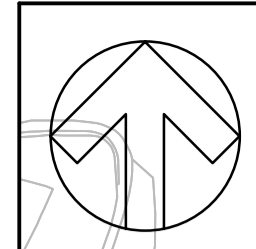


Appendix L Groundwater Levels



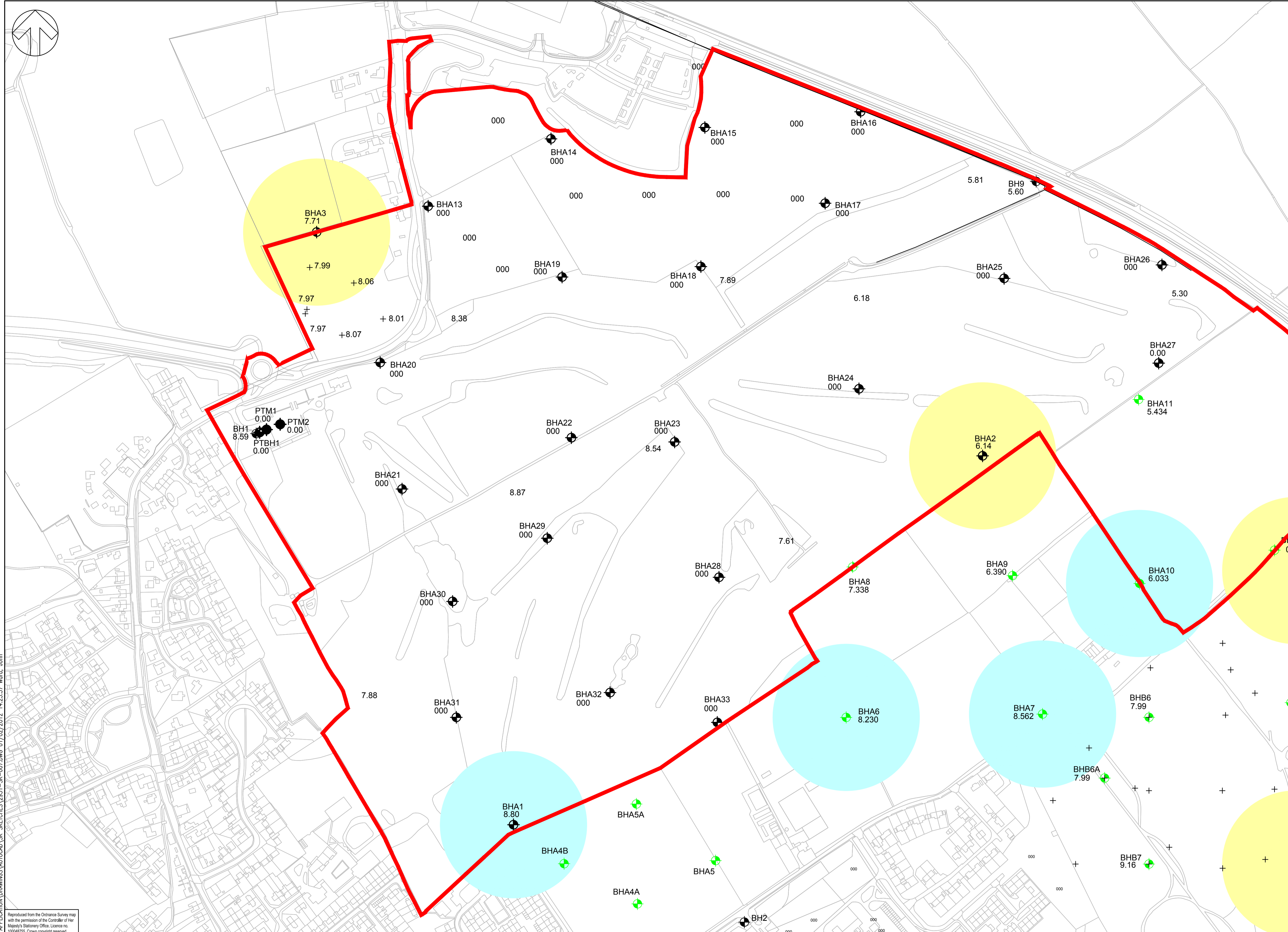
DO NOT SCALE

KEY:

- OUTLINE PLANNING APPLICATION BOUNDARY
- BOREHOLE LOCATION
- PUMP TEST MONITORING BOREHOLE
- CWW

MINIMUM DEPTH OF GROUNDWATER:

- LESS THAN 0.5m
- 0.5m TO 1.0m



N:\NORTHSTOWE_PHASE_1_PLANNING_APPLICATION_DRAWINGS\AUTOCAD\SKETCHES\2951-SK-007.DWG 01/02/2012 14:26:37 Word: John

Reproduced from the Ordnance Survey map with the permission of the Controller of Her Majesty's Stationary Office, Licence no. 100048755. Crown copyright reserved.

REV	DATE	BY	DESCRIPTION	CHK	APD
B	01/02/12	JW	REVISED PHASE 1 BOUNDARY	ALA	ALA
A	19/12/11	CC	FIRST ISSUE	MJM	ALA

DRAWING STATUS: FOR INFORMATION ONLY



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<http://www.wspgroup.com>

CLIENT:	GALLAGHER
ARCHITECT:	TOR

PROJECT:	NORTHSTOWE PHASE 1
TITLE:	GROUNDWATER LEVELS

SCALE @ A1:	1:2500	CHECKED:	MJW	APPROVED:	ALA
CAD FILE:	2951-SK-007	DESIGN/DRAWN:	CC	DATE:	December 2011
PROJECT No:	11012951	DRAWING No:	2951/SK/07	REV:	B

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Appendix M Earthworks

Earthworks Strategy Summary

The earthworks for Phase 1 will be completed in two stages as follows:

Earthworks Stage 1: The two attenuation ponds and Greenway A will be excavated and constructed with the excavated material being spread over the area to the north of Greenway A and the western half on the land between Greenways A and B. This will enable development phases 1-1 and 1-2 (years 2014 and 2015) to be built out. The secondary flood protection bund located on the eastern edge of the site will also be constructed.

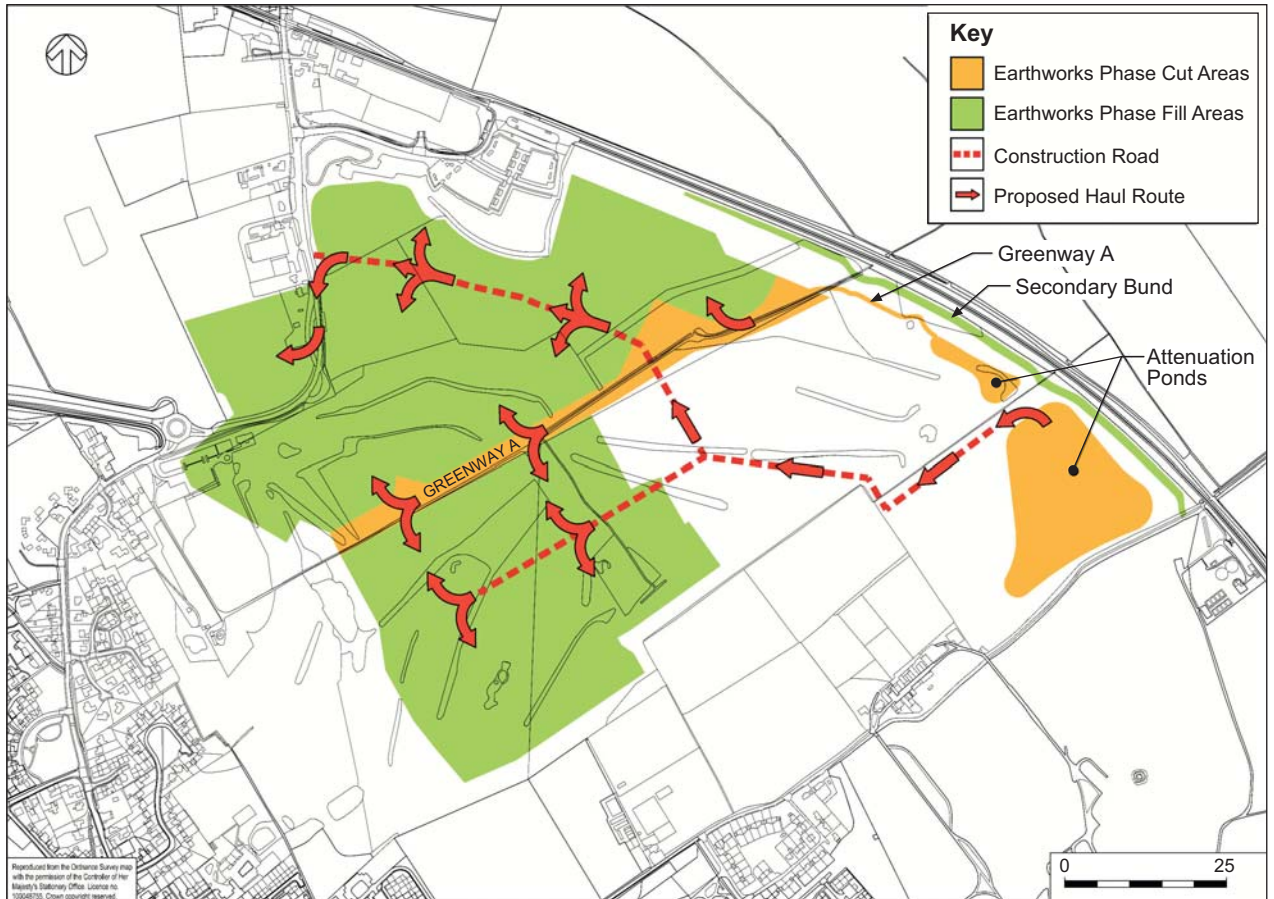
	CUT	FILL
EXCAVATE MAIN POND	104,000	
EXCAVATE MINOR POND	6,000	
EXCAVATE GREENWAY A	23,000	4,000
CONSTRUCT SECONDARY BUND		10,000
DEVELOPMENT NORTH OF GREENWAY A	28,000	79,000
WESTERN HALF OF DEVELOPMENT BETWEEN GREENWAYS A & B		56,000
TOTAL	161,000	149,000

Earthworks Stage 2: The off-site infrastructure area and Greenway B will be constructed and the excavated material will be spread over the remaining phase 1 core area. This will enable the remaining development phases 1-3 and 1-4 (years 2016 and 2017) to be completed.

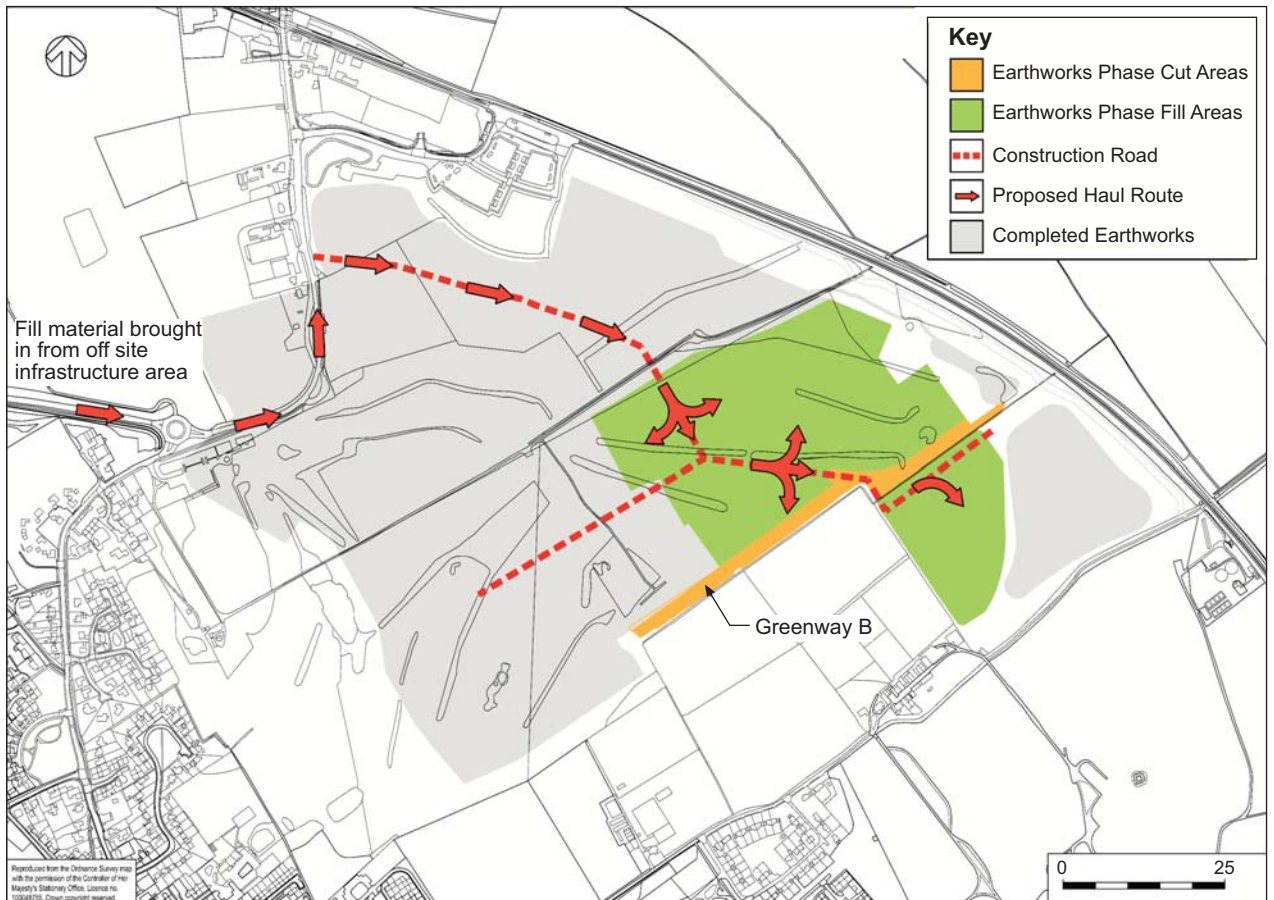
	CUT	FILL
GREENWAY B	8,000	4,300
EXCAVATE MATERIAL FROM OFF-SITE ATTENUATION PONDS	215,000	
SURPLUS FROM STAGE 1	12,000	
REMAINING DEVELOPMENT BETWEEN GREENWAYS A & B	18,800	186,500
DEVELOPMENT SOUTH OF GREENWAY B		59,300
TOTAL	253,800	250,100

The above figures assume the following:

- The existing topsoil has been stripped and stored on site
- An allowance for a topsoiling to a depth of 300mm over one third of each development plot
- A 300mm deep of fill material generated from on-plot arisings from foundations, sewers, estate road, etc.
- No allowance has been made for the bulking of excavated materials when being re-used as fill material
- All excavated materials are deemed acceptable as fill material



Earthworks Stage 1



Earthworks Stage 2



Figure 5
Earthworks Strategy
Not to Scale

Appendix N Hydraulic Modelling Report



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DIFFERENCE



Addendum to Longstanton Flood Modelling Reports

Gallagher

January 2012

QM

Issue/revision	Issue 1	Revision 3	Revision4	Revision 5
Remarks				
Date	October 2011	December 2011	23/01/2012	
Prepared by	G Guma	T Sampson	T Sampson	
Signature				
Checked by	T Sampson	A Atkinson	A Atkinson	
Signature				
Authorised by	A Atkinson	A Atkinson	A Atkinson	
Signature				
Project number	11012988	11012988	11012988	
File reference			\\Northstowe,%20Phase%201,%20planning%20application\TEXT\REPORTS\Longstanton%20Modelling\120124%20Longstanton%20Modelling.docx	

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1	Addendum Note for Baseline Model	1
2	Hydrology	2
3	Hydraulic Model	3
4	Model Results	2
5	Conclusions and Recommendations	4

1 Addendum Note for Baseline Model

1.1 INTRODUCTION

1.1.1 WSP UK has been commissioned by Gallagher to identify the possible flood mitigation to be provided as part of the Northstowe proposal. As part of this work we have investigate how the proposed alterations to the Longstanton Brook catchment will affect the flood risks within the existing catchment.

1.1.2 This note reviews the hydrology undertaken since 2006 and provides a set of conditions to be used as part of the flood mitigation proposal. This note also documents the post-development model and presents the flood model results.

1.1.3 This work follows on from modelling reports completed by WSP in May 2003 (Longstanton Flood Modelling and Hydrology Report), June 2005 and an addendum to the June 2005 report undertaken in December 2007.

2 Hydrology

2.1 PAST HYDROLOGY

2.1.1 The June 2005 report detailing the flood mitigation options proposed was reviewed by Faber Maunsell on behalf of the Environment Agency. Additional flow estimation and hydraulic modelling was completed by Faber Maunsell in October 2006 (Longstanton Model Audit Review – Final Modelling Report).

2.1.2 Faber Maunsell undertook estimation of design flows for the Gravel Bridge catchment using a range of methods outlined within the Flood Estimation Handbook (FEH). The pre-development flows derived using the FEH Rainfall-Runoff and Statistical methods were higher than those within the original WSP modelling study. It was therefore recommended WSP adopt the FEH Rainfall-Runoff methodology for the site.

2.1.3 The addendum completed in December 2007 outlined the additional flow estimation and further modelling work undertaken for both the pre-development scenario and the post-development model comprising of the two proposed flood mitigation ponds upstream of Longstanton.

2.1.4 Since the Faber Maunsell review, the Revitalised Flood Hydrograph (ReFH) method has been introduced. It was therefore considered necessary to review the flows based on the most up to date methods.

2.2 ADDITIONAL FLOW ESTIMATION

2.2.1 The flood flows incorporated in the WSP hydraulic models in the December 2006 addendum were estimated at a number of key locations of interest within the catchment and at confluences with other watercourses.

2.2.2 The Revitalised Flood Hydrograph analysis was undertaken based upon the subject site catchment descriptors being imported into ISIS and design storm durations selected based on the ReFH spread sheet (version 1.4). The FEH catchment characteristics were taken from the FEH CD-ROM (Version 3).

2.2.3 The locations where the flows were estimated and the peak flows generated are detailed in Table 1. Refer to Appendix A for the hydrological analysis.

2.2.4 The peak flows from the ReFH methodology are generally lower for all the catchments in the model as shown in Table 1.1 except for the lower order events such as the 1 in 5 year.

2.3 INFLOWS USED IN HYDRAULIC MODEL

2.3.1 Following discussion with the Environment Agency and the client it has been decided to use retain the inflows estimated in the 2006 FEH Rainfall-Runoff analysis. This is a precautionary approach and does not impact upon the design of the upstream flood storage ponds as these are being designed to provide the maximum possible storage.

Table 1 Flow Locations and Current ReFH Flows vs FEH Rainfall-Runoff Flows

Location	2011 ReFH Flows (m ³ /s)			2006 FEH Rainfall-Runoff Flows (m ³ /s)		
	<i>1 in 100</i>	<i>1 in 50</i>	<i>1 in 5</i>	<i>1 in 100</i>	<i>1 in 50</i>	<i>1 in 5</i>
(539200,265700) Downstream of Ponds	4.01	3.42	2.80	5.56	4.73	2.36
(539750,266350) School Lane, Longstanton	4.86	4.15	3.39	6.97	5.95	2.98
(538650,268100) Gravel Bridge	5.51	4.70	3.85	7.96	6.81	3.47
(537450,268750)	9.72	8.33	6.87	13.93	11.92	6.06
(537450,268800)	10.82	9.29	7.66	15.55	13.30	6.77
(536600,270450)	12.57	10.80	8.93	18.43	15.78	8.09

3 Hydraulic Model

3.1 BASELINE MODEL

3.1.1 No changes have been made to the 2007 baseline pre-development ISIS 1D model.

3.1.2 A review of the structures and selected cross sections in the model has been undertaken. No amendments have been required following this review.

3.2 POST-DEVELOPMENT MODEL

3.2.1 The post-development model is based upon the 2007 baseline pre-development ISIS 1D model with the following updates:

- Inclusion of 2x storage ponds as ISIS reservoir units.
- Inclusion of a bypass channel around each pond with cross section profiles to match the existing channel.
- A spill into and out of each of the storage ponds.

