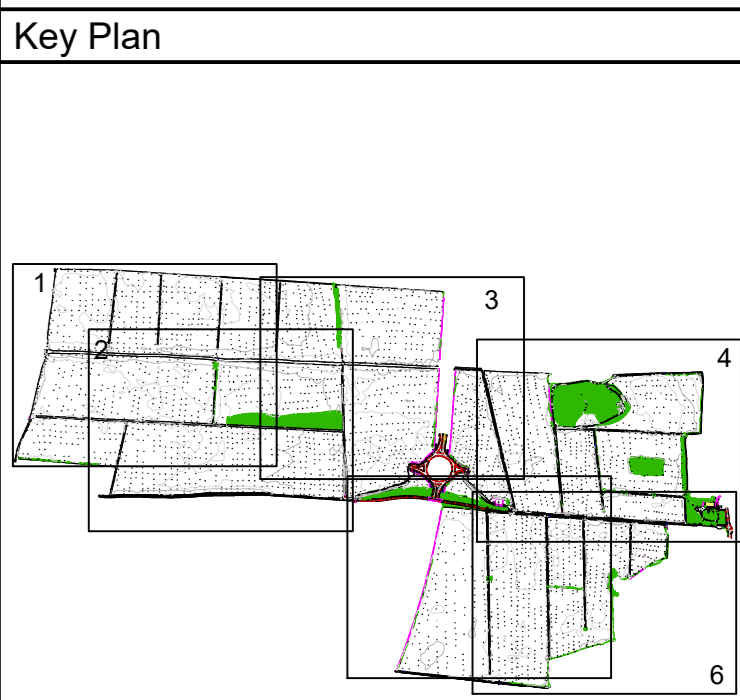


- Notes**
- Do not scale this drawing. All dimensions must be checked/verified on site. If in doubt ask.
 - This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.
 - All dimensions in metres unless noted otherwise. All levels in metres unless noted otherwise.
 - Any discrepancies noted on site are to be reported to the engineer immediately.
 - No scale factor has been applied to this survey, therefore the OS coordinates are to be treated as arbitrary. Please refer to survey station information below for on site control establishment.
 - All coordinates and height data relate to OSGB36(15). Control stations are coordinated by means of GPS receiving real time corrections via OS smartnet.
 - All manhole data is collected from ground level therefore discrepancies may occur. More accurate data is only achievable via confined space entry.
 - OS license number: 10022432



- Legend**
- OS Buildings
 - Surveyed Buildings
 - Building
 - Wall
 - Kerb Channel Line
 - Top of Kerb
 - Edge of Surface
 - Top of Bank
 - Bottom of Bank
 - Canopy / Overhang
 - Line Marking
 - Centre Line
 - Watercourse
 - Centre Line
 - Barrier
 - Fence
 - Gate
 - Overhead Powerline
 - Overhead Utilities
 - Contour Lines
 - Inspection Chamber
 - Flow direction and pipe diameter
 - Station and Name
 - BH 1
 - Monitoring Borehole
 - Tree / Bush / Sapling
 - Area of Vegetation/ Extent of Tree Canopy
 - Hedge
 - Body of Water
 - Body of Water from OS
 - Spot Level
 - 50.00
 - Assumed Surface
 - Water Drainage Line
 - Surface Water Drainage Line
- AP Anchor Point FBW Fence Barbed Wire LB Litter Bin
 BG Back Gully FCB Fence Clashed Board LP Lamp Post
 BO Bollard FCL Fence Chain Link MH Manhole
 BS Bus Stop FEL Fence Electric MV Service Marker
 BT British Telecom FMP Fence Metal Panel PS Post Box
 C Crest FMB Fence Metal Bar FT Foot
 CL Cover Level FOB Fence Open Board RE Rodding Eye
 CMP Cable Marker FFW Fence Post & Wire SP Stop Post
 Post FSP Fence Steel Palisade ST Stop Tap
 CCTV/Security Camera FVM Fence Wire Mesh SV Stop Valve
 CTV Cable TV FFL Finished Floor Level TCB Telephone Call Box
 Drainage Channel FIP Flagpole CFB Cuff Box
 DK Drop Kerb GV Gas Valve THL Threshold Level
 DP Down Pipe GY Gully TL Traffic Light
 Elec Electric Hc Height TL Traffic Light
 EP Electricity Post IC Inspection Chamber TFS Telegraph Post
 ER Earth Rod IFL Internal Floor Level UFS Unstable to Survey
 FH Fire Hydrant IL Level Level WL Water Level
 FL Floodlight BL (as a reduced level) WO Wash Out

P2: 23.10.24	Watercourse Details Added	DS	SS
P1: 10.07.23	Provisional Issue	BC	SS
Rev	Date	Details of Issue / Revision	Drawn / Reviewed

Issues & Revisions

Birmingham | 0121 233 3322
 Leeds | 0113 233 8000
 London | 020 7407 3879
 Manchester | 0161 233 4280
 Nottingham | 0115 924 1100
 www.bwbconsulting.com

Client
Hargreaves Services PLC

Project Title
Lincolnshire Lakes, Scunthorpe

Drawing Title
Existing SitePlan Sheet 6 of 6

Drawn:	B. Connolly	Reviewed:	S. Shreeves
BWB Ref:	221423.00	Date:	10.07.23
Scale:	1:1000		

