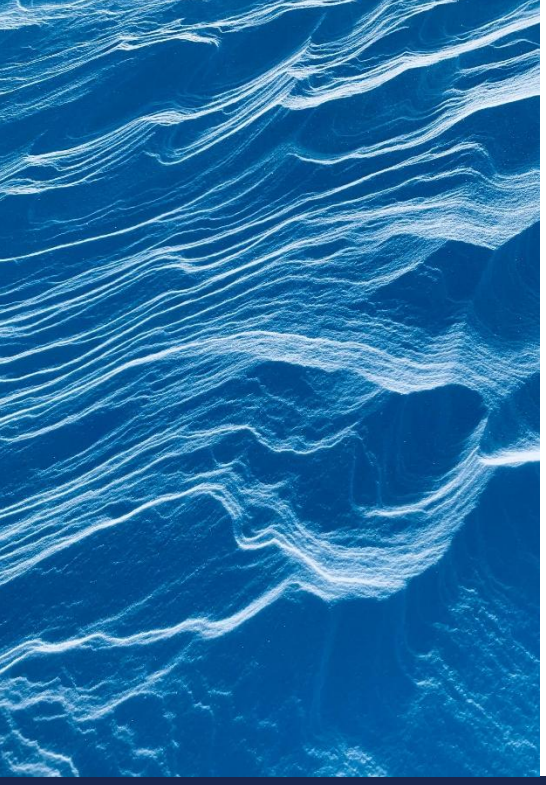

Surface Water Drainage Strategy

AEG8953_NW5_Camden_05

aegaea
Flood risk, water and environment

Site Address: 38 Woodville Road
Croydon
London
CR7 8LG

UK Experts in Flood Modelling, Flood Risk Assessments, and Surface Water Drainage Strategies

aegaea
Flood risk, water and environment

Document Issue Record

Project: Surface Water Drainage Strategy

Prepared for: Pierre Guenin

Reference: AEG8953_NW5_Camden_05

Site Location: 31 Spencer Rise, London, NW5 1AR

Issue	Date	Author	Check	Auth.	Comments
1	25/09/2025	Daniel Cunningham	JA	NB	First issue
2	20/03/2026	Daniel Cunningham	OH		Second issue – updated plans

Please Note:

Table of Contents

1. Introduction

1.1. Aegaea were commissioned by Pierre Guenin to undertake a Surface Water Drainage Strategy (SWDS) for the conversion of the extension of existing basement and construction of a 2 storey rear extension to the existing dwelling. The development will not result in an increase in impermeable area.

Site Overview

1.2. The site is located at 31 Spencer Rise, London, NW5 1AR (Figure 1).

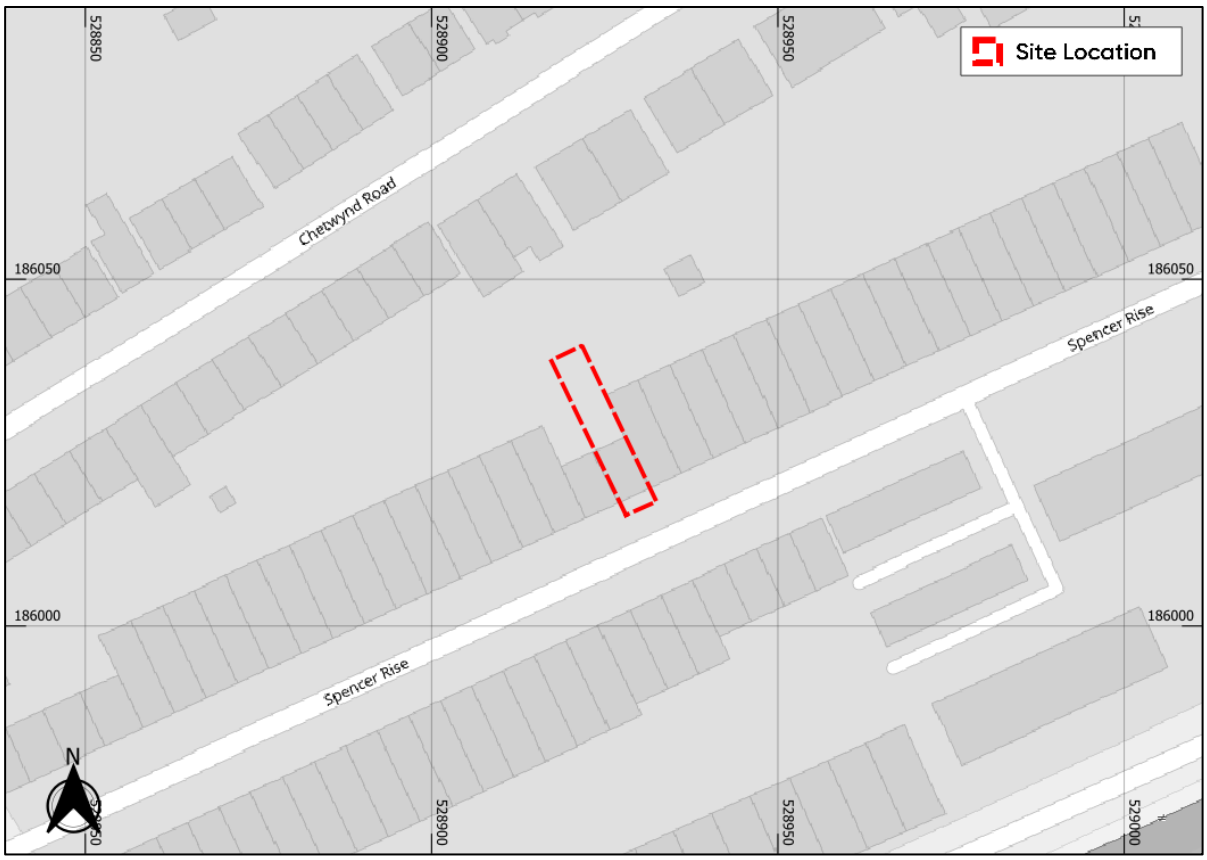

Figure 1: Site Location (Base map and data from OpenStreetMap and OpenStreetMap Foundation (CC-BY-SA). © https://www.openstreetmap.org and contributors)

1.3. It is understood that the proposed development is for the extension of the existing basement into existing storage areas, with the floor level being retained and no extra excavation is being proposed. The proposals also include a construction of a 2 storey rear extension to the existing dwelling (see development proposals as Appendix A).

1.4. In the absence of a topographical survey, Environment Agency Light Detection and Ranging (LiDAR) data Digital Terrain Model (1m resolution) has been utilised to review the topography of the site (Figure 2). The LiDAR data shows that the site levels vary between approximately 54.39m Above Ordnance Datum (m AOD) and 56.76m AOD.

1.5. It is noted that the site slopes down from the rear garden to the existing dwelling.

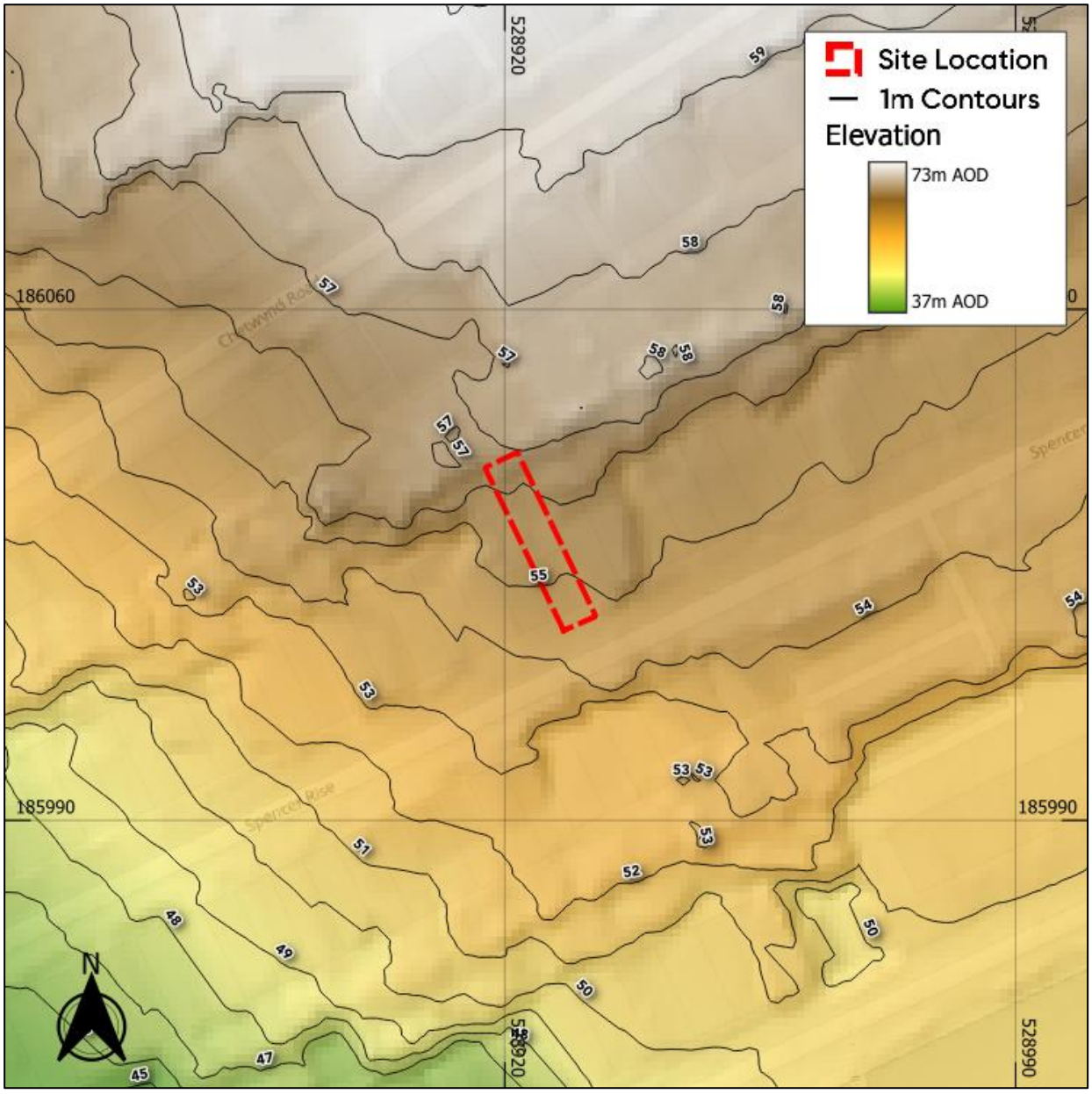

Figure 2: Site Topography (Base map and data from OpenStreetMap and OpenStreetMap Foundation (CC-BY-SA). © https://www.openstreetmap.org and contributors. Contains public sector information licensed under the Open Government Licence v3.0)

1.6. Camden Council is the Local Planning Authority (LPA) for the site and also the designated Lead Local Flood Authority (LLFA). The site sits within the Environment Agency's Hertfordshire and North London region.

2. Planning Policy

The London Plan

2.1. The London Plan[1] prepared by the Greater London Authority in 2021 sets out the policies for development in the region.

2.2. Policy SI 13 Sustainable drainage outlines the requirements for new development within the region. It states:

> *Policy SI 13 Sustainable drainage*
>
> *A Lead Local Flood Authorities should identify – through their Local Flood Risk Management Strategies and Surface Water Management Plans – areas where there are particular surface water management issues and aim to reduce these risks. Increases in surface water runoff outside these areas also need to be identified and addressed.*
>
> *B Development proposals should aim to achieve greenfield run-off rates and ensure that surface water run-off is managed as close to its source as possible. There should also be a preference for green over grey features, in line with the following drainage hierarchy:*
>
> *1) rainwater use as a resource (for example rainwater harvesting, blue roofs for irrigation)*
>
> *2) rainwater infiltration to ground at or close to source*
>
> *3) rainwater attenuation in green infrastructure features for gradual release (for example green roofs, rain gardens)*
>
> *4) rainwater discharge direct to a watercourse (unless not appropriate)*
>
> *5) controlled rainwater discharge to a surface water sewer or drain*
>
> *6) controlled rainwater discharge to a combined sewer.*

[1] **https://www.london.gov.uk/programmes-strategies/planning/london-plan/london-plan-2021**

C Development proposals for impermeable surfacing should normally be resisted unless they can be shown to be unavoidable, including on small surfaces such as front gardens and driveways.

D Drainage should be designed and implemented in ways that promote multiple benefits including increased water use efficiency, improved water quality, and enhanced biodiversity, urban greening, amenity and recreation.

Local Planning Policy

2.3. The Camden Local Plan prepared by the Local Planning Authority and also the designated Lead Local Flood Authority (LLFA), Camden Council, sets out the policies for development in the local area.

Policy CC3 Water and flooding, states the following in relation to the provision of SuDS.

Policy CC3 Water and flooding

The Council will seek to ensure that development does not increase flood risk and reduces the risk of flooding where possible.

We will require development to:

a. incorporate water efficiency measures;

b. avoid harm to the water environment and improve water quality;

c. consider the impact of development in areas at risk of flooding (including drainage);

d. incorporate flood resilient measures in areas prone to flooding;

e. utilise Sustainable Drainage Systems (SuDS) in line with the drainage hierarchy to achieve a greenfield run-off rate where feasible; and

f. not locate vulnerable development in flood-prone areas.

Where an assessment of flood risk is required, developments should consider surface water flooding in detail and groundwater flooding where applicable.

The Council will protect the borough's existing drinking water and foul water infrastructure, including the reservoirs at Barrow Hill, Hampstead Heath, Highgate and Kidderpore.

Council Comments

2.4. Based on correspondence from Camden Council (LPA), the client has been advised that a Surface Water Drainage report is necessary for the development and the following points should be covered:

- *identification of flood risk*
- *assessment of existing run-off rates*
- *calculation of greenfield run-off rates*
- *identification of measures, in line with the drainage hierarchy, to reduce runoff rates*
- *calculation of proposed run-off rates.*

2.5. As such, this report aims to cover the points raised above.

3. Consultation

Documents and Online Mapping

3.1. Local Governments and Lead Local Flood Authorities provide documents which contain data and policies on flood risk and new development in their areas. These documents are introduced and briefly summarised below. For the purposes of this SWDS, these documents have been reviewed for relevant information and any relevant data is discussed within the appropriate sub heading of this report.

