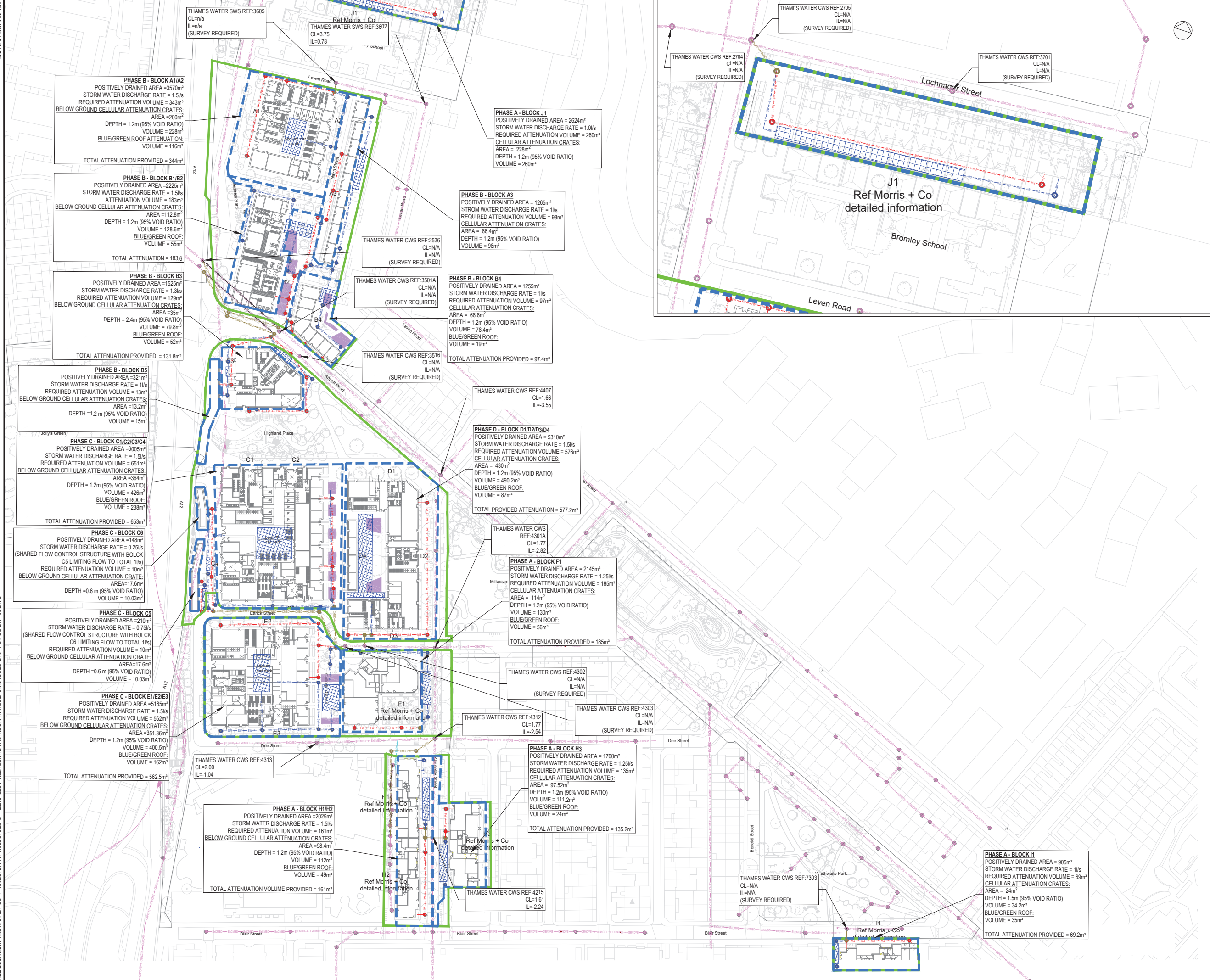


DATE: 14/10/2021
 FILE LOCATION: \\MEINHARDT-DC\PROJECTS\2812 - ABERFELDY VILLAGE1 - MHT\CIVIL\DRAWINGS\2812\2812.MHT-CV-BG-DR-100.DWG



