



STN	Easting	Northing	Level	Desc
101	480674.884	178003.526	54.12	HELI. NAIL
102	480710.138	178004.473	54.28	HELI. NAIL
103	480696.558	178007.551	54.27	HELI. NAIL
104	480690.521	177999.241	53.92	NAIL
105	480698.241	177999.876	55.27	NAIL
106	480695.488	177997.471	54.39	HELI. NAIL
107	480694.244	177985.728	56.18	NAIL
108	480692.088	177985.545	56.07	NAIL
109	480691.773	177985.785	56.19	NAIL
110	480691.800	177985.967	55.92	NAIL
111	480691.800	177985.967	56.11	NAIL
112	480691.800	177985.967	56.11	NAIL
113	480691.800	177985.967	56.11	NAIL
114	480691.800	177985.967	56.11	NAIL
115	480691.800	177985.967	56.11	NAIL
116	480691.800	177985.967	56.11	NAIL
117	480691.800	177985.967	56.11	NAIL
118	480691.800	177985.967	56.11	NAIL
119	480691.800	177985.967	56.11	NAIL
120	480691.800	177985.967	56.11	NAIL
121	480691.800	177985.967	56.11	NAIL
122	480691.800	177985.967	56.11	NAIL
123	480691.800	177985.967	56.11	NAIL
124	480691.800	177985.967	56.11	NAIL
125	480691.800	177985.967	56.11	NAIL
126	480691.800	177985.967	56.11	NAIL
127	480691.800	177985.967	56.11	NAIL
128	480691.800	177985.967	56.11	NAIL
129	480691.800	177985.967	56.11	NAIL
130	480691.800	177985.967	56.11	NAIL
131	480691.800	177985.967	56.11	NAIL
132	480691.800	177985.967	56.11	NAIL
133	480691.800	177985.967	56.11	NAIL
134	480691.800	177985.967	56.11	NAIL
135	480691.800	177985.967	56.11	NAIL
136	480691.800	177985.967	56.11	NAIL
137	480691.800	177985.967	56.11	NAIL
138	480691.800	177985.967	56.11	NAIL
139	480691.800	177985.967	56.11	NAIL
140	480691.800	177985.967	56.11	NAIL
141	480691.800	177985.967	56.11	NAIL
142	480691.800	177985.967	56.11	NAIL
143	480691.800	177985.967	56.11	NAIL
144	480691.800	177985.967	56.11	NAIL
145	480691.800	177985.967	56.11	NAIL

TO BE READ IN CONJUNCTION WITH:-

A	FIRST FLOOR LAYOUT ADDED	30:05:24
ISSUE	REVISION	DATE

CHILTERN SURVEYS Ltd.

LAND SURVEYS AND SITE ENGINEERING SERVICES

Spurway Mill Farm, Oakford, Tiverton, Devon. EX16 9EU

Tel: 01398 351277 Mobile: 07932 650676

E-mail: chilternsurveys@tiscali.co.uk

OFFICES IN DEVON AND BUCKINGHAMSHIRE

TITLE:-

Site Survey

PROJECT:-

Lodds Garden Centre
Bath Road
Hare Hatch

SCALE:- 1:200	GENERAL NOTES:-
DRAWN:- J.W.	ALL LEVELS RELATE TO ORDNANCE SURVEY DATUM BY GPS OSGB 36.
DWG. No. HARE2401 Rev.A	GRID RELATES TO OSGB 36
DATE:- 30:04:24	

Appendix D Stakeholder Correspondence

- EA data request



Blaikie, Joshua

From: Enquiries_THM <enquiries_THM@environment-agency.gov.uk>
Sent: 09 September 2024 16:13
To: Whalley, Luke
Subject: THM375343_SM - Ladds Garden Centre, Hare Hatch - Product 4 Data Request

You don't often get email from enquiries_thm@environment-agency.gov.uk. [Learn why this is important](#)

Dear Luke,

Reference: THM375343

Thank you for your email requesting Product 4 data.

The site lies within flood zone 1 and as a result we do not have any detailed flood risk modelling in this location. We are sorry that we are therefore unable to provide modelled flood levels and extents for your site.

You can access our flood map for planning on our website:

<https://flood-map-for-planning.service.gov.uk/>

You can find more information on the long term risk of flooding for this location on our website:

<https://flood-warning-information.service.gov.uk/long-term-flood-risk>

You can find recorded flood outlines for this location via the link below:

<https://data.gov.uk/dataset/recorded-flood-outlines1>

You can find out the risk of flooding from surface water for this location via the link below:

<https://data.gov.uk/dataset/d5ca01ec-e535-4d3f-adc0-089b4f03687d/risk-of-flooding-from-surface-water-suitability>

You may be interested in the following guidance / information publically available:

- **'Planning Practice Guidance'** - provides information about planning considerations in areas at risk of flooding. <https://www.gov.uk/government/collections/planning-practice-guidance>
- **'Planning applications: assessing flood risk'** - information about completing Flood Risk Assessments. <https://www.gov.uk/guidance/flood-risk-assessment-for-planning-applications>
- **'Site specific flood risk assessment: Checklist'** – a checklist to help ensure you have considered all the relevant factors in your flood risk assessment. <https://www.gov.uk/guidance/flood-risk-and-coastal-change#Site-Specific-Flood-Risk-Assessment-checklist-section>
- **'Using modelling for flood risk assessments'** – provides information regarding the use of modelling in flood risk assessments when applying for planning permission. <https://www.gov.uk/guidance/using-modelling-for-flood-risk-assessments>

Please be aware that from 20th July 2021 the climate change allowances required in flood risk assessments have been updated. Please see <https://www.gov.uk/guidance/flood-risk-assessments-climate-change-allowances#contents> for more information.

I hope that we have correctly interpreted your request. Please refer to our Open Government Licence for the permitted use of the supplied data: <http://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/>

Please be aware that many of our datasets are now available online. Simply visit environment.data.gov.uk

We respond to requests for recorded information that we hold under the Freedom of Information Act 2000 (FOIA) and the associated Environmental Information Regulations 2004 (EIR).

Please get in touch if you have any further queries or contact us within two months if you'd like us to review the information we have sent.

Kind regards,

Customers & Engagement Team - Thames



External: 0203 0259 804



enquiries_THM@environment-agency.gov.uk



Environment Agency | Red Kite House, Howbery Park, Wallingford, OX10 8BD

ARE YOU AT RISK F

From: Whalley, Luke <Luke.Whalley@stantec.com>

Sent: 06 September 2024 11:11

To: Enquiries_THM <enquiries_THM@environment-agency.gov.uk>

Subject: THM375343_SM - Ladds Garden Centre, Hare Hatch - Product 4 Data Request

Good morning,

We are undertaking flood risk works for a proposed site in Hare Hatch, Berkshire. Please can you provide any flood risk information as a Product 4 data request. The site location plan is attached. The site is centred at BNG SU8067177934 with the postcode of RG10 9SB.

Please let me know if you require anymore information.

Thanks,

Luke Whalley

Senior Flood Risk Consultant

Office: +44 161 2458900

Direct: +44 117 3327847

Luke.Whalley@stantec.com

100 Barbirolli Square
Manchester
M2 3AB





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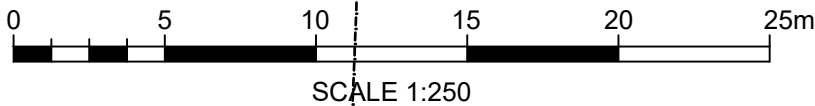
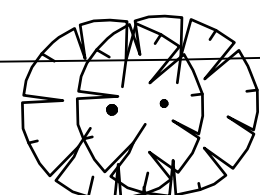
Attention: Ce courriel provient de l'extérieur de Stantec. Veuillez prendre des précautions supplémentaires.

Atención: Este correo electrónico proviene de fuera de Stantec. Por favor, tome precauciones adicionales.

Appendix E Surface Water Drainage Strategy

- 332611948-001-P02
- Greenfield calcs
- Brownfield calcs
- InfoDrainage regular outfall outputs
- InfoDrainage surcharged outfall outputs





Stantec UK Limited
61 Oxford Street
Manchester
M1 6EQ
Tel. +44 161 245 8900
www.stantec.com/uk

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UTILITIES NOTE: The position of any existing public or private sewers, utility services, plant or apparatus shown on this drawing is believed to be correct, but no warranty to this is expressed or implied. Other such plant or apparatus may also be present but not shown. The Contractor is therefore advised to undertake their own investigation where the presence of any existing sewers, services, plant or apparatus may affect their operations.

1. MASTERPLAN BASED ON DRAWING: LADDS GARDEN CENTRE SITE LAYOUT 00525
2. LEVELS AND DITCH INFORMATION TAKEN FROM TOPOGRAPHICAL SURVEY DRAWING HARE2401 Rev.A BY CHILTERN SURVEYS LTD. 20.04.2024
3. SUITABLE DIGGING METHODS TO BE USED WHERE PIPES PASS THROUGH ROOT PROTECTION AREAS

 SITE BOUNDARY
 SURFACE WATER MANHOLE
 SURFACE WATER PIPE
 PROPOSED PERMEABLE PAVEMENT

Issue Status

This document is suitable only for the purpose noted above.
Use of this document for any other purpose is not permitted.

Client/Project
WESTBOURNE HOMES

Title _____

PROPOSED DRAINAGE LAYOUT

Project No. 332611948	A1 Scale 1:250
Revision P02	Drawing No. 332611948/001

offered: 23/07/2025, 2025-07-23 1:59:20 PM by: Taylor, Vanessa
 ORIGINAL SHEET - BSCA1 \\msrc-bcs-001\corp-bcs\projects\332611948\addis_garden\centre\100\hydra\working\drainage\tech_note\cad\dwg\332611948-001_proposed_drainage_layout

FEH Greenfield Runoff

Using the 2008 Statistical Method QMED Equation



Project Title	Ladds Garden Centre		
Project No	332611948		

Methodology as set out in SuDS Manual 24.3.2

[SUFS Manual Chapter 24](#)

1 Retrieve FEH Catchment Information

Define BFIHOST definition source	BFIHOST	FEH	see note 1
Catchment Descriptors		0.502	
	SAAR	659.0	see note 1
	FARL	1.0	see note 2

2 Derive QBAR (mean annual flood)

Define area	Site Area	0.5	ha	
	Applied Area	50.0	ha	see note 3
FEH Index Flood (SuDS Manual Equation 24.2)	QMED (Q ₂)	1.3	l/s	see note 4
Calculate QBAR by dividing QMED by 2yr growth factor	QBAR	1.5	l/s	see note 5

3 Select appropriate growth factors

FSR Hydrological Region		6
100yr Growth Curve Factor	GQ ₁₀₀	3.19
30yr Growth Curve Factor	GQ ₃₀	2.40
10yr Growth Curve Factor	GQ ₁₀	1.62
2yr Growth Curve Factor	GQ ₂	0.88
1yr Growth Curve Factor	GQ ₁	0.85

(refer to FSR Hydrological Region tab)



Figure 20.1 Hydrological areas

4 Derive Flood Frequency

Greenfield Runoff per 1ha

100yr Peak Runoff Rate	Q ₁₀₀	4.8	l/s	Q ₁₀₀	9.0	l/s/ha
30yr Peak Runoff Rate	Q ₃₀	3.6	l/s	Q ₃₀	6.7	l/s/ha
10yr Growth Curve Rate	Q ₁₀	2.4	l/s	Q ₁₀	4.5	l/s/ha
QBAR Peak Runoff Rate	QBAR	1.5	l/s	QBAR	2.8	l/s/ha
2yr Peak Runoff Rate	Q ₂	1.3	l/s	Q ₂	2.5	l/s/ha
1yr Peak Runoff Rate	Q ₁	1.3	l/s	Q ₁	2.4	l/s/ha

DOCUMENT ISSUE RECORD

Rev	Comments	Prepared	Date	Checked	Date
A	Original calculation	JB	02/07/2025	EE	02/07/2025

Brownfield Runoff Rates

Modified Rational Method



Project Title	Ladds Garden Centre	
Project No	332611948	

Existing Site Condition

Rainfall Model		FEH
Storm Duration		360.00 mins
Global Time of Entry		5.00 mins
Volumetric Runoff Coefficient	Cv	0.85
Routing Coefficient	Cr	1.30
Contributing Area	A	1.31 ha

	Average Rainfall Intensity, i (mm/hr)	Runoff Rate , Q (l/s)	
1 in 1 Year	3.1	12.5	FEH22
1 in 2 Year	4.28	17.2	FEH22
1 in 30 Year	9.4	37.8	FEH22
1 in 100 Year	11.71	47.1	FEH22

Based on the Modified Rational Method as described in CIRIA C753 - The SuDS Manual 2015

EQ. 24.5

Modified rational method equation to determine peak flow rates

$$Q = 2.78 C i A$$

where:

- Q = design event peak rate of runoff (l/s)
- C = non-dimensional runoff coefficient which is dependent on the catchment characteristics

$$C = C_v C_R$$

where: C_v = volumetric runoff coefficient

C_R = dimensionless routing coefficient

- i = rainfall intensity for the design return period (in mm/hr) and for a duration equal to the "time of concentration" of the network
- A = total catchment area being drained (ha)

Note: 2.78 is a conversion factor to address the rainfall unit being in mm/hr.

DOCUMENT ISSUE RECORD

Rev	Comments	Prepared	Date	Checked	Date
-	Original calculation	JB	02/07/2025	EE	02/07/2025

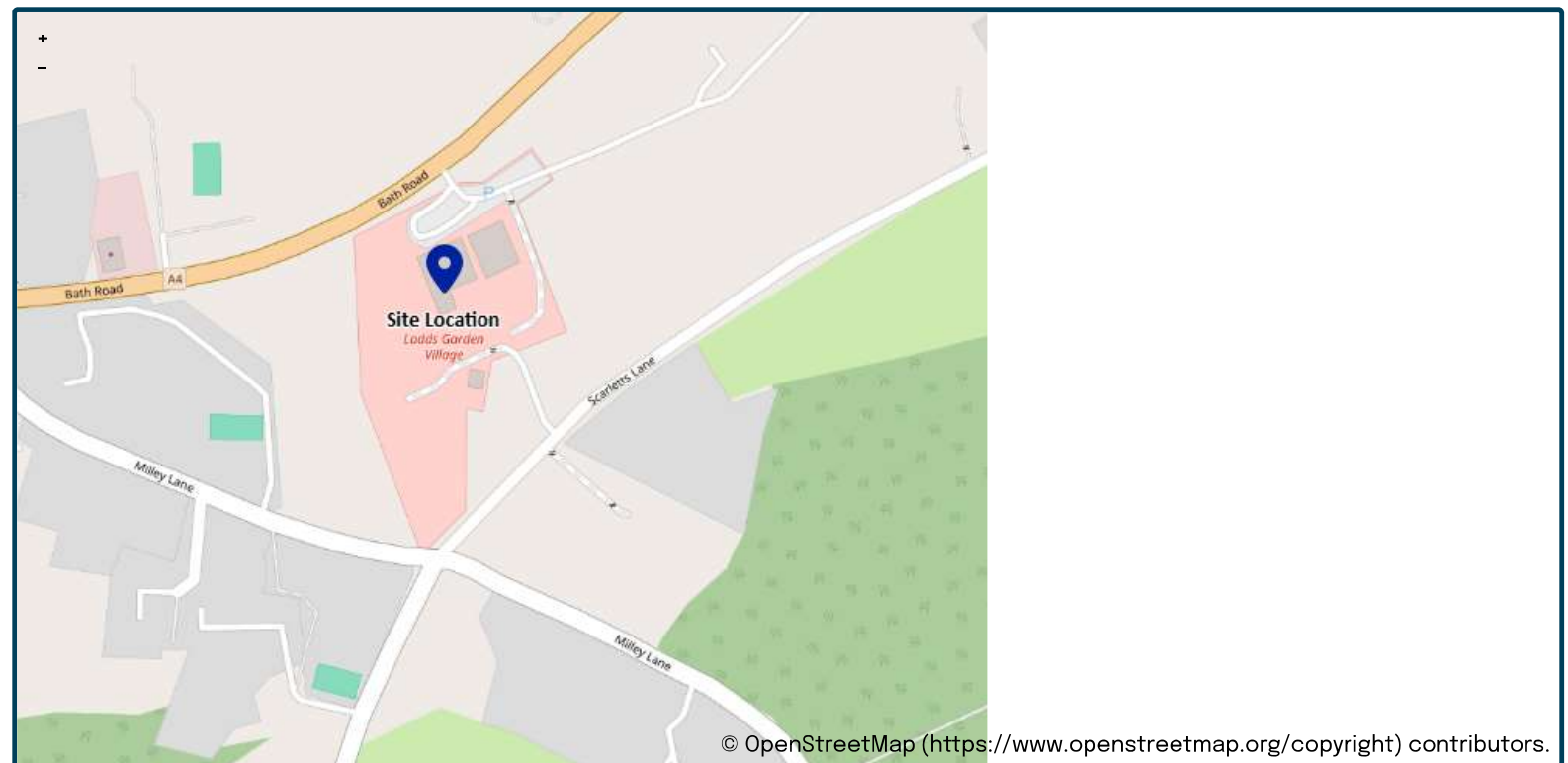
This is an estimation of the greenfield runoff rates that are used to meet normal best practice criteria in line with Environment Agency guidance “Rainfall runoff management for developments”, SC030219 (2013), the SuDS Manual C753 (CIRIA, 2015) and the non-statutory standards for SuDS (Defra, 2015). 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	17/06/2025
Calculated by	Josh Blaikie
Reference	
Model version	2.0.1

Location

Site name	Ladds Garden Centre
Site location	Reading



Site easting	480684
Site northing	177916

Site details

Total site area (ha)	1.573	ha
----------------------	------------------------------------	----

Greenfield runoff

Method

Method	IH124		
	<u>My value</u>	☐	<u>Map value</u>
SAAR (mm)	657 mm		657
How should SPR be derived?	WRAP soil type		
WRAP soil type	4 4	☐	4 4
SPR	0.47 0.47		
QBar (IH124) (l/s)	7.1 7.1		 l/s

Growth curve factors

	<u>My value</u>	☐	<u>Map value</u>
Hydrological region	6 6		6 6
1 year growth factor	0.85 0.85		
2 year growth factor	0.88 0.88		
10 year growth factor	1.62 1.62		
30 year growth factor	2.3 2.3		
100 year growth factor	3.19 3.19		
200 year growth factor	3.74 3.74		

Results

Method	IH124	
Flow rate 1 year (l/s)	6 6	 l/s
Flow rate 2 year (l/s)	6.2 6.2	 l/s
Flow rate 10 years (l/s)	11.4 11.4	 l/s
Flow rate 30 years (l/s)	16.2 16.2	 l/s
Flow rate 100 years (l/s)	22.5 22.5	 l/s
Flow rate 200 years (l/s)	26.4 26.4	 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) (<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.