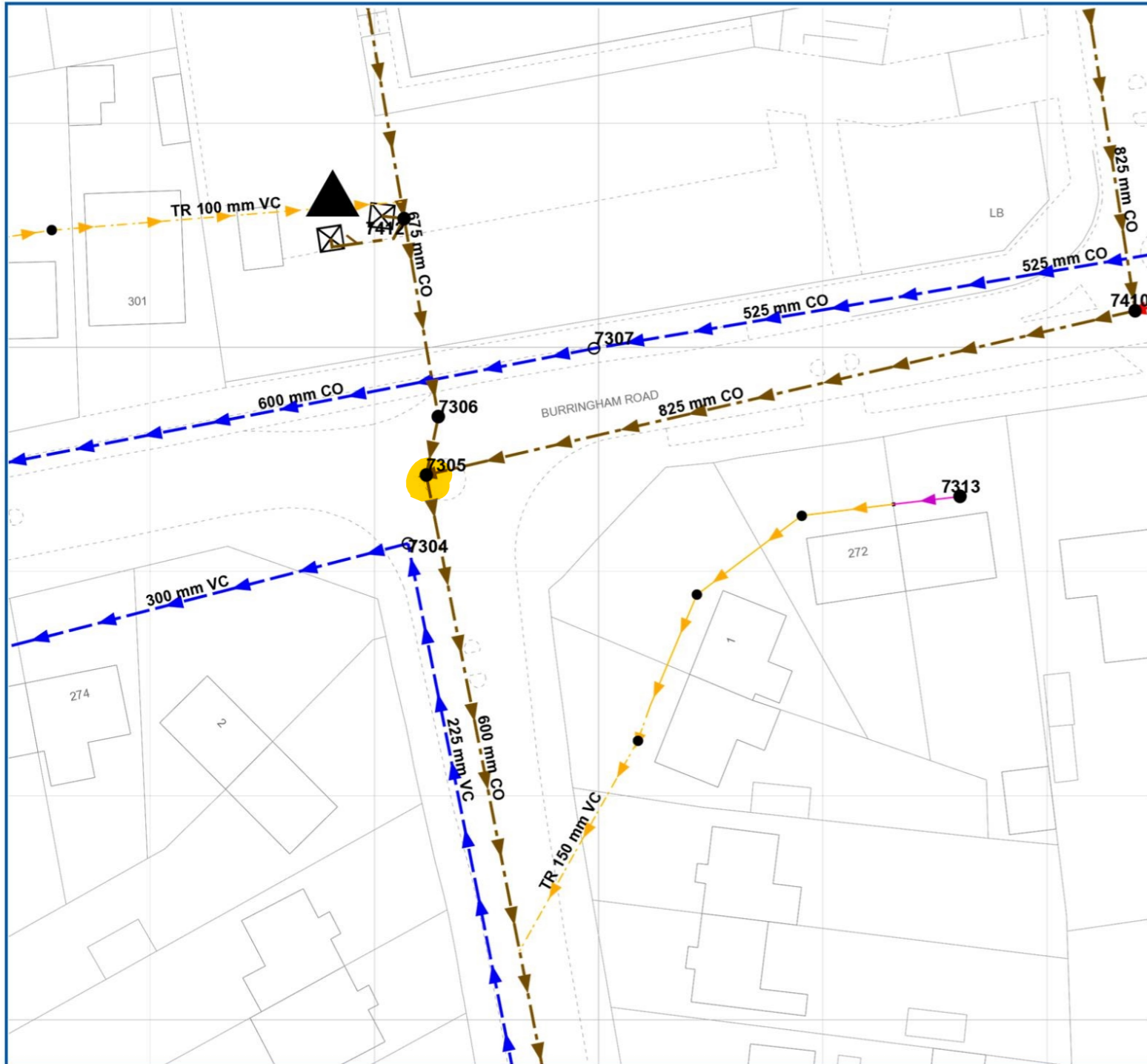
Information

Project - Originator - Zone - Level - Type - Role - Number	Status	Rev
LIN-BWB-00-06-DR-G-0001	S2	P6

Station Coordinates

Station Name	Eastings (m)	Northings (m)	Height (m)
BT1	48175.553	436237.238	4.109
BT2	48177.791	43615.306	5.715
BT3	48188.029	43626.115	4.254
BWB01	48695.179	439481.027	2.679
BWB02	48676.583	439501.442	2.723
BWB03	48640.018	439511.019	2.944
BWB05	48578.931	439560.844	2.412
BWB06	48590.072	439566.250	2.281

Appendix 3: Severn Trent Sewer Records



Reference	Cover Level	Invert Level Upstream	Invert Level Downstream	Purpose	Material	Pipe Shape	Max Size	Min Size	Gradient	Year Laid
SE87087305	9.034	6.14	5.69	F	CO	C	600	<UNK>	198.4	31/12/1899 00:00:00
SE87087304	8.7989	6.79	6.74	S	VC	C	300	<UNK>	1065.8	31/12/1899 00:00:00
SE87087412	8.64	6.48	6.39	F	CO	C	675	0	199.44	31/12/1899 00:00:00
SE87087412	8.64	6.2	6.1	F	VC	C	225	0	16	31/12/1899 00:00:00
SE87087313	<UNK>	<UNK>	<UNK>	C	VC	U	100	<UNK>	0	04/04/2012 00:00:00
SE87087410	10.25	6.24	6.17	F	CO	C	<UNK>	<UNK>	927.14	31/12/1899 00:00:00
SE87087306	9.001	6.39	6.15	F	CO	C	675	<UNK>	22.08	31/12/1899 00:00:00
SE87087307	9.394	7.74	6.59	S	CO	C	600	<UNK>	78.31	31/12/1899 00:00:00
<UNK>	<UNK>	<UNK>	<UNK>	F	VC	<UNK>	<UNK>	<UNK>	<UNK>	24/06/2019 00:00:00
<UNK>	<UNK>	<UNK>	<UNK>	C	VC	<UNK>	<UNK>	<UNK>	<UNK>	04/04/2012 00:00:00
<UNK>	<UNK>	<UNK>	<UNK>	F	VC	<UNK>	<UNK>	<UNK>	<UNK>	05/07/2023 00:00:00
<UNK>	<UNK>	<UNK>	<UNK>	C	<UNK>	<UNK>	<UNK>	<UNK>	<UNK>	04/04/2012 00:00:00

