30 minute 100 year Winter I+20%	70.000	68.221	0.862	0.000	0.72		23.072	1042.539	758.0	SURCHARGED
19.000	KD17	15 minute 100 year Winter I+20%	69.440	68.302	-0.088	0.000	0.35		0.064	10.503	22.5	OK
9.010	S56	30 minute 100 year Winter I+20%	70.000	68.174	1.035	0.000	1.03		27.741	1053.865	746.3	SURCHARGED
9.011	S57	30 minute 100 year Winter I+20%	70.000	68.133	1.049	0.000	0.96		15.768	1051.946	728.2	SURCHARGED
20.000	10A	15 minute 100 year Summer I+20%	80.350	79.484	-0.166	0.000	0.41		0.146	71.814	231.6	OK
20.001	10B	15 minute 100 year Summer I+20%	75.350	74.828	0.178	0.000	0.19	127.8	0.553	52.647	103.9	SURCHARGED
20.002	SDP010	15 minute 100 year Winter I+20%	70.350	68.318	0.043	0.000	1.24		0.729	60.611	103.9	SURCHARGED
20.003	S59 (V)	60 minute 100 year Summer I+20%	70.150	68.279	0.029	0.000	1.16		1.168	115.647	103.4	SURCHARGED
21.000	S58 (V)	15 minute 100 year Summer I+20%	70.150	68.864	0.689	0.000	2.47		1.113	19.166	124.4	SURCHARGED
9.012	S60	30 minute 100 year Winter I+20%	70.000	68.091	1.071	0.000	0.76		25.680	1152.087	761.6	SURCHARGED
22.000	KD18	15 minute 100 year Winter I+20%	69.925	68.849	-0.101	0.000	0.58		0.135	7.077	15.0	OK
22.001	KD19	15 minute 100 year Winter I+20%	69.440	68.701	0.161	0.000	1.22		0.555	29.452	65.2	SURCHARGED
22.002	KD20	15 minute 100 year Winter I+20%	69.095	68.617	0.057	0.000	1.49		1.861	62.097	138.4	SURCHARGED
22.003	KD21	15 minute 100 year Winter I+20%	69.095	68.475	0.130	0.000	1.53		2.471	103.418	229.9	SURCHARGED
23.000	KD22	15 minute 100 year Winter I+20%	68.750	68.378	0.453	0.000	1.24		1.454	50.910	105.4	FLOOD RISK
22.004	S61	15 minute 100 year Winter I+20%	68.800	68.329	0.339	0.000	2.10		3.506	154.337	324.5	SURCHARGED
24.000	KD23	30 minute 100 year Winter I+20%	68.170	68.130	0.785	0.000	1.43		2.042	90.654	113.0	FLOOD RISK
22.005	S62	30 minute 100 year Winter I+20%	68.800	68.091	0.621	0.000	1.49		6.261	293.557	371.1	SURCHARGED
22.006	Tank 8 - Bypass	30 minute 100 year Winter I+20%	68.800	68.030	0.590	0.000	1.75		2.462	293.556	369.8	SURCHARGED
9.013	S63	30 minute 100 year Winter I+20%	68.900	68.005	1.270	0.000	1.46		63.754	1441.482	1059.8	SURCHARGED
25.000	KD24	30 minute 100 year Winter I+20%	68.385	67.958	0.548	0.000	0.35		0.868	7.504	9.6	SURCHARGED
9.014	S64	30 minute 100 year Winter I+20%	68.425	67.952	1.272	0.000	1.00		16.266	1461.807	1023.8	SURCHARGED
9.015	Ex SC15	30 minute 100 year Winter I+20%	70.000	67.893	1.421	0.000	0.43		13.239	1460.534	938.7	SURCHARGED
26.000	C16a	30 minute 100 year Winter I+20%	68.110	68.063	1.153	0.000	1.02		1.638	86.440	108.6	FLOOD RISK
27.000	1	15 minute 100 year Winter I+20%	71.600	71.667	1.367	66.846	1.57		68.600	166.539	165.5	FLOOD
27.001	2	15 minute 100 year Winter I+20%	71.180	71.207	1.502	27.304	2.01		34.516	213.822	221.1	FLOOD
27.002	3	15 minute 100 year Winter I+20%	71.410	71.225	1.817	0.000	1.84		13.677	309.097	317.3	FLOOD RISK
27.003	4	15 minute 100 year Winter I+20%	71.410	70.841	1.655	0.000	1.75		14.071	354.741	377.0	SURCHARGED
27.004	5	30 minute 100 year Winter I+20%	71.490	69.866	1.098	0.000	1.16		15.770	529.680	416.7	SURCHARGED
27.005	6	30 minute 100 year Winter I+20%	70.600	69.055	1.322	0.000	0.87		14.609	529.598	384.9	SURCHARGED
27.006	7	30 minute 100 year Winter I+20%	69.530	68.659	1.726	0.000	1.55		8.690	664.272	511.0	SURCHARGED
27.007	8	30 minute 100 year Winter I+20%	69.030	68.133	1.543	0.000	0.80		5.715	664.206	504.9	SURCHARGED
26.001	C16	30 minute 100 year Winter I+20%	68.690	67.897	1.707	0.000	0.96		15.919	750.451	600.5	SURCHARGED
9.016	C17	30 minute 100 year Winter I+20%	69.130	67.586	2.059	0.000	0.66		56.812	2314.594	1451.6	SURCHARGED
9.017	C18	30 minute 100 year Winter I+20%	69.612	67.237	2.656	0.000	0.68		41.045	2313.221	1409.0	SURCHARGED
28.000	OB1	15 minute 100 year Winter I+20%	68.920	68.300	-0.095	0.000	0.73		4.595	264.658	834.5	OK
28.001	S1	15 minute 100 year Winter I+20%	69.855	68.227	-0.048	0.000	0.56		258.050	207.636	252.8	OK
29.000	OB2	30 minute 100 year Winter I+20%	69.795	69.469	0.799	0.000	1.35		2.065	80.448	102.9	FLOOD RISK
28.002	S2 (BD)	30 minute 100 year Winter I+20%	69.855	68.906	0.676	0.000	0.41		8.827	243.239	227.9	SURCHARGED
30.000	OB3	30 minute 100 year Winter I+20%	69.340	69.346	1.056	6.792	1.53		8.302	57.051	154.1	FLOOD
28.003	S3	30 minute 100 year Winter I+20%	69.855	69.482	1.416	0.000	0.41		33.204	295.874	245.8	FLOOD RISK
28.004	Tank 1 -Full Retention	30 minute 100 year Winter I+20%	70.000	69.672	1.752	0.000	0.54		15.590	292.914	225.0	FLOOD RISK
28.005	S4	30 minute 100 year Winter I+20%	70.000	69.768	1.887	0.000	0.35		11.509	289.181	204.2	FLOOD RISK

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100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Catchment C

