GLP Consulting Engineers Ltd
Unit 5, Howarth Court
Gateway Crescent
Oldham Broadway Business Park
Chadderton
Greater Manchester
OL9 9XB

GREATER LONDON HOUSE

Planning Condition 11 discharge Design Note updated to incorporate additional comments from planning department.
Revision 01 - 05.10.18

INTRODUCTION

This document has been prepared to demonstrate that the criteria within Condition 11 has been addressed to the councils and LLFA's requirements.

Rickesh Miyangar
Public Health Engineer on Behalf of GLP

Lead Local Flood Authority – London Borough of Camden
Statutory Consultee for all Major Developments (SuDS)
Statutory Consultee for all Major developments >1ha

Scheme Address	ASOS HQ, Greater London, Hampstead Road, Camden Town, London, NW1 7FB
Planning Reference	2018/2868/P
Application type	Condition
Size of site (as stated on application form)	1.5 ha only 0.156 is being redeveloped
Date	29/08/18
Recommendation:	Not Discharged

Condition 10 submitted details of the lifetime maintenance plan and was confirmed by Camden on 11/01/17 as discharged.

Condition 11: is herein submitted with Camden comments listed and answered below:

1. **Comment:** The applicant has specified general maintenance activities that would be required for the proposed surface drainage system. However, they have not specified how often each maintenance activity should occur.

   `**Recommendation:** The applicant needs to specify how often each maintenance activity should occur.

   GLP have prepared a site specific maintenance plan please refer to the details within, this design note. Please see Appendix A

2. **Comment:** The applicant has modified their proposed strategy, so it now differs from the strategy that was previously approved. They now state that only 53 m^3 of storage is required as opposed to 110 m^3 as was previously stated. This volume would be provided by three attenuations tanks. The volume of the tanks are not stated on Proposed Drainage Layout (GLP, February 2016, 1607-M106-T2). However, the typical detail they provided for an attenuation tank indicates each tank would have a volume of approximately 35 m^3. Furthermore, the MicroDrainage calculations they have provided for each tank do not provide clarity in regards to their volume, as they do not show a depth for the tank.

   Recommendation: The applicant needs to specify and clarify the exact volume of storage that will provided as part of the proposed drainage.

   There will be 3No 18m^3 attenuation tanks that provide a total of 54m^3 (actual requirement is 52.4m^3 for the site) the calculations for the catchment area serving each tank are provided.

Spatial and existing structural constrains imposed on the drainage layout and hence the change in the tank locations and sizes. Please refer to the latest plans and sections within Appendix B.

TB-LG-RW-001 – Rainwater Plan South

TB-LG-RW-002 – Rainwater South Sections

TB-LG-RW-003 – Rainwater Plan North

TB-LG-RW-004 - Rainwater North Sections

3. **Comment:** The sum of the maximum outflow rate for each tank (maximum outflow rates are shown in the MicroDrainage calculations) equals 6.9 l/s. This exceeds the previously agreed upon rate of 6.28 l/s.

   Recommendation: The application needs to ensure the maximum discharge rate of 6.28 l/s, which was previously approved, is met.

   The maximum flow rate for the final selected hydrobreak device is 2l/s per tank outfall total (3 x 2l/s = 6l/s) there for this condition will be adhered to. Please refer to revised calculations within Appendix C.

4. **Comment:** Within the previously approved drainage strategy, it is stated that green roofs will not be provided on site. Furthermore, green roofs are not shown on the Proposed Drainage Layout (GLP, February 2016, 1607-M106-T2). However, maintenance regime has been provided for green roofs.

   Recommendation: The applicants should clarify whether green roofs will be provided on-site. If green roofs are to be provided, their location needs to be shown the Proposed Drainage Layout.

   Latest Architectural roof plan attached with the extent of the green roof to be incorporated on this development, please refer to the plan drawings within Appendix D.

LLFA Recommendation: Further information required/condition not discharged.
As outlined above, further items are required before Condition 11 can be considered dischargeable.

Planning Condition 11

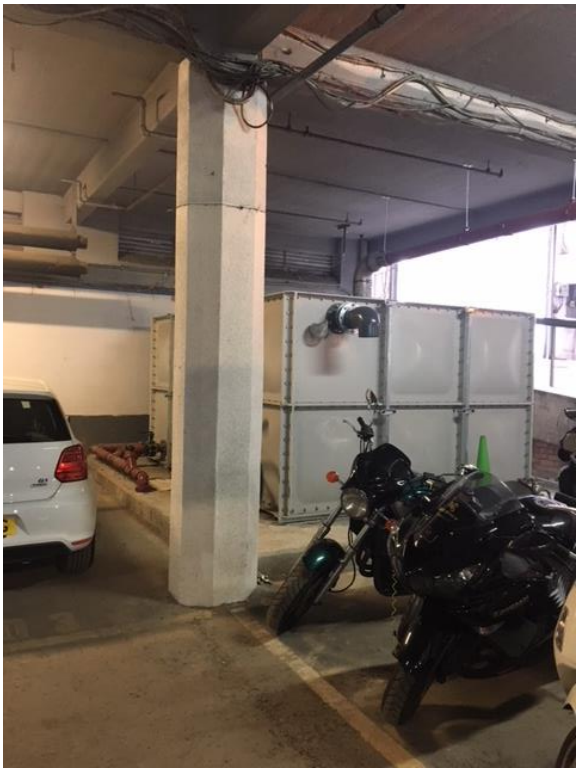
"Prior to occupation, evidence that the system has been implemented in accordance with the approved details set out in the "SuDS Calculation Report" dated 22 August 2016 as part of the development shall be submitted to the Local Authority and approved in writing. The systems shall thereafter be retained and maintained in accordance with the approved maintenance plan.

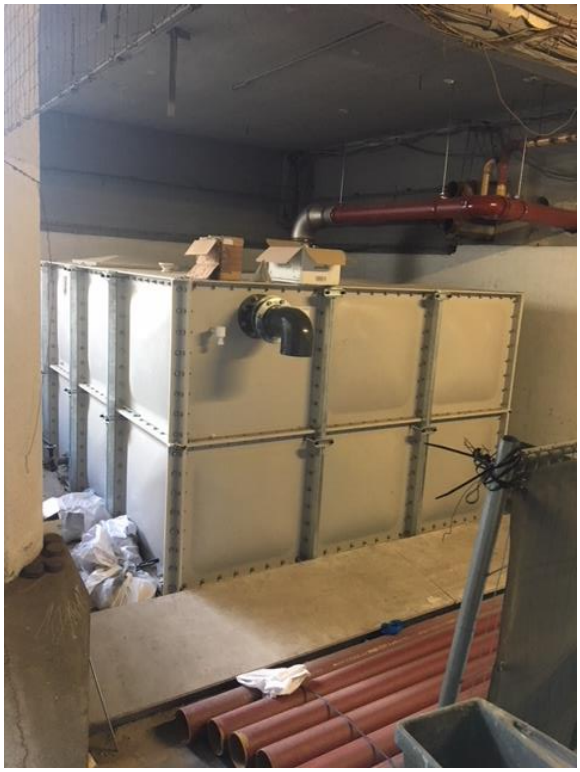
The maintenance plan submitted in the previous revision of this design note confirms how the SUDS assets shall be maintained going forward.

