

PRO-FORMA 1: Sustainable Drainage System: Planning Permission

This pro-forma is a requirement of the Planning Validation Checklist. You **must complete all white boxes in full** and submit this pro-forma along with your supporting evidence to the Local Planning Authority for any application which seeks planning permission for major development (as defined in section 2 of [Statutory Instrument 2015 No. 595](#)).

This pro-forma supports developers and regulators in **summarising and confirming** how surface water from a development will be managed sustainably under current and future conditions. It should be completed in conjunction with the Council's 'Completing your Pro Forma' document and your sustainable drainage system should be designed in accordance with [CIRIA The SuDS Manual C753](#).

The pro-forma follows Policy CS24 of [Knowsley MBC's Local Plan](#), [National Planning Policy Framework](#), [House of Commons Written Statement \(HWSW 161\) on SuDS](#), [Planning Practice Guidance](#) and [Defra's Non-Statutory Technical Standards for Sustainable Drainage Systems](#). It is supported by the [Defra/EA Guidance on Rainfall Runoff Management](#) and can be completed using freely available tools such as [Tools for Sustainable Drainage Systems](#) or approved Industry Standard surface water management design software. The Council's [Sustainable Drainage & Surface Water Management Technical Guidance document](#) also provides further information.

Section 1: Development Details

Development Name		Eastlands Car Park		
Development Address (including postcode)		Jaguar Land Rover Halewood, Speke Boulevard, Speke, L24 9BJ	Planning Application Reference (if available)	26/00192/FUL
Development Grid Reference	Northings	384202	Expected lifetime of development (years)	100
	Eastings	345612	Have you submitted a Flood Risk Assessment?	Yes ☒ No ☐
Total Development Site Area (Ha)		5.12	Type of Planning Application (✓)	Outline ☐
Site area served by proposed drainage system (excluding open space) (Ha)*		5.12		Full ☒
Is your surface water drainage system designed to a (tick all that apply):				Hybrid ☐
Greenfield Standard		☒		Reserved Matters ☐
Previously Developed Standard		☐		

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Section 2: Impermeable Area and Existing Drainage For outline or reserved matters applications, go to Section 3

	Existing (E)	Proposed (P)	Difference (P – E)	Evidence Checklist	
Impermeable Area (Ha)	0	5.12	5.12	☒	Plans showing development layout of site with existing and proposed impermeable areas.
State Drainage Method	Natural runoff	Gravity networks (3no.)	N/A	☒	Plans showing current and proposed locations of sustainable drainage system.
Are there existing sewers, watercourses, water bodies, highway drains, soakaways or filter drains on the site?			Yes ☒ No ☐	☒	Plans showing existing layout to include: • Watercourses, open or culverted • Water bodies – ponds, swales etc. • Sewers, including manholes • Highway drains, include manholes • Soakaways, filter drains

Section 3: Surface Water Discharge Hierarchy – Planning Practice Guidance

Surface Water Discharge Method	Proposed?	If YES - Evidence Checklist		If NO - Evidence Checklist	
1. Infiltration to ground	Yes ☐ No ☒	☐	Completed Infiltration Checklist from CIRIA The SuDS Manual C753 Appendix B <i>An editable version of this form is available on SusDrain website.</i>	☒	Geotechnical Survey, including Soil Permeability Testing stating Percolation Coefficient, in accordance with BRE 365 AND Statement providing justification in your Sustainable Drainage Strategy
2. Discharge to watercourse or surface water body (Main River or Ordinary)	Yes ☐ No ☒	☐	Watercourse and/or Water Body Survey Report	☒	Plan showing nearby watercourses and water bodies AND Statement providing justification in your Sustainable Drainage Strategy
3. Discharge to surface water sewer	Yes ☒ No ☐	☐	Water and Sewerage Company written agreement for the Right to Connect.	☒	Plan showing nearby sewers
4. Discharge to combined sewer	Yes ☐ No ☒		Note: sewers are private and owned by the Developer, Sewerage Company permission not required		AND Statement providing justification in your Sustainable Drainage Strategy

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Section 4: Calculate Peak Discharge Rates – Technical Standards S2 and S3 (unless S1 applies)

Rainfall Event	Existing Rate (l/s)	Greenfield Rate (l/s)	Proposed Rate (l/s) <i>Brownfield sites must reduce discharge rates by 50%</i>	Evidence Checklist	
Qbar	25.2	25.2	25.2	☒	MicroDrainage (or equivalent) calculations
1:1 Year Event	21.9	21.9	25.2		
1:30 Year Event	42.7	42.7	25.2		
1:100 Year Event	52.4	52.4	25.2		