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

- NOTES:**
- DO NOT SCALE FROM THIS DRAWING
 - ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE
 - THIS DRAWING IS FOR INFORMATION ONLY.
 - DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, ENGINEERS AND CONSULTANTS DRAWINGS AND SPECIFICATIONS.
 - PERMEABLE PAVING TO BE UTILIZED IN PRIVATELY MANAGED PUBLIC SPACE WHERE FEASIBLE.
 - 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



PROJECT
ABERFELDY VILLAGE MASTERPLAN

CLIENT
ECOWORLD

TITLE
BELOW GROUND DRAINAGE MASTERPLAN

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

ISO A1 841mm x 594mm
DATE: 14/10/2021
FILE LOCATION: \\MEINHARDT-DC\PROJECTS\2812 - ABERFELDY VILLAGE\1. MHT\CIVIL\DRAWINGS\2812.MHT-CV-RF-DR-01.DWG



ISSUED FOR INFORMATION

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

- NOTES:**
- DO NOT SCALE FROM THIS DRAWING
 - ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
 - THIS DRAWING IS FOR PLANNING PURPOSES.
 - DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, ENGINEERS AND CONSULTANTS DRAWINGS AND SPECIFICATIONS.
 - 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.

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



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

Appendix D – Tower Hamlets SUDS Proforma

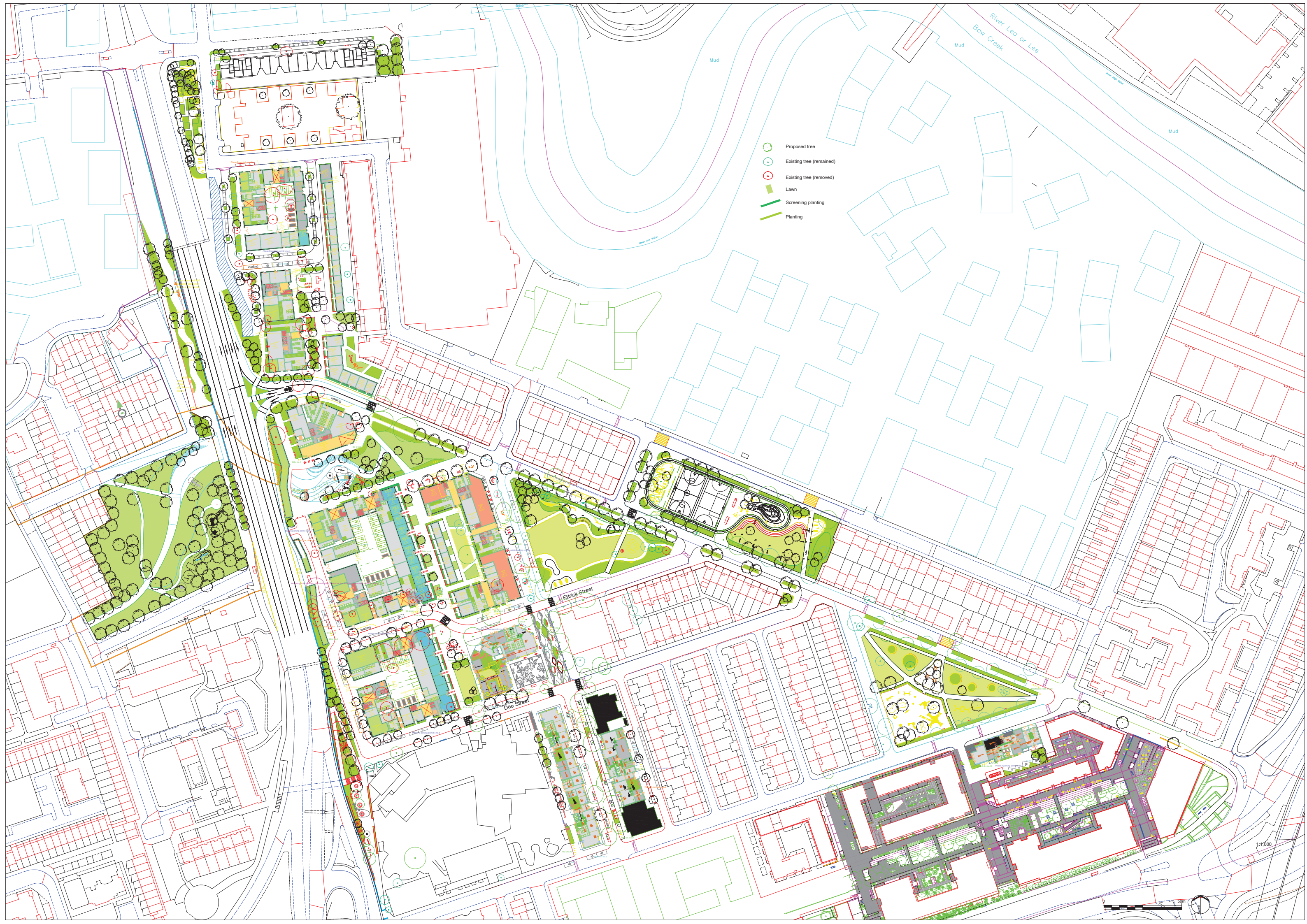
1. Project & Site Details	Project / Site Name (including sub-catchment / stage / phase where appropriate)	Aberfeldy Village
	Address & post code	Poplar Riverside, Aberfeldy Village, E14, London
	OS Grid ref. (Easting, Northing)	E 538365
		N 181398
	LPA reference (if applicable)	
	Brief description of 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	Alluvium - Clay, Silt, S		
	Bedrock geology classification	London Clay Formation		
	Site infiltration rate	1.12x10 ⁻⁴ and 2.55x10 ⁻⁴	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?	Thames Water. Response received confirm			