3.2. The following sources of information have been reviewed for this assessment:

- Flood Map for Planning on the Environment Agency website[2]
- Long Term Flood Risk Information on the Environment Agency website[3]
- National Planning Policy Framework (NPPF) (Department for Levelling Up, Housing and Communities, 2023)
- Planning Practice Guidance - Flood Risk and Coastal Change (Department for Levelling Up, Housing and Communities, 2022)
- Geoindex Onshore (British Geological Survey, 2023)[4]
- CIRIA C753 SuDS manual[5]
- The London Plan (Greater London Authority, 2021)[6]
- Camden Local Plan (Camden Council, 2017)[7]

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[2] https://flood-map-for-planning.service.gov.uk/

[3] https://www.gov.uk/check-long-term-flood-risk

[4] https://www.epsom-ewell.gov.uk/sites/default/files/documents/residents/planning/planning-policy/Core%20Strategy%202007.pdf

[5] https://www.ciria.org/CIRIA/Memberships/The_SuDs_Manual_C753_Chapters.aspx

[6] https://www.london.gov.uk/programmes-strategies/planning/london-plan/london-plan-2021

[7] https://www.camden.gov.uk/documents/20142/4820180/Local+Plan.pdf/ce6e992a-91f9-3a60-720c-70290fab78a6

CIRIA C753 SuDS manual

3.3. The CIRIA SuDS manual has been used throughout this SWDS in order to determine an appropriate strategy for the proposed development. This guidance covers the planning, design, construction and maintenance of Sustainable Drainage Systems (SuDS) to assist with their effective implementation within both new and existing developments. It looks at how to maximise amenity and biodiversity benefits and deliver the key objectives of managing flood risk and water quality. There is also supporting information covering topics such as materials, landscape design, maintenance, community engagement and costs and benefits.

4. Flood Risk Identification

Fluvial / Tidal

4.1. Flooding from watercourses arises when flows exceed the capacity of the channel, or where a restrictive structure is encountered, resulting in water overtopping the banks into the floodplain.

4.2. Tidal flooding occurs when a high tide and high winds combine to elevate sea levels. An area behind coastal flood defences can still flood if waves overtop the defences or break through them. Tidal flooding can also occur a long way from the coast by raising river levels. Water may overtop the river bank or river defences when tide levels are high.

Main Rivers and Ordinary Watercourses

4.3. There are no watercourses within 1.0km of the site based on OS mapping.

EA Flood Map for Planning

4.4. The site is situated entirely within Flood Zone 1 (Figure 3). Flood Zone 1 denotes land having less than 1 in 1,000 annual probability of river or sea flooding (all land outside Zones 2 and 3).

Figure 3: EA Flood Map for Planning (Base map and data from OpenStreetMap and OpenStreetMap Foundation (CC-BY-SA). © https://www.openstreetmap.org and contributors. Contains public sector information licensed under the Open Government Licence v3.0)

Fluvial / Tidal Flood Risk Summary

4.5. Based on the EA data analysed above, the fluvial and tidal flood risk to the site and proposed development is considered to be low.

Pluvial

4.6. Pluvial flooding can occur during prolonged or intense storm events when the infiltration potential of soils, or the capacity of drainage infrastructure is overwhelmed leading to the accumulation of surface water and the generation of overland flow routes.

RoFSW Data Analysis

4.7. The National Flood Risk Assessment (NaFRA2), published in January 2025, has updated the Risks of Flooding from Surface Water (RoFSW) products which shows the chance of flooding from surface water to areas of land.

4.8. The RoFSW products are an assessment of where surface water flooding may occur when rainwater foes not drain away through the normal drainage systems or soak into the ground but lies on or flows over the ground instead. It includes information about flooding extents and depths including the potential impact of climate change on flood risk, based on the latest UK Climate Projections (UKCP18).

4.9. Risk is displayed as one of three likelihood categories:

- High – greater than or equal to 1 in 30 (3.3%) chance of flooding in any year.
- Medium – less than 1 in 30 (3.3%) but greater than or equal to 1 in 100 (1%) chance of flooding in any given year.
- Low – less than 1 in 100 (1%) but greater than or equal to 1 in 1000 (0.1%) chance of flooding in any given year.

4.10. The RoFSW depth mapping shows the annual chance of flooding (based on the three risk categories listed above) **beyond a specific depth**, for depths at the following intervals from 20cm to 120cm (0.2m, 0.3m, 0.6m, 0.9m and 1.2m).

4.11. As well as present day risk of flooding from surface water, climate change scenarios have been produced to indicate the predicted impacts of climate change on future flood risk. The climate change allowances are based on the latest UK Climate Projections (UKCP18) from the Met Office, using the Representative Concentration Pathway (RCP) 8.5. A near-term epoch (2040 – 2060 "2050s" epoch) and central allowances are being used initially, to support short and medium-term decisions informed by the highest flood likelihood projections.

Climate Change Scenario

4.12. Examination of the EA's 'Flood Risk from Surface Water – Climate Change' mapping indicates that most of the site is outside the modelled low, medium and high likelihood extents (Figure 4). There are some single pixels of low risk that encroach within the site boundary. Thus, the site

is considered to be at low risk of surface water flooding even when considering the effects of climate change.

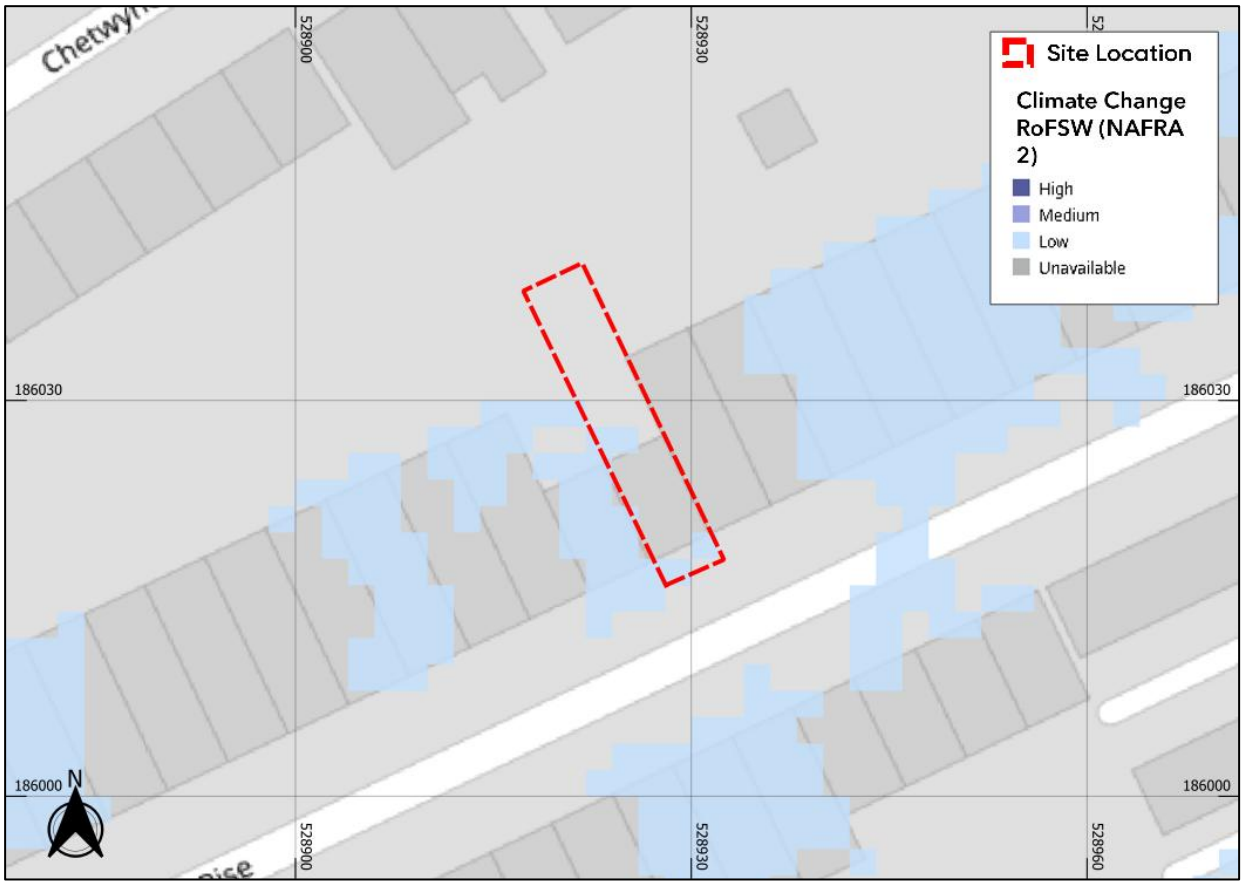

Figure 4: EA Climate Change Surface Water Flood Risk Mapping (Base map and data from OpenStreetMap and OpenStreetMap Foundation (CC-BY-SA). © https://www.openstreetmap.org and contributors. Contains public sector information licensed under the Open Government Licence v3.0)

Pluvial Flood Risk Summary

4.13. Based on the NaFRA2 data analysed above, the pluvial (surface water) flood risk to the entirety of the site, including the proposed dwelling, is considered to be low.

5. Surface Water Drainage Strategy

Nearby Watercourses

5.1. The are no mapped watercourses within a 250m radius of the site, therefore, it will not be possible to discharge surface water runoff from the site into a watercourse.

Ground Conditions

5.2. The British Geological Survey's (BGS) mapping shows no superficial deposits underlying the site. The bedrock underlying the site is mapped as London Clay Formation comprising Clay and Silt.

5.3. In accordance with Building Regulations – infiltration SuDS (such as soakaways) must be located a minimum of 5.0m from any existing or proposed building, and 2.5m from any site boundary. Due to the compact nature of the site it will not be possible to include a soakaway whilst maintaining the required 5.0m easement from any building foundation.

5.4. The provision of a soakaway is limited due to the space constraints and underlying geology within the site. As such, infiltration as a means of surface water disposal is deemed unviable.

Existing Drainage Infrastructure

5.5. An asset plan has been provided by Thames Water (Appendix B). As can be seen in Figure 5, there is a combined sewer beneath Spencer Rise. Based on a CCTV conducted by Rexaux Group (ref: JSD8564) (Appendix C), the existing site connects to the public sewer on Spencer Rise via existing surface water drains beneath the site.

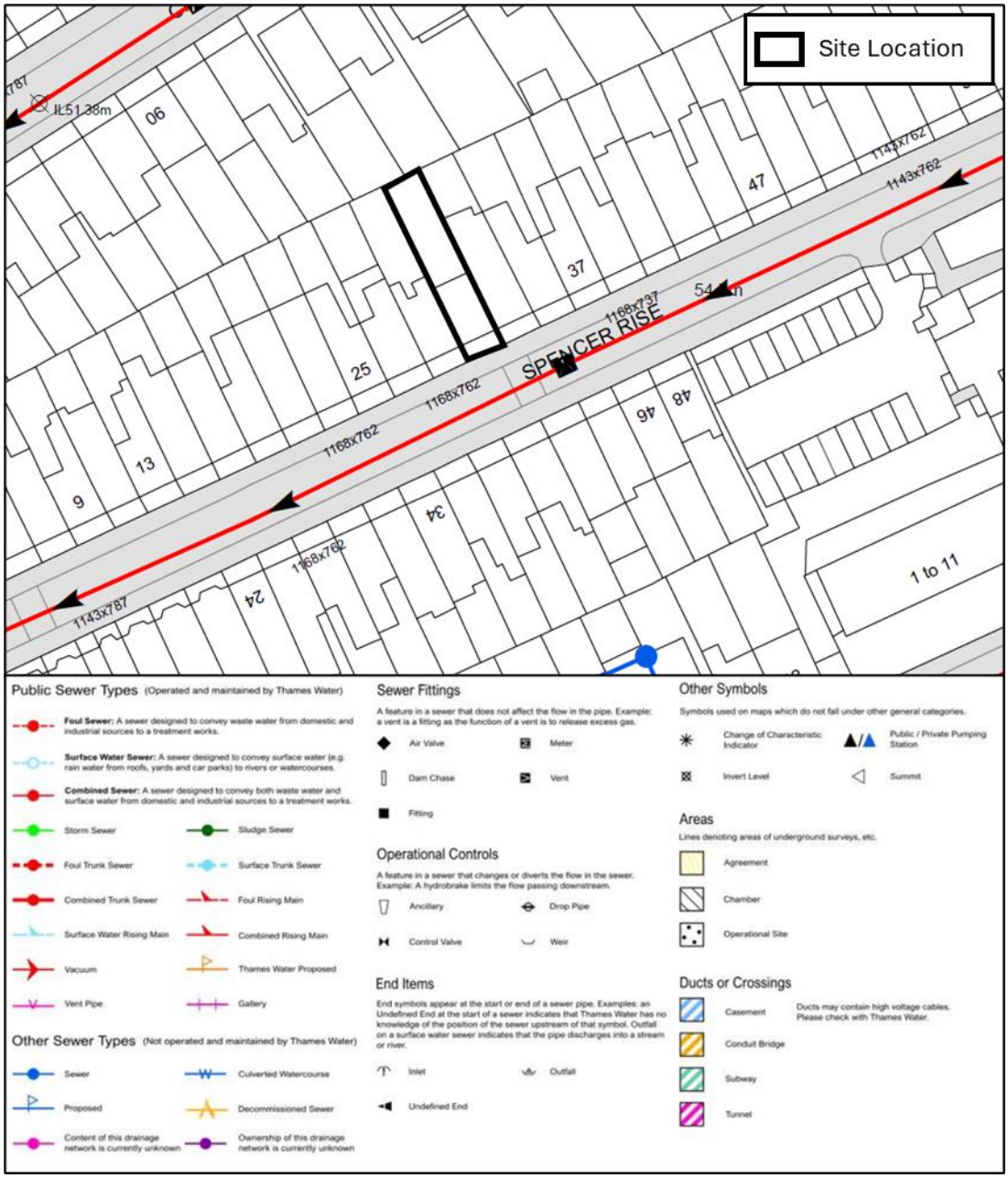

Figure 5: Front downpipes (Google Street View)

5.6. Given that the front facing catchment area will remain unchanged with the development, this has not been included as part of the strategy and will drain as existing.

5.7. As such, this strategy proposes to reuse the existing connection, providing attenuation for the proposed extension roof areas to reduce runoff from the proposed extension as much as possible.

Greenfield Runoff Rates

5.8. The greenfield runoff rate (Q_{BAR} Rural) was calculated using HR Wallingford Greenfield Runoff Calculator Tool using the ICP SuDS methodology. For sites smaller than 50 ha, the IH124 method is applied to a 50 ha site and the results multiplied by a scale factor equal to the site area (in hectares) divided by 50. QBAR was calculated using the following formula (equation yields m^3/s):

$$QBAR_{rural} = 0.00180 \times AREA^{0.89} \times SAAR^{1.17} \times SOIL^{2.17}$$

5.9. The greenfield runoff rate (Q_{BAR}) for the proposed catchment site area of 0.03ha was calculated to be 0.0l/s (anything below 0.05 is rounded down to 0l/s). Greenfield runoff rate calculations are included in Appendix E of this report.

5.10. Given the risk of sedimentation and blockage it will not be possible to discharge surface water at the greenfield rate. Therefore, flows will be restricted to 0.8l/s for all storms up to and including the 1 in 100 year, plus climate change, storm event. It is noted that this discharge rate is very low - which is primarily driven from the small size of catchment and the aim of providing as much betterment as possible compared to existing. To minimise the risk of blockages, it is recommended that a filter or gravel layer is added prior to the outfall to reduce the risk of sediments blocking the orifice. This would be confirmed during the detailed design stage.