My request, in order to enable our service properly to review the application, is kindly to:
- Confirm that the application is intended in respect of "Discharge of Condition 11 (SuDs implementation) of 2016/4208/P dated 26/10/2016".

- Briefly summarise the intention of the application, given that
  - Information on the water storage tanks already installed at lower ground level is submitted but no details or photos of the approved 500 m^2 of green roofs are provided. Ref: approved 'Drainage Statement' dated 12/12/2016 and Drainage Proforma for the discharged condition 10 (pre implementation).

The 3No attenuation tanks are installed please refer to the photo's attached below for reference.





The project is not completed (ref: Application Form), suggesting that the green roof elements may not yet be implemented. Proof that they are installed will address the planning officers concerns.

The Green roof area installation is pending on site, we anticipate from engagement with the main build contractor that this will be completed towards the end of November 2018, GLP shall submit further information in due course in respect of this matter.

APPENDIX A

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GREATER LONDON HOUSE,LONDON

STORM WATER ATTENUATION TANK AND FLOW CONTROL DEVICE MANAGEMENT AND MAINTENANCE OVERVIEW

10.09.2018 REVISION 01 – TO ADDRESS PLANNING CONDITION 11

The proposed redevelopment Greater London House, Camden, London shall incorporate 3No 18m³ stormwater attenuation tanks (sectional) complete with a flow control devices (Hydrobreak).

The stormwater attenuation tanks has been sized to accommodate all storm events up to and including 100 year plus 30% for climate change.

This document will establish the basis of the maintenance schedule for the attenuation tanks and flow control devices.

The pro-forma document has previously been submitted to Camden Council to enable the discharge of Planning Conditions this schedule provides project specific details and shall be incorporated within the buildings operation and maintenance manual, to inform the Facilities Management team of the maintenance requirements. The previous maintenance requirements and tasks have been expanded upon to suit the revised attenuation tank arrangement.

PROPOSED MANAGEMENT TEAMS

Surface water drainage, stormwater attenuation tank and features will be maintained by the Facilities Management team.

MANAGEMENT PROCESSES

The stormwater attenuation tanks will be managed and maintained in accordance with the requirements of CIRIA C753 SuDS Manual, Table 21.3.

In addition the flow control device shall have an extra level of maintenance to ensure that the orifice is regularly maintained and that it is running freely with no materials blocking the outlet pipe.

The stormwater attenuation tank and flow control devices will not be adopted and will remain a private asset.

DRAINAGE SYSTEM ACCESS PROVISION

The above and below ground surface water drainage designs have been developed to provide adequate access to the system(s) without the need to provide any specialist access equipment.

All sections of above ground drainage will be installed with sufficient access points to undertake general inspections of the pipework system(s) using CCTV equipment.

The below ground drainage pipework (which is limited on this redevelopment) will be accessible via a series of access chambers and rodding access points which will be accessible via the basement access corridors.

Where access is required to the stormwater attenuation tanks, this shall be undertaken via the access panels situated on top of the tank.

Table 1 Stormwater Attenuation Maintenance Schedule

Maintenance Schedule	Required Action	Frequency
Regular maintenance	Inspect and identify any areas that are not operating correctly. If required, take remedial action	Monthly for 3 months, then annually
	Remove debris from the catchment surface (where it may cause risks to performance)	Monthly
	Remove sediment/silt from upstream rainwater outlets and pipework, ensure overflow is in working operation	Annually, or as required
Occasional maintenance	Removal of inspection cover on access chambers to inspect the condition of the benching/outfall(s) heading towards basement.	Every 6 months
	Removal of inspection cover on access chambers to remove any build-up of silt.	Every 6 months

Maintenance Schedule	Required Action	Frequency
Remedial maintenance	Repair/rehabilitate inlets, outlets and vents	As required
	Jet all sections of pipework and access chambers to remove debris and silt	As required
Monitoring	Inspect inlets, outlets for blockages, and clear if required.	Monthly

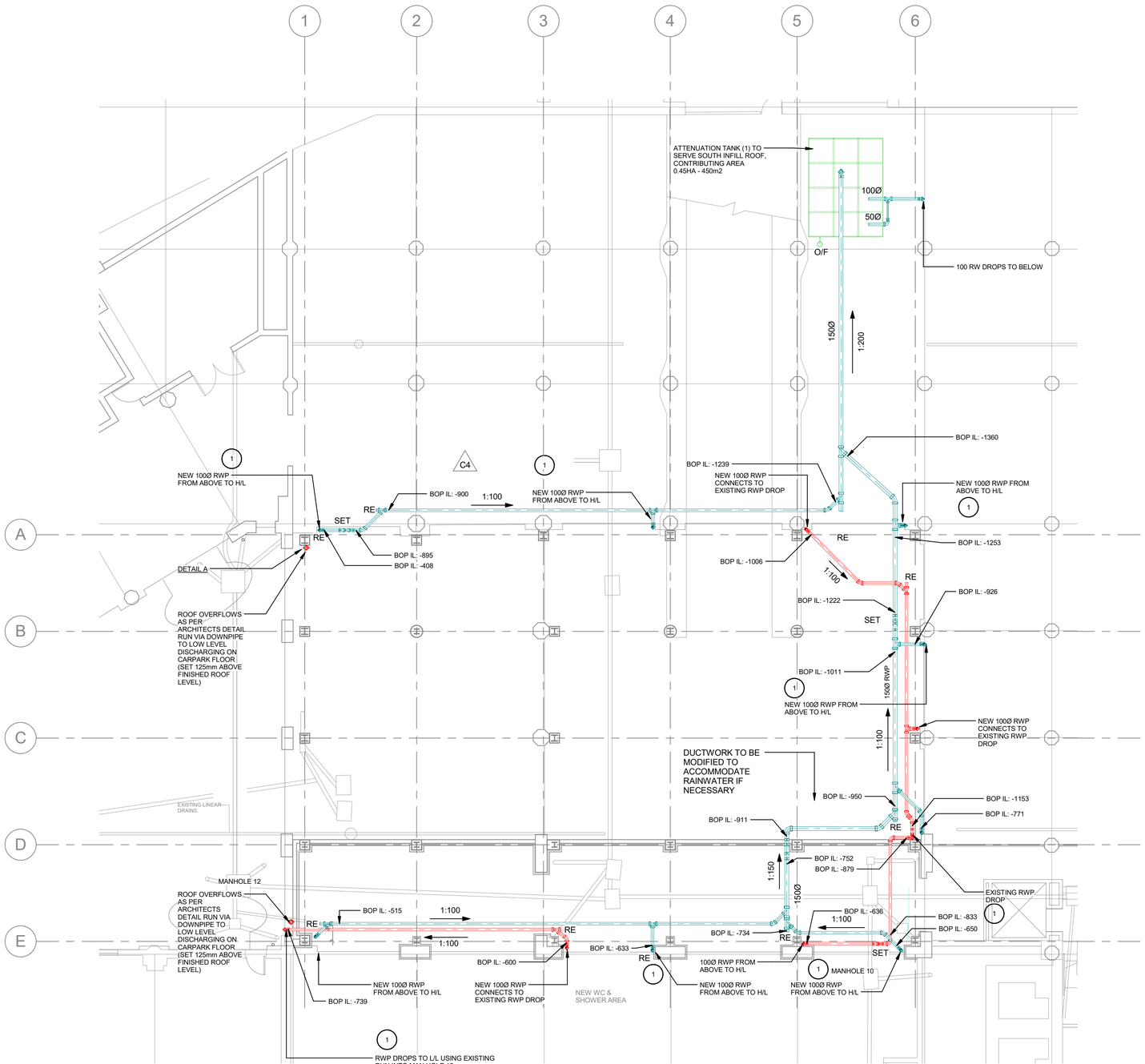
Table 2 Flow Control/Anti flood Valves Manhole Maintenance Schedule

