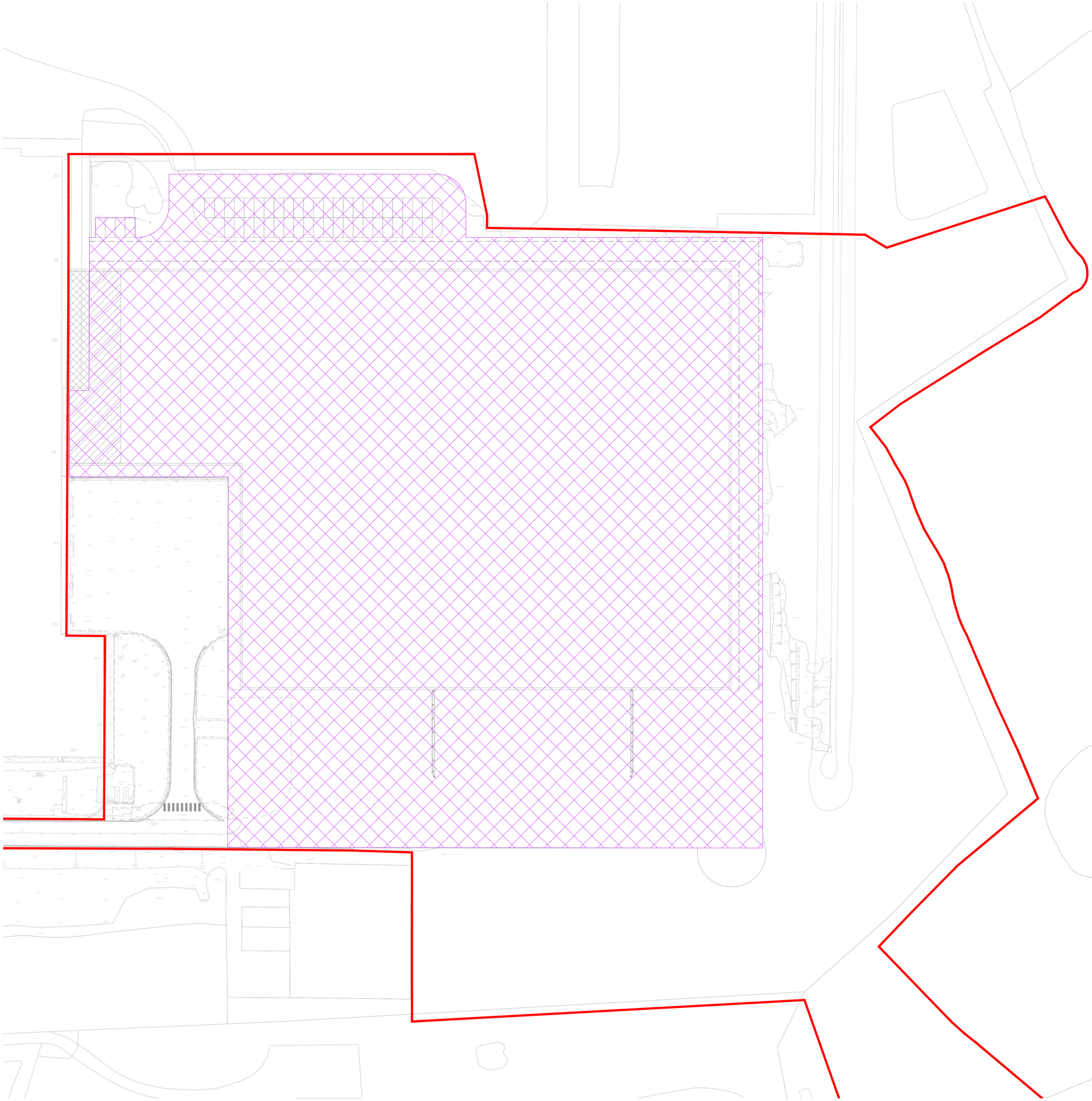


EXISTING CATCHMENTS

TOTAL EXISTING HARDSTANDING CATCHMENT: **2.42 Ha.**

IT IS PROPOSED TO DISCHARGE FROM THE SITE AT GREENFIELD RUNOFF RATE.

GREENFIELD RUN-OFF RATE (QBAR) CALCULATED AS **11.3l/s** BASED ON PROPOSED IMPERMEABLE AREA USING UKSUDS TOOL

DRAWING BASED ON:

SURVEY INFORMATION
- LS6476-T3 BY LAYER SURVEYS DATED FEB 2026
- LIDAR DATA DOWNLOADED MAY 2026

ARCHITECT'S PLANS
- 26073-UMC-ZZZZ-SI-DR-A-0115 REV P03 SITE LAYOUT OPTION 5

KEY:

APPROXIMATE SITE BOUNDARY

PROPOSED IMPERMEABLE AREA

1:500 0 10m 20m 30m 40m 50m

1:1 0 10 20 30 40 50 60 70 80 90 100

GENERAL NOTES:

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.
2. DESIGN BASED ON TOPOGRAPHICAL SURVEY INFORMATION AVAILABLE AT THE TIME OF DESIGN.
3. ALL EXISTING SEWERS, CONNECTIONS, PIPE SIZES AND INVERT LEVELS TO BE CONFIRMED BY CONTRACTOR PRIOR TO COMMENCEMENT OF WORKS TO ENSURE CONNECTIVITY. ANY VARIANCE FROM THE INFORMATION SHOWN SHOULD BE REPORTED TO THE ENGINEER FOR REVIEW.
4. DO NOT SCALE THIS DRAWING. ANY AMBIGUITIES, OMISSIONS AND ERRORS ON DRAWINGS SHALL BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY. ALL DIMENSIONS MUST BE CHECKED / VERIFIED ON SITE.
5. ALL DIMENSIONS ARE IN METRES AND LEVELS IN METRES ABOVE ORDNANCE DATUM UNLESS OTHERWISE NOTED.
6. WHERE EXISTING DRAINAGE IS BEING USED, ALLOWANCES SHOULD BE MADE TO REMEDIATE THIS DRAINAGE IN LINE WITH AVAILABLE CCTV SURVEY INFORMATION. IF NO SURVEY IS AVAILABLE, IT IS ADVISED TO OBTAIN ONE PRIOR TO COMMENCEMENT OF WORKS.
7. ALL EXISTING SERVICES TO BE LOCATED PRIOR TO COMMENCEMENT OF ANY DRAINAGE WORKS, AND WHERE NECESSARY PROTECTION OR DIVERSIONS TO BE UNDERTAKEN TO AVOID CONFLICT WITH THE PROPOSED WORK.
8. COVER LEVELS, GULLY POSITIONS, AND BUILDINGS LOCATION ARE APPROXIMATE AND SHALL BE CONFIRMED BY ARCHITECT/ LANDSCAPE ARCHITECT.
9. ALL PIPE DIAMETERS GIVEN ARE NOMINAL INTERNAL PIPE DIAMETERS. THESE ARE TO BE CONFIRMED ONCE A DETAILED CAPACITY CHECK HAS BEEN UNDERTAKEN AT A LATER DESIGN STAGE.
10. OUTFALL CONNECTION(S) SUBJECT TO AGREEMENT WITH THE APPROVING AUTHORITY.

Rev:	Description:	Date:	By:	Chkd:
P01	FIRST ISSUE	29.05.26	JC	ATL

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Status: SUITABLE FOR INFORMATION **S2**

Project: WREXHAM INDUSTRIAL ESTATE

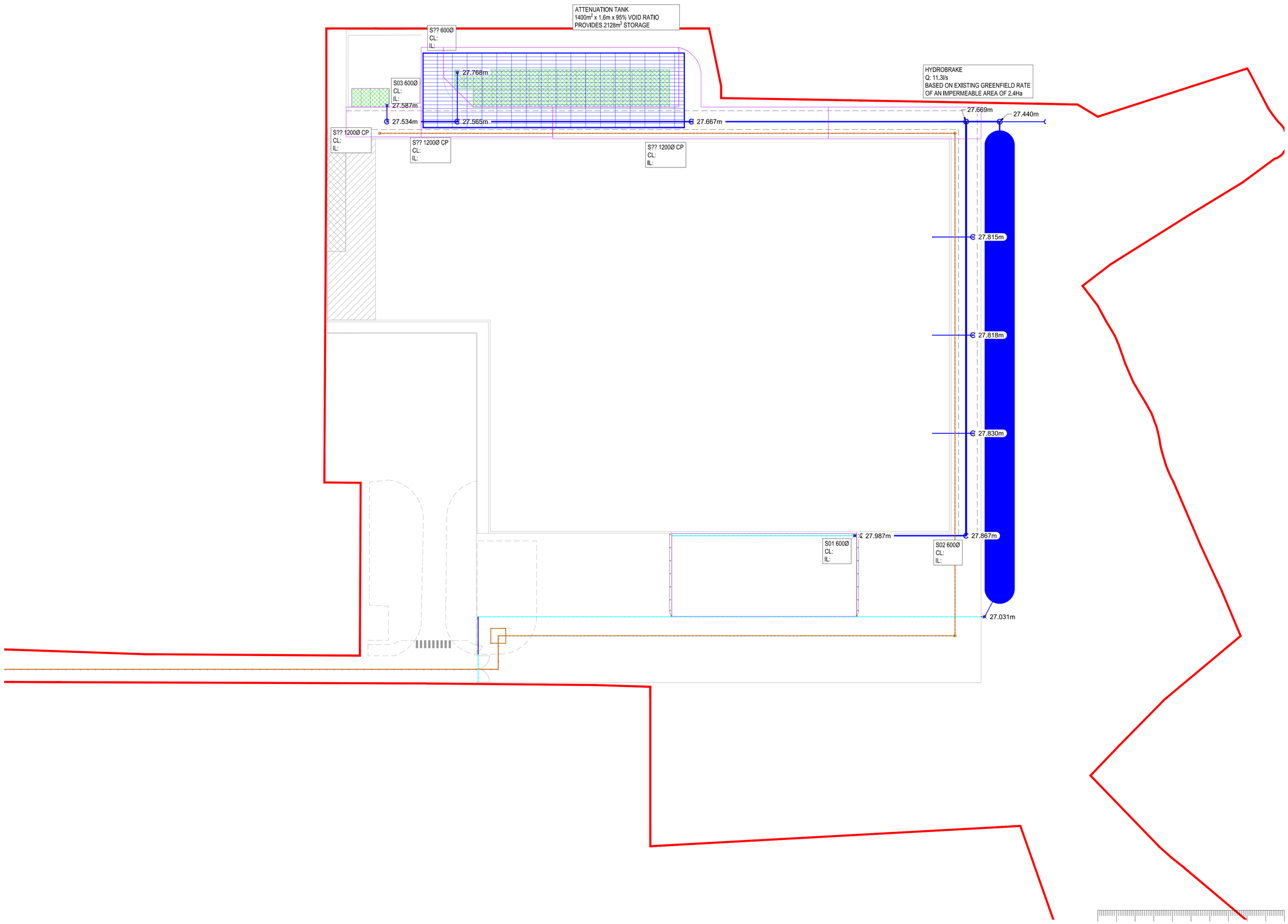
Drg Title: PROPOSED IMPERMEABLE AREAS PLAN

