ISO A1 841mm x 594mm

J1
Ref Morris + Co
detailed information

Bromley School

Leven Road

A1

A2

podium car park

Nairn Street

A3

Enterprise Yard

B1

B2

B3

B4

A12

STRATEGIC 2No. 991mm DIA THAMES WATER SEWERS TO BE ABANDONED AND DIVERTED AS SHOWN. SEWER DIVERSION AGREEMENT REQUIRED FROM THAMES WATER PRIOR TO ANY WORKS BEING UNDERTAKEN.

991mm DIA

2250mm DIA

TOWER HAMLETS SWS REF:3407
CL=2.25
IL=0.86

TOWER HAMLETS SWS REF:2420
CL=3.36
IL=1.54

TOWER HAMLETS SWS REF:3403
CL=1.94
IL=-0.54

STRATEGIC 2250mm THAMES WATER SEWER BUILDOVER AGREEMENT WILL BE REQUIRED. GYROSCOPIC SURVEY WILL ALSO BE REQUIRED AS PART OF CONSULTATION WITH THAMES WATER TO ACHIEVE FORMAL BUILD OVER AGREEMENT.

914mm DIA

Abbot Road

ABBOT ROAD AND ASSOCIATED HIGHWAY DRAINAGE TO BE ABANDONED, AGREEMENT TO BE PROVIDED FROM THE LONDON BOROUGH OF TOWER HAMLETS.

225mm DIA

Highland Place

TOWER HAMLETS SWS REF:3406
CL=2.76
IL=-1.11

THAMES WATER CWS REF:4407
CL=1.66
IL=-3.55

C1

C2

D1

THAMES WATER SWS REF:3401
TO BE RELOCATED OUTSIDE OF BUILDING FOOTPRINT AS SHOWN. ASSOCIATED EXISTING CONNECTIONS BE DIVERTED AS NECESSARY, WITH FURTHER SURVEY WORKS REQUIRED.

TOWER HAMLETS SWS REF:3405
CL=1.72
IL=0.13

TOWER HAMLETS SWS REF:4401
CL=1.76
IL=-0.05

TOWER HAMLETS SWS REF:3404
CL=1.67
IL=-0.33

Liffler Road

Abbott Road

686mm DIA

STRATEGIC 2250mm THAMES WATER SEWER BUILDOVER AGREEMENT WILL BE REQUIRED. GYROSCOPIC SURVEY WILL ALSO BE REQUIRED AS PART OF CONSULTATION WITH THAMES WATER TO ACHIEVE FORMAL BUILD OVER AGREEMENT.

THAMES WATER SWS REF:3432
CL=1.66
IL=-1.72

305mm DIA

C4

D4

D2

THAMES WATER CWS REF:4420
CL=1.66
IL=-3.16

SEWERS TO BE ABANDONED
APPLICATION TO THAMES WATER REQUIRED

FURTHER SURVEY WORKS REQUIRED TO CONFIRM EXISTING PUBLIC SURFACE WATER SEWER CAN BE ABANDONED PRIOR TO FORMAL APPLICATION AND AGREEMENT FROM THAMES WATER.

Elrick Street

C3

E2

300mm DIA

610mm DIA

E1

E3

SEWERS TO BE ABANDONED
FOLLOWING CONSULTATION AND AGREEMENT WITH THAMES WATER. FORMAL APPLICATIONS AND AGREEMENTS TO BE COMPLETED DURING LATER DESIGN STAGES.

THAMES WATER CWS REF:4312
CL=1.77
IL=-2.54

Hilton Tower

THAMES WATER CWS REF:3222
CL=2.29
IL=0.55

Dee Street

THAMES WATER CWS REF:4313
CL=2.00
IL=-1.04

Kentidy Street

457mm DIA

THAMES WATER SEWER TO BE ABANDONED AND REDIRECTED AS SHOWN CONNECTING TO THAMES WATER MANHOLE REF: 4312. SEWER DIVERSION AGREEMENT REQUIRED FROM THAMES WATER PRIOR TO ANY WORKS BEING UNDERTAKEN.