Section 5: Calculate Discharge Volume – Technical Standards S4 and S6 (unless S1 applies)

Rainfall Event	Existing Volume (m ³)	Greenfield Volume (m ³)	Proposed Volume (m ³)	Evidence Checklist	
1:100 Year 6 Hour Event	1532.412	1532.412	559.97	☒	MicroDrainage (or equivalent) calculations

Section 6: Infiltration

Site Information	✓	Evidence Checklist	
Do your sustainable drainage proposals include any infiltration?	Yes ☐ No ☒ <i>If NO, please move on to Section 7</i>	☐	Proposed sustainable drainage plans
You should submit an alternative 'Plan B' sustainable drainage design utilising an alternative discharge method if site specific ground conditions are unknown at this stage. This will become the default design in the event infiltration proposals are not feasible upon site specific ground investigation. Have you submitted an alternative 'Plan B' sustainable drainage design?	Yes ☐ No ☐	☐	'Plan B' conceptual sustainable drainage plans and statement of approach

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Section 7: Storage – Technical Standards S7, S8 and S9

Storage Details	Details	Evidence Checklist	
State climate change allowance used (%)	45	☒	State / use in MicroDrainage
State storage volume provided (m ³) (excluding non-void spaces) <i>Must include an allowance for climate change and urban creep.</i>	Geocellular crates storage total = 3,187m ³	☒	Drainage plans showing location of attenuation and all flow control devices and any supporting calculations
Summarise how storage will be provided for 1:30 year event on site. <i>Storage must be designed to ensure that at no flooding occurs onsite in a 1 in 30 year event except in designed areas and no flooding occurs offsite in a 1 in 100 year (+ climate change allowance) event.</i>	All storage required up to and including 30year critical design event will be in below-ground geocellular crates and pipework	☒	Plans showing size and location of storage and supporting calculations
Summarise how storage will be provided for 1:100 year (+ climate change) 6 hour event on site. <i>Where storage above the 1:30 year rainfall event is provided in designated areas designed to accommodate excess surface water volumes, plans showing storage locations and surface water depths and supported by MicroDrainage (or equivalent) calculations.</i>	All storage required for this event will be in below-ground geocellular crates and pipework	☒	Plans showing size and location of storage and supporting calculations

Section 8: Operation and Maintenance – Technical Standard S12 and HCWS161

Consideration	Select <u>ALL</u> that apply (✓)		Evidence Checklist
State how <u>ALL</u> components of the sustainable drainage system will be maintained for the design life of the development.	Sustainable drainage features are at property level	☒	☒ Statement provided within your Sustainable Drainage Strategy
	Sustainable drainage system to be adopted by Water and Sewerage Company through a Section 104 agreement (Water Industry Act 1991)	☐	
	Applicant to secure maintenance of sustainable drainage features by entering into a Section 106 agreement (Town and Country Planning Act 1990)	☐	

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Declaration and Submission

This pro-forma has been completed using evidence from information which has been submitted with my planning application.

The information submitted in the Sustainable Drainage Strategy and site-specific Flood Risk Assessment (FRA), where submitted, is proportionate to the site conditions, flood risks and magnitude of development and I agree that this information can be used as evidence to this sustainable drainage approach.

Submitter Details

Form <u>completed</u> by		Email Address	
		Daytime Telephone	
Form <u>signed off</u> by		Accreditation(s) and/or Qualification(s) of Signatory	HND, DipHE, GMICE
Date (dd/mm/yyyy)	29/05/2026	Company	Ridge and Partners LLP

Client Details

Name	Jaguar Land Rover	Company	Jaguar Land Rover
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JLR EASTLANDS CAR PARK, HALEWOOD
APPLICATION REF: 26/00192/FUL

KNOWSLEY COUNCIL SUDS PROFORMA SUPPORTING EVIDENCE

Note: Refer to the submitted Flood Risk Assessment (FRA), that contains the Drainage Layout drawing and necessary statements that this Proforma requests.