Simulation Criteria

5.11. InfoDrainage Software (v2025.5) was used to calculate the existing/proposed runoff rates from the proposed development area, using the following criteria (Table 1):

Table 1: Simulation Criteria

Catchment Area Simulation Parameters	
Rainfall Data	FEH22
Total Area	0.003ha (rear catchment only +10% Urban Creep)
Return Periods	2, 30, 30+35% for climate change, 100, 100+40% climate change. Summer and Winter

Storm Durations	15, 30, 60, 120, 240, 360, 480, 960, 1440 minute
Volumetric Runoff Coefficient	1.0 (summer and winter storms)
Percentage Impervious	100%
Time of Concentration	5 minutes

Brownfield Runoff Rate

5.12. InfoDrainage Software (v2025.5) was used to calculate the existing runoff rates from the development proposals area. It was assumed that the building is positively drained (20m^2) to provide an indicative existing runoff rate. This included the existing asphalt present where the proposed extension footprint is located and the rear facing roof of the existing building.

5.13. Calculations indicate that in the existing scenario, during the 2 year, 30 year, and 100 year events the maximum unrestricted outflow would be 0.4l/s, 1.1l/s, and 1.4l/s respectively (Table 2). The existing brownfield runoff rates are shown in Appendix D.

Table 2: Existing (Unrestricted) Runoff Rates

Catchment	Area	1 in 2 Year	1 in 30 Year	1 in 100 Year
Existing	20m2	0.4l/s	1.1l/s	1.4l/s

5.14. Policy CC3 Water and flooding of the local plan states:

> *Policy CC3 Water and flooding*
>
> *The Council will seek to ensure that development does not increase flood risk and reduces the risk of flooding where possible.*
>
> *We will require development to:*
>
> *g. incorporate water efficiency measures;*
>
> *h. avoid harm to the water environment and improve water quality;*
>
> *i. consider the impact of development in areas at risk of flooding (including drainage);*
>
> *j. incorporate flood resilient measures in areas prone to flooding;*

> *k. utilise Sustainable Drainage Systems (SuDS) in line with the drainage hierarchy to achieve a greenfield run-off rate where feasible; and*
>
> *l. not locate vulnerable development in flood-prone areas.*
>
> *Where an assessment of flood risk is required, developments should consider surface water flooding in detail and groundwater flooding where applicable.*
>
> *The Council will protect the borough's existing drinking water and foul water infrastructure, including the reservoirs at Barrow Hill, Hampstead Heath, Highgate and Kidderpore.*

5.15. Given the development area is so small, the greenfield rate was calculated to be <0.1l/s. It is not possible to discharge runoff at such a low rate as it would require unreasonably small flow controls, which would significantly increase the risk of blockage. There is also limited space to implement extensive SuDS features to significantly reduce the runoff rate.

5.16. Betterment to the existing scenario will be provided. This is discussed in the 'InfoDrainage Modelling Results' section of this report.

5.17. All possible SuDS measures were considered to comply with Policy GB12 (b). Runoff has been restricted as much as feasible that is proportionate to the scale of development.

5.18. In accordance with the SuDS management train approach, the use of various SuDS measures to reduce and control surface water flows have been considered in detail for the development (Table 3).

5.19. The management of surface water has been considered in respect to the SuDS hierarchy below, as detailed in the London Plan, 2021.

Table 3: SuDS Drainage Hierarchy

SUDS DRAINAGE HIERARCHY				
			Suitability	**Comment**
	1.	**Store rainwater for later use**	✓	Water Butts could be provided at rainwater downpipes for non-potable uses around the site.
	2.	**Use infiltration techniques, such as porous surfaces in non-clay areas**	x	The British Geological Survey's (BGS) mapping shows no superficial deposits underlying the site. The bedrock underlying the site is mapped as London Clay Formation comprising Clay and Silt. In accordance with Building Regulations – infiltration SuDS (such as soakaways) must be located a minimum of 5.0m from any existing or proposed building, and 2.5m from any site boundary. Due to the compact nature of the site it will not be possible to include a soakaway whilst maintaining the required 5m easement from any building foundation. The provision of a soakaway is limited due to the space constraints and underlying geology within the site. As such, infiltration as a means of surface water disposal is deemed unviable.
	3.	**Attenuate rainwater in ponds or open water features for gradual release**	x	Given differing levels in the rear garden it is not considered possible to include any open water attenuation.
	4.	**Attenuate rainwater by storing in tanks or sealed water features for gradual release**	✓	A geocellular tank is proposed beneath the rear garden.
	5.	**Discharge rainwater direct to a watercourse**	x	No watercourse/feature positioned near to the proposed development.
	6.	**Discharge rainwater to a surface water sewer/drain**	x	No surface water sewers within the vicinity of the site based on the Thames Asset Plan

	7.	**Discharge rainwater to Combined Sewer**	✓	Existing drainage on site to be reused and connect into the public combined sewer on Spencer Rise.

5.20. On review of the SuDS drainage hierarchy, and with reference to both national and local policy, it is proposed that surface water runoff from the rear roof catchment approximately 40m^2 is to be managed via the rainwater downpipes to a geocellular tank, before discharging to the existing sewer network via existing connection.

5.21. Given that the front falling catchment area will remain unchanged with the development, this has not been included as part of the strategy and will drain as existing

5.22. The proposed Surface Water Drainage Layout is included in Appendix F.

InfoDrainage Modelling

5.23. A network model has been produced in InfoDrainage software (v2025.5).

5.24. The model comprises;

- 1no. contributing catchment area for a total of 40m^2.
- 1 'geocellular tank' to simulate the required attenuation

5.25. In line with the limited nature of the development proposals, the proposed surface water drainage strategy will manage surface water generated by proposed extension footprint on site, whilst the remainder of the site will continue to drain as existing.

5.26. The Environment Agency Peak Rainfall Climate Change Allowance guidance (updated in May 2022) was reviewed and subsequently the DEFRA Peak Rainfall Allowances Map was assessed to determine appropriate climate change allowances to inform the surface water drainage strategy. In line with this guidance, the upper end allowances for the London Management Catchment have been used for both the 1% and 3.3% annual exceedance probability events. An allowance of 35% has been used for the 3.3% AEP event and an allowance of 40% has been used for the 1% AEP event.

InfoDrainage Modelling Results

5.27. A simplified InfoDrainage model has been produced whereby the catchment southern roof area is applied as an inflow to understand existing/proposed runoff rates (Appendix D).

5.28. The full calculation outputs can be found in Appendix E of this report although the key results have been summarised below in Table 4:

- The proposed Geocellular Tank (volume 2.30m³) will provide a 42% betterment in runoff rate (compared to existing) during the 1 in 100 +40%CC storm. No flooding is observed in this event based on the InfoDrainage model.

Table 4: Existing (Unrestricted) Runoff Rates

Catchment	Area	1 in 2 Year	1 in 30 Year	1 in 100 Year	1 in 30 Year (+35%CC)	1 in 100 Year (+40%CC)
Existing	20m2	0.4l/s	1.1l/s	1.4l/s	-	-
Proposed	40m²	0.3l/s	0.5l/s	0.6l/s	0.6/s	0.8l/s
Betterment	-	25%	55%	57%	57%	42%

5.29. As such, these results indicate that the runoff from the proposed development could be accommodated within a drainage system of the approximate size modelled.

Maintenance

5.30. Table 5 presents details regarding the maintenance requirements for the proposed SuDS included as part of the development, taken from the CIRIA C753 SuDS manual. All SuDS will be privately maintained. Each manufacturer will have bespoke requirements however the below should be used as a guide:

Table 5: Maintenance Requirements

Geocellular Storage		
Regular Maintenance	Inspect and identify any area 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
	For systems where rainfall infiltrates into the tank from above, check surface of filter for blockage by sediment, algae or other matter; remove and replace surface infiltration medium as necessary.	Annually
	Remove sediment from pre-treatment structures and/ or internal forebays	Annually, or as required
Remedial Actions	Repair/ rehabilitate inlets, outlet, overflows and vents	As required
Monitoring	Inspect/ check all inlets, outlets, vents and overflows to ensure that they are in good condition and operating as designed	Annually
	Survey inside of tank for sediment build-up and remove if necessary	Every 5 years or as required

Designing for Exceedance

5.31. Periods of exceedance occur when the rate of surface water runoff exceeds the drainage system capacity. Conveyance beneath the ground cannot, generally, be economically or sustainably constructed to the scale required for the most extreme rainfall events. This may result, on occasion, in the surface water runoff exceeding the capacity of the drainage network, with excess water (exceedance flow) being conveyed above ground.

5.32. For situations where extreme rainfall intensity exceeds inlet capacities, or for extreme storm events exceeding the design flood event considered for drainage design, it is expected that runoff would back-up and overflow into the garden area in the first instance. Building threshold to the extension would encourage any exceedance floodwater to remain within the garden.

Water Quality

5.33. A key element of SuDS is that they have the potential to improve the quality of surface water discharged from a site. In order to assess this, the "Pollution hazard indices for different land

use classifications", provided in the CIRIA SuDS Manual (C753) as table 26.2, has been reviewed. The indices use four different methods of assessing pollution potential based on the hazard level, total suspended solids (TSS), Metals, and Hydrocarbons.

5.34. The Pollution Hazard Indices are summarised in Table 6 below (with reference to table 26.3 in the CIRIA SuDS manual).

Table 6: Pollutant Hazard Indices

Land Use	Pollution Hazard Level	Total Suspended Solids (TSS)	Metals	Hydrocarbons
Residential roofs	Very Low	0.2	0.2	0.05

5.35. Runoff from residential roofs is generally considered low contamination risk and does not usually warrant any significant treatment. However, it is recommended that a silt trap is provided to prevent build up within the geocellular tank. It is therefore considered that the proposed SuDS features are appropriate and acceptable in terms of water quality.

6. Conclusion

6.1. Aegaea were commissioned by Pierre Guenin to undertake a Surface Water Drainage Strategy (SWDS) for the proposed development is for the extension of the existing basement into existing storage areas, with the floor level being retained and no extra excavation is being proposed. The proposals also include a construction of a 2 storey rear extension to the existing dwelling.

6.2. On review of the SuDS drainage hierarchy, and with reference to both national and local policy, it is proposed that surface water runoff from the proposed extension are managed via the rainwater downpipes to a geocellular tank, volume 2.30m³, before discharging to the existing connection to the sewer under Spencer Rise, to provide a betterment over the existing scenario.

6.3. The Surface Water Drainage Strategy should be submitted as part of the planning application to satisfy the requirements under NPPF.

Appendix A – Proposed Development Plans

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Email: James@jlarchitecture.co.uk
Tel:07763850450
Web: www.jlarchitecture.co.uk

CIAT
CHARTERED PRACTICE

CLIENT
PIERRE GUENIN

PROJECT
PROPOSED REFURBISHMENT AND EXTENSION

ADDRESS
31 SPENCER RISE
LONDON
NW5 1AR

DRAWING
EXISTING BLOCK PLAN

SCALE
1:200 on A3

DRAWN BY	DRWG NOS.	REV
JL	97	-

JLArchitecture
Email: James@jlarchitecture.co.uk
Tel:07763850450
Web: www.jlarchitecture.co.uk

CIAT CHARTERED PRACTICE

CLIENT
PIERRE GUENIN

PROJECT
PROPOSED REFURBISHMENT AND EXTENSION

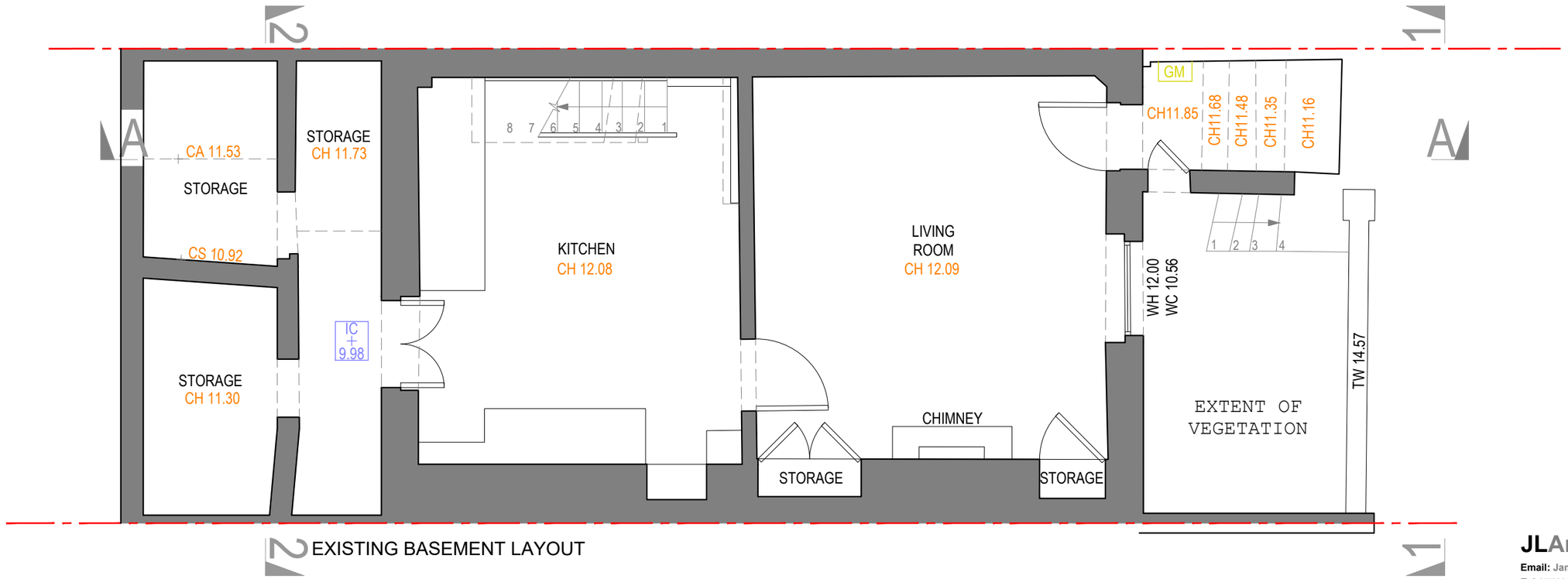
ADDRESS
31 SPENCER RISE
LONDON
NW5 1AR

DRAWING
LOCATION PLAN

SCALE
1:1250 on A4

0 25 50 75 100 125m @1:1250

DRAWN BY	DRWG NOS.	REV
JL	99	-



2 EXISTING BASEMENT LAYOUT

1

0 5m @ 1:50

JLArchitecture
Email: James@jlarchitecture.co.uk
Tel:07763850450
Web: www.jlarchitecture.co.uk