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (1)

Type : Catchment Area

Area (ha)	0.027
-----------	-------

Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (3)

Type : Catchment Area

Area (ha)	0.006
-----------	-------

Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (5)

Type : Catchment Area

Area (ha)	0.013
-----------	-------

Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (6)

Type : Catchment Area

Area (ha)	0.009
-----------	-------

Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (7)

Type : Catchment Area

Area (ha)	0.011
-----------	-------

Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (8)

Type : Catchment Area

Area (ha)	0.012
-----------	-------

Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (9)

Type : Catchment Area

Area (ha)	0.009
-----------	-------

Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (11)

Type : Catchment Area

Area (ha)	0.002
-----------	-------

Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (12)

Type : Catchment Area

Area (ha)	0.006
-----------	-------

Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (15)

Type : Catchment Area

Area (ha)	0.005
-----------	-------

Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (18)

Type : Catchment Area

Area (ha)	0.005
-----------	-------

Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (19)

Type : Catchment Area

Area (ha)	0.005
-----------	-------

Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (20)

Type : Catchment Area

Area (ha)	0.008
-----------	-------

Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (21)

Type : Catchment Area

Area (ha)	0.006
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Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (22)

Type : Catchment Area

Area (ha)	0.01
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Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (23)

Type : Catchment Area

Area (ha)	0.01
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Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (24)

Type : Catchment Area

Area (ha)	0.011
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Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (25)

Type : Catchment Area

Area (ha)	0.011
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Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (26)

Type : Catchment Area

Area (ha)	0.007
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Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (27)

Type : Catchment Area

Area (ha)	0.008
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Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (28)

Type : Catchment Area

Area (ha)	0.013
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Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (30)

Type : Catchment Area

Area (ha)	0.01
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Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (31)

Type : Catchment Area

Area (ha)	0.009
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Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (32)

Type : Catchment Area

Area (ha)	0.009
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Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (33)

Type : Catchment Area

Area (ha)	0.007
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Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (34)

Type : Catchment Area

Area (ha)	0.012
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Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (35)

Type : Catchment Area

Area (ha)	0.018
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Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (14)

Type : Catchment Area

Area (ha)	0.004
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Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (38)

Type : Catchment Area

Area (ha)	0.021
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Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (39)

Type : Catchment Area

Area (ha)	0.002
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Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (40)

Type : Catchment Area

Area (ha)	0.011
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Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (41)

Type : Catchment Area

Area (ha)	0.024
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Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (42)

Type : Catchment Area

Area (ha)	0.002
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Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (43)

Type : Catchment Area

Area (ha)	0.003
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Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area

Type : Catchment Area

Area (ha)	0.007
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Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (44)

Type : Catchment Area

Area (ha)	0.003
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Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (2)

Type : Catchment Area

Area (ha)	0.002
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Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (45)

Type : Catchment Area

Area (ha)	0.01
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Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (47)

Type : Catchment Area

Area (ha)	0.003
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Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (48)

Type : Catchment Area

Area (ha)	0.003
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Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (49)

Type : Catchment Area

Area (ha)	0.007
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Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (50)

Type : Catchment Area

Area (ha)	0.012
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Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (51)

Type : Catchment Area

Area (ha)	0.012
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Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (52)

Type : Catchment Area

Area (ha)	0.009
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Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (55)

Type : Catchment Area

Area (ha)	0.012
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Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (56)

Type : Catchment Area

Area (ha)	0.003
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Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (57)

Type : Catchment Area

Area (ha)	0.011
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Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (58)

Type : Catchment Area

Area (ha)	0.01
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Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (59)

Type : Catchment Area

Area (ha)	0.008
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Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (60)

Type : Catchment Area

Area (ha)	0.003
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Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (61)

Type : Catchment Area

Area (ha)	0.004
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Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (64)

Type : Catchment Area

Area (ha)	0.004
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Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (66)

Type : Catchment Area

Area (ha)	0.004
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Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (68)

Type : Catchment Area

Area (ha)	0.004
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Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (4)

Type : Catchment Area

Area (ha)	0.004
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Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (69)

Type : Catchment Area

Area (ha)	0.008
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Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (70)

Type : Catchment Area

Area (ha)	0.003
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Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (71)

Type : Catchment Area

Area (ha)	0.003
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Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (72)

Type : Catchment Area

Area (ha)	0.003
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Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (73)

Type : Catchment Area

Area (ha)	0.007
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Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (74)

Type : Catchment Area

Area (ha)	0.008
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Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (10)

Type : Catchment Area

Area (ha)	0.001
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Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (13)

Type : Catchment Area

Area (ha)	0.006
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Preliminary Sizing

Volumetric Runoff Coefficient	1.000
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (17)

Type : Catchment Area

Area (ha)	0.003
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Preliminary Sizing

Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.750
Winter Volumetric Runoff	0.750
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Inflows Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Catchment Area (29)

Type : Catchment Area

Area (ha)	0.019
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Preliminary Sizing

Volumetric Runoff Coefficient	0.750
Percentage Impervious (%)	100
Time of Concentration (mins)	5

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	0.750
Winter Volumetric Runoff	0.750
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Project: Ladds Garden Centre	Date: 13/06/2025		
	Designed by: JB	Checked by:	Approved By:
Report Details: Type: Junctions Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB		



Name	Junction Type	Easting (m)	Northing (m)	Cover Level (m)	Depth (m)	Invert Level (m)	Chamber Shape	Diameter (m)	Lock
S001	Manhole	480671.866	177883.252	57.200	1.350	55.850	Circular	1.200	None
S002	Manhole	480667.576	177892.953	56.900	1.350	55.550	Circular	1.200	None
S003	Manhole	480665.713	177907.105	56.200	1.544	54.656	Circular	1.200	None
S009	Manhole	480665.485	177915.077	56.190	1.608	54.582	Circular	1.200	None
S010	Manhole	480663.948	177928.907	55.690	1.425	54.265	Circular	1.200	None
S011	Manhole	480663.242	177947.444	55.300	1.528	53.772	Circular	1.200	None
S017	Manhole	480665.801	177960.596	54.877	1.500	53.377	Circular	1.200	None
S006	Manhole	480705.785	177929.774	56.400	1.350	55.050	Circular	1.200	None
S007	Manhole	480699.550	177927.292	56.337	1.425	54.912	Circular	1.200	None
S008	Manhole	480671.237	177915.542	56.200	1.425	54.775	Circular	1.200	Levels
S004	Manhole	480715.874	177905.765	57.500	1.350	56.150	Circular	1.200	None
S005	Manhole	480710.174	177918.823	56.900	1.350	55.550	Circular	1.200	None
S014	Manhole	480681.370	177986.705	54.994	1.425	53.569	Circular	1.200	None
S016	Manhole	480673.590	177976.381	54.936	1.500	53.436	Circular	1.200	None
S015	Manhole	480686.906	177971.145	55.000	1.425	53.575	Circular	1.200	Levels
S012	Manhole	480710.798	178001.613	55.231	1.350	53.881	Circular	1.200	None
S013	Manhole	480692.191	177999.479	55.106	1.350	53.756	Circular	1.200	None
S019	Simple Junction	480632.815	177977.412						

Inlets

Junction	Inlet Name	Incoming Item(s)	Bypass Destination	Capacity Type
S001	Inlet	2.001	(None)	No Restriction
	Inlet (1)	Catchment Area (1)	(None)	No Restriction
	Inlet (2)	Catchment Area Catchment Area (29)	(None)	No Restriction
S002	Inlet	1.001 Catchment Area (3)	(None)	No Restriction
	Inlet (2)	3.001	(None)	No Restriction
S003	Inlet	1.002	(None)	No Restriction
	Inlet (2)	Catchment Area (15) 4.001	(None)	No Restriction
	Inlet	1.003	(None)	No Restriction

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Junctions Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			

Junction	Inlet Name	Incoming Item(s)	Bypass Destination	Capacity Type
S009	Inlet (1)	6.005	(None)	No Restriction
	Inlet (2)	5.001	(None)	No Restriction
	Inlet (3)	Catchment Area (20)	(None)	No Restriction
SO10	Inlet	1.004 Catchment Area (23) 13.001 14.001 12.001	(None)	No Restriction
S011	Inlet	1.005	(None)	No Restriction
	Inlet (2)	Catchment Area (26) 15.001	(None)	No Restriction
S017	Inlet	1.006	(None)	No Restriction
	Inlet (1)	16.006	(None)	No Restriction
S006	Inlet	6.002 Catchment Area (11)	(None)	No Restriction
	Inlet (1)	Catchment Area (14)	(None)	No Restriction
	Inlet (2)	9.001	(None)	No Restriction
S007	Inlet	6.003	(None)	No Restriction
	Inlet (2)	10.001	(None)	No Restriction
	Inlet (3)	Catchment Area (10)	(None)	No Restriction
S008	Inlet	6.004 Catchment Area (39)	(None)	No Restriction
	Inlet (1)	11.001	(None)	No Restriction
S004	Inlet (1)	Catchment Area (9) 7.001	(None)	No Restriction
	Inlet (2)	Catchment Area (47)	(None)	No Restriction
S005	Inlet	6.001 Catchment Area (12)	(None)	No Restriction
	Inlet (1)	8.001	(None)	No Restriction
S014	Inlet	16.003 Catchment Area (31)	(None)	No Restriction
S016	Inlet	16.005	(None)	No Restriction
	Inlet (1)	17.002 Catchment Area (30)	(None)	No Restriction

Project: Ladds Garden Centre		Date: 13/06/2025			
		Designed by: JB	Checked by:		Approved By:
Report Details: Type: Junctions Storm Phase: Final Design regular outfall		Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			

Junction	Inlet Name	Incoming Item(s)	Bypass Destination	Capacity Type
S015	Inlet	Catchment Area (27) 17.001	(None)	No Restriction
	Inlet (1)	18.001	(None)	No Restriction
S012	Inlet (1)	Catchment Area (35) 16.002	(None)	No Restriction
S013	Inlet	Catchment Area (34)	(None)	No Restriction
	Inlet (1)	Catchment Area (40)	(None)	No Restriction
S019	Inlet	1.008	(None)	No Restriction

Outlets

Junction	Outlet Name	Outgoing Connection	Outlet Type
S001	Outlet	1.001	Free Discharge
S002	Outlet	1.002	Free Discharge
S003	Outlet	1.003	Free Discharge
S009	Outlet	1.004	Free Discharge
S010	Outlet	1.005	Free Discharge
S011	Outlet	1.006	Free Discharge
S017	Outlet	1.007	Free Discharge
S006	Outlet	6.003	Free Discharge
S007	Outlet	6.004	Free Discharge
S008	Outlet	6.005	Free Discharge
S004	Outlet	6.001	Free Discharge
S005	Outlet	6.002	Free Discharge
S014	Outlet	16.005	Free Discharge
S016	Outlet	16.006	Free Discharge
S015	Outlet	17.002	Free Discharge
S012	Outlet	16.002	Free Discharge
S013	Outlet	16.003	Free Discharge

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Stormwater Controls Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



Pond

Type : Pond

Dimensions

Exceedance Level (m)	54.600
Depth (m)	1.500
Base Level (m)	53.100
Freeboard (mm)	300
Initial Depth (m)	0.000
Porosity (%)	100
Average Slope (1:X)	3.096
Total Volume (m³)	413.179

Depth (m)	Area (m²)	Volume (m³)
0.000	230.00	0.000
1.500	547.41	566.117

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	1.007
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (1)

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area (13)
Bypass Destination	(None)
Capacity Type	No Restriction

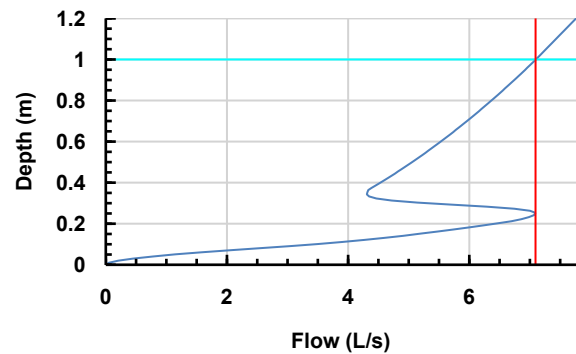
Project: Ladds Garden Centre	Date: 13/06/2025		
	Designed by: JB	Checked by:	Approved By:
Report Details: Type: Stormwater Controls Storm Phase: Final Design regular outfall	Stantec UK Ltd.: 100 Barbirolli Square Manchester M2 3AB		



Outlets

Outlet

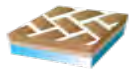
Outgoing Connection	1.008
Outlet Type	Hydro-Brake®
Invert Level (m)	53.100
Design Depth (m)	1.000
Design Flow (L/s)	7.1
Objective	Minimise Upstream Storage Requirements
Application	Surface Water Only
Sump Available	☐
Unit Reference	CHE-0118-7100-1000-7100



Advanced

Perimeter	Circular
Length (m)	30.567
Friction Scheme	Manning's n
n	0.03

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Stormwater Controls Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



P1

Type : Porous Paving

Dimensions

Exceedance Level (m)	56.100
Depth (m)	0.400
Base Level (m)	55.700
Paving Layer Depth (mm)	100
Membrane Percolation (m/hr)	324.0
Porosity (%)	30
Length (m)	28.953
Long. Slope (1:X)	223.00
Width (m)	5.475
Total Volume (m³)	14.425

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	100
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Colebrook-White Roughness
Roughness (mm)	0.6

Inlets

Inlet (1)

Inlet Type	Lateral Inflow
Incoming Item(s)	Catchment Area (38)
Bypass Destination	(None)
Capacity Type	No Restriction

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Stormwater Controls Storm Phase: Final Design regular outfall	Stantec UK Ltd : 100 Barbirolli Square Manchester M2 3AB			

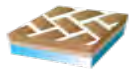
Outlets

Outlet

Outgoing Connection	11.001
Outlet Type	Free Discharge

Advanced

Conductivity (m/hr)	300.0
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P2

Type : Porous Paving

Dimensions

Exceedance Level (m)	54.900
Depth (m)	0.400
Base Level (m)	54.500
Paving Layer Depth (mm)	100
Membrane Percolation (m/hr)	324.0
Porosity (%)	30
Length (m)	41.448
Long. Slope (1:X)	230.40
Width (m)	5.382
Total Volume (m³)	21.101

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	225
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Colebrook-White Roughness
Roughness (mm)	0.6

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Stormwater Controls Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			

Inlets

Inlet

Inlet Type	Lateral Inflow
Incoming Item(s)	Catchment Area (41)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (1)

Inlet Type	Point Inflow
Incoming Item(s)	No Delay
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (2)

Inlet Type	Point Inflow
Incoming Item(s)	No Delay (1) (1)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (3)

Inlet Type	Point Inflow
Incoming Item(s)	No Delay (2)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (4)

Inlet Type	Point Inflow
Incoming Item(s)	No Delay (3)
Bypass Destination	(None)
Capacity Type	No Restriction

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Stormwater Controls Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			

Inlet (5)

Inlet Type	Point Inflow
Incoming Item(s)	No Delay (4)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (6)

Inlet Type	Point Inflow
Incoming Item(s)	No Delay (5)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	17.001
Outlet Type	Free Discharge

Advanced

Conductivity (m/hr)	300.0
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P3

Type : Porous Paving

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Stormwater Controls Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			

Dimensions

Exceedance Level (m)	57.100
Depth (m)	0.400
Base Level (m)	56.700
Paving Layer Depth (mm)	100
Membrane Percolation (m/hr)	324.0
Porosity (%)	30
Length (m)	7.062
Long. Slope (1:X)	9999.00
Width (m)	3.448
Total Volume (m³)	2.230

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	100
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Colebrook-White Roughness
Roughness (mm)	0.6

Inlets

Inlet

Inlet Type	Lateral Inflow
Incoming Item(s)	Catchment Area (2)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

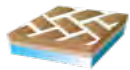
Outlet

Outgoing Connection	2.001
Outlet Type	Free Discharge

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Stormwater Controls Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			

Advanced

Conductivity (m/hr)	300.0
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P4

Type : Porous Paving

Dimensions

Exceedance Level (m)	56.800
Depth (m)	0.400
Base Level (m)	56.400
Paving Layer Depth (mm)	100
Membrane Percolation (m/hr)	324.0
Porosity (%)	30
Length (m)	8.442
Long. Slope (1:X)	9999.00
Width (m)	3.946
Total Volume (m³)	3.045

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	100
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Colebrook-White Roughness
Roughness (mm)	0.6

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Stormwater Controls Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			

Inlets

Inlet (2)

Inlet Type	Lateral Inflow
Incoming Item(s)	Catchment Area (44)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area (45)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	3.001
Outlet Type	Free Discharge

Advanced

Conductivity (m/hr)	300.0
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P5

Type : Porous Paving

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Stormwater Controls Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			

Dimensions

Exceedance Level (m)	56.090
Depth (m)	0.400
Base Level (m)	55.690
Paving Layer Depth (mm)	100
Membrane Percolation (m/hr)	324.0
Porosity (%)	30
Length (m)	15.359
Long. Slope (1:X)	9999.00
Width (m)	5.659
Total Volume (m³)	7.907

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	100
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Colebrook-White Roughness
Roughness (mm)	0.6

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area (5)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (1)

Inlet Type	Lateral Inflow
Incoming Item(s)	Catchment Area (6)
Bypass Destination	(None)
Capacity Type	No Restriction

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Stormwater Controls Storm Phase: Final Design regular outfall	Stantec UK Ltd.: 100 Barbirolli Square Manchester M2 3AB			

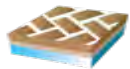
Outlets

Outlet

Outgoing Connection	5.001
Outlet Type	Free Discharge

Advanced

Conductivity (m/hr)	300.0
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P6

