

TBE (SOUTHERN LTD)

Chapter Court, Wrexham

January 2020



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CARDIFF, CF24 3RR

t: 029 2030 2521

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Document Control Sheet

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Project:	Chapter Court, Wrexham
Client:	TBE (Southern Ltd)
Document Title:	Drainage Strategy & Flood Consequence Assessment
Author:	Patryk Obermajer
Revision:	C

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1. INTRODUCTION

1.1 Background

- 1.1.1 PHG Consulting has been commissioned by TBE (Southern Ltd) to review available information and prepare this Drainage Strategy to support the redevelopment of Chapter Court, Wrexham.
- 1.1.2 The report sets out a drainage strategy, including surface and foul water management, and flood consequence assessment.

1.2 Existing site

- 1.2.1 The application site is currently Brownfield, of commercial use. The site is bound by Queen Street to the north and east, Argyle Street to the west, and Hope Street to the south.
- 1.2.2 The development covers an area of approximately 0.3 ha located at National Grid Reference SJ334503. The approximate site location is shown in Figure 1.

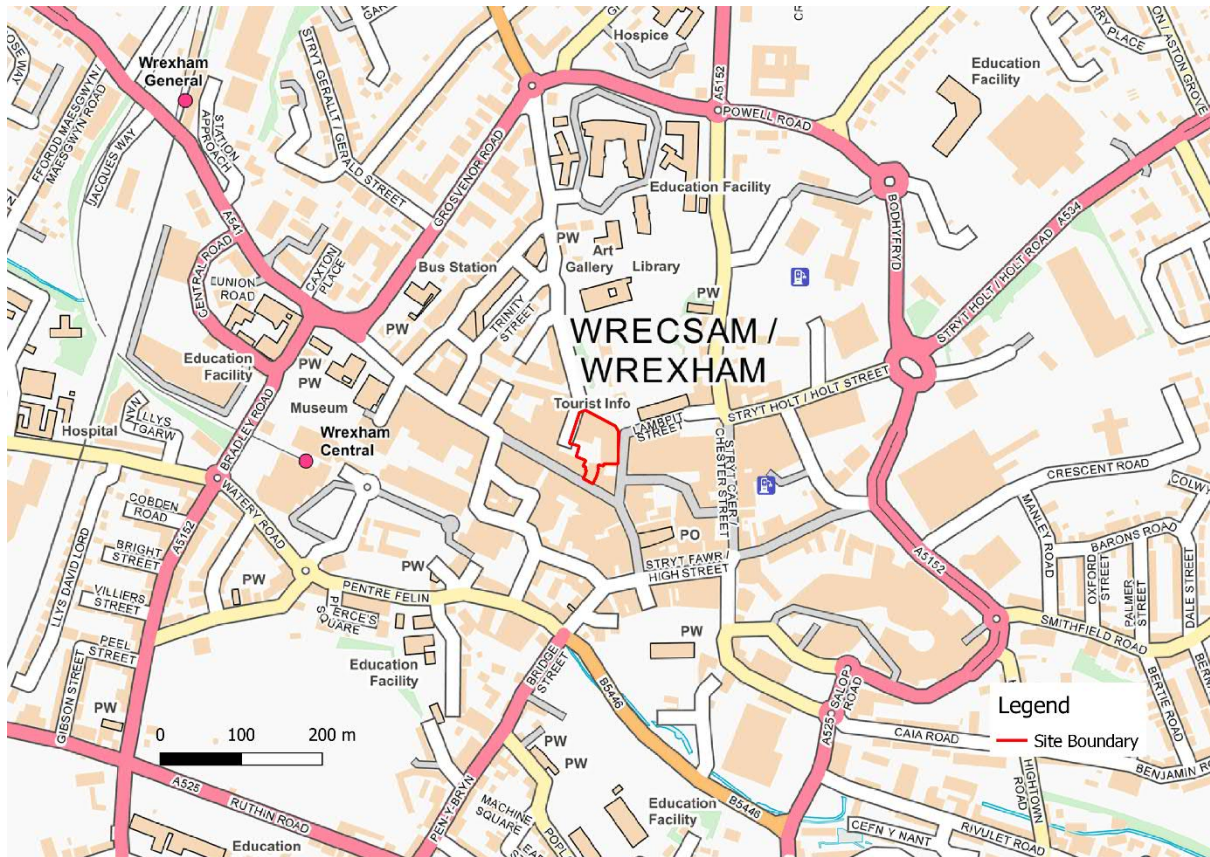


Figure 1: Site location. National Grid reference: SJ334503. Nearest Postcode: LL11 1AT.

2. DRAINAGE STATEMENT

2.1 Existing Drainage

- 2.1.1 The topographical survey shows that there is a soakaway in the central point of the car park. The car park and roof surface water runoff of the area of ca. 2680 m² is currently discharging into the existing soakaway.
- 2.1.2 Roof surface water is divided into two areas along the ridge line: outer section (approx. 640 m²) discharging into the combined sewer outside the building and internal area mentioned in 2.1.1 into the soakaway in the centre, as shown in Figure 2 and Figure 3.

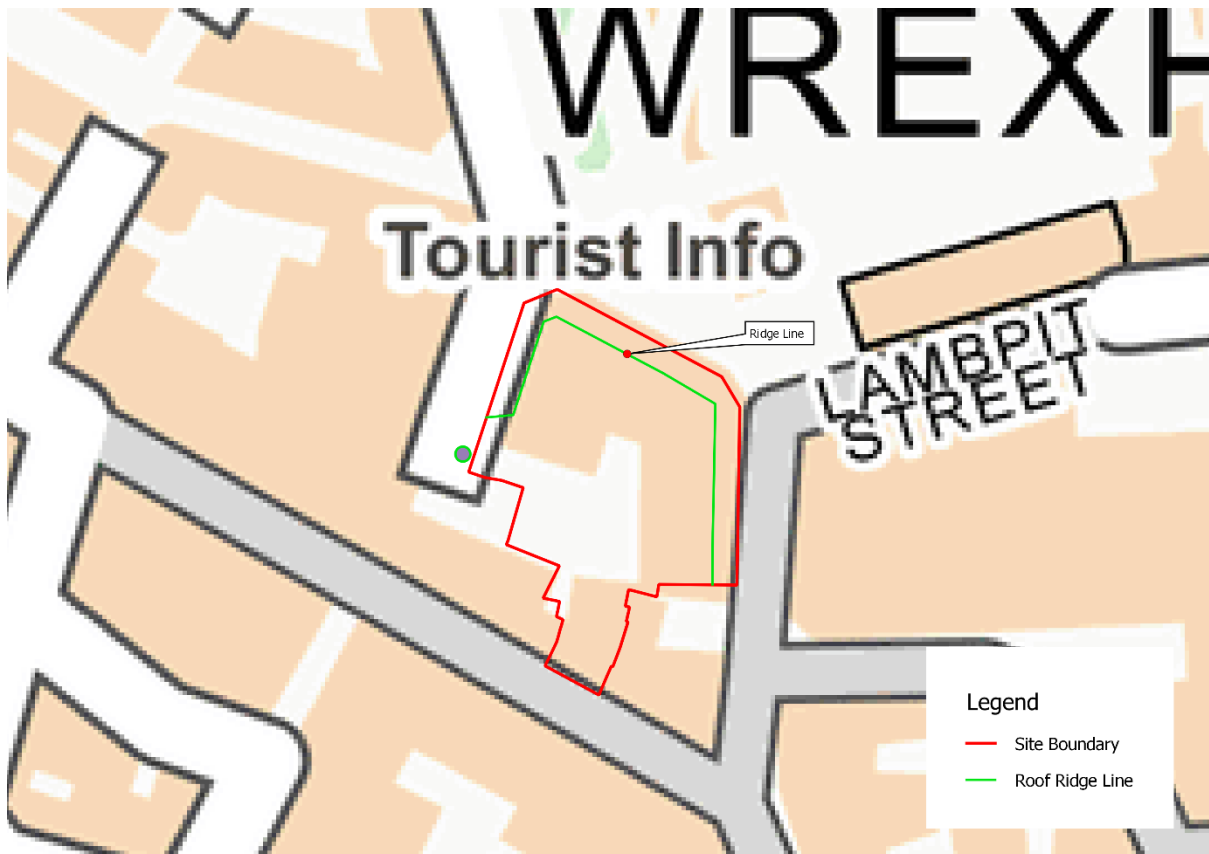


Figure 2: Ridge Line dividing roof catchment areas

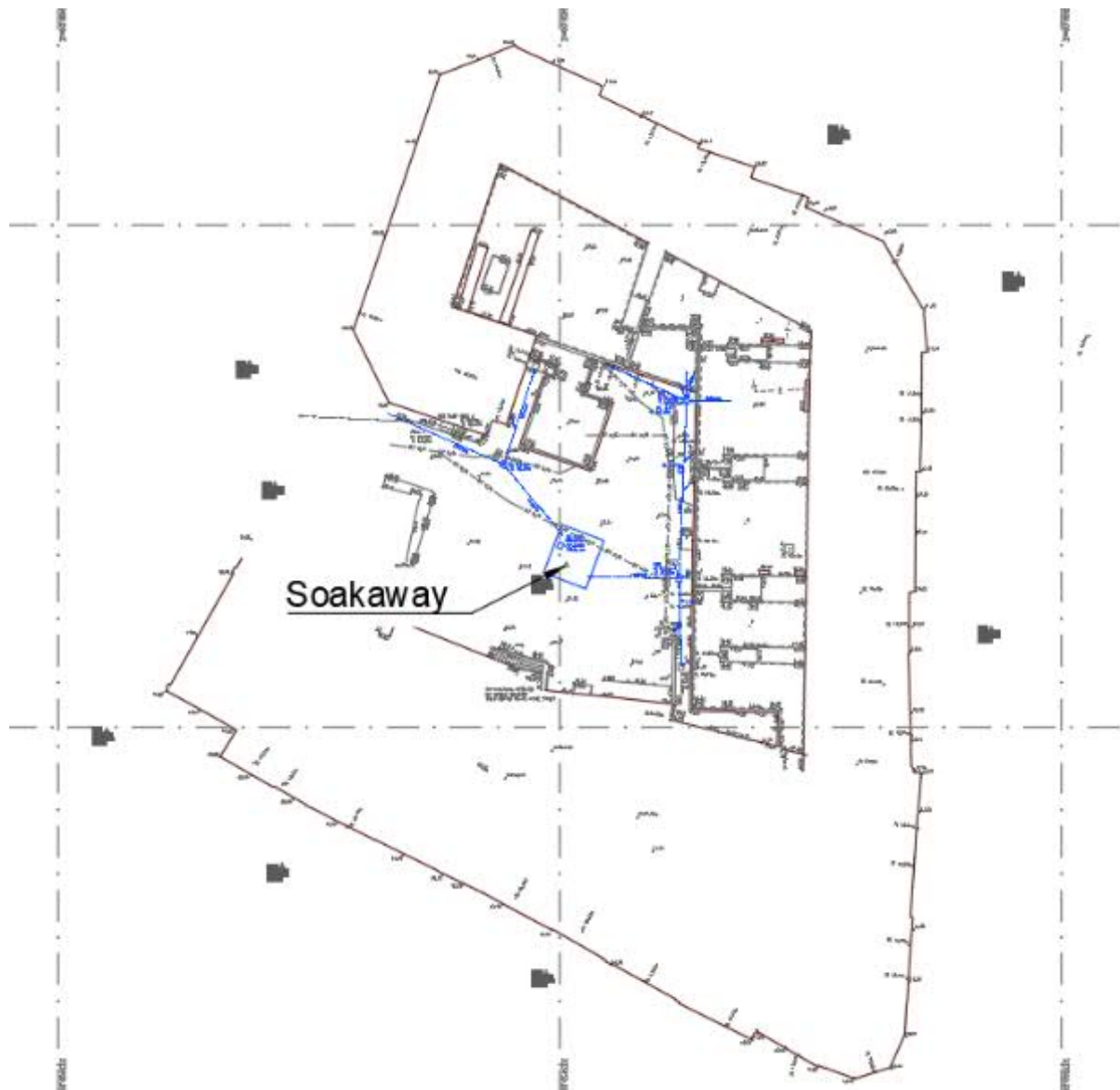


Figure 3: Location of the existing soakaway

2.1.3 Existing foul water network discharges into the combined sewer located to the west, as shown in Figure 4.



Figure 4: Location of the existing foul water point of discharge.

2.2 Surface Water Management Approach

- 2.2.1 SAB application will not be required.
- 2.2.2 Since no changes will be made to the roof, the existing runoff destination of the outer side of the roof discharging into the combined sewers can be maintained.
- 2.2.3 The internal roof area and car park should be managed by infiltration as it is at present.
- 2.2.4 Use of the existing soakaway will not be suitable due to the proximity of proposed structures (less than 5 m off the soakaway). Therefore, new shallow infiltration system will be proposed, comprising permeable block paving system with attenuation within the sub-base.
- 2.2.5 Permeable paving will occupy the area of 477 m². Its extents are presented in Figure 5.

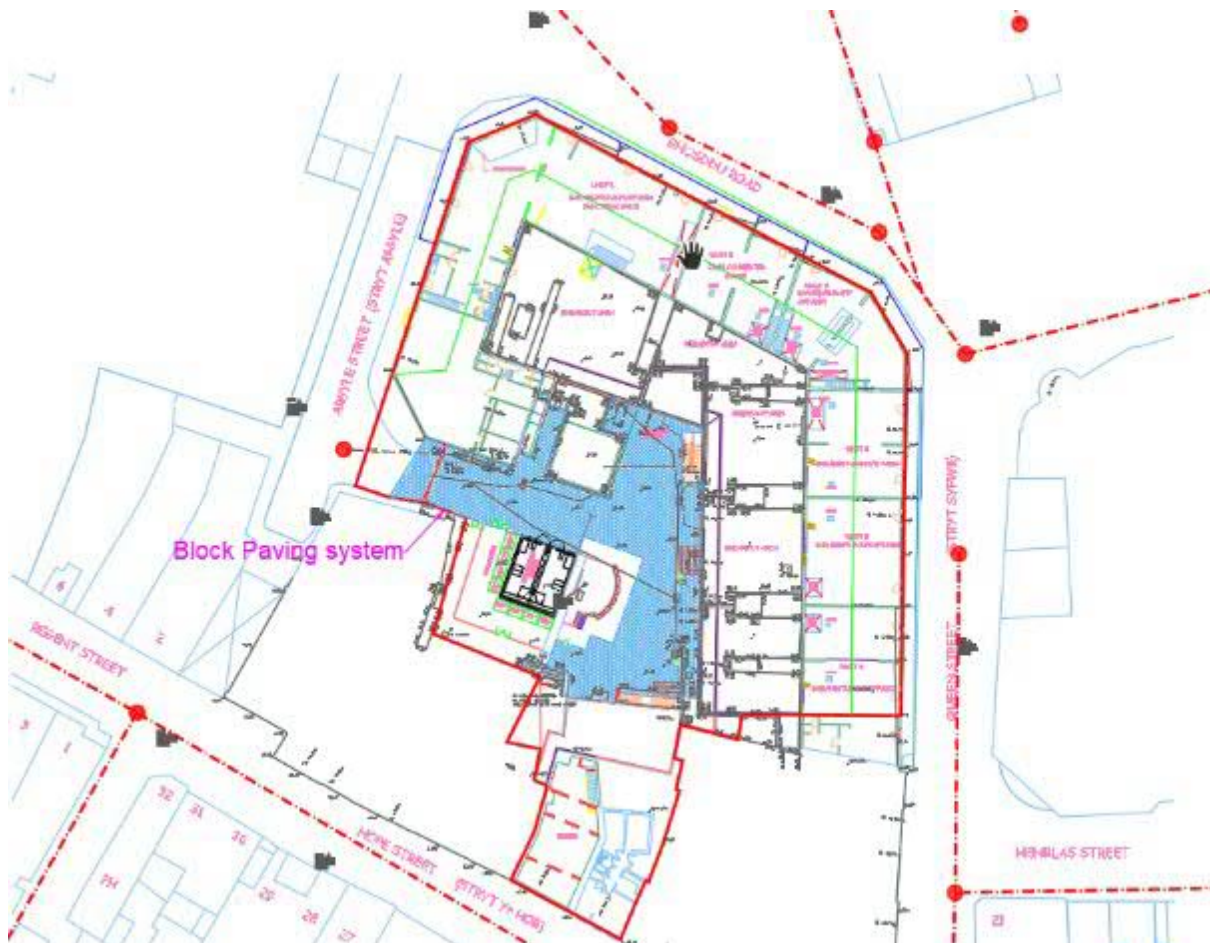


Figure 5: Block paving extents

2.2.6 The permeable paving system has been designed to accommodate flows from the impermeable area of 2680 m² up to a 1 in 100-year rainfall event with a 30% allowance for climate change. The depth of the system has been estimated as 1.3 m. Since no Site Investigation has been carried out on site providing information on soil's permeability rates, the Infiltration Coefficient has been taken conservatively as 0.036 m/hr. At the detailed design stage, all relevant information should be collected.