CIAT CHARTERED PRACTICE

CLIENT
PIERRE GUENIN

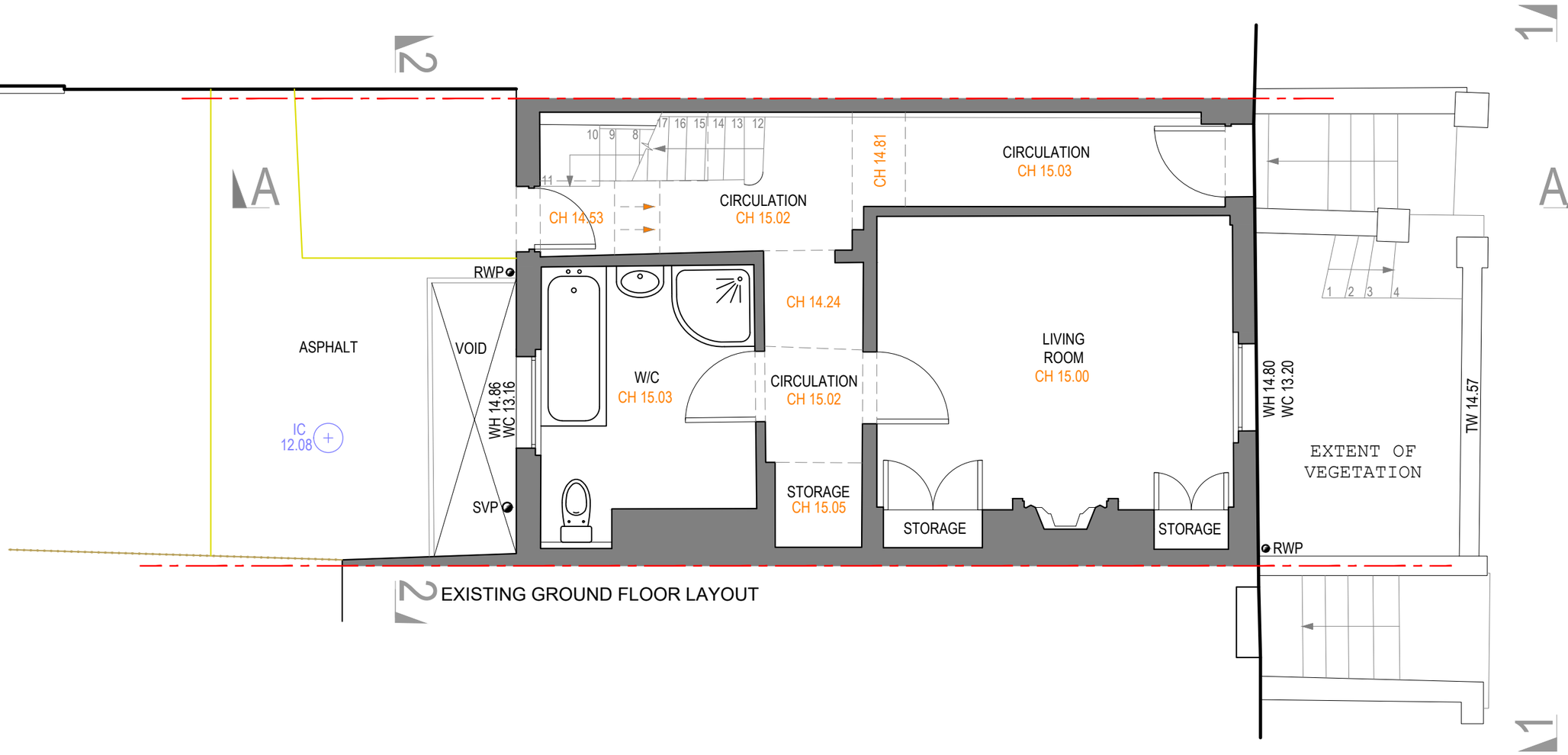
PROJECT
PROPOSED REFURBISHMENT AND EXTENSION

ADDRESS
31 SPENCER RISE
LONDON
NW5 1AR

DRAWING
EXISTING BASEMENT FLOOR PLAN

SCALE
1:50 on A3

DRAWN BY	DRWG NOS.	REV
JL	100	-



2 EXISTING GROUND FLOOR LAYOUT

0 5m @ 1:50

1

JLArchitecture
Email: James@jlarchitecture.co.uk
Tel:07763850450
Web: www.jlarchitecture.co.uk

CIAT CHARTERED PRACTICE

CLIENT
PIERRE GUENIN

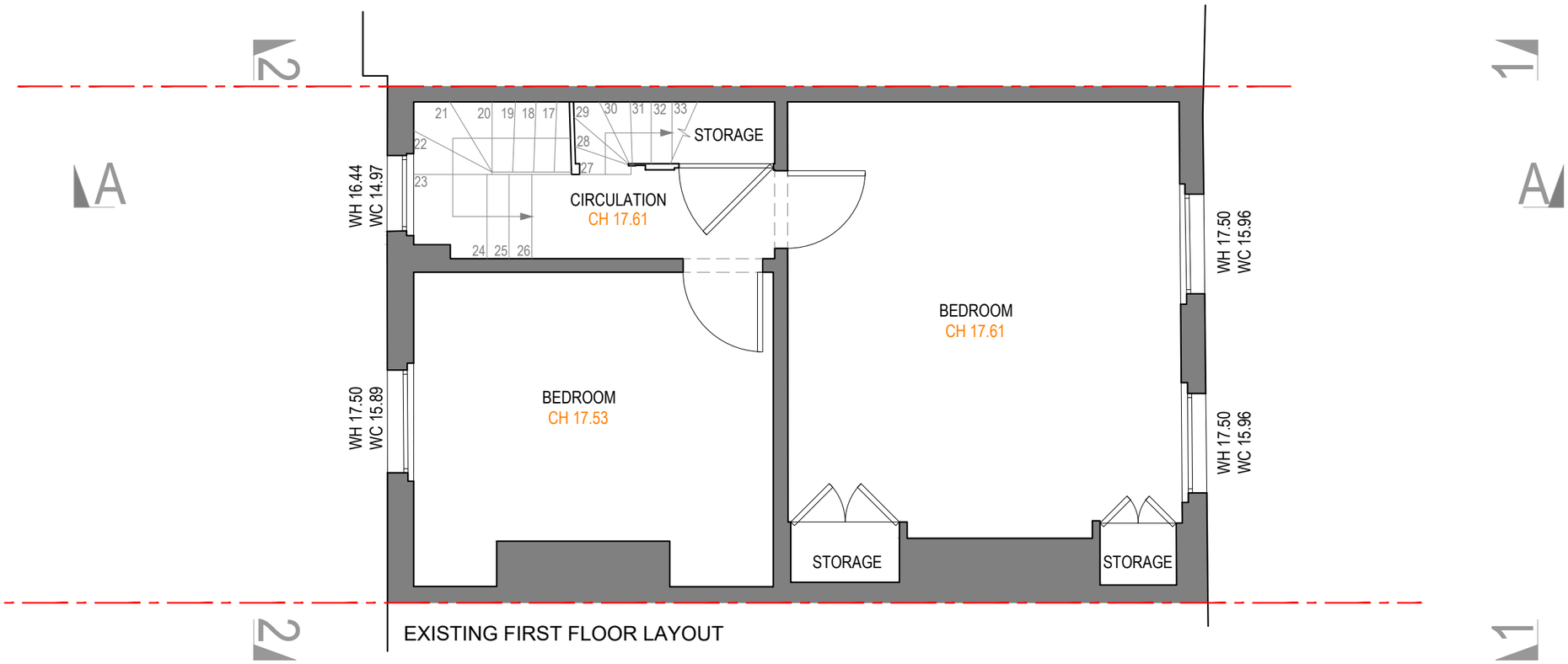
PROJECT
PROPOSED REFURBISHMENT AND EXTENSION

ADDRESS
31 SPENCER RISE
LONDON
NW5 1AR

DRAWING
EXISTING GROUND FLOOR PLAN

SCALE
1:50 on A3

DRAWN BY	DRWG NOS.	REV
JL	101	-



EXISTING FIRST FLOOR LAYOUT

0 5m @ 1:50

JLArchitecture
Email: James@jlarchitecture.co.uk
Tel:07763850450
Web: www.jlarchitecture.co.uk

CIAT CHARTERED PRACTICE

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PIERRE GUENIN

PROJECT
PROPOSED REFURBISHMENT AND EXTENSION

ADDRESS
31 SPENCER RISE
LONDON
NW5 1AR

DRAWING
EXISTING FIRST FLOOR PLAN

SCALE
1:50 on A3

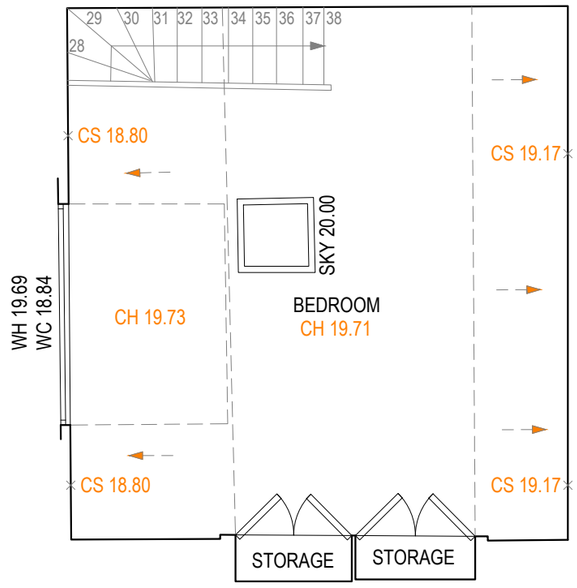
DRAWN BY	DRWG NOS.	REV
JL	102	-

2

A

1

A



2

EXISTING ATTIC LAYOUT

1

0 5m @ 1:50

JLArchitecture
Email: James@jlarchitecture.co.uk
Tel:07763850450
Web: www.jlarchitecture.co.uk

CIAT CHARTERED PRACTICE

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PROJECT
PROPOSED REFURBISHMENT AND EXTENSION

ADDRESS
31 SPENCER RISE
LONDON
NW5 1AR

DRAWING
EXISTING ATTIC PLAN

SCALE
1:50 on A3

DRAWN BY	DRWG NOS.	REV
JL	103	-

0 5m @ 1:50

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CIAT CHARTERED PRACTICE

CLIENT
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PROJECT
PROPOSED REFURBISHMENT AND EXTENSION

ADDRESS
31 SPENCER RISE
LONDON
NW5 1AR

DRAWING
EXISTING ROOF PLAN

SCALE
1:50 on A3

DRAWN BY	DRWG NOS.	REV
JL	104	-

EXISTING FRONT ELEVATION

0 5m @ 1:50

JLArchitecture
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Tel:07763850450
Web: www.jlarchitecture.co.uk

CIAT CHARTERED PRACTICE

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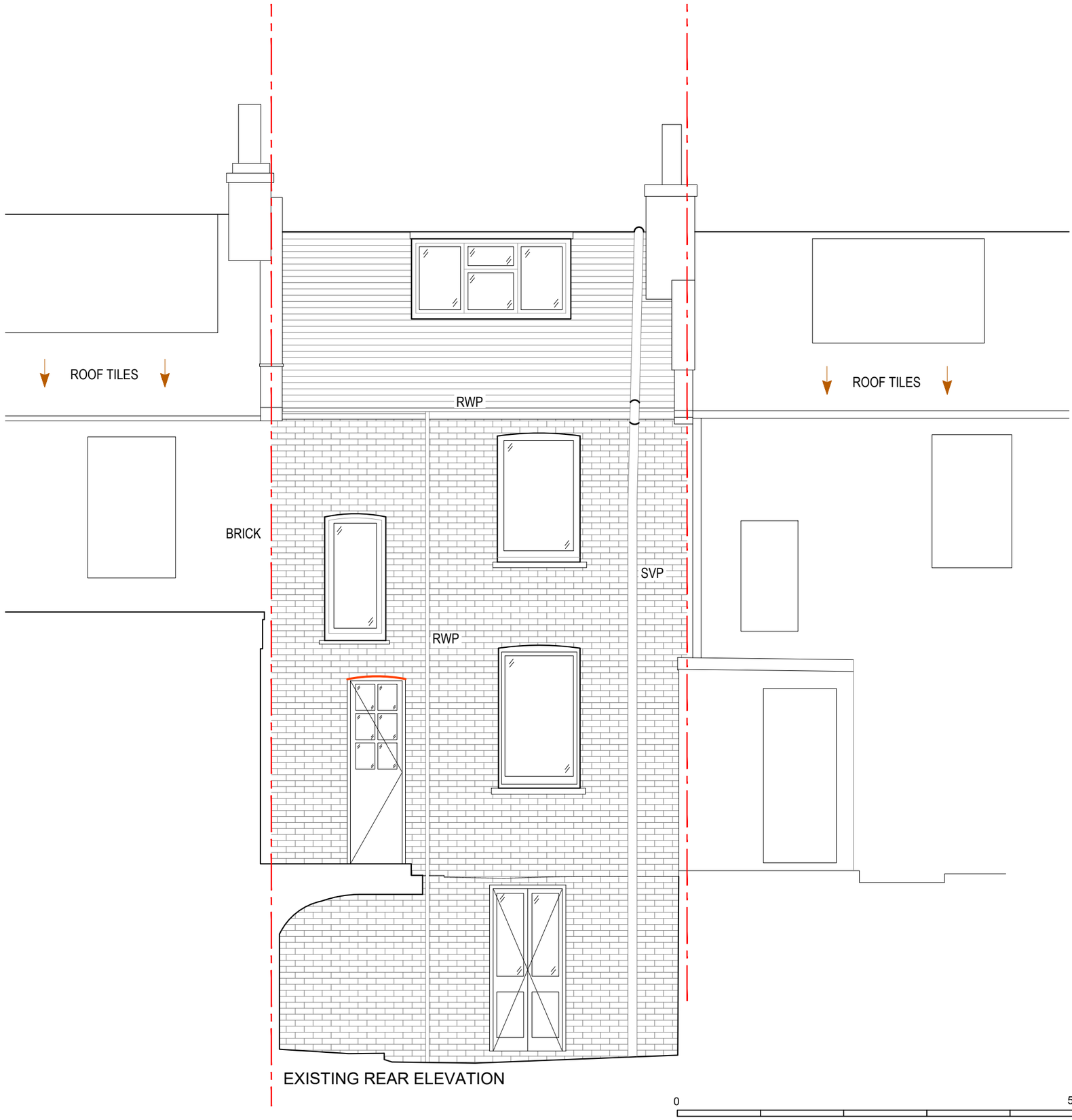
PROJECT
PROPOSED REFURBISHMENT AND EXTENSION

ADDRESS
31 SPENCER RISE
LONDON
NW5 1AR

DRAWING
EXISTING FRONT ELEVATION

SCALE
1:50on A3

DRAWN BY	DRWG NOS.	REV
JL	105	-



EXISTING REAR ELEVATION

0 5m @ 1:50

JLArchitecture
Email: James@jlarchitecture.co.uk
Tel:07763850450
Web: www.jlarchitecture.co.uk