3.2.2 Figure 1 in Appendix B shows the location of the storage ponds modelled.

3.3 DESIGN EVENT RUNS

3.3.1 The following design event model runs have been undertaken using the FEH Rainfall-Runoff inflows:

- Baseline pre-development model: 1 in 5, 1 in 10, 1 in 20, 1 in 30, 1 in 50, 1 in 100 and 1 in 100 (+20%) for climate change.
- Post-development model: 1 in 5, 1 in 10, 1 in 20, 1 in 30, 1 in 50, 1 in 100 and 1 in 100 (+20%) for climate change.

3.4 MODEL CALIBRATION, VALIDATION AND SENSITIVITY

3.4.1 No new sensitivity testing, calibration or validation has been undertaken as there are insufficient changes to the baseline model.

4 Model Results

4.1 RESULT DISCUSSIONS

4.1.1 A summary of peak flows and levels at key locations is shown below in table 2 and 3. Appendix C contains the full model outputs.

4.1.2 The storage ponds have reduced peak levels by around 0.19m and flows by $3.7\text{m}^3/\text{s}$ in the 1 in 100 annual probability flood at School Lane. At Hattons Road the reduction in levels is 0.55m and flows have reduced by $3.7\text{m}^3/\text{s}$ in the 1 in 100 annual probability flood.

4.1.3 In the 1 in 20 annual probability flood the inclusion of the storage ponds has made a more significant reduction in levels at School Lane (levels reduced by 0.35m) and Hattons Road (levels reduced by 0.6m).

4.1.4 At all of the locations selected below the post-development 1 in 100 annual probability peak flood levels are lower than the baseline (pre-development) 1 in 20 annual probability peak flood levels. This suggests that the storage ponds are able to reduce the risk of flooding to properties in Longstanton from 1 in 100 annual probability to 1 in 20 annual probability. The number of properties which will experience a reduction in flood risk and by how much cannot be confirmed at this stage.

4.1.5 Analysis of the peak flows in table 3 shows the same pattern in that the post-development 1 in 100 annual probability flood peak flows are lower than the baseline (pre-development) 1 in 20 annual probability flood peak flows.

Table 2 Selected Model Results – Peak Level

Location <i>Peak level in mAOD</i>	Baseline (pre-development)				Post-development			
	<i>1 in 100 (+20%)</i>	<i>1 in 100</i>	<i>1 in 20</i>	<i>1 in 5</i>	<i>1 in 100 (+20%)</i>	<i>1 in 100</i>	<i>1 in 20</i>	<i>1 in 5</i>
u/s of Ponds (node 2711.2)	13.574	13.518	13.272	12.984	13.579	13.549	13.297	13.049
d/s of Ponds (node 1653.8)	9.948	9.927	9.801	9.535	9.865	9.590	9.418	9.336
u/s of School Lane (node 920.9)	8.721	8.692	8.611	8.438	8.648	8.503	8.259	8.100
d/s of School Lane (node 906.5)	8.495	8.452	8.357	8.217	8.394	8.253	8.115	7.998
u/s of Hattons Road (node 481.1)	8.208	8.134	7.732	7.487	8.011	7.582	7.296	7.175
d/s of Hattons Road (node 470.7)	8.115	8.033	7.607	7.401	7.890	7.481	7.237	7.132
u/s of High Street (east crossing) (node 258.6)	7.849	7.744	7.295	7.041	7.590	7.139	6.812	6.684
d/s of High Street (east crossing) (node 254.7)	7.796	7.703	7.295	7.041	7.598	7.138	6.810	6.682
u/s of High Street (west crossing) (node 198.2)	7.766	7.671	7.243	6.958	7.560	7.062	6.718	6.587
d/s of High Street (west crossing) (node 178.5)	7.740	7.646	7.211	6.944	7.537	7.038	6.718	6.589

Table 3 Selected Model Results – Peak Flows

Location <i>Peak flow in m³/s</i>	Baseline (pre-development)				Post-development			
	<i>1 in 100 (+20%)</i>	<i>1 in 100</i>	<i>1 in 20</i>	<i>1 in 5</i>	<i>1 in 100 (+20%)</i>	<i>1 in 100</i>	<i>1 in 20</i>	<i>1 in 5</i>
u/s of Ponds (node 2711.2)	6.596	5.542	3.694	2.353	6.600	5.542	3.694	2.358
d/s of Ponds (node 1653.8)	8.076	7.088	4.652	2.977	5.598	3.289	2.395	2.017
u/s of School Lane (node 920.9)	8.069	6.991	4.549	2.971	5.53	3.278	2.394	2.016
u/s of Hattons Road (node 481.1)	8.056	6.947	4.548	2.963	5.463	3.259	2.393	2.016
u/s of High Stream (east crossing) (node 258.6)	8.055	6.943	4.545	2.962	5.463	3.258	2.393	2.016
u/s of High Stream (west crossing) (node 198.2)	8.055	6.962	4.545	2.962	5.467	3.258	2.393	2.016

5 Conclusions and Recommendations

5.1 CONCLUSIONS

5.1.1 WSP conclude that the proposed storage ponds upstream of Longstanton can reduce the risk of flooding in Longstanton. Peak flows and levels for the post-development 1 in 100 annual probability flood are lower than those for the baseline (pre-development) 1 in 20 annual probability flood.

5.1.2 The modelling is based upon FEH rainfall runoff flows from the 2006 Faber Maunsell analysis. Using ReFH flows would result in different peak flows and levels.

5.1.3 As the storage ponds have been designed to maximise upstream storage and there is uncertainty in the hydrological analysis we do not feel it is appropriate to quote an exact standard of protection.

5.2 RECOMMENDATIONS

5.2.1 WSP seek approval from the Environment Agency that the updated modelling for the Longstanton Brook is acceptable. This approval will enable WSP to assess the various design options for alleviating flooding.

Appendices, Figures & Tables

Appendix A Hydrological Analysis

Revitalised FSR/FEH rainfall runoff method

Spreadsheet application report

User name	Ukgxg006	Catchment name	4452.4	Date/time modelled	29-Sep-2011 10:26
Company name	WSP P&D	Catchment easting	539200	Version	1.4
Project name	Northstowe - Longstandon	Catchment northing	265700		
		Catchment area	7.83		

Summary of model setup

Design rainfall parameters		Loss model parameters		Routing model parameters		Baseflow model parameters	
Return period (yr)	100	C_{max} (mm)	285	T_p (hr)	6.81	BL (hr)	38.3
Duration (hr)	11	C_{ini} (mm)	121	U_p	0.65	BR	0.66
Timestep (hr)	1	α factor	0.83	U_k	0.8	BF₀ (m³/s)	0.2
Season	Winter						

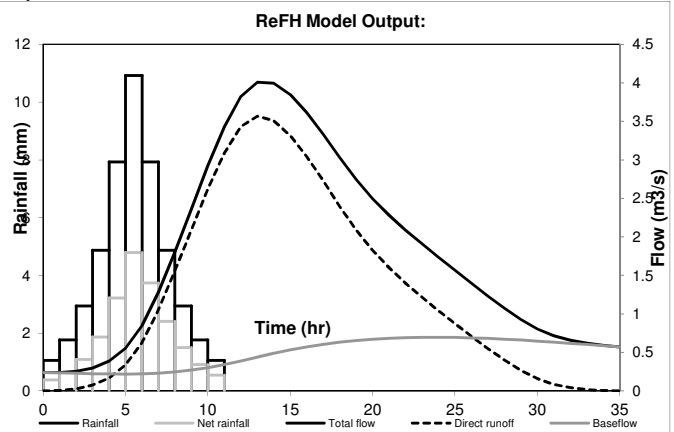
Summary of results

FEH DDF rainfall (mm)	76.9	Peak rainfall (mm)	10.9
Design rainfall (mm)	48.1	Peak flow (m³/s)	4

Results

Series	Design Rainfall	Net rainfall	Direct runoff	Baseflow	Total flow
Unit	mm	mm	m ³ /s	m ³ /s	m ³ /s
0	1.1	0.4	0.0	0.2	0.2
1	1.8	0.6	0.0	0.2	0.2
2	2.9	1.1	0.0	0.2	0.3
3	4.9	1.9	0.1	0.2	0.3
4	7.9	3.2	0.2	0.2	0.4
5	10.9	4.8	0.3	0.2	0.6
6	7.9	3.7	0.6	0.2	0.9
7	4.9	2.4	1.1	0.2	1.3
8	2.9	1.5	1.6	0.2	1.8
9	1.8	0.9	2.1	0.3	2.4
10	1.1	0.6	2.6	0.3	2.9
11	0.0	0.0	3.1	0.3	3.4
12	0.0	0.0	3.4	0.4	3.8
13	0.0	0.0	3.6	0.4	4.0
14	0.0	0.0	3.5	0.5	4.0
15	0.0	0.0	3.3	0.5	3.8
16	0.0	0.0	3.0	0.6	3.6
17	0.0	0.0	2.7	0.6	3.3
18	0.0	0.0	2.4	0.6	3.0
19	0.0	0.0	2.1	0.7	2.7
20	0.0	0.0	1.8	0.7	2.5
21	0.0	0.0	1.6	0.7	2.3
22	0.0	0.0	1.4	0.7	2.1
23	0.0	0.0	1.2	0.7	1.9
24	0.0	0.0	1.0	0.7	1.7
25	0.0	0.0	0.9	0.7	1.6
26	0.0	0.0	0.7	0.7	1.4
27	0.0	0.0	0.5	0.7	1.2
28	0.0	0.0	0.4	0.7	1.1
29	0.0	0.0	0.3	0.7	0.9
30	0.0	0.0	0.2	0.6	0.8
31	0.0	0.0	0.1	0.6	0.7
32	0.0	0.0	0.0	0.6	0.7
33	0.0	0.0	0.0	0.6	0.6
34	0.0	0.0	0.0	0.6	0.6
35	0.0	0.0	0.0	0.6	0.6
Total (mm)	48.1	21.1	21.1	8.2	29.3

Graph



Audit comments

Model run with ReFH dll version 1.4.0003

Catchment

Catchment descriptors imported from file
 Catchment descriptor file = '4452.4.csv'
 Catchment descriptor file exported from CD ROM version 1
 BFIHOST value of 0.32 used
 PROPWET value of 0.24 used
 SAAR value of 547 used
 DPLBAR value of 4.41 used
 DPSBAR value of 19.9 used
 URBEXT value of 0.0418 used
 C value of -0.02671 used
 D1 value of 0.31215 used
 D2 value of 0.29733 used
 D3 value of 0.27386 used
 E value of 0.31869 used
 F value of 2.42224 used

Rainfall

Recommended season is Winter, as URBEXT < 0.125
 ReFH design standard Seasonal Correction Factor of 0.65 applied
 ReFH design standard Areal Reduction Factor of 0.97 applied

Loss Model

C_{max} derived from catchment descriptors
 ReFH design standard C_{ini} used
 ReFH design standard α factor used

Routing Model

T_p derived from catchment descriptors
 ReFH design standard used for U_p
 ReFH design standard used for U_k

Baseflow Model

BL derived from catchment descriptors

Revitalised FSR/FEH rainfall runoff method

Spreadsheet application report

BR derived from catchment descriptors
ReFH design standard BF₀ used

Revitalised FSR/FEH rainfall runoff method

Spreadsheet application report

User name	Ukgxg006	Catchment name	B2	Date/time modelled	29-Sep-2011 10:30
Company name	WSP P&D	Catchment easting	539750	Version	1.4
Project name	Northstowe - Longstandon	Catchment northing	266350		
		Catchment area	9.93		

Summary of model setup

Design rainfall parameters		Loss model parameters		Routing model parameters		Baseflow model parameters	
Return period (yr)	100	C_{max} (mm)	279	T_p (hr)	7.37	BL (hr)	38.6
Duration (hr)	11	C_{ini} (mm)	121	U_p	0.65	BR	0.64
Timestep (hr)	1	α factor	0.83	U_k	0.8	BF₀ (m³/s)	0.3
Season	Winter						

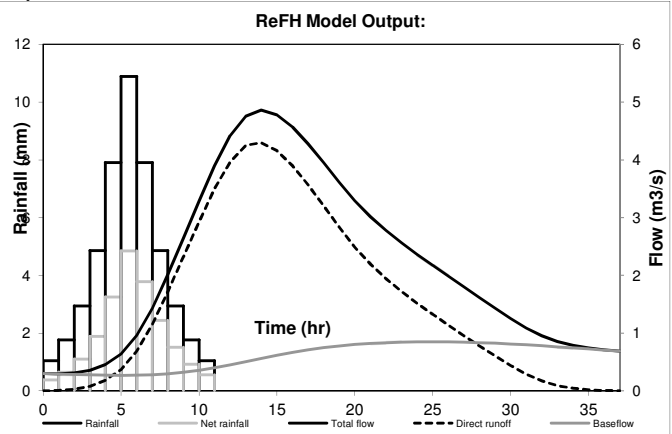
Summary of results

FEH DDF rainfall (mm)	76.9	Peak rainfall (mm)	10.9
Design rainfall (mm)	47.9	Peak flow (m³/s)	4.9

Results

Series	Design Rainfall	Net rainfall	Direct runoff	Baseflow	Total flow
Unit	mm	mm	m ³ /s	m ³ /s	m ³ /s
0	1.1	0.4	0.0	0.3	0.3
1	1.8	0.6	0.0	0.3	0.3
2	2.9	1.1	0.0	0.3	0.3
3	4.9	1.9	0.1	0.3	0.4
4	7.9	3.3	0.2	0.3	0.5
5	10.9	4.9	0.4	0.3	0.6
6	7.9	3.8	0.7	0.3	1.0
7	4.9	2.4	1.2	0.3	1.4
8	2.9	1.5	1.7	0.3	2.0
9	1.8	0.9	2.3	0.3	2.6
10	1.1	0.6	2.9	0.4	3.3
11	0.0	0.0	3.5	0.4	3.9
12	0.0	0.0	4.0	0.5	4.4
13	0.0	0.0	4.3	0.5	4.8
14	0.0	0.0	4.3	0.6	4.9
15	0.0	0.0	4.2	0.6	4.8
16	0.0	0.0	3.9	0.7	4.6
17	0.0	0.0	3.6	0.7	4.3
18	0.0	0.0	3.2	0.7	4.0
19	0.0	0.0	2.8	0.8	3.6
20	0.0	0.0	2.5	0.8	3.3
21	0.0	0.0	2.2	0.8	3.0
22	0.0	0.0	1.9	0.8	2.8
23	0.0	0.0	1.7	0.8	2.6
24	0.0	0.0	1.5	0.8	2.4
25	0.0	0.0	1.3	0.8	2.2
26	0.0	0.0	1.1	0.8	2.0
27	0.0	0.0	1.0	0.8	1.8
28	0.0	0.0	0.8	0.8	1.6
29	0.0	0.0	0.6	0.8	1.4
30	0.0	0.0	0.4	0.8	1.3
31	0.0	0.0	0.3	0.8	1.1
32	0.0	0.0	0.2	0.8	1.0
33	0.0	0.0	0.1	0.8	0.9
34	0.0	0.0	0.0	0.7	0.8
35	0.0	0.0	0.0	0.7	0.7
36	0.0	0.0	0.0	0.7	0.7
37	0.0	0.0	0.0	0.7	0.7
Total (mm)	47.9	21.4	21.4	8.4	29.7

Graph



Audit comments

Model run with ReFH dll version 1.4.0003

Catchment

Catchment descriptors imported from file
 Catchment descriptor file = 'B2.csv'
 Catchment descriptor file exported from CD ROM version 1
 BFIHOST value of 0.313 used
 PROPWET value of 0.24 used
 SAAR value of 546 used
 DPLBAR value of 4.63 used
 DPSBAR value of 17.2 used
 URBEXT value of 0.0391 used
 C value of -0.02656 used
 D1 value of 0.31165 used
 D2 value of 0.29372 used
 D3 value of 0.27346 used
 E value of 0.3181 used
 F value of 2.42492 used

Rainfall

Recommended season is Winter, as URBEXT < 0.125
 ReFH design standard Seasonal Correction Factor of 0.65 applied
 ReFH design standard Areal Reduction Factor of 0.96 applied

Loss Model

C_{max} derived from catchment descriptors
 ReFH design standard C_{ini} used
 ReFH design standard α factor used

Routing Model

T_p derived from catchment descriptors
 ReFH design standard used for U_p
 ReFH design standard used for U_k

Revitalised FSR/FEH rainfall runoff method

Spreadsheet application report

Baseflow Model

BL derived from catchment descriptors

BR derived from catchment descriptors

ReFH design standard BF_0 used

Revitalised FSR/FEH rainfall runoff method

Spreadsheet application report

User name	Ukgxg006	Catchment name	B3	Date/time modelled	29-Sep-2011 10:37
Company name	WSP P&D	Catchment easting	538650	Version	1.4
Project name	Northstowe - Longstandon	Catchment northing	268100		
		Catchment area	12.84		

Summary of model setup

Design rainfall parameters		Loss model parameters		Routing model parameters		Baseflow model parameters	
Return period (yr)	100	C_{max} (mm)	272	T_p (hr)	8.88	BL (hr)	39.9
Duration (hr)	11	C_{ini} (mm)	120	U_p	0.65	BR	0.62
Timestep (hr)	1	α factor	0.83	U_k	0.8	BF₀ (m³/s)	0.4
Season	Winter						

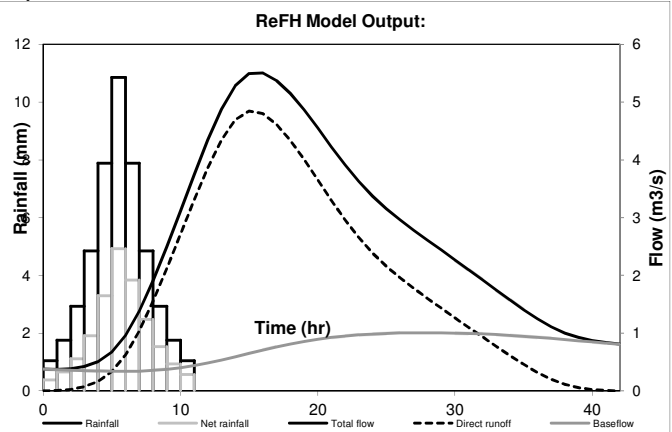
Summary of results

FEH DDF rainfall (mm)	77	Peak rainfall (mm)	10.9
Design rainfall (mm)	47.8	Peak flow (m³/s)	5.5

Results

Series	Design Rainfall	Net rainfall	Direct runoff	Baseflow	Total flow
Unit	mm	mm	m ³ /s	m ³ /s	m ³ /s
0	1.0	0.4	0.0	0.4	0.4
1	1.8	0.7	0.0	0.4	0.4
2	2.9	1.1	0.0	0.4	0.4
3	4.8	1.9	0.1	0.4	0.4
4	7.9	3.3	0.2	0.3	0.5
5	10.9	4.9	0.3	0.3	0.7
6	7.9	3.8	0.6	0.3	1.0
7	4.8	2.5	1.0	0.3	1.4
8	2.9	1.5	1.6	0.4	1.9
9	1.8	0.9	2.1	0.4	2.5
10	1.0	0.6	2.7	0.4	3.1
11	0.0	0.0	3.3	0.4	3.7
12	0.0	0.0	3.9	0.5	4.3
13	0.0	0.0	4.3	0.5	4.9
14	0.0	0.0	4.7	0.6	5.3
15	0.0	0.0	4.8	0.6	5.5
16	0.0	0.0	4.8	0.7	5.5
17	0.0	0.0	4.6	0.8	5.4
18	0.0	0.0	4.3	0.8	5.1
19	0.0	0.0	4.0	0.9	4.9
20	0.0	0.0	3.7	0.9	4.6
21	0.0	0.0	3.3	0.9	4.2
22	0.0	0.0	3.0	1.0	3.9
23	0.0	0.0	2.7	1.0	3.6
24	0.0	0.0	2.4	1.0	3.4
25	0.0	0.0	2.2	1.0	3.2
26	0.0	0.0	2.0	1.0	3.0
27	0.0	0.0	1.8	1.0	2.8
28	0.0	0.0	1.6	1.0	2.6
29	0.0	0.0	1.4	1.0	2.4
30	0.0	0.0	1.3	1.0	2.3
31	0.0	0.0	1.1	1.0	2.1
32	0.0	0.0	0.9	1.0	1.9
33	0.0	0.0	0.8	1.0	1.7
34	0.0	0.0	0.6	1.0	1.6
35	0.0	0.0	0.5	0.9	1.4
36	0.0	0.0	0.3	0.9	1.2
37	0.0	0.0	0.2	0.9	1.1
38	0.0	0.0	0.1	0.9	1.0
39	0.0	0.0	0.1	0.9	0.9
40	0.0	0.0	0.0	0.8	0.9
41	0.0	0.0	0.0	0.8	0.8
42	0.0	0.0	0.0	0.8	0.8
Total (mm)	47.8	21.7	21.7	8.8	30.5