2.2.7 Extract from the hydraulic calculations is included in APPENDIX D.

2.3 Foul Drainage Strategy

2.3.1 The proposed system is gravity-based.

2.3.2 The foul water network will remain connected to the combined sewer to the west, as shown in Figure 4.

2.3.3 The proposed foul water network is presented in Figure 6.

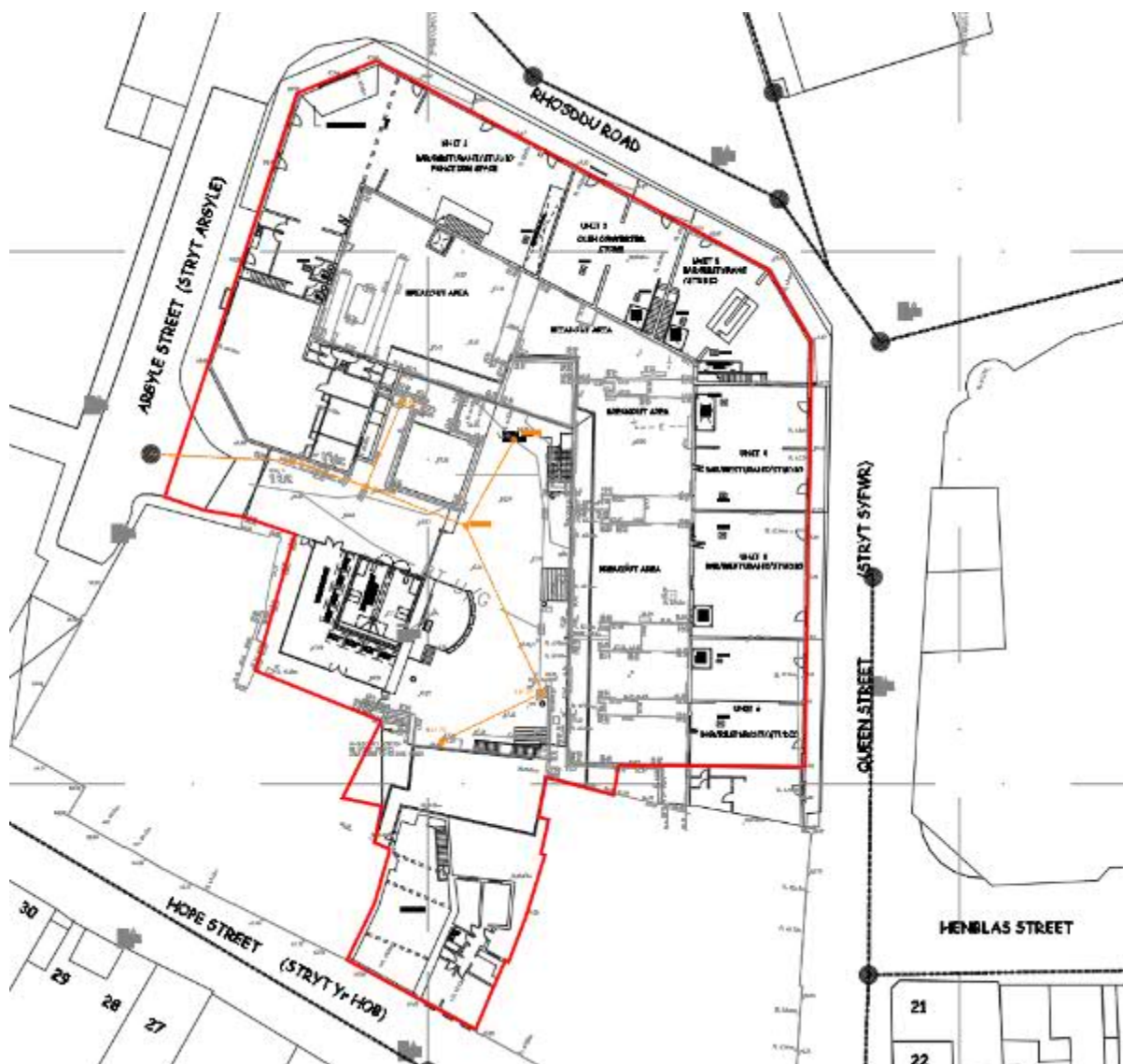


Figure 6: Proposed Foul Water Network

2.3.4 The invert level of the sewer will need to be confirmed at detailed design stage.

3. FLOOD CONSEQUENCE ASSESSMENT

3.1.1 As shown in Figure 7, there is minor surface water flooding risk in the centre of the site. Approximately an area of 130 m² is located within Medium Surface Water Flood Risk (1 in 100-year event), and 300 m² within Low Surface Water Flood Risk (1 in 1000-year event).

3.1.2 The surface water risk will be alleviated by efficient surface water drainage system.



Figure 7: Surface water flood risk (NRW)

3.1.3 NRW Development Advice Map in Figure 8 indicates that the proposed site is located entirely within Flood Risk Zone A, which is appropriate for development.

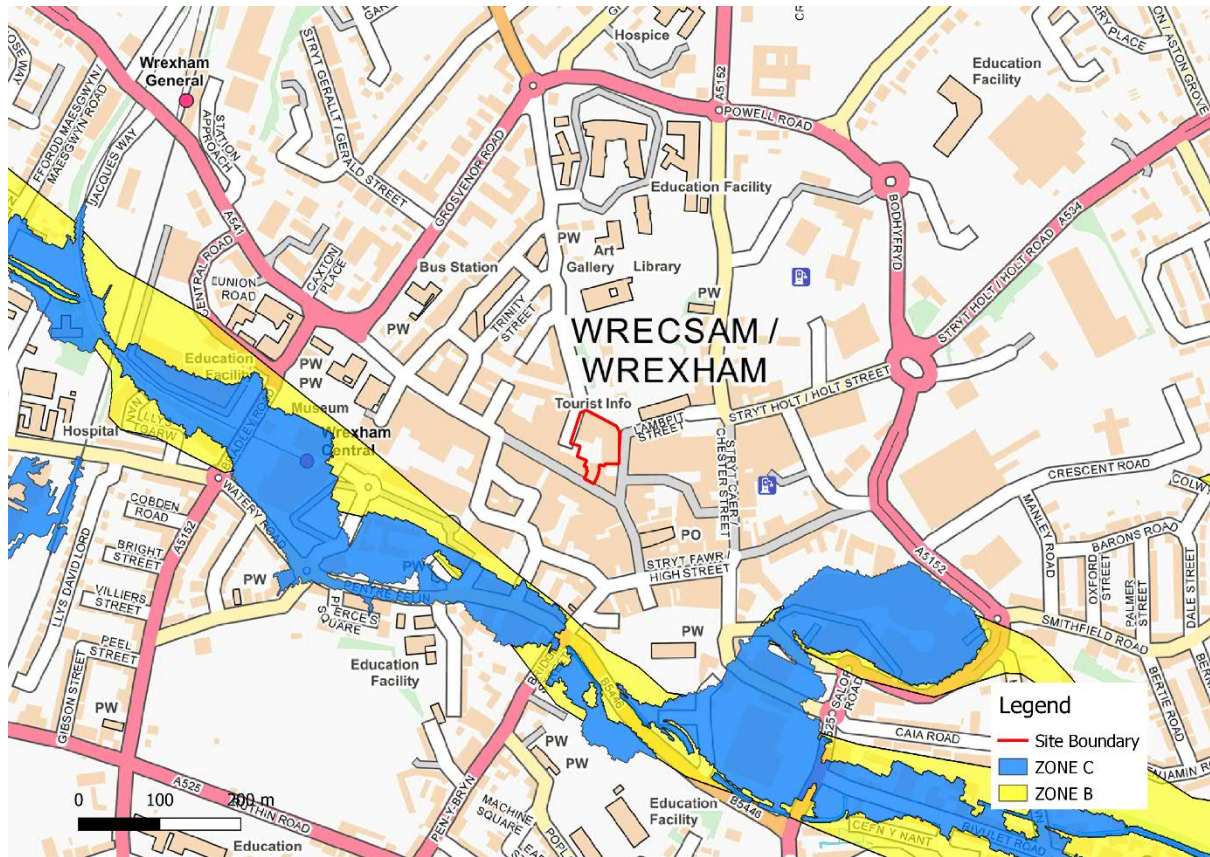
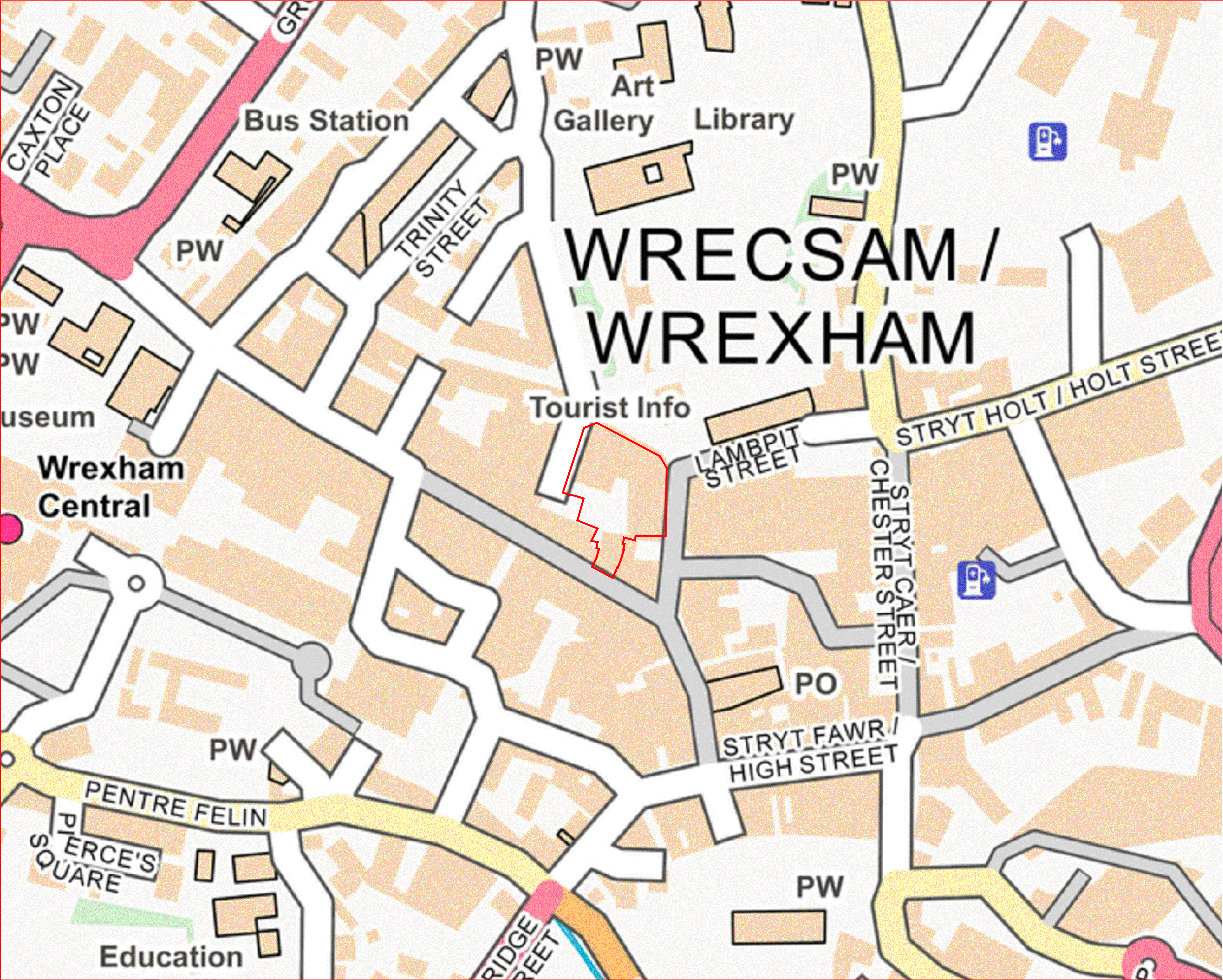


Figure 8. NRW Development Advice Map. TAN 15

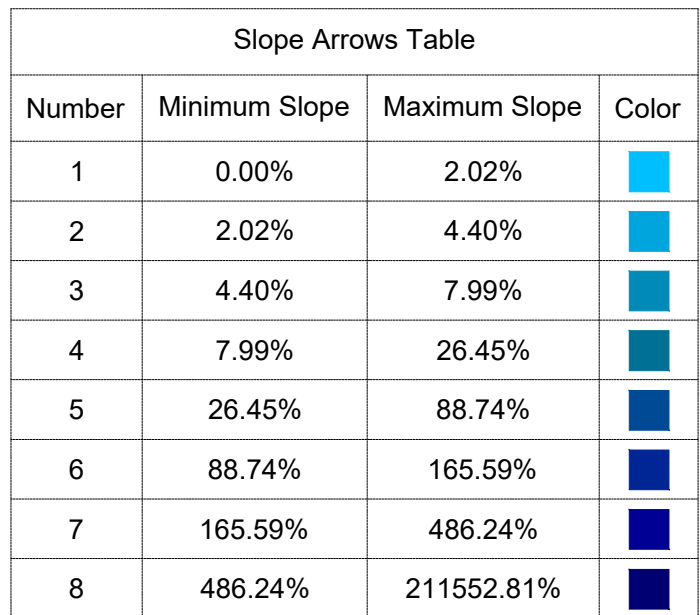
4. CONCLUSIONS

- 4.1.1 The surface water runoff will be managed to the permeable paving system and infiltrate into the soil strata. As the soil has not been subjected to soakaway/percolation tests, conservative infiltration rate has been used in permeable paving system sizing calculations.
- 4.1.2 The foul water system will discharge into the combined sewer to the west of the site (existing connection).
- 4.1.3 The development site is in the Flood Zone A, which is acceptable for development. There is no risk of fluvial flooding on site.
- 4.1.4 Medium and low surface water flood risk will be alleviated by the surface water drainage system.

***APPENDIX A – Site Location, Topographical Survey,
Flow Routes***



A	06/03/20	Client details amended		PO	SJD
-	06/03/20	First Issue		PO	SJD
REV	DATE	DETAILS	AMENDMENTS	BY	CHK
CLIENT:					
TBE (Southern Ltd)					
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PROJECT:					
TBE (Southern Ltd) Chapter Court 7-9 Rhosddu Road Wrexham					
DRAWING TITLE:					
Site Location					
DRAWN:	CHK:	STATUS:	SCALE:		
PO	SJD	Information	1:1000@A1		
DATE:	JOB NO:	DRG. NO:	REV:		
Jan'20	1996	102	A		



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PROJECT:
CNC Property Fund Management
St James Regeneration
7-9 Rhosddu Road Wrexham

DRAWING TITLE:

Existing Site Topography

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APPENDIX B – DCWW and NRW Records

