



## APPENDIX C

Sewer Node

REFERENCE	COVER LEVEL	INV LEVEL UPSTR	INV LEVEL DOWNSTR	PURP	MATL	SHAPE	MAX SIZE	MIN SIZE	GRADIENT	YEAR LAID
SP40771102	95.06	94.19	93.53	S	VC	C	225	nll	143.03	nll
SP40771204	94.28	93.35	93.23	S	nll	C	150	nll	195.08	nll
SP40771206	94.53	93.42	92.89	F	nll	C	150	nll	33.58	nll
SP40771209	94.63	93.17	93.09	S	nll	C	225	nll	374.63	nll
SP40771211	94.60	93.07	92.85	F	nll	C	150	nll	144.45	nll
SP40771216	94.79	93.23	93.09	F	nll	C	150	nll	246.71	nll
SP40771217	94.90	93.39	93.26	F	nll	C	150	nll	49.23	nll
SP40771218	94.94	93.61	93.53	S	nll	C	225	nll	35.38	nll
SP40771219	94.76	93.48	93.19	S	VC	C	225	nll	126.52	nll
SP40771220	94.91	93.63	93.41	F	nll	C	150	nll	119.32	nll
SP40771221	94.93	93.94	93.63	S	nll	C	225	nll	101.03	nll
SP40771301	94.57	nll	nll	nll	nll	nll	nll	nll	0.00	nll
SP40772201	95.22	93.94	93.65	F	nll	C	150	nll	139.30	nll
SP40772202	95.21	94.20	93.99	S	nll	C	225	nll	207.90	nll
SP40772301	94.72	92.48	91.53	F	nll	C	225	nll	212.14	nll
SP40772302	94.77	nll	nll	nll	nll	nll	nll	nll	0.00	nll
SP40773201	94.97	92.80	92.50	F	nll	C	225	nll	281.68	nll
SP40773202	94.92	93.08	92.82	F	nll	C	225	nll	269.68	nll
SP40773203	95.08	nll	nll	nll	nll	nll	nll	nll	0.00	nll
SP40773301	94.86	nll	nll	nll	nll	nll	nll	nll	0.00	nll
SP40774201	95.36	93.98	93.74	F	nll	C	150	nll	80.04	nll
SP40774202	95.30	93.72	93.10	F	nll	C	150	nll	136.34	nll
SP40775101	95.92	nll	nll	nll	nll	nll	nll	nll	0.00	nll
SP40775102	nll	nll	nll	nll	nll	nll	nll	nll	0.00	nll
SP40775103	96.00	94.67	94.00	F	nll	C	150	nll	155.99	nll
SP40775104	96.31	nll	nll	nll	nll	nll	nll	nll	0.00	nll
nll	nll	nll	nll	nll	nll	nll	nll	nll	0.00	nll
nll	nll	nll	nll	nll	nll	nll	nll	nll	0.00	nll
nll	nll	nll	nll	nll	nll	nll	nll	nll	0.00	nll
nll	nll	nll	nll	nll	nll	nll	nll	nll	0.00	nll
nll	nll	nll	nll	nll	nll	nll	nll	nll	0.00	nll
nll	nll	nll	nll	nll	nll	nll	nll	nll	0.00	nll



Sewer Pipe Data

**SEWER RECORD (Tabular)**

**O/S Map scale:** 1:2500  
**Date of issue:** 29.08.14  
**Sheet No.:** 1 of 1

**This map is centred upon:** O / S Grid reference:  
**X:** 440345  
**Y:** 277286

**SEVERN TRENT WATER LIMITED**  
Asset Data Management  
PO Box 5344  
Coventry  
CV3 9RT  
Telephone: 0845 601 6616

**Disclaimer Statement:**  
1. Do not scale off this map.  
2. The information shown on this map is for general guidance only and should not be relied upon for any specific works (including but not limited to excavation) in the vicinity of Severn Trent Water assets or for the purposes of determining the suitability of a point of connection to the sewerage or distribution systems.  
3. On 1 October 2011 most private sewers and private lateral drains in Severn Trent Waters sewerage area, which were connected to a public sewer as at 1 July 2011, transferred to the ownership of Severn Trent Water. Private sewers and private lateral drains which remain the property of Severn Trent Water will transfer to the ownership of Severn Trent Water on or before 1 October 2018.  
4. These assets may not be displayed on this map.  
5. Document users other than Severn Trent Water business users are advised that the document is provided for reference purposes only and is subject to copyright, therefore, no further copies should be made from it.