Graph



Audit comments

Model run with ReFH dll version 1.4.0003

Catchment

Catchment descriptors imported from file
 Catchment descriptor file = 'B3.csv'
 Catchment descriptor file exported from CD ROM version 1
 BFIHOST value of 0.305 used
 PROPWET value of 0.24 used
 SAAR value of 545 used
 DPLBAR value of 6 used
 DPSBAR value of 14.8 used
 URBEXT value of 0.0425 used
 C value of -0.02644 used
 D1 value of 0.31122 used
 D2 value of 0.28874 used
 D3 value of 0.27218 used
 E value of 0.31809 used
 F value of 2.42585 used

Rainfall

Recommended season is Winter, as URBEXT < 0.125
 ReFH design standard Seasonal Correction Factor of 0.65 applied
 ReFH design standard Areal Reduction Factor of 0.96 applied

Loss Model

C_{max} derived from catchment descriptors
 ReFH design standard C_{ini} used
 ReFH design standard α factor used

Routing Model

Revitalised FSR/FEH rainfall runoff method

Spreadsheet application report

T_p derived from catchment descriptors

ReFH design standard used for U_p

ReFH design standard used for U_k

Baseflow Model

BL derived from catchment descriptors

BR derived from catchment descriptors

ReFH design standard BF_0 used

Revitalised FSR/FEH rainfall runoff method

Spreadsheet application report

User name	Ukgxg006	Catchment name	B4	Date/time modelled	29-Sep-2011 10:38
Company name	WSP P&D	Catchment easting	537450	Version	1.4
Project name	Northstowe - Longstandon	Catchment northing	268750		
		Catchment area	23.83		

Summary of model setup

Design rainfall parameters		Loss model parameters		Routing model parameters		Baseflow model parameters	
Return period (yr)	100	C_{max} (mm)	281	T_p (hr)	9.4	BL (hr)	43
Duration (hr)	15	C_{ini} (mm)	121	U_p	0.65	BR	0.64
Timestep (hr)	1	α factor	0.83	U_k	0.8	BF₀ (m³/s)	0.7
Season	Winter						

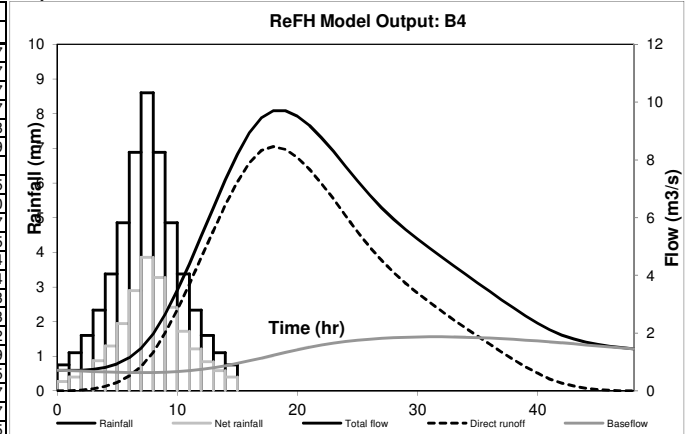
Summary of results

FEH DDF rainfall (mm)	81.2	Peak rainfall (mm)	8.6
Design rainfall (mm)	50.4	Peak flow (m³/s)	9.7

Results

Series	Design Rainfall	Net rainfall	Direct runoff	Baseflow	Total flow
Unit	mm	mm	m ³ /s	m ³ /s	m ³ /s
0	0.8	0.3	0.0	0.7	0.7
1	1.1	0.4	0.0	0.7	0.7
2	1.6	0.6	0.0	0.7	0.7
3	2.3	0.9	0.1	0.7	0.7
4	3.4	1.3	0.2	0.7	0.8
5	4.9	1.9	0.3	0.6	0.9
6	6.9	2.9	0.5	0.6	1.1
7	8.6	3.9	0.8	0.6	1.5
8	6.9	3.3	1.3	0.6	2.0
9	4.9	2.4	2.0	0.6	2.7
10	3.4	1.7	2.8	0.7	3.5
11	2.3	1.2	3.7	0.7	4.4
12	1.6	0.8	4.6	0.7	5.4
13	1.1	0.6	5.5	0.8	6.3
14	0.8	0.4	6.4	0.9	7.3
15	0.0	0.0	7.2	1.0	8.2
16	0.0	0.0	7.9	1.0	8.9
17	0.0	0.0	8.3	1.1	9.5
18	0.0	0.0	8.5	1.2	9.7
19	0.0	0.0	8.4	1.3	9.7
20	0.0	0.0	8.1	1.4	9.5
21	0.0	0.0	7.7	1.5	9.2
22	0.0	0.0	7.2	1.6	8.8
23	0.0	0.0	6.6	1.7	8.3
24	0.0	0.0	6.1	1.7	7.8
25	0.0	0.0	5.5	1.8	7.3
26	0.0	0.0	5.0	1.8	6.8
27	0.0	0.0	4.5	1.8	6.3
28	0.0	0.0	4.1	1.8	5.9
29	0.0	0.0	3.7	1.9	5.6
30	0.0	0.0	3.4	1.9	5.3
31	0.0	0.0	3.1	1.9	4.9
32	0.0	0.0	2.8	1.9	4.6
33	0.0	0.0	2.5	1.9	4.3
34	0.0	0.0	2.2	1.9	4.0
35	0.0	0.0	1.9	1.8	3.7
36	0.0	0.0	1.6	1.8	3.4
37	0.0	0.0	1.3	1.8	3.2
38	0.0	0.0	1.1	1.8	2.9
39	0.0	0.0	0.8	1.8	2.6
40	0.0	0.0	0.6	1.7	2.3
41	0.0	0.0	0.4	1.7	2.1
42	0.0	0.0	0.3	1.7	1.9
43	0.0	0.0	0.2	1.6	1.8
44	0.0	0.0	0.1	1.6	1.7
45	0.0	0.0	0.1	1.6	1.6
46	0.0	0.0	0.0	1.5	1.5
47	0.0	0.0	0.0	1.5	1.5
48	0.0	0.0	0.0	1.5	1.5
Total (mm)	50.4	22.6	22.6	9.9	32.5

Graph



Audit comments

Model run with ReFH dll version 1.4.0003

Catchment

Catchment descriptors imported from file
 Catchment descriptor file = 'B4.csv'
 Catchment descriptor file exported from CD ROM version 1
 BFIHOST value of 0.315 used
 PROPWET value of 0.24 used
 SAAR value of 544 used
 DPLBAR value of 6.21 used
 DPSBAR value of 16 used
 URBEXT value of 0.0245 used
 C value of -0.02653 used
 D1 value of 0.31159 used
 D2 value of 0.28862 used
 D3 value of 0.27018 used
 E value of 0.31863 used
 F value of 2.42339 used

Rainfall

Recommended season is Winter, as URBEXT < 0.125
 ReFH design standard Seasonal Correction Factor of 0.65 applied
 ReFH design standard Areal Reduction Factor of 0.96 applied

Revitalised FSR/FEH rainfall runoff method

Spreadsheet application report

Loss Model

C_{Max} derived from catchment descriptors

ReFH design standard C_{in} used

ReFH design standard α factor used

Routing Model

T_p derived from catchment descriptors

ReFH design standard used for U_p

ReFH design standard used for U_k

Baseflow Model

BL derived from catchment descriptors

BR derived from catchment descriptors

ReFH design standard BF_0 used

Revitalised FSR/FEH rainfall runoff method

Spreadsheet application report

User name	Ukgxg006	Catchment name	B5	Date/time modelled	29-Sep-2011 10:41
Company name	WSP P&D	Catchment easting	537450	Version	1.4
Project name	Northstowe - Longstandon	Catchment northing	268800		
		Catchment area	26.76		

Summary of model setup

Design rainfall parameters		Loss model parameters		Routing model parameters		Baseflow model parameters	
Return period (yr)	100	C_{max} (mm)	287	T_p (hr)	9.31	BL (hr)	43.3
Duration (hr)	15	C_{ini} (mm)	122	U_p	0.65	BR	0.66
Timestep (hr)	1	α factor	0.83	U_k	0.8	BF₀ (m³/s)	0.8
Season	Winter						

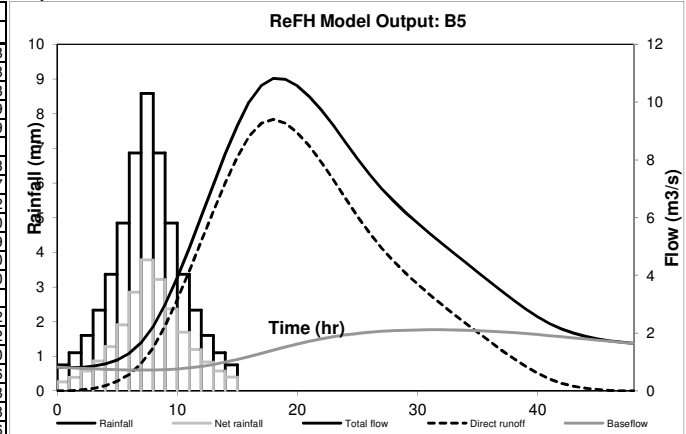
Summary of results

FEH DDF rainfall (mm)	81.2	Peak rainfall (mm)	8.6
Design rainfall (mm)	50.3	Peak flow (m³/s)	10.8

Results

Series	Design Rainfall	Net rainfall	Direct runoff	Baseflow	Total flow
Unit	mm	mm	m ³ /s	m ³ /s	m ³ /s
0	0.8	0.3	0.0	0.8	0.8
1	1.1	0.4	0.0	0.8	0.8
2	1.6	0.6	0.0	0.8	0.8
3	2.3	0.9	0.1	0.8	0.9
4	3.4	1.3	0.2	0.8	0.9
5	4.8	1.9	0.3	0.7	1.1
6	6.9	2.8	0.6	0.7	1.3
7	8.6	3.8	0.9	0.7	1.7
8	6.9	3.2	1.5	0.7	2.2
9	4.8	2.4	2.3	0.7	3.0
10	3.4	1.7	3.2	0.8	3.9
11	2.3	1.2	4.2	0.8	5.0
12	1.6	0.8	5.2	0.9	6.0
13	1.1	0.6	6.2	0.9	7.1
14	0.8	0.4	7.2	1.0	8.2
15	0.0	0.0	8.1	1.1	9.2
16	0.0	0.0	8.8	1.2	10.0
17	0.0	0.0	9.3	1.3	10.6
18	0.0	0.0	9.4	1.4	10.8
19	0.0	0.0	9.3	1.5	10.8
20	0.0	0.0	8.9	1.6	10.6
21	0.0	0.0	8.5	1.7	10.2
22	0.0	0.0	7.9	1.8	9.7
23	0.0	0.0	7.3	1.9	9.2
24	0.0	0.0	6.7	1.9	8.6
25	0.0	0.0	6.0	2.0	8.0
26	0.0	0.0	5.5	2.0	7.5
27	0.0	0.0	4.9	2.1	7.0
28	0.0	0.0	4.5	2.1	6.6
29	0.0	0.0	4.1	2.1	6.2
30	0.0	0.0	3.7	2.1	5.8
31	0.0	0.0	3.3	2.1	5.5
32	0.0	0.0	3.0	2.1	5.1
33	0.0	0.0	2.7	2.1	4.8
34	0.0	0.0	2.3	2.1	4.5
35	0.0	0.0	2.0	2.1	4.1
36	0.0	0.0	1.7	2.1	3.8
37	0.0	0.0	1.4	2.0	3.5
38	0.0	0.0	1.1	2.0	3.1
39	0.0	0.0	0.9	2.0	2.8
40	0.0	0.0	0.6	2.0	2.6
41	0.0	0.0	0.4	1.9	2.3
42	0.0	0.0	0.3	1.9	2.1
43	0.0	0.0	0.2	1.8	2.0
44	0.0	0.0	0.1	1.8	1.9
45	0.0	0.0	0.0	1.8	1.8
46	0.0	0.0	0.0	1.7	1.7
47	0.0	0.0	0.0	1.7	1.7
48	0.0	0.0	0.0	1.6	1.6
Total (mm)	50.3	22.2	22.2	10.0	32.2

Graph



Audit comments

Model run with ReFH dll version 1.4.0003

Catchment

Catchment descriptors imported from file
 Catchment descriptor file = 'B5.csv'
 Catchment descriptor file exported from CD ROM version 1
 BFIHOST value of 0.322 used
 PROPWET value of 0.24 used
 SAAR value of 544 used
 DPLBAR value of 5.88 used
 DPSBAR value of 15.2 used
 URBEXT value of 0.0218 used
 C value of -0.02653 used
 D1 value of 0.31156 used
 D2 value of 0.28775 used
 D3 value of 0.27006 used
 E value of 0.31864 used
 F value of 2.42306 used

Rainfall

Recommended season is Winter, as URBEXT < 0.125
 ReFH design standard Seasonal Correction Factor of 0.65 applied
 ReFH design standard Areal Reduction Factor of 0.96 applied

Revitalised FSR/FEH rainfall runoff method

Spreadsheet application report

Loss Model

C_{Max} derived from catchment descriptors

ReFH design standard C_{in} used

ReFH design standard α factor used

Routing Model

T_p derived from catchment descriptors

ReFH design standard used for U_p

ReFH design standard used for U_k

Baseflow Model

BL derived from catchment descriptors

BR derived from catchment descriptors

ReFH design standard BF_0 used

Revitalised FSR/FEH rainfall runoff method

Spreadsheet application report

User name	Ukgxg006	Catchment name	B6	Date/time modelled	29-Sep-2011 10:43
Company name	WSP P&D	Catchment easting	536600	Version	1.4
Project name	Northstowe - Longstandon	Catchment northing	270450		
		Catchment area	34.83		

Summary of model setup

Design rainfall parameters		Loss model parameters		Routing model parameters		Baseflow model parameters	
Return period (yr)	100	C_{max} (mm)	303	T_p (hr)	10.33	BL (hr)	45
Duration (hr)	15	C_{ini} (mm)	124	U_p	0.65	BR	0.7
Timestep (hr)	1	α factor	0.83	U_k	0.8	BF₀ (m³/s)	1.1
Season	Winter						

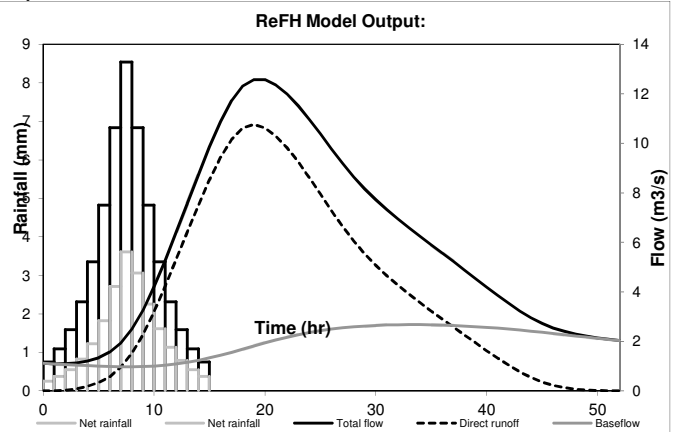
Summary of results

FEH DDF rainfall (mm)	81.2	Peak rainfall (mm)	8.5
Design rainfall (mm)	50.1	Peak flow (m³/s)	12.6

Results

Series	Design Rainfall	Net rainfall	Direct runoff	Baseflow	Total flow
Unit	mm	mm	m ³ /s	m ³ /s	m ³ /s
0	0.7	0.3	0.0	1.1	1.1
1	1.1	0.4	0.0	1.1	1.1
2	1.6	0.6	0.0	1.1	1.1
3	2.3	0.8	0.1	1.0	1.1
4	3.4	1.2	0.2	1.0	1.2
5	4.8	1.8	0.3	1.0	1.3
6	6.8	2.7	0.6	1.0	1.6
7	8.5	3.6	1.0	1.0	1.9
8	6.8	3.1	1.5	1.0	2.5
9	4.8	2.3	2.3	1.0	3.3
10	3.4	1.6	3.2	1.0	4.2
11	2.3	1.1	4.2	1.0	5.3
12	1.6	0.8	5.3	1.1	6.4
13	1.1	0.5	6.4	1.2	7.6
14	0.7	0.4	7.5	1.2	8.7
15	0.0	0.0	8.5	1.3	9.9
16	0.0	0.0	9.4	1.4	10.9
17	0.0	0.0	10.2	1.6	11.7
18	0.0	0.0	10.6	1.7	12.3
19	0.0	0.0	10.8	1.8	12.6
20	0.0	0.0	10.6	1.9	12.6
21	0.0	0.0	10.3	2.1	12.4
22	0.0	0.0	9.8	2.2	12.0
23	0.0	0.0	9.2	2.3	11.5
24	0.0	0.0	8.6	2.4	11.0
25	0.0	0.0	8.0	2.4	10.4
26	0.0	0.0	7.3	2.5	9.8
27	0.0	0.0	6.6	2.5	9.2
28	0.0	0.0	6.1	2.6	8.6
29	0.0	0.0	5.5	2.6	8.2
30	0.0	0.0	5.1	2.6	7.7
31	0.0	0.0	4.7	2.7	7.3
32	0.0	0.0	4.3	2.7	6.9
33	0.0	0.0	3.9	2.7	6.6
34	0.0	0.0	3.6	2.7	6.2
35	0.0	0.0	3.2	2.7	5.9
36	0.0	0.0	2.9	2.7	5.6
37	0.0	0.0	2.6	2.6	5.2
38	0.0	0.0	2.3	2.6	4.9
39	0.0	0.0	1.9	2.6	4.5
40	0.0	0.0	1.6	2.6	4.2
41	0.0	0.0	1.3	2.5	3.9
42	0.0	0.0	1.0	2.5	3.5
43	0.0	0.0	0.8	2.5	3.2
44	0.0	0.0	0.5	2.4	3.0
45	0.0	0.0	0.4	2.4	2.7
46	0.0	0.0	0.2	2.3	2.5
47	0.0	0.0	0.1	2.3	2.4
48	0.0	0.0	0.1	2.2	2.3
49	0.0	0.0	0.0	2.2	2.2
50	0.0	0.0	0.0	2.1	2.1
51	0.0	0.0	0.0	2.1	2.1
52	0.0	0.0	0.0	2.0	2.0
Total (mm)	50.1	21.2	21.2	10.7	31.9

Graph



Audit comments

Model run with ReFH dll version 1.4.0003

Catchment

Catchment descriptors imported from file
 Catchment descriptor file = 'B6.csv'
 Catchment descriptor file exported from CD ROM version 1
 BFIHOST value of 0.341 used
 PROPWET value of 0.24 used
 SAAR value of 544 used
 DPLBAR value of 7.02 used
 DPSBAR value of 13.9 used
 URBEXT value of 0.0303 used
 C value of -0.02647 used
 D1 value of 0.3116 used
 D2 value of 0.28432 used
 D3 value of 0.26893 used
 E value of 0.31874 used
 F value of 2.42212 used

Rainfall

Revitalised FSR/FEH rainfall runoff method

Spreadsheet application report

Recommended season is Winter, as URBEXT < 0.125
ReFH design standard Seasonal Correction Factor of 0.65 applied
ReFH design standard Areal Reduction Factor of 0.95 applied

Loss Model

C_{Max} derived from catchment descriptors
ReFH design standard C_{in} used
ReFH design standard α factor used

Routing Model

T_p derived from catchment descriptors
ReFH design standard used for U_p
ReFH design standard used for U_k

Baseflow Model

BL derived from catchment descriptors
BR derived from catchment descriptors
ReFH design standard BF_0 used