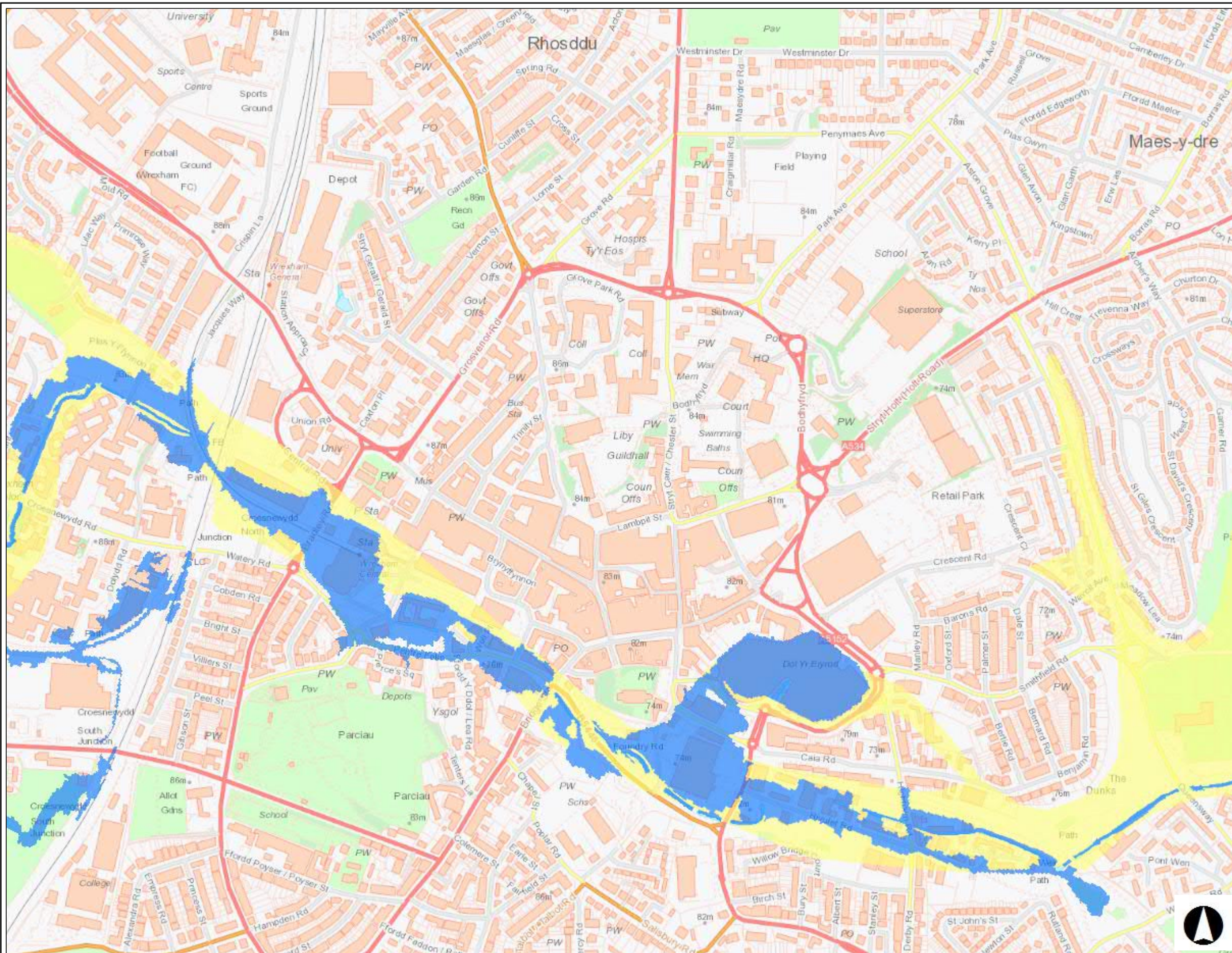
Map Perygl Llifogydd / Flood Risk Map

Allwedd / Map Key

- Zone C1
- Zone C2
- Zone B
- Zone A

Graddfa / Scale 1: 6,349

Dyddiad / Date
06/01/2020



0.3 0 0.16 0.3
British_National_Grid Kilometers

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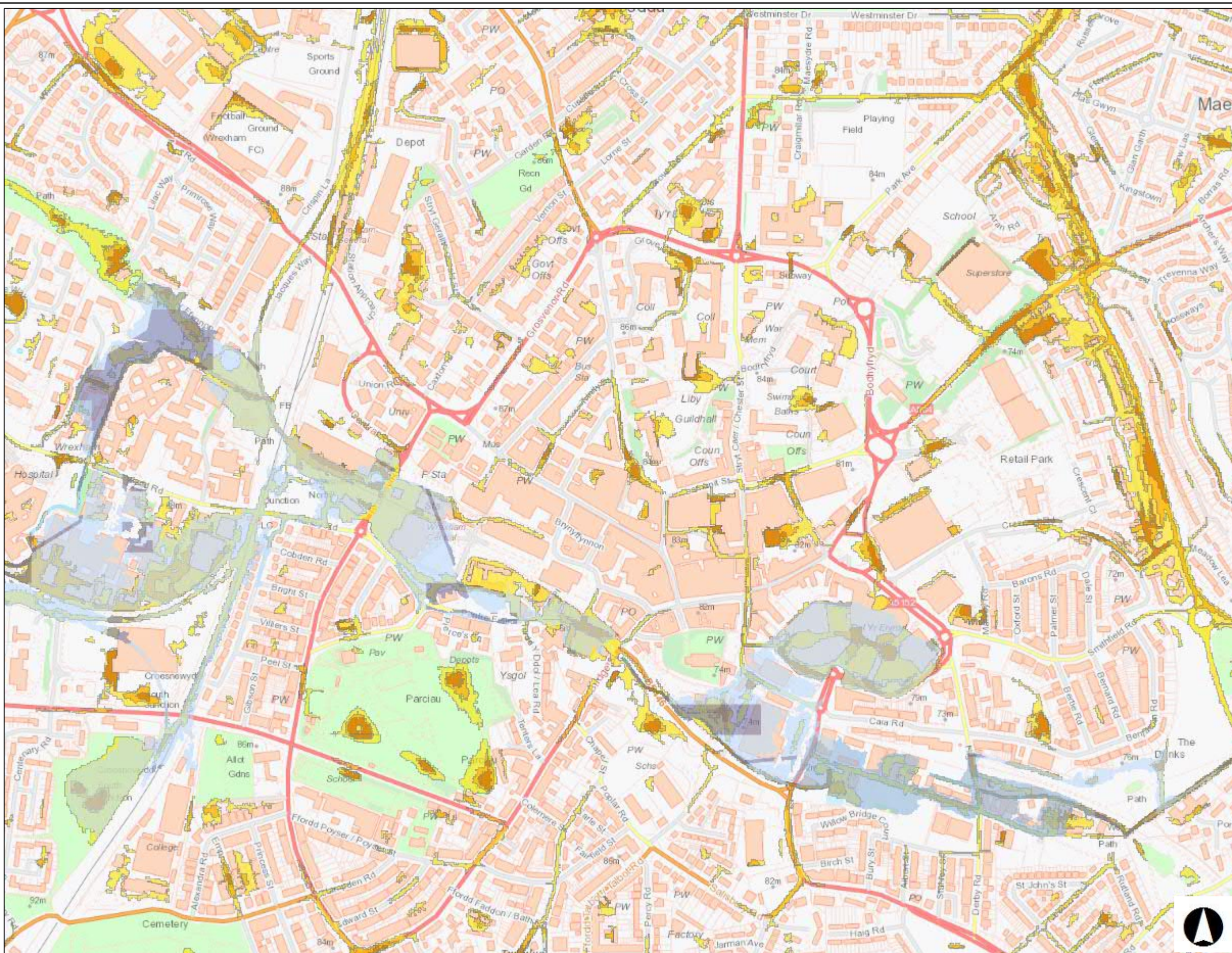
Map Perygl Llifogydd / Flood Risk Map

Allwedd / Map Key

- Flood Defences
- Risk of Flooding from Rivers & Sea
 - High
 - Medium
 - Low
 - Very Low
- Risk of Flooding from Reservoirs - Extent
- High Surface Water Flood Risk - Extent
- Medium Surface Water Flood Risk - Extent
- Low Surface Water Flood Risk - Extent

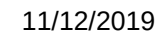
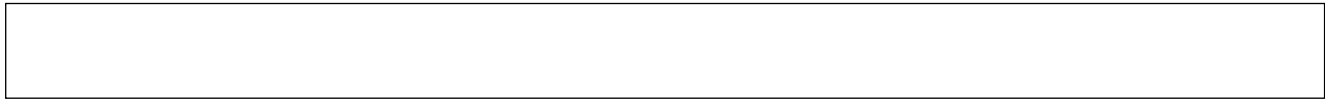
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Dyddiad / Date
06/01/2020



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British_National_Grid Kilometers

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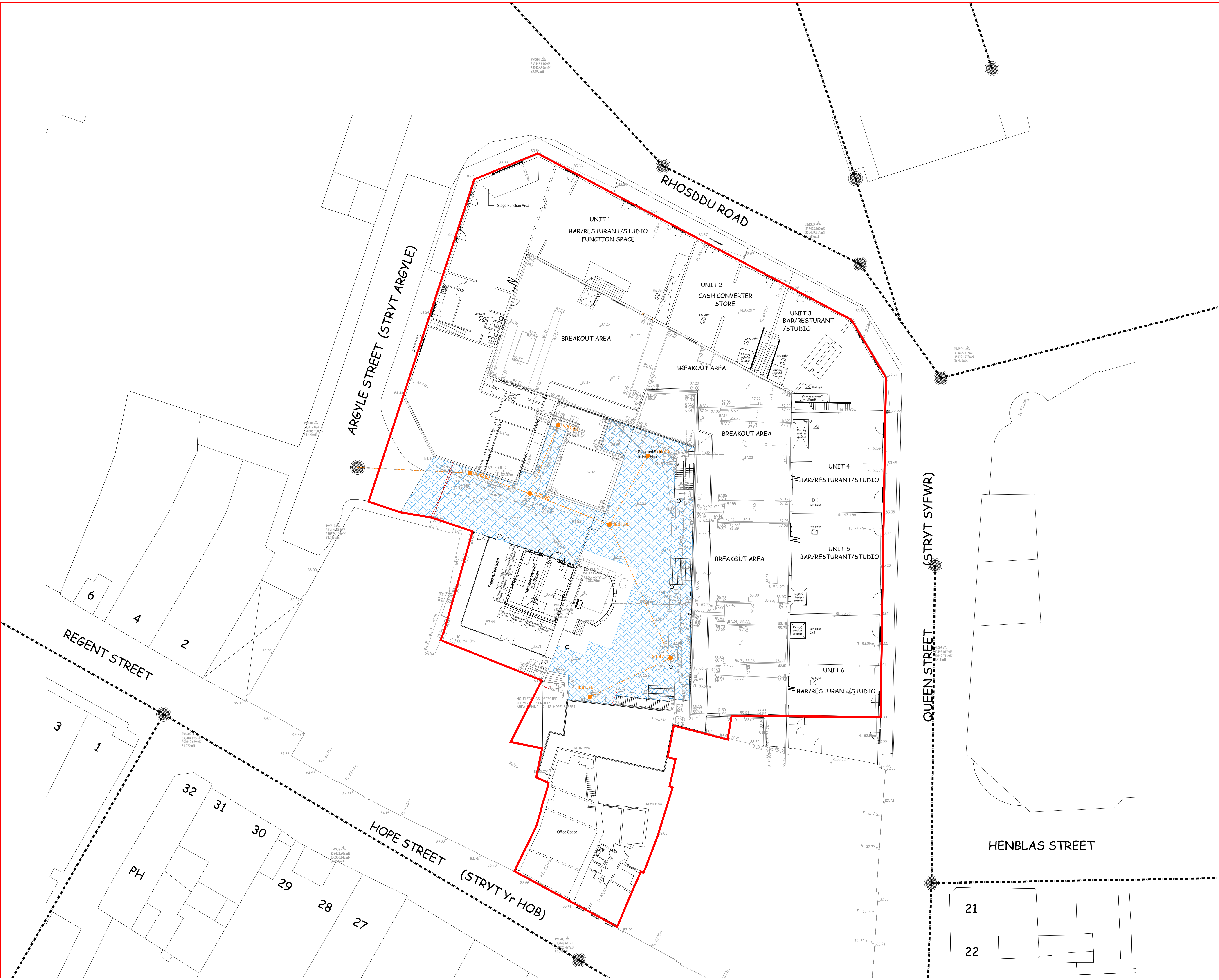
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**EXACT LOCATION OF
ALL APPARATUS TO
BE DETERMINED ON
SITE**

Whilst every reasonable effort has been taken to correctly record the pipe material of DCWW assets, there is a possibility that in some cases pipe material (other than Asbestos Cement or Pitch Fibre) may be found to be Asbestos Cement (AC) or Pitch Fibre (PF). It is therefore advisable that the possible presence of AC or PF pipes be anticipated and considered as part of any risk assessment prior to excavation

APPENDIX C- Drainage Strategy Layout



Legend

- Private foul inspection chamber <3.0m deep with restricted access depths over 1.2m (700mm deep unless noted)
- Existing Welsh Water Combined Sewer (all locations shown are indicative taken from the sewer records provided)
- Permeable Paving - Block Paving - Tarmac Hydropave 240 or similar

A	06/01/20	Client details amended	PO	SID
-	06/01/20	First Issue	PO	SID
REV:	DATE	DETAILS	BY:	CHK

CLIENT:

TBE (Southern Ltd)

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PROJECT:

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DRAWING TITLE:

Engineering Layout

DRAWN:	CHK:	STATUS:	SCALE:
PO	SJD	Information	1:200 @ A1
DATE:	JOB NO:	DWG. NO:	REV:
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APPENDIX D – Hydraulic Calculations