Drawn By	Designed By	Checked By
JC	JC	ATL
	Date: 29/05/26	Scales @ A1: 1:500

Project No - Originator - Function - Spatial - Form - Discipline - Number: 089023 - CUR - XX - XX - D - C - 92001

Revision: P01

\\ma-fs-1\Projects\089001 - 090000\089023 - Wrexham Industrial Estate\03-2-Delivery\C\C08-CAD\92\



GENERAL NOTES:

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.
2. DO NOT SCALE THIS DRAWING. ANY AMBIGUITIES, OMISSIONS AND ERRORS ON DRAWINGS SHALL BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY. ALL DIMENSIONS MUST BE CHECKED / VERIFIED ON SITE.
3. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
4. FOR GENERAL NOTES REFER TO DRAWING.

26 May 2026 10:57
- - DRAFT - -
Philip Barrett

REV	ISSUED	00/00/00	XXX	XXX
Rev.	Description:	Date:	By:	Chkd:

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Status: WORK IN PROGRESS — S0

Project: WREXHAM INDUSTRIAL ESTATE

Drg Title: PROPOSED DRAINAGE STRATEGY

Drawn By	Designed By	Checked By
JC	JC	AL
	Date: 26/05/26	Scales @ A1: 1:200

Project No - Originator - Function - Spatial - Form - Discipline - Number	Revision
089023 - CUR - XX - XX - D - C - 92000	P01

\\mts-fs-1\Projects\089001 - 090000\089023 - Wrexham Industrial Estate\03-2-Delivery\CUR\C06-CAD\92\