Appendix B Hydraulic Modelling



DO NOT SCALE

School Lane

DITCH DIVERSION

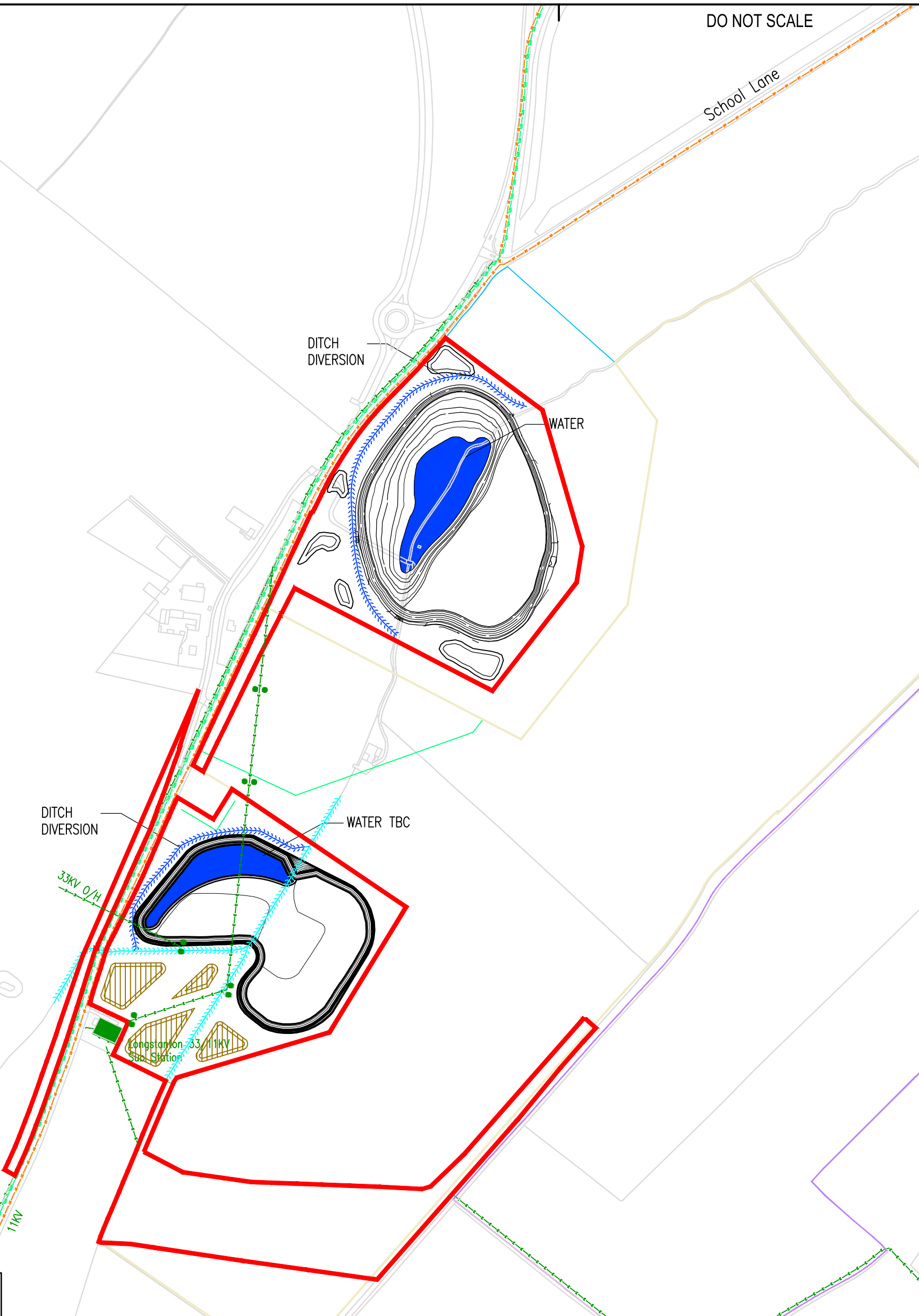
WATER

DITCH DIVERSION

WATER TBC

33KV O/H

Longstanton 33/11KV Sub Station



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N:\Northstowe, Phase 1, planning application\DRAWINGS\AUTOCAD\FLD Flood Modelling\2988-FLD-302.dwg 02/02/2012 17:11:04 Ward, John

REV	DATE	BY	DESCRIPTION	CHK	APD
D	31/01/12	JW	REVISED PHASE 1 BOUNDARY & ELECTRICAL PLANT TO MATCH TOPOGRAPHICAL SURVEY	ALA	ALA
C	21/12/11	CC	TEXT REMOVED	MJV	ALA
B	02/12/11	JW	BASIN DESIGN ALTERATION	MJV	ALA
A	09/11/11	CC	FIRST ISSUE	ALA	ALA

CAD FILE:	DESIGN-DRAWN:	DATE:
2988-FLD-302	CC	January 2012



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PROJECT: NORTHSTOWE PHASE 1		
TITLE: LONGSTANTON BROOK OFF SITE MITIGATION		
SCALE @ A3: 1:5000	CHECKED: ALA	APPROVED: ALA
PROJECT No: 11012988	DRAWING No: 2988/FLD/302	REV: D

DRAWING STATUS:
FOR INFORMATION ONLY

CLIENT:
GALLAGHER

ARCHITECT:
TOR

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Appendix C Model Results

		flow in m ³ /s stage in mAOD		Pre-Development											
Label	Location	1 in 5 FEH		1 in 10 FEH		1 in 20 FEH		1 in 30 FEH		1 in 50 FEH		1 in 100 FEH		1 in 100cc FEH	
		Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage
4452.4		2.355	22.496	2.983	22.622	3.698	22.744	4.107	22.807	4.732	22.898	5.555	22.978	6.666	23.075
4400		2.355	22.042	2.983	22.163	3.698	22.281	4.107	22.342	4.731	22.428	5.553	22.551	6.643	22.904
4350		2.355	21.649	2.983	21.75	3.698	21.839	4.107	21.9	4.73	22.022	5.548	22.27	6.625	22.86
4272.53		2.355	20.907	2.983	21.042	3.698	21.248	4.106	21.393	4.729	21.649	5.544	22.097	6.603	22.842
4272.2		2.355	20.907	2.983	21.04	3.698	21.18	4.106	21.257	4.729	21.376	5.544	21.56	6.603	21.841
4271.6		2.355	20.897	2.983	21.032	3.698	21.173	4.106	21.25	4.729	21.37	5.544	21.556	6.603	21.839
4268.2		2.355	20.905	2.983	21.038	3.698	21.177	4.106	21.253	4.729	21.371	5.544	21.553	6.603	21.835
4254.2		2.355	20.761	2.983	20.899	3.698	21.044	4.106	21.122	4.729	21.248	5.544	21.45	6.603	21.762
4218		2.355	20.547	2.983	20.69	3.697	20.838	4.106	20.917	4.729	21.052	5.544	21.27	6.602	21.654
4201.8		2.355	20.542	2.983	20.685	3.697	20.833	4.106	20.912	4.729	21.026	5.544	21.179	6.602	21.379
4159.9		2.355	20.304	2.983	20.445	3.697	20.585	4.106	20.658	4.729	20.763	5.544	20.893	6.602	21.072
4109.6		2.355	20.2	2.983	20.327	3.697	20.448	4.106	20.511	4.729	20.599	5.544	20.71	6.602	20.835
4096.5		2.355	20.14	2.983	20.27	3.697	20.395	4.106	20.46	4.729	20.551	5.544	20.669	6.602	20.797
4052.8		2.355	19.831	2.982	19.938	3.697	20.049	4.106	20.108	4.729	20.196	5.544	20.319	6.602	20.469
3997.2		2.355	19.362	2.982	19.492	3.697	19.623	4.106	19.694	4.729	19.799	5.544	19.942	6.602	20.142
3993.7		2.355	19.357	2.982	19.482	3.697	19.608	4.106	19.677	4.729	19.779	5.544	19.901	6.602	20.048
3992.7		2.355	19.347	2.982	19.471	3.697	19.598	4.106	19.666	4.729	19.769	5.544	19.89	6.602	20.04
3941.7		2.355	19.072	2.982	19.211	3.697	19.353	4.106	19.429	4.729	19.54	5.544	19.684	6.602	19.867
3913.9		2.355	18.84	2.982	18.934	3.697	19.026	4.106	19.074	4.729	19.143	5.544	19.229	6.602	19.336
3847.9		2.354	18.541	2.982	18.622	3.697	18.71	4.106	18.759	4.729	18.833	5.544	18.93	6.602	19.055
3657.4		2.354	17.651	2.982	17.797	3.696	17.956	4.105	18.044	4.728	18.173	5.544	18.337	6.601	18.54
3614.6		2.354	17.498	2.982	17.662	3.696	17.836	4.105	17.931	4.728	18.07	5.544	18.243	6.601	18.456
3606.3		2.354	17.266	2.982	17.391	3.696	17.51	4.105	17.571	4.728	17.659	5.544	17.765	6.601	17.887
3438.8		2.355	16.732	2.982	16.852	3.696	16.952	4.105	17.003	4.728	17.072	5.544	17.16	6.601	17.262
3317.7		2.354	15.77	2.981	15.846	3.696	15.925	4.105	15.966	4.728	16.027	5.544	16.101	6.601	16.19
3313		2.354	15.73	2.981	15.81	3.696	15.893	4.105	15.935	4.728	15.999	5.544	16.077	6.601	16.169
3254		2.354	15.237	2.981	15.328	3.696	15.422	4.104	15.472	4.728	15.545	5.544	15.632	6.601	15.736
3054.3		2.354	14.3	2.981	14.424	3.695	14.553	4.104	14.621	4.727	14.701	5.543	14.773	6.6	14.871
2856.7		2.353	13.742	2.98	13.885	3.695	14.04	4.103	14.128	4.723	14.253	5.542	14.373	6.598	14.513
2723.1		2.353	13.248	2.98	13.424	3.694	13.606	4.102	13.708	4.721	13.849	5.542	13.969	6.596	14.125
WD6		0	13.248	0	13.424	0	13.606	0	13.708	0	13.849	0	13.969	0	14.125
WD6		0	12.984	0	13.127	0	13.272	0	13.355	0	13.467	0	13.518	0	13.574
BU6		2.353	13.248	2.98	13.424	3.694	13.606	4.102	13.708	4.721	13.849	5.542	13.969	6.596	14.125
BD6		2.353	12.984	2.98	13.127	3.694	13.272	4.102	13.355	4.721	13.467	5.542	13.518	6.596	13.574
2711.2		2.353	12.984	2.98	13.127	3.694	13.272	4.102	13.355	4.721	13.467	5.542	13.518	6.596	13.574
2651.1		2.353	12.683	2.98	12.832	3.694	12.981	4.102	13.062	4.72	13.196	5.542	13.294	6.6	13.325
2651.1D	Bypass of upstream reservoir 3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
USRES3SP1		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
USRES3SP1		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2608.7	Bypass of upstream reservoir 3	2.353	12.545	2.98	12.694	3.694	12.843	4.102	12.92	4.736	13.065	5.548	13.164	6.609	13.222
2608.64		2.353	12.545	2.98	12.694	3.694	12.843	4.102	12.92	4.736	13.065	5.548	13.164	6.609	13.221
2608.63		2.353	12.545	2.98	12.694	3.694	12.843	4.102	12.92	4.736	13.065	5.548	13.17	6.609	13.223
2608.495		2.353	12.545	2.98	12.694	3.694	12.842	4.102	12.92	4.736	13.065	5.548	13.169	6.609	13.223
2535.2	Bypass of upstream reservoir 3	2.353	12.389	2.98	12.531	3.694	12.675	4.102	12.751	4.716	12.914	5.579	12.987	6.586	13.053
2447.2	Bypass of upstream reservoir 3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
RES3	Upstream Reservoir 3 (South Pond)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
DummyRES3		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
DSRES3SP1		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
DSRES3SP		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2447.2		2.353	12.123	2.98	12.272	3.694	12.428	4.102	12.513	4.836	12.68	5.558	12.822	6.507	12.961
2276.6		2.353	11.481	2.98	11.565	3.694	11.645	4.102	11.685	4.726	11.905	5.646	11.917	6.478	11.921
2272.1		2.353	11.473	2.98	11.558	3.694	11.64	4.102	11.68	4.726	11.928	5.646	11.941	6.478	11.945
2270.5		2.353	11.462	2.98	11.546	3.694	11.626	4.102	11.665	4.728	11.922	5.646	11.935	6.478	11.939
2269.6		2.353	11.462	2.98	11.546	3.694	11.625	4.102	11.664	4.728	11.922	5.646	11.935	6.478	11.939
2252.6		2.353	11.428	2.98	11.522	3.694	11.61	4.102	11.655	4.865	11.917	5.658	11.93	6.478	11.934
2057.8		2.352	10.624	2.979	10.772	3.692	10.935	4.1	11.013	5.319	11.206	5.78	11.283	6.469	11.363
2010.7		2.351	10.525	2.978	10.698	3.692	10.878	4.099	10.962	4.951	11.1	5.714	11.214	6.459	11.329
2005.1		2.351	10.508	2.978	10.675	3.692	10.852	4.099	10.934	4.951	11.067	5.714	11.193	6.459	11.319
1992		2.351	10.472	2.978	10.636	3.692	10.819	4.099	10.917	4.944	11.078	5.694	11.199	6.458	11.316

		flow in m ³ /s stage in mAOD		Pre-Development													
				1 in 5 FEH		1 in 10 FEH		1 in 20 FEH		1 in 30 FEH		1 in 50 FEH		1 in 100 FEH		1 in 100cc FEH	
Label	Location	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage
1991.89		2.351	10.471	2.978	10.623	3.692	10.768	4.099	10.835	4.944	10.926	5.694	10.978	6.458	11.015		
1990.89	Bypass of upstream reservoir 2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1900	Bypass of upstream reservoir 2	2.351	10.247	2.978	10.384	3.691	10.517	4.098	10.583	4.933	10.653	5.686	10.689	6.458	10.721		
1900A	Bypass of upstream reservoir 2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1900B	Bypass of upstream reservoir 2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1900C	Bypass of upstream reservoir 2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1852.5	Bypass of upstream reservoir 2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1852.41		2.978	10.145	3.759	10.278	4.65	10.407	5.157	10.473	6.144	10.543	7.091	10.577	8.076	10.604		
1852.4	Bypass of upstream reservoir 2	2.351	10.145	2.977	10.278	3.691	10.407	4.098	10.473	4.929	10.543	5.682	10.577	6.459	10.604		
FlapUS		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
RES2	Upstream Reservoir 2 (North Pond)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
DSRES2SP1		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
DSRES2SP		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1852.3		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1852.2		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1852		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1653.8		2.977	9.535	3.759	9.672	4.652	9.801	5.157	9.831	6.108	9.901	7.088	9.927	8.076	9.948		
1461.5		2.977	9.046	3.758	9.2	4.652	9.462	5.23	9.471	6.083	9.475	7.08	9.477	8.075	9.488		
1261.2		2.976	8.649	3.758	8.795	4.607	8.971	5.157	9.035	6.062	9.063	7.058	9.087	8.075	9.105		
1200		2.975	8.572	3.758	8.708	4.603	8.803	5.155	8.883	6.035	8.924	7.049	8.958	8.074	8.981		
1100		2.974	8.503	3.758	8.626	4.601	8.695	5.153	8.728	5.982	8.763	7.021	8.8	8.072	8.83		
1045.9		2.973	8.483	3.758	8.6	4.597	8.662	5.152	8.692	5.948	8.723	7.003	8.758	8.071	8.788		
921.9		2.971	8.439	3.759	8.558	4.594	8.612	5.152	8.634	5.949	8.662	6.991	8.693	8.069	8.721		
920.9	School Lane (u/s)	2.971	8.438	3.759	8.558	4.594	8.611	5.152	8.634	5.949	8.662	6.991	8.692	8.069	8.721		
C920SP-U	School Lane (spill)	0.004	8.438	0.559	8.558	1.421	8.611	1.988	8.634	2.801	8.662	3.913	8.692	5.095	8.721		
C920SP-D	School Lane (spill)	0.004	8.217	0.559	8.3	1.421	8.357	1.988	8.381	2.801	8.41	3.913	8.452	5.095	8.495		
C920.9BU	School Lane (culvert b)	1.483	8.364	1.612	8.471	1.631	8.526	1.632	8.549	1.638	8.577	1.644	8.612	1.652	8.645		
C920.9BD	School Lane (culvert b)	1.483	8.307	1.612	8.405	1.631	8.461	1.632	8.485	1.638	8.513	1.644	8.551	1.652	8.589		
C920.9AU	School Lane (culvert a)	1.483	8.364	1.612	8.471	1.631	8.526	1.632	8.549	1.638	8.577	1.644	8.612	1.652	8.645		
C920.9AD	School Lane (culvert a)	1.483	8.307	1.612	8.405	1.631	8.461	1.632	8.485	1.638	8.513	1.644	8.551	1.652	8.589		
906.5	School Lane (d/s)	2.971	8.217	3.759	8.3	4.594	8.357	5.152	8.381	5.949	8.41	6.991	8.452	8.069	8.495		
847.3		2.97	8.131	3.758	8.231	4.59	8.298	5.15	8.329	5.934	8.362	6.981	8.408	8.067	8.453		
lb		1.483	8.217	1.612	8.3	1.631	8.357	1.632	8.381	1.638	8.41	1.644	8.452	1.652	8.495		
653.5		2.965	7.713	3.744	7.912	4.559	8.052	5.138	8.11	5.867	8.169	6.954	8.243	8.06	8.308		
481.1	Hattons Road (u/s)	2.963	7.487	3.737	7.732	4.548	7.903	5.133	7.978	5.857	8.05	6.947	8.134	8.056	8.208		
481.1SP-U	Hattons Road (spill)	0	7.487	0.002	7.732	0.549	7.903	1.297	7.978	2.198	8.05	3.45	8.134	4.692	8.208		
481.1SP-D	Hattons Road (spill)	0	7.401	0.002	7.607	0.549	7.767	1.297	7.854	2.198	7.938	3.45	8.033	4.692	8.115		
C481.1U	Hattons Road (culvert)	2.963	7.432	3.735	7.645	4.107	7.802	4.111	7.885	4.121	7.966	4.13	8.057	4.106	8.137		
C481.1D	Hattons Road (culvert)	2.963	7.415	3.735	7.617	4.107	7.771	4.111	7.856	4.121	7.939	4.13	8.033	4.106	8.115		
470.7	Hattons Road (d/s)	2.963	7.401	3.737	7.607	4.548	7.767	5.133	7.854	5.857	7.938	6.947	8.033	8.056	8.115		
456.7		2.963	7.376	3.737	7.584	4.548	7.743	5.133	7.83	5.857	7.908	6.947	8.002	8.056	8.086		
258.6	High Street (u/s)	2.962	7.041	3.735	7.295	4.545	7.477	5.132	7.568	5.853	7.627	6.943	7.744	8.055	7.849		
BUS	High Street (bridge)	2.962	7.041	3.735	7.295	4.426	7.477	4.735	7.568	5.917	7.627	5.844	7.744	5.913	7.849		
BD5	High Street (bridge)	2.962	7.041	3.735	7.295	4.426	7.473	4.735	7.556	5.917	7.627	5.844	7.703	5.913	7.796		
WU5	High Street (spill)	0	7.041	0	7.295	0.124	7.477	0.401	7.568	0.419	7.627	2.192	7.744	3.803	7.849		
WD5	High Street (spill)	0	7.041	0	7.295	0.124	7.473	0.401	7.556	0.419	7.627	2.192	7.703	3.803	7.796		
254.7	High Street (d/s)	2.962	7.041	3.735	7.295	4.545	7.473	5.132	7.556	5.853	7.627	6.943	7.703	8.055	7.796		
236.1		2.962	7.034	3.735	7.292	4.545	7.471	5.132	7.555	5.853	7.625	6.951	7.698	8.055	7.791		
236.09		2.962	7.034	3.735	7.292	4.545	7.471	5.132	7.555	5.853	7.625	6.951	7.698	8.055	7.791		
225.2		2.962	7.027	3.735	7.285	4.545	7.467	5.132	7.551	5.853	7.621	6.955	7.693	8.055	7.787		
225.19		2.962	7.027	3.735	7.285	4.545	7.467	5.132	7.551	5.853	7.621	6.955	7.693	8.055	7.787		
224.97		2.962	7.027	3.735	7.285	4.545	7.467	5.132	7.551	5.853	7.621	6.955	7.693	8.055	7.787		
209.4		2.962	6.979	3.734	7.261	4.545	7.453	5.132	7.539	5.853	7.61	6.959	7.681	8.055	7.775		
209.33		2.962	6.979	3.734	7.26	4.545	7.453	5.132	7.539	5.853	7.61	6.959	7.681	8.055	7.775		
204.33		2.962	6.968	3.734	7.252	4.545	7.447	5.132	7.534	5.853	7.605	6.96	7.677	8.055	7.771		
203.3		2.962	6.966	3.734	7.251	4.545	7.446	5.132	7.533	5.853	7.605	6.961	7.676	8.055	7.77		
202.3		2.962	6.964	3.734	7.249	4.545	7.445	5.132	7.532	5.853	7.604	6.961	7.675	8.055	7.769		
201.3		2.962	6.963	3.734	7.248	4.545	7.444	5.132	7.531	5.853	7.603	6.961	7.674	8.055	7.768		
200.3		2.962	6.961	3.734	7.246	4.545	7.443	5.132	7.53	5.853	7.602	6.961	7.673	8.055	7.767		

