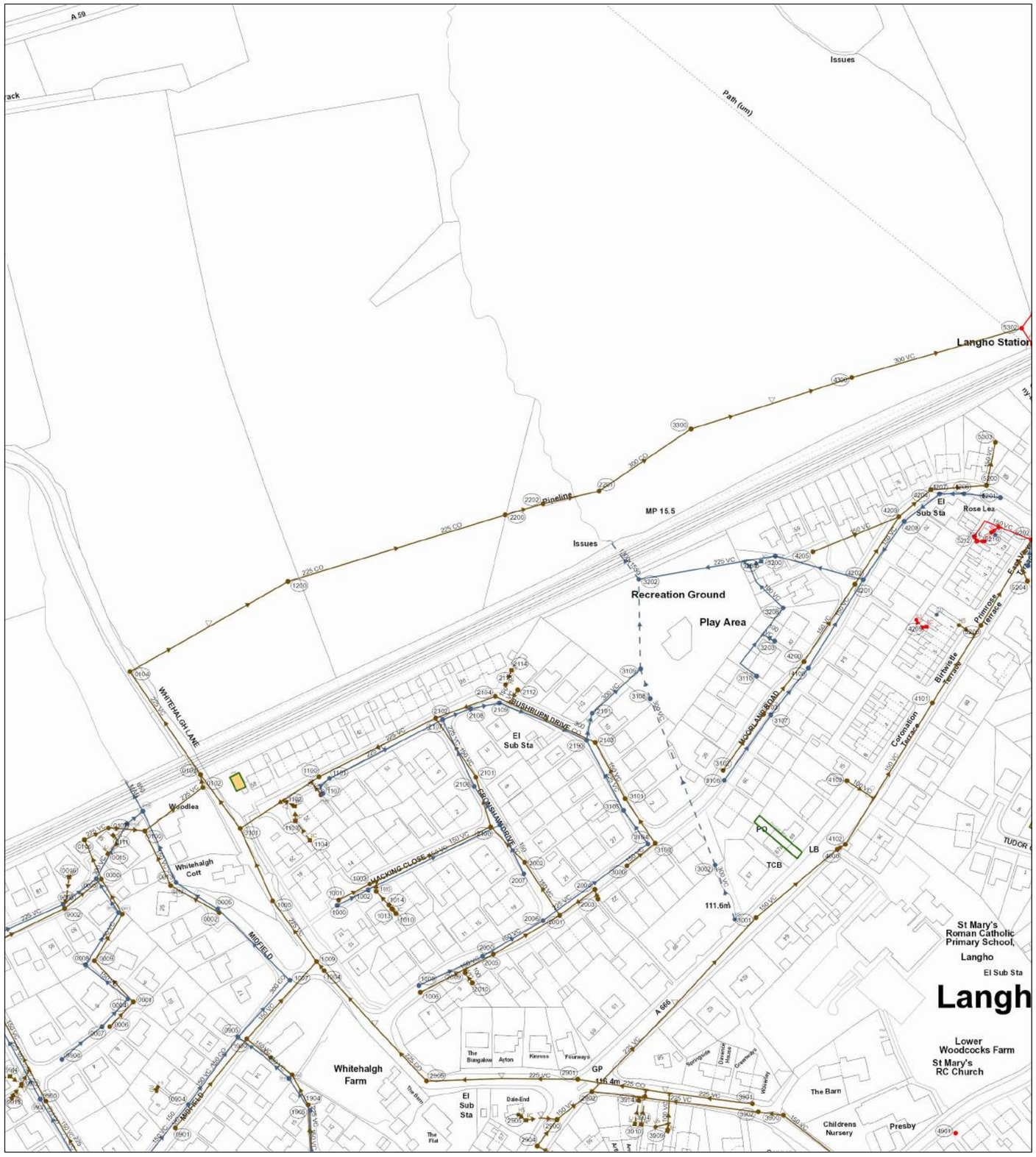

Refno	Cover	Func	Invert	Size x	Size y	Shape	Matl	Length	Grad
3102	105.55	FO	103.64	150			VC	38.3317	1 in 25
2001	109.75	FO	107.84	150			VC	35.23737	1 in 22
0005	106.92	SW	105.31	300			CO	27.27949	
0012		FO	0	150			VC	33.69905	
2904		FO	0	150			VC	18.57603	
1904		FO	0	150			VC	18.8632	
0013		SW	0	300			CO	43.70781	
0009		FO	0	150			VC	30.13442	
0009		FO	0	150			VC	30.13442	
0009		FO	0	150			VC	30.13442	
4200	103.48	FO	101.5	150			VC	51.37227	1 in 89
0010		SW	0	150			VC	13.31877	
0010		SW	0	150			VC	13.31877	
0010		SW	0	150			VC	13.31877	
2900	117.62	FO	115.55	150			VC	24.70208	
3002		SW		300			VC	99.17101	
2000	111.06	FO	108.85	150			VC	42.67538	1 in 45
1001	108.87	FO	107.52	150			VC	19.28566	1 in 43
5204	102.22	FO	100.21	150			VC	11.60845	
5204	102.22	FO	100.21	150			VC	11.60845	
0901	113.83	FO	111.73	150			VC	63.11325	1 in 32
0103	98.11	FO	96.36	225			VC	69.15684	1 in 100
2010		FO		100			VC	6.872562	
3202		SW		1300				25.83201	
0902	115.15	SW	113.12	225			VC	26.88227	1 in 15
5200	100.25	FO	98.55	150			VC	24.28536	
5200	100.25	FO	98.55	150			VC	24.28536	
1100	104.64	FO	100.54	225			VC	52.13778	1 in 2607
5206	103.82	FO	0	150			VC	41.0225	
5206	103.82	FO	0	150			VC	41.0225	
1005	106.87	FO	104.92	225			VC	43.96923	1 in 10
4206	100.28	SW	99.16	150			VC	13.5803	1 in 104
4206	100.28	SW	99.16	150			VC	13.5803	1 in 104
2004	108.83	FO	108.06	150			VC	24.15776	1 in 151
0007	109.85	SW	107.93	150			VC	21.12019	1 in 35
0007	109.85	SW	107.93	150			VC	21.12019	1 in 35
0007	109.85	SW	107.93	150			VC	21.12019	1 in 35
3203		SW		100			VC	7.579982	
2102	103.24	FO	100.89	225			VC	72.50292	1 in 259
0108		SW	0	650			MAR	19.3161	
2201	95.82	FO	94.19	300			CO	61.58193	1 in 181
9002	104.98	FO	101.42	150			VC	26.06696	1 in 32
9002	104.98	FO	101.42	150			VC	26.06696	1 in 32
9002	104.98	FO	101.42	150			VC	26.06696	1 in 32
3001	112.18	FO	110.05	150			VC	58.92071	1 in 21
3901	116.63	FO	114.41	225			VC	48.75964	1 in 69
1003	108.53	FO	107.04	150			VC	74.27203	1 in 26
3902	116.48	FO	114.55	225			VC	92.86987	1 in 90
0008		SW	0	150			VC	34.40472	
0008		SW	0	150			VC	34.40472	
0008		SW	0	150			VC	34.40472	
4300	96.54	FO	93.59	300			VC	98.18643	1 in 118
5205	101.86	SW	101.06	150			VC	14.60349	1 in 11
5205	101.86	SW	101.06	150			VC	14.60349	1 in 11
9906	110.43	SW	109.5	150			VC	28.79079	1 in 19
9906	110.43	SW	109.5	150			VC	28.79079	1 in 19
9906	110.43	SW	109.5	150			VC	28.79079	1 in 19
3107	104.36	SW	0	150			VC	33.39645	
1013		FO		100			VC	3.212783	
2104	102.63	FO	101.07	225			VC	35.279	1 in 220
3106	105.56	SW	0	150			VC	44.3218	
0002	106.9	FO	105.65	150			VC	30.67809	
3200	101.61	SW	98.17	225			VC	76.93964	
4201	102.94	FO	100.91	150			VC	44.59406	1 in 37
1004	109.4	FO	107.72	225			VC	6.536367	1 in 20
1007	109.82	SW	107.38	300			CO	56.19754	1 in 27
3900	116.1	FO	114.67	150			VC	14.18381	1 in 177
1006	111.76	FO	109.91	150			VC	45.67727	1 in 47
9902	111.62	FO	110.05	150			VC	52.23259	1 in 16
9902	111.62	FO	110.05	150			VC	52.23259	1 in 16
9902	111.62	FO	110.05	150			VC	52.23259	1 in 16
2009		FO		100			VC	2.336993	
2112		FO		150			VC	8.620085	
1000	108.9	SW	107.09	150			VC	19.21802	1 in 41
0904	113.44	SW	110.84	150			VC	23.5725	1 in 30
2007	108.13	SW	106.06	150			VC	30.12563	1 in 15
3105	105.95	SW	103.29	225			VC	43.98835	1 in 57
0003	104.35	SW	101.96	300			VC	34.83129	
0003	104.35	SW	101.96	300			VC	34.83129	
0001	109.41	FO	107.21	150			VC	31.36057	
2901	115.81	FO	112.95	225			VC	42.15162	1 in 50
2004	104.39	FO	99.2	225			VC	40.17606	1 in 23
2005	111.27	SW	108.37	150			VC	38.90879	1 in 37
1108		FO		150			VC	8.89665	
2202	95.26	FO	94.29	300			CO	31.76491	
1107		SW		150			VC	11.3114	
1009	109.18	FO	107.33	225			VC	41.56939	1 in 18
2100	106.82	FO	104.12	150			VC	28.73287	
1008	111.83	SW	109.46	150			VC	38.82469	1 in 36
3110		SW		100			VC	50.59472	