CIAT CHARTERED PRACTICE

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PIERRE GUENIN

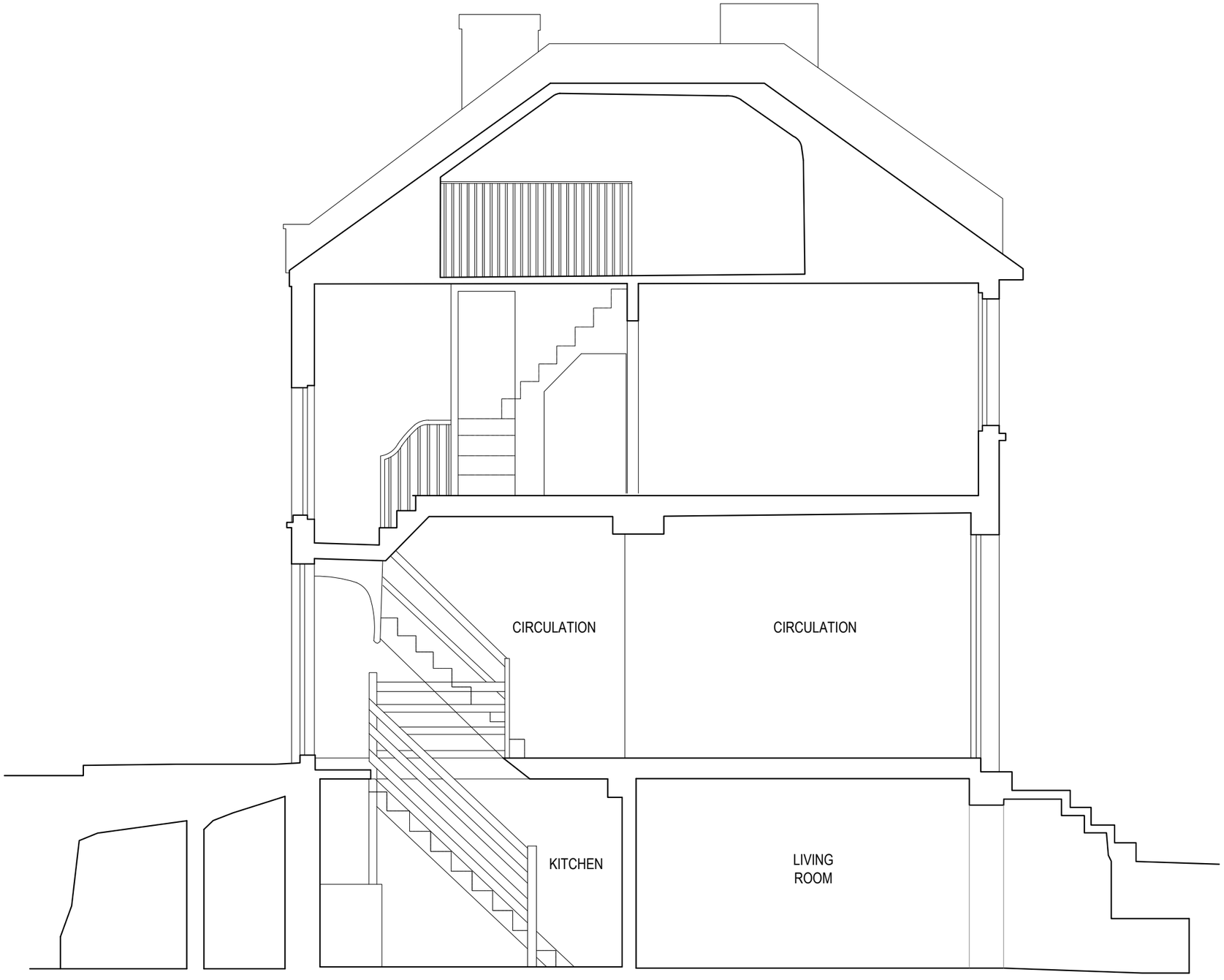
PROJECT
PROPOSED REFURBISHMENT AND EXTENSION

ADDRESS
31 SPENCER RISE
LONDON
NW5 1AR

DRAWING
EXISTING REAR ELEVATION

SCALE
1:50 on A3

DRAWN BY	DRWG NOS.	REV
JL	106	-



EXISTING SECTION

0 5m @ 1:50

JLArchitecture
Email: James@jlarchitecture.co.uk
Tel:07763850450
Web: www.jlarchitecture.co.uk

CIAT CHARTERED PRACTICE

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PIERRE GUENIN

PROJECT
PROPOSED REFURBISHMENT AND EXTENSION

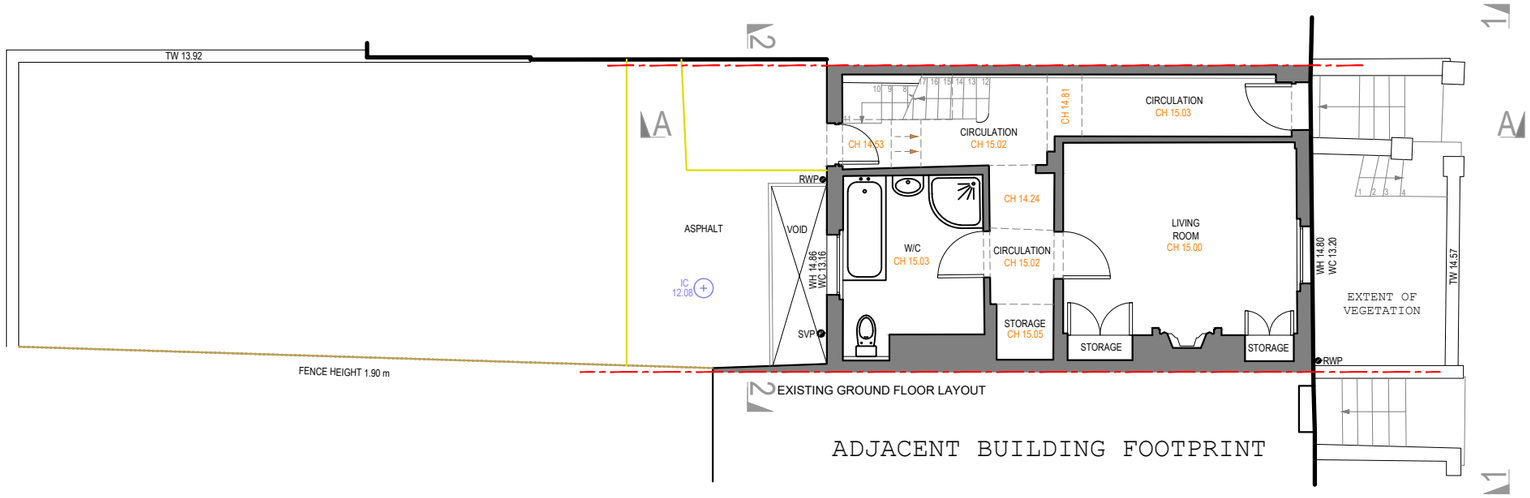
ADDRESS
31 SPENCER RISE
LONDON
NW5 1AR

DRAWING
EXISTING SECTION

SCALE
1:50 on A3

DRAWN BY	DRWG NOS.	REV
JL	107	-

ADJACENT BUILDING FOOTPRINT



0 10m @ 1:100

JLArchitecture
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Tel:07763850450
Web: www.jlarchitecture.co.uk

CIAT CHARTERED PRACTICE

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PROPOSED REFURBISHMENT AND EXTENSION

ADDRESS
31 SPENCER RISE
LONDON
NW5 1AR

DRAWING
EXISTING SITE PLAN

SCALE
1:100 on A3

DRAWN BY	DRWG NOS.	REV
JL	108	-

JLArchitecture
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Tel:07763850450
Web: www.jlarchitecture.co.uk

CIAT CHARTERED PRACTICE

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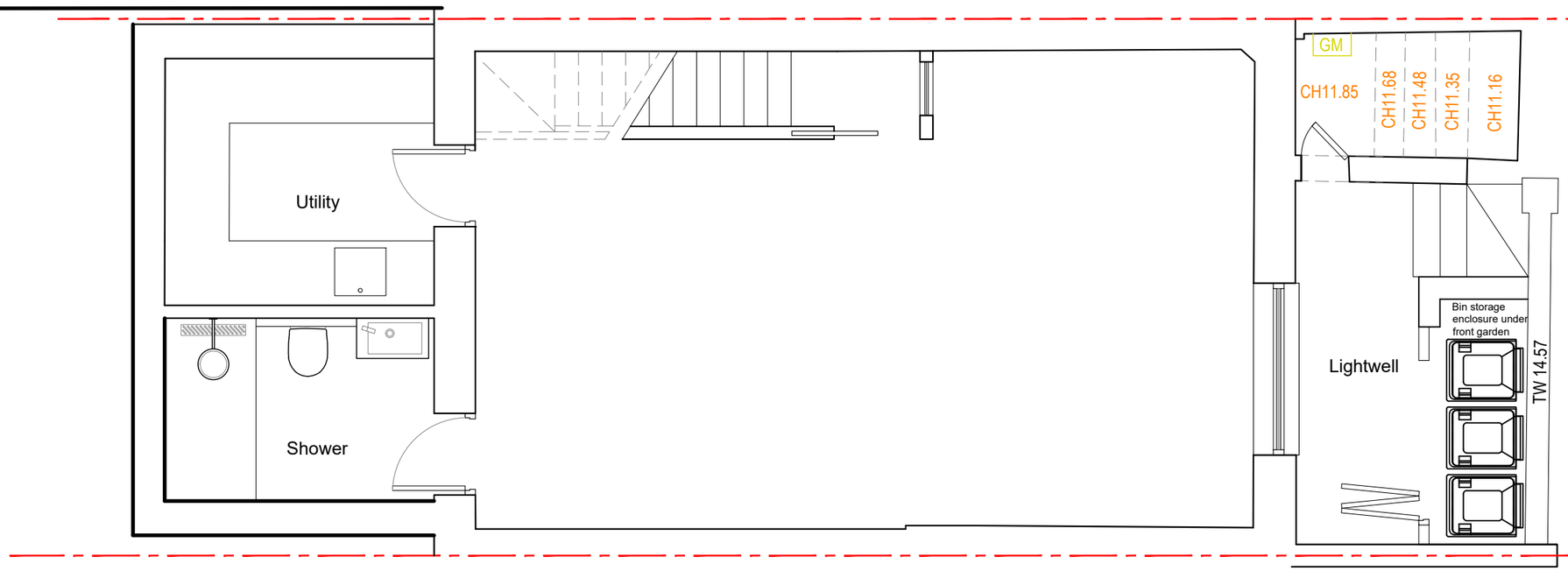
PROPOSED REFURBISHMENT AND EXTENSION

ADDRESS
31 SPENCER RISE
LONDON
NW5 1AR

DRAWING
EXISTING STREET SCENE

SCALE
1:50on A3

DRAWN BY	DRWG NOS.	REV
JL	109	-



PROPOSED BASEMENT LAYOUT

0 5m @ 1:50

JLArchitecture
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Tel:07763850450
Web: www.jlarchitecture.co.uk

CIAT CHARTERED PRACTICE

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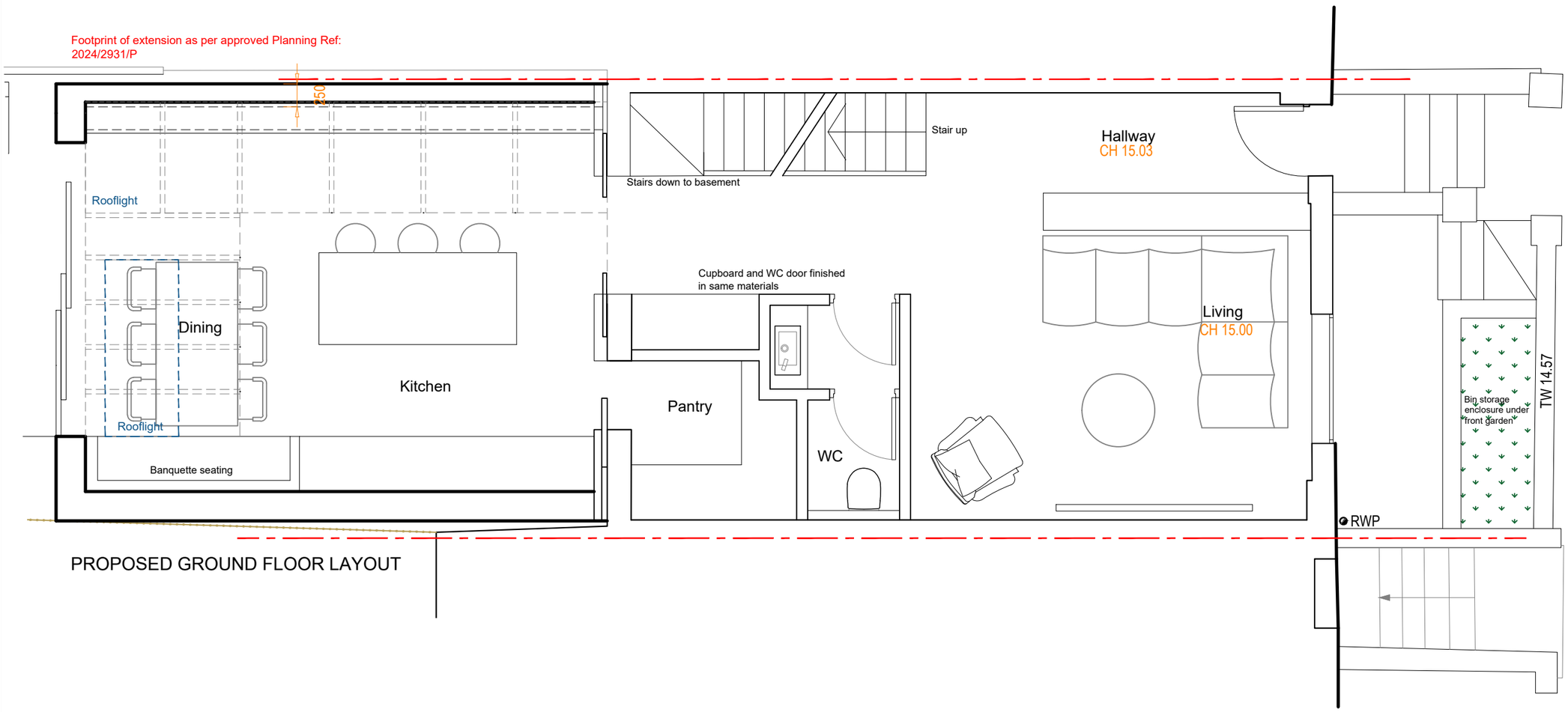
PROPOSED REFURBISHMENT AND EXTENSION

ADDRESS
31 SPENCER RISE
LONDON
NW5 1AR

DRAWING
PROPOSED BASEMENT FLOOR PLAN

SCALE
1:50 on A3

DRAWN BY	DRWG NOS.	REV
JL	200	-



PROPOSED GROUND FLOOR LAYOUT

0 5m @ 1:50

JLArchitecture
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Tel:07763850450
Web: www.jlarchitecture.co.uk