LEGEND

- Operational Site
- Waste Water Pump
- S24
- S104
- S102
- Null Private
- Null
- None
- Highway Drain
- Adopted Sewer
- Storage
- DS
- Off-Line Waste Water Storage
- On-Line Waste Water Storage
- Wet Well
- Waste Water Process Structure
- Sewage Treatment Point
- Sewage Treatment Structure
- Sludge Treatment Point
- Sludge Treatment Structure
- Manhole
- Foul Bifurcation Manhole
- Combined Bifurcation Manhole
- Surface Water Bifurcation Manhole
- Dual Manhole
- Foul Single Manhole
- Combined Single Manhole
- Surface Water Single Manhole
- Twin Manhole
- Foul Adopted Manhole
- Combined Adopted Manhole
- Surface Adopted Manhole
- Transfered Manhole
- Unserved Manhole
- Gravity Sewer Pipe
- Foul Gravity Sewer
- Combined Gravity Sewer
- Surface Water Gravity Sewer
- S104 Surface Water Gravity Sewer
- S104 Combined Gravity Sewer
- S104 Foul Gravity Sewer
- Private Surface Water Gravity Sewer
- Private Combined Gravity Sewer
- Private Foul Gravity Sewer
- Surface Water Unserved Pipe
- Foul Unserved Pipe
- Combined Unserved Pipe
- Transfered Surface Water Sewer
- Transfered Combined Sewer
- Transfered Foul Sewer
- Disposal Pipe
- Overflow Pipe
- Culverted Water Course
- Waste Internal Site Pipe
- Sewer Service Connection
- Gravity Sewer Others
- Pressure Sewer Pipe
- Surface Water Pressure Sewer
- Combined Pressure Sewer
- Foul Pressure Sewer
- S104 Surface Water Pressure Sewer
- S104 Combined Pressure Sewer
- S104 Foul Pressure Sewer
- Private Surface Water Pressure Sewer
- Private Combined Pressure Sewer
- Private Foul Pressure Sewer
- Surface Water Unserved Pipe
- Foul Unserved Pipe
- Combined Unserved Pipe
- Private Surface Water Vacuum Sewer
- Private Combined Vacuum Sewer
- Private Foul Vacuum Sewer
- Surface Water Siphon
- Combined Siphon
- Foul Siphon
- Private Surface Water Siphon
- Private Combined Siphon
- Private Foul Siphon
- S104 Surface Water Siphon
- S104 Combined Siphon
- S104 Foul Siphon
- Surface Water Unserved Pipe
- Foul Unserved Pipe
- Combined Unserved Pipe
- Private Surface Water Lateral Drain
- Private Combined Lateral Drain
- Private Foul Lateral Drain
- Transfered Surface Water Lateral Dia
- Transfered Combined Lateral Drain
- Transfered Foul Lateral Drain
- Foul Lateral Drain
- S104 Surface Water Lateral Drain
- S104 Combined Lateral Drain
- S104 Foul Lateral Drain
- Private Surface Water Lateral Drain
- Private Combined Lateral Drain
- Private Foul Lateral Drain
- Transfered Surface Water Lateral Dia
- Transfered Combined Lateral Drain
- Transfered Foul Lateral Drain
- Ancillary
- Balancing Lagoon
- Grease Trap
- Interceptor
- Screen
- Chamber
- Flushing Chamber
- Soakaway
- Overflow
- Connector
- Sewer Junctions
- Sewer Line Connection Node
- Fitting
- Blind Shaft
- Facility Connector
- Head Node
- Lamp Pole
- Sewerage Air Valve
- Sewerage Chemical Injection Point
- Sewerage Hatch Box
- Sewerage Pressure Washout
- Vent Column
- Waste Water Outfall
- Control Valve
- Hydrobrake
- Penstock
- Sewerage Isolation Valve
- Sewerage Non Return Valve
- Landline Symbol
- Culvert Symbol
- Direction Of Flow Symbol
- Boundary Half Meeting Symbol
- Bench Mark Symbol
- Railway Switch Symbol
- Road Related Flow Symbol
- Print20mLine

MATERIALS

- NONE
- AC - ASBESTOS CEME
- BR - BRICK
- CC - CONCRETE BOX CULVERT
- CI - CAST IRON
- CO - CONCRETE
- CSB - CONCRETE SEGMENTS (BOLTED)
- CSU - CONCRETE SEGMENTS (UNBOLTED)
- DI - DUCTILE IRON
- GRP - GLASS REINFORCED PLASTIC
- MAC - MASONRY IN REGULAR COURSES
- MAR - MASONRY RANDOMLY COURSED
- PE - POLYETHYLENE
- PF - PITCH
- PP - POLYPROPYLENE
- PSC - PLASTIC STEEL COMPOSITE
- PVC - POLYVINYL CHLORIDE
- RPM - REINFORCED PLASTIC MATRIX
- SI - SPUN (GREY) IRON
- ST - STEEL
- U - UNKNOWN
- VC - VITRIFIED CLAY
- XXX - OTHER

CATEGORIES

- W - WEIR
- C - CASCADE
- DB - DAMBOARD
- SE - SIDE ENTRY
- FV - FLAP VALVE
- BD - BACK DROP
- S - SIPHON
- D - HIGHWAY DRAIN
- S104 - SECTION 104

SHAPE

- C - CIRCULAR
- E - EGG SHAPED
- O - OTHER
- R - RECTANGLE
- S - SQUARE
- T - TRAPEZOIDAL
- U - UNKNOWN
- C - COMBINED
- E - FINAL EFFLUENT
- F - FOUL
- L - SLUDGE
- S - SURFACE WATER