		flow in m ³ /s stage in mAOD		Pre-Development											
Label	Location	1 in 5 FEH		1 in 10 FEH		1 in 20 FEH		1 in 30 FEH		1 in 50 FEH		1 in 100 FEH		1 in 100cc FEH	
		Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage
RSCULV		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CULVOUT		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
RS237.23		3.288	5.392	4.032	5.569	4.636	5.748	5.068	5.843	5.378	5.98	6.462	6.143	7.673	6.35
RS137.569		3.025	5.39	3.607	5.569	4.162	5.748	4.49	5.843	4.743	5.98	6.162	6.142	5.971	6.35
RS90.042		2.876	5.39	3.392	5.568	4.024	5.748	4.259	5.843	4.599	5.98	5.626	6.142	5.859	6.35
RS63.594		2.814	5.389	3.31	5.568	3.975	5.747	4.174	5.843	4.586	5.98	5.261	6.142	5.862	6.35
RS38.594		2.755	5.389	3.253	5.568	3.935	5.747	4.149	5.843	4.579	5.98	5.141	6.142	5.889	6.35
RS0		2.683	5.389	3.199	5.568	3.877	5.747	4.117	5.843	4.578	5.98	5.168	6.142	5.956	6.35
RS1.4000		2.668	5.376	3.188	5.555	3.853	5.736	4.11	5.819	4.586	5.932	5.188	6.07	5.998	6.246
RS1.3800		2.647	5.358	3.173	5.539	3.834	5.72	4.116	5.804	4.601	5.918	5.214	6.057	6.038	6.235
RS1.3600		2.623	5.348	3.158	5.529	3.817	5.711	4.128	5.795	4.624	5.909	5.251	6.05	6.096	6.229
RS1.3400		2.598	5.342	3.15	5.524	3.823	5.706	4.157	5.791	4.665	5.905	5.313	6.046	6.187	6.226
RS1.3200		5.164	5.342	6.3	5.524	7.623	5.706	8.184	5.791	9.137	5.905	10.358	6.046	11.97	6.226
RS1.3000		5.115	5.332	6.251	5.514	7.574	5.697	8.144	5.783	9.097	5.898	10.326	6.039	11.925	6.219
RS1.2800		5.078	5.321	6.215	5.504	7.533	5.688	8.12	5.774	9.065	5.889	10.303	6.031	11.891	6.212
RS1.2725		5.066	5.317	6.203	5.501	7.52	5.685	8.112	5.771	9.056	5.886	10.297	6.028	11.882	6.209
RS1.2610		5.051	5.312	6.188	5.496	7.503	5.68	8.102	5.766	9.045	5.882	10.287	6.025	11.871	6.206
RS1.2600		5.754	5.312	7.053	5.496	8.55	5.68	9.233	5.766	10.341	5.882	11.759	6.025	13.623	6.206
RS1.2400		5.736	5.22	7.033	5.395	8.527	5.576	9.214	5.663	10.313	5.786	11.734	5.939	13.591	6.136
RS1.2384		5.736	5.17	7.033	5.326	8.527	5.481	9.214	5.555	10.313	5.659	11.734	5.783	13.591	5.934
CU		5.736	5.19	7.033	5.351	8.527	5.51	9.214	5.585	10.313	5.689	11.734	5.814	13.591	5.967
CD		5.736	5.186	7.033	5.345	8.527	5.502	9.214	5.576	10.313	5.678	11.734	5.799	13.591	5.948
RS1.2200		5.72	5.103	7.016	5.255	8.506	5.407	9.197	5.48	10.289	5.584	11.709	5.709	13.56	5.864
RS1.2000		5.692	5.076	6.985	5.23	8.472	5.384	9.168	5.457	10.253	5.561	11.676	5.688	13.522	5.845
RS1.1950		5.685	5.067	6.978	5.222	8.464	5.377	9.162	5.45	10.245	5.554	11.668	5.682	13.513	5.839
RS1.19493		5.685	5.066	6.978	5.218	8.464	5.371	9.162	5.443	10.245	5.547	11.668	5.673	13.513	5.83
RS1.1800		5.67	5.044	6.954	5.197	8.437	5.352	9.141	5.426	10.222	5.53	11.645	5.658	13.489	5.816
RS1.1600		5.655	5.024	6.929	5.174	8.403	5.33	9.115	5.404	10.196	5.508	11.616	5.637	13.46	5.797
RS1.1435		5.646	5.002	6.917	5.148	8.383	5.303	9.099	5.377	10.18	5.482	11.596	5.612	13.441	5.774
RS1.1430		5.646	4.999	6.916	5.144	8.382	5.296	9.098	5.369	10.18	5.472	11.596	5.601	13.44	5.76
RS1.14204		5.646	4.999	6.916	5.144	8.382	5.296	9.098	5.369	10.18	5.472	11.596	5.6	13.44	5.759
RS1.1400		5.645	4.997	6.915	5.143	8.381	5.296	9.097	5.37	10.179	5.475	11.595	5.604	13.439	5.766
RS1.1200		5.633	4.98	6.899	5.123	8.358	5.275	9.079	5.349	10.164	5.454	11.579	5.584	13.425	5.746
RS1.1000		5.621	4.958	6.886	5.098	8.344	5.247	9.068	5.32	10.154	5.424	11.568	5.554	13.416	5.717
RS1.0800		5.612	4.943	6.876	5.08	8.333	5.228	9.06	5.3	10.147	5.403	11.562	5.532	13.411	5.696
RS1.0600		6.908	4.939	8.47	5.075	10.263	5.222	11.177	5.294	12.54	5.397	14.324	5.527	16.698	5.691
RS1.0400		6.893	4.935	8.452	5.071	10.243	5.218	11.158	5.29	12.522	5.393	14.304	5.522	16.677	5.686
RS1.0200		6.884	4.932	8.442	5.068	10.232	5.215	11.148	5.286	12.512	5.389	14.294	5.518	16.665	5.681
RS1.0005		6.881	4.93	8.439	5.066	10.228	5.211	11.145	5.283	12.508	5.385	14.29	5.514	16.661	5.677
RS1.0003		6.881	2.837	8.439	2.931	10.228	3.028	11.145	3.076	12.508	3.141	14.29	3.224	16.661	3.341
RS1.0000		6.881	2.832	8.439	2.925	10.228	3.021	11.145	3.069	12.508	3.133	14.29	3.216	16.661	3.333
B3		0.487	6.049	0.585	6.205	0.7	6.349	0.765	6.43	0.861	6.532	0.986	6.654	1.183	6.752
BU2		2.962	6.913	3.844	7.184	4.998	7.405	4.958	7.496	4.941	7.568	4.964	7.636	5.007	7.731
WU2		0	6.913	0.078	7.184	2.016	7.405	3.356	7.496	4.262	7.568	5.363	7.636	6.564	7.731
WD2		0	6.912	0.078	7.19	2.016	7.392	3.356	7.479	4.262	7.551	5.363	7.616	6.564	7.712
BD2		2.962	6.912	3.844	7.19	4.998	7.392	4.958	7.479	4.941	7.551	4.964	7.616	5.007	7.712
BU1		2.962	6.888	3.707	7.164	3.898	7.37	3.886	7.461	3.893	7.534	3.9	7.599	3.887	7.696
WU1		0	6.888	0.027	7.164	0.72	7.37	1.56	7.461	2.669	7.534	3.877	7.599	5.997	7.696
WD1		0	6.752	0.027	6.924	0.72	7.084	1.56	7.195	2.669	7.323	3.877	7.457	5.997	7.574
BD1		2.962	6.752	3.707	6.924	3.898	7.084	3.886	7.195	3.893	7.323	3.9	7.457	3.887	7.574
BU-1		5.513	5.067	5.8	5.222	5.934	5.377	5.97	5.45	6.043	5.554	6.108	5.682	6.176	5.839
WU-1		0.731	5.067	2.328	5.222	4.076	5.377	4.926	5.45	6.23	5.554	7.961	5.682	9.965	5.839
WD-1		0.731	5.066	2.328	5.218	4.076	5.371	4.926	5.443	6.23	5.547	7.961	5.673	9.965	5.83
BD-1		5.513	5.066	5.8	5.218	5.934	5.371	5.97	5.443	6.043	5.547	6.108	5.673	6.176	5.83
BU-2		5.646	4.999	6.916	5.144	8.382	5.296	9.098	5.369	10.18	5.472	11.596	5.601	13.44	5.76
WU-2		0	4.999	0	5.144	0	5.296	0	5.369	0	5.472	0	5.601	0	5.76
WD-2		0	4.999	0	5.144	0	5.296	0	5.369	0	5.472	0	5.6	0	5.759
BD-2		5.646	4.999	6.916	5.144	8.382	5.296	9.098	5.369	10.18	5.472	11.596	5.6	13.44	5.759
B4		2.586	5.342	3.253	5.524	4.013	5.706	4.447	5.791	5.107	5.905	5.977	6.046	7.172	6.226

		flow in m ³ /s stage in mAOD		Pre-Development											
				1 in 5 FEH		1 in 10 FEH		1 in 20 FEH		1 in 30 FEH		1 in 50 FEH		1 in 100 FEH	
Label	Location	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage
B5		0.714	5.312	0.891	5.496	1.094	5.68	1.209	5.766	1.385	5.882	1.614	6.025	1.938	6.206
B6		1.316	4.939	1.625	5.075	1.979	5.222	2.18	5.294	2.484	5.397	2.881	5.527	3.456	5.691
C481.1UJ		2.963	7.487	3.735	7.732	4.107	7.903	4.111	7.978	4.121	8.05	4.13	8.134	4.106	8.208
C481.1DJ		2.963	7.401	3.735	7.607	4.107	7.767	4.111	7.854	4.121	7.938	4.13	8.033	4.106	8.115
RS1.4091		2.676	5.385	3.194	5.564	3.87	5.745	4.114	5.827	4.58	5.939	5.175	6.076	5.969	6.252
RS1.4100		2.676	5.385	3.194	5.564	3.87	5.745	4.114	5.841	4.58	5.978	5.175	6.142	5.969	6.349
RS1.0605		5.599	4.939	6.862	5.075	8.32	5.222	9.051	5.294	10.142	5.397	11.559	5.527	13.411	5.691
USresSP1		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
RES1		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
dummy		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Flap		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
USRESSP1		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
USCULVOUT		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
dummy2		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
B2		0.628	10.145	0.783	10.278	0.96	10.407	1.061	10.473	1.215	10.543	1.416	10.577	1.699	10.604

flow in m ³ /s stage in mAOD		Post-Development															
		1 in 5 FEH		1 in 10 FEH		1 in 20 FEH		1 in 30 FEH		1 in 50 FEH		1 in 100 FEH		1 in 100cc FEH			
Label	Location	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage
4452.4		2.355	22.493	2.983	22.62	3.698	22.742	4.107	22.805	4.731	22.896	5.555	22.979	6.665	22.979	6.665	23.075
4400		2.355	22.04	2.984	22.161	3.698	22.279	4.107	22.339	4.73	22.427	5.556	22.547	6.645	22.904	6.645	22.904
4350		2.355	21.643	2.984	21.746	3.698	21.838	4.107	21.899	4.73	22.021	5.549	22.267	6.627	22.859	6.627	22.859
4272.53		2.355	20.906	2.983	21.041	3.698	21.245	4.106	21.389	4.729	21.643	5.544	22.091	6.607	22.841	6.607	22.841
4272.2		2.355	20.905	2.983	21.039	3.698	21.178	4.106	21.254	4.729	21.374	5.544	21.557	6.607	21.84	6.607	21.84
4271.6		2.355	20.896	2.983	21.03	3.698	21.171	4.106	21.248	4.729	21.368	5.544	21.553	6.607	21.838	6.607	21.838
4268.2		2.355	20.902	2.983	21.036	3.698	21.175	4.106	21.25	4.729	21.369	5.544	21.55	6.607	21.834	6.607	21.834
4254.2		2.355	20.76	2.983	20.899	3.698	21.043	4.106	21.122	4.729	21.248	5.544	21.449	6.607	21.762	6.607	21.762
4218		2.355	20.544	2.983	20.687	3.697	20.835	4.106	20.914	4.729	21.049	5.544	21.267	6.606	21.651	6.606	21.651
4201.8		2.355	20.538	2.983	20.682	3.697	20.83	4.106	20.909	4.729	21.024	5.544	21.176	6.606	21.073	6.606	21.073
4159.9		2.355	20.301	2.983	20.442	3.697	20.582	4.106	20.656	4.729	20.761	5.544	20.893	6.606	21.073	6.606	21.073
4109.6		2.355	20.196	2.983	20.323	3.697	20.445	4.106	20.508	4.729	20.597	5.544	20.709	6.606	20.836	6.606	20.836
4096.5		2.355	20.135	2.983	20.265	3.697	20.39	4.106	20.455	4.729	20.547	5.544	20.665	6.606	20.794	6.606	20.794
4052.8		2.355	19.828	2.983	19.936	3.697	20.048	4.106	20.108	4.729	20.196	5.544	20.319	6.606	20.47	6.606	20.47
3997.2		2.355	19.361	2.982	19.491	3.697	19.623	4.106	19.694	4.729	19.798	5.544	19.942	6.606	20.143	6.606	20.143
3993.7		2.355	19.357	2.982	19.482	3.697	19.609	4.106	19.677	4.729	19.78	5.544	19.902	6.606	20.05	6.606	20.05
3992.7		2.355	19.346	2.982	19.472	3.697	19.598	4.106	19.667	4.729	19.769	5.544	19.892	6.606	20.041	6.606	20.041
3941.7		2.355	19.071	2.982	19.21	3.697	19.352	4.106	19.428	4.729	19.539	5.544	19.683	6.606	19.867	6.606	19.867
3913.9		2.355	18.838	2.982	18.932	3.697	19.024	4.106	19.072	4.729	19.142	5.544	19.228	6.606	19.335	6.606	19.335
3847.9		2.354	18.54	2.983	18.621	3.697	18.709	4.105	18.758	4.729	18.832	5.544	18.929	6.606	19.055	6.606	19.055
3657.4		2.355	17.649	2.983	17.796	3.696	17.955	4.104	18.043	4.728	18.172	5.543	18.336	6.605	18.54	6.605	18.54
3614.6		2.354	17.498	2.982	17.662	3.696	17.836	4.105	17.931	4.727	18.07	5.543	18.243	6.605	18.457	6.605	18.457
3606.3		2.354	17.263	2.982	17.388	3.696	17.506	4.105	17.567	4.727	17.655	5.543	17.762	6.605	17.885	6.605	17.885
3438.8		2.376	16.721	3.001	16.838	3.696	16.936	4.104	16.988	4.727	17.057	5.544	17.146	6.605	17.25	6.605	17.25
3317.7		2.384	15.772	3.011	15.848	3.695	15.927	4.104	15.968	4.727	16.028	5.543	16.103	6.605	16.192	6.605	16.192
3313		2.383	15.731	3.011	15.81	3.695	15.891	4.104	15.934	4.727	15.998	5.543	16.076	6.605	16.169	6.605	16.169
3254		2.379	15.238	3.008	15.329	3.695	15.421	4.104	15.471	4.727	15.544	5.543	15.632	6.604	15.736	6.604	15.736
3054.3		2.367	14.299	2.992	14.424	3.695	14.552	4.103	14.62	4.726	14.701	5.543	14.773	6.604	14.871	6.604	14.871
2856.7		2.362	13.738	2.984	13.885	3.694	14.041	4.103	14.127	4.723	14.247	5.542	14.376	6.601	14.511	6.601	14.511
2723.1		2.358	13.291	2.982	13.454	3.694	13.622	4.102	13.712	4.723	13.839	5.542	13.989	6.6	14.126	6.6	14.126
WU6		0	13.291	0	13.454	0	13.622	0	13.712	0	13.839	0	13.989	0	14.126	0	14.126
WD6		0	13.049	0	13.172	0	13.297	0	13.362	0	13.45	0	13.549	0	13.579	0	13.579
BU6		2.358	13.291	2.982	13.454	3.694	13.622	4.102	13.712	4.723	13.839	5.542	13.989	6.6	14.126	6.6	14.126
BD6		2.358	13.049	2.982	13.172	3.694	13.297	4.102	13.362	4.723	13.45	5.542	13.549	6.6	13.579	6.6	13.579
2711.2		2.358	13.049	2.982	13.172	3.694	13.297	4.102	13.362	4.723	13.45	5.542	13.549	6.6	13.579	6.6	13.579
2651.1		2.357	12.862	2.982	12.957	3.695	13.044	4.103	13.088	4.723	13.151	5.541	13.235	6.597	13.352	6.597	13.352
2651.1D	Bypass of upstream reservoir 3	2.229	12.862	2.464	12.957	2.682	13.044	2.798	13.088	2.969	13.151	3.173	13.235	3.349	13.352	3.349	13.352
USRES3SP1		0.128	12.862	0.52	12.957	1.015	13.044	1.307	13.088	1.757	13.151	2.433	13.235	3.481	13.352	3.481	13.352
USRES3SP1		0.835	-9999	1.039	-9999	1.24	-9999	1.326	-9999	2.04	-9999	2.71	-9999	3.854	-9999	3.854	-9999
2608.7	Bypass of upstream reservoir 3	2.229	12.757	2.465	12.853	2.682	12.939	2.798	12.983	2.969	13.045	3.172	13.138	3.348	13.271	3.348	13.271
2608.64		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2608.63		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2608.495		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2535.2	Bypass of upstream reservoir 3	2.229	12.517	2.465	12.601	2.682	12.675	2.798	12.712	2.969	12.769	3.171	12.905	3.346	13.071	3.346	13.071
2447.2	Bypass of upstream reservoir 3	2.229	12.088	2.465	12.146	2.682	12.196	2.798	12.225	2.969	12.43	3.17	12.63	3.338	12.819	3.338	12.819
RES3	Upstream Reservoir 3 (South Pond)	0.128	10.548	0.52	11.558	1.015	12.051	1.307	12.269	1.757	12.434	2.433	12.633	3.481	12.824	3.481	12.824
DummyRES3		0	10.548	0	11.558	0	12.051	0	12.269	0	12.434	0	12.633	0	12.824	0	12.824
DSRES3SP1		0	10.548	0	11.558	0	12.051	0.45	12.269	1.248	12.434	2.12	12.633	4.828	12.824	4.828	12.824
DSRES3SP		0	12.088	0	12.146	0	12.196	0.45	12.225	1.248	12.43	2.12	12.63	4.828	12.819	4.828	12.819
2447.2		2.229	12.088	2.465	12.146	2.682	12.196	2.809	12.225	3.806	12.43	4.687	12.63	7.847	12.819	7.847	12.819
2276.6		2.229	11.49	2.464	11.539	2.681	11.581	2.808	11.604	3.806	11.766	4.686	11.888	8.416	12.318	8.416	12.318
2272.1		2.229	11.484	2.464	11.534	2.681	11.576	2.808	11.6	3.806	11.772	4.686	11.911	8.416	12.264	8.416	12.264
2270.5		2.229	11.475	2.464	11.525	2.681	11.568	2.808	11.591	3.806	11.763	4.686	11.905	8.41	12.263	8.41	12.263
2269.6		2.229	11.474	2.464	11.525	2.681	11.568	2.808	11.591	3.806	11.763	4.686	11.905	8.408	12.263	8.408	12.263
2252.6		2.229	11.446	2.464	11.503	2.681	11.549	2.808	11.575	3.805	11.758	4.685	11.897	11.327	12.259	11.327	12.259
2057.8		2.228	10.526	2.463	10.567	2.681	10.602	2.806	10.617	3.804	10.749	4.684	10.867	7.393	11.193	7.393	11.193
2010.7		2.228	10.316	2.463	10.366	2.681	10.409	2.806	10.429	3.804	10.597	4.683	10.737	6.195	11.029	6.195	11.029
2005.1		2.228	10.314	2.463	10.355	2.681	10.393	2.806	10.41	3.804	10.556	4.683	10.684	6.195	10.977	6.195	10.977
1992		2.228	10.256	2.463	10.291	2.681	10.323	2.806	10.337	3.804	10.458	4.683	10.57	6.193	10.96	6.193	10.96

