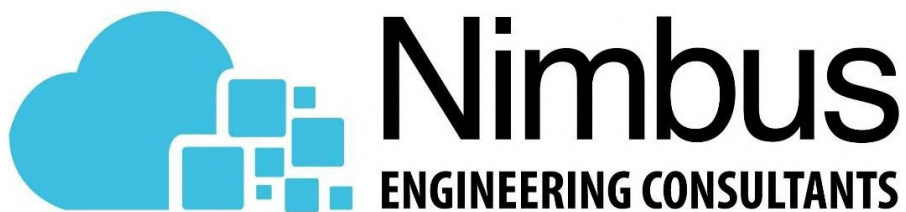


DRAINAGE IMPACT ASSESSMENT REPORT FOR
MUTTONHOLE ROAD,
HAMILTON, ML3 8RJ

DOCUMENT NUMBER.: C3206-R1-REV-B

PREPARED BY



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1. INTRODUCTION

1.1 Appointment

Nimbus Engineering have been appointed to provide a solution on the management of surface water run-off and to ensure that there is no risk of flooding caused by the proposed Battery Storage site.

The existing and proposed site plans, can be found in Appendix A.

1.2 Objectives

This report will address the concerns raised by the local authority and provide details on a suitable Sustainable Urban Drainage System (SuDS) in order to reduce the surface water run-off leaving the site and show that the proposed development will not increase Flood Risk at the site or elsewhere.

1.3 Limitations

The general limitations of this report are:

- A number of data and information sources have been used to prepare this report. Whilst Nimbus Engineering believes them to be trustworthy, Nimbus Engineering is unable to guarantee the accuracy of data and information that has been provided by others;
- This report has been prepared using the best data and information that was available at the time of writing. There is the potential for further information or data to become available, leading to changes in the conclusions drawn by this report, for which Nimbus Engineering cannot be held responsible.

2. GEOLOGY OF THE AREA

According to, the British Geological Survey, the superficial deposits at the site consist of diamicton, as shown in Figure 1, below. The bedrock in the area is of the Limestone Coal Formation, consisting of limestone and coal, as shown in Figure 2, below.

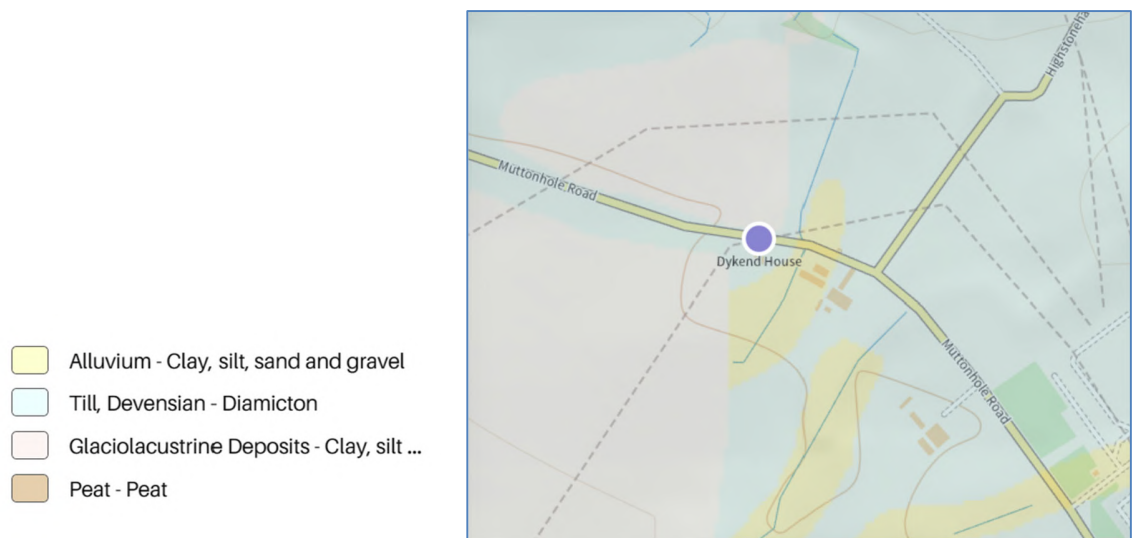


Figure 1- Superficial deposits at the site. (Source: British Geological Society Website (Contains British Geological Survey materials © URKI [2024]. Base mapping is provided by ESRI)).



Figure 2- Bedrock at the site. (Source: British Geological Society Website (Contains British Geological Survey materials © URKI [2024]. Base mapping is provided by ESRI))

3. SUSTAINABLE URBAN DRAINAGE SYSTEMS

Surface water arising from a developed site should, as far as is practicable, be managed in a sustainable manner to mimic the surface water flows arising from the site prior to the proposed development, while reducing the flood risk to the site itself and elsewhere, taking climate change into account.

Reducing the rate of surface water discharge from urban sites is one of the most effective ways of reducing and managing flood risk.

Traditional piped surface water systems work by removing surface water from our developments as quickly as possible, however this can cause various adverse impacts:

- Increased downstream flooding, and sudden rises in flow rates and water levels in local water courses.
- Reduction in groundwater levels and dry weather flows in watercourses.
- Reduce amenity and adversely affect biodiversity due to the surface water run-off containing contaminants such as oil, organic matter and toxic materials

SuDS are defined as a sequence of management principles and control structures designed to drain surface water in a more sustainable fashion than conventional piped drainage techniques. SuDS should utilise the natural landscape of an area which as well as slowing down the rate of runoff provides a number of environmental, ecological and social benefits.

These include:

- Protection and enhancement of water quality. As well as providing on-site attenuation, SuDS treat the water, resulting in an improved quality of water leaving the site. This is achieved when the water passes through fine soils and the roots of specially selected plants. Pollutants washed off the hard landscaping by rainfall will be safely removed before the water reaches the natural receiving water course.
- A sympathetic approach to the environmental setting by providing opportunities to create habitats for flora and fauna in urban watercourses and open spaces.
- Meeting the amenity and social needs of the local community and residents in the creation of attractive green spaces.

The various types of SuDS include:

Permeable paving	
Soakaways;	
Swales and basins;	
Bioretention/ rain gardens;	
Green roofs and rainwater re-use;	

Preferably a combination of these techniques should be used as part of the surface water management train, and it is important for all stakeholders, such as developers, architects, landscape architects and engineers to work in order to determine a feasible solution.

The SuDS management train is shown below, and this has been followed when proposing the proposed Sustainable Urban Drainage Systems for this site.

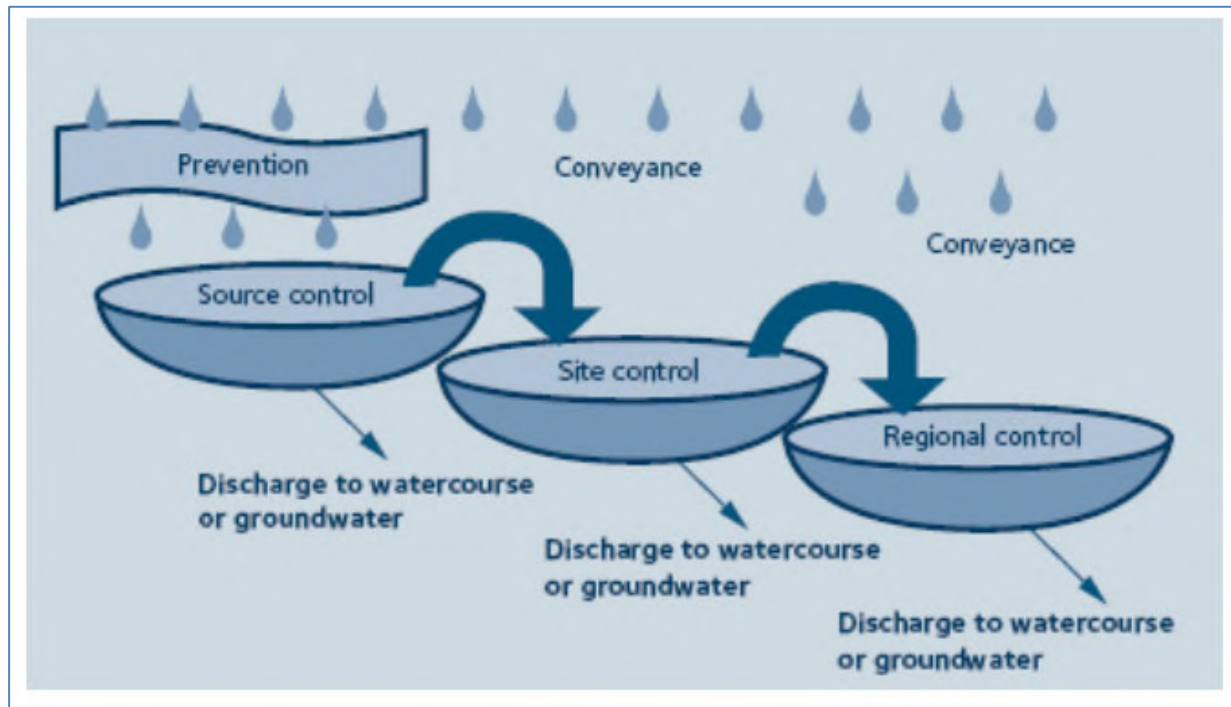


Figure 3 – SuDS Management Train

4. PROPOSED SOLUTION

Due to the underlying geology and the excessively steep slopes, infiltration has been ruled out as an option at this site. Therefore, Porous surfacing, in the form of granular material has been provided at all proposed hardstanding areas, in order to treat all of the surface water run off from these areas, however the sub-base of these areas will be lined due to infiltration not being feasible.

Perforated pipes will also collect any excess surface water run off from the sub-base of the granular material. Therefore a level of treatment has been provided for all of this surface water run off.

The surface water from these perforated pipes, will then be conveyed via gravity to a detention basin. This detention basin has been sized for the 1 in 200 year plus 45% storm event, with a flow restriction of 36.1 l/s (QBAR) to discharge via gravity to the adjacent ditch.

This proposed solution can be found on the drawings provided in Appendix A, together with the calculations of Qbar and the proposed surface water run off rates.

The proposed surface water and SuDS solution has been modelled for the 1 in 200 year plus 45% climate change event and the hydraulic modelling files have been provided in Appendix B. The water quality index has also been completed and provided in Appendix C.

5. TIMESCALE AND MAINTENANCE OF WORKS

All drainage works shall be completed prior to first occupation and there shall be no adoption of any of the drainage works within the site, the managers of the site will be responsible to oversee the long-term maintenance of the drains. The following outline maintenance strategy sets out recommended timescales for maintenance of the proposed drainage works, in line with CIRIA SuDS Design Guide:

- Regular inspection will comprise the inspection and cleaning of catchment, filters and tanks to reduce the likelihood of contamination, this is recommended to be carried out every 3 to 6 months.

Maintenance schedule	Required action	Typical frequency
Regular maintenance	Remove litter and debris	Monthly
	Cut grass- for spillways and access routes	Monthly (during growing season) or as required
	Cut grass- meadow grass in and around basin	Half yearly (spring-before nesting season and autumn)
	Manage other vegetation and remove nuisance plants	Monthly (at start, then as required)
	Inspect inlets, outlets and overflows for blockages and clear if required	Monthly
	Inspect banksides, structures, pipework etc for evidence of physical damage	Monthly
	Inspect inlets and facility surface for silt accumulation. Establish appropriate silt removal frequencies	Monthly (for first year) then annually or as required
	Check any penstocks and other mechanical devices	Annually
	Tidy all dead growth before start of growing season	Annually
	Remove sediment from inlets, outlet and forebay	Annually (or as required)
	Manage wetland plants in outlet pool- where provided	Annually (as set out in chapter 23)
Occasional maintenance	Reseed areas of poor vegetation growth	As required
	Prune and trim any trees and remove cuttings	Every 2 years, or as required
	Remove sediment from inlets, outlets, forebay and main basin when required	Every 5 years, or as required (likely to be minimal requirements where effective upstream source control is provided)
Remedial actions	Repair erosion or other damage by reseedling or re-turfing	As required
	Realignment of rip-rap	As required
	Repair/ rehabilitation of inlets, outlets and overflows	As required
	Relevel uneven surfaces and reinstate design levels	As required

Table 1: Operation and maintenance requirements for detentions basins.

Maintenance schedule	Required action	Typical frequency
Regular maintenance	Inspect from surface and identify any areas that are not operating correctly. If required, take remedial action	Monthly for 3 months, then 6 monthly intervals
	Remove debris from the catchment surface (where it may cause risks to performance)	Monthly
	Orifice plates within plastic chambers or vortex controls to be jetted from the surface after heavy rainfall events to remove any debris or silt	As required
	Empty catchpits upstream of SuDS features to ensure no debris is passed downstream	3 months or as required
Remedial actions*	In the event of a blockage, a vortex flow control can be removed from the chamber via the lifting cabled located at the access, this will be cleaned at surface level and reinstalled into its original location	As required
	In the event of a blockage, the orifice plate should be jetted from surface, and if blockage is not cleared the orifice plate can be removed by removing fixing bolts. These fixing bolts should be checked and replaced if needed.	As required
Monitoring	Following installation it is important that any extraneous materials i.e. building materials: granular backfill, in-situ pour concrete etc are removed from the unit and the new flow control chamber is fully jetted down	Upon installation
	Inspect/check chamber channel for any debris or silt build-up. Upstream chambers should be checked at the same time as these monitoring works to ensure network is operating at full capacity.	Annually

Table 2: Operation and maintenance requirements for flow control chambers

*All Remedial Works should be carried out by a competent and certified contractor, with no access to chambers or removal of parts to be undertaken by managers of the site

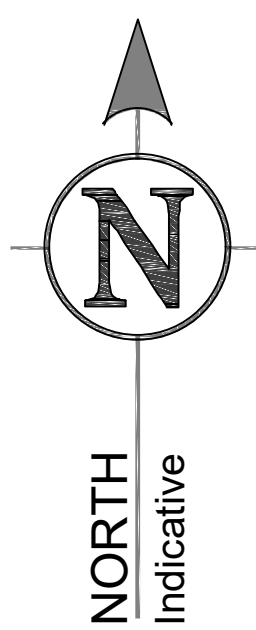
If upstream network of flow control chamber is regularly maintained, little maintenance is required within the chamber as there are no moving parts

6. CONCLUSIONS

The purpose of this report is to provide a suitable SuDS strategy to the Local Flooding Authority relating to surface water flows arising due to the proposed development.

As requested, SuDS have been incorporated into this design, in the loose granular surfacing on all proposed hardstanding areas, perforated pipes, and a detention basin with a flow restriction of 36.1 l/s (QBAR), via gravity to the adjacent ditch.

APPENDIX A – DRAWINGS



DRAWING TO BE PRINTED IN COLOUR.

- KEY:
- Existing Soft Areas as per topographical survey. Soft areas include grass, shrubs and trees but for ease of reference is shown as same hatch.
 - Proposed Site Boundary.
 - Existing AOD pre-development spot levels as per topographical survey.
 - Existing Exceedance SW routes as per information from topographical survey.

- NOTES:
- DRAWING WILL NEED TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DRAWINGS FROM ARCHITECT, LANDSCAPE ARCHITECT, STRUCTURAL ENGINEER AND M&E.
 - EXISTING LEVELS ARE BASED ON THE TOPOGRAPHICAL SURVEY.
 - EXISTING ROUTES FOR UNDERGROUND UTILITIES ARE CURRENTLY UNKNOWN.

NOT FOR CONSTRUCTION

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REV	DATE	DRAWN	DESCRIPTION	CHECK	APPR.
B	26-11-24	M.H	Proposed Site Boundary Adjusted.	SL	SL
A	15-03-24	M.H	For Information.	SL	SL

PROJECT:
C3206 - Muttonhole Road, Hamilton, ML3

TITLE:
Existing Pre-Development Impermeable Areas.

CLIENT:
Cogeo Planning and Environmental Services



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CHECKED BY: S.L	DATE: 15-03-24	APPROVED BY: S.L	DATE: 15-03-24
DRN BY: M.H	SCALE: 1:500	DRAWING NUMBER: C3206-01	REV: B
DATE: 15-03-24	SIZE: A1		

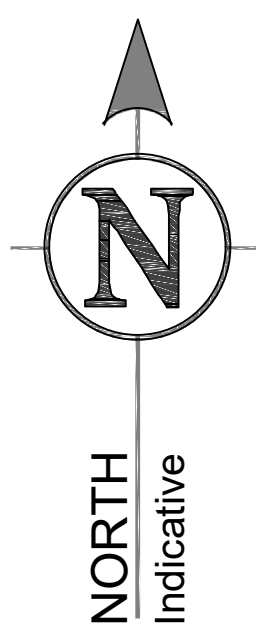
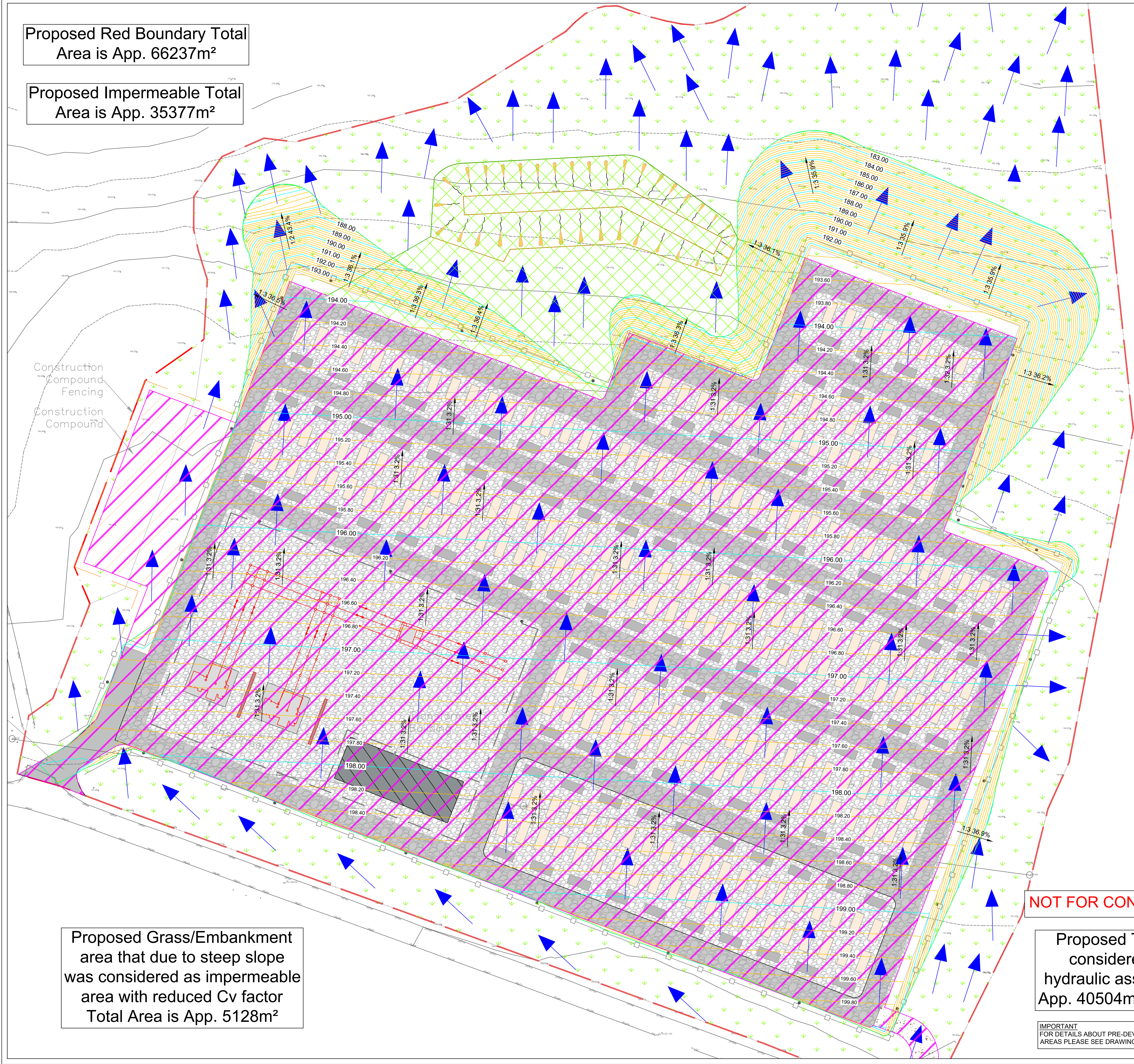
Proposed Red Boundary Total
Area is App. 66237m²

Existing Soft Total Area is
App. 66237m²

IMPORTANT
FOR DETAILS ABOUT POST DEVELOPMENT IMPERMEABLE
AREAS PLEASE SEE DRAWING C3206-02

Proposed Red Boundary Total
Area is App. 66237m²

Proposed Impermeable Total
Area is App. 35377m²



DRAWING TO BE PRINTED IN COLOUR.

KEY:

- Proposed considered impermeable area that will contribute to the detention basin. Area includes roads, pavements, battery storage units and substations.
- Proposed grass/embankment area that due to the steep slope are considered in the hydraulic calculation with a reduced Cv factor. This also includes the area where the detention basin will be located.
- Existing Soft Areas as per topographical survey. Soft areas include grass, shrubs and trees but for ease of reference is shown as same hatch.
- 196.00 Proposed Major Contours 1.000m.
- 196.20 Proposed Minor Contours 0.200m.
- Proposed Site Boundary.
- Proposed detention basins to have minimum storage capacity as shown on the notes. Inlets and outlets to have headwalls and erosion control blankets.
- Proposed Substations. Currently there is no detailed layout available. SW drainage in this area to be confirmed in subsequent design stages.
- Existing levels as per topographical survey.
- Existing Vegetation as per existing site layout.
- 1:31 3.2% Proposed Gradient m/m and slope in %.
- Proposed Exceedance SW routes as per proposed levels done by others.

NOTES:

- DRAWING WILL NEED TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DRAWINGS FROM ARCHITECT, LANDSCAPE ARCHITECT, STRUCTURAL ENGINEER AND M&E.
- EXTERNAL LEVELS DESIGN IS SUBJECT TO CHANGE AS DESIGN PROGRESSES. THIS DESIGN IS BASED ON PROPOSED LEVELS PROVIDED BY ADVANCE CONSTRUCTION SCOTLAND DRAWING NO. MUTTONHOLE-T-050_RevA from 23/02/2024.
- EXISTING LEVELS ARE BASED ON THE TOPOGRAPHICAL SURVEY.

IMPORTANT
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REV	DATE	DRAWN	DESCRIPTION	CHECK	APPR.
B	26-11-24	M.H	Proposed Site Layout Amended.	SL	SL
A	15-03-24	M.H	For Information.	SL	SL

PROJECT:
C3206 - Muttonhole Road, Hamilton, ML3

TITLE:
Proposed Post-Development Impermeable Areas.

CLIENT:
Cogeo Planning and Environmental Services

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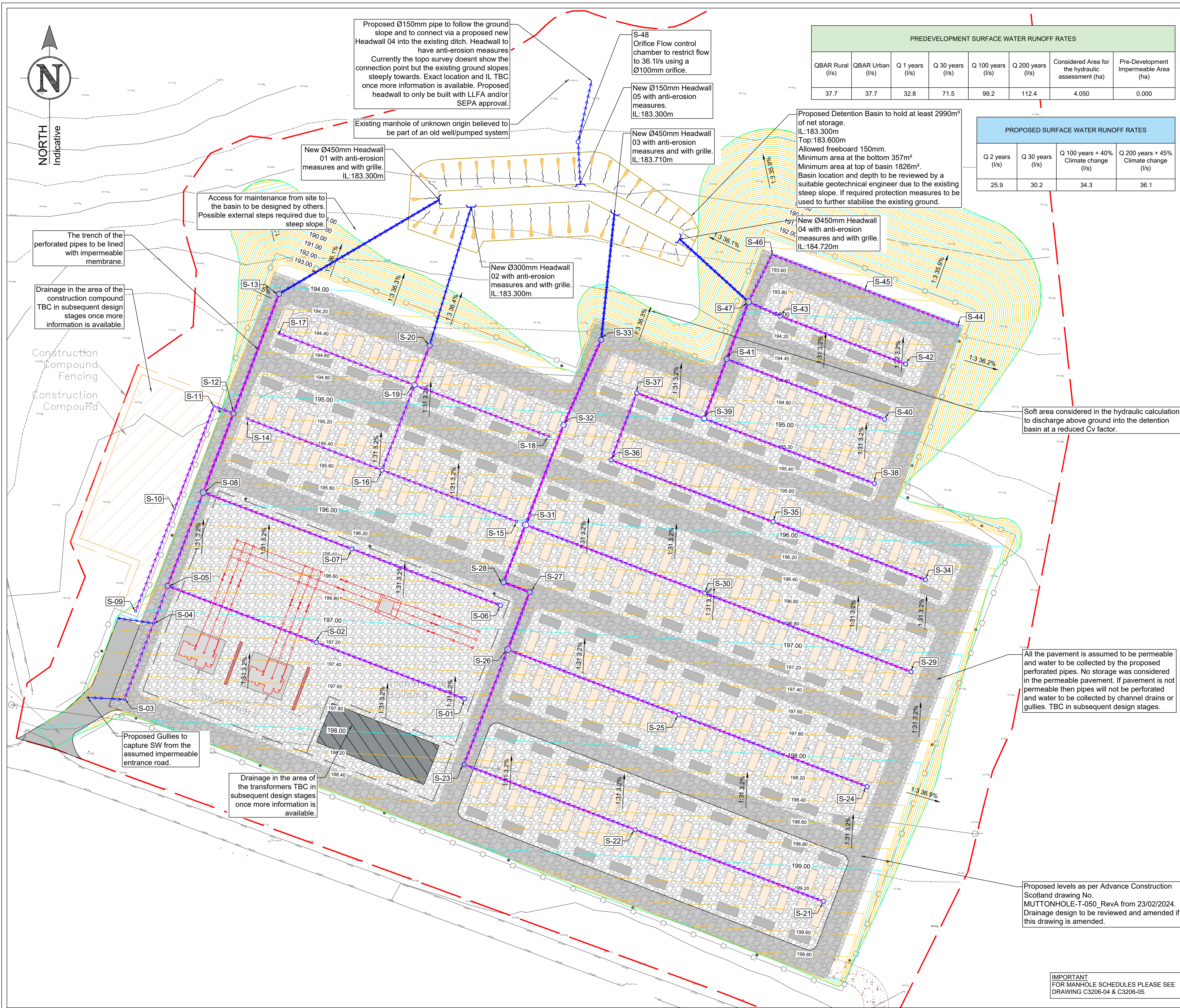
CHECKED BY: S.L	DATE: 15-03-24	APPROVED BY: S.L	DATE: 15-03-24
DRN BY: M.H	SCALE: 1:500	DRAWING NUMBER: C3206-02	REV: B
DATE: 15-03-24	SIZE: A1		

Proposed Grass/Embankment
area that due to steep slope
was considered as impermeable
area with reduced Cv factor
Total Area is App. 5128m²

NOT FOR CONSTRUCTION

Proposed Total Area
considered in the
hydraulic assessment is
App. 40504m² (4.0504ha)

IMPORTANT
FOR DETAILS ABOUT PRE-DEVELOPMENT IMPERMEABLE
AREAS PLEASE SEE DRAWING C3206-01



Proposed Ø150mm pipe to follow the ground slope and to connect via a proposed new Headwall 04 into the existing ditch. Headwall to have anti-erosion measures

Currently the topo survey doesnt show the connection point but the existing ground slopes steeply towards. Exact location and IL TBC once more information is available. Proposed headwall to only be built with LLFA and/or SEPA approval.

S-48
Orifice Flow control chamber to restrict flow to 36.1l/s using a Ø100mm orifice.

New Ø150mm Headwall 05 with anti-erosion measures.
IL:183.300m

New Ø450mm Headwall 03 with anti-erosion measures and with grille.
IL:183.710m

PREDEVELOPMENT SURFACE WATER RUNOFF RATES							
QBAR Rural (l/s)	QBAR Urban (l/s)	Q 1 years (l/s)	Q 30 years (l/s)	Q 100 years (l/s)	Q 200 years (l/s)	Considered Area for the hydraulic assessment (ha)	Pre-Development Impermeable Area (ha)
37.7	37.7	32.8	71.5	99.2	112.4	4.050	0.000

Proposed Detention Basin to hold at least 29900³ of net storage.
IL:183.300m
Top:183.600m
Allowed freeboard 150mm.
Minimum area at the bottom 357m²
Minimum area at top of basin 1826m².
Basin location and depth to be reviewed by a suitable geotechnical engineer due to the existing steep slope. If required protection measures to be used to further stabilise the existing ground.

PROPOSED SURFACE WATER RUNOFF RATES			
Q 2 years (l/s)	Q 30 years (l/s)	Q 100 years + 40% Climate change (l/s)	Q 200 years + 45% Climate change (l/s)
25.9	30.2	34.3	36.1

New Ø450mm Headwall 01 with anti-erosion measures and with grille.
IL:183.300m

Access for maintenance from site to the basin to be designed by others. Possible external steps required due to steep slope.

New Ø300mm Headwall 02 with anti-erosion measures and with grille.
IL:183.300m

New Ø450mm Headwall 04 with anti-erosion measures and with grille.
IL:184.720m

The trench of the perforated pipes to be lined with impermeable membrane.

Drainage in the area of the construction compound TBC in subsequent design stages once more information is available.

Construction Compound Fencing
Construction Compound

Soft area considered in the hydraulic calculation to discharge above ground into the detention basin at a reduced Cv factor.

All the pavement is assumed to be permeable and water to be collected by the proposed perforated pipes. No storage was considered in the permeable pavement. If pavement is not permeable then pipes will not be perforated and water to be collected by channel drains or gullies. TBC in subsequent design stages.

Proposed levels as per Advance Construction Scotland drawing No. MUTTONHOLE-T-050_RevA from 23/02/2024. Drainage design to be reviewed and amended if this drawing is amended.

DRAWING TO BE PRINTED IN COLOUR.

KEY:

- Proposed Surface Water Pipes.
- Proposed Perforated Surface Water Pipes.
- Proposed SW catchpits inspection chambers and access chambers. S-48 is orifice flow control chamber.
- Proposed Site Boundary.
- Proposed detention basins to have minimum storage capacity as shown on the notes. Inlets and outlets to have headwalls and erosion control blankets.
- Proposed headwall with erosion control blanket.
- Proposed Substations. Currently there is no detailed layout available. SW drainage in this area to be confirmed in subsequent design stages.
- Existing levels as per topographical survey.
- Existing Vegetation as per existing site layout.
- Proposed Major Contours 1.000m.
- Proposed Minor Contours 0.200m.
- Proposed Gradient m/m and slope in %.

NOTES:

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- EXISTING LEVELS ARE BASED ON THE TOPOGRAPHICAL SURVEY.
- ALL CATCHPITS TO HAVE AT LEAST 450mm SUMP FROM IL SHOWN IN TABLE.
- SW PIPES TO BE PLASTIC Ø150mm LAID AT A GRADIENT BETWEEN 1:10 AND 1:100 IF NOT OTHERWISE STATED.
- RESTRICTED FLOW RATE OF 36.1l/s IS BASED ON THE Qbar VALUE AS SHOWN IN THE HYDRAULIC ASSESSMENT AND ON THE TABLES.
- ALL CHAMBERS TO HAVE D400 COVER AND FRAMES.

NOT FOR CONSTRUCTION

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REV	DATE	DRAWN	DESCRIPTION	CHECK	APPR.
B	26-11-24	M.H	Proposed Site Layout Amended.	SL	SL
A	15-03-24	M.H	For Information.	SL	SL

PROJECT:
C3206 - Muttonhole Road, Hamilton, ML3

TITLE:
Proposed Surface Water Strategy Layout.

CLIENT:
Cogeo Planning and Environmental Services



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CHECKED BY: S.L	DATE: 15-03-24	APPROVED BY: S.L	DATE: 15-03-24
DRN BY: M.H	SCALE: 1:500	DRAWING NUMBER: C3206-03	REV: B
DATE: 15-03-24	SIZE: A1		

IMPORTANT
FOR MANHOLE SCHEDULES PLEASE SEE
DRAWING C3206-04 & C3206-05.

SCHEDULE OF SURFACE WATER CHAMBERS *COVER LEVELS TO BE CONFIRMED ON SITE PRIOR TO CONSTRUCTION					
NAME	TYPE	DIAMETER (m)	COVER LEVEL (m)	INVERT LEVEL (m)	DEPTH (m)
S-01	MH-CP	1.200	197.649	196.149	1.500
S-02	MH-CP	1.200	197.210	195.391	1.819
S-03	CP	0.600	197.824	196.332	1.492
S-04	CP	0.600	197.118	195.167	1.951
S-05	MH-CP	1.500	196.771	194.254	2.517
S-06	MH-CP	1.200	196.782	195.432	1.350
S-07	MH-CP	1.200	196.782	194.675	2.107
S-08	MH-CP	1.800	195.904	193.389	2.515
S-09	CP	0.600	196.883	195.225	1.658
S-10	CP	0.600	196.000	194.365	1.635
S-11	CP	0.600	195.172	192.796	2.376
S-12	MH-CP	1.500	195.172	192.422	2.750
S-13	MH-CP	1.500	194.063	191.202	2.861
S-14	CP	0.600	195.214	193.714	1.500
S-15	CP	0.600	196.011	194.511	1.500
S-16	MH-CP	1.200	195.613	192.816	2.797
S-17	CP	0.600	194.422	192.922	1.500
S-18	CP	0.600	194.824	193.324	1.500
S-19	MH-CP	1.500	194.824	192.090	2.734
S-20	MH-CP	1.500	194.458	190.882	3.576
S-21	MH-CP	1.200	199.311	197.811	1.500
S-22	MH-CP	1.200	198.752	196.850	1.902
S-23	MH-CP	1.200	198.245	195.802	2.443
S-24	MH-CP	1.200	198.246	196.746	1.500

SCHEDULE OF SURFACE WATER CHAMBERS *COVER LEVELS TO BE CONFIRMED ON SITE PRIOR TO CONSTRUCTION					
NAME	TYPE	DIAMETER (m)	COVER LEVEL (m)	INVERT LEVEL (m)	DEPTH (m)
S-25	MH-CP	1.200	197.688	195.785	1.903
S-26	MH-CP	1.800	197.180	194.848	2.332
S-27	MH-CP	1.500	196.647	194.408	2.239
S-28	MH-CP	1.500	196.570	194.208	2.362
S-29	MH-CP	1.200	197.181	195.681	1.500
S-30	MH-CP	1.200	196.570	194.779	1.791
S-31	MH-CP	1.800	196.038	193.618	2.420
S-32	MH-CP	1.500	195.111	192.853	2.258
S-33	MH-CP	1.500	193.330	190.193	3.137
S-34	MH-CP	1.200	196.336	194.736	1.600
S-35	MH-CP	1.200	195.887	193.958	1.929
S-36	MH-CP	1.200	195.407	192.966	2.441
S-37	MH-CP	1.200	194.784	192.452	2.332
S-38	MH-CP	1.200	195.488	193.888	1.600
S-39	MH-CP	1.500	194.984	191.614	3.370
S-40	MH-CP	1.200	194.895	193.070	1.825
S-41	MH-CP	1.500	194.436	191.310	3.126
S-42	MH-CP	1.200	194.384	192.401	1.983
S-43	MH-CP	1.200	194.018	191.441	2.577
S-44	CP	0.600	194.006	192.983	1.023
S-45	CP	0.600	193.736	192.273	1.463
S-46	CP	0.600	193.463	191.563	1.900
S-47	MH-CP	1.800	193.906	190.960	2.946
S-48	Flow Control	1.200	186.100	182.082	4.018

IMPORTANT
FOR DRAINAGE LAYOUT PLEASE
SEE DRAWING C3206-03.
FOR SURFACE WATER PIPES
SCHEDULE PLEASE SEE DRAWING
C3206-05.

NOT FOR CONSTRUCTION

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REV	DATE	DRAWN	DESCRIPTION	CHECK	APPR.
B	26-11-24	M.H	Proposed Site Layout Amended.	SL	SL
A	15-03-24	M.H	For Information.	SL	SL

PROJECT:
C3206 - Muttonhole Road, Hamilton, ML3

TITLE:
Proposed Surface Water Manhole Schedule.

CLIENT:
Cogeo Planning and Environmental Services



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CHECKED BY: S.L	DATE: 15-03-24	APPROVED BY: S.L	DATE: 15-03-24
DRN BY: M.H	SCALE: 1:500	DRAWING NUMBER: C3206-04	REV: B
DATE: 15-03-24	SIZE: A1		

SCHEDULE OF SURFACE WATER PIPES				
PIPE NAME	START AND END STRUCTURE	DIAMETER (m)	LENGTH (m)	GRADIENT
SWP-01	S-01 to S-02	0.300	45.441	1:60
SWP-02	S-02 to S-05	0.300	45.441	1:40
SWP-03	S-03 to S-04	0.150	23.302	1:20
SWP-04	S-04 to S-05	0.150	11.443	1:15
SWP-05	S-05 to S-08	0.300	28.587	1:40
SWP-06	S-06 to S-07	0.300	45.445	1:60
SWP-07	S-07 to S-08	0.300	45.445	1:40
SWP-08	S-08 to S-12	0.450	24.172	1:25
SWP-09	S-09 to S-10	0.150	31.394	1:40
SWP-10	S-10 to S-11	0.225	31.394	1:20
SWP-11	S-11 to S-12	0.225	5.964	1:40
SWP-12	S-12 to S-13	0.450	36.577	1:30
SWP-13	S-13 to Headwall 1	0.450	53.161	1:6
SWP-14	S-14 to S-16	0.225	41.145	1:50
SWP-15	S-15 to S-16	0.225	41.145	1:25
SWP-16	S-16 to S-19	0.225	26.030	1:40
SWP-17	S-17 to S-19	0.225	41.431	1:61
SWP-18	S-18 to S-19	0.225	41.145	1:38
SWP-19	S-19 to S-20	0.300	12.082	1:10
SWP-20	S-20 to Headwall 2	0.300	41.381	1:5
SWP-21	S-21 to S-22	0.300	57.603	1:60
SWP-22	S-22 to S-23	0.300	52.355	1:50
SWP-23	S-23 to S-26	0.300	35.136	1:44
SWP-24	S-24 to S-25	0.300	57.603	1:60

IMPORTANT
FOR DRAINAGE LAYOUT PLEASE SEE DRAWING C3206-03.
FOR SURFACE WATER MANHOLE SCHEDULE PLEASE SEE DRAWING C3206-04.

SCHEDULE OF SURFACE WATER PIPES				
PIPE NAME	START AND END STRUCTURE	DIAMETER (m)	LENGTH (m)	GRADIENT
SWP-25	S-25 to S-26	0.300	52.355	1:66
SWP-26	S-26 to S-27	0.450	17.571	1:40
SWP-27	S-27 to S-28	0.450	7.971	1:40
SWP-28	S-28 to S-31	0.450	17.568	1:40
SWP-29	S-29 to S-30	0.300	63.089	1:70
SWP-30	S-30 to S-31	0.300	54.860	1:54
SWP-31	S-31 to S-32	0.450	30.583	1:40
SWP-32	S-32 to S-33	0.450	26.594	1:10
SWP-33	S-33 to Headwall 3	0.450	36.150	1:6
SWP-34	S-34 to S-35	0.300	46.631	1:60
SWP-35	S-35 to S-36	0.300	49.585	1:50
SWP-36	S-36 to S-37	0.300	20.544	1:40
SWP-37	S-37 to S-39	0.300	20.628	1:30
SWP-38	S-38 to S-39	0.300	52.117	1:25
SWP-39	S-39 to S-41	0.450	18.212	1:60
SWP-40	S-40 to S-41	0.300	48.309	1:30
SWP-41	S-41 to S-47	0.450	17.492	1:50
SWP-42	S-42 to S-43	0.300	38.402	1:40
SWP-43	S-43 to S-47	0.300	9.923	1:30
SWP-44	S-44 to S-45	0.225	28.405	1:40
SWP-45	S-45 to S-46	0.225	28.405	1:40
SWP-46	S-46 to S-47	0.225	15.090	1:40
SWP-47	S-47 to Headwall 4	0.450	26.676	1:4
SWP-48	Headwall 5 to S-48	0.150	12.176	1:10

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REV	DATE	DRAWN	DESCRIPTION	CHECK	APPR.
B	26-11-24	M.H	Proposed Site Layout Amended.	SL	SL
A	15-03-24	M.H	For Information.	SL	SL

PROJECT:
C3206 - Muttonhole Road, Hamilton, ML3

TITLE:
Proposed Surface Water Pipes Schedule.

CLIENT:
Cogeo Planning and Environmental Services



Nimbus
ENGINEERING CONSULTANTS
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CHECKED BY: S.L	DATE: 15-03-24	APPROVED BY: S.L	DATE: 15-03-24
DRN BY: M.H	SCALE: 1:500	DRAWING NUMBER: C3206-05	REV: B
DATE: 15-03-24	SIZE: A1		

MAINTENANCE REQUIREMENTS FOR ALL DRAINAGE FEATURES WITHIN DEVELOPMENT	
MANAGEMENT COMPANY WILL BE FORMED AND BE RESPONSIBLE FOR ALL DRAINAGE FEATURES	
IDENTIFIER	MAINTENANCE REQUIREMENTS & REMEDIAL ACTIONS
3. DRAINAGE RUNS	ANY DEFORMED OR DAMAGED PIPEWORK IS TO BE IDENTIFIED BY A DRAINAGE/CCTV SURVEY AND IS TO BE REPLACED BY APPOINTED MANAGEMENT COMPANY.

Proposed Ø150mm pipe to follow the ground slope and to connect via a proposed new Headwall 04 into the existing ditch. Headwall to have anti-erosion measures

Currently the topo survey doesnt show the connection point but the existing ground slopes steeply towards. Exact location and IL TBC once more information is available. Proposed headwall to only be built with LLFA and/or SEPA approval.

Existing manhole of unknown origin believed to be part of an old well/pumped system

New Ø150mm Headwall 01 with anti-erosion measures and with grille. IL:183.300m

S-48 Orifice Flow control chamber to restrict flow to 36.1l/s using a Ø100mm orifice.

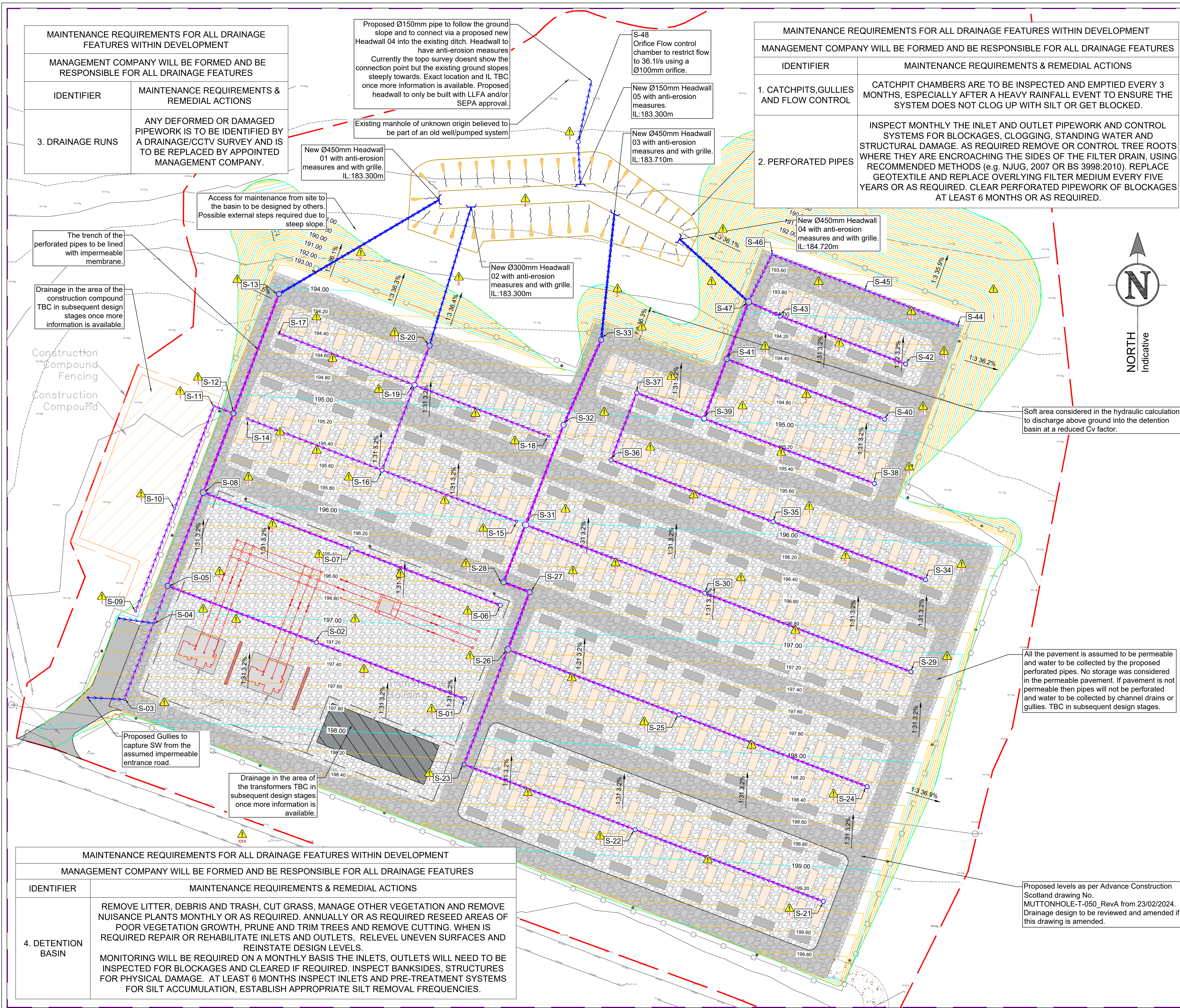
New Ø150mm Headwall 03 with anti-erosion measures. IL:183.300m

New Ø450mm Headwall 05 with anti-erosion measures and with grille. IL:183.710m

MAINTENANCE REQUIREMENTS FOR ALL DRAINAGE FEATURES WITHIN DEVELOPMENT	
MANAGEMENT COMPANY WILL BE FORMED AND BE RESPONSIBLE FOR ALL DRAINAGE FEATURES	
IDENTIFIER	MAINTENANCE REQUIREMENTS & REMEDIAL ACTIONS
1. CATCHPITS, GULLIES AND FLOW CONTROL	CATCHPIT CHAMBERS ARE TO BE INSPECTED AND EMPTIED EVERY 3 MONTHS, ESPECIALLY AFTER A HEAVY RAINFALL EVENT TO ENSURE THE SYSTEM DOES NOT CLOG UP WITH SILT OR GET BLOCKED.
2. PERFORATED PIPES	INSPECT MONTHLY THE INLET AND OUTLET PIPEWORK AND CONTROL SYSTEMS FOR BLOCKAGES, CLOGGING, STANDING WATER AND STRUCTURAL DAMAGE. AS REQUIRED REMOVE OR CONTROL TREE ROOTS WHERE THEY ARE ENCROACHING THE SIDES OF THE FILTER DRAIN, USING RECOMMENDED METHODS (e.g. NJUG, 2007 OR BS 3998:2010). REPLACE GEOTEXTILE AND REPLACE OVERLYING FILTER MEDIUM EVERY FIVE YEARS OR AS REQUIRED. CLEAR PERFORATED PIPEWORK OF BLOCKAGES AT LEAST 6 MONTHS OR AS REQUIRED.

DRAWING TO BE PRINTED IN COLOUR.

- KEY:
- Proposed Surface Water Pipes.
 - Proposed Perforated Surface Water Pipes.
 - Proposed SW catchpits inspection chambers and access chambers. S-48 is orifice flow control chamber.
 - Proposed Site Boundary.
 - Proposed detention basins to have minimum storage capacity as shown on the notes. Inlets and outlets to have headwalls and erosion control blankets.
 - Proposed headwall with erosion control blanket.
 - Proposed Substations. Currently there is no detailed layout available. SW drainage in this area to be confirmed in subsequent design stages.
 - Existing levels as per topographical survey.
 - Existing Vegetation as per existing site layout.
 - Proposed Major Contours 1.000m.
 - Proposed Minor Contours 0.200m.
 - Proposed Gradient m/m and slope in %.



MAINTENANCE REQUIREMENTS FOR ALL DRAINAGE FEATURES WITHIN DEVELOPMENT	
MANAGEMENT COMPANY WILL BE FORMED AND BE RESPONSIBLE FOR ALL DRAINAGE FEATURES	
IDENTIFIER	MAINTENANCE REQUIREMENTS & REMEDIAL ACTIONS
4. DETENTION BASIN	REMOVE LITTER, DEBRIS AND TRASH, CUT GRASS, MANAGE OTHER VEGETATION AND REMOVE NUISANCE PLANTS MONTHLY OR AS REQUIRED. ANNUALLY OR AS REQUIRED RESEED AREAS OF POOR VEGETATION GROWTH, PRUNE AND TRIM TREES AND REMOVE CUTTING. WHEN IS REQUIRED REPAIR OR REHABILITATE INLETS AND OUTLETS, RELEVEL UNEVEN SURFACES AND REINSTATE DESIGN LEVELS. MONITORING WILL BE REQUIRED ON A MONTHLY BASIS THE INLETS, OUTLETS WILL NEED TO BE INSPECTED FOR BLOCKAGES AND CLEARED IF REQUIRED. INSPECT BANKSIDES, STRUCTURES FOR PHYSICAL DAMAGE. AT LEAST 6 MONTHS INSPECT INLETS AND PRE-TREATMENT SYSTEMS FOR SILT ACCUMULATION, ESTABLISH APPROPRIATE SILT REMOVAL FREQUENCIES.

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REV	DATE	DRAWN	DESCRIPTION	CHECK	APPR.
B	26-11-24	M.H	Proposed Site Layout Amended.	SL	SL
A	15-03-24	M.H	For Information.	SL	SL

PROJECT:
C3206 - Muttonhole Road, Hamilton, ML3


TITLE:
Proposed Surface Water Maintenance and Management Plan.