0101	102.36	FO	100.49	225			VC	37.14573	1 in 9
4204	100.77	FO	99.03	150			VC	30.95474	1 in 67
4204	100.77	FO	99.03	150			VC	30.95474	1 in 67
0000	104.39	FO	100.57	225			VC	23.62864	
0000	104.39	FO	100.57	225			VC	23.62864	
0905	111.65	SW	109.35	300			CO	42.69387	1 in 23
5201	100.54	SW	99.28	150			VC	20.22039	1 in 225
5201	100.54	SW	99.28	150			VC	20.22039	1 in 225
9912		FO		100			VC	9.303029	
9912		FO		100			VC	9.303029	
9912		FO		100			VC	9.303029	
4101	106.25	FO	104.08	150			VC	50.6467	1 in 21
4101	106.25	FO	104.08	150			VC	50.6467	1 in 21
1002	108.41	SW	106.6	150			VC	81.44424	1 in 48
0105		SW	0	300			VC	11.46231	
0105		SW	0	300			VC	11.46231	
0004	109.42	SW	107.27	150			VC	30.10279	
0004	109.42	SW	107.27	150			VC	30.10279	
0004	109.42	SW	107.27	150			VC	30.10279	
0104	96.79	FO	95.64	225			VC	50.33454	1 in 252
0104	96.79	FO	95.64	225			VC	50.33454	1 in 252
4202	102.71	SW	98.51	225			VC	50.40372	1 in 163
3100	107.54	FO	105.13	150			VC	29.92886	1 in 12
3103	104.49	FO	102.1	150			VC	36.89299	1 in 66
1903		FO	0	150			VC	32.06831	
4103		FO		100			VC	17.84291	
1101	104.57	SW	102.9	225			VC	70.70905	1 in 71
4102	109.3	FO	107.48	150			VC	92.18355	1 in 30
4100	103.39	SW	101.85	150			VC	57.82398	1 in 18
5202	101.64	CO	99.48	150			VC	23.29617	1 in 22
5202	101.64	CO	99.48	150			VC	23.29617	1 in 22
2200	95.86	FO	94.76	300			CO	21.7912	1 in 46
5211		CO		150			VC	2.989794	
5211		CO		150			VC	2.989794	
1905	114.01	SW	112.32	225			VC	21.09275	
1015		FO		100			VC	5.623276	
2105	106.71	SW	103.98	150			VC	25.6411	1 in 19
5302	93.85	CO	92.71	300			VC	101.8201	1 in 35
5302	93.85	CO	92.71	300			VC	101.8201	1 in 35
3101	105.73	FO	102.53	150			VC	35.30177	1 in 56
4205	101.84	FO	100.14	150			VC	51.45163	1 in 143
2191	103.6	SW	101.26	300			VC	36.37677	
1200	97.59	FO	95.21	225			CO	126.0018	1 in 360
2003	109.05	FO	108.31	150			VC	5.518061	1 in 29
1900	111.59	FO	109.76	150			VC	57.88701	1 in 25
2101		FO	0	150			VC	39.68903	
2002	107.97	FO	106.21	150			VC	27.23432	1 in 33
3208		SW		100			VC	34.156	
0011		FO	0	150			VC	22.71202	
0011		FO	0	150			VC	22.71202	
0011		FO	0	150			VC	22.71202	
2902	115.79	FO	0	225			VC	66.08918	
0106		FO	0	225			VC	14.95483	
0106		FO	0	225			VC	14.95483	
3104	107.31	SW	104.35	225			VC	22.95855	1 in 22
4207	100.68	SW	99	150			VC	24.78779	1 in 496
4207	100.68	SW	99	150			VC	24.78779	1 in 496
2107	103.47	SW	101.89	225			VC	16.55482	1 in 50
3108		SW		300			VC	17.33594	
0900	115.17	FO	113.5	150			VC	51.05569	1 in 15
0107		FO	0	225			VC	10.02119	
0107		FO	0	225			VC	10.02119	
2109	102.57	SW	101.29	225			VC	26.94831	1 in 128
2905	113.77	FO	111.1	225			CO	41.70231	1 in 24
1014		FO		100			VC	10.41596	
2103	103.9	FO	101.34	225			VC	61.00719	1 in 265
2108	102.89	SW	101.54	225			VC	16.42279	1 in 75
0102	98.71	FO	97.44	225			VC	7.199035	1 in 12
4000	109.39	FO	107.19	150			VC	5.368091	
3109		SW		300			VC	49.6987	
3300	96.18	FO	93.83	300			CO	46.97535	1 in 427
3000	107.96	FO	106.28	150			VC	19.87984	1 in 18
4203	101.5	FO	99.65	150			VC	23.3009	1 in 41
9905	111.52	SW	109.56	225			CO	23.35217	1 in 15
9905	111.52	SW	109.56	225			CO	23.35217	1 in 15
9905	111.52	SW	109.56	225			CO	23.35217	1 in 15
2190	104.19	SW	100.99	300			CO	8.726953	
4208	101.63	SW	98.87	150			VC	39.57629	1 in 128
2006	109.94	SW	107.29	225			VC	72.02003	1 in 44
0006	109.81	FO	107.81	150			VC	18.97182	1 in 37
0006	109.81	FO	107.81	150			VC	18.97182	1 in 37
0006	109.81	FO	107.81	150			VC	18.97182	1 in 37
1902		SW	0	300			VC	19.32139	
2106	105.58	SW	102.59	225			VC	41.01265	1 in 60
5212		CO		150			VC	38.28185	
5212		CO		150			VC	38.28185	
9004	105.66	SW	104.05	225			VC	66.06764	1 in 50
9004	105.66	SW	104.05	225			VC	66.06764	1 in 50
9001	105.67	FO	103.77	150			VC	64.64919	1 in 29
9001	105.67	FO	103.77	150			VC	64.64919	1 in 29
9005	105.06	SW	102.68	225			VC	23.18766	1 in 37
9005	105.06	SW	102.68	225			VC	23.18766	1 in 37