Appendix F

Proposed Drainage Calculations

Greenfield runoff rate estimation tool

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

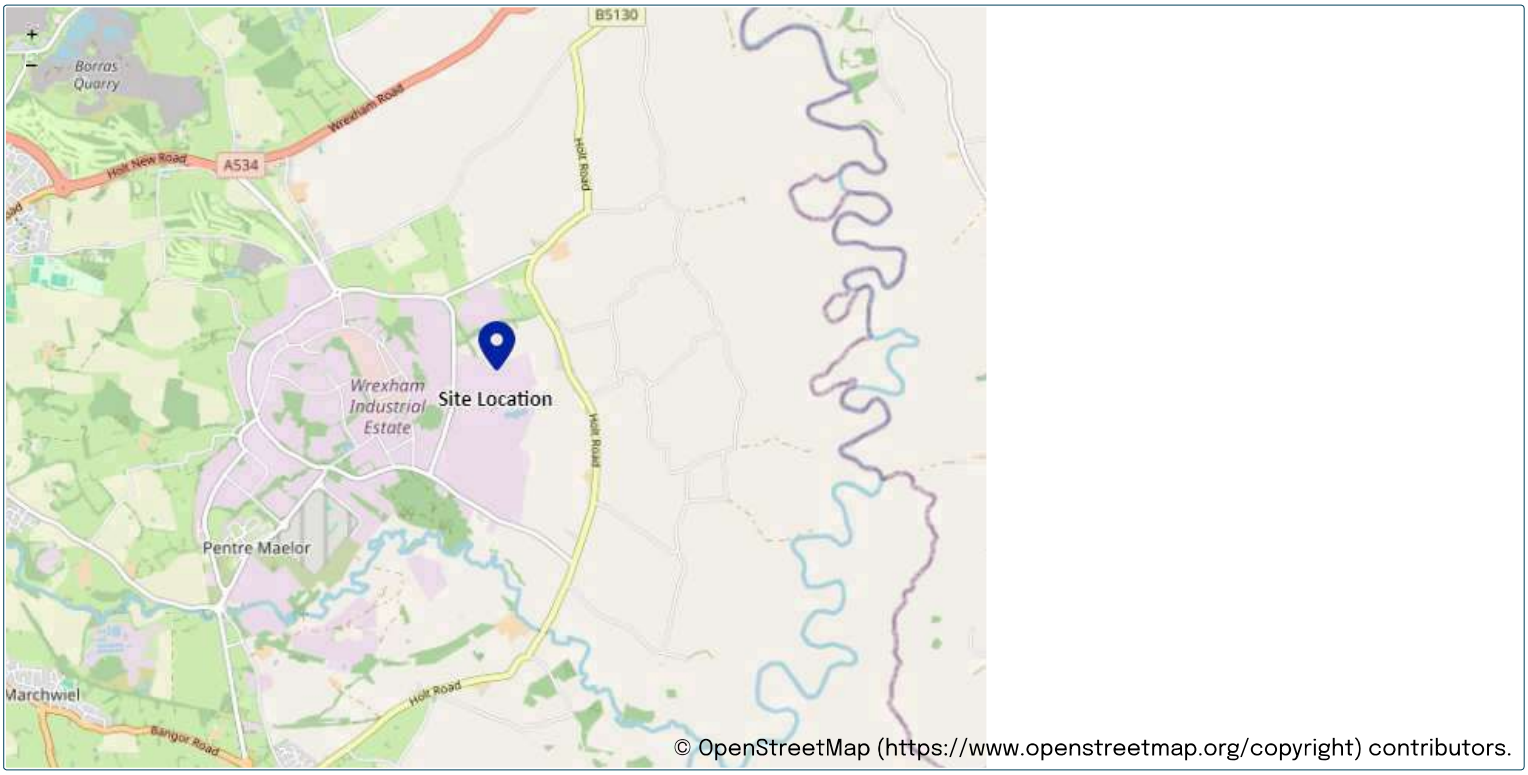
This is an estimation of the greenfield runoff rates that are used to meet normal best practice criteria in line with Environment Agency guidance "Rainfall runoff management for developments", SC030219 (2013), the SuDS Manual C753 (CIRIA, 2015) and the non-statutory standards for SuDS (Defra, 2015).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

Project details

Date	09/03/2026
Calculated by	
Reference	
Model version	2.2.3

Location

Site name	Wrexham Indutrial Estate
Site location	



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Site easting (British National Grid)	339295
Site northing (British National Grid)	350098

Site details

Total site area (ha)	2.42 ha

Greenfield runoff

Method

Method	IH124

IH124

	My value		Map value
SAAR (mm)	680 mm		680
How should SPR be derived?	WRAP soil type		
WRAP soil type	4		4
SPR	0.47		
QBar (IH124) (l/s)	11.3 l/s		

Growth curve factors

	My value		Map value
Hydrological region	9		9
1 year growth factor	0.88		
2 year growth factor	0.93		
10 year growth factor	1.42		
30 year growth factor	1.78		
100 year growth factor	2.18		
200 year growth factor	2.46		

Results

Method	IH124
Flow rate 1 year (l/s)	9.9 l/s
Flow rate 2 year (l/s)	10.5 l/s
Flow rate 10 years (l/s)	16.0 l/s
Flow rate 30 years (l/s)	20.1 l/s
Flow rate 100 years (l/s)	24.6 l/s
Flow rate 200 years (l/s)	27.8 l/s

Please note runoff estimation is subject to significant uncertainty. Results are therefore normally reported to only 1 decimal place. Where 2 decimal places are provided, this does not indicate accuracy to this level, it has been adopted to prevent 'zero' figures from being reported. Outputs less than 0.01 l/s are reported as 0.01 l/s.

Disclaimer

This report was produced using the Greenfield runoff rate estimation tool (2.2.3) developed by HR Wallingford and available at uksuds.com (https://www.uksuds.com/). The use of this tool is subject to the UK SuDS terms and conditions and licence agreement, which can both be found at uksuds.com/terms-conditions (https://www.uksuds.com/terms-conditions). The outputs from this tool have been used to estimate Greenfield runoff rates. The use of these results is the responsibility of the users of this tool. No liability will be accepted by HR Wallingford, the Environment Agency, Centre for Ecology and Hydrology, Wallingford Hydrosolutions or any other organisation for the use of these data in the design or operational characteristics of any drainage scheme.