Type : Porous Paving

Dimensions

Exceedance Level (m)	55.590
Depth (m)	0.400
Base Level (m)	55.190
Paving Layer Depth (mm)	100
Membrane Percolation (m/hr)	324.0
Porosity (%)	30
Length (m)	7.264
Long. Slope (1:X)	9999.00
Width (m)	6.159
Total Volume (m³)	4.067

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	100
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Colebrook-White Roughness
Roughness (mm)	0.6

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Stormwater Controls Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area (58)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (1)

Inlet Type	Lateral Inflow
Incoming Item(s)	Catchment Area (18)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	12.001
Outlet Type	Free Discharge

Advanced

Conductivity (m/hr)	300.0
---------------------	-------



P7

Type : Porous Paving

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Stormwater Controls Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			

Dimensions

Exceedance Level (m)	55.590
Depth (m)	0.400
Base Level (m)	55.190
Paving Layer Depth (mm)	100
Membrane Percolation (m/hr)	324.0
Porosity (%)	30
Length (m)	7.482
Long. Slope (1:X)	9999.00
Width (m)	6.112
Total Volume (m³)	4.157

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	100
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Colebrook-White Roughness
Roughness (mm)	0.6

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area (59)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (1)

Inlet Type	Lateral Inflow
Incoming Item(s)	Catchment Area (19)
Bypass Destination	(None)
Capacity Type	No Restriction

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Stormwater Controls Storm Phase: Final Design regular outfall	Stantec UK Ltd.: 100 Barbirolli Square Manchester M2 3AB			

Outlets

Outlet

Outgoing Connection	13.001
Outlet Type	Free Discharge

Advanced

Conductivity (m/hr)	300.0
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P8

Type : Porous Paving

Dimensions

Exceedance Level (m)	55.200
Depth (m)	0.400
Base Level (m)	54.800
Paving Layer Depth (mm)	100
Membrane Percolation (m/hr)	324.0
Porosity (%)	30
Length (m)	16.246
Long. Slope (1:X)	9999.00
Width (m)	5.920
Total Volume (m³)	8.746

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	100
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Colebrook-White Roughness
Roughness (mm)	0.6

Project: Ladds Garden Centre	Date: 13/06/2025		
	Designed by: JB	Checked by:	
Report Details: Type: Stormwater Controls Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB		

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area (24)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (1)

Inlet Type	Lateral Inflow
Incoming Item(s)	Catchment Area (25)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (2)

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area (17)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	15.001
Outlet Type	Free Discharge

Advanced

Conductivity (m/hr)	300.0
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P12

Type : Porous Paving

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Stormwater Controls Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			

Dimensions

Exceedance Level (m)	57.400
Depth (m)	0.400
Base Level (m)	57.000
Paving Layer Depth (mm)	100
Membrane Percolation (m/hr)	324.0
Porosity (%)	30
Length (m)	6.608
Long. Slope (1:X)	9999.00
Width (m)	5.902
Total Volume (m³)	3.546

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	100
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Colebrook-White Roughness
Roughness (mm)	0.6

Inlets

Inlet (1)

Inlet Type	Lateral Inflow
Incoming Item(s)	Catchment Area (4)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (2)

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area (7)
Bypass Destination	(None)
Capacity Type	No Restriction

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Stormwater Controls Storm Phase: Final Design regular outfall	Stantec UK Ltd.: 100 Barbirolli Square Manchester M2 3AB			

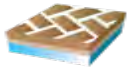
Outlets

Outlet

Outgoing Connection	7.001
Outlet Type	Free Discharge

Advanced

Conductivity (m/hr)	300.0
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P13

Type : Porous Paving

Dimensions

Exceedance Level (m)	55.590
Depth (m)	0.400
Base Level (m)	55.190
Paving Layer Depth (mm)	100
Membrane Percolation (m/hr)	324.0
Porosity (%)	30
Length (m)	8.030
Long. Slope (1:X)	9999.00
Width (m)	5.106
Total Volume (m³)	3.734

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	100
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Colebrook-White Roughness
Roughness (mm)	0.6

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Stormwater Controls Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area (22)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (1)

Inlet Type	Lateral Inflow
Incoming Item(s)	Catchment Area (21)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (2)

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area (71)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	14.001
Outlet Type	Free Discharge

Advanced

Conductivity (m/hr)	300.0
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P14

Type : Porous Paving

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Stormwater Controls Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			

Dimensions

Exceedance Level (m)	54.900
Depth (m)	0.400
Base Level (m)	54.500
Paving Layer Depth (mm)	100
Membrane Percolation (m/hr)	324.0
Porosity (%)	30
Length (m)	6.453
Long. Slope (1:X)	9999.00
Width (m)	5.034
Total Volume (m³)	2.959

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	100
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Colebrook-White Roughness
Roughness (mm)	0.6

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Stormwater Controls Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			

Inlets

Inlet (1)

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area (28)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (2)

Inlet Type	Lateral Inflow
Incoming Item(s)	Catchment Area (60)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (3)

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area (72)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	18.001
Outlet Type	Free Discharge

Advanced

Conductivity (m/hr)	300.0
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P15

Type : Porous Paving

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Stormwater Controls Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			

Dimensions

Exceedance Level (m)	55.100
Depth (m)	0.500
Base Level (m)	54.600
Paving Layer Depth (mm)	100
Membrane Percolation (m/hr)	324.0
Porosity (%)	30
Length (m)	11.740
Long. Slope (1:X)	9999.00
Width (m)	2.982
Total Volume (m³)	4.346

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	150
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Colebrook-White Roughness
Roughness (mm)	0.6

Inlets

Inlet (1)

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area (32)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (2)

Inlet Type	Lateral Inflow
Incoming Item(s)	Catchment Area (64)
Bypass Destination	(None)
Capacity Type	No Restriction

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Stormwater Controls Storm Phase: Final Design regular outfall	Stantec UK Ltd : 100 Barbirolli Square Manchester M2 3AB			

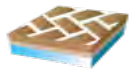
Outlets

Outlet

Outgoing Connection	No Delay
Outlet Type	Orifice
Diameter (m)	0.150
Coefficient of Discharge	0.600
Invert Level (m)	54.600

Advanced

Conductivity (m/hr)	300.0
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P16

Type : Porous Paving

Dimensions

Exceedance Level (m)	55.100
Depth (m)	0.400
Base Level (m)	54.700
Paving Layer Depth (mm)	100
Membrane Percolation (m/hr)	324.0
Porosity (%)	30
Length (m)	4.952
Long. Slope (1:X)	9999.00
Width (m)	4.914
Total Volume (m³)	2.217

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Stormwater Controls Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	100
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Colebrook-White Roughness
Roughness (mm)	0.6

Inlets

Inlet (1)

Inlet Type	Lateral Inflow
Incoming Item(s)	Catchment Area (66)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (2)

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area (73)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

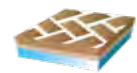
Outlet

Outgoing Connection	No Delay (2)
Outlet Type	Orifice
Diameter (m)	0.150
Coefficient of Discharge	0.600
Invert Level (m)	54.700

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Stormwater Controls Storm Phase: Final Design regular outfall	Stantec UK Ltd. : 100 Barbirolli Square Manchester M2 3AB			

Advanced

Conductivity (m/hr)	300.0
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P17

Type : Porous Paving

Dimensions

Exceedance Level (m)	55.200
Depth (m)	0.400
Base Level (m)	54.800
Paving Layer Depth (mm)	100
Membrane Percolation (m/hr)	324.0
Porosity (%)	30
Length (m)	4.956
Long. Slope (1:X)	9999.00
Width (m)	4.938
Total Volume (m³)	2.230

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	100
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Colebrook-White Roughness
Roughness (mm)	0.6

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Stormwater Controls Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			

Inlets

Inlet (1)

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area (33)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (2)

Inlet Type	Lateral Inflow
Incoming Item(s)	Catchment Area (68)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	No Delay (3)
Outlet Type	Orifice
Diameter (m)	0.150
Coefficient of Discharge	0.600
Invert Level (m)	54.800

Advanced

Conductivity (m/hr)	300.0
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P18

Type : Porous Paving

Project: Ladds Garden Centre	Date: 13/06/2025		
	Designed by: JB	Checked by:	Approved By:
Report Details: Type: Stormwater Controls Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB		



Dimensions

Exceedance Level (m)	55.100
Depth (m)	0.400
Base Level (m)	54.700
Paving Layer Depth (mm)	100
Membrane Percolation (m/hr)	324.0
Porosity (%)	30
Length (m)	4.971
Long. Slope (1:X)	9999.00
Width (m)	4.912
Total Volume (m³)	2.198

Inlets

Inlet

Inlet Type	Lateral Inflow
Incoming Item(s)	Catchment Area (43)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

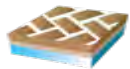
Outlet

Outgoing Connection	No Delay (4)
Outlet Type	Orifice
Diameter (m)	0.150
Coefficient of Discharge	0.600
Invert Level (m)	54.700

Advanced

Conductivity (m/hr)	300.0
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Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Stormwater Controls Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



P11

Type : Porous Paving

Dimensions

Exceedance Level (m)	56.233
Depth (m)	0.400
Base Level (m)	55.833
Paving Layer Depth (mm)	100
Membrane Percolation (m/hr)	324.0
Porosity (%)	30
Length (m)	10.255
Long. Slope (1:X)	9999.00
Width (m)	5.110
Total Volume (m³)	4.773

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	100
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Colebrook-White Roughness
Roughness (mm)	0.6

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Stormwater Controls Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			

Inlets

Inlet (3)

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area (51)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (6)

Inlet Type	Lateral Inflow
Incoming Item(s)	Catchment Area (52)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	10.001
Outlet Type	Free Discharge

Advanced

Conductivity (m/hr)	300.0
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P9

Type : Porous Paving

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Stormwater Controls Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			

Dimensions

Exceedance Level (m)	56.100
Depth (m)	0.400
Base Level (m)	55.700
Paving Layer Depth (mm)	100
Membrane Percolation (m/hr)	324.0
Porosity (%)	30
Length (m)	12.709
Long. Slope (1:X)	9999.00
Width (m)	3.960
Total Volume (m³)	4.686

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	150
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Colebrook-White Roughness
Roughness (mm)	0.6

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Stormwater Controls Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			

Inlets

Inlet (2)

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area (48)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (3)

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area (50)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (4)

Inlet Type	Lateral Inflow
Incoming Item(s)	Catchment Area (49)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	4.001
Outlet Type	Free Discharge

Advanced

Conductivity (m/hr)	300.0
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P10

Type : Porous Paving

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Stormwater Controls Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			

Dimensions

Exceedance Level (m)	56.300
Depth (m)	0.400
Base Level (m)	55.900
Paving Layer Depth (mm)	100
Membrane Percolation (m/hr)	324.0
Porosity (%)	30
Length (m)	8.782
Long. Slope (1:X)	9999.00
Width (m)	13.482
Total Volume (m³)	10.704

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	100
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Colebrook-White Roughness
Roughness (mm)	0.6

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Stormwater Controls Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			

Inlets

Inlet (3)

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area (57)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (4)

Inlet Type	Lateral Inflow
Incoming Item(s)	Catchment Area (55)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (5)

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area (56)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	9.001
Outlet Type	Free Discharge

Advanced

Conductivity (m/hr)	300.0
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P19

Type : Porous Paving

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Stormwater Controls Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			

Dimensions

Exceedance Level (m)	56.800
Depth (m)	0.400
Base Level (m)	56.400
Paving Layer Depth (mm)	100
Membrane Percolation (m/hr)	324.0
Porosity (%)	30
Length (m)	7.714
Long. Slope (1:X)	9999.00
Width (m)	9.078
Total Volume (m³)	6.345

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	100
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Colebrook-White Roughness
Roughness (mm)	0.6

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Stormwater Controls Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			

Inlets

Inlet (3)

Inlet Type	Lateral Inflow
Incoming Item(s)	Catchment Area (69)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (4)

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area (8)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet (5)

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area (70)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	8.001
Outlet Type	Free Discharge

Advanced

Conductivity (m/hr)	300.0
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P20

Type : Porous Paving

Project: Ladds Garden Centre	Date: 13/06/2025		
	Designed by: JB	Checked by:	Approved By:
Report Details: Type: Stormwater Controls Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB		



Dimensions

Exceedance Level (m)	55.100
Depth (m)	0.500
Base Level (m)	54.600
Paving Layer Depth (mm)	100
Membrane Percolation (m/hr)	324.0
Porosity (%)	30
Length (m)	11.328
Long. Slope (1:X)	9999.00
Width (m)	2.972
Total Volume (m³)	4.180

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	150
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Colebrook-White Roughness
Roughness (mm)	0.6

Inlets

Inlet (1)

Inlet Type	Lateral Inflow
Incoming Item(s)	Catchment Area (61)
Bypass Destination	(None)
Capacity Type	No Restriction

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	Catchment Area (74)
Bypass Destination	(None)
Capacity Type	No Restriction

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Stormwater Controls Storm Phase: Final Design regular outfall	Stantec UK Ltd : 100 Barbirolli Square Manchester M2 3AB			

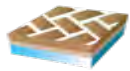
Outlets

Outlet

Outgoing Connection	No Delay (1) (1)
Outlet Type	Orifice
Diameter (m)	0.150
Coefficient of Discharge	0.600
Invert Level (m)	54.600

Advanced

Conductivity (m/hr)	300.0
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Porous Paving

Type : Porous Paving

Dimensions

Exceedance Level (m)	55.000
Depth (m)	0.400
Base Level (m)	54.600
Paving Layer Depth (mm)	100
Membrane Percolation (m/hr)	324.0
Porosity (%)	34
Length (m)	8.891
Long. Slope (1:X)	9999.00
Width (m)	2.128
Total Volume (m³)	1.930

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Stormwater Controls Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			

Inlets

Inlet

Inlet Type	Lateral Inflow
Incoming Item(s)	Catchment Area (42)
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	No Delay (5)
Outlet Type	Orifice
Diameter (m)	0.150
Coefficient of Discharge	0.600
Invert Level (m)	54.600

Advanced

Conductivity (m/hr)	300.0
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Project: Ladds Garden Centre	Date: 13/06/2025		
	Designed by: JB	Checked by:	Approved By:
Report Details: Type: Connections Storm Phase: Final Design regular outfall	Stantec UK Ltd : 100 Barbirolli Square Manchester M2 3AB		



Name	Length (m)	Connection Type	Slope (1:X)	Manning's n	Colebrook-White Roughness (mm)	Diameter / Base Width (mm)	Upstream Cover Level (m)	Upstream Invert Level (m)	Downstream Cover Level (m)	Downstream Invert Level (m)	Lock	Flow Restriction (L/s)
1.001	10.607	Pipe	35.357		0.6	150	57.200	55.850	56.900	55.550	None	
1.002	14.274	Pipe	17.428		0.6	150	56.900	55.550	56.200	54.731	All	
1.003	7.975	Pipe	108.308		0.6	225	56.200	54.656	56.190	54.582	All	
1.004	13.915	Pipe	43.897		0.6	225	56.190	54.582	55.690	54.265	All	
1.005	18.550	Pipe	44.377		0.6	225	55.690	54.265	55.300	53.847	All	
1.006	13.399	Pipe	33.921		0.6	300	55.300	53.772	54.877	53.377	All	
6.003	6.711	Pipe	106.522		0.6	150	56.400	55.050	56.337	54.987	All	
6.004	30.654	Pipe	223.754		0.6	225	56.337	54.912	56.200	54.775	All	
6.005	5.770	Pipe	29.899		0.6	225	56.200	54.775	56.190	54.582	None	
6.001	14.247	Pipe	23.746		0.6	150	57.500	56.150	56.900	55.550	None	
6.002	11.799	Pipe	23.597		0.6	150	56.900	55.550	56.400	55.050	None	
16.005	12.927	Pipe	222.881		0.6	225	54.994	53.569	54.936	53.511	All	
16.006	17.602	Pipe	298.347		0.6	300	54.936	53.436	54.877	53.377	All	
17.002	14.309	Pipe	223.574		0.6	225	55.000	53.575	54.936	53.511	All	
16.002	18.729	Pipe	149.834		0.6	150	55.231	53.881	55.106	53.756	None	
16.003	16.741	Pipe	149.474		0.6	150	55.106	53.756	54.994	53.644	All	
1.007	10.444	Pipe	82.236		0.6	300	54.877	53.377	54.600	53.250	All	
11.001	1.830	Pipe	101.654		0.6	150	56.100	55.700	56.200	55.682	All	
3.001	4.044	Pipe	4.758		0.6	100	56.801	56.400	56.900	55.550	None	
4.001	4.680	Pipe	4.481		0.6	150	56.101	55.700	56.200	54.656	None	
10.001	5.038	Pipe	5.470		0.6	100	56.234	55.833	56.337	54.912	None	
7.001	4.780	Pipe	5.624		0.6	100	57.401	57.000	57.500	56.150	None	
8.001	7.436	Pipe	8.748		0.6	100	56.801	56.400	56.900	55.550	None	
9.001	6.313	Pipe	7.427		0.6	100	56.301	55.900	56.400	55.050	None	
13.001	3.952	Pipe	4.272		0.6	100	55.591	55.190	55.690	54.265	None	
14.001	3.738	Pipe	4.042		0.6	100	55.591	55.190	55.690	54.265	None	
15.001	3.392	Pipe	3.300		0.6	100	55.202	54.800	55.300	53.772	None	
18.001	3.215	Pipe	3.475		0.6	100	54.901	54.500	55.000	53.575	None	
No Delay	1.368	No Delay										
No Delay (1) (1)	1.718	No Delay										
No Delay (2)	1.139	No Delay										
No Delay (3)	1.413	No Delay										
No Delay (4)	1.607	No Delay										

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Connections Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			

No Delay (5)	1.350	No Delay										
17.001	2.281	Pipe	103.679		0.6	225	54.900	54.500	55.000	54.478	All	
1.008	7.981	Pipe	79.809		0.6	100	54.600	53.100	54.350	53.000	None	7.8
12.001	7.710	Pipe	12.680		0.6	100	55.591	55.190	55.690	54.582	None	
5.001	4.915	Pipe	4.751		0.6	100	56.092	55.690	56.190	54.656	None	
2.001	2.112	Pipe	2.485		0.6	100	57.101	56.700	57.200	55.850	None	