CLIENT:
Cogeo Planning and Environmental Services

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CHECKED BY: S.L	DATE: 15-03-24	APPROVED BY: S.L	DATE: 15-03-24
DRN BY: M.H	SCALE: 1:500	DRAWING NUMBER: C3206-06	REV: B
DATE: 15-03-24	SIZE: A1		

APPENDIX B – HYDRAULIC MODELLING OUTPUTS

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024			
		Designed by: M.H	Checked by: S.L		Approved By: S.L
Report Details: Type: Junctions Storm Phase: Phase		Kemp House: 124 City Road London EC1V 2NX			

Outlets

Junction	Outlet Name	Outgoing Connection	Outlet Type
S-48 (FC)	Outlet	(None)	Orifice
	Diameter (m)	0.100	
	Coefficient of Discharge	0.600	
	Invert Level (m)	182.082	
S-01	Outlet	Pipe	Free Discharge
S-02	Outlet	Pipe (1)	Free Discharge
S-03	Outlet	Pipe (2)	Free Discharge
S-04	Outlet	Pipe (3)	Free Discharge
S-05	Outlet	Pipe (4)	Free Discharge
S-06	Outlet	Pipe (5)	Free Discharge
S-07	Outlet	Pipe (6)	Free Discharge
S-08	Outlet	Pipe (7)	Free Discharge
S-09	Outlet	Pipe (8)	Free Discharge
S-10	Outlet	Pipe (9)	Free Discharge
S-11	Outlet	Pipe (10)	Free Discharge
S-12	Outlet	Pipe (11)	Free Discharge
S-13	Outlet	Pipe (12)	Free Discharge
S-14	Outlet	Pipe (13)	Free Discharge
S-15	Outlet	Pipe (14)	Free Discharge
S-16	Outlet	Pipe (15)	Free Discharge
S-17	Outlet	Pipe (16)	Free Discharge
S-18	Outlet	Pipe (17)	Free Discharge
S-19	Outlet	Pipe (18)	Free Discharge
S-20	Outlet	Pipe (19)	Free Discharge
S-21	Outlet	Pipe (20)	Free Discharge
S-22	Outlet	Pipe (21)	Free Discharge
S-23	Outlet	Pipe (22)	Free Discharge
S-24	Outlet	Pipe (23)	Free Discharge
S-25	Outlet	Pipe (24)	Free Discharge
S-26	Outlet	Pipe (25)	Free Discharge
S-27	Outlet	Pipe (26)	Free Discharge
S-28	Outlet	Pipe (27)	Free Discharge
S-29	Outlet	Pipe (28)	Free Discharge
S-30	Outlet	Pipe (29)	Free Discharge
S-31	Outlet	Pipe (30)	Free Discharge
S-32	Outlet	Pipe (31)	Free Discharge
S-33	Outlet	Pipe (32)	Free Discharge
S-34	Outlet	Pipe (33)	Free Discharge
S-35	Outlet	Pipe (34)	Free Discharge
S-36	Outlet	Pipe (35)	Free Discharge
S-37	Outlet	Pipe (36)	Free Discharge
S-38	Outlet	Pipe (37)	Free Discharge
S-39	Outlet	Pipe (38)	Free Discharge
S-40	Outlet	Pipe (39)	Free Discharge
S-41	Outlet	Pipe (40)	Free Discharge
S-42	Outlet	Pipe (41)	Free Discharge
S-43	Outlet	Pipe (42)	Free Discharge
S-44	Outlet	Pipe (43)	Free Discharge
S-45	Outlet	Pipe (44)	Free Discharge
S-46	Outlet	Pipe (45)	Free Discharge
S-47	Outlet	Pipe (46)	Free Discharge

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Stormwater Controls Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		



Tank

Type : Tank


Dimensions

Exceedance Level (m)	186.300
Depth (m)	3.000
Base Level (m)	183.300
Freeboard (mm)	150
Initial Depth (m)	0.000
Porosity (%)	100
Average Slope (1:X)	4.479
Total Volume (m³)	2723.902


Depth (m)	Area (m²)	Volume (m³)
0.000	357.43	0.000
3.000	1825.00	2990.093

Advanced


Perimeter	Circular
Length (m)	70.993

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S-48 (FC)	186.100 182.082	Diameter / Length: 1.200	{1} Pipe (167)	Pipe	182.082	Diam/Width:150	Manhole
E:268533.859	4.018						
N:653630.018							Not Applicable
S-01	197.649 196.149	Diameter / Length: 1.200					Manhole
E:268501.434	1.500						
N:653470.733							Not Applicable
S-02	197.210 195.391	Diameter / Length: 1.200	{1} Pipe	Pipe	195.391	Diam/Width:300	Manhole
E:268458.961	1.819						
N:653486.887							Not Applicable
S-03	197.824 196.332	Diameter / Length: 0.600					Manhole
E:268404.143	1.492						
N:653470.565							Not Applicable
S-04	197.118 195.167	Diameter / Length: 0.600	{1} Pipe (2)	Pipe	195.167	Diam/Width:150	Manhole
E:268412.443	1.951						
N:653492.339							Not Applicable
			{a} Pipe (3)	Pipe	195.167	Diam/Width:150	Not Applicable

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S-05	196.771 194.254	Diameter / Length: 1.500	{1} Pipe (1)	Pipe	194.254	Diam/Width:300	Manhole
E:268416.489 N:653503.042	2.517		{2} Pipe (3)	Pipe	194.404	Diam/Width:150	
			{a} Pipe (4)	Pipe	194.254	Diam/Width:300	Not Applicable
S-06	196.782 195.432	Diameter / Length: 1.200					Manhole
E:268511.640 N:653497.479	1.350						
			{a} Pipe (5)	Pipe	195.432	Diam/Width:300	Not Applicable
S-07	196.782 194.675	Diameter / Length: 1.200	{1} Pipe (5)	Pipe	194.675	Diam/Width:300	Manhole
E:268469.157 N:653513.616	2.107						
			{a} Pipe (6)	Pipe	194.675	Diam/Width:300	Not Applicable
S-08	195.904 193.389	Diameter / Length: 1.800	{1} Pipe (4)	Pipe	193.539	Diam/Width:300	Manhole
E:268426.674 N:653529.753	2.515		{2} Pipe (6)	Pipe	193.539	Diam/Width:300	
			{a} Pipe (7)	Pipe	193.389	Diam/Width:450	Not Applicable

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S-09	196.883 195.225	Diameter / Length: 0.600					Manhole
E:268407.342 N:653495.797	1.658		{a} Pipe (8)	Pipe	195.225	Diam/Width:150	Not Applicable
S-10	196.000 194.365	Diameter / Length: 0.600	{1} Pipe (8)	Pipe	194.440	Diam/Width:150	Manhole
E:268418.528 N:653525.131	1.635		{a} Pipe (9)	Pipe	194.365	Diam/Width:225	Not Applicable
S-11	195.172 192.796	Diameter / Length: 0.600	{1} Pipe (9)	Pipe	192.796	Diam/Width:225	Manhole
E:268429.713 N:653554.464	2.376		{a} Pipe (10)	Pipe	192.796	Diam/Width:225	Not Applicable
S-12	195.172 192.422	Diameter / Length: 1.500	{1} Pipe (7)	Pipe	192.422	Diam/Width:450	Manhole
E:268435.286 N:653552.339	2.750		{2} Pipe (10)	Pipe	192.647	Diam/Width:225	
			{a} Pipe (11)	Pipe	192.422	Diam/Width:450	Not Applicable
S-13	194.063 191.202	Diameter / Length: 1.500	{1} Pipe (11)	Pipe	191.202	Diam/Width:450	Manhole
E:268448.317 N:653586.516	2.861		{a} Pipe (12)	Pipe	191.202	Diam/Width:450	Not Applicable

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S-14	195.214 193.714	Diameter / Length: 0.600					Manhole
E:268439.346 N:653550.791	1.500		{a} Pipe (13)	Pipe	193.714	Diam/Width:225	Not Applicable
S-15	196.011 194.511	Diameter / Length: 0.600					Manhole
E:268516.236 N:653521.473	1.500		{a} Pipe (14)	Pipe	194.511	Diam/Width:225	Not Applicable
S-16	195.613 192.816	Diameter / Length: 1.200	{1} Pipe (13)	Pipe	192.816	Diam/Width:225	Manhole
E:268477.791 N:653536.132	2.797		{2} Pipe (14)	Pipe	192.816	Diam/Width:225	
			{a} Pipe (15)	Pipe	192.816	Diam/Width:225	Not Applicable
S-17	194.422 192.922	Diameter / Length: 1.200					Manhole
E:268448.353 N:653575.215	1.500		{a} Pipe (16)	Pipe	192.922	Diam/Width:225	Not Applicable
S-18	194.824 193.324	Diameter / Length: 1.200					Manhole
E:268525.510 N:653545.795	1.500		{a} Pipe (17)	Pipe	193.324	Diam/Width:225	Not Applicable

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S-19	194.824 192.090	Diameter / Length: 1.500	{1} Pipe (15)	Pipe	192.165	Diam/Width:225	Manhole
E:268487.065	2.734		{2} Pipe (16)	Pipe	192.165	Diam/Width:225	
N:653560.454			{3} Pipe (17)	Pipe	192.165	Diam/Width:225	
			{a} Pipe (18)	Pipe	192.090	Diam/Width:300	Not Applicable
S-20	194.458 190.882	Diameter / Length: 1.500	{1} Pipe (18)	Pipe	190.882	Diam/Width:300	Manhole
E:268491.370	3.576						
N:653571.743			{a} Pipe (19)	Pipe	190.882	Diam/Width:300	Not Applicable
S-21	199.311 197.811	Diameter / Length: 1.200					Manhole
E:268603.972	1.500						
N:653412.812			{a} Pipe (20)	Pipe	197.811	Diam/Width:300	Not Applicable
S-22	198.752 196.850	Diameter / Length: 1.200	{1} Pipe (20)	Pipe	196.850	Diam/Width:300	Manhole
E:268550.149	1.902						
N:653433.335			{a} Pipe (21)	Pipe	196.850	Diam/Width:300	Not Applicable

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024			
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L		Approved By: S.L
		Kemp House: 124 City Road London EC1V 2NX			


Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S-23	198.245 195.802	Diameter / Length: 1.200	{1} Pipe (21)	Pipe	195.802	Diam/Width:300	Manhole
E:268501.230 N:653451.988	2.443		{a} Pipe (22)	Pipe	195.802	Diam/Width:300	Not Applicable
S-24	198.246 196.746	Diameter / Length: 1.200					Manhole
E:268616.490 N:653445.643	1.500		{a} Pipe (23)	Pipe	196.746	Diam/Width:300	Not Applicable
S-25	197.688 195.785	Diameter / Length: 1.200	{1} Pipe (23)	Pipe	195.785	Diam/Width:300	Manhole
E:268562.667 N:653466.165	1.903		{a} Pipe (24)	Pipe	195.785	Diam/Width:300	Not Applicable
S-26	197.180 194.848	Diameter / Length: 1.800	{1} Pipe (22)	Pipe	194.998	Diam/Width:300	Manhole
E:268513.748 N:653484.818	2.332		{2} Pipe (24)	Pipe	194.998	Diam/Width:300	
			{a} Pipe (25)	Pipe	194.848	Diam/Width:450	Not Applicable
S-27	196.647 194.408	Diameter / Length: 1.500	{1} Pipe (25)	Pipe	194.408	Diam/Width:450	Manhole
E:268519.989 N:653501.244	2.239		{a} Pipe (26)	Pipe	194.408	Diam/Width:450	Not Applicable

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S-28	196.570 194.208	Diameter / Length: 1.500	{1} Pipe (26)	Pipe	194.208	Diam/Width:450	Manhole
E:268512.540 N:653504.081	2.362		{a} Pipe (27)	Pipe	194.208	Diam/Width:450	Not Applicable
S-29	197.181 195.681	Diameter / Length: 1.200					Manhole
E:268629.008 N:653478.473	1.500		{a} Pipe (28)	Pipe	195.681	Diam/Width:300	Not Applicable
S-30	196.570 194.779	Diameter / Length: 1.200	{1} Pipe (28)	Pipe	194.779	Diam/Width:300	Manhole
E:268570.059 N:653500.950	1.791		{a} Pipe (29)	Pipe	194.779	Diam/Width:300	Not Applicable
S-31	196.038 193.618	Diameter / Length: 1.800	{1} Pipe (27)	Pipe	193.768	Diam/Width:450	Manhole
E:268518.799 N:653520.496	2.420		{2} Pipe (29)	Pipe	193.768	Diam/Width:300	
			{a} Pipe (30)	Pipe	193.618	Diam/Width:450	Not Applicable
S-32	195.111 192.853	Diameter / Length: 1.500	{1} Pipe (30)	Pipe	192.853	Diam/Width:450	Manhole
E:268529.695 N:653549.072	2.258		{a} Pipe (31)	Pipe	192.853	Diam/Width:450	Not Applicable

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S-33	193.330 190.193	Diameter / Length: 1.500	{1} Pipe (31)	Pipe	190.193	Diam/Width:450	Manhole
E:268540.445 N:653573.397	3.137		{a} Pipe (32)	Pipe	190.193	Diam/Width:450	Not Applicable
S-34	196.336 194.736	Diameter / Length: 1.200					Manhole
E:268633.156 N:653504.750	1.600		{a} Pipe (33)	Pipe	194.736	Diam/Width:300	Not Applicable
S-35	195.887 193.958	Diameter / Length: 1.200	{1} Pipe (33)	Pipe	193.958	Diam/Width:300	Manhole
E:268589.585 N:653521.363	1.929		{a} Pipe (34)	Pipe	193.958	Diam/Width:300	Not Applicable
S-36	195.407 192.966	Diameter / Length: 1.200	{1} Pipe (34)	Pipe	192.966	Diam/Width:300	Manhole
E:268543.254 N:653539.029	2.441		{a} Pipe (35)	Pipe	192.966	Diam/Width:300	Not Applicable
S-37	194.784 192.452	Diameter / Length: 1.200	{1} Pipe (35)	Pipe	192.452	Diam/Width:300	Manhole
E:268550.573 N:653558.225	2.332		{a} Pipe (36)	Pipe	192.452	Diam/Width:300	Not Applicable

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S-38	195.488 193.888	Diameter / Length: 1.200					Manhole
E:268618.545 N:653532.308	1.600						
			{a} Pipe (37)	Pipe	193.888	Diam/Width:300	Not Applicable
S-39	194.984 191.614	Diameter / Length: 1.500	{1} Pipe (36)	Pipe	191.764	Diam/Width:300	Manhole
E:268569.848 N:653550.876	3.370		{2} Pipe (37)	Pipe	191.764	Diam/Width:300	
			{a} Pipe (38)	Pipe	191.614	Diam/Width:450	Not Applicable
S-40	194.895 193.070	Diameter / Length: 1.200					Manhole
E:268621.475 N:653550.681	1.825						
			{a} Pipe (39)	Pipe	193.070	Diam/Width:300	Not Applicable
S-41	194.436 191.310	Diameter / Length: 1.500	{1} Pipe (38)	Pipe	191.310	Diam/Width:450	Manhole
E:268576.336 N:653567.893	3.126		{2} Pipe (39)	Pipe	191.460	Diam/Width:300	
			{a} Pipe (40)	Pipe	191.310	Diam/Width:450	Not Applicable

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S-42	194.384 192.401	Diameter / Length: 1.200					Manhole
E:268627.488	1.983						
N:653566.449			{a} Pipe (41)	Pipe	192.401	Diam/Width:300	Not Applicable
S-43	194.018 191.441	Diameter / Length: 1.200	{1} Pipe (41)	Pipe	191.441	Diam/Width:300	Manhole
E:268591.623	2.577						
N:653580.176			{a} Pipe (42)	Pipe	191.441	Diam/Width:300	Not Applicable
S-44	194.006 192.983	Diameter / Length: 0.600					Manhole
E:268642.375	1.023						
N:653577.501			{a} Pipe (43)	Pipe	192.983	Diam/Width:225	Not Applicable
S-45	193.736 192.273	Diameter / Length: 0.600	{1} Pipe (43)	Pipe	192.273	Diam/Width:225	Manhole
E:268615.834	1.463						
N:653587.623			{a} Pipe (44)	Pipe	192.273	Diam/Width:225	Not Applicable
S-46	193.463 191.563	Diameter / Length: 0.600	{1} Pipe (44)	Pipe	191.563	Diam/Width:225	Manhole
E:268589.294	1.900						
N:653597.745			{a} Pipe (45)	Pipe	191.563	Diam/Width:225	Not Applicable

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024			
		Designed by: M.H	Checked by: S.L		Approved By: S.L
Report Details: Type: Manhole Schedule Storm Phase: Phase		Kemp House: 124 City Road London EC1V 2NX			


Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S-47	193.906 190.960	Diameter / Length: 1.800	{1} Pipe (40)	Pipe	190.960	Diam/Width:450	Manhole
E:268582.568	2.946		{2} Pipe (42)	Pipe	191.110	Diam/Width:300	
N:653584.237			{3} Pipe (45)	Pipe		Diam/Width:225	
				{a} Pipe (46)	Pipe	190.960	Diam/Width:450

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Inflow Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		

Inflow Label	Connected To	Flow (L/s)	Runoff Method	Area (ha)	Percentage Impervious (%)	Urban Creep (%)	Adjusted Percentage Impervious (%)	Area Analysed (ha)
Catchment Area	S-01		Time of Concentration	0.155	100	0	100	0.155
Catchment Area (1)	S-02		Time of Concentration	0.139	100	0	100	0.139
Catchment Area (2)	S-03		Time of Concentration	0.031	100	0	100	0.031
Catchment Area (3)	S-04		Time of Concentration	0.022	100	0	100	0.022
Catchment Area (4)	S-05		Time of Concentration	0.083	100	0	100	0.083
Catchment Area (5)	S-06		Time of Concentration	0.116	100	0	100	0.116
Catchment Area (6)	S-07		Time of Concentration	0.103	100	0	100	0.103
Catchment Area (7)	S-08		Time of Concentration	0.074	100	0	100	0.074
Catchment Area (8)	S-09		Time of Concentration	0.009	100	0	100	0.009
Catchment Area (9)	S-10		Time of Concentration	0.072	100	0	100	0.072
Catchment Area (10)	S-11		Time of Concentration	0.054	100	0	100	0.054
Catchment Area (11)	S-12		Time of Concentration	0.017	100	0	100	0.017
Catchment Area (12)	S-13		Time of Concentration	0.020	100	0	100	0.020
Catchment Area (13)	S-14		Time of Concentration	0.067	100	0	100	0.067
Catchment Area (14)	S-15		Time of Concentration	0.067	100	0	100	0.067
Catchment Area (15)	S-16		Time of Concentration	0.125	100	0	100	0.125
Catchment Area (16)	S-17		Time of Concentration	0.048	100	0	100	0.048
Catchment Area (17)	S-18		Time of Concentration	0.048	100	0	100	0.048
Catchment Area (18)	S-19		Time of Concentration	0.088	100	0	100	0.088
Catchment Area (19)	S-20		Time of Concentration	0.134	100	0	100	0.134
Catchment Area (20)	S-21		Time of Concentration	0.116	100	0	100	0.116
Catchment Area (21)	S-22		Time of Concentration	0.110	100	0	100	0.110
Catchment Area (22)	S-23		Time of Concentration	0.101	100	0	100	0.101
Catchment Area (23)	S-24		Time of Concentration	0.135	100	0	100	0.135
Catchment Area (24)	S-25		Time of Concentration	0.154	100	0	100	0.154
Catchment Area (25)	S-26		Time of Concentration	0.142	100	0	100	0.142
Catchment Area (26)	S-29		Time of Concentration	0.135	100	0	100	0.135
Catchment Area (27)	S-30		Time of Concentration	0.154	100	0	100	0.154
Catchment Area (28)	S-27		Time of Concentration	0.142	100	0	100	0.142
Catchment Area (29)	S-33		Time of Concentration	0.062	100	0	100	0.062
Catchment Area (30)	S-34		Time of Concentration	0.135	100	0	100	0.135
Catchment Area (31)	S-35		Time of Concentration	0.114	100	0	100	0.114

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024				
Report Details: Type: Inflow Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L			Approved By: S.L
		Kemp House: 124 City Road London EC1V 2NX				

Catchment Area (32)	S-36		Time of Concentration	0.083	100	0	100	0.083
Catchment Area (33)	S-37		Time of Concentration	0.064	100	0	100	0.064
Catchment Area (34)	S-38		Time of Concentration	0.055	100	0	100	0.055
Catchment Area (35)	S-39		Time of Concentration	0.074	100	0	100	0.074
Catchment Area (36)	S-40		Time of Concentration	0.051	100	0	100	0.051
Catchment Area (37)	S-41		Time of Concentration	0.068	100	0	100	0.068
Catchment Area (38)	S-42		Time of Concentration	0.055	100	0	100	0.055
Catchment Area (39)	S-43		Time of Concentration	0.071	100	0	100	0.071
Catchment Area (40)	S-44		Time of Concentration	0.019	100	0	100	0.019
Catchment Area (41)	S-45		Time of Concentration	0.024	100	0	100	0.024
Catchment Area (42)	Tank		Time of Concentration	0.330	100	0	100	0.330
Catchment Area (43)	Tank		Time of Concentration	0.183	100	0	100	0.183
TOTAL		0.0		4.050				4.050

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Title: Rainfall Analysis Criteria		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		

Runoff Type	Dynamic
Output Interval (mins)	5
Time Step	Default
Urban Creep	Apply Global Value
Urban Creep Global Value (%)	0
Junction Flood Risk Margin (mm)	300
Perform No Discharge Analysis	<input type="checkbox"/>

Rainfall


FEH	Type: FEH
Site Location	GB 268527 653527 NS 68527 53527
Rainfall Version	2013
Data Type	Point
Summer	<input checked="" type="checkbox"/>
Winter	<input checked="" type="checkbox"/>

Return Period

Return Period (years)	Increase Rainfall (%)
200.0	45.000

Storm Durations

Duration (mins)	Run Time (mins)
15	30
30	60
60	120
120	240
180	360
240	480
360	720
480	960
600	1200
720	1440
960	1920
1440	2880

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Title: UK and Ireland Rural Runoff Calculator		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


ICP SUDS / IH 124

Details

Method	ICP SUDS
Area (ha)	4.05
SAAR (mm)	1227.0
Soil	0.47
Region	Region 2
Urban	0
Return Period (years)	200

Results


Region	QBAR Rural (L/s)	QBAR Urban (L/s)	Q 200 (years) (L/s)	Q 1 (years) (L/s)	Q 30 (years) (L/s)	Q 100 (years) (L/s)
Region 2	37.7	37.7	112.4	32.8	71.5	99.2

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		




Critical Storm Per Item: Rank By: Max. Outflow


Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
S-48 (FC)	FEH: 200 years: +45 %: 360 mins: Winter	186.100	182.082	185.122	3.040	36.1	3.438	0.000	36.1	1354.574	OK
S-01	FEH: 200 years: +45 %: 15 mins: Winter	197.649	196.149	197.341	1.192	117.5	1.349	0.000	97.3	54.300	Surcharged
S-02	FEH: 200 years: +45 %: 15 mins: Winter	197.210	195.391	196.955	1.564	202.6	1.769	0.000	183.7	103.065	Flood Risk
S-03	FEH: 200 years: +45 %: 15 mins: Winter	197.824	196.332	196.416	0.084	23.8	0.024	0.000	23.7	11.003	OK
S-04	FEH: 200 years: +45 %: 15 mins: Winter	197.118	195.167	195.958	0.791	40.1	0.224	0.000	28.4	18.588	Surcharged
S-05	FEH: 200 years: +45 %: 15 mins: Winter	196.771	194.254	195.644	1.390	275.1	2.455	0.000	257.6	150.978	Surcharged
S-06	FEH: 200 years: +45 %: 15 mins: Winter	196.782	195.432	195.604	0.172	87.5	0.195	0.000	85.3	40.515	OK
S-07	FEH: 200 years: +45 %: 15 mins: Winter	196.782	194.675	194.913	0.238	163.2	0.270	0.000	152.6	76.558	OK
S-08	FEH: 200 years: +45 %: 15 mins: Winter	195.904	193.389	193.730	0.341	466.1	0.868	0.000	458.7	253.339	OK
S-09	FEH: 200 years: +45 %: 15 mins: Winter	196.883	195.225	195.275	0.050	6.8	0.014	0.000	6.5	3.168	OK
S-10	FEH: 200 years: +45 %: 15 mins: Winter	196.000	194.365	194.480	0.115	60.6	0.033	0.000	60.2	28.179	OK
S-11	FEH: 200 years: +45 %: 15 mins: Winter	195.172	192.796	193.234	0.438	101.1	0.124	0.000	97.4	47.096	Surcharged
S-12	FEH: 200 years: +45 %: 15 mins: Winter	195.172	192.422	192.891	0.469	568.9	0.829	0.000	527.8	306.373	Surcharged
S-13	FEH: 200 years: +45 %: 15 mins: Winter	194.063	191.202	191.408	0.206	543.2	0.364	0.000	544.6	312.710	OK
S-14	FEH: 200 years: +45 %: 15 mins: Summer	195.214	193.714	194.919	1.205	48.1	0.341	0.000	39.3	20.862	Flood Risk
S-15	FEH: 200 years: +45 %: 15 mins: Winter	196.011	194.511	195.124	0.613	50.6	0.173	0.000	37.9	23.381	Surcharged
S-16	FEH: 200 years: +45 %: 15 mins: Winter	195.613	192.816	194.891	2.075	170.4	2.347	0.000	157.4	90.421	Surcharged
S-17	FEH: 200 years: +45 %: 15 mins: Winter	194.422	192.922	193.034	0.112	35.9	0.127	0.000	35.0	16.547	OK
S-18	FEH: 200 years: +45 %: 15 mins: Winter	194.824	193.324	193.424	0.100	36.2	0.113	0.000	35.4	16.709	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)				Date: 24/11/2024						
Report Details: Type: Junctions Summary Storm Phase: Phase				Designed by:	Checked by:	Approved By:				
				M.H	S.L	S.L				
				Kemp House: 124 City Road London EC1V 2NX						

S-19	FEH: 200 years: +45 %: 15 mins: Winter	194.8 24	192.0 90	192.35 7	0.267	294.3	0.472	0.000	285.1	154.658	OK
S-20	FEH: 200 years: +45 %: 15 mins: Winter	194.4 58	190.8 82	191.08 9	0.207	386.2	0.365	0.000	384.1	201.151	OK
S-21	FEH: 200 years: +45 %: 15 mins: Summer	199.3 11	197.8 11	197.97 4	0.163	83.5	0.185	0.000	81.3	36.106	OK
S-22	FEH: 200 years: +45 %: 15 mins: Winter	198.7 52	196.8 50	198.05 1	1.201	133.3	1.358	0.000	123.9	79.056	Surcharged
S-23	FEH: 200 years: +45 %: 15 mins: Winter	198.2 45	195.8 02	197.41 5	1.613	200.5	1.824	0.000	174.2	114.163	Surcharged
S-24	FEH: 200 years: +45 %: 15 mins: Winter	198.2 46	196.7 46	197.92 8	1.182	101.9	1.337	0.000	75.9	47.047	Surcharged
S-25	FEH: 200 years: +45 %: 15 mins: Winter	197.6 88	195.7 85	197.66 1	1.876	192.4	2.122	0.000	165.4	100.187	Flood Risk
S-26	FEH: 200 years: +45 %: 15 mins: Winter	197.1 80	194.8 48	196.45 6	1.608	446.7	4.092	0.000	401.1	264.656	Surcharged
S-27	FEH: 200 years: +45 %: 15 mins: Winter	196.6 47	194.4 08	196.03 2	1.624	508.5	2.870	0.000	482.7	314.450	Surcharged
S-28	FEH: 200 years: +45 %: 15 mins: Winter	196.5 70	194.2 08	195.63 7	1.429	482.7	2.526	0.000	461.0	313.729	Surcharged
S-29	FEH: 200 years: +45 %: 15 mins: Winter	197.1 81	195.6 81	196.81 1	1.130	101.9	1.278	0.000	79.1	46.965	Surcharged
S-30	FEH: 200 years: +45 %: 15 mins: Winter	196.5 70	194.7 79	196.48 3	1.704	195.6	1.927	0.000	173.0	100.213	Flood Risk
S-31	FEH: 200 years: +45 %: 15 mins: Winter	196.0 38	193.6 18	195.08 2	1.464	634.0	3.726	0.000	609.4	415.115	Surcharged
S-32	FEH: 200 years: +45 %: 15 mins: Winter	195.1 11	192.8 53	193.14 6	0.293	609.4	0.518	0.000	602.8	415.029	OK
S-33	FEH: 200 years: +45 %: 15 mins: Winter	193.3 30	190.1 93	190.40 5	0.212	649.7	0.374	0.000	645.7	436.143	OK
S-34	FEH: 200 years: +45 %: 15 mins: Winter	196.3 36	194.7 36	195.31 8	0.582	102.0	0.659	0.000	76.3	47.115	Surcharged
S-35	FEH: 200 years: +45 %: 15 mins: Summer	195.8 87	193.9 58	194.84 2	0.884	153.3	1.000	0.000	145.6	77.763	Surcharged
S-36	FEH: 200 years: +45 %: 15 mins: Winter	195.4 07	192.9 66	194.09 9	1.133	205.7	1.282	0.000	197.1	116.361	Surcharged
S-37	FEH: 200 years: +45 %: 15 mins: Winter	194.7 84	192.4 52	193.29 8	0.846	245.4	0.956	0.000	239.8	138.707	Surcharged
S-38	FEH: 200 years: +45 %: 15 mins: Winter	195.4 88	193.8 88	193.97 4	0.086	41.8	0.098	0.000	41.1	19.320	OK
S-39	FEH: 200 years: +45 %: 15 mins: Winter	194.9 84	191.6 14	192.00 3	0.389	336.9	0.687	0.000	322.9	184.063	OK
S-40	FEH: 200 years: +45 %: 15 mins: Winter	194.8 95	193.0 70	193.15 7	0.087	38.6	0.098	0.000	37.8	17.826	OK
S-41	FEH: 200 years: +45 %: 15 mins: Winter	194.4 36	191.3 10	191.69 5	0.385	412.1	0.681	0.000	398.5	225.717	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024			
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L		
		Kemp House: 124 City Road London EC1V 2NX			


S-42	FEH: 200 years: +45 %: 15 mins: Winter	194.3 84	192.4 01	192.49 9	0.098	41.5	0.111	0.000	40.6	19.193	OK
S-43	FEH: 200 years: +45 %: 15 mins: Winter	194.0 18	191.4 41	191.60 6	0.165	94.5	0.187	0.000	91.7	44.115	OK
S-44	FEH: 200 years: +45 %: 15 mins: Winter	194.0 06	192.9 83	193.04 5	0.062	14.1	0.018	0.000	13.9	6.544	OK
S-45	FEH: 200 years: +45 %: 15 mins: Winter	193.7 36	192.2 73	192.37 3	0.100	32.2	0.028	0.000	31.2	15.041	OK
S-46	FEH: 200 years: +45 %: 15 mins: Winter	193.4 63	191.5 63	191.66 5	0.102	31.2	0.029	0.000	30.1	15.032	OK
S-47	FEH: 200 years: +45 %: 15 mins: Winter	193.9 06	190.9 60	191.15 5	0.195	520.3	0.497	0.000	515.0	284.245	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024			
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L		Approved By: S.L
		Kemp House: 124 City Road London EC1V 2NX			




Critical Storm Per Item: Rank By: Max. Avg. Depth

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Percentage Available (%)	Status
Tank	FEH: 200 years: +45 %: 360 mins: Winter	186.129	186.129	2.829	2.829	384.2	2687.270	0.000	0.000	36.1	1360.097	1.345	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024			
		Designed by: M.H	Checked by: S.L		Approved By: S.L
Report Details: Type: Junctions Storm Phase: Phase		Kemp House: 124 City Road London EC1V 2NX			

Outlets

Junction	Outlet Name	Outgoing Connection	Outlet Type
S-48 (FC)	Outlet	(None)	Orifice
	Diameter (m)	0.100	
	Coefficient of Discharge	0.600	
	Invert Level (m)	182.082	
S-01	Outlet	Pipe	Free Discharge
S-02	Outlet	Pipe (1)	Free Discharge
S-03	Outlet	Pipe (2)	Free Discharge
S-04	Outlet	Pipe (3)	Free Discharge
S-05	Outlet	Pipe (4)	Free Discharge
S-06	Outlet	Pipe (5)	Free Discharge
S-07	Outlet	Pipe (6)	Free Discharge
S-08	Outlet	Pipe (7)	Free Discharge
S-09	Outlet	Pipe (8)	Free Discharge
S-10	Outlet	Pipe (9)	Free Discharge
S-11	Outlet	Pipe (10)	Free Discharge
S-12	Outlet	Pipe (11)	Free Discharge
S-13	Outlet	Pipe (12)	Free Discharge
S-14	Outlet	Pipe (13)	Free Discharge
S-15	Outlet	Pipe (14)	Free Discharge
S-16	Outlet	Pipe (15)	Free Discharge
S-17	Outlet	Pipe (16)	Free Discharge
S-18	Outlet	Pipe (17)	Free Discharge
S-19	Outlet	Pipe (18)	Free Discharge
S-20	Outlet	Pipe (19)	Free Discharge
S-21	Outlet	Pipe (20)	Free Discharge
S-22	Outlet	Pipe (21)	Free Discharge
S-23	Outlet	Pipe (22)	Free Discharge
S-24	Outlet	Pipe (23)	Free Discharge
S-25	Outlet	Pipe (24)	Free Discharge
S-26	Outlet	Pipe (25)	Free Discharge
S-27	Outlet	Pipe (26)	Free Discharge
S-28	Outlet	Pipe (27)	Free Discharge
S-29	Outlet	Pipe (28)	Free Discharge
S-30	Outlet	Pipe (29)	Free Discharge
S-31	Outlet	Pipe (30)	Free Discharge
S-32	Outlet	Pipe (31)	Free Discharge
S-33	Outlet	Pipe (32)	Free Discharge
S-34	Outlet	Pipe (33)	Free Discharge
S-35	Outlet	Pipe (34)	Free Discharge
S-36	Outlet	Pipe (35)	Free Discharge
S-37	Outlet	Pipe (36)	Free Discharge
S-38	Outlet	Pipe (37)	Free Discharge
S-39	Outlet	Pipe (38)	Free Discharge
S-40	Outlet	Pipe (39)	Free Discharge
S-41	Outlet	Pipe (40)	Free Discharge
S-42	Outlet	Pipe (41)	Free Discharge
S-43	Outlet	Pipe (42)	Free Discharge
S-44	Outlet	Pipe (43)	Free Discharge
S-45	Outlet	Pipe (44)	Free Discharge
S-46	Outlet	Pipe (45)	Free Discharge
S-47	Outlet	Pipe (46)	Free Discharge

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Stormwater Controls Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		



Tank

Type : Tank


Dimensions

Exceedance Level (m)	186.300
Depth (m)	3.000
Base Level (m)	183.300
Freeboard (mm)	150
Initial Depth (m)	0.000
Porosity (%)	100
Average Slope (1:X)	4.479
Total Volume (m³)	2723.902


Depth (m)	Area (m²)	Volume (m³)
0.000	357.43	0.000
3.000	1825.00	2990.093

Advanced


Perimeter	Circular
Length (m)	70.993

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S-48 (FC)	186.100 182.082	Diameter / Length: 1.200	{1} Pipe (167)	Pipe	182.082	Diam/Width:150	Manhole
E:268533.859	4.018						
N:653630.018							Not Applicable
S-01	197.649 196.149	Diameter / Length: 1.200					Manhole
E:268501.434	1.500						
N:653470.733							Not Applicable
S-02	197.210 195.391	Diameter / Length: 1.200	{1} Pipe	Pipe	195.391	Diam/Width:300	Manhole
E:268458.961	1.819						
N:653486.887							Not Applicable
S-03	197.824 196.332	Diameter / Length: 0.600					Manhole
E:268404.143	1.492						
N:653470.565							Not Applicable
S-04	197.118 195.167	Diameter / Length: 0.600	{1} Pipe (2)	Pipe	195.167	Diam/Width:150	Manhole
E:268412.443	1.951						
N:653492.339							Not Applicable
			{a} Pipe (3)	Pipe	195.167	Diam/Width:150	Not Applicable

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S-05	196.771 194.254	Diameter / Length: 1.500	{1} Pipe (1)	Pipe	194.254	Diam/Width:300	Manhole
E:268416.489 N:653503.042	2.517		{2} Pipe (3)	Pipe	194.404	Diam/Width:150	
			{a} Pipe (4)	Pipe	194.254	Diam/Width:300	Not Applicable
S-06	196.782 195.432	Diameter / Length: 1.200					Manhole
E:268511.640 N:653497.479	1.350						
			{a} Pipe (5)	Pipe	195.432	Diam/Width:300	Not Applicable
S-07	196.782 194.675	Diameter / Length: 1.200	{1} Pipe (5)	Pipe	194.675	Diam/Width:300	Manhole
E:268469.157 N:653513.616	2.107						
			{a} Pipe (6)	Pipe	194.675	Diam/Width:300	Not Applicable
S-08	195.904 193.389	Diameter / Length: 1.800	{1} Pipe (4)	Pipe	193.539	Diam/Width:300	Manhole
E:268426.674 N:653529.753	2.515		{2} Pipe (6)	Pipe	193.539	Diam/Width:300	
			{a} Pipe (7)	Pipe	193.389	Diam/Width:450	Not Applicable

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024			
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L		Approved By: S.L
		Kemp House: 124 City Road London EC1V 2NX			


Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S-09	196.883 195.225	Diameter / Length: 0.600					Manhole
E:268407.342 N:653495.797	1.658		{a} Pipe (8)	Pipe	195.225	Diam/Width:150	Not Applicable
S-10	196.000 194.365	Diameter / Length: 0.600	{1} Pipe (8)	Pipe	194.440	Diam/Width:150	Manhole
E:268418.528 N:653525.131	1.635		{a} Pipe (9)	Pipe	194.365	Diam/Width:225	Not Applicable
S-11	195.172 192.796	Diameter / Length: 0.600	{1} Pipe (9)	Pipe	192.796	Diam/Width:225	Manhole
E:268429.713 N:653554.464	2.376		{a} Pipe (10)	Pipe	192.796	Diam/Width:225	Not Applicable
S-12	195.172 192.422	Diameter / Length: 1.500	{1} Pipe (7)	Pipe	192.422	Diam/Width:450	Manhole
E:268435.286 N:653552.339	2.750		{2} Pipe (10)	Pipe	192.647	Diam/Width:225	
			{a} Pipe (11)	Pipe	192.422	Diam/Width:450	Not Applicable
S-13	194.063 191.202	Diameter / Length: 1.500	{1} Pipe (11)	Pipe	191.202	Diam/Width:450	Manhole
E:268448.317 N:653586.516	2.861		{a} Pipe (12)	Pipe	191.202	Diam/Width:450	Not Applicable

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S-14	195.214 193.714	Diameter / Length: 0.600					Manhole
E:268439.346 N:653550.791	1.500		{a} Pipe (13)	Pipe	193.714	Diam/Width:225	Not Applicable
S-15	196.011 194.511	Diameter / Length: 0.600					Manhole
E:268516.236 N:653521.473	1.500		{a} Pipe (14)	Pipe	194.511	Diam/Width:225	Not Applicable
S-16	195.613 192.816	Diameter / Length: 1.200	{1} Pipe (13)	Pipe	192.816	Diam/Width:225	Manhole
E:268477.791 N:653536.132	2.797		{2} Pipe (14)	Pipe	192.816	Diam/Width:225	
			{a} Pipe (15)	Pipe	192.816	Diam/Width:225	Not Applicable
S-17	194.422 192.922	Diameter / Length: 1.200					Manhole
E:268448.353 N:653575.215	1.500		{a} Pipe (16)	Pipe	192.922	Diam/Width:225	Not Applicable
S-18	194.824 193.324	Diameter / Length: 1.200					Manhole
E:268525.510 N:653545.795	1.500		{a} Pipe (17)	Pipe	193.324	Diam/Width:225	Not Applicable

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S-19	194.824 192.090	Diameter / Length: 1.500	{1} Pipe (15)	Pipe	192.165	Diam/Width:225	Manhole
E:268487.065	2.734		{2} Pipe (16)	Pipe	192.165	Diam/Width:225	
N:653560.454			{3} Pipe (17)	Pipe	192.165	Diam/Width:225	
			{a} Pipe (18)	Pipe	192.090	Diam/Width:300	Not Applicable
S-20	194.458 190.882	Diameter / Length: 1.500	{1} Pipe (18)	Pipe	190.882	Diam/Width:300	Manhole
E:268491.370	3.576						
N:653571.743			{a} Pipe (19)	Pipe	190.882	Diam/Width:300	Not Applicable
S-21	199.311 197.811	Diameter / Length: 1.200					Manhole
E:268603.972	1.500						
N:653412.812			{a} Pipe (20)	Pipe	197.811	Diam/Width:300	Not Applicable
S-22	198.752 196.850	Diameter / Length: 1.200	{1} Pipe (20)	Pipe	196.850	Diam/Width:300	Manhole
E:268550.149	1.902						
N:653433.335			{a} Pipe (21)	Pipe	196.850	Diam/Width:300	Not Applicable

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S-23	198.245 195.802	Diameter / Length: 1.200	{1} Pipe (21)	Pipe	195.802	Diam/Width:300	Manhole
E:268501.230 N:653451.988	2.443		{a} Pipe (22)	Pipe	195.802	Diam/Width:300	Not Applicable
S-24	198.246 196.746	Diameter / Length: 1.200					Manhole
E:268616.490 N:653445.643	1.500		{a} Pipe (23)	Pipe	196.746	Diam/Width:300	Not Applicable
S-25	197.688 195.785	Diameter / Length: 1.200	{1} Pipe (23)	Pipe	195.785	Diam/Width:300	Manhole
E:268562.667 N:653466.165	1.903		{a} Pipe (24)	Pipe	195.785	Diam/Width:300	Not Applicable
S-26	197.180 194.848	Diameter / Length: 1.800	{1} Pipe (22)	Pipe	194.998	Diam/Width:300	Manhole
E:268513.748 N:653484.818	2.332		{2} Pipe (24)	Pipe	194.998	Diam/Width:300	
			{a} Pipe (25)	Pipe	194.848	Diam/Width:450	Not Applicable
S-27	196.647 194.408	Diameter / Length: 1.500	{1} Pipe (25)	Pipe	194.408	Diam/Width:450	Manhole
E:268519.989 N:653501.244	2.239		{a} Pipe (26)	Pipe	194.408	Diam/Width:450	Not Applicable

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S-28	196.570 194.208	Diameter / Length: 1.500	{1} Pipe (26)	Pipe	194.208	Diam/Width:450	Manhole
E:268512.540 N:653504.081	2.362		{a} Pipe (27)	Pipe	194.208	Diam/Width:450	Not Applicable
S-29	197.181 195.681	Diameter / Length: 1.200					Manhole
E:268629.008 N:653478.473	1.500		{a} Pipe (28)	Pipe	195.681	Diam/Width:300	Not Applicable
S-30	196.570 194.779	Diameter / Length: 1.200	{1} Pipe (28)	Pipe	194.779	Diam/Width:300	Manhole
E:268570.059 N:653500.950	1.791		{a} Pipe (29)	Pipe	194.779	Diam/Width:300	Not Applicable
S-31	196.038 193.618	Diameter / Length: 1.800	{1} Pipe (27)	Pipe	193.768	Diam/Width:450	Manhole
E:268518.799 N:653520.496	2.420		{2} Pipe (29)	Pipe	193.768	Diam/Width:300	
			{a} Pipe (30)	Pipe	193.618	Diam/Width:450	Not Applicable
S-32	195.111 192.853	Diameter / Length: 1.500	{1} Pipe (30)	Pipe	192.853	Diam/Width:450	Manhole
E:268529.695 N:653549.072	2.258		{a} Pipe (31)	Pipe	192.853	Diam/Width:450	Not Applicable

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S-33	193.330 190.193	Diameter / Length: 1.500	{1} Pipe (31)	Pipe	190.193	Diam/Width:450	Manhole
E:268540.445 N:653573.397	3.137		{a} Pipe (32)	Pipe	190.193	Diam/Width:450	Not Applicable
S-34	196.336 194.736	Diameter / Length: 1.200					Manhole
E:268633.156 N:653504.750	1.600		{a} Pipe (33)	Pipe	194.736	Diam/Width:300	Not Applicable
S-35	195.887 193.958	Diameter / Length: 1.200	{1} Pipe (33)	Pipe	193.958	Diam/Width:300	Manhole
E:268589.585 N:653521.363	1.929		{a} Pipe (34)	Pipe	193.958	Diam/Width:300	Not Applicable
S-36	195.407 192.966	Diameter / Length: 1.200	{1} Pipe (34)	Pipe	192.966	Diam/Width:300	Manhole
E:268543.254 N:653539.029	2.441		{a} Pipe (35)	Pipe	192.966	Diam/Width:300	Not Applicable
S-37	194.784 192.452	Diameter / Length: 1.200	{1} Pipe (35)	Pipe	192.452	Diam/Width:300	Manhole
E:268550.573 N:653558.225	2.332		{a} Pipe (36)	Pipe	192.452	Diam/Width:300	Not Applicable

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S-38	195.488 193.888	Diameter / Length: 1.200					Manhole
E:268618.545 N:653532.308	1.600						
			{a} Pipe (37)	Pipe	193.888	Diam/Width:300	Not Applicable
S-39	194.984 191.614	Diameter / Length: 1.500	{1} Pipe (36)	Pipe	191.764	Diam/Width:300	Manhole
E:268569.848 N:653550.876	3.370		{2} Pipe (37)	Pipe	191.764	Diam/Width:300	
			{a} Pipe (38)	Pipe	191.614	Diam/Width:450	Not Applicable
S-40	194.895 193.070	Diameter / Length: 1.200					Manhole
E:268621.475 N:653550.681	1.825						
			{a} Pipe (39)	Pipe	193.070	Diam/Width:300	Not Applicable
S-41	194.436 191.310	Diameter / Length: 1.500	{1} Pipe (38)	Pipe	191.310	Diam/Width:450	Manhole
E:268576.336 N:653567.893	3.126		{2} Pipe (39)	Pipe	191.460	Diam/Width:300	
			{a} Pipe (40)	Pipe	191.310	Diam/Width:450	Not Applicable

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024			
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L		Approved By: S.L
		Kemp House: 124 City Road London EC1V 2NX			


Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S-42	194.384 192.401	Diameter / Length: 1.200					Manhole
E:268627.488	1.983						
N:653566.449			{a} Pipe (41)	Pipe	192.401	Diam/Width:300	Not Applicable
S-43	194.018 191.441	Diameter / Length: 1.200	{1} Pipe (41)	Pipe	191.441	Diam/Width:300	Manhole
E:268591.623	2.577						
N:653580.176			{a} Pipe (42)	Pipe	191.441	Diam/Width:300	Not Applicable
S-44	194.006 192.983	Diameter / Length: 0.600					Manhole
E:268642.375	1.023						
N:653577.501			{a} Pipe (43)	Pipe	192.983	Diam/Width:225	Not Applicable
S-45	193.736 192.273	Diameter / Length: 0.600	{1} Pipe (43)	Pipe	192.273	Diam/Width:225	Manhole
E:268615.834	1.463						
N:653587.623			{a} Pipe (44)	Pipe	192.273	Diam/Width:225	Not Applicable
S-46	193.463 191.563	Diameter / Length: 0.600	{1} Pipe (44)	Pipe	191.563	Diam/Width:225	Manhole
E:268589.294	1.900						
N:653597.745			{a} Pipe (45)	Pipe	191.563	Diam/Width:225	Not Applicable

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024			
		Designed by: M.H	Checked by: S.L		Approved By: S.L
Report Details: Type: Manhole Schedule Storm Phase: Phase		Kemp House: 124 City Road London EC1V 2NX			


Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S-47	193.906 190.960	Diameter / Length: 1.800	{1} Pipe (40)	Pipe	190.960	Diam/Width:450	Manhole
E:268582.568	2.946		{2} Pipe (42)	Pipe	191.110	Diam/Width:300	
N:653584.237			{3} Pipe (45)	Pipe		Diam/Width:225	
				{a} Pipe (46)	Pipe	190.960	Diam/Width:450

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Inflow Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		

Inflow Label	Connected To	Flow (L/s)	Runoff Method	Area (ha)	Percentage Impervious (%)	Urban Creep (%)	Adjusted Percentage Impervious (%)	Area Analysed (ha)
Catchment Area	S-01		Time of Concentration	0.155	100	0	100	0.155
Catchment Area (1)	S-02		Time of Concentration	0.139	100	0	100	0.139
Catchment Area (2)	S-03		Time of Concentration	0.031	100	0	100	0.031
Catchment Area (3)	S-04		Time of Concentration	0.022	100	0	100	0.022
Catchment Area (4)	S-05		Time of Concentration	0.083	100	0	100	0.083
Catchment Area (5)	S-06		Time of Concentration	0.116	100	0	100	0.116
Catchment Area (6)	S-07		Time of Concentration	0.103	100	0	100	0.103
Catchment Area (7)	S-08		Time of Concentration	0.074	100	0	100	0.074
Catchment Area (8)	S-09		Time of Concentration	0.009	100	0	100	0.009
Catchment Area (9)	S-10		Time of Concentration	0.072	100	0	100	0.072
Catchment Area (10)	S-11		Time of Concentration	0.054	100	0	100	0.054
Catchment Area (11)	S-12		Time of Concentration	0.017	100	0	100	0.017
Catchment Area (12)	S-13		Time of Concentration	0.020	100	0	100	0.020
Catchment Area (13)	S-14		Time of Concentration	0.067	100	0	100	0.067
Catchment Area (14)	S-15		Time of Concentration	0.067	100	0	100	0.067
Catchment Area (15)	S-16		Time of Concentration	0.125	100	0	100	0.125
Catchment Area (16)	S-17		Time of Concentration	0.048	100	0	100	0.048
Catchment Area (17)	S-18		Time of Concentration	0.048	100	0	100	0.048
Catchment Area (18)	S-19		Time of Concentration	0.088	100	0	100	0.088
Catchment Area (19)	S-20		Time of Concentration	0.134	100	0	100	0.134
Catchment Area (20)	S-21		Time of Concentration	0.116	100	0	100	0.116
Catchment Area (21)	S-22		Time of Concentration	0.110	100	0	100	0.110
Catchment Area (22)	S-23		Time of Concentration	0.101	100	0	100	0.101
Catchment Area (23)	S-24		Time of Concentration	0.135	100	0	100	0.135
Catchment Area (24)	S-25		Time of Concentration	0.154	100	0	100	0.154
Catchment Area (25)	S-26		Time of Concentration	0.142	100	0	100	0.142
Catchment Area (26)	S-29		Time of Concentration	0.135	100	0	100	0.135
Catchment Area (27)	S-30		Time of Concentration	0.154	100	0	100	0.154
Catchment Area (28)	S-27		Time of Concentration	0.142	100	0	100	0.142
Catchment Area (29)	S-33		Time of Concentration	0.062	100	0	100	0.062
Catchment Area (30)	S-34		Time of Concentration	0.135	100	0	100	0.135
Catchment Area (31)	S-35		Time of Concentration	0.114	100	0	100	0.114

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024			
Report Details: Type: Inflow Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L		
		Kemp House: 124 City Road London EC1V 2NX			