Design Settings

Rainfall Methodology	FSR	Maximum Time of Concentration (mins)	30.00
Return Period (years)	100	Maximum Rainfall (mm/hr)	50.0
Additional Flow (%)	0	Minimum Velocity (m/s)	1.00
FSR Region	England and Wales	Connection Type	Level Soffits
M5-60 (mm)	18.000	Minimum Backdrop Height (m)	0.200
Ratio-R	0.380	Preferred Cover Depth (m)	1.200
CV	0.750	Include Intermediate Ground	✓
Time of Entry (mins)	5.00	Enforce best practice design rules	✓

Nodes

Name	Area (ha)	T of E (mins)	Cover Level (m)	Diameter (mm)	Width (mm)	Easting (m)	Northing (m)	Depth (m)
S01	0.020	5.00	27.587	600		339378.084	350170.575	1.050
S02			27.601	150		339386.266	350170.574	1.701
S03	0.164	5.00	27.860	600		339453.112	350179.598	1.160
S04			27.733	1500		339459.675	350170.558	2.127
S05			27.667	1500		339459.674	350166.250	2.078
OU	0.101	5.00	26.800	350	350	339503.375	350055.228	1.000
S06			27.867	1500		339533.250	350055.228	2.249
S07			27.669	1500		339533.250	350166.219	2.374
S08	0.430	5.00	27.600	1200		339538.183	350033.485	0.750
SW1			27.600			339542.233	350051.572	0.850
SP1	0.500	5.00	27.830	1500		339535.105	350082.665	1.000
SW2	0.030	5.00	27.600			339542.233	350084.463	0.932
SP2	0.500	5.00	27.818	1500		339535.105	350108.990	0.998
SW3	0.030	5.00	27.600			339542.233	350110.788	0.998
SP3	0.500	5.00	27.815	1500		339535.105	350135.315	0.995
SW4	0.030	5.00	27.600			339542.233	350137.113	1.064
S09		5.00	27.600	1200		339542.233	350033.307	1.730
S10	0.050	5.00	27.600	1200		339542.233	350159.862	2.240
S11			27.440	1800		339542.233	350166.219	2.199
Headwall			26.123	150		339554.253	350166.219	1.123

Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
1.000	S01	S02	8.182	0.600	26.537	26.455	0.082	100.0	150	5.14	50.0
1.001	S02	S04	73.409	0.600	25.900	25.606	0.294	250.0	375	6.21	50.0
2.000	S03	S04	11.171	0.600	26.700	26.569	0.131	85.3	225	5.13	50.0
1.002	S04	S05	4.308	0.600	25.606	25.589	0.017	250.0	375	6.27	50.0
1.003	S05	S07	73.576	0.600	25.589	25.295	0.294	250.0	375	7.35	50.0
3.000	OU	S06	29.875	0.600	25.800	25.680	0.120	250.0	375	5.44	50.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)
1.000	1.005	17.8	2.7	0.900	0.996	0.020	0.0
1.001	1.141	126.0	2.7	1.326	1.752	0.020	0.0
2.000	1.417	56.3	22.2	0.935	0.939	0.164	0.0
1.002	1.141	126.0	24.9	1.752	1.703	0.184	0.0
1.003	1.141	126.0	24.9	1.703	1.999	0.184	0.0
3.000	1.141	126.0	13.7	0.625	1.812	0.101	0.0

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Links

Name	US Node	DS Node	Length (m)	ks (mm) / n	US IL (m)	DS IL (m)	Fall (m)	Slope (1:X)	Dia (mm)	T of C (mins)	Rain (mm/hr)
3.001	S06	S07	110.991	0.600	25.618	25.295	0.323	343.6	375	7.34	50.0
1.004	S07	S11	8.983	0.600	25.295	25.241	0.054	167.0	225	7.49	50.0
4.000	S08	SW1	18.535	0.600	26.850	26.750	0.100	185.3	375	5.23	50.0
4.001	SW1	SW2	32.891	0.600	26.750	26.668	0.082	400.0	750	5.49	50.0
5.000	SP1	SW2	7.351	0.600	26.830	26.750	0.080	91.9	375	5.06	50.0
4.002	SW2	SW3	26.325	0.600	26.668	26.602	0.066	400.0	1000	5.66	50.0
6.000	SP2	SW3	7.351	0.600	26.820	26.673	0.147	50.0	375	5.05	50.0
4.003	SW3	SW4	26.325	0.600	26.602	26.536	0.066	400.0	1000	5.84	50.0
7.000	SP3	SW4	7.351	0.600	26.820	26.673	0.147	50.0	375	5.05	50.0
4.004	SW4	S10	22.749	0.600	26.536	26.479	0.057	400.0	1000	5.99	50.0
8.000	S09	S10	126.555	0.600	25.870	25.360	0.510	248.1	375	6.84	50.0
4.005	S10	S11	6.357	0.600	25.360	25.241	0.119	53.4	375	6.88	50.0
1.005	S11	Headwall	12.020	0.600	25.241	25.000	0.241	49.9	225	7.60	50.0