PHG Consulting			Page 1																																																																																																																																																																																																																																																																																																								
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<u>Flood Routing through Storage Facility</u> <u>Event: 480 min Winter</u> <table><thead><tr><th>Time (mins)</th><th>Level (m)</th><th>Depth (m)</th><th>Σ Inflow (l/s)</th><th>Filtration (l/s)</th><th>Volume (m³)</th></tr></thead><tbody><tr><td>2</td><td>81.700</td><td>0.000</td><td>0.0</td><td>0.0</td><td>0.0</td></tr><tr><td>4</td><td>81.700</td><td>0.000</td><td>0.0</td><td>0.0</td><td>0.0</td></tr><tr><td>6</td><td>81.700</td><td>0.000</td><td>0.0</td><td>0.0</td><td>0.0</td></tr><tr><td>8</td><td>81.700</td><td>0.000</td><td>0.0</td><td>0.0</td><td>0.0</td></tr><tr><td>10</td><td>81.700</td><td>0.000</td><td>0.0</td><td>0.0</td><td>0.0</td></tr><tr><td>12</td><td>81.700</td><td>0.000</td><td>0.0</td><td>0.0</td><td>0.0</td></tr><tr><td>14</td><td>81.700</td><td>0.000</td><td>0.0</td><td>0.0</td><td>0.0</td></tr><tr><td>16</td><td>81.700</td><td>0.000</td><td>0.0</td><td>0.0</td><td>0.0</td></tr><tr><td>18</td><td>81.700</td><td>0.000</td><td>0.0</td><td>0.0</td><td>0.0</td></tr><tr><td>20</td><td>81.700</td><td>0.000</td><td>0.0</td><td>0.0</td><td>0.0</td></tr><tr><td>22</td><td>81.700</td><td>0.000</td><td>0.0</td><td>0.0</td><td>0.0</td></tr><tr><td>24</td><td>81.700</td><td>0.000</td><td>0.0</td><td>0.0</td><td>0.0</td></tr><tr><td>26</td><td>81.700</td><td>0.000</td><td>0.0</td><td>0.0</td><td>0.0</td></tr><tr><td>28</td><td>81.700</td><td>0.000</td><td>0.0</td><td>0.0</td><td>0.0</td></tr><tr><td>30</td><td>81.713</td><td>0.013</td><td>0.7</td><td>0.0</td><td>0.0</td></tr><tr><td>32</td><td>81.729</td><td>0.029</td><td>2.6</td><td>0.2</td><td>0.2</td></tr><tr><td>34</td><td>81.744</td><td>0.044</td><td>2.6</td><td>0.3</td><td>0.5</td></tr><tr><td>36</td><td>81.754</td><td>0.054</td><td>2.7</td><td>0.5</td><td>0.8</td></tr><tr><td>38</td><td>81.762</td><td>0.062</td><td>2.8</td><td>0.6</td><td>1.0</td></tr><tr><td>40</td><td>81.770</td><td>0.070</td><td>2.8</td><td>0.6</td><td>1.3</td></tr><tr><td>42</td><td>81.776</td><td>0.076</td><td>2.9</td><td>0.7</td><td>1.6</td></tr><tr><td>44</td><td>81.783</td><td>0.083</td><td>2.9</td><td>0.7</td><td>1.8</td></tr><tr><td>46</td><td>81.788</td><td>0.088</td><td>3.0</td><td>0.8</td><td>2.1</td></tr><tr><td>48</td><td>81.793</td><td>0.093</td><td>3.0</td><td>0.8</td><td>2.4</td></tr><tr><td>50</td><td>81.798</td><td>0.098</td><td>3.0</td><td>0.9</td><td>2.6</td></tr><tr><td>52</td><td>81.803</td><td>0.103</td><td>3.0</td><td>0.9</td><td>2.9</td></tr><tr><td>54</td><td>81.807</td><td>0.107</td><td>3.0</td><td>1.0</td><td>3.1</td></tr><tr><td>56</td><td>81.812</td><td>0.112</td><td>3.0</td><td>1.0</td><td>3.4</td></tr><tr><td>58</td><td>81.816</td><td>0.116</td><td>3.1</td><td>1.0</td><td>3.6</td></tr><tr><td>60</td><td>81.819</td><td>0.119</td><td>3.1</td><td>1.1</td><td>3.8</td></tr><tr><td>62</td><td>81.823</td><td>0.123</td><td>3.1</td><td>1.1</td><td>4.1</td></tr><tr><td>64</td><td>81.826</td><td>0.126</td><td>3.1</td><td>1.1</td><td>4.3</td></tr><tr><td>66</td><td>81.830</td><td>0.130</td><td>3.1</td><td>1.2</td><td>4.5</td></tr><tr><td>68</td><td>81.833</td><td>0.133</td><td>3.1</td><td>1.2</td><td>4.8</td></tr><tr><td>70</td><td>81.836</td><td>0.136</td><td>3.1</td><td>1.2</td><td>5.0</td></tr><tr><td>72</td><td>81.839</td><td>0.139</td><td>3.0</td><td>1.2</td><td>5.2</td></tr><tr><td>74</td><td>81.842</td><td>0.142</td><td>3.0</td><td>1.3</td><td>5.4</td></tr><tr><td>76</td><td>81.844</td><td>0.144</td><td>3.0</td><td>1.3</td><td>5.6</td></tr><tr><td>78</td><td>81.847</td><td>0.147</td><td>3.1</td><td>1.3</td><td>5.8</td></tr><tr><td>80</td><td>81.850</td><td>0.150</td><td>3.1</td><td>1.3</td><td>6.0</td></tr><tr><td>82</td><td>81.852</td><td>0.152</td><td>3.1</td><td>1.4</td><td>6.3</td></tr><tr><td>84</td><td>81.855</td><td>0.155</td><td>3.1</td><td>1.4</td><td>6.5</td></tr><tr><td>86</td><td>81.857</td><td>0.157</td><td>3.1</td><td>1.4</td><td>6.7</td></tr><tr><td>88</td><td>81.859</td><td>0.159</td><td>3.1</td><td>1.4</td><td>6.9</td></tr><tr><td>90</td><td>81.862</td><td>0.162</td><td>3.1</td><td>1.5</td><td>7.1</td></tr><tr><td>92</td><td>81.864</td><td>0.164</td><td>3.1</td><td>1.5</td><td>7.3</td></tr><tr><td>94</td><td>81.866</td><td>0.166</td><td>3.2</td><td>1.5</td><td>7.5</td></tr><tr><td>96</td><td>81.868</td><td>0.168</td><td>3.2</td><td>1.5</td><td>7.7</td></tr></tbody></table>						Time (mins)	Level (m)	Depth (m)	Σ Inflow (l/s)	Filtration (l/s)	Volume (m³)	2	81.700	0.000	0.0	0.0	0.0	4	81.700	0.000	0.0	0.0	0.0	6	81.700	0.000	0.0	0.0	0.0	8	81.700	0.000	0.0	0.0	0.0	10	81.700	0.000	0.0	0.0	0.0	12	81.700	0.000	0.0	0.0	0.0	14	81.700	0.000	0.0	0.0	0.0	16	81.700	0.000	0.0	0.0	0.0	18	81.700	0.000	0.0	0.0	0.0	20	81.700	0.000	0.0	0.0	0.0	22	81.700	0.000	0.0	0.0	0.0	24	81.700	0.000	0.0	0.0	0.0	26	81.700	0.000	0.0	0.0	0.0	28	81.700	0.000	0.0	0.0	0.0	30	81.713	0.013	0.7	0.0	0.0	32	81.729	0.029	2.6	0.2	0.2	34	81.744	0.044	2.6	0.3	0.5	36	81.754	0.054	2.7	0.5	0.8	38	81.762	0.062	2.8	0.6	1.0	40	81.770	0.070	2.8	0.6	1.3	42	81.776	0.076	2.9	0.7	1.6	44	81.783	0.083	2.9	0.7	1.8	46	81.788	0.088	3.0	0.8	2.1	48	81.793	0.093	3.0	0.8	2.4	50	81.798	0.098	3.0	0.9	2.6	52	81.803	0.103	3.0	0.9	2.9	54	81.807	0.107	3.0	1.0	3.1	56	81.812	0.112	3.0	1.0	3.4	58	81.816	0.116	3.1	1.0	3.6	60	81.819	0.119	3.1	1.1	3.8	62	81.823	0.123	3.1	1.1	4.1	64	81.826	0.126	3.1	1.1	4.3	66	81.830	0.130	3.1	1.2	4.5	68	81.833	0.133	3.1	1.2	4.8	70	81.836	0.136	3.1	1.2	5.0	72	81.839	0.139	3.0	1.2	5.2	74	81.842	0.142	3.0	1.3	5.4	76	81.844	0.144	3.0	1.3	5.6	78	81.847	0.147	3.1	1.3	5.8	80	81.850	0.150	3.1	1.3	6.0	82	81.852	0.152	3.1	1.4	6.3	84	81.855	0.155	3.1	1.4	6.5	86	81.857	0.157	3.1	1.4	6.7	88	81.859	0.159	3.1	1.4	6.9	90	81.862	0.162	3.1	1.5	7.1	92	81.864	0.164	3.1	1.5	7.3	94	81.866	0.166	3.2	1.5	7.5	96	81.868	0.168	3.2	1.5	7.7
Time (mins)	Level (m)	Depth (m)	Σ Inflow (l/s)	Filtration (l/s)	Volume (m³)																																																																																																																																																																																																																																																																																																						
2	81.700	0.000	0.0	0.0	0.0																																																																																																																																																																																																																																																																																																						
4	81.700	0.000	0.0	0.0	0.0																																																																																																																																																																																																																																																																																																						
6	81.700	0.000	0.0	0.0	0.0																																																																																																																																																																																																																																																																																																						
8	81.700	0.000	0.0	0.0	0.0																																																																																																																																																																																																																																																																																																						
10	81.700	0.000	0.0	0.0	0.0																																																																																																																																																																																																																																																																																																						
12	81.700	0.000	0.0	0.0	0.0																																																																																																																																																																																																																																																																																																						
14	81.700	0.000	0.0	0.0	0.0																																																																																																																																																																																																																																																																																																						
16	81.700	0.000	0.0	0.0	0.0																																																																																																																																																																																																																																																																																																						
18	81.700	0.000	0.0	0.0	0.0																																																																																																																																																																																																																																																																																																						
20	81.700	0.000	0.0	0.0	0.0																																																																																																																																																																																																																																																																																																						
22	81.700	0.000	0.0	0.0	0.0																																																																																																																																																																																																																																																																																																						
24	81.700	0.000	0.0	0.0	0.0																																																																																																																																																																																																																																																																																																						
26	81.700	0.000	0.0	0.0	0.0																																																																																																																																																																																																																																																																																																						
28	81.700	0.000	0.0	0.0	0.0																																																																																																																																																																																																																																																																																																						
30	81.713	0.013	0.7	0.0	0.0																																																																																																																																																																																																																																																																																																						
32	81.729	0.029	2.6	0.2	0.2																																																																																																																																																																																																																																																																																																						
34	81.744	0.044	2.6	0.3	0.5																																																																																																																																																																																																																																																																																																						
36	81.754	0.054	2.7	0.5	0.8																																																																																																																																																																																																																																																																																																						
38	81.762	0.062	2.8	0.6	1.0																																																																																																																																																																																																																																																																																																						
40	81.770	0.070	2.8	0.6	1.3																																																																																																																																																																																																																																																																																																						
42	81.776	0.076	2.9	0.7	1.6																																																																																																																																																																																																																																																																																																						
44	81.783	0.083	2.9	0.7	1.8																																																																																																																																																																																																																																																																																																						
46	81.788	0.088	3.0	0.8	2.1																																																																																																																																																																																																																																																																																																						
48	81.793	0.093	3.0	0.8	2.4																																																																																																																																																																																																																																																																																																						
50	81.798	0.098	3.0	0.9	2.6																																																																																																																																																																																																																																																																																																						
52	81.803	0.103	3.0	0.9	2.9																																																																																																																																																																																																																																																																																																						
54	81.807	0.107	3.0	1.0	3.1																																																																																																																																																																																																																																																																																																						
56	81.812	0.112	3.0	1.0	3.4																																																																																																																																																																																																																																																																																																						
58	81.816	0.116	3.1	1.0	3.6																																																																																																																																																																																																																																																																																																						
60	81.819	0.119	3.1	1.1	3.8																																																																																																																																																																																																																																																																																																						
62	81.823	0.123	3.1	1.1	4.1																																																																																																																																																																																																																																																																																																						
64	81.826	0.126	3.1	1.1	4.3																																																																																																																																																																																																																																																																																																						
66	81.830	0.130	3.1	1.2	4.5																																																																																																																																																																																																																																																																																																						
68	81.833	0.133	3.1	1.2	4.8																																																																																																																																																																																																																																																																																																						
70	81.836	0.136	3.1	1.2	5.0																																																																																																																																																																																																																																																																																																						
72	81.839	0.139	3.0	1.2	5.2																																																																																																																																																																																																																																																																																																						
74	81.842	0.142	3.0	1.3	5.4																																																																																																																																																																																																																																																																																																						
76	81.844	0.144	3.0	1.3	5.6																																																																																																																																																																																																																																																																																																						
78	81.847	0.147	3.1	1.3	5.8																																																																																																																																																																																																																																																																																																						
80	81.850	0.150	3.1	1.3	6.0																																																																																																																																																																																																																																																																																																						
82	81.852	0.152	3.1	1.4	6.3																																																																																																																																																																																																																																																																																																						
84	81.855	0.155	3.1	1.4	6.5																																																																																																																																																																																																																																																																																																						
86	81.857	0.157	3.1	1.4	6.7																																																																																																																																																																																																																																																																																																						
88	81.859	0.159	3.1	1.4	6.9																																																																																																																																																																																																																																																																																																						
90	81.862	0.162	3.1	1.5	7.1																																																																																																																																																																																																																																																																																																						
92	81.864	0.164	3.1	1.5	7.3																																																																																																																																																																																																																																																																																																						
94	81.866	0.166	3.2	1.5	7.5																																																																																																																																																																																																																																																																																																						
96	81.868	0.168	3.2	1.5	7.7																																																																																																																																																																																																																																																																																																						
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62 Albany Road Cardiff CF24 3RR		St James Regeneration, Wrexham			
Date 03/01/2020 10:08 File 1996-MD.SRCX		Designed by PBO Checked by TOR			
Innovyze		Source Control 2019.1			
<u>Flood Routing through Storage Facility</u> <u>Event: 480 min Winter</u>					
Time (mins)	Level (m)	Depth (m)	Σ Inflow (l/s)	Filtration (l/s)	Volume (m³)
98	81.871	0.171	3.3	1.5	7.9
100	81.873	0.173	3.3	1.6	8.1
102	81.875	0.175	3.3	1.6	8.3
104	81.877	0.177	3.4	1.6	8.5
106	81.880	0.180	3.5	1.6	8.7
108	81.882	0.182	3.5	1.6	8.9
110	81.884	0.184	3.6	1.7	9.2
112	81.887	0.187	3.7	1.7	9.4
114	81.889	0.189	3.8	1.7	9.7
116	81.892	0.192	3.9	1.7	9.9
118	81.894	0.194	4.0	1.7	10.2
120	81.897	0.197	4.1	1.8	10.4
122	81.899	0.199	4.2	1.8	10.7
124	81.902	0.202	4.3	1.8	11.0
126	81.905	0.205	4.4	1.8	11.3
128	81.908	0.208	4.6	1.9	11.6
130	81.910	0.210	4.7	1.9	12.0
132	81.914	0.214	4.9	1.9	12.3
134	81.917	0.217	5.0	2.0	12.7
136	81.920	0.220	5.2	2.0	13.0
138	81.923	0.223	5.4	2.0	13.4
140	81.926	0.226	5.5	2.0	13.8
142	81.930	0.230	5.7	2.1	14.3
144	81.934	0.234	5.9	2.1	14.7
146	81.937	0.237	6.1	2.1	15.2