Catchment Area (32)	S-36		Time of Concentration	0.083	100	0	100	0.083
Catchment Area (33)	S-37		Time of Concentration	0.064	100	0	100	0.064
Catchment Area (34)	S-38		Time of Concentration	0.055	100	0	100	0.055
Catchment Area (35)	S-39		Time of Concentration	0.074	100	0	100	0.074
Catchment Area (36)	S-40		Time of Concentration	0.051	100	0	100	0.051
Catchment Area (37)	S-41		Time of Concentration	0.068	100	0	100	0.068
Catchment Area (38)	S-42		Time of Concentration	0.055	100	0	100	0.055
Catchment Area (39)	S-43		Time of Concentration	0.071	100	0	100	0.071
Catchment Area (40)	S-44		Time of Concentration	0.019	100	0	100	0.019
Catchment Area (41)	S-45		Time of Concentration	0.024	100	0	100	0.024
Catchment Area (42)	Tank		Time of Concentration	0.330	100	0	100	0.330
Catchment Area (43)	Tank		Time of Concentration	0.183	100	0	100	0.183
TOTAL		0.0		4.050				4.050

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Title: Rainfall Analysis Criteria		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		

Runoff Type	Dynamic
Output Interval (mins)	5
Time Step	Default
Urban Creep	Apply Global Value
Urban Creep Global Value (%)	0
Junction Flood Risk Margin (mm)	300
Perform No Discharge Analysis	<input type="checkbox"/>

Rainfall


FEH	Type: FEH
Site Location	GB 268527 653527 NS 68527 53527
Rainfall Version	2013
Data Type	Point
Summer	<input checked="" type="checkbox"/>
Winter	<input checked="" type="checkbox"/>

Return Period

Return Period (years)	Increase Rainfall (%)
200.0	45.000

Storm Durations

Duration (mins)	Run Time (mins)
15	30
30	60
60	120
120	240
180	360
240	480
360	720
480	960
600	1200
720	1440
960	1920
1440	2880

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Title: UK and Ireland Rural Runoff Calculator		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


ICP SUDS / IH 124

Details

Method	ICP SUDS
Area (ha)	4.05
SAAR (mm)	1227.0
Soil	0.47
Region	Region 2
Urban	0
Return Period (years)	200

Results

Region	QBAR Rural (L/s)	QBAR Urban (L/s)	Q 200 (years) (L/s)	Q 1 (years) (L/s)	Q 30 (years) (L/s)	Q 100 (years) (L/s)
Region 2	37.7	37.7	112.4	32.8	71.5	99.2

C3206 - Muttonhole Road, Hamilton, ML3_RevB:		Date:		
Proposed Site for Battery Storage_RevB		24/11/2024		
1:200 Storm Event + 45% Climate Change_RevB		Designed by:	Checked by:	
Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		M.H	S.L	S.L
Report Details:		Kemp House:		
Type: Junctions Summary		124 City Road		
Storm Phase: Phase		London		
		EC1V 2NX		




Summary Results for S-48 (FC): Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FEH: 200 years: +45 %: 15 mins: Summer	186.100	182.082	184.265	2.183	30.6	2.469	0.000	30.5	40.980	OK
FEH: 200 years: +45 %: 15 mins: Winter	186.100	182.082	184.362	2.280	31.3	2.579	0.000	31.2	42.367	OK
FEH: 200 years: +45 %: 30 mins: Summer	186.100	182.082	184.551	2.469	32.5	2.792	0.000	32.5	95.005	OK
FEH: 200 years: +45 %: 30 mins: Winter	186.100	182.082	184.663	2.581	33.3	2.920	0.000	33.2	97.503	OK
FEH: 200 years: +45 %: 60 mins: Summer	186.100	182.082	184.796	2.714	34.1	3.069	0.000	34.1	208.408	OK
FEH: 200 years: +45 %: 60 mins: Winter	186.100	182.082	184.923	2.841	34.9	3.213	0.000	34.9	213.194	OK
FEH: 200 years: +45 %: 120 mins: Summer	186.100	182.082	184.899	2.817	34.7	3.187	0.000	34.7	433.387	OK
FEH: 200 years: +45 %: 120 mins: Winter	186.100	182.082	185.037	2.955	35.6	3.343	0.000	35.6	443.121	OK
FEH: 200 years: +45 %: 180 mins: Summer	186.100	182.082	184.940	2.858	35.0	3.232	0.000	35.0	658.134	OK
FEH: 200 years: +45 %: 180 mins: Winter	186.100	182.082	185.084	3.002	35.9	3.395	0.000	35.9	673.390	OK
FEH: 200 years: +45 %: 240 mins: Summer	186.100	182.082	184.957	2.875	35.1	3.252	0.000	35.1	881.141	OK
FEH: 200 years: +45 %: 240 mins: Winter	186.100	182.082	185.108	3.026	36.0	3.422	0.000	36.0	902.443	OK
FEH: 200 years: +45 %: 360 mins: Summer	186.100	182.082	184.960	2.878	35.1	3.255	0.000	35.1	1319.642	OK
FEH: 200 years: +45 %: 360 mins: Winter	186.100	182.082	185.122	3.040	36.1	3.438	0.000	36.1	1354.574	OK
FEH: 200 years: +45 %: 480 mins: Summer	186.100	182.082	184.944	2.862	35.0	3.237	0.000	35.0	1745.468	OK
FEH: 200 years: +45 %: 480 mins: Winter	186.100	182.082	185.116	3.034	36.1	3.431	0.000	36.1	1796.229	OK
FEH: 200 years: +45 %: 600 mins: Summer	186.100	182.082	184.922	2.840	34.9	3.213	0.000	34.9	2156.107	OK
FEH: 200 years: +45 %: 600 mins: Winter	186.100	182.082	185.099	3.017	36.0	3.412	0.000	36.0	2225.409	OK
FEH: 200 years: +45 %: 720 mins: Summer	186.100	182.082	184.904	2.822	34.8	3.192	0.000	34.8	2549.257	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024	
		Designed by: M.H	Checked by: S.L
		Approved By: S.L	
Report Details: Type: Junctions Summary Storm Phase: Phase		Kemp House: 124 City Road London EC1V 2NX	




FEH: 200 years: +45 %: 720 mins: Winter	186.1 00	182.0 82	185.07 7	2.995	35.8	3.387	0.000	35.8	2640.055	OK
FEH: 200 years: +45 %: 960 mins: Summer	186.1 00	182.0 82	184.87 1	2.789	34.6	3.155	0.000	34.6	3271.253	OK
FEH: 200 years: +45 %: 960 mins: Winter	186.1 00	182.0 82	185.03 9	2.957	35.6	3.344	0.000	35.6	3417.466	OK
FEH: 200 years: +45 %: 1440 mins: Summer	186.1 00	182.0 82	184.81 9	2.737	34.2	3.096	0.000	34.2	3977.800	OK
FEH: 200 years: +45 %: 1440 mins: Winter	186.1 00	182.0 82	184.97 2	2.890	35.2	3.268	0.000	35.2	4431.683	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB:		Date:			
Proposed Site for Battery Storage_RevB		24/11/2024			
1:200 Storm Event + 45% Climate Change_RevB		Designed by:	Checked by:		Approved By:
Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		M.H	S.L		S.L
Report Details:		Kemp House:			
Type: Junctions Summary		124 City Road			
Storm Phase: Phase		London			
		EC1V 2NX			




Summary Results for S-01: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FEH: 200 years: +45 %: 15 mins: Summer	197.649	196.149	196.994	0.845	111.8	0.956	0.000	92.9	48.467	Surcharged
FEH: 200 years: +45 %: 15 mins: Winter	197.649	196.149	197.341	1.192	117.5	1.349	0.000	97.3	54.300	Surcharged
FEH: 200 years: +45 %: 30 mins: Summer	197.649	196.149	196.307	0.158	77.1	0.179	0.000	77.1	66.767	OK
FEH: 200 years: +45 %: 30 mins: Winter	197.649	196.149	196.367	0.218	81.1	0.247	0.000	79.8	74.766	OK
FEH: 200 years: +45 %: 60 mins: Summer	197.649	196.149	196.297	0.148	68.8	0.167	0.000	68.8	85.956	OK
FEH: 200 years: +45 %: 60 mins: Winter	197.649	196.149	196.288	0.139	62.0	0.157	0.000	62.0	96.273	OK
FEH: 200 years: +45 %: 120 mins: Summer	197.649	196.149	196.266	0.117	46.4	0.132	0.000	46.4	97.778	OK
FEH: 200 years: +45 %: 120 mins: Winter	197.649	196.149	196.253	0.104	37.4	0.118	0.000	37.4	109.510	OK
FEH: 200 years: +45 %: 180 mins: Summer	197.649	196.149	196.250	0.101	35.2	0.114	0.000	35.2	104.944	OK
FEH: 200 years: +45 %: 180 mins: Winter	197.649	196.149	196.237	0.088	27.1	0.100	0.000	27.1	117.539	OK
FEH: 200 years: +45 %: 240 mins: Summer	197.649	196.149	196.239	0.090	28.6	0.102	0.000	28.6	110.297	OK
FEH: 200 years: +45 %: 240 mins: Winter	197.649	196.149	196.227	0.078	21.5	0.088	0.000	21.5	123.534	OK
FEH: 200 years: +45 %: 360 mins: Summer	197.649	196.149	196.226	0.077	21.0	0.087	0.000	21.0	118.547	OK
FEH: 200 years: +45 %: 360 mins: Winter	197.649	196.149	196.215	0.066	15.5	0.075	0.000	15.5	132.780	OK
FEH: 200 years: +45 %: 480 mins: Summer	197.649	196.149	196.218	0.069	17.0	0.078	0.000	17.0	125.081	OK
FEH: 200 years: +45 %: 480 mins: Winter	197.649	196.149	196.208	0.059	12.3	0.067	0.000	12.3	140.112	OK
FEH: 200 years: +45 %: 600 mins: Summer	197.649	196.149	196.212	0.063	14.2	0.072	0.000	14.2	130.656	OK
FEH: 200 years: +45 %: 600 mins: Winter	197.649	196.149	196.203	0.054	10.3	0.061	0.000	10.3	146.346	OK
FEH: 200 years: +45 %: 720 mins: Summer	197.649	196.149	196.208	0.059	12.3	0.067	0.000	12.3	135.648	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


FEH: 200 years: +45 %: 720 mins: Winter	197.6 49	196.1 49	196.19 9	0.050	8.9	0.057	0.000	8.9	151.926	OK
FEH: 200 years: +45 %: 960 mins: Summer	197.6 49	196.1 49	196.20 2	0.053	9.8	0.060	0.000	9.8	144.498	OK
FEH: 200 years: +45 %: 960 mins: Winter	197.6 49	196.1 49	196.19 4	0.045	7.1	0.051	0.000	7.1	161.892	OK
FEH: 200 years: +45 %: 1440 mins: Summer	197.6 49	196.1 49	196.19 5	0.046	7.3	0.051	0.000	7.3	159.804	OK
FEH: 200 years: +45 %: 1440 mins: Winter	197.6 49	196.1 49	196.18 8	0.039	5.2	0.044	0.000	5.2	179.022	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		




Summary Results for S-02: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FEH: 200 years: +45 %: 15 mins: Summer	197.2 10	195.3 91	196.64 5	1.254	193.0	1.418	0.000	171.9	92.017	Surcharged
FEH: 200 years: +45 %: 15 mins: Winter	197.2 10	195.3 91	196.95 5	1.564	202.6	1.769	0.000	183.7	103.065	Flood Risk
FEH: 200 years: +45 %: 30 mins: Summer	197.2 10	195.3 91	195.94 5	0.554	146.2	0.627	0.000	145.8	126.580	Surcharged
FEH: 200 years: +45 %: 30 mins: Winter	197.2 10	195.3 91	196.12 7	0.736	152.4	0.832	0.000	152.2	141.801	Surcharged
FEH: 200 years: +45 %: 60 mins: Summer	197.2 10	195.3 91	195.58 7	0.196	130.4	0.221	0.000	130.4	162.909	OK
FEH: 200 years: +45 %: 60 mins: Winter	197.2 10	195.3 91	195.57 1	0.180	117.5	0.204	0.000	117.5	182.527	OK
FEH: 200 years: +45 %: 120 mins: Summer	197.2 10	195.3 91	195.54 1	0.150	88.0	0.170	0.000	88.0	185.385	OK
FEH: 200 years: +45 %: 120 mins: Winter	197.2 10	195.3 91	195.52 3	0.132	70.9	0.150	0.000	70.9	207.633	OK
FEH: 200 years: +45 %: 180 mins: Summer	197.2 10	195.3 91	195.51 9	0.128	66.7	0.145	0.000	66.7	198.974	OK
FEH: 200 years: +45 %: 180 mins: Winter	197.2 10	195.3 91	195.50 2	0.111	51.5	0.125	0.000	51.5	222.870	OK
FEH: 200 years: +45 %: 240 mins: Summer	197.2 10	195.3 91	195.50 5	0.114	54.2	0.129	0.000	54.2	209.122	OK
FEH: 200 years: +45 %: 240 mins: Winter	197.2 10	195.3 91	195.48 9	0.098	40.8	0.111	0.000	40.8	234.236	OK
FEH: 200 years: +45 %: 360 mins: Summer	197.2 10	195.3 91	195.48 8	0.097	39.8	0.109	0.000	39.8	224.760	OK
FEH: 200 years: +45 %: 360 mins: Winter	197.2 10	195.3 91	195.47 3	0.082	29.4	0.093	0.000	29.4	251.752	OK
FEH: 200 years: +45 %: 480 mins: Summer	197.2 10	195.3 91	195.47 7	0.086	32.2	0.098	0.000	32.2	237.151	OK
FEH: 200 years: +45 %: 480 mins: Winter	197.2 10	195.3 91	195.46 4	0.073	23.3	0.083	0.000	23.3	265.648	OK
FEH: 200 years: +45 %: 600 mins: Summer	197.2 10	195.3 91	195.47 0	0.079	27.0	0.089	0.000	27.0	247.778	OK
FEH: 200 years: +45 %: 600 mins: Winter	197.2 10	195.3 91	195.45 8	0.067	19.5	0.076	0.000	19.5	277.481	OK
FEH: 200 years: +45 %: 720 mins: Summer	197.2 10	195.3 91	195.46 4	0.073	23.3	0.083	0.000	23.3	257.217	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


FEH: 200 years: +45 %: 720 mins: Winter	197.2 10	195.3 91	195.45 3	0.062	16.9	0.070	0.000	16.9	288.047	OK
FEH: 200 years: +45 %: 960 mins: Summer	197.2 10	195.3 91	195.45 7	0.066	18.7	0.074	0.000	18.6	274.006	OK
FEH: 200 years: +45 %: 960 mins: Winter	197.2 10	195.3 91	195.44 7	0.056	13.5	0.063	0.000	13.5	306.929	OK
FEH: 200 years: +45 %: 1440 mins: Summer	197.2 10	195.3 91	195.44 7	0.056	13.8	0.064	0.000	13.8	303.010	OK
FEH: 200 years: +45 %: 1440 mins: Winter	197.2 10	195.3 91	195.43 9	0.048	9.9	0.054	0.000	9.9	339.414	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB:		Date:		
Proposed Site for Battery Storage_RevB		24/11/2024		
1:200 Storm Event + 45% Climate Change_RevB		Designed by:	Checked by:	
Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		M.H	S.L	S.L
Report Details:		Kemp House:		
Type: Junctions Summary		124 City Road		
Storm Phase: Phase		London		
		EC1V 2NX		




Summary Results for S-03: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FEH: 200 years: +45 %: 15 mins: Summer	197.8 24	196.3 32	196.41 3	0.081	22.6	0.023	0.000	22.5	9.821	OK
FEH: 200 years: +45 %: 15 mins: Winter	197.8 24	196.3 32	196.41 6	0.084	23.8	0.024	0.000	23.7	11.003	OK
FEH: 200 years: +45 %: 30 mins: Summer	197.8 24	196.3 32	196.39 7	0.065	15.6	0.018	0.000	15.6	13.532	OK
FEH: 200 years: +45 %: 30 mins: Winter	197.8 24	196.3 32	196.39 9	0.067	16.4	0.019	0.000	16.4	15.160	OK
FEH: 200 years: +45 %: 60 mins: Summer	197.8 24	196.3 32	196.39 3	0.061	13.9	0.017	0.000	13.9	17.422	OK
FEH: 200 years: +45 %: 60 mins: Winter	197.8 24	196.3 32	196.39 0	0.058	12.6	0.016	0.000	12.6	19.504	OK
FEH: 200 years: +45 %: 120 mins: Summer	197.8 24	196.3 32	196.38 1	0.049	9.4	0.014	0.000	9.4	19.811	OK
FEH: 200 years: +45 %: 120 mins: Winter	197.8 24	196.3 32	196.37 6	0.044	7.6	0.013	0.000	7.6	22.181	OK
FEH: 200 years: +45 %: 180 mins: Summer	197.8 24	196.3 32	196.37 5	0.043	7.1	0.012	0.000	7.1	21.251	OK
FEH: 200 years: +45 %: 180 mins: Winter	197.8 24	196.3 32	196.37 0	0.038	5.5	0.011	0.000	5.5	23.819	OK
FEH: 200 years: +45 %: 240 mins: Summer	197.8 24	196.3 32	196.37 1	0.039	5.8	0.011	0.000	5.8	22.349	OK
FEH: 200 years: +45 %: 240 mins: Winter	197.8 24	196.3 32	196.36 5	0.033	4.4	0.009	0.000	4.4	25.032	OK
FEH: 200 years: +45 %: 360 mins: Summer	197.8 24	196.3 32	196.36 5	0.033	4.3	0.009	0.000	4.3	24.029	OK
FEH: 200 years: +45 %: 360 mins: Winter	197.8 24	196.3 32	196.36 0	0.028	3.1	0.008	0.000	3.1	26.886	OK
FEH: 200 years: +45 %: 480 mins: Summer	197.8 24	196.3 32	196.36 2	0.030	3.4	0.008	0.000	3.4	25.343	OK
FEH: 200 years: +45 %: 480 mins: Winter	197.8 24	196.3 32	196.35 7	0.025	2.5	0.007	0.000	2.5	28.373	OK
FEH: 200 years: +45 %: 600 mins: Summer	197.8 24	196.3 32	196.35 9	0.027	2.9	0.008	0.000	2.9	26.484	OK
FEH: 200 years: +45 %: 600 mins: Winter	197.8 24	196.3 32	196.35 5	0.023	2.1	0.007	0.000	2.1	29.663	OK
FEH: 200 years: +45 %: 720 mins: Summer	197.8 24	196.3 32	196.35 7	0.025	2.5	0.007	0.000	2.5	27.474	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024			
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L		
		Kemp House: 124 City Road London EC1V 2NX			


FEH: 200 years: +45 %: 720 mins: Winter	197.8 24	196.3 32	196.35 4	0.022	1.8	0.006	0.000	1.8	30.797	OK
FEH: 200 years: +45 %: 960 mins: Summer	197.8 24	196.3 32	196.35 5	0.023	2.0	0.006	0.000	2.0	29.262	OK
FEH: 200 years: +45 %: 960 mins: Winter	197.8 24	196.3 32	196.35 2	0.020	1.4	0.006	0.000	1.4	32.748	OK
FEH: 200 years: +45 %: 1440 mins: Summer	197.8 24	196.3 32	196.35 2	0.020	1.5	0.006	0.000	1.5	32.316	OK
FEH: 200 years: +45 %: 1440 mins: Winter	197.8 24	196.3 32	196.34 9	0.017	1.1	0.005	0.000	1.1	36.246	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB:		Date:		
Proposed Site for Battery Storage_RevB		24/11/2024		
1:200 Storm Event + 45% Climate Change_RevB		Designed by:	Checked by:	
Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		M.H	S.L	S.L
Report Details:		Kemp House:		
Type: Junctions Summary		124 City Road		
Storm Phase: Phase		London		
		EC1V 2NX		




Summary Results for S-04: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FEH: 200 years: +45 %: 15 mins: Summer	197.18	195.167	195.761	0.594	38.1	0.168	0.000	27.9	16.590	Surcharged
FEH: 200 years: +45 %: 15 mins: Winter	197.18	195.167	195.958	0.791	40.1	0.224	0.000	28.4	18.588	Surcharged
FEH: 200 years: +45 %: 30 mins: Summer	197.18	195.167	195.368	0.201	26.4	0.057	0.000	26.0	22.859	Surcharged
FEH: 200 years: +45 %: 30 mins: Winter	197.18	195.167	195.516	0.349	27.8	0.099	0.000	27.6	25.618	Surcharged
FEH: 200 years: +45 %: 60 mins: Summer	197.18	195.167	195.243	0.076	23.6	0.022	0.000	23.6	29.438	OK
FEH: 200 years: +45 %: 60 mins: Winter	197.18	195.167	195.239	0.072	21.2	0.020	0.000	21.2	32.973	OK
FEH: 200 years: +45 %: 120 mins: Summer	197.18	195.167	195.231	0.064	15.9	0.018	0.000	15.9	33.494	OK
FEH: 200 years: +45 %: 120 mins: Winter	197.18	195.167	195.224	0.057	12.8	0.016	0.000	12.8	37.497	OK
FEH: 200 years: +45 %: 180 mins: Summer	197.18	195.167	195.222	0.055	12.0	0.016	0.000	12.0	35.925	OK
FEH: 200 years: +45 %: 180 mins: Winter	197.18	195.167	195.215	0.048	9.3	0.013	0.000	9.3	40.276	OK
FEH: 200 years: +45 %: 240 mins: Summer	197.18	195.167	195.216	0.049	9.8	0.014	0.000	9.8	37.779	OK
FEH: 200 years: +45 %: 240 mins: Winter	197.18	195.167	195.209	0.042	7.4	0.012	0.000	7.4	42.304	OK
FEH: 200 years: +45 %: 360 mins: Summer	197.18	195.167	195.208	0.041	7.2	0.012	0.000	7.2	40.618	OK
FEH: 200 years: +45 %: 360 mins: Winter	197.18	195.167	195.202	0.035	5.3	0.010	0.000	5.3	45.454	OK
FEH: 200 years: +45 %: 480 mins: Summer	197.18	195.167	195.204	0.037	5.8	0.010	0.000	5.8	42.844	OK
FEH: 200 years: +45 %: 480 mins: Winter	197.18	195.167	195.198	0.031	4.2	0.009	0.000	4.2	47.956	OK
FEH: 200 years: +45 %: 600 mins: Summer	197.18	195.167	195.201	0.034	4.9	0.010	0.000	4.9	44.758	OK
FEH: 200 years: +45 %: 600 mins: Winter	197.18	195.167	195.196	0.029	3.5	0.008	0.000	3.5	50.128	OK
FEH: 200 years: +45 %: 720 mins: Summer	197.18	195.167	195.198	0.031	4.2	0.009	0.000	4.2	46.462	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024				
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L			Approved By: S.L
		Kemp House: 124 City Road London EC1V 2NX				


FEH: 200 years: +45 %: 720 mins: Winter	197.1 18	195.1 67	195.19 4	0.027	3.0	0.008	0.000	3.0	52.048	OK
FEH: 200 years: +45 %: 960 mins: Summer	197.1 18	195.1 67	195.19 5	0.028	3.4	0.008	0.000	3.4	49.474	OK
FEH: 200 years: +45 %: 960 mins: Winter	197.1 18	195.1 67	195.19 1	0.024	2.4	0.007	0.000	2.4	55.427	OK
FEH: 200 years: +45 %: 1440 mins: Summer	197.1 18	195.1 67	195.19 1	0.024	2.5	0.007	0.000	2.5	54.713	OK
FEH: 200 years: +45 %: 1440 mins: Winter	197.1 18	195.1 67	195.18 7	0.020	1.8	0.006	0.000	1.8	61.295	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		




Summary Results for S-05: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FEH: 200 years: +45 %: 15 mins: Summer	196.7 71	194.2 54	195.44 9	1.195	259.8	2.111	0.000	242.0	134.804	Surcharged
FEH: 200 years: +45 %: 15 mins: Winter	196.7 71	194.2 54	195.64 4	1.390	275.1	2.455	0.000	257.6	150.978	Surcharged
FEH: 200 years: +45 %: 30 mins: Summer	196.7 71	194.2 54	195.08 3	0.829	213.2	1.464	0.000	212.8	185.372	Surcharged
FEH: 200 years: +45 %: 30 mins: Winter	196.7 71	194.2 54	195.19 9	0.945	223.3	1.669	0.000	223.1	207.644	Surcharged
FEH: 200 years: +45 %: 60 mins: Summer	196.7 71	194.2 54	194.81 3	0.559	190.9	0.988	0.000	190.9	238.502	Surcharged
FEH: 200 years: +45 %: 60 mins: Winter	196.7 71	194.2 54	194.59 5	0.341	171.9	0.603	0.000	171.9	267.131	Surcharged
FEH: 200 years: +45 %: 120 mins: Summer	196.7 71	194.2 54	194.46 4	0.210	128.8	0.371	0.000	128.8	271.304	OK
FEH: 200 years: +45 %: 120 mins: Winter	196.7 71	194.2 54	194.43 3	0.179	103.8	0.317	0.000	103.8	303.858	OK
FEH: 200 years: +45 %: 180 mins: Summer	196.7 71	194.2 54	194.42 6	0.172	97.6	0.304	0.000	97.6	291.185	OK
FEH: 200 years: +45 %: 180 mins: Winter	196.7 71	194.2 54	194.40 0	0.146	75.3	0.258	0.000	75.3	326.182	OK
FEH: 200 years: +45 %: 240 mins: Summer	196.7 71	194.2 54	194.40 5	0.151	79.3	0.266	0.000	79.3	306.040	OK
FEH: 200 years: +45 %: 240 mins: Winter	196.7 71	194.2 54	194.38 1	0.127	59.7	0.224	0.000	59.7	342.788	OK
FEH: 200 years: +45 %: 360 mins: Summer	196.7 71	194.2 54	194.37 9	0.125	58.3	0.221	0.000	58.3	328.948	OK
FEH: 200 years: +45 %: 360 mins: Winter	196.7 71	194.2 54	194.35 9	0.105	43.0	0.186	0.000	43.0	368.413	OK
FEH: 200 years: +45 %: 480 mins: Summer	196.7 71	194.2 54	194.36 5	0.111	47.1	0.196	0.000	47.1	347.083	OK
FEH: 200 years: +45 %: 480 mins: Winter	196.7 71	194.2 54	194.34 7	0.093	34.1	0.164	0.000	34.1	388.724	OK
FEH: 200 years: +45 %: 600 mins: Summer	196.7 71	194.2 54	194.35 4	0.100	39.5	0.177	0.000	39.5	362.607	OK
FEH: 200 years: +45 %: 600 mins: Winter	196.7 71	194.2 54	194.33 8	0.084	28.5	0.149	0.000	28.5	406.084	OK
FEH: 200 years: +45 %: 720 mins: Summer	196.7 71	194.2 54	194.34 7	0.093	34.2	0.164	0.000	34.2	376.426	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024				
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L			Approved By: S.L
		Kemp House: 124 City Road London EC1V 2NX				


FEH: 200 years: +45 %: 720 mins: Winter	196.7 71	194.2 54	194.33 2	0.078	24.7	0.138	0.000	24.7	421.577	OK
FEH: 200 years: +45 %: 960 mins: Summer	196.7 71	194.2 54	194.33 6	0.082	27.3	0.145	0.000	27.3	400.986	OK
FEH: 200 years: +45 %: 960 mins: Winter	196.7 71	194.2 54	194.32 3	0.069	19.7	0.122	0.000	19.7	449.197	OK
FEH: 200 years: +45 %: 1440 mins: Summer	196.7 71	194.2 54	194.32 4	0.070	20.1	0.124	0.000	20.1	443.528	OK
FEH: 200 years: +45 %: 1440 mins: Winter	196.7 71	194.2 54	194.31 3	0.059	14.5	0.105	0.000	14.5	496.747	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB:		Date:		
Proposed Site for Battery Storage_RevB		24/11/2024		
1:200 Storm Event + 45% Climate Change_RevB		Designed by:	Checked by:	
Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		M.H	S.L	S.L
Report Details:		Kemp House:		
Type: Junctions Summary		124 City Road		
Storm Phase: Phase		London		
		EC1V 2NX		




Summary Results for S-06: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FEH: 200 years: +45 %: 15 mins: Summer	196.7 82	195.4 32	195.59 8	0.166	83.2	0.188	0.000	81.0	36.176	OK
FEH: 200 years: +45 %: 15 mins: Winter	196.7 82	195.4 32	195.60 4	0.172	87.5	0.195	0.000	85.3	40.515	OK
FEH: 200 years: +45 %: 30 mins: Summer	196.7 82	195.4 32	195.56 4	0.132	57.5	0.149	0.000	57.5	49.757	OK
FEH: 200 years: +45 %: 30 mins: Winter	196.7 82	195.4 32	195.56 8	0.136	60.4	0.154	0.000	60.4	55.740	OK
FEH: 200 years: +45 %: 60 mins: Summer	196.7 82	195.4 32	195.55 6	0.124	51.2	0.140	0.000	51.2	64.024	OK
FEH: 200 years: +45 %: 60 mins: Winter	196.7 82	195.4 32	195.54 9	0.117	46.1	0.132	0.000	46.1	71.712	OK
FEH: 200 years: +45 %: 120 mins: Summer	196.7 82	195.4 32	195.53 2	0.100	34.6	0.113	0.000	34.6	72.823	OK
FEH: 200 years: +45 %: 120 mins: Winter	196.7 82	195.4 32	195.52 1	0.089	27.9	0.101	0.000	27.9	81.559	OK
FEH: 200 years: +45 %: 180 mins: Summer	196.7 82	195.4 32	195.51 8	0.086	26.2	0.098	0.000	26.2	78.163	OK
FEH: 200 years: +45 %: 180 mins: Winter	196.7 82	195.4 32	195.50 8	0.076	20.2	0.086	0.000	20.2	87.547	OK
FEH: 200 years: +45 %: 240 mins: Summer	196.7 82	195.4 32	195.51 0	0.078	21.3	0.088	0.000	21.3	82.147	OK
FEH: 200 years: +45 %: 240 mins: Winter	196.7 82	195.4 32	195.49 9	0.067	16.0	0.076	0.000	16.0	92.017	OK
FEH: 200 years: +45 %: 360 mins: Summer	196.7 82	195.4 32	195.49 8	0.066	15.6	0.075	0.000	15.6	88.297	OK
FEH: 200 years: +45 %: 360 mins: Winter	196.7 82	195.4 32	195.48 9	0.057	11.5	0.065	0.000	11.5	98.881	OK
FEH: 200 years: +45 %: 480 mins: Summer	196.7 82	195.4 32	195.49 2	0.060	12.6	0.068	0.000	12.6	93.175	OK
FEH: 200 years: +45 %: 480 mins: Winter	196.7 82	195.4 32	195.48 3	0.051	9.2	0.058	0.000	9.2	104.353	OK
FEH: 200 years: +45 %: 600 mins: Summer	196.7 82	195.4 32	195.48 7	0.055	10.6	0.062	0.000	10.6	97.327	OK
FEH: 200 years: +45 %: 600 mins: Winter	196.7 82	195.4 32	195.47 9	0.047	7.7	0.053	0.000	7.7	109.027	OK
FEH: 200 years: +45 %: 720 mins: Summer	196.7 82	195.4 32	195.48 3	0.051	9.2	0.058	0.000	9.2	101.041	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


FEH: 200 years: +45 %: 720 mins: Winter	196.7 82	195.4 32	195.47 6	0.044	6.6	0.049	0.000	6.6	113.149	OK
FEH: 200 years: +45 %: 960 mins: Summer	196.7 82	195.4 32	195.47 8	0.046	7.3	0.052	0.000	7.3	107.659	OK
FEH: 200 years: +45 %: 960 mins: Winter	196.7 82	195.4 32	195.47 1	0.039	5.3	0.044	0.000	5.3	120.583	OK
FEH: 200 years: +45 %: 1440 mins: Summer	196.7 82	195.4 32	195.47 1	0.039	5.4	0.045	0.000	5.4	118.975	OK
FEH: 200 years: +45 %: 1440 mins: Winter	196.7 82	195.4 32	195.46 6	0.034	3.9	0.038	0.000	3.9	133.380	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB:		Date:		
Proposed Site for Battery Storage_RevB		24/11/2024		
1:200 Storm Event + 45% Climate Change_RevB		Designed by:	Checked by:	
Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		M.H	S.L	S.L
Report Details:		Kemp House:		
Type: Junctions Summary		124 City Road		
Storm Phase: Phase		London		
		EC1V 2NX		



Summary Results for S-07: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FEH: 200 years: +45 %: 15 mins: Summer	196.782	194.675	194.902	0.227	155.1	0.257	0.000	144.7	68.354	OK
FEH: 200 years: +45 %: 15 mins: Winter	196.782	194.675	194.913	0.238	163.2	0.270	0.000	152.6	76.558	OK
FEH: 200 years: +45 %: 30 mins: Summer	196.782	194.675	194.855	0.180	108.6	0.204	0.000	108.6	94.041	OK
FEH: 200 years: +45 %: 30 mins: Winter	196.782	194.675	194.862	0.187	114.2	0.211	0.000	114.2	105.346	OK
FEH: 200 years: +45 %: 60 mins: Summer	196.782	194.675	194.842	0.167	96.9	0.189	0.000	96.9	121.014	OK
FEH: 200 years: +45 %: 60 mins: Winter	196.782	194.675	194.831	0.156	87.2	0.177	0.000	87.2	135.550	OK
FEH: 200 years: +45 %: 120 mins: Summer	196.782	194.675	194.806	0.131	65.3	0.149	0.000	65.3	137.663	OK
FEH: 200 years: +45 %: 120 mins: Winter	196.782	194.675	194.791	0.116	52.7	0.131	0.000	52.7	154.192	OK
FEH: 200 years: +45 %: 180 mins: Summer	196.782	194.675	194.787	0.112	49.5	0.127	0.000	49.5	147.754	OK
FEH: 200 years: +45 %: 180 mins: Winter	196.782	194.675	194.772	0.097	38.2	0.110	0.000	38.2	165.501	OK
FEH: 200 years: +45 %: 240 mins: Summer	196.782	194.675	194.775	0.100	40.3	0.113	0.000	40.3	155.292	OK
FEH: 200 years: +45 %: 240 mins: Winter	196.782	194.675	194.761	0.086	30.3	0.097	0.000	30.3	173.933	OK
FEH: 200 years: +45 %: 360 mins: Summer	196.782	194.675	194.760	0.085	29.5	0.096	0.000	29.5	166.917	OK
FEH: 200 years: +45 %: 360 mins: Winter	196.782	194.675	194.747	0.072	21.8	0.082	0.000	21.8	186.925	OK
FEH: 200 years: +45 %: 480 mins: Summer	196.782	194.675	194.751	0.076	23.9	0.086	0.000	23.9	176.134	OK
FEH: 200 years: +45 %: 480 mins: Winter	196.782	194.675	194.739	0.064	17.3	0.073	0.000	17.3	197.258	OK
FEH: 200 years: +45 %: 600 mins: Summer	196.782	194.675	194.744	0.069	20.0	0.078	0.000	20.0	184.001	OK
FEH: 200 years: +45 %: 600 mins: Winter	196.782	194.675	194.734	0.059	14.5	0.066	0.000	14.5	206.079	OK
FEH: 200 years: +45 %: 720 mins: Summer	196.782	194.675	194.739	0.064	17.3	0.073	0.000	17.3	191.028	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


FEH: 200 years: +45 %: 720 mins: Winter	196.7 82	194.6 75	194.72 9	0.054	12.5	0.062	0.000	12.5	213.915	OK
FEH: 200 years: +45 %: 960 mins: Summer	196.7 82	194.6 75	194.73 2	0.057	13.8	0.065	0.000	13.8	203.533	OK
FEH: 200 years: +45 %: 960 mins: Winter	196.7 82	194.6 75	194.72 4	0.049	10.0	0.055	0.000	10.0	227.968	OK
FEH: 200 years: +45 %: 1440 mins: Summer	196.7 82	194.6 75	194.72 4	0.049	10.2	0.056	0.000	10.2	224.972	OK
FEH: 200 years: +45 %: 1440 mins: Winter	196.7 82	194.6 75	194.71 7	0.042	7.4	0.047	0.000	7.4	252.088	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB:				Date:		
Proposed Site for Battery Storage_RevB				24/11/2024		
1:200 Storm Event + 45% Climate Change_RevB				Designed by:	Checked by:	Approved By:
Restrictef flow under Qbar = 36.1l/s (FEH rainfall)				M.H	S.L	S.L
Report Details:				Kemp House:		
Type: Junctions Summary				124 City Road		
Storm Phase: Phase				London		
				EC1V 2NX		




Summary Results for S-08: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FEH: 200 years: +45 %: 15 mins: Summer	195.904	193.389	193.710	0.321	439.9	0.816	0.000	433.8	226.216	OK
FEH: 200 years: +45 %: 15 mins: Winter	195.904	193.389	193.730	0.341	466.1	0.868	0.000	458.7	253.339	OK
FEH: 200 years: +45 %: 30 mins: Summer	195.904	193.389	193.660	0.271	358.1	0.689	0.000	358.0	311.175	OK
FEH: 200 years: +45 %: 30 mins: Winter	195.904	193.389	193.670	0.281	375.9	0.715	0.000	375.8	348.562	OK
FEH: 200 years: +45 %: 60 mins: Summer	195.904	193.389	193.639	0.250	320.5	0.636	0.000	320.5	400.391	OK
FEH: 200 years: +45 %: 60 mins: Winter	195.904	193.389	193.621	0.232	288.6	0.591	0.000	288.6	448.460	OK
FEH: 200 years: +45 %: 120 mins: Summer	195.904	193.389	193.581	0.192	216.2	0.490	0.000	216.2	455.474	OK
FEH: 200 years: +45 %: 120 mins: Winter	195.904	193.389	193.558	0.169	174.2	0.429	0.000	174.2	510.133	OK
FEH: 200 years: +45 %: 180 mins: Summer	195.904	193.389	193.551	0.162	163.8	0.413	0.000	163.8	488.843	OK
FEH: 200 years: +45 %: 180 mins: Winter	195.904	193.389	193.529	0.140	126.4	0.356	0.000	126.4	547.588	OK
FEH: 200 years: +45 %: 240 mins: Summer	195.904	193.389	193.533	0.144	133.1	0.366	0.000	133.1	513.775	OK
FEH: 200 years: +45 %: 240 mins: Winter	195.904	193.389	193.512	0.123	100.3	0.312	0.000	100.3	575.477	OK
FEH: 200 years: +45 %: 360 mins: Summer	195.904	193.389	193.510	0.121	97.8	0.307	0.000	97.8	552.250	OK
FEH: 200 years: +45 %: 360 mins: Winter	195.904	193.389	193.491	0.102	72.2	0.260	0.000	72.2	618.487	OK
FEH: 200 years: +45 %: 480 mins: Summer	195.904	193.389	193.496	0.107	79.0	0.273	0.000	79.0	582.681	OK
FEH: 200 years: +45 %: 480 mins: Winter	195.904	193.389	193.479	0.090	57.3	0.230	0.000	57.3	652.605	OK
FEH: 200 years: +45 %: 600 mins: Summer	195.904	193.389	193.487	0.098	66.3	0.249	0.000	66.3	608.736	OK
FEH: 200 years: +45 %: 600 mins: Winter	195.904	193.389	193.471	0.082	47.9	0.209	0.000	47.9	681.750	OK
FEH: 200 years: +45 %: 720 mins: Summer	195.904	193.389	193.479	0.090	57.3	0.230	0.000	57.3	631.988	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


FEH: 200 years: +45 %: 720 mins: Winter	195.9 04	193.3 89	193.46 5	0.076	41.4	0.194	0.000	41.4	707.734	OK
FEH: 200 years: +45 %: 960 mins: Summer	195.9 04	193.3 89	193.46 9	0.080	45.8	0.204	0.000	45.8	673.241	OK
FEH: 200 years: +45 %: 960 mins: Winter	195.9 04	193.3 89	193.45 7	0.068	33.1	0.174	0.000	33.1	754.138	OK
FEH: 200 years: +45 %: 1440 mins: Summer	195.9 04	193.3 89	193.45 8	0.069	33.8	0.175	0.000	33.8	744.548	OK
FEH: 200 years: +45 %: 1440 mins: Winter	195.9 04	193.3 89	193.44 8	0.059	24.4	0.150	0.000	24.4	833.993	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB:		Date:		
Proposed Site for Battery Storage_RevB		24/11/2024		
1:200 Storm Event + 45% Climate Change_RevB		Designed by:	Checked by:	
Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		M.H	S.L	S.L
Report Details:		Kemp House:		
Type: Junctions Summary		124 City Road		
Storm Phase: Phase		London		
		EC1V 2NX		



Summary Results for S-09: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FEH: 200 years: +45 %: 15 mins: Summer	196.883	195.225	195.274	0.049	6.5	0.014	0.000	6.2	2.826	OK
FEH: 200 years: +45 %: 15 mins: Winter	196.883	195.225	195.275	0.050	6.8	0.014	0.000	6.5	3.168	OK
FEH: 200 years: +45 %: 30 mins: Summer	196.883	195.225	195.266	0.041	4.5	0.012	0.000	4.5	3.892	OK
FEH: 200 years: +45 %: 30 mins: Winter	196.883	195.225	195.267	0.042	4.7	0.012	0.000	4.7	4.360	OK
FEH: 200 years: +45 %: 60 mins: Summer	196.883	195.225	195.264	0.039	4.0	0.011	0.000	4.0	5.002	OK
FEH: 200 years: +45 %: 60 mins: Winter	196.883	195.225	195.262	0.037	3.6	0.010	0.000	3.6	5.608	OK
FEH: 200 years: +45 %: 120 mins: Summer	196.883	195.225	195.257	0.032	2.7	0.009	0.000	2.7	5.686	OK
FEH: 200 years: +45 %: 120 mins: Winter	196.883	195.225	195.253	0.028	2.2	0.008	0.000	2.2	6.377	OK
FEH: 200 years: +45 %: 180 mins: Summer	196.883	195.225	195.253	0.028	2.0	0.008	0.000	2.0	6.113	OK
FEH: 200 years: +45 %: 180 mins: Winter	196.883	195.225	195.249	0.024	1.6	0.007	0.000	1.6	6.833	OK
FEH: 200 years: +45 %: 240 mins: Summer	196.883	195.225	195.250	0.025	1.7	0.007	0.000	1.7	6.419	OK
FEH: 200 years: +45 %: 240 mins: Winter	196.883	195.225	195.247	0.022	1.3	0.006	0.000	1.2	7.187	OK
FEH: 200 years: +45 %: 360 mins: Summer	196.883	195.225	195.246	0.021	1.2	0.006	0.000	1.2	6.893	OK
FEH: 200 years: +45 %: 360 mins: Winter	196.883	195.225	195.244	0.019	0.9	0.005	0.000	0.9	7.739	OK
FEH: 200 years: +45 %: 480 mins: Summer	196.883	195.225	195.244	0.019	1.0	0.005	0.000	1.0	7.283	OK
FEH: 200 years: +45 %: 480 mins: Winter	196.883	195.225	195.242	0.017	0.7	0.005	0.000	0.7	8.153	OK
FEH: 200 years: +45 %: 600 mins: Summer	196.883	195.225	195.243	0.018	0.8	0.005	0.000	0.8	7.613	OK
FEH: 200 years: +45 %: 600 mins: Winter	196.883	195.225	195.240	0.015	0.6	0.004	0.000	0.6	8.549	OK
FEH: 200 years: +45 %: 720 mins: Summer	196.883	195.225	195.242	0.017	0.7	0.005	0.000	0.7	7.895	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


FEH: 200 years: +45 %: 720 mins: Winter	196.8 83	195.2 25	195.23 9	0.014	0.5	0.004	0.000	0.5	8.831	OK
FEH: 200 years: +45 %: 960 mins: Summer	196.8 83	195.2 25	195.24 0	0.015	0.6	0.004	0.000	0.6	8.423	OK
FEH: 200 years: +45 %: 960 mins: Winter	196.8 83	195.2 25	195.23 8	0.013	0.4	0.004	0.000	0.4	9.413	OK
FEH: 200 years: +45 %: 1440 mins: Summer	196.8 83	195.2 25	195.23 8	0.013	0.4	0.004	0.000	0.4	9.329	OK
FEH: 200 years: +45 %: 1440 mins: Winter	196.8 83	195.2 25	195.23 6	0.011	0.3	0.003	0.000	0.3	10.373	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB:		Date:	
Proposed Site for Battery Storage_RevB		24/11/2024	
1:200 Storm Event + 45% Climate Change_RevB		Designed by:	Checked by:
Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		M.H	S.L
Report Details:		Approved By:	
Type: Junctions Summary		S.L	
Storm Phase: Phase		Kemp House:	
		124 City Road	
		London	
		EC1V 2NX	



Summary Results for S-10: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FEH: 200 years: +45 %: 15 mins: Summer	196.000	194.365	194.477	0.112	57.6	0.032	0.000	57.2	25.162	OK
FEH: 200 years: +45 %: 15 mins: Winter	196.000	194.365	194.480	0.115	60.6	0.033	0.000	60.2	28.179	OK
FEH: 200 years: +45 %: 30 mins: Summer	196.000	194.365	194.456	0.091	40.0	0.026	0.000	40.0	34.626	OK
FEH: 200 years: +45 %: 30 mins: Winter	196.000	194.365	194.458	0.093	42.0	0.026	0.000	42.0	38.784	OK
FEH: 200 years: +45 %: 60 mins: Summer	196.000	194.365	194.450	0.085	35.7	0.024	0.000	35.7	44.545	OK
FEH: 200 years: +45 %: 60 mins: Winter	196.000	194.365	194.446	0.081	32.1	0.023	0.000	32.1	49.897	OK
FEH: 200 years: +45 %: 120 mins: Summer	196.000	194.365	194.434	0.069	24.0	0.020	0.000	24.0	50.655	OK
FEH: 200 years: +45 %: 120 mins: Winter	196.000	194.365	194.427	0.062	19.4	0.018	0.000	19.4	56.757	OK
FEH: 200 years: +45 %: 180 mins: Summer	196.000	194.365	194.425	0.060	18.2	0.017	0.000	18.2	54.405	OK
FEH: 200 years: +45 %: 180 mins: Winter	196.000	194.365	194.418	0.053	14.1	0.015	0.000	14.1	60.892	OK
FEH: 200 years: +45 %: 240 mins: Summer	196.000	194.365	194.419	0.054	14.8	0.015	0.000	14.8	57.166	OK
FEH: 200 years: +45 %: 240 mins: Winter	196.000	194.365	194.412	0.047	11.1	0.013	0.000	11.1	64.024	OK
FEH: 200 years: +45 %: 360 mins: Summer	196.000	194.365	194.411	0.046	10.9	0.013	0.000	10.9	61.444	OK
FEH: 200 years: +45 %: 360 mins: Winter	196.000	194.365	194.405	0.040	8.0	0.011	0.000	8.0	68.824	OK
FEH: 200 years: +45 %: 480 mins: Summer	196.000	194.365	194.407	0.042	8.8	0.012	0.000	8.8	64.816	OK
FEH: 200 years: +45 %: 480 mins: Winter	196.000	194.365	194.401	0.036	6.4	0.010	0.000	6.4	72.586	OK
FEH: 200 years: +45 %: 600 mins: Summer	196.000	194.365	194.403	0.038	7.4	0.011	0.000	7.4	67.714	OK
FEH: 200 years: +45 %: 600 mins: Winter	196.000	194.365	194.398	0.033	5.3	0.009	0.000	5.3	75.874	OK
FEH: 200 years: +45 %: 720 mins: Summer	196.000	194.365	194.401	0.036	6.4	0.010	0.000	6.4	70.294	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


FEH: 200 years: +45 %: 720 mins: Winter	196.0 00	194.3 65	194.39 5	0.030	4.6	0.009	0.000	4.6	78.719	OK
FEH: 200 years: +45 %: 960 mins: Summer	196.0 00	194.3 65	194.39 7	0.032	5.1	0.009	0.000	5.1	74.902	OK
FEH: 200 years: +45 %: 960 mins: Winter	196.0 00	194.3 65	194.39 2	0.027	3.7	0.008	0.000	3.7	83.891	OK
FEH: 200 years: +45 %: 1440 mins: Summer	196.0 00	194.3 65	194.39 3	0.028	3.8	0.008	0.000	3.8	82.841	OK
FEH: 200 years: +45 %: 1440 mins: Winter	196.0 00	194.3 65	194.38 9	0.024	2.7	0.007	0.000	2.7	92.723	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB:		Date:	
Proposed Site for Battery Storage_RevB		24/11/2024	
1:200 Storm Event + 45% Climate Change_RevB		Designed by:	Checked by:
Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		M.H	S.L
Report Details:		Approved By:	
Type: Junctions Summary		S.L	
Storm Phase: Phase		Kemp House:	
		124 City Road	
		London	
		EC1V 2NX	




Summary Results for S-11: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FEH: 200 years: +45 %: 15 mins: Summer	195.172	192.796	193.196	0.400	96.1	0.113	0.000	94.0	42.052	Surcharged
FEH: 200 years: +45 %: 15 mins: Winter	195.172	192.796	193.234	0.438	101.1	0.124	0.000	97.4	47.096	Surcharged
FEH: 200 years: +45 %: 30 mins: Summer	195.172	192.796	192.989	0.193	66.8	0.055	0.000	66.8	57.874	OK
FEH: 200 years: +45 %: 30 mins: Winter	195.172	192.796	193.000	0.204	70.2	0.058	0.000	70.2	64.817	OK
FEH: 200 years: +45 %: 60 mins: Summer	195.172	192.796	192.970	0.174	59.6	0.049	0.000	59.6	74.451	OK
FEH: 200 years: +45 %: 60 mins: Winter	195.172	192.796	192.956	0.160	53.7	0.045	0.000	53.7	83.392	OK
FEH: 200 years: +45 %: 120 mins: Summer	195.172	192.796	192.927	0.131	40.2	0.037	0.000	40.2	84.686	OK
FEH: 200 years: +45 %: 120 mins: Winter	195.172	192.796	192.909	0.113	32.4	0.032	0.000	32.4	94.870	OK
FEH: 200 years: +45 %: 180 mins: Summer	195.172	192.796	192.905	0.109	30.5	0.031	0.000	30.5	90.922	OK
FEH: 200 years: +45 %: 180 mins: Winter	195.172	192.796	192.889	0.093	23.5	0.026	0.000	23.5	101.808	OK
FEH: 200 years: +45 %: 240 mins: Summer	195.172	192.796	192.892	0.096	24.8	0.027	0.000	24.8	95.555	OK
FEH: 200 years: +45 %: 240 mins: Winter	195.172	192.796	192.877	0.081	18.6	0.023	0.000	18.6	107.029	OK
FEH: 200 years: +45 %: 360 mins: Summer	195.172	192.796	192.876	0.080	18.2	0.023	0.000	18.2	102.720	OK
FEH: 200 years: +45 %: 360 mins: Winter	195.172	192.796	192.863	0.067	13.4	0.019	0.000	13.4	115.028	OK
FEH: 200 years: +45 %: 480 mins: Summer	195.172	192.796	192.867	0.071	14.7	0.020	0.000	14.7	108.343	OK
FEH: 200 years: +45 %: 480 mins: Winter	195.172	192.796	192.855	0.059	10.7	0.017	0.000	10.7	121.329	OK
FEH: 200 years: +45 %: 600 mins: Summer	195.172	192.796	192.860	0.064	12.3	0.018	0.000	12.3	113.216	OK
FEH: 200 years: +45 %: 600 mins: Winter	195.172	192.796	192.850	0.054	8.9	0.015	0.000	8.9	126.813	OK
FEH: 200 years: +45 %: 720 mins: Summer	195.172	192.796	192.855	0.059	10.7	0.017	0.000	10.7	117.482	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024			
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L		
		Kemp House: 124 City Road London EC1V 2NX			