CIAT CHARTERED PRACTICE

CLIENT
PIERRE GUENIN

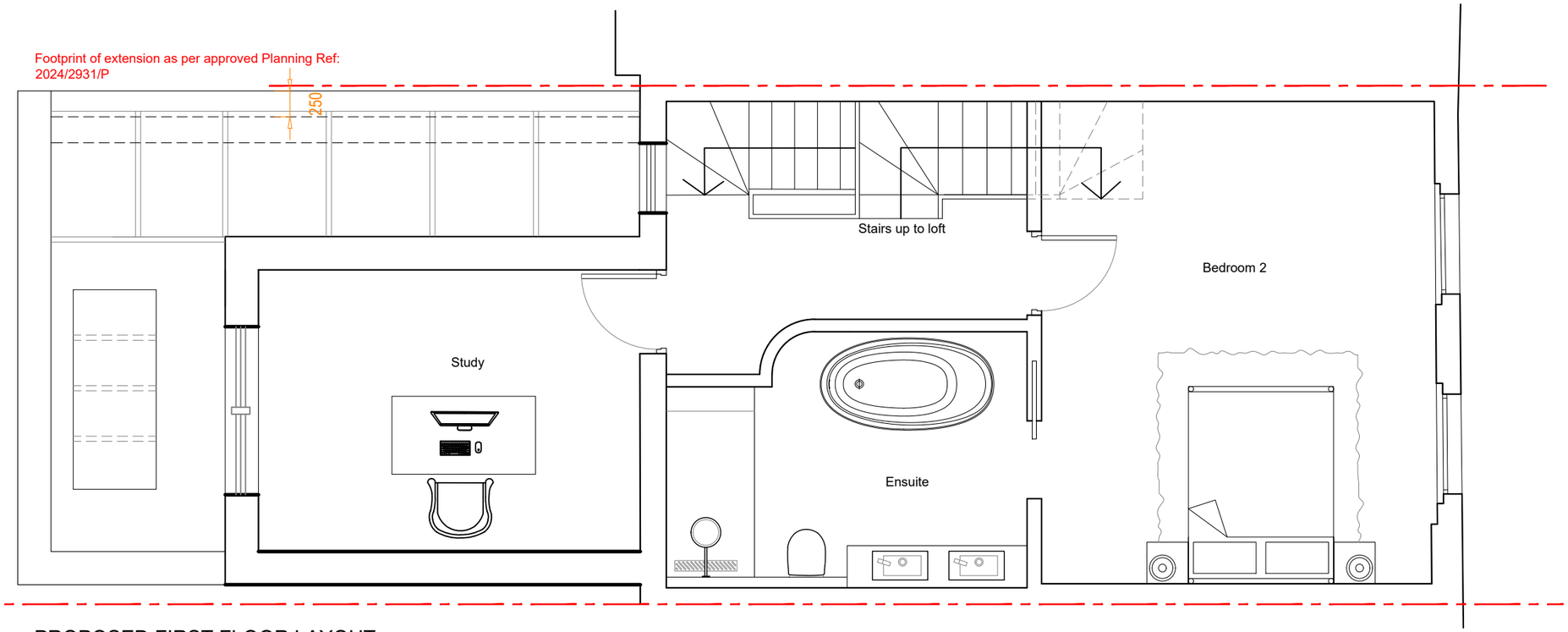
PROJECT
PROPOSED REFURBISHMENT AND EXTENSION

ADDRESS
31 SPENCER RISE
LONDON
NW5 1AR

DRAWING
PROPOSED GROUND FLOOR PLAN

SCALE
1:50 on A3

DRAWN BY	DRWG NOS.	REV
JL	201	-



PROPOSED FIRST FLOOR LAYOUT

0 5m @ 1:50

JLArchitecture
Email: James@jlarchitecture.co.uk
Tel:07763850450
Web: www.jlarchitecture.co.uk

CIAT CHARTERED PRACTICE

CLIENT
PIERRE GUENIN

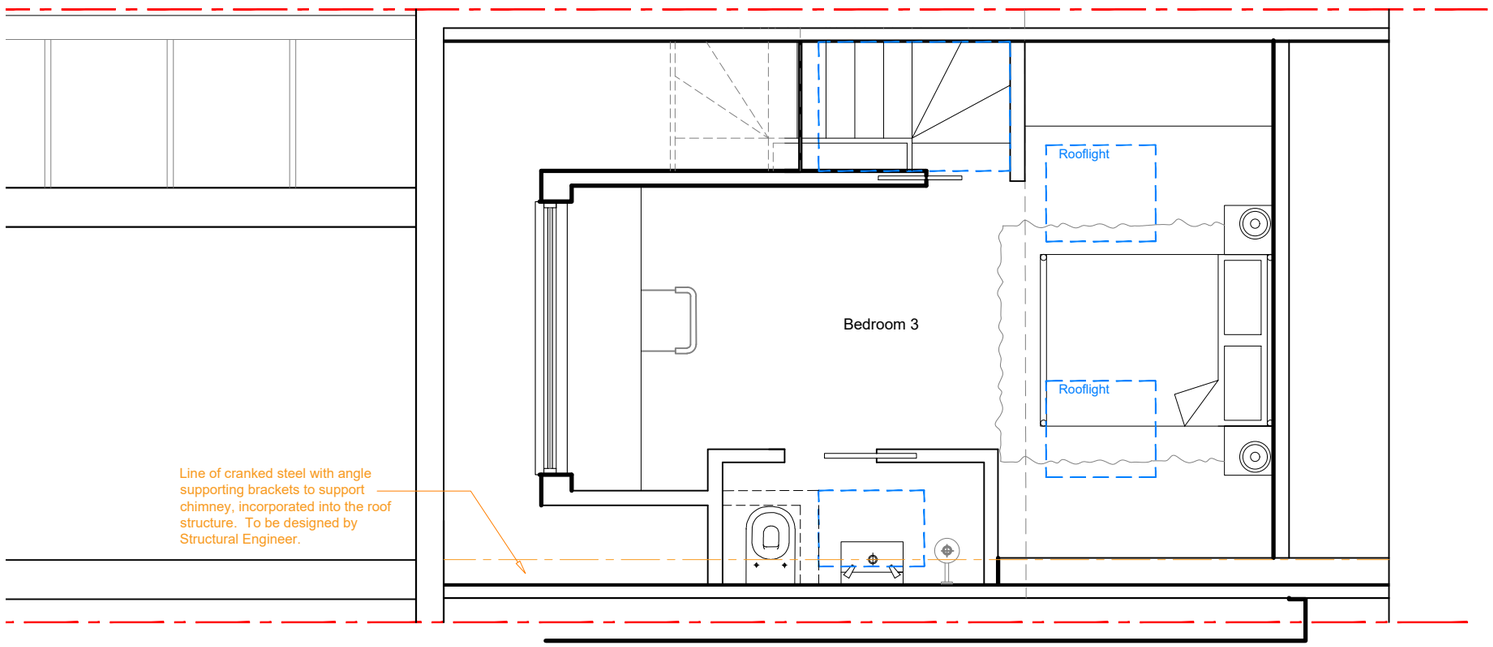
PROJECT
PROPOSED REFURBISHMENT AND EXTENSION

ADDRESS
31 SPENCER RISE
LONDON
NW5 1AR

DRAWING
PROPOSED FIRST FLOOR PLAN

SCALE
1:50 on A3

DRAWN BY	DRWG NOS.	REV
JL	202	-



PROPOSED LOFT LAYOUT

0 5m @ 1:50

JLArchitecture
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Tel:07763850450
Web: www.jlarchitecture.co.uk

CIAT CHARTERED PRACTICE

CLIENT
PIERRE GUENIN

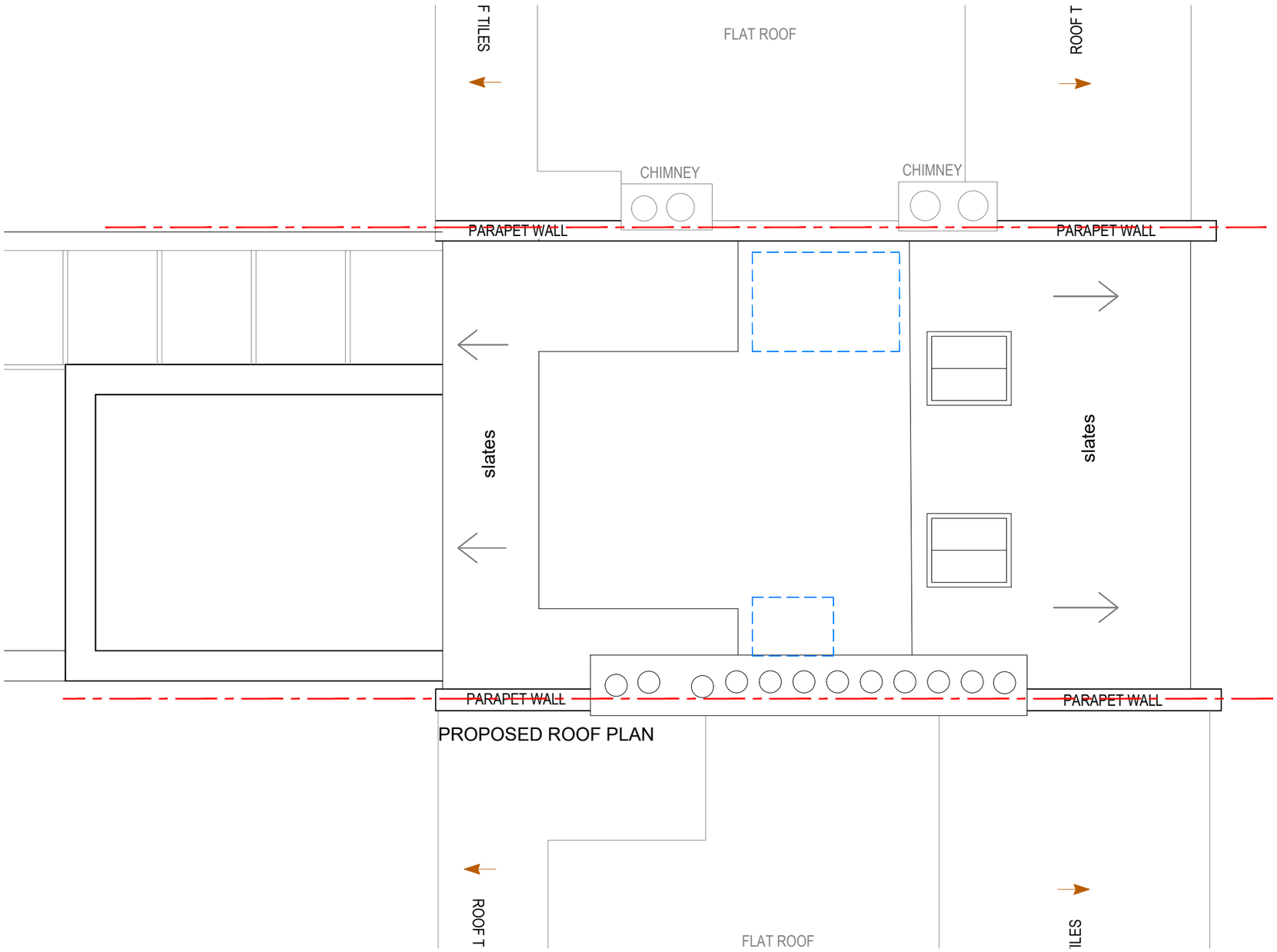
PROJECT
PROPOSED REFURBISHMENT AND EXTENSION

ADDRESS
31 SPENCER RISE
LONDON
NW5 1AR

DRAWING
PROPOSED LOFT PLAN

SCALE
1:50 on A3

DRAWN BY	DRWG NOS.	REV
JL	203	-



PROPOSED ROOF PLAN

0 5m @ 1:50

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Tel:07763850450
Web: www.jlarchitecture.co.uk

CIAT CHARTERED PRACTICE

CLIENT
PIERRE GUENIN

PROJECT
PROPOSED REFURBISHMENT AND EXTENSION

ADDRESS
31 SPENCER RISE
LONDON
NW5 1AR

DRAWING
PROPOSED ROOF PLAN

SCALE
1:50 on A3

DRAWN BY	DRWG NOS.	REV
JL	204	-

PROPOSED FRONT ELEVATION

0 5m @ 1:50

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CIAT CHARTERED PRACTICE

CLIENT
PIERRE GUENIN

PROJECT
PROPOSED REFURBISHMENT AND EXTENSION

ADDRESS
31 SPENCER RISE
LONDON
NW5 1AR

DRAWING
PROPOSED FRONT ELEVATION

SCALE
1:50on A3

DRAWN BY	DRWG NOS.	REV
JL	205	-

PROPOSED REAR ELEVATION

0 5m @ 1:50

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CIAT CHARTERED PRACTICE

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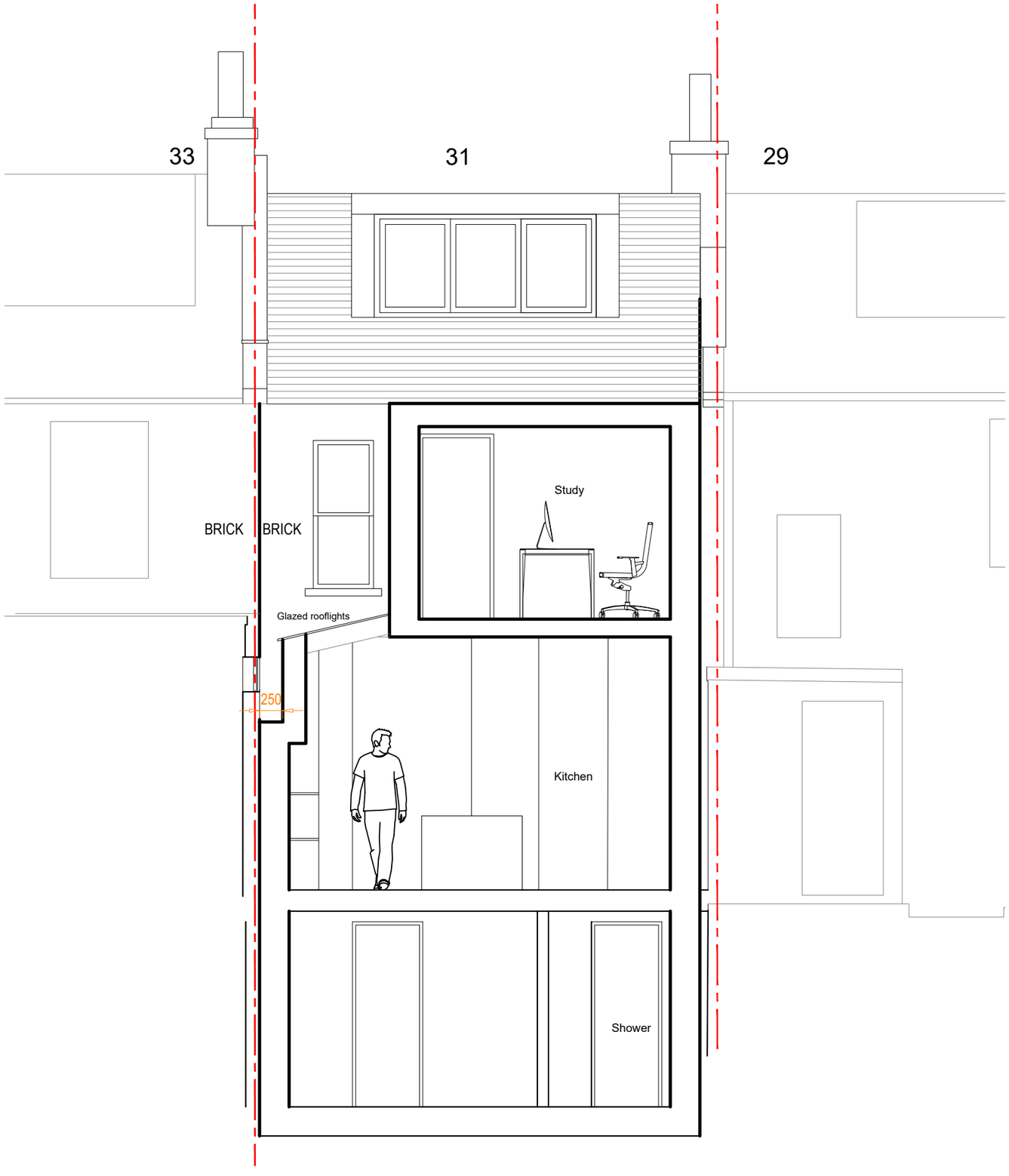
PROJECT
PROPOSED REFURBISHMENT AND EXTENSION