**CATEGORIES**

- W - WEIR
- C - CASCADE
- DB - DAMBOARD
- SE - SIDE ENTRY
- ED - BACKDROP
- S - SIPHON
- HD - HIGHWAY DRAIN
- S104 - SECTION 104

**MATERIALS**

- AC - PORTLAND CEMENT
- BR - BRICK
- CC - CONCRETE BOX CULVERT
- CI - CAST IRON
- CO - CONCRETE SEGMENTS (BOLTED)
- CSU - CONCRETE SEGMENTS (UNBOLTED)
- DI - DUCTILE IRON
- GRC - GLASS REINFORCED CONCRETE
- MC - MASONRY IN REGULAR COURSES
- MAR - MASONRY RANDOMLY COURSED
- PE - POLYETHYLENE
- PF - PITCH
- PP - POLYPROPYLENE
- PVC - POLYVINYLCHLORIDE
- RPM - REINFORCED PLASTIC MATRIX
- SI - SPIUN (GREY) IRON
- U - UNKNOWN
- VC - VITRIFIED CLAY
- XXX - OTHER

**SHAPE**

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

**PURPOSE**

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

**TABULAR KEY**

- A. Sewer pipe data refers to downstream sewer pipe.
- B. Where the node bifurcates (epilts) X and Y indicates downstream sewer pipe.
- C. Gradient is stated as 1 in...

**Sewer Chemical Injection Point**

- Sewer Junction
- Sewerage Air Valve
- Sewerage Hatch Box Point
- Sewerage Isolation Valve
- Soakaway
- Surface Water Manhole
- Vent Column
- Waste Water Storage
- Pre-1937 Properties

**Blind Shaft**

- Combined Use Manhole
- Flushing Chamber
- Foul Use Manhole
- Grease Trap
- Head Node
- Hydrobrake
- Lampole
- Outfall
- Overflow
- Penstock
- Petrol Interceptor

**Culverted Watercourse**

- Cable, Earthing
- Cable Junction
- Cable, Optical Fibre/Instrumentation
- Cable, Low Voltage
- Cable, High Voltage
- Cable, Other
- Housing, Building
- Housing, Kiosk
- Disposal Site
- Sewage Treatment Works
- Housing, Other
- Pipe Support Structure
- Sewage Pumping Facility
- Sewer Facility Connection Inlet / Outlet

**Abandoned Gravity Sewer**

- Private Surface Water Gravity Sewer
- Private Foul Gravity Sewer
- Public Combined Gravity Sewer
- Public Foul Gravity Sewer
- Public Surface Water Gravity Sewer
- Trunk Foul Use Gravity Sewer
- Trunk Surface Water Gravity Sewer
- Combined Use Pressurised Sewer
- Surface Water Pressurised Sewer
- Highway Drain
- Combined Lateral Drain (SS)
- Foul Lateral Drain (SS)
- Surface Water Lateral Drain (SS)

**Private Sewers are shown in magenta**  
**All section 104 sewers are shown in green**



**Sewer Node**

REFERENCE	COVER LEVEL	INV LEVEL UPSTR	INV LEVEL DOWNSTR	PURP	MATL	SHAPE	MAX SIZE	MIN SIZE	GRADIENT	YEAR LAID
SP40767901	95.53	93.12	92.27	F	VC	C	150	nll	76.02	nll
SP40767902	95.64	93.16	93.13	F	VC	C	150	nll	906.67	nll
SP40775101	95.92	nll	nll	nll	nll	nll	nll	nll	0.00	nll
SP40775102	nll	nll	nll	nll	nll	nll	nll	nll	0.00	nll
SP40775103	96.00	94.67	94.00	F	nll	C	150	nll	155.99	nll
SP40775104	96.31	nll	nll	nll	nll	nll	nll	nll	0.00	nll
SP40776001	96.46	nll	nll	nll	nll	nll	nll	nll	0.00	nll
SP40776002	96.36	nll	nll	nll	nll	nll	nll	nll	0.00	nll
SP40777002	nll	nll	93.17	F	VC	C	150	nll	0.00	nll
SP40778101	96.61	95.90	nll	F	VC	C	100	nll	0.00	nll
SP40778102	nll	nll	94.88	F	VC	C	150	nll	0.00	nll
SP40778103	96.57	94.82	nll	F	VC	C	150	nll	0.00	nll
SP40778104	nll	nll	nll	F	VC	C	150	nll	0.00	nll