Refno	Cover	Func	Invert	Size x	Size y	Shape	Matl	Length	Grad

LEGEND

Abandoned | Foul | Surface Water | Combined

- Public Sewer
- Private Sewer
- Section 104
- Rising Main
- Sludge Main
- Overflow
- Water Course
- Highway Drain

All point assets follow the standard colour convention:
red - combined, blue - surface water, brown - foul, purple - overflow

- Manhole
- Head of System
- Extent of Survey
- Rodding Eye
- Inlet
- Discharge Point
- Vortex
- Penstock
- Washout Chamber
- Valve
- Air Valve
- Non Return Valve
- Soakaway
- Gully
- Cascade
- Flow Meter
- Hatch Box
- Oil Interceptor
- Summit
- Drop Shaft
- Orifice Plate
- Side Entry Manhole
- Outfall
- Screen Chamber
- Inspection Chamber
- Bifurcation Chamber
- Lamp Hole
- T Junction / Saddle
- Catchpit
- Valve Chamber
- Vent Column
- Vortex Chamber
- Penstock Chamber
- Network Storage Tank
- Sewer Overflow
- Ww Treatment Works
- Ww Pumping Station
- Septic Tank
- Control Kiosk
- Change of Characteristic

MANHOLE FUNCTION

FO	Foul
SW	Surface Water
CO	Combined
OV	Overflow

SEWER SHAPE

CI	Circular	TR	Trapezoidal
EG	Egg	AR	Arch
OV	Oval	BA	Barrel
FT	Flat Top	HO	HorseShoe
RE	Rectangular	UN	Unspecified
SQ	Square		

SEWER MATERIAL

AC	Asbestos Cement
BR	Brick
PE	Polyethylene
RP	Reinforced Plastic Matrix
CO	Concrete
CSB	Concrete Segment Bolted
CSU	Concrete Segment Unbolted
CC	Concrete Box Culverted
PSC	Plastic / Steel Composite
GRC	Glass Reinforced Plastic
DI	Ductile Iron
PVC	Polyvinyl Chloride
CI	Cast Iron
SI	Spun Iron
ST	Steel
VC	Vitrified Clay
PP	Polypropylene
PF	Pitch Fibre
MAC	Masonry, Coursed
MAR	Masonry, Random
U	Unspecified

Address or Site Reference:

44714,

OS sheet Number: SD7034SW
Scale: 1:1250 **Date:** 06/12/2019
Nodes: 182
Sheet: 4 of 7

Printed by: Property Searches

SEWER RECORDS

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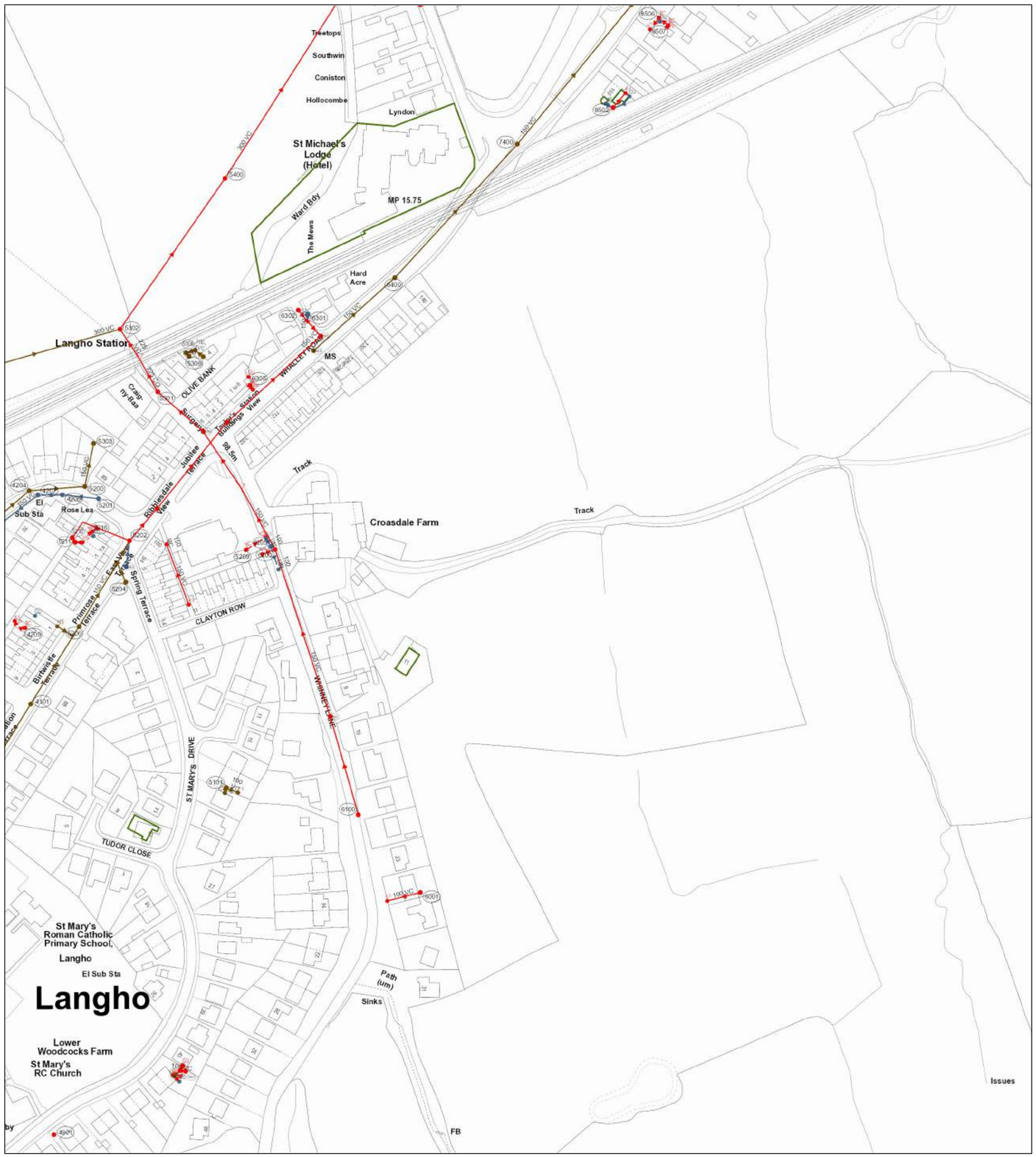