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	

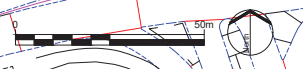
4a. Discharge & Drainage Strategy		Page/section of drainage report
Infiltration feasibility (2a) – geotechnical factual and interpretive reports, including infiltration results		Section 2.1.3
Drainage hierarchy (2b)		Section 2.1.3
Proposed discharge details (2c) – utility plans, correspondence / approval 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

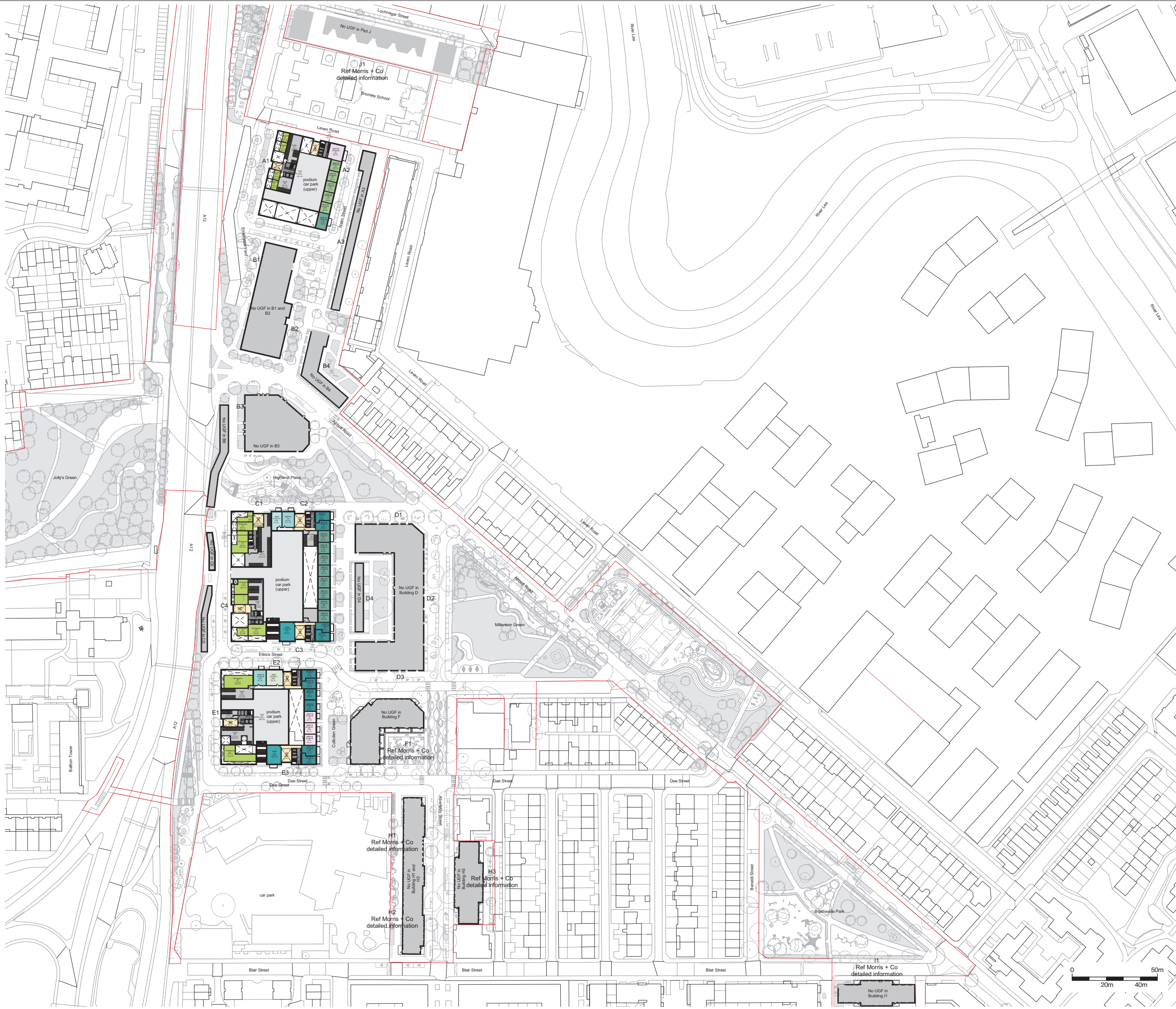
Appendix E – Architects Plans



- Proposed tree
- Existing tree (remained)
- Existing tree (removed)
- Lawn
- Screening planting
- Planting

1:1000





- Notes**
1. Do not scale this drawing.
 2. All dimensions must be checked on site and any discrepancies verified with the architect.
 3. Unless shown otherwise, all dimensions are to structural surfaces.
 4. Drawing to be read with all other issued information. Any discrepancies to be brought to the attention of the architect.
 5. This drawing is the copyright of Levitt Bernstein and may not be copied, altered or reproduced in any form, or passed to a third party without license or written consent.
 6. This document is prepared for the sole use of EcoWorld London and no liability to any other persons is accepted by Levitt Bernstein. Levitt Bernstein accepts no liability for use of this drawing by parties other than the party for whom it was prepared or for purposes other than those for which it was prepared.