148	81.941	0.241	6.3	2.2	15.7
150	81.945	0.245	6.5	2.2	16.2
152	81.949	0.249	6.8	2.2	16.7
154	81.953	0.253	6.9	2.3	17.3
156	81.957	0.257	7.2	2.3	17.8
158	81.962	0.262	7.4	2.3	18.5
160	81.966	0.266	7.7	2.3	19.1
162	81.971	0.271	7.9	2.3	19.8
164	81.976	0.276	8.1	2.3	20.4
166	81.982	0.282	8.5	2.3	21.2
168	81.987	0.287	8.6	2.3	21.9
170	81.993	0.293	9.0	2.3	22.7
172	81.999	0.299	9.2	2.3	23.5
174	82.006	0.306	9.5	2.3	24.4
176	82.012	0.312	9.8	2.3	25.3
178	82.019	0.319	10.0	2.3	26.2
180	82.026	0.326	10.3	2.3	27.1
182	82.033	0.333	10.6	2.3	28.1
184	82.041	0.341	10.9	2.3	29.1
186	82.049	0.349	11.2	2.3	30.2
188	82.057	0.357	11.4	2.3	31.3
190	82.065	0.365	11.8	2.3	32.4
192	82.074	0.374	12.0	2.3	33.6
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Innovyze		Source Control 2019.1			
<u>Flood Routing through Storage Facility</u> <u>Event: 480 min Winter</u>					
Time (mins)	Level (m)	Depth (m)	Σ Inflow (l/s)	Filtration (l/s)	Volume (m³)
194	82.082	0.382	12.3	2.3	34.8
196	82.091	0.391	12.6	2.3	36.0
198	82.101	0.401	12.9	2.3	37.2
200	82.110	0.410	13.2	2.3	38.5
202	82.120	0.420	13.4	2.3	39.9
204	82.130	0.430	13.7	2.3	41.2
206	82.141	0.441	14.0	2.3	42.6
208	82.151	0.451	14.2	2.3	44.0
210	82.162	0.462	14.5	2.3	45.5
212	82.173	0.473	14.7	2.3	47.0
214	82.184	0.484	15.0	2.3	48.5
216	82.196	0.496	15.2	2.3	50.0
218	82.207	0.507	15.5	2.3	51.6
220	82.219	0.519	15.7	2.3	53.2
222	82.231	0.531	15.9	2.3	54.8
224	82.243	0.543	16.2	2.3	56.5
226	82.256	0.556	16.3	2.3	58.2
228	82.268	0.568	16.5	2.3	59.9
230	82.281	0.581	16.7	2.3	61.6
232	82.294	0.594	16.8	2.3	63.3
234	82.307	0.607	17.0	2.3	65.1
236	82.320	0.620	17.1	2.3	66.9
238	82.333	0.633	17.2	2.3	68.6
240	82.347	0.647	17.3	2.3	70.4
242	82.360	0.660	17.4	2.3	72.3
244	82.374	0.674	17.4	2.3	74.1
246	82.387	0.687	17.4	2.3	75.9
248	82.401	0.701	17.3	2.3	77.7
250	82.414	0.714	17.2	2.3	79.5
252	82.427	0.727	17.1	2.3	81.3
254	82.440	0.740	17.0	2.3	83.1
256	82.453	0.753	16.8	2.3	84.8
258	82.466	0.766	16.7	2.3	86.6
260	82.479	0.779	16.5	2.3	88.3
262	82.492	0.792	16.3	2.3	90.0
264	82.504	0.804	16.2	2.3	91.7
266	82.516	0.816	15.9	2.3	93.3
268	82.528	0.828	15.7	2.3	95.0
270	82.540	0.840	15.5	2.3	96.6
272	82.552	0.852	15.2	2.3	98.1
274	82.563	0.863	15.0	2.3	99.7
276	82.575	0.875	14.7	2.3	101.2
278	82.586	0.886	14.5	2.3	102.7
280	82.596	0.896	14.2	2.3	104.1
282	82.607	0.907	14.0	2.3	105.6
284	82.617	0.917	13.7	2.3	106.9
286	82.627	0.927	13.4	2.3	108.3
288	82.637	0.937	13.2	2.3	109.6
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62 Albany Road Cardiff CF24 3RR		St James Regeneration, Wrexham			
Date 03/01/2020 10:08 File 1996-MD.SRCX		Designed by PBO Checked by TOR			
Innovyze		Source Control 2019.1			
<u>Flood Routing through Storage Facility</u> <u>Event: 480 min Winter</u>					
Time (mins)	Level (m)	Depth (m)	Σ Inflow (l/s)	Filtration (l/s)	Volume (m³)
290	82.647	0.947	12.9	2.3	110.9
292	82.656	0.956	12.6	2.3	112.2
294	82.665	0.965	12.3	2.3	113.4
296	82.674	0.974	12.0	2.3	114.6
298	82.682	0.982	11.8	2.3	115.7
300	82.691	0.991	11.4	2.3	116.9
302	82.699	0.999	11.2	2.3	118.0
304	82.707	1.007	10.9	2.3	119.0
306	82.714	1.014	10.6	2.3	120.0
308	82.721	1.021	10.3	2.3	121.0
310	82.728	1.028	10.0	2.3	122.0
312	82.735	1.035	9.8	2.3	122.9
314	82.742	1.042	9.5	2.3	123.8
316	82.748	1.048	9.2	2.3	124.6
318	82.754	1.054	9.0	2.3	125.4
320	82.760	1.060	8.6	2.3	126.2
322	82.766	1.066	8.5	2.3	127.0
324	82.771	1.071	8.1	2.3	127.7
326	82.776	1.076	7.9	2.3	128.4
328	82.781	1.081	7.7	2.3	129.1
330	82.786	1.086	7.4	2.3	129.7
332	82.790	1.090	7.2	2.3	130.3
334	82.795	1.095	6.9	2.3	130.9
336	82.799	1.099	6.8	2.3	131.4
338	82.803	1.103	6.5	2.3	132.0
340	82.806	1.106	6.3	2.3	132.5
342	82.810	1.110	6.1	2.3	132.9
344	82.813	1.113	5.9	2.3	133.4
346	82.816	1.116	5.7	2.3	133.8
348	82.819	1.119	5.5	2.3	134.2
350	82.822	1.122	5.4	2.3	134.6
352	82.825	1.125	5.2	2.3	135.0
354	82.827	1.127	5.0	2.3	135.3
356	82.830	1.130	4.9	2.3	135.6
358	82.832	1.132	4.7	2.3	135.9
360	82.834	1.134	4.6	2.3	136.2
362	82.836	1.136	4.4	2.3	136.5
364	82.838	1.138	4.3	2.3	136.7
366	82.840	1.140	4.2	2.3	137.0
368	82.841	1.141	4.1	2.3	137.2
370	82.843	1.143	4.0	2.3	137.4
372	82.844	1.144	3.9	2.3	137.6
374	82.846	1.146	3.8	2.3	137.8
376	82.847	1.147	3.7	2.3	138.0
378	82.848	1.148	3.6	2.3	138.2
380	82.850	1.150	3.5	2.3	138.3
382	82.851	1.151	3.5	2.3	138.5
384	82.852	1.152	3.4	2.3	138.6
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62 Albany Road Cardiff CF24 3RR		St James Regeneration, Wrexham			
Date 03/01/2020 10:08 File 1996-MD.SRCX		Designed by PBO Checked by TOR			
Innovyze		Source Control 2019.1			
<u>Flood Routing through Storage Facility</u> <u>Event: 480 min Winter</u>					
Time (mins)	Level (m)	Depth (m)	Σ Inflow (l/s)	Filtration (l/s)	Volume (m³)
386	82.853	1.153	3.3	2.3	138.7
388	82.854	1.154	3.3	2.3	138.9
390	82.855	1.155	3.3	2.3	139.0
392	82.855	1.155	3.2	2.3	139.1
394	82.856	1.156	3.2	2.3	139.2
396	82.857	1.157	3.1	2.3	139.3
398	82.858	1.158	3.1	2.3	139.4
400	82.859	1.159	3.1	2.3	139.5
402	82.859	1.159	3.1	2.3	139.6
404	82.860	1.160	3.1	2.3	139.7
406	82.861	1.161	3.1	2.3	139.8
408	82.862	1.162	3.1	2.3	139.9
410	82.862	1.162	3.1	2.3	140.0
412	82.863	1.163	3.0	2.3	140.1
414	82.864	1.164	3.0	2.3	140.2
416	82.864	1.164	3.0	2.3	140.3
418	82.865	1.165	3.1	2.3	140.4
420	82.866	1.166	3.1	2.3	140.5
422	82.867	1.167	3.1	2.3	140.6
424	82.867	1.167	3.1	2.3	140.7
426	82.868	1.168	3.1	2.3	140.8
428	82.869	1.169	3.1	2.3	140.9
430	82.869	1.169	3.1	2.3	141.0
432	82.870	1.170	3.0	2.3	141.1
434	82.871	1.171	3.0	2.3	141.2
436	82.872	1.172	3.0	2.3	141.3
438	82.872	1.172	3.0	2.3	141.4
440	82.873	1.173	3.0	2.3	141.5
442	82.874	1.174	3.0	2.3	141.5
444	82.874	1.174	2.9	2.3	141.6
446	82.875	1.175	2.9	2.3	141.7
448	82.875	1.175	2.8	2.3	141.8
450	82.876	1.176	2.8	2.3	141.8
452	82.876	1.176	2.7	2.3	141.9
454	82.877	1.177	2.6	2.3	142.0
456	82.877	1.177	2.6	2.3	142.0
458	82.877	1.177	2.4	2.3	142.0
460	82.877	1.177	2.3	2.3	142.0
462	82.877	1.177	2.2	2.3	142.1
464	82.877	1.177	2.1	2.3	142.0
466	82.877	1.177	2.0	2.3	142.0
468	82.877	1.177	1.8	2.3	142.0
470	82.876	1.176	1.6	2.3	141.9
472	82.875	1.175	1.4	2.3	141.8
474	82.875	1.175	1.2	2.3	141.7
476	82.874	1.174	1.0	2.3	141.5
478	82.872	1.172	0.7	2.3	141.4
480	82.871	1.171	0.5	2.3	141.2
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<u>Flood Routing through Storage Facility</u> <u>Event: 480 min Winter</u> <table><thead><tr><th>Time (mins)</th><th>Level (m)</th><th>Depth (m)</th><th>Σ Inflow (l/s)</th><th>Filtration (l/s)</th><th>Volume (m³)</th></tr></thead><tbody><tr><td>482</td><td>82.869</td><td>1.169</td><td>0.3</td><td>2.3</td><td>140.9</td></tr><tr><td>484</td><td>82.867</td><td>1.167</td><td>0.1</td><td>2.3</td><td>140.7</td></tr><tr><td>486</td><td>82.865</td><td>1.165</td><td>0.0</td><td>2.3</td><td>140.4</td></tr><tr><td>488</td><td>82.863</td><td>1.163</td><td>0.0</td><td>2.3</td><td>140.2</td></tr><tr><td>490</td><td>82.861</td><td>1.161</td><td>0.0</td><td>2.3</td><td>139.9</td></tr><tr><td>492</td><td>82.859</td><td>1.159</td><td>0.0</td><td>2.3</td><td>139.6</td></tr><tr><td>494</td><td>82.857</td><td>1.157</td><td>0.0</td><td>2.3</td><td>139.4</td></tr><tr><td>496</td><td>82.855</td><td>1.155</td><td>0.0</td><td>2.3</td><td>139.1</td></tr><tr><td>498</td><td>82.853</td><td>1.153</td><td>0.0</td><td>2.3</td><td>138.8</td></tr><tr><td>500</td><td>82.851</td><td>1.151</td><td>0.0</td><td>2.3</td><td>138.6</td></tr><tr><td>502</td><td>82.849</td><td>1.149</td><td>0.0</td><td>2.3</td><td>138.3</td></tr><tr><td>504</td><td>82.847</td><td>1.147</td><td>0.0</td><td>2.3</td><td>138.0</td></tr><tr><td>506</td><td>82.845</td><td>1.145</td><td>0.0</td><td>2.3</td><td>137.7</td></tr><tr><td>508</td><td>82.843</td><td>1.143</td><td>0.0</td><td>2.3</td><td>137.5</td></tr><tr><td>510</td><td>82.841</td><td>1.141</td><td>0.0</td><td>2.3</td><td>137.2</td></tr><tr><td>512</td><td>82.839</td><td>1.139</td><td>0.0</td><td>2.3</td><td>136.9</td></tr><tr><td>514</td><td>82.837</td><td>1.137</td><td>0.0</td><td>2.3</td><td>136.7</td></tr><tr><td>516</td><td>82.835</td><td>1.135</td><td>0.0</td><td>2.3</td><td>136.4</td></tr><tr><td>518</td><td>82.833</td><td>1.133</td><td>0.0</td><td>2.3</td><td>136.1</td></tr><tr><td>520</td><td>82.831</td><td>1.131</td><td>0.0</td><td>2.3</td><td>135.9</td></tr><tr><td>522</td><td>82.829</td><td>1.129</td><td>0.0</td><td>2.3</td><td>135.6</td></tr><tr><td>524</td><td>82.827</td><td>1.127</td><td>0.0</td><td>2.3</td><td>135.3</td></tr><tr><td>526</td><td>82.825</td><td>1.125</td><td>0.0</td><td>2.3</td><td>135.0</td></tr><tr><td>528</td><td>82.823</td><td>1.123</td><td>0.0</td><td>2.3</td><td>134.8</td></tr><tr><td>530</td><td>82.821</td><td>1.121</td><td>0.0</td><td>2.3</td><td>134.5</td></tr><tr><td>532</td><td>82.819</td><td>1.119</td><td>0.0</td><td>2.3</td><td>134.2</td></tr><tr><td>534</td><td>82.817</td><td>1.117</td><td>0.0</td><td>2.3</td><td>134.0</td></tr><tr><td>536</td><td>82.815</td><td>1.115</td><td>0.0</td><td>2.3</td><td>133.7</td></tr><tr><td>538</td><td>82.813</td><td>1.113</td><td>0.0</td><td>2.3</td><td>133.4</td></tr><tr><td>540</td><td>82.811</td><td>1.111</td><td>0.0</td><td>2.3</td><td>133.2</td></tr><tr><td>542</td><td>82.809</td><td>1.109</td><td>0.0</td><td>2.3</td><td>132.9</td></tr><tr><td>544</td><td>82.807</td><td>1.107</td><td>0.0</td><td>2.3</td><td>132.6</td></tr><tr><td>546</td><td>82.805</td><td>1.105</td><td>0.0</td><td>2.3</td><td>132.3</td></tr><tr><td>548</td><td>82.803</td><td>1.103</td><td>0.0</td><td>2.3</td><td>132.1</td></tr><tr><td>550</td><td>82.801</td><td>1.101</td><td>0.0</td><td>2.3</td><td>131.8</td></tr><tr><td>552</td><td>82.799</td><td>1.099</td><td>0.0</td><td>2.3</td><td>131.5</td></tr><tr><td>554</td><td>82.797</td><td>1.097</td><td>0.0</td><td>2.3</td><td>131.3</td></tr><tr><td>556</td><td>82.795</td><td>1.095</td><td>0.0</td><td>2.3</td><td>131.0</td></tr><tr><td>558</td><td>82.793</td><td>1.093</td><td>0.0</td><td>2.3</td><td>130.7</td></tr><tr><td>560</td><td>82.791</td><td>1.091</td><td>0.0</td><td>2.3</td><td>130.5</td></tr><tr><td>562</td><td>82.789</td><td>1.089</td><td>0.0</td><td>2.3</td><td>130.2</td></tr><tr><td>564</td><td>82.787</td><td>1.087</td><td>0.0</td><td>2.3</td><td>129.9</td></tr><tr><td>566</td><td>82.785</td><td>1.085</td><td>0.0</td><td>2.3</td><td>129.6</td></tr><tr><td>568</td><td>82.783</td><td>1.083</td><td>0.0</td><td>2.3</td><td>129.4</td></tr><tr><td>570</td><td>82.781</td><td>1.081</td><td>0.0</td><td>2.3</td><td>129.1</td></tr><tr><td>572</td><td>82.779</td><td>1.079</td><td>0.0</td><td>2.3</td><td>128.8</td></tr><tr><td>574</td><td>82.777</td><td>1.077</td><td>0.0</td><td>2.3</td><td>128.6</td></tr><tr><td>576</td><td>82.775</td><td>1.075</td><td>0.0</td><td>2.3</td><td>128.3</td></tr></tbody></table>						Time (mins)	Level (m)	Depth (m)	Σ Inflow (l/s)	Filtration (l/s)	Volume (m³)	482	82.869	1.169	0.3	2.3	140.9	484	82.867	1.167	0.1	2.3	140.7	486	82.865	1.165	0.0	2.3	140.4	488	82.863	1.163	0.0	2.3	140.2	490	82.861	1.161	0.0	2.3	139.9	492	82.859	1.159	0.0	2.3	139.6	494	82.857	1.157	0.0	2.3	139.4	496	82.855	1.155	0.0	2.3	139.1	498	82.853	1.153	0.0	2.3	138.8	500	82.851	1.151	0.0	2.3	138.6	502	82.849	1.149	0.0	2.3	138.3	504	82.847	1.147	0.0	2.3	138.0	506	82.845	1.145	0.0	2.3	137.7	508	82.843	1.143	0.0	2.3	137.5	510	82.841	1.141	0.0	2.3	137.2	512	82.839	1.139	0.0	2.3	136.9	514	82.837	1.137	0.0	2.3	136.7	516	82.835	1.135	0.0	2.3	136.4	518	82.833	1.133	0.0	2.3	136.1	520	82.831	1.131	0.0	2.3	135.9	522	82.829	1.129	0.0	2.3	135.6	524	82.827	1.127	0.0	2.3	135.3	526	82.825	1.125	0.0	2.3	135.0	528	82.823	1.123	0.0	2.3	134.8	530	82.821	1.121	0.0	2.3	134.5	532	82.819	1.119	0.0	2.3	134.2	534	82.817	1.117	0.0	2.3	134.0	536	82.815	1.115	0.0	2.3	133.7	538	82.813	1.113	0.0	2.3	133.4	540	82.811	1.111	0.0	2.3	133.2	542	82.809	1.109	0.0	2.3	132.9	544	82.807	1.107	0.0	2.3	132.6	546	82.805	1.105	0.0	2.3	132.3	548	82.803	1.103	0.0	2.3	132.1	550	82.801	1.101	0.0	2.3	131.8	552	82.799	1.099	0.0	2.3	131.5	554	82.797	1.097	0.0	2.3	131.3	556	82.795	1.095	0.0	2.3	131.0	558	82.793	1.093	0.0	2.3	130.7	560	82.791	1.091	0.0	2.3	130.5	562	82.789	1.089	0.0	2.3	130.2	564	82.787	1.087	0.0	2.3	129.9	566	82.785	1.085	0.0	2.3	129.6	568	82.783	1.083	0.0	2.3	129.4	570	82.781	1.081	0.0	2.3	129.1	572	82.779	1.079	0.0	2.3	128.8	574	82.777	1.077	0.0	2.3	128.6	576	82.775	1.075	0.0	2.3	128.3
Time (mins)	Level (m)	Depth (m)	Σ Inflow (l/s)	Filtration (l/s)	Volume (m³)																																																																																																																																																																																																																																																																																																						
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488	82.863	1.163	0.0	2.3	140.2																																																																																																																																																																																																																																																																																																						
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500	82.851	1.151	0.0	2.3	138.6																																																																																																																																																																																																																																																																																																						
502	82.849	1.149	0.0	2.3	138.3																																																																																																																																																																																																																																																																																																						
504	82.847	1.147	0.0	2.3	138.0																																																																																																																																																																																																																																																																																																						
506	82.845	1.145	0.0	2.3	137.7																																																																																																																																																																																																																																																																																																						
508	82.843	1.143	0.0	2.3	137.5																																																																																																																																																																																																																																																																																																						
510	82.841	1.141	0.0	2.3	137.2																																																																																																																																																																																																																																																																																																						
512	82.839	1.139	0.0	2.3	136.9																																																																																																																																																																																																																																																																																																						
514	82.837	1.137	0.0	2.3	136.7																																																																																																																																																																																																																																																																																																						
516	82.835	1.135	0.0	2.3	136.4																																																																																																																																																																																																																																																																																																						
518	82.833	1.133	0.0	2.3	136.1																																																																																																																																																																																																																																																																																																						
520	82.831	1.131	0.0	2.3	135.9																																																																																																																																																																																																																																																																																																						
522	82.829	1.129	0.0	2.3	135.6																																																																																																																																																																																																																																																																																																						
524	82.827	1.127	0.0	2.3	135.3																																																																																																																																																																																																																																																																																																						
526	82.825	1.125	0.0	2.3	135.0																																																																																																																																																																																																																																																																																																						
528	82.823	1.123	0.0	2.3	134.8																																																																																																																																																																																																																																																																																																						
530	82.821	1.121	0.0	2.3	134.5																																																																																																																																																																																																																																																																																																						
532	82.819	1.119	0.0	2.3	134.2																																																																																																																																																																																																																																																																																																						
534	82.817	1.117	0.0	2.3	134.0																																																																																																																																																																																																																																																																																																						
536	82.815	1.115	0.0	2.3	133.7																																																																																																																																																																																																																																																																																																						
538	82.813	1.113	0.0	2.3	133.4																																																																																																																																																																																																																																																																																																						
540	82.811	1.111	0.0	2.3	133.2																																																																																																																																																																																																																																																																																																						
542	82.809	1.109	0.0	2.3	132.9																																																																																																																																																																																																																																																																																																						
544	82.807	1.107	0.0	2.3	132.6																																																																																																																																																																																																																																																																																																						
546	82.805	1.105	0.0	2.3	132.3																																																																																																																																																																																																																																																																																																						
548	82.803	1.103	0.0	2.3	132.1																																																																																																																																																																																																																																																																																																						
550	82.801	1.101	0.0	2.3	131.8																																																																																																																																																																																																																																																																																																						
552	82.799	1.099	0.0	2.3	131.5																																																																																																																																																																																																																																																																																																						
554	82.797	1.097	0.0	2.3	131.3																																																																																																																																																																																																																																																																																																						
556	82.795	1.095	0.0	2.3	131.0																																																																																																																																																																																																																																																																																																						
558	82.793	1.093	0.0	2.3	130.7																																																																																																																																																																																																																																																																																																						
560	82.791	1.091	0.0	2.3	130.5																																																																																																																																																																																																																																																																																																						