ADDRESS
31 SPENCER RISE
LONDON
NW5 1AR

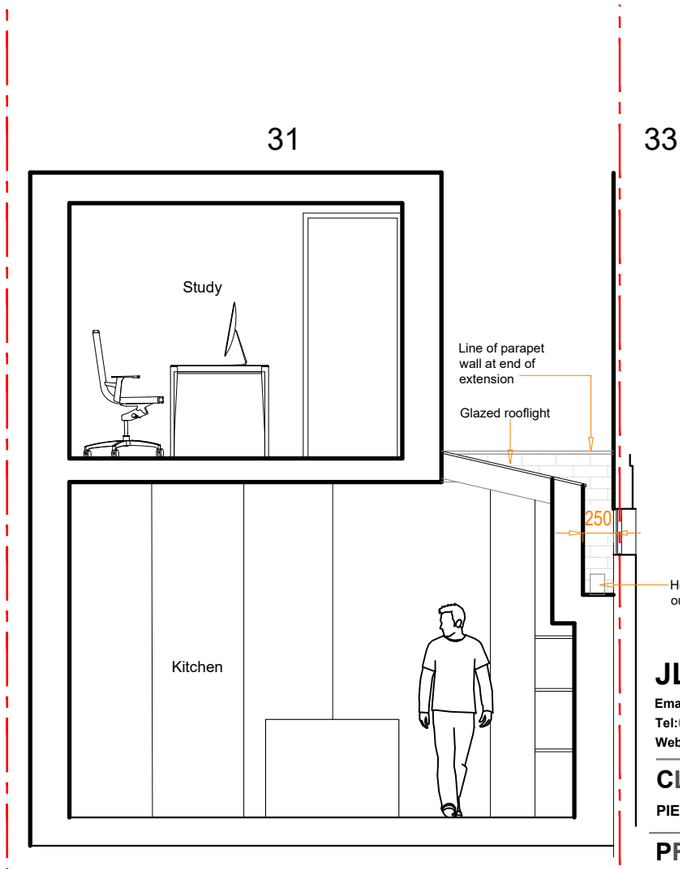
DRAWING
PROPOSED REAR ELEVATION

SCALE
1:50 on A3

DRAWN BY	DRWG NOS.	REV
JL	206	-



PROPOSED REAR SECTION



PROPOSED REAR CROSS SECTION

0 5m @ 1:50

JLArchitecture
Email: James@jlarchitecture.co.uk
Tel:07763850450
Web: www.jlarchitecture.co.uk

CIAT CHARTERED PRACTICE

CLIENT
PIERRE GUENIN

PROJECT
PROPOSED REFURBISHMENT AND EXTENSION

ADDRESS
31 SPENCER RISE
LONDON
NW5 1AR

DRAWING
PROPOSED SECTION

SCALE
1:50 on A3

DRAWN BY	DRWG NOS.	REV
JL	207	-

JLArchitecture
Email: James@jlarchitecture.co.uk
Tel:07763850450
Web: www.jlarchitecture.co.uk

CIAT CHARTERED PRACTICE

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PIERRE GUENIN

PROJECT
PROPOSED REFURBISHMENT AND EXTENSION

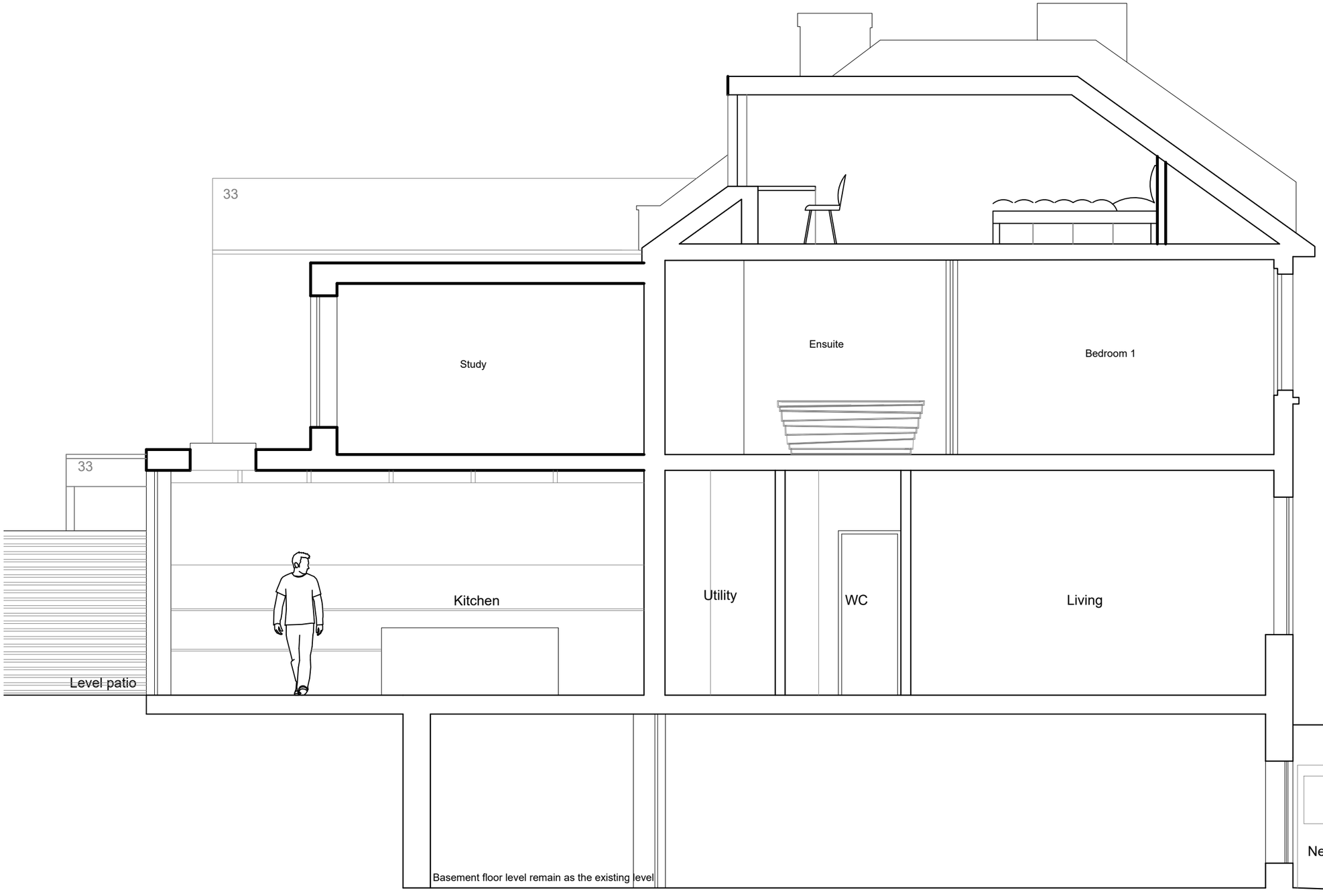
ADDRESS
31 SPENCER RISE
LONDON
NW5 1AR

DRAWING
PROPOSED SECTION

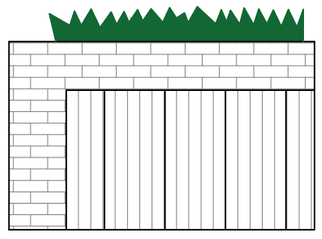
SCALE
1:50 on A3

DRAWN BY	DRWG NOS.	REV
JL	208	-

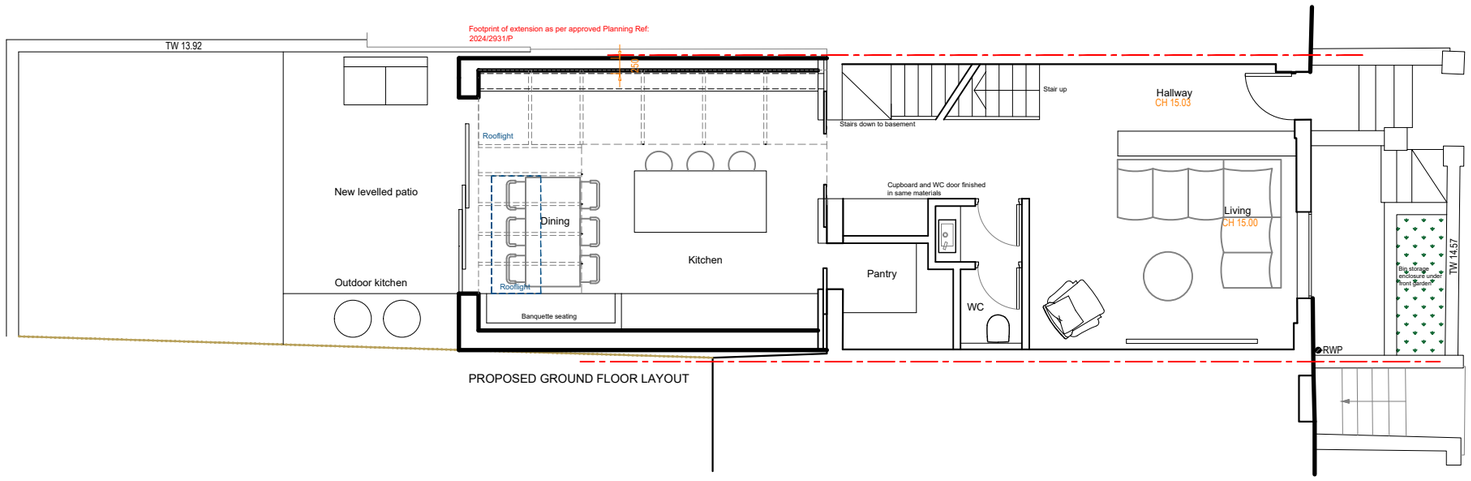
0 5m @ 1:50



PROPOSED LONG SECTION



Elevation of bin store viewed from the lightwell



PROPOSED GROUND FLOOR LAYOUT

0 10m @ 1:100

JLArchitecture
Email: James@jlarchitecture.co.uk
Tel:07763850450
Web: www.jlarchitecture.co.uk

CIAT CHARTERED PRACTICE

CLIENT
PIERRE GUENIN

PROJECT
PROPOSED REFURBISHMENT AND EXTENSION

ADDRESS
31 SPENCER RISE
LONDON
NW5 1AR

DRAWING
PROPOSED SITE PLAN

SCALE
1:100 on A3

DRAWN BY	DRWG NOS.	REV
JL	209	-

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Tel:07763850450
Web: www.jlarchitecture.co.uk

CIAT CHARTERED PRACTICE

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PIERRE GUENIN

PROJECT
PROPOSED REFURBISHMENT AND EXTENSION

ADDRESS
31 SPENCER RISE
LONDON
NW5 1AR

DRAWING
PROPOSED STREET SCENE

SCALE
1:50 on A3

DRAWN BY	DRWG NOS.	REV
JL	210	-

Appendix B – Asset Plan Thames Water

Asset Location Search

Thames Water Property Searches

Aegaea
SEVENTH FLOOR, 15-18 WEST STRE
BRIGHTON
BN1 2RL

Search address supplied 31
Spencer Rise
London
NW5 1AR

Your reference 8953

Our reference ALS/ALS Standard/2025_5220838

Search date 9 September 2025

Keeping you up-to-date

Notification of price changes

We're changing our report prices from 4th June 2025. The price will increase by 3.5% based on Retail Price Index (RPI).

Find our new prices on our website thameswater.co.uk/property-searches

Any Questions? We're happy to talk through the changes with you – give our Property Searches team a call on 0800 009 4540 .

Thames Water Utilities Ltd
Property Searches,
Clearwater Court, Vastern Road, Reading RG1 8DB

property.searches@thameswater.co.uk
thameswater.co.uk/propertysearches

0800 009 4540

Asset Location Search

Property Searches

Search address supplied: 31, Spencer Rise, London, NW5 1AR

Dear Sir / Madam

An Asset Location Search is recommended when undertaking a site development. It is essential to obtain information on the size and location of clean water and sewerage assets to safeguard against expensive damage and allow cost-effective service design.

The following records were searched in compiling this report: - the map of public sewers & the map of waterworks. Thames Water Utilities Ltd (TWUL) holds all of these.

This search provides maps showing the position and size of Thames Water assets close to the proposed development and also manhole cover and invert levels, where available.

Please note that none of the charges made for this report relate to the provision of Ordnance Survey mapping information. The replies contained in this letter are given following inspection of the public service records available to this company. No responsibility can be accepted for any error or omission in the replies.

You should be aware that the information contained on these plans is current only on the day that the plans are issued. The plans should only be used for the duration of the work that is being carried out at the present time. Under no circumstances should this data be copied or transmitted to parties other than those for whom the current work is being carried out.

Thames Water do update these service plans on a regular basis and failure to observe the above conditions could lead to damage arising to new or diverted services at a later date.

Contact Us

If you have any further queries regarding this enquiry please feel free to contact a member of the team on 0800 009 4540, or use the contact details below:

Thames Water Utilities Ltd
Property Searches
Clearwater Court
Vastern Road
Reading
RG1 8DB

Email: property.searches@thameswater.co.uk
Web: thameswater.co.uk/propertysearches

Waste Water Services

Please provide a copy extract from the public sewer map.

Enclosed is a map showing the approximate lines of our sewers. Our plans do not show sewer connections from individual properties or any sewers not owned by Thames Water unless specifically annotated otherwise. Records such as "private" pipework are in some cases available from the Building Control Department of the relevant Local Authority. Where the Local Authority does not hold such plans it might be advisable to consult the property deeds for the site or contact neighbouring landowners. The public sewer map relates only to sewerage apparatus of Thames Water Utilities Ltd, it does not disclose details of cables and or communications equipment that may be running through or around such apparatus. The sewer level information contained in this response represents all of the level data available in our existing records. Should you require any further Information, please refer to the relevant section within the 'Further Contacts' page found later in this document.