This is not a construction drawing, it is unsuitable for the purpose of construction and must on no account be used as such.

Accommodation Key

P2	06/08/21	Design Freeze Issue	LA
P1	05/07/21	For Information	LS
Rev	Date	Description	Drawn / Checked

Project name

Aberfeldy New Masterplan

Drawing number Rev

3663 - LBA - Site - 01 - DR - A - 100B P2

Drawing

Proposed UGF Plan - Scenario A

Purpose of issue

Information

Scale Date

1 : 1000 @ A1 20/11/20

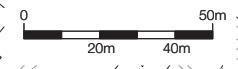
Client

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Appendix: Water Resources, Drainage and Flood Risk

Annex 1: Flood Risk Assessment

Annex 2: Drainage Strategy

Annex 3: Thames Water – Potable Water Supply Correspondence

Annex 4: Sustainable Urban Drainage System (SuDS) Proforma



Your reference: DS6085769

Your site address: Aberfeldy, Abbott Road, Poplar E14 ONE

Mr Kiel Jordaan
Aberfeldy New Village LLP
25 Victoria Street
London
SW1H 0EX

Clean water capacity report

Status: Capacity concerns

Date: 20th July 2021

Validity: Valid until 19th July 2022 or for the duration of your Local Authority planning permission when this report is used to support your application.