562	82.789	1.089	0.0	2.3	130.2																																																																																																																																																																																																																																																																																																						
564	82.787	1.087	0.0	2.3	129.9																																																																																																																																																																																																																																																																																																						
566	82.785	1.085	0.0	2.3	129.6																																																																																																																																																																																																																																																																																																						
568	82.783	1.083	0.0	2.3	129.4																																																																																																																																																																																																																																																																																																						
570	82.781	1.081	0.0	2.3	129.1																																																																																																																																																																																																																																																																																																						
572	82.779	1.079	0.0	2.3	128.8																																																																																																																																																																																																																																																																																																						
574	82.777	1.077	0.0	2.3	128.6																																																																																																																																																																																																																																																																																																						
576	82.775	1.075	0.0	2.3	128.3																																																																																																																																																																																																																																																																																																						
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Date 03/01/2020 10:08 File 1996-MD.SRCX		Designed by PBO Checked by TOR			
Innovyze		Source Control 2019.1			
<u>Flood Routing through Storage Facility</u> <u>Event: 480 min Winter</u>					
Time (mins)	Level (m)	Depth (m)	Σ Inflow (l/s)	Filtration (l/s)	Volume (m³)
578	82.773	1.073	0.0	2.3	128.0
580	82.771	1.071	0.0	2.3	127.8
582	82.769	1.069	0.0	2.3	127.5
584	82.767	1.067	0.0	2.3	127.2
586	82.765	1.065	0.0	2.3	126.9
588	82.763	1.063	0.0	2.3	126.7
590	82.761	1.061	0.0	2.3	126.4
592	82.759	1.059	0.0	2.3	126.1
594	82.757	1.057	0.0	2.3	125.9
596	82.755	1.055	0.0	2.3	125.6
598	82.753	1.053	0.0	2.3	125.3
600	82.751	1.051	0.0	2.3	125.1
602	82.749	1.049	0.0	2.3	124.8
604	82.747	1.047	0.0	2.3	124.5
606	82.745	1.045	0.0	2.3	124.2
608	82.743	1.043	0.0	2.3	124.0
610	82.741	1.041	0.0	2.3	123.7
612	82.739	1.039	0.0	2.3	123.4
614	82.737	1.037	0.0	2.3	123.2
616	82.735	1.035	0.0	2.3	122.9
618	82.733	1.033	0.0	2.3	122.6
620	82.731	1.031	0.0	2.3	122.4
622	82.729	1.029	0.0	2.3	122.1
624	82.727	1.027	0.0	2.3	121.8
626	82.725	1.025	0.0	2.3	121.5
628	82.723	1.023	0.0	2.3	121.3
630	82.721	1.021	0.0	2.3	121.0
632	82.719	1.019	0.0	2.3	120.7
634	82.717	1.017	0.0	2.3	120.5
636	82.715	1.015	0.0	2.3	120.2
638	82.713	1.013	0.0	2.3	119.9
640	82.711	1.011	0.0	2.3	119.7
642	82.709	1.009	0.0	2.3	119.4
644	82.707	1.007	0.0	2.3	119.1
646	82.705	1.005	0.0	2.3	118.8
648	82.703	1.003	0.0	2.3	118.6
650	82.701	1.001	0.0	2.3	118.3
652	82.699	0.999	0.0	2.3	118.0
654	82.697	0.997	0.0	2.3	117.8
656	82.695	0.995	0.0	2.3	117.5
658	82.693	0.993	0.0	2.3	117.2
660	82.691	0.991	0.0	2.3	117.0
662	82.689	0.989	0.0	2.3	116.7
664	82.687	0.987	0.0	2.3	116.4
666	82.685	0.985	0.0	2.3	116.1
668	82.683	0.983	0.0	2.3	115.9
670	82.681	0.981	0.0	2.3	115.6
672	82.679	0.979	0.0	2.3	115.3
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Date 03/01/2020 10:08 File 1996-MD.SRCX		Designed by PBO Checked by TOR			
Innovyze		Source Control 2019.1			
<u>Flood Routing through Storage Facility</u> <u>Event: 480 min Winter</u>					
Time (mins)	Level (m)	Depth (m)	Σ Inflow (l/s)	Filtration (l/s)	Volume (m³)
674	82.677	0.977	0.0	2.3	115.1
676	82.675	0.975	0.0	2.3	114.8
678	82.673	0.973	0.0	2.3	114.5
680	82.671	0.971	0.0	2.3	114.3
682	82.669	0.969	0.0	2.3	114.0
684	82.667	0.967	0.0	2.3	113.7
686	82.665	0.965	0.0	2.3	113.4
688	82.663	0.963	0.0	2.3	113.2
690	82.661	0.961	0.0	2.3	112.9
692	82.659	0.959	0.0	2.3	112.6
694	82.657	0.957	0.0	2.3	112.4
696	82.655	0.955	0.0	2.3	112.1
698	82.653	0.953	0.0	2.3	111.8
700	82.651	0.951	0.0	2.3	111.6
702	82.649	0.949	0.0	2.3	111.3
704	82.647	0.947	0.0	2.3	111.0
706	82.645	0.945	0.0	2.3	110.7
708	82.643	0.943	0.0	2.3	110.5
710	82.641	0.941	0.0	2.3	110.2
712	82.639	0.939	0.0	2.3	109.9
714	82.637	0.937	0.0	2.3	109.7
716	82.635	0.935	0.0	2.3	109.4
718	82.633	0.933	0.0	2.3	109.1
720	82.631	0.931	0.0	2.3	108.9
722	82.629	0.929	0.0	2.3	108.6
724	82.627	0.927	0.0	2.3	108.3
726	82.625	0.925	0.0	2.3	108.0
728	82.623	0.923	0.0	2.3	107.8
730	82.621	0.921	0.0	2.3	107.5
732	82.619	0.919	0.0	2.3	107.2
734	82.617	0.917	0.0	2.3	107.0
736	82.615	0.915	0.0	2.3	106.7
738	82.613	0.913	0.0	2.3	106.4
740	82.611	0.911	0.0	2.3	106.2
742	82.609	0.909	0.0	2.3	105.9
744	82.607	0.907	0.0	2.3	105.6
746	82.605	0.905	0.0	2.3	105.3
748	82.603	0.903	0.0	2.3	105.1
750	82.601	0.901	0.0	2.3	104.8
752	82.599	0.899	0.0	2.3	104.5
754	82.597	0.897	0.0	2.3	104.3
756	82.595	0.895	0.0	2.3	104.0
758	82.593	0.893	0.0	2.3	103.7
760	82.591	0.891	0.0	2.3	103.5
762	82.589	0.889	0.0	2.3	103.2
764	82.587	0.887	0.0	2.3	102.9
766	82.585	0.885	0.0	2.3	102.6
768	82.583	0.883	0.0	2.3	102.4
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<u>Flood Routing through Storage Facility</u> <u>Event: 480 min Winter</u> <table><tr><th>Time (mins)</th><th>Level (m)</th><th>Depth (m)</th><th>Σ Inflow (l/s)</th><th>Filtration (l/s)</th><th>Volume (m³)</th></tr><tr><td>770</td><td>82.581</td><td>0.881</td><td>0.0</td><td>2.3</td><td>102.1</td></tr><tr><td>772</td><td>82.579</td><td>0.879</td><td>0.0</td><td>2.3</td><td>101.8</td></tr><tr><td>774</td><td>82.577</td><td>0.877</td><td>0.0</td><td>2.3</td><td>101.6</td></tr><tr><td>776</td><td>82.575</td><td>0.875</td><td>0.0</td><td>2.3</td><td>101.3</td></tr><tr><td>778</td><td>82.573</td><td>0.873</td><td>0.0</td><td>2.3</td><td>101.0</td></tr><tr><td>780</td><td>82.571</td><td>0.871</td><td>0.0</td><td>2.3</td><td>100.8</td></tr><tr><td>782</td><td>82.569</td><td>0.869</td><td>0.0</td><td>2.3</td><td>100.5</td></tr><tr><td>784</td><td>82.567</td><td>0.867</td><td>0.0</td><td>2.3</td><td>100.2</td></tr><tr><td>786</td><td>82.565</td><td>0.865</td><td>0.0</td><td>2.3</td><td>99.9</td></tr><tr><td>788</td><td>82.563</td><td>0.863</td><td>0.0</td><td>2.3</td><td>99.7</td></tr><tr><td>790</td><td>82.561</td><td>0.861</td><td>0.0</td><td>2.3</td><td>99.4</td></tr><tr><td>792</td><td>82.559</td><td>0.859</td><td>0.0</td><td>2.3</td><td>99.1</td></tr><tr><td>794</td><td>82.557</td><td>0.857</td><td>0.0</td><td>2.3</td><td>98.9</td></tr><tr><td>796</td><td>82.555</td><td>0.855</td><td>0.0</td><td>2.3</td><td>98.6</td></tr><tr><td>798</td><td>82.553</td><td>0.853</td><td>0.0</td><td>2.3</td><td>98.3</td></tr><tr><td>800</td><td>82.551</td><td>0.851</td><td>0.0</td><td>2.3</td><td>98.1</td></tr><tr><td>802</td><td>82.549</td><td>0.849</td><td>0.0</td><td>2.3</td><td>97.8</td></tr><tr><td>804</td><td>82.547</td><td>0.847</td><td>0.0</td><td>2.3</td><td>97.5</td></tr><tr><td>806</td><td>82.545</td><td>0.845</td><td>0.0</td><td>2.3</td><td>97.2</td></tr><tr><td>808</td><td>82.543</td><td>0.843</td><td>0.0</td><td>2.3</td><td>97.0</td></tr><tr><td>810</td><td>82.541</td><td>0.841</td><td>0.0</td><td>2.3</td><td>96.7</td></tr><tr><td>812</td><td>82.539</td><td>0.839</td><td>0.0</td><td>2.3</td><td>96.4</td></tr><tr><td>814</td><td>82.537</td><td>0.837</td><td>0.0</td><td>2.3</td><td>96.2</td></tr><tr><td>816</td><td>82.535</td><td>0.835</td><td>0.0</td><td>2.3</td><td>95.9</td></tr><tr><td>818</td><td>82.533</td><td>0.833</td><td>0.0</td><td>2.3</td><td>95.6</td></tr><tr><td>820</td><td>82.531</td><td>0.831</td><td>0.0</td><td>2.3</td><td>95.4</td></tr><tr><td>822</td><td>82.529</td><td>0.829</td><td>0.0</td><td>2.3</td><td>95.1</td></tr><tr><td>824</td><td>82.527</td><td>0.827</td><td>0.0</td><td>2.3</td><td>94.8</td></tr><tr><td>826</td><td>82.525</td><td>0.825</td><td>0.0</td><td>2.3</td><td>94.5</td></tr><tr><td>828</td><td>82.523</td><td>0.823</td><td>0.0</td><td>2.3</td><td>94.3</td></tr><tr><td>830</td><td>82.521</td><td>0.821</td><td>0.0</td><td>2.3</td><td>94.0</td></tr><tr><td>832</td><td>82.519</td><td>0.819</td><td>0.0</td><td>2.3</td><td>93.7</td></tr><tr><td>834</td><td>82.517</td><td>0.817</td><td>0.0</td><td>2.3</td><td>93.5</td></tr><tr><td>836</td><td>82.515</td><td>0.815</td><td>0.0</td><td>2.3</td><td>93.2</td></tr><tr><td>838</td><td>82.513</td><td>0.813</td><td>0.0</td><td>2.3</td><td>92.9</td></tr><tr><td>840</td><td>82.511</td><td>0.811</td><td>0.0</td><td>2.3</td><td>92.7</td></tr><tr><td>842</td><td>82.509</td><td>0.809</td><td>0.0</td><td>2.3</td><td>92.4</td></tr><tr><td>844</td><td>82.507</td><td>0.807</td><td>0.0</td><td>2.3</td><td>92.1</td></tr><tr><td>846</td><td>82.505</td><td>0.805</td><td>0.0</td><td>2.3</td><td>91.8</td></tr><tr><td>848</td><td>82.503</td><td>0.803</td><td>0.0</td><td>2.3</td><td>91.6</td></tr><tr><td>850</td><td>82.501</td><td>0.801</td><td>0.0</td><td>2.3</td><td>91.3</td></tr><tr><td>852</td><td>82.499</td><td>0.799</td><td>0.0</td><td>2.3</td><td>91.0</td></tr><tr><td>854</td><td>82.497</td><td>0.797</td><td>0.0</td><td>2.3</td><td>90.8</td></tr><tr><td>856</td><td>82.495</td><td>0.795</td><td>0.0</td><td>2.3</td><td>90.5</td></tr><tr><td>858</td><td>82.493</td><td>0.793</td><td>0.0</td><td>2.3</td><td>90.2</td></tr><tr><td>860</td><td>82.491</td><td>0.791</td><td>0.0</td><td>2.3</td><td>90.0</td></tr><tr><td>862</td><td>82.489</td><td>0.789</td><td>0.0</td><td>2.3</td><td>89.7</td></tr><tr><td>864</td><td>82.487</td><td>0.787</td><td>0.0</td><td>2.3</td><td>89.4</td></tr></table>						Time (mins)	Level (m)	Depth (m)	Σ Inflow (l/s)	Filtration (l/s)	Volume (m³)	770	82.581	0.881	0.0	2.3	102.1	772	82.579	0.879	0.0	2.3	101.8	774	82.577	0.877	0.0	2.3	101.6	776	82.575	0.875	0.0	2.3	101.3	778	82.573	0.873	0.0	2.3	101.0	780	82.571	0.871	0.0	2.3	100.8	782	82.569	0.869	0.0	2.3	100.5	784	82.567	0.867	0.0	2.3	100.2	786	82.565	0.865	0.0	2.3	99.9	788	82.563	0.863	0.0	2.3	99.7	790	82.561	0.861	0.0	2.3	99.4	792	82.559	0.859	0.0	2.3	99.1	794	82.557	0.857	0.0	2.3	98.9	796	82.555	0.855	0.0	2.3	98.6	798	82.553	0.853	0.0	2.3	98.3	800	82.551	0.851	0.0	2.3	98.1	802	82.549	0.849	0.0	2.3	97.8	804	82.547	0.847	0.0	2.3	97.5	806	82.545	0.845	0.0	2.3	97.2	808	82.543	0.843	0.0	2.3	97.0	810	82.541	0.841	0.0	2.3	96.7	812	82.539	0.839	0.0	2.3	96.4	814	82.537	0.837	0.0	2.3	96.2	816	82.535	0.835	0.0	2.3	95.9	818	82.533	0.833	0.0	2.3	95.6	820	82.531	0.831	0.0	2.3	95.4	822	82.529	0.829	0.0	2.3	95.1	824	82.527	0.827	0.0	2.3	94.8	826	82.525	0.825	0.0	2.3	94.5	828	82.523	0.823	0.0	2.3	94.3	830	82.521	0.821	0.0	2.3	94.0	832	82.519	0.819	0.0	2.3	93.7	834	82.517	0.817	0.0	2.3	93.5	836	82.515	0.815	0.0	2.3	93.2	838	82.513	0.813	0.0	2.3	92.9	840	82.511	0.811	0.0	2.3	92.7	842	82.509	0.809	0.0	2.3	92.4	844	82.507	0.807	0.0	2.3	92.1	846	82.505	0.805	0.0	2.3	91.8	848	82.503	0.803	0.0	2.3	91.6	850	82.501	0.801	0.0	2.3	91.3	852	82.499	0.799	0.0	2.3	91.0	854	82.497	0.797	0.0	2.3	90.8	856	82.495	0.795	0.0	2.3	90.5	858	82.493	0.793	0.0	2.3	90.2	860	82.491	0.791	0.0	2.3	90.0	862	82.489	0.789	0.0	2.3	89.7	864	82.487	0.787	0.0	2.3	89.4
Time (mins)	Level (m)	Depth (m)	Σ Inflow (l/s)	Filtration (l/s)	Volume (m³)																																																																																																																																																																																																																																																																																																						
770	82.581	0.881	0.0	2.3	102.1																																																																																																																																																																																																																																																																																																						
772	82.579	0.879	0.0	2.3	101.8																																																																																																																																																																																																																																																																																																						
774	82.577	0.877	0.0	2.3	101.6																																																																																																																																																																																																																																																																																																						
776	82.575	0.875	0.0	2.3	101.3																																																																																																																																																																																																																																																																																																						
778	82.573	0.873	0.0	2.3	101.0																																																																																																																																																																																																																																																																																																						
780	82.571	0.871	0.0	2.3	100.8																																																																																																																																																																																																																																																																																																						
782	82.569	0.869	0.0	2.3	100.5																																																																																																																																																																																																																																																																																																						
784	82.567	0.867	0.0	2.3	100.2																																																																																																																																																																																																																																																																																																						
786	82.565	0.865	0.0	2.3	99.9																																																																																																																																																																																																																																																																																																						
788	82.563	0.863	0.0	2.3	99.7																																																																																																																																																																																																																																																																																																						
790	82.561	0.861	0.0	2.3	99.4																																																																																																																																																																																																																																																																																																						
792	82.559	0.859	0.0	2.3	99.1																																																																																																																																																																																																																																																																																																						
794	82.557	0.857	0.0	2.3	98.9																																																																																																																																																																																																																																																																																																						
796	82.555	0.855	0.0	2.3	98.6																																																																																																																																																																																																																																																																																																						
798	82.553	0.853	0.0	2.3	98.3																																																																																																																																																																																																																																																																																																						
800	82.551	0.851	0.0	2.3	98.1																																																																																																																																																																																																																																																																																																						
802	82.549	0.849	0.0	2.3	97.8																																																																																																																																																																																																																																																																																																						
804	82.547	0.847	0.0	2.3	97.5																																																																																																																																																																																																																																																																																																						
806	82.545	0.845	0.0	2.3	97.2																																																																																																																																																																																																																																																																																																						
808	82.543	0.843	0.0	2.3	97.0																																																																																																																																																																																																																																																																																																						
810	82.541	0.841	0.0	2.3	96.7																																																																																																																																																																																																																																																																																																						
812	82.539	0.839	0.0	2.3	96.4																																																																																																																																																																																																																																																																																																						
814	82.537	0.837	0.0	2.3	96.2																																																																																																																																																																																																																																																																																																						
816	82.535	0.835	0.0	2.3	95.9																																																																																																																																																																																																																																																																																																						
818	82.533	0.833	0.0	2.3	95.6																																																																																																																																																																																																																																																																																																						
820	82.531	0.831	0.0	2.3	95.4																																																																																																																																																																																																																																																																																																						
822	82.529	0.829	0.0	2.3	95.1																																																																																																																																																																																																																																																																																																						
824	82.527	0.827	0.0	2.3	94.8																																																																																																																																																																																																																																																																																																						
826	82.525	0.825	0.0	2.3	94.5																																																																																																																																																																																																																																																																																																						
828	82.523	0.823	0.0	2.3	94.3																																																																																																																																																																																																																																																																																																						
830	82.521	0.821	0.0	2.3	94.0																																																																																																																																																																																																																																																																																																						
832	82.519	0.819	0.0	2.3	93.7																																																																																																																																																																																																																																																																																																						