Label	Location	flow in m ³ /s stage in mAOD		Post-Development											
		1 in 5 FEH		1 in 10 FEH		1 in 20 FEH		1 in 30 FEH		1 in 50 FEH		1 in 100 FEH		1 in 100cc FEH	
		Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage
1991.89		2.228	10.256	2.463	10.291	2.681	10.323	2.806	10.337	3.804	10.457	4.683	10.55	6.193	10.795
1990.89	Bypass of upstream reservoir 2	2.228	10.248	2.463	10.283	2.681	10.314	2.806	10.328	3.804	10.445	4.683	10.535	6.193	10.777
1900	Bypass of upstream reservoir 2	1.399	10.029	1.432	10.062	1.456	10.094	1.526	10.108	1.767	10.183	2.008	10.256	2.618	10.561
1900A	Bypass of upstream reservoir 2	1.399	10.009	1.432	10.044	1.456	10.077	1.526	10.093	1.767	10.165	2.008	10.239	2.622	10.55
1900B	Bypass of upstream reservoir 2	1.399	9.989	1.432	10.026	1.456	10.061	1.526	10.078	1.767	10.148	2.008	10.224	2.626	10.541
1900C	Bypass of upstream reservoir 2	1.399	9.97	1.432	10.009	1.456	10.047	1.526	10.065	1.767	10.133	2.008	10.209	2.625	10.532
1852.5	Bypass of upstream reservoir 2	1.398	9.953	1.431	9.994	1.455	10.033	1.526	10.052	1.767	10.119	2.008	10.196	2.602	10.525
1852.41		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1852.4	Bypass of upstream reservoir 2	1.398	9.952	1.431	9.993	1.455	10.033	1.526	10.052	1.767	10.118	2.008	10.196	2.601	10.525
FlapUS		0	9.383	0	9.383	0	9.383	0	9.474	0.381	9.9	0.68	10.301	0.698	10.623
RES2	Upstream Reservoir 2 (North Pond)	0.835	8.717	1.039	8.993	1.24	9.265	1.326	9.474	2.04	9.9	2.71	10.301	3.854	10.623
DSRES2SP1		0	8.717	0	8.993	0	9.265	0	9.474	0	9.9	0	10.301	1.558	10.623
DSRES2SP		0	9.952	0	9.993	0	10.033	0	10.052	0	10.118	0	10.196	1.558	10.525
1852.3		1.398	9.952	1.431	9.993	1.455	10.033	1.526	10.052	1.767	10.118	2.494	10.196	4.695	10.525
1852.2		1.398	9.952	1.431	9.993	1.455	10.033	1.526	10.052	1.767	10.118	2.494	10.196	4.695	10.525
1852		2.017	9.952	2.202	9.993	2.396	10.033	2.489	10.052	2.838	10.118	3.291	10.196	5.628	10.525
1653.8		2.017	9.336	2.202	9.377	2.395	9.418	2.488	9.437	2.838	9.507	3.289	9.59	5.598	9.865
1461.5		2.017	8.799	2.202	8.849	2.395	8.902	2.488	8.925	2.837	9.011	3.286	9.111	5.607	9.477
1261.2		2.017	8.332	2.202	8.402	2.395	8.473	2.488	8.5	2.836	8.608	3.284	8.718	5.601	9.052
1200		2.017	8.239	2.202	8.314	2.395	8.389	2.488	8.416	2.836	8.529	3.283	8.639	5.587	8.906
1100		2.016	8.166	2.202	8.243	2.395	8.321	2.488	8.347	2.835	8.46	3.281	8.566	5.56	8.746
1045.9		2.016	8.147	2.202	8.225	2.394	8.302	2.488	8.329	2.834	8.44	3.281	8.544	5.538	8.708
921.9		2.016	8.101	2.201	8.181	2.394	8.26	2.487	8.286	2.833	8.394	3.278	8.503	5.53	8.649
920.9	School Lane (u/s)	2.016	8.1	2.201	8.18	2.394	8.259	2.487	8.285	2.832	8.393	3.278	8.503	5.53	8.648
C920SP-U	School Lane (spill)	0	8.1	0	8.18	0	8.259	0	8.285	0	8.393	0.13	8.503	2.366	8.648
C920SP-D	School Lane (spill)	0	7.998	0	8.058	0	8.115	0	8.13	0	8.192	0.13	8.253	2.366	8.394
C920.9BU	School Lane (culvert b)	1.008	8.066	1.101	8.139	1.197	8.211	1.244	8.233	1.416	8.325	1.579	8.418	1.615	8.563
C920.9bD	School Lane (culvert b)	1.008	8.04	1.101	8.108	1.197	8.174	1.244	8.193	1.416	8.274	1.579	8.355	1.615	8.498
C920.9aU	School Lane (culvert a)	1.008	8.066	1.101	8.139	1.197	8.211	1.244	8.233	1.416	8.325	1.579	8.418	1.615	8.563
C920.9aD	School Lane (culvert a)	1.008	8.04	1.101	8.108	1.197	8.174	1.244	8.193	1.416	8.274	1.579	8.355	1.615	8.498
906.5	School Lane (d/s)	2.016	7.998	2.201	8.058	2.394	8.115	2.487	8.13	2.832	8.192	3.278	8.253	5.53	8.394
847.3		2.016	7.886	2.201	7.944	2.394	8.001	2.487	8.021	2.832	8.098	3.276	8.18	5.521	8.344
lb		1.008	7.998	1.101	8.058	1.197	8.115	1.244	8.13	1.416	8.192	1.579	8.253	1.615	8.394
653.5		2.016	7.416	2.201	7.473	2.393	7.532	2.486	7.561	2.829	7.667	3.263	7.8	5.473	8.137
481.1	Hattons Road (u/s)	2.016	7.175	2.201	7.235	2.393	7.296	2.486	7.326	2.829	7.44	3.259	7.582	5.463	8.011
481.1SP-U	Hattons Road (spill)	0	7.175	0	7.235	0	7.296	0	7.326	0	7.44	0	7.582	1.669	8.011
481.1SP-D	Hattons Road (spill)	0	7.132	0	7.183	0	7.237	0	7.263	0	7.361	0	7.481	1.669	7.89
C481.1U	Hattons Road (culvert)	2.016	7.149	2.201	7.204	2.393	7.26	2.486	7.287	2.829	7.39	3.259	7.515	4.106	7.92
C481.1D	Hattons Road (culvert)	2.016	7.143	2.201	7.195	2.393	7.249	2.486	7.275	2.829	7.374	3.259	7.494	4.106	7.891
470.7	Hattons Road (d/s)	2.016	7.132	2.201	7.183	2.393	7.237	2.486	7.263	2.829	7.361	3.259	7.481	5.463	7.89
456.7		2.016	7.101	2.201	7.154	2.393	7.207	2.486	7.233	2.829	7.333	3.259	7.455	5.463	7.864
258.6	High Street (u/s)	2.016	6.684	2.201	6.746	2.393	6.812	2.486	6.844	2.828	6.979	3.258	7.139	5.463	7.59
BUS	High Street (bridge)	2.016	6.684	2.201	6.746	2.393	6.812	2.486	6.844	2.828	6.979	3.258	7.139	5.193	7.59
BD5	High Street (bridge)	2.016	6.682	2.201	6.745	2.393	6.81	2.486	6.843	2.828	6.979	3.258	7.138	5.193	7.587
WU5	High Street (spill)	0	6.684	0	6.746	0	6.812	0	6.844	0	6.979	0	7.139	0.396	7.59
WD5	High Street (spill)	0	6.682	0	6.745	0	6.81	0	6.843	0	6.979	0	7.138	0.396	7.587
254.7	High Street (d/s)	2.016	6.682	2.201	6.745	2.393	6.81	2.486	6.843	2.828	6.979	3.258	7.138	5.463	7.587
236.1		2.016	6.67	2.201	6.734	2.393	6.8	2.486	6.833	2.828	6.971	3.258	7.131	5.464	7.586
236.09		2.016	6.67	2.201	6.734	2.393	6.8	2.486	6.833	2.828	6.971	3.258	7.131	5.464	7.586
225.2		2.016	6.662	2.201	6.726	2.393	6.792	2.486	6.825	2.828	6.963	3.258	7.125	5.465	7.582
225.19		2.016	6.662	2.201	6.726	2.393	6.792	2.486	6.825	2.828	6.963	3.258	7.125	5.465	7.582
224.97		2.016	6.662	2.201	6.725	2.393	6.792	2.486	6.825	2.828	6.963	3.258	7.125	5.465	7.582
209.4		2.016	6.605	2.201	6.669	2.393	6.736	2.486	6.77	2.828	6.912	3.258	7.086	5.466	7.57
209.33		2.016	6.605	2.201	6.669	2.393	6.736	2.486	6.77	2.828	6.912	3.258	7.086	5.466	7.57
204.33		2.016	6.596	2.201	6.66	2.393	6.727	2.486	6.761	2.828	6.901	3.258	7.075	5.467	7.565
203.3		2.016	6.595	2.201	6.658	2.393	6.725	2.486	6.759	2.828	6.899	3.258	7.073	5.467	7.564
202.3		2.016	6.593	2.201	6.657	2.393	6.724	2.486	6.758	2.828	6.898	3.258	7.071	5.467	7.564
201.3		2.016	6.592	2.201	6.656	2.393	6.723	2.486	6.756	2.828	6.896	3.258	7.069	5.467	7.563
200.3		2.016	6.591	2.201	6.654	2.393	6.721	2.486	6.755	2.828	6.895	3.258	7.067	5.467	7.562

		flow in m ³ /s stage in mAOD		Post-Development											
Label	Location	1 in 5 FEH		1 in 10 FEH		1 in 20 FEH		1 in 30 FEH		1 in 50 FEH		1 in 100 FEH		1 in 100cc FEH	
		Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage
199.3		2.016	6.59	2.201	6.653	2.393	6.72	2.486	6.754	2.828	6.894	3.258	7.065	5.467	7.561
199.2		2.016	6.589	2.201	6.653	2.393	6.72	2.486	6.753	2.828	6.893	3.258	7.064	5.467	7.561
198.2	High Street (u/s)	2.016	6.587	2.201	6.651	2.393	6.718	2.486	6.751	2.828	6.891	3.258	7.062	5.467	7.56
BU3	High Street (bridge)	2.016	6.587	2.201	6.651	2.393	6.718	2.486	6.751	2.828	6.891	3.257	7.062	3.416	7.56
BD3	High Street (bridge)	2.016	6.589	2.201	6.652	2.393	6.718	2.486	6.752	2.828	6.883	3.257	7.038	3.416	7.537
WU3	High Street (spill)	0	6.587	0	6.651	0	6.718	0	6.751	0	6.891	0.001	7.062	3.814	7.56
WD3	High Street (spill)	0	6.589	0	6.652	0	6.718	0	6.752	0	6.883	0.001	7.038	3.814	7.537
178.5	High Street (d/s)	2.016	6.589	2.201	6.652	2.393	6.718	2.486	6.752	2.828	6.883	3.258	7.038	5.467	7.537
168.1		2.016	6.575	2.201	6.638	2.393	6.706	2.486	6.74	2.828	6.872	3.258	7.029	5.468	7.532
168.03		2.016	6.575	2.201	6.638	2.393	6.706	2.486	6.74	2.828	6.872	3.258	7.028	5.468	7.532
159.57		2.016	6.553	2.201	6.617	2.393	6.685	2.486	6.719	2.828	6.853	3.258	7.011	5.468	7.528
159.5		2.016	6.553	2.201	6.617	2.393	6.685	2.486	6.719	2.827	6.853	3.258	7.011	5.468	7.527
158.3		2.016	6.551	2.201	6.615	2.393	6.683	2.485	6.717	2.827	6.85	3.258	7.009	5.468	7.527
154.7		2.016	6.552	2.201	6.616	2.393	6.684	2.485	6.719	2.827	6.851	3.258	7.003	5.468	7.51
153.7		2.016	6.55	2.201	6.614	2.393	6.683	2.485	6.717	2.827	6.849	3.258	7.002	5.468	7.509
153.63		2.016	6.55	2.201	6.614	2.393	6.682	2.485	6.717	2.827	6.849	3.258	7.002	5.468	7.509
137.87		2.016	6.523	2.201	6.588	2.393	6.657	2.485	6.692	2.827	6.827	3.258	6.981	5.469	7.493
137.8		2.016	6.523	2.201	6.588	2.393	6.657	2.485	6.692	2.827	6.827	3.258	6.981	5.469	7.493
136.5		2.016	6.52	2.201	6.586	2.393	6.655	2.485	6.69	2.827	6.825	3.258	6.979	5.469	7.492
128.6		2.016	6.48	2.201	6.534	2.393	6.589	2.485	6.615	2.827	6.706	3.258	6.807	5.469	7.23
124.9		2.016	6.457	2.201	6.512	2.393	6.566	2.485	6.592	2.827	6.685	3.258	6.786	5.469	7.213
124.83		2.016	6.457	2.201	6.511	2.393	6.566	2.485	6.592	2.827	6.684	3.258	6.786	5.469	7.213
73.9		2.016	6.291	2.201	6.343	2.392	6.396	2.485	6.422	2.827	6.514	3.257	6.611	5.467	7.015
73.83		2.016	6.291	2.201	6.343	2.392	6.396	2.485	6.422	2.827	6.513	3.257	6.611	5.467	7.014
59.5		2.016	6.249	2.201	6.3	2.392	6.351	2.485	6.377	2.827	6.467	3.257	6.561	5.467	6.947
39.5		2.016	6.176	2.201	6.226	2.392	6.276	2.485	6.302	2.827	6.391	3.257	6.481	5.467	6.848
39.43		2.016	6.176	2.201	6.226	2.392	6.276	2.485	6.302	2.827	6.39	3.257	6.481	5.467	6.848
18.8		2.016	6.142	2.201	6.191	2.392	6.242	2.485	6.268	2.827	6.357	3.257	6.447	5.467	6.805
0		2.016	6.141	2.201	6.19	2.392	6.241	2.485	6.267	2.827	6.356	3.257	6.446	5.467	6.796
I920.9a		1.008	8.1	1.101	8.18	1.197	8.259	1.244	8.285	1.416	8.393	1.579	8.503	1.615	8.648
I920.9b		1.008	8.1	1.101	8.18	1.197	8.259	1.244	8.285	1.416	8.393	1.579	8.503	1.615	8.648
C3614.6U		2.354	17.364	2.982	17.506	3.696	17.646	4.105	17.72	4.727	17.828	5.543	17.961	6.605	18.118
la		1.008	7.998	1.101	8.058	1.197	8.115	1.244	8.13	1.416	8.192	1.579	8.253	1.615	8.394
C3614.6D		2.354	17.351	2.982	17.492	3.696	17.63	4.105	17.703	4.727	17.81	5.543	17.94	6.605	18.095
RS1665.34		2.016	6.078	2.201	6.128	2.392	6.179	2.485	6.205	2.827	6.295	3.257	6.384	5.466	6.727
RS1635.87		2.016	6.02	2.201	6.069	2.391	6.121	2.484	6.147	2.826	6.237	3.256	6.324	5.465	6.649
RS1599.94		2.015	5.983	2.2	6.033	2.391	6.087	2.484	6.115	2.826	6.206	3.256	6.295	5.464	6.621
RS1598.44		2.015	5.983	2.2	6.033	2.391	6.087	2.484	6.115	2.826	6.206	3.256	6.295	5.464	6.621
RS1549.48		2.015	5.926	2.199	5.98	2.39	6.039	2.483	6.069	2.825	6.163	3.255	6.257	5.461	6.58
RS1544.48		2.015	5.926	2.199	5.98	2.39	6.039	2.483	6.069	2.825	6.163	3.255	6.257	5.461	6.58
RS1498.04		2.014	5.831	2.198	5.895	2.389	5.962	2.481	5.997	2.824	6.097	3.253	6.201	5.459	6.513
RS1382.49		2.007	5.716	2.19	5.796	2.379	5.876	2.471	5.919	2.818	6.023	3.246	6.141	5.447	6.446
EX2		2.001	5.713	2.182	5.793	2.369	5.873	2.461	5.917	2.813	6.02	3.24	6.138	5.438	6.442
RS1284.49		1.999	5.71	2.181	5.79	2.367	5.87	2.459	5.914	2.812	6.017	3.238	6.135	5.437	6.437
RS1284.2		1.999	5.71	2.181	5.79	2.367	5.87	2.459	5.913	2.812	6.017	3.238	6.135	5.437	6.436
RS1193.26		1.995	5.691	2.176	5.773	2.361	5.854	2.453	5.898	2.81	6	3.235	6.121	5.432	6.414
RS1135.53		2.457	5.691	2.732	5.773	3.03	5.854	3.188	5.898	3.668	6	4.221	6.121	6.319	6.414
RS1038.37		2.454	5.646	2.728	5.73	3.025	5.812	3.183	5.859	3.664	5.957	4.216	6.086	6.307	6.361
RS933.6		2.452	5.563	2.726	5.653	3.022	5.737	3.18	5.787	3.662	5.885	4.214	6.026	6.304	6.266
RS933.5		2.452	5.563	2.726	5.653	3.022	5.737	3.18	5.787	3.662	5.885	4.214	6.026	6.304	6.266
RS851.43		2.45	5.511	2.723	5.606	3.019	5.691	3.177	5.743	3.659	5.846	4.211	5.991	6.301	6.211
RS1709.17		2.016	6.13	2.201	6.18	2.392	6.231	2.485	6.257	2.827	6.347	3.257	6.437	5.467	6.789
RS846.43		2.45	5.511	2.723	5.606	3.019	5.691	3.177	5.743	3.659	5.846	4.211	5.991	6.301	6.211
RS739.14		2.447	5.443	2.719	5.543	3.015	5.63	3.172	5.682	3.656	5.794	4.207	5.941	6.275	6.165
RS625		2.443	5.387	2.714	5.489	3.009	5.577	3.167	5.64	3.652	5.753	4.202	5.898	6.175	6.131
RS523.69		2.438	5.359	2.708	5.462	3.003	5.55	3.161	5.62	3.642	5.735	4.186	5.886	5.967	6.122
RS425		2.433	5.33	2.702	5.432	2.996	5.52	3.154	5.599	3.626	5.718	4.161	5.875	5.687	6.12
RS375.17		2.43	5.319	2.698	5.422	2.993	5.51	3.149	5.593	3.601	5.715	4.11	5.872	5.55	6.119
USres		2.424	5.307	2.69	5.411	2.96	5.502	3.099	5.589	3.499	5.712	3.927	5.871	5.328	6.119