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

SEWER RECORD (Tabular)

O/S Map Scale: 1:500

This map is centred upon:

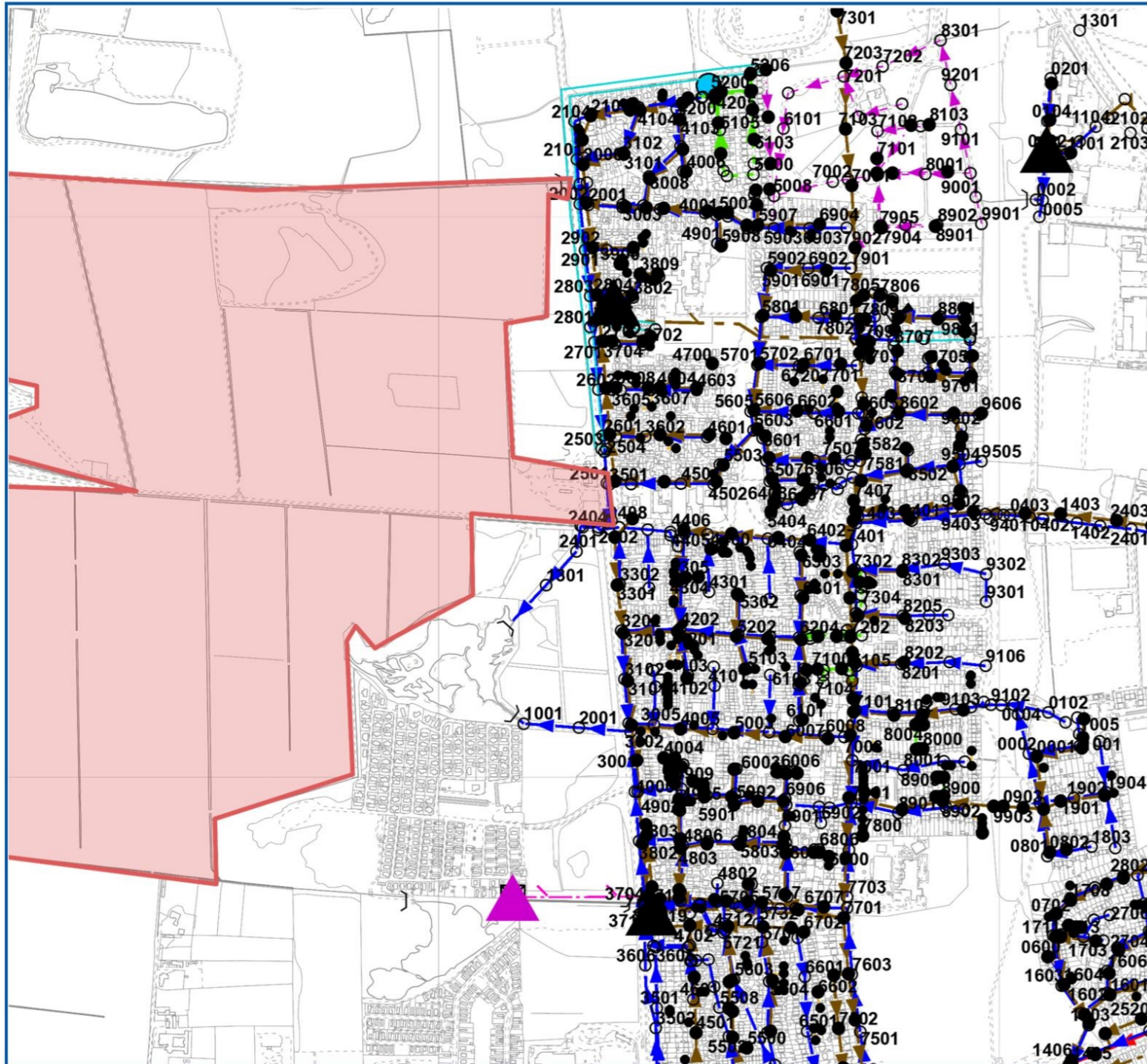
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Reference	Cover Level	Invert Level Upstream	Invert Level Downstream	Purpose	Material	Pipe Shape	Max Size	Min Size	Gradient	Year Laid
SE87096100	8.7119	6.27	<UNK>	F	VC	C	150	<UNK>	0	31/12/1899 00:00:00
SE87096100	8.7119	5.99	5.66	F	VC	C	<UNK>	<UNK>	233.979	31/12/1899 00:00:00
SE87096405	<UNK>	<UNK>	<UNK>	F	VC	<UNK>	<UNK>	<UNK>	0	31/12/1899 00:00:00
SE87105010	<UNK>	<UNK>	<UNK>	S	U	C	750	<UNK>	<UNK>	04/03/2020 00:00:00
SE88101103	41.9879	39.97	39.64	S	VC	C	225	<UNK>	96.45	31/12/1899 00:00:00
SE87085501	6.109	4.08	3.83	F	VC	C	225	<UNK>	186.4	31/12/1899 00:00:00
SE87086707	8.5159	6.66	5.3	F	VC	C	225	<UNK>	82.2	31/12/1899 00:00:00
SE87095001	5.8689	3.96	3.47	F	VC	C	150	<UNK>	100.31	31/12/1899 00:00:00
SE87097501	9.2309	7.02	6.71	S	VC	C	225	<UNK>	83.65	31/12/1899 00:00:00
SE87103002	5.6519	3.63	3.31	F	VC	C	150	<UNK>	116.41	31/12/1899 00:00:00
SE88090401	34.462	30.95	25.841	S	VC	C	300	<UNK>	4.69	31/12/1899 00:00:00
SE87098711	14.4399	<UNK>	<UNK>	<UNK>	<UNK>	<UNK>	<UNK>	<UNK>	<UNK>	31/12/1899 00:00:00
SE87099706	18.107	16.99	16.51	S	VC	C	150	<UNK>	52.29	31/12/1899 00:00:00
SE88100004	40.4739	<UNK>	<UNK>	S	CO	C	1200	<UNK>	0	31/12/1899 00:00:00
SE87095605	6.689	4.9	4.69	S	CO	C	575	<UNK>	163.19	31/12/1899 00:00:00
SE87099402	21.684	17.84	17.36	S	CO	C	375	<UNK>	38.13	31/12/1899 00:00:00
SE87096200	<UNK>	<UNK>	<UNK>	F	VC	<UNK>	150	<UNK>	<UNK>	20/10/2022 00:00:00
SE87097303	9.133	7.14	6.85	S	CO	C	375	<UNK>	151.41	31/12/1899 00:00:00
SE87095901	7.762	6.4	5.65	F	VC	C	150	<UNK>	108.24	31/12/1899 00:00:00
SE87086709	7.8	5.68	5.02	F	VC	C	225	<UNK>	111.55	31/12/1899 00:00:00
SE88080901	36.75	33.66	29.491	F	VC	C	<UNK>	<UNK>	8.7	31/12/1899 00:00:00
SE87098301	13.17	11.04	7.65	F	VC	C	225	<UNK>	26.28	31/12/1899 00:00:00
SE87085504	7.1599	5.19	4.85	F	VC	C	225	<UNK>	266.38	31/12/1899 00:00:00
SE88081704	40.096	38.15	37.72	S	VC	C	225	<UNK>	94.09	31/12/1899 00:00:00
SE88081700	<UNK>	<UNK>	<UNK>	F	U	U	100	<UNK>	<UNK>	31/12/1899 00:00:00
SE87105009	8.93	7.51	6.88	F	VC	C	150	<UNK>	73.05	31/12/1899 00:00:00
SE87096901	8.9619	7.43	6.41	F	VC	C	225	<UNK>	98.33	31/12/1899 00:00:00
SE87084804	<UNK>	<UNK>	2.45	F	VC	C	<UNK>	<UNK>	0	31/12/1899 00:00:00
SE87085905	5.517	3.88	3.499	S	CO	C	600	<UNK>	134.61	31/12/1899 00:00:00