Name	Culvert Type	Culvert Entrance
1.001	(None)	(None)
1.002	(None)	(None)
1.003	(None)	(None)
1.004	(None)	(None)
1.005	(None)	(None)
1.006	(None)	(None)
6.003	(None)	(None)
6.004	(None)	(None)
6.005	(None)	(None)
6.001	(None)	(None)
6.002	(None)	(None)
16.005	(None)	(None)
16.006	(None)	(None)
17.002	(None)	(None)
16.002	(None)	(None)
16.003	(None)	(None)
1.007	(None)	(None)
11.001	(None)	(None)
3.001	(None)	(None)
4.001	(None)	(None)
10.001	(None)	(None)
7.001	(None)	(None)
8.001	(None)	(None)
9.001	(None)	(None)
13.001	(None)	(None)
14.001	(None)	(None)
15.001	(None)	(None)
18.001	(None)	(None)

Project: Ladds Garden Centre	Date: 13/06/2025			
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Report Details: Type: Connections Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			

No Delay		
No Delay (1) (1)		
No Delay (2)		
No Delay (3)		
No Delay (4)		
No Delay (5)		
17.001	(None)	(None)
1.008	(None)	(None)
12.001	(None)	(None)
5.001	(None)	(None)
2.001	(None)	(None)

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Outfall Details Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			

Outfalls

Outfall	Outfall Type	Gated	Fixed Surcharged Level (m)	Level Curve
S019	Free Discharge			

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Junctions Summary Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



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

Project: Ladds Garden Centre	Date: 13/06/2025		
	Designed by: JB	Checked by:	Approved By:
Report Details: Type: Junctions Summary Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB		



Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
S001	FEH: 100 years: +40 %: 60 mins: Summer	57.200	55.850	56.693	0.843	27.4	0.954	0.000	27.0	34.227	Surcharged
S002	FEH: 100 years: +40 %: 60 mins: Summer	56.900	55.550	56.423	0.873	36.0	0.987	0.000	35.6	47.767	Surcharged
S003	FEH: 100 years: +40 %: 60 mins: Summer	56.200	54.656	55.835	1.180	45.1	1.334	0.000	44.7	66.128	Surcharged
S009	FEH: 100 years: +40 %: 60 mins: Summer	56.190	54.582	55.763	1.181	90.5	1.336	0.000	90.1	175.774	Surcharged
SO10	FEH: 100 years: +40 %: 60 mins: Summer	55.690	54.265	55.282	1.017	110.8	1.150	0.000	110.4	214.784	Surcharged
S011	FEH: 100 years: +40 %: 120 mins: Summer	55.300	53.772	54.354	0.582	115.3	0.659	0.000	114.4	286.577	Surcharged
S017	FEH: 100 years: +40 %: 360 mins: Winter	54.877	53.377	54.328	0.951	62.2	1.075	0.000	62.0	538.621	Surcharged
S006	FEH: 100 years: +40 %: 60 mins: Summer	56.400	55.050	56.136	1.086	29.1	1.228	0.000	27.5	59.907	Flood Risk
S007	FEH: 100 years: +40 %: 60 mins: Summer	56.337	54.912	55.960	1.048	35.6	1.186	0.000	36.8	74.617	Surcharged
S008	FEH: 100 years: +40 %: 60 mins: Summer	56.200	54.775	55.825	1.050	44.0	1.187	0.000	45.1	89.871	Surcharged
S004	FEH: 100 years: +40 %: 60 mins: Summer	57.500	56.150	56.457	0.307	14.9	0.347	0.000	14.5	18.707	Surcharged
S005	FEH: 100 years: +40 %: 60 mins: Summer	56.900	55.550	56.350	0.800	25.8	0.905	0.000	25.4	38.361	Surcharged
S014	FEH: 100 years: +40 %: 360 mins: Winter	54.994	53.569	54.328	0.759	5.9	0.858	0.000	5.7	51.587	Surcharged
S016	FEH: 100 years: +40 %: 360 mins: Winter	54.936	53.436	54.328	0.892	19.1	1.009	0.000	19.0	168.298	Surcharged
S015	FEH: 100 years: +40 %: 360 mins: Winter	55.000	53.575	54.328	0.753	12.5	0.852	0.000	12.3	107.626	Surcharged
S012	FEH: 100 years: +40 %: 60 mins: Summer	55.231	53.881	54.491	0.610	9.6	0.690	0.000	9.1	11.723	Surcharged
S013	FEH: 100 years: +40 %: 60 mins: Summer	55.106	53.756	54.438	0.682	21.8	0.772	0.000	21.2	26.761	Surcharged
S019	FEH: 100 years: +40 %: 120 mins: Summer		53.000	53.100	0.100	7.0			7.0	81.808	OK

Project: Ladds Garden Centre	Date: 13/06/2025			
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FEH: 100 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Depth

Project: Ladds Garden Centre	Date: 13/06/2025		
	Designed by: JB	Checked by:	Approved By:
Report Details: Type: Junctions Summary Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB		



Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
S001	FEH: 100 years: +0 %: 60 mins: Summer	57.200	55.850	55.946	0.096	19.6	0.109	0.000	19.6	24.467	OK
S002	FEH: 100 years: +0 %: 60 mins: Summer	56.900	55.550	55.803	0.253	27.4	0.286	0.000	25.9	34.108	Surcharged
S003	FEH: 100 years: +0 %: 60 mins: Summer	56.200	54.656	55.469	0.813	36.2	0.920	0.000	34.7	47.206	Surcharged
S009	FEH: 100 years: +0 %: 60 mins: Summer	56.190	54.582	55.417	0.835	84.5	0.945	0.000	83.0	125.219	Surcharged
SO10	FEH: 100 years: +0 %: 60 mins: Summer	55.690	54.265	54.979	0.714	105.5	0.808	0.000	104.4	153.397	Surcharged
S011	FEH: 100 years: +0 %: 60 mins: Summer	55.300	53.772	54.087	0.315	114.4	0.356	0.000	113.6	168.031	Surcharged
S017	FEH: 100 years: +0 %: 360 mins: Winter	54.877	53.377	54.013	0.636	43.9	0.719	0.000	43.4	385.645	Surcharged
S006	FEH: 100 years: +0 %: 60 mins: Summer	56.400	55.050	55.828	0.778	29.5	0.880	0.000	29.2	42.257	Surcharged
S007	FEH: 100 years: +0 %: 60 mins: Summer	56.337	54.912	55.622	0.710	36.0	0.803	0.000	38.3	53.131	Surcharged
S008	FEH: 100 years: +0 %: 60 mins: Summer	56.200	54.775	55.474	0.699	44.7	0.791	0.000	47.4	63.958	Surcharged
S004	FEH: 100 years: +0 %: 60 mins: Summer	57.500	56.150	56.205	0.055	10.7	0.062	0.000	10.7	13.339	OK
S005	FEH: 100 years: +0 %: 60 mins: Summer	56.900	55.550	55.985	0.435	21.1	0.492	0.000	19.2	27.341	Surcharged
S014	FEH: 100 years: +0 %: 360 mins: Winter	54.994	53.569	54.013	0.444	4.5	0.502	0.000	4.4	37.828	Surcharged
S016	FEH: 100 years: +0 %: 360 mins: Winter	54.936	53.436	54.013	0.577	13.6	0.653	0.000	13.0	120.766	Surcharged
S015	FEH: 100 years: +0 %: 360 mins: Winter	55.000	53.575	54.013	0.438	8.9	0.496	0.000	8.6	76.407	Surcharged
S012	FEH: 100 years: +0 %: 60 mins: Summer	55.231	53.881	54.117	0.236	6.9	0.267	0.000	6.7	8.602	Surcharged
S013	FEH: 100 years: +0 %: 60 mins: Summer	55.106	53.756	54.090	0.334	15.8	0.378	0.000	14.8	19.616	Surcharged
S019	FEH: 100 years: +0 %: 120 mins: Winter		53.000	53.100	0.100	7.0			7.0	71.124	OK

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FEH: 30 years: Increase Rainfall (%): +40: Critical Storm Per Item: Rank By: Max. Depth

Project: Ladds Garden Centre	Date: 13/06/2025		
	Designed by: JB	Checked by:	Approved By:
Report Details: Type: Junctions Summary Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB		



Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
S001	FEH: 30 years: +40 %: 60 mins: Summer	57.200	55.850	56.084	0.234	21.0	0.265	0.000	20.6	26.177	Surcharged
S002	FEH: 30 years: +40 %: 60 mins: Summer	56.900	55.550	55.932	0.382	28.1	0.432	0.000	27.8	36.492	Surcharged
S003	FEH: 30 years: +40 %: 60 mins: Summer	56.200	54.656	55.599	0.943	37.9	1.067	0.000	35.8	50.508	Surcharged
S009	FEH: 30 years: +40 %: 60 mins: Summer	56.190	54.582	55.544	0.962	86.7	1.088	0.000	85.4	134.070	Surcharged
SO10	FEH: 30 years: +40 %: 60 mins: Summer	55.690	54.265	55.087	0.822	109.2	0.930	0.000	108.0	164.198	Surcharged
S011	FEH: 30 years: +40 %: 60 mins: Summer	55.300	53.772	54.141	0.369	118.7	0.417	0.000	118.0	179.771	Surcharged
S017	FEH: 30 years: +40 %: 360 mins: Winter	54.877	53.377	54.109	0.732	49.4	0.827	0.000	49.0	430.211	Surcharged
S006	FEH: 30 years: +40 %: 60 mins: Summer	56.400	55.050	55.930	0.880	28.2	0.996	0.000	27.8	45.256	Surcharged
S007	FEH: 30 years: +40 %: 60 mins: Summer	56.337	54.912	55.745	0.833	35.5	0.942	0.000	36.6	56.913	Surcharged
S008	FEH: 30 years: +40 %: 60 mins: Summer	56.200	54.775	55.602	0.827	43.2	0.935	0.000	45.1	68.498	Surcharged
S004	FEH: 30 years: +40 %: 60 mins: Summer	57.500	56.150	56.207	0.057	11.4	0.064	0.000	11.4	14.285	OK
S005	FEH: 30 years: +40 %: 60 mins: Summer	56.900	55.550	56.116	0.566	22.1	0.641	0.000	21.1	29.277	Surcharged
S014	FEH: 30 years: +40 %: 360 mins: Winter	54.994	53.569	54.109	0.540	5.0	0.610	0.000	4.7	41.837	Surcharged
S016	FEH: 30 years: +40 %: 360 mins: Winter	54.936	53.436	54.109	0.673	15.2	0.761	0.000	14.9	134.498	Surcharged
S015	FEH: 30 years: +40 %: 360 mins: Winter	55.000	53.575	54.109	0.534	9.9	0.604	0.000	9.6	85.489	Surcharged
S012	FEH: 30 years: +40 %: 60 mins: Summer	55.231	53.881	54.189	0.308	7.4	0.348	0.000	7.2	9.201	Surcharged
S013	FEH: 30 years: +40 %: 60 mins: Summer	55.106	53.756	54.158	0.402	16.9	0.454	0.000	15.9	20.848	Surcharged
S019	FEH: 30 years: +40 %: 60 mins: Winter		53.000	53.100	0.100	6.9			6.9	33.542	OK

Project: Ladds Garden Centre	Date: 13/06/2025			
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FEH: 30 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Depth

Project: Ladds Garden Centre	Date: 13/06/2025		
	Designed by: JB	Checked by:	Approved By:
Report Details: Type: Junctions Summary Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB		



Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
S001	FEH: 30 years: +0 %: 60 mins: Summer	57.200	55.850	55.931	0.081	15.0	0.092	0.000	15.0	18.680	OK
S002	FEH: 30 years: +0 %: 60 mins: Summer	56.900	55.550	55.626	0.076	20.9	0.086	0.000	20.9	26.033	OK
S003	FEH: 30 years: +0 %: 60 mins: Summer	56.200	54.656	55.000	0.345	29.0	0.390	0.000	28.1	35.999	Surcharged
S009	FEH: 30 years: +0 %: 60 mins: Summer	56.190	54.582	54.965	0.383	69.3	0.433	0.000	68.6	95.356	Surcharged
SO10	FEH: 30 years: +0 %: 60 mins: Summer	55.690	54.265	54.654	0.389	85.9	0.440	0.000	85.3	116.820	Surcharged
S011	FEH: 30 years: +0 %: 60 mins: Winter	55.300	53.772	53.930	0.158	80.7	0.179	0.000	80.6	128.051	OK
S017	FEH: 30 years: +0 %: 240 mins: Winter	54.877	53.377	53.839	0.462	48.7	0.522	0.000	48.3	279.645	Surcharged
S006	FEH: 30 years: +0 %: 60 mins: Summer	56.400	55.050	55.299	0.249	24.4	0.281	0.000	24.3	32.199	Surcharged
S007	FEH: 30 years: +0 %: 60 mins: Summer	56.337	54.912	55.093	0.181	30.9	0.204	0.000	29.7	40.465	OK
S008	FEH: 30 years: +0 %: 60 mins: Summer	56.200	54.775	55.006	0.231	35.1	0.261	0.000	33.3	48.681	Surcharged
S004	FEH: 30 years: +0 %: 60 mins: Summer	57.500	56.150	56.198	0.048	8.2	0.055	0.000	8.2	10.216	OK
S005	FEH: 30 years: +0 %: 60 mins: Summer	56.900	55.550	55.620	0.070	16.4	0.079	0.000	16.3	20.884	OK
S014	FEH: 30 years: +0 %: 240 mins: Winter	54.994	53.569	53.839	0.270	4.8	0.305	0.000	4.8	27.617	Surcharged
S016	FEH: 30 years: +0 %: 240 mins: Winter	54.936	53.436	53.839	0.403	15.2	0.455	0.000	15.0	87.288	Surcharged
S015	FEH: 30 years: +0 %: 240 mins: Winter	55.000	53.575	53.839	0.264	9.5	0.298	0.000	9.5	54.911	Surcharged
S012	FEH: 30 years: +0 %: 60 mins: Summer	55.231	53.881	53.943	0.062	5.3	0.070	0.000	5.3	6.573	OK
S013	FEH: 30 years: +0 %: 60 mins: Summer	55.106	53.756	53.869	0.113	12.2	0.127	0.000	12.1	15.160	OK
S019	FEH: 30 years: +0 %: 120 mins: Winter		53.000	53.100	0.100	6.9			6.9	63.439	OK

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Junctions Summary Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



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

Project: Ladds Garden Centre	Date: 13/06/2025		
	Designed by: JB	Checked by:	Approved By:
Report Details: Type: Junctions Summary Storm Phase: Final Design regular outfall	Stantec UK Ltd : 100 Barbirolli Square Manchester M2 3AB		



Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
S001	FEH: 2 years: +0 %: 60 mins: Summer	57.200	55.850	55.897	0.047	5.9	0.053	0.000	5.9	7.357	OK
S002	FEH: 2 years: +0 %: 60 mins: Summer	56.900	55.550	55.596	0.046	8.2	0.052	0.000	8.2	10.244	OK
S003	FEH: 2 years: +0 %: 60 mins: Summer	56.200	54.656	54.737	0.082	11.3	0.093	0.000	11.3	14.102	OK
S009	FEH: 2 years: +0 %: 60 mins: Summer	56.190	54.582	54.680	0.098	27.9	0.111	0.000	27.8	36.859	OK
SO10	FEH: 2 years: +0 %: 60 mins: Summer	55.690	54.265	54.377	0.112	34.6	0.126	0.000	34.4	45.200	OK
S011	FEH: 2 years: +0 %: 60 mins: Summer	55.300	53.772	53.865	0.093	37.5	0.106	0.000	37.4	49.438	OK
S017	FEH: 2 years: +0 %: 60 mins: Summer	54.877	53.377	53.525	0.148	49.5	0.168	0.000	49.1	70.275	OK
S006	FEH: 2 years: +0 %: 60 mins: Summer	56.400	55.050	55.137	0.087	9.6	0.099	0.000	9.6	12.399	OK
S007	FEH: 2 years: +0 %: 60 mins: Summer	56.337	54.912	55.007	0.095	12.1	0.108	0.000	12.0	15.597	OK
S008	FEH: 2 years: +0 %: 60 mins: Summer	56.200	54.775	54.837	0.062	13.6	0.070	0.000	13.5	18.701	OK
S004	FEH: 2 years: +0 %: 60 mins: Summer	57.500	56.150	56.180	0.030	3.2	0.034	0.000	3.2	3.985	OK
S005	FEH: 2 years: +0 %: 60 mins: Summer	56.900	55.550	55.593	0.043	6.5	0.048	0.000	6.5	8.118	OK
S014	FEH: 2 years: +0 %: 60 mins: Summer	54.994	53.569	53.634	0.065	5.9	0.074	0.000	5.9	7.314	OK
S016	FEH: 2 years: +0 %: 60 mins: Summer	54.936	53.436	53.543	0.107	12.3	0.121	0.000	12.1	20.940	OK
S015	FEH: 2 years: +0 %: 120 mins: Summer	55.000	53.575	53.645	0.070	6.7	0.079	0.000	6.7	19.094	OK
S012	FEH: 2 years: +0 %: 60 mins: Summer	55.231	53.881	53.919	0.038	2.1	0.043	0.000	2.1	2.602	OK
S013	FEH: 2 years: +0 %: 60 mins: Summer	55.106	53.756	53.818	0.062	4.8	0.070	0.000	4.8	6.022	OK
S019	FEH: 2 years: +0 %: 240 mins: Summer		53.000	53.100	0.100	6.9			6.9	115.181	OK

Project: Ladds Garden Centre	Date: 13/06/2025		
	Designed by: JB	Checked by:	Approved By:
Report Details: Type: Stormwater Controls Summary Storm Phase: Final Design regular outfall	Stantec UK Ltd : 100 Barbirolli Square Manchester M2 3AB		