PN	US/MH Name	Event	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Maximum Vol (m³)	Discharge Vol (m³)	Pipe Flow (l/s)	Status
31.000	5A	15 minute 100 year Summer I+20%	80.350	79.512	-0.138	0.000	0.57		0.177	98.329	317.2	OK
31.001	5B	15 minute 100 year Summer I+20%	75.350	74.870	0.220	0.000	0.25	175.3	0.602	71.898	141.9	SURCHARGED
31.002	SDP005	30 minute 100 year Summer I+20%	70.350	69.184	0.834	0.000	0.96		2.260	110.581	140.9	SURCHARGED
31.003	S5 (V)	30 minute 100 year Winter I+20%	68.952	68.978	0.608	26.194	0.60		30.428	131.355	141.4	FLOOD
32.000	6A	15 minute 100 year Summer I+20%	80.350	79.512	-0.138	0.000	0.57		0.177	98.329	317.2	OK
32.001	6B	15 minute 100 year Summer I+20%	75.350	74.870	0.220	0.000	0.25	175.3	0.602	71.898	141.9	SURCHARGED
32.002	SDP006	60 minute 100 year Winter I+20%	70.350	69.196	0.921	0.000	0.79		2.282	181.528	124.2	SURCHARGED
31.004	S6 (V)	30 minute 100 year Winter I+20%	68.952	68.981	0.641	28.627	0.87		38.839	262.761	282.6	FLOOD
33.000	7A	15 minute 100 year Summer I+20%	80.350	79.512	-0.138	0.000	0.57		0.177	98.329	317.2	OK
33.001	7B	15 minute 100 year Summer I+20%	75.350	74.870	0.220	0.000	0.25	175.3	0.602	71.898	141.9	SURCHARGED
33.002	SDP007	60 minute 100 year Winter I+20%	70.350	69.125	0.850	0.000	1.31		2.157	181.526	124.3	SURCHARGED
31.005	S7 (V)	30 minute 100 year Winter I+20%	68.952	68.981	0.746	29.454	1.27		41.873	394.112	424.2	FLOOD
34.000	8A	15 minute 100 year Summer I+20%	80.350	79.512	-0.138	0.000	0.57		0.177	98.329	317.2	OK
34.001	8B	15 minute 100 year Summer I+20%	75.350	74.870	0.220	0.000	0.25	175.3	0.602	71.898	141.9	SURCHARGED
34.002	SDP008	30 minute 100 year Winter I+20%	70.350	69.086	0.811	0.000	1.50		2.088	131.386	141.7	SURCHARGED
31.006	S8 (V)	30 minute 100 year Winter I+20%	68.952	69.001	0.886	51.315	1.59		62.658	525.359	564.6	FLOOD
28.006	S9 (V)	30 minute 100 year Winter I+20%	69.850	69.860	1.961	21.945	0.91		52.359	810.147	707.8	FLOOD
35.000	9A	15 minute 100 year Summer I+20%	80.350	79.459	-0.266	0.000	0.19		0.184	50.805	163.9	OK
35.001	9B	15 minute 100 year Summer I+20%	75.350	74.791	0.066	0.000	0.08	89.9	0.789	37.614	74.0	SURCHARGED
35.002	SDP009	30 minute 100 year Winter I+20%	70.350	69.901	1.626	0.000	0.97		3.554	68.410	74.0	SURCHARGED
35.003	S10 (V)	30 minute 100 year Winter I+20%	70.130	69.812	1.552	0.000	0.85		3.794	68.372	85.9	FLOOD RISK
28.007	S11	30 minute 100 year Winter I+20%	70.092	69.625	1.796	2.881	0.81		23.373	873.986	733.1	FLOOD
28.008	S12	15 minute 100 year Winter I+20%	70.130	69.757	2.068	0.794	0.72		35.709	666.284	677.0	FLOOD
28.009	S13	15 minute 100 year Winter I+20%	70.130	69.989	2.469	1.201	0.77		42.869	661.019	654.2	FLOOD
36.000	OB4	30 minute 100 year Winter I+20%	69.905	69.906	1.051	0.686	1.08		3.145	94.302	131.4	FLOOD
36.001	S14	15 minute 100 year Winter I+20%	70.025	69.542	0.712	0.000	0.96		2.919	80.621	168.3	SURCHARGED
37.000	OB5	15 minute 100 year Winter I+20%	69.955	69.958	0.978	2.859	2.43		4.211	35.163	64.6	FLOOD
37.001	S15	30 minute 100 year Winter I+20%	70.025	69.708	0.818	0.000	2.11		2.306	46.218	56.9	FLOOD RISK
38.000	OB6	30 minute 100 year Winter I+20%	69.905	69.906	0.751	0.787	1.03		2.872	96.957	123.9	FLOOD
37.002	S16	30 minute 100 year Winter I+20%	70.025	69.633	0.580	0.000	1.28		3.415	143.175	175.8	FLOOD RISK
36.002	S17	15 minute 100 year Winter I+20%	70.025	69.284	0.734	0.000	2.17		16.668	189.517	367.6	SURCHARGED
36.003	Tank 2 - Full Retention	15 minute 100 year Winter I+20%	70.015	69.552	1.092	0.000	3.01		4.709	189.517	367.2	SURCHARGED
28.010	S18 (BD)	15 minute 100 year Winter I+20%	70.130	70.106	2.691	0.147	1.11		32.366	845.687	922.7	FLOOD
39.000	KD1	15 minute 100 year Winter I+20%	70.240	69.313	0.348	0.000	0.44		0.643	5.936	11.4	SURCHARGED
39.001	S19	15 minute 100 year Winter I+20%	70.000	69.301	0.371	0.000	0.43		1.014	5.937	12.4	SURCHARGED
40.000	OB7	30 minute 100 year Winter I+20%	70.035	69.801	0.516	0.000	1.15		1.699	121.272	155.1	FLOOD RISK
39.002	S20	15 minute 100 year Winter I+20%	70.158	69.266	0.376	0.000	0.82		5.775	98.231	180.6	SURCHARGED
41.000	OB8	30 minute 100 year Winter I+20%	70.035	69.696	0.486	0.000	1.33		1.512	91.554	117.1	FLOOD RISK
41.001	S21	15 minute 100 year Winter I+20%	70.158	69.251	0.076	0.000	1.47		1.662	69.636	147.8	SURCHARGED
39.003	S22	15 minute 100 year Winter I+20%	70.158	68.975	0.490	0.000	1.89		14.727	167.867	320.0	SURCHARGED
39.004	TANK 3 - Full Retention	15 minute 100 year Winter I+20%	70.092	69.652	1.232	0.000	2.09		3.551	167.531	318.6	SURCHARGED
28.011	S23	15 minute 100 year Winter I+20%	70.130	69.954	2.484	0.000	1.08		31.934	1008.710	1187.9	FLOOD RISK
28.012	S24	15 minute 100 year Winter I+20%	70.130	69.222	1.823	0.000	0.70		26.471	1003.355	1112.8	SURCHARGED
42.000	KD2	15 minute 100 year Winter I+20%	68.625	68.246	0.521	0.000	0.80		0.923	17.122	36.6	FLOOD RISK
28.013	S25 (BD)	15 minute 100 year Winter I+20%	68.860	68.040	0.950	0.277	0.93		72.798	1016.316	1018.1	FLOOD
43.000	11A	15 minute 100 year Summer I+20%	80.350	79.484	-0.166	0.000	0.41		0.146	71.814	231.6	OK
43.001	11B	15 minute 100 year Summer I+20%	75.350	74.828	0.178	0.000	0.19	127.8	0.553	52.647	103.9	SURCHARGED
43.002	SDP011	15 minute 100 year Summer I+20%	70.350	68.571	0.296	0.000	1.28		1.176	52.647	106.1	SURCHARGED
43.003	S26 (V)	15 minute 100 year Summer I+20%	70.075	68.542	0.277	0.000	1.10		1.323	52.644	108.9	SURCHARGED

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100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Catchment C