H1
Ref Morris + Co
detailed information

SEWERS TO BE ABANDONED
APPLICATION TO THAMES WATER REQUIRED

H3
Ref Morris + Co
detailed information

THAMES WATER CWS REF:4216
CL=1.56
IL=-1.33

car park

H2
Ref Morris + Co
detailed information

THAMES WATER CWS REF:4215
CL=1.61
IL=-2.24

Blair Street

Benedi Street

Braithwaite Park

I1
Ref Morris + Co
detailed information

Lochnagar Street

J1
Ref Morris + Co
detailed information

Bromley School

Leven Road

ISSUED FOR INFORMATION

REV	DESCRIPTION	BY	DATE
P01	STAGE 2 ISSUE	LH	20/08/21
P02	DRAFT STAGE 2+ ISSUED FOR PLANNING	LH	17/09/21
P03	ISSUED FOR PLANNING	LB	14/10/21

NOTES:

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3. THIS DRAWING IS FOR INFORMATION ONLY.
4. DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, ENGINEERS AND CONSULTANTS DRAWINGS AND SPECIFICATIONS.
5. THIS DRAWING IS BASED ON:
   - THAMES WATER ASSET RECORDS DATED NOVEMBER 2020
   - LEVITT BERNSTEIN ARCHITECTURAL MASTERPLAN 3663 - 100A - Proposed LGF Plan - Scenario A - P10, DATED: 10/08/21
   - TOPOGRAPHICAL & UTILITIES COMBINED SURVEY FULL SITE V2

KEY:

- SITE BOUNDARY
- EXISTING SURFACE WATER SEWER
- EXISTING COMBINED WATER SEWER
- PROPOSED COMBINED WATER SEWER
- EXISTING SURFACE WATER MANHOLE
- EXISTING COMBINED WATER MANHOLE
- PROPOSED COMBINED WATER MANHOLE
- SEWER TO BE ABANDONED
- SEWER TO BE PASSED THROUGH STRATEGIC THAMES WATER SEWER BUILD OVER AGREEMENT
- SEWER TO BE DIVERTED & ABANDONED

CDM RESIDUAL CIVIL / STRUCTURAL DESIGN RISKS

MEINHARDT
10 Aldersgate Street, London EC1A 4JU
Telephone: +44 (0)20 7831 7969
www.meinhardt.co.uk