834	82.517	0.817	0.0	2.3	93.5																																																																																																																																																																																																																																																																																																						
836	82.515	0.815	0.0	2.3	93.2																																																																																																																																																																																																																																																																																																						
838	82.513	0.813	0.0	2.3	92.9																																																																																																																																																																																																																																																																																																						
840	82.511	0.811	0.0	2.3	92.7																																																																																																																																																																																																																																																																																																						
842	82.509	0.809	0.0	2.3	92.4																																																																																																																																																																																																																																																																																																						
844	82.507	0.807	0.0	2.3	92.1																																																																																																																																																																																																																																																																																																						
846	82.505	0.805	0.0	2.3	91.8																																																																																																																																																																																																																																																																																																						
848	82.503	0.803	0.0	2.3	91.6																																																																																																																																																																																																																																																																																																						
850	82.501	0.801	0.0	2.3	91.3																																																																																																																																																																																																																																																																																																						
852	82.499	0.799	0.0	2.3	91.0																																																																																																																																																																																																																																																																																																						
854	82.497	0.797	0.0	2.3	90.8																																																																																																																																																																																																																																																																																																						
856	82.495	0.795	0.0	2.3	90.5																																																																																																																																																																																																																																																																																																						
858	82.493	0.793	0.0	2.3	90.2																																																																																																																																																																																																																																																																																																						
860	82.491	0.791	0.0	2.3	90.0																																																																																																																																																																																																																																																																																																						
862	82.489	0.789	0.0	2.3	89.7																																																																																																																																																																																																																																																																																																						
864	82.487	0.787	0.0	2.3	89.4																																																																																																																																																																																																																																																																																																						
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62 Albany Road Cardiff CF24 3RR		St James Regeneration, Wrexham			
Date 03/01/2020 10:08 File 1996-MD.SRCX		Designed by PBO Checked by TOR			
Innovyze		Source Control 2019.1			
<u>Flood Routing through Storage Facility</u> <u>Event: 480 min Winter</u>					
Time (mins)	Level (m)	Depth (m)	Σ Inflow (l/s)	Filtration (l/s)	Volume (m³)
866	82.485	0.785	0.0	2.3	89.1
868	82.483	0.783	0.0	2.3	88.9
870	82.481	0.781	0.0	2.3	88.6
872	82.479	0.779	0.0	2.3	88.3
874	82.477	0.777	0.0	2.3	88.1
876	82.475	0.775	0.0	2.3	87.8
878	82.473	0.773	0.0	2.3	87.5
880	82.471	0.771	0.0	2.3	87.3
882	82.469	0.769	0.0	2.3	87.0
884	82.467	0.767	0.0	2.3	86.7
886	82.465	0.765	0.0	2.3	86.4
888	82.463	0.763	0.0	2.3	86.2
890	82.461	0.761	0.0	2.3	85.9
892	82.459	0.759	0.0	2.3	85.6
894	82.457	0.757	0.0	2.3	85.4
896	82.455	0.755	0.0	2.3	85.1
898	82.453	0.753	0.0	2.3	84.8
900	82.451	0.751	0.0	2.3	84.6
902	82.449	0.749	0.0	2.3	84.3
904	82.447	0.747	0.0	2.3	84.0
906	82.445	0.745	0.0	2.3	83.7
908	82.443	0.743	0.0	2.3	83.5
910	82.441	0.741	0.0	2.3	83.2
912	82.439	0.739	0.0	2.3	82.9
914	82.437	0.737	0.0	2.3	82.7
916	82.435	0.735	0.0	2.3	82.4
918	82.433	0.733	0.0	2.3	82.1
920	82.431	0.731	0.0	2.3	81.9
922	82.429	0.729	0.0	2.3	81.6
924	82.427	0.727	0.0	2.3	81.3
926	82.425	0.725	0.0	2.3	81.0
928	82.423	0.723	0.0	2.3	80.8
930	82.421	0.721	0.0	2.3	80.5
932	82.419	0.719	0.0	2.3	80.2
934	82.417	0.717	0.0	2.3	80.0
936	82.415	0.715	0.0	2.3	79.7
938	82.413	0.713	0.0	2.3	79.4
940	82.411	0.711	0.0	2.3	79.2
942	82.409	0.709	0.0	2.3	78.9
944	82.407	0.707	0.0	2.3	78.6
946	82.405	0.705	0.0	2.3	78.3
948	82.403	0.703	0.0	2.3	78.1
950	82.401	0.701	0.0	2.3	77.8
952	82.399	0.699	0.0	2.3	77.5
954	82.397	0.697	0.0	2.3	77.3
956	82.395	0.695	0.0	2.3	77.0
958	82.393	0.693	0.0	2.3	76.7
960	82.391	0.691	0.0	2.3	76.5
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Innovyze		Source Control 2019.1			
<u>Flood Routing through Storage Facility</u> <u>Event: 480 min Winter</u>					
Time (mins)	Level (m)	Depth (m)	Σ Inflow (l/s)	Filtration (l/s)	Volume (m³)
962	82.389	0.689	0.0	2.3	76.2
964	82.387	0.687	0.0	2.3	75.9
966	82.385	0.685	0.0	2.3	75.6
968	82.383	0.683	0.0	2.3	75.4
970	82.381	0.681	0.0	2.3	75.1
972	82.379	0.679	0.0	2.3	74.8
974	82.377	0.677	0.0	2.3	74.6
976	82.375	0.675	0.0	2.3	74.3
978	82.373	0.673	0.0	2.3	74.0
980	82.371	0.671	0.0	2.3	73.8
982	82.369	0.669	0.0	2.3	73.5
984	82.367	0.667	0.0	2.3	73.2
986	82.365	0.665	0.0	2.3	72.9
988	82.363	0.663	0.0	2.3	72.7
990	82.361	0.661	0.0	2.3	72.4
992	82.359	0.659	0.0	2.3	72.1
994	82.357	0.657	0.0	2.3	71.9
996	82.355	0.655	0.0	2.3	71.6
998	82.353	0.653	0.0	2.3	71.3
1000	82.351	0.651	0.0	2.3	71.1
1002	82.349	0.649	0.0	2.3	70.8
1004	82.347	0.647	0.0	2.3	70.5
1006	82.345	0.645	0.0	2.3	70.2
1008	82.343	0.643	0.0	2.3	70.0
1010	82.341	0.641	0.0	2.3	69.7
1012	82.339	0.639	0.0	2.3	69.4
1014	82.337	0.637	0.0	2.3	69.2
1016	82.335	0.635	0.0	2.3	68.9
1018	82.333	0.633	0.0	2.3	68.6
1020	82.331	0.631	0.0	2.3	68.4
1022	82.329	0.629	0.0	2.3	68.1
1024	82.327	0.627	0.0	2.3	67.8
1026	82.325	0.625	0.0	2.3	67.5
1028	82.323	0.623	0.0	2.3	67.3
1030	82.321	0.621	0.0	2.3	67.0
1032	82.319	0.619	0.0	2.3	66.7
1034	82.317	0.617	0.0	2.3	66.5
1036	82.315	0.615	0.0	2.3	66.2
1038	82.313	0.613	0.0	2.3	65.9
1040	82.311	0.611	0.0	2.3	65.7
1042	82.309	0.609	0.0	2.3	65.4
1044	82.307	0.607	0.0	2.3	65.1
1046	82.305	0.605	0.0	2.3	64.8
1048	82.303	0.603	0.0	2.3	64.6
1050	82.301	0.601	0.0	2.3	64.3
1052	82.299	0.599	0.0	2.3	64.0
1054	82.297	0.597	0.0	2.3	63.8
1056	82.295	0.595	0.0	2.3	63.5
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Time (mins)	Level (m)	Depth (m)	Σ Inflow (l/s)	Filtration (l/s)	Volume (m³)
1058	82.293	0.593	0.0	2.3	63.2
1060	82.291	0.591	0.0	2.3	63.0
1062	82.289	0.589	0.0	2.3	62.7
1064	82.287	0.587	0.0	2.3	62.4
1066	82.285	0.585	0.0	2.3	62.1
1068	82.283	0.583	0.0	2.3	61.9
1070	82.281	0.581	0.0	2.3	61.6
1072	82.279	0.579	0.0	2.3	61.3
1074	82.277	0.577	0.0	2.3	61.1
1076	82.275	0.575	0.0	2.3	60.8
1078	82.273	0.573	0.0	2.3	60.5
1080	82.271	0.571	0.0	2.3	60.3
1082	82.269	0.569	0.0	2.3	60.0
1084	82.267	0.567	0.0	2.3	59.7
1086	82.265	0.565	0.0	2.3	59.4
1088	82.263	0.563	0.0	2.3	59.2
1090	82.261	0.561	0.0	2.3	58.9
1092	82.259	0.559	0.0	2.3	58.6
1094	82.257	0.557	0.0	2.3	58.4
1096	82.255	0.555	0.0	2.3	58.1
1098	82.253	0.553	0.0	2.3	57.8
1100	82.251	0.551	0.0	2.3	57.6
1102	82.249	0.549	0.0	2.3	57.3
1104	82.247	0.547	0.0	2.3	57.0
1106	82.245	0.545	0.0	2.3	56.7
1108	82.243	0.543	0.0	2.3	56.5
1110	82.241	0.541	0.0	2.3	56.2
1112	82.239	0.539	0.0	2.3	55.9
1114	82.237	0.537	0.0	2.3	55.7
1116	82.235	0.535	0.0	2.3	55.4
1118	82.233	0.533	0.0	2.3	55.1
1120	82.231	0.531	0.0	2.3	54.9
1122	82.229	0.529	0.0	2.3	54.6
1124	82.227	0.527	0.0	2.3	54.3
1126	82.225	0.525	0.0	2.3	54.0
1128	82.223	0.523	0.0	2.3	53.8
1130	82.221	0.521	0.0	2.3	53.5
1132	82.219	0.519	0.0	2.3	53.2
1134	82.217	0.517	0.0	2.3	53.0
1136	82.215	0.515	0.0	2.3	52.7
1138	82.213	0.513	0.0	2.3	52.4
1140	82.211	0.511	0.0	2.3	52.2
1142	82.209	0.509	0.0	2.3	51.9
1144	82.207	0.507	0.0	2.3	51.6
1146	82.205	0.505	0.0	2.3	51.3
1148	82.203	0.503	0.0	2.3	51.1
1150	82.201	0.501	0.0	2.3	50.8
1152	82.199	0.499	0.0	2.3	50.5
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Time (mins)	Level (m)	Depth (m)	Σ Inflow (l/s)	Filtration (l/s)	Volume (m³)
1154	82.197	0.497	0.0	2.3	50.3
1156	82.195	0.495	0.0	2.3	50.0
1158	82.193	0.493	0.0	2.3	49.7
1160	82.191	0.491	0.0	2.3	49.5
1162	82.189	0.489	0.0	2.3	49.2
1164	82.187	0.487	0.0	2.3	48.9
1166	82.185	0.485	0.0	2.3	48.6
1168	82.183	0.483	0.0	2.3	48.4
1170	82.181	0.481	0.0	2.3	48.1
1172	82.179	0.479	0.0	2.3	47.8
1174	82.177	0.477	0.0	2.3	47.6
1176	82.175	0.475	0.0	2.3	47.3
1178	82.173	0.473	0.0	2.3	47.0
1180	82.171	0.471	0.0	2.3	46.8
1182	82.169	0.469	0.0	2.3	46.5
1184	82.167	0.467	0.0	2.3	46.2
1186	82.165	0.465	0.0	2.3	45.9
1188	82.163	0.463	0.0	2.3	45.7
1190	82.161	0.461	0.0	2.3	45.4
1192	82.159	0.459	0.0	2.3	45.1
1194	82.157	0.457	0.0	2.3	44.9
1196	82.155	0.455	0.0	2.3	44.6
1198	82.153	0.453	0.0	2.3	44.3
1200	82.151	0.451	0.0	2.3	44.1
1202	82.149	0.449	0.0	2.3	43.8
1204	82.147	0.447	0.0	2.3	43.5
1206	82.145	0.445	0.0	2.3	43.2
1208	82.143	0.443	0.0	2.3	43.0
1210	82.141	0.441	0.0	2.3	42.7
1212	82.139	0.439	0.0	2.3	42.4
1214	82.137	0.437	0.0	2.3	42.2
1216	82.135	0.435	0.0	2.3	41.9
1218	82.133	0.433	0.0	2.3	41.6
1220	82.131	0.431	0.0	2.3	41.4
1222	82.129	0.429	0.0	2.3	41.1
1224	82.127	0.427	0.0	2.3	40.8
1226	82.125	0.425	0.0	2.3	40.5
1228	82.123	0.423	0.0	2.3	40.3
1230	82.121	0.421	0.0	2.3	40.0
1232	82.119	0.419	0.0	2.3	39.7
1234	82.117	0.417	0.0	2.3	39.5
1236	82.115	0.415	0.0	2.3	39.2
1238	82.113	0.413	0.0	2.3	38.9
1240	82.111	0.411	0.0	2.3	38.7
1242	82.109	0.409	0.0	2.3	38.4
1244	82.107	0.407	0.0	2.3	38.1
1246	82.105	0.405	0.0	2.3	37.8
1248	82.103	0.403	0.0	2.3	37.6
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Time (mins)	Level (m)	Depth (m)	Σ Inflow (l/s)	Filtration (l/s)	Volume (m³)
1250	82.101	0.401	0.0	2.3	37.3
1252	82.099	0.399	0.0	2.3	37.0
1254	82.097	0.397	0.0	2.3	36.8
1256	82.095	0.395	0.0	2.3	36.5
1258	82.093	0.393	0.0	2.3	36.2
1260	82.091	0.391	0.0	2.3	36.0
1262	82.089	0.389	0.0	2.3	35.7
1264	82.087	0.387	0.0	2.3	35.4
1266	82.085	0.385	0.0	2.3	35.1
1268	82.083	0.383	0.0	2.3	34.9
1270	82.081	0.381	0.0	2.3	34.6
1272	82.079	0.379	0.0	2.3	34.3
1274	82.077	0.377	0.0	2.3	34.1
1276	82.075	0.375	0.0	2.3	33.8
1278	82.073	0.373	0.0	2.3	33.5
1280	82.071	0.371	0.0	2.3	33.3
1282	82.069	0.369	0.0	2.3	33.0
1284	82.067	0.367	0.0	2.3	32.7
1286	82.065	0.365	0.0	2.3	32.4
1288	82.063	0.363	0.0	2.3	32.2
1290	82.061	0.361	0.0	2.3	31.9
1292	82.059	0.359	0.0	2.3	31.6
1294	82.057	0.357	0.0	2.3	31.4
1296	82.055	0.355	0.0	2.3	31.1
1298	82.053	0.353	0.0	2.3	30.8
1300	82.051	0.351	0.0	2.3	30.6
1302	82.049	0.349	0.0	2.3	30.3
1304	82.047	0.347	0.0	2.3	30.0
1306	82.045	0.345	0.0	2.3	29.7
1308	82.043	0.343	0.0	2.3	29.5
1310	82.041	0.341	0.0	2.3	29.2
1312	82.039	0.339	0.0	2.3	28.9
1314	82.037	0.337	0.0	2.3	28.7
1316	82.035	0.335	0.0	2.3	28.4
1318	82.033	0.333	0.0	2.3	28.1
1320	82.031	0.331	0.0	2.3	27.9
1322	82.029	0.329	0.0	2.3	27.6
1324	82.027	0.327	0.0	2.3	27.3
1326	82.025	0.325	0.0	2.3	27.0
1328	82.023	0.323	0.0	2.3	26.8
1330	82.021	0.321	0.0	2.3	26.5
1332	82.019	0.319	0.0	2.3	26.2
1334	82.017	0.317	0.0	2.3	26.0
1336	82.015	0.315	0.0	2.3	25.7
1338	82.013	0.313	0.0	2.3	25.4
1340	82.011	0.311	0.0	2.3	25.2
1342	82.009	0.309	0.0	2.3	24.9
1344	82.007	0.307	0.0	2.3	24.6
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Time (mins)	Level (m)	Depth (m)	Σ Inflow (l/s)	Filtration (l/s)	Volume (m³)
1346	82.005	0.305	0.0	2.3	24.3
1348	82.003	0.303	0.0	2.3	24.1
1350	82.001	0.301	0.0	2.3	23.8
1352	81.999	0.299	0.0	2.3	23.5
1354	81.997	0.297	0.0	2.3	23.3
1356	81.995	0.295	0.0	2.3	23.0
1358	81.993	0.293	0.0	2.3	22.7
1360	81.991	0.291	0.0	2.3	22.5
1362	81.989	0.289	0.0	2.3	22.2
1364	81.987	0.287	0.0	2.3	21.9
1366	81.985	0.285	0.0	2.3	21.6
1368	81.983	0.283	0.0	2.3	21.4
1370	81.981	0.281	0.0	2.3	21.1
1372	81.979	0.279	0.0	2.3	20.8
1374	81.977	0.277	0.0	2.3	20.6
1376	81.975	0.275	0.0	2.3	20.3
1378	81.973	0.273	0.0	2.3	20.0
1380	81.971	0.271	0.0	2.3	19.8
1382	81.969	0.269	0.0	2.3	19.5
1384	81.967	0.267	0.0	2.3	19.2
1386	81.965	0.265	0.0	2.3	18.9
1388	81.963	0.263	0.0	2.3	18.7
1390	81.961	0.261	0.0	2.3	18.4
1392	81.959	0.259	0.0	2.3	18.1
1394	81.957	0.257	0.0	2.3	17.9
1396	81.955	0.255	0.0	2.3	17.6
1398	81.953	0.253	0.0	2.3	17.3
1400	81.951	0.251	0.0	2.3	17.1
1402	81.949	0.249	0.0	2.2	16.8
1404	81.947	0.247	0.0	2.2	16.5
1406	81.945	0.245	0.0	2.2	16.2
1408	81.943	0.243	0.0	2.2	16.0
1410	81.941	0.241	0.0	2.2	15.7
1412	81.939	0.239	0.0	2.2	15.5
1414	81.937	0.237	0.0	2.1	15.2
1416	81.935	0.235	0.0	2.1	14.9
1418	81.933	0.233	0.0	2.1	14.7
1420	81.931	0.231	0.0	2.1	14.4
1422	81.929	0.229	0.0	2.1	14.2
1424	81.927	0.227	0.0	2.0	14.0
1426	81.925	0.225	0.0	2.0	13.7
1428	81.923	0.223	0.0	2.0	13.5
1430	81.921	0.221	0.0	2.0	13.2
1432	81.919	0.219	0.0	2.0	13.0
1434	81.917	0.217	0.0	2.0	12.8
1436	81.915	0.215	0.0	1.9	12.5
1438	81.913	0.213	0.0	1.9	12.3
1440	81.911	0.211	0.0	1.9	12.1
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Time (mins)	Level (m)	Depth (m)	Σ Inflow (l/s)	Filtration (l/s)	Volume (m³)
1442	81.909	0.209	0.0	1.9	11.8
1444	81.907	0.207	0.0	1.9	11.6
1446	81.905	0.205	0.0	1.8	11.4
1448	81.903	0.203	0.0	1.8	11.2
1450	81.901	0.201	0.0	1.8	10.9
1452	81.899	0.199	0.0	1.8	10.7
1454	81.897	0.197	0.0	1.8	10.5
1456	81.895	0.195	0.0	1.8	10.3
1458	81.893	0.193	0.0	1.7	10.1
1460	81.891	0.191	0.0	1.7	9.9
1462	81.889	0.189	0.0	1.7	9.7
1464	81.887	0.187	0.0	1.7	9.5
1466	81.885	0.185	0.0	1.7	9.3
1468	81.883	0.183	0.0	1.6	9.1
1470	81.881	0.181	0.0	1.6	8.9
1472	81.879	0.179	0.0	1.6	8.7
1474	81.877	0.177	0.0	1.6	8.5
1476	81.875	0.175	0.0	1.6	8.3
1478	81.873	0.173	0.0	1.6	8.1
1480	81.871	0.171	0.0	1.5	7.9
1482	81.869	0.169	0.0	1.5	7.7
1484	81.867	0.167	0.0	1.5	7.6
1486	81.865	0.165	0.0	1.5	7.4
1488	81.863	0.163	0.0	1.5	7.2
1490	81.861	0.161	0.0	1.5	7.0
1492	81.859	0.159	0.0	1.4	6.9
1494	81.857	0.157	0.0	1.4	6.7
1496	81.855	0.155	0.0	1.4	6.5
1498	81.853	0.153	0.0	1.4	6.3
1500	81.851	0.151	0.0	1.4	6.2
1502	81.849	0.149	0.0	1.3	6.0
1504	81.847	0.147	0.0	1.3	5.9
1506	81.845	0.145	0.0	1.3	5.7
1508	81.843	0.143	0.0	1.3	5.5
1510	81.841	0.141	0.0	1.3	5.4
1512	81.839	0.139	0.0	1.3	5.2
1514	81.837	0.137	0.0	1.2	5.1
1516	81.835	0.135	0.0	1.2	4.9
1518	81.833	0.133	0.0	1.2	4.8
1520	81.831	0.131	0.0	1.2	4.7
1522	81.829	0.129	0.0	1.2	4.5
1524	81.827	0.127	0.0	1.1	4.4
1526	81.825	0.125	0.0	1.1	4.2
1528	81.823	0.123	0.0	1.1	4.1
1530	81.821	0.121	0.0	1.1	4.0
1532	81.819	0.119	0.0	1.1	3.8
1534	81.817	0.117	0.0	1.1	3.7
1536	81.815	0.115	0.0	1.0	3.6
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Time (mins)	Level (m)	Depth (m)	Σ Inflow (l/s)	Filtration (l/s)	Volume (m³)
1538	81.813	0.113	0.0	1.0	3.5
1540	81.811	0.111	0.0	1.0	3.3
1542	81.809	0.109	0.0	1.0	3.2
1544	81.807	0.107	0.0	1.0	3.1
1546	81.805	0.105	0.0	0.9	3.0
1548	81.803	0.103	0.0	0.9	2.9
1550	81.801	0.101	0.0	0.9	2.8
1552	81.799	0.099	0.0	0.9	2.7
1554	81.797	0.097	0.0	0.9	2.6
1556	81.795	0.095	0.0	0.9	2.5
1558	81.793	0.093	0.0	0.8	2.4
1560	81.791	0.091	0.0	0.8	2.3
1562	81.789	0.089	0.0	0.8	2.2
1564	81.787	0.087	0.0	0.8	2.1
1566	81.785	0.085	0.0	0.8	2.0
1568	81.783	0.083	0.0	0.7	1.9
1570	81.781	0.081	0.0	0.7	1.8
1572	81.779	0.079	0.0	0.7	1.7
1574	81.777	0.077	0.0	0.7	1.6
1576	81.775	0.075	0.0	0.7	1.5
1578	81.773	0.073	0.0	0.7	1.5
1580	81.771	0.071	0.0	0.6	1.4
1582	81.769	0.069	0.0	0.6	1.3
1584	81.767	0.067	0.0	0.6	1.2
1586	81.765	0.065	0.0	0.6	1.2
1588	81.763	0.063	0.0	0.6	1.1
1590	81.761	0.061	0.0	0.6	1.0
1592	81.759	0.059	0.0	0.5	1.0
1594	81.757	0.057	0.0	0.5	0.9
1596	81.755	0.055	0.0	0.5	0.8
1598	81.753	0.053	0.0	0.5	0.8
1600	81.751	0.051	0.0	0.5	0.7
1602	81.750	0.050	0.0	0.4	0.7
1604	81.748	0.048	0.0	0.4	0.6
1606	81.746	0.046	0.0	0.4	0.6
1608	81.744	0.044	0.0	0.3	0.5
1610	81.742	0.042	0.0	0.3	0.5
1612	81.741	0.041	0.0	0.3	0.4
1614	81.739	0.039	0.0	0.3	0.4
1616	81.737	0.037	0.0	0.2	0.4
1618	81.736	0.036	0.0	0.2	0.3
1620	81.735	0.035	0.0	0.2	0.3
1622	81.733	0.033	0.0	0.2	0.3
1624	81.732	0.032	0.0	0.2	0.3
1626	81.731	0.031	0.0	0.2	0.3
1628	81.729	0.029	0.0	0.2	0.2
1630	81.728	0.028	0.0	0.1	0.2
1632	81.727	0.027	0.0	0.1	0.2
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62 Albany Road Cardiff CF24 3RR		St James Regeneration, Wrexham			
Date 03/01/2020 10:08 File 1996-MD.SRCX		Designed by PBO Checked by TOR			
Innovyze		Source Control 2019.1			
<u>Flood Routing through Storage Facility</u> <u>Event: 480 min Winter</u>					
Time (mins)	Level (m)	Depth (m)	Σ Inflow (l/s)	Filtration (l/s)	Volume (m³)
1634	81.726	0.026	0.0	0.1	0.2
1636	81.725	0.025	0.0	0.1	0.2
1638	81.724	0.024	0.0	0.1	0.2
1640	81.723	0.023	0.0	0.1	0.1
1642	81.722	0.022	0.0	0.1	0.1
1644	81.721	0.021	0.0	0.1	0.1
1646	81.720	0.020	0.0	0.1	0.1
1648	81.720	0.020	0.0	0.1	0.1
1650	81.719	0.019	0.0	0.1	0.1
1652	81.718	0.018	0.0	0.1	0.1
1654	81.717	0.017	0.0	0.1	0.1
1656	81.717	0.017	0.0	0.1	0.1
1658	81.716	0.016	0.0	0.0	0.1
1660	81.715	0.015	0.0	0.0	0.1
1662	81.715	0.015	0.0	0.0	0.1
1664	81.714	0.014	0.0	0.0	0.1
1666	81.714	0.014	0.0	0.0	0.1
1668	81.713	0.013	0.0	0.0	0.0
1670	81.713	0.013	0.0	0.0	0.0
1672	81.712	0.012	0.0	0.0	0.0
1674	81.712	0.012	0.0	0.0	0.0
1676	81.711	0.011	0.0	0.0	0.0
1678	81.711	0.011	0.0	0.0	0.0
1680	81.710	0.010	0.0	0.0	0.0
1682	81.710	0.010	0.0	0.0	0.0
1684	81.710	0.010	0.0	0.0	0.0
1686	81.709	0.009	0.0	0.0	0.0
1688	81.709	0.009	0.0	0.0	0.0
1690	81.708	0.008	0.0	0.0	0.0
1692	81.708	0.008	0.0	0.0	0.0
1694	81.708	0.008	0.0	0.0	0.0
1696	81.708	0.008	0.0	0.0	0.0
1698	81.707	0.007	0.0	0.0	0.0
1700	81.707	0.007	0.0	0.0	0.0
1702	81.707	0.007	0.0	0.0	0.0
1704	81.706	0.006	0.0	0.0	0.0
1706	81.706	0.006	0.0	0.0	0.0
1708	81.706	0.006	0.0	0.0	0.0
1710	81.706	0.006	0.0	0.0	0.0
1712	81.705	0.005	0.0	0.0	0.0
1714	81.705	0.005	0.0	0.0	0.0
1716	81.705	0.005	0.0	0.0	0.0
1718	81.705	0.005	0.0	0.0	0.0
1720	81.705	0.005	0.0	0.0	0.0
1722	81.705	0.005	0.0	0.0	0.0
1724	81.704	0.004	0.0	0.0	0.0
1726	81.704	0.004	0.0	0.0	0.0
1728	81.704	0.004	0.0	0.0	0.0
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62 Albany Road Cardiff CF24 3RR		St James Regeneration, Wrexham			
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Innovyze		Source Control 2019.1			
<u>Flood Routing through Storage Facility</u> <u>Event: 480 min Winter</u>					
Time (mins)	Level (m)	Depth (m)	Σ Inflow (l/s)	Filtration (l/s)	Volume (m³)
1730	81.704	0.004	0.0	0.0	0.0
1732	81.704	0.004	0.0	0.0	0.0
1734	81.704	0.004	0.0	0.0	0.0
1736	81.703	0.003	0.0	0.0	0.0
1738	81.703	0.003	0.0	0.0	0.0
1740	81.703	0.003	0.0	0.0	0.0
1742	81.703	0.003	0.0	0.0	0.0
1744	81.703	0.003	0.0	0.0	0.0
1746	81.703	0.003	0.0	0.0	0.0
1748	81.703	0.003	0.0	0.0	0.0
1750	81.703	0.003	0.0	0.0	0.0
1752	81.702	0.002	0.0	0.0	0.0
1754	81.702	0.002	0.0	0.0	0.0
1756	81.702	0.002	0.0	0.0	0.0
1758	81.702	0.002	0.0	0.0	0.0
1760	81.702	0.002	0.0	0.0	0.0
1762	81.702	0.002	0.0	0.0	0.0
1764	81.702	0.002	0.0	0.0	0.0
1766	81.702	0.002	0.0	0.0	0.0
1768	81.702	0.002	0.0	0.0	0.0
1770	81.702	0.002	0.0	0.0	0.0
1772	81.702	0.002	0.0	0.0	0.0
1774	81.702	0.002	0.0	0.0	0.0
1776	81.701	0.001	0.0	0.0	0.0
1778	81.701	0.001	0.0	0.0	0.0
1780	81.701	0.001	0.0	0.0	0.0
1782	81.701	0.001	0.0	0.0	0.0
1784	81.701	0.001	0.0	0.0	0.0
1786	81.701	0.001	0.0	0.0	0.0
1788	81.701	0.001	0.0	0.0	0.0
1790	81.701	0.001	0.0	0.0	0.0
1792	81.701	0.001	0.0	0.0	0.0
1794	81.701	0.001	0.0	0.0	0.0
1796	81.701	0.001	0.0	0.0	0.0
1798	81.701	0.001	0.0	0.0	0.0
1800	81.701	0.001	0.0	0.0	0.0
1802	81.701	0.001	0.0	0.0	0.0
1804	81.701	0.001	0.0	0.0	0.0
1806	81.701	0.001	0.0	0.0	0.0
1808	81.701	0.001	0.0	0.0	0.0
1810	81.701	0.001	0.0	0.0	0.0
1812	81.701	0.001	0.0	0.0	0.0
1814	81.701	0.001	0.0	0.0	0.0
1816	81.701	0.001	0.0	0.0	0.0
1818	81.701	0.001	0.0	0.0	0.0
1820	81.701	0.001	0.0	0.0	0.0
1822	81.701	0.001	0.0	0.0	0.0
1824	81.701	0.001	0.0	0.0	0.0
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62 Albany Road Cardiff CF24 3RR	St James Regeneration, Wrexham																			
Date 03/01/2020 10:08 File 1996-MD.SRCX	Designed by PBO Checked by TOR																			
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<u>Flood Routing through Storage Facility</u> <u>Event: 480 min Winter</u> <table><thead><tr><th>Time (mins)</th><th>Level (m)</th><th>Depth (m)</th><th>Σ Inflow (l/s)</th><th>Filtration (l/s)</th><th>Volume (m³)</th></tr></thead><tbody><tr><td>1826</td><td>81.701</td><td>0.001</td><td>0.0</td><td>0.0</td><td>0.0</td></tr><tr><td>1828</td><td>81.700</td><td>0.000</td><td>0.0</td><td>0.0</td><td>0.0</td></tr></tbody></table>			Time (mins)	Level (m)	Depth (m)	Σ Inflow (l/s)	Filtration (l/s)	Volume (m³)	1826	81.701	0.001	0.0	0.0	0.0	1828	81.700	0.000	0.0	0.0	0.0
Time (mins)	Level (m)	Depth (m)	Σ Inflow (l/s)	Filtration (l/s)	Volume (m³)															
1826	81.701	0.001	0.0	0.0	0.0															
1828	81.700	0.000	0.0	0.0	0.0															
©1982-2019 Innovyze																				