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

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)
Pond	FEH: 100 years: +40 %: 360 mins: Winter	54.327	54.327	1.227	1.227	62.7	425.955	0.000	0.000	7.4	259.496	569	-3.092
P1	FEH: 100 years: +40 %: 60 mins: Summer	55.911	55.833	0.082	0.133	11.5	5.630	0.000	0.000	7.9	14.047	11	60.969
P2	FEH: 100 years: +40 %: 60 mins: Summer	54.805	54.637	0.126	0.137	30.6	9.013	0.000	0.000	26.9	47.839	5	57.286
P3	FEH: 100 years: +40 %: 60 mins: Summer	56.735	56.712	0.034	0.012	1.3	0.168	0.000	0.000	1.3	1.648	2	92.469
P4	FEH: 100 years: +40 %: 60 mins: Summer	56.545	56.451	0.144	0.051	7.4	0.973	0.000	0.000	6.0	9.240	2	68.041
P5	FEH: 100 years: +40 %: 60 mins: Summer	55.946	55.837	0.255	0.147	11.8	5.322	0.000	0.000	12.9	14.453	4	32.692
P6	FEH: 100 years: +40 %: 60 mins: Summer	55.376	55.346	0.185	0.156	8.4	2.290	0.000	0.000	6.8	10.389	3	43.682
P7	FEH: 100 years: +40 %: 60 mins: Summer	55.335	55.313	0.145	0.123	7.4	1.837	0.000	0.000	6.9	9.122	2	55.814
P8	FEH: 100 years: +40 %: 60 mins: Summer	55.056	54.833	0.254	0.033	12.8	4.573	0.000	0.000	8.6	15.713	7	47.709
P12	FEH: 100 years: +40 %: 60 mins: Summer	57.131	57.038	0.131	0.038	8.4	0.989	0.000	0.000	8.3	10.391	2	72.110
P13	FEH: 100 years: +40 %: 60 mins: Summer	55.415	55.348	0.224	0.158	10.4	2.329	0.000	0.000	9.2	12.961	2	37.617
P14	FEH: 100 years: +40 %: 60 mins: Summer	54.739	54.537	0.239	0.037	10.7	1.343	0.000	0.000	10.1	13.321	1	54.616
P15	FEH: 100 years: +40 %: 60 mins: Summer	54.965	54.961	0.363	0.361	6.9	3.802	0.000	0.000	4.3	7.612	13	12.501
P16	FEH: 100 years: +40 %: 60 mins: Summer	54.989	54.969	0.289	0.269	6.1	2.027	0.000	0.000	4.4	7.606	7	8.558
P17	FEH: 100 years: +40 %: 60 mins: Summer	55.066	55.044	0.266	0.244	5.9	1.870	0.000	0.000	4.5	7.315	6	16.139
P18	FEH: 100 years: +40 %: 60 mins: Summer	54.881	54.812	0.181	0.112	1.5	1.072	0.000	0.000	0.7	1.671	33	51.239

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by:	Checked by:	Approved By:	
	JB			
Report Details: Type: Stormwater Controls Summary Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			

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Project: Ladds Garden Centre						Date: 13/06/2025							
Designed by: JB						Checked by:			Approved By:				
Report Details: Type: Stormwater Controls Summary Storm Phase: Final Design regular outfall						Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB							

P11	FEH: 100 years: +40 %: 60 mins: Summer	56.099	56.034	0.265	0.201	11.6	3.701	0.000	0.000	9.9	14.332	3	22.456
P9	FEH: 100 years: +40 %: 60 mins: Summer	55.870	55.847	0.168	0.147	11.9	2.403	0.000	0.000	11.3	14.804	3	48.721
P10	FEH: 100 years: +40 %: 60 mins: Summer	56.193	56.168	0.292	0.268	16.3	9.951	0.000	0.000	18.1	18.004	8	7.042
P19	FEH: 100 years: +40 %: 60 mins: Summer	56.623	56.509	0.222	0.109	12.4	3.259	0.000	0.000	9.4	15.367	5	48.643
P20	FEH: 100 years: +40 %: 60 mins: Summer	54.968	54.964	0.366	0.364	6.9	3.689	0.000	0.000	4.3	7.631	12	11.742
Porous Paving	FEH: 100 years: +40 %: 180 mins: Summer	54.807	54.778	0.206	0.178	0.6	1.185	0.000	0.000	0.3	1.119	87	38.628

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by:	Checked by:	Approved By:	
	JB			
Report Details: Type: Stormwater Controls Summary Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			

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Project: Ladds Garden Centre	Date: 13/06/2025		
	Designed by: JB	Checked by:	Approved By:
Report Details: Type: Stormwater Controls Summary Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB		



FEH: 100 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Resident Volume

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)
Pond	FEH: 100 years: +0 %: 360 mins: Winter	54.013	54.013	0.913	0.913	43.9	286.808	0.000	0.000	7.1	220.828	416	30.585
P1	FEH: 100 years: +0 %: 60 mins: Summer	55.878	55.771	0.048	0.071	8.2	3.368	0.000	0.000	6.4	9.965	7	76.652
P2	FEH: 100 years: +0 %: 60 mins: Summer	54.784	54.614	0.104	0.114	22.6	7.488	0.000	0.000	19.9	33.233	6	64.512
P3	FEH: 100 years: +0 %: 60 mins: Summer	56.731	56.710	0.030	0.010	1.0	0.145	0.000	0.000	1.0	1.174	2	93.521
P4	FEH: 100 years: +0 %: 60 mins: Summer	56.493	56.429	0.092	0.029	5.3	0.605	0.000	0.000	5.3	6.595	1	80.143
P5	FEH: 100 years: +0 %: 60 mins: Summer	55.857	55.723	0.166	0.033	8.4	2.724	0.000	0.000	6.8	10.253	5	65.547
P6	FEH: 100 years: +0 %: 60 mins: Summer	55.286	55.230	0.095	0.040	6.0	0.910	0.000	0.000	5.9	7.409	2	77.623
P7	FEH: 100 years: +0 %: 60 mins: Summer	55.273	55.217	0.082	0.027	5.3	0.753	0.000	0.000	5.2	6.490	2	81.884
P8	FEH: 100 years: +0 %: 60 mins: Summer	54.976	54.830	0.174	0.030	9.2	3.109	0.000	0.000	7.2	11.158	5	64.447
P12	FEH: 100 years: +0 %: 60 mins: Summer	57.091	57.033	0.091	0.033	6.0	0.721	0.000	0.000	6.0	7.398	1	79.658
P13	FEH: 100 years: +0 %: 60 mins: Summer	55.316	55.223	0.126	0.033	7.5	0.973	0.000	0.000	7.3	9.243	2	73.944
P14	FEH: 100 years: +0 %: 60 mins: Summer	54.626	54.532	0.125	0.032	7.6	0.766	0.000	0.000	7.6	9.518	1	74.128
P15	FEH: 100 years: +0 %: 60 mins: Summer	54.872	54.870	0.271	0.270	4.9	2.842	0.000	0.000	3.2	5.181	16	34.600
P16	FEH: 100 years: +0 %: 60 mins: Summer	54.901	54.887	0.200	0.187	4.4	1.413	0.000	0.000	3.5	5.419	5	36.259
P17	FEH: 100 years: +0 %: 60 mins: Summer	54.989	54.975	0.188	0.175	4.2	1.333	0.000	0.000	3.4	5.205	5	40.215
P18	FEH: 100 years: +0 %: 60 mins: Summer	54.838	54.789	0.137	0.089	1.1	0.819	0.000	0.000	0.5	1.146	34	62.735

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by:	Checked by:	Approved By:	
	JB			
Report Details: Type: Stormwater Controls Summary Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			

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Project: Ladds Garden Centre						Date: 13/06/2025							
						Designed by: JB		Checked by:		Approved By:			
Report Details: Type: Stormwater Controls Summary Storm Phase: Final Design regular outfall						Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB							

P11	FEH: 100 years: +0 %: 60 mins: Summer	55.984	55.870	0.150	0.037	8.3	1.553	0.000	0.000	7.8	10.218	3	67.469
P9	FEH: 100 years: +0 %: 60 mins: Summer	55.807	55.731	0.106	0.031	8.5	1.107	0.000	0.000	8.5	10.546	1	76.388
P10	FEH: 100 years: +0 %: 60 mins: Summer	56.040	55.944	0.139	0.044	10.2	3.213	0.000	0.000	8.9	12.387	4	69.988
P19	FEH: 100 years: +0 %: 60 mins: Summer	56.545	56.443	0.144	0.043	8.9	1.962	0.000	0.000	7.9	10.943	3	69.073
P20	FEH: 100 years: +0 %: 60 mins: Summer	54.874	54.872	0.273	0.272	4.9	2.749	0.000	0.000	3.2	5.193	13	34.244
Porous Paving	FEH: 100 years: +0 %: 180 mins: Summer	54.760	54.747	0.159	0.147	0.4	0.959	0.000	0.000	0.2	0.647	113	50.295

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by:	Checked by:	Approved By:	
	JB			
Report Details: Type: Stormwater Controls Summary Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			

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Project: Ladds Garden Centre	Date: 13/06/2025		
	Designed by: JB	Checked by:	Approved By:
Report Details: Type: Stormwater Controls Summary Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB		



FEH: 30 years: Increase Rainfall (%): +40: Critical Storm Per Item: Rank By: Max. Resident Volume

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)
Pond	FEH: 30 years: +40 %: 360 mins: Winter	54.108	54.108	1.008	1.008	49.6	326.662	0.000	0.000	7.1	233.787	465	20.939
P1	FEH: 30 years: +40 %: 60 mins: Summer	55.880	55.774	0.050	0.074	8.8	3.546	0.000	0.000	6.8	10.684	7	75.417
P2	FEH: 30 years: +40 %: 60 mins: Summer	54.788	54.618	0.108	0.118	24.1	7.769	0.000	0.000	21.2	35.784	6	63.182
P3	FEH: 30 years: +40 %: 60 mins: Summer	56.731	56.710	0.031	0.010	1.0	0.150	0.000	0.000	1.0	1.258	2	93.291
P4	FEH: 30 years: +40 %: 60 mins: Summer	56.504	56.429	0.103	0.029	5.7	0.662	0.000	0.000	5.5	7.051	1	78.267
P5	FEH: 30 years: +40 %: 60 mins: Summer	55.870	55.724	0.178	0.034	9.0	2.896	0.000	0.000	7.2	10.990	5	63.381
P6	FEH: 30 years: +40 %: 60 mins: Summer	55.297	55.231	0.106	0.041	6.4	0.989	0.000	0.000	6.2	7.925	2	75.678
P7	FEH: 30 years: +40 %: 60 mins: Summer	55.277	55.218	0.086	0.028	5.6	0.786	0.000	0.000	5.6	6.958	2	81.085
P8	FEH: 30 years: +40 %: 60 mins: Summer	54.989	54.831	0.187	0.031	9.8	3.310	0.000	0.000	7.6	11.942	5	62.158
P12	FEH: 30 years: +40 %: 60 mins: Summer	57.098	57.034	0.098	0.034	6.4	0.768	0.000	0.000	6.3	7.938	1	78.334
P13	FEH: 30 years: +40 %: 60 mins: Summer	55.328	55.223	0.137	0.033	8.0	1.047	0.000	0.000	7.7	9.897	1	71.954
P14	FEH: 30 years: +40 %: 60 mins: Summer	54.635	54.533	0.134	0.033	8.2	0.813	0.000	0.000	8.1	10.178	1	72.535
P15	FEH: 30 years: +40 %: 60 mins: Summer	54.888	54.885	0.287	0.285	5.3	3.005	0.000	0.000	3.4	5.599	14	30.850
P16	FEH: 30 years: +40 %: 60 mins: Summer	54.916	54.900	0.215	0.200	4.7	1.515	0.000	0.000	3.6	5.803	6	31.684
P17	FEH: 30 years: +40 %: 60 mins: Summer	55.002	54.987	0.201	0.187	4.5	1.423	0.000	0.000	3.6	5.583	5	36.165
P18	FEH: 30 years: +40 %: 60 mins: Summer	54.846	54.793	0.146	0.093	1.2	0.867	0.000	0.000	0.5	1.243	35	60.544

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by:	Checked by:	Approved By:	
	JB			
Report Details: Type: Stormwater Controls Summary Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			

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Project: Ladds Garden Centre						Date: 13/06/2025							
Designed by: JB						Checked by:			Approved By:				
Report Details: Type: Stormwater Controls Summary Storm Phase: Final Design regular outfall						Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB							

P11	FEH: 30 years: +40 %: 60 mins: Summer	55.996	55.871	0.162	0.038	8.8	1.656	0.000	0.000	8.3	10.944	2	65.299
P9	FEH: 30 years: +40 %: 60 mins: Summer	55.811	55.732	0.110	0.032	9.1	1.144	0.000	0.000	9.1	11.290	1	75.598
P10	FEH: 30 years: +40 %: 60 mins: Summer	56.058	56.001	0.157	0.101	10.9	4.576	0.000	0.000	8.7	13.268	8	57.248
P19	FEH: 30 years: +40 %: 60 mins: Summer	56.560	56.443	0.159	0.043	9.5	2.122	0.000	0.000	8.1	11.716	3	66.564
P20	FEH: 30 years: +40 %: 60 mins: Summer	54.889	54.887	0.288	0.287	5.2	2.902	0.000	0.000	3.4	5.606	12	30.564
Porous Paving	FEH: 30 years: +40 %: 240 mins: Summer	54.777	54.756	0.176	0.156	0.4	1.023	0.000	0.000	0.2	0.895	108	47.017

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by:	Checked by:	Approved By:	
	JB			
Report Details: Type: Stormwater Controls Summary Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			

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Project: Ladds Garden Centre	Date: 13/06/2025		
	Designed by: JB	Checked by:	Approved By:
Report Details: Type: Stormwater Controls Summary Storm Phase: Final Design regular outfall	Stantec UK Ltd : 100 Barbirolli Square Manchester M2 3AB		



FEH: 30 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Resident Volume

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)
Pond	FEH: 30 years: +0 %: 240 mins: Winter	53.838	53.838	0.738	0.738	48.8	219.079	0.000	0.000	7.1	132.205	284	46.977
P1	FEH: 30 years: +0 %: 60 mins: Summer	55.871	55.761	0.041	0.061	6.3	2.776	0.000	0.000	4.8	7.560	8	80.753
P2	FEH: 30 years: +0 %: 60 mins: Summer	54.769	54.598	0.089	0.098	17.6	6.414	0.000	0.000	15.3	24.690	8	69.605
P3	FEH: 30 years: +0 %: 60 mins: Summer	56.727	56.709	0.027	0.009	0.7	0.129	0.000	0.000	0.7	0.887	2	94.232
P4	FEH: 30 years: +0 %: 60 mins: Summer	56.478	56.426	0.077	0.026	4.1	0.513	0.000	0.000	4.1	5.030	1	83.163
P5	FEH: 30 years: +0 %: 60 mins: Summer	55.819	55.719	0.127	0.029	6.4	2.148	0.000	0.000	5.6	7.779	6	72.836
P6	FEH: 30 years: +0 %: 60 mins: Summer	55.269	55.225	0.079	0.035	4.6	0.766	0.000	0.000	4.6	5.634	2	81.161
P7	FEH: 30 years: +0 %: 60 mins: Summer	55.261	55.214	0.071	0.024	4.0	0.648	0.000	0.000	4.0	4.949	2	84.407
P8	FEH: 30 years: +0 %: 60 mins: Summer	54.935	54.827	0.133	0.027	7.0	2.444	0.000	0.000	5.8	8.435	7	72.050
P12	FEH: 30 years: +0 %: 60 mins: Summer	57.077	57.028	0.076	0.028	4.6	0.611	0.000	0.000	4.6	5.665	1	82.760
P13	FEH: 30 years: +0 %: 60 mins: Summer	55.284	55.218	0.093	0.028	5.7	0.745	0.000	0.000	5.7	7.042	2	80.041
P14	FEH: 30 years: +0 %: 60 mins: Summer	54.593	54.527	0.092	0.027	5.8	0.582	0.000	0.000	5.8	7.264	1	80.321
P15	FEH: 30 years: +0 %: 60 mins: Summer	54.822	54.820	0.221	0.220	3.8	2.314	0.000	0.000	2.5	3.739	18	46.744
P16	FEH: 30 years: +0 %: 60 mins: Summer	54.861	54.852	0.161	0.152	3.3	1.141	0.000	0.000	3.0	4.143	5	48.538
P17	FEH: 30 years: +0 %: 60 mins: Summer	54.950	54.942	0.149	0.142	3.2	1.068	0.000	0.000	2.7	3.989	5	52.090
P18	FEH: 30 years: +0 %: 60 mins: Summer	54.810	54.773	0.110	0.073	0.8	0.654	0.000	0.000	0.4	0.846	35	70.256

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by:	Checked by:	Approved By:	
	JB			
Report Details: Type: Stormwater Controls Summary Storm Phase: Final Design regular outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			

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Project: Ladds Garden Centre						Date: 13/06/2025							
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P11	FEH: 30 years: +0 %: 60 mins: Summer	55.947	55.865	0.113	0.032	6.3	1.204	0.000	0.000	6.2	7.789	3	74.777
P9	FEH: 30 years: +0 %: 60 mins: Summer	55.795	55.727	0.093	0.027	6.5	0.974	0.000	0.000	6.5	8.034	2	79.222
P10	FEH: 30 years: +0 %: 60 mins: Summer	56.007	55.936	0.106	0.036	7.8	2.531	0.000	0.000	6.5	9.388	7	76.356
P19	FEH: 30 years: +0 %: 60 mins: Summer	56.507	56.438	0.107	0.038	6.8	1.517	0.000	0.000	6.3	8.335	4	76.092
P20	FEH: 30 years: +0 %: 60 mins: Summer	54.823	54.821	0.221	0.221	3.7	2.236	0.000	0.000	2.5	3.763	17	46.517
Porous Paving	FEH: 30 years: +0 %: 360 mins: Summer	54.741	54.729	0.141	0.129	0.2	0.841	0.000	0.000	0.1	0.609	193	56.453

Project: Ladds Garden Centre	Date: 13/06/2025			
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Project: Ladds Garden Centre	Date: 13/06/2025		
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Report Details: Type: Stormwater Controls Summary Storm Phase: Final Design regular outfall	Stantec UK Ltd : 100 Barbirolli Square Manchester M2 3AB		