PROJECT
ABERFELDY VILLAGE MASTERPLAN

CLIENT
ECOWORLD

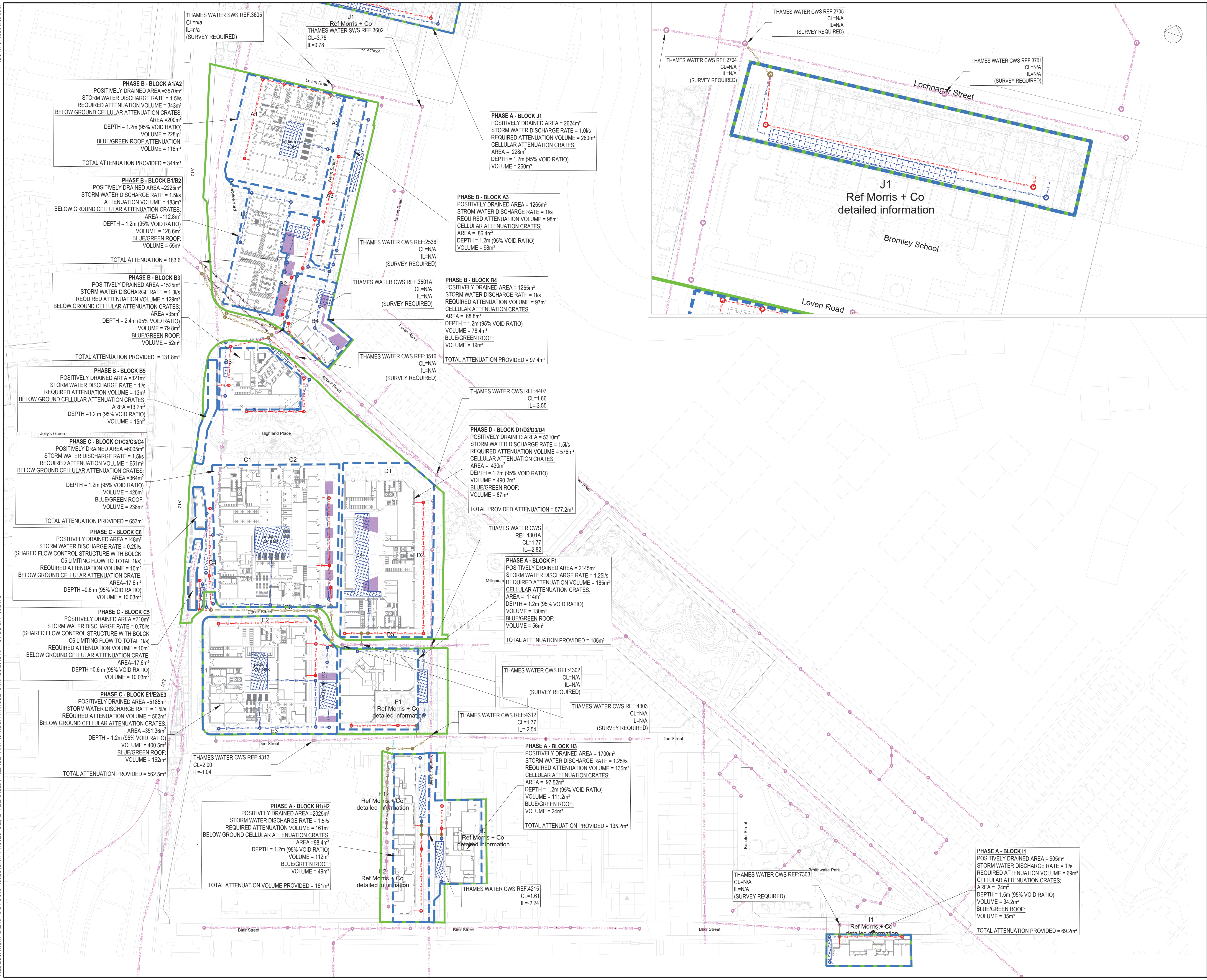
TITLE
THAMES WATER SEWER ABANDONMENT AND BUILDOVER MAP

DISCIPLINE			SCALE
CIVIL			1:1000
DRAWN	DESIGNED	CHECKED	APPROVED
LH	LH	LB	CM
DRAWING No			ISSUE
2812-MHT-CV-BG-DR-050			P03

DATE: 14/10/2021
FILE LOCATION: \\MEINHARDT-DC1\PROJECTDATA\PROJECTS\2812 - ABERFIELDY VILLAGE\1. MHT\CIVIL\DRAWINGS\DRAWINGS\2812-MHT-CV-BG-DR-050.DWG

ISSUED FOR INFORMATION

REV	DESCRIPTION	BY	DATE
P01	STAGE 2 ISSUE	LH	20/08/21
P02	SUSTAINABILITY PRESENTATION	LB	25/08/21
P03	DRAFT STAGE 2+ ISSUED FOR PLANNING	LH	17/09/21
P04	ISSUED FOR PLANNING	LB	14/10/21



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3. THIS DRAWING IS FOR INFORMATION ONLY.
4. DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, ENGINEERS AND CONSULTANTS DRAWINGS AND SPECIFICATIONS.
5. PERMEABLE PAVING TO BE UTILIZED IN PRIVATELY MANAGED PUBLIC SPACE WHERE FEASIBLE.
6. THIS DRAWING IS BASED ON:
   - THAMES WATER ASSET RECORDS DATED NOVEMBER 2020
   - LEVITT BERNSTEIN ARCHITECTURAL MASTERPLAN 3663 - 100A - Proposed LGF Plan - Scenario A - P10, DATED: 10/08/21
   - TOPOGRAPHICAL & UTILITIES COMBINED SURVEY FULL SITE V2

TOTAL DISCHARGE RATE FROM SITE IS EQUAL TO THE GREENFIELD RUNOFF RATE OF 18.73 L/S.