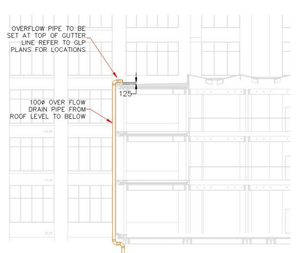
Maintenance Schedule	Required Action	Frequency
Regular maintenance	Inspect and identify any areas that are not operating correctly. If required, take remedial action – i.e. flow control orifice.	Quarterly
	Visually inspect all connection points for leakage	Quarterly
	opening and closing of non-return valves; checking seating and ball/flap; functional check;	Quarterly
	~~visual inspection of the electrical part of the plant;~~	Quarterly
Occasional maintenance	~~Fully service all submersible pumps & valves~~	Annually
	~~Test and where necessary re-commission the alarm and warning installation not applicable~~	Every 6 months

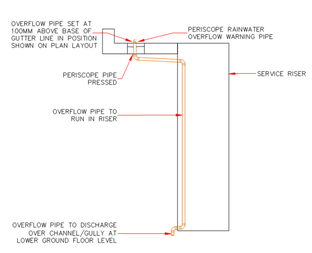
Notes:

1. The Facilities maintenance team will be responsible for keeping a detailed log of all maintenance work, detailing any work carried out and the applicable information.
2. If faults are found that cannot be corrected, where necessary spare parts shall be kept on site to minimise the risk of this.
3. It is recommended that the owner of the building take out a maintenance contract to cover regular maintenance and repair work.

APPENDIX B







NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ENGINEERS, ARCHITECTS AND SPECIALISTS DRAWINGS AND THE SPECIFICATION.
2. DO NOT SCALE FROM THIS DRAWING MANUALLY OR ELECTRONICALLY. WRITTEN PERMISSION MUST BE OBTAINED FROM REVICAD PRIOR TO SCALING ELECTRONICALLY OR USING THIS ELECTRONIC FILE.
3. ALL SURFACE WATER DRAINAGE ABOVE 75mm IS TO BE 'ENSIGN' LIGHT WEIGHT CAST IRON SYSTEM.
4. PIPEWORK SHALL BE SUPPORTED IN ACCORDANCE TO MANUFACTURERS RECOMMENDATIONS.
5. A RODDING ACCESS PINOT IS FITTED 1200mm AFFL IN EACH DROP INTO THE EXISTING NETWORK.

LEGEND

- DENOTES NEW RWP INSTALLATION PIPEWORK ROUTE
- DENOTES NEW RWP INSTALLATION ROUTE WITH CONNECTIONS INTERFACED INTO EXISTING RWP DROP LOCATIONS
- (1) 100Ø RAINWATER OUTLET ALUMASC HARMER OR EQUAL AND APPROVED ALL OUTLETS ARE POSITIONED IN A 450mm SQUARE 50mm DEEP GUTTER SUMP
- (2) NOTE TO ARCHITECT: PERIMETER GUTTER HAS BEEN DESIGNED TO CATER FOR A CATEGORY 3 RAINFALL INTENSITY AND SHALL BE (600mm x 100mm DEEP)

  NOTE: THE GUTTER IS SIZED TO INCORPORATED 50mm DEEP SUMPS AT ALL OUTLETS LOCATIONS

Rev	Date	Description	Made	Checked
AI	02.08.2018	AS INSTALLED	MS	DL

Drawing Status: AS INSTALLED

TREE BUILDING SERVICES

Client: LAZARI INVESTMENTS LIMITED

Project: GREATER LONDON HOUSE

Drawing Title: LOWER GROUND CAR PARK SOUTH RAINWATER SERVICES

Drawn/Design	Checked	Approved	Date
MS	DL	DL	22/03/2017

Scales	Drawing No.	Rev
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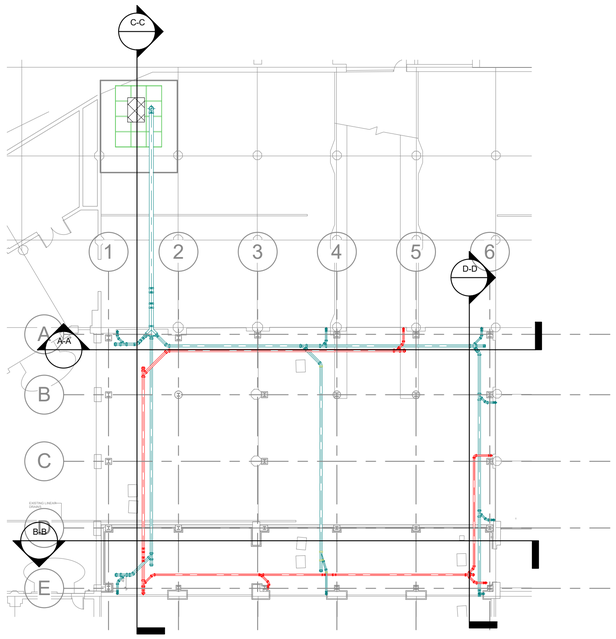