We confirm that there will be sufficient capacity on our clean water network to serve the following properties on your development: 99 residential houses.

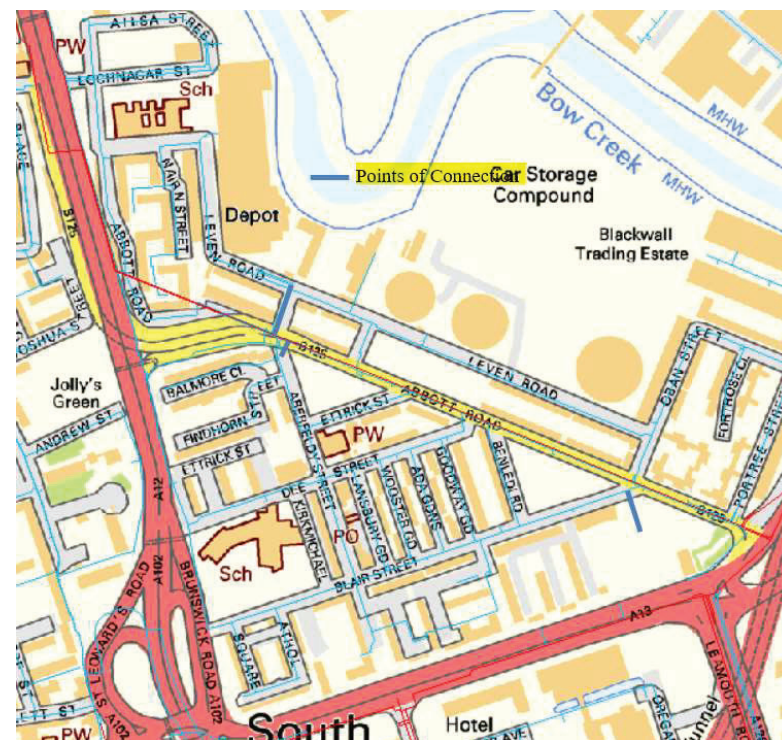
However, we're unable to confirm capacity for your whole development consisting of 219 residential houses and 1,379 residential flats without further investigation. How to make a request for us to progress with network modelling activity is listed in the accompanying email.

Please be aware that this report is based upon the details and drawings provided. If there are any subsequent changes to these, then the contents of this report will become invalid and a new assessment will be needed.

Please note that the below POC is based on desktop study and it might change after capacity check study or site-specific survey.

Nearest point of connection / Your preferred point of connection

9" main on Abbott Road.



Contaminated land

If your site is on contaminated land, any new water pipes laid should be barrier pipe which is more expensive. If you think this is not the case you will need to provide a soil report when applying for new mains and services.

Diversions

From our records we don't anticipate that any clean water assets need to be diverted to accommodate your proposals.

Building water

It's important that you apply for a building water supply before you start using water on site even if you believe your supply is already metered. We need to ensure your account is properly set up and you have the correct meter for your supply or fines maybe imposed. Apply [here](#).

Fire hydrant and sprinkler demand

Please note that we cannot confirm whether a fire hydrant or sprinkler demand can be accommodated on a new connection. You'll need to contact an independent consultant or specialist company for hydrant testing for fire-fighting purposes. Valve operations must be carried out by our Network Service Technician which can be booked on 0800 316 9800.

Asset location search

If you need help in identifying the location of existing water mains and sewers, you can get this information from any property search provider. We have a Property Searches team who will carry out an asset location search, which provides information on the location of known Thames Water clean and/or wastewater assets, including details of pipe sizes, direction of flow and depth (for which a fee is payable). You can find out more [online](#) or by calling us on 0845 070 9148.