KEY:
- ASSUMED PROPERTY BOUNDARY
- PROPOSED SURFACE WATER SEWER
- EXISTING SURFACE WATER SEWER
- PROPOSED FOUL WATER SEWER
- EXISTING COMBINED WATER SEWER
- PROPOSED COMBINED WATER SEWER
- ABANDONED SEWER
- PROPOSED SURFACE WATER MANHOLE
- EXISTING FOUL WATER MANHOLE
- PROPOSED FOUL WATER MANHOLE
- EXISTING COMBINED WATER SEWER
- PROPOSED COMBINED WATER MANHOLE
- PROPOSED BELOW GROUND SURFACE WATER ATTENUATION TANK
- SUDS PLANTER (BIO-RETENTION)
- ASSUMED POSITIVELY DRAINED BLOCK AREA

CDM RESIDUAL CIVIL / STRUCTURAL DESIGN RISKS

MEINHARDT

10 Aldersgate Street, London EC1A 4JU
Telephone: +44 (0)20 7831 7969
www.meinhardt.co.uk

PROJECT
ABERFELDY VILLAGE MASTERPLAN

CLIENT
ECOWORLD

TITLE
BELOW GROUND DRAINAGE MASTERPLAN

DISCIPLINE			SCALE
CIVIL			1:1000
DRAWN	DESIGNED	CHECKED	APPROVED
LH	LH	LB	LB
DRAWING No			ISSUE
2812-MHT-CV-BG-DR-100			P04

ISO A1 841mm x 594mm

DATE: 14/10/2021
FILE LOCATION: \\MEINHARDT-DC1\PROJECTDATA\PROJECTS\2812 - ABERFELDY VILLAGE\1. MHT\CIVIL\DRAWINGS\2812-MHT-CV-BG-DR-100.DWG

ISO A1 841mm x 594mm

BLOCK A1/A2

ROOF AREA = 2110m²

BLUE/GREEN ROOF ATTENUATION:
ROOF AREA AVAILABLE FOR BLUE/GREEN ROOF = 1386 x 0.5 = 693m²

ATTENUATION VOLUME PROVIDED BY BLUE/GREEN ROOF AT 0.1m DEPTH & 0.95 VOID RATIO = 65m³

PODIUM BLUE ROOF:
PODIUM BLUE ROOF AREA = 543m²

ATTENUATION VOLUME PROVIDED BY PODIUM BLUE ROOF AT 0.1m DEPTH & 0.95 VOID RATIO = 51m³

TOTAL ATTENUATION VOLUME PROVIDED = 116m³

BLUE/GREEN ROOF DISCHARGE RATE DESIGNED BY SPECIALIST AT LATER DESIGN STAGE.

BLOCK B1/B2

ROOF AREA = 1289m²

ASSUMED ROOF AREA AVAILABLE FOR BLUE/GREEN ROOF = 1175 x 0.5 = 587.5m²

ATTENUATION VOLUME PROVIDED BY BLUE/GREEN ROOF AT 0.1m DEPTH & 0.95 VOID RATIO = 55m³

BLUE/GREEN ROOF DISCHARGE RATE DESIGNED BY SPECIALIST AT LATER DESIGN STAGE.

BLOCK B4

ROOF AREA = 488m²

ROOF AREA AVAILABLE FOR BLUE/GREEN ROOF = 409 x 0.5 = 204.5m²

ATTENUATION VOLUME PROVIDED BY BLUE/GREEN ROOF AT 0.1m DEPTH & 0.95 VOID RATIO = 19m³

BLUE/GREEN ROOF DISCHARGE RATE DESIGNED BY SPECIALIST AT LATER DESIGN STAGE.