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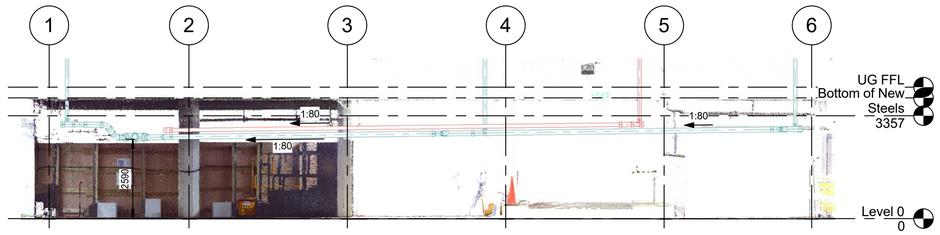

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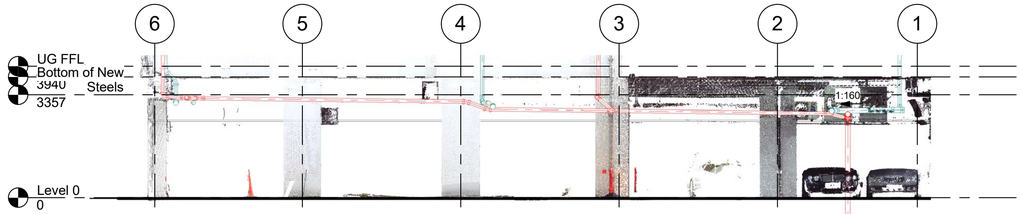

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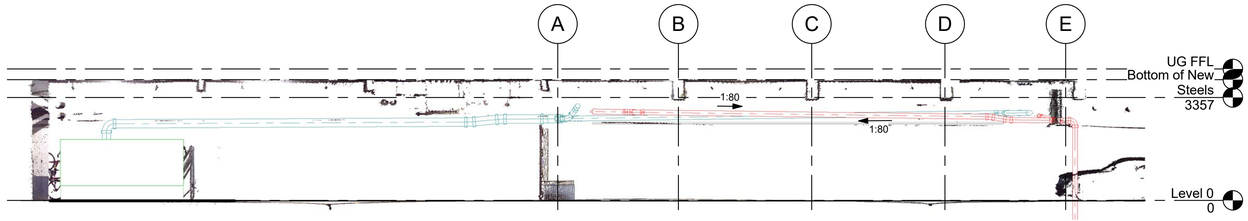

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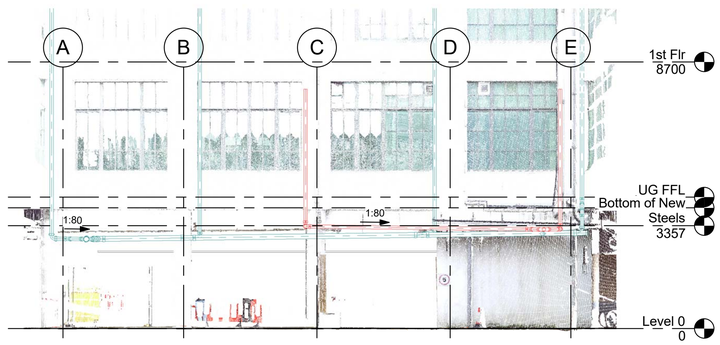

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DENOTES NEW RWP INSTALLATION PIPEWORK ROUTE

DENOTES NEW RWP INSTALLATION ROUTE WITH CONNECTIONS INTERFACED INTO EXISTING RWP DROP LOCATIONS

Rev	Date	Description	Made	Checked
P2	17.04.2017	INCORPORATING GLP C2 CHANGES	MS	DL
P1	04.04.2017	FOR APPROVAL	MS	DL

Drawing Status
FOR APPROVAL

TREE BUILDING SERVICES

Client
LAZARI INVESTMENTS LIMITED

Project
GREATER LONDON HOUSE

Drawing Title
LOWER GROUND
CAR PARK SOUTH
PROPOSED RAINWATER
SECTIONS

Drawn/Design	Checked	Approved	Date
MS	DL	DL	02/04/2017

Scales	Drawing No.	Rev
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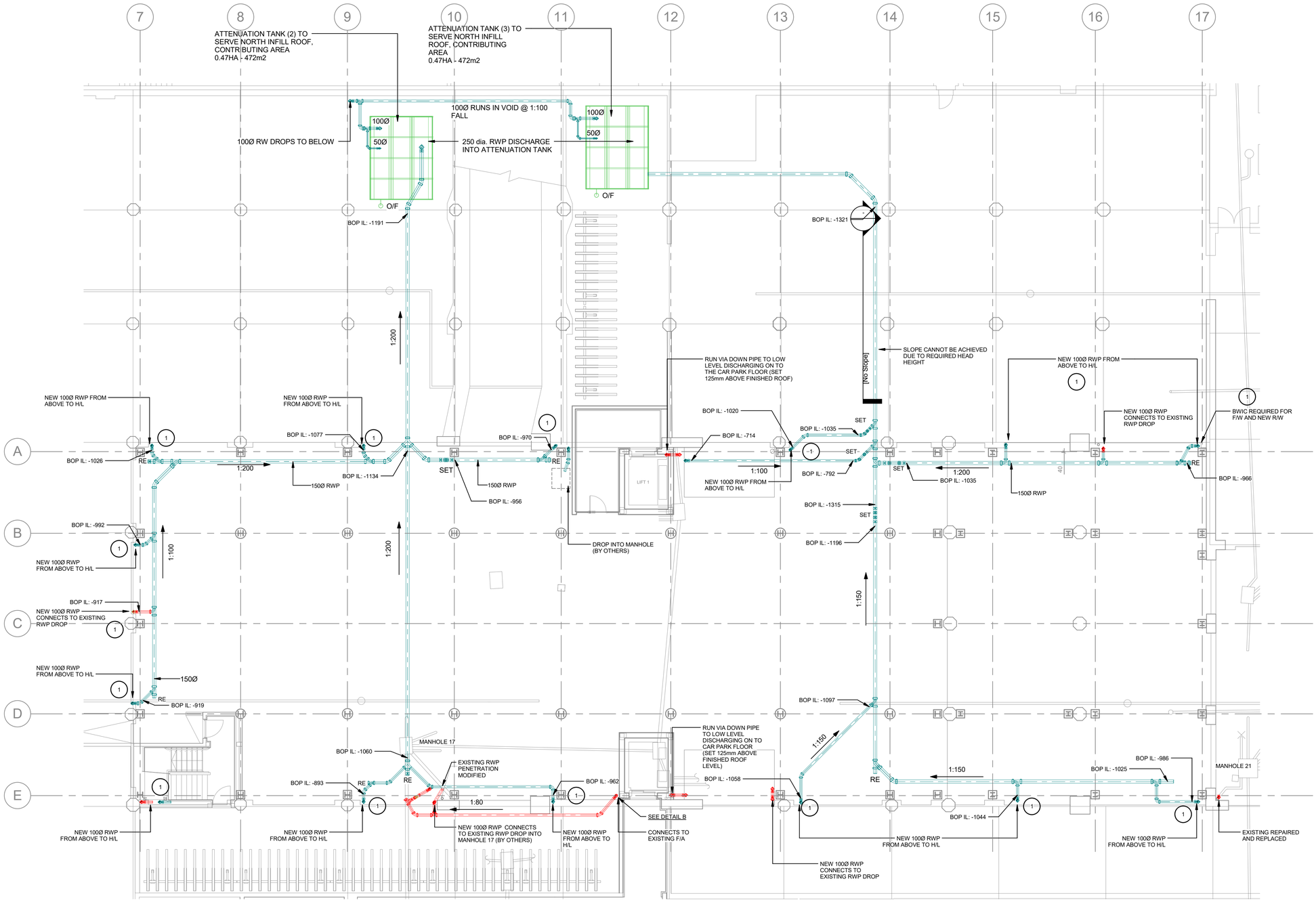