Content enclosed in following additional pages

Existing Site Information Drawing

Soil Permeability Test Results

Greenfield Runoff Rates and Volumes Calculations

EXISTING SITE INFORMATION DRAWING



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CDM REGULATIONS 2015

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P01	FOR INFORMATION	29.30.2026	SD	SD
REV	DESCRIPTION	DATE	BY	CHKD
ORIGINATOR:		www.ridge.co.uk		

RIDGE

PROJECT NUMBER: 5031818

CLIENT:

JLR

CONTRACTOR CLIENT:

PROJECT:

EASTLANDS CAR PARK

TITLE:

EXISTING SITE INFORMATION

DRAWN BY:	SD	CHECKED BY:	-	APPROVED BY:	SD
SCALE:	1:2500	@ A3	DATE:	29.05.2026	
STATUS:	DESCRIPTION:				
S2 FOR INFORMATION					
DRAWING No: ECP-RDG-ZZ-ST-D-C-110010					
PROJECT:	ORG:	FUNCTION:	SPATIAL:	FORM:	DISC:
ECP	RDG	ZZ	ST	D	C
NUMBER:	REV:				
110010	P01				

SOIL PERMEABILITY TEST RESULTS

Project Name:	Jaguar Land Rover	Test Duration:	mins
Project No:	LW25-136	Length:	2.00 m
Client:	GBX Remediation	Width:	0.70 m
Date of Test:	19/01/2026	Depth of Pit at Start of Test:	2.20 m
		Depth of Pit at End of Test:	2.20 m
		Porosity of Infill:	100 % (100% if no infill)

First Fill	
Time (mins)	Water Level (mBGL)
0	1.31
1	1.31
2	1.31
3	1.31
4	1.31
5	1.31
6	1.31
7	1.31
8	1.31
9	1.31
10	1.31
15	1.32
20	1.32
25	1.32
30	1.32
45	1.32
60	1.32
90	1.32
120	1.32
180	1.32

Test carried out to BRE Digest 365: 2016 - Soakaway Design

$$\text{Soil Infiltration Rate} = \frac{V_{p75-25}}{a_{p50} \times t_{p75-25}}$$

where f = soil infiltration rate, V_{p75-25} = volume outflowing between 75% and 25% effective depth (m^3)

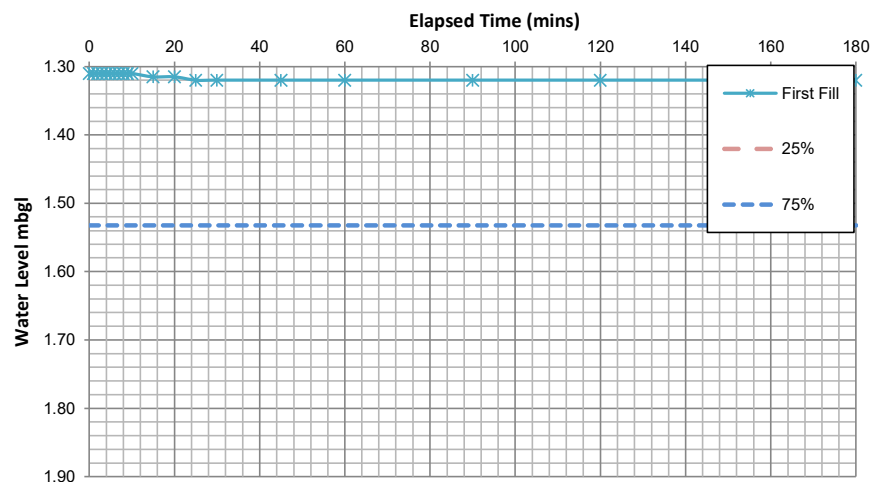
ap50 = mean surface area (pit sides to 50% effective depth + base) (m²),

tp75-25 = time for outflow between 75% and 25% effective depth (seconds)

Note:

Soil Infiltration Rate = - m/s

Test Zone Material: MADE GROUND: Brown sandy very gravelly clay with frequent extraneous material.



SA02

SOAKAWAY TEST RESULT



Project Name: Jaguar Land Rover Test Duration: mins
 Project No: LW25-136 Length: 2.20 m
 Client: GBX Remediation Width: 0.70 m
 Date of Test: 19/01/2026 Depth of Pit at Start of Test: 2.20 m
 Depth of Pit at End of Test: 2.20 m
 Porosity of Infill: 100 % (100% if no infill)

First Fill	
Time (mins)	Water Level (mBGL)
0	1.59
1	1.59
2	1.59
3	1.59
4	1.59
5	1.59
6	1.59
7	1.59
8	1.59
9	1.59
10	1.59
15	1.59
20	1.59
25	1.59
30	1.59
45	1.59
60	1.59
90	1.59
120	1.59
180	1.59