LEGEND

- Operational Site
- Waste Water Pump
- Transfered Asset
- S14
- S104
- S102
- Null Private
- Null
- None
- Highway Drain
- Adopted Sewer
- Storage
- DS
- Disposal Site
- Off-Line Waste Water Storage
- On-Line Waste Water Storage
- Wet Well
- Waste Water Process Structure
- Sewage Treatment Point
- Sewage Treatment Structure
- Sludge Treatment Point
- Sludge Treatment Structure
- Manhole
- Foul Bifurcation Manhole
- Combined Bifurcation Manhole
- Surface Water Bifurcation Manhole
- Dual Manhole
- Foul Single Manhole
- Combined Single Manhole
- Surface Water Single Manhole
- Twin Manhole
- Foul Adopted Manhole
- Combined Adopted Manhole
- Surface Adopted Manhole
- Transfered Manhole
- Unsurveyed Manhole
- Gravity Sewer Pipe
- Foul Gravity Sewer
- Combined Gravity Sewer
- Surface Water Gravity Sewer
- S104 Surface Water Gravity Sewer
- S104 Combined Gravity Sewer
- S104 Foul Gravity Sewer
- Private Surface Water Gravity Sewer
- Private Combined Gravity Sewer
- Private Foul Gravity Sewer
- Surface Water Unsurveyed Pipe
- Foul Unsurveyed Pipe
- Transfered Surface Water Sewer
- Transfered Combined Sewer
- Transfered Foul Sewer
- Disposal Pipe
- Overflow Pipe
- Culverted Water Course
- Waste Internal Site Pipe
- Sewer Service Connection
- Gravity Sewer Others
- Pressure Sewer Pipe
- Surface Water Pressure Sewer
- Combined Pressure Sewer
- Foul Pressure Sewer
- S104 Surface Water Pressure Sewer
- S104 Combined Pressure Sewer
- S104 Foul Pressure Sewer
- Private Surface Water Pressure Sewer
- Private Combined Pressure Sewer
- Private Foul Pressure Sewer
- Surface Water Vacuum Sewer
- S104 Surface Water Vacuum Sewer
- S104 Combined Vacuum Sewer
- S104 Foul Vacuum Sewer
- Private Surface Water Vacuum Sewer
- Private Combined Vacuum Sewer
- Private Foul Vacuum Sewer
- Foul Lateral Drain
- S104 Surface Water Lateral Drain
- S104 Combined Lateral Drain
- S104 Foul Lateral Drain
- Private Surface Water Lateral Drain
- Private Combined Lateral Drain
- Private Foul Lateral Drain
- Transfered Surface Water Lateral Drain
- Transfered Combined Lateral Drain
- Transfered Foul Lateral Drain
- Ancillary
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- Sewerage Chemical Injection Point
- Sewerage Hatch Box
- Sewerage Pressure Washout
- Vent Column
- Waste Water Outfall
- Control Valve
- Hydrobrake
- Pantstock
- Sewerage Isolation Valve
- Sewerage Non Return Valve
- Print1000mLine

MATERIALS

- NONE
- AC - ASBESTOS CEME
- BR - BRICK
- CC - CONCRETE BOX CULVERT
- CI - CAST IRON
- CO - CONCRETE
- CSB - CONCRETE SEGMENTS (BOLTED)
- CSU - CONCRETE SEGMENTS (UNBOLTED)
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- GRP - GLASS REINFORCED PLASTIC
- MAC - MASONRY IN REGULAR COURSES
- MAR - MASONRY RANDOMLY COURSED
- PE - POLYETHYLENE
- PF - PITCH
- PP - POLYPROPYLENE
- PSC - PLASTIC STEEL COMPOSITE
- PVC - POLYVINYL CHLORIDE
- RPM - REINFORCED PLASTIC MATRIX
- SI - SPUN (GREY) IRON
- ST - STEEL
- U - UNKNOWN
- VC - VITRIFIED CLAY
- XXX - OTHER