FEH: 200 years: +45 %: 720 mins: Winter	195.1 72	192.7 96	192.84 6	0.050	7.7	0.014	0.000	7.7	131.607	OK
FEH: 200 years: +45 %: 960 mins: Summer	195.1 72	192.7 96	192.84 9	0.053	8.5	0.015	0.000	8.5	125.174	OK
FEH: 200 years: +45 %: 960 mins: Winter	195.1 72	192.7 96	192.84 0	0.044	6.1	0.013	0.000	6.1	140.230	OK
FEH: 200 years: +45 %: 1440 mins: Summer	195.1 72	192.7 96	192.84 1	0.045	6.3	0.013	0.000	6.3	138.465	OK
FEH: 200 years: +45 %: 1440 mins: Winter	195.1 72	192.7 96	192.83 4	0.038	4.5	0.011	0.000	4.5	154.996	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB:		Date:		
Proposed Site for Battery Storage_RevB		24/11/2024		
1:200 Storm Event + 45% Climate Change_RevB		Designed by:	Checked by:	
Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		M.H	S.L	S.L
Report Details:		Kemp House:		
Type: Junctions Summary		124 City Road		
Storm Phase: Phase		London		
		EC1V 2NX		




Summary Results for S-12: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FEH: 200 years: +45 %: 15 mins: Summer	195.172	192.422	192.837	0.415	540.0	0.733	0.000	524.4	273.546	OK
FEH: 200 years: +45 %: 15 mins: Winter	195.172	192.422	192.891	0.469	568.9	0.829	0.000	527.8	306.373	Surcharged
FEH: 200 years: +45 %: 30 mins: Summer	195.172	192.422	192.758	0.336	433.2	0.595	0.000	433.0	376.302	OK
FEH: 200 years: +45 %: 30 mins: Winter	195.172	192.422	192.772	0.350	454.9	0.619	0.000	454.8	421.501	OK
FEH: 200 years: +45 %: 60 mins: Summer	195.172	192.422	192.731	0.309	387.6	0.546	0.000	387.6	484.184	OK
FEH: 200 years: +45 %: 60 mins: Winter	195.172	192.422	192.709	0.287	349.0	0.507	0.000	349.0	542.317	OK
FEH: 200 years: +45 %: 120 mins: Summer	195.172	192.422	192.660	0.238	261.4	0.420	0.000	261.4	550.792	OK
FEH: 200 years: +45 %: 120 mins: Winter	195.172	192.422	192.631	0.209	210.7	0.369	0.000	210.7	616.915	OK
FEH: 200 years: +45 %: 180 mins: Summer	195.172	192.422	192.623	0.201	198.1	0.356	0.000	198.1	591.180	OK
FEH: 200 years: +45 %: 180 mins: Winter	195.172	192.422	192.596	0.174	152.9	0.307	0.000	152.9	662.180	OK
FEH: 200 years: +45 %: 240 mins: Summer	195.172	192.422	192.601	0.179	161.0	0.316	0.000	161.0	621.334	OK
FEH: 200 years: +45 %: 240 mins: Winter	195.172	192.422	192.575	0.153	121.3	0.270	0.000	121.3	695.952	OK
FEH: 200 years: +45 %: 360 mins: Summer	195.172	192.422	192.573	0.151	118.3	0.266	0.000	118.3	667.858	OK
FEH: 200 years: +45 %: 360 mins: Winter	195.172	192.422	192.550	0.128	87.3	0.226	0.000	87.3	747.977	OK
FEH: 200 years: +45 %: 480 mins: Summer	195.172	192.422	192.556	0.134	95.6	0.238	0.000	95.6	704.663	OK
FEH: 200 years: +45 %: 480 mins: Winter	195.172	192.422	192.536	0.114	69.3	0.201	0.000	69.3	789.189	OK
FEH: 200 years: +45 %: 600 mins: Summer	195.172	192.422	192.544	0.122	80.2	0.216	0.000	80.2	736.167	OK
FEH: 200 years: +45 %: 600 mins: Winter	195.172	192.422	192.525	0.103	57.9	0.183	0.000	57.9	824.490	OK
FEH: 200 years: +45 %: 720 mins: Summer	195.172	192.422	192.536	0.114	69.3	0.201	0.000	69.3	764.244	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


FEH: 200 years: +45 %: 720 mins: Winter	195.1 72	192.4 22	192.51 8	0.096	50.1	0.170	0.000	50.1	855.864	OK
FEH: 200 years: +45 %: 960 mins: Summer	195.1 72	192.4 22	192.52 3	0.101	55.4	0.179	0.000	55.4	814.132	OK
FEH: 200 years: +45 %: 960 mins: Winter	195.1 72	192.4 22	192.50 8	0.086	40.0	0.152	0.000	40.0	911.975	OK
FEH: 200 years: +45 %: 1440 mins: Summer	195.1 72	192.4 22	192.50 9	0.087	40.8	0.153	0.000	40.9	900.387	OK
FEH: 200 years: +45 %: 1440 mins: Winter	195.1 72	192.4 22	192.49 6	0.074	29.5	0.130	0.000	29.5	1008.476	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		



Summary Results for S-13: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FEH: 200 years: +45 %: 15 mins: Summer	194.0 63	191.2 02	191.40 6	0.204	539.1	0.360	0.000	534.8	279.101	OK
FEH: 200 years: +45 %: 15 mins: Winter	194.0 63	191.2 02	191.40 8	0.206	543.2	0.364	0.000	544.6	312.710	OK
FEH: 200 years: +45 %: 30 mins: Summer	194.0 63	191.2 02	191.38 4	0.182	443.1	0.322	0.000	443.0	384.422	OK
FEH: 200 years: +45 %: 30 mins: Winter	194.0 63	191.2 02	191.38 9	0.187	465.4	0.331	0.000	465.4	430.715	OK
FEH: 200 years: +45 %: 60 mins: Summer	194.0 63	191.2 02	191.37 3	0.171	396.6	0.302	0.000	396.6	495.084	OK
FEH: 200 years: +45 %: 60 mins: Winter	194.0 63	191.2 02	191.36 3	0.161	357.1	0.284	0.000	357.1	554.561	OK
FEH: 200 years: +45 %: 120 mins: Summer	194.0 63	191.2 02	191.33 9	0.137	267.5	0.242	0.000	267.5	563.378	OK
FEH: 200 years: +45 %: 120 mins: Winter	194.0 63	191.2 02	191.32 4	0.122	215.6	0.215	0.000	215.6	631.031	OK
FEH: 200 years: +45 %: 180 mins: Summer	194.0 63	191.2 02	191.32 0	0.118	202.7	0.208	0.000	202.7	604.765	OK
FEH: 200 years: +45 %: 180 mins: Winter	194.0 63	191.2 02	191.30 4	0.102	156.5	0.181	0.000	156.5	677.406	OK
FEH: 200 years: +45 %: 240 mins: Summer	194.0 63	191.2 02	191.30 7	0.105	164.8	0.186	0.000	164.8	635.637	OK
FEH: 200 years: +45 %: 240 mins: Winter	194.0 63	191.2 02	191.29 3	0.091	124.1	0.160	0.000	124.1	711.987	OK
FEH: 200 years: +45 %: 360 mins: Summer	194.0 63	191.2 02	191.29 1	0.089	121.0	0.158	0.000	121.0	683.273	OK
FEH: 200 years: +45 %: 360 mins: Winter	194.0 63	191.2 02	191.27 8	0.076	89.3	0.135	0.000	89.3	765.265	OK
FEH: 200 years: +45 %: 480 mins: Summer	194.0 63	191.2 02	191.28 2	0.080	97.8	0.141	0.000	97.8	720.966	OK
FEH: 200 years: +45 %: 480 mins: Winter	194.0 63	191.2 02	191.27 0	0.068	70.9	0.120	0.000	70.9	807.446	OK
FEH: 200 years: +45 %: 600 mins: Summer	194.0 63	191.2 02	191.27 5	0.073	82.0	0.129	0.000	82.0	753.190	OK
FEH: 200 years: +45 %: 600 mins: Winter	194.0 63	191.2 02	191.26 4	0.062	59.3	0.109	0.000	59.3	843.584	OK
FEH: 200 years: +45 %: 720 mins: Summer	194.0 63	191.2 02	191.27 0	0.068	70.9	0.120	0.000	70.9	781.924	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


FEH: 200 years: +45 %: 720 mins: Winter	194.0 63	191.2 02	191.26 0	0.058	51.3	0.102	0.000	51.3	875.718	OK
FEH: 200 years: +45 %: 960 mins: Summer	194.0 63	191.2 02	191.26 3	0.061	56.7	0.107	0.000	56.7	832.997	OK
FEH: 200 years: +45 %: 960 mins: Winter	194.0 63	191.2 02	191.25 3	0.051	41.0	0.091	0.000	40.9	933.084	OK
FEH: 200 years: +45 %: 1440 mins: Summer	194.0 63	191.2 02	191.25 4	0.052	41.8	0.092	0.000	41.8	921.267	OK
FEH: 200 years: +45 %: 1440 mins: Winter	194.0 63	191.2 02	191.24 6	0.044	30.2	0.078	0.000	30.2	1031.869	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB:		Date:	
Proposed Site for Battery Storage_RevB		24/11/2024	
1:200 Storm Event + 45% Climate Change_RevB		Designed by:	Checked by:
Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		M.H	S.L
Report Details:		Approved By:	
Type: Junctions Summary		S.L	
Storm Phase: Phase		Kemp House:	
		124 City Road	
		London	
		EC1V 2NX	




Summary Results for S-14: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FEH: 200 years: +45 %: 15 mins: Summer	195.214	193.714	194.919	1.205	48.1	0.341	0.000	39.3	20.862	Flood Risk
FEH: 200 years: +45 %: 15 mins: Winter	195.214	193.714	195.101	1.387	50.6	0.392	0.000	38.4	23.395	Flood Risk
FEH: 200 years: +45 %: 30 mins: Summer	195.214	193.714	194.282	0.568	33.2	0.161	0.000	33.1	28.721	Surcharged
FEH: 200 years: +45 %: 30 mins: Winter	195.214	193.714	194.457	0.743	34.9	0.210	0.000	34.8	32.179	Surcharged
FEH: 200 years: +45 %: 60 mins: Summer	195.214	193.714	193.923	0.209	29.6	0.059	0.000	29.5	36.964	OK
FEH: 200 years: +45 %: 60 mins: Winter	195.214	193.714	193.805	0.091	26.7	0.026	0.000	26.7	41.409	OK
FEH: 200 years: +45 %: 120 mins: Summer	195.214	193.714	193.791	0.077	20.0	0.022	0.000	20.0	42.073	OK
FEH: 200 years: +45 %: 120 mins: Winter	195.214	193.714	193.783	0.069	16.1	0.020	0.000	16.1	47.119	OK
FEH: 200 years: +45 %: 180 mins: Summer	195.214	193.714	193.781	0.067	15.1	0.019	0.000	15.1	45.151	OK
FEH: 200 years: +45 %: 180 mins: Winter	195.214	193.714	193.773	0.059	11.7	0.017	0.000	11.7	50.575	OK
FEH: 200 years: +45 %: 240 mins: Summer	195.214	193.714	193.775	0.061	12.3	0.017	0.000	12.3	47.461	OK
FEH: 200 years: +45 %: 240 mins: Winter	195.214	193.714	193.767	0.053	9.3	0.015	0.000	9.3	53.155	OK
FEH: 200 years: +45 %: 360 mins: Summer	195.214	193.714	193.766	0.052	9.0	0.015	0.000	9.0	51.019	OK
FEH: 200 years: +45 %: 360 mins: Winter	195.214	193.714	193.759	0.045	6.7	0.013	0.000	6.7	57.133	OK
FEH: 200 years: +45 %: 480 mins: Summer	195.214	193.714	193.761	0.047	7.3	0.013	0.000	7.3	53.833	OK
FEH: 200 years: +45 %: 480 mins: Winter	195.214	193.714	193.754	0.040	5.3	0.011	0.000	5.3	60.258	OK
FEH: 200 years: +45 %: 600 mins: Summer	195.214	193.714	193.757	0.043	6.1	0.012	0.000	6.1	56.209	OK
FEH: 200 years: +45 %: 600 mins: Winter	195.214	193.714	193.751	0.037	4.4	0.010	0.000	4.4	62.976	OK
FEH: 200 years: +45 %: 720 mins: Summer	195.214	193.714	193.754	0.040	5.3	0.011	0.000	5.3	58.357	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024				
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L			Approved By: S.L
		Kemp House: 124 City Road London EC1V 2NX				


FEH: 200 years: +45 %: 720 mins: Winter	195.2 14	193.7 14	193.74 8	0.034	3.8	0.010	0.000	3.8	65.352	OK
FEH: 200 years: +45 %: 960 mins: Summer	195.2 14	193.7 14	193.75 0	0.036	4.2	0.010	0.000	4.2	62.203	OK
FEH: 200 years: +45 %: 960 mins: Winter	195.2 14	193.7 14	193.74 5	0.031	3.1	0.009	0.000	3.1	69.678	OK
FEH: 200 years: +45 %: 1440 mins: Summer	195.2 14	193.7 14	193.74 5	0.031	3.1	0.009	0.000	3.1	68.755	OK
FEH: 200 years: +45 %: 1440 mins: Winter	195.2 14	193.7 14	193.74 0	0.026	2.3	0.007	0.000	2.3	77.028	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB:		Date:		
Proposed Site for Battery Storage_RevB		24/11/2024		
1:200 Storm Event + 45% Climate Change_RevB		Designed by:	Checked by:	
Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		M.H	S.L	S.L
Report Details:		Kemp House:		
Type: Junctions Summary		124 City Road		
Storm Phase: Phase		London		
		EC1V 2NX		




Summary Results for S-15: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FEH: 200 years: +45 %: 15 mins: Summer	196.0 11	194.5 11	194.88 1	0.370	48.1	0.105	0.000	32.6	20.872	Surcharged
FEH: 200 years: +45 %: 15 mins: Winter	196.0 11	194.5 11	195.12 4	0.613	50.6	0.173	0.000	37.9	23.381	Surcharged
FEH: 200 years: +45 %: 30 mins: Summer	196.0 11	194.5 11	194.59 7	0.086	33.2	0.024	0.000	33.2	28.730	OK
FEH: 200 years: +45 %: 30 mins: Winter	196.0 11	194.5 11	194.59 9	0.088	34.9	0.025	0.000	34.9	32.182	OK
FEH: 200 years: +45 %: 60 mins: Summer	196.0 11	194.5 11	194.59 1	0.080	29.6	0.023	0.000	29.6	36.976	OK
FEH: 200 years: +45 %: 60 mins: Winter	196.0 11	194.5 11	194.58 7	0.076	26.7	0.021	0.000	26.7	41.425	OK
FEH: 200 years: +45 %: 120 mins: Summer	196.0 11	194.5 11	194.57 6	0.065	20.0	0.018	0.000	20.0	42.080	OK
FEH: 200 years: +45 %: 120 mins: Winter	196.0 11	194.5 11	194.57 0	0.059	16.1	0.017	0.000	16.1	47.132	OK
FEH: 200 years: +45 %: 180 mins: Summer	196.0 11	194.5 11	194.56 8	0.057	15.1	0.016	0.000	15.1	45.164	OK
FEH: 200 years: +45 %: 180 mins: Winter	196.0 11	194.5 11	194.56 1	0.050	11.7	0.014	0.000	11.7	50.587	OK
FEH: 200 years: +45 %: 240 mins: Summer	196.0 11	194.5 11	194.56 3	0.052	12.3	0.015	0.000	12.3	47.474	OK
FEH: 200 years: +45 %: 240 mins: Winter	196.0 11	194.5 11	194.55 6	0.045	9.3	0.013	0.000	9.3	53.167	OK
FEH: 200 years: +45 %: 360 mins: Summer	196.0 11	194.5 11	194.55 5	0.044	9.0	0.013	0.000	9.0	51.031	OK
FEH: 200 years: +45 %: 360 mins: Winter	196.0 11	194.5 11	194.54 9	0.038	6.7	0.011	0.000	6.7	57.145	OK
FEH: 200 years: +45 %: 480 mins: Summer	196.0 11	194.5 11	194.55 1	0.040	7.3	0.011	0.000	7.3	53.839	OK
FEH: 200 years: +45 %: 480 mins: Winter	196.0 11	194.5 11	194.54 5	0.034	5.3	0.010	0.000	5.3	60.276	OK
FEH: 200 years: +45 %: 600 mins: Summer	196.0 11	194.5 11	194.54 8	0.037	6.1	0.010	0.000	6.1	56.221	OK
FEH: 200 years: +45 %: 600 mins: Winter	196.0 11	194.5 11	194.54 2	0.031	4.4	0.009	0.000	4.4	62.988	OK
FEH: 200 years: +45 %: 720 mins: Summer	196.0 11	194.5 11	194.54 5	0.034	5.3	0.010	0.000	5.3	58.363	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


FEH: 200 years: +45 %: 720 mins: Winter	196.0 11	194.5 11	194.54 0	0.029	3.8	0.008	0.000	3.8	65.358	OK
FEH: 200 years: +45 %: 960 mins: Summer	196.0 11	194.5 11	194.54 2	0.031	4.2	0.009	0.000	4.2	62.215	OK
FEH: 200 years: +45 %: 960 mins: Winter	196.0 11	194.5 11	194.53 7	0.026	3.1	0.007	0.000	3.1	69.690	OK
FEH: 200 years: +45 %: 1440 mins: Summer	196.0 11	194.5 11	194.53 8	0.027	3.1	0.008	0.000	3.1	68.773	OK
FEH: 200 years: +45 %: 1440 mins: Winter	196.0 11	194.5 11	194.53 4	0.023	2.3	0.006	0.000	2.3	77.046	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB:		Date:		
Proposed Site for Battery Storage_RevB		24/11/2024		
1:200 Storm Event + 45% Climate Change_RevB		Designed by:	Checked by:	
Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		M.H	S.L	S.L
Report Details:		Kemp House:		
Type: Junctions Summary		124 City Road		
Storm Phase: Phase		London		
		EC1V 2NX		



Summary Results for S-16: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FEH: 200 years: +45 %: 15 mins: Summer	195.613	192.816	194.683	1.867	161.4	2.112	0.000	149.8	80.720	Surcharged
FEH: 200 years: +45 %: 15 mins: Winter	195.613	192.816	194.891	2.075	170.4	2.347	0.000	157.4	90.421	Surcharged
FEH: 200 years: +45 %: 30 mins: Summer	195.613	192.816	194.107	1.291	128.1	1.461	0.000	128.0	111.003	Surcharged
FEH: 200 years: +45 %: 30 mins: Winter	195.613	192.816	194.269	1.453	134.6	1.643	0.000	134.6	124.330	Surcharged
FEH: 200 years: +45 %: 60 mins: Summer	195.613	192.816	193.782	0.966	114.2	1.093	0.000	114.1	142.815	Surcharged
FEH: 200 years: +45 %: 60 mins: Winter	195.613	192.816	193.540	0.724	102.9	0.819	0.000	102.9	159.948	Surcharged
FEH: 200 years: +45 %: 120 mins: Summer	195.613	192.816	193.010	0.194	77.1	0.220	0.000	77.1	162.433	OK
FEH: 200 years: +45 %: 120 mins: Winter	195.613	192.816	192.974	0.158	62.1	0.179	0.000	62.1	181.939	OK
FEH: 200 years: +45 %: 180 mins: Summer	195.613	192.816	192.967	0.151	58.4	0.171	0.000	58.4	174.337	OK
FEH: 200 years: +45 %: 180 mins: Winter	195.613	192.816	192.942	0.126	45.1	0.143	0.000	45.1	195.282	OK
FEH: 200 years: +45 %: 240 mins: Summer	195.613	192.816	192.946	0.130	47.5	0.147	0.000	47.5	183.243	OK
FEH: 200 years: +45 %: 240 mins: Winter	195.613	192.816	192.925	0.109	35.8	0.123	0.000	35.8	205.263	OK
FEH: 200 years: +45 %: 360 mins: Summer	195.613	192.816	192.923	0.107	34.9	0.121	0.000	34.9	196.974	OK
FEH: 200 years: +45 %: 360 mins: Winter	195.613	192.816	192.906	0.090	25.7	0.102	0.000	25.7	220.619	OK
FEH: 200 years: +45 %: 480 mins: Summer	195.613	192.816	192.911	0.095	28.2	0.107	0.000	28.2	207.818	OK
FEH: 200 years: +45 %: 480 mins: Winter	195.613	192.816	192.895	0.079	20.4	0.089	0.000	20.4	232.710	OK
FEH: 200 years: +45 %: 600 mins: Summer	195.613	192.816	192.902	0.086	23.6	0.097	0.000	23.6	217.077	OK
FEH: 200 years: +45 %: 600 mins: Winter	195.613	192.816	192.887	0.071	17.1	0.081	0.000	17.1	243.163	OK
FEH: 200 years: +45 %: 720 mins: Summer	195.613	192.816	192.895	0.079	20.5	0.089	0.000	20.5	225.376	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024				
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L			Approved By: S.L
		Kemp House: 124 City Road London EC1V 2NX				


FEH: 200 years: +45 %: 720 mins: Winter	195.6 13	192.8 16	192.88 2	0.066	14.8	0.075	0.000	14.8	252.392	OK
FEH: 200 years: +45 %: 960 mins: Summer	195.6 13	192.8 16	192.88 6	0.070	16.3	0.079	0.000	16.3	240.107	OK
FEH: 200 years: +45 %: 960 mins: Winter	195.6 13	192.8 16	192.87 5	0.059	11.8	0.066	0.000	11.8	269.036	OK
FEH: 200 years: +45 %: 1440 mins: Summer	195.6 13	192.8 16	192.87 5	0.059	12.1	0.067	0.000	12.1	265.518	OK
FEH: 200 years: +45 %: 1440 mins: Winter	195.6 13	192.8 16	192.86 6	0.050	8.7	0.057	0.000	8.7	297.411	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB:		Date:	
Proposed Site for Battery Storage_RevB		24/11/2024	
1:200 Storm Event + 45% Climate Change_RevB		Designed by:	Checked by:
Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		M.H	S.L
Report Details:		Approved By:	
Type: Junctions Summary		S.L	
Storm Phase: Phase		Kemp House:	
		124 City Road	
		London	
		EC1V 2NX	




Summary Results for S-17: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FEH: 200 years: +45 %: 15 mins: Summer	194.422	192.922	193.031	0.109	34.2	0.123	0.000	33.2	14.757	OK
FEH: 200 years: +45 %: 15 mins: Winter	194.422	192.922	193.034	0.112	35.9	0.127	0.000	35.0	16.547	OK
FEH: 200 years: +45 %: 30 mins: Summer	194.422	192.922	193.012	0.090	23.6	0.101	0.000	23.6	20.353	OK
FEH: 200 years: +45 %: 30 mins: Winter	194.422	192.922	193.014	0.092	24.8	0.104	0.000	24.8	22.809	OK
FEH: 200 years: +45 %: 60 mins: Summer	194.422	192.922	193.006	0.084	21.0	0.095	0.000	21.0	26.218	OK
FEH: 200 years: +45 %: 60 mins: Winter	194.422	192.922	193.002	0.080	18.9	0.090	0.000	18.9	29.386	OK
FEH: 200 years: +45 %: 120 mins: Summer	194.422	192.922	192.991	0.069	14.2	0.078	0.000	14.2	29.868	OK
FEH: 200 years: +45 %: 120 mins: Winter	194.422	192.922	192.984	0.062	11.4	0.070	0.000	11.4	33.459	OK
FEH: 200 years: +45 %: 180 mins: Summer	194.422	192.922	192.982	0.060	10.8	0.068	0.000	10.7	32.067	OK
FEH: 200 years: +45 %: 180 mins: Winter	194.422	192.922	192.975	0.053	8.3	0.060	0.000	8.3	35.919	OK
FEH: 200 years: +45 %: 240 mins: Summer	194.422	192.922	192.976	0.054	8.7	0.061	0.000	8.7	33.705	OK
FEH: 200 years: +45 %: 240 mins: Winter	194.422	192.922	192.969	0.047	6.6	0.053	0.000	6.6	37.750	OK
FEH: 200 years: +45 %: 360 mins: Summer	194.422	192.922	192.968	0.046	6.4	0.052	0.000	6.4	36.225	OK
FEH: 200 years: +45 %: 360 mins: Winter	194.422	192.922	192.962	0.040	4.7	0.045	0.000	4.7	40.582	OK
FEH: 200 years: +45 %: 480 mins: Summer	194.422	192.922	192.964	0.042	5.2	0.047	0.000	5.2	38.224	OK
FEH: 200 years: +45 %: 480 mins: Winter	194.422	192.922	192.957	0.035	3.8	0.040	0.000	3.8	42.790	OK
FEH: 200 years: +45 %: 600 mins: Summer	194.422	192.922	192.960	0.038	4.3	0.043	0.000	4.3	39.934	OK
FEH: 200 years: +45 %: 600 mins: Winter	194.422	192.922	192.955	0.033	3.1	0.037	0.000	3.1	44.687	OK
FEH: 200 years: +45 %: 720 mins: Summer	194.422	192.922	192.957	0.035	3.8	0.040	0.000	3.8	41.470	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024				
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L			Approved By: S.L
		Kemp House: 124 City Road London EC1V 2NX				


FEH: 200 years: +45 %: 720 mins: Winter	194.4 22	192.9 22	192.95 2	0.030	2.7	0.034	0.000	2.7	46.457	OK
FEH: 200 years: +45 %: 960 mins: Summer	194.4 22	192.9 22	192.95 4	0.032	3.0	0.036	0.000	3.0	44.176	OK
FEH: 200 years: +45 %: 960 mins: Winter	194.4 22	192.9 22	192.94 9	0.027	2.2	0.031	0.000	2.2	49.463	OK
FEH: 200 years: +45 %: 1440 mins: Summer	194.4 22	192.9 22	192.95 0	0.028	2.2	0.031	0.000	2.2	48.820	OK
FEH: 200 years: +45 %: 1440 mins: Winter	194.4 22	192.9 22	192.94 6	0.024	1.6	0.027	0.000	1.6	54.701	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB:		Date:		
Proposed Site for Battery Storage_RevB		24/11/2024		
1:200 Storm Event + 45% Climate Change_RevB		Designed by:	Checked by:	
Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		M.H	S.L	S.L
Report Details:		Kemp House:		
Type: Junctions Summary		124 City Road		
Storm Phase: Phase		London		
		EC1V 2NX		




Summary Results for S-18: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FEH: 200 years: +45 %: 15 mins: Summer	194.824	193.324	193.421	0.097	34.4	0.110	0.000	33.6	14.902	OK
FEH: 200 years: +45 %: 15 mins: Winter	194.824	193.324	193.424	0.100	36.2	0.113	0.000	35.4	16.709	OK
FEH: 200 years: +45 %: 30 mins: Summer	194.824	193.324	193.404	0.080	23.8	0.091	0.000	23.8	20.539	OK
FEH: 200 years: +45 %: 30 mins: Winter	194.824	193.324	193.406	0.082	25.0	0.093	0.000	25.0	23.014	OK
FEH: 200 years: +45 %: 60 mins: Summer	194.824	193.324	193.399	0.075	21.2	0.085	0.000	21.2	26.450	OK
FEH: 200 years: +45 %: 60 mins: Winter	194.824	193.324	193.395	0.071	19.1	0.081	0.000	19.1	29.645	OK
FEH: 200 years: +45 %: 120 mins: Summer	194.824	193.324	193.385	0.061	14.3	0.069	0.000	14.3	30.127	OK
FEH: 200 years: +45 %: 120 mins: Winter	194.824	193.324	193.380	0.056	11.5	0.063	0.000	11.5	33.735	OK
FEH: 200 years: +45 %: 180 mins: Summer	194.824	193.324	193.378	0.054	10.8	0.061	0.000	10.8	32.313	OK
FEH: 200 years: +45 %: 180 mins: Winter	194.824	193.324	193.371	0.047	8.4	0.054	0.000	8.4	36.202	OK
FEH: 200 years: +45 %: 240 mins: Summer	194.824	193.324	193.373	0.049	8.8	0.055	0.000	8.8	33.975	OK
FEH: 200 years: +45 %: 240 mins: Winter	194.824	193.324	193.366	0.042	6.6	0.048	0.000	6.6	38.062	OK
FEH: 200 years: +45 %: 360 mins: Summer	194.824	193.324	193.366	0.042	6.5	0.047	0.000	6.5	36.520	OK
FEH: 200 years: +45 %: 360 mins: Winter	194.824	193.324	193.360	0.036	4.8	0.040	0.000	4.8	40.882	OK
FEH: 200 years: +45 %: 480 mins: Summer	194.824	193.324	193.361	0.037	5.2	0.042	0.000	5.2	38.542	OK
FEH: 200 years: +45 %: 480 mins: Winter	194.824	193.324	193.356	0.032	3.8	0.036	0.000	3.8	43.178	OK
FEH: 200 years: +45 %: 600 mins: Summer	194.824	193.324	193.358	0.034	4.4	0.039	0.000	4.4	40.258	OK
FEH: 200 years: +45 %: 600 mins: Winter	194.824	193.324	193.353	0.029	3.2	0.033	0.000	3.2	45.089	OK
FEH: 200 years: +45 %: 720 mins: Summer	194.824	193.324	193.356	0.032	3.8	0.036	0.000	3.8	41.824	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024				
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L			Approved By: S.L
		Kemp House: 124 City Road London EC1V 2NX				


FEH: 200 years: +45 %: 720 mins: Winter	194.8 24	193.3 24	193.35 1	0.027	2.7	0.031	0.000	2.7	46.811	OK
FEH: 200 years: +45 %: 960 mins: Summer	194.8 24	193.3 24	193.35 3	0.029	3.0	0.032	0.000	3.0	44.530	OK
FEH: 200 years: +45 %: 960 mins: Winter	194.8 24	193.3 24	193.34 9	0.025	2.2	0.028	0.000	2.2	49.883	OK
FEH: 200 years: +45 %: 1440 mins: Summer	194.8 24	193.3 24	193.34 9	0.025	2.2	0.028	0.000	2.2	49.265	OK
FEH: 200 years: +45 %: 1440 mins: Winter	194.8 24	193.3 24	193.34 5	0.021	1.6	0.024	0.000	1.6	55.073	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB:		Date:		
Proposed Site for Battery Storage_RevB		24/11/2024		
1:200 Storm Event + 45% Climate Change_RevB		Designed by:	Checked by:	
Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		M.H	S.L	S.L
Report Details:		Kemp House:		
Type: Junctions Summary		124 City Road		
Storm Phase: Phase		London		
		EC1V 2NX		




Summary Results for S-19: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FEH: 200 years: +45 %: 15 mins: Summer	194.824	192.090	192.342	0.252	279.9	0.446	0.000	272.9	138.066	OK
FEH: 200 years: +45 %: 15 mins: Winter	194.824	192.090	192.357	0.267	294.3	0.472	0.000	285.1	154.658	OK
FEH: 200 years: +45 %: 30 mins: Summer	194.824	192.090	192.296	0.206	219.1	0.364	0.000	219.0	189.773	OK
FEH: 200 years: +45 %: 30 mins: Winter	194.824	192.090	192.305	0.215	230.3	0.379	0.000	230.2	212.604	OK
FEH: 200 years: +45 %: 60 mins: Summer	194.824	192.090	192.279	0.189	195.3	0.334	0.000	195.3	244.159	OK
FEH: 200 years: +45 %: 60 mins: Winter	194.824	192.090	192.265	0.175	176.0	0.310	0.000	176.0	273.509	OK
FEH: 200 years: +45 %: 120 mins: Summer	194.824	192.090	192.235	0.145	131.9	0.256	0.000	131.9	277.806	OK
FEH: 200 years: +45 %: 120 mins: Winter	194.824	192.090	192.217	0.127	106.3	0.224	0.000	106.3	311.151	OK
FEH: 200 years: +45 %: 180 mins: Summer	194.824	192.090	192.212	0.122	99.9	0.216	0.000	99.9	298.160	OK
FEH: 200 years: +45 %: 180 mins: Winter	194.824	192.090	192.195	0.105	77.1	0.185	0.000	77.1	333.983	OK
FEH: 200 years: +45 %: 240 mins: Summer	194.824	192.090	192.198	0.108	81.2	0.191	0.000	81.2	313.386	OK
FEH: 200 years: +45 %: 240 mins: Winter	194.824	192.090	192.182	0.092	61.2	0.163	0.000	61.2	351.051	OK
FEH: 200 years: +45 %: 360 mins: Summer	194.824	192.090	192.181	0.091	59.6	0.160	0.000	59.7	336.875	OK
FEH: 200 years: +45 %: 360 mins: Winter	194.824	192.090	192.167	0.077	44.0	0.136	0.000	44.0	377.287	OK
FEH: 200 years: +45 %: 480 mins: Summer	194.824	192.090	192.171	0.081	48.2	0.143	0.000	48.2	355.429	OK
FEH: 200 years: +45 %: 480 mins: Winter	194.824	192.090	192.158	0.068	34.9	0.120	0.000	34.9	398.027	OK
FEH: 200 years: +45 %: 600 mins: Summer	194.824	192.090	192.163	0.073	40.4	0.130	0.000	40.4	371.283	OK
FEH: 200 years: +45 %: 600 mins: Winter	194.824	192.090	192.152	0.062	29.2	0.109	0.000	29.2	415.822	OK
FEH: 200 years: +45 %: 720 mins: Summer	194.824	192.090	192.158	0.068	35.0	0.120	0.000	35.0	385.504	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024				
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L			Approved By: S.L
		Kemp House: 124 City Road London EC1V 2NX				


FEH: 200 years: +45 %: 720 mins: Winter	194.8 24	192.0 90	192.14 7	0.057	25.3	0.101	0.000	25.3	431.717	OK
FEH: 200 years: +45 %: 960 mins: Summer	194.8 24	192.0 90	192.15 0	0.060	27.9	0.107	0.000	28.0	410.664	OK
FEH: 200 years: +45 %: 960 mins: Winter	194.8 24	192.0 90	192.14 1	0.051	20.2	0.090	0.000	20.2	460.043	OK
FEH: 200 years: +45 %: 1440 mins: Summer	194.8 24	192.0 90	192.14 2	0.052	20.6	0.091	0.000	20.6	454.154	OK
FEH: 200 years: +45 %: 1440 mins: Winter	194.8 24	192.0 90	192.13 4	0.044	14.9	0.077	0.000	14.9	508.536	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB:		Date:		
Proposed Site for Battery Storage_RevB		24/11/2024		
1:200 Storm Event + 45% Climate Change_RevB		Designed by:	Checked by:	
Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		M.H	S.L	S.L
Report Details:		Kemp House:		
Type: Junctions Summary		124 City Road		
Storm Phase: Phase		London		
		EC1V 2NX		




Summary Results for S-20: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FEH: 200 years: +45 %: 15 mins: Summer	194.458	190.882	191.082	0.200	369.0	0.353	0.000	367.0	179.531	OK
FEH: 200 years: +45 %: 15 mins: Winter	194.458	190.882	191.089	0.207	386.2	0.365	0.000	384.1	201.151	OK
FEH: 200 years: +45 %: 30 mins: Summer	194.458	190.882	191.049	0.167	285.4	0.296	0.000	285.4	247.030	OK
FEH: 200 years: +45 %: 30 mins: Winter	194.458	190.882	191.055	0.173	300.0	0.306	0.000	300.0	276.774	OK
FEH: 200 years: +45 %: 60 mins: Summer	194.458	190.882	191.037	0.155	254.5	0.275	0.000	254.5	318.003	OK
FEH: 200 years: +45 %: 60 mins: Winter	194.458	190.882	191.028	0.146	229.4	0.257	0.000	229.4	356.210	OK
FEH: 200 years: +45 %: 120 mins: Summer	194.458	190.882	191.004	0.122	171.8	0.216	0.000	171.8	361.868	OK
FEH: 200 years: +45 %: 120 mins: Winter	194.458	190.882	190.990	0.108	138.4	0.191	0.000	138.4	405.303	OK
FEH: 200 years: +45 %: 180 mins: Summer	194.458	190.882	190.986	0.104	130.2	0.184	0.000	130.2	388.407	OK
FEH: 200 years: +45 %: 180 mins: Winter	194.458	190.882	190.972	0.090	100.5	0.160	0.000	100.5	435.067	OK
FEH: 200 years: +45 %: 240 mins: Summer	194.458	190.882	190.975	0.093	105.8	0.164	0.000	105.8	408.244	OK
FEH: 200 years: +45 %: 240 mins: Winter	194.458	190.882	190.962	0.080	79.7	0.141	0.000	79.7	457.305	OK
FEH: 200 years: +45 %: 360 mins: Summer	194.458	190.882	190.961	0.079	77.7	0.139	0.000	77.7	438.827	OK
FEH: 200 years: +45 %: 360 mins: Winter	194.458	190.882	190.949	0.067	57.3	0.118	0.000	57.3	491.506	OK
FEH: 200 years: +45 %: 480 mins: Summer	194.458	190.882	190.952	0.070	62.8	0.124	0.000	62.8	463.019	OK
FEH: 200 years: +45 %: 480 mins: Winter	194.458	190.882	190.941	0.059	45.5	0.105	0.000	45.5	518.509	OK
FEH: 200 years: +45 %: 600 mins: Summer	194.458	190.882	190.946	0.064	52.7	0.113	0.000	52.7	483.692	OK
FEH: 200 years: +45 %: 600 mins: Winter	194.458	190.882	190.936	0.054	38.0	0.095	0.000	38.0	541.747	OK
FEH: 200 years: +45 %: 720 mins: Summer	194.458	190.882	190.941	0.059	45.6	0.105	0.000	45.6	502.192	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024				
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L			Approved By: S.L
		Kemp House: 124 City Road London EC1V 2NX				


FEH: 200 years: +45 %: 720 mins: Winter	194.4 58	190.8 82	190.93 2	0.050	32.9	0.088	0.000	32.9	562.448	OK
FEH: 200 years: +45 %: 960 mins: Summer	194.4 58	190.8 82	190.93 5	0.053	36.4	0.093	0.000	36.4	534.994	OK
FEH: 200 years: +45 %: 960 mins: Winter	194.4 58	190.8 82	190.92 7	0.045	26.3	0.079	0.000	26.3	599.301	OK
FEH: 200 years: +45 %: 1440 mins: Summer	194.4 58	190.8 82	190.92 7	0.045	26.9	0.080	0.000	26.8	591.627	OK
FEH: 200 years: +45 %: 1440 mins: Winter	194.4 58	190.8 82	190.92 0	0.038	19.4	0.068	0.000	19.4	662.521	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB:		Date:		
Proposed Site for Battery Storage_RevB		24/11/2024		
1:200 Storm Event + 45% Climate Change_RevB		Designed by:	Checked by:	
Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		M.H	S.L	S.L
Report Details:		Kemp House:		
Type: Junctions Summary		124 City Road		
Storm Phase: Phase		London		
		EC1V 2NX		




Summary Results for S-21: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FEH: 200 years: +45 %: 15 mins: Summer	199.311	197.811	197.974	0.163	83.5	0.185	0.000	81.3	36.106	OK
FEH: 200 years: +45 %: 15 mins: Winter	199.311	197.811	198.037	0.226	87.8	0.255	0.000	50.1	40.470	OK
FEH: 200 years: +45 %: 30 mins: Summer	199.311	197.811	197.943	0.132	57.6	0.149	0.000	57.8	49.918	OK
FEH: 200 years: +45 %: 30 mins: Winter	199.311	197.811	197.947	0.136	60.6	0.154	0.000	60.6	55.848	OK
FEH: 200 years: +45 %: 60 mins: Summer	199.311	197.811	197.935	0.124	51.4	0.140	0.000	51.4	64.229	OK
FEH: 200 years: +45 %: 60 mins: Winter	199.311	197.811	197.928	0.117	46.3	0.132	0.000	46.3	71.933	OK
FEH: 200 years: +45 %: 120 mins: Summer	199.311	197.811	197.911	0.100	34.7	0.113	0.000	34.7	73.056	OK
FEH: 200 years: +45 %: 120 mins: Winter	199.311	197.811	197.900	0.089	28.0	0.101	0.000	28.0	81.835	OK
FEH: 200 years: +45 %: 180 mins: Summer	199.311	197.811	197.898	0.087	26.3	0.098	0.000	26.3	78.415	OK
FEH: 200 years: +45 %: 180 mins: Winter	199.311	197.811	197.887	0.076	20.3	0.086	0.000	20.3	87.829	OK
FEH: 200 years: +45 %: 240 mins: Summer	199.311	197.811	197.889	0.078	21.4	0.088	0.000	21.4	82.411	OK
FEH: 200 years: +45 %: 240 mins: Winter	199.311	197.811	197.878	0.067	16.1	0.076	0.000	16.1	92.323	OK
FEH: 200 years: +45 %: 360 mins: Summer	199.311	197.811	197.878	0.067	15.7	0.075	0.000	15.7	88.597	OK
FEH: 200 years: +45 %: 360 mins: Winter	199.311	197.811	197.868	0.057	11.6	0.065	0.000	11.6	99.205	OK
FEH: 200 years: +45 %: 480 mins: Summer	199.311	197.811	197.871	0.060	12.7	0.068	0.000	12.7	93.451	OK
FEH: 200 years: +45 %: 480 mins: Winter	199.311	197.811	197.862	0.051	9.2	0.058	0.000	9.2	104.653	OK
FEH: 200 years: +45 %: 600 mins: Summer	199.311	197.811	197.866	0.055	10.6	0.062	0.000	10.6	97.636	OK
FEH: 200 years: +45 %: 600 mins: Winter	199.311	197.811	197.858	0.047	7.7	0.053	0.000	7.7	109.333	OK
FEH: 200 years: +45 %: 720 mins: Summer	199.311	197.811	197.862	0.051	9.2	0.058	0.000	9.2	101.371	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


FEH: 200 years: +45 %: 720 mins: Winter	199.3 11	197.8 11	197.85 5	0.044	6.7	0.049	0.000	6.7	113.527	OK
FEH: 200 years: +45 %: 960 mins: Summer	199.3 11	197.8 11	197.85 7	0.046	7.3	0.052	0.000	7.3	108.031	OK
FEH: 200 years: +45 %: 960 mins: Winter	199.3 11	197.8 11	197.85 0	0.039	5.3	0.044	0.000	5.3	120.960	OK
FEH: 200 years: +45 %: 1440 mins: Summer	199.3 11	197.8 11	197.85 1	0.040	5.4	0.045	0.000	5.4	119.443	OK
FEH: 200 years: +45 %: 1440 mins: Winter	199.3 11	197.8 11	197.84 5	0.034	3.9	0.038	0.000	3.9	133.776	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB:		Date:		
Proposed Site for Battery Storage_RevB		24/11/2024		
1:200 Storm Event + 45% Climate Change_RevB		Designed by:	Checked by:	
Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		M.H	S.L	S.L
Report Details:		Kemp House:		
Type: Junctions Summary		124 City Road		
Storm Phase: Phase		London		
		EC1V 2NX		



Summary Results for S-22: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FEH: 200 years: +45 %: 15 mins: Summer	198.752	196.850	197.544	0.694	160.4	0.785	0.000	105.5	70.575	Surcharged
FEH: 200 years: +45 %: 15 mins: Winter	198.752	196.850	198.051	1.201	133.3	1.358	0.000	123.9	79.056	Surcharged
FEH: 200 years: +45 %: 30 mins: Summer	198.752	196.850	197.132	0.282	112.4	0.318	0.000	104.4	97.094	OK
FEH: 200 years: +45 %: 30 mins: Winter	198.752	196.850	197.618	0.768	118.0	0.869	0.000	114.2	108.763	Surcharged
FEH: 200 years: +45 %: 60 mins: Summer	198.752	196.850	197.026	0.176	100.1	0.199	0.000	100.1	125.049	OK
FEH: 200 years: +45 %: 60 mins: Winter	198.752	196.850	197.014	0.164	90.2	0.185	0.000	90.2	140.066	OK
FEH: 200 years: +45 %: 120 mins: Summer	198.752	196.850	196.987	0.137	67.5	0.155	0.000	67.5	142.262	OK
FEH: 200 years: +45 %: 120 mins: Winter	198.752	196.850	196.972	0.122	54.4	0.137	0.000	54.4	159.350	OK
FEH: 200 years: +45 %: 180 mins: Summer	198.752	196.850	196.967	0.117	51.2	0.133	0.000	51.2	152.702	OK
FEH: 200 years: +45 %: 180 mins: Winter	198.752	196.850	196.952	0.102	39.5	0.116	0.000	39.5	171.024	OK
FEH: 200 years: +45 %: 240 mins: Summer	198.752	196.850	196.955	0.105	41.6	0.119	0.000	41.6	160.498	OK
FEH: 200 years: +45 %: 240 mins: Winter	198.752	196.850	196.940	0.090	31.3	0.102	0.000	31.3	179.774	OK
FEH: 200 years: +45 %: 360 mins: Summer	198.752	196.850	196.939	0.089	30.5	0.101	0.000	30.5	172.524	OK
FEH: 200 years: +45 %: 360 mins: Winter	198.752	196.850	196.926	0.076	22.5	0.086	0.000	22.5	193.197	OK
FEH: 200 years: +45 %: 480 mins: Summer	198.752	196.850	196.930	0.080	24.7	0.090	0.000	24.7	182.005	OK
FEH: 200 years: +45 %: 480 mins: Winter	198.752	196.850	196.918	0.068	17.9	0.077	0.000	17.9	203.806	OK
FEH: 200 years: +45 %: 600 mins: Summer	198.752	196.850	196.923	0.073	20.7	0.083	0.000	20.7	190.139	OK
FEH: 200 years: +45 %: 600 mins: Winter	198.752	196.850	196.912	0.062	15.0	0.070	0.000	15.0	212.926	OK
FEH: 200 years: +45 %: 720 mins: Summer	198.752	196.850	196.918	0.068	17.9	0.077	0.000	17.9	197.378	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		

FEH: 200 years: +45 %: 720 mins: Winter	198.7 52	196.8 50	196.90 8	0.058	13.0	0.065	0.000	12.9	221.099	OK
FEH: 200 years: +45 %: 960 mins: Summer	198.7 52	196.8 50	196.91 1	0.061	14.3	0.069	0.000	14.3	210.345	OK
FEH: 200 years: +45 %: 960 mins: Winter	198.7 52	196.8 50	196.90 2	0.052	10.3	0.058	0.000	10.3	235.577	OK
FEH: 200 years: +45 %: 1440 mins: Summer	198.7 52	196.8 50	196.90 2	0.052	10.6	0.059	0.000	10.6	232.594	OK
FEH: 200 years: +45 %: 1440 mins: Winter	198.7 52	196.8 50	196.89 5	0.045	7.6	0.050	0.000	7.6	260.430	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB:		Date:	
Proposed Site for Battery Storage_RevB		24/11/2024	
1:200 Storm Event + 45% Climate Change_RevB		Designed by:	Checked by:
Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		M.H	S.L
Report Details:		Approved By:	
Type: Junctions Summary		S.L	
Storm Phase: Phase		Kemp House:	
		124 City Road	
		London	
		EC1V 2NX	




Summary Results for S-23: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FEH: 200 years: +45 %: 15 mins: Summer	198.2 45	195.8 02	196.93 2	1.130	178.4	1.278	0.000	156.5	101.932	Surcharged
FEH: 200 years: +45 %: 15 mins: Winter	198.2 45	195.8 02	197.41 5	1.613	200.5	1.824	0.000	174.2	114.163	Surcharged
FEH: 200 years: +45 %: 30 mins: Summer	198.2 45	195.8 02	196.65 3	0.851	154.5	0.963	0.000	151.5	140.274	Surcharged
FEH: 200 years: +45 %: 30 mins: Winter	198.2 45	195.8 02	197.02 7	1.225	167.1	1.386	0.000	164.0	157.208	Surcharged
FEH: 200 years: +45 %: 60 mins: Summer	198.2 45	195.8 02	196.04 0	0.238	145.0	0.269	0.000	145.0	181.106	OK
FEH: 200 years: +45 %: 60 mins: Winter	198.2 45	195.8 02	196.01 9	0.217	130.6	0.245	0.000	130.6	202.844	OK
FEH: 200 years: +45 %: 120 mins: Summer	198.2 45	195.8 02	195.97 7	0.175	97.8	0.198	0.000	97.8	206.038	OK
FEH: 200 years: +45 %: 120 mins: Winter	198.2 45	195.8 02	195.95 5	0.153	78.8	0.173	0.000	78.8	230.766	OK
FEH: 200 years: +45 %: 180 mins: Summer	198.2 45	195.8 02	195.94 9	0.147	74.1	0.166	0.000	74.1	221.135	OK
FEH: 200 years: +45 %: 180 mins: Winter	198.2 45	195.8 02	195.92 8	0.126	57.2	0.142	0.000	57.2	247.676	OK
FEH: 200 years: +45 %: 240 mins: Summer	198.2 45	195.8 02	195.93 2	0.130	60.2	0.147	0.000	60.2	232.413	OK
FEH: 200 years: +45 %: 240 mins: Winter	198.2 45	195.8 02	195.91 2	0.110	45.4	0.125	0.000	45.4	260.339	OK
FEH: 200 years: +45 %: 360 mins: Summer	198.2 45	195.8 02	195.91 1	0.109	44.2	0.123	0.000	44.2	249.842	OK
FEH: 200 years: +45 %: 360 mins: Winter	198.2 45	195.8 02	195.89 4	0.092	32.6	0.104	0.000	32.6	279.813	OK
FEH: 200 years: +45 %: 480 mins: Summer	198.2 45	195.8 02	195.89 9	0.097	35.8	0.109	0.000	35.8	263.578	OK
FEH: 200 years: +45 %: 480 mins: Winter	198.2 45	195.8 02	195.88 3	0.081	25.9	0.092	0.000	25.9	295.169	OK
FEH: 200 years: +45 %: 600 mins: Summer	198.2 45	195.8 02	195.89 0	0.088	30.0	0.099	0.000	30.0	275.379	OK
FEH: 200 years: +45 %: 600 mins: Winter	198.2 45	195.8 02	195.87 6	0.074	21.7	0.084	0.000	21.7	308.400	OK
FEH: 200 years: +45 %: 720 mins: Summer	198.2 45	195.8 02	195.88 3	0.081	25.9	0.092	0.000	25.9	285.871	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024	
		Designed by: M.H	Checked by: S.L
		Approved By: S.L	
Report Details: Type: Junctions Summary Storm Phase: Phase		Kemp House: 124 City Road London EC1V 2NX	