Test carried out to BRE Digest 365: 2016 - Soakaway Design

$$\text{Soil Infiltration Rate} = \frac{V_{p75-25}}{a_{p50} \times t_{p75-25}}$$

where f = soil infiltration rate, V_{p75-25} = volume outflowing between 75% and 25% effective depth (m3)

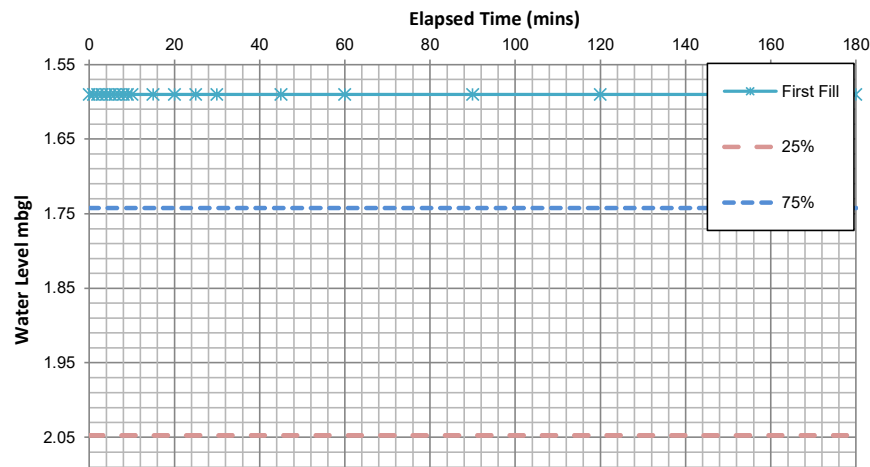
ap50 = mean surface area (pit sides to 50% effective depth + base) (m2),

tp75-25 = time for outflow between 75% and 25% effective depth (seconds)

Note:

Soil Infiltration Rate = - m/s

Test Zone Material: MADE GROUND: Dark grey sandy very gravelly clay with frequent extraneous material.



SA03

SOAKAWAY TEST RESULT



Project Name: Jaguar Land Rover Test Duration: mins
 Project No: LW25-136 Length: 1.80 m
 Client: GBX Remediation Width: 0.70 m
 Date of Test: 19/01/2026 Depth of Pit at Start of Test: 1.94 m
 Depth of Pit at End of Test: 1.94 m
 Porosity of Infill: 100 % (100% if no infill)

First Fill	
Time (mins)	Water Level (mBGL)
0	1.38
1	1.39
2	1.40
3	1.41
4	1.41
5	1.42
6	1.42
7	1.43
8	1.43
9	1.44
10	1.44
15	1.45
20	1.46
25	1.47
30	1.48
45	1.51
60	1.54
90	1.57
120	1.60
180	1.64

Test carried out to BRE Digest 365: 2016 - Soakaway Design

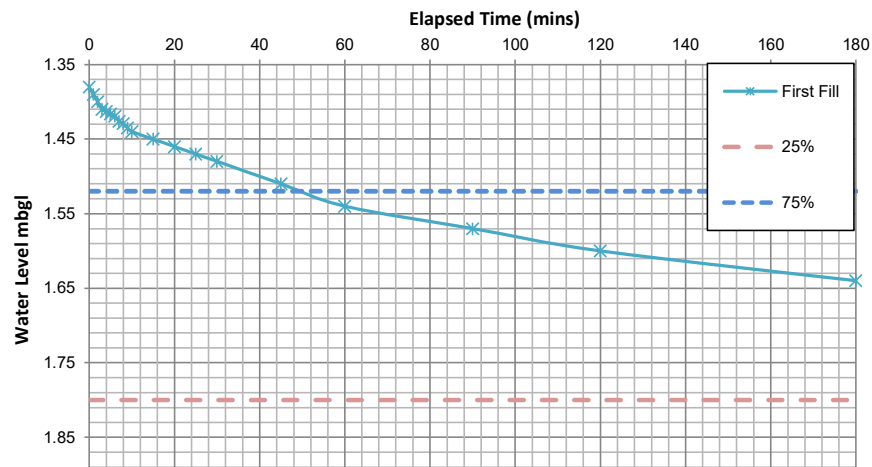
$$\text{Soil Infiltration Rate} = \frac{V_{p75-25}}{a_{p50} \times t_{p75-25}}$$

where f = soil infiltration rate, V_{p75-25} = volume outflowing between 75% and 25% effective depth (m3) a_{p50} = mean surface area (pit sides to 50% effective depth + base) (m2), t_{p75-25} = time for outflow between 75% and 25% effective depth (seconds)

Note:

Soil Infiltration Rate = - m/s

Test Zone Material: MADE GROUND: Brown very gravelly clay with occasional extraneous material.