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

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)
Pond	FEH: 2 years: +0 %: 360 mins: Summer	53.455	53.455	0.355	0.355	27.2	92.573	0.000	0.000	7.0	144.746	141	77.595
P1	FEH: 2 years: +0 %: 120 mins: Summer	55.852	55.734	0.023	0.034	2.1	1.506	0.000	0.000	1.7	4.304	12	89.562
P2	FEH: 2 years: +0 %: 120 mins: Summer	54.732	54.553	0.052	0.053	5.7	3.577	0.000	0.000	5.0	13.333	12	83.048
P3	FEH: 2 years: +0 %: 120 mins: Summer	56.723	56.705	0.022	0.005	0.3	0.098	0.000	0.000	0.2	0.503	6	95.609
P4	FEH: 2 years: +0 %: 60 mins: Summer	56.450	56.416	0.049	0.016	1.6	0.325	0.000	0.000	1.6	1.954	3	89.332
P5	FEH: 2 years: +0 %: 60 mins: Summer	55.760	55.709	0.069	0.019	2.5	1.228	0.000	0.000	2.1	2.917	9	84.467
P6	FEH: 2 years: +0 %: 60 mins: Summer	55.240	55.212	0.049	0.022	1.8	0.482	0.000	0.000	1.8	2.193	4	88.145
P7	FEH: 2 years: +0 %: 60 mins: Summer	55.236	55.204	0.045	0.014	1.6	0.410	0.000	0.000	1.6	1.920	4	90.135
P8	FEH: 2 years: +0 %: 60 mins: Summer	54.872	54.817	0.070	0.017	2.8	1.364	0.000	0.000	2.2	3.159	10	84.409
P12	FEH: 2 years: +0 %: 60 mins: Summer	57.049	57.018	0.048	0.018	1.8	0.387	0.000	0.000	1.8	2.200	3	89.093
P13	FEH: 2 years: +0 %: 60 mins: Summer	55.246	55.207	0.055	0.017	2.2	0.445	0.000	0.000	2.2	2.737	2	88.090
P14	FEH: 2 years: +0 %: 60 mins: Summer	54.556	54.518	0.055	0.018	2.3	0.356	0.000	0.000	2.3	2.840	2	87.964
P15	FEH: 2 years: +0 %: 120 mins: Summer	54.738	54.738	0.137	0.138	1.3	1.443	0.000	0.000	0.9	1.776	31	66.801
P16	FEH: 2 years: +0 %: 60 mins: Summer	54.776	54.774	0.076	0.074	1.3	0.545	0.000	0.000	1.0	1.605	8	75.404
P17	FEH: 2 years: +0 %: 60 mins: Summer	54.873	54.871	0.073	0.071	1.3	0.526	0.000	0.000	1.0	1.557	8	76.395
P18	FEH: 2 years: +0 %: 180 mins: Summer	54.762	54.732	0.062	0.032	0.2	0.327	0.000	0.000	0.1	0.620	37	85.106

Project: Ladds Garden Centre	Date: 13/06/2025			
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	JB			
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Project: Ladds Garden Centre						Date: 13/06/2025							
						Designed by: JB		Checked by:		Approved By:			
Report Details: Type: Stormwater Controls Summary Storm Phase: Final Design regular outfall						Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB							

P11	FEH: 2 years: +0 %: 60 mins: Summer	55.900	55.853	0.066	0.020	2.5	0.722	0.000	0.000	2.4	3.018	4	84.862
P9	FEH: 2 years: +0 %: 60 mins: Summer	55.763	55.717	0.062	0.017	2.6	0.647	0.000	0.000	2.5	3.106	3	86.198
P10	FEH: 2 years: +0 %: 60 mins: Summer	55.959	55.922	0.058	0.022	3.1	1.423	0.000	0.000	2.5	3.528	8	86.704
P19	FEH: 2 years: +0 %: 60 mins: Summer	56.459	56.424	0.058	0.024	2.7	0.864	0.000	0.000	2.6	3.207	6	86.384
P20	FEH: 2 years: +0 %: 120 mins: Summer	54.738	54.738	0.137	0.138	1.3	1.387	0.000	0.000	0.9	1.781	29	66.813
Porous Paving	FEH: 2 years: +0 %: 960 mins: Winter	54.702	54.699	0.101	0.099	0.0	0.635	0.000	0.000	0.0	0.272	291	67.088

Project: Ladds Garden Centre	Date: 13/06/2025			
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Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Outfall Details Storm Phase: Final Design surcharged outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			

Outfalls

Outfall	Outfall Type	Gated	Fixed Surcharged Level (m)	Level Curve
S019	Fixed Surcharged Level	☐	53.500	
FEH : 100 years: +40 %: 60 mins: Summer			53.500	
FEH : 100 years: +40 %: 60 mins: Winter			53.500	
FEH : 100 years: +0 %: 60 mins: Summer			53.500	
FEH : 100 years: +0 %: 60 mins: Winter			53.500	
FEH : 30 years: +40 %: 60 mins: Summer			53.500	
FEH : 30 years: +40 %: 60 mins: Winter			53.500	
FEH : 30 years: +0 %: 60 mins: Summer			53.500	
FEH : 30 years: +0 %: 60 mins: Winter			53.500	
FEH : 2 years: +0 %: 60 mins: Summer			53.500	
FEH : 2 years: +0 %: 60 mins: Winter			53.500	
FEH : 100 years: +40 %: 120 mins: Summer			53.500	
FEH : 100 years: +40 %: 120 mins: Winter			53.500	
FEH : 100 years: +0 %: 120 mins: Summer			53.500	
FEH : 100 years: +0 %: 120 mins: Winter			53.500	
FEH : 30 years: +40 %: 120 mins: Summer			53.500	
FEH : 30 years: +40 %: 120 mins: Winter			53.500	
FEH : 30 years: +0 %: 120 mins: Summer			53.500	
FEH : 30 years: +0 %: 120 mins: Winter			53.500	
FEH : 2 years: +0 %: 120 mins: Summer			53.500	
FEH : 2 years: +0 %: 120 mins: Winter			53.500	
FEH : 100 years: +40 %: 180 mins: Summer			53.500	
FEH : 100 years: +40 %: 180 mins: Winter			53.500	
FEH : 100 years: +0 %: 180 mins: Summer			53.500	
FEH : 100 years: +0 %: 180 mins: Winter			53.500	
FEH : 30 years: +40 %: 180 mins: Summer			53.500	
FEH : 30 years: +40 %: 180 mins: Winter			53.500	
FEH : 30 years: +0 %: 180 mins: Summer			53.500	
FEH : 30 years: +0 %: 180 mins: Winter			53.500	
FEH : 2 years: +0 %: 180 mins: Summer			53.500	
FEH : 2 years: +0 %: 180 mins: Winter			53.500	
FEH : 100 years: +40 %: 240 mins: Summer			53.500	
FEH : 100 years: +40 %: 240 mins: Winter			53.500	

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FEH : 100 years: +0 %: 240 mins: Summer			53.500	
FEH : 100 years: +0 %: 240 mins: Winter			53.500	
FEH : 30 years: +40 %: 240 mins: Summer			53.500	
FEH : 30 years: +40 %: 240 mins: Winter			53.500	
FEH : 30 years: +0 %: 240 mins: Summer			53.500	
FEH : 30 years: +0 %: 240 mins: Winter			53.500	
FEH : 2 years: +0 %: 240 mins: Summer			53.500	
FEH : 2 years: +0 %: 240 mins: Winter			53.500	
FEH : 100 years: +40 %: 360 mins: Summer			53.500	
FEH : 100 years: +40 %: 360 mins: Winter			53.500	
FEH : 100 years: +0 %: 360 mins: Summer			53.500	
FEH : 100 years: +0 %: 360 mins: Winter			53.500	
FEH : 30 years: +40 %: 360 mins: Summer			53.500	
FEH : 30 years: +40 %: 360 mins: Winter			53.500	
FEH : 30 years: +0 %: 360 mins: Summer			53.500	
FEH : 30 years: +0 %: 360 mins: Winter			53.500	
FEH : 2 years: +0 %: 360 mins: Summer			53.500	
FEH : 2 years: +0 %: 360 mins: Winter			53.500	
FEH : 100 years: +40 %: 480 mins: Summer			53.500	
FEH : 100 years: +40 %: 480 mins: Winter			53.500	
FEH : 100 years: +0 %: 480 mins: Summer			53.500	
FEH : 100 years: +0 %: 480 mins: Winter			53.500	
FEH : 30 years: +40 %: 480 mins: Summer			53.500	
FEH : 30 years: +40 %: 480 mins: Winter			53.500	
FEH : 30 years: +0 %: 480 mins: Summer			53.500	
FEH : 30 years: +0 %: 480 mins: Winter			53.500	
FEH : 2 years: +0 %: 480 mins: Summer			53.500	
FEH : 2 years: +0 %: 480 mins: Winter			53.500	
FEH : 100 years: +40 %: 600 mins: Summer			53.500	
FEH : 100 years: +40 %: 600 mins: Winter			53.500	
FEH : 100 years: +0 %: 600 mins: Summer			53.500	
FEH : 100 years: +0 %: 600 mins: Winter			53.500	
FEH : 30 years: +40 %: 600 mins: Summer			53.500	
FEH : 30 years: +40 %: 600 mins: Winter			53.500	
FEH : 30 years: +0 %: 600 mins: Summer			53.500	
FEH : 30 years: +0 %: 600 mins: Winter			53.500	

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
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FEH : 2 years: +0 %: 600 mins: Summer			53.500	
FEH : 2 years: +0 %: 600 mins: Winter			53.500	
FEH : 100 years: +40 %: 720 mins: Summer			53.500	
FEH : 100 years: +40 %: 720 mins: Winter			53.500	
FEH : 100 years: +0 %: 720 mins: Summer			53.500	
FEH : 100 years: +0 %: 720 mins: Winter			53.500	
FEH : 30 years: +40 %: 720 mins: Summer			53.500	
FEH : 30 years: +40 %: 720 mins: Winter			53.500	
FEH : 30 years: +0 %: 720 mins: Summer			53.500	
FEH : 30 years: +0 %: 720 mins: Winter			53.500	
FEH : 2 years: +0 %: 720 mins: Summer			53.500	
FEH : 2 years: +0 %: 720 mins: Winter			53.500	
FEH : 100 years: +40 %: 960 mins: Summer			53.500	
FEH : 100 years: +40 %: 960 mins: Winter			53.500	
FEH : 100 years: +0 %: 960 mins: Summer			53.500	
FEH : 100 years: +0 %: 960 mins: Winter			53.500	
FEH : 30 years: +40 %: 960 mins: Summer			53.500	
FEH : 30 years: +40 %: 960 mins: Winter			53.500	
FEH : 30 years: +0 %: 960 mins: Summer			53.500	
FEH : 30 years: +0 %: 960 mins: Winter			53.500	
FEH : 2 years: +0 %: 960 mins: Summer			53.500	
FEH : 2 years: +0 %: 960 mins: Winter			53.500	
FEH : 100 years: +40 %: 1440 mins: Summer			53.500	
FEH : 100 years: +40 %: 1440 mins: Winter			53.500	
FEH : 100 years: +0 %: 1440 mins: Summer			53.500	
FEH : 100 years: +0 %: 1440 mins: Winter			53.500	
FEH : 30 years: +40 %: 1440 mins: Summer			53.500	
FEH : 30 years: +40 %: 1440 mins: Winter			53.500	
FEH : 30 years: +0 %: 1440 mins: Summer			53.500	
FEH : 30 years: +0 %: 1440 mins: Winter			53.500	
FEH : 2 years: +0 %: 1440 mins: Summer			53.500	
FEH : 2 years: +0 %: 1440 mins: Winter			53.500	
FEH : 100 years: +40 %: 2160 mins: Summer			53.500	
FEH : 100 years: +40 %: 2160 mins: Winter			53.500	
FEH : 100 years: +0 %: 2160 mins: Summer			53.500	
FEH : 100 years: +0 %: 2160 mins: Winter			53.500	

Project: Ladds Garden Centre	Date: 13/06/2025			
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FEH : 30 years: +40 %: 2160 mins: Summer			53.500	
FEH : 30 years: +40 %: 2160 mins: Winter			53.500	
FEH : 30 years: +0 %: 2160 mins: Summer			53.500	
FEH : 30 years: +0 %: 2160 mins: Winter			53.500	
FEH : 2 years: +0 %: 2160 mins: Summer			53.500	
FEH : 2 years: +0 %: 2160 mins: Winter			53.500	
FEH : 100 years: +40 %: 2880 mins: Summer			53.500	
FEH : 100 years: +40 %: 2880 mins: Winter			53.500	
FEH : 100 years: +0 %: 2880 mins: Summer			53.500	
FEH : 100 years: +0 %: 2880 mins: Winter			53.500	
FEH : 30 years: +40 %: 2880 mins: Summer			53.500	
FEH : 30 years: +40 %: 2880 mins: Winter			53.500	
FEH : 30 years: +0 %: 2880 mins: Summer			53.500	
FEH : 30 years: +0 %: 2880 mins: Winter			53.500	
FEH : 2 years: +0 %: 2880 mins: Summer			53.500	
FEH : 2 years: +0 %: 2880 mins: Winter			53.500	
FEH : 100 years: +40 %: 4320 mins: Summer			53.500	
FEH : 100 years: +40 %: 4320 mins: Winter			53.500	
FEH : 100 years: +0 %: 4320 mins: Summer			53.500	
FEH : 100 years: +0 %: 4320 mins: Winter			53.500	
FEH : 30 years: +40 %: 4320 mins: Summer			53.500	
FEH : 30 years: +40 %: 4320 mins: Winter			53.500	
FEH : 30 years: +0 %: 4320 mins: Summer			53.500	
FEH : 30 years: +0 %: 4320 mins: Winter			53.500	
FEH : 2 years: +0 %: 4320 mins: Summer			53.500	
FEH : 2 years: +0 %: 4320 mins: Winter			53.500	
FEH : 100 years: +40 %: 5760 mins: Summer			53.500	
FEH : 100 years: +40 %: 5760 mins: Winter			53.500	
FEH : 100 years: +0 %: 5760 mins: Summer			53.500	
FEH : 100 years: +0 %: 5760 mins: Winter			53.500	
FEH : 30 years: +40 %: 5760 mins: Summer			53.500	
FEH : 30 years: +40 %: 5760 mins: Winter			53.500	
FEH : 30 years: +0 %: 5760 mins: Summer			53.500	
FEH : 30 years: +0 %: 5760 mins: Winter			53.500	
FEH : 2 years: +0 %: 5760 mins: Summer			53.500	
FEH : 2 years: +0 %: 5760 mins: Winter			53.500	

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Outfall Details Storm Phase: Final Design surcharged outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			

FEH : 100 years: +40 %: 7200 mins: Summer			53.500	
FEH : 100 years: +40 %: 7200 mins: Winter			53.500	
FEH : 100 years: +0 %: 7200 mins: Summer			53.500	
FEH : 100 years: +0 %: 7200 mins: Winter			53.500	
FEH : 30 years: +40 %: 7200 mins: Summer			53.500	
FEH : 30 years: +40 %: 7200 mins: Winter			53.500	
FEH : 30 years: +0 %: 7200 mins: Summer			53.500	
FEH : 30 years: +0 %: 7200 mins: Winter			53.500	
FEH : 2 years: +0 %: 7200 mins: Summer			53.500	
FEH : 2 years: +0 %: 7200 mins: Winter			53.500	
FEH : 100 years: +40 %: 8640 mins: Summer			53.500	
FEH : 100 years: +40 %: 8640 mins: Winter			53.500	
FEH : 100 years: +0 %: 8640 mins: Summer			53.500	
FEH : 100 years: +0 %: 8640 mins: Winter			53.500	
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FEH : 2 years: +0 %: 8640 mins: Winter			53.500	
FEH : 100 years: +40 %: 10080 mins: Summer			53.500	
FEH : 100 years: +40 %: 10080 mins: Winter			53.500	
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FEH : 30 years: +0 %: 10080 mins: Summer			53.500	
FEH : 30 years: +0 %: 10080 mins: Winter			53.500	
FEH : 2 years: +0 %: 10080 mins: Summer			53.500	
FEH : 2 years: +0 %: 10080 mins: Winter			53.500	

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Junctions Summary Storm Phase: Final Design surcharged outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



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

Project: Ladds Garden Centre	Date: 13/06/2025		
	Designed by: JB	Checked by:	Approved By:
Report Details: Type: Junctions Summary Storm Phase: Final Design surcharged outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB		



Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
S001	FEH: 100 years: +40 %: 60 mins: Summer	57.200	55.850	56.694	0.844	27.4	0.954	0.000	27.0	34.226	Surcharged
S002	FEH: 100 years: +40 %: 60 mins: Summer	56.900	55.550	56.423	0.873	35.9	0.987	0.000	35.6	47.766	Surcharged
S003	FEH: 100 years: +40 %: 60 mins: Summer	56.200	54.656	55.836	1.181	45.0	1.335	0.000	44.6	66.126	Surcharged
S009	FEH: 100 years: +40 %: 60 mins: Summer	56.190	54.582	55.767	1.185	90.1	1.341	0.000	89.7	175.761	Surcharged
SO10	FEH: 100 years: +40 %: 60 mins: Summer	55.690	54.265	55.292	1.027	109.5	1.162	0.000	109.1	214.760	Surcharged
S011	FEH: 100 years: +40 %: 480 mins: Winter	55.300	53.772	54.465	0.693	34.6	0.784	0.000	34.3	393.811	Surcharged
S017	FEH: 100 years: +40 %: 480 mins: Winter	54.877	53.377	54.465	1.088	49.5	1.231	0.000	49.4	568.688	Surcharged
S006	FEH: 100 years: +40 %: 60 mins: Summer	56.400	55.050	56.137	1.087	29.1	1.229	0.000	27.7	59.909	Flood Risk
S007	FEH: 100 years: +40 %: 60 mins: Summer	56.337	54.912	55.962	1.050	35.5	1.188	0.000	36.7	74.610	Surcharged
S008	FEH: 100 years: +40 %: 60 mins: Summer	56.200	54.775	55.828	1.053	43.9	1.191	0.000	45.0	89.867	Surcharged
S004	FEH: 100 years: +40 %: 60 mins: Summer	57.500	56.150	56.457	0.307	14.9	0.347	0.000	14.5	18.707	Surcharged
S005	FEH: 100 years: +40 %: 60 mins: Summer	56.900	55.550	56.351	0.801	25.8	0.905	0.000	25.4	38.360	Surcharged
S014	FEH: 100 years: +40 %: 480 mins: Winter	54.994	53.569	54.465	0.896	4.7	1.014	0.000	4.5	54.220	Surcharged
S016	FEH: 100 years: +40 %: 480 mins: Winter	54.936	53.436	54.465	1.029	15.4	1.164	0.000	15.2	177.508	Surcharged
S015	FEH: 100 years: +40 %: 480 mins: Winter	55.000	53.575	54.465	0.890	10.0	1.007	0.000	9.9	113.778	Surcharged
S012	FEH: 100 years: +40 %: 60 mins: Summer	55.231	53.881	54.506	0.625	9.6	0.707	0.000	8.8	11.665	Surcharged
S013	FEH: 100 years: +40 %: 480 mins: Winter	55.106	53.756	54.465	0.709	3.9	0.802	0.000	3.8	45.234	Surcharged
S019	FEH: 100 years: +40 %: 60 mins: Summer		53.000	53.500	0.500	7.1			7.1	38.154	OK