Refno	Cover	Func	Invert	Size x	Size y	Shape	Matl	Length	Grad
5902		CO		100			VC	3.134233	
4300	96.54	FO	93.59	300			VC	98.18643	1 in 118
5205	101.86	SW	101.06	150			VC	14.60349	1 in 11
5205	101.86	SW	101.06	150			VC	14.60349	1 in 11
5300	98.61	CO	94.36	225			CO	33.39001	1 in 71
4204	100.77	FO	99.03	150			VC	30.95474	1 in 67
4204	100.77	FO	99.03	150			VC	30.95474	1 in 67
5304	98.25	CO	0	150			VC	70.64705	
5201	100.54	SW	99.28	150			VC	20.22039	1 in 225
5201	100.54	SW	99.28	150			VC	20.22039	1 in 225
4101	106.25	FO	104.08	150			VC	50.6467	1 in 21
4101	106.25	FO	104.08	150			VC	50.6467	1 in 21
6101	106.37	CO	105.06	150			VC	97.76237	1 in 21
5101		FO		100			VC	7.336361	
4207	100.68	SW	99	150			VC	24.78779	1 in 496
4207	100.68	SW	99	150			VC	24.78779	1 in 496
5204	102.22	FO	100.21	150			VC	11.60845	
5204	102.22	FO	100.21	150			VC	11.60845	
5203	100.65	CO	98.42	150			VC	61.6866	
5400	91.26	CO	89.79	300			VC	117.3694	1 in 36
5400	91.26	CO	89.79	300			VC	117.3694	1 in 36
6205		SW		100			UN	13.54252	
5308		FO		100			PVC	5.159397	
6301	95.44	SW	94.12	150			VC	4.013191	
5200	100.25	FO	98.55	150			VC	24.28536	
5200	100.25	FO	98.55	150			VC	24.28536	
5206	103.82	FO	0	150			VC	41.0225	
5206	103.82	FO	0	150			VC	41.0225	
5301	96.94	CO	93.87	225			CO	20.39042	1 in 42
6400	91.81	FO	0	150			VC	100.5006	
6200	101.78	CO	100.35	150			VC	38.01911	1 in 12
6100	108.55	CO	107.13	150			VC	56.49229	1 in 28
4102	109.3	FO	107.48	150			VC	92.18355	1 in 30
6001		CO		100			VC	19.0008	
5202	101.64	CO	99.48	150			VC	23.29617	1 in 22
5202	101.64	CO	99.48	150			VC	23.29617	1 in 22
4206	100.28	SW	99.16	150			VC	13.5803	1 in 104
4206	100.28	SW	99.16	150			VC	13.5803	1 in 104
5211		CO		150			VC	2.989794	
5211		CO		150			VC	2.989794	
6300	95.4	FO	93.05	150			VC	60.53537	
8502		CO		100			PVC	10.55326	
8502		CO		100			PVC	10.55326	
6302	95.53	CO	93.97	150			VC	7.897525	
5302	93.85	CO	92.71	300			VC	101.8201	1 in 35
5302	93.85	CO	92.71	300			VC	101.8201	1 in 35
4203	101.5	FO	99.65	150			VC	23.3009	1 in 41
5306		FO		100			PVC	5.79951	
7400	88.4	FO	85.93	150			VC	99.85457	1 in 68
7400	88.4	FO	85.93	150			VC	99.85457	1 in 68
5212		CO		150			VC	38.28185	
5212		CO		150			VC	38.28185	

Refno	Cover	Func	Invert	Size x	Size y	Shape	Matl	Length	Grad

LEGEND

Abandoned / Foul / Surface Water / Combined

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- Private Sewer
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- Inlet
- Discharge Point
- Vortex
- Penstock
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- Non Return Valve
- Soakaway
- Gully
- Cascade
- Flow Meter
- Hatch Box
- Oil Interceptor
- Summit
- Drop Shaft
- Orifice Plate
- Side Entry Manhole
- Outfall
- Screen Chamber
- Inspection Chamber
- Bifurcation Chamber
- Lamp Hole
- T Junction / Saddle
- Catchpit
- Valve Chamber
- Vent Column
- Vortex Chamber
- Penstock Chamber
- Network Storage Tank
- Sewer Overflow
- Ww Treatment Works
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- Change of Characteristic

MANHOLE FUNCTION

FO	Foul
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FT	Flat Top	HO	HorseShoe
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SEWER MATERIAL

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GRC	Glass Reinforced Plastic
DI	Ductile Iron
PVC	Polyvinyl Chloride
CI	Cast Iron
SI	Spun Iron
ST	Steel
VC	Vitrified Clay
PP	Polypropylene
PF	Pitch Fibre
MAC	Masonry, Coursed
MAR	Masonry, Random
U	Unspecified

Address or Site Reference:

44714,

OS sheet Number: SD7034SE
Scale: 1:1250 **Date:** 06/12/2019
Nodes: 52
Sheet: 2 of 7

Printed by: Property Searches

SEWER RECORDS

United Utilities — helping life flow smoothly

Jessica Stevenson-Steels

From: seweradoptions@uuplc.co.uk
Sent: 06 November 2024 11:16
To: jessica.stevenson-steels@eastwoodce.com
Subject: RE: 06544237 - Pre Development - Longsight Road, Langho, BB6 8FB [Filed 06 Nov 2024 11:17]

Follow Up Flag: Follow up
Flag Status: Flagged

Categories: Filed by Mail Manager

Good morning, Jessica.

Pre-Development Enquiry for: 300 dwellings at Longsight Road Langho BB6 8FB (Grid ref: 370282E, 434509N)
UU Reference Number : 06544237

We have carried out an assessment of your application which is based on the information provided. This pre-development advice on your drainage strategy will be valid for 12 months. Your drainage strategy will need to be reviewed by other competent authorities as part of the planning process, and we advise that you carry out the necessary site investigations to confirm the viability of your proposals.
If your investigations require access to our public sewer network, we ask that you contact our network engineers with a request for an access certificate via our main contact telephone number 0345 6723 723 or refer to the link below:
https://www.unitedutilities.com/builders-developers/working-near-our-assets/

Foul Water
Foul flow from this site will be allowed to drain into the public foul water/combined sewer system.
Our preferred point of discharge would be to the 300mm diameter public foul water sewer crossing the site. If you are able to identify an alternative, more suitable point of discharge, we request that you contact us at your earliest convenience so that we can assess suitability.

Surface Water
All surface water flow from the proposed development should drain in-line with the drainage hierarchy, as outlined in Paragraph 80, (Reference ID: 7-080-20150323), of the National Planning Practice Guidance. We also recommend you prioritise the use of multi-functional sustainable drainage systems for the management of surface water in accordance with national planning policy.
Generally, the aim should be to discharge surface run off as high up the following hierarchy of drainage options as reasonably practicable.
This is outlined as follows, in order of priority:

1. **into the ground (infiltration);**
2. **to a surface waterbody;**
3. **to a surface water sewer or highway drain;**
4. **to a combined sewer.**

For guidance, The **North West SuDS Pro-Forma** provides information on the appropriate evidence required at each stage of the hierarchy, to demonstrate how each level has been discounted.
The Lead Local Flood Authority has responsibility for all surface water drainage concerns and their input to your proposal is critical. You should also consider whether it is necessary to discuss your proposal with the Environment Agency, or Internal Drainage Board (if operating in your area).
The Local Planning Authority are the determining authority for any application for planning permission and the appropriate authority for determining cost viability of a proposed drainage scheme, such assessments are

outside of the jurisdiction of United Utilities.

Infiltration
Surface water runoff generated from this development should discharge to the ground via infiltration system where feasible.
A detailed evidence-based feasibility assessment must be carried out in line with Chapter 25 of the CIRIA SuDS Manual 2015 to determine whether infiltration is a suitable method of surface water disposal.
Particular attention must be paid to Ground Water Source Protection Zones to ensure that the risk of pollution to these valuable resources is not compromised. Details can be obtained from the government website:
https://www.gov.uk/guidance/groundwater-source-protection-zones-spzs#find-groundwater-spzs
If your site is in a Groundwater Source Protection Zone, you should have regard to the Environment Agency's approach to Groundwater Protection. Information on this is available via the link below:
https://www.gov.uk/government/publications/groundwater-protection-position-statements
Please note that such a location could have implications for the principle of your development and the need for additional mitigating measures to protect the groundwater environment and public water supply in the detailed design of your site.