		flow in m ³ /s stage in mAOD		Post-Development											
Label	Location	1 in 5 FEH		1 in 10 FEH		1 in 20 FEH		1 in 30 FEH		1 in 50 FEH		1 in 100 FEH		1 in 100cc FEH	
		Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage
RSCULV		2.406	5.305	2.647	5.409	2.837	5.5	2.907	5.587	2.971	5.711	3.717	5.871	5.182	6.119
CULVOUT		0.7	5.305	0.7	5.409	0.7	5.5	0.7	5.587	0.7	5.711	0.7	5.871	0.7	6.119
RS237.23		2.406	5.305	2.647	5.409	2.837	5.5	2.907	5.587	2.971	5.711	3.718	5.871	5.182	6.119
RS137.569		2.262	5.302	2.386	5.408	2.478	5.5	2.505	5.587	2.809	5.711	3.853	5.871	5.22	6.119
RS90.042		2.166	5.301	2.237	5.408	2.289	5.5	2.502	5.587	2.92	5.711	4.005	5.871	5.268	6.119
RS63.594		2.119	5.301	2.171	5.407	2.319	5.5	2.539	5.587	2.975	5.711	4.085	5.871	5.311	6.118
RS38.594		2.082	5.301	2.106	5.407	2.351	5.499	2.578	5.587	3.034	5.711	4.159	5.871	5.37	6.118
RSD		2.089	5.3	2.079	5.407	2.403	5.499	2.642	5.587	3.137	5.71	4.281	5.871	5.511	6.118
RS1.4000		2.094	5.29	2.09	5.4	2.418	5.495	2.659	5.579	3.182	5.704	4.334	5.848	5.574	6.049
RS1.3800		2.101	5.276	2.109	5.39	2.442	5.489	2.689	5.57	3.224	5.695	4.376	5.838	5.631	6.036
RS1.3600		2.112	5.268	2.135	5.384	2.474	5.485	2.729	5.565	3.277	5.69	4.43	5.832	5.706	6.029
RS1.3400		2.135	5.264	2.181	5.381	2.529	5.484	2.797	5.562	3.358	5.688	4.515	5.829	5.816	6.026
RS1.3200		4.544	5.264	5.16	5.381	5.656	5.484	6.137	5.562	7.029	5.688	8.058	5.829	9.915	6.026
RS1.3000		4.511	5.252	5.116	5.371	5.609	5.475	6.122	5.554	7.006	5.68	8.061	5.822	9.914	6.018
RS1.2800		4.488	5.242	5.086	5.362	5.575	5.466	6.115	5.545	6.992	5.671	8.069	5.814	9.917	6.011
RS1.2725		4.482	5.238	5.077	5.358	5.565	5.463	6.114	5.541	6.988	5.668	8.072	5.811	9.92	6.008
RS1.2610		4.473	5.232	5.065	5.353	5.552	5.459	6.114	5.537	6.986	5.664	8.079	5.807	9.927	6.004
RS1.2600		5.165	5.232	5.938	5.353	6.631	5.459	7.149	5.537	8.19	5.664	9.361	5.807	11.324	6.004
RS1.2400		5.152	5.148	5.922	5.263	6.612	5.365	7.141	5.442	8.176	5.566	9.35	5.711	11.316	5.921
RS1.2384		5.152	5.106	5.922	5.211	6.612	5.304	7.141	5.371	8.176	5.478	9.35	5.602	11.316	5.773
CU		5.152	5.124	5.922	5.231	6.612	5.326	7.141	5.395	8.176	5.504	9.35	5.631	11.316	5.803
CD		5.152	5.121	5.922	5.227	6.612	5.321	7.141	5.389	8.176	5.497	9.35	5.621	11.316	5.789
RS1.2200		5.141	5.042	5.907	5.145	6.597	5.237	7.135	5.303	8.163	5.408	9.342	5.53	11.309	5.701
RS1.2000		5.122	5.016	5.884	5.12	6.569	5.214	7.124	5.28	8.144	5.386	9.331	5.508	11.302	5.68
RS1.1950		5.118	5.007	5.879	5.112	6.563	5.207	7.122	5.273	8.14	5.379	9.329	5.502	11.3	5.674
RS1.19493		5.118	5.006	5.879	5.11	6.563	5.203	7.122	5.269	8.14	5.374	9.33	5.495	11.3	5.667
RS1.1800		5.108	4.985	5.864	5.089	6.542	5.184	7.114	5.25	8.126	5.356	9.325	5.479	11.297	5.651
RS1.1600		5.098	4.967	5.848	5.069	6.521	5.163	7.107	5.229	8.11	5.335	9.322	5.458	11.294	5.632
RS1.1435		5.092	4.947	5.841	5.047	6.51	5.139	7.104	5.204	8.102	5.31	9.322	5.433	11.295	5.607
RS1.1430		5.092	4.944	5.841	5.044	6.51	5.135	7.103	5.199	8.102	5.304	9.322	5.425	11.295	5.596
RS1.14204		5.092	4.944	5.841	5.044	6.51	5.135	7.103	5.199	8.102	5.304	9.322	5.425	11.295	5.595
RS1.1400		5.092	4.943	5.841	5.043	6.509	5.134	7.103	5.199	8.101	5.305	9.322	5.427	11.295	5.6
RS1.1200		5.084	4.927	5.831	5.026	6.497	5.117	7.099	5.18	8.093	5.285	9.326	5.408	11.299	5.58
RS1.1000		5.077	4.907	5.822	5.004	6.488	5.093	7.098	5.155	8.09	5.259	9.33	5.38	11.304	5.551
RS1.0800		5.071	4.893	5.815	4.989	6.481	5.078	7.098	5.139	8.088	5.241	9.337	5.36	11.312	5.531
RS1.0600		6.367	4.889	7.421	4.985	8.44	5.074	9.159	5.134	10.428	5.236	11.967	5.355	14.292	5.525
RS1.0400		6.355	4.886	7.408	4.981	8.427	5.07	9.148	5.13	10.413	5.232	11.956	5.351	14.28	5.521
RS1.0200		6.349	4.884	7.401	4.979	8.42	5.067	9.142	5.127	10.404	5.228	11.949	5.347	14.273	5.516
RS1.0005		6.347	4.881	7.398	4.976	8.417	5.064	9.139	5.124	10.401	5.225	11.947	5.343	14.271	5.512
RS1.0003		6.347	2.804	7.398	2.869	8.417	2.93	9.139	2.97	10.401	3.037	11.947	3.114	14.271	3.223
RS1.0000		6.347	2.799	7.398	2.864	8.417	2.924	9.139	2.963	10.401	3.03	11.947	3.107	14.271	3.215
B3		0.5	5.691	0.585	5.773	0.7	5.854	0.765	5.898	0.861	6	0.986	6.121	1.183	6.414
BU2		2.016	6.551	2.201	6.615	2.393	6.683	2.485	6.717	2.827	6.85	3.258	7.009	5.023	7.527
WU2		0	6.551	0	6.615	0	6.683	0	6.717	0	6.85	0	7.009	3.771	7.527
WD2		0	6.552	0	6.616	0	6.684	0	6.719	0	6.851	0	7.003	3.771	7.51
BD2		2.016	6.552	2.201	6.616	2.393	6.684	2.485	6.719	2.827	6.851	3.258	7.003	5.023	7.51
BU1		2.016	6.52	2.201	6.586	2.393	6.655	2.485	6.69	2.827	6.825	3.258	6.979	3.913	7.492
WU1		0	6.52	0	6.586	0	6.655	0	6.69	0	6.825	0	6.979	1.961	7.492
WD1		0	6.48	0	6.534	0	6.589	0	6.615	0	6.706	0	6.807	1.961	7.23
BD1		2.016	6.48	2.201	6.534	2.393	6.589	2.485	6.615	2.827	6.706	3.258	6.807	3.913	7.23
BU-1		5.118	5.007	5.466	5.112	5.62	5.207	5.663	5.273	5.728	5.379	5.798	5.502	5.882	5.674
WU-1		0.116	5.007	1.106	5.112	2.077	5.207	2.786	5.273	3.959	5.379	5.323	5.502	7.699	5.674
WD-1		0.116	5.006	1.106	5.11	2.077	5.203	2.786	5.269	3.959	5.374	5.323	5.495	7.699	5.667
BD-1		5.118	5.006	5.466	5.11	5.62	5.203	5.663	5.269	5.728	5.374	5.798	5.495	5.882	5.667
BU-2		5.092	4.944	5.841	5.044	6.51	5.135	7.103	5.199	8.102	5.304	9.322	5.425	11.295	5.596
WU-2		0	4.944	0	5.044	0	5.135	0	5.199	0	5.304	0	5.425	0	5.596
WD-2		0	4.944	0	5.044	0	5.135	0	5.199	0	5.304	0	5.425	0	5.595
BD-2		5.092	4.944	5.841	5.044	6.51	5.135	7.103	5.199	8.102	5.304	9.322	5.425	11.295	5.595
B4		2.586	5.264	3.253	5.381	4.013	5.484	4.447	5.562	5.107	5.688	5.977	5.829	7.172	6.026

		<i>flow in m³/s</i>		Post-Development													
		<i>stage in mAOD</i>		1 in 5 FEH		1 in 10 FEH		1 in 20 FEH		1 in 30 FEH		1 in 50 FEH		1 in 100 FEH		1 in 100cc FEH	
Label	Location	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage
B5		0.714	5.232	0.891	5.353	1.094	5.459	1.209	5.537	1.385	5.664	1.614	5.807	1.938	6.004		
B6		1.316	4.889	1.625	4.985	1.979	5.074	2.18	5.134	2.484	5.236	2.881	5.355	3.456	5.525		
C481.1UJ		2.016	7.175	2.201	7.235	2.393	7.296	2.486	7.326	2.829	7.44	3.259	7.582	4.106	8.011		
C481.1DJ		2.016	7.132	2.201	7.183	2.393	7.237	2.486	7.263	2.829	7.361	3.259	7.481	4.106	7.89		
RS1.4091		2.091	5.297	2.084	5.405	2.41	5.498	2.65	5.584	3.151	5.709	4.3	5.854	5.532	6.055		
RS1.4100		2.091	5.297	2.084	5.405	2.41	5.498	2.65	5.584	3.151	5.709	4.3	5.87	5.532	6.118		
RS1.0605		5.064	4.889	5.806	4.985	6.473	5.074	7.101	5.134	8.09	5.236	9.349	5.355	11.328	5.525		
USresSP1		0.005	-9999	0.37	-9999	0.917	-9999	1.271	-9999	1.708	-9999	2.081	-9999	2.522	-9999		
RES1		0.005	3.495	0.37	4.806	0.917	5.496	1.271	5.588	1.708	5.711	2.081	5.871	2.522	6.119		
dummy		0	4.46	0	4.806	0	5.496	0	5.588	0	5.711	0	5.871	0	6.119		
Flap		0	4.46	0.022	4.806	0.069	5.496	0.07	5.588	0.069	5.711	0.065	5.871	0.054	6.119		
USRESSP1		0.835	-9999	1.039	-9999	1.24	-9999	1.326	-9999	2.04	-9999	2.71	-9999	3.854	-9999		
USCULVOUT		0.65	9.952	0.65	9.993	0.65	10.033	0.65	10.052	0.65	10.118	0.68	10.196	0.698	10.525		
dummy2		0	9.383	0	9.383	0	9.383	0	9.474	0	9.9	0	10.301	0	10.623		
B2		0.628	9.952	0.783	9.993	0.96	10.033	1.061	10.052	1.215	10.118	1.416	10.196	1.699	10.525		

		flow in m ³ /s stage in mAOD		Difference (post- less pre-)											
Label	Location	1 in 5 FEH		1 in 10 FEH		1 in 20 FEH		1 in 30 FEH		1 in 50 FEH		1 in 100 FEH		1 in 100cc FEH	
		Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage
4452.4		0	-0.003	0	-0.002	0	-0.002	0	-0.002	-0.001	-0.002	0	0.001	-0.001	0
4400		0	-0.002	0.001	-0.002	0	-0.002	0	-0.003	-0.001	-0.001	0.003	-0.004	0.002	0
4350		0	-0.006	0.001	-0.004	0	-0.001	0	-0.001	0	-0.001	0.001	-0.003	0.002	-0.001
4272.53		0	-0.001	0	-0.001	0	-0.003	0	-0.004	0	-0.006	0	-0.006	0.004	-0.001
4272.2		0	-0.002	0	-0.001	0	-0.002	0	-0.003	0	-0.002	0	-0.003	0.004	-0.001
4271.6		0	-0.001	0	-0.002	0	-0.002	0	-0.002	0	-0.002	0	-0.003	0.004	-0.001
4268.2		0	-0.003	0	-0.002	0	-0.002	0	-0.003	0	-0.002	0	-0.003	0.004	-0.001
4254.2		0	-0.001	0	0	0	-0.001	0	0	0	0	0	-0.001	0.004	0
4218		0	-0.003	0	-0.003	0	-0.003	0	-0.003	0	-0.003	0	-0.003	0.004	-0.003
4201.8		0	-0.004	0	-0.003	0	-0.003	0	-0.003	0	-0.002	0	-0.003	0.004	-0.001
4159.9		0	-0.003	0	-0.003	0	-0.003	0	-0.002	0	-0.002	0	0	0.004	0.001
4109.6		0	-0.004	0	-0.004	0	-0.003	0	-0.003	0	-0.002	0	-0.001	0.004	0.001
4096.5		0	-0.005	0	-0.005	0	-0.005	0	-0.005	0	-0.004	0	-0.004	0.004	-0.003
4052.8		0	-0.003	0.001	-0.002	0	-0.001	0	0	0	0	0	0	0.004	0.001
3997.2		0	-0.001	0	-0.001	0	0	0	0	0	-0.001	0	0	0.004	0.001
3993.7		0	0	0	0	0	0.001	0	0	0	0.001	0	0.001	0.004	0.002
3992.7		0	-0.001	0	0.001	0	0	0	0.001	0	0	0	0.002	0.004	0.001
3941.7		0	-0.001	0	-0.001	0	-0.001	0	-0.001	0	-0.001	0	-0.001	0.004	0
3913.9		0	-0.002	0	-0.002	0	-0.002	0	-0.002	0	-0.001	0	-0.001	0.004	-0.001
3847.9		0	-0.001	0.001	-0.001	0	-0.001	-0.001	-0.001	0	-0.001	0	-0.001	0.004	0
3657.4		0.001	-0.002	0.001	-0.001	0	-0.001	-0.001	-0.001	0	-0.001	-0.001	-0.001	0.004	0
3614.6		0	0	0	0	0	0	0	0	-0.001	0	-0.001	0	0.004	0.001
3606.3		0	-0.003	0	-0.003	0	-0.004	0	-0.004	-0.001	-0.004	-0.001	-0.003	0.004	-0.002
3438.8		0.021	-0.011	0.019	-0.014	0	-0.016	-0.001	-0.015	-0.001	-0.015	0	-0.014	0.004	-0.012
3317.7		0.03	0.002	0.03	0.002	-0.001	0.002	-0.001	0.002	-0.001	0.001	-0.001	0.002	0.004	0.002
3313		0.029	0.001	0.03	0	-0.001	-0.002	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	0.004	0
3254		0.025	0.001	0.027	0.001	-0.001	-0.001	0	-0.001	-0.001	-0.001	-0.001	0	0.003	0
3054.3		0.013	-0.001	0.011	0	0	-0.001	-0.001	-0.001	-0.001	0	0	0	0.004	0
2856.7		0.009	-0.004	0.004	0	-0.001	0.001	0	-0.001	0	-0.006	0	0.003	0.003	-0.002
2723.1		0.005	0.043	0.002	0.03	0	0.016	0	0.004	0.002	-0.01	0	0.02	0.004	0.001
WU6		0	0.043	0	0.03	0	0.016	0	0.004	0	-0.01	0	0.02	0	0.001
WD6		0	0.065	0	0.045	0	0.025	0	0.007	0	-0.017	0	0.031	0	0.005
BU6		0.005	0.043	0.002	0.03	0	0.016	0	0.004	0.002	-0.01	0	0.02	0.004	0.001
BD6		0.005	0.065	0.002	0.045	0	0.025	0	0.007	0.002	-0.017	0	0.031	0.004	0.005
2711.2		0.005	0.065	0.002	0.045	0	0.025	0	0.007	0.002	-0.017	0	0.031	0.004	0.005
2651.1		0.004	0.179	0.002	0.125	0.001	0.063	0.001	0.026	0.003	-0.045	-0.001	-0.059	-0.003	0.027
2651.1D	Bypass of upstream reservoir 3	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
USRES3SP1		#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
USRESSP1		#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
2608.7	Bypass of upstream reservoir 3	-0.124	0.212	-0.515	0.159	-1.012	0.096	-1.304	0.063	-1.767	-0.02	-2.376	-0.026	-3.261	0.049
2608.64		#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
2608.63		#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
2608.495		#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
2535.2	Bypass of upstream reservoir 3	-0.124	0.128	-0.515	0.07	-1.012	0	-1.304	-0.039	-1.747	-0.145	-2.408	-0.082	-3.24	0.018
2447.2	Bypass of upstream reservoir 3	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
RES3	Upstream Reservoir 3 (South Pond)	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
DummyRES3		#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
DSRES3SP1		#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
DSRES3SP		#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
2447.2		-0.124	-0.035	-0.515	-0.126	-1.012	-0.232	-1.293	-0.288	-1.03	-0.25	-0.871	-0.192	1.34	-0.142
2276.6		-0.124	0.009	-0.516	-0.026	-1.013	-0.064	-1.294	-0.081	-0.92	-0.139	-0.96	-0.029	1.938	0.397
2272.1		-0.124	0.011	-0.516	-0.024	-1.013	-0.064	-1.294	-0.08	-0.92	-0.156	-0.96	-0.03	1.938	0.319
2270.5		-0.124	0.013	-0.516	-0.021	-1.013	-0.058	-1.294	-0.074	-0.922	-0.159	-0.96	-0.03	1.932	0.324
2269.6		-0.124	0.012	-0.516	-0.021	-1.013	-0.057	-1.294	-0.073	-0.922	-0.159	-0.96	-0.03	1.93	0.324
2252.6		-0.124	0.018	-0.516	-0.019	-1.013	-0.061	-1.294	-0.08	-1.06	-0.159	-0.973	-0.033	4.849	0.325
2057.8		-0.124	-0.098	-0.516	-0.205	-1.011	-0.333	-1.294	-0.396	-1.515	-0.457	-1.096	-0.416	0.924	-0.17
2010.7		-0.123	-0.209	-0.515	-0.332	-1.011	-0.469	-1.293	-0.533	-1.147	-0.503	-1.031	-0.477	-0.264	-0.3
2005.1		-0.123	-0.194	-0.515	-0.32	-1.011	-0.459	-1.293	-0.524	-1.147	-0.511	-1.031	-0.509	-0.264	-0.342
1992		-0.123	-0.216	-0.515	-0.345	-1.011	-0.496	-1.293	-0.58	-1.14	-0.62	-1.011	-0.629	-0.265	-0.356