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Junctions Summary Storm Phase: Final Design surcharged outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



FEH: 100 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Depth

Project: Ladds Garden Centre	Date: 13/06/2025		
	Designed by: JB	Checked by:	Approved By:
Report Details: Type: Junctions Summary Storm Phase: Final Design surcharged outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB		



Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
S001	FEH: 100 years: +0 %: 60 mins: Summer	57.200	55.850	55.946	0.096	19.6	0.109	0.000	19.6	24.467	OK
S002	FEH: 100 years: +0 %: 60 mins: Summer	56.900	55.550	55.803	0.253	27.4	0.286	0.000	25.9	34.108	Surcharged
S003	FEH: 100 years: +0 %: 60 mins: Summer	56.200	54.656	55.469	0.813	36.2	0.920	0.000	34.7	47.205	Surcharged
S009	FEH: 100 years: +0 %: 60 mins: Summer	56.190	54.582	55.417	0.835	84.5	0.945	0.000	83.0	125.219	Surcharged
SO10	FEH: 100 years: +0 %: 60 mins: Summer	55.690	54.265	54.979	0.714	105.5	0.808	0.000	104.4	153.375	Surcharged
S011	FEH: 100 years: +0 %: 600 mins: Summer	55.300	53.772	54.179	0.407	31.6	0.460	0.000	31.2	292.887	Surcharged
S017	FEH: 100 years: +0 %: 600 mins: Summer	54.877	53.377	54.179	0.802	44.8	0.907	0.000	44.8	423.803	Surcharged
S006	FEH: 100 years: +0 %: 60 mins: Summer	56.400	55.050	55.828	0.778	29.5	0.880	0.000	29.0	42.257	Surcharged
S007	FEH: 100 years: +0 %: 60 mins: Summer	56.337	54.912	55.622	0.710	36.0	0.803	0.000	38.1	53.131	Surcharged
S008	FEH: 100 years: +0 %: 60 mins: Summer	56.200	54.775	55.474	0.699	44.4	0.791	0.000	47.1	63.959	Surcharged
S004	FEH: 100 years: +0 %: 60 mins: Summer	57.500	56.150	56.205	0.055	10.7	0.062	0.000	10.7	13.339	OK
S005	FEH: 100 years: +0 %: 60 mins: Summer	56.900	55.550	55.985	0.435	21.1	0.492	0.000	19.2	27.341	Surcharged
S014	FEH: 100 years: +0 %: 600 mins: Summer	54.994	53.569	54.179	0.610	4.3	0.689	0.000	4.2	41.449	Surcharged
S016	FEH: 100 years: +0 %: 600 mins: Summer	54.936	53.436	54.179	0.743	13.7	0.840	0.000	13.6	132.822	Surcharged
S015	FEH: 100 years: +0 %: 600 mins: Summer	55.000	53.575	54.179	0.604	8.8	0.683	0.000	8.7	84.238	Surcharged
S012	FEH: 100 years: +0 %: 600 mins: Summer	55.231	53.881	54.179	0.298	1.6	0.337	0.000	1.6	14.850	Surcharged
S013	FEH: 100 years: +0 %: 600 mins: Summer	55.106	53.756	54.179	0.423	3.8	0.478	0.000	3.5	34.408	Surcharged
S019	FEH: 100 years: +0 %: 60 mins: Summer		53.000	53.500	0.500	7.1			7.1	45.821	OK

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Junctions Summary Storm Phase: Final Design surcharged outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



FEH: 30 years: Increase Rainfall (%): +40: Critical Storm Per Item: Rank By: Max. Depth

Project: Ladds Garden Centre	Date: 13/06/2025		
	Designed by: JB	Checked by:	Approved By:
Report Details: Type: Junctions Summary Storm Phase: Final Design surcharged outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB		



Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
S001	FEH: 30 years: +40 %: 60 mins: Summer	57.200	55.850	56.084	0.234	21.0	0.265	0.000	20.6	26.177	Surcharged
S002	FEH: 30 years: +40 %: 60 mins: Summer	56.900	55.550	55.932	0.382	28.1	0.432	0.000	27.8	36.492	Surcharged
S003	FEH: 30 years: +40 %: 60 mins: Summer	56.200	54.656	55.599	0.943	37.9	1.067	0.000	35.8	50.508	Surcharged
S009	FEH: 30 years: +40 %: 60 mins: Summer	56.190	54.582	55.544	0.962	86.7	1.088	0.000	85.4	134.072	Surcharged
SO10	FEH: 30 years: +40 %: 60 mins: Summer	55.690	54.265	55.087	0.822	109.2	0.930	0.000	108.0	163.937	Surcharged
S011	FEH: 30 years: +40 %: 600 mins: Summer	55.300	53.772	54.266	0.494	35.5	0.559	0.000	35.0	327.929	Surcharged
S017	FEH: 30 years: +40 %: 600 mins: Summer	54.877	53.377	54.266	0.889	50.0	1.006	0.000	49.9	473.847	Surcharged
S006	FEH: 30 years: +40 %: 60 mins: Summer	56.400	55.050	55.930	0.880	28.2	0.996	0.000	27.5	45.256	Surcharged
S007	FEH: 30 years: +40 %: 60 mins: Summer	56.337	54.912	55.745	0.833	35.5	0.942	0.000	36.3	56.911	Surcharged
S008	FEH: 30 years: +40 %: 60 mins: Summer	56.200	54.775	55.602	0.827	42.9	0.935	0.000	44.8	68.499	Surcharged
S004	FEH: 30 years: +40 %: 60 mins: Summer	57.500	56.150	56.207	0.057	11.4	0.064	0.000	11.4	14.285	OK
S005	FEH: 30 years: +40 %: 60 mins: Summer	56.900	55.550	56.116	0.566	22.1	0.641	0.000	21.1	29.277	Surcharged
S014	FEH: 30 years: +40 %: 600 mins: Summer	54.994	53.569	54.266	0.697	4.6	0.789	0.000	4.5	45.888	Surcharged
S016	FEH: 30 years: +40 %: 600 mins: Summer	54.936	53.436	54.266	0.830	15.2	0.939	0.000	15.0	148.165	Surcharged
S015	FEH: 30 years: +40 %: 600 mins: Summer	55.000	53.575	54.266	0.691	9.8	0.782	0.000	9.7	94.378	Surcharged
S012	FEH: 30 years: +40 %: 600 mins: Summer	55.231	53.881	54.266	0.385	1.8	0.436	0.000	1.7	16.620	Surcharged
S013	FEH: 30 years: +40 %: 600 mins: Summer	55.106	53.756	54.266	0.510	3.9	0.577	0.000	3.7	38.251	Surcharged
S019	FEH: 30 years: +40 %: 60 mins: Summer		53.000	53.500	0.500	7.1			7.1	36.149	OK

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Junctions Summary Storm Phase: Final Design surcharged outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



FEH: 30 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Depth

Project: Ladds Garden Centre	Date: 13/06/2025		
	Designed by: JB	Checked by:	Approved By:
Report Details: Type: Junctions Summary Storm Phase: Final Design surcharged outfall	Stantec UK Ltd : 100 Barbirolli Square Manchester M2 3AB		



Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
S001	FEH: 30 years: +0 %: 60 mins: Summer	57.200	55.850	55.931	0.081	15.0	0.092	0.000	15.0	18.680	OK
S002	FEH: 30 years: +0 %: 60 mins: Summer	56.900	55.550	55.626	0.076	20.9	0.086	0.000	20.9	26.033	OK
S003	FEH: 30 years: +0 %: 60 mins: Summer	56.200	54.656	55.000	0.345	29.0	0.390	0.000	28.1	35.997	Surcharged
S009	FEH: 30 years: +0 %: 60 mins: Summer	56.190	54.582	54.965	0.383	69.3	0.433	0.000	68.6	95.354	Surcharged
SO10	FEH: 30 years: +0 %: 60 mins: Summer	55.690	54.265	54.654	0.389	85.9	0.440	0.000	85.3	116.819	Surcharged
S011	FEH: 30 years: +0 %: 600 mins: Summer	55.300	53.772	54.025	0.253	25.2	0.286	0.000	25.2	234.366	OK
S017	FEH: 30 years: +0 %: 600 mins: Summer	54.877	53.377	54.025	0.648	35.8	0.733	0.000	35.6	339.990	Surcharged
S006	FEH: 30 years: +0 %: 60 mins: Summer	56.400	55.050	55.299	0.249	24.4	0.281	0.000	24.3	32.199	Surcharged
S007	FEH: 30 years: +0 %: 60 mins: Summer	56.337	54.912	55.093	0.181	30.9	0.204	0.000	29.7	40.466	OK
S008	FEH: 30 years: +0 %: 60 mins: Summer	56.200	54.775	55.006	0.231	35.1	0.261	0.000	33.3	48.682	Surcharged
S004	FEH: 30 years: +0 %: 60 mins: Summer	57.500	56.150	56.198	0.048	8.2	0.055	0.000	8.2	10.216	OK
S005	FEH: 30 years: +0 %: 60 mins: Summer	56.900	55.550	55.620	0.070	16.4	0.079	0.000	16.3	20.884	OK
S014	FEH: 30 years: +0 %: 600 mins: Summer	54.994	53.569	54.025	0.456	3.6	0.516	0.000	3.4	33.462	Surcharged
S016	FEH: 30 years: +0 %: 600 mins: Summer	54.936	53.436	54.025	0.589	10.8	0.666	0.000	10.6	106.841	Surcharged
S015	FEH: 30 years: +0 %: 600 mins: Summer	55.000	53.575	54.025	0.450	7.0	0.509	0.000	6.9	67.142	Surcharged
S012	FEH: 30 years: +0 %: 600 mins: Summer	55.231	53.881	54.025	0.144	1.3	0.163	0.000	1.3	11.893	OK
S013	FEH: 30 years: +0 %: 600 mins: Summer	55.106	53.756	54.025	0.269	3.0	0.304	0.000	3.0	27.530	Surcharged
S019	FEH: 30 years: +0 %: 60 mins: Summer		53.000	53.500	0.500	7.1			7.1	37.368	OK

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Junctions Summary Storm Phase: Final Design surcharged outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			



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

Project: Ladds Garden Centre	Date: 13/06/2025		
	Designed by: JB	Checked by:	Approved By:
Report Details: Type: Junctions Summary Storm Phase: Final Design surcharged outfall	Stantec UK Ltd : 100 Barbirolli Square Manchester M2 3AB		



Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
S001	FEH: 2 years: +0 %: 60 mins: Summer	57.200	55.850	55.897	0.047	5.9	0.053	0.000	5.9	7.357	OK
S002	FEH: 2 years: +0 %: 60 mins: Summer	56.900	55.550	55.596	0.046	8.2	0.052	0.000	8.2	10.243	OK
S003	FEH: 2 years: +0 %: 60 mins: Summer	56.200	54.656	54.737	0.082	11.3	0.093	0.000	11.3	14.102	OK
S009	FEH: 2 years: +0 %: 60 mins: Summer	56.190	54.582	54.680	0.098	27.9	0.111	0.000	27.8	36.858	OK
SO10	FEH: 2 years: +0 %: 60 mins: Summer	55.690	54.265	54.377	0.112	34.6	0.126	0.000	34.4	45.200	OK
S011	FEH: 2 years: +0 %: 60 mins: Summer	55.300	53.772	53.865	0.093	37.5	0.106	0.000	37.4	49.442	OK
S017	FEH: 2 years: +0 %: 960 mins: Summer	54.877	53.377	53.729	0.352	13.3	0.398	0.000	13.1	199.743	Surcharged
S006	FEH: 2 years: +0 %: 60 mins: Summer	56.400	55.050	55.137	0.087	9.6	0.099	0.000	9.6	12.399	OK
S007	FEH: 2 years: +0 %: 60 mins: Summer	56.337	54.912	55.007	0.095	12.1	0.108	0.000	12.0	15.597	OK
S008	FEH: 2 years: +0 %: 60 mins: Summer	56.200	54.775	54.837	0.062	13.6	0.070	0.000	13.5	18.701	OK
S004	FEH: 2 years: +0 %: 60 mins: Summer	57.500	56.150	56.180	0.030	3.2	0.034	0.000	3.2	3.985	OK
S005	FEH: 2 years: +0 %: 60 mins: Summer	56.900	55.550	55.593	0.043	6.5	0.048	0.000	6.5	8.118	OK
S014	FEH: 2 years: +0 %: 960 mins: Summer	54.994	53.569	53.729	0.160	1.3	0.181	0.000	1.3	19.739	OK
S016	FEH: 2 years: +0 %: 960 mins: Summer	54.936	53.436	53.729	0.293	4.1	0.331	0.000	3.9	62.346	OK
S015	FEH: 2 years: +0 %: 960 mins: Summer	55.000	53.575	53.729	0.154	2.6	0.174	0.000	2.5	38.749	OK
S012	FEH: 2 years: +0 %: 60 mins: Summer	55.231	53.881	53.919	0.038	2.1	0.043	0.000	2.1	2.602	OK
S013	FEH: 2 years: +0 %: 60 mins: Summer	55.106	53.756	53.818	0.062	4.8	0.070	0.000	4.8	6.022	OK
S019	FEH: 2 years: +0 %: 60 mins: Summer		53.000	53.500	0.500	7.1			7.1	23.788	OK

Project: Ladds Garden Centre	Date: 13/06/2025		
	Designed by: JB	Checked by:	Approved By:
Report Details: Type: Stormwater Controls Summary Storm Phase: Final Design surcharged outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB		



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

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)
Pond	FEH: 100 years: +40 %: 480 mins: Winter	54.464	54.464	1.364	1.364	49.9	494.248	0.000	0.000	7.0	284.033	728	-19.621
P1	FEH: 100 years: +40 %: 60 mins: Summer	55.912	55.836	0.082	0.136	11.5	5.684	0.000	0.000	7.7	14.046	12	60.598
P2	FEH: 100 years: +40 %: 60 mins: Summer	54.805	54.637	0.126	0.137	30.6	9.013	0.000	0.000	26.9	47.838	5	57.286
P3	FEH: 100 years: +40 %: 60 mins: Summer	56.735	56.712	0.034	0.012	1.3	0.168	0.000	0.000	1.3	1.648	2	92.469
P4	FEH: 100 years: +40 %: 60 mins: Summer	56.545	56.451	0.144	0.051	7.4	0.973	0.000	0.000	6.0	9.240	2	68.029
P5	FEH: 100 years: +40 %: 60 mins: Summer	55.947	55.839	0.255	0.149	11.8	5.352	0.000	0.000	12.5	14.452	4	32.321
P6	FEH: 100 years: +40 %: 60 mins: Summer	55.381	55.352	0.190	0.162	8.4	2.363	0.000	0.000	6.5	10.389	3	41.889
P7	FEH: 100 years: +40 %: 60 mins: Summer	55.342	55.321	0.151	0.131	7.4	1.938	0.000	0.000	7.4	9.122	2	53.382
P8	FEH: 100 years: +40 %: 60 mins: Summer	55.056	54.833	0.254	0.033	12.8	4.573	0.000	0.000	8.6	15.713	7	47.711
P12	FEH: 100 years: +40 %: 60 mins: Summer	57.131	57.038	0.131	0.038	8.4	0.989	0.000	0.000	8.3	10.391	2	72.110
P13	FEH: 100 years: +40 %: 60 mins: Summer	55.416	55.356	0.225	0.166	10.4	2.404	0.000	0.000	8.7	12.961	2	35.606
P14	FEH: 100 years: +40 %: 60 mins: Summer	54.739	54.537	0.239	0.037	10.7	1.343	0.000	0.000	10.1	13.321	1	54.616
P15	FEH: 100 years: +40 %: 60 mins: Summer	54.965	54.961	0.363	0.361	6.9	3.802	0.000	0.000	4.3	7.612	13	12.504
P16	FEH: 100 years: +40 %: 60 mins: Summer	54.989	54.969	0.289	0.269	6.1	2.027	0.000	0.000	4.4	7.606	7	8.560
P17	FEH: 100 years: +40 %: 60 mins: Summer	55.066	55.044	0.266	0.244	5.9	1.870	0.000	0.000	4.5	7.315	6	16.139
P18	FEH: 100 years: +40 %: 60 mins: Summer	54.881	54.812	0.181	0.112	1.5	1.072	0.000	0.000	0.7	1.671	33	51.241

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by: JB	Checked by:	Approved By:	
Report Details: Type: Stormwater Controls Summary Storm Phase: Final Design surcharged outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			

Status
Flood Risk
OK
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Project: Ladds Garden Centre						Date: 13/06/2025							
Designed by: JB						Checked by:			Approved By:				
Report Details: Type: Stormwater Controls Summary Storm Phase: Final Design surcharged outfall						Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB							