Waterbody
If an evidence-based assessment has been carried out and confirms that infiltration is not feasible, we recommend that you contact the Lead Local Flood Authority and/or Environment Agency to discuss a point of discharge to the culverted/open ordinary watercourse/main river//canal/waterbody/pond (with onward flow) crossing the site proposed in your submission.
We would encourage you to identify and engage with any third-party landowner and riparian owner to agree access and discharge rights to the water body if this is not in your ownership.

Highway Drainage
If an evidence-based assessment has been carried out and confirms that infiltration is not feasible, we recommend that you investigate the possibility of draining surface water to the highway drain where this ultimately discharges to a watercourse, by contacting the relevant Highway Authority.
Under no circumstance should surface water be discharged into our existing sewer directly or indirectly.

As a Water Company, we have no obligation to accept highway drainage into our public sewer network. However, should your proposals include runoff from highways, we would request that consideration is given to SuDS components that deliver source control are incorporated within the design of the scheme to reduce the volume and frequency of discharges of these flows to the public sewer.

Levels
For low-lying sites, (where the ground level of the site or the level of a basement is below the ground level at the point where the drainage connects to the public sewer), care should be taken to ensure that the property is not at increased risk of flooding. If these circumstances exist, we recommend that you contact us to discuss further. It could affect the detailed design of your site and result in the need to incorporate appropriate mitigating measures in your drainage scheme.

Land drainage / Overland flows / track drainage
United Utilities have no obligation, and furthermore we do not accept land drainage, overland flows or track drainage into the public sewerage network under any circumstances.

Existing Wastewater Assets Crossing the Site
According to our public sewer records there are public sewers located within your site boundary. We will require unrestricted access to the sewer for maintenance purposes, we would ask that you maintain a minimum clearance of 6m which is measured 3m from the centre line of the pipe unless there happens to be a formal easement agreement in place, in which case the specified easement width would apply. If you cannot achieve this then you may wish to consider diverting and or abandoning the public sewer.
Please be aware that any proposed diversion may require modelling. This process may take up to 6 months in order to reach an acceptable design.

Please refer to the link below to obtain full details of the processes involved with sewer diversions:
https://www.unitedutilities.com/builders-developers/larger-developments/wastewater/sewer-diversions/

Connection Application

Although we may discuss and agree discharge points and rates in principle, please be aware that you will have to apply for a formal sewer connection. This is so that we can assess the method of construction, Health & Safety requirements and to ultimately inspect the connection when it is made. Details of the application process and the form itself can be obtained from our website by following the link below:
https://www.unitedutilities.com/builders-developers/wastewater-services/sewer-connections/sewer-connection/
We recommend that the detailed design should confirm the locations of all utilities in the area and ensure that any proposed drainage solution considers routing and clash checks where required.
If we can be of any further assistance please don't hesitate to contact us further.

Sewer Adoptions

You have indicated on your application form that you intend to put the sewers forward for adoption (including any SuDS components that can come within the meaning of a sewer).
United Utilities assess adoption applications based on the current Design & Construction Guidance and local practices which have now replaced 'Sewers for Adoption 6th Edition'.
We recommend that you submit a predesign assessment to the sewer adoption mailbox (SewerAdoptions@uuplc.co.uk) stating pre design assessment in the title
Please refer to links below to obtain further guidance:
https://www.unitedutilities.com/builders-developers/larger-developments/wastewater/sewer-adoptions/
Site drainage must be designed in accordance with Building Regulations, National Planning Policy, and local flood authority guidelines, we would recommend that you speak and make suitable agreements with the relevant statutory bodies.
If you intend to put forward your wastewater assets for adoption by United Utilities, the proposed detail design will be subject to a technical appraisal by an Adoption Engineer as we need to be sure that the proposals meet the requirements set out in the Design & Construction Guidance. The proposed design should give consideration to long term operability and give United Utilities a safe and cost-effective proposal for the lifetime of the assets. In these cases, we strongly recommend that no construction commences until the detailed drainage design, submitted as part of the Section 104 application, has been assessed and accepted in writing by United Utilities. Any work carried out prior to the technical assessment being approved is done entirely at the developer's own risk and could be subject to change.

SuDS

If your development proposal incorporates any SuDS component(s) which interact with a sewer network you plan on offering for adoption to United Utilities; contact should be made with our technical team at your earliest convenience, please complete the 'Section 104 pre-application form : ' and include as much relevant detail as you can. These discussions can help prevent delays later in the development process.
Section 104 Pre application form (1b)
As per the sewerage sector guidance, all SuDS should be designed in accordance with the standards within the Design & construction guidance & the CIRIA SuDS manual (C753)

Codes For Adoption

The new Codes for Adoption are outlined on the Water UK Website. The link below takes you to their webpage:
https://www.water.org.uk/technical-guidance/developers-services/codes-for-adoption/
A free copy of the new Design & Construction Guidance can be downloaded via the link below:
https://www.water.org.uk/sewerage-sector-guidance-approved-documents/

Many thanks and kind regards,

Josephine Wong
Wastewater Developer Engineer
Developer Services & Metering
Customer Services
Tel: 01925 429089
unitedutilities.com

Did you know we now have a live chat facility available to you Mon to Friday 8 -5pm. You just click on the orange live chat box on our webpage and one of our advisors will be ready to chat to you and help you with your enquiry https://www.unitedutilities.com/builders-developers/ or you can email us at WastewaterDeveloperServices@uuplc.co.uk

---------- Original Message ----------
From: seweradoptions@uuplc.co.uk [seweradoptions@uuplc.co.uk]
Sent: 29/10/2024 11:35
To: jessica.stevenson-steels@eastwoodce.com
Subject: 06544237 - Pre Development - Longsight Road, Langho, BB6 8FB

Good Morning,

PRE DEVELOPMENT APPLICATION AT: Longsight Road, Langho, BB6 8FB – UU Ref 06544237

Please accept this email as receipt of your application received on 28/10/2024 for the above development. This has now been logged on our system and the job reference is 06544237, we would ask that you quote this reference in all future correspondence.

I have reviewed your application (and attachments) and can confirm this is suitable to be passed to Gulshan Seetulparsad for technical assessment. You will receive their response on or before 11/11/2024.

Kind regards

Colleen Scott
Customer Advisor Advanced
Developer Services & Metering
Customer Services
Tel: 0345 026 8989
unitedutilities.com

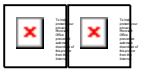
If you have received a great service today why not tell us?
Visit: unitedutilities.com/wow

Did you know we now have a live chat facility available to you Mon to Friday 8 -5pm. You just click on the orange live chat box on our webpage and one of our advisors will be ready to chat to you and help you with your enquiry https://www.unitedutilities.com/builders-developers/ or you can email us at WastewaterDeveloperServices@uuplc.co.uk

---------- Original Message ----------
From: [donotreply@uu-web.co.uk]
Sent: 28/10/2024 08:50
To: seweradoptions@uuplc.co.uk; webmaster@uuplc.co.uk
Subject: Wastewater Pre-Development Enquiry Submission

Question	Answer
Section 1 - Your Details	
Developer/Consultant/Land owner/Other	Consultant
Name	Jessica Stevenson-Steels
Company Name	Eastwood Consulting Engineers
Address	St Andrew's House, 23 Kingfield Road, Sheffield S11 9AS
Contact Number	01142554554
Email Address	jessica.stevenson-steels@eastwoodce.com
Section 2 - Development Details	
Do you intend to offer any of the sewers for adoption by United Utilities under S104?	Yes
Site Address	Longsight Road Langho BB6 8FB
Site Postcode	#Development postcode#
Site Name	Longsight Road, Langho
Grid Reference Number	370282E, 434509N
Development Type	Residential
Approx. Number Units	300
Total Site Area (hectares)	20.4
Does this site have planning permission?	No
Planning Reference Number	
Council Area	Ribble Valley Borough Council
Have you approached us about this site previously?	No
If yes, please provide reference number	
Is the development part of a larger site that will be developed in phases?	No
Location Plan	49343_Location Plan.pdf
Section 3: Previous Land Use	
Please confirm what the land was previously used for:	Greenfield
Brownfield evidence of positive drainage to the public sewer	
Section 4 - Drainage Strategy	
Foul connection: How are you proposing to drain foul flows from the site?	Via a new connection to the public sewer
Via an existing connection to the public sewer?	Yes

Question	Answer
Surface water connection: How are you proposing to drain your site, following the surface water hierarchy, as outlined in National Planning Policy Guidance?	Surface water body
SuDS: Have SuDS features been considered in the surface water drainage strategy?	Yes



APPENDIX 5

The Lead Local Flood Authority expect the latest FEH rainfall data (FEH22) and ReFH2.3 methodology to be used. Evidence of this data should be included in your submission.