**Sewer Pipe Data**

**Severn Trent Water Limited**  
Asset Data Management  
PO Box 5344  
Coventry  
CV3 9RT  
Telephone: 0845 601 6616

**SEWER RECORD (Tabular)**

**O/S Map scale:** 1:2500  
**Date of Issue:** 29.08.14  
**Sheet No.:** 1 of 1

**This map is centred upon:**  
**O / S Grid reference:**  
**X:** 440732  
**Y:** 277181

Disclaimer Statement:  
1. Do not scale off this map.  
2. This map is provided as a general guide only and is not intended to be used for any legal or other purposes. It is not intended to be used for the purpose of determining the suitability of a point of connection to the sewerage or drainage system.  
3. On 1 October 2015 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. This map shows the sewerage system as it was on 1 July 2011.  
4. These assets may not be all shown on this map.  
5. Document users other than Severn Trent Water business users are advised that this document is provided for reference purpose only and is subject to copyright. Therefore, no further copies should be made from it.

**CATEGORIES**

**W** WEIR  
**C** CASCADE  
**DB** DAMBOARD  
**SE** SIDE ENTRY  
**SV** VALVE  
**BD** BLOCK DRAIN  
**SD** SIPHON  
**HD** HIGHWAY DRAIN  
**S104** SECTION 104

**MATERIALS**

- NONE
- AC - ASBESTOS CEMENT
- CC - CONCRETE BOX CULVERT
- CI - CAST IRON
- CO - CONCRETE
- CSU - CONCRETE SEGMENTS (UNBOLTED)
- DI - DUCTILE IRON
- GRC - GLASS REINFORCED CONCRETE
- GRP - GLASS REINFORCED PLASTIC
- MA - MASONRY
- MAR - MASONRY RANDOMLY COURSED
- PE - POLYETHYLENE
- PF - PITCH
- PP - POLYPROPYLENE
- PVC - POLYVINYL CHLORIDE
- RPM - REINFORCED PLASTIC MATRIX
- SI - SPUN GREY IRON
- ST - STEEL
- VC - VITRIFIED CLAY
- XXX - OTHER

**MATERIALS**

- NONE
- AC - ASBESTOS CEMENT
- CC - CONCRETE BOX CULVERT
- CI - CAST IRON
- CO - CONCRETE
- CSU - CONCRETE SEGMENTS (UNBOLTED)
- DI - DUCTILE IRON
- GRC - GLASS REINFORCED CONCRETE
- GRP - GLASS REINFORCED PLASTIC
- MA - MASONRY
- MAR - MASONRY RANDOMLY COURSED
- PE - POLYETHYLENE
- PF - PITCH
- PP - POLYPROPYLENE
- PVC - POLYVINYL CHLORIDE
- RPM - REINFORCED PLASTIC MATRIX
- SI - SPUN GREY IRON
- ST - STEEL
- VC - VITRIFIED CLAY
- XXX - OTHER

**PURPOSE**

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

**SHAPE**

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

**TABULAR KEY**

Sewer pipe data refers to downstream sewer pipe.

Where the node bifurcates (splits) X and Y indicates downstream sewer pipe.

Gradient is stated as 1 in...

All Private Sewers are shown in magenta  
All section 104 sewers are shown in green

## APPENDIX D





- LEGEND**
- Site boundary
  - Primary vehicular access point
  - Pedestrian access point
  - Residential development
  - Potential location for single storey development
  - Indicative location of proposed new dwelling on Rugby Road
  - Retained access to new dwelling and existing properties on Rugby Road (front and rear access as appropriate)
  - Public Open space
  - Existing tree/ hedgerow planting
  - New trees/ hedgerow planting
  - Proposed area for attenuation
  - Foul pump station
  - Area for formal play
  - Informal pedestrian footpath
  - Mown path
  - Existing PROW- Footpath
  - Existing PROW- Bridleway
  - Existing PROW- Twelve O'Clock Ride



Project  
**Brandon Stadium  
 Coventry**  
 Drawing Title  
**Illustrative Masterplan**


Date	Scale	Drawn by	Check by
24.08.17	1:1000 @ A1	EMB	JDH
Project No	Drawing No	Revision	
27510	9401	C	

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 Landscape Planning & Design • Environmental Planning • Graphic  
 Communications • Public Engagement • Development Economics