P11	FEH: 100 years: +40 %: 60 mins: Summer	56.100	56.035	0.266	0.202	11.6	3.711	0.000	0.000	9.8	14.331	3	22.233
P9	FEH: 100 years: +40 %: 60 mins: Summer	55.872	55.850	0.171	0.150	11.9	2.445	0.000	0.000	10.9	14.804	3	47.824
P10	FEH: 100 years: +40 %: 60 mins: Summer	56.194	56.168	0.293	0.268	16.3	9.961	0.000	0.000	17.8	18.006	8	6.941
P19	FEH: 100 years: +40 %: 60 mins: Summer	56.623	56.509	0.222	0.109	12.4	3.261	0.000	0.000	9.4	15.367	5	48.617
P20	FEH: 100 years: +40 %: 60 mins: Summer	54.968	54.964	0.366	0.364	6.9	3.689	0.000	0.000	4.3	7.630	12	11.745
Porous Paving	FEH: 100 years: +40 %: 180 mins: Summer	54.807	54.778	0.206	0.178	0.6	1.185	0.000	0.000	0.3	1.119	87	38.628

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by:	Checked by:	Approved By:	
	JB			
Report Details: Type: Stormwater Controls Summary Storm Phase: Final Design surcharged outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			

OK
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Project: Ladds Garden Centre	Date: 13/06/2025		
	Designed by: JB	Checked by:	Approved By:
Report Details: Type: Stormwater Controls Summary Storm Phase: Final Design surcharged outfall	Stantec UK Ltd : 100 Barbirolli Square Manchester M2 3AB		



FEH: 100 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Resident Volume

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)
Pond	FEH: 100 years: +0 %: 60 mins: Summer	54.178	54.178	1.078	1.078	45.3	357.250	0.000	0.000	7.1	302.617	482	13.536
P1	FEH: 100 years: +0 %: 60 mins: Summer	55.878	55.771	0.048	0.071	8.2	3.368	0.000	0.000	6.4	9.965	7	76.652
P2	FEH: 100 years: +0 %: 60 mins: Summer	54.784	54.614	0.104	0.114	22.6	7.488	0.000	0.000	19.9	33.233	6	64.512
P3	FEH: 100 years: +0 %: 60 mins: Summer	56.731	56.710	0.030	0.010	1.0	0.145	0.000	0.000	1.0	1.174	2	93.521
P4	FEH: 100 years: +0 %: 60 mins: Summer	56.493	56.429	0.092	0.029	5.3	0.605	0.000	0.000	5.3	6.595	1	80.143
P5	FEH: 100 years: +0 %: 60 mins: Summer	55.857	55.723	0.166	0.033	8.4	2.724	0.000	0.000	6.8	10.253	5	65.547
P6	FEH: 100 years: +0 %: 60 mins: Summer	55.286	55.230	0.095	0.040	6.0	0.910	0.000	0.000	5.9	7.409	2	77.623
P7	FEH: 100 years: +0 %: 60 mins: Summer	55.273	55.217	0.082	0.027	5.3	0.753	0.000	0.000	5.2	6.490	2	81.884
P8	FEH: 100 years: +0 %: 60 mins: Summer	54.976	54.830	0.174	0.030	9.2	3.109	0.000	0.000	7.2	11.157	5	64.447
P12	FEH: 100 years: +0 %: 60 mins: Summer	57.091	57.033	0.091	0.033	6.0	0.721	0.000	0.000	6.0	7.398	1	79.658
P13	FEH: 100 years: +0 %: 60 mins: Summer	55.316	55.223	0.126	0.033	7.5	0.973	0.000	0.000	7.3	9.243	2	73.944
P14	FEH: 100 years: +0 %: 60 mins: Summer	54.626	54.532	0.125	0.032	7.6	0.766	0.000	0.000	7.6	9.518	1	74.128
P15	FEH: 100 years: +0 %: 60 mins: Summer	54.872	54.870	0.271	0.270	4.9	2.842	0.000	0.000	3.2	5.181	16	34.600
P16	FEH: 100 years: +0 %: 60 mins: Summer	54.901	54.887	0.200	0.187	4.4	1.413	0.000	0.000	3.5	5.419	5	36.258
P17	FEH: 100 years: +0 %: 60 mins: Summer	54.989	54.975	0.188	0.175	4.2	1.333	0.000	0.000	3.4	5.205	5	40.215

Project: Ladds Garden Centre	Date: 13/06/2025			
	Designed by:	Checked by:	Approved By:	
	JB			
Report Details: Type: Stormwater Controls Summary Storm Phase: Final Design surcharged outfall	Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB			

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Project: Ladds Garden Centre						Date: 13/06/2025							
Designed by: JB						Checked by:			Approved By:				
Report Details: Type: Stormwater Controls Summary Storm Phase: Final Design surcharged outfall						Stantec UK Ltd: : 100 Barbirolli Square Manchester M2 3AB							

P18	FEH: 100 years: +0 %: 60 mins: Summer	54.838	54.789	0.137	0.089	1.1	0.819	0.000	0.000	0.5	1.146	34	62.735
P11	FEH: 100 years: +0 %: 60 mins: Summer	55.984	55.870	0.150	0.037	8.3	1.553	0.000	0.000	7.8	10.218	3	67.469
P9	FEH: 100 years: +0 %: 60 mins: Summer	55.807	55.731	0.106	0.031	8.5	1.107	0.000	0.000	8.5	10.546	1	76.388
P10	FEH: 100 years: +0 %: 60 mins: Summer	56.040	55.944	0.139	0.044	10.2	3.213	0.000	0.000	9.1	12.387	4	69.988
P19	FEH: 100 years: +0 %: 60 mins: Summer	56.545	56.443	0.144	0.043	8.9	1.962	0.000	0.000	7.9	10.943	3	69.073
P20	FEH: 100 years: +0 %: 60 mins: Summer	54.874	54.872	0.273	0.272	4.9	2.748	0.000	0.000	3.2	5.194	13	34.244
Porous Paving	FEH: 100 years: +0 %: 180 mins: Summer	54.760	54.747	0.159	0.147	0.4	0.959	0.000	0.000	0.2	0.646	113	50.295

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Project: Ladds Garden Centre	Date: 13/06/2025		
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Report Details: Type: Stormwater Controls Summary Storm Phase: Final Design surcharged outfall	Stantec UK Ltd : 100 Barbirolli Square Manchester M2 3AB		



FEH: 30 years: Increase Rainfall (%): +40: Critical Storm Per Item: Rank By: Max. Resident Volume

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)
Pond	FEH: 30 years: +40 %: 600 mins: Summer	54.266	54.266	1.166	1.166	50.5	397.072	0.000	0.000	7.1	307.937	530	3.898
P1	FEH: 30 years: +40 %: 60 mins: Summer	55.880	55.774	0.050	0.074	8.8	3.546	0.000	0.000	6.8	10.684	7	75.417
P2	FEH: 30 years: +40 %: 60 mins: Summer	54.788	54.618	0.108	0.118	24.1	7.769	0.000	0.000	21.2	35.784	6	63.182
P3	FEH: 30 years: +40 %: 60 mins: Summer	56.731	56.710	0.031	0.010	1.0	0.150	0.000	0.000	1.0	1.258	2	93.291
P4	FEH: 30 years: +40 %: 60 mins: Summer	56.504	56.429	0.103	0.029	5.7	0.662	0.000	0.000	5.5	7.051	1	78.267
P5	FEH: 30 years: +40 %: 60 mins: Summer	55.870	55.724	0.178	0.034	9.0	2.896	0.000	0.000	7.2	10.990	5	63.381
P6	FEH: 30 years: +40 %: 60 mins: Summer	55.297	55.231	0.106	0.041	6.4	0.989	0.000	0.000	6.2	7.925	2	75.678
P7	FEH: 30 years: +40 %: 60 mins: Summer	55.277	55.218	0.086	0.028	5.6	0.786	0.000	0.000	5.6	6.958	2	81.085
P8	FEH: 30 years: +40 %: 60 mins: Summer	54.989	54.831	0.187	0.031	9.8	3.310	0.000	0.000	7.6	11.941	5	62.158
P12	FEH: 30 years: +40 %: 60 mins: Summer	57.098	57.034	0.098	0.034	6.4	0.768	0.000	0.000	6.3	7.938	1	78.334
P13	FEH: 30 years: +40 %: 60 mins: Summer	55.328	55.223	0.137	0.033	8.0	1.047	0.000	0.000	7.7	9.897	1	71.954
P14	FEH: 30 years: +40 %: 60 mins: Summer	54.635	54.533	0.134	0.033	8.2	0.813	0.000	0.000	8.1	10.178	1	72.535
P15	FEH: 30 years: +40 %: 60 mins: Summer	54.888	54.885	0.287	0.285	5.3	3.005	0.000	0.000	3.4	5.599	14	30.850
P16	FEH: 30 years: +40 %: 60 mins: Summer	54.916	54.900	0.215	0.200	4.7	1.515	0.000	0.000	3.6	5.803	6	31.686
P17	FEH: 30 years: +40 %: 60 mins: Summer	55.002	54.987	0.201	0.187	4.5	1.423	0.000	0.000	3.6	5.583	5	36.165

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Project: Ladds Garden Centre						Date: 13/06/2025							
Report Details: Type: Stormwater Controls Summary Storm Phase: Final Design surcharged outfall						Designed by: JB		Checked by:		Approved By:			
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P18	FEH: 30 years: +40 %: 60 mins: Summer	54.846	54.793	0.146	0.093	1.2	0.867	0.000	0.000	0.5	1.243	35	60.544
P11	FEH: 30 years: +40 %: 60 mins: Summer	55.996	55.871	0.162	0.038	8.8	1.656	0.000	0.000	8.3	10.944	2	65.299
P9	FEH: 30 years: +40 %: 60 mins: Summer	55.811	55.732	0.110	0.032	9.1	1.144	0.000	0.000	9.1	11.290	1	75.598
P10	FEH: 30 years: +40 %: 60 mins: Summer	56.058	56.002	0.157	0.102	10.9	4.607	0.000	0.000	8.5	13.268	8	56.959
P19	FEH: 30 years: +40 %: 60 mins: Summer	56.560	56.443	0.159	0.043	9.5	2.122	0.000	0.000	8.1	11.716	3	66.564
P20	FEH: 30 years: +40 %: 60 mins: Summer	54.889	54.887	0.288	0.287	5.2	2.902	0.000	0.000	3.4	5.605	12	30.564
Porous Paving	FEH: 30 years: +40 %: 240 mins: Summer	54.777	54.756	0.176	0.156	0.4	1.023	0.000	0.000	0.2	0.894	108	47.016

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FEH: 30 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Resident Volume

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)
Pond	FEH: 30 years: +0 %: 600 mins: Summer	54.024	54.024	0.924	0.924	36.0	291.672	0.000	0.000	7.1	267.166	467	29.408
P1	FEH: 30 years: +0 %: 60 mins: Summer	55.871	55.761	0.041	0.061	6.3	2.776	0.000	0.000	4.8	7.560	8	80.753
P2	FEH: 30 years: +0 %: 60 mins: Summer	54.769	54.598	0.089	0.098	17.6	6.414	0.000	0.000	15.3	24.690	8	69.605
P3	FEH: 30 years: +0 %: 60 mins: Summer	56.727	56.709	0.027	0.009	0.7	0.129	0.000	0.000	0.7	0.887	2	94.232
P4	FEH: 30 years: +0 %: 60 mins: Summer	56.478	56.426	0.077	0.026	4.1	0.513	0.000	0.000	4.1	5.030	1	83.163
P5	FEH: 30 years: +0 %: 60 mins: Summer	55.819	55.719	0.127	0.029	6.4	2.148	0.000	0.000	5.6	7.779	6	72.836
P6	FEH: 30 years: +0 %: 60 mins: Summer	55.269	55.225	0.079	0.035	4.6	0.766	0.000	0.000	4.6	5.634	2	81.161
P7	FEH: 30 years: +0 %: 60 mins: Summer	55.261	55.214	0.071	0.024	4.0	0.648	0.000	0.000	4.0	4.949	2	84.407
P8	FEH: 30 years: +0 %: 60 mins: Summer	54.935	54.827	0.133	0.027	7.0	2.444	0.000	0.000	5.8	8.435	7	72.050
P12	FEH: 30 years: +0 %: 60 mins: Summer	57.077	57.028	0.076	0.028	4.6	0.611	0.000	0.000	4.6	5.665	1	82.760
P13	FEH: 30 years: +0 %: 60 mins: Summer	55.284	55.218	0.093	0.028	5.7	0.745	0.000	0.000	5.7	7.042	2	80.041
P14	FEH: 30 years: +0 %: 60 mins: Summer	54.593	54.527	0.092	0.027	5.8	0.582	0.000	0.000	5.8	7.264	1	80.321
P15	FEH: 30 years: +0 %: 60 mins: Summer	54.822	54.820	0.221	0.220	3.8	2.314	0.000	0.000	2.5	3.739	18	46.744
P16	FEH: 30 years: +0 %: 60 mins: Summer	54.861	54.852	0.161	0.152	3.3	1.141	0.000	0.000	3.0	4.143	5	48.537
P17	FEH: 30 years: +0 %: 60 mins: Summer	54.950	54.942	0.149	0.142	3.2	1.068	0.000	0.000	2.7	3.989	5	52.091
P18	FEH: 30 years: +0 %: 60 mins: Summer	54.810	54.773	0.110	0.073	0.8	0.654	0.000	0.000	0.4	0.846	35	70.256

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P11	FEH: 30 years: +0 %: 60 mins: Summer	55.947	55.865	0.113	0.032	6.3	1.204	0.000	0.000	6.2	7.789	3	74.777
P9	FEH: 30 years: +0 %: 60 mins: Summer	55.795	55.727	0.093	0.027	6.5	0.974	0.000	0.000	6.5	8.034	2	79.222
P10	FEH: 30 years: +0 %: 60 mins: Summer	56.007	55.936	0.106	0.036	7.8	2.531	0.000	0.000	6.5	9.388	7	76.356
P19	FEH: 30 years: +0 %: 60 mins: Summer	56.507	56.438	0.107	0.038	6.8	1.517	0.000	0.000	6.3	8.335	4	76.092
P20	FEH: 30 years: +0 %: 60 mins: Summer	54.823	54.821	0.221	0.221	3.7	2.236	0.000	0.000	2.5	3.763	17	46.516
Porous Paving	FEH: 30 years: +0 %: 360 mins: Summer	54.741	54.729	0.141	0.129	0.2	0.841	0.000	0.000	0.1	0.611	193	56.452

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

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)
Pond	FEH: 2 years: +0 %: 960 mins: Summer	53.728	53.728	0.628	0.628	13.3	179.822	0.000	0.000	5.4	166.747	710	56.478
P1	FEH: 2 years: +0 %: 120 mins: Summer	55.852	55.734	0.023	0.034	2.1	1.506	0.000	0.000	1.7	4.304	12	89.562
P2	FEH: 2 years: +0 %: 120 mins: Summer	54.732	54.553	0.052	0.053	5.7	3.577	0.000	0.000	5.0	13.332	12	83.048
P3	FEH: 2 years: +0 %: 120 mins: Summer	56.723	56.705	0.022	0.005	0.3	0.098	0.000	0.000	0.2	0.503	6	95.609
P4	FEH: 2 years: +0 %: 60 mins: Summer	56.450	56.416	0.049	0.016	1.6	0.325	0.000	0.000	1.6	1.954	3	89.332
P5	FEH: 2 years: +0 %: 60 mins: Summer	55.760	55.709	0.069	0.019	2.5	1.228	0.000	0.000	2.1	2.917	9	84.467
P6	FEH: 2 years: +0 %: 60 mins: Summer	55.240	55.212	0.049	0.022	1.8	0.482	0.000	0.000	1.8	2.193	4	88.145
P7	FEH: 2 years: +0 %: 60 mins: Summer	55.236	55.204	0.045	0.014	1.6	0.410	0.000	0.000	1.6	1.920	4	90.135
P8	FEH: 2 years: +0 %: 60 mins: Summer	54.872	54.817	0.070	0.017	2.8	1.364	0.000	0.000	2.2	3.159	10	84.409
P12	FEH: 2 years: +0 %: 60 mins: Summer	57.049	57.018	0.048	0.018	1.8	0.387	0.000	0.000	1.8	2.200	3	89.093
P13	FEH: 2 years: +0 %: 60 mins: Summer	55.246	55.207	0.055	0.017	2.2	0.445	0.000	0.000	2.2	2.737	2	88.090
P14	FEH: 2 years: +0 %: 60 mins: Summer	54.556	54.518	0.055	0.018	2.3	0.356	0.000	0.000	2.3	2.840	2	87.964
P15	FEH: 2 years: +0 %: 120 mins: Summer	54.738	54.738	0.137	0.138	1.3	1.443	0.000	0.000	0.9	1.774	31	66.801
P16	FEH: 2 years: +0 %: 60 mins: Summer	54.776	54.774	0.076	0.074	1.3	0.545	0.000	0.000	1.0	1.605	8	75.404
P17	FEH: 2 years: +0 %: 60 mins: Summer	54.873	54.871	0.073	0.071	1.3	0.526	0.000	0.000	1.0	1.557	8	76.395
P18	FEH: 2 years: +0 %: 180 mins: Summer	54.762	54.732	0.062	0.032	0.2	0.327	0.000	0.000	0.1	0.620	37	85.106

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P11	FEH: 2 years: +0 %: 60 mins: Summer	55.900	55.853	0.066	0.020	2.5	0.722	0.000	0.000	2.4	3.018	4	84.862
P9	FEH: 2 years: +0 %: 60 mins: Summer	55.763	55.717	0.062	0.017	2.6	0.647	0.000	0.000	2.5	3.106	3	86.198
P10	FEH: 2 years: +0 %: 60 mins: Summer	55.959	55.922	0.058	0.022	3.1	1.423	0.000	0.000	2.5	3.528	8	86.704
P19	FEH: 2 years: +0 %: 60 mins: Summer	56.459	56.424	0.058	0.024	2.7	0.864	0.000	0.000	2.6	3.207	6	86.384
P20	FEH: 2 years: +0 %: 120 mins: Summer	54.738	54.738	0.137	0.138	1.3	1.387	0.000	0.000	0.9	1.781	29	66.813
Porous Paving	FEH: 2 years: +0 %: 960 mins: Winter	54.702	54.699	0.101	0.099	0.0	0.635	0.000	0.000	0.0	0.279	300	67.088

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