PN	US/MH Name	Event	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Maximum Vol (m³)	Discharge Vol (m³)	Pipe Flow (l/s)	Status
44.000	S27 (V)	15 minute 100 year Summer I+20%	70.075	68.805	0.540	0.000	1.22		1.608	19.168	125.5	SURCHARGED
43.004	S28	15 minute 100 year Summer I+20%	70.325	68.457	0.177	0.000	1.42		4.090	71.789	211.4	SURCHARGED
28.014	S29	15 minute 100 year Winter I+20%	68.700	68.036	1.016	0.000	0.86		29.706	1092.932	1056.9	SURCHARGED
45.000	KD3	30 minute 100 year Winter I+20%	67.915	67.779	0.764	0.242	0.38		1.197	12.908	16.5	FLOOD
28.015	S30	30 minute 100 year Winter I+20%	68.300	68.301	1.392	2.819	0.70		37.081	1454.120	982.7	FLOOD
46.000	KD4	30 minute 100 year Winter I+20%	67.940	67.945	0.905	4.755	0.69		6.105	22.213	40.0	FLOOD
46.001	KD9	30 minute 100 year Winter I+20%	67.970	67.971	0.941	1.456	1.35		2.686	53.132	68.1	FLOOD
47.000	KD5	15 minute 100 year Winter I+20%	69.785	69.045	0.010	0.000	1.01		0.805	72.824	152.2	SURCHARGED
47.001	KD6	15 minute 100 year Winter I+20%	69.440	68.753	0.063	0.000	1.40		1.813	100.224	210.3	SURCHARGED
47.002	KD7	15 minute 100 year Winter I+20%	69.095	68.464	-0.166	0.000	0.71		1.788	127.619	270.1	OK
47.003	KD8	30 minute 100 year Winter I+20%	68.515	68.090	0.175	0.000	0.92		2.149	204.422	261.7	SURCHARGED
46.002	S31	30 minute 100 year Winter I+20%	68.050	67.938	0.623	0.327	0.95		5.816	257.553	328.7	FLOOD
46.003	Tank 4 - By Pass	30 minute 100 year Winter I+20%	68.050	67.993	0.753	0.000	1.52		4.070	257.554	330.1	FLOOD RISK
46.004	S32	30 minute 100 year Winter I+20%	68.050	68.050	0.825	0.562	1.20		3.688	257.554	330.9	FLOOD
28.016	S33	30 minute 100 year Winter I+20%	68.208	68.208	1.479	0.458	0.93		35.717	1706.133	1210.2	FLOOD
28.017	S34	30 minute 100 year Winter I+20%	68.650	67.600	1.011	0.000	0.85		42.276	1696.988	1102.3	SURCHARGED
48.000	KD10	15 minute 100 year Winter I+20%	68.375	68.211	0.811	0.000	0.86		1.166	12.100	22.9	FLOOD RISK
48.001	S35	15 minute 100 year Winter I+20%	68.455	68.152	0.762	0.000	0.54		1.191	12.100	24.6	FLOOD RISK
49.000	KD11	15 minute 100 year Winter I+20%	69.785	69.058	0.173	0.000	1.25		0.529	33.331	70.2	SURCHARGED
49.001	KD12	15 minute 100 year Winter I+20%	69.440	68.958	0.058	0.000	1.46		1.864	65.300	141.3	SURCHARGED
49.002	KD13	15 minute 100 year Winter I+20%	69.095	68.412	0.067	0.000	1.40		0.906	97.250	210.9	SURCHARGED
49.003	KD14	15 minute 100 year Winter I+20%	68.750	68.190	0.115	0.000	1.26		2.881	129.211	275.7	SURCHARGED
50.000	KD15	15 minute 100 year Winter I+20%	68.375	68.289	0.889	0.000	1.33		1.254	31.734	64.8	FLOOD RISK
48.002	S36	15 minute 100 year Winter I+20%	68.455	68.075	0.495	0.000	1.43		4.838	173.045	355.6	FLOOD RISK
48.003	Tank 5 - Bypass	15 minute 100 year Winter I+20%	68.455	67.861	0.351	0.000	2.19		2.365	173.045	353.7	SURCHARGED
48.004	S37	15 minute 100 year Winter I+20%	68.455	67.645	0.150	0.000	2.24		1.934	173.049	355.3	SURCHARGED
28.018	S38 (P)	30 minute 100 year Winter I+20%	68.625	67.387	0.998	0.000	0.85		73.295	1916.513	1197.1	SURCHARGED
28.019	Ex SC41	30 minute 100 year Winter I+20%	70.000	67.327	1.427	0.000	0.36		46.005	1914.899	1169.0	SURCHARGED
9.018	C44	30 minute 100 year Winter I+20%	69.398	66.880	3.133	0.000	1.25		73.766	4356.005	2519.9	SURCHARGED
51.000	C19	15 minute 100 year Winter I+20%	83.721	82.750	-0.071	0.000	0.54		0.084	9.694	20.8	OK
51.001	C20	15 minute 100 year Winter I+20%	82.256	81.309	-0.047	0.000	0.73		0.122	15.670	34.1	OK
51.002	C21	15 minute 100 year Winter I+20%	80.753	80.548	0.695	0.000	0.91		1.114	21.598	43.8	FLOOD RISK
51.003	C22	15 minute 100 year Winter I+20%	79.479	79.483	0.904	4.467	1.12		5.833	32.277	50.0	FLOOD
51.004	C23	15 minute 100 year Winter I+20%	79.479	78.011	1.561	0.000	1.31		2.430	46.430	66.9	SURCHARGED
51.005	C24	15 minute 100 year Winter I+20%	77.829	77.406	1.368	0.000	1.07		3.274	63.557	91.8	SURCHARGED
52.000	OB1	15 minute 100 year Winter I+20%	76.990	76.148	0.144	0.000	0.26		0.327	0.913	3.6	SURCHARGED
52.001	PPIC1	15 minute 100 year Winter I+20%	77.050	76.148	0.194	0.000	0.38		0.396	0.913	6.4	SURCHARGED
52.002	PPIC2	15 minute 100 year Winter I+20%	77.020	76.155	0.361	0.000	0.93		0.830	0.913	13.0	SURCHARGED
53.000	BI RWP	15 minute 100 year Winter I+20%	77.000	76.167	0.373	0.000	0.32		0.586	1.370	4.4	SURCHARGED
52.003	Ex. SC25	15 minute 100 year Winter I+20%	76.921	76.166	0.422	0.000	0.31		0.802	10.045	25.9	SURCHARGED
52.004	Ex. SC26	15 minute 100 year Winter I+20%	76.304	76.147	0.993	0.000	0.43		2.146	22.600	36.4	FLOOD RISK
54.000	New gully	15 minute 100 year Winter I+20%	75.580	75.588	0.228	8.045	1.67		8.358	7.761	22.6	FLOOD
54.001	Separator	15 minute 100 year Winter I+20%	76.300	75.896	0.761	0.000	1.93		1.338	7.761	22.9	SURCHARGED
55.000	OB2	15 minute 100 year Winter I+20%	76.140	76.038	0.783	0.000	0.30		1.049	1.826	5.0	FLOOD RISK
56.000	MS RWP	15 minute 100 year Winter I+20%	76.625	76.040	0.885	0.000	0.38		1.165	2.740	5.8	SURCHARGED
54.002	PS3	15 minute 100 year Winter I+20%	76.550	76.031	0.936	0.000	0.86		1.734	12.336	31.6	SURCHARGED
57.000	OB3	15 minute 100 year Winter I+20%	76.575	76.122	1.027	0.000	0.43		1.326	2.968	7.0	SURCHARGED
52.005	PS4	15 minute 100 year Winter I+20%	76.575	76.105	1.125	0.000	1.05		4.077	40.643	64.5	SURCHARGED
51.006	C27	15 minute 100 year Winter I+20%	76.336	76.100	1.180	0.000	1.07		3.464	137.304	167.5	FLOOD RISK

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100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Catchment C