If you are unsure about the calculations of greenfield runoff rates, you can discuss this with the Lead Local Flood Authority through the Planning Advice Service.

What values do I use for Qbar?

Qbar is the peak rate of flow from a catchment for the mean annual flood, a return period of approximately 1:2.3 years. $Qbar_{rural}$ should be used for this value.

What about watercourses discharging to estuarial waters that are tidally affected?

Where the drainage system discharges to a surface water body that can accommodate uncontrolled surface water discharges without any impact on flood risk from that surface water body (e.g. the sea or a large estuary) the peak flow control standards and volume control technical standards need not apply, in line with standard S1 of the Defra Technical Standards for Sustainable Drainage Systems.

If you are unsure about whether this applies to your site, you can discuss this with the Lead Local Flood Authority through the Planning Advice Service.

Which methodologies should be used to calculate discharge rates?

The Lead Local Flood Authority expect the latest FEH rainfall data (FEH22) and ReFH2.3 methodology to be used. Evidence of this data should be included in your submission.

What must I limit proposed post-development surface water discharge rates to?

This depends on the approach you take to limit the amount of surface water discharged from the site.

Approach 1 (Long Term Storage) controls the discharge rate and discharge volume by providing long-term storage, allowing an attenuated volume equivalent to the 1:100 year 6 hour greenfield event to be discharged at the greenfield 1:100 year rate for the 1 in 100 year 6 hour event (plus an allowance for climate change). Additional post-development runoff volume should be infiltrated into the ground or released at a rate of 2 l/s/ha or less.

Therefore, in accordance with Standards S2 and S3 of the Defra Technical Standards for Sustainable Drainage Systems, the following discharge rates from the development to any highway drain, sewer or surface water body must be achieved:

Greenfield Site: For greenfield developments, the peak runoff rate from the development to any highway drain, sewer or surface water body for the 1 in 1 year rainfall event **and** the 1 in 100 year rainfall event should never exceed the peak greenfield runoff rate for the same event.

Previously Developed Site:

Section 4: Discharge Volume

What is 'discharge volume' and why must I consider it?

Discharge volume is the total volume of water leaving the development site for a particular rainfall event.

Introducing new impermeable surfaces increases surface water runoff and therefore can increase flood risk within and outside the development. By understanding the increase in surface water runoff volume measures can be taken to attenuate flows and mitigate any potential flood risk outside of the development.

The Defra Technical Standards for Sustainable Drainage Systems require runoff volume from development sites to be restricted in line with Technical Standards S4, S5 and/or S6, unless S1 applies.

What must the proposed post-development surface water discharge volume be limited to?

In line with Standards S4 and S5 of the Defra Technical Standards for Sustainable Drainage Systems, the following discharge volumes from the development to any highway drain, sewer or surface water body must be achieved:

Greenfield Site: For greenfield development, the runoff volume from the development to any highway drain, sewer or surface water body in the 1 in 100 year, 6 hour rainfall event should never exceed the greenfield runoff volume for the same event.

Previously Developed Site: For developments which have been previously developed, the runoff volume from the development to any highway drain, sewer or surface water body in the 1 in 100 year, 6 hour rainfall event must be constrained to a value as close as is reasonably practicable to the greenfield runoff volume for the same event, but should never exceed the runoff volume from the development site prior to redevelopment for that event.

Where it is not reasonably practicable to constrain the volume of runoff to any drain, sewer or surface water body in accordance with the above, the runoff volume must be discharged at a rate that does not adversely affect flood risk (usually Qbar). If you are unsure, you can discuss this with the Lead Local Flood Authority through our Planning Advice Service.

Why do I need to calculate the runoff volume for the 100 year 6 hour storm event?

This is a simple method of calculating the volume of surface water discharging from a development site to determine whether there will be an increase in runoff volume discharging to the downstream catchment and subsequently whether there will be an increase in flood risk

By using a single specific storm event such as the 100 year 6 hour storm event, you are able to compare the volumetric runoff response from the existing site and the developed site.

Jessica Stevenson-Steels

From: Daniel, Owen <Owen.Daniel@lancashire.gov.uk> on behalf of Daniel, Owen
Sent: 04 November 2024 14:32
To: jessica.stevenson-steels@eastwoodce.com
Subject: 613184 - Longsight Rd [Enquiry] [Filed 04 Nov 2024 15:06]

Follow Up Flag: Follow up
Flag Status: Flagged

Categories: Filed by Mail Manager

Good afternoon,

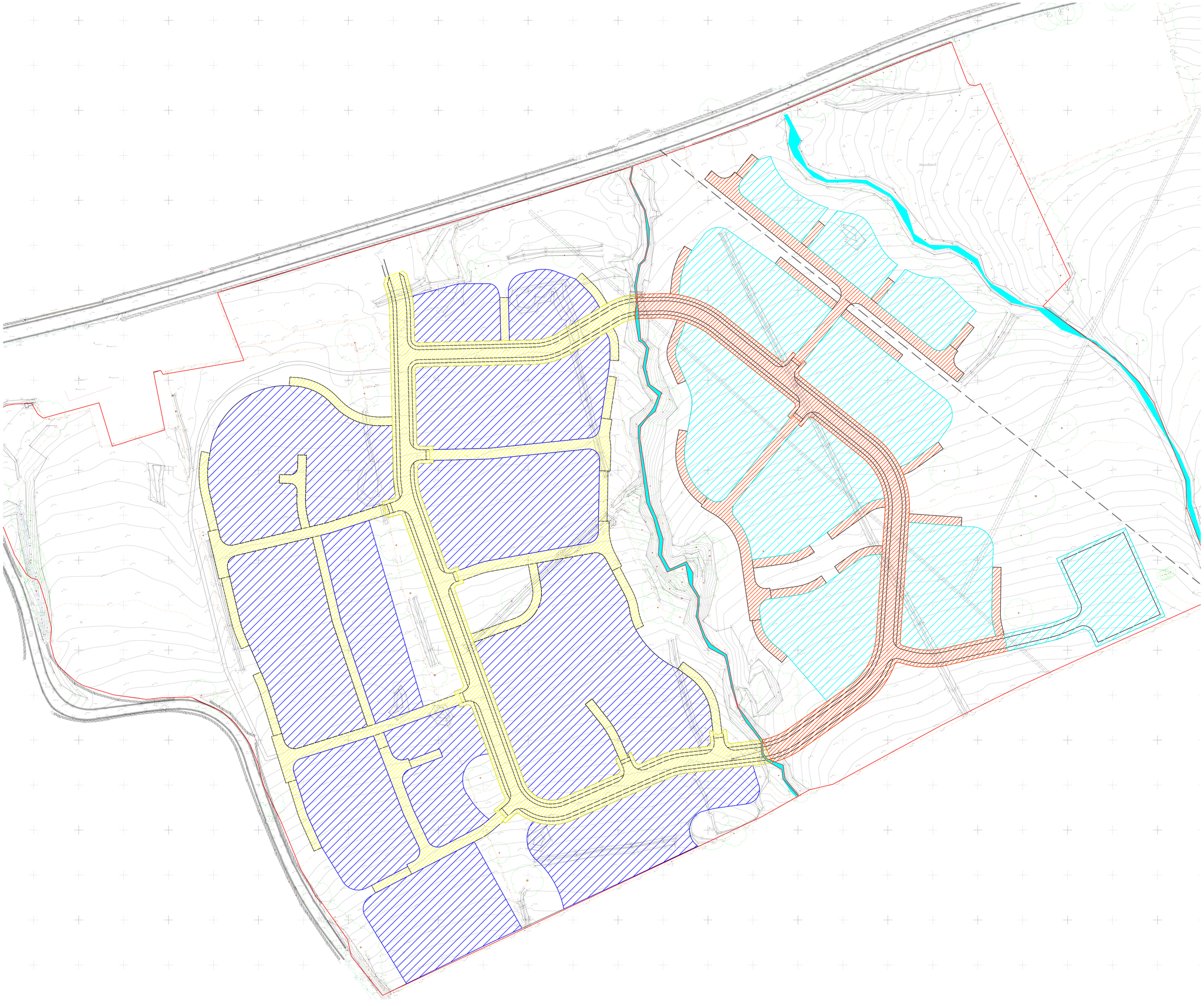
Thank you for your Ordinary Watercourse Consent enquiry. Depending on how you plan to connect to the existing watercourse you may require ordinary watercourse consent from ourselves. Usually the most common way to discharge into a watercourse is by a surface water outfall, depending on how these are designed within the bank profile of the existing watercourse they may or may not require consent.