BLOCK B3

ROOF AREA = 1095m²

ROOF AREA USED BY MEP PLANT/FIXED FURNITURE = 85m²
<50% TOTAL BLUE/GREEN ROOF AREA THEREFORE ASSUMPTION OKAY.

ROOF AREA AVAILABLE FOR BLUE/GREEN ROOF = 1095 x 0.5 = 547.5m²

ATTENUATION VOLUME PROVIDED BY BLUE/GREEN ROOF AT 0.1m DEPTH & 0.95 VOID RATIO = 52m³

BLUE/GREEN ROOF DISCHARGE RATE DESIGNED BY SPECIALIST AT LATER DESIGN STAGE.

BLOCK C1/C2/C3/C4

ROOF AREA = 4349m²

BLUE/GREEN ROOF ATTENUATION:
ROOF AREA AVAILABLE FOR BLUE/GREEN ROOF = 2598 x 0.5 = 1299m²

ATTENUATION VOLUME PROVIDED BY BLUE/GREEN ROOF AT 0.1m DEPTH & 0.95 VOID RATIO = 123.4m³

PODIUM BLUE ROOF:
PODIUM BLUE ROOF AREA = 1210m²

ATTENUATION VOLUME PROVIDED BY PODIUM BLUE ROOF AT 0.1m DEPTH & 0.95 VOID RATIO = 114.95m³

TOTAL ATTENUATION VOLUME PROVIDED = 238m³

BLUE/GREEN ROOF DISCHARGE RATE DESIGNED BY SPECIALIST AT LATER DESIGN STAGE.

BLOCK D1/D2/D3/D4

ROOF AREA = 2320m²

ROOF AREA AVAILABLE FOR BLUE/GREEN ROOF = 1833 x 0.5 = 916.5m²

ATTENUATION VOLUME PROVIDED BY BLUE/GREEN ROOF AT 0.1m DEPTH & 0.95 VOID RATIO = 87m³

BLUE/GREEN ROOF DISCHARGE RATE DESIGNED BY SPECIALIST AT LATER DESIGN STAGE.

BLOCK E1/E2/E3

ROOF AREA = 3062m²

BLUE/GREEN ROOF ATTENUATION:
ROOF AREA AVAILABLE FOR BLUE/GREEN ROOF = 1948 x 0.5 = 974m²

ATTENUATION VOLUME PROVIDED BY BLUE/GREEN ROOF AT 0.1m DEPTH & 0.95 VOID RATIO = 92m³

PODIUM BLUE ROOF:
PODIUM BLUE ROOF AREA = 746m²

ATTENUATION VOLUME PROVIDED BY PODIUM BLUE ROOF AT 0.1m DEPTH & 0.95 VOID RATIO = 70m³

TOTAL ATTENUATION VOLUME PROVIDED = 162m³

BLUE/GREEN ROOF DISCHARGE RATE DESIGNED BY SPECIALIST AT LATER DESIGN STAGE.

BLOCK F1

ROOF AREA = 1017m²

ROOF AREA USED BY MEP PLANT/FIXED FURNITURE = 235m²

ROOF AREA AVAILABLE FOR BLUE/GREEN ROOF = 834 - 235 = 599m²

ATTENUATION VOLUME PROVIDED BY BLUE/GREEN ROOF AT 0.1m DEPTH & 0.95 VOID RATIO = 56m³

BLUE/GREEN ROOF DISCHARGE RATE DESIGNED BY SPECIALIST AT LATER DESIGN STAGE.

BLOCK H1/H2

ROOF AREA = 1184m²

ROOF AREA USED BY MEP PLANT/FIXED FURNITURE = 72m²

ROOF AREA AVAILABLE FOR BLUE/GREEN ROOF = 593 - 72 = 521m²

ATTENUATION VOLUME PROVIDED BY BLUE/GREEN ROOF AT 0.1m DEPTH & 0.95 VOID RATIO = 49m³

BLUE/GREEN ROOF DISCHARGE RATE DESIGNED BY SPECIALIST AT LATER DESIGN STAGE.