GREENFIELD RUNOFF RATES AND VOLUMES CALCULATIONS

Project: JLR Eastlands Car Park Halewood	Date: 29/05/2026		
	Designed by: SDowning	Checked by: -	Approved By: SDowning
Report Title: UK and Ireland Rural Runoff Calculator	Company Address: 2nd Floor, 100 Embankment Cathedral Approach Manchester. M3 7FB		

ICP SUDS / IH 124

Details

Method	ICP SUDS
Area (ha)	5.12
SAAR (mm)	759.0
Soil	0.47
Region	Region 10
Urban	0
Return Period (years)	0

Results

Region	QBAR Rural (L/s)	QBAR Urban (L/s)	Q 1 (years) (L/s)	Q 30 (years) (L/s)	Q 100 (years) (L/s)
Region 10	25.2	25.2	21.9	42.7	52.4

Greenfield Volume

FSR

Details

Region	England And Wales
M5-60 (mm)	20.0
Ratio R	0.4
Area (ha)	5.12
SAAR (mm)	759.0
CWI	112.613
Urban 1990	0
Areal Reduction Factor	1.00
SPR	47
Storm Duration (mins)	360
Return Period (years)	100

Results

PR%	47.88
Greenfield Runoff Volume (m³)	1532.412

Project: JLR Eastlands Car Park Halewood		Date: 02/04/2026			
		Designed by: L Pilsbury	Checked by: SDowning		Approved By: SDowning
Report Details: Type: Junctions Summary Storm Phase: Phase Flow Path: Network 1		Company Address: 2nd Floor, 100 Embankment Cathedral Approach Manchester. M3 7FB			



FSR: 100 years: Increase Rainfall (%): +0: 360 mins: Summer

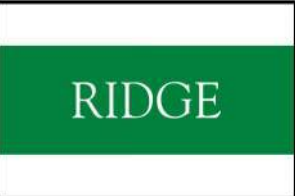
Junction	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
S01	22.850	21.350	21.499	0.149	29.6	0.213	0.000	29.3	167.238	OK
S02	22.850	21.090	21.326	0.236	52.7	0.337	0.000	52.4	298.357	OK
S05	22.850	20.914	21.326	0.412	141.5	0.727	0.000	140.7	802.482	OK
S06	23.400	20.759	21.325	0.566	140.7	1.001	0.000	140.0	799.337	Surcharged
S07	23.400	20.674	21.325	0.651	8.0	1.151	0.000	7.5	186.131	Surcharged
S08	22.710	20.576	20.652	0.076	7.5	0.000	0.000	7.5	186.058	OK

Project: JLR Eastlands Car Park Halewood		Date: 02/04/2026		
Report Details: Type: Junctions Summary Storm Phase: Phase Flow Path: Network 1		Designed by: L Pilsbury	Checked by: SDowning	
		Approved By: SDowning		
		Company Address: 2nd Floor, 100 Embankment Cathedral Approach Manchester. M3 7FB		



FSR: 100 years: Increase Rainfall (%): +0: 360 mins: Winter

Junction	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
S01	22.850	21.350	21.468	0.118	19.5	0.169	0.000	19.5	167.240	OK
S02	22.850	21.090	21.324	0.234	34.9	0.335	0.000	34.9	298.532	OK
S05	22.850	20.914	21.324	0.410	94.0	0.724	0.000	94.0	802.537	OK
S06	23.400	20.759	21.324	0.565	94.0	0.999	0.000	93.5	799.426	Surcharged
S07	23.400	20.674	21.324	0.650	7.9	1.149	0.000	7.6	188.999	Surcharged
S08	22.710	20.576	20.653	0.077	7.6	0.000	0.000	7.6	188.927	OK

Project: JLR Eastlands Car Park Halewood		Date: 02/04/2026		
Report Details: Type: Connections Summary Storm Phase: Phase Flow Path: Network 1		Designed by: L Pilsbury	Checked by: S Downing	
		Approved By: S Downing		
		Company Address: 2nd Floor, 100 Embankment Cathedral Approach Manchester. M3 7FB		