We would strongly recommend to submit an application with us and provide the minimal required documents in order for us to make an assessment. We can get back to you if the works do/do not require consent, a fee will only be charged if consent is required.

Many thanks,

Owen Daniel (he/him)
Technical Support Officer
Highways and Transport
Lancashire County Council
T: 01772 534594
W: www.lancashire.gov.uk

APPENDIX 6



Developable areas:

Western catchment:

Roads: 1.53 ha

Additional developable areas: 5.33 ha

Total developable area: 6.86 ha

Proposed impermeable area: 3.06 (1.53 ha x 2, see note below)

Eastern catchment:

Roads: 1.03 ha

Additional developable areas: 2.70 ha

Total developable area: 3.73 ha

Proposed impermeable area: 2.06 (1.03 ha x 2, see note below)

Notes:

1. It can be assumed that the total proposed impermeable area of the site will be broadly equivalent to the proposed road area multiplied by 2. This is to be confirmed as the site layout develops.

REV	DESCRIPTION	SIG	CHK	DATE
P01	First Issue.	JSS	KBE	03.12.2024

HALLAM LAND MANAGEMENT LTD

LONGSIGHT ROAD, LANGHO

PROPOSED DEVELOPMENT AREAS

Eastwood
CONSULTING ENGINEERS

St Andrew's House
23 Kingfield Road
Sheffield, S11 9AS

T: 0114 255 4554
E: mail@eastwoodce.com
eastwoodce.com

ECE PROJECT No	SCALE AT A1	STATUS	SUITABLE FOR
49343	1:1000	S0	Initial

DRAWING NUMBER

Project	Originator	Zone	Level	Type	Role	Number	REV
49343	ECE	XX	XX	DR	C	0001	P01

Greenfield runoff catchments:

- Catchment 1
- Catchment 2
- Catchment 3
- Catchment 4
- General direction of greenfield runoff
- Watercourse

Developable area in greenfield runoff catchments for the proposed surface water outfall watercourses:

- Central western catchment: 7.11 ha
- Central eastern catchment: 2.35 ha

REV	DESCRIPTION	SIG	CHK	DATE
P02	Additional runoff arrows and text included.	JSS	KBE	29.01.2025
P01	First Issue.	JSS	KBE	03.12.2024

HALLAM LAND MANAGEMENT LTD

LONGSIGHT ROAD, LANGHO

GREENFIELD RUNOFF CATCHMENTS

Eastwood
CONSULTING ENGINEERS
St Andrew's House
23 Kingfield Road
Sheffield, S11 9AS
T: 0114 255 4554
E: mail@eastwoodce.com
eastwoodce.com

ECE PROJECT No	SCALE AT A1	STATUS	SUITABLE FOR
49343	1:1250	S0	Initial

DRAWING NUMBER

Project	Originator	Zone	Level	Type	Role	Number	REV
49343	ECE	XX	XX	DR	C	0002	P02

EASTWOOD & PARTNERS (Consulting Engineers) Ltd.

Project:	**49343**	Sheet	1.00
location	**Longsight Road**	Job No.	49343
town	**Langho**	Date	04/02/2025
Subject:		Designed	JSS
	Surface Water Drainage	Checked	KBE
	Storage Estimates	Revision	B

Site Details :

Location : Longsight Road, Langho, West
Grid Ref : 370282E, 434509N

Total Site Area	**8.665**	ha	
Deduct areas to soakaways	0.000	ha	
Effective Drainage Area	**8.665**	ha	
Total Impermeable	**2.052**	ha	24%
Allow for Urban Creep	**0.103**	ha	10% (10% of roof area only)
Total Impermeable	**2.154**	ha	
PIMP	24.9%		
PR	20.5	Equation 7.3	
Cv	0.82	Equation 7.21	
Default Cv	**1.00**	Designer to insert to override calculated Cv	

Information From Wallingford Maps :

M5-60	**20.0**	mm
r	**0.30**	
SAAR	**1148**	mm
UCWI	120	(Fig. 9.7)
Soil Type	**4**	
SOIL	0.45	(Section 7.4)

Design Return Period **100** **Years**

Max. Branch Length	**100**	metres
Approx. Time of Flow	**1.7**	mins

Percentage Increase For Climate Change: **50%**

Details of Restricted Discharge :

Maximum Permitted Rate of Flow from the System		Litres/sec.ha
	18.3	Litres/sec
Assumed Average Flow as a Proportion (Estimate)	**85**	%
Average Rate of Flow	**15.6**	Litres/sec

Calculation of Critical Duration and Storage Volume Required :

Trial Durations (mins)	**670**	**720**	**740**	**760**	**780**	**800**	**820**
Average Point Intensity (mm/hr)	7.4	7.0	6.9	6.7	6.6	6.5	6.4
Volume of Run-off for the period = Area x Cv x i x D (m3)	1775.8	1809.3	1822.1	1834.7	1847.0	1859.0	1870.8
With climate change	2663.7	2713.9	2733.2	2752.0	2770.5	2788.5	2806.3
Volume of Out-flow for the period = Ave. flow x (D+Tf)(m3)	626.9	673.5	692.2	710.9	729.5	748.2	766.9
Storage Volume for this Duration (m3)	**2037**	**2040**	**2041**	**2041**	**2041**	**2040**	**2039**

Storage Volume Reqired for

100 Year Return Period = 2041 m^3

Is this the worst case (ie. Critical Duration)? 1 (1 = Yes, 0 = No)

EASTWOOD & PARTNERS (Consulting Engineers) Ltd.