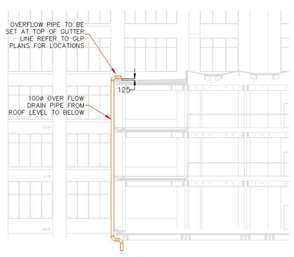

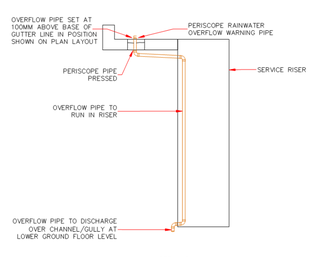

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Rev	Date	Description	Made	Checked
AI	02.08.2018	AS INSTALLED	MS	DL

Drawing Status: AS INSTALLED

TREE BUILDING SERVICES

Client: LAZARI INVESTMENTS LIMITED

Project: GREATER LONDON HOUSE

Drawing Title: LOWER GROUND CAR PARK NORTH RAINWATER SERVICES

Drawn/Design	Checked	Approved	Date
MS	DL	DL	29/03/2017

Scales	Drawing No.	Rev
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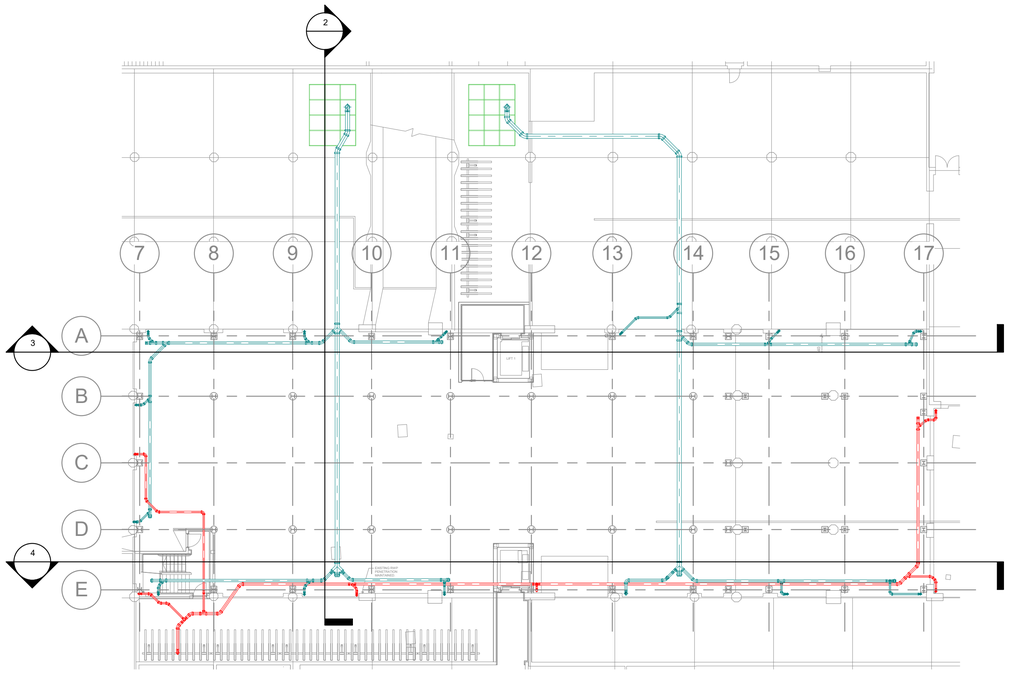

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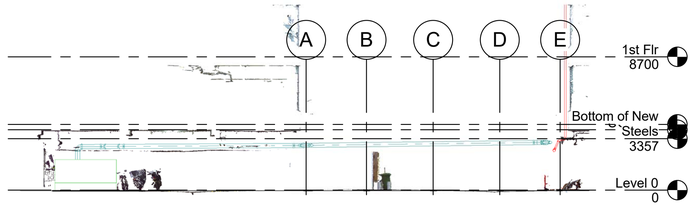

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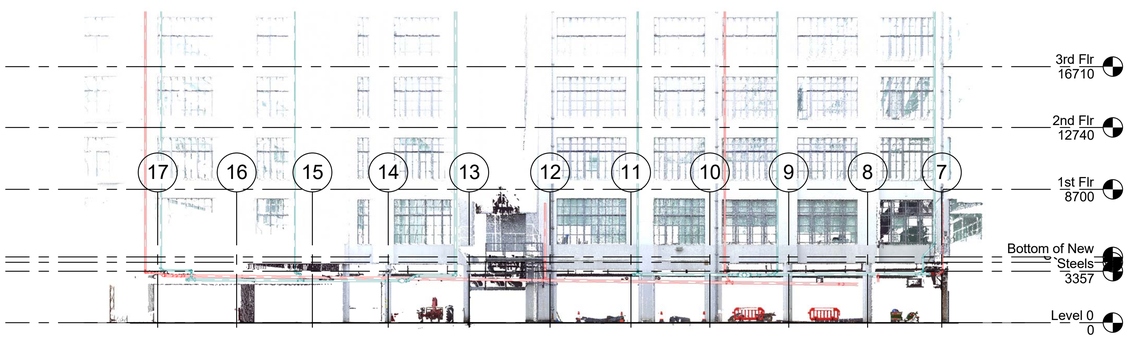