CATEGORIES

- W - WEIR
- C - CASCADE
- DB - DAMBOARD
- SE - SIDE ENTRY
- FV - FLAP VALVE
- BD - BACK DROP
- S - SIPHON
- D - HIGHWAY DRAIN
- S104 - SECTION 104

SHAPE

- C - CIRCULAR
- E - EGG SHAPED
- O - OTHER
- R - RECTANGLE
- S - SQUARE
- T - TRAPEZOIDAL
- U - UNKNOWN

PURPOSE

- C - COMBINED
- E - FINAL EFFLUENT
- F - FOUL
- L - SLUDGE
- S - SURFACE WATER



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

SEWER RECORD (Tabular)

O/S Map Scale: 1:10,000

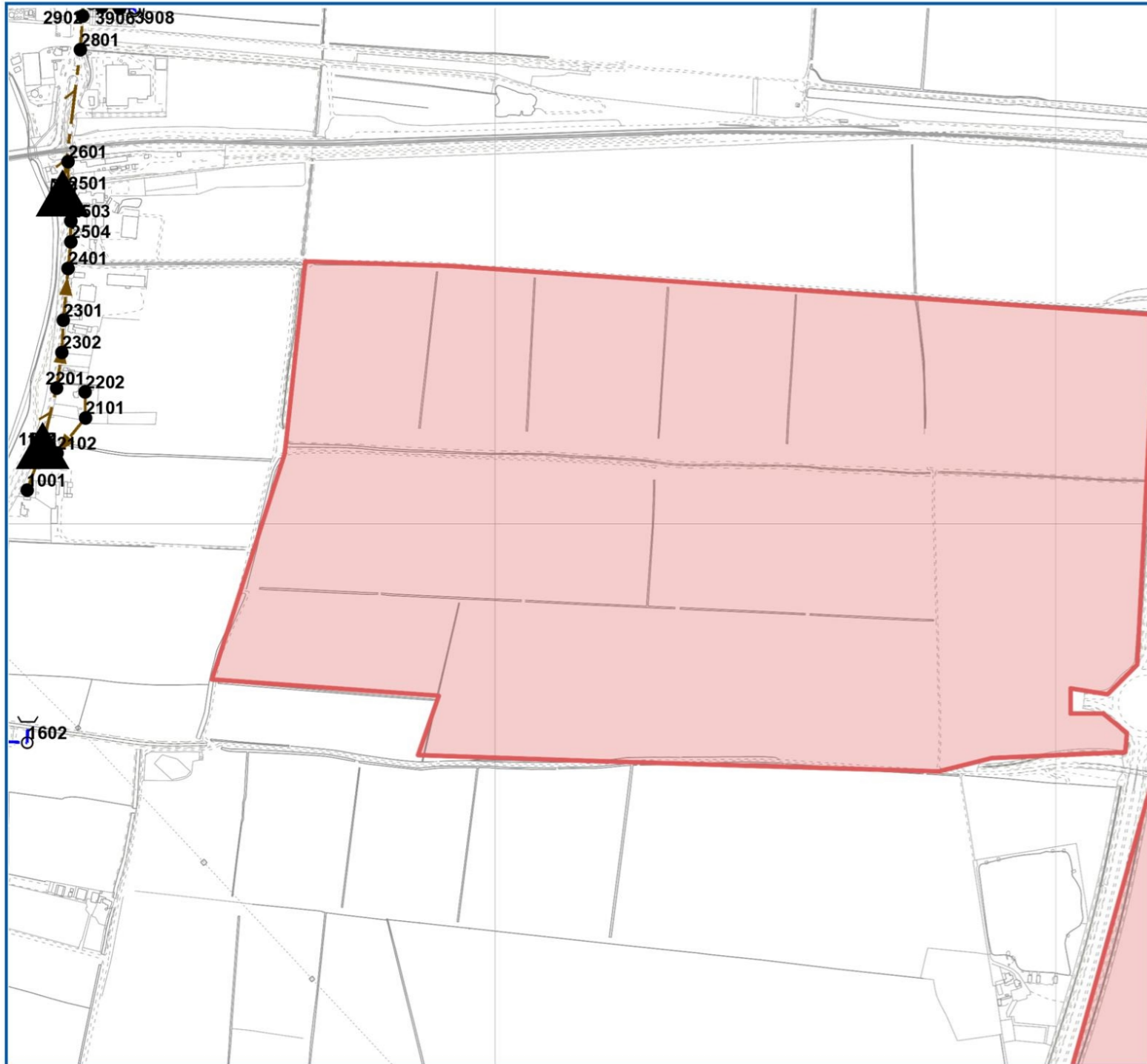
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Date of Issue: 13-07-23