Project:	**49343**	Sheet	1.00
location	**Longsight Road**	Job No.	49343
town	**Langho**	Date	04/02/2025
Subject:		Designed	JSS
	Surface Water Drainage	Checked	KBE
	Storage Estimates	Revision	B

Site Details :

Location : Longsight Road, Langho, West
Grid Ref : 370282E, 434509N

Total Site Area	**11.434**	ha
Deduct areas to soakaways	0.000	ha
Effective Drainage Area	**11.434**	ha

Total Impermeable	**3.064**	ha	27%
Allow for Urban Creep	**0.153**	ha	10% (10% of roof area only)
Total Impermeable	**3.217**	ha	

PIMP	28.1%	
PR	23.2	Equation 7.3
Cv	0.83	Equation 7.21
Default Cv	**1.00**	Designer to insert to override calculated Cv

Information From Wallingford Maps :

M5-60	**20.0**	mm
r	**0.30**	
SAAR	**1148**	mm
UCWI	120	(Fig. 9.7)
Soil Type	**4**	
SOIL	0.45	(Section 7.4)

Design Return Period **100** **Years**

Max. Branch Length	**543**	metres
Approx. Time of Flow	**9.1**	mins

Percentage Increase For Climate Change: **50%**

Details of Restricted Discharge :

Maximum Permitted Rate of Flow from the System		Litres/sec.ha
	33.7	Litres/sec
Assumed Average Flow as a Proportion (Estimate)	**85**	%
Average Rate of Flow	**28.6**	Litres/sec

Calculation of Critical Duration and Storage Volume Required :

Trial Durations (mins)	**540**	**560**	**580**	**600**	**620**	**640**	**660**
Average Point Intensity (mm/hr)	8.7	8.4	8.2	8.0	7.8	7.6	7.5
Volume of Run-off for the period = Area x Cv x i x D (m3)	2506.6	2530.8	2554.2	2577.0	2599.2	2620.9	2641.9
With climate change	3760.0	3796.2	3831.3	3865.5	3898.8	3931.3	3962.9
Volume of Out-flow for the period = Ave. flow x (D+Tf)(m3)	943.7	978.0	1012.4	1046.8	1081.1	1115.5	1149.9
Storage Volume for this Duration (m3)	**2816**	**2818**	**2819**	**2819**	**2818**	**2816**	**2813**

Storage Volume Reqired for

100 Year Return Period = 2819 m^3

Is this the worst case (ie. Critical Duration)? 1 (1 = Yes, 0 = No)

UK Design Flood Estimation

Generated on 08 November 2024 11:40:10 by ihopkinson
Printed from the ReFH2 Flood Modelling software package, version 4.0.8560.23190

Summary of estimate using the Flood Estimation Handbook revitalised flood hydrograph method (ReFH2)

Site details Checksum: 99C7-7073

Site name: FEH_Point_Descriptors_370146_434443_v5_0_1

Easting: 370146

Northing: 434443

Country: England, Wales or Northern Ireland

Catchment Area (km²): 0.07 [0.5]*

Using plot scale calculations: Yes

Model: 2.3

Site description: None

Model run: 1 year

Summary of results

Rainfall - FEH22 (mm):	14.97	Total runoff (ML):	0.34
Total Rainfall (mm):	11.00	Total flow (ML):	0.78
Peak Rainfall (mm):	1.36	Peak flow (m³/s):	0.05

Parameters

Where the user has overriden a system-generated value, this original value is shown in square brackets after the value used.
** Indicates that the user locked the duration/timestep*

Rainfall parameters (Rainfall - FEH22)

Name	Value	User-defined?
Duration (hh:mm:ss)	02:06:00	No
Timestep (hh:mm:ss)	00:06:00	No
SCF (Seasonal correction factor)	0.74	No
ARF (Areal reduction factor)	1 [0.99]	Yes
Seasonality	Winter	No

Loss model parameters

Name	Value	User-defined?
Cini (mm)	111.55	No
Cmax (mm)	271.03	No
Use alpha correction factor	No	No
Alpha correction factor	n/a	No

Routing model parameters

Name	Value	User-defined?
Tp (hr)	1	No
Up	0.65	No
Uk	0.8	No

Baseflow model parameters

Name	Value	User-defined?
BF0 (m^3/s)	0	No
BL (hr)	27.7 [23.89]	Yes
BR	1.32	No

Urbanisation parameters

Name	Value	User-defined?
Sewer capacity (m^3/s)	0	No
Exporting drained area (km^2)	0	No
Urban area (km^2)	0	No
Urbext 2000	0	No
Impervious runoff factor	0.7	No
Imperviousness factor	0.4	No
Tp scaling factor	0.75	No
Depression storage depth (mm)	0.5	No

Time series data

Time (hh:mm:ss)	Rain (mm)	Sewer Loss (m^3/s)	Net Rain (mm)	Runoff (m^3/s)	Baseflow (m^3/s)	Total Flow (m^3/s)
00:00:00	0.1109	0.0000	0.0457	0.0000	0.0041	0.0041
00:06:00	0.1455	0.0000	0.0600	0.0000	0.00408	0.00411
00:12:00	0.1907	0.0000	0.0787	0.0001	0.00407	0.00419
00:18:00	0.2495	0.0000	0.1032	0.0003	0.00405	0.00437
00:24:00	0.3261	0.0000	0.1352	0.0006	0.00404	0.00466
00:30:00	0.4252	0.0000	0.1769	0.0011	0.00403	0.0051
00:36:00	0.5531	0.0000	0.2312	0.0017	0.00402	0.00575
00:42:00	0.7170	0.0000	0.3013	0.0026	0.00402	0.00666
00:48:00	0.9242	0.0000	0.3912	0.0039	0.00402	0.00793
00:54:00	1.1770	0.0000	0.5028	0.0056	0.00403	0.00964
01:00:00	1.3625	0.0000	0.5884	0.0079	0.00404	0.0119
01:06:00	1.1770	0.0000	0.5138	0.0108	0.00407	0.0149
01:12:00	0.9242	0.0000	0.4071	0.0144	0.00412	0.0185
01:18:00	0.7170	0.0000	0.3180	0.0183	0.00418	0.0225
01:24:00	0.5531	0.0000	0.2466	0.0226	0.00426	0.0269
01:30:00	0.4252	0.0000	0.1903	0.0270	0.00437	0.0313
01:36:00	0.3261	0.0000	0.1464	0.0313	0.00449	0.0358
01:42:00	0.2495	0.0000	0.1123	0.0355	0.00463	0.0401
01:48:00	0.1907	0.0000	0.0860	0.0392	0.00479	0.044
01:54:00	0.1455	0.0000	0.0657	0.0424	0.00497	0.0474
02:00:00	0.1109	0.0000	0.0501	0.0448	0.00516	0.05
02:06:00	0.0000	0.0000	0.0000	0.0462	0.00535	0.0515
02:12:00	0.0000	0.0000	0.0000	0.0465	0.00555	0.052
02:18:00	0.0000	0.0000	0.0000	0.0458	0.00575	0.0516
02:24:00	0.0000	0.0000	0.0000	0.0445	0.00595	0.0505
02:30:00	0.0000	0.0000	0.0000	0.0427	0.00613	0.0488
02:36:00	0.0000	0.0000	0.0000	0.0404	0.00631	0.0468
02:42:00	0.0000	0.0000	0.0000	0.0380	0.00647	0.0444
02:48:00	0.0000	0.0000	0.0000	0.0353	0.00662	0.042
02:54:00	0.0000	0.0000	0.0000	0.0326	0.00676	0.0394
03:00:00	0.0000	0.0000	0.0000	0.0300	0.00688	0.0369
03:06:00	0.0000	0.0000	0.0000	0.0274	0.00699	0.0344
03:12:00	0.0000	0.0000	0.0000	0.0251	0.00709	0.0322
03:18:00	0.0000	0.0000	0.0000	0.0229	0.00718	0.0301
03:24:00	0.0000	0.0000	0.0000	0.0209	0.00726	0.0281