PHG Consulting				Page 21																																																																																																																																																																																																																			
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Summary of Results for 100 year Return Period (+30%) Half Drain Time : 530 minutes. <table><thead><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr></thead><tbody><tr><td>15 min Summer</td><td>82.183</td><td>0.483</td><td>2.3</td><td>48.4</td><td>O K</td></tr><tr><td>30 min Summer</td><td>82.317</td><td>0.617</td><td>2.3</td><td>66.4</td><td>O K</td></tr><tr><td>60 min Summer</td><td>82.460</td><td>0.760</td><td>2.3</td><td>85.7</td><td>O K</td></tr><tr><td>120 min Summer</td><td>82.598</td><td>0.898</td><td>2.3</td><td>104.3</td><td>O K</td></tr><tr><td>180 min Summer</td><td>82.665</td><td>0.965</td><td>2.3</td><td>113.3</td><td>O K</td></tr><tr><td>240 min Summer</td><td>82.698</td><td>0.998</td><td>2.3</td><td>117.8</td><td>O K</td></tr><tr><td>360 min Summer</td><td>82.721</td><td>1.021</td><td>2.3</td><td>121.0</td><td>O K</td></tr><tr><td>480 min Summer</td><td>82.720</td><td>1.020</td><td>2.3</td><td>120.9</td><td>O K</td></tr><tr><td>600 min Summer</td><td>82.714</td><td>1.014</td><td>2.3</td><td>120.0</td><td>O K</td></tr><tr><td>720 min Summer</td><td>82.704</td><td>1.004</td><td>2.3</td><td>118.6</td><td>O K</td></tr><tr><td>960 min Summer</td><td>82.679</td><td>0.979</td><td>2.3</td><td>115.2</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>82.619</td><td>0.919</td><td>2.3</td><td>107.2</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>82.525</td><td>0.825</td><td>2.3</td><td>94.6</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>82.434</td><td>0.734</td><td>2.3</td><td>82.2</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>82.269</td><td>0.569</td><td>2.3</td><td>60.0</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>82.137</td><td>0.437</td><td>2.3</td><td>42.1</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>82.041</td><td>0.341</td><td>2.3</td><td>29.1</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>81.976</td><td>0.276</td><td>2.3</td><td>20.4</td><td>O K</td></tr><tr><td>10080 min Summer</td><td>81.943</td><td>0.243</td><td>2.2</td><td>15.9</td><td>O K</td></tr><tr><td>15 min Winter</td><td>82.230</td><td>0.530</td><td>2.3</td><td>54.7</td><td>O K</td></tr></tbody></table> <table><thead><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr></thead><tbody><tr><td>15 min Summer</td><td>104.874</td><td>0.0</td><td>22</td></tr><tr><td>30 min Summer</td><td>71.898</td><td>0.0</td><td>37</td></tr><tr><td>60 min Summer</td><td>47.182</td><td>0.0</td><td>66</td></tr><tr><td>120 min Summer</td><td>29.929</td><td>0.0</td><td>124</td></tr><tr><td>180 min Summer</td><td>22.583</td><td>0.0</td><td>184</td></tr><tr><td>240 min Summer</td><td>18.348</td><td>0.0</td><td>242</td></tr><tr><td>360 min Summer</td><td>13.620</td><td>0.0</td><td>360</td></tr><tr><td>480 min Summer</td><td>11.023</td><td>0.0</td><td>438</td></tr><tr><td>600 min Summer</td><td>9.346</td><td>0.0</td><td>496</td></tr><tr><td>720 min Summer</td><td>8.162</td><td>0.0</td><td>560</td></tr><tr><td>960 min Summer</td><td>6.584</td><td>0.0</td><td>688</td></tr><tr><td>1440 min Summer</td><td>4.852</td><td>0.0</td><td>964</td></tr><tr><td>2160 min Summer</td><td>3.567</td><td>0.0</td><td>1368</td></tr><tr><td>2880 min Summer</td><td>2.863</td><td>0.0</td><td>1760</td></tr><tr><td>4320 min Summer</td><td>2.095</td><td>0.0</td><td>2512</td></tr><tr><td>5760 min Summer</td><td>1.677</td><td>0.0</td><td>3224</td></tr><tr><td>7200 min Summer</td><td>1.413</td><td>0.0</td><td>3888</td></tr><tr><td>8640 min Summer</td><td>1.228</td><td>0.0</td><td>4504</td></tr><tr><td>10080 min Summer</td><td>1.091</td><td>0.0</td><td>5152</td></tr><tr><td>15 min Winter</td><td>104.874</td><td>0.0</td><td>22</td></tr></tbody></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	82.183	0.483	2.3	48.4	O K	30 min Summer	82.317	0.617	2.3	66.4	O K	60 min Summer	82.460	0.760	2.3	85.7	O K	120 min Summer	82.598	0.898	2.3	104.3	O K	180 min Summer	82.665	0.965	2.3	113.3	O K	240 min Summer	82.698	0.998	2.3	117.8	O K	360 min Summer	82.721	1.021	2.3	121.0	O K	480 min Summer	82.720	1.020	2.3	120.9	O K	600 min Summer	82.714	1.014	2.3	120.0	O K	720 min Summer	82.704	1.004	2.3	118.6	O K	960 min Summer	82.679	0.979	2.3	115.2	O K	1440 min Summer	82.619	0.919	2.3	107.2	O K	2160 min Summer	82.525	0.825	2.3	94.6	O K	2880 min Summer	82.434	0.734	2.3	82.2	O K	4320 min Summer	82.269	0.569	2.3	60.0	O K	5760 min Summer	82.137	0.437	2.3	42.1	O K	7200 min Summer	82.041	0.341	2.3	29.1	O K	8640 min Summer	81.976	0.276	2.3	20.4	O K	10080 min Summer	81.943	0.243	2.2	15.9	O K	15 min Winter	82.230	0.530	2.3	54.7	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	104.874	0.0	22	30 min Summer	71.898	0.0	37	60 min Summer	47.182	0.0	66	120 min Summer	29.929	0.0	124	180 min Summer	22.583	0.0	184	240 min Summer	18.348	0.0	242	360 min Summer	13.620	0.0	360	480 min Summer	11.023	0.0	438	600 min Summer	9.346	0.0	496	720 min Summer	8.162	0.0	560	960 min Summer	6.584	0.0	688	1440 min Summer	4.852	0.0	964	2160 min Summer	3.567	0.0	1368	2880 min Summer	2.863	0.0	1760	4320 min Summer	2.095	0.0	2512	5760 min Summer	1.677	0.0	3224	7200 min Summer	1.413	0.0	3888	8640 min Summer	1.228	0.0	4504	10080 min Summer	1.091	0.0	5152	15 min Winter	104.874	0.0	22
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30 min Summer	71.898	0.0	37																																																																																																																																																																																																																				
60 min Summer	47.182	0.0	66																																																																																																																																																																																																																				
120 min Summer	29.929	0.0	124																																																																																																																																																																																																																				
180 min Summer	22.583	0.0	184																																																																																																																																																																																																																				
240 min Summer	18.348	0.0	242																																																																																																																																																																																																																				
360 min Summer	13.620	0.0	360																																																																																																																																																																																																																				
480 min Summer	11.023	0.0	438																																																																																																																																																																																																																				
600 min Summer	9.346	0.0	496																																																																																																																																																																																																																				
720 min Summer	8.162	0.0	560																																																																																																																																																																																																																				
960 min Summer	6.584	0.0	688																																																																																																																																																																																																																				
1440 min Summer	4.852	0.0	964																																																																																																																																																																																																																				
2160 min Summer	3.567	0.0	1368																																																																																																																																																																																																																				
2880 min Summer	2.863	0.0	1760																																																																																																																																																																																																																				
4320 min Summer	2.095	0.0	2512																																																																																																																																																																																																																				
5760 min Summer	1.677	0.0	3224																																																																																																																																																																																																																				
7200 min Summer	1.413	0.0	3888																																																																																																																																																																																																																				
8640 min Summer	1.228	0.0	4504																																																																																																																																																																																																																				
10080 min Summer	1.091	0.0	5152																																																																																																																																																																																																																				
15 min Winter	104.874	0.0	22																																																																																																																																																																																																																				
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62 Albany Road Cardiff CF24 3RR		St James Regeneration, Wrexham			
Date 03/01/2020 10:08 File 1996-MD.SRCX		Designed by PBO Checked by TOR			
Innovyze		Source Control 2019.1			
Summary of Results for 100 year Return Period (+30%)					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	82.381	0.681	2.3	75.0	O K
60 min Winter	82.543	0.843	2.3	97.0	O K
120 min Winter	82.705	1.005	2.3	118.8	O K
180 min Winter	82.786	1.086	2.3	129.7	O K
240 min Winter	82.830	1.130	2.3	135.6	O K
360 min Winter	82.868	1.168	2.3	140.8	Flood Risk
480 min Winter	82.877	1.177	2.3	142.1	Flood Risk
600 min Winter	82.869	1.169	2.3	140.9	Flood Risk
720 min Winter	82.851	1.151	2.3	138.5	Flood Risk
960 min Winter	82.817	1.117	2.3	134.0	O K
1440 min Winter	82.729	1.029	2.3	122.0	O K
2160 min Winter	82.582	0.882	2.3	102.2	O K
2880 min Winter	82.438	0.738	2.3	82.8	O K
4320 min Winter	82.189	0.489	2.3	49.1	O K
5760 min Winter	82.011	0.311	2.3	25.2	O K
7200 min Winter	81.938	0.238	2.1	15.3	O K
8640 min Winter	81.910	0.210	1.9	11.9	O K
10080 min Winter	81.887	0.187	1.7	9.5	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	71.898	0.0	36		
60 min Winter	47.182	0.0	64		
120 min Winter	29.929	0.0	122		
180 min Winter	22.583	0.0	180		
240 min Winter	18.348	0.0	238		
360 min Winter	13.620	0.0	352		
480 min Winter	11.023	0.0	462		
600 min Winter	9.346	0.0	566		
720 min Winter	8.162	0.0	648		
960 min Winter	6.584	0.0	744		
1440 min Winter	4.852	0.0	1052		
2160 min Winter	3.567	0.0	1492		
2880 min Winter	2.863	0.0	1904		
4320 min Winter	2.095	0.0	2640		
5760 min Winter	1.677	0.0	3240		
7200 min Winter	1.413	0.0	3816		
8640 min Winter	1.228	0.0	4496		
10080 min Winter	1.091	0.0	5240		
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62 Albany Road Cardiff CF24 3RR	St James Regeneration, Wrexham																									
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InnovyzeSource Control 2019.1																										
Model Details Storage is Online Cover Level (m) 83.000 Porous Car Park Structure <table><tr><td>Infiltration Coefficient Base (m/hr)</td><td>0.03600</td><td>Width (m)</td><td>45.0</td></tr><tr><td>Membrane Percolation (mm/hr)</td><td>1000</td><td>Length (m)</td><td>10.0</td></tr><tr><td>Max Percolation (l/s)</td><td>125.0</td><td>Slope (1:X)</td><td>40.0</td></tr><tr><td>Safety Factor</td><td>2.0</td><td>Depression Storage (mm)</td><td>5</td></tr><tr><td>Porosity</td><td>0.30</td><td>Evaporation (mm/day)</td><td>3</td></tr><tr><td>Invert Level (m)</td><td>81.700</td><td>Membrane Depth (m)</td><td>130</td></tr></table>			Infiltration Coefficient Base (m/hr)	0.03600	Width (m)	45.0	Membrane Percolation (mm/hr)	1000	Length (m)	10.0	Max Percolation (l/s)	125.0	Slope (1:X)	40.0	Safety Factor	2.0	Depression Storage (mm)	5	Porosity	0.30	Evaporation (mm/day)	3	Invert Level (m)	81.700	Membrane Depth (m)	130
Infiltration Coefficient Base (m/hr)	0.03600	Width (m)	45.0																							
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