PN	US/MH Name	Event	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Maximum Vol (m³)	Discharge Vol (m³)	Pipe Flow (l/s)	Status
51.007	C28	15 minute 100 year Winter I+20%	74.920	74.920	1.120	0.314	0.96		5.369	161.525	196.8	FLOOD
58.000	C29	15 minute 100 year Winter I+20%	75.557	75.562	1.330	4.588	1.07		6.250	28.814	35.0	FLOOD
58.001	C30	15 minute 100 year Winter I+20%	74.373	74.376	1.203	3.411	1.47		5.419	40.510	51.2	FLOOD
58.002	C31	15 minute 100 year Winter I+20%	73.349	73.102	0.962	0.000	0.75		1.740	51.245	60.1	FLOOD RISK
58.003	C32	15 minute 100 year Winter I+20%	72.668	72.670	1.295	2.305	0.75		6.162	56.094	82.5	FLOOD
51.008	C33	15 minute 100 year Summer I+20%	72.929	72.662	1.370	0.000	1.01		7.834	246.428	340.1	FLOOD RISK
51.009	C34	15 minute 100 year Winter I+20%	69.716	69.737	1.221	21.241	1.07		28.825	337.171	376.2	FLOOD
51.010	C35	30 minute 100 year Winter I+20%	66.836	66.850	1.214	13.939	1.05		20.882	475.320	378.9	FLOOD
51.011	C36	30 minute 100 year Winter I+20%	66.255	66.339	1.284	83.961	1.22		92.427	513.425	411.6	FLOOD
51.012	C37	30 minute 100 year Winter I+20%	66.211	66.252	1.333	41.480	1.32		55.706	548.443	446.7	FLOOD
51.013	C38	30 minute 100 year Summer I+20%	66.775	66.441	1.657	0.000	1.38		14.927	553.450	505.2	FLOOD RISK
51.014	C39	30 minute 100 year Winter I+20%	68.127	66.335	1.851	0.000	1.72		29.346	778.616	630.9	SURCHARGED
51.015	C40	30 minute 100 year Winter I+20%	69.594	66.047	1.863	0.000	0.73		29.390	778.545	581.1	SURCHARGED
9.019	C46	30 minute 100 year Winter I+20%	69.215	65.711	2.769	0.000	1.26		53.392	5165.394	2870.6	SURCHARGED
9.020	C47	30 minute 100 year Winter I+20%	65.851	63.329	1.848	0.000	1.96		63.913	5201.321	2889.7	SURCHARGED
59.000	OB1	15 minute 100 year Winter I+20%	66.530	66.531	0.846	0.621	0.37		1.826	11.908	22.2	FLOOD
60.000	OB2	30 minute 100 year Winter I+20%	66.465	66.491	1.041	26.451	0.83		27.933	91.844	92.7	FLOOD
59.001	S1	15 minute 100 year Winter I+20%	66.570	66.515	1.265	0.000	1.70		3.318	81.771	113.2	FLOOD RISK
61.000	OB3	15 minute 100 year Winter I+20%	66.465	66.479	1.389	13.776	0.80		16.989	60.731	118.2	FLOOD
59.002	S2	15 minute 100 year Winter I+20%	66.575	66.510	1.465	0.000	0.57		8.617	141.766	217.3	FLOOD RISK
62.000	OB4	15 minute 100 year Winter I+20%	66.610	66.615	1.025	4.515	1.03		5.912	23.287	38.9	FLOOD
62.001	S3	15 minute 100 year Summer I+20%	66.715	66.618	1.108	0.000	0.95		1.876	20.798	38.3	FLOOD RISK
63.000	OB5	15 minute 100 year Winter I+20%	66.610	66.616	1.366	6.125	0.73		9.200	58.443	113.8	FLOOD
62.002	S4	30 minute 100 year Winter I+20%	66.715	66.600	1.400	0.000	0.56		6.572	104.182	103.3	FLOOD RISK
64.000	OB6	15 minute 100 year Winter I+20%	66.610	66.612	1.542	2.183	1.66		4.258	58.215	109.7	FLOOD
62.003	S5	15 minute 100 year Winter I+20%	66.715	66.542	1.542	0.000	0.58		12.049	138.169	201.5	FLOOD RISK
59.003	S6	15 minute 100 year Winter I+20%	66.715	66.509	1.609	0.000	1.19		13.295	273.037	357.9	FLOOD RISK
65.000	OB7	15 minute 100 year Winter I+20%	67.085	66.715	0.565	0.000	0.64		0.804	7.534	16.1	FLOOD RISK
65.001	S8	15 minute 100 year Winter I+20%	67.320	66.644	0.759	0.000	0.75		1.189	7.541	15.0	SURCHARGED
66.000	OB8	15 minute 100 year Winter I+20%	67.085	66.672	1.127	0.000	0.68		1.524	15.069	29.6	SURCHARGED
65.002	S9	15 minute 100 year Winter I+20%	67.320	66.565	1.125	0.000	0.66		2.452	22.609	37.8	SURCHARGED
67.000	OB9	15 minute 100 year Winter I+20%	67.085	66.575	1.690	0.000	0.78		2.160	18.179	34.9	SURCHARGED
59.004	S7	15 minute 100 year Summer I+20%	67.320	66.449	1.674	0.000	1.29		20.026	271.611	367.2	SURCHARGED
68.000	OB10	15 minute 100 year Winter I+20%	66.940	66.585	1.695	0.000	1.06		2.081	9.132	17.0	FLOOD RISK
68.001	S10	15 minute 100 year Winter I+20%	67.175	66.444	1.664	0.000	1.44		2.217	9.011	22.3	SURCHARGED
59.005	S11	15 minute 100 year Summer I+20%	67.175	66.345	1.645	0.000	1.03		13.749	271.406	356.6	SURCHARGED
59.006	S12	120 minute 100 year Winter I+20%	67.050	66.004	1.319	0.000	0.70		6.619	629.199	196.8	SURCHARGED
59.007	FRS1	120 minute 100 year Winter I+20%	67.065	65.995	1.425	0.000	0.57		8.346	624.707	195.1	SURCHARGED
59.008	S13	120 minute 100 year Winter I+20%	67.125	65.985	1.440	0.000	0.74		8.515	619.715	193.9	SURCHARGED
69.000	CP5	120 minute 100 year Winter I+20%	67.070	65.988	0.113	0.000	0.38		5.508	150.181	51.7	SURCHARGED
70.000	G1	120 minute 100 year Winter I+20%	66.385	65.983	1.313	0.000	0.15		1.649	6.832	2.5	SURCHARGED
59.009	S14	120 minute 100 year Winter I+20%	67.000	65.979	1.459	0.000	0.54		11.229	769.449	243.0	SURCHARGED
71.000	CP8	120 minute 100 year Winter I+20%	67.215	65.945	0.680	0.000	0.58		20.805	80.511	27.6	SURCHARGED
59.010	AT1	120 minute 100 year Winter I+20%	69.000	65.976	1.516	0.000	0.11		483.630	584.535	45.0	SURCHARGED
59.011	S15	60 minute 100 year Summer I+20%	66.050	63.747	-0.213	0.000	0.19		0.397	278.596	45.0	OK
72.000	SSFD	30 minute 100 year Winter I+20%	63.720	63.741	1.021	20.721	7.57		26.551	68.431	42.8	FLOOD
59.012	Ex SC72a	30 minute 100 year Winter I+20%	63.720	63.527	0.807	0.000	1.08		2.037	197.570	75.0	FLOOD RISK
9.021	Spur	15 minute 100 year Summer I+20%	64.435	61.055	0.450	0.000	1.29		15.824	3820.473	2747.9	SURCHARGED*
9.022	C48	30 minute 100 year Winter I+20%	63.019	59.993	-0.167	0.000	0.96		27.882	5419.155	2944.3	OK

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100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Catchment C

PN	US/MH Name	Event	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Maximum Vol (m³)	Discharge Vol (m³)	Pipe Flow (l/s)	Status
9.023	C49	30 minute 100 year Winter I+20%	60.634	58.134	0.031	0.000	0.93		11.988	5440.911	2941.6	SURCHARGED
9.024	C50	30 minute 100 year Winter I+20%	57.788	55.990	0.340	0.000	1.11		18.838	5486.463	2963.6	SURCHARGED
9.025	C51	30 minute 100 year Winter I+20%	55.447	53.803	-0.304	0.000	0.77		6.492	5539.014	2980.8	OK
73.000	SW01	15 minute 100 year Winter I+20%	58.600	57.938	-0.062	0.000	0.63		0.094	5.405	11.3	OK
73.001	SW02	15 minute 100 year Winter I+20%	58.370	57.542	-0.114	0.000	0.46		0.126	11.577	24.4	OK
74.000	SW02A	15 minute 100 year Winter I+20%	64.330	62.746	-0.084	0.000	0.40		0.070	14.962	32.1	OK
73.002	SW03	15 minute 100 year Winter I+20%	57.754	56.981	-0.119	0.000	0.65		0.281	35.104	74.1	OK
73.003	SW04	15 minute 100 year Winter I+20%	57.214	56.425	-0.086	0.000	0.82		0.650	47.341	98.0	OK
73.004	SW05	15 minute 100 year Winter I+20%	56.600	55.437	-0.115	0.000	0.69		0.494	47.341	97.3	OK
75.000	SW05A	15 minute 100 year Winter I+20%	56.073	55.374	-0.099	0.000	0.25		0.052	2.741	5.9	OK
73.005	SW06	15 minute 100 year Winter I+20%	55.886	54.932	-0.128	0.000	0.73		0.589	54.651	107.2	OK
73.006	SW07	15 minute 100 year Winter I+20%	55.692	54.428	-0.153	0.000	0.64		1.444	59.000	111.0	OK
73.007	SW08	15 minute 100 year Winter I+20%	55.529	53.849	-0.149	0.000	0.67		1.187	62.125	111.9	OK
73.008	SW09	15 minute 100 year Winter I+20%	55.422	53.462	-0.146	0.000	0.68		1.208	65.631	115.7	OK
76.000	SW10	15 minute 100 year Summer I+20%	55.857	54.057	-0.600	0.000	0.00		0.000	0.000	0.0	OK
76.001	SW11	15 minute 100 year Summer I+20%	55.738	53.761	-0.750	0.000	0.00		0.000	0.000	0.0	OK
76.002	SW12	15 minute 100 year Summer I+20%	55.647	53.650	-0.750	0.000	0.00		0.000	0.000	0.0	OK
76.003	SW13	15 minute 100 year Summer I+20%	55.528	53.367	-0.750	0.000	0.00		0.000	0.000	0.0	OK
76.004	SW14	15 minute 100 year Summer I+20%	55.484	53.177	-0.750	0.000	0.00		0.000	0.000	0.0	OK
76.005	SW15	15 minute 100 year Summer I+20%	55.612	52.641	-0.750	0.000	0.00		0.000	0.000	0.0	OK
73.009	SW16	15 minute 100 year Winter I+20%	55.589	52.562	-0.683	0.000	0.13		0.743	99.975	152.0	OK
77.000	SW17	15 minute 100 year Winter I+20%	58.606	58.052	-0.073	0.000	0.73		0.167	14.356	28.4	OK
77.001	SW18	15 minute 100 year Winter I+20%	58.445	57.585	-0.053	0.000	0.87		0.617	23.497	44.2	OK
77.002	SW19	15 minute 100 year Winter I+20%	57.723	56.681	-0.057	0.000	0.89		0.429	26.631	49.3	OK
78.000	SW20	15 minute 100 year Winter I+20%	57.200	56.626	-0.024	0.000	0.97		0.137	7.788	16.2	OK
77.003	SW21	15 minute 100 year Winter I+20%	57.444	56.163	-0.058	0.000	0.90		0.431	34.419	64.7	OK
77.004	SW22	15 minute 100 year Winter I+20%	57.084	55.698	-0.027	0.000	0.99		0.355	34.418	63.4	OK
79.000	Gully	15 minute 100 year Winter I+20%	56.774	55.832	-0.118	0.000	0.10		0.008	2.326	5.0	OK
77.005	SW23	15 minute 100 year Winter I+20%	56.562	54.611	-0.050	0.000	0.96		0.361	36.745	66.7	OK
80.000	SW24	15 minute 100 year Summer I+20%	55.645	54.530	-0.150	0.000	0.00		0.000	0.000	0.0	OK
80.001	SW25	15 minute 100 year Summer I+20%	56.340	54.318	-0.150	0.000	0.00		0.000	0.000	0.0	OK
80.002	SW26	15 minute 100 year Summer I+20%	56.262	54.236	-0.150	0.000	0.00		0.000	0.000	0.0	OK
77.006	SW27	15 minute 100 year Winter I+20%	56.310	54.061	0.000	0.000	1.01		0.558	36.745	65.0	OK
77.007	SW28	15 minute 100 year Winter I+20%	56.044	53.907	-0.048	0.000	1.00		1.405	36.745	63.8	OK
77.008	SW29	15 minute 100 year Winter I+20%	55.892	53.710	-0.175	0.000	0.36		0.369	36.745	63.8	OK
73.010	SW30	15 minute 100 year Winter I+20%	55.503	52.262	-0.696	0.000	0.12		1.650	142.178	214.4	OK
73.011	SW31	15 minute 100 year Winter I+20%	55.327	51.386	-0.700	0.000	0.11		1.373	145.518	217.7	OK
73.012	SW32	15 minute 100 year Winter I+20%	55.648	50.665	-0.691	0.000	0.12		1.146	145.518	217.5	OK
81.000	HD01	15 minute 100 year Winter I+20%	57.100	56.124	-0.076	0.000	0.48		0.078	7.228	15.3	OK
81.001	HD02	15 minute 100 year Winter I+20%	56.041	55.038	-0.086	0.000	0.37		0.076	7.229	15.2	OK
81.002	HD03	15 minute 100 year Winter I+20%	55.655	54.369	-0.080	0.000	0.44		0.078	7.229	15.4	OK
81.003	HD04	15 minute 100 year Winter I+20%	54.782	53.615	0.064	0.000	1.01		0.288	17.721	37.0	SURCHARGED
73.013	36	15 minute 100 year Winter I+20%	51.350	50.272	-0.472	0.000	0.58		3.298	993.088	1710.8	OK
9.026	C52	30 minute 100 year Winter I+20%	51.156	49.241	-0.565	0.000	0.54		4.427	6918.138	4086.2	OK
9.027	C53	30 minute 100 year Winter I+20%	46.900	45.094	-0.426	0.000	0.74		8.545	6914.565	4086.8	OK
9.028	C54	30 minute 100 year Winter I+20%	45.580	43.280	-0.350	0.000	0.85		13.008	6910.600	4083.4	OK
9.029	H20C	1440 minute 100 year Winter I+20%	42.300	41.494	-0.406	0.000	0.07		15.092	20786.762	585.5	OK
82.000	C55a	15 minute 100 year Winter I+20%	42.230	42.240	0.835	9.932	1.37		11.110	22.833	55.5	FLOOD
83.000	C55b	15 minute 100 year Winter I+20%	45.150	43.863	-0.087	0.000	0.37		0.066	9.133	19.6	OK