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## APPENDIX E

Armstrong Stokes & Clayton Ltd		Page 1
Regus House, Herald Way Pegasus Business Park Castle Donington, Derbyshir...	Coventry Stadium Brandon	
Date 15/12/2017 File	Designed by John Checked by	
Micro Drainage	Source Control 2016.1.1	

ICP SUDS Mean Annual Flood


Input

Return Period (years)	100	Soil	0.450
Area (ha)	4.150	Urban	0.000
SAAR (mm)	700	Region Number	Region 4

**Results 1/s**

QBAR Rural	18.2
QBAR Urban	18.2
Q100 years	46.9
Q1 year	15.1
Q30 years	35.7
Q100 years	46.9




Armstrong Stokes & Clayton Ltd		Page 1
Regus House, Herald Way Pegasus Business Park Castle Donington, Derbyshir...	Coventry Stad Brandon East Pond 100yr CC	
Date 15/12/2017 File Prelim Pond4.srcx	Designed by JS Checked by	
Micro Drainage	Source Control 2016.1.1	

Summary of Results for 100 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Control (l/s)	Max Volume (m <sup>3</sup> )	Status
15 min Summer	100.470	0.470	7.6	305.5	O K
30 min Summer	100.590	0.590	7.6	398.8	O K
60 min Summer	100.703	0.703	7.6	491.9	O K
120 min Summer	100.801	0.801	8.1	578.2	O K
180 min Summer	100.848	0.848	8.4	620.2	O K
240 min Summer	100.873	0.873	8.5	643.0	O K
360 min Summer	100.893	0.893	8.6	662.2	O K
480 min Summer	100.898	0.898	8.6	666.4	O K
600 min Summer	100.893	0.893	8.6	661.8	O K
720 min Summer	100.886	0.886	8.6	655.9	O K
960 min Summer	100.872	0.872	8.5	642.2	O K
1440 min Summer	100.838	0.838	8.3	610.9	O K
2160 min Summer	100.783	0.783	8.0	561.9	O K
2880 min Summer	100.730	0.730	7.8	515.6	O K
4320 min Summer	100.631	0.631	7.6	432.2	O K
5760 min Summer	100.540	0.540	7.6	358.7	O K
7200 min Summer	100.451	0.451	7.6	291.1	O K
8640 min Summer	100.353	0.353	7.6	220.6	O K
10080 min Summer	100.262	0.262	7.6	158.5	O K
15 min Winter	100.519	0.519	7.6	342.7	O K
30 min Winter	100.650	0.650	7.6	447.5	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m <sup>3</sup> )	Discharge Volume (m <sup>3</sup> )	Time-Peak (mins)
15 min Summer	132.861	0.0	295.4	23
30 min Summer	87.290	0.0	388.7	37
60 min Summer	54.663	0.0	503.3	66
120 min Summer	33.095	0.0	610.4	126
180 min Summer	24.358	0.0	674.1	184
240 min Summer	19.485	0.0	719.1	244
360 min Summer	14.144	0.0	782.9	362
480 min Summer	11.275	0.0	831.7	480
600 min Summer	9.449	0.0	870.8	570
720 min Summer	8.176	0.0	903.4	618
960 min Summer	6.502	0.0	955.7	742
1440 min Summer	4.700	0.0	1027.0	1008
2160 min Summer	3.392	0.0	1138.2	1412
2880 min Summer	2.689	0.0	1202.4	1824
4320 min Summer	1.935	0.0	1295.9	2640
5760 min Summer	1.531	0.0	1374.0	3456
7200 min Summer	1.276	0.0	1430.6	4184
8640 min Summer	1.099	0.0	1477.4	4920
10080 min Summer	0.968	0.0	1515.9	5440
15 min Winter	132.861	0.0	331.4	22
30 min Winter	87.290	0.0	434.7	37


Armstrong Stokes & Clayton Ltd		Page 2
Regus House, Herald Way Pegasus Business Park Castle Donington, Derbyshir...	Coventry Stad Brandon East Pond 100yr CC	
Date 15/12/2017 File Prelim Pond4.srcx	Designed by JS Checked by	
Micro Drainage	Source Control 2016.1.1	