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DENOTES NEW RWP INSTALLATION ROUTE WITH CONNECTIONS INTERFACED INTO EXISTING RWP DROP LOCATIONS

Rev	Date	Description	Made	Checked
P1	17.04.2017	ISSUED FOR APPROVAL	MS	DL

Drawing Status

TREE BUILDING SERVICES

Client

LAZARI INVESTMENTS LIMITED

Project

GREATER LONDON HOUSE

Drawing Title

CAR PARK NORTH
PROPOSED RAINWATER
SECTIONS

Drawn/Design	Checked	Approved	Date
Designer	Checker	Approver	04/18/17

Scales	Drawing No.	Rev
1:200	TB-LG-RW-004	P1

APPENDIX C

. . .

Date 10/04/2017 12:46 | Designed by UKRXM014
File 161209 Attenuation Tank... | Checked by
XP Solutions | Source Control 2015.1

Summary of Results for 100 year Return Period (+30%)

Storm Event	Max Level (m)	Max Depth (m)	Max Control (l/s)	Max Overflow (l/s)	Max Σ Outflow (l/s)	Max Volume (m³)	Status
15 min Summer	23.666	0.966	1.6	0.0	1.6	11.6	O K
30 min Summer	23.871	1.171	1.7	0.3	2.0	14.1	O K
60 min Summer	23.904	1.204	1.8	1.7	3.4	14.4	O K
120 min Summer	23.897	1.197	1.7	1.3	3.0	14.4	O K
180 min Summer	23.871	1.171	1.7	0.3	2.0	14.0	O K
240 min Summer	23.807	1.107	1.7	0.0	1.7	13.3	O K
360 min Summer	23.676	0.976	1.6	0.0	1.6	11.7	O K
480 min Summer	23.559	0.859	1.5	0.0	1.5	10.3	O K
600 min Summer	23.453	0.753	1.5	0.0	1.5	9.0	O K
720 min Summer	23.352	0.652	1.5	0.0	1.5	7.8	O K
960 min Summer	23.119	0.419	1.5	0.0	1.5	5.0	O K
1440 min Summer	22.888	0.188	1.5	0.0	1.5	2.3	O K
2160 min Summer	22.788	0.088	1.3	0.0	1.3	1.1	O K
2880 min Summer	22.767	0.067	1.0	0.0	1.0	0.8	O K
4320 min Summer	22.749	0.049	0.7	0.0	0.7	0.6	O K
5760 min Summer	22.742	0.042	0.6	0.0	0.6	0.5	O K
7200 min Summer	22.737	0.037	0.5	0.0	0.5	0.4	O K
8640 min Summer	22.734	0.034	0.4	0.0	0.4	0.4	O K
10080 min Summer	22.731	0.031	0.4	0.0	0.4	0.4	O K
15 min Winter	23.791	1.091	1.7	0.0	1.7	13.1	O K
30 min Winter	23.933	1.233	1.8	3.5	5.3	14.8	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Overflow Volume (m³)	Time-Peak (mins)
15 min Summer	137.274	0.0	12.9	0.0	18
30 min Summer	88.737	0.0	16.6	0.1	31
60 min Summer	54.549	0.0	20.5	1.3	46
120 min Summer	32.389	0.0	24.3	1.0	82
180 min Summer	23.570	0.0	26.5	0.2	122
240 min Summer	18.708	0.0	28.1	0.0	160
360 min Summer	13.486	0.0	30.3	0.0	230
480 min Summer	10.688	0.0	32.1	0.0	298
600 min Summer	8.919	0.0	33.4	0.0	364
720 min Summer	7.689	0.0	34.6	0.0	432
960 min Summer	6.081	0.0	36.5	0.0	546
1440 min Summer	4.363	0.0	39.3	0.0	764
2160 min Summer	3.126	0.0	42.2	0.0	1100
2880 min Summer	2.465	0.0	44.4	0.0	1468
4320 min Summer	1.762	0.0	47.6	0.0	2176
5760 min Summer	1.387	0.0	49.9	0.0	2928
7200 min Summer	1.152	0.0	51.8	0.0	3672
8640 min Summer	0.989	0.0	53.4	0.0	4320
10080 min Summer	0.870	0.0	54.8	0.0	4984
15 min Winter	137.274	0.0	14.4	0.0	18
30 min Winter	88.737	0.0	18.6	1.8	26

Summary of Results for 100 year Return Period (+30%)

Storm Event	Max Level (m)	Max Depth (m)	Max Control (l/s)	Max Overflow (l/s)	Max Σ Outflow (l/s)	Max Volume (m³)	Status
60 min Winter	23.959	1.259	1.8	4.9	6.7	15.1	O K
120 min Winter	23.936	1.236	1.8	3.6	5.4	14.8	O K
180 min Winter	23.912	1.212	1.8	2.2	3.9	14.5	O K
240 min Winter	23.892	1.192	1.7	1.0	2.8	14.3	O K
360 min Winter	23.761	1.061	1.7	0.0	1.7	12.7	O K
480 min Winter	23.590	0.890	1.5	0.0	1.5	10.7	O K
600 min Winter	23.433	0.733	1.5	0.0	1.5	8.8	O K
720 min Winter	23.268	0.568	1.5	0.0	1.5	6.8	O K
960 min Winter	22.955	0.255	1.5	0.0	1.5	3.1	O K
1440 min Winter	22.791	0.091	1.3	0.0	1.3	1.1	O K
2160 min Winter	22.761	0.061	0.9	0.0	0.9	0.7	O K
2880 min Winter	22.749	0.049	0.7	0.0	0.7	0.6	O K
4320 min Winter	22.739	0.039	0.5	0.0	0.5	0.5	O K
5760 min Winter	22.734	0.034	0.4	0.0	0.4	0.4	O K
7200 min Winter	22.731	0.031	0.3	0.0	0.3	0.4	O K
8640 min Winter	22.728	0.028	0.3	0.0	0.3	0.3	O K
10080 min Winter	22.726	0.026	0.3	0.0	0.3	0.3	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Overflow Volume (m³)	Time-Peak (mins)
60 min Winter	54.549	0.0	22.9	3.7	44
120 min Winter	32.389	0.0	27.2	3.5	78
180 min Winter	23.570	0.0	29.7	2.4	118
240 min Winter	18.708	0.0	31.4	1.1	160
360 min Winter	13.486	0.0	34.0	0.0	248
480 min Winter	10.688	0.0	35.9	0.0	320
600 min Winter	8.919	0.0	37.5	0.0	392
720 min Winter	7.689	0.0	38.8	0.0	466
960 min Winter	6.081	0.0	40.9	0.0	550
1440 min Winter	4.363	0.0	44.0	0.0	750
2160 min Winter	3.126	0.0	47.3	0.0	1100
2880 min Winter	2.465	0.0	49.7	0.0	1468
4320 min Winter	1.762	0.0	53.3	0.0	2160
5760 min Winter	1.387	0.0	55.9	0.0	2896
7200 min Winter	1.152	0.0	58.0	0.0	3632
8640 min Winter	0.989	0.0	59.8	0.0	4312
10080 min Winter	0.870	0.0	61.4	0.0	5104