Label	Location	flow in m ³ /s stage in mAOD		Difference (post- less pre-)											
		1 in 5 FEH		1 in 10 FEH		1 in 20 FEH		1 in 30 FEH		1 in 50 FEH		1 in 100 FEH		1 in 100cc FEH	
		Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage
1991.89		-0.123	-0.215	-0.515	-0.332	-1.011	-0.445	-1.293	-0.498	-1.14	-0.469	-1.011	-0.428	-0.265	-0.22
1990.89	Bypass of upstream reservoir 2	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
1900	Bypass of upstream reservoir 2	-0.952	-0.218	-1.546	-0.322	-2.235	-0.423	-2.572	-0.475	-3.166	-0.47	-3.678	-0.433	-3.84	-0.16
1900A	Bypass of upstream reservoir 2	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
1900B	Bypass of upstream reservoir 2	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
1900C	Bypass of upstream reservoir 2	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
1852.5	Bypass of upstream reservoir 2	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
1852.41		#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
1852.4	Bypass of upstream reservoir 2	-0.953	-0.193	-1.546	-0.285	-2.236	-0.374	-2.572	-0.421	-3.162	-0.425	-3.674	-0.381	-3.858	-0.079
FlapUS		#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
RES2	Upstream Reservoir 2 (North Pond)	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
DSRES2SP1		#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
DSRES2SP		#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
1852.3		#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
1852.2		#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
1852		#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
1653.8		-0.96	-0.199	-1.557	-0.295	-2.257	-0.383	-2.669	-0.394	-3.27	-0.394	-3.799	-0.337	-2.478	-0.083
1461.5		-0.96	-0.247	-1.556	-0.351	-2.257	-0.56	-2.742	-0.546	-3.246	-0.464	-3.794	-0.366	-2.468	-0.011
1261.2		-0.959	-0.317	-1.556	-0.393	-2.212	-0.498	-2.669	-0.535	-3.226	-0.455	-3.774	-0.369	-2.474	-0.053
1200		-0.958	-0.333	-1.556	-0.394	-2.208	-0.414	-2.667	-0.467	-3.199	-0.395	-3.766	-0.319	-2.487	-0.075
1100		-0.958	-0.337	-1.556	-0.383	-2.206	-0.374	-2.665	-0.381	-3.147	-0.303	-3.74	-0.234	-2.512	-0.084
1045.9		-0.957	-0.336	-1.556	-0.375	-2.203	-0.36	-2.664	-0.363	-3.114	-0.283	-3.722	-0.214	-2.533	-0.08
921.9		-0.955	-0.338	-1.558	-0.377	-2.2	-0.352	-2.665	-0.348	-3.116	-0.268	-3.713	-0.19	-2.539	-0.072
920.9	School Lane (u/s)	-0.955	-0.338	-1.558	-0.378	-2.2	-0.352	-2.665	-0.349	-3.117	-0.269	-3.713	-0.189	-2.539	-0.073
C920SP-U	School Lane (spill)	-0.004	-0.338	-0.559	-0.378	-1.421	-0.352	-1.988	-0.349	-2.801	-0.269	-3.783	-0.189	-2.729	-0.073
C920SP-D	School Lane (spill)	-0.004	-0.219	-0.559	-0.242	-1.421	-0.242	-1.988	-0.251	-2.801	-0.218	-3.783	-0.199	-2.729	-0.101
C920.9bU	School Lane (culvert b)	-0.475	-0.298	-0.511	-0.332	-0.434	-0.315	-0.388	-0.316	-0.222	-0.252	-0.065	-0.194	-0.037	-0.082
C920.9bD	School Lane (culvert b)	-0.475	-0.267	-0.511	-0.297	-0.434	-0.287	-0.388	-0.292	-0.222	-0.239	-0.065	-0.196	-0.037	-0.091
C920.9aU	School Lane (culvert a)	-0.475	-0.298	-0.511	-0.332	-0.434	-0.315	-0.388	-0.316	-0.222	-0.252	-0.065	-0.194	-0.037	-0.082
C920.9aD	School Lane (culvert a)	-0.475	-0.267	-0.511	-0.297	-0.434	-0.287	-0.388	-0.292	-0.222	-0.239	-0.065	-0.196	-0.037	-0.091
906.5	School Lane (d/s)	-0.955	-0.219	-1.558	-0.242	-2.2	-0.242	-2.665	-0.251	-3.117	-0.218	-3.713	-0.199	-2.539	-0.101
847.3		-0.954	-0.245	-1.557	-0.287	-2.196	-0.297	-2.663	-0.308	-3.102	-0.264	-3.705	-0.228	-2.546	-0.109
lb		-0.475	-0.219	-0.511	-0.242	-0.434	-0.242	-0.388	-0.251	-0.222	-0.218	-0.065	-0.199	-0.037	-0.101
653.5		-0.949	-0.297	-1.543	-0.439	-2.166	-0.52	-2.652	-0.549	-3.038	-0.502	-3.691	-0.443	-2.587	-0.171
481.1	Hattons Road (u/s)	-0.947	-0.312	-1.536	-0.497	-2.155	-0.607	-2.647	-0.652	-3.028	-0.61	-3.688	-0.552	-2.593	-0.197
481.1SP-U	Hattons Road (spill)	0	-0.312	-0.002	-0.497	-0.549	-0.607	-1.297	-0.652	-2.198	-0.61	-3.45	-0.552	-3.023	-0.197
481.1SP-D	Hattons Road (spill)	0	-0.269	-0.002	-0.424	-0.549	-0.53	-1.297	-0.591	-2.198	-0.577	-3.45	-0.552	-3.023	-0.225
C481.1U	Hattons Road (culvert)	-0.947	-0.283	-1.534	-0.441	-1.714	-0.542	-1.625	-0.598	-1.292	-0.576	-0.871	-0.542	0	-0.217
C481.1D	Hattons Road (culvert)	-0.947	-0.272	-1.534	-0.422	-1.714	-0.522	-1.625	-0.581	-1.292	-0.565	-0.871	-0.539	0	-0.224
470.7	Hattons Road (d/s)	-0.947	-0.269	-1.536	-0.424	-2.155	-0.53	-2.647	-0.591	-3.028	-0.577	-3.688	-0.552	-2.593	-0.225
456.7		-0.947	-0.275	-1.536	-0.43	-2.155	-0.536	-2.647	-0.597	-3.028	-0.575	-3.688	-0.547	-2.593	-0.222
258.6	High Street (u/s)	-0.946	-0.357	-1.534	-0.549	-2.152	-0.665	-2.646	-0.724	-3.025	-0.648	-3.685	-0.605	-2.592	-0.259
BUS	High Street (bridge)	-0.946	-0.357	-1.534	-0.549	-2.033	-0.665	-2.249	-0.724	-3.089	-0.648	-2.586	-0.605	-0.72	-0.259
BD5	High Street (bridge)	-0.946	-0.359	-1.534	-0.55	-2.033	-0.663	-2.249	-0.713	-3.089	-0.648	-2.586	-0.565	-0.72	-0.209
WU5	High Street (spill)	0	-0.357	0	-0.549	-0.124	-0.665	-0.401	-0.724	-0.419	-0.648	-2.192	-0.605	-3.407	-0.259
WD5	High Street (spill)	0	-0.359	0	-0.55	-0.124	-0.663	-0.401	-0.713	-0.419	-0.648	-2.192	-0.565	-3.407	-0.209
254.7	High Street (d/s)	-0.946	-0.359	-1.534	-0.55	-2.152	-0.663	-2.646	-0.713	-3.025	-0.648	-3.685	-0.565	-2.592	-0.209
236.1		-0.946	-0.364	-1.534	-0.558	-2.152	-0.671	-2.646	-0.722	-3.025	-0.654	-3.693	-0.567	-2.591	-0.205
236.09		-0.946	-0.364	-1.534	-0.558	-2.152	-0.671	-2.646	-0.722	-3.025	-0.654	-3.693	-0.567	-2.591	-0.205
225.2		-0.946	-0.365	-1.534	-0.559	-2.152	-0.675	-2.646	-0.726	-3.025	-0.658	-3.697	-0.568	-2.59	-0.205
225.19		-0.946	-0.365	-1.534	-0.559	-2.152	-0.675	-2.646	-0.726	-3.025	-0.658	-3.697	-0.568	-2.59	-0.205
224.97		-0.946	-0.365	-1.534	-0.56	-2.152	-0.675	-2.646	-0.726	-3.025	-0.658	-3.697	-0.568	-2.59	-0.205
209.4		-0.946	-0.374	-1.533	-0.592	-2.152	-0.717	-2.646	-0.769	-3.025	-0.698	-3.701	-0.595	-2.589	-0.205
209.33		-0.946	-0.374	-1.533	-0.591	-2.152	-0.717	-2.646	-0.769	-3.025	-0.698	-3.701	-0.595	-2.589	-0.205
204.33		-0.946	-0.372	-1.533	-0.592	-2.152	-0.72	-2.646	-0.773	-3.025	-0.704	-3.702	-0.602	-2.588	-0.206
203.3		-0.946	-0.371	-1.533	-0.593	-2.152	-0.721	-2.646	-0.774	-3.025	-0.706	-3.703	-0.603	-2.588	-0.206
202.3		-0.946	-0.371	-1.533	-0.592	-2.152	-0.721	-2.646	-0.774	-3.025	-0.706	-3.703	-0.604	-2.588	-0.205
201.3		-0.946	-0.371	-1.533	-0.592	-2.152	-0.721	-2.646	-0.775	-3.025	-0.707	-3.703	-0.605	-2.588	-0.205
200.3		-0.946	-0.37	-1.533	-0.592	-2.152	-0.722	-2.646	-0.775	-3.025	-0.707	-3.703	-0.606	-2.588	-0.205

Label	Location	flow in m ³ /s stage in mAOD		Difference (post- less pre-)											
		1 in 5 FEH		1 in 10 FEH		1 in 20 FEH		1 in 30 FEH		1 in 50 FEH		1 in 100 FEH		1 in 100cc FEH	
		Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage
		#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
RSCULV															
CULVOUT															
RS237.23		-0.882	-0.087	-1.385	-0.16	-1.799	-0.248	-2.161	-0.256	-2.407	-0.269	-2.744	-0.272	-2.491	-0.231
RS137.569		-0.763	-0.088	-1.221	-0.161	-1.684	-0.248	-1.985	-0.256	-1.934	-0.269	-2.309	-0.271	-0.751	-0.231
RS90.042		-0.71	-0.089	-1.155	-0.16	-1.735	-0.248	-1.757	-0.256	-1.679	-0.269	-1.621	-0.271	-0.591	-0.231
RS63.594		-0.695	-0.088	-1.139	-0.161	-1.656	-0.247	-1.635	-0.256	-1.611	-0.269	-1.176	-0.271	-0.551	-0.232
RS38.594		-0.673	-0.088	-1.147	-0.161	-1.584	-0.248	-1.571	-0.256	-1.545	-0.269	-0.982	-0.271	-0.519	-0.232
RSD		-0.594	-0.089	-1.12	-0.161	-1.474	-0.248	-1.475	-0.256	-1.441	-0.27	-0.887	-0.271	-0.445	-0.232
RS1.4000		-0.574	-0.086	-1.098	-0.155	-1.435	-0.241	-1.451	-0.24	-1.404	-0.228	-0.854	-0.222	-0.424	-0.197
RS1.3800		-0.546	-0.082	-1.064	-0.149	-1.392	-0.231	-1.427	-0.234	-1.377	-0.223	-0.838	-0.219	-0.407	-0.199
RS1.3600		-0.511	-0.08	-1.023	-0.145	-1.343	-0.226	-1.399	-0.23	-1.347	-0.219	-0.821	-0.218	-0.39	-0.2
RS1.3400		-0.463	-0.078	-0.969	-0.143	-1.294	-0.222	-1.36	-0.229	-1.307	-0.217	-0.798	-0.217	-0.371	-0.2
RS1.3200		-0.62	-0.078	-1.14	-0.143	-1.967	-0.222	-2.047	-0.229	-2.108	-0.217	-2.3	-0.217	-2.055	-0.2
RS1.3000		-0.604	-0.08	-1.135	-0.143	-1.965	-0.222	-2.022	-0.229	-2.091	-0.218	-2.265	-0.217	-2.011	-0.201
RS1.2800		-0.59	-0.079	-1.129	-0.142	-1.958	-0.222	-2.005	-0.229	-2.073	-0.218	-2.234	-0.217	-1.974	-0.201
RS1.2725		-0.584	-0.079	-1.126	-0.143	-1.955	-0.222	-1.998	-0.23	-2.068	-0.218	-2.225	-0.217	-1.962	-0.201
RS1.2610		-0.578	-0.08	-1.123	-0.143	-1.951	-0.221	-1.988	-0.229	-2.059	-0.218	-2.208	-0.218	-1.944	-0.202
RS1.2600		-0.589	-0.08	-1.115	-0.143	-1.919	-0.221	-2.084	-0.229	-2.151	-0.218	-2.398	-0.218	-2.299	-0.202
RS1.2400		-0.584	-0.072	-1.111	-0.132	-1.915	-0.211	-2.073	-0.221	-2.137	-0.22	-2.384	-0.228	-2.275	-0.215
RS1.2384		-0.584	-0.064	-1.111	-0.115	-1.915	-0.177	-2.073	-0.184	-2.137	-0.181	-2.384	-0.181	-2.275	-0.161
CU		-0.584	-0.066	-1.111	-0.12	-1.915	-0.184	-2.073	-0.19	-2.137	-0.185	-2.384	-0.183	-2.275	-0.164
CD		-0.584	-0.065	-1.111	-0.118	-1.915	-0.181	-2.073	-0.187	-2.137	-0.181	-2.384	-0.178	-2.275	-0.159
RS1.2200		-0.579	-0.061	-1.109	-0.11	-1.909	-0.17	-2.062	-0.177	-2.126	-0.176	-2.367	-0.179	-2.251	-0.163
RS1.2000		-0.57	-0.06	-1.101	-0.11	-1.903	-0.17	-2.044	-0.177	-2.109	-0.175	-2.345	-0.18	-2.22	-0.165
RS1.1950		-0.567	-0.06	-1.099	-0.11	-1.901	-0.17	-2.04	-0.177	-2.105	-0.175	-2.339	-0.18	-2.213	-0.165
RS1.19493		-0.567	-0.06	-1.099	-0.108	-1.901	-0.168	-2.04	-0.174	-2.105	-0.173	-2.338	-0.178	-2.213	-0.163
RS1.1800		-0.562	-0.059	-1.09	-0.108	-1.895	-0.168	-2.027	-0.176	-2.096	-0.174	-2.32	-0.179	-2.192	-0.165
RS1.1600		-0.557	-0.057	-1.081	-0.105	-1.882	-0.167	-2.008	-0.175	-2.086	-0.173	-2.294	-0.179	-2.166	-0.165
RS1.1435		-0.554	-0.055	-1.076	-0.101	-1.873	-0.164	-1.995	-0.173	-2.078	-0.172	-2.274	-0.179	-2.146	-0.167
RS1.1430		-0.554	-0.055	-1.075	-0.1	-1.872	-0.161	-1.995	-0.17	-2.078	-0.168	-2.274	-0.176	-2.145	-0.164
RS1.14204		-0.554	-0.055	-1.075	-0.1	-1.872	-0.161	-1.995	-0.17	-2.078	-0.168	-2.274	-0.175	-2.145	-0.164
RS1.1400		-0.553	-0.054	-1.074	-0.1	-1.872	-0.162	-1.994	-0.171	-2.078	-0.17	-2.273	-0.177	-2.144	-0.166
RS1.1200		-0.549	-0.053	-1.068	-0.097	-1.861	-0.158	-1.98	-0.169	-2.071	-0.169	-2.253	-0.176	-2.126	-0.166
RS1.1000		-0.544	-0.051	-1.064	-0.094	-1.856	-0.154	-1.97	-0.165	-2.064	-0.165	-2.238	-0.174	-2.112	-0.166
RS1.0800		-0.541	-0.05	-1.061	-0.091	-1.852	-0.15	-1.962	-0.161	-2.059	-0.162	-2.225	-0.172	-2.099	-0.165
RS1.0600		-0.541	-0.05	-1.049	-0.09	-1.823	-0.148	-2.018	-0.16	-2.112	-0.161	-2.357	-0.172	-2.406	-0.166
RS1.0400		-0.538	-0.049	-1.044	-0.09	-1.816	-0.148	-2.01	-0.16	-2.109	-0.161	-2.348	-0.171	-2.397	-0.165
RS1.0200		-0.535	-0.048	-1.041	-0.089	-1.812	-0.148	-2.006	-0.159	-2.108	-0.161	-2.345	-0.171	-2.392	-0.165
RS1.0005		-0.534	-0.049	-1.041	-0.09	-1.811	-0.147	-2.006	-0.159	-2.107	-0.16	-2.343	-0.171	-2.39	-0.165
RS1.0003		-0.534	-0.033	-1.041	-0.062	-1.811	-0.098	-2.006	-0.106	-2.107	-0.104	-2.343	-0.11	-2.39	-0.118
RS1.0000		-0.534	-0.033	-1.041	-0.061	-1.811	-0.097	-2.006	-0.106	-2.107	-0.103	-2.343	-0.109	-2.39	-0.118
B3		0.013	-0.358	0	-0.432	0	-0.495	0	-0.532	0	-0.532	0	-0.533	0	-0.338
BU2		-0.946	-0.362	-1.643	-0.569	-2.605	-0.722	-2.473	-0.779	-2.114	-0.718	-1.706	-0.627	0.016	-0.204
WU2		0	-0.362	-0.078	-0.569	-2.016	-0.722	-3.356	-0.779	-4.262	-0.718	-5.363	-0.627	-2.793	-0.204
WD2		0	-0.36	-0.078	-0.574	-2.016	-0.708	-3.356	-0.76	-4.262	-0.7	-5.363	-0.613	-2.793	-0.202
BD2		-0.946	-0.36	-1.643	-0.574	-2.605	-0.708	-2.473	-0.76	-2.114	-0.7	-1.706	-0.613	0.016	-0.202
BU1		-0.946	-0.368	-1.506	-0.578	-1.505	-0.715	-1.401	-0.771	-1.066	-0.709	-0.642	-0.62	0.026	-0.204
WU1		0	-0.368	-0.027	-0.578	-0.72	-0.715	-1.56	-0.771	-2.669	-0.709	-3.877	-0.62	-4.036	-0.204
WD1		0	-0.272	-0.027	-0.39	-0.72	-0.495	-1.56	-0.58	-2.669	-0.617	-3.877	-0.65	-4.036	-0.344
BD1		-0.946	-0.272	-1.506	-0.39	-1.505	-0.495	-1.401	-0.58	-1.066	-0.617	-0.642	-0.65	0.026	-0.344
BU-1		-0.395	-0.06	-0.334	-0.11	-0.314	-0.17	-0.307	-0.177	-0.315	-0.175	-0.31	-0.18	-0.294	-0.165
WU-1		-0.615	-0.06	-1.222	-0.11	-1.999	-0.17	-2.14	-0.177	-2.271	-0.175	-2.638	-0.18	-2.266	-0.165
WD-1		-0.615	-0.06	-1.222	-0.108	-1.999	-0.168	-2.14	-0.174	-2.271	-0.173	-2.638	-0.178	-2.266	-0.163
BD-1		-0.395	-0.06	-0.334	-0.108	-0.314	-0.168	-0.307	-0.174	-0.315	-0.173	-0.31	-0.178	-0.294	-0.163
BU-2		-0.554	-0.055	-1.075	-0.1	-1.872	-0.161	-1.995	-0.17	-2.078	-0.168	-2.274	-0.176	-2.145	-0.164
WU-2		0	-0.055	0	-0.1	0	-0.161	0	-0.17	0	-0.168	0	-0.176	0	-0.164
WD-2		0	-0.055	0	-0.1	0	-0.161	0	-0.17	0	-0.168	0	-0.175	0	-0.164
BD-2		-0.554	-0.055	-1.075	-0.1	-1.872	-0.161	-1.995	-0.17	-2.078	-0.168	-2.274	-0.175	-2.145	-0.164
B4		0	-0.078	0	-0.143	0	-0.222	0	-0.229	0	-0.217	0	-0.217	0	-0.2

		flow in m ³ /s stage in mAOD		Difference (post- less pre-)											
Label	Location	1 in 5 FEH		1 in 10 FEH		1 in 20 FEH		1 in 30 FEH		1 in 50 FEH		1 in 100 FEH		1 in 100cc FEH	
		Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage	Max Flow	Max Stage
B5		0	-0.08	0	-0.143	0	-0.221	0	-0.229	0	-0.218	0	-0.218	0	-0.202
B6		0	-0.05	0	-0.09	0	-0.148	0	-0.16	0	-0.161	0	-0.172	0	-0.166
C481.1UJ		-0.947	-0.312	-1.534	-0.497	-1.714	-0.607	-1.625	-0.652	-1.292	-0.61	-0.871	-0.552	0	-0.197
C481.1DJ		-0.947	-0.269	-1.534	-0.424	-1.714	-0.53	-1.625	-0.591	-1.292	-0.577	-0.871	-0.552	0	-0.225
RS1.4091		-0.585	-0.088	-1.11	-0.159	-1.46	-0.247	-1.464	-0.243	-1.429	-0.23	-0.875	-0.222	-0.437	-0.197
RS1.4100		-0.585	-0.088	-1.11	-0.159	-1.46	-0.247	-1.464	-0.257	-1.429	-0.269	-0.875	-0.272	-0.437	-0.231
RS1.0605		-0.535	-0.05	-1.056	-0.09	-1.847	-0.148	-1.95	-0.16	-2.052	-0.161	-2.21	-0.172	-2.083	-0.166
USresSP1		#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
RES1		#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
dummy		#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
Flap		#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
USRESSP1		#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
USCULVOUT		#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
dummy2		#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
B2		0	-0.193	0	-0.285	0	-0.374	0	-0.421	0	-0.425	0	-0.381	0	-0.079