FSR: 100 years: Increase Rainfall (%): +0: 360 mins: Summer

Connection	Connection Type	From	To	Upstream Cover Level (m)	Max. US Water Level (m)	Max. Flow Depth (m)	Discharge Volume (m³)	Max. Velocity (m/s)	Flow / Capacity	Max. Flow (L/s)	Status
1.000	Pipe	S01	S02	22.850	21.499	0.140	167.238	0.9	0.46	29.3	OK
1.001	Pipe	S02	S05	22.850	21.326	0.286	298.326	1.0	0.28	52.4	OK
1.002	Pipe	S05	S06	22.850	21.326	0.489	802.409	1.3	0.3	140.7	OK
1.003	Pipe	S06	TANK1	23.400	21.325	0.525	799.285	2.1	0.28	140.0	Surcharged
1.004	Pipe	TANK1	S07	23.400	21.325	0.525	187.997	0.2	0.03	8.0	Surcharged
1.005	Pipe	S07	S08	23.400	21.325	0.078	186.058	0.8	0.52	7.5	Surcharged

Project: JLR Eastlands Car Park Halewood		Date: 02/04/2026		
Report Details: Type: Connections Summary Storm Phase: Phase Flow Path: Network 1		Designed by: L Pilsbury	Checked by: SDowning	
		Approved By: SDowning		
		Company Address: 2nd Floor, 100 Embankment Cathedral Approach Manchester. M3 7FB		



FSR: 100 years: Increase Rainfall (%): +0: 360 mins: Winter

Connection	Connection Type	From	To	Upstream Cover Level (m)	Max. US Water Level (m)	Max. Flow Depth (m)	Discharge Volume (m³)	Max. Velocity (m/s)	Flow / Capacity	Max. Flow (L/s)	Status
1.000	Pipe	S01	S02	22.850	21.468	0.112	167.240	0.8	0.3	19.5	OK
1.001	Pipe	S02	S05	22.850	21.324	0.284	298.532	0.9	0.19	34.9	OK
1.002	Pipe	S05	S06	22.850	21.324	0.488	802.537	1.2	0.2	94.0	OK
1.003	Pipe	S06	TANK1	23.400	21.324	0.525	799.426	2.1	0.18	93.5	Surcharged
1.004	Pipe	TANK1	S07	23.400	21.324	0.525	190.860	0.1	0.03	7.9	Surcharged
1.005	Pipe	S07	S08	23.400	21.324	0.079	188.927	0.8	0.53	7.6	Surcharged

Project: JLR Eastlands Car Park Halewood		Date: 02/04/2026			
Report Details: Type: Junctions Summary Storm Phase: Phase Flow Path: Network 2		Designed by: L Pilsbury	Checked by: SDowning		Approved By: SDowning
		Company Address: 2nd Floor, 100 Embankment Cathedral Approach Manchester. M3 7FB			



FSR: 100 years: Increase Rainfall (%): +0: 360 mins: Summer

Junction	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
S09	21.735	20.085	20.228	0.143	38.0	0.204	0.000	37.6	214.677	OK
S10	21.735	19.900	20.114	0.214	76.3	0.378	0.000	75.8	432.114	OK
S13	21.735	19.717	20.114	0.397	182.3	0.701	0.000	180.7	1033.409	OK
S14	22.390	19.523	20.114	0.591	180.7	1.043	0.000	179.4	1027.929	OK
S15	22.390	19.439	20.113	0.674	9.4	1.192	0.000	8.8	221.081	Surcharged
S16	22.390	19.394	19.477	0.083	8.7	0.000	0.000	8.7	220.999	OK

Project: JLR Eastlands Car Park Halewood	Date: 02/04/2026			RIDGE
	Designed by: L Pilsbury	Checked by: SDowning	Approved By: SDowning	
Report Details: Type: Junctions Summary Storm Phase: Phase Flow Path: Network 2	Company Address: 2nd Floor, 100 Embankment Cathedral Approach Manchester. M3 7FB			



FSR: 100 years: Increase Rainfall (%): +0: 360 mins: Winter

Junction	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
S09	21.735	20.085	20.200	0.115	25.0	0.164	0.000	25.0	214.396	OK
S10	21.735	19.900	20.112	0.212	50.5	0.374	0.000	50.4	431.494	OK
S13	21.735	19.717	20.112	0.395	120.9	0.698	0.000	120.8	1031.805	OK
S14	22.390	19.523	20.112	0.589	120.8	1.041	0.000	120.1	1026.267	OK
S15	22.390	19.439	20.112	0.673	9.9	1.189	0.000	9.6	224.840	Surcharged
S16	22.390	19.394	19.482	0.089	9.6	0.000	0.000	9.6	224.758	OK