Model Details

Storage is Online Cover Level (m) 24.700

Tank or Pond Structure

Invert Level (m) 22.700

Depth (m)	Area (m²)
0.000	12.0

Hydro-Brake Optimum® Outflow Control

Unit Reference	MD-SHE-0060-2000-1600-2000
Design Head (m)	1.600
Design Flow (l/s)	2.0
Flush-Flo™	Calculated
Objective	Minimise upstream storage
Diameter (mm)	60
Invert Level (m)	22.700
Minimum Outlet Pipe Diameter (mm)	75
Suggested Manhole Diameter (mm)	1200

Control Points	Head (m)	Flow (l/s)
Design Point (Calculated)	1.600	2.0
Flush-Flo™	0.263	1.5
Kick-Flo®	0.536	1.2
Mean Flow over Head Range	-	1.5

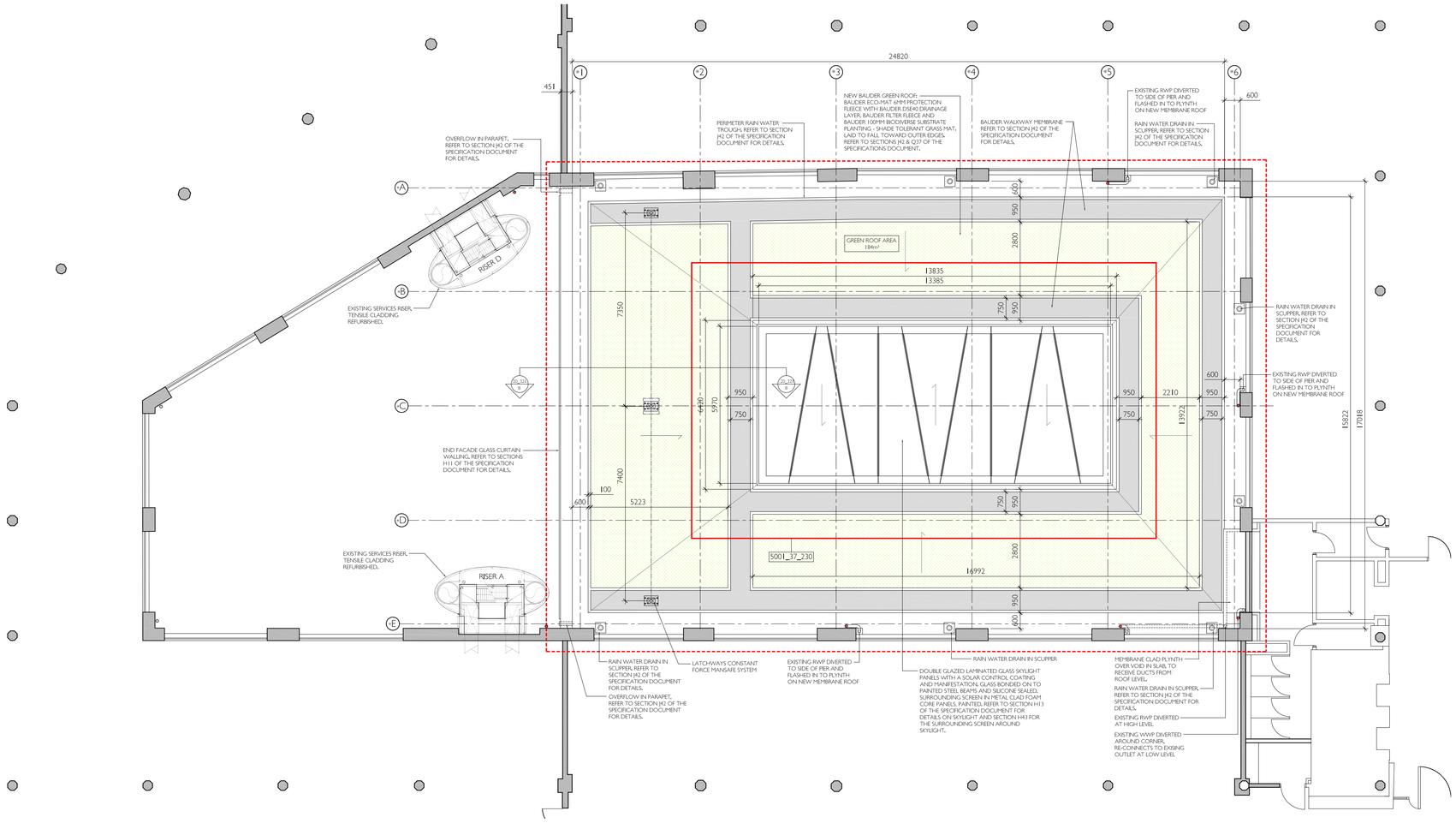
The hydrological calculations have been based on the Head/Discharge relationship for the Hydro-Brake Optimum® as specified. Should another type of control device other than a Hydro-Brake Optimum® be utilised then these storage routing calculations will be invalidated

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	1.3	1.200	1.8	3.000	2.7	7.000	4.0
0.200	1.5	1.400	1.9	3.500	2.9	7.500	4.1
0.300	1.5	1.600	2.0	4.000	3.0	8.000	4.2
0.400	1.5	1.800	2.1	4.500	3.2	8.500	4.3
0.500	1.3	2.000	2.2	5.000	3.4	9.000	4.4
0.600	1.3	2.200	2.3	5.500	3.5	9.500	4.6
0.800	1.5	2.400	2.4	6.000	3.7		
1.000	1.6	2.600	2.5	6.500	3.8		