Name	Vel (m/s)	Cap (l/s)	Flow (l/s)	US Depth (m)	DS Depth (m)	Σ Area (ha)	Σ Add Inflow (l/s)
3.001	0.972	107.3	13.7	1.874	1.999	0.101	0.0
1.004	1.009	40.1	38.6	2.149	1.974	0.285	0.0
4.000	1.327	146.6	58.3	0.375	0.475	0.430	0.0
4.001	2.140	4012.2	58.3	0.100	0.182	0.430	0.0
5.000	1.890	208.8	67.8	0.625	0.475	0.500	0.0
4.002	2.531	8227.3	130.1	-0.068	-0.002	0.960	0.0
6.000	2.567	283.5	67.8	0.623	0.552	0.500	0.0
4.003	2.531	8227.3	201.9	-0.002	0.064	1.490	0.0
7.000	2.567	283.5	67.8	0.620	0.552	0.500	0.0
4.004	2.531	8227.3	273.8	0.064	0.121	2.020	0.0
8.000	1.145	126.5	0.0	1.355	1.865	0.000	0.0
4.005	2.483	274.3	280.5	1.865	1.824	2.070	0.0
1.005	1.856	73.8	319.2	1.974	0.898	2.355	0.0

Pipeline Schedule

Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
1.000	8.182	100.0	150	Circular	27.587	26.537	0.900	27.601	26.455	0.996
1.001	73.409	250.0	375	Circular	27.601	25.900	1.326	27.733	25.606	1.752
2.000	11.171	85.3	225	Circular	27.860	26.700	0.935	27.733	26.569	0.939
1.002	4.308	250.0	375	Circular	27.733	25.606	1.752	27.667	25.589	1.703
1.003	73.576	250.0	375	Circular	27.667	25.589	1.703	27.669	25.295	1.999
3.000	29.875	250.0	375	Circular	26.800	25.800	0.625	27.867	25.680	1.812
3.001	110.991	343.6	375	Circular	27.867	25.618	1.874	27.669	25.295	1.999

Link	US Node	Dia (mm)	Width (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.000	S01	600		Manhole	Adoptable	S02	150	Manhole	Adoptable
1.001	S02	150		Manhole	Adoptable	S04	1500	Manhole	Adoptable
2.000	S03	600		Manhole	Adoptable	S04	1500	Manhole	Adoptable
1.002	S04	1500		Manhole	Adoptable	S05	1500	Manhole	Adoptable
1.003	S05	1500		Manhole	Adoptable	S07	1500	Manhole	Adoptable
3.000	OU	350	350	Manhole	Adoptable	S06	1500	Manhole	Adoptable
3.001	S06	1500		Manhole	Adoptable	S07	1500	Manhole	Adoptable

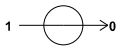
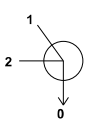
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Pipeline Schedule

Link	Length (m)	Slope (1:X)	Dia (mm)	Link Type	US CL (m)	US IL (m)	US Depth (m)	DS CL (m)	DS IL (m)	DS Depth (m)
1.004	8.983	167.0	225	Circular	27.669	25.295	2.149	27.440	25.241	1.974
4.000	18.535	185.3	375	Circular	27.600	26.850	0.375	27.600	26.750	0.475
4.001	32.891	400.0	750	Swale	27.600	26.750	0.100	27.600	26.668	0.182
5.000	7.351	91.9	375	Circular	27.830	26.830	0.625	27.600	26.750	0.475
4.002	26.325	400.0	1000	Swale	27.600	26.668	-0.068	27.600	26.602	-0.002
6.000	7.351	50.0	375	Circular	27.818	26.820	0.623	27.600	26.673	0.552
4.003	26.325	400.0	1000	Swale	27.600	26.602	-0.002	27.600	26.536	0.064
7.000	7.351	50.0	375	Circular	27.815	26.820	0.620	27.600	26.673	0.552
4.004	22.749	400.0	1000	Swale	27.600	26.536	0.064	27.600	26.479	0.121
8.000	126.555	248.1	375	Circular	27.600	25.870	1.355	27.600	25.360	1.865
4.005	6.357	53.4	375	Circular	27.600	25.360	1.865	27.440	25.241	1.824
1.005	12.020	49.9	225	Circular	27.440	25.241	1.974	26.123	25.000	0.898

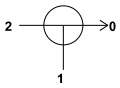
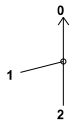
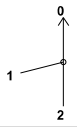
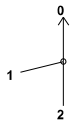
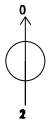
Link	US Node	Dia (mm)	Width (mm)	Node Type	MH Type	DS Node	Dia (mm)	Node Type	MH Type
1.004	S07	1500		Manhole	Adoptable	S11	1800	Manhole	Adoptable
4.000	S08	1200		Manhole	Adoptable	SW1		Junction	
4.001	SW1			Junction		SW2		Junction	
5.000	SP1	1500		Manhole	Adoptable	SW2		Junction	
4.002	SW2			Junction		SW3		Junction	
6.000	SP2	1500		Manhole	Adoptable	SW3		Junction	
4.003	SW3			Junction		SW4		Junction	
7.000	SP3	1500		Manhole	Adoptable	SW4		Junction	
4.004	SW4			Junction		S10	1200	Manhole	Adoptable
8.000	S09	1200		Manhole	Adoptable	S10	1200	Manhole	Adoptable
4.005	S10	1200		Manhole	Adoptable	S11	1800	Manhole	Adoptable
1.005	S11	1800		Manhole	Adoptable	Headwall	150	Manhole	Adoptable

Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Width (mm)	Connections	Link	IL (m)	Dia (mm)
S01	339378.084	350170.575	27.587	1.050	600					
							0	1.000	26.537	150
S02	339386.266	350170.574	27.601	1.701	150			1	1.000	26.455	150
										
							0	1.001	25.900	375
S03	339453.112	350179.598	27.860	1.160	600					
							0	2.000	26.700	225
S04	339459.675	350170.558	27.733	2.127	1500			1	2.000	26.569	225
								2	1.001	25.606	375
							0	1.002	25.606	375
S05	339459.674	350166.250	27.667	2.078	1500			1	1.002	25.589	375
							0	1.003	25.589	375

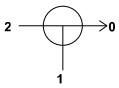
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Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Width (mm)	Connections	Link	IL (m)	Dia (mm)
OU	339503.375	350055.228	26.800	1.000	350	350		0	3.000	25.800	375
S06	339533.250	350055.228	27.867	2.249	1500			1	3.000	25.680	375
								0	3.001	25.618	375
S07	339533.250	350166.219	27.669	2.374	1500			1	3.001	25.295	375
								2	1.003	25.295	375
								0	1.004	25.295	225
S08	339538.183	350033.485	27.600	0.750	1200			0	4.000	26.850	375
SW1	339542.233	350051.572	27.600	0.850				1	4.000	26.750	375
								0	4.001	26.750	750
SP1	339535.105	350082.665	27.830	1.000	1500			0	5.000	26.830	375
SW2	339542.233	350084.463	27.600	0.932				1	5.000	26.750	375
								2	4.001	26.668	750
								0	4.002	26.668	1000
SP2	339535.105	350108.990	27.818	0.998	1500			0	6.000	26.820	375
SW3	339542.233	350110.788	27.600	0.998				1	6.000	26.673	375
								2	4.002	26.602	1000
								0	4.003	26.602	1000
SP3	339535.105	350135.315	27.815	0.995	1500			0	7.000	26.820	375
SW4	339542.233	350137.113	27.600	1.064				1	7.000	26.673	375
								2	4.003	26.536	1000
								0	4.004	26.536	1000
S09	339542.233	350033.307	27.600	1.730	1200			0	8.000	25.870	375
S10	339542.233	350159.862	27.600	2.240	1200			1	8.000	25.360	375
								2	4.004	26.479	1000
								0	4.005	25.360	375

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Manhole Schedule

Node	Easting (m)	Northing (m)	CL (m)	Depth (m)	Dia (mm)	Width (mm)	Connections		Link	IL (m)	Dia (mm)
S11	339542.233	350166.219	27.440	2.199	1800			1	4.005	25.241	375
								2	1.004	25.241	225
								0	1.005	25.241	225
Headwall	339554.253	350166.219	26.123	1.123	150			1	1.005	25.000	225

SuDS Carriers

Link	US Node	DS Node	Link Type	Base Inf Coef (m/hr)	Sides Inf Coef (m/hr)	Safety Factor	Time to Half Empty (mins)
4.001	SW1	SW2	Swale	0.00000	0.00000	2.0	1
4.002	SW2	SW3	Swale	0.00000	0.00000	2.0	1
4.003	SW3	SW4	Swale	0.00000	0.00000	2.0	1
4.004	SW4	S10	Swale	0.00000	0.00000	2.0	1

Simulation Settings

Rainfall Methodology	FSR	Analysis Speed	Normal
Rainfall Events	Singular	Skip Steady State	x
FSR Region	England and Wales	Drain Down Time (mins)	240
M5-60 (mm)	18.000	Additional Storage (m³/ha)	20.0
Ratio-R	0.380	Starting Level (m)	
Summer CV	0.750	Check Discharge Rate(s)	✓
Winter CV	0.840	Check Discharge Volume	x

Storm Durations

15	30	60	120	180	240	360	480	600	720	960	1440

Return Period (years)	Climate Change (CC %)	Additional Area (A %)	Additional Flow (Q %)
1	0	0	0
100	50	0	0

Pre-development Discharge Rate

Site Makeup	Greenfield	Growth Factor 30 year	1.95
Greenfield Method	IH124	Growth Factor 100 year	2.48
Positively Drained Area (ha)		Betterment (%)	0
SAAR (mm)		QBar	
Soil Index	1	Q 1 year (l/s)	
SPR	0.10	Q 30 year (l/s)	
Region	1	Q 100 year (l/s)	
Growth Factor 1 year	0.85		