FEH: 200 years: +45 %: 720 mins: Winter	198.2 45	195.8 02	195.87 1	0.069	18.7	0.078	0.000	18.7	320.203	OK
FEH: 200 years: +45 %: 960 mins: Summer	198.2 45	195.8 02	195.87 4	0.072	20.7	0.082	0.000	20.7	304.617	OK
FEH: 200 years: +45 %: 960 mins: Winter	198.2 45	195.8 02	195.86 3	0.061	15.0	0.069	0.000	15.0	341.168	OK
FEH: 200 years: +45 %: 1440 mins: Summer	198.2 45	195.8 02	195.86 4	0.062	15.3	0.070	0.000	15.3	336.869	OK
FEH: 200 years: +45 %: 1440 mins: Winter	198.2 45	195.8 02	195.85 5	0.053	11.1	0.059	0.000	11.1	377.169	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		




Summary Results for S-24: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FEH: 200 years: +45 %: 15 mins: Summer	198.2 46	196.7 46	197.50 2	0.756	96.9	0.855	0.000	67.1	41.961	Surcharged
FEH: 200 years: +45 %: 15 mins: Winter	198.2 46	196.7 46	197.92 8	1.182	101.9	1.337	0.000	75.9	47.047	Surcharged
FEH: 200 years: +45 %: 30 mins: Summer	198.2 46	196.7 46	196.97 1	0.225	66.9	0.254	0.000	64.7	57.835	OK
FEH: 200 years: +45 %: 30 mins: Winter	198.2 46	196.7 46	197.34 9	0.603	70.3	0.682	0.000	68.4	64.776	Surcharged
FEH: 200 years: +45 %: 60 mins: Summer	198.2 46	196.7 46	196.88 1	0.135	59.7	0.153	0.000	59.7	74.548	OK
FEH: 200 years: +45 %: 60 mins: Winter	198.2 46	196.7 46	196.87 3	0.127	53.7	0.144	0.000	53.7	83.483	OK
FEH: 200 years: +45 %: 120 mins: Summer	198.2 46	196.7 46	196.85 5	0.109	40.2	0.123	0.000	40.2	84.791	OK
FEH: 200 years: +45 %: 120 mins: Winter	198.2 46	196.7 46	196.84 3	0.097	32.4	0.109	0.000	32.4	94.973	OK
FEH: 200 years: +45 %: 180 mins: Summer	198.2 46	196.7 46	196.84 0	0.094	30.5	0.106	0.000	30.5	91.012	OK
FEH: 200 years: +45 %: 180 mins: Winter	198.2 46	196.7 46	196.82 8	0.082	23.5	0.093	0.000	23.5	101.920	OK
FEH: 200 years: +45 %: 240 mins: Summer	198.2 46	196.7 46	196.83 0	0.084	24.8	0.095	0.000	24.8	95.650	OK
FEH: 200 years: +45 %: 240 mins: Winter	198.2 46	196.7 46	196.81 9	0.073	18.7	0.082	0.000	18.7	107.139	OK
FEH: 200 years: +45 %: 360 mins: Summer	198.2 46	196.7 46	196.81 8	0.072	18.2	0.081	0.000	18.2	102.808	OK
FEH: 200 years: +45 %: 360 mins: Winter	198.2 46	196.7 46	196.80 8	0.062	13.4	0.070	0.000	13.4	115.137	OK
FEH: 200 years: +45 %: 480 mins: Summer	198.2 46	196.7 46	196.81 1	0.065	14.7	0.073	0.000	14.7	108.489	OK
FEH: 200 years: +45 %: 480 mins: Winter	198.2 46	196.7 46	196.80 1	0.055	10.7	0.062	0.000	10.7	121.478	OK
FEH: 200 years: +45 %: 600 mins: Summer	198.2 46	196.7 46	196.80 5	0.059	12.3	0.067	0.000	12.3	113.295	OK
FEH: 200 years: +45 %: 600 mins: Winter	198.2 46	196.7 46	196.79 6	0.050	8.9	0.057	0.000	8.9	126.902	OK
FEH: 200 years: +45 %: 720 mins: Summer	198.2 46	196.7 46	196.80 1	0.055	10.7	0.062	0.000	10.7	117.621	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


FEH: 200 years: +45 %: 720 mins: Winter	198.2 46	196.7 46	196.79 3	0.047	7.7	0.053	0.000	7.7	131.750	OK
FEH: 200 years: +45 %: 960 mins: Summer	198.2 46	196.7 46	196.79 5	0.049	8.5	0.056	0.000	8.5	125.367	OK
FEH: 200 years: +45 %: 960 mins: Winter	198.2 46	196.7 46	196.78 8	0.042	6.2	0.048	0.000	6.2	140.377	OK
FEH: 200 years: +45 %: 1440 mins: Summer	198.2 46	196.7 46	196.78 9	0.043	6.3	0.048	0.000	6.3	138.632	OK
FEH: 200 years: +45 %: 1440 mins: Winter	198.2 46	196.7 46	196.78 2	0.036	4.5	0.041	0.000	4.5	155.197	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB:		Date:		
Proposed Site for Battery Storage_RevB		24/11/2024		
1:200 Storm Event + 45% Climate Change_RevB		Designed by:	Checked by:	
Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		M.H	S.L	S.L
Report Details:		Kemp House:		
Type: Junctions Summary		124 City Road		
Storm Phase: Phase		London		
		EC1V 2NX		




Summary Results for S-25: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FEH: 200 years: +45 %: 15 mins: Summer	197.688	195.785	197.150	1.365	178.0	1.544	0.000	148.6	89.269	Surcharged
FEH: 200 years: +45 %: 15 mins: Winter	197.688	195.785	197.661	1.876	192.4	2.122	0.000	165.4	100.187	Flood Risk
FEH: 200 years: +45 %: 30 mins: Summer	197.688	195.785	196.781	0.996	141.0	1.126	0.000	138.3	123.476	Surcharged
FEH: 200 years: +45 %: 30 mins: Winter	197.688	195.785	197.119	1.334	148.6	1.509	0.000	145.6	138.306	Surcharged
FEH: 200 years: +45 %: 60 mins: Summer	197.688	195.785	196.036	0.251	127.9	0.284	0.000	127.9	159.759	OK
FEH: 200 years: +45 %: 60 mins: Winter	197.688	195.785	196.012	0.227	115.2	0.256	0.000	115.2	178.930	OK
FEH: 200 years: +45 %: 120 mins: Summer	197.688	195.785	195.967	0.182	86.3	0.206	0.000	86.3	181.756	OK
FEH: 200 years: +45 %: 120 mins: Winter	197.688	195.785	195.943	0.158	69.5	0.179	0.000	69.5	203.573	OK
FEH: 200 years: +45 %: 180 mins: Summer	197.688	195.785	195.937	0.152	65.4	0.172	0.000	65.4	195.100	OK
FEH: 200 years: +45 %: 180 mins: Winter	197.688	195.785	195.915	0.130	50.5	0.148	0.000	50.4	218.501	OK
FEH: 200 years: +45 %: 240 mins: Summer	197.688	195.785	195.919	0.134	53.1	0.152	0.000	53.1	205.045	OK
FEH: 200 years: +45 %: 240 mins: Winter	197.688	195.785	195.899	0.114	40.0	0.129	0.000	40.0	229.658	OK
FEH: 200 years: +45 %: 360 mins: Summer	197.688	195.785	195.898	0.113	39.0	0.127	0.000	39.0	220.379	OK
FEH: 200 years: +45 %: 360 mins: Winter	197.688	195.785	195.880	0.095	28.8	0.108	0.000	28.8	246.821	OK
FEH: 200 years: +45 %: 480 mins: Summer	197.688	195.785	195.885	0.100	31.5	0.113	0.000	31.5	232.519	OK
FEH: 200 years: +45 %: 480 mins: Winter	197.688	195.785	195.869	0.084	22.9	0.095	0.000	22.9	260.424	OK
FEH: 200 years: +45 %: 600 mins: Summer	197.688	195.785	195.876	0.091	26.4	0.103	0.000	26.4	242.852	OK
FEH: 200 years: +45 %: 600 mins: Winter	197.688	195.785	195.862	0.077	19.1	0.087	0.000	19.1	272.059	OK
FEH: 200 years: +45 %: 720 mins: Summer	197.688	195.785	195.869	0.084	22.9	0.095	0.000	22.9	252.147	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


FEH: 200 years: +45 %: 720 mins: Winter	197.6 88	195.7 85	195.85 6	0.071	16.5	0.081	0.000	16.5	282.458	OK
FEH: 200 years: +45 %: 960 mins: Summer	197.6 88	195.7 85	195.86 0	0.075	18.3	0.085	0.000	18.3	268.724	OK
FEH: 200 years: +45 %: 960 mins: Winter	197.6 88	195.7 85	195.84 9	0.064	13.2	0.072	0.000	13.2	300.963	OK
FEH: 200 years: +45 %: 1440 mins: Summer	197.6 88	195.7 85	195.84 9	0.064	13.5	0.073	0.000	13.5	297.168	OK
FEH: 200 years: +45 %: 1440 mins: Winter	197.6 88	195.7 85	195.84 0	0.055	9.7	0.062	0.000	9.7	332.728	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		




Summary Results for S-26: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FEH: 200 years: +45 %: 15 mins: Summer	197.180	194.848	196.153	1.305	406.9	3.322	0.000	375.9	236.297	Surcharged
FEH: 200 years: +45 %: 15 mins: Winter	197.180	194.848	196.456	1.608	446.7	4.092	0.000	401.1	264.656	Surcharged
FEH: 200 years: +45 %: 30 mins: Summer	197.180	194.848	195.919	1.071	360.1	2.726	0.000	358.8	325.169	Surcharged
FEH: 200 years: +45 %: 30 mins: Winter	197.180	194.848	196.188	1.340	383.5	3.410	0.000	378.6	364.279	Surcharged
FEH: 200 years: +45 %: 60 mins: Summer	197.180	194.848	195.191	0.343	335.5	0.873	0.000	335.5	419.147	OK
FEH: 200 years: +45 %: 60 mins: Winter	197.180	194.848	195.162	0.314	302.2	0.799	0.000	302.2	469.478	OK
FEH: 200 years: +45 %: 120 mins: Summer	197.180	194.848	195.096	0.248	226.3	0.630	0.000	226.3	476.876	OK
FEH: 200 years: +45 %: 120 mins: Winter	197.180	194.848	195.061	0.213	182.4	0.541	0.000	182.4	534.104	OK
FEH: 200 years: +45 %: 180 mins: Summer	197.180	194.848	195.052	0.204	171.5	0.519	0.000	171.5	511.836	OK
FEH: 200 years: +45 %: 180 mins: Winter	197.180	194.848	195.021	0.173	132.4	0.439	0.000	132.4	573.258	OK
FEH: 200 years: +45 %: 240 mins: Summer	197.180	194.848	195.026	0.178	139.4	0.454	0.000	139.4	537.939	OK
FEH: 200 years: +45 %: 240 mins: Winter	197.180	194.848	194.998	0.150	105.0	0.381	0.000	105.0	602.552	OK
FEH: 200 years: +45 %: 360 mins: Summer	197.180	194.848	194.996	0.148	102.4	0.376	0.000	102.4	578.220	OK
FEH: 200 years: +45 %: 360 mins: Winter	197.180	194.848	194.972	0.124	75.5	0.315	0.000	75.5	647.621	OK
FEH: 200 years: +45 %: 480 mins: Summer	197.180	194.848	194.978	0.130	82.8	0.331	0.000	82.8	610.050	OK
FEH: 200 years: +45 %: 480 mins: Winter	197.180	194.848	194.957	0.109	60.0	0.276	0.000	60.0	683.222	OK
FEH: 200 years: +45 %: 600 mins: Summer	197.180	194.848	194.966	0.118	69.4	0.300	0.000	69.4	637.273	OK
FEH: 200 years: +45 %: 600 mins: Winter	197.180	194.848	194.946	0.098	50.2	0.251	0.000	50.2	713.777	OK
FEH: 200 years: +45 %: 720 mins: Summer	197.180	194.848	194.957	0.109	60.0	0.276	0.000	60.0	661.602	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024				
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L			Approved By: S.L
		Kemp House: 124 City Road London EC1V 2NX				

FEH: 200 years: +45 %: 720 mins: Winter	197.1 80	194.8 48	194.93 9	0.091	43.4	0.232	0.000	43.4	741.091	OK
FEH: 200 years: +45 %: 960 mins: Summer	197.1 80	194.8 48	194.94 4	0.096	48.0	0.245	0.000	48.0	705.013	OK
FEH: 200 years: +45 %: 960 mins: Winter	197.1 80	194.8 48	194.92 9	0.081	34.7	0.206	0.000	34.7	789.663	OK
FEH: 200 years: +45 %: 1440 mins: Summer	197.1 80	194.8 48	194.93 0	0.082	35.4	0.208	0.000	35.4	779.666	OK
FEH: 200 years: +45 %: 1440 mins: Winter	197.1 80	194.8 48	194.91 7	0.069	25.6	0.175	0.000	25.6	872.963	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB:		Date:		
Proposed Site for Battery Storage_RevB		24/11/2024		
1:200 Storm Event + 45% Climate Change_RevB		Designed by:	Checked by:	
Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		M.H	S.L	S.L
Report Details:		Kemp House:		
Type: Junctions Summary		124 City Road		
Storm Phase: Phase		London		
		EC1V 2NX		



Summary Results for S-27: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FEH: 200 years: +45 %: 15 mins: Summer	196.647	194.408	195.787	1.379	478.0	2.436	0.000	459.9	280.763	Surcharged
FEH: 200 years: +45 %: 15 mins: Winter	196.647	194.408	196.032	1.624	508.5	2.870	0.000	482.7	314.450	Surcharged
FEH: 200 years: +45 %: 30 mins: Summer	196.647	194.408	195.585	1.177	429.3	2.080	0.000	428.5	386.307	Surcharged
FEH: 200 years: +45 %: 30 mins: Winter	196.647	194.408	195.820	1.412	452.7	2.495	0.000	449.7	432.746	Surcharged
FEH: 200 years: +45 %: 60 mins: Summer	196.647	194.408	194.937	0.529	398.4	0.935	0.000	398.4	497.699	Surcharged
FEH: 200 years: +45 %: 60 mins: Winter	196.647	194.408	194.796	0.388	358.8	0.685	0.000	358.8	557.452	OK
FEH: 200 years: +45 %: 120 mins: Summer	196.647	194.408	194.712	0.304	268.7	0.538	0.000	268.7	566.232	OK
FEH: 200 years: +45 %: 120 mins: Winter	196.647	194.408	194.669	0.261	216.6	0.460	0.000	216.6	634.182	OK
FEH: 200 years: +45 %: 180 mins: Summer	196.647	194.408	194.658	0.250	203.6	0.441	0.000	203.6	607.732	OK
FEH: 200 years: +45 %: 180 mins: Winter	196.647	194.408	194.618	0.210	157.2	0.372	0.000	157.2	680.667	OK
FEH: 200 years: +45 %: 240 mins: Summer	196.647	194.408	194.626	0.218	165.5	0.385	0.000	165.5	638.741	OK
FEH: 200 years: +45 %: 240 mins: Winter	196.647	194.408	194.590	0.182	124.7	0.321	0.000	124.7	715.440	OK
FEH: 200 years: +45 %: 360 mins: Summer	196.647	194.408	194.587	0.179	121.6	0.316	0.000	121.6	686.559	OK
FEH: 200 years: +45 %: 360 mins: Winter	196.647	194.408	194.557	0.149	89.7	0.263	0.000	89.7	768.927	OK
FEH: 200 years: +45 %: 480 mins: Summer	196.647	194.408	194.565	0.157	98.3	0.278	0.000	98.3	724.335	OK
FEH: 200 years: +45 %: 480 mins: Winter	196.647	194.408	194.538	0.130	71.2	0.230	0.000	71.2	811.243	OK
FEH: 200 years: +45 %: 600 mins: Summer	196.647	194.408	194.550	0.142	82.4	0.250	0.000	82.4	756.677	OK
FEH: 200 years: +45 %: 600 mins: Winter	196.647	194.408	194.525	0.117	59.6	0.207	0.000	59.6	847.552	OK
FEH: 200 years: +45 %: 720 mins: Summer	196.647	194.408	194.538	0.130	71.3	0.230	0.000	71.3	785.560	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024	
		Designed by: M.H	Checked by: S.L
		Approved By: S.L	
Report Details: Type: Junctions Summary Storm Phase: Phase		Kemp House: 124 City Road London EC1V 2NX	




FEH: 200 years: +45 %: 720 mins: Winter	196.6 47	194.4 08	194.51 6	0.108	51.5	0.191	0.000	51.5	879.930	OK
FEH: 200 years: +45 %: 960 mins: Summer	196.6 47	194.4 08	194.52 2	0.114	57.0	0.202	0.000	57.0	837.107	OK
FEH: 200 years: +45 %: 960 mins: Winter	196.6 47	194.4 08	194.50 3	0.095	41.2	0.168	0.000	41.2	937.587	OK
FEH: 200 years: +45 %: 1440 mins: Summer	196.6 47	194.4 08	194.50 4	0.096	42.0	0.170	0.000	42.0	925.710	OK
FEH: 200 years: +45 %: 1440 mins: Winter	196.6 47	194.4 08	194.48 9	0.081	30.4	0.143	0.000	30.4	1036.517	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB:		Date:	
Proposed Site for Battery Storage_RevB		24/11/2024	
1:200 Storm Event + 45% Climate Change_RevB		Designed by:	Checked by:
Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		M.H	S.L
Report Details:		Approved By:	
Type: Junctions Summary		S.L	
Storm Phase: Phase		Kemp House:	
		124 City Road	
		London	
		EC1V 2NX	



Summary Results for S-28: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FEH: 200 years: +45 %: 15 mins: Summer	196.570	194.208	195.427	1.219	459.9	2.154	0.000	443.6	280.017	Surcharged
FEH: 200 years: +45 %: 15 mins: Winter	196.570	194.208	195.637	1.429	482.7	2.526	0.000	461.0	313.729	Surcharged
FEH: 200 years: +45 %: 30 mins: Summer	196.570	194.208	195.272	1.064	428.5	1.881	0.000	427.8	385.790	Surcharged
FEH: 200 years: +45 %: 30 mins: Winter	196.570	194.208	195.479	1.271	449.7	2.246	0.000	447.1	432.217	Surcharged
FEH: 200 years: +45 %: 60 mins: Summer	196.570	194.208	194.607	0.399	398.4	0.706	0.000	398.4	497.554	OK
FEH: 200 years: +45 %: 60 mins: Winter	196.570	194.208	194.543	0.335	358.8	0.593	0.000	358.8	557.437	OK
FEH: 200 years: +45 %: 120 mins: Summer	196.570	194.208	194.479	0.271	268.7	0.478	0.000	268.7	566.221	OK
FEH: 200 years: +45 %: 120 mins: Winter	196.570	194.208	194.442	0.234	216.6	0.414	0.000	216.6	634.173	OK
FEH: 200 years: +45 %: 180 mins: Summer	196.570	194.208	194.433	0.225	203.6	0.398	0.000	203.6	607.723	OK
FEH: 200 years: +45 %: 180 mins: Winter	196.570	194.208	194.400	0.192	157.2	0.339	0.000	157.2	680.661	OK
FEH: 200 years: +45 %: 240 mins: Summer	196.570	194.208	194.406	0.198	165.5	0.350	0.000	165.5	638.734	OK
FEH: 200 years: +45 %: 240 mins: Winter	196.570	194.208	194.375	0.167	124.7	0.295	0.000	124.7	715.435	OK
FEH: 200 years: +45 %: 360 mins: Summer	196.570	194.208	194.373	0.165	121.6	0.291	0.000	121.6	686.553	OK
FEH: 200 years: +45 %: 360 mins: Winter	196.570	194.208	194.346	0.138	89.7	0.244	0.000	89.7	768.924	OK
FEH: 200 years: +45 %: 480 mins: Summer	196.570	194.208	194.354	0.146	98.3	0.257	0.000	98.3	724.330	OK
FEH: 200 years: +45 %: 480 mins: Winter	196.570	194.208	194.330	0.122	71.2	0.215	0.000	71.2	811.240	OK
FEH: 200 years: +45 %: 600 mins: Summer	196.570	194.208	194.340	0.132	82.4	0.233	0.000	82.4	756.672	OK
FEH: 200 years: +45 %: 600 mins: Winter	196.570	194.208	194.318	0.110	59.6	0.195	0.000	59.6	847.550	OK
FEH: 200 years: +45 %: 720 mins: Summer	196.570	194.208	194.330	0.122	71.3	0.215	0.000	71.3	785.556	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


FEH: 200 years: +45 %: 720 mins: Winter	196.5 70	194.2 08	194.31 0	0.102	51.5	0.180	0.000	51.5	879.928	OK
FEH: 200 years: +45 %: 960 mins: Summer	196.5 70	194.2 08	194.31 6	0.108	57.0	0.190	0.000	57.0	837.104	OK
FEH: 200 years: +45 %: 960 mins: Winter	196.5 70	194.2 08	194.29 8	0.090	41.2	0.160	0.000	41.2	937.585	OK
FEH: 200 years: +45 %: 1440 mins: Summer	196.5 70	194.2 08	194.29 9	0.091	42.0	0.161	0.000	42.0	925.707	OK
FEH: 200 years: +45 %: 1440 mins: Winter	196.5 70	194.2 08	194.28 5	0.077	30.4	0.136	0.000	30.4	1036.516	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB:		Date:	
Proposed Site for Battery Storage_RevB		24/11/2024	
1:200 Storm Event + 45% Climate Change_RevB		Designed by:	Checked by:
Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		M.H	S.L
Report Details:		Approved By:	
Type: Junctions Summary		S.L	
Storm Phase: Phase		Kemp House:	
		124 City Road	
		London	
		EC1V 2NX	




Summary Results for S-29: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FEH: 200 years: +45 %: 15 mins: Summer	197.181	195.681	196.428	0.747	96.9	0.845	0.000	69.9	41.913	Surcharged
FEH: 200 years: +45 %: 15 mins: Winter	197.181	195.681	196.811	1.130	101.9	1.278	0.000	79.1	46.965	Surcharged
FEH: 200 years: +45 %: 30 mins: Summer	197.181	195.681	195.911	0.230	66.9	0.260	0.000	64.4	57.816	OK
FEH: 200 years: +45 %: 30 mins: Winter	197.181	195.681	196.222	0.541	70.3	0.612	0.000	68.7	64.754	Surcharged
FEH: 200 years: +45 %: 60 mins: Summer	197.181	195.681	195.822	0.141	59.7	0.160	0.000	59.7	74.548	OK
FEH: 200 years: +45 %: 60 mins: Winter	197.181	195.681	195.814	0.133	53.7	0.150	0.000	53.7	83.483	OK
FEH: 200 years: +45 %: 120 mins: Summer	197.181	195.681	195.794	0.113	40.2	0.128	0.000	40.2	84.790	OK
FEH: 200 years: +45 %: 120 mins: Winter	197.181	195.681	195.782	0.101	32.4	0.114	0.000	32.4	94.972	OK
FEH: 200 years: +45 %: 180 mins: Summer	197.181	195.681	195.779	0.098	30.5	0.110	0.000	30.5	91.012	OK
FEH: 200 years: +45 %: 180 mins: Winter	197.181	195.681	195.766	0.085	23.5	0.096	0.000	23.5	101.920	OK
FEH: 200 years: +45 %: 240 mins: Summer	197.181	195.681	195.768	0.087	24.8	0.099	0.000	24.8	95.650	OK
FEH: 200 years: +45 %: 240 mins: Winter	197.181	195.681	195.757	0.076	18.7	0.086	0.000	18.7	107.139	OK
FEH: 200 years: +45 %: 360 mins: Summer	197.181	195.681	195.756	0.075	18.2	0.084	0.000	18.2	102.807	OK
FEH: 200 years: +45 %: 360 mins: Winter	197.181	195.681	195.745	0.064	13.4	0.073	0.000	13.4	115.137	OK
FEH: 200 years: +45 %: 480 mins: Summer	197.181	195.681	195.748	0.067	14.7	0.076	0.000	14.7	108.489	OK
FEH: 200 years: +45 %: 480 mins: Winter	197.181	195.681	195.738	0.057	10.7	0.065	0.000	10.7	121.478	OK
FEH: 200 years: +45 %: 600 mins: Summer	197.181	195.681	195.742	0.061	12.3	0.070	0.000	12.3	113.295	OK
FEH: 200 years: +45 %: 600 mins: Winter	197.181	195.681	195.733	0.052	8.9	0.059	0.000	8.9	126.902	OK
FEH: 200 years: +45 %: 720 mins: Summer	197.181	195.681	195.738	0.057	10.7	0.065	0.000	10.7	117.620	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


FEH: 200 years: +45 %: 720 mins: Winter	197.1 81	195.6 81	195.73 0	0.049	7.7	0.055	0.000	7.7	131.750	OK
FEH: 200 years: +45 %: 960 mins: Summer	197.1 81	195.6 81	195.73 2	0.051	8.5	0.058	0.000	8.5	125.366	OK
FEH: 200 years: +45 %: 960 mins: Winter	197.1 81	195.6 81	195.72 5	0.044	6.2	0.049	0.000	6.2	140.377	OK
FEH: 200 years: +45 %: 1440 mins: Summer	197.1 81	195.6 81	195.72 5	0.044	6.3	0.050	0.000	6.3	138.632	OK
FEH: 200 years: +45 %: 1440 mins: Winter	197.1 81	195.6 81	195.71 9	0.038	4.5	0.043	0.000	4.5	155.197	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB:		Date:		
Proposed Site for Battery Storage_RevB		24/11/2024		
1:200 Storm Event + 45% Climate Change_RevB		Designed by:	Checked by:	
Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		M.H	S.L	S.L
Report Details:		Kemp House:		
Type: Junctions Summary		124 City Road		
Storm Phase: Phase		London		
		EC1V 2NX		




Summary Results for S-30: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FEH: 200 years: +45 %: 15 mins: Summer	196.570	194.779	196.041	1.262	180.8	1.427	0.000	154.3	89.386	Surcharged
FEH: 200 years: +45 %: 15 mins: Winter	196.570	194.779	196.483	1.704	195.6	1.927	0.000	173.0	100.213	Flood Risk
FEH: 200 years: +45 %: 30 mins: Summer	196.570	194.779	195.700	0.921	140.7	1.041	0.000	138.7	123.626	Surcharged
FEH: 200 years: +45 %: 30 mins: Winter	196.570	194.779	195.964	1.185	149.1	1.341	0.000	147.4	138.530	Surcharged
FEH: 200 years: +45 %: 60 mins: Summer	196.570	194.779	194.996	0.217	127.9	0.246	0.000	127.9	159.543	OK
FEH: 200 years: +45 %: 60 mins: Winter	196.570	194.779	194.980	0.201	115.2	0.227	0.000	115.2	178.853	OK
FEH: 200 years: +45 %: 120 mins: Summer	196.570	194.779	194.948	0.169	86.3	0.191	0.000	86.3	181.706	OK
FEH: 200 years: +45 %: 120 mins: Winter	196.570	194.779	194.927	0.148	69.5	0.168	0.000	69.5	203.572	OK
FEH: 200 years: +45 %: 180 mins: Summer	196.570	194.779	194.922	0.143	65.4	0.162	0.000	65.4	195.100	OK
FEH: 200 years: +45 %: 180 mins: Winter	196.570	194.779	194.902	0.123	50.5	0.139	0.000	50.4	218.500	OK
FEH: 200 years: +45 %: 240 mins: Summer	196.570	194.779	194.905	0.126	53.1	0.143	0.000	53.1	205.045	OK
FEH: 200 years: +45 %: 240 mins: Winter	196.570	194.779	194.887	0.108	40.0	0.122	0.000	40.0	229.658	OK
FEH: 200 years: +45 %: 360 mins: Summer	196.570	194.779	194.885	0.106	39.0	0.120	0.000	39.0	220.379	OK
FEH: 200 years: +45 %: 360 mins: Winter	196.570	194.779	194.869	0.090	28.8	0.102	0.000	28.8	246.821	OK
FEH: 200 years: +45 %: 480 mins: Summer	196.570	194.779	194.874	0.095	31.5	0.107	0.000	31.5	232.519	OK
FEH: 200 years: +45 %: 480 mins: Winter	196.570	194.779	194.859	0.080	22.9	0.090	0.000	22.9	260.424	OK
FEH: 200 years: +45 %: 600 mins: Summer	196.570	194.779	194.865	0.086	26.4	0.098	0.000	26.4	242.852	OK
FEH: 200 years: +45 %: 600 mins: Winter	196.570	194.779	194.852	0.073	19.1	0.082	0.000	19.1	272.059	OK
FEH: 200 years: +45 %: 720 mins: Summer	196.570	194.779	194.859	0.080	22.9	0.090	0.000	22.9	252.147	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


FEH: 200 years: +45 %: 720 mins: Winter	196.5 70	194.7 79	194.84 7	0.068	16.5	0.076	0.000	16.5	282.458	OK
FEH: 200 years: +45 %: 960 mins: Summer	196.5 70	194.7 79	194.85 0	0.071	18.3	0.080	0.000	18.3	268.723	OK
FEH: 200 years: +45 %: 960 mins: Winter	196.5 70	194.7 79	194.83 9	0.060	13.2	0.068	0.000	13.2	300.963	OK
FEH: 200 years: +45 %: 1440 mins: Summer	196.5 70	194.7 79	194.84 0	0.061	13.5	0.069	0.000	13.5	297.168	OK
FEH: 200 years: +45 %: 1440 mins: Winter	196.5 70	194.7 79	194.83 1	0.052	9.7	0.059	0.000	9.7	332.728	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB:		Date:		
Proposed Site for Battery Storage_RevB		24/11/2024		
1:200 Storm Event + 45% Climate Change_RevB		Designed by:	Checked by:	
Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		M.H	S.L	S.L
Report Details:		Kemp House:		
Type: Junctions Summary		124 City Road		
Storm Phase: Phase		London		
		EC1V 2NX		




Summary Results for S-31: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FEH: 200 years: +45 %: 15 mins: Summer	196.0 38	193.6 18	194.91 0	1.292	597.9	3.288	0.000	576.5	370.693	Surcharged
FEH: 200 years: +45 %: 15 mins: Winter	196.0 38	193.6 18	195.08 2	1.464	634.0	3.726	0.000	609.4	415.115	Surcharged
FEH: 200 years: +45 %: 30 mins: Summer	196.0 38	193.6 18	194.79 6	1.178	566.5	2.999	0.000	565.6	510.284	Surcharged
FEH: 200 years: +45 %: 30 mins: Winter	196.0 38	193.6 18	194.96 3	1.345	594.5	3.424	0.000	591.6	571.630	Surcharged
FEH: 200 years: +45 %: 60 mins: Summer	196.0 38	193.6 18	194.18 9	0.571	526.3	1.453	0.000	526.3	657.307	Surcharged
FEH: 200 years: +45 %: 60 mins: Winter	196.0 38	193.6 18	194.03 9	0.421	474.0	1.072	0.000	474.0	736.318	OK
FEH: 200 years: +45 %: 120 mins: Summer	196.0 38	193.6 18	193.93 5	0.317	355.0	0.807	0.000	355.0	747.960	OK
FEH: 200 years: +45 %: 120 mins: Winter	196.0 38	193.6 18	193.89 1	0.273	286.1	0.694	0.000	286.1	837.747	OK
FEH: 200 years: +45 %: 180 mins: Summer	196.0 38	193.6 18	193.88 0	0.262	269.0	0.666	0.000	269.0	802.825	OK
FEH: 200 years: +45 %: 180 mins: Winter	196.0 38	193.6 18	193.84 0	0.222	207.6	0.566	0.000	207.6	899.162	OK
FEH: 200 years: +45 %: 240 mins: Summer	196.0 38	193.6 18	193.84 8	0.230	218.6	0.584	0.000	218.6	843.780	OK
FEH: 200 years: +45 %: 240 mins: Winter	196.0 38	193.6 18	193.81 2	0.194	164.7	0.493	0.000	164.7	945.094	OK
FEH: 200 years: +45 %: 360 mins: Summer	196.0 38	193.6 18	193.80 9	0.191	160.6	0.486	0.000	160.6	906.933	OK
FEH: 200 years: +45 %: 360 mins: Winter	196.0 38	193.6 18	193.77 9	0.161	118.5	0.409	0.000	118.5	1015.745	OK
FEH: 200 years: +45 %: 480 mins: Summer	196.0 38	193.6 18	193.78 7	0.169	129.8	0.431	0.000	129.8	956.850	OK
FEH: 200 years: +45 %: 480 mins: Winter	196.0 38	193.6 18	193.76 0	0.142	94.1	0.361	0.000	94.1	1071.664	OK
FEH: 200 years: +45 %: 600 mins: Summer	196.0 38	193.6 18	193.77 2	0.154	108.8	0.391	0.000	108.8	999.525	OK
FEH: 200 years: +45 %: 600 mins: Winter	196.0 38	193.6 18	193.74 7	0.129	78.7	0.328	0.000	78.7	1119.609	OK
FEH: 200 years: +45 %: 720 mins: Summer	196.0 38	193.6 18	193.76 0	0.142	94.2	0.361	0.000	94.2	1037.703	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024				
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L			Approved By: S.L
		Kemp House: 124 City Road London EC1V 2NX				


FEH: 200 years: +45 %: 720 mins: Winter	196.0 38	193.6 18	193.73 7	0.119	68.0	0.304	0.000	68.0	1162.386	OK
FEH: 200 years: +45 %: 960 mins: Summer	196.0 38	193.6 18	193.74 4	0.126	75.3	0.320	0.000	75.3	1105.828	OK
FEH: 200 years: +45 %: 960 mins: Winter	196.0 38	193.6 18	193.72 4	0.106	54.4	0.270	0.000	54.4	1238.547	OK
FEH: 200 years: +45 %: 1440 mins: Summer	196.0 38	193.6 18	193.72 5	0.107	55.5	0.273	0.000	55.5	1222.876	OK
FEH: 200 years: +45 %: 1440 mins: Winter	196.0 38	193.6 18	193.70 9	0.091	40.1	0.231	0.000	40.1	1369.243	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB:		Date:		
Proposed Site for Battery Storage_RevB		24/11/2024		
1:200 Storm Event + 45% Climate Change_RevB		Designed by:	Checked by:	
Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		M.H	S.L	S.L
Report Details:		Kemp House:		
Type: Junctions Summary		124 City Road		
Storm Phase: Phase		London		
		EC1V 2NX		




Summary Results for S-32: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FEH: 200 years: +45 %: 15 mins: Summer	195.1 11	192.8 53	193.13 5	0.282	576.5	0.498	0.000	571.8	370.615	OK
FEH: 200 years: +45 %: 15 mins: Winter	195.1 11	192.8 53	193.14 6	0.293	609.4	0.518	0.000	602.8	415.029	OK
FEH: 200 years: +45 %: 30 mins: Summer	195.1 11	192.8 53	193.13 1	0.278	565.6	0.492	0.000	565.4	510.216	OK
FEH: 200 years: +45 %: 30 mins: Winter	195.1 11	192.8 53	193.14 1	0.288	591.6	0.508	0.000	590.8	571.565	OK
FEH: 200 years: +45 %: 60 mins: Summer	195.1 11	192.8 53	193.11 8	0.265	526.3	0.468	0.000	526.2	657.278	OK
FEH: 200 years: +45 %: 60 mins: Winter	195.1 11	192.8 53	193.10 0	0.247	474.0	0.436	0.000	474.0	736.287	OK
FEH: 200 years: +45 %: 120 mins: Summer	195.1 11	192.8 53	193.05 9	0.206	355.0	0.363	0.000	355.0	747.937	OK
FEH: 200 years: +45 %: 120 mins: Winter	195.1 11	192.8 53	193.03 4	0.181	286.1	0.319	0.000	286.1	837.728	OK
FEH: 200 years: +45 %: 180 mins: Summer	195.1 11	192.8 53	193.02 7	0.174	269.0	0.308	0.000	269.0	802.806	OK
FEH: 200 years: +45 %: 180 mins: Winter	195.1 11	192.8 53	193.00 3	0.150	207.6	0.266	0.000	207.6	899.148	OK
FEH: 200 years: +45 %: 240 mins: Summer	195.1 11	192.8 53	193.00 8	0.155	218.6	0.274	0.000	218.6	843.765	OK
FEH: 200 years: +45 %: 240 mins: Winter	195.1 11	192.8 53	192.98 5	0.132	164.7	0.234	0.000	164.7	945.083	OK
FEH: 200 years: +45 %: 360 mins: Summer	195.1 11	192.8 53	192.98 4	0.131	160.6	0.231	0.000	160.6	906.921	OK
FEH: 200 years: +45 %: 360 mins: Winter	195.1 11	192.8 53	192.96 4	0.111	118.5	0.196	0.000	118.5	1015.737	OK
FEH: 200 years: +45 %: 480 mins: Summer	195.1 11	192.8 53	192.96 9	0.116	129.8	0.206	0.000	129.8	956.839	OK
FEH: 200 years: +45 %: 480 mins: Winter	195.1 11	192.8 53	192.95 1	0.098	94.1	0.174	0.000	94.1	1071.658	OK
FEH: 200 years: +45 %: 600 mins: Summer	195.1 11	192.8 53	192.95 9	0.106	108.8	0.187	0.000	108.8	999.516	OK
FEH: 200 years: +45 %: 600 mins: Winter	195.1 11	192.8 53	192.94 3	0.090	78.7	0.158	0.000	78.7	1119.604	OK
FEH: 200 years: +45 %: 720 mins: Summer	195.1 11	192.8 53	192.95 1	0.098	94.2	0.174	0.000	94.2	1037.695	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


FEH: 200 years: +45 %: 720 mins: Winter	195.1 11	192.8 53	192.93 6	0.083	68.0	0.147	0.000	68.0	1162.382	OK
FEH: 200 years: +45 %: 960 mins: Summer	195.1 11	192.8 53	192.94 1	0.088	75.3	0.155	0.000	75.3	1105.820	OK
FEH: 200 years: +45 %: 960 mins: Winter	195.1 11	192.8 53	192.92 7	0.074	54.4	0.131	0.000	54.4	1238.544	OK
FEH: 200 years: +45 %: 1440 mins: Summer	195.1 11	192.8 53	192.92 8	0.075	55.5	0.132	0.000	55.5	1222.870	OK
FEH: 200 years: +45 %: 1440 mins: Winter	195.1 11	192.8 53	192.91 7	0.064	40.1	0.113	0.000	40.1	1369.241	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB:		Date:		
Proposed Site for Battery Storage_RevB		24/11/2024		
1:200 Storm Event + 45% Climate Change_RevB		Designed by:	Checked by:	
Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		M.H	S.L	S.L
Report Details:		Kemp House:		
Type: Junctions Summary		124 City Road		
Storm Phase: Phase		London		
		EC1V 2NX		




Summary Results for S-33: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FEH: 200 years: +45 %: 15 mins: Summer	193.3 30	190.1 93	190.39 8	0.205	616.5	0.362	0.000	613.0	389.399	OK
FEH: 200 years: +45 %: 15 mins: Winter	193.3 30	190.1 93	190.40 5	0.212	649.7	0.374	0.000	645.7	436.143	OK
FEH: 200 years: +45 %: 30 mins: Summer	193.3 30	190.1 93	190.39 4	0.201	596.2	0.356	0.000	596.1	536.405	OK
FEH: 200 years: +45 %: 30 mins: Winter	193.3 30	190.1 93	190.40 0	0.207	623.1	0.365	0.000	622.6	600.971	OK
FEH: 200 years: +45 %: 60 mins: Summer	193.3 30	190.1 93	190.38 6	0.193	553.7	0.341	0.000	553.7	691.291	OK
FEH: 200 years: +45 %: 60 mins: Winter	193.3 30	190.1 93	190.37 4	0.181	498.7	0.320	0.000	498.7	774.428	OK
FEH: 200 years: +45 %: 120 mins: Summer	193.3 30	190.1 93	190.34 7	0.154	373.5	0.271	0.000	373.5	786.779	OK
FEH: 200 years: +45 %: 120 mins: Winter	193.3 30	190.1 93	190.32 9	0.136	301.1	0.241	0.000	301.1	881.243	OK
FEH: 200 years: +45 %: 180 mins: Summer	193.3 30	190.1 93	190.32 5	0.132	283.0	0.233	0.000	283.0	844.555	OK
FEH: 200 years: +45 %: 180 mins: Winter	193.3 30	190.1 93	190.30 7	0.114	218.5	0.202	0.000	218.5	945.920	OK
FEH: 200 years: +45 %: 240 mins: Summer	193.3 30	190.1 93	190.31 1	0.118	230.1	0.208	0.000	230.1	887.669	OK
FEH: 200 years: +45 %: 240 mins: Winter	193.3 30	190.1 93	190.29 4	0.101	173.3	0.178	0.000	173.3	994.264	OK
FEH: 200 years: +45 %: 360 mins: Summer	193.3 30	190.1 93	190.29 3	0.100	169.0	0.176	0.000	169.0	954.127	OK
FEH: 200 years: +45 %: 360 mins: Winter	193.3 30	190.1 93	190.27 8	0.085	124.6	0.150	0.000	124.6	1068.625	OK
FEH: 200 years: +45 %: 480 mins: Summer	193.3 30	190.1 93	190.28 2	0.089	136.6	0.157	0.000	136.6	1006.677	OK
FEH: 200 years: +45 %: 480 mins: Winter	193.3 30	190.1 93	190.26 8	0.075	99.0	0.133	0.000	99.0	1127.478	OK
FEH: 200 years: +45 %: 600 mins: Summer	193.3 30	190.1 93	190.27 4	0.081	114.5	0.144	0.000	114.5	1051.596	OK
FEH: 200 years: +45 %: 600 mins: Winter	193.3 30	190.1 93	190.26 2	0.069	82.8	0.121	0.000	82.8	1177.915	OK
FEH: 200 years: +45 %: 720 mins: Summer	193.3 30	190.1 93	190.26 8	0.075	99.1	0.133	0.000	99.1	1091.763	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


FEH: 200 years: +45 %: 720 mins: Winter	193.3 30	190.1 93	190.25 7	0.064	71.6	0.113	0.000	71.6	1222.953	OK
FEH: 200 years: +45 %: 960 mins: Summer	193.3 30	190.1 93	190.26 0	0.067	79.2	0.119	0.000	79.2	1163.407	OK
FEH: 200 years: +45 %: 960 mins: Winter	193.3 30	190.1 93	190.25 0	0.057	57.2	0.101	0.000	57.2	1303.085	OK
FEH: 200 years: +45 %: 1440 mins: Summer	193.3 30	190.1 93	190.25 1	0.058	58.4	0.102	0.000	58.4	1286.556	OK
FEH: 200 years: +45 %: 1440 mins: Winter	193.3 30	190.1 93	190.24 2	0.049	42.2	0.086	0.000	42.2	1440.608	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		




Summary Results for S-34: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FEH: 200 years: +45 %: 15 mins: Summer	196.336	194.736	194.956	0.220	97.0	0.249	0.000	71.2	42.050	OK
FEH: 200 years: +45 %: 15 mins: Winter	196.336	194.736	195.318	0.582	102.0	0.659	0.000	76.3	47.115	Surcharged
FEH: 200 years: +45 %: 30 mins: Summer	196.336	194.736	194.880	0.144	66.9	0.163	0.000	66.9	57.979	OK
FEH: 200 years: +45 %: 30 mins: Winter	196.336	194.736	194.884	0.148	70.4	0.167	0.000	70.4	64.935	OK
FEH: 200 years: +45 %: 60 mins: Summer	196.336	194.736	194.871	0.135	59.7	0.153	0.000	59.7	74.599	OK
FEH: 200 years: +45 %: 60 mins: Winter	196.336	194.736	194.863	0.127	53.8	0.144	0.000	53.8	83.553	OK
FEH: 200 years: +45 %: 120 mins: Summer	196.336	194.736	194.844	0.108	40.3	0.123	0.000	40.3	84.851	OK
FEH: 200 years: +45 %: 120 mins: Winter	196.336	194.736	194.833	0.097	32.5	0.109	0.000	32.5	95.046	OK
FEH: 200 years: +45 %: 180 mins: Summer	196.336	194.736	194.830	0.094	30.5	0.106	0.000	30.5	91.062	OK
FEH: 200 years: +45 %: 180 mins: Winter	196.336	194.736	194.818	0.082	23.5	0.093	0.000	23.5	102.018	OK
FEH: 200 years: +45 %: 240 mins: Summer	196.336	194.736	194.820	0.084	24.8	0.095	0.000	24.8	95.721	OK
FEH: 200 years: +45 %: 240 mins: Winter	196.336	194.736	194.809	0.073	18.7	0.082	0.000	18.7	107.202	OK
FEH: 200 years: +45 %: 360 mins: Summer	196.336	194.736	194.808	0.072	18.2	0.081	0.000	18.2	102.876	OK
FEH: 200 years: +45 %: 360 mins: Winter	196.336	194.736	194.798	0.062	13.4	0.070	0.000	13.4	115.254	OK
FEH: 200 years: +45 %: 480 mins: Summer	196.336	194.736	194.801	0.065	14.7	0.073	0.000	14.7	108.552	OK
FEH: 200 years: +45 %: 480 mins: Winter	196.336	194.736	194.791	0.055	10.7	0.062	0.000	10.7	121.578	OK
FEH: 200 years: +45 %: 600 mins: Summer	196.336	194.736	194.795	0.059	12.4	0.067	0.000	12.4	113.400	OK
FEH: 200 years: +45 %: 600 mins: Winter	196.336	194.736	194.786	0.050	8.9	0.057	0.000	8.9	127.014	OK
FEH: 200 years: +45 %: 720 mins: Summer	196.336	194.736	194.791	0.055	10.7	0.062	0.000	10.7	117.726	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


FEH: 200 years: +45 %: 720 mins: Winter	196.3 36	194.7 36	194.78 3	0.047	7.7	0.053	0.000	7.7	131.880	OK
FEH: 200 years: +45 %: 960 mins: Summer	196.3 36	194.7 36	194.78 5	0.049	8.5	0.056	0.000	8.5	125.436	OK
FEH: 200 years: +45 %: 960 mins: Winter	196.3 36	194.7 36	194.77 8	0.042	6.2	0.048	0.000	6.2	140.508	OK
FEH: 200 years: +45 %: 1440 mins: Summer	196.3 36	194.7 36	194.77 9	0.043	6.3	0.048	0.000	6.3	138.733	OK
FEH: 200 years: +45 %: 1440 mins: Winter	196.3 36	194.7 36	194.77 2	0.036	4.6	0.041	0.000	4.6	155.310	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB:		Date:		
Proposed Site for Battery Storage_RevB		24/11/2024		
1:200 Storm Event + 45% Climate Change_RevB		Designed by:	Checked by:	
Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		M.H	S.L	S.L
Report Details:		Kemp House:		
Type: Junctions Summary		124 City Road		
Storm Phase: Phase		London		
		EC1V 2NX		




Summary Results for S-35: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FEH: 200 years: +45 %: 15 mins: Summer	195.887	193.958	194.842	0.884	153.3	1.000	0.000	145.6	77.763	Surcharged
FEH: 200 years: +45 %: 15 mins: Winter	195.887	193.958	194.983	1.025	162.6	1.159	0.000	142.8	87.117	Surcharged
FEH: 200 years: +45 %: 30 mins: Summer	195.887	193.958	194.163	0.205	123.6	0.231	0.000	123.6	106.978	OK
FEH: 200 years: +45 %: 30 mins: Winter	195.887	193.958	194.280	0.322	130.0	0.364	0.000	127.0	119.804	Surcharged
FEH: 200 years: +45 %: 60 mins: Summer	195.887	193.958	194.148	0.190	110.3	0.215	0.000	110.3	137.734	OK
FEH: 200 years: +45 %: 60 mins: Winter	195.887	193.958	194.135	0.177	99.3	0.200	0.000	99.3	154.276	OK
FEH: 200 years: +45 %: 120 mins: Summer	195.887	193.958	194.105	0.147	74.4	0.166	0.000	74.4	156.674	OK
FEH: 200 years: +45 %: 120 mins: Winter	195.887	193.958	194.087	0.129	59.9	0.146	0.000	59.9	175.509	OK
FEH: 200 years: +45 %: 180 mins: Summer	195.887	193.958	194.083	0.125	56.3	0.141	0.000	56.3	168.170	OK
FEH: 200 years: +45 %: 180 mins: Winter	195.887	193.958	194.066	0.108	43.5	0.122	0.000	43.5	188.373	OK
FEH: 200 years: +45 %: 240 mins: Summer	195.887	193.958	194.069	0.111	45.8	0.125	0.000	45.8	176.744	OK
FEH: 200 years: +45 %: 240 mins: Winter	195.887	193.958	194.053	0.095	34.5	0.108	0.000	34.5	197.982	OK
FEH: 200 years: +45 %: 360 mins: Summer	195.887	193.958	194.052	0.094	33.7	0.106	0.000	33.7	189.976	OK
FEH: 200 years: +45 %: 360 mins: Winter	195.887	193.958	194.038	0.080	24.8	0.091	0.000	24.8	212.816	OK
FEH: 200 years: +45 %: 480 mins: Summer	195.887	193.958	194.042	0.084	27.2	0.095	0.000	27.2	200.459	OK
FEH: 200 years: +45 %: 480 mins: Winter	195.887	193.958	194.029	0.071	19.7	0.081	0.000	19.7	224.496	OK
FEH: 200 years: +45 %: 600 mins: Summer	195.887	193.958	194.035	0.077	22.8	0.087	0.000	22.8	209.424	OK
FEH: 200 years: +45 %: 600 mins: Winter	195.887	193.958	194.023	0.065	16.5	0.074	0.000	16.5	234.562	OK
FEH: 200 years: +45 %: 720 mins: Summer	195.887	193.958	194.029	0.071	19.7	0.081	0.000	19.7	217.408	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


FEH: 200 years: +45 %: 720 mins: Winter	195.8 87	193.9 58	194.01 9	0.061	14.3	0.069	0.000	14.3	243.523	OK
FEH: 200 years: +45 %: 960 mins: Summer	195.8 87	193.9 58	194.02 2	0.064	15.8	0.072	0.000	15.8	231.650	OK
FEH: 200 years: +45 %: 960 mins: Winter	195.8 87	193.9 58	194.01 2	0.054	11.4	0.061	0.000	11.4	259.492	OK
FEH: 200 years: +45 %: 1440 mins: Summer	195.8 87	193.9 58	194.01 3	0.055	11.6	0.062	0.000	11.6	256.209	OK
FEH: 200 years: +45 %: 1440 mins: Winter	195.8 87	193.9 58	194.00 5	0.047	8.4	0.053	0.000	8.4	286.913	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB:		Date:		
Proposed Site for Battery Storage_RevB		24/11/2024		
1:200 Storm Event + 45% Climate Change_RevB		Designed by:	Checked by:	
Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		M.H	S.L	S.L
Report Details:		Kemp House:		
Type: Junctions Summary		124 City Road		
Storm Phase: Phase		London		
		EC1V 2NX		