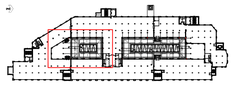
Pipe Overflow Control

Diameter (m)	0.150	Entry Loss Coefficient	0.500
Slope (1:X)	200.0	Coefficient of Contraction	0.600
Length (m)	2.500	Upstream Invert Level (m)	23.850
Roughness k (mm)	0.600		

APPENDIX D



SITE / LOCATION PLAN



DO NOT SCALE FROM THIS DRAWING

THE CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE AND REPORT ANY DISCREPANCIES TO FORME BEFORE PROCEEDING WITH THE WORKS

PAPER SIZE
A1

KEY

EXTENT OF NEW WORKS

DETAIL KEY

GREEN ROOF

NBS

STRUCTURAL SPECIFICATION - 16861/MC/Spec

ARCHITECTURAL SPECIFICATION - 5001_20_900 ( )

REV	DATE	BY	NOTES
A	26/10/16	GW	BAUDER PERIMETER WALKWAY MEMBRANE REMOVED FROM PARAPET EDGE.
			MANSAFE SYSTEM LAYOUT REVISED. RWP LOCATIONS UPDATED.
			SKYLIGHT LAYOUT UPDATED.
B	16/12/16	RCJ	NBS REFERENCES ADDED. MANSAFE LAYOUT REVISED.

PROJECT TITLE
Greater London House
Lightwell Extension

DATE 05/16

ORIGINATOR RCJ

CHECKED

APPROVED

DRAWING TITLE
Third Floor Roof (South)
General Arrangement Plan

SCALE 1:100 @ A1

REVISION C1

STATUS
Contract

DRAWING NUMBER
5001_20_230

forme UK
ARCHITECTURE LTD
NUTMEG HOUSE 60 GAINSFORD STREET
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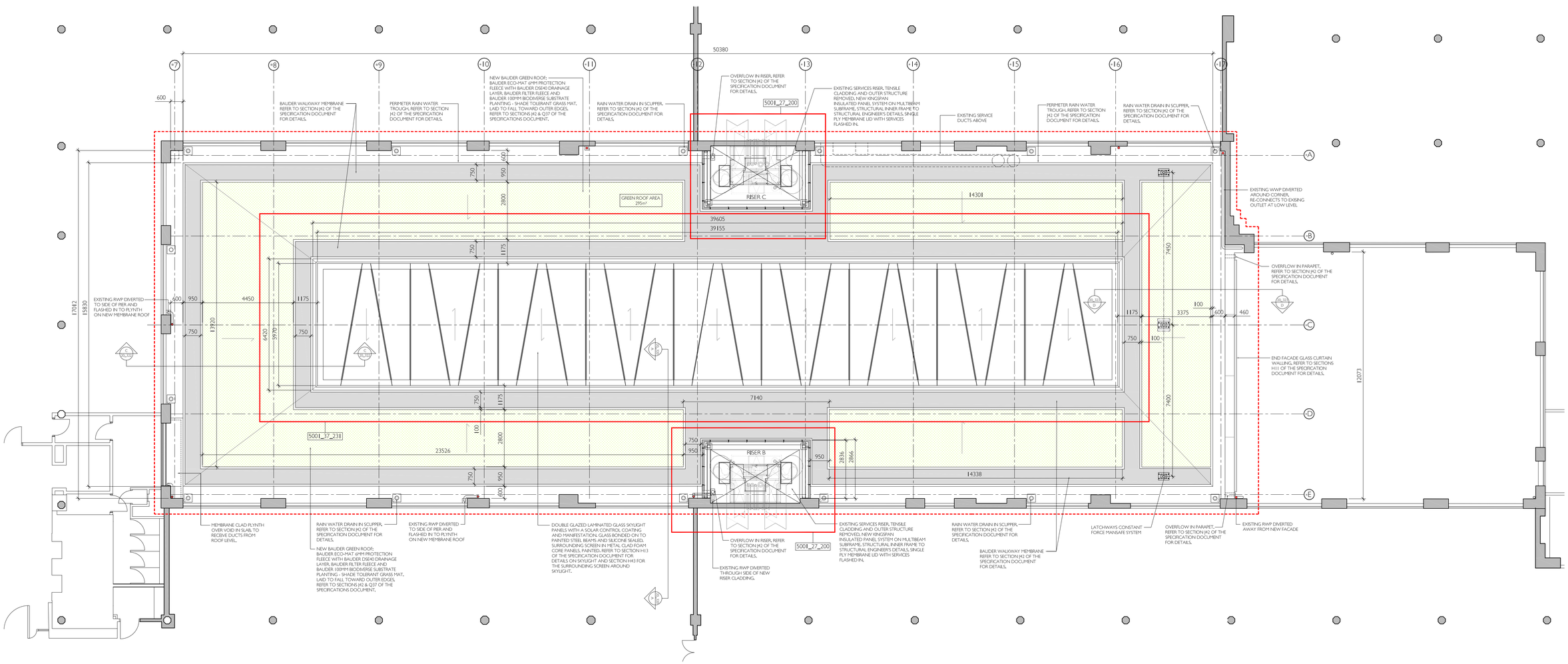
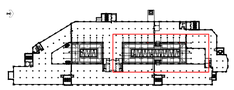
COMPANY NUMBER 9879724



SITE / LOCATION PLAN



DO NOT SCALE FROM THIS DRAWING

THE CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS ON SITE AND REPORT ANY DISCREPANCIES TO FORME BEFORE PROCEEDING WITH THE WORKS

PAPER SIZE
A1

KEY

EXTENT OF NEW WORKS

DETAIL KEY

GREEN ROOF

NBS

STRUCTURAL SPECIFICATION - 16861/MC/Spec

ARCHITECTURAL SPECIFICATION - 5001_20_900 ( )

REV	DATE	BY	NOTES
A	26/10/16	GW	BAUDER PERIMETER WALKWAY MEMBRANE REMOVED FROM PARAPET EDGE
			NEW RISER ENCLOSURES, MANSAFE SYSTEM LAYOUT REVISED, RWP LOCATIONS
			UPDATED, SKYLIGHT LAYOUT UPDATED.
B	16/12/16	RCJ	NBS REFERENCES ADDED, MANSAFE LAYOUT REVISED.

PROJECT TITLE
Greater London House
Lightwell Extension

DATE
05/16

ORIGINATOR
RCJ

CHECKED

APPROVED

DRAWING TITLE
Third Floor Roof (North)
General Arrangement plan

SCALE
1:100 @ A1

REVISION
C1

STATUS
Contract

DRAWING NUMBER
5001_20_231

forme UK
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