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Node S11 Online Hydro-Brake® Control

Flap Valve	✓	Objective	(HE) Minimise upstream storage
Replaces Downstream Link	✓	Sump Available	✓
Invert Level (m)	25.241	Product Number	CTL-SHE-0137-1130-2150-1130
Design Depth (m)	2.150	Min Outlet Diameter (m)	0.150
Design Flow (l/s)	11.3	Min Node Diameter (mm)	1500

Node S04 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	25.606
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	Time to half empty (mins)	

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	1020.0	1020.0	1.200	1020.0	1155.9	1.201	0.0	1155.9

Node S10 Depth/Area Storage Structure

Base Inf Coefficient (m/hr)	0.00000	Safety Factor	2.0	Invert Level (m)	25.360
Side Inf Coefficient (m/hr)	0.00000	Porosity	0.95	Time to half empty (mins)	

Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)	Depth (m)	Area (m²)	Inf Area (m²)
0.000	520.0	520.0	0.800	520.0	584.7	0.801	0.0	584.7

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Results for 1 year Critical Storm Duration. Lowest mass balance: 99.67%

Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status
15 minute winter	S01	10	26.576	0.039	2.5	0.0260	0.0000	OK
15 minute winter	S02	11	25.943	0.043	2.4	0.0008	0.0000	OK
15 minute winter	S03	10	26.800	0.100	20.4	0.3125	0.0000	OK
240 minute winter	S04	236	25.668	0.062	11.8	59.8692	0.0000	OK
180 minute winter	S05	136	25.687	0.098	10.0	0.1735	0.0000	OK
15 minute winter	OU	10	25.880	0.080	12.6	0.1707	0.0000	OK
15 minute winter	S06	11	25.702	0.084	12.2	0.1491	0.0000	OK
180 minute winter	S07	136	25.693	0.398	11.2	0.7032	0.0000	SURCHARGED
15 minute winter	S08	10	27.003	0.153	53.3	1.9240	0.0000	OK
15 minute winter	SW1	11	26.864	0.114	52.0	0.0000	0.0000	OK
15 minute winter	SP1	10	26.978	0.148	62.0	1.7467	0.0000	OK
15 minute winter	SW2	11	26.839	0.171	115.4	0.1101	0.0000	OK
15 minute winter	SP2	10	26.948	0.128	62.0	1.5131	0.0000	OK
15 minute winter	SW3	11	26.810	0.208	179.5	0.1252	0.0000	OK
15 minute winter	SP3	10	26.947	0.127	62.0	1.5020	0.0000	OK
15 minute winter	SW4	11	26.773	0.237	243.0	0.1338	0.0000	OK
15 minute summer	S09	1	25.870	0.000	0.0	0.0000	0.0000	OK
180 minute winter	S10	136	25.698	0.338	66.4	167.6799	0.0000	OK
180 minute winter	S11	136	25.697	0.456	40.9	1.1608	0.0000	SURCHARGED
15 minute summer	Headwall	1	25.000	0.000	10.2	0.0000	0.0000	OK

Link Event (Outflow)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)
15 minute winter	S01	1.000	S02	2.4	0.689	0.138	0.0290	
15 minute winter	S02	1.001	S04	2.3	0.784	0.018	0.2651	
15 minute winter	S03	2.000	S04	20.0	1.237	0.356	0.1810	
240 minute winter	S04	1.002	S05	-10.2	-0.762	-0.081	0.0651	
240 minute winter	S05	1.003	S07	-10.1	-0.131	-0.080	4.8907	
15 minute winter	OU	3.000	S06	12.2	0.729	0.097	0.5002	
15 minute winter	S06	3.001	S07	12.3	0.729	0.115	5.0686	
15 minute winter	S07	1.004	S11	-23.1	-0.613	-0.576	0.3573	
15 minute winter	S08	4.000	SW1	52.0	1.491	0.355	0.6483	
15 minute winter	SW1	4.001	SW2	52.1	0.539	0.013	3.2605	
15 minute winter	SP1	5.000	SW2	60.8	1.583	0.291	0.2823	
15 minute winter	SW2	4.002	SW3	116.5	0.751	0.014	4.1166	
15 minute winter	SP2	6.000	SW3	60.8	1.867	0.215	0.2547	
15 minute winter	SW3	4.003	SW4	179.9	0.879	0.022	5.4025	
15 minute winter	SP3	7.000	SW4	61.0	1.967	0.215	0.2280	
15 minute winter	SW4	4.004	S10	241.3	1.104	0.029	5.0053	
15 minute summer	S09	8.000	S10	0.0	0.000	0.000	3.3214	
15 minute winter	S10	4.005	S11	35.1	0.756	0.128	0.5195	
180 minute winter	S11	Hydro-Brake®	Headwall	10.9				232.6

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