Summary Results for S-36: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FEH: 200 years: +45 %: 15 mins: Summer	195.407	192.966	193.921	0.955	205.5	1.080	0.000	190.1	103.884	Surcharged
FEH: 200 years: +45 %: 15 mins: Winter	195.407	192.966	194.099	1.133	205.7	1.282	0.000	197.1	116.361	Surcharged
FEH: 200 years: +45 %: 30 mins: Summer	195.407	192.966	193.497	0.531	164.9	0.601	0.000	164.9	142.821	Surcharged
FEH: 200 years: +45 %: 30 mins: Winter	195.407	192.966	193.578	0.612	170.4	0.692	0.000	170.0	159.989	Surcharged
FEH: 200 years: +45 %: 60 mins: Summer	195.407	192.966	193.211	0.245	147.1	0.277	0.000	147.1	183.787	OK
FEH: 200 years: +45 %: 60 mins: Winter	195.407	192.966	193.187	0.221	132.5	0.250	0.000	132.5	205.855	OK
FEH: 200 years: +45 %: 120 mins: Summer	195.407	192.966	193.143	0.177	99.2	0.201	0.000	99.2	209.071	OK
FEH: 200 years: +45 %: 120 mins: Winter	195.407	192.966	193.120	0.154	80.0	0.174	0.000	80.0	234.183	OK
FEH: 200 years: +45 %: 180 mins: Summer	195.407	192.966	193.114	0.148	75.2	0.167	0.000	75.2	224.402	OK
FEH: 200 years: +45 %: 180 mins: Winter	195.407	192.966	193.092	0.126	58.0	0.142	0.000	58.0	251.362	OK
FEH: 200 years: +45 %: 240 mins: Summer	195.407	192.966	193.096	0.130	61.1	0.147	0.000	61.1	235.851	OK
FEH: 200 years: +45 %: 240 mins: Winter	195.407	192.966	193.076	0.110	46.0	0.125	0.000	46.0	264.187	OK
FEH: 200 years: +45 %: 360 mins: Summer	195.407	192.966	193.075	0.109	44.9	0.123	0.000	44.9	253.492	OK
FEH: 200 years: +45 %: 360 mins: Winter	195.407	192.966	193.058	0.092	33.1	0.104	0.000	33.1	283.985	OK
FEH: 200 years: +45 %: 480 mins: Summer	195.407	192.966	193.062	0.096	36.3	0.109	0.000	36.3	267.480	OK
FEH: 200 years: +45 %: 480 mins: Winter	195.407	192.966	193.047	0.081	26.3	0.091	0.000	26.3	299.541	OK
FEH: 200 years: +45 %: 600 mins: Summer	195.407	192.966	193.053	0.087	30.4	0.099	0.000	30.4	279.434	OK
FEH: 200 years: +45 %: 600 mins: Winter	195.407	192.966	193.040	0.074	22.0	0.083	0.000	22.0	312.961	OK
FEH: 200 years: +45 %: 720 mins: Summer	195.407	192.966	193.047	0.081	26.3	0.091	0.000	26.3	290.118	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


FEH: 200 years: +45 %: 720 mins: Winter	195.4 07	192.9 66	193.03 4	0.068	19.0	0.077	0.000	19.0	324.935	OK
FEH: 200 years: +45 %: 960 mins: Summer	195.4 07	192.9 66	193.03 8	0.072	21.0	0.081	0.000	21.0	309.088	OK
FEH: 200 years: +45 %: 960 mins: Winter	195.4 07	192.9 66	193.02 7	0.061	15.2	0.069	0.000	15.2	346.269	OK
FEH: 200 years: +45 %: 1440 mins: Summer	195.4 07	192.9 66	193.02 7	0.061	15.5	0.069	0.000	15.5	341.964	OK
FEH: 200 years: +45 %: 1440 mins: Winter	195.4 07	192.9 66	193.01 8	0.052	11.2	0.059	0.000	11.2	382.810	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB:		Date:		
Proposed Site for Battery Storage_RevB		24/11/2024		
1:200 Storm Event + 45% Climate Change_RevB		Designed by:	Checked by:	
Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		M.H	S.L	S.L
Report Details:		Kemp House:		
Type: Junctions Summary		124 City Road		
Storm Phase: Phase		London		
		EC1V 2NX		




Summary Results for S-37: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FEH: 200 years: +45 %: 15 mins: Summer	194.784	192.452	193.150	0.698	236.0	0.790	0.000	224.8	123.840	Surcharged
FEH: 200 years: +45 %: 15 mins: Winter	194.784	192.452	193.298	0.846	245.4	0.956	0.000	239.8	138.707	Surcharged
FEH: 200 years: +45 %: 30 mins: Summer	194.784	192.452	192.924	0.472	196.5	0.534	0.000	196.5	170.258	Surcharged
FEH: 200 years: +45 %: 30 mins: Winter	194.784	192.452	192.964	0.512	203.3	0.579	0.000	203.1	190.718	Surcharged
FEH: 200 years: +45 %: 60 mins: Summer	194.784	192.452	192.705	0.253	175.3	0.286	0.000	175.3	219.048	OK
FEH: 200 years: +45 %: 60 mins: Winter	194.784	192.452	192.680	0.228	157.9	0.258	0.000	157.9	245.341	OK
FEH: 200 years: +45 %: 120 mins: Summer	194.784	192.452	192.635	0.183	118.3	0.206	0.000	118.3	249.167	OK
FEH: 200 years: +45 %: 120 mins: Winter	194.784	192.452	192.610	0.158	95.3	0.179	0.000	95.3	279.099	OK
FEH: 200 years: +45 %: 180 mins: Summer	194.784	192.452	192.604	0.152	89.6	0.172	0.000	89.6	267.464	OK
FEH: 200 years: +45 %: 180 mins: Winter	194.784	192.452	192.582	0.130	69.2	0.147	0.000	69.2	299.585	OK
FEH: 200 years: +45 %: 240 mins: Summer	194.784	192.452	192.586	0.134	72.8	0.151	0.000	72.8	281.103	OK
FEH: 200 years: +45 %: 240 mins: Winter	194.784	192.452	192.565	0.113	54.9	0.128	0.000	54.9	314.884	OK
FEH: 200 years: +45 %: 360 mins: Summer	194.784	192.452	192.563	0.111	53.5	0.126	0.000	53.5	302.099	OK
FEH: 200 years: +45 %: 360 mins: Winter	194.784	192.452	192.546	0.094	39.5	0.106	0.000	39.5	338.456	OK
FEH: 200 years: +45 %: 480 mins: Summer	194.784	192.452	192.551	0.099	43.2	0.112	0.000	43.2	318.788	OK
FEH: 200 years: +45 %: 480 mins: Winter	194.784	192.452	192.535	0.083	31.3	0.094	0.000	31.3	357.019	OK
FEH: 200 years: +45 %: 600 mins: Summer	194.784	192.452	192.542	0.090	36.3	0.101	0.000	36.3	333.040	OK
FEH: 200 years: +45 %: 600 mins: Winter	194.784	192.452	192.527	0.075	26.2	0.085	0.000	26.2	372.977	OK
FEH: 200 years: +45 %: 720 mins: Summer	194.784	192.452	192.535	0.083	31.4	0.094	0.000	31.4	345.770	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024				
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L			Approved By: S.L
		Kemp House: 124 City Road London EC1V 2NX				


FEH: 200 years: +45 %: 720 mins: Winter	194.7 84	192.4 52	192.52 2	0.070	22.7	0.079	0.000	22.7	387.262	OK
FEH: 200 years: +45 %: 960 mins: Summer	194.7 84	192.4 52	192.52 6	0.074	25.1	0.083	0.000	25.1	368.378	OK
FEH: 200 years: +45 %: 960 mins: Winter	194.7 84	192.4 52	192.51 4	0.062	18.1	0.070	0.000	18.1	412.688	OK
FEH: 200 years: +45 %: 1440 mins: Summer	194.7 84	192.4 52	192.51 5	0.063	18.5	0.071	0.000	18.5	407.518	OK
FEH: 200 years: +45 %: 1440 mins: Winter	194.7 84	192.4 52	192.50 5	0.053	13.4	0.060	0.000	13.4	456.255	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		




Summary Results for S-38: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FEH: 200 years: +45 %: 15 mins: Summer	195.488	193.888	193.972	0.084	39.8	0.095	0.000	38.8	17.244	OK
FEH: 200 years: +45 %: 15 mins: Winter	195.488	193.888	193.974	0.086	41.8	0.098	0.000	41.1	19.320	OK
FEH: 200 years: +45 %: 30 mins: Summer	195.488	193.888	193.959	0.071	27.5	0.080	0.000	27.5	23.753	OK
FEH: 200 years: +45 %: 30 mins: Winter	195.488	193.888	193.960	0.072	28.9	0.082	0.000	28.9	26.605	OK
FEH: 200 years: +45 %: 60 mins: Summer	195.488	193.888	193.955	0.067	24.5	0.075	0.000	24.5	30.578	OK
FEH: 200 years: +45 %: 60 mins: Winter	195.488	193.888	193.951	0.063	22.1	0.071	0.000	22.1	34.260	OK
FEH: 200 years: +45 %: 120 mins: Summer	195.488	193.888	193.943	0.055	16.5	0.062	0.000	16.5	34.798	OK
FEH: 200 years: +45 %: 120 mins: Winter	195.488	193.888	193.938	0.050	13.3	0.056	0.000	13.3	38.985	OK
FEH: 200 years: +45 %: 180 mins: Summer	195.488	193.888	193.936	0.048	12.5	0.054	0.000	12.5	37.370	OK
FEH: 200 years: +45 %: 180 mins: Winter	195.488	193.888	193.930	0.042	9.7	0.048	0.000	9.7	41.842	OK
FEH: 200 years: +45 %: 240 mins: Summer	195.488	193.888	193.931	0.043	10.2	0.049	0.000	10.2	39.249	OK
FEH: 200 years: +45 %: 240 mins: Winter	195.488	193.888	193.926	0.038	7.7	0.043	0.000	7.7	43.978	OK
FEH: 200 years: +45 %: 360 mins: Summer	195.488	193.888	193.925	0.037	7.5	0.042	0.000	7.5	42.195	OK
FEH: 200 years: +45 %: 360 mins: Winter	195.488	193.888	193.920	0.032	5.5	0.036	0.000	5.5	47.267	OK
FEH: 200 years: +45 %: 480 mins: Summer	195.488	193.888	193.922	0.034	6.0	0.038	0.000	6.0	44.560	OK
FEH: 200 years: +45 %: 480 mins: Winter	195.488	193.888	193.917	0.029	4.4	0.033	0.000	4.4	49.865	OK
FEH: 200 years: +45 %: 600 mins: Summer	195.488	193.888	193.919	0.031	5.1	0.035	0.000	5.1	46.516	OK
FEH: 200 years: +45 %: 600 mins: Winter	195.488	193.888	193.915	0.027	3.7	0.030	0.000	3.7	52.115	OK
FEH: 200 years: +45 %: 720 mins: Summer	195.488	193.888	193.917	0.029	4.4	0.033	0.000	4.4	48.292	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024				
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L			Approved By: S.L
		Kemp House: 124 City Road London EC1V 2NX				


FEH: 200 years: +45 %: 720 mins: Winter	195.4 88	193.8 88	193.91 3	0.025	3.2	0.028	0.000	3.2	54.107	OK
FEH: 200 years: +45 %: 960 mins: Summer	195.4 88	193.8 88	193.91 4	0.026	3.5	0.029	0.000	3.5	51.430	OK
FEH: 200 years: +45 %: 960 mins: Winter	195.4 88	193.8 88	193.91 0	0.022	2.5	0.025	0.000	2.5	57.641	OK
FEH: 200 years: +45 %: 1440 mins: Summer	195.4 88	193.8 88	193.91 0	0.022	2.6	0.025	0.000	2.6	56.891	OK
FEH: 200 years: +45 %: 1440 mins: Winter	195.4 88	193.8 88	193.90 7	0.019	1.9	0.022	0.000	1.9	63.725	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB:		Date:		
Proposed Site for Battery Storage_RevB		24/11/2024		
1:200 Storm Event + 45% Climate Change_RevB		Designed by:	Checked by:	
Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		M.H	S.L	S.L
Report Details:		Kemp House:		
Type: Junctions Summary		124 City Road		
Storm Phase: Phase		London		
		EC1V 2NX		




Summary Results for S-39: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FEH: 200 years: +45 %: 15 mins: Summer	194.984	191.614	191.980	0.366	316.8	0.647	0.000	305.9	164.326	OK
FEH: 200 years: +45 %: 15 mins: Winter	194.984	191.614	192.003	0.389	336.9	0.687	0.000	322.9	184.063	OK
FEH: 200 years: +45 %: 30 mins: Summer	194.984	191.614	191.927	0.313	260.7	0.553	0.000	260.6	225.872	OK
FEH: 200 years: +45 %: 30 mins: Winter	194.984	191.614	191.937	0.323	270.5	0.570	0.000	270.3	253.023	OK
FEH: 200 years: +45 %: 60 mins: Summer	194.984	191.614	191.901	0.287	232.6	0.506	0.000	232.6	290.570	OK
FEH: 200 years: +45 %: 60 mins: Winter	194.984	191.614	191.880	0.266	209.5	0.469	0.000	209.5	325.446	OK
FEH: 200 years: +45 %: 120 mins: Summer	194.984	191.614	191.832	0.218	156.9	0.386	0.000	156.9	330.516	OK
FEH: 200 years: +45 %: 120 mins: Winter	194.984	191.614	191.804	0.190	126.4	0.336	0.000	126.4	370.211	OK
FEH: 200 years: +45 %: 180 mins: Summer	194.984	191.614	191.797	0.183	118.9	0.323	0.000	118.9	354.796	OK
FEH: 200 years: +45 %: 180 mins: Winter	194.984	191.614	191.771	0.157	91.7	0.277	0.000	91.7	397.373	OK
FEH: 200 years: +45 %: 240 mins: Summer	194.984	191.614	191.775	0.161	96.6	0.285	0.000	96.6	372.866	OK
FEH: 200 years: +45 %: 240 mins: Winter	194.984	191.614	191.751	0.137	72.8	0.242	0.000	72.8	417.683	OK
FEH: 200 years: +45 %: 360 mins: Summer	194.984	191.614	191.749	0.135	71.0	0.238	0.000	71.0	400.715	OK
FEH: 200 years: +45 %: 360 mins: Winter	194.984	191.614	191.727	0.113	52.3	0.201	0.000	52.4	448.919	OK
FEH: 200 years: +45 %: 480 mins: Summer	194.984	191.614	191.733	0.119	57.4	0.211	0.000	57.4	422.896	OK
FEH: 200 years: +45 %: 480 mins: Winter	194.984	191.614	191.714	0.100	41.6	0.177	0.000	41.6	473.570	OK
FEH: 200 years: +45 %: 600 mins: Summer	194.984	191.614	191.722	0.108	48.1	0.191	0.000	48.1	441.769	OK
FEH: 200 years: +45 %: 600 mins: Winter	194.984	191.614	191.705	0.091	34.8	0.160	0.000	34.8	494.727	OK
FEH: 200 years: +45 %: 720 mins: Summer	194.984	191.614	191.714	0.100	41.6	0.177	0.000	41.6	458.645	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024				
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L			Approved By: S.L
		Kemp House: 124 City Road London EC1V 2NX				


FEH: 200 years: +45 %: 720 mins: Winter	194.9 84	191.6 14	191.69 8	0.084	30.1	0.148	0.000	30.1	513.704	OK
FEH: 200 years: +45 %: 960 mins: Summer	194.9 84	191.6 14	191.70 3	0.089	33.3	0.157	0.000	33.3	488.597	OK
FEH: 200 years: +45 %: 960 mins: Winter	194.9 84	191.6 14	191.68 9	0.075	24.0	0.132	0.000	24.0	547.410	OK
FEH: 200 years: +45 %: 1440 mins: Summer	194.9 84	191.6 14	191.68 9	0.075	24.5	0.133	0.000	24.5	540.499	OK
FEH: 200 years: +45 %: 1440 mins: Winter	194.9 84	191.6 14	191.67 8	0.064	17.7	0.113	0.000	17.7	605.197	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB:		Date:		
Proposed Site for Battery Storage_RevB		24/11/2024		
1:200 Storm Event + 45% Climate Change_RevB		Designed by:	Checked by:	
Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		M.H	S.L	S.L
Report Details:		Kemp House:		
Type: Junctions Summary		124 City Road		
Storm Phase: Phase		London		
		EC1V 2NX		




Summary Results for S-40: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FEH: 200 years: +45 %: 15 mins: Summer	194.895	193.070	193.155	0.085	36.7	0.096	0.000	35.9	15.907	OK
FEH: 200 years: +45 %: 15 mins: Winter	194.895	193.070	193.157	0.087	38.6	0.098	0.000	37.8	17.826	OK
FEH: 200 years: +45 %: 30 mins: Summer	194.895	193.070	193.141	0.071	25.3	0.081	0.000	25.3	21.903	OK
FEH: 200 years: +45 %: 30 mins: Winter	194.895	193.070	193.143	0.073	26.6	0.083	0.000	26.6	24.545	OK
FEH: 200 years: +45 %: 60 mins: Summer	194.895	193.070	193.137	0.067	22.6	0.076	0.000	22.6	28.200	OK
FEH: 200 years: +45 %: 60 mins: Winter	194.895	193.070	193.134	0.064	20.4	0.072	0.000	20.4	31.607	OK
FEH: 200 years: +45 %: 120 mins: Summer	194.895	193.070	193.125	0.055	15.2	0.062	0.000	15.2	32.097	OK
FEH: 200 years: +45 %: 120 mins: Winter	194.895	193.070	193.120	0.050	12.3	0.056	0.000	12.3	35.951	OK
FEH: 200 years: +45 %: 180 mins: Summer	194.895	193.070	193.119	0.049	11.6	0.055	0.000	11.6	34.461	OK
FEH: 200 years: +45 %: 180 mins: Winter	194.895	193.070	193.113	0.043	8.9	0.048	0.000	8.9	38.590	OK
FEH: 200 years: +45 %: 240 mins: Summer	194.895	193.070	193.114	0.044	9.4	0.050	0.000	9.4	36.213	OK
FEH: 200 years: +45 %: 240 mins: Winter	194.895	193.070	193.108	0.038	7.1	0.043	0.000	7.1	40.564	OK
FEH: 200 years: +45 %: 360 mins: Summer	194.895	193.070	193.108	0.038	6.9	0.043	0.000	6.9	38.926	OK
FEH: 200 years: +45 %: 360 mins: Winter	194.895	193.070	193.103	0.033	5.1	0.037	0.000	5.1	43.601	OK
FEH: 200 years: +45 %: 480 mins: Summer	194.895	193.070	193.104	0.034	5.6	0.038	0.000	5.6	41.056	OK
FEH: 200 years: +45 %: 480 mins: Winter	194.895	193.070	193.099	0.029	4.0	0.033	0.000	4.0	45.995	OK
FEH: 200 years: +45 %: 600 mins: Summer	194.895	193.070	193.101	0.031	4.7	0.035	0.000	4.7	42.910	OK
FEH: 200 years: +45 %: 600 mins: Winter	194.895	193.070	193.097	0.027	3.4	0.030	0.000	3.4	48.065	OK
FEH: 200 years: +45 %: 720 mins: Summer	194.895	193.070	193.099	0.029	4.0	0.033	0.000	4.0	44.542	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024				
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L			Approved By: S.L
		Kemp House: 124 City Road London EC1V 2NX				


FEH: 200 years: +45 %: 720 mins: Winter	194.8 95	193.0 70	193.09 5	0.025	2.9	0.028	0.000	2.9	49.877	OK
FEH: 200 years: +45 %: 960 mins: Summer	194.8 95	193.0 70	193.09 6	0.026	3.2	0.030	0.000	3.2	47.434	OK
FEH: 200 years: +45 %: 960 mins: Winter	194.8 95	193.0 70	193.09 2	0.022	2.3	0.025	0.000	2.3	53.129	OK
FEH: 200 years: +45 %: 1440 mins: Summer	194.8 95	193.0 70	193.09 3	0.023	2.4	0.026	0.000	2.4	52.457	OK
FEH: 200 years: +45 %: 1440 mins: Winter	194.8 95	193.0 70	193.08 9	0.019	1.7	0.022	0.000	1.7	58.751	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		




Summary Results for S-41: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FEH: 200 years: +45 %: 15 mins: Summer	194.4 36	191.3 10	191.68 0	0.370	390.6	0.653	0.000	381.0	201.528	OK
FEH: 200 years: +45 %: 15 mins: Winter	194.4 36	191.3 10	191.69 5	0.385	412.1	0.681	0.000	398.5	225.717	OK
FEH: 200 years: +45 %: 30 mins: Summer	194.4 36	191.3 10	191.63 0	0.320	319.6	0.566	0.000	319.6	276.987	OK
FEH: 200 years: +45 %: 30 mins: Winter	194.4 36	191.3 10	191.63 9	0.329	332.4	0.582	0.000	332.4	310.272	OK
FEH: 200 years: +45 %: 60 mins: Summer	194.4 36	191.3 10	191.60 6	0.296	285.2	0.523	0.000	285.2	356.333	OK
FEH: 200 years: +45 %: 60 mins: Winter	194.4 36	191.3 10	191.58 7	0.277	256.9	0.489	0.000	256.9	399.110	OK
FEH: 200 years: +45 %: 120 mins: Summer	194.4 36	191.3 10	191.54 1	0.231	192.4	0.409	0.000	192.4	405.308	OK
FEH: 200 years: +45 %: 120 mins: Winter	194.4 36	191.3 10	191.51 4	0.204	155.0	0.361	0.000	155.0	453.982	OK
FEH: 200 years: +45 %: 180 mins: Summer	194.4 36	191.3 10	191.50 7	0.197	145.8	0.348	0.000	145.8	435.100	OK
FEH: 200 years: +45 %: 180 mins: Winter	194.4 36	191.3 10	191.48 1	0.171	112.5	0.301	0.000	112.5	487.280	OK
FEH: 200 years: +45 %: 240 mins: Summer	194.4 36	191.3 10	191.48 5	0.175	118.5	0.310	0.000	118.5	457.251	OK
FEH: 200 years: +45 %: 240 mins: Winter	194.4 36	191.3 10	191.46 1	0.151	89.2	0.266	0.000	89.2	512.200	OK
FEH: 200 years: +45 %: 360 mins: Summer	194.4 36	191.3 10	191.45 8	0.148	87.0	0.262	0.000	87.0	491.415	OK
FEH: 200 years: +45 %: 360 mins: Winter	194.4 36	191.3 10	191.43 7	0.127	64.2	0.224	0.000	64.2	550.505	OK
FEH: 200 years: +45 %: 480 mins: Summer	194.4 36	191.3 10	191.44 3	0.133	70.3	0.234	0.000	70.3	518.588	OK
FEH: 200 years: +45 %: 480 mins: Winter	194.4 36	191.3 10	191.42 2	0.112	51.0	0.199	0.000	51.0	580.742	OK
FEH: 200 years: +45 %: 600 mins: Summer	194.4 36	191.3 10	191.43 1	0.121	59.0	0.214	0.000	59.0	541.709	OK
FEH: 200 years: +45 %: 600 mins: Winter	194.4 36	191.3 10	191.41 3	0.103	42.6	0.181	0.000	42.6	606.701	OK
FEH: 200 years: +45 %: 720 mins: Summer	194.4 36	191.3 10	191.42 2	0.112	51.0	0.198	0.000	51.0	562.435	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024				
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L			Approved By: S.L
		Kemp House: 124 City Road London EC1V 2NX				


FEH: 200 years: +45 %: 720 mins: Winter	194.4 36	191.3 10	191.40 5	0.095	36.9	0.168	0.000	36.9	629.938	OK
FEH: 200 years: +45 %: 960 mins: Summer	194.4 36	191.3 10	191.41 0	0.100	40.8	0.177	0.000	40.8	599.165	OK
FEH: 200 years: +45 %: 960 mins: Winter	194.4 36	191.3 10	191.39 5	0.085	29.5	0.150	0.000	29.5	671.277	OK
FEH: 200 years: +45 %: 1440 mins: Summer	194.4 36	191.3 10	191.39 6	0.086	30.1	0.152	0.000	30.1	662.762	OK
FEH: 200 years: +45 %: 1440 mins: Winter	194.4 36	191.3 10	191.38 3	0.073	21.7	0.129	0.000	21.7	742.097	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB:		Date:		
Proposed Site for Battery Storage_RevB		24/11/2024		
1:200 Storm Event + 45% Climate Change_RevB		Designed by:	Checked by:	
Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		M.H	S.L	S.L
Report Details:		Kemp House:		
Type: Junctions Summary		124 City Road		
Storm Phase: Phase		London		
		EC1V 2NX		




Summary Results for S-42: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FEH: 200 years: +45 %: 15 mins: Summer	194.384	192.401	192.496	0.095	39.4	0.108	0.000	38.6	17.136	OK
FEH: 200 years: +45 %: 15 mins: Winter	194.384	192.401	192.499	0.098	41.5	0.111	0.000	40.6	19.193	OK
FEH: 200 years: +45 %: 30 mins: Summer	194.384	192.401	192.480	0.079	27.2	0.090	0.000	27.2	23.569	OK
FEH: 200 years: +45 %: 30 mins: Winter	194.384	192.401	192.482	0.081	28.6	0.092	0.000	28.6	26.402	OK
FEH: 200 years: +45 %: 60 mins: Summer	194.384	192.401	192.476	0.075	24.3	0.085	0.000	24.3	30.327	OK
FEH: 200 years: +45 %: 60 mins: Winter	194.384	192.401	192.472	0.071	21.9	0.080	0.000	21.9	33.969	OK
FEH: 200 years: +45 %: 120 mins: Summer	194.384	192.401	192.462	0.061	16.4	0.070	0.000	16.4	34.498	OK
FEH: 200 years: +45 %: 120 mins: Winter	194.384	192.401	192.456	0.055	13.2	0.063	0.000	13.2	38.645	OK
FEH: 200 years: +45 %: 180 mins: Summer	194.384	192.401	192.455	0.054	12.4	0.061	0.000	12.4	37.031	OK
FEH: 200 years: +45 %: 180 mins: Winter	194.384	192.401	192.448	0.047	9.6	0.053	0.000	9.6	41.483	OK
FEH: 200 years: +45 %: 240 mins: Summer	194.384	192.401	192.449	0.048	10.1	0.055	0.000	10.1	38.909	OK
FEH: 200 years: +45 %: 240 mins: Winter	194.384	192.401	192.443	0.042	7.6	0.048	0.000	7.6	43.595	OK
FEH: 200 years: +45 %: 360 mins: Summer	194.384	192.401	192.443	0.042	7.4	0.047	0.000	7.4	41.855	OK
FEH: 200 years: +45 %: 360 mins: Winter	194.384	192.401	192.437	0.036	5.5	0.041	0.000	5.5	46.836	OK
FEH: 200 years: +45 %: 480 mins: Summer	194.384	192.401	192.439	0.038	6.0	0.043	0.000	6.0	44.123	OK
FEH: 200 years: +45 %: 480 mins: Winter	194.384	192.401	192.433	0.032	4.3	0.036	0.000	4.3	49.422	OK
FEH: 200 years: +45 %: 600 mins: Summer	194.384	192.401	192.436	0.035	5.0	0.039	0.000	5.0	46.127	OK
FEH: 200 years: +45 %: 600 mins: Winter	194.384	192.401	192.431	0.030	3.6	0.034	0.000	3.6	51.654	OK
FEH: 200 years: +45 %: 720 mins: Summer	194.384	192.401	192.433	0.032	4.3	0.036	0.000	4.3	47.855	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


FEH: 200 years: +45 %: 720 mins: Winter	194.3 84	192.4 01	192.42 9	0.028	3.1	0.031	0.000	3.1	53.580	OK
FEH: 200 years: +45 %: 960 mins: Summer	194.3 84	192.4 01	192.43 0	0.029	3.5	0.033	0.000	3.5	50.994	OK
FEH: 200 years: +45 %: 960 mins: Winter	194.3 84	192.4 01	192.42 6	0.025	2.5	0.028	0.000	2.5	57.108	OK
FEH: 200 years: +45 %: 1440 mins: Summer	194.3 84	192.4 01	192.42 6	0.025	2.6	0.028	0.000	2.6	56.406	OK
FEH: 200 years: +45 %: 1440 mins: Winter	194.3 84	192.4 01	192.42 3	0.022	1.9	0.024	0.000	1.9	63.168	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB:		Date:		
Proposed Site for Battery Storage_RevB		24/11/2024		
1:200 Storm Event + 45% Climate Change_RevB		Designed by:	Checked by:	
Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		M.H	S.L	S.L
Report Details:		Kemp House:		
Type: Junctions Summary		124 City Road		
Storm Phase: Phase		London		
		EC1V 2NX		




Summary Results for S-43: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FEH: 200 years: +45 %: 15 mins: Summer	194.018	191.441	191.601	0.160	89.8	0.181	0.000	87.0	39.391	OK
FEH: 200 years: +45 %: 15 mins: Winter	194.018	191.441	191.606	0.165	94.5	0.187	0.000	91.7	44.115	OK
FEH: 200 years: +45 %: 30 mins: Summer	194.018	191.441	191.570	0.129	62.6	0.146	0.000	62.6	54.191	OK
FEH: 200 years: +45 %: 30 mins: Winter	194.018	191.441	191.574	0.133	65.8	0.151	0.000	65.8	60.696	OK
FEH: 200 years: +45 %: 60 mins: Summer	194.018	191.441	191.561	0.120	55.8	0.136	0.000	55.8	69.717	OK
FEH: 200 years: +45 %: 60 mins: Winter	194.018	191.441	191.554	0.113	50.3	0.128	0.000	50.3	78.089	OK
FEH: 200 years: +45 %: 120 mins: Summer	194.018	191.441	191.537	0.096	37.6	0.108	0.000	37.6	79.317	OK
FEH: 200 years: +45 %: 120 mins: Winter	194.018	191.441	191.526	0.085	30.3	0.096	0.000	30.3	88.841	OK
FEH: 200 years: +45 %: 180 mins: Summer	194.018	191.441	191.523	0.082	28.5	0.093	0.000	28.5	85.139	OK
FEH: 200 years: +45 %: 180 mins: Winter	194.018	191.441	191.512	0.071	22.0	0.080	0.000	22.0	95.359	OK
FEH: 200 years: +45 %: 240 mins: Summer	194.018	191.441	191.514	0.073	23.2	0.083	0.000	23.2	89.454	OK
FEH: 200 years: +45 %: 240 mins: Winter	194.018	191.441	191.504	0.063	17.5	0.071	0.000	17.5	100.232	OK
FEH: 200 years: +45 %: 360 mins: Summer	194.018	191.441	191.503	0.062	17.0	0.070	0.000	17.0	96.175	OK
FEH: 200 years: +45 %: 360 mins: Winter	194.018	191.441	191.494	0.053	12.6	0.060	0.000	12.6	107.709	OK
FEH: 200 years: +45 %: 480 mins: Summer	194.018	191.441	191.496	0.055	13.8	0.063	0.000	13.8	101.462	OK
FEH: 200 years: +45 %: 480 mins: Winter	194.018	191.441	191.488	0.047	10.0	0.053	0.000	10.0	113.638	OK
FEH: 200 years: +45 %: 600 mins: Summer	194.018	191.441	191.492	0.051	11.5	0.057	0.000	11.5	106.046	OK
FEH: 200 years: +45 %: 600 mins: Winter	194.018	191.441	191.484	0.043	8.3	0.048	0.000	8.3	118.738	OK
FEH: 200 years: +45 %: 720 mins: Summer	194.018	191.441	191.488	0.047	10.0	0.053	0.000	10.0	110.025	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024				
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L			Approved By: S.L
		Kemp House: 124 City Road London EC1V 2NX				


FEH: 200 years: +45 %: 720 mins: Winter	194.0 18	191.4 41	191.48 1	0.040	7.2	0.045	0.000	7.2	123.220	OK
FEH: 200 years: +45 %: 960 mins: Summer	194.0 18	191.4 41	191.48 3	0.042	8.0	0.047	0.000	8.0	117.243	OK
FEH: 200 years: +45 %: 960 mins: Winter	194.0 18	191.4 41	191.47 7	0.036	5.8	0.040	0.000	5.8	131.315	OK
FEH: 200 years: +45 %: 1440 mins: Summer	194.0 18	191.4 41	191.47 7	0.036	5.9	0.041	0.000	5.9	129.646	OK
FEH: 200 years: +45 %: 1440 mins: Winter	194.0 18	191.4 41	191.47 2	0.031	4.3	0.035	0.000	4.3	145.211	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		




Summary Results for S-44: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FEH: 200 years: +45 %: 15 mins: Summer	194.0 06	192.9 83	193.04 4	0.061	13.4	0.017	0.000	13.2	5.839	OK
FEH: 200 years: +45 %: 15 mins: Winter	194.0 06	192.9 83	193.04 5	0.062	14.1	0.018	0.000	13.9	6.544	OK
FEH: 200 years: +45 %: 30 mins: Summer	194.0 06	192.9 83	193.03 4	0.051	9.3	0.014	0.000	9.3	8.026	OK
FEH: 200 years: +45 %: 30 mins: Winter	194.0 06	192.9 83	193.03 5	0.052	9.8	0.015	0.000	9.8	8.999	OK
FEH: 200 years: +45 %: 60 mins: Summer	194.0 06	192.9 83	193.03 1	0.048	8.3	0.014	0.000	8.3	10.337	OK
FEH: 200 years: +45 %: 60 mins: Winter	194.0 06	192.9 83	193.02 9	0.046	7.4	0.013	0.000	7.4	11.573	OK
FEH: 200 years: +45 %: 120 mins: Summer	194.0 06	192.9 83	193.02 3	0.040	5.6	0.011	0.000	5.6	11.753	OK
FEH: 200 years: +45 %: 120 mins: Winter	194.0 06	192.9 83	193.01 9	0.036	4.5	0.010	0.000	4.5	13.163	OK
FEH: 200 years: +45 %: 180 mins: Summer	194.0 06	192.9 83	193.01 8	0.035	4.2	0.010	0.000	4.2	12.629	OK
FEH: 200 years: +45 %: 180 mins: Winter	194.0 06	192.9 83	193.01 3	0.030	3.3	0.009	0.000	3.3	14.129	OK
FEH: 200 years: +45 %: 240 mins: Summer	194.0 06	192.9 83	193.01 4	0.031	3.4	0.009	0.000	3.4	13.277	OK
FEH: 200 years: +45 %: 240 mins: Winter	194.0 06	192.9 83	193.01 0	0.027	2.6	0.008	0.000	2.6	14.855	OK
FEH: 200 years: +45 %: 360 mins: Summer	194.0 06	192.9 83	193.01 0	0.027	2.5	0.008	0.000	2.5	14.243	OK
FEH: 200 years: +45 %: 360 mins: Winter	194.0 06	192.9 83	193.00 6	0.023	1.9	0.007	0.000	1.9	15.960	OK
FEH: 200 years: +45 %: 480 mins: Summer	194.0 06	192.9 83	193.00 7	0.024	2.0	0.007	0.000	2.0	15.041	OK
FEH: 200 years: +45 %: 480 mins: Winter	194.0 06	192.9 83	193.00 4	0.021	1.5	0.006	0.000	1.5	16.842	OK
FEH: 200 years: +45 %: 600 mins: Summer	194.0 06	192.9 83	193.00 5	0.022	1.7	0.006	0.000	1.7	15.701	OK
FEH: 200 years: +45 %: 600 mins: Winter	194.0 06	192.9 83	193.00 2	0.019	1.2	0.005	0.000	1.2	17.634	OK
FEH: 200 years: +45 %: 720 mins: Summer	194.0 06	192.9 83	193.00 4	0.021	1.5	0.006	0.000	1.5	16.289	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024				
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L			Approved By: S.L
		Kemp House: 124 City Road London EC1V 2NX				


FEH: 200 years: +45 %: 720 mins: Winter	194.0 06	192.9 83	193.00 1	0.018	1.1	0.005	0.000	1.1	18.306	OK
FEH: 200 years: +45 %: 960 mins: Summer	194.0 06	192.9 83	193.00 2	0.019	1.2	0.005	0.000	1.2	17.375	OK
FEH: 200 years: +45 %: 960 mins: Winter	194.0 06	192.9 83	192.99 9	0.016	0.9	0.005	0.000	0.9	19.452	OK
FEH: 200 years: +45 %: 1440 mins: Summer	194.0 06	192.9 83	192.99 9	0.016	0.9	0.005	0.000	0.9	19.224	OK
FEH: 200 years: +45 %: 1440 mins: Winter	194.0 06	192.9 83	192.99 7	0.014	0.6	0.004	0.000	0.6	21.516	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB:		Date:		
Proposed Site for Battery Storage_RevB		24/11/2024		
1:200 Storm Event + 45% Climate Change_RevB		Designed by:	Checked by:	
Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		M.H	S.L	S.L
Report Details:		Kemp House:		
Type: Junctions Summary		124 City Road		
Storm Phase: Phase		London		
		EC1V 2NX		




Summary Results for S-45: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FEH: 200 years: +45 %: 15 mins: Summer	193.736	192.273	192.370	0.097	30.6	0.027	0.000	29.6	13.428	OK
FEH: 200 years: +45 %: 15 mins: Winter	193.736	192.273	192.373	0.100	32.2	0.028	0.000	31.2	15.041	OK
FEH: 200 years: +45 %: 30 mins: Summer	193.736	192.273	192.353	0.080	21.3	0.023	0.000	21.3	18.464	OK
FEH: 200 years: +45 %: 30 mins: Winter	193.736	192.273	192.355	0.082	22.4	0.023	0.000	22.4	20.696	OK
FEH: 200 years: +45 %: 60 mins: Summer	193.736	192.273	192.348	0.075	19.0	0.021	0.000	19.0	23.769	OK
FEH: 200 years: +45 %: 60 mins: Winter	193.736	192.273	192.344	0.071	17.1	0.020	0.000	17.1	26.614	OK
FEH: 200 years: +45 %: 120 mins: Summer	193.736	192.273	192.334	0.061	12.8	0.017	0.000	12.8	27.034	OK
FEH: 200 years: +45 %: 120 mins: Winter	193.736	192.273	192.327	0.054	10.3	0.015	0.000	10.3	30.281	OK
FEH: 200 years: +45 %: 180 mins: Summer	193.736	192.273	192.326	0.053	9.7	0.015	0.000	9.7	29.027	OK
FEH: 200 years: +45 %: 180 mins: Winter	193.736	192.273	192.319	0.046	7.5	0.013	0.000	7.5	32.501	OK
FEH: 200 years: +45 %: 240 mins: Summer	193.736	192.273	192.320	0.047	7.9	0.013	0.000	7.9	30.521	OK
FEH: 200 years: +45 %: 240 mins: Winter	193.736	192.273	192.314	0.041	6.0	0.012	0.000	6.0	34.163	OK
FEH: 200 years: +45 %: 360 mins: Summer	193.736	192.273	192.314	0.041	5.8	0.012	0.000	5.8	32.765	OK
FEH: 200 years: +45 %: 360 mins: Winter	193.736	192.273	192.308	0.035	4.3	0.010	0.000	4.3	36.731	OK
FEH: 200 years: +45 %: 480 mins: Summer	193.736	192.273	192.310	0.037	4.7	0.010	0.000	4.7	34.571	OK
FEH: 200 years: +45 %: 480 mins: Winter	193.736	192.273	192.304	0.031	3.4	0.009	0.000	3.4	38.723	OK
FEH: 200 years: +45 %: 600 mins: Summer	193.736	192.273	192.307	0.034	3.9	0.009	0.000	3.9	36.131	OK
FEH: 200 years: +45 %: 600 mins: Winter	193.736	192.273	192.302	0.029	2.9	0.008	0.000	2.9	40.496	OK
FEH: 200 years: +45 %: 720 mins: Summer	193.736	192.273	192.304	0.031	3.4	0.009	0.000	3.4	37.493	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024				
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L			Approved By: S.L
		Kemp House: 124 City Road London EC1V 2NX				


FEH: 200 years: +45 %: 720 mins: Winter	193.7 36	192.2 73	192.30 0	0.027	2.5	0.008	0.000	2.5	42.030	OK
FEH: 200 years: +45 %: 960 mins: Summer	193.7 36	192.2 73	192.30 1	0.028	2.7	0.008	0.000	2.7	39.978	OK
FEH: 200 years: +45 %: 960 mins: Winter	193.7 36	192.2 73	192.29 7	0.024	2.0	0.007	0.000	2.0	44.789	OK
FEH: 200 years: +45 %: 1440 mins: Summer	193.7 36	192.2 73	192.29 7	0.024	2.0	0.007	0.000	2.0	44.202	OK
FEH: 200 years: +45 %: 1440 mins: Winter	193.7 36	192.2 73	192.29 4	0.021	1.4	0.006	0.000	1.4	49.428	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB:		Date:		
Proposed Site for Battery Storage_RevB		24/11/2024		
1:200 Storm Event + 45% Climate Change_RevB		Designed by:	Checked by:	
Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		M.H	S.L	S.L
Report Details:		Kemp House:		
Type: Junctions Summary		124 City Road		
Storm Phase: Phase		London		
		EC1V 2NX		




Summary Results for S-46: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FEH: 200 years: +45 %: 15 mins: Summer	193.463	191.563	191.661	0.098	29.6	0.028	0.000	28.5	13.419	OK
FEH: 200 years: +45 %: 15 mins: Winter	193.463	191.563	191.665	0.102	31.2	0.029	0.000	30.1	15.032	OK
FEH: 200 years: +45 %: 30 mins: Summer	193.463	191.563	191.646	0.083	21.3	0.023	0.000	21.3	18.458	OK
FEH: 200 years: +45 %: 30 mins: Winter	193.463	191.563	191.648	0.085	22.4	0.024	0.000	22.4	20.690	OK
FEH: 200 years: +45 %: 60 mins: Summer	193.463	191.563	191.640	0.077	19.0	0.022	0.000	19.0	23.764	OK
FEH: 200 years: +45 %: 60 mins: Winter	193.463	191.563	191.636	0.073	17.1	0.021	0.000	17.1	26.609	OK
FEH: 200 years: +45 %: 120 mins: Summer	193.463	191.563	191.625	0.062	12.8	0.018	0.000	12.8	27.031	OK
FEH: 200 years: +45 %: 120 mins: Winter	193.463	191.563	191.619	0.056	10.3	0.016	0.000	10.3	30.278	OK
FEH: 200 years: +45 %: 180 mins: Summer	193.463	191.563	191.617	0.054	9.7	0.015	0.000	9.7	29.024	OK
FEH: 200 years: +45 %: 180 mins: Winter	193.463	191.563	191.610	0.047	7.5	0.013	0.000	7.5	32.499	OK
FEH: 200 years: +45 %: 240 mins: Summer	193.463	191.563	191.611	0.048	7.9	0.014	0.000	7.9	30.518	OK
FEH: 200 years: +45 %: 240 mins: Winter	193.463	191.563	191.605	0.042	6.0	0.012	0.000	6.0	34.161	OK
FEH: 200 years: +45 %: 360 mins: Summer	193.463	191.563	191.604	0.041	5.8	0.012	0.000	5.8	32.763	OK
FEH: 200 years: +45 %: 360 mins: Winter	193.463	191.563	191.598	0.035	4.3	0.010	0.000	4.3	36.730	OK
FEH: 200 years: +45 %: 480 mins: Summer	193.463	191.563	191.600	0.037	4.7	0.011	0.000	4.7	34.569	OK
FEH: 200 years: +45 %: 480 mins: Winter	193.463	191.563	191.595	0.032	3.4	0.009	0.000	3.4	38.722	OK
FEH: 200 years: +45 %: 600 mins: Summer	193.463	191.563	191.597	0.034	3.9	0.010	0.000	3.9	36.129	OK
FEH: 200 years: +45 %: 600 mins: Winter	193.463	191.563	191.592	0.029	2.9	0.008	0.000	2.9	40.495	OK
FEH: 200 years: +45 %: 720 mins: Summer	193.463	191.563	191.595	0.032	3.4	0.009	0.000	3.4	37.492	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024				
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L			Approved By: S.L
		Kemp House: 124 City Road London EC1V 2NX				


FEH: 200 years: +45 %: 720 mins: Winter	193.4 63	191.5 63	191.59 0	0.027	2.5	0.008	0.000	2.5	42.028	OK
FEH: 200 years: +45 %: 960 mins: Summer	193.4 63	191.5 63	191.59 1	0.028	2.7	0.008	0.000	2.7	39.976	OK
FEH: 200 years: +45 %: 960 mins: Winter	193.4 63	191.5 63	191.58 7	0.024	2.0	0.007	0.000	2.0	44.789	OK
FEH: 200 years: +45 %: 1440 mins: Summer	193.4 63	191.5 63	191.58 7	0.024	2.0	0.007	0.000	2.0	44.200	OK
FEH: 200 years: +45 %: 1440 mins: Winter	193.4 63	191.5 63	191.58 4	0.021	1.4	0.006	0.000	1.5	49.427	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB:		Date:		
Proposed Site for Battery Storage_RevB		24/11/2024		
1:200 Storm Event + 45% Climate Change_RevB		Designed by:	Checked by:	
Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		M.H	S.L	S.L
Report Details:		Kemp House:		
Type: Junctions Summary		124 City Road		
Storm Phase: Phase		London		
		EC1V 2NX		




Summary Results for S-47: Rank By: Max. Outflow

Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
FEH: 200 years: +45 %: 15 mins: Summer	193.906	190.960	191.150	0.190	496.5	0.483	0.000	491.4	253.823	OK
FEH: 200 years: +45 %: 15 mins: Winter	193.906	190.960	191.155	0.195	520.3	0.497	0.000	515.0	284.245	OK
FEH: 200 years: +45 %: 30 mins: Summer	193.906	190.960	191.128	0.168	403.4	0.428	0.000	403.4	348.950	OK
FEH: 200 years: +45 %: 30 mins: Winter	193.906	190.960	191.124	0.164	420.6	0.418	0.000	423.8	390.828	OK
FEH: 200 years: +45 %: 60 mins: Summer	193.906	190.960	191.110	0.150	360.0	0.382	0.000	360.0	449.011	OK
FEH: 200 years: +45 %: 60 mins: Winter	193.906	190.960	191.105	0.145	324.3	0.368	0.000	324.3	502.977	OK
FEH: 200 years: +45 %: 120 mins: Summer	193.906	190.960	191.083	0.123	242.9	0.313	0.000	242.9	511.045	OK
FEH: 200 years: +45 %: 120 mins: Winter	193.906	190.960	191.066	0.106	195.7	0.269	0.000	195.7	572.556	OK
FEH: 200 years: +45 %: 180 mins: Summer	193.906	190.960	191.062	0.102	184.0	0.261	0.000	184.0	548.791	OK
FEH: 200 years: +45 %: 180 mins: Winter	193.906	190.960	191.050	0.090	142.0	0.228	0.000	142.2	614.719	OK
FEH: 200 years: +45 %: 240 mins: Summer	193.906	190.960	191.052	0.092	149.6	0.235	0.000	149.6	576.837	OK
FEH: 200 years: +45 %: 240 mins: Winter	193.906	190.960	191.040	0.080	112.7	0.203	0.000	112.7	646.246	OK
FEH: 200 years: +45 %: 360 mins: Summer	193.906	190.960	191.039	0.079	109.8	0.200	0.000	110.0	620.058	OK
FEH: 200 years: +45 %: 360 mins: Winter	193.906	190.960	191.026	0.066	81.0	0.169	0.000	81.0	694.677	OK
FEH: 200 years: +45 %: 480 mins: Summer	193.906	190.960	191.031	0.071	88.8	0.180	0.000	88.9	654.375	OK
FEH: 200 years: +45 %: 480 mins: Winter	193.906	190.960	191.019	0.059	64.3	0.150	0.000	64.4	732.879	OK
FEH: 200 years: +45 %: 600 mins: Summer	193.906	190.960	191.025	0.065	74.5	0.165	0.000	74.5	683.674	OK
FEH: 200 years: +45 %: 600 mins: Winter	193.906	190.960	191.014	0.054	53.8	0.138	0.000	53.8	765.740	OK
FEH: 200 years: +45 %: 720 mins: Summer	193.906	190.960	191.019	0.059	64.4	0.151	0.000	64.5	709.764	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


FEH: 200 years: +45 %: 720 mins: Winter	193.9 06	190.9 60	191.01 0	0.050	46.6	0.127	0.000	46.6	795.013	OK
FEH: 200 years: +45 %: 960 mins: Summer	193.9 06	190.9 60	191.01 4	0.054	51.5	0.138	0.000	51.5	756.229	OK
FEH: 200 years: +45 %: 960 mins: Winter	193.9 06	190.9 60	191.00 5	0.045	37.2	0.115	0.000	37.2	847.234	OK
FEH: 200 years: +45 %: 1440 mins: Summer	193.9 06	190.9 60	191.00 7	0.047	37.9	0.119	0.000	38.0	836.512	OK
FEH: 200 years: +45 %: 1440 mins: Winter	193.9 06	190.9 60	190.99 9	0.039	27.4	0.100	0.000	27.4	936.623	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024			
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L		
		Approved By: S.L			
		Kemp House: 124 City Road London EC1V 2NX			




Summary Results for Tank: Rank By: Max. Avg. Depth

Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Residnt Volume (m³)	Max. Flood ed Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Percentage Available (%)	Status
FEH: 200 years: +45 %: 15 mins: Summer	185.024	185.024	1.724	1.724	2248.4	1170.351	0.000	0.000	32.1	45.317	57.034	OK
FEH: 200 years: +45 %: 15 mins: Winter	185.150	185.150	1.850	1.850	2331.5	1308.157	0.000	0.000	32.7	46.942	51.975	OK
FEH: 200 years: +45 %: 30 mins: Summer	185.396	185.396	2.096	2.096	1894.9	1602.016	0.000	0.000	33.0	100.001	41.187	OK
FEH: 200 years: +45 %: 30 mins: Winter	185.542	185.542	2.242	2.242	1978.8	1791.888	0.000	0.000	33.8	102.778	34.216	OK
FEH: 200 years: +45 %: 60 mins: Summer	185.713	185.713	2.413	2.413	1713.8	2031.186	0.000	0.000	34.2	213.925	25.431	OK
FEH: 200 years: +45 %: 60 mins: Winter	185.876	185.876	2.576	2.576	1537.1	2276.035	0.000	0.000	35.0	219.026	16.442	OK
FEH: 200 years: +45 %: 120 mins: Summer	185.845	185.845	2.545	2.545	1156.2	2228.125	0.000	0.000	34.8	438.997	18.201	OK
FEH: 200 years: +45 %: 120 mins: Winter	186.021	186.021	2.721	2.721	927.9	2506.106	0.000	0.000	35.6	449.073	7.996	OK
FEH: 200 years: +45 %: 180 mins: Summer	185.896	185.896	2.596	2.596	876.1	2307.292	0.000	0.000	35.0	663.682	15.295	OK
FEH: 200 years: +45 %: 180 mins: Winter	186.081	186.081	2.781	2.781	673.5	2606.413	0.000	0.000	35.9	679.304	4.313	OK
FEH: 200 years: +45 %: 240 mins: Summer	185.918	185.918	2.618	2.618	712.1	2340.645	0.000	0.000	35.1	886.567	14.070	OK
FEH: 200 years: +45 %: 240 mins: Winter	186.111	186.111	2.811	2.811	534.1	2656.412	0.000	0.000	36.0	908.256	2.478	OK
FEH: 200 years: +45 %: 360 mins: Summer	185.922	185.922	2.622	2.622	523.2	2347.256	0.000	0.000	35.1	1324.735	13.827	OK
FEH: 200 years: +45 %: 360 mins: Winter	186.129	186.129	2.829	2.829	384.2	2687.270	0.000	0.000	36.1	1360.097	1.345	OK