X: 487250.28 Y: 409430.31

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Reference	Cover Level	Invert Level Upstream	Invert Level Downstream	Purpose	Material	Pipe Shape	Max Size	Min Size	Gradient	Year Laid
SE84102904	<UNK>	2.46	2.054	S	VC	C	<UNK>	<UNK>	51.27	31/12/1899 00:00:00
SE84102101	2.83	1.27	<UNK>	F	VC	C	<UNK>	<UNK>	0	31/12/1899 00:00:00
SE84102401	3.16	1.26	1.12	F	VC	C	<UNK>	<UNK>	351.79	31/12/1899 00:00:00
SE84103907	2.69	1.864	1.86	S	VC	C	<UNK>	<UNK>	0	31/12/1899 00:00:00
SE84091602	2.44	0.43	0.03	S	U	C	<UNK>	<UNK>	58.83	31/12/1899 00:00:00
SE84102302	3.09	1.9	1.66	F	VC	C	<UNK>	<UNK>	237.83	31/12/1899 00:00:00
SE84102902	3.98	2.42	2.01	F	VC	C	<UNK>	<UNK>	151.24	31/12/1899 00:00:00
SE84103904	3.09	2.054	1.975	S	VC	C	<UNK>	<UNK>	322.5	31/12/1899 00:00:00
SE84102301	3.46	1.64	1.28	F	VC	C	<UNK>	<UNK>	253.75	31/12/1899 00:00:00
SE84101001	<UNK>	<UNK>	0.71	F	VC	C	<UNK>	<UNK>	0	31/12/1899 00:00:00
SE84102503	3.3	0.98	0.74	F	VC	C	<UNK>	<UNK>	217.29	31/12/1899 00:00:00
SE84102201	3.13	2.18	1.92	F	VC	C	<UNK>	<UNK>	249.15	31/12/1899 00:00:00
SE84102504	3.39	1.1	1	F	VC	C	<UNK>	<UNK>	350.1	31/12/1899 00:00:00
SE84102501	3.24	0.72	<UNK>	F	VC	C	225	<UNK>	0	31/12/1899 00:00:00
SE84101102	2.89	0.69	<UNK>	F	VC	C	150	<UNK>	0	31/12/1899 00:00:00
SE84103905	2.86	1.975	1.864	S	VC	C	<UNK>	<UNK>	269.64	31/12/1899 00:00:00
SE84103906	2.824	2.216	2.21	F	VC	C	<UNK>	<UNK>	3114	31/12/1899 00:00:00
SE84102601	3.14	1.74	0.74	F	VC	C	<UNK>	<UNK>	56.01	31/12/1899 00:00:00
SE84102903	3.113	2.016	1.94	F	VC	C	<UNK>	<UNK>	176.75	31/12/1899 00:00:00
SE84102202	2.66	1.6	1.29	F	VC	C	<UNK>	<UNK>	148.39	31/12/1899 00:00:00
SE84103908	<UNK>	1.86	1.85	S	VC	C	<UNK>	<UNK>	300	31/12/1899 00:00:00
SE84102102	<UNK>	<UNK>	0.71	F	VC	C	<UNK>	<UNK>	0	31/12/1899 00:00:00
SE84102801	4.32	2.92	2.44	F	VC	C	<UNK>	<UNK>	125.15	31/12/1899 00:00:00

LEGEND

Operational Site	Combined Effluence Manhole	Combined Unsurveyed Pipe	Combined Vacuum Sewer	Foul Lateral Drain	Lamp Hole
Waste Water Pump	Surface Water Effluence Manhole	Foul Unsurveyed Pipe	S104 Surface Water Vacuum Sewer	S104 Surface Water Lateral Drain	Sewerage Air Valve
Transferred Asset	Dual Manhole	Transferred Surface Water Sewer	S104 Combined Vacuum Sewer	S104 Combined Lateral Drain	Sewerage Chemical Injection Point
S04	Foul Single Manhole	Transferred Combined Sewer	S104 Foul Vacuum Sewer	S104 Foul Lateral Drain	Sewerage Hatch Box
S104	Combined Single Manhole	Transferred Foul Sewer	Private Surface Water Vacuum Sewer	Private Surface Water Lateral Drain	Sewerage Pressure Washout
S102	Surface Water Single Manhole	Disposal Pipe	Private Combined Vacuum Sewer	Private Combined Lateral Drain	Vent Column
Null Private	Twin Manhole	Overflow Pipe	Private Foul Vacuum Sewer	Private Foul Lateral Drain	Waste Water Outfall
Null	Foul Adopted Manhole	Culverted Water Course	Surface Water Siphon	Transferred Surface Water Lateral Dia	Control Valve
None	Combined Adopted Manhole	Waste Internal Site Pipe	Combined Siphon	Transferred Combined Lateral Drain	Hydrobrake
Highway Drain	Surface Adopted Manhole	Sewer Service Connection	Foul Siphon	Transferred Foul Lateral Drain	Penstock
Adopted Sewer	Transferred Manhole	Gravity Sewer Others	Private Surface Water Siphon	Ancillary	Sewerage Isolation Valve
Storage	Unsurveyed Manhole	Pressure Sewer Pipe	Private Combined Siphon	Balancing Lagoon	Sewerage Non Return Valve
DS	Gravity Sewer Pipe	Surface Water Pressure Sewer	Private Foul Siphon	Grease Trap	Print1000mLine
Off-Line Waste Water Storage	Foul Gravity Sewer	Combined Pressure Sewer	S104 Surface Water Siphon	Interceptor	Chamber
On-Line Waste Water Storage	Combined Gravity Sewer	Foul Pressure Sewer	S104 Combined Siphon	Screen	Flushing Chamber
Wet Well	Surface Water Gravity Sewer	S104 Surface Water Pressure Sewer	S104 Foul Siphon	Scalaway	Overflow
Waste Water Process Structure	S104 Surface Water Gravity Sewer	S104 Combined Pressure Sewer	Surface Water Unsurveyed Pipe	Chamber	Fitting
Sewage Treatment Point	S104 Combined Gravity Sewer	S104 Foul Pressure Sewer	Combined Unsurveyed Pipe	Blind Shaft	Facility Connector
Sewage Treatment Structure	S104 Foul Gravity Sewer	Private Surface Water Pressure Sewer	Foul Unsurveyed Pipe	Head Node	
Sludge Treatment Point	Private Surface Water Gravity Sewer	Private Combined Pressure Sewer	Disposal Pipe		
Sludge Treatment Structure	Private Combined Gravity Sewer	Private Foul Pressure Sewer	Service Pipe		
Manhole	Private Foul Gravity Sewer	Surface Water Vacuum Sewer	Surface Water Lateral Drain		
Foul Effluence Manhole	Surface Water Unsurveyed Pipe	Foul Vacuum Sewer	Combined Lateral Drain		