BLOCK H3

ROOF AREA = 723m²

ROOF AREA USED BY MEP PLANT/FIXED FURNITURE = 163m²

ROOF AREA AVAILABLE FOR BLUE/GREEN ROOF = 415 - 163 = 252m²

ATTENUATION VOLUME PROVIDED BY BLUE/GREEN ROOF AT 0.1m DEPTH & 0.95 VOID RATIO = 24m³

BLUE/GREEN ROOF DISCHARGE RATE DESIGNED BY SPECIALIST AT LATER DESIGN STAGE.

BLOCK I1

ROOF AREA = 609m²

ROOF AREA USED BY MEP PLANT/FIXED FURNITURE = 135m²

ROOF AREA AVAILABLE FOR BLUE/GREEN ROOF = 511 - 135 = 376m²

ATTENUATION VOLUME PROVIDED BY BLUE/GREEN ROOF AT 0.1m DEPTH & 0.95 VOID RATIO = 35m³

BLUE/GREEN ROOF DISCHARGE RATE DESIGNED BY SPECIALIST AT LATER DESIGN STAGE.

NOTE:

A 50% REDUCTION IN BLUE/GREEN ROOF PLAN AREA IS APPLIED WHERE ROOF PLANT AREAS ARE UNKNOWN. THIS REDUCTION IS EXCLUDING PODIUM BLUE ROOF AREAS.

KEY:

- PROPOSED PODIUM DECK BLUE ROOF AREA
- PROPOSED BLUE OR GREEN ROOF AREA
- PROPOSED BLUE ROOF AREA

CDM RESIDUAL CIVIL / STRUCTURAL DESIGN RISKS

ISSUED FOR INFORMATION

REV	DESCRIPTION	BY	DATE
P01	STAGE 2 ISSUE	LH	20/08/21
P02	DRAFT STAGE 2+ FOR PLANNING	LH	17/09/21
P03	ISSUED FOR PLANNING	LB	14/10/21

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5. THIS DRAWING IS BASED ON:
   - LEVITT BERNSTEIN ARCHITECTURAL MASTERPLAN DWG REF; 3663 - 130 - Proposed Roof plan - Scenario A - P6.
   - MORRIS AND COMPANY ROOF PLANS A303-MCO-BF-R1-DR-A-01122, A303-MCO-BH-R1-DR-A-01138 & A303-MCO-BI-R1-DR-A-01158.

MEINHARDT
10 Aldersgate Street, London EC1A 4JU
Telephone: +44 (0)20 7831 7969
www.meinhardt.co.uk

PROJECT
ABERFELDY VILLAGE MASTERPLAN

CLIENT
ECOWORLD

TITLE
ROOF MASTERPLAN

DISCIPLINE			SCALE
CIVIL			1:1000
DRAWN	DESIGNED	CHECKED	APPROVED
LH	LH	LB	CM
DRAWING No			ISSUE
2812-MHT-CV-BG-DR-101			P03

DATE: 14/10/2021
FILE LOCATION: \\MEINHARDT.DC1\PROJECTDATA\PROJECTS\2812 - ABERFIELDY VILLAGE\1. MHT\CIVIL\DRAWINGS\DRAWINGS\2812-MHT-CV-RF-DR-101.DWG