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100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Catchment C

PN	US/MH Name	Event	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Maximum Vol (m³)	Discharge Vol (m³)	Pipe Flow (l/s)	Status
82.001	C55	15 minute 100 year Summer I+20%	43.800	42.413	1.423	0.000	2.21		4.132	57.067	84.9	SURCHARGED
82.002	56	1440 minute 100 year Winter I+20%	44.900	41.464	0.684	0.000	0.08		2.948	228.984	6.5	SURCHARGED
82.003	C57	1440 minute 100 year Winter I+20%	44.300	41.463	0.948	0.000	0.07		4.454	225.164	6.0	SURCHARGED
82.004	H7C	1440 minute 100 year Winter I+20%	42.500	41.462	1.162	0.000	0.03		3.801	222.000	6.0	SURCHARGED
9.030	BASIN C1	1440 minute 100 year Winter I+20%	42.000	41.461	1.711	0.000	0.08		15559.124	10918.648	72.8	SURCHARGED
9.031	C59	600 minute 100 year Winter I+20%	38.600	37.632	0.682	0.000	0.25		3.336	4577.262	71.7	SURCHARGED
84.000	P2_29	15 minute 100 year Winter I+20%	42.400	42.078	0.878	0.000	0.54		2.602	70.738	142.4	FLOOD RISK
84.001	P2_30	15 minute 100 year Winter I+20%	42.343	42.050	0.933	0.000	1.52		13.551	147.661	299.5	FLOOD RISK
84.002	P2_31	15 minute 100 year Winter I+20%	42.162	42.009	0.929	0.000	0.94		8.428	147.413	256.1	FLOOD RISK
85.000	SC72	15 minute 100 year Winter I+20%	44.017	43.939	0.365	0.000	0.20		0.662	4.567	8.3	FLOOD RISK
85.001	SC73	15 minute 100 year Winter I+20%	43.907	43.910	0.701	3.152	1.11		6.082	27.400	42.6	FLOOD
85.002	SC74	15 minute 100 year Winter I+20%	43.815	43.815	0.898	0.324	1.78		3.454	47.031	67.5	FLOOD
85.003	SC75	15 minute 100 year Winter I+20%	43.201	43.201	0.501	0.000	0.75		2.840	47.038	60.9	FLOOD RISK
85.004	SC76	60 minute 100 year Summer I+20%	43.103	43.103	0.703	0.024	0.43		5.421	101.633	66.5	FLOOD
85.005	SC77	15 minute 100 year Winter I+20%	42.911	42.912	0.762	0.876	0.90		18.200	219.066	280.5	FLOOD
85.006	SC78	15 minute 100 year Winter I+20%	42.668	42.671	0.773	3.396	1.47		35.489	386.770	511.3	FLOOD
85.007	SC79	30 minute 100 year Winter I+20%	42.450	42.461	0.631	10.593	0.63		19.681	507.134	483.5	FLOOD
85.008	SC80	30 minute 100 year Winter I+20%	42.222	42.331	0.801	108.680	0.83		137.036	647.913	381.8	FLOOD
85.009	SC81	30 minute 100 year Winter I+20%	42.120	42.220	0.850	99.850	1.19		144.768	886.669	578.4	FLOOD
85.010	SC82	15 minute 100 year Winter I+20%	42.609	42.198	0.975	0.000	1.28		36.075	868.436	636.5	SURCHARGED
85.011	SC83	15 minute 100 year Winter I+20%	42.400	42.078	1.033	0.000	1.46		43.113	874.613	636.5	FLOOD RISK
84.003	P2_32	15 minute 100 year Winter I+20%	42.065	41.947	0.969	0.000	3.29		31.723	1045.682	862.0	FLOOD RISK
84.004	P2_33	30 minute 100 year Winter I+20%	41.991	41.635	0.685	0.000	2.00		9.393	1361.822	902.3	FLOOD RISK
84.005	P2_34	15 minute 100 year Winter I+20%	42.255	41.227	0.375	0.000	3.69		25.317	1094.211	886.1	SURCHARGED
84.006	P1 Slab	15 minute 100 year Winter I+20%	42.398	40.895	0.065	0.000	2.32		6.791	1090.262	888.1	SURCHARGED
86.000	C88	15 minute 100 year Winter I+20%	44.193	42.911	-0.432	0.000	0.00		0.023	0.228	0.4	OK
86.001	C89	15 minute 100 year Winter I+20%	44.062	42.893	-0.319	0.000	0.15		1.294	10.045	19.4	OK
86.002	C90	15 minute 100 year Winter I+20%	43.963	42.819	-0.276	0.000	0.28		2.171	21.688	38.0	OK
86.003	C91	15 minute 100 year Winter I+20%	43.801	42.705	-0.228	0.000	0.45		3.736	38.353	60.8	OK
86.004	C92	15 minute 100 year Winter I+20%	43.639	42.572	-0.199	0.000	0.54		4.752	55.018	74.1	OK
86.005	C93	15 minute 100 year Winter I+20%	43.417	42.376	-0.173	0.000	0.65		6.339	77.848	88.6	OK
86.006	C94	30 minute 100 year Winter I+20%	43.195	42.182	-0.145	0.000	0.78		7.564	132.374	106.0	OK
86.007	C95	30 minute 100 year Winter I+20%	43.004	42.011	-0.125	0.000	0.85		8.000	158.154	116.0	OK
86.008	C96	30 minute 100 year Winter I+20%	42.813	41.833	-0.112	0.000	0.91		8.569	183.714	123.7	OK
86.009	C97	30 minute 100 year Winter I+20%	42.622	41.620	-0.134	0.000	0.84		7.628	209.119	130.7	OK
87.000	C87	15 minute 100 year Summer I+20%	42.450	41.600	-0.150	0.000	0.00		0.000	0.000	0.0	OK
88.000	P2_1	15 minute 100 year Summer I+20%	44.315	44.273	1.158	0.000	0.47		1.474	2.347	7.5	FLOOD RISK
88.001	P2_2	15 minute 100 year Winter I+20%	44.251	44.251	1.200	0.170	0.99		1.760	8.120	15.6	FLOOD
88.002	P2_3	15 minute 100 year Winter I+20%	44.154	44.157	1.203	3.346	1.37		5.008	11.591	20.7	FLOOD
88.003	P2_4	15 minute 100 year Winter I+20%	44.141	44.142	1.255	1.048	1.24		2.727	22.553	25.1	FLOOD
89.000	P2_5	15 minute 100 year Winter I+20%	56.568	56.570	1.202	1.886	1.00		3.384	56.704	96.4	FLOOD
88.004	P2_6	15 minute 100 year Winter I+20%	43.748	43.766	1.323	18.613	1.74		20.810	100.807	115.9	FLOOD
88.005	P2_7	15 minute 100 year Winter I+20%	43.614	43.620	1.249	5.855	1.22		8.190	110.312	114.7	FLOOD
88.006	P2_8	15 minute 100 year Winter I+20%	43.453	43.478	1.258	25.067	1.55		28.980	209.853	258.4	FLOOD
88.007	P2_11	15 minute 100 year Winter I+20%	43.304	43.275	1.257	0.000	1.50		13.374	237.343	293.5	FLOOD RISK
88.008	P2_12	30 minute 100 year Winter I+20%	43.208	43.240	1.244	32.009	1.25		36.958	456.285	401.1	FLOOD
88.009	P_13	30 minute 100 year Winter I+20%	43.102	43.152	1.299	49.663	1.92		66.617	632.076	532.3	FLOOD
88.010	P2_14	15 minute 100 year Winter I+20%	42.969	42.974	1.261	4.958	1.41		29.347	605.518	683.3	FLOOD
88.011	P2_15	30 minute 100 year Winter I+20%	42.830	42.839	1.266	8.598	1.89		43.810	1064.593	921.0	FLOOD