Summary of Results for 100 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Control (l/s)	Max Volume (m <sup>3</sup> )	Status
60 min Winter	100.773	0.773	8.0	552.6	O K
120 min Winter	100.882	0.882	8.5	651.4	O K
180 min Winter	100.934	0.934	8.8	700.6	O K
240 min Winter	100.963	0.963	8.9	728.4	O K
360 min Winter	100.990	0.990	9.0	754.4	O K
480 min Winter	100.999	0.999	9.1	763.8	O K
600 min Winter	100.999	0.999	9.1	763.1	O K
720 min Winter	100.992	0.992	9.1	756.4	O K
960 min Winter	100.971	0.971	9.0	736.4	O K
1440 min Winter	100.930	0.930	8.8	696.5	O K
2160 min Winter	100.856	0.856	8.4	627.5	O K
2880 min Winter	100.781	0.781	8.0	559.7	O K
4320 min Winter	100.638	0.638	7.6	437.7	O K
5760 min Winter	100.500	0.500	7.6	327.8	O K
7200 min Winter	100.322	0.322	7.6	199.0	O K
8640 min Winter	100.209	0.209	7.6	124.1	O K
10080 min Winter	100.177	0.177	6.9	103.6	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m <sup>3</sup> )	Discharge Volume (m <sup>3</sup> )	Time-Peak (mins)
60 min Winter	54.663	0.0	564.3	66
120 min Winter	33.095	0.0	684.1	124
180 min Winter	24.358	0.0	755.4	182
240 min Winter	19.485	0.0	805.6	240
360 min Winter	14.144	0.0	876.8	354
480 min Winter	11.275	0.0	931.2	466
600 min Winter	9.449	0.0	974.5	576
720 min Winter	8.176	0.0	1010.5	680
960 min Winter	6.502	0.0	1067.4	776
1440 min Winter	4.700	0.0	1136.3	1082
2160 min Winter	3.392	0.0	1275.2	1536
2880 min Winter	2.689	0.0	1347.2	1988
4320 min Winter	1.935	0.0	1451.7	2848
5760 min Winter	1.531	0.0	1539.4	3688
7200 min Winter	1.276	0.0	1602.9	4328
8640 min Winter	1.099	0.0	1655.6	4664
10080 min Winter	0.968	0.0	1699.3	5248



Armstrong Stokes & Clayton Ltd		Page 3
Regus House, Herald Way Pegasus Business Park Castle Donington, Derbyshir...	Coventry Stad Brandon East Pond 100yr CC	
Date 15/12/2017 File Prelim Pond4.srcx	Designed by JS Checked by	
Micro Drainage		Source Control 2016.1.1


Rainfall Details

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	100	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	19.300	Shortest Storm (mins)	15
Ratio R	0.400	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 1.250

Time (mins)		Area	Time (mins)		Area
From:	To:	(ha)	From:	To:	(ha)
0	4	0.625	4	8	0.625

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Regus House, Herald Way Pegasus Business Park Castle Donington, Derbyshir...	Coventry Stad Brandon East Pond 100yr CC	
Date 15/12/2017 File Prelim Pond4.srcx	Designed by JS Checked by	
Micro Drainage Source Control 2016.1.1		

Model Details

Storage is Online Cover Level (m) 101.300

Tank or Pond Structure

Invert Level (m) 100.000

Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )
0.000	548.0	0.700	850.9	1.400	1110.5	2.100	1110.5
0.100	591.5	0.800	894.4	1.500	1110.5	2.200	1110.5
0.200	634.9	0.900	938.1	1.600	1110.5	2.300	1110.5
0.300	677.9	1.000	981.1	1.700	1110.5	2.400	1110.5
0.400	721.2	1.100	1024.2	1.800	1110.5	2.500	1110.5
0.500	764.8	1.200	1067.4	1.900	1110.5		
0.600	808.0	1.300	1110.5	2.000	1110.5		

Hydro-Brake® Outflow Control

Design Head (m) 1.000 Hydro-Brake® Type Md4 Invert Level (m) 100.000  
Design Flow (l/s) 9.1 Diameter (mm) 108

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	3.2	1.200	10.0	3.000	15.7	7.000	24.0
0.200	7.5	1.400	10.8	3.500	17.0	7.500	24.9
0.300	7.0	1.600	11.5	4.000	18.2	8.000	25.7
0.400	6.3	1.800	12.2	4.500	19.3	8.500	26.5
0.500	6.6	2.000	12.9	5.000	20.3	9.000	27.3
0.600	7.1	2.200	13.5	5.500	21.3	9.500	28.0
0.800	8.1	2.400	14.1	6.000	22.3		
1.000	9.1	2.600	14.7	6.500	23.2		