MATERIALS

- NONE
- AC - ASBESTOS CEME
- BR - BRICK
- CC - CONCRETE BOX CULVERT
- CI - CAST IRON
- CO - CONCRETE
- CSB - CONCRETE SEGMENTS (BOLTED)
- CSU - CONCRETE SEGMENTS (UNBOLTED)
- DI - DUCTILE IRON
- GRP - GLASS REINFORCED PLASTIC
- MAC - MASONRY IN REGULAR COURSES
- MAR - MASONRY RANDOMLY COURSED
- PE - POLYETHYLENE
- PF - PITCH
- PP - POLYPROPYLENE
- PSC - POLYESTER COMPOSITE
- PVC - POLYVINYL CHLORIDE
- RPM - REINFORCED PLASTIC MATRIX
- SI - SPUN (GREY) IRON
- ST - STEEL
- U - UNKNOWN
- VC - VITRIFIED CLAY
- XXX - OTHER

CATEGORIES

- W - WEIR
- C - CASCADE
- DB - DAMBOARD
- SE - SIDE ENTRY
- FV - FLAP VALVE
- BD - BACK DROP
- S - SIPHON
- D - HIGHWAY DRAIN
- S104 - SECTION 104

SHAPE

- C - CIRCULAR
- E - EGG SHAPED
- O - OTHER
- R - RECTANGLE
- S - SQUARE
- T - TRAPEZOIDAL
- U - UNKNOWN

PURPOSE

- C - COMBINED
- E - FINAL EFFLUENT
- F - FOUL
- L - SLUDGE
- S - SURFACE WATER

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

SEWER RECORD (Tabular)

O/S Map Scale: 1:10,000 **This map is centred upon:**

Date of Issue: 13-07-23 **X:** 485149.49 **Y:** 409977.99

Disclaimer Statement

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- On 1 October 2011 most private sewers and private lateral drains in Severn Trent Water's sewerage area, which were connected to a public sewer as at 1 July 2011, transferred to the ownership of Severn Trent Water and became public sewers and public lateral drains. A further transfer takes place on 1 October 2012. Private pumping stations, which form part of these sewers or lateral drains, will transfer to ownership of Severn Trent Water on or before 1 October 2016. Severn Trent Water does not possess complete records of these assets. These assets may not be displayed on the map.
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Appendix 4: Greenfield Run-Off Rates

Calculated by: Ariya Shademani

Site name: Lincolnshire Lakes

Site location:

Site Details

Latitude: 53.57685° N

Longitude: 0.6949° W

Reference: 1470026326

Date: Dec 23 2024 13:05

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.

Runoff estimation approach

Site characteristics

Total site area (ha):

Methodology

Q_{BAR} estimation method: Calculate from SPR and SAAR

SPR estimation method: Calculate from SOIL type

Notes

(1) Is $Q_{BAR} < 2.0$ l/s/ha?

When Q_{BAR} is < 2.0 l/s/ha then limiting discharge rates are set at 2.0 l/s/ha.

Soil characteristics

	Default	Edited
SOIL type:	2	2
HOST class:	N/A	N/A
SPR/SPRHOST:	0.3	0.3

(2) Are flow rates < 5.0 l/s?

Where flow rates are less than 5.0 l/s consent for discharge is usually set at 5.0 l/s if blockage from vegetation and other materials is possible. Lower consent flow rates may be set where the blockage risk is addressed by using appropriate drainage elements.

Hydrological characteristics

	Default	Edited
SAAR (mm):	605	605
Hydrological region:	4	4
Growth curve factor 1 year:	0.83	0.83
Growth curve factor 30 years:	2	2
Growth curve factor 100 years:	2.57	2.57
Growth curve factor 200 years:	3.04	3.04

(3) Is $SPR/SPRHOST \leq 0.3$?

Where groundwater levels are low enough the use of soakaways to avoid discharge offsite would normally be preferred for disposal of surface water runoff.

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Default Edited

Q_{BAR} (l/s):	1.54	1.54
1 in 1 year (l/s):	1.28	1.28
1 in 30 years (l/s):	3.07	3.07
1 in 100 year (l/s):	3.95	3.95
1 in 200 years (l/s):	4.67	4.67

This report was produced using the greenfield runoff tool developed by HR Wallingford and available at 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 www.uksuds.com/terms-and-conditions.htm. The outputs from this tool are estimates of 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, CEH, Hydrosolutions or any other organisation for the use of this data in the design or operational characteristics of any drainage scheme.

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Appendix 5: Existing Run-Off Volume

Simulation Settings

Rainfall Methodology	FSR	Skip Steady State	x
FSR Region	England and Wales	Drain Down Time (mins)	240
M5-60 (mm)	18.400	Additional Storage (m ³ /ha)	20.0
Ratio-R	0.401	Check Discharge Rate(s)	x
Summer CV	0.750	Check Discharge Volume	✓
Winter CV	0.840	100 year 360 minute (m ³)	2124
Analysis Speed	Normal		

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 %)
100	40	0	0

Pre-development Discharge Volume

Site Makeup	Greenfield	Return Period (years)	100
Greenfield Method	FSR/FEH	Climate Change (%)	0
Positively Drained Area (ha)	14.750	Storm Duration (mins)	360
Soil Index	2	Betterment (%)	0
SPR	0.30	PR	0.248
CWI	90.370	Runoff Volume (m ³)	2124

Appendix 6: Outline Drainage Strategy