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100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Catchment C

PN	US/MH Name	Event	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Maximum Vol (m³)	Discharge Vol (m³)	Pipe Flow (l/s)	Status
88.012	P2_16	30 minute 100 year Winter I+20%	42.683	42.515	1.087	0.000	3.20		35.729	1067.732	914.7	FLOOD RISK
88.013	P2_17	30 minute 100 year Winter I+20%	42.781	42.246	0.833	0.000	1.48		8.615	1121.819	954.7	SURCHARGED
88.014	P2_18	30 minute 100 year Winter I+20%	42.724	42.151	0.794	0.000	2.16		22.266	1136.842	958.9	SURCHARGED
88.015	P2_19	30 minute 100 year Winter I+20%	42.835	42.070	0.745	0.000	2.29		14.391	1141.784	946.7	SURCHARGED
88.016	P2_20	30 minute 100 year Winter I+20%	43.007	41.989	0.691	0.000	1.55		12.971	1176.061	974.1	SURCHARGED
88.017	P2_21	30 minute 100 year Winter I+20%	42.959	41.857	0.609	0.000	2.26		19.765	1187.001	974.8	SURCHARGED
88.018	P2_22	30 minute 100 year Winter I+20%	43.070	41.767	0.550	0.000	2.47		13.443	1186.632	965.3	SURCHARGED
88.019	P2_23	60 minute 100 year Winter I+20%	43.218	41.652	0.459	0.000	1.28		10.974	1599.323	904.2	SURCHARGED
88.020	P2_24	60 minute 100 year Winter I+20%	43.168	41.545	0.441	0.000	2.12		31.692	1602.228	898.8	SURCHARGED
88.021	P2_25	60 minute 100 year Winter I+20%	43.164	41.480	0.406	0.000	1.29		12.593	1646.410	917.5	SURCHARGED
88.022	P2_25A	60 minute 100 year Winter I+20%	43.078	41.359	0.377	0.000	1.21		32.325	1669.595	916.8	SURCHARGED
88.023	P2_26	60 minute 100 year Winter I+20%	42.941	41.193	0.346	0.000	1.20		46.199	1678.461	906.6	SURCHARGED
88.024	P2_26A	60 minute 100 year Winter I+20%	42.801	41.030	0.321	0.000	2.10		46.793	1687.414	904.8	SURCHARGED
88.025	P2_27	60 minute 100 year Winter I+20%	42.787	40.969	0.275	0.000	1.18		7.630	1704.783	894.3	SURCHARGED
88.026	P2_28	60 minute 100 year Winter I+20%	42.657	40.796	0.234	0.000	1.06		44.462	1724.596	896.7	SURCHARGED
88.027	P2_28A	60 minute 100 year Winter I+20%	42.181	40.634	0.218	0.000	1.51		38.034	1724.591	890.5	SURCHARGED
88.028	246	60 minute 100 year Winter I+20%	42.490	40.537	0.167	0.000	2.18		16.544	1724.457	890.7	SURCHARGED
86.010	C98	60 minute 100 year Winter I+20%	42.480	40.457	0.115	0.000	1.65		10.882	2019.155	1024.8	SURCHARGED
84.007	C65	60 minute 100 year Winter I+20%	42.458	39.556	-0.744	0.000	0.31		2.755	4026.569	1799.1	OK
84.008	C66	60 minute 100 year Winter I+20%	38.800	37.741	-0.409	0.000	0.76		12.879	4025.809	1805.1	OK
90.000	P16 - Dummy	15 minute 100 year Summer I+20%	54.000	51.000	-0.225	0.000	0.00		0.000	0.000	0.0	OK
90.001	P16 - Tank	1440 minute 100 year Winter I+20%	51.200	49.472	1.247	0.000	0.15		3135.379	1794.115	13.2	SURCHARGED
90.002	P16 - Basin	2160 minute 100 year Winter I+20%	40.000	39.155	1.230	0.000	0.25		1349.771	2156.204	10.0	SURCHARGED
9.032	BASIN C3	600 minute 100 year Winter I+20%	38.500	37.461	1.131	0.000	0.47		5855.524	8872.442	139.6	SURCHARGED
9.033	C68	480 minute 100 year Winter I+20%	36.717	35.421	-0.197	0.000	0.61		1.478	7051.919	139.6	OK
9.034	C69	480 minute 100 year Winter I+20%	36.300	35.127	-0.266	0.000	0.35		0.999	7046.936	139.6	OK
9.035	C70	2160 minute 100 year Summer I+20%	34.865	33.988	-0.277	0.000	0.32		0.536	25947.541	139.8	OK
9.036	C71	2160 minute 100 year Summer I+20%	33.672	32.942	-0.130	0.000	0.85		1.283	25944.154	139.8	OK

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Appendix 12: EMG 1 Post-MCO MicroDrainage Network Model Sensitivity Testing Calculations

STORM SEWER DESIGN by the Modified Rational Method

Design Criteria for Catchment C

Pipe Sizes STANDARD Manhole Sizes STANDARD

FEH Rainfall Model

Return Period (years)	1	Maximum Time of Concentration (mins)	30
		Foul Sewage (l/s/ha)	0.000
FEH Rainfall Version	1999	Volumetric Runoff Coeff.	0.750
Site Location	GB 447050 329250 SK 47050 29250	PIMP (%)	100
C (1km)	-0.026	Add Flow / Climate Change (%)	0
D1 (1km)	0.351	Minimum Backdrop Height (m)	5.000
D2 (1km)	0.352	Maximum Backdrop Height (m)	0.000
D3 (1km)	0.243	Min Design Depth for Optimisation (m)	1.200
E (1km)	0.303	Min Vel for Auto Design only (m/s)	1.00
F (1km)	2.358	Min Slope for Optimisation (1:X)	500
Maximum Rainfall (mm/hr)	50		

Designed with Level Soffits

Time Area Diagram for Catchment C

Time (mins)	Area (ha)	Time (mins)	Area (ha)	Time (mins)	Area (ha)	Time (mins)	Area (ha)	Time (mins)	Area (ha)	Time (mins)	Area (ha)
0-4	2.254	4-8	14.451	8-12	18.867	12-16	6.947	16-20	0.784	20-24	0.017