Project: JLR Eastlands Car Park Halewood		Date: 02/04/2026		
Report Details: Type: Connections Summary Storm Phase: Phase Flow Path: Network 2		Designed by: L Pilsbury	Checked by: S Downing	
		Approved By: S Downing		
		Company Address: 2nd Floor, 100 Embankment Cathedral Approach Manchester. M3 7FB		



FSR: 100 years: Increase Rainfall (%): +0: 360 mins: Summer

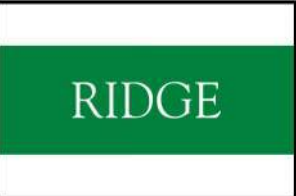
Connection	Connection Type	From	To	Upstream Cover Level (m)	Max. US Water Level (m)	Max. Flow Depth (m)	Discharge Volume (m³)	Max. Velocity (m/s)	Flow / Capacity	Max. Flow (L/s)	Status
3.000	Pipe	S09	S10	21.735	20.228	0.137	214.345	0.9	0.2	37.6	OK
3.001	Pipe	S10	S13	21.735	20.114	0.268	431.177	1.0	0.27	75.8	OK
3.002	Pipe	S13	S14	21.735	20.114	0.494	1031.448	1.3	0.32	180.7	OK
3.003	Pipe	S14	TANK2	22.390	20.114	0.600	1025.920	2.0	0.33	179.4	OK
3.004	Pipe	TANK2	S15	22.390	20.113	0.600	223.705	0.2	0.02	9.4	Surcharged
3.005	Pipe	S15	S16	22.390	20.113	0.088	220.999	0.8	0.6	8.7	Surcharged

Project: JLR Eastlands Car Park Halewood		Date: 02/04/2026			
Report Details: Type: Connections Summary Storm Phase: Phase Flow Path: Network 2		Designed by: L Pilsbury	Checked by: S Downing		Approved By: S Downing
		Company Address: 2nd Floor, 100 Embankment Cathedral Approach Manchester. M3 7FB			



FSR: 100 years: Increase Rainfall (%): +0: 360 mins: Winter

Connection	Connection Type	From	To	Upstream Cover Level (m)	Max. US Water Level (m)	Max. Flow Depth (m)	Discharge Volume (m³)	Max. Velocity (m/s)	Flow / Capacity	Max. Flow (L/s)	Status
3.000	Pipe	S09	S10	21.735	20.200	0.111	214.325	0.8	0.13	25.0	OK
3.001	Pipe	S10	S13	21.735	20.112	0.266	431.331	1.0	0.18	50.4	OK
3.002	Pipe	S13	S14	21.735	20.112	0.492	1031.582	1.2	0.21	120.8	OK
3.003	Pipe	S14	TANK2	22.390	20.112	0.600	1026.087	2.0	0.22	120.1	OK
3.004	Pipe	TANK2	S15	22.390	20.112	0.600	227.457	0.1	0.03	9.9	Surcharged
3.005	Pipe	S15	S16	22.390	20.112	0.093	224.758	0.8	0.66	9.6	Surcharged

Project: JLR Eastlands Car Park Halewood		Date: 02/04/2026		
Report Details: Type: Junctions Summary Storm Phase: Phase Flow Path: Network 3		Designed by: L Pilsbury	Checked by: SDowning	
		Approved By: SDowning		
		Company Address: 2nd Floor, 100 Embankment Cathedral Approach Manchester. M3 7FB		



FSR: 100 years: Increase Rainfall (%): +0: 360 mins: Summer

Junction	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
S17	21.540	20.040	20.147	0.107	16.4	0.121	0.000	16.2	92.572	OK
S18	21.540	19.857	20.016	0.159	31.3	0.227	0.000	30.9	177.669	OK
S19	21.540	19.680	20.016	0.336	46.5	0.480	0.000	46.3	264.571	OK
S21	21.540	19.590	20.016	0.426	80.8	0.752	0.000	80.0	456.480	OK
S22	22.086	19.418	20.015	0.597	80.0	1.056	0.000	78.9	452.872	Surcharged
S23	22.086	19.347	20.015	0.668	4.4	1.181	0.000	4.0	145.435	Surcharged
S24	22.086	19.320	19.374	0.053	4.0	0.000	0.000	4.0	145.367	OK