Appendix: Water Resources, Drainage and Flood Risk

Annex 1: Flood Risk Assessment

Annex 2: Drainage Strategy

Annex 3: Thames Water – Potable Water Supply Correspondence

Annex 4: Sustainable Urban Drainage System (SuDS) Proforma

The London Sustainable Drainage Proforma

Introduction

This proforma is intended to accompany a drainage strategy prepared for a planning application where required by national or local planning policy. It should be used to summarise the key outputs from the strategy to allow assessing officers at the Lead Local Flood Authority (LLFA) to quickly assess compliance with sustainable drainage (SuDS)

The proforma is divided into 4 sections, which are intended to be used as follows:

1. Site and project information - Provide summary details of the development, site and drainage
2. Proposed discharge arrangement – Summarise site ground conditions to determine potential for infiltration. Select a surface water discharge method (or mix of methods) following the hierarchical approach set out in the London Plan.
3. Drainage strategy – Prioritise SuDS measures that manage runoff as close to source as possible and contribute to the four main pillars of SuDS; amenity, biodiversity, water quality and water quantity.
4. Supporting information – Provide cross references to the page or section of the drainage strategy report where the detailed information to support each element can be found. This may be more than one reference

Policy

Drainage strategies for developments in the London Borough of Tower Hamlets need to comply with the following policies on SuDS:

1. [London Borough of Tower Hamlets Local Plan policy DM13](#)
2. [London Plan policy 5.13](#) and draft [New London Plan policy SI13](#)
3. [The National Planning Policy Framework \(NPPF\)](#)

Technical Guidance

- Post-development surface water discharge rate should be limited to greenfield runoff rates. Proposals for higher discharge rates should be agreed with the LLFA ahead of submission of the Planning Application. Clear evidence should be provided with the Planning Application to show why greenfield rates cannot be achieved.
- Greenfield runoff rate is the runoff rate from a site in its natural state, prior to any development. This should be calculated using one of the runoff estimation methods set out in Table 24.1 of CIRIA C753 The SuDS
- Attenuation storage volumes required to reduce post-development discharge rates to greenfield rates should be calculated using one of the runoff estimation methods set out in Table 24.1 of CIRIA C753 The SuDS
- 'CC' refers to climate change allowance from the current Environment Agency guidance.
- An operation and maintenance strategy for proposed SuDS measures should be submitted with the Planning Application and include the details set out in section 32.2 of CIRIA C753 The SuDS Manual. The manual should be site-specific and not directly reproduce parts of The SuDS Manual.
- Other useful sources of guidance are:
 - o [Tower Hamlets Sustainable Drainage guidance](#)
 - o [The London Plan Sustainable Design and Construction SPG](#)
 - o [DEFRA non-statutory technical standards for sustainable drainage](#)
 - o [Environment Agency climate change guidance](#)
 - o [CIRIA C753 The SuDS Manual](#)

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 vehicular underpass.
	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	

2. Proposed Discharge Arrangements	2a. Infiltration Feasibility		
	Superficial geology classification	Alluvium - Clay, Silt, S	
	Bedrock geology classification	London Clay Formation	
	Site infiltration rate	1.12x10 ⁻⁴ and 2.55x10 ⁻⁴ m/s	
	Depth to groundwater level	m below ground level	
	Is infiltration feasible?	No	
	2b. Drainage Hierarchy		
		<i>Feasible (Y/N)</i>	<i>Proposed (Y/N)</i>
	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	Thames Water. Response received confirm		



GREATER LONDON AUTHORITY



	Designer Company	Meinhardt
--	------------------	-----------

	consulted?	
--	------------	--

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	

4a. Discharge & Drainage Strategy		Page/section of drainage report
Infiltration feasibility (2a) – geotechnical factual and interpretive reports, including infiltration results		Section 2.1.3
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c) amenity?		Section 2.1.6