C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:200 Storm Event + 45% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		

FEH: 200 years: +45 %: 480 mins: Summer	185.90 1	185.90 1	2.601	2.601	422.8	2314.2 53	0.000	0.000	35.0	1750.15 1	15.039	OK
FEH: 200 years: +45 %: 480 mins: Winter	186.12 1	186.12 1	2.821	2.821	305.1	2673.4 60	0.000	0.000	36.1	1801.38 7	1.852	OK
FEH: 200 years: +45 %: 600 mins: Summer	185.87 4	185.87 4	2.574	2.574	354.6	2271.8 63	0.000	0.000	34.9	2160.32 1	16.595	OK
FEH: 200 years: +45 %: 600 mins: Winter	186.09 9	186.09 9	2.799	2.799	255.1	2637.5 48	0.000	0.000	36.0	2230.14 7	3.170	OK
FEH: 200 years: +45 %: 720 mins: Summer	185.85 0	185.85 0	2.550	2.550	306.7	2235.3 57	0.000	0.000	34.8	2552.94 2	17.935	OK
FEH: 200 years: +45 %: 720 mins: Winter	186.07 1	186.07 1	2.771	2.771	220.7	2589.9 69	0.000	0.000	35.8	2644.32 2	4.917	OK
FEH: 200 years: +45 %: 960 mins: Summer	185.80 8	185.80 8	2.508	2.508	245.1	2171.7 45	0.000	0.000	34.6	3273.66 6	20.271	OK
FEH: 200 years: +45 %: 960 mins: Winter	186.02 2	186.02 2	2.722	2.722	176.3	2509.0 00	0.000	0.000	35.6	3420.62 1	7.890	OK
FEH: 200 years: +45 %: 1440 mins: Summer	185.74 1	185.74 1	2.441	2.441	180.7	2072.8 24	0.000	0.000	34.2	3977.83 5	23.902	OK
FEH: 200 years: +45 %: 1440 mins: Winter	185.93 7	185.93 7	2.637	2.637	130.0	2370.8 58	0.000	0.000	35.2	4431.75 7	12.961	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:100 Storm Event + 40% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Junctions Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		

Outlets

Junction	Outlet Name	Outgoing Connection	Outlet Type
S-48 (FC)	Outlet	(None)	Orifice
	Diameter (m)	0.100	
	Coefficient of Discharge	0.600	
	Invert Level (m)	182.082	
S-01	Outlet	Pipe	Free Discharge
S-02	Outlet	Pipe (1)	Free Discharge
S-03	Outlet	Pipe (2)	Free Discharge
S-04	Outlet	Pipe (3)	Free Discharge
S-05	Outlet	Pipe (4)	Free Discharge
S-06	Outlet	Pipe (5)	Free Discharge
S-07	Outlet	Pipe (6)	Free Discharge
S-08	Outlet	Pipe (7)	Free Discharge
S-09	Outlet	Pipe (8)	Free Discharge
S-10	Outlet	Pipe (9)	Free Discharge
S-11	Outlet	Pipe (10)	Free Discharge
S-12	Outlet	Pipe (11)	Free Discharge
S-13	Outlet	Pipe (12)	Free Discharge
S-14	Outlet	Pipe (13)	Free Discharge
S-15	Outlet	Pipe (14)	Free Discharge
S-16	Outlet	Pipe (15)	Free Discharge
S-17	Outlet	Pipe (16)	Free Discharge
S-18	Outlet	Pipe (17)	Free Discharge
S-19	Outlet	Pipe (18)	Free Discharge
S-20	Outlet	Pipe (19)	Free Discharge
S-21	Outlet	Pipe (20)	Free Discharge
S-22	Outlet	Pipe (21)	Free Discharge
S-23	Outlet	Pipe (22)	Free Discharge
S-24	Outlet	Pipe (23)	Free Discharge
S-25	Outlet	Pipe (24)	Free Discharge
S-26	Outlet	Pipe (25)	Free Discharge
S-27	Outlet	Pipe (26)	Free Discharge
S-28	Outlet	Pipe (27)	Free Discharge
S-29	Outlet	Pipe (28)	Free Discharge
S-30	Outlet	Pipe (29)	Free Discharge
S-31	Outlet	Pipe (30)	Free Discharge
S-32	Outlet	Pipe (31)	Free Discharge
S-33	Outlet	Pipe (32)	Free Discharge
S-34	Outlet	Pipe (33)	Free Discharge
S-35	Outlet	Pipe (34)	Free Discharge
S-36	Outlet	Pipe (35)	Free Discharge
S-37	Outlet	Pipe (36)	Free Discharge
S-38	Outlet	Pipe (37)	Free Discharge
S-39	Outlet	Pipe (38)	Free Discharge
S-40	Outlet	Pipe (39)	Free Discharge
S-41	Outlet	Pipe (40)	Free Discharge
S-42	Outlet	Pipe (41)	Free Discharge
S-43	Outlet	Pipe (42)	Free Discharge
S-44	Outlet	Pipe (43)	Free Discharge
S-45	Outlet	Pipe (44)	Free Discharge
S-46	Outlet	Pipe (45)	Free Discharge
S-47	Outlet	Pipe (46)	Free Discharge

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:100 Storm Event + 40% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Stormwater Controls Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		



Tank

Type : Tank


Dimensions

Exceedance Level (m)	186.300
Depth (m)	3.000
Base Level (m)	183.300
Freeboard (mm)	150
Initial Depth (m)	0.000
Porosity (%)	100
Average Slope (1:X)	4.479
Total Volume (m³)	2723.902


Depth (m)	Area (m²)	Volume (m³)
0.000	357.43	0.000
3.000	1825.00	2990.093

Advanced


Perimeter	Circular
Length (m)	70.993

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:100 Storm Event + 40% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S-48 (FC)	186.100 182.082	Diameter / Length: 1.200	{1} Pipe (167)	Pipe	182.082	Diam/Width:150	Manhole
E:268533.859	4.018						
N:653630.018							Not Applicable
S-01	197.649 196.149	Diameter / Length: 1.200					Manhole
E:268501.434	1.500						
N:653470.733			{a} Pipe	Pipe	196.149	Diam/Width:300	Not Applicable
S-02	197.210 195.391	Diameter / Length: 1.200	{1} Pipe	Pipe	195.391	Diam/Width:300	Manhole
E:268458.961	1.819						
N:653486.887			{a} Pipe (1)	Pipe	195.391	Diam/Width:300	Not Applicable
S-03	197.824 196.332	Diameter / Length: 0.600					Manhole
E:268404.143	1.492						
N:653470.565			{a} Pipe (2)	Pipe	196.332	Diam/Width:150	Not Applicable
S-04	197.118 195.167	Diameter / Length: 0.600	{1} Pipe (2)	Pipe	195.167	Diam/Width:150	Manhole
E:268412.443	1.951						
N:653492.339			{a} Pipe (3)	Pipe	195.167	Diam/Width:150	Not Applicable

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:100 Storm Event + 40% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S-05	196.771 194.254	Diameter / Length: 1.500	{1} Pipe (1)	Pipe	194.254	Diam/Width:300	Manhole
E:268416.489 N:653503.042	2.517		{2} Pipe (3)	Pipe	194.404	Diam/Width:150	
			{a} Pipe (4)	Pipe	194.254	Diam/Width:300	Not Applicable
S-06	196.782 195.432	Diameter / Length: 1.200					Manhole
E:268511.640 N:653497.479	1.350						
			{a} Pipe (5)	Pipe	195.432	Diam/Width:300	Not Applicable
S-07	196.782 194.675	Diameter / Length: 1.200	{1} Pipe (5)	Pipe	194.675	Diam/Width:300	Manhole
E:268469.157 N:653513.616	2.107						
			{a} Pipe (6)	Pipe	194.675	Diam/Width:300	Not Applicable
S-08	195.904 193.389	Diameter / Length: 1.800	{1} Pipe (4)	Pipe	193.539	Diam/Width:300	Manhole
E:268426.674 N:653529.753	2.515		{2} Pipe (6)	Pipe	193.539	Diam/Width:300	
			{a} Pipe (7)	Pipe	193.389	Diam/Width:450	Not Applicable

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:100 Storm Event + 40% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S-09	196.883 195.225	Diameter / Length: 0.600					Manhole
E:268407.342 N:653495.797	1.658		{a} Pipe (8)	Pipe	195.225	Diam/Width:150	Not Applicable
S-10	196.000 194.365	Diameter / Length: 0.600	{1} Pipe (8)	Pipe	194.440	Diam/Width:150	Manhole
E:268418.528 N:653525.131	1.635		{a} Pipe (9)	Pipe	194.365	Diam/Width:225	Not Applicable
S-11	195.172 192.796	Diameter / Length: 0.600	{1} Pipe (9)	Pipe	192.796	Diam/Width:225	Manhole
E:268429.713 N:653554.464	2.376		{a} Pipe (10)	Pipe	192.796	Diam/Width:225	Not Applicable
S-12	195.172 192.422	Diameter / Length: 1.500	{1} Pipe (7)	Pipe	192.422	Diam/Width:450	Manhole
E:268435.286 N:653552.339	2.750		{2} Pipe (10)	Pipe	192.647	Diam/Width:225	
			{a} Pipe (11)	Pipe	192.422	Diam/Width:450	Not Applicable
S-13	194.063 191.202	Diameter / Length: 1.500	{1} Pipe (11)	Pipe	191.202	Diam/Width:450	Manhole
E:268448.317 N:653586.516	2.861		{a} Pipe (12)	Pipe	191.202	Diam/Width:450	Not Applicable

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:100 Storm Event + 40% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S-14	195.214 193.714	Diameter / Length: 0.600					Manhole
E:268439.346 N:653550.791	1.500		{a} Pipe (13)	Pipe	193.714	Diam/Width:225	Not Applicable
S-15	196.011 194.511	Diameter / Length: 0.600					Manhole
E:268516.236 N:653521.473	1.500		{a} Pipe (14)	Pipe	194.511	Diam/Width:225	Not Applicable
S-16	195.613 192.816	Diameter / Length: 1.200	{1} Pipe (13)	Pipe	192.816	Diam/Width:225	Manhole
E:268477.791 N:653536.132	2.797		{2} Pipe (14)	Pipe	192.816	Diam/Width:225	
			{a} Pipe (15)	Pipe	192.816	Diam/Width:225	Not Applicable
S-17	194.422 192.922	Diameter / Length: 1.200					Manhole
E:268448.353 N:653575.215	1.500		{a} Pipe (16)	Pipe	192.922	Diam/Width:225	Not Applicable
S-18	194.824 193.324	Diameter / Length: 1.200					Manhole
E:268525.510 N:653545.795	1.500		{a} Pipe (17)	Pipe	193.324	Diam/Width:225	Not Applicable

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:100 Storm Event + 40% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S-19	194.824 192.090	Diameter / Length: 1.500	{1} Pipe (15)	Pipe	192.165	Diam/Width:225	Manhole
E:268487.065	2.734		{2} Pipe (16)	Pipe	192.165	Diam/Width:225	
N:653560.454			{3} Pipe (17)	Pipe	192.165	Diam/Width:225	
			{a} Pipe (18)	Pipe	192.090	Diam/Width:300	Not Applicable
S-20	194.458 190.882	Diameter / Length: 1.500	{1} Pipe (18)	Pipe	190.882	Diam/Width:300	Manhole
E:268491.370	3.576						
N:653571.743			{a} Pipe (19)	Pipe	190.882	Diam/Width:300	Not Applicable
S-21	199.311 197.811	Diameter / Length: 1.200					Manhole
E:268603.972	1.500						
N:653412.812			{a} Pipe (20)	Pipe	197.811	Diam/Width:300	Not Applicable
S-22	198.752 196.850	Diameter / Length: 1.200	{1} Pipe (20)	Pipe	196.850	Diam/Width:300	Manhole
E:268550.149	1.902						
N:653433.335			{a} Pipe (21)	Pipe	196.850	Diam/Width:300	Not Applicable

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:100 Storm Event + 40% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S-23	198.245 195.802	Diameter / Length: 1.200	{1} Pipe (21)	Pipe	195.802	Diam/Width:300	Manhole
E:268501.230 N:653451.988	2.443		{a} Pipe (22)	Pipe	195.802	Diam/Width:300	Not Applicable
S-24	198.246 196.746	Diameter / Length: 1.200					Manhole
E:268616.490 N:653445.643	1.500		{a} Pipe (23)	Pipe	196.746	Diam/Width:300	Not Applicable
S-25	197.688 195.785	Diameter / Length: 1.200	{1} Pipe (23)	Pipe	195.785	Diam/Width:300	Manhole
E:268562.667 N:653466.165	1.903		{a} Pipe (24)	Pipe	195.785	Diam/Width:300	Not Applicable
S-26	197.180 194.848	Diameter / Length: 1.800	{1} Pipe (22)	Pipe	194.998	Diam/Width:300	Manhole
E:268513.748 N:653484.818	2.332		{2} Pipe (24)	Pipe	194.998	Diam/Width:300	
			{a} Pipe (25)	Pipe	194.848	Diam/Width:450	Not Applicable
S-27	196.647 194.408	Diameter / Length: 1.500	{1} Pipe (25)	Pipe	194.408	Diam/Width:450	Manhole
E:268519.989 N:653501.244	2.239		{a} Pipe (26)	Pipe	194.408	Diam/Width:450	Not Applicable

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:100 Storm Event + 40% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S-28	196.570 194.208	Diameter / Length: 1.500	{1} Pipe (26)	Pipe	194.208	Diam/Width:450	Manhole
E:268512.540 N:653504.081	2.362		{a} Pipe (27)	Pipe	194.208	Diam/Width:450	Not Applicable
S-29	197.181 195.681	Diameter / Length: 1.200					Manhole
E:268629.008 N:653478.473	1.500		{a} Pipe (28)	Pipe	195.681	Diam/Width:300	Not Applicable
S-30	196.570 194.779	Diameter / Length: 1.200	{1} Pipe (28)	Pipe	194.779	Diam/Width:300	Manhole
E:268570.059 N:653500.950	1.791		{a} Pipe (29)	Pipe	194.779	Diam/Width:300	Not Applicable
S-31	196.038 193.618	Diameter / Length: 1.800	{1} Pipe (27)	Pipe	193.768	Diam/Width:450	Manhole
E:268518.799 N:653520.496	2.420		{2} Pipe (29)	Pipe	193.768	Diam/Width:300	
			{a} Pipe (30)	Pipe	193.618	Diam/Width:450	Not Applicable
S-32	195.111 192.853	Diameter / Length: 1.500	{1} Pipe (30)	Pipe	192.853	Diam/Width:450	Manhole
E:268529.695 N:653549.072	2.258		{a} Pipe (31)	Pipe	192.853	Diam/Width:450	Not Applicable

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:100 Storm Event + 40% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S-33	193.330 190.193	Diameter / Length: 1.500	{1} Pipe (31)	Pipe	190.193	Diam/Width:450	Manhole
E:268540.445 N:653573.397	3.137		{a} Pipe (32)	Pipe	190.193	Diam/Width:450	Not Applicable
S-34	196.336 194.736	Diameter / Length: 1.200					Manhole
E:268633.156 N:653504.750	1.600		{a} Pipe (33)	Pipe	194.736	Diam/Width:300	Not Applicable
S-35	195.887 193.958	Diameter / Length: 1.200	{1} Pipe (33)	Pipe	193.958	Diam/Width:300	Manhole
E:268589.585 N:653521.363	1.929		{a} Pipe (34)	Pipe	193.958	Diam/Width:300	Not Applicable
S-36	195.407 192.966	Diameter / Length: 1.200	{1} Pipe (34)	Pipe	192.966	Diam/Width:300	Manhole
E:268543.254 N:653539.029	2.441		{a} Pipe (35)	Pipe	192.966	Diam/Width:300	Not Applicable
S-37	194.784 192.452	Diameter / Length: 1.200	{1} Pipe (35)	Pipe	192.452	Diam/Width:300	Manhole
E:268550.573 N:653558.225	2.332		{a} Pipe (36)	Pipe	192.452	Diam/Width:300	Not Applicable

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:100 Storm Event + 40% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S-38	195.488 193.888	Diameter / Length: 1.200					Manhole
E:268618.545 N:653532.308	1.600						
			{a} Pipe (37)	Pipe	193.888	Diam/Width:300	Not Applicable
S-39	194.984 191.614	Diameter / Length: 1.500	{1} Pipe (36)	Pipe	191.764	Diam/Width:300	Manhole
E:268569.848 N:653550.876	3.370		{2} Pipe (37)	Pipe	191.764	Diam/Width:300	
			{a} Pipe (38)	Pipe	191.614	Diam/Width:450	Not Applicable
S-40	194.895 193.070	Diameter / Length: 1.200					Manhole
E:268621.475 N:653550.681	1.825						
			{a} Pipe (39)	Pipe	193.070	Diam/Width:300	Not Applicable
S-41	194.436 191.310	Diameter / Length: 1.500	{1} Pipe (38)	Pipe	191.310	Diam/Width:450	Manhole
E:268576.336 N:653567.893	3.126		{2} Pipe (39)	Pipe	191.460	Diam/Width:300	
			{a} Pipe (40)	Pipe	191.310	Diam/Width:450	Not Applicable

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:100 Storm Event + 40% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S-42	194.384 192.401	Diameter / Length: 1.200					Manhole
E:268627.488	1.983						
N:653566.449			{a} Pipe (41)	Pipe	192.401	Diam/Width:300	Not Applicable
S-43	194.018 191.441	Diameter / Length: 1.200	{1} Pipe (41)	Pipe	191.441	Diam/Width:300	Manhole
E:268591.623	2.577						
N:653580.176			{a} Pipe (42)	Pipe	191.441	Diam/Width:300	Not Applicable
S-44	194.006 192.983	Diameter / Length: 0.600					Manhole
E:268642.375	1.023						
N:653577.501			{a} Pipe (43)	Pipe	192.983	Diam/Width:225	Not Applicable
S-45	193.736 192.273	Diameter / Length: 0.600	{1} Pipe (43)	Pipe	192.273	Diam/Width:225	Manhole
E:268615.834	1.463						
N:653587.623			{a} Pipe (44)	Pipe	192.273	Diam/Width:225	Not Applicable
S-46	193.463 191.563	Diameter / Length: 0.600	{1} Pipe (44)	Pipe	191.563	Diam/Width:225	Manhole
E:268589.294	1.900						
N:653597.745			{a} Pipe (45)	Pipe	191.563	Diam/Width:225	Not Applicable

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:100 Storm Event + 40% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024			
		Designed by: M.H	Checked by: S.L		Approved By: S.L
Report Details: Type: Manhole Schedule Storm Phase: Phase		Kemp House: 124 City Road London EC1V 2NX			


Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S-47	193.906 190.960	Diameter / Length: 1.800	{1} Pipe (40)	Pipe	190.960	Diam/Width:450	Manhole
E:268582.568	2.946		{2} Pipe (42)	Pipe	191.110	Diam/Width:300	
N:653584.237			{3} Pipe (45)	Pipe		Diam/Width:225	
				{a} Pipe (46)	Pipe	190.960	Diam/Width:450

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:100 Storm Event + 40% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Inflow Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		

Inflow Label	Connected To	Flow (L/s)	Runoff Method	Area (ha)	Percentage Impervious (%)	Urban Creep (%)	Adjusted Percentage Impervious (%)	Area Analysed (ha)
Catchment Area	S-01		Time of Concentration	0.155	100	0	100	0.155
Catchment Area (1)	S-02		Time of Concentration	0.139	100	0	100	0.139
Catchment Area (2)	S-03		Time of Concentration	0.031	100	0	100	0.031
Catchment Area (3)	S-04		Time of Concentration	0.022	100	0	100	0.022
Catchment Area (4)	S-05		Time of Concentration	0.083	100	0	100	0.083
Catchment Area (5)	S-06		Time of Concentration	0.116	100	0	100	0.116
Catchment Area (6)	S-07		Time of Concentration	0.103	100	0	100	0.103
Catchment Area (7)	S-08		Time of Concentration	0.074	100	0	100	0.074
Catchment Area (8)	S-09		Time of Concentration	0.009	100	0	100	0.009
Catchment Area (9)	S-10		Time of Concentration	0.072	100	0	100	0.072
Catchment Area (10)	S-11		Time of Concentration	0.054	100	0	100	0.054
Catchment Area (11)	S-12		Time of Concentration	0.017	100	0	100	0.017
Catchment Area (12)	S-13		Time of Concentration	0.020	100	0	100	0.020
Catchment Area (13)	S-14		Time of Concentration	0.067	100	0	100	0.067
Catchment Area (14)	S-15		Time of Concentration	0.067	100	0	100	0.067
Catchment Area (15)	S-16		Time of Concentration	0.125	100	0	100	0.125
Catchment Area (16)	S-17		Time of Concentration	0.048	100	0	100	0.048
Catchment Area (17)	S-18		Time of Concentration	0.048	100	0	100	0.048
Catchment Area (18)	S-19		Time of Concentration	0.088	100	0	100	0.088
Catchment Area (19)	S-20		Time of Concentration	0.134	100	0	100	0.134
Catchment Area (20)	S-21		Time of Concentration	0.116	100	0	100	0.116
Catchment Area (21)	S-22		Time of Concentration	0.110	100	0	100	0.110
Catchment Area (22)	S-23		Time of Concentration	0.101	100	0	100	0.101
Catchment Area (23)	S-24		Time of Concentration	0.135	100	0	100	0.135
Catchment Area (24)	S-25		Time of Concentration	0.154	100	0	100	0.154
Catchment Area (25)	S-26		Time of Concentration	0.142	100	0	100	0.142
Catchment Area (26)	S-29		Time of Concentration	0.135	100	0	100	0.135
Catchment Area (27)	S-30		Time of Concentration	0.154	100	0	100	0.154
Catchment Area (28)	S-27		Time of Concentration	0.142	100	0	100	0.142
Catchment Area (29)	S-33		Time of Concentration	0.062	100	0	100	0.062
Catchment Area (30)	S-34		Time of Concentration	0.135	100	0	100	0.135
Catchment Area (31)	S-35		Time of Concentration	0.114	100	0	100	0.114

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:100 Storm Event + 40% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Inflow Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		

Catchment Area (32)	S-36		Time of Concentration	0.083	100	0	100	0.083
Catchment Area (33)	S-37		Time of Concentration	0.064	100	0	100	0.064
Catchment Area (34)	S-38		Time of Concentration	0.055	100	0	100	0.055
Catchment Area (35)	S-39		Time of Concentration	0.074	100	0	100	0.074
Catchment Area (36)	S-40		Time of Concentration	0.051	100	0	100	0.051
Catchment Area (37)	S-41		Time of Concentration	0.068	100	0	100	0.068
Catchment Area (38)	S-42		Time of Concentration	0.055	100	0	100	0.055
Catchment Area (39)	S-43		Time of Concentration	0.071	100	0	100	0.071
Catchment Area (40)	S-44		Time of Concentration	0.019	100	0	100	0.019
Catchment Area (41)	S-45		Time of Concentration	0.024	100	0	100	0.024
Catchment Area (42)	Tank		Time of Concentration	0.330	100	0	100	0.330
Catchment Area (43)	Tank		Time of Concentration	0.183	100	0	100	0.183
TOTAL		0.0		4.050				4.050

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:100 Storm Event + 40% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Title: Rainfall Analysis Criteria		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		

Runoff Type	Dynamic
Output Interval (mins)	5
Time Step	Default
Urban Creep	Apply Global Value
Urban Creep Global Value (%)	0
Junction Flood Risk Margin (mm)	300
Perform No Discharge Analysis	<input type="checkbox"/>

Rainfall


FEH	Type: FEH
Site Location	GB 268527 653527 NS 68527 53527
Rainfall Version	2013
Data Type	Point
Summer	<input checked="" type="checkbox"/>
Winter	<input checked="" type="checkbox"/>

Return Period

Return Period (years)	Increase Rainfall (%)
100.0	40.000

Storm Durations

Duration (mins)	Run Time (mins)
15	30
30	60
60	120
120	240
180	360
240	480
360	720
480	960
600	1200
720	1440
960	1920
1440	2880

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:100 Storm Event + 40% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Title: UK and Ireland Rural Runoff Calculator		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


ICP SUDS / IH 124

Details

Method	ICP SUDS
Area (ha)	4.05
SAAR (mm)	1227.0
Soil	0.47
Region	Region 2
Urban	0
Return Period (years)	200

Results


Region	QBAR Rural (L/s)	QBAR Urban (L/s)	Q 200 (years) (L/s)	Q 1 (years) (L/s)	Q 30 (years) (L/s)	Q 100 (years) (L/s)
Region 2	37.7	37.7	112.4	32.8	71.5	99.2

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:100 Storm Event + 40% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		




Critical Storm Per Item: Rank By: Max. Outflow


Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
S-48 (FC)	FEH: 100 years: +40 %: 360 mins: Winter	186.100	182.082	184.894	2.812	34.7	3.180	0.000	34.7	1296.859	OK
S-01	FEH: 100 years: +40 %: 15 mins: Summer	197.649	196.149	196.323	0.174	92.4	0.197	0.000	89.9	39.987	OK
S-02	FEH: 100 years: +40 %: 15 mins: Winter	197.210	195.391	196.187	0.796	166.7	0.900	0.000	157.9	85.069	Surcharged
S-03	FEH: 100 years: +40 %: 15 mins: Winter	197.824	196.332	196.406	0.074	19.7	0.021	0.000	19.5	9.084	OK
S-04	FEH: 100 years: +40 %: 15 mins: Summer	197.118	195.167	195.284	0.117	31.4	0.033	0.000	26.8	13.702	OK
S-05	FEH: 100 years: +40 %: 15 mins: Winter	196.771	194.254	195.161	0.907	233.5	1.603	0.000	217.2	124.618	Surcharged
S-06	FEH: 100 years: +40 %: 15 mins: Winter	196.782	195.432	195.584	0.152	72.3	0.171	0.000	70.4	33.450	OK
S-07	FEH: 100 years: +40 %: 15 mins: Winter	196.782	194.675	194.879	0.204	134.9	0.230	0.000	126.7	63.196	OK
S-08	FEH: 100 years: +40 %: 15 mins: Winter	195.904	193.389	193.678	0.289	390.1	0.737	0.000	384.4	209.141	OK
S-09	FEH: 100 years: +40 %: 15 mins: Winter	196.883	195.225	195.270	0.045	5.7	0.013	0.000	5.4	2.616	OK
S-10	FEH: 100 years: +40 %: 15 mins: Winter	196.000	194.365	194.468	0.103	50.1	0.029	0.000	49.7	23.272	OK
S-11	FEH: 100 years: +40 %: 15 mins: Winter	195.172	192.796	193.073	0.277	83.5	0.078	0.000	75.3	38.902	Surcharged
S-12	FEH: 100 years: +40 %: 15 mins: Winter	195.172	192.422	192.781	0.359	470.3	0.634	0.000	462.5	252.883	OK
S-13	FEH: 100 years: +40 %: 15 mins: Winter	194.063	191.202	191.391	0.189	475.3	0.334	0.000	471.7	258.006	OK
S-14	FEH: 100 years: +40 %: 15 mins: Winter	195.214	193.714	194.529	0.815	41.8	0.231	0.000	30.3	19.298	Surcharged
S-15	FEH: 100 years: +40 %: 15 mins: Winter	196.011	194.511	194.609	0.098	41.8	0.028	0.000	41.2	19.303	OK
S-16	FEH: 100 years: +40 %: 15 mins: Winter	195.613	192.816	194.375	1.559	149.3	1.763	0.000	138.0	74.617	Surcharged
S-17	FEH: 100 years: +40 %: 15 mins: Winter	194.422	192.922	193.023	0.101	29.7	0.114	0.000	28.8	13.649	OK
S-18	FEH: 100 years: +40 %: 15 mins: Winter	194.824	193.324	193.414	0.090	29.9	0.101	0.000	29.2	13.779	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:100 Storm Event + 40% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)			Date: 24/11/2024					
Report Details: Type: Junctions Summary Storm Phase: Phase			Designed by: M.H	Checked by: S.L	Approved By: S.L			
			Kemp House: 124 City Road London EC1V 2NX					

S-19	FEH: 100 years: +40 %: 15 mins: Winter	194.8 24	192.0 90	192.31 7	0.227	251.0	0.401	0.000	244.8	127.604	OK
S-20	FEH: 100 years: +40 %: 15 mins: Winter	194.4 58	190.8 82	191.06 5	0.183	328.4	0.324	0.000	326.3	165.933	OK
S-21	FEH: 100 years: +40 %: 15 mins: Winter	199.3 11	197.8 11	197.96 0	0.149	72.6	0.168	0.000	70.4	33.463	OK
S-22	FEH: 100 years: +40 %: 15 mins: Summer	198.7 52	196.8 50	197.06 0	0.210	132.2	0.238	0.000	127.4	58.136	OK
S-23	FEH: 100 years: +40 %: 15 mins: Winter	198.2 45	195.8 02	196.51 9	0.717	186.0	0.811	0.000	161.5	94.068	Surcharged
S-24	FEH: 100 years: +40 %: 15 mins: Winter	198.2 46	196.7 46	196.91 1	0.165	84.2	0.187	0.000	81.0	38.794	OK
S-25	FEH: 100 years: +40 %: 15 mins: Winter	197.6 88	195.7 85	196.63 4	0.849	177.4	0.960	0.000	142.2	82.544	Surcharged
S-26	FEH: 100 years: +40 %: 15 mins: Winter	197.1 80	194.8 48	195.63 9	0.791	392.2	2.012	0.000	352.9	218.260	Surcharged
S-27	FEH: 100 years: +40 %: 15 mins: Winter	196.6 47	194.4 08	195.29 3	0.885	441.7	1.563	0.000	420.7	259.377	Surcharged
S-28	FEH: 100 years: +40 %: 15 mins: Winter	196.5 70	194.2 08	194.98 1	0.773	420.7	1.365	0.000	402.1	258.719	Surcharged
S-29	FEH: 100 years: +40 %: 15 mins: Summer	197.1 81	195.6 81	195.84 5	0.164	80.1	0.186	0.000	77.8	34.592	OK
S-30	FEH: 100 years: +40 %: 15 mins: Winter	196.5 70	194.7 79	195.62 7	0.848	173.8	0.959	0.000	142.0	82.706	Surcharged
S-31	FEH: 100 years: +40 %: 15 mins: Winter	196.0 38	193.6 18	194.55 1	0.933	544.1	2.376	0.000	520.0	342.462	Surcharged
S-32	FEH: 100 years: +40 %: 15 mins: Winter	195.1 11	192.8 53	193.11 5	0.262	520.0	0.463	0.000	515.3	342.370	OK
S-33	FEH: 100 years: +40 %: 15 mins: Winter	193.3 30	190.1 93	190.38 5	0.192	554.1	0.340	0.000	551.3	359.716	OK
S-34	FEH: 100 years: +40 %: 15 mins: Winter	196.3 36	194.7 36	194.90 2	0.166	84.3	0.188	0.000	82.4	38.899	OK
S-35	FEH: 100 years: +40 %: 15 mins: Summer	195.8 87	193.9 58	194.18 7	0.229	145.7	0.259	0.000	139.6	64.100	OK
S-36	FEH: 100 years: +40 %: 15 mins: Summer	195.4 07	192.9 66	193.45 0	0.484	189.1	0.548	0.000	171.4	85.677	Surcharged
S-37	FEH: 100 years: +40 %: 15 mins: Winter	194.7 84	192.4 52	192.99 7	0.545	210.0	0.616	0.000	206.6	114.433	Surcharged
S-38	FEH: 100 years: +40 %: 15 mins: Winter	195.4 88	193.8 88	193.96 6	0.078	34.6	0.089	0.000	33.7	15.951	OK
S-39	FEH: 100 years: +40 %: 15 mins: Winter	194.9 84	191.6 14	191.94 4	0.330	286.5	0.583	0.000	271.4	151.853	OK
S-40	FEH: 100 years: +40 %: 15 mins: Winter	194.8 95	193.0 70	193.14 9	0.079	31.9	0.089	0.000	31.1	14.708	OK
S-41	FEH: 100 years: +40 %: 15 mins: Winter	194.4 36	191.3 10	191.64 4	0.334	344.9	0.590	0.000	335.5	186.222	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:100 Storm Event + 40% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024			
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L		
		Kemp House: 124 City Road London EC1V 2NX			


S-42	FEH: 100 years: +40 %: 15 mins: Winter	194.3 84	192.4 01	192.48 9	0.088	34.3	0.100	0.000	33.5	15.848	OK
S-43	FEH: 100 years: +40 %: 15 mins: Winter	194.0 18	191.4 41	191.58 7	0.146	78.0	0.165	0.000	75.7	36.419	OK
S-44	FEH: 100 years: +40 %: 15 mins: Winter	194.0 06	192.9 83	193.04 0	0.057	11.7	0.016	0.000	11.4	5.398	OK
S-45	FEH: 100 years: +40 %: 15 mins: Winter	193.7 36	192.2 73	192.36 2	0.089	26.6	0.025	0.000	25.8	12.410	OK
S-46	FEH: 100 years: +40 %: 15 mins: Winter	193.4 63	191.5 63	191.65 4	0.091	25.8	0.026	0.000	24.8	12.402	OK
S-47	FEH: 100 years: +40 %: 15 mins: Winter	193.9 06	190.9 60	191.13 6	0.176	436.0	0.447	0.000	432.3	234.716	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:100 Storm Event + 40% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)				Date: 24/11/2024				
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase				Designed by: M.H	Checked by: S.L	Approved By: S.L		
				Kemp House: 124 City Road London EC1V 2NX				




Critical Storm Per Item: Rank By: Max. Avg. Depth

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Residant Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Percentage Available (%)	Status
Tank	FEH: 100 years: +40 %: 360 mins: Winter	185.837	185.837	2.537	2.537	326.3	2215.489	0.000	0.000	34.7	1301.745	18.665	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:30 Storm Event + 0% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024			
		Designed by: M.H	Checked by: S.L		Approved By: S.L
Report Details: Type: Junctions Storm Phase: Phase		Kemp House: 124 City Road London EC1V 2NX			

Outlets

Junction	Outlet Name	Outgoing Connection	Outlet Type
S-48 (FC)	Outlet	(None)	Orifice
	Diameter (m)	0.100	
	Coefficient of Discharge	0.600	
	Invert Level (m)	182.082	
S-01	Outlet	Pipe	Free Discharge
S-02	Outlet	Pipe (1)	Free Discharge
S-03	Outlet	Pipe (2)	Free Discharge
S-04	Outlet	Pipe (3)	Free Discharge
S-05	Outlet	Pipe (4)	Free Discharge
S-06	Outlet	Pipe (5)	Free Discharge
S-07	Outlet	Pipe (6)	Free Discharge
S-08	Outlet	Pipe (7)	Free Discharge
S-09	Outlet	Pipe (8)	Free Discharge
S-10	Outlet	Pipe (9)	Free Discharge
S-11	Outlet	Pipe (10)	Free Discharge
S-12	Outlet	Pipe (11)	Free Discharge
S-13	Outlet	Pipe (12)	Free Discharge
S-14	Outlet	Pipe (13)	Free Discharge
S-15	Outlet	Pipe (14)	Free Discharge
S-16	Outlet	Pipe (15)	Free Discharge
S-17	Outlet	Pipe (16)	Free Discharge
S-18	Outlet	Pipe (17)	Free Discharge
S-19	Outlet	Pipe (18)	Free Discharge
S-20	Outlet	Pipe (19)	Free Discharge
S-21	Outlet	Pipe (20)	Free Discharge
S-22	Outlet	Pipe (21)	Free Discharge
S-23	Outlet	Pipe (22)	Free Discharge
S-24	Outlet	Pipe (23)	Free Discharge
S-25	Outlet	Pipe (24)	Free Discharge
S-26	Outlet	Pipe (25)	Free Discharge
S-27	Outlet	Pipe (26)	Free Discharge
S-28	Outlet	Pipe (27)	Free Discharge
S-29	Outlet	Pipe (28)	Free Discharge
S-30	Outlet	Pipe (29)	Free Discharge
S-31	Outlet	Pipe (30)	Free Discharge
S-32	Outlet	Pipe (31)	Free Discharge
S-33	Outlet	Pipe (32)	Free Discharge
S-34	Outlet	Pipe (33)	Free Discharge
S-35	Outlet	Pipe (34)	Free Discharge
S-36	Outlet	Pipe (35)	Free Discharge
S-37	Outlet	Pipe (36)	Free Discharge
S-38	Outlet	Pipe (37)	Free Discharge
S-39	Outlet	Pipe (38)	Free Discharge
S-40	Outlet	Pipe (39)	Free Discharge
S-41	Outlet	Pipe (40)	Free Discharge
S-42	Outlet	Pipe (41)	Free Discharge
S-43	Outlet	Pipe (42)	Free Discharge
S-44	Outlet	Pipe (43)	Free Discharge
S-45	Outlet	Pipe (44)	Free Discharge
S-46	Outlet	Pipe (45)	Free Discharge
S-47	Outlet	Pipe (46)	Free Discharge

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:30 Storm Event + 0% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Stormwater Controls Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		



Tank

Type : Tank


Dimensions

Exceedance Level (m)	186.300
Depth (m)	3.000
Base Level (m)	183.300
Freeboard (mm)	150
Initial Depth (m)	0.000
Porosity (%)	100
Average Slope (1:X)	4.479
Total Volume (m³)	2723.902


Depth (m)	Area (m²)	Volume (m³)
0.000	357.43	0.000
3.000	1825.00	2990.093

Advanced


Perimeter	Circular
Length (m)	70.993

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:30 Storm Event + 0% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S-48 (FC)	186.100 182.082	Diameter / Length: 1.200	{1} Pipe (167)	Pipe	182.082	Diam/Width:150	Manhole
E:268533.859	4.018						
N:653630.018							Not Applicable
S-01	197.649 196.149	Diameter / Length: 1.200					Manhole
E:268501.434	1.500						
N:653470.733			{a} Pipe	Pipe	196.149	Diam/Width:300	Not Applicable
S-02	197.210 195.391	Diameter / Length: 1.200	{1} Pipe	Pipe	195.391	Diam/Width:300	Manhole
E:268458.961	1.819						
N:653486.887			{a} Pipe (1)	Pipe	195.391	Diam/Width:300	Not Applicable
S-03	197.824 196.332	Diameter / Length: 0.600					Manhole
E:268404.143	1.492						
N:653470.565			{a} Pipe (2)	Pipe	196.332	Diam/Width:150	Not Applicable
S-04	197.118 195.167	Diameter / Length: 0.600	{1} Pipe (2)	Pipe	195.167	Diam/Width:150	Manhole
E:268412.443	1.951						
N:653492.339			{a} Pipe (3)	Pipe	195.167	Diam/Width:150	Not Applicable

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:30 Storm Event + 0% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S-05	196.771 194.254	Diameter / Length: 1.500	{1} Pipe (1)	Pipe	194.254	Diam/Width:300	Manhole
E:268416.489 N:653503.042	2.517		{2} Pipe (3)	Pipe	194.404	Diam/Width:150	
			{a} Pipe (4)	Pipe	194.254	Diam/Width:300	Not Applicable
S-06	196.782 195.432	Diameter / Length: 1.200					Manhole
E:268511.640 N:653497.479	1.350						
			{a} Pipe (5)	Pipe	195.432	Diam/Width:300	Not Applicable
S-07	196.782 194.675	Diameter / Length: 1.200	{1} Pipe (5)	Pipe	194.675	Diam/Width:300	Manhole
E:268469.157 N:653513.616	2.107						
			{a} Pipe (6)	Pipe	194.675	Diam/Width:300	Not Applicable
S-08	195.904 193.389	Diameter / Length: 1.800	{1} Pipe (4)	Pipe	193.539	Diam/Width:300	Manhole
E:268426.674 N:653529.753	2.515		{2} Pipe (6)	Pipe	193.539	Diam/Width:300	
			{a} Pipe (7)	Pipe	193.389	Diam/Width:450	Not Applicable

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:30 Storm Event + 0% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024			
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L		Approved By: S.L
		Kemp House: 124 City Road London EC1V 2NX			


Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S-09	196.883 195.225	Diameter / Length: 0.600					Manhole
E:268407.342 N:653495.797	1.658		{a} Pipe (8)	Pipe	195.225	Diam/Width:150	Not Applicable
S-10	196.000 194.365	Diameter / Length: 0.600	{1} Pipe (8)	Pipe	194.440	Diam/Width:150	Manhole
E:268418.528 N:653525.131	1.635		{a} Pipe (9)	Pipe	194.365	Diam/Width:225	Not Applicable
S-11	195.172 192.796	Diameter / Length: 0.600	{1} Pipe (9)	Pipe	192.796	Diam/Width:225	Manhole
E:268429.713 N:653554.464	2.376		{a} Pipe (10)	Pipe	192.796	Diam/Width:225	Not Applicable
S-12	195.172 192.422	Diameter / Length: 1.500	{1} Pipe (7)	Pipe	192.422	Diam/Width:450	Manhole
E:268435.286 N:653552.339	2.750		{2} Pipe (10)	Pipe	192.647	Diam/Width:225	
			{a} Pipe (11)	Pipe	192.422	Diam/Width:450	Not Applicable
S-13	194.063 191.202	Diameter / Length: 1.500	{1} Pipe (11)	Pipe	191.202	Diam/Width:450	Manhole
E:268448.317 N:653586.516	2.861		{a} Pipe (12)	Pipe	191.202	Diam/Width:450	Not Applicable

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:30 Storm Event + 0% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S-14	195.214 193.714	Diameter / Length: 0.600					Manhole
E:268439.346 N:653550.791	1.500		{a} Pipe (13)	Pipe	193.714	Diam/Width:225	Not Applicable
S-15	196.011 194.511	Diameter / Length: 0.600					Manhole
E:268516.236 N:653521.473	1.500		{a} Pipe (14)	Pipe	194.511	Diam/Width:225	Not Applicable
S-16	195.613 192.816	Diameter / Length: 1.200	{1} Pipe (13)	Pipe	192.816	Diam/Width:225	Manhole
E:268477.791 N:653536.132	2.797		{2} Pipe (14)	Pipe	192.816	Diam/Width:225	
			{a} Pipe (15)	Pipe	192.816	Diam/Width:225	Not Applicable
S-17	194.422 192.922	Diameter / Length: 1.200					Manhole
E:268448.353 N:653575.215	1.500		{a} Pipe (16)	Pipe	192.922	Diam/Width:225	Not Applicable
S-18	194.824 193.324	Diameter / Length: 1.200					Manhole
E:268525.510 N:653545.795	1.500		{a} Pipe (17)	Pipe	193.324	Diam/Width:225	Not Applicable

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:30 Storm Event + 0% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S-19	194.824 192.090	Diameter / Length: 1.500	{1} Pipe (15)	Pipe	192.165	Diam/Width:225	Manhole
E:268487.065	2.734		{2} Pipe (16)	Pipe	192.165	Diam/Width:225	
N:653560.454			{3} Pipe (17)	Pipe	192.165	Diam/Width:225	
			{a} Pipe (18)	Pipe	192.090	Diam/Width:300	Not Applicable
S-20	194.458 190.882	Diameter / Length: 1.500	{1} Pipe (18)	Pipe	190.882	Diam/Width:300	Manhole
E:268491.370	3.576						
N:653571.743			{a} Pipe (19)	Pipe	190.882	Diam/Width:300	Not Applicable
S-21	199.311 197.811	Diameter / Length: 1.200					Manhole
E:268603.972	1.500						
N:653412.812			{a} Pipe (20)	Pipe	197.811	Diam/Width:300	Not Applicable
S-22	198.752 196.850	Diameter / Length: 1.200	{1} Pipe (20)	Pipe	196.850	Diam/Width:300	Manhole
E:268550.149	1.902						
N:653433.335			{a} Pipe (21)	Pipe	196.850	Diam/Width:300	Not Applicable

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:30 Storm Event + 0% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S-23	198.245 195.802	Diameter / Length: 1.200	{1} Pipe (21)	Pipe	195.802	Diam/Width:300	Manhole
E:268501.230 N:653451.988	2.443		{a} Pipe (22)	Pipe	195.802	Diam/Width:300	Not Applicable
S-24	198.246 196.746	Diameter / Length: 1.200					Manhole
E:268616.490 N:653445.643	1.500		{a} Pipe (23)	Pipe	196.746	Diam/Width:300	Not Applicable
S-25	197.688 195.785	Diameter / Length: 1.200	{1} Pipe (23)	Pipe	195.785	Diam/Width:300	Manhole
E:268562.667 N:653466.165	1.903		{a} Pipe (24)	Pipe	195.785	Diam/Width:300	Not Applicable
S-26	197.180 194.848	Diameter / Length: 1.800	{1} Pipe (22)	Pipe	194.998	Diam/Width:300	Manhole
E:268513.748 N:653484.818	2.332		{2} Pipe (24)	Pipe	194.998	Diam/Width:300	
			{a} Pipe (25)	Pipe	194.848	Diam/Width:450	Not Applicable
S-27	196.647 194.408	Diameter / Length: 1.500	{1} Pipe (25)	Pipe	194.408	Diam/Width:450	Manhole
E:268519.989 N:653501.244	2.239		{a} Pipe (26)	Pipe	194.408	Diam/Width:450	Not Applicable

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:30 Storm Event + 0% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024			
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L		Approved By: S.L
		Kemp House: 124 City Road London EC1V 2NX			


Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S-28	196.570 194.208	Diameter / Length: 1.500	{1} Pipe (26)	Pipe	194.208	Diam/Width:450	Manhole
E:268512.540 N:653504.081	2.362		{a} Pipe (27)	Pipe	194.208	Diam/Width:450	Not Applicable
S-29	197.181 195.681	Diameter / Length: 1.200					Manhole
E:268629.008 N:653478.473	1.500		{a} Pipe (28)	Pipe	195.681	Diam/Width:300	Not Applicable
S-30	196.570 194.779	Diameter / Length: 1.200	{1} Pipe (28)	Pipe	194.779	Diam/Width:300	Manhole
E:268570.059 N:653500.950	1.791		{a} Pipe (29)	Pipe	194.779	Diam/Width:300	Not Applicable
S-31	196.038 193.618	Diameter / Length: 1.800	{1} Pipe (27)	Pipe	193.768	Diam/Width:450	Manhole
E:268518.799 N:653520.496	2.420		{2} Pipe (29)	Pipe	193.768	Diam/Width:300	
			{a} Pipe (30)	Pipe	193.618	Diam/Width:450	Not Applicable
S-32	195.111 192.853	Diameter / Length: 1.500	{1} Pipe (30)	Pipe	192.853	Diam/Width:450	Manhole
E:268529.695 N:653549.072	2.258		{a} Pipe (31)	Pipe	192.853	Diam/Width:450	Not Applicable

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:30 Storm Event + 0% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S-33	193.330 190.193	Diameter / Length: 1.500	{1} Pipe (31)	Pipe	190.193	Diam/Width:450	Manhole
E:268540.445 N:653573.397	3.137		{a} Pipe (32)	Pipe	190.193	Diam/Width:450	Not Applicable
S-34	196.336 194.736	Diameter / Length: 1.200					Manhole
E:268633.156 N:653504.750	1.600		{a} Pipe (33)	Pipe	194.736	Diam/Width:300	Not Applicable
S-35	195.887 193.958	Diameter / Length: 1.200	{1} Pipe (33)	Pipe	193.958	Diam/Width:300	Manhole
E:268589.585 N:653521.363	1.929		{a} Pipe (34)	Pipe	193.958	Diam/Width:300	Not Applicable
S-36	195.407 192.966	Diameter / Length: 1.200	{1} Pipe (34)	Pipe	192.966	Diam/Width:300	Manhole
E:268543.254 N:653539.029	2.441		{a} Pipe (35)	Pipe	192.966	Diam/Width:300	Not Applicable
S-37	194.784 192.452	Diameter / Length: 1.200	{1} Pipe (35)	Pipe	192.452	Diam/Width:300	Manhole
E:268550.573 N:653558.225	2.332		{a} Pipe (36)	Pipe	192.452	Diam/Width:300	Not Applicable

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:30 Storm Event + 0% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S-38	195.488 193.888	Diameter / Length: 1.200					Manhole
E:268618.545 N:653532.308	1.600						
			{a} Pipe (37)	Pipe	193.888	Diam/Width:300	Not Applicable
S-39	194.984 191.614	Diameter / Length: 1.500	{1} Pipe (36)	Pipe	191.764	Diam/Width:300	Manhole
E:268569.848 N:653550.876	3.370		{2} Pipe (37)	Pipe	191.764	Diam/Width:300	
			{a} Pipe (38)	Pipe	191.614	Diam/Width:450	Not Applicable
S-40	194.895 193.070	Diameter / Length: 1.200					Manhole
E:268621.475 N:653550.681	1.825						
			{a} Pipe (39)	Pipe	193.070	Diam/Width:300	Not Applicable
S-41	194.436 191.310	Diameter / Length: 1.500	{1} Pipe (38)	Pipe	191.310	Diam/Width:450	Manhole
E:268576.336 N:653567.893	3.126		{2} Pipe (39)	Pipe	191.460	Diam/Width:300	
			{a} Pipe (40)	Pipe	191.310	Diam/Width:450	Not Applicable

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:30 Storm Event + 0% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024			
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L		Approved By: S.L
		Kemp House: 124 City Road London EC1V 2NX			


Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S-42	194.384 192.401	Diameter / Length: 1.200					Manhole
E:268627.488	1.983						
N:653566.449			{a} Pipe (41)	Pipe	192.401	Diam/Width:300	Not Applicable
S-43	194.018 191.441	Diameter / Length: 1.200	{1} Pipe (41)	Pipe	191.441	Diam/Width:300	Manhole
E:268591.623	2.577						
N:653580.176			{a} Pipe (42)	Pipe	191.441	Diam/Width:300	Not Applicable
S-44	194.006 192.983	Diameter / Length: 0.600					Manhole
E:268642.375	1.023						
N:653577.501			{a} Pipe (43)	Pipe	192.983	Diam/Width:225	Not Applicable
S-45	193.736 192.273	Diameter / Length: 0.600	{1} Pipe (43)	Pipe	192.273	Diam/Width:225	Manhole
E:268615.834	1.463						
N:653587.623			{a} Pipe (44)	Pipe	192.273	Diam/Width:225	Not Applicable
S-46	193.463 191.563	Diameter / Length: 0.600	{1} Pipe (44)	Pipe	191.563	Diam/Width:225	Manhole
E:268589.294	1.900						
N:653597.745			{a} Pipe (45)	Pipe	191.563	Diam/Width:225	Not Applicable