Appendix D – Tower Hamlets SUDS Proforma

GREATER**LONDON**AUTHORITY

1. Project & Site Details

Project / Site Name (including sub-catchment / stage / phase where appropriate)	Aberfeldy Village
Address & post code	Poplar Riverside, Aberfeldy Village, E14, London
OS Grid ref. (Easting, Northing)	E 538365
	N 181398
LPA reference (if applicable)	
Brief description of proposed work	The Aberfeldy Village Masterplan aims to deliver, up to 1628 new homes, new workspace, a new high street, new and improved open space and the pedestrianisation of the A12 Abbott Road
Total site Area	48334 m^2
Total existing impervious area	37000 m^2
Total proposed impervious area	36418 m^2
Is the site in a surface water flood risk catchment (ref. local Surface Water Management Plan)?	no
Existing drainage connection type and location	Traditional piped system, multiple connection points
Designer Name	Luke Boustead
Designer Position	Senior Engineer
Designer Company	Meinhardt

2. Proposed Discharge Arrangements

2a. Infiltration Feasibility

Superficial geology classification	Alluviam - Clay, Silt, S
Bedrock geology classification	London Clay Formation
Site infiltration rate	1.12x10 -4 and 2.55x10 m/s
Depth to groundwater level	m below ground level
Is infiltration feasible?	No

2b. Drainage Hierarchy

	Feasible (Y/N)	*Proposed (Y/N)*
1 store rainwater for later use	N	N
2 use infiltration techniques, such as porous surfaces in non-clay areas	N	N
3 attenuate rainwater in ponds or open water features for gradual release	N	N
4 attenuate rainwater by storing in tanks or sealed water features for gradual release	Y	Y
5 discharge rainwater direct to a watercourse	N	N
6 discharge rainwater to a surface water sewer/drain	N	N
7 discharge rainwater to the combined sewer.	Y	Y

2c. Proposed Discharge Details

Proposed discharge location	locations to Thames Water public combine
Has the owner/regulator of the discharge location been consulted?	o Thames Water. Response received confirr

TOWER HAMLETS

GREATER**LONDON**AUTHORITY

LoDEG

3. Drainage Strategy

3a. Discharge Rates & Required Storage				
	Greenfield (GF) runoff rate (l/s)	*Existing discharge rate (l/s)*	*Required storage for GF rate (m^3)*	*Proposed discharge rate (l/s)*
Qbar	18.8			
1 in 1				18.8
1 in 30				18.8
1 in 100				18.8
1 in 100 + CC				18.8
Climate change allowance used		40%		
3b. Principal Method of Flow Control		Vortex Flow control (Hydro-Brake or similar)		

3c. Proposed SuDS Measures			
	Catchment area (m^2)	*Plan area (m^2)*	*Storage vol. (m^3)*
Rainwater harvesting	0		0
Infiltration systems	0		0
Green roofs	7000	3500	335
Blue roofs	11000	6500	620
Filter strips	0	0	0
Filter drains	0	0	0
Bioretention / tree pits	3500	730	0
Pervious pavements	0	0	0
Swales	0	0	0
Basins/ponds			0
Attenuation tanks	48334		2000
Total	**69834**	**10730**	**2955**

4. Supporting Information

4a. Discharge & Drainage Strategy	*Page/section of drainage report*
Infiltration feasibility (2a) – geotechnical factual and interpretive reports, including infiltration results	Section 2.1.3
Drainage hierarchy (2b)	Section 2.1.3
Proposed discharge details (2c) – utility plans, correspondence / approval from owner/regulator of discharge location	Appendix B
Discharge rates & storage (3a) – detailed hydrologic and hydraulic calculations	Appendix C
Proposed SuDS measures & specifications (3b)	Throughout report

4b. Other Supporting Details	*Page/section of drainage report*
Detailed Development Layout	Appendix B
Detailed drainage design drawings, including exceedance flow routes	Appendix B
Detailed landscaping plans	Appendix E
Maintenance strategy	Section 2.5
Demonstration of how the proposed SuDS measures improve:	Section 2
a) water quality of the runoff?	Section 2.1.5
b) biodiversity?	Section 2.1.6
c) amenity?	Section 2.1.6

Appendix E – Architects Plans

Proposed tree

Existing tree (remained)

Existing tree (removed)

Lawn

Screening planting

Planting

River Lea or Lee

Bow Creek

Mud

Ettrick Street

Dee Street

1:1,000

50m