Total Area Contributing (ha) = 43.321

Total Pipe Volume (m³) = 3477.321

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Network Design Table for Catchment C

« - Indicates pipe capacity < flow

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
9.032	75.151	0.712	105.5	0.832	0.00	0.0	0.600	o	450	Pipe/Conduit	
9.033	33.595	0.225	149.3	0.000	0.00	0.0	0.600	o	450	Pipe/Conduit	
9.034	65.169	1.128	57.8	0.000	0.00	0.0	0.600	o	450	Pipe/Conduit	
9.035	53.153	1.193	44.6	0.000	0.00	0.0	0.600	o	450	Pipe/Conduit	
9.036	31.803	0.110	289.1	0.000	0.00	0.0	0.600	o	450	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
9.032	20.29	21.96	35.880	43.321	4.3	0.0	0.0	1.98	314.7«	2385.3
9.033	20.09	22.30	35.168	43.321	4.3	0.0	0.0	1.66	264.3«	2385.3
9.034	19.86	22.70	34.943	43.321	4.3	0.0	0.0	2.68	426.1«	2385.3
9.035	19.70	22.99	33.815	43.321	4.3	0.0	0.0	3.05	485.5«	2385.3
9.036	19.45	23.44	32.622	43.321	4.3	0.0	0.0	1.19	189.3«	2385.3

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Manhole Schedules for Catchment C

MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam.,L*W (mm)	Pipe Out PN	Pipe Out Invert Level (m)	Pipe Out Diameter (mm)	Pipes In PN	Pipes In Invert Level (m)	Pipes In Diameter (mm)	Backdrop (mm)
BASIN C3	38.500	2.620	Open Manhole	2400	9.032	35.880	450	9.031	36.250	450	370
								84.008	36.600	1200	1470
								90.002	36.585	225	480
C68	36.717	1.549	Open Manhole	1500	9.033	35.168	450	9.032	35.168	450	
C69	36.300	1.357	Open Manhole	1500	9.034	34.943	450	9.033	34.943	450	
C70	34.865	1.050	Open Manhole	1500	9.035	33.815	450	9.034	33.815	450	
C71	33.672	1.050	Open Manhole	1500	9.036	32.622	450	9.035	32.622	450	
C OUTFALL	33.425	0.913	Open Manhole	450		OUTFALL		9.036	32.512	450	

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
BASIN C3	447173.412	327788.816	447173.412	327788.816	Required	
C68	447228.588	327839.838	447228.588	327839.838	Required	

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Manhole Schedules for Catchment C

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
C69	447223.300	327873.014	447223.300	327873.014	Required	
C70	447219.180	327938.053	447219.180	327938.053	Required	
C71	447223.213	327991.053	447223.213	327991.053	Required	
C OUTFALL	447229.134	328022.300			No Entry	

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PIPELINE SCHEDULES for Catchment C

Upstream Manhole

PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
9.032	o	450	BASIN C3	38.500	35.880	2.170	Open Manhole	2400
9.033	o	450	C68	36.717	35.168	1.099	Open Manhole	1500
9.034	o	450	C69	36.300	34.943	0.907	Open Manhole	1500
9.035	o	450	C70	34.865	33.815	0.600	Open Manhole	1500
9.036	o	450	C71	33.672	32.622	0.600	Open Manhole	1500

Downstream Manhole

PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
9.032	75.151	105.5	C68	36.717	35.168	1.099	Open Manhole	1500
9.033	33.595	149.3	C69	36.300	34.943	0.907	Open Manhole	1500
9.034	65.169	57.8	C70	34.865	33.815	0.600	Open Manhole	1500
9.035	53.153	44.6	C71	33.672	32.622	0.600	Open Manhole	1500
9.036	31.803	289.1	C OUTFALL	33.425	32.512	0.463	Open Manhole	450

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Area Summary for Catchment C

Pipe Number	PIMP Type	PIMP Name	PIMP (%)	Gross Area (ha)	Imp. Area (ha)	Pipe Total (ha)
9.032	User	-	20	4.160	0.832	0.832
9.033	-	-	100	0.000	0.000	0.000
9.034	-	-	100	0.000	0.000	0.000
9.035	-	-	100	0.000	0.000	0.000
9.036	-	-	100	0.000	0.000	0.000
				Total	Total	Total
				4.160	0.832	0.832

Free Flowing Outfall Details for Catchment C

Outfall Pipe Number	Outfall Name	C. Level (m)	I. Level (m)	Min I. Level (m)	D,L (mm)	W (mm)
9.036	C OUTFALL	33.425	32.512	32.512	450	0

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Simulation Criteria for Catchment C

Volumetric Runoff Coeff	0.840	Manhole Headloss Coeff (Global)	0.500	Inlet Coeffiecient	0.800
Areal Reduction Factor	1.000	Foul Sewage per hectare (l/s)	0.000	Flow per Person per Day (l/per/day)	0.000
Hot Start (mins)	0	Additional Flow - % of Total Flow	0.000	Run Time (mins)	2880
Hot Start Level (mm)	0	MADD Factor * 10m³/ha Storage	0.000	Output Interval (mins)	24

Number of Input Hydrographs	0	Number of Offline Controls	12	Number of Time/Area Diagrams	0
Number of Online Controls	18	Number of Storage Structures	10	Number of Real Time Controls	0

Synthetic Rainfall Details

Rainfall Model	FEH	E (1km)	0.303
Return Period (years)	1	F (1km)	2.358
FEH Rainfall Version	1999	Summer Storms	No
Site Location	GB 447050 329250 SK 47050 29250	Winter Storms	Yes
C (1km)	-0.026	Cv (Summer)	0.750
D1 (1km)	0.351	Cv (Winter)	0.840
D2 (1km)	0.352	Storm Duration (mins)	1440
D3 (1km)	0.243		

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Online Controls for Catchment C

Depth/Flow Relationship Manhole: BASIN C3, DS/PN: 9.032, Volume (m³): 28.3

Invert Level (m) 35.880

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	16.7900	0.500	104.9900	1.200	138.3200	2.000	144.5000	2.800	170.9700	3.600	193.8700
0.200	41.1700	0.600	118.7600	1.400	135.2000	2.200	151.5500	3.000	176.9800	3.800	199.1800
0.300	65.5100	0.800	135.0300	1.600	133.8700	2.400	158.2900	3.200	182.7800		
0.400	87.1400	1.000	139.8300	1.800	137.0800	2.600	164.7600	3.400	188.4000		

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Storage Structures for Catchment C

Tank or Pond Manhole: BASIN C3, DS/PN: 9.032

Invert Level (m) 35.980

Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)
0.000	0.0	0.120	1198.0	0.320	3824.0	0.520	4072.0	1.520	5366.0	2.520	6753.0
0.020	53.4	0.220	2469.0	0.420	3948.0	1.020	4708.0	2.020	6048.0		

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+40%% Sensitivity 100 year Return Period
Summary of Critical Results by Maximum Level (Rank 1) for Catchment C

Simulation Criteria

Areal Reduction Factor 1.000 Manhole Headloss Coeff (Global) 0.500 MADD Factor * 10m³/ha Storage 0.000
Hot Start (mins) 0 Foul Sewage per hectare (l/s) 0.000 Inlet Coeffiecient 0.800
Hot Start Level (mm) 0 Additional Flow - % of Total Flow 0.000 Flow per Person per Day (l/per/day) 0.000

Number of Input Hydrographs 0 Number of Offline Controls 12 Number of Time/Area Diagrams 0
Number of Online Controls 18 Number of Storage Structures 10 Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall Model FSR M5-60 (mm) 18.500 Cv (Winter) 0.840
Return Period (years) 100 Ratio R 0.400
Region England and Wales Cv (Summer) 0.750

Margin for Flood Risk Warning (mm) 400.0 DTS Status ON Inertia Status OFF
Analysis Timestep Fine DVD Status OFF

Profile(s) Summer and Winter
Duration(s) (mins) 15, 30, 60, 120, 240, 360, 480, 960, 1440
Sensitivity flows(s) (%) 0, +20, +25, +40

PN	US/MH Name	Event	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Maximum Vol (m³)	Discharge Vol (m³)	Pipe Flow (l/s)	Status
9.032	BASIN C3	960 minute 100 year Winter Q+40%	38.500	37.689	1.359	0.000	0.47		7102.250	14365.529	139.5	SURCHARGED
9.033	C68	960 minute 100 year Winter Q+40%	36.717	35.421	-0.197	0.000	0.61		1.478	14363.102	139.5	OK

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+40%% Sensitivity 100 year Return Period
Summary of Critical Results by Maximum Level (Rank 1) for Catchment C