Project: JLR Eastlands Car Park Halewood		Date: 02/04/2026		
Report Details: Type: Junctions Summary Storm Phase: Phase Flow Path: Network 3		Designed by: L Pilsbury	Checked by: SDowning	
		Approved By: SDowning		
		Company Address: 2nd Floor, 100 Embankment Cathedral Approach Manchester. M3 7FB		



FSR: 100 years: Increase Rainfall (%): +0: 360 mins: Winter

Junction	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
S17	21.540	20.040	20.126	0.086	10.8	0.097	0.000	10.8	92.545	OK
S18	21.540	19.857	20.015	0.158	20.7	0.226	0.000	20.7	177.559	OK
S19	21.540	19.680	20.015	0.335	30.9	0.480	0.000	30.9	264.163	OK
S21	21.540	19.590	20.015	0.425	53.8	0.752	0.000	53.0	456.012	OK
S22	22.086	19.418	20.015	0.597	53.0	1.056	0.000	52.1	452.452	Surcharged
S23	22.086	19.347	20.015	0.668	4.2	1.181	0.000	4.0	146.348	Surcharged
S24	22.086	19.320	19.374	0.053	4.0	0.000	0.000	4.0	146.280	OK

Project: JLR Eastlands Car Park Halewood		Date: 02/04/2026			
		Designed by: L Pilsbury	Checked by: SDowning		Approved By: SDowning
Report Details: Type: Connections Summary Storm Phase: Phase Flow Path: Network 3		Company Address: 2nd Floor, 100 Embankment Cathedral Approach Manchester. M3 7FB			



FSR: 100 years: Increase Rainfall (%): +0: 360 mins: Summer

Connection	Connection Type	From	To	Upstream Cover Level (m)	Max. US Water Level (m)	Max. Flow Depth (m)	Discharge Volume (m³)	Max. Velocity (m/s)	Flow / Capacity	Max. Flow (L/s)	Status
5.000	Pipe	S17	S18	21.540	20.147	0.101	92.572	0.8	0.25	16.2	OK
5.001	Pipe	S18	S19	21.540	20.016	0.210	177.485	0.9	0.27	30.9	OK
5.002	Pipe	S19	S21	21.540	20.016	0.381	264.142	0.8	0.25	46.3	OK
5.003	Pipe	S21	S22	21.540	20.016	0.450	455.960	1.0	0.28	80.0	OK
5.004	Pipe	S22	TANK3	22.086	20.015	0.450	452.395	1.3	0.4	78.9	Surcharged
5.005	Pipe	TANK3	S23	22.000	20.015	0.450	147.075	0.2	0.02	4.4	Surcharged
5.006	Pipe	S23	S24	22.086	20.015	0.056	145.367	0.7	0.28	4.0	Surcharged

Project: JLR Eastlands Car Park Halewood		Date: 02/04/2026		RIDGE	
		Designed by: L Pilsbury	Checked by: SDowning		Approved By: SDowning
Report Details: Type: Connections Summary Storm Phase: Phase Flow Path: Network 3		Company Address: 2nd Floor, 100 Embankment Cathedral Approach Manchester. M3 7FB			



FSR: 100 years: Increase Rainfall (%): +0: 360 mins: Winter

Connection	Connection Type	From	To	Upstream Cover Level (m)	Max. US Water Level (m)	Max. Flow Depth (m)	Discharge Volume (m³)	Max. Velocity (m/s)	Flow / Capacity	Max. Flow (L/s)	Status
5.000	Pipe	S17	S18	21.540	20.126	0.082	92.545	0.7	0.17	10.8	OK
5.001	Pipe	S18	S19	21.540	20.015	0.209	177.559	0.8	0.18	20.7	OK
5.002	Pipe	S19	S21	21.540	20.015	0.380	264.163	0.8	0.17	30.9	OK
5.003	Pipe	S21	S22	21.540	20.015	0.450	456.012	0.9	0.18	53.0	OK
5.004	Pipe	S22	TANK3	22.086	20.015	0.450	452.452	1.3	0.27	52.1	Surcharged
5.005	Pipe	TANK3	S23	22.000	20.015	0.450	147.984	0.1	0.02	4.2	Surcharged
5.006	Pipe	S23	S24	22.086	20.015	0.056	146.280	0.7	0.28	4.0	Surcharged