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:30 Storm Event + 0% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024			
		Designed by: M.H	Checked by: S.L		Approved By: S.L
Report Details: Type: Manhole Schedule Storm Phase: Phase		Kemp House: 124 City Road London EC1V 2NX			

Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S-47	193.906 190.960	Diameter / Length: 1.800	{1} Pipe (40)	Pipe	190.960	Diam/Width:450	Manhole
E:268582.568	2.946		{2} Pipe (42)	Pipe	191.110	Diam/Width:300	
N:653584.237			{3} Pipe (45)	Pipe		Diam/Width:225	
				{a} Pipe (46)	Pipe	191.185	
			{a} Pipe (46)	Pipe	190.960	Diam/Width:450	Not Applicable

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:30 Storm Event + 0% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Inflow Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		

Inflow Label	Connected To	Flow (L/s)	Runoff Method	Area (ha)	Percentage Impervious (%)	Urban Creep (%)	Adjusted Percentage Impervious (%)	Area Analysed (ha)
Catchment Area	S-01		Time of Concentration	0.155	100	0	100	0.155
Catchment Area (1)	S-02		Time of Concentration	0.139	100	0	100	0.139
Catchment Area (2)	S-03		Time of Concentration	0.031	100	0	100	0.031
Catchment Area (3)	S-04		Time of Concentration	0.022	100	0	100	0.022
Catchment Area (4)	S-05		Time of Concentration	0.083	100	0	100	0.083
Catchment Area (5)	S-06		Time of Concentration	0.116	100	0	100	0.116
Catchment Area (6)	S-07		Time of Concentration	0.103	100	0	100	0.103
Catchment Area (7)	S-08		Time of Concentration	0.074	100	0	100	0.074
Catchment Area (8)	S-09		Time of Concentration	0.009	100	0	100	0.009
Catchment Area (9)	S-10		Time of Concentration	0.072	100	0	100	0.072
Catchment Area (10)	S-11		Time of Concentration	0.054	100	0	100	0.054
Catchment Area (11)	S-12		Time of Concentration	0.017	100	0	100	0.017
Catchment Area (12)	S-13		Time of Concentration	0.020	100	0	100	0.020
Catchment Area (13)	S-14		Time of Concentration	0.067	100	0	100	0.067
Catchment Area (14)	S-15		Time of Concentration	0.067	100	0	100	0.067
Catchment Area (15)	S-16		Time of Concentration	0.125	100	0	100	0.125
Catchment Area (16)	S-17		Time of Concentration	0.048	100	0	100	0.048
Catchment Area (17)	S-18		Time of Concentration	0.048	100	0	100	0.048
Catchment Area (18)	S-19		Time of Concentration	0.088	100	0	100	0.088
Catchment Area (19)	S-20		Time of Concentration	0.134	100	0	100	0.134
Catchment Area (20)	S-21		Time of Concentration	0.116	100	0	100	0.116
Catchment Area (21)	S-22		Time of Concentration	0.110	100	0	100	0.110
Catchment Area (22)	S-23		Time of Concentration	0.101	100	0	100	0.101
Catchment Area (23)	S-24		Time of Concentration	0.135	100	0	100	0.135
Catchment Area (24)	S-25		Time of Concentration	0.154	100	0	100	0.154
Catchment Area (25)	S-26		Time of Concentration	0.142	100	0	100	0.142
Catchment Area (26)	S-29		Time of Concentration	0.135	100	0	100	0.135
Catchment Area (27)	S-30		Time of Concentration	0.154	100	0	100	0.154
Catchment Area (28)	S-27		Time of Concentration	0.142	100	0	100	0.142
Catchment Area (29)	S-33		Time of Concentration	0.062	100	0	100	0.062
Catchment Area (30)	S-34		Time of Concentration	0.135	100	0	100	0.135
Catchment Area (31)	S-35		Time of Concentration	0.114	100	0	100	0.114

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:30 Storm Event + 0% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Inflow Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		

Catchment Area (32)	S-36		Time of Concentration	0.083	100	0	100	0.083
Catchment Area (33)	S-37		Time of Concentration	0.064	100	0	100	0.064
Catchment Area (34)	S-38		Time of Concentration	0.055	100	0	100	0.055
Catchment Area (35)	S-39		Time of Concentration	0.074	100	0	100	0.074
Catchment Area (36)	S-40		Time of Concentration	0.051	100	0	100	0.051
Catchment Area (37)	S-41		Time of Concentration	0.068	100	0	100	0.068
Catchment Area (38)	S-42		Time of Concentration	0.055	100	0	100	0.055
Catchment Area (39)	S-43		Time of Concentration	0.071	100	0	100	0.071
Catchment Area (40)	S-44		Time of Concentration	0.019	100	0	100	0.019
Catchment Area (41)	S-45		Time of Concentration	0.024	100	0	100	0.024
Catchment Area (42)	Tank		Time of Concentration	0.330	100	0	100	0.330
Catchment Area (43)	Tank		Time of Concentration	0.183	100	0	100	0.183
TOTAL		0.0		4.050				4.050

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:30 Storm Event + 0% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024	
Report Title: Rainfall Analysis Criteria		Designed by: M.H	Checked by: S.L
		Approved By: S.L	
		Kemp House: 124 City Road London EC1V 2NX	



Runoff Type	Dynamic
Output Interval (mins)	5
Time Step	Default
Urban Creep	Apply Global Value
Urban Creep Global Value (%)	0
Junction Flood Risk Margin (mm)	300
Perform No Discharge Analysis	<input type="checkbox"/>

Rainfall

FEH

Type: FEH


Site Location	GB 268527 653527 NS 68527 53527
Rainfall Version	2013
Data Type	Point
Summer	<input checked="" type="checkbox"/>
Winter	<input checked="" type="checkbox"/>

Return Period

Return Period (years)	Increase Rainfall (%)
30.0	0.000

Storm Durations

Duration (mins)	Run Time (mins)
15	30
30	60
60	120
120	240
180	360
240	480
360	720
480	960
600	1200
720	1440
960	1920
1440	2880

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:30 Storm Event + 0% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Title: UK and Ireland Rural Runoff Calculator		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


ICP SUDS / IH 124

Details

Method	ICP SUDS
Area (ha)	4.05
SAAR (mm)	1227.0
Soil	0.47
Region	Region 2
Urban	0
Return Period (years)	200

Results


Region	QBAR Rural (L/s)	QBAR Urban (L/s)	Q 200 (years) (L/s)	Q 1 (years) (L/s)	Q 30 (years) (L/s)	Q 100 (years) (L/s)
Region 2	37.7	37.7	112.4	32.8	71.5	99.2

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:30 Storm Event + 0% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024			
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L		
		Approved By: S.L			
		Kemp House: 124 City Road London EC1V 2NX			




Critical Storm Per Item: Rank By: Max. Outflow

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
S-48 (FC)	FEH: 30 years: +0 %: 240 mins: Winter	186.100	182.082	184.226	2.144	30.2	2.425	0.000	30.2	741.762	OK
S-01	FEH: 30 years: +0 %: 15 mins: Winter	197.649	196.149	196.273	0.124	51.5	0.140	0.000	50.1	23.833	OK
S-02	FEH: 30 years: +0 %: 15 mins: Winter	197.210	195.391	195.547	0.156	96.2	0.177	0.000	92.5	45.171	OK
S-03	FEH: 30 years: +0 %: 15 mins: Winter	197.824	196.332	196.384	0.052	10.4	0.015	0.000	10.3	4.830	OK
S-04	FEH: 30 years: +0 %: 15 mins: Winter	197.118	195.167	195.235	0.068	17.5	0.019	0.000	17.2	8.158	OK
S-05	FEH: 30 years: +0 %: 15 mins: Winter	196.771	194.254	194.468	0.214	137.3	0.378	0.000	130.0	66.078	OK
S-06	FEH: 30 years: +0 %: 15 mins: Winter	196.782	195.432	195.536	0.104	38.4	0.118	0.000	37.3	17.759	OK
S-07	FEH: 30 years: +0 %: 15 mins: Winter	196.782	194.675	194.809	0.134	71.4	0.152	0.000	66.9	33.532	OK
S-08	FEH: 30 years: +0 %: 15 mins: Winter	195.904	193.389	193.585	0.196	221.3	0.498	0.000	218.7	110.921	OK
S-09	FEH: 30 years: +0 %: 15 mins: Winter	196.883	195.225	195.258	0.033	3.0	0.009	0.000	2.8	1.387	OK
S-10	FEH: 30 years: +0 %: 15 mins: Winter	196.000	194.365	194.437	0.072	26.5	0.020	0.000	26.2	12.356	OK
S-11	FEH: 30 years: +0 %: 15 mins: Winter	195.172	192.796	192.933	0.137	44.1	0.039	0.000	42.9	20.642	OK
S-12	FEH: 30 years: +0 %: 15 mins: Winter	195.172	192.422	192.661	0.239	267.2	0.422	0.000	261.1	134.112	OK
S-13	FEH: 30 years: +0 %: 15 mins: Winter	194.063	191.202	191.341	0.139	267.9	0.246	0.000	263.8	136.768	OK
S-14	FEH: 30 years: +0 %: 15 mins: Winter	195.214	193.714	193.795	0.081	22.2	0.023	0.000	21.7	10.266	OK
S-15	FEH: 30 years: +0 %: 15 mins: Winter	196.011	194.511	194.580	0.069	22.2	0.019	0.000	21.8	10.268	OK
S-16	FEH: 30 years: +0 %: 15 mins: Winter	195.613	192.816	193.013	0.197	84.7	0.223	0.000	77.0	39.574	OK
S-17	FEH: 30 years: +0 %: 15 mins: Winter	194.422	192.922	192.995	0.073	15.7	0.082	0.000	15.1	7.255	OK
S-18	FEH: 30 years: +0 %: 15 mins: Winter	194.824	193.324	193.388	0.064	15.9	0.072	0.000	15.5	7.322	OK
S-19	FEH: 30 years: +0 %: 15 mins: Winter	194.824	192.090	192.237	0.147	136.8	0.260	0.000	134.1	67.666	OK
S-20	FEH: 30 years: +0 %: 15 mins: Winter	194.458	190.882	191.007	0.125	178.5	0.220	0.000	177.2	87.913	OK
S-21	FEH: 30 years: +0 %: 15 mins: Winter	199.311	197.811	197.915	0.104	38.5	0.118	0.000	37.2	17.822	OK
S-22	FEH: 30 years: +0 %: 15 mins: Winter	198.752	196.850	196.992	0.142	73.6	0.160	0.000	69.7	34.659	OK
S-23	FEH: 30 years: +0 %: 15 mins: Winter	198.245	195.802	195.978	0.176	103.3	0.199	0.000	97.0	50.172	OK
S-24	FEH: 30 years: +0 %: 15 mins: Winter	198.246	196.746	196.859	0.113	44.7	0.128	0.000	43.2	20.692	OK
S-25	FEH: 30 years: +0 %: 15 mins: Winter	197.688	195.785	195.969	0.184	94.2	0.208	0.000	85.7	44.261	OK
S-26	FEH: 30 years: +0 %: 15 mins: Winter	197.180	194.848	195.099	0.251	229.6	0.638	0.000	226.4	116.122	OK
S-27	FEH: 30 years: +0 %: 15 mins: Winter	196.647	194.408	194.714	0.306	273.4	0.541	0.000	269.0	137.884	OK
S-28	FEH: 30 years: +0 %: 15 mins: Winter	196.570	194.208	194.477	0.269	269.0	0.476	0.000	263.2	137.835	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:30 Storm Event + 0% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024			
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L		Approved By: S.L
		Kemp House: 124 City Road London EC1V 2NX			


S-29	FEH: 30 years: +0 %: 15 mins: Winter	197.1 81	195.6 81	195.79 8	0.117	44.7	0.133	0.000	42.9	20.690	OK
S-30	FEH: 30 years: +0 %: 15 mins: Winter	196.5 70	194.7 79	194.95 1	0.172	94.0	0.194	0.000	85.9	44.125	OK
S-31	FEH: 30 years: +0 %: 15 mins: Winter	196.0 38	193.6 18	193.93 0	0.312	349.1	0.793	0.000	342.4	181.998	OK
S-32	FEH: 30 years: +0 %: 15 mins: Winter	195.1 11	192.8 53	193.05 3	0.200	342.4	0.353	0.000	338.0	181.919	OK
S-33	FEH: 30 years: +0 %: 15 mins: Winter	193.3 30	190.1 93	190.34 5	0.152	358.5	0.269	0.000	355.2	191.047	OK
S-34	FEH: 30 years: +0 %: 15 mins: Winter	196.3 36	194.7 36	194.84 9	0.113	44.7	0.128	0.000	43.5	20.696	OK
S-35	FEH: 30 years: +0 %: 15 mins: Winter	195.8 87	193.9 58	194.11 0	0.152	81.3	0.172	0.000	77.5	38.172	OK
S-36	FEH: 30 years: +0 %: 15 mins: Winter	195.4 07	192.9 66	193.14 7	0.181	105.1	0.205	0.000	101.2	50.930	OK
S-37	FEH: 30 years: +0 %: 15 mins: Winter	194.7 84	192.4 52	192.63 7	0.185	122.3	0.209	0.000	118.7	60.688	OK
S-38	FEH: 30 years: +0 %: 15 mins: Winter	195.4 88	193.8 88	193.94 5	0.057	18.3	0.064	0.000	17.8	8.458	OK
S-39	FEH: 30 years: +0 %: 15 mins: Winter	194.9 84	191.6 14	191.83 5	0.221	161.1	0.390	0.000	157.0	80.473	OK
S-40	FEH: 30 years: +0 %: 15 mins: Winter	194.8 95	193.0 70	193.12 7	0.057	16.9	0.065	0.000	16.4	7.800	OK
S-41	FEH: 30 years: +0 %: 15 mins: Winter	194.4 36	191.3 10	191.54 2	0.232	195.9	0.410	0.000	190.8	98.641	OK
S-42	FEH: 30 years: +0 %: 15 mins: Winter	194.3 84	192.4 01	192.46 5	0.064	18.2	0.072	0.000	17.7	8.409	OK
S-43	FEH: 30 years: +0 %: 15 mins: Winter	194.0 18	191.4 41	191.54 1	0.100	41.3	0.113	0.000	39.9	19.328	OK
S-44	FEH: 30 years: +0 %: 15 mins: Winter	194.0 06	192.9 83	193.02 4	0.041	6.2	0.012	0.000	6.0	2.863	OK
S-45	FEH: 30 years: +0 %: 15 mins: Winter	193.7 36	192.2 73	192.33 6	0.063	14.1	0.018	0.000	13.6	6.585	OK
S-46	FEH: 30 years: +0 %: 15 mins: Winter	193.4 63	191.5 63	191.62 6	0.063	13.6	0.018	0.000	13.0	6.579	OK
S-47	FEH: 30 years: +0 %: 15 mins: Winter	193.9 06	190.9 60	191.08 6	0.126	243.8	0.320	0.000	240.3	124.516	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:30 Storm Event + 0% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024			
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L		Approved By: S.L
		Kemp House: 124 City Road London EC1V 2NX			




Critical Storm Per Item: Rank By: Max. Avg. Depth

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Residant Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Percentage Available (%)	Status
Tank	FEH: 30 years: +0 %: 240 mins: Winter	184.974	184.974	1.674	1.674	252.4	1117.577	0.000	0.000	30.2	745.174	58.971	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:2 Storm Event + 0% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024			
		Designed by: M.H	Checked by: S.L		Approved By: S.L
Report Details: Type: Junctions Storm Phase: Phase		Kemp House: 124 City Road London EC1V 2NX			

Outlets

Junction	Outlet Name	Outgoing Connection	Outlet Type
S-48 (FC)	Outlet	(None)	Orifice
	Diameter (m)	0.100	
	Coefficient of Discharge	0.600	
	Invert Level (m)	182.082	
S-01	Outlet	Pipe	Free Discharge
S-02	Outlet	Pipe (1)	Free Discharge
S-03	Outlet	Pipe (2)	Free Discharge
S-04	Outlet	Pipe (3)	Free Discharge
S-05	Outlet	Pipe (4)	Free Discharge
S-06	Outlet	Pipe (5)	Free Discharge
S-07	Outlet	Pipe (6)	Free Discharge
S-08	Outlet	Pipe (7)	Free Discharge
S-09	Outlet	Pipe (8)	Free Discharge
S-10	Outlet	Pipe (9)	Free Discharge
S-11	Outlet	Pipe (10)	Free Discharge
S-12	Outlet	Pipe (11)	Free Discharge
S-13	Outlet	Pipe (12)	Free Discharge
S-14	Outlet	Pipe (13)	Free Discharge
S-15	Outlet	Pipe (14)	Free Discharge
S-16	Outlet	Pipe (15)	Free Discharge
S-17	Outlet	Pipe (16)	Free Discharge
S-18	Outlet	Pipe (17)	Free Discharge
S-19	Outlet	Pipe (18)	Free Discharge
S-20	Outlet	Pipe (19)	Free Discharge
S-21	Outlet	Pipe (20)	Free Discharge
S-22	Outlet	Pipe (21)	Free Discharge
S-23	Outlet	Pipe (22)	Free Discharge
S-24	Outlet	Pipe (23)	Free Discharge
S-25	Outlet	Pipe (24)	Free Discharge
S-26	Outlet	Pipe (25)	Free Discharge
S-27	Outlet	Pipe (26)	Free Discharge
S-28	Outlet	Pipe (27)	Free Discharge
S-29	Outlet	Pipe (28)	Free Discharge
S-30	Outlet	Pipe (29)	Free Discharge
S-31	Outlet	Pipe (30)	Free Discharge
S-32	Outlet	Pipe (31)	Free Discharge
S-33	Outlet	Pipe (32)	Free Discharge
S-34	Outlet	Pipe (33)	Free Discharge
S-35	Outlet	Pipe (34)	Free Discharge
S-36	Outlet	Pipe (35)	Free Discharge
S-37	Outlet	Pipe (36)	Free Discharge
S-38	Outlet	Pipe (37)	Free Discharge
S-39	Outlet	Pipe (38)	Free Discharge
S-40	Outlet	Pipe (39)	Free Discharge
S-41	Outlet	Pipe (40)	Free Discharge
S-42	Outlet	Pipe (41)	Free Discharge
S-43	Outlet	Pipe (42)	Free Discharge
S-44	Outlet	Pipe (43)	Free Discharge
S-45	Outlet	Pipe (44)	Free Discharge
S-46	Outlet	Pipe (45)	Free Discharge
S-47	Outlet	Pipe (46)	Free Discharge

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:2 Storm Event + 0% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Stormwater Controls Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		



Tank

Type : Tank


Dimensions

Exceedance Level (m)	186.300
Depth (m)	3.000
Base Level (m)	183.300
Freeboard (mm)	150
Initial Depth (m)	0.000
Porosity (%)	100
Average Slope (1:X)	4.479
Total Volume (m³)	2723.902


Depth (m)	Area (m²)	Volume (m³)
0.000	357.43	0.000
3.000	1825.00	2990.093

Advanced


Perimeter	Circular
Length (m)	70.993

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:2 Storm Event + 0% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S-48 (FC)	186.100 182.082	Diameter / Length: 1.200	{1} Pipe (167)	Pipe	182.082	Diam/Width:150	Manhole
E:268533.859	4.018						
N:653630.018							Not Applicable
S-01	197.649 196.149	Diameter / Length: 1.200					Manhole
E:268501.434	1.500						
N:653470.733							Not Applicable
S-02	197.210 195.391	Diameter / Length: 1.200	{1} Pipe	Pipe	195.391	Diam/Width:300	Manhole
E:268458.961	1.819						
N:653486.887							Not Applicable
S-03	197.824 196.332	Diameter / Length: 0.600					Manhole
E:268404.143	1.492						
N:653470.565							Not Applicable
S-04	197.118 195.167	Diameter / Length: 0.600	{1} Pipe (2)	Pipe	195.167	Diam/Width:150	Manhole
E:268412.443	1.951						
N:653492.339							Not Applicable
			{a} Pipe (3)	Pipe	195.167	Diam/Width:150	Not Applicable

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:2 Storm Event + 0% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S-05	196.771 194.254	Diameter / Length: 1.500	{1} Pipe (1)	Pipe	194.254	Diam/Width:300	Manhole
E:268416.489 N:653503.042	2.517		{2} Pipe (3)	Pipe	194.404	Diam/Width:150	
			{a} Pipe (4)	Pipe	194.254	Diam/Width:300	Not Applicable
S-06	196.782 195.432	Diameter / Length: 1.200					Manhole
E:268511.640 N:653497.479	1.350						
			{a} Pipe (5)	Pipe	195.432	Diam/Width:300	Not Applicable
S-07	196.782 194.675	Diameter / Length: 1.200	{1} Pipe (5)	Pipe	194.675	Diam/Width:300	Manhole
E:268469.157 N:653513.616	2.107						
			{a} Pipe (6)	Pipe	194.675	Diam/Width:300	Not Applicable
S-08	195.904 193.389	Diameter / Length: 1.800	{1} Pipe (4)	Pipe	193.539	Diam/Width:300	Manhole
E:268426.674 N:653529.753	2.515		{2} Pipe (6)	Pipe	193.539	Diam/Width:300	
			{a} Pipe (7)	Pipe	193.389	Diam/Width:450	Not Applicable

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:2 Storm Event + 0% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024			
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L		Approved By: S.L
		Kemp House: 124 City Road London EC1V 2NX			


Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S-09	196.883 195.225	Diameter / Length: 0.600					Manhole
E:268407.342 N:653495.797	1.658		{a} Pipe (8)	Pipe	195.225	Diam/Width:150	Not Applicable
S-10	196.000 194.365	Diameter / Length: 0.600	{1} Pipe (8)	Pipe	194.440	Diam/Width:150	Manhole
E:268418.528 N:653525.131	1.635		{a} Pipe (9)	Pipe	194.365	Diam/Width:225	Not Applicable
S-11	195.172 192.796	Diameter / Length: 0.600	{1} Pipe (9)	Pipe	192.796	Diam/Width:225	Manhole
E:268429.713 N:653554.464	2.376		{a} Pipe (10)	Pipe	192.796	Diam/Width:225	Not Applicable
S-12	195.172 192.422	Diameter / Length: 1.500	{1} Pipe (7)	Pipe	192.422	Diam/Width:450	Manhole
E:268435.286 N:653552.339	2.750		{2} Pipe (10)	Pipe	192.647	Diam/Width:225	
			{a} Pipe (11)	Pipe	192.422	Diam/Width:450	Not Applicable
S-13	194.063 191.202	Diameter / Length: 1.500	{1} Pipe (11)	Pipe	191.202	Diam/Width:450	Manhole
E:268448.317 N:653586.516	2.861						
			{a} Pipe (12)	Pipe	191.202	Diam/Width:450	Not Applicable

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:2 Storm Event + 0% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S-14	195.214 193.714	Diameter / Length: 0.600					Manhole
E:268439.346 N:653550.791	1.500		{a} Pipe (13)	Pipe	193.714	Diam/Width:225	Not Applicable
S-15	196.011 194.511	Diameter / Length: 0.600					Manhole
E:268516.236 N:653521.473	1.500		{a} Pipe (14)	Pipe	194.511	Diam/Width:225	Not Applicable
S-16	195.613 192.816	Diameter / Length: 1.200	{1} Pipe (13)	Pipe	192.816	Diam/Width:225	Manhole
E:268477.791 N:653536.132	2.797		{2} Pipe (14)	Pipe	192.816	Diam/Width:225	
			{a} Pipe (15)	Pipe	192.816	Diam/Width:225	Not Applicable
S-17	194.422 192.922	Diameter / Length: 1.200					Manhole
E:268448.353 N:653575.215	1.500		{a} Pipe (16)	Pipe	192.922	Diam/Width:225	Not Applicable
S-18	194.824 193.324	Diameter / Length: 1.200					Manhole
E:268525.510 N:653545.795	1.500		{a} Pipe (17)	Pipe	193.324	Diam/Width:225	Not Applicable

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:2 Storm Event + 0% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024			
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L		Approved By: S.L
		Kemp House: 124 City Road London EC1V 2NX			


Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S-19	194.824 192.090	Diameter / Length: 1.500	{1} Pipe (15)	Pipe	192.165	Diam/Width:225	Manhole
E:268487.065	2.734		{2} Pipe (16)	Pipe	192.165	Diam/Width:225	
N:653560.454			{3} Pipe (17)	Pipe	192.165	Diam/Width:225	
			{a} Pipe (18)	Pipe	192.090	Diam/Width:300	Not Applicable
S-20	194.458 190.882	Diameter / Length: 1.500	{1} Pipe (18)	Pipe	190.882	Diam/Width:300	Manhole
E:268491.370	3.576						
N:653571.743			{a} Pipe (19)	Pipe	190.882	Diam/Width:300	Not Applicable
S-21	199.311 197.811	Diameter / Length: 1.200					Manhole
E:268603.972	1.500						
N:653412.812			{a} Pipe (20)	Pipe	197.811	Diam/Width:300	Not Applicable
S-22	198.752 196.850	Diameter / Length: 1.200	{1} Pipe (20)	Pipe	196.850	Diam/Width:300	Manhole
E:268550.149	1.902						
N:653433.335			{a} Pipe (21)	Pipe	196.850	Diam/Width:300	Not Applicable

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:2 Storm Event + 0% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S-23	198.245 195.802	Diameter / Length: 1.200	{1} Pipe (21)	Pipe	195.802	Diam/Width:300	Manhole
E:268501.230 N:653451.988	2.443		{a} Pipe (22)	Pipe	195.802	Diam/Width:300	Not Applicable
S-24	198.246 196.746	Diameter / Length: 1.200					Manhole
E:268616.490 N:653445.643	1.500		{a} Pipe (23)	Pipe	196.746	Diam/Width:300	Not Applicable
S-25	197.688 195.785	Diameter / Length: 1.200	{1} Pipe (23)	Pipe	195.785	Diam/Width:300	Manhole
E:268562.667 N:653466.165	1.903		{a} Pipe (24)	Pipe	195.785	Diam/Width:300	Not Applicable
S-26	197.180 194.848	Diameter / Length: 1.800	{1} Pipe (22)	Pipe	194.998	Diam/Width:300	Manhole
E:268513.748 N:653484.818	2.332		{2} Pipe (24)	Pipe	194.998	Diam/Width:300	
			{a} Pipe (25)	Pipe	194.848	Diam/Width:450	Not Applicable
S-27	196.647 194.408	Diameter / Length: 1.500	{1} Pipe (25)	Pipe	194.408	Diam/Width:450	Manhole
E:268519.989 N:653501.244	2.239		{a} Pipe (26)	Pipe	194.408	Diam/Width:450	Not Applicable

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:2 Storm Event + 0% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S-28	196.570 194.208	Diameter / Length: 1.500	{1} Pipe (26)	Pipe	194.208	Diam/Width:450	Manhole
E:268512.540 N:653504.081	2.362		{a} Pipe (27)	Pipe	194.208	Diam/Width:450	Not Applicable
S-29	197.181 195.681	Diameter / Length: 1.200					Manhole
E:268629.008 N:653478.473	1.500		{a} Pipe (28)	Pipe	195.681	Diam/Width:300	Not Applicable
S-30	196.570 194.779	Diameter / Length: 1.200	{1} Pipe (28)	Pipe	194.779	Diam/Width:300	Manhole
E:268570.059 N:653500.950	1.791		{a} Pipe (29)	Pipe	194.779	Diam/Width:300	Not Applicable
S-31	196.038 193.618	Diameter / Length: 1.800	{1} Pipe (27)	Pipe	193.768	Diam/Width:450	Manhole
E:268518.799 N:653520.496	2.420		{2} Pipe (29)	Pipe	193.768	Diam/Width:300	
			{a} Pipe (30)	Pipe	193.618	Diam/Width:450	Not Applicable
S-32	195.111 192.853	Diameter / Length: 1.500	{1} Pipe (30)	Pipe	192.853	Diam/Width:450	Manhole
E:268529.695 N:653549.072	2.258		{a} Pipe (31)	Pipe	192.853	Diam/Width:450	Not Applicable

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:2 Storm Event + 0% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		

Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S-33	193.330 190.193	Diameter / Length: 1.500	{1} Pipe (31)	Pipe	190.193	Diam/Width:450	Manhole
E:268540.445 N:653573.397	3.137		{a} Pipe (32)	Pipe	190.193	Diam/Width:450	Not Applicable
S-34	196.336 194.736	Diameter / Length: 1.200					Manhole
E:268633.156 N:653504.750	1.600		{a} Pipe (33)	Pipe	194.736	Diam/Width:300	Not Applicable
S-35	195.887 193.958	Diameter / Length: 1.200	{1} Pipe (33)	Pipe	193.958	Diam/Width:300	Manhole
E:268589.585 N:653521.363	1.929		{a} Pipe (34)	Pipe	193.958	Diam/Width:300	Not Applicable
S-36	195.407 192.966	Diameter / Length: 1.200	{1} Pipe (34)	Pipe	192.966	Diam/Width:300	Manhole
E:268543.254 N:653539.029	2.441		{a} Pipe (35)	Pipe	192.966	Diam/Width:300	Not Applicable
S-37	194.784 192.452	Diameter / Length: 1.200	{1} Pipe (35)	Pipe	192.452	Diam/Width:300	Manhole
E:268550.573 N:653558.225	2.332		{a} Pipe (36)	Pipe	192.452	Diam/Width:300	Not Applicable

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:2 Storm Event + 0% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		

Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S-38	195.488 193.888	Diameter / Length: 1.200					Manhole
E:268618.545 N:653532.308	1.600						
			{a} Pipe (37)	Pipe	193.888	Diam/Width:300	Not Applicable
S-39	194.984 191.614	Diameter / Length: 1.500	{1} Pipe (36)	Pipe	191.764	Diam/Width:300	Manhole
E:268569.848 N:653550.876	3.370		{2} Pipe (37)	Pipe	191.764	Diam/Width:300	
			{a} Pipe (38)	Pipe	191.614	Diam/Width:450	Not Applicable
S-40	194.895 193.070	Diameter / Length: 1.200					Manhole
E:268621.475 N:653550.681	1.825						
			{a} Pipe (39)	Pipe	193.070	Diam/Width:300	Not Applicable
S-41	194.436 191.310	Diameter / Length: 1.500	{1} Pipe (38)	Pipe	191.310	Diam/Width:450	Manhole
E:268576.336 N:653567.893	3.126		{2} Pipe (39)	Pipe	191.460	Diam/Width:300	
			{a} Pipe (40)	Pipe	191.310	Diam/Width:450	Not Applicable

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:2 Storm Event + 0% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024			
Report Details: Type: Manhole Schedule Storm Phase: Phase		Designed by: M.H	Checked by: S.L		Approved By: S.L
		Kemp House: 124 City Road London EC1V 2NX			

Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S-42	194.384 192.401	Diameter / Length: 1.200					Manhole
E:268627.488 N:653566.449	1.983						
			{a} Pipe (41)	Pipe	192.401	Diam/Width:300	Not Applicable
S-43	194.018 191.441	Diameter / Length: 1.200	{1} Pipe (41)	Pipe	191.441	Diam/Width:300	Manhole
E:268591.623 N:653580.176	2.577						
			{a} Pipe (42)	Pipe	191.441	Diam/Width:300	Not Applicable
S-44	194.006 192.983	Diameter / Length: 0.600					Manhole
E:268642.375 N:653577.501	1.023						
			{a} Pipe (43)	Pipe	192.983	Diam/Width:225	Not Applicable
S-45	193.736 192.273	Diameter / Length: 0.600	{1} Pipe (43)	Pipe	192.273	Diam/Width:225	Manhole
E:268615.834 N:653587.623	1.463						
			{a} Pipe (44)	Pipe	192.273	Diam/Width:225	Not Applicable
S-46	193.463 191.563	Diameter / Length: 0.600	{1} Pipe (44)	Pipe	191.563	Diam/Width:225	Manhole
E:268589.294 N:653597.745	1.900						
			{a} Pipe (45)	Pipe	191.563	Diam/Width:225	Not Applicable

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:2 Storm Event + 0% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)	Date: 24/11/2024		
	Designed by:	Checked by:	Approved By:
	M.H	S.L	S.L
Report Details: Type: Manhole Schedule Storm Phase: Phase	Kemp House: 124 City Road London EC1V 2NX		




Name	Cover Level (m) Invert Level (m)	Manhole Size (m)	Connection Details				Type
Coordinates (m)	Depth (m)		Incoming Connections	Connection Type	Connection Invert (m)	Connection Size (mm)	Junction Type
			Outgoing Connections				Cover
S-47	193.906 190.960	Diameter / Length: 1.800	{1} Pipe (40)	Pipe	190.960	Diam/Width:450	Manhole
E:268582.568	2.946		{2} Pipe (42)	Pipe	191.110	Diam/Width:300	
N:653584.237			{3} Pipe (45)	Pipe		Diam/Width:225	
				{a} Pipe (46)	Pipe	190.960	Diam/Width:450

C3206 - Muttonhole Road, Hamilton, ML3_RevB:		Date: 24/11/2024		
Proposed Site for Battery Storage_RevB		Designed by:	Checked by:	Approved By:
1:2 Storm Event + 0% Climate Change_RevB		M.H	S.L	S.L
Restrictef flow under Qbar = 36.1l/s (FEH rainfall)				
Report Details:		Kemp House:		
Type: Inflow Summary		124 City Road		
Storm Phase: Phase		London		
		EC1V 2NX		



Inflow Label	Connected To	Flow (L/s)	Runoff Method	Area (ha)	Percentage Impervious (%)	Urban Creep (%)	Adjusted Percentage Impervious (%)	Area Analysed (ha)
Catchment Area	S-01		Time of Concentration	0.155	100	0	100	0.155
Catchment Area (1)	S-02		Time of Concentration	0.139	100	0	100	0.139
Catchment Area (2)	S-03		Time of Concentration	0.031	100	0	100	0.031
Catchment Area (3)	S-04		Time of Concentration	0.022	100	0	100	0.022
Catchment Area (4)	S-05		Time of Concentration	0.083	100	0	100	0.083
Catchment Area (5)	S-06		Time of Concentration	0.116	100	0	100	0.116
Catchment Area (6)	S-07		Time of Concentration	0.103	100	0	100	0.103
Catchment Area (7)	S-08		Time of Concentration	0.074	100	0	100	0.074
Catchment Area (8)	S-09		Time of Concentration	0.009	100	0	100	0.009
Catchment Area (9)	S-10		Time of Concentration	0.072	100	0	100	0.072
Catchment Area (10)	S-11		Time of Concentration	0.054	100	0	100	0.054
Catchment Area (11)	S-12		Time of Concentration	0.017	100	0	100	0.017
Catchment Area (12)	S-13		Time of Concentration	0.020	100	0	100	0.020
Catchment Area (13)	S-14		Time of Concentration	0.067	100	0	100	0.067
Catchment Area (14)	S-15		Time of Concentration	0.067	100	0	100	0.067
Catchment Area (15)	S-16		Time of Concentration	0.125	100	0	100	0.125
Catchment Area (16)	S-17		Time of Concentration	0.048	100	0	100	0.048
Catchment Area (17)	S-18		Time of Concentration	0.048	100	0	100	0.048
Catchment Area (18)	S-19		Time of Concentration	0.088	100	0	100	0.088
Catchment Area (19)	S-20		Time of Concentration	0.134	100	0	100	0.134
Catchment Area (20)	S-21		Time of Concentration	0.116	100	0	100	0.116
Catchment Area (21)	S-22		Time of Concentration	0.110	100	0	100	0.110
Catchment Area (22)	S-23		Time of Concentration	0.101	100	0	100	0.101
Catchment Area (23)	S-24		Time of Concentration	0.135	100	0	100	0.135
Catchment Area (24)	S-25		Time of Concentration	0.154	100	0	100	0.154
Catchment Area (25)	S-26		Time of Concentration	0.142	100	0	100	0.142
Catchment Area (26)	S-29		Time of Concentration	0.135	100	0	100	0.135
Catchment Area (27)	S-30		Time of Concentration	0.154	100	0	100	0.154
Catchment Area (28)	S-27		Time of Concentration	0.142	100	0	100	0.142
Catchment Area (29)	S-33		Time of Concentration	0.062	100	0	100	0.062
Catchment Area (30)	S-34		Time of Concentration	0.135	100	0	100	0.135
Catchment Area (31)	S-35		Time of Concentration	0.114	100	0	100	0.114

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:2 Storm Event + 0% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Inflow Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		

Catchment Area (32)	S-36		Time of Concentration	0.083	100	0	100	0.083
Catchment Area (33)	S-37		Time of Concentration	0.064	100	0	100	0.064
Catchment Area (34)	S-38		Time of Concentration	0.055	100	0	100	0.055
Catchment Area (35)	S-39		Time of Concentration	0.074	100	0	100	0.074
Catchment Area (36)	S-40		Time of Concentration	0.051	100	0	100	0.051
Catchment Area (37)	S-41		Time of Concentration	0.068	100	0	100	0.068
Catchment Area (38)	S-42		Time of Concentration	0.055	100	0	100	0.055
Catchment Area (39)	S-43		Time of Concentration	0.071	100	0	100	0.071
Catchment Area (40)	S-44		Time of Concentration	0.019	100	0	100	0.019
Catchment Area (41)	S-45		Time of Concentration	0.024	100	0	100	0.024
Catchment Area (42)	Tank		Time of Concentration	0.330	100	0	100	0.330
Catchment Area (43)	Tank		Time of Concentration	0.183	100	0	100	0.183
TOTAL		0.0		4.050				4.050

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:2 Storm Event + 0% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024	
Report Title: Rainfall Analysis Criteria		Designed by: M.H	Checked by: S.L
		Approved By: S.L	
		Kemp House: 124 City Road London EC1V 2NX	



Runoff Type	Dynamic
Output Interval (mins)	5
Time Step	Default
Urban Creep	Apply Global Value
Urban Creep Global Value (%)	0
Junction Flood Risk Margin (mm)	300
Perform No Discharge Analysis	<input type="checkbox"/>

Rainfall


FEH	Type: FEH
Site Location	GB 268527 653527 NS 68527 53527
Rainfall Version	2013
Data Type	Point
Summer	<input checked="" type="checkbox"/>
Winter	<input checked="" type="checkbox"/>

Return Period

Return Period (years)	Increase Rainfall (%)
2.0	0.000

Storm Durations

Duration (mins)	Run Time (mins)
15	30
30	60
60	120
120	240
180	360
240	480
360	720
480	960
600	1200
720	1440
960	1920
1440	2880

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:2 Storm Event + 0% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Title: UK and Ireland Rural Runoff Calculator		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		


ICP SUDS / IH 124

Details

Method	ICP SUDS
Area (ha)	4.05
SAAR (mm)	1227.0
Soil	0.47
Region	Region 2
Urban	0
Return Period (years)	200

Results


Region	QBAR Rural (L/s)	QBAR Urban (L/s)	Q 200 (years) (L/s)	Q 1 (years) (L/s)	Q 30 (years) (L/s)	Q 100 (years) (L/s)
Region 2	37.7	37.7	112.4	32.8	71.5	99.2

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:2 Storm Event + 0% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024		
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L	
		Approved By: S.L		
		Kemp House: 124 City Road London EC1V 2NX		




Critical Storm Per Item: Rank By: Max. Outflow

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
S-48 (FC)	FEH: 2 years: +0 %: 360 mins: Winter	186.100	182.082	183.672	1.590	25.9	1.799	0.000	25.9	824.101	OK
S-01	FEH: 2 years: +0 %: 15 mins: Winter	197.649	196.149	196.224	0.075	20.6	0.085	0.000	19.9	9.556	OK
S-02	FEH: 2 years: +0 %: 15 mins: Winter	197.210	195.391	195.484	0.093	38.4	0.105	0.000	36.6	18.106	OK
S-03	FEH: 2 years: +0 %: 15 mins: Winter	197.824	196.332	196.364	0.032	4.2	0.009	0.000	4.1	1.936	OK
S-04	FEH: 2 years: +0 %: 15 mins: Winter	197.118	195.167	195.207	0.040	7.0	0.011	0.000	6.8	3.270	OK
S-05	FEH: 2 years: +0 %: 15 mins: Winter	196.771	194.254	194.371	0.117	54.5	0.207	0.000	51.4	26.461	OK
S-06	FEH: 2 years: +0 %: 15 mins: Winter	196.782	195.432	195.497	0.065	15.4	0.073	0.000	14.8	7.118	OK
S-07	FEH: 2 years: +0 %: 15 mins: Winter	196.782	194.675	194.755	0.080	28.5	0.091	0.000	26.2	13.427	OK
S-08	FEH: 2 years: +0 %: 15 mins: Winter	195.904	193.389	193.503	0.114	87.4	0.289	0.000	86.2	44.406	OK
S-09	FEH: 2 years: +0 %: 15 mins: Winter	196.883	195.225	195.246	0.021	1.2	0.006	0.000	1.1	0.553	OK
S-10	FEH: 2 years: +0 %: 15 mins: Winter	196.000	194.365	194.410	0.045	10.6	0.013	0.000	10.4	4.951	OK
S-11	FEH: 2 years: +0 %: 15 mins: Winter	195.172	192.796	192.874	0.078	17.6	0.022	0.000	17.0	8.270	OK
S-12	FEH: 2 years: +0 %: 15 mins: Winter	195.172	192.422	192.562	0.140	105.4	0.247	0.000	102.4	53.683	OK
S-13	FEH: 2 years: +0 %: 15 mins: Winter	194.063	191.202	191.288	0.086	105.1	0.152	0.000	102.8	55.123	OK
S-14	FEH: 2 years: +0 %: 15 mins: Winter	195.214	193.714	193.765	0.051	8.9	0.014	0.000	8.6	4.114	OK
S-15	FEH: 2 years: +0 %: 15 mins: Winter	196.011	194.511	194.554	0.043	8.9	0.012	0.000	8.6	4.115	OK
S-16	FEH: 2 years: +0 %: 15 mins: Winter	195.613	192.816	192.917	0.101	33.8	0.114	0.000	31.1	15.848	OK
S-17	FEH: 2 years: +0 %: 15 mins: Winter	194.422	192.922	192.966	0.044	6.3	0.050	0.000	5.8	2.912	OK
S-18	FEH: 2 years: +0 %: 15 mins: Winter	194.824	193.324	193.364	0.040	6.4	0.045	0.000	5.9	2.940	OK
S-19	FEH: 2 years: +0 %: 15 mins: Winter	194.824	192.090	192.176	0.086	54.5	0.151	0.000	54.1	27.103	OK
S-20	FEH: 2 years: +0 %: 15 mins: Winter	194.458	190.882	190.959	0.077	71.8	0.137	0.000	70.9	35.351	OK
S-21	FEH: 2 years: +0 %: 15 mins: Winter	199.311	197.811	197.876	0.065	15.4	0.073	0.000	14.7	7.144	OK
S-22	FEH: 2 years: +0 %: 15 mins: Winter	198.752	196.850	196.934	0.084	29.3	0.095	0.000	27.4	13.887	OK
S-23	FEH: 2 years: +0 %: 15 mins: Winter	198.245	195.802	195.903	0.101	40.8	0.114	0.000	37.9	20.082	OK
S-24	FEH: 2 years: +0 %: 15 mins: Winter	198.246	196.746	196.816	0.070	17.9	0.079	0.000	17.1	8.296	OK
S-25	FEH: 2 years: +0 %: 15 mins: Winter	197.688	195.785	195.890	0.105	37.5	0.118	0.000	33.6	17.714	OK
S-26	FEH: 2 years: +0 %: 15 mins: Winter	197.180	194.848	194.985	0.137	90.2	0.348	0.000	88.8	46.471	OK
S-27	FEH: 2 years: +0 %: 15 mins: Winter	196.647	194.408	194.573	0.165	107.7	0.292	0.000	105.6	55.181	OK
S-28	FEH: 2 years: +0 %: 15 mins: Winter	196.570	194.208	194.359	0.151	105.6	0.266	0.000	102.8	55.143	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:2 Storm Event + 0% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)		Date: 24/11/2024			
Report Details: Type: Junctions Summary Storm Phase: Phase		Designed by: M.H	Checked by: S.L		Approved By: S.L
		Kemp House: 124 City Road London EC1V 2NX			

S-29	FEH: 2 years: +0 %: 15 mins: Winter	197.1 81	195.6 81	195.75 3	0.072	17.9	0.082	0.000	17.0	8.295	OK
S-30	FEH: 2 years: +0 %: 15 mins: Winter	196.5 70	194.7 79	194.87 8	0.099	37.4	0.112	0.000	33.5	17.713	OK
S-31	FEH: 2 years: +0 %: 15 mins: Winter	196.0 38	193.6 18	193.79 2	0.174	136.4	0.442	0.000	133.7	72.822	OK
S-32	FEH: 2 years: +0 %: 15 mins: Winter	195.1 11	192.8 53	192.97 0	0.117	133.7	0.206	0.000	131.1	72.763	OK
S-33	FEH: 2 years: +0 %: 15 mins: Winter	193.3 30	190.1 93	190.28 6	0.093	139.4	0.165	0.000	137.4	76.697	OK
S-34	FEH: 2 years: +0 %: 15 mins: Winter	196.3 36	194.7 36	194.80 6	0.070	17.9	0.079	0.000	17.3	8.292	OK
S-35	FEH: 2 years: +0 %: 15 mins: Winter	195.8 87	193.9 58	194.04 8	0.090	32.4	0.102	0.000	30.6	15.288	OK
S-36	FEH: 2 years: +0 %: 15 mins: Winter	195.4 07	192.9 66	193.06 8	0.102	41.6	0.116	0.000	39.9	20.393	OK
S-37	FEH: 2 years: +0 %: 15 mins: Winter	194.7 84	192.4 52	192.55 6	0.104	48.3	0.117	0.000	46.7	24.296	OK
S-38	FEH: 2 years: +0 %: 15 mins: Winter	195.4 88	193.8 88	193.92 4	0.036	7.3	0.040	0.000	6.8	3.399	OK
S-39	FEH: 2 years: +0 %: 15 mins: Winter	194.9 84	191.6 14	191.74 0	0.126	63.3	0.223	0.000	62.2	32.222	OK
S-40	FEH: 2 years: +0 %: 15 mins: Winter	194.8 95	193.0 70	193.10 6	0.036	6.8	0.041	0.000	6.3	3.132	OK
S-41	FEH: 2 years: +0 %: 15 mins: Winter	194.4 36	191.3 10	191.44 8	0.138	77.5	0.244	0.000	75.6	39.504	OK
S-42	FEH: 2 years: +0 %: 15 mins: Winter	194.3 84	192.4 01	192.44 2	0.041	7.3	0.046	0.000	7.0	3.372	OK
S-43	FEH: 2 years: +0 %: 15 mins: Winter	194.0 18	191.4 41	191.50 1	0.060	16.5	0.068	0.000	15.8	7.745	OK
S-44	FEH: 2 years: +0 %: 15 mins: Winter	194.0 06	192.9 83	193.00 9	0.026	2.5	0.007	0.000	2.4	1.148	OK
S-45	FEH: 2 years: +0 %: 15 mins: Winter	193.7 36	192.2 73	192.31 2	0.039	5.6	0.011	0.000	5.4	2.639	OK
S-46	FEH: 2 years: +0 %: 15 mins: Winter	193.4 63	191.5 63	191.60 2	0.039	5.4	0.011	0.000	5.1	2.635	OK
S-47	FEH: 2 years: +0 %: 15 mins: Winter	193.9 06	190.9 60	191.03 7	0.077	96.5	0.195	0.000	94.8	49.860	OK

C3206 - Muttonhole Road, Hamilton, ML3_RevB: Proposed Site for Battery Storage_RevB 1:2 Storm Event + 0% Climate Change_RevB Restrictef flow under Qbar = 36.1l/s (FEH rainfall)				Date: 24/11/2024				
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase				Designed by: M.H	Checked by: S.L	Approved By: S.L		
				Kemp House: 124 City Road London EC1V 2NX				



Critical Storm Per Item: Rank By: Max. Avg. Depth

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Residant Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Percentage Available (%)	Status
Tank	FEH: 2 years: +0 %: 360 mins: Winter	184.247	184.247	0.947	0.947	99.4	490.630	0.000	0.000	25.9	824.378	81.988	OK

APPENDIX C – WATER QUALITY INDEX

SUMMARY TABLE		DESIGN CONDITIONS			
		1	2	3	4
Land Use Type Pollution Hazard Level Pollution Hazard Indices TSS Metals Hydrocarbons	Other industrial site area High 0.8 0.8 0.9	These indices should only be used if considered appropriate by the required risk assessment and where approved by the regulator. If they are not considered appropriate, the risk assessment should use alternative measures of pollution hazard for the site.	In Scotland and Northern Ireland, the environmental regulator should be consulted as part of the licensing process required for High Risk sites. In England and Wales, the environmental regulator should be consulted prior to design (for pre-permitting advice) to determine the most appropriate design approach and requirements for risk assessment.		
SuDS components proposed					
Component 1	Pervious pavement (where the pavement is not designed as an infiltration component)	SuDS components can only be assumed to deliver these indices if they follow design guidance with respect to hydraulics and treatment set out in the relevant technical component chapters of the SuDS Manual. See also checklists in Appendix B			
Component 2	None				
Component 3	Detention basin				
SuDS Pollution Mitigation Indices					
TSS	0.95				
Metals	0.85				
Hydrocarbons	>0.95				
Groundwater protection type	Pervious pavement underlain by 300 mm minimum depth of soils with good contamination attenuation potential	All designs must include a minimum of 1 m unsaturated depth of subsoil or aquifer material between the infiltration surface and the maximum likely groundwater level. Infiltration components should always be preceded by upstream component(s) that trap(s) silt, or designed specifically to retain sediment in a separate lined zone, easily accessible for maintenance, such that the sediment will not be re-suspended in subsequent events	The permeable pavement must include a suitable filtration layer provides treatment and must include a geotextile at the base separating the foundation from the sub-grade. The underlying soils must provide good contaminant attenuation potential (eg as recommended in Sniffer 2008 (a) and (b) / Scott Wilson (2010) or other appropriate guidance). Alternative depth and soil combinations must provide equivalent protection to the underlying groundwater		
Groundwater protection Pollution Mitigation Indices TSS Metals Hydrocarbons	0.7 0.6 0.7				
Combined Pollution Mitigation Indices		Reference to local planning documents should also be made to identify any additional protection required for sites due to habitat conservation (see Chapter 7 The SuDS design process). The implications of developments on or within close proximity to an area with an environmental designation, such as a Site of Special Scientific Interest (SSSI), should be considered via consultation with relevant conservation bodies such as Natural England			
TSS	>0.95				
Metals	>0.95				
Hydrocarbons	>0.95				
Acceptability of Pollution Mitigation					
TSS	Sufficient				
Metals	Sufficient				
Hydrocarbons	Sufficient				