PN	US/MH Name	Event	US/CL (m)	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Maximum Vol (m³)	Discharge Vol (m³)	Pipe Flow (l/s)	Status
9.034	C69	1440 minute 100 year Winter Q+40%	36.300	35.127	-0.266	0.000	0.35		0.999	21595.622	139.7	OK
9.035	C70	960 minute 100 year Winter Q+40%	34.865	33.988	-0.277	0.000	0.31		0.536	14352.232	139.6	OK
9.036	C71	960 minute 100 year Winter Q+40%	33.672	32.942	-0.130	0.000	0.85		1.283	14342.539	139.6	OK

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Appendix 13: Severn Trent Water Pre-development Enquiry

WONDERFUL ON TAP

SEVERN TRENT

BWB Consulting
11 Portland Street
Manchester
M1 3HU

Severn Trent Water Ltd
Leicester Water Centre
Gorse Hill
Anstey
Leicester
LE7 7GU

www.stwater.co.uk

Email:
Network.Solutions@SevernTrent.co.uk

Vijay Tanna

26th November 2024

F.A.O: Matthew Bailey

Our ref: **1133855**

Dear Sir/Madam,

Proposed Development: (up to 2x industrial units)
North of Sergo East Midlands Gateway, Logistics Park, Kegworth
XY:446900;327500

I refer to your 'Development Enquiry Request' in respect of the above named site. Please find enclosed the sewer records that are included in the fee together with the Supplementary Guidance Notes (SGN) which refer to surface water disposal from development sites.

Protective Strip

No public sewers within site boundary.

Due to a change in legislation on 1 October 2011 there may be former private sewers on the site which have transferred to the responsibility of Severn Trent Water Ltd, which are not shown on the statutory sewer records, but are located in your client's land. These sewers would require protective strips of 3 metres either side of the sewer's centreline that we will not allow to be built over. If such sewers are identified to be present on the site, please contact us for further guidance.

Please note: there is no guarantee that you will be able to build over or close to any Severn Trent sewers, and where a diversion is required there is no guarantee that you will be able to undertake those works on a self-lay basis. Every approach to build near to or divert our assets has to be assessed on its own merit and the decision of what is or isn't permissible is taken based on the risk to the asset and the wider catchment it serves. It is vital therefore that you contact us at the earliest opportunity to discuss the implications of our assets crossing your site. Failure to do so could significantly affect the costs and timescales of your project if it transpires diversionary works need to be carried out by Severn Trent.

Foul Water Drainage

There are no public sewers within close vicinity of the site. There is private drainage around the development site- you should look to investigate the possibility of connection to any nearby private foul drains- subject to a formal Section 106 sewer connection approval.

Alternatively if the above is not feasible the closest public sewer is located south east of the development site and nearest mh is SK4726**4801**. A development of such size would generate approximate foul flows of 2.08l/s (2xdwf)- We would prefer a gravity connection however due to the site topography you may need to consider a pumped solution. This sewer outfalls to a pumping station: (Kegworth - Derby Road (SPS))- which has previously identified capacity issues hence as a last resort if you do opt connect to this location we will need carry out further review/modelling of the sewer to understand if the flows can be accepted.
Please also note, that a connection at this location may involve crossing third party land- You must comply and obtain any third party landowners permission and easement(s) to work on and access private land.

Please note for any discharge of non- domestic flows you will need to consult with our Trade Effluent team via :
trade.effluent@severntrent.co.uk

Surface Water Drainage

Under the terms of Section H of the Building Regulations 2000, the disposal of surface water by means of soakaways should be considered as the primary method. If these are found to be unsuitable, satisfactory evidence will need to be submitted. The evidence should be either percolation test results or by the submission of a statement from the SI consultant (extract or a supplementary letter).

Subject to above Severn Trent Water expects all surface water from the development to be drained in a sustainable way to the nearest watercourse or land drainage channel, subject to the developer discussing all aspects of the developments surface water drainage with the Local Lead Flood Authority (LLFA). Any discharge rate to a watercourse or drainage ditch will be determined by the LLFA / EA.

Please note we do not have any public Surface Water sewers within close proximity of the site- you must look to investigate any private SW drains or look to discharge to any nearby watercourses- Any discharge rate to a watercourse or drainage ditch will be determined by the LLFA / EA.

Connections

For any new connections (including the re-use of existing connections) to the public sewerage system, the developer will need to submit a Section 106 application form. Our Developer Services department are responsible for handling all new connections enquiries

and applications. To contact them for an application form and associated guidance notes please call 0800 7076600 or download from www.stwater.co.uk.

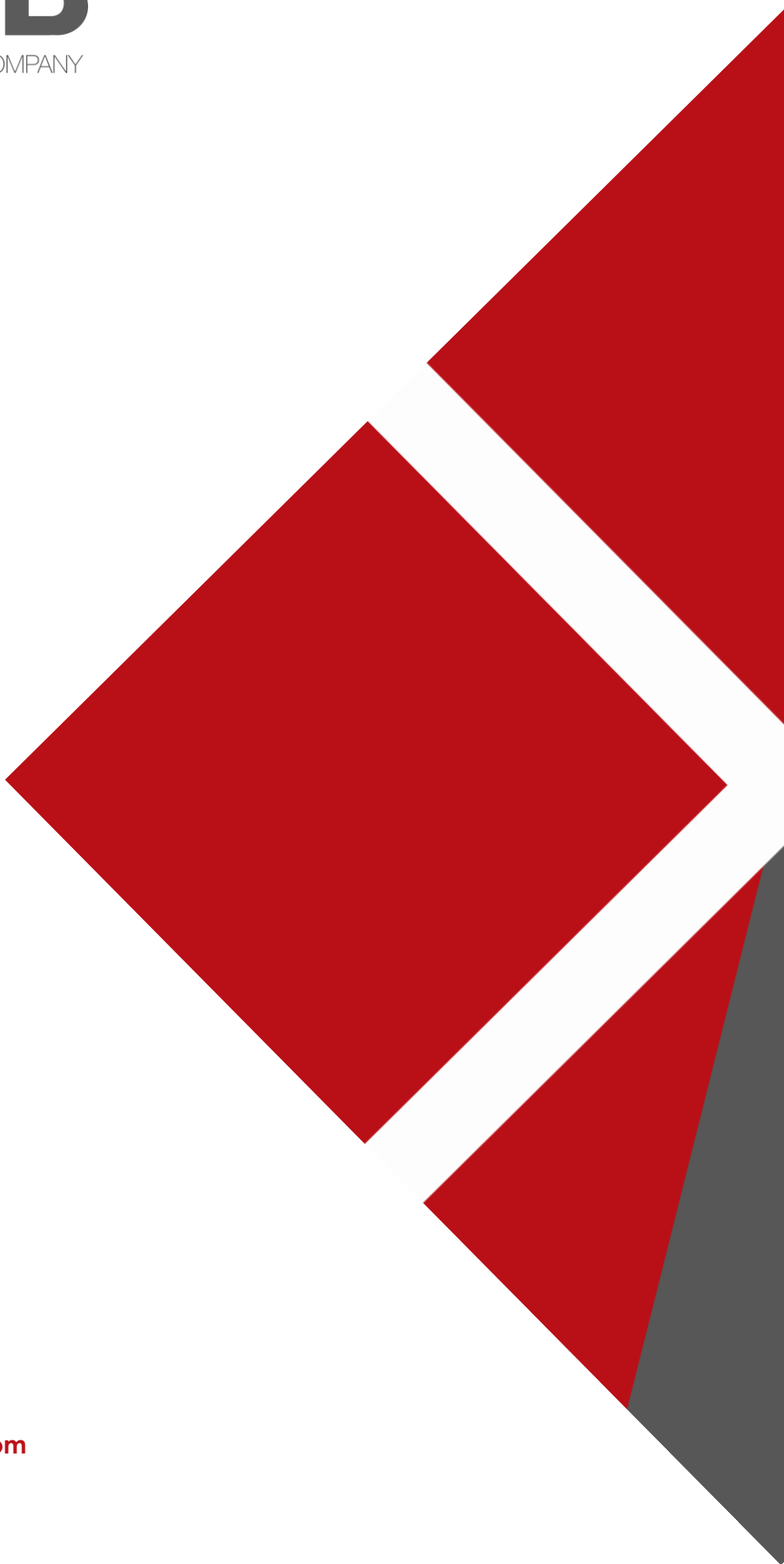
Please quote the above reference in any future correspondence (including e-mails) with STW Limited. Please note that Developer Enquiry responses are only valid for 6 months from the date of this letter.

Yours sincerely

Vijay Tanna
Network Solutions
Developer Services

BWB

A CAF GROUP COMPANY



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