For your guidance:

- The Company is not generally responsible for rivers, watercourses, ponds, culverts or highway drains. If any of these are shown on the copy extract they are shown for information only.
- Any private sewers or lateral drains which are indicated on the extract of the public sewer map as being subject to an agreement under Section 104 of the Water Industry Act 1991 are not an ‘as constructed’ record. It is recommended these details be checked with the developer.

Clean Water Services

Please provide a copy extract from the public water main map.

Enclosed is a map showing the approximate positions of our water mains and associated apparatus. Please note that records are not kept of the positions of individual domestic supplies. For your information, there will be a pressure of at least 10m head at the outside stop valve. If you would like to know the static pressure, please contact our Customer Centre on 0800 316 9800. The Customer Centre can also arrange for a full flow and pressure test to be carried out for a fee.

For your guidance:

- Assets other than vested water mains may be shown on the plan, for information only.
- If an extract of the public water main record is enclosed, this will show known public water mains in the vicinity of the property. It should be possible to estimate the likely length and route of any private water supply pipe connecting the property to the public water network.

Further contacts:

Waste Water queries

Should you require verification of the invert levels of public sewers, by site measurement, you will need to approach the relevant Thames Water Area Network Office for permission to lift the appropriate covers. This permission will usually involve you completing a TWOSA form. You can do this by emailing customer.feedback@thameswater.co.uk with the email subject header 'Enquiry – TWOSA', along with details of the request.

If you have any questions regarding sewer connections, budget estimates, diversions or building over issues please direct them to our service desk which can be contacted by writing to:

Developer Services (Waste Water)
Thames Water
Clearwater Court
Vastern Road
Reading
RG1 8DB

Tel: 0800 009 3921
Email: developer.services@thameswater.co.uk

Clean Water queries

Should you require any advice concerning clean water connections, please contact:

Developer Services (Clean Water)
Thames Water
Clearwater Court
Vastern Road
Reading
RG1 8DB

Tel: 0800 009 3921
Email: developer.services@thameswater.co.uk

Asset Location Search Sewer Map - ALS/ALS Standard/2025_5220838

The width of the displayed area is 200 m and the centre of the map is located at OS coordinates 528927,186030

The position of the apparatus shown on this plan is given without obligation and warranty, and the accuracy cannot be guaranteed. Service pipes are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Thames Water for any error or omission. The actual position of mains and services must be verified and established on site before any works are undertaken.

Based on the Ordnance Survey Map (2024) with the Sanction of the controller of H.M. Stationery Office, License no. AC0000849556 Crown Copyright Reserved.

NB. Levels quoted in metres Ordnance Newlyn Datum. The value -9999.00 indicates that no survey information is available

Manhole Reference	Manhole Cover Level	Manhole Invert Level
8006	n/a	n/a
8007	n/a	n/a
891A	n/a	n/a
8008	n/a	n/a
8901	n/a	n/a
9002	n/a	n/a
99AF	n/a	n/a
99AE	n/a	n/a
99AH	n/a	n/a
0111	n/a	n/a
0001	n/a	n/a

The position of the apparatus shown on this plan is given without obligation and warranty, and the accuracy cannot be guaranteed. Service pipes are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Thames Water for any error or omission. The actual position of mains and services must be verified and established on site before any works are undertaken.

Asset Location Search - Sewer Key

Public Sewer Types (Operated and maintained by Thames Water)

Foul Sewer: A sewer designed to convey waste water from domestic and industrial sources to a treatment works.

Surface Water Sewer: A sewer designed to convey surface water (e.g. rain water from roofs, yards and car parks) to rivers or watercourses.

Combined Sewer: A sewer designed to convey both waste water and surface water from domestic and industrial sources to a treatment works.

- Storm Sewer
- Sludge Sewer
- Foul Trunk Sewer
- Surface Trunk Sewer
- Combined Trunk Sewer
- Foul Rising Main
- Surface Water Rising Main
- Combined Rising Main
- Vacuum
- Thames Water Proposed
- Vent Pipe
- Gallery

Other Sewer Types (Not operated and maintained by Thames Water)

- Sewer
- Culverted Watercourse
- Proposed
- Decommissioned Sewer
- Content of this drainage network is currently unknown
- Ownership of this drainage network is currently unknown

Sewer Fittings

A feature in a sewer that does not affect the flow in the pipe. Example: a vent is a fitting as the function of a vent is to release excess gas.

- Air Valve
- Meter
- Dam Chase
- Vent
- Fitting

Operational Controls

A feature in a sewer that changes or diverts the flow in the sewer. Example: A hydrobrake limits the flow passing downstream.

- Ancillary
- Drop Pipe
- Control Valve
- Weir

End Items

End symbols appear at the start or end of a sewer pipe. Examples: an Undefined End at the start of a sewer indicates that Thames Water has no knowledge of the position of the sewer upstream of that symbol. Outfall on a surface water sewer indicates that the pipe discharges into a stream or river.

- Inlet
- Outfall
- Undefined End

Other Symbols

Symbols used on maps which do not fall under other general categories.

- Change of Characteristic Indicator
- Public / Private Pumping Station
- Invert Level
- Summit

Areas

Lines denoting areas of underground surveys, etc.

- Agreement
- Chamber
- Operational Site

Ducts or Crossings

- Casement — Ducts may contain high voltage cables. Please check with Thames Water.
- Conduit Bridge
- Subway
- Tunnel

Notes:

1) All levels associated with the plans are to Ordnance Datum Newlyn.
2) All measurements on the plan are metric.
3) Arrows (on gravity fed sewers) or flecks (on rising mains) indicate the direction of flow.
4) Most private pipes are not shown on our plans, as in the past, this information has not been recorded.
5) 'na' or '0' on a manhole indicates that data is unavailable.
6) The text appearing alongside a sewer line indicates the internal diameter of the pipe in millimeters. Text next to a manhole indicates the manhole reference number and should not be taken as a measurement.

If you are unsure about any text or symbology, please contact Property Searches on 0800 009 4540.

Asset Location Search Water Map - ALS/ALS Standard/2025_5220838

The width of the displayed area is 200 m and the centre of the map is located at OS coordinates 528927, 186030.

Asset Location Search - Water Key

Water Pipes (Operated & Maintained by Thames Water)

4"

Distribution Main: The most common pipe shown on water maps. With few exceptions, domestic connections are only made to distribution mains.

16"

Trunk Main: A main carrying water from a source of supply to a treatment plant or reservoir, or from one treatment plant or reservoir to another. Also a main transferring water in bulk to smaller water mains used for supplying individual customers.

3" SUPPLY

Supply Main: A supply main indicates that the water main is used as a supply for a single property or group of properties.

3" FIRE

Fire Main: Where a pipe is used as a fire supply, the word FIRE will be displayed along the pipe.

3" METERED

Metered Pipe: A metered main indicates that the pipe in question supplies water for a single property or group of properties and that quantity of water passing through the pipe is metered even though there may be no meter symbol shown.

Transmission Tunnel: A very large diameter water pipe. Most tunnels are buried very deep underground. These pipes are not expected to affect the structural integrity of buildings shown on the map provided.

Proposed Main: A main that is still in the planning stages or in the process of being laid. More details of the proposed main and its reference number are generally included near the main.

Valves

- General Purpose Valve
- Air Valve
- Pressure Control Valve
- Customer Valve

Hydrants

- Single Hydrant

Meters

- Meter

End Items

Symbol indicating what happens at the end of a water main.

- Blank Flange
- Capped End
- Emptying Pit
- Undefined End
- Manifold
- Customer Supply
- Fire Supply

Operational Sites

- Booster Station
- Other
- Other (Proposed)
- Pumping Station
- Service Reservoir
- Shaft Inspection
- Treatment Works
- Unknown
- Water Tower

Other Symbols

- Data Logger
- **Casement:** Ducts may contain high voltage cables. Please check with Thames Water.

PIPE DIAMETER	DEPTH BELOW GROUND
Up to 300mm (12")	900mm (3')
300mm - 600mm (12" - 24")	1100mm (3' 8")
600mm and bigger (24" plus)	1200mm (4')

Other Water Pipes (Not Operated or Maintained by Thames Water)

Other Water Company Main: Occasionally other water company water pipes may overlap the border of our clean water coverage area. These mains are denoted in purple and in most cases have the owner of the pipe displayed along them.

Private Main: Indiates that the water main in question is not owned by Thames Water. These mains normally have text associated with them indicating the diameter and owner of the pipe.

Appendix C – CCTV Survey

Neighbour

BOUNDARY LINE

Rainwater Downpipe (Discharges above ground)

Road

1.85M

1.81M

1.88M

1.67M

Stack 1

S1

1.78M

1.80M

Rainwater Gully 1

Rainwater Gully 2

S6

M1

0.25M

M2

S2

Main Line

M6

S7

FRONT GARDEN

MH2

M5

S5

M4

M3

S5

Doors

MH1

S3

REAR GARDEN

Stack 2

BC

Ground Level

NO. 31

S4

Redundant

Lightwell

Basement Level

Steps

Door

Door

Road

BOUNDARY LINE

Neighbour

REXAUS GROUP

31 SPENCER RISE
LONDON
NW5 1AR
LONDON

*** NOT TO SCALE**

KEY

FOUL (PRIVATE)

SURFACE (PRIVATE)

COMBINED (PRIVATE)

SHARED/MAIN

MANHOLE DEPTHS

MANHOLE 1 = 0.57M DEPTH
MANHOLE 2 = 1.24M DEPTH

MARKER DEPTHS

MARKER 1 = 0.35M DEPTH
MARKER 2 = 2.56M DEPTH
MARKER 3 = 0.84M DEPTH
MARKER 4 = 0.95M DEPTH
MARKER 5 = 1.09M DEPTH
MARKER 6 = 2.52M DEPTH

BC = BLIND CONNECTION

Appendix D – Brownfield Runoff Rate

AEG8953_NW5_Camden_05: 31 Spencer Rise, London, NW5 1AR Existing Runoff Rates	Date: 24/09/2025		
	Designed by: DMC	Checked by: JA	Approved By: NB
Report Details: Type: Inflows Storm Phase: Phase	Aegaea:		

Existing Asphault

Type : Catchment Area

Area (ha)	0.002

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

AEG8953_NW5_Camden_05: 31 Spencer Rise, London, NW5 1AR Existing Runoff Rates	Date: 24/09/2025			aegaea water, civils and environment
	Designed by: DMC	Checked by: JA	Approved By: NB	
Report Details: Type: Inflow Summary Storm Phase: Phase	Aegaea:			

Inflow Label	Connected To	Flow (L/s)	Runoff Method	Area (ha)	Percentage Impervious (%)	Urban Creep (%)	Adjusted Percentage Impervious (%)	Area Analysed (ha)
Existing Asphault			Time of Concentration	0.002	100	0	100	0.002
TOTAL		**0.0**		**0.002**				**0.002**

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	☐

Rainfall

FEH

Type: FEH

Site Location	GB 528934 186030 TQ 28934 86030
Rainfall Version	2022
Summer	☑
Winter	☑

Return Period

Return Period (years)	Increase Rainfall (%)
2.0	0.000
30.0	0.000
100.0	0.000

Storm Durations

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

AEG8953_NW5_Camden_05: 31 Spencer Rise, London, NW5 1AR Existing Runoff Rates	Date: 24/09/2025			aegaea water, civils and environment
	Designed by: DMC	Checked by: JA	Approved By: NB	
Report Details: Type: Inflows Summary Storm Phase: Phase	Aegaea:			

FEH: 2 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Inflow

Inflow	Storm Event	Inflow Area (ha)	Max. Inflow (L/s)	Total Inflow Volume (m^3)
Existing Asphault	FEH: 2 years: +0 %: 15 mins: Summer	0.00	0.4	0.189

AEG8953_NW5_Camden_05: 31 Spencer Rise, London, NW5 1AR Existing Runoff Rates	Date: 24/09/2025		
	Designed by: DMC	Checked by: JA	Approved By: NB
Report Details: Type: Inflows Summary Storm Phase: Phase	Aegaea:		

FEH: 30 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Inflow

Inflow	Storm Event	Inflow Area (ha)	Max. Inflow (L/s)	Total Inflow Volume (m^3)
Existing Asphault	FEH: 30 years: +0 %: 15 mins: Summer	0.00	1.1	0.486

AEG8953_NW5_Camden_05: 31 Spencer Rise, London, NW5 1AR Existing Runoff Rates	Date: 24/09/2025			aegaea water, civils and environment
	Designed by: DMC	Checked by: JA	Approved By: NB	
Report Details: Type: Inflows Summary Storm Phase: Phase	Aegaea:			

FEH: 100 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Inflow

Inflow	Storm Event	Inflow Area (ha)	Max. Inflow (L/s)	Total Inflow Volume (m^3)
Existing Asphault	FEH: 100 years: +0 %: 15 mins: Summer	0.00	1.4	0.636

Appendix E – Proposed InfoDrainage Calculations

AEG8953_NW5_Camden_05: 31 Spencer Rise, London, NW5 1AR Surface Water Drainage Network	Date: 24/09/2025		
	Designed by: DMC	Checked by: JA	Approved By: NB
Report Details: Type: Inflows Storm Phase: Phase	Aegaea:		

aegaea
water, civils and environment

Extension Catchment Area

Type : Catchment Area

Area (ha)	0.004

Dynamic Sizing

Runoff Method	Time of Concentration
Summer Volumetric Runoff	1.000
Winter Volumetric Runoff	1.000
Time of Concentration (mins)	5
Percentage Impervious (%)	100

Cellular Storage

Type : Cellular Storage

Dimensions

Exceedance Level (m)	55.700
Depth (m)	0.400
Base Level (m)	54.700
Number of Crates Long	7
Number of Crates Wide	4
Number of Crates High	1
Porosity (%)	95
Crate Length (m)	0.4
Crate Width (m)	0.4
Crate Height (m)	0.4
Total Volume (m³)	2.302

Inlets

Inlet

Inlet Type	Point Inflow
Incoming Item(s)	Extension Catchment Area
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet (1)

Outgoing Connection	Pipe
Outlet Type	Orifice

Diameter (m)	0.025
Coefficient of Discharge	0.600
Invert Level (m)	54.700

AEG8953_NW5_Camden_05: 31 Spencer Rise, London, NW5 1AR Surface Water Drainage Network	Date: 24/09/2025		
	Designed by: DMC	Checked by: JA	Approved By: NB
Report Details: Type: Inflow Summary Storm Phase: Phase	Aegaea:		

Inflow Label	Connected To	Flow (L/s)	Runoff Method	Area (ha)	Percentage Impervious (%)	Urban Creep (%)	Adjusted Percentage Impervious (%)	Area Analysed (ha)
Extension Catchment Area	Cellular Storage		Time of Concentration	0.004	100	10	110	0.004
TOTAL		**0.0**		**0.004**				**0.004**

Runoff Type	Dynamic
Output Interval (mins)	5
Time Step	Default
Urban Creep	Apply Global Value
Urban Creep Global Value (%)	10
Junction Flood Risk Margin (mm)	300
Perform No Discharge Analysis	☐

Rainfall

FEH

Type: FEH

Site Location	GB 528934 186030 TQ 28934 86030
Rainfall Version	2022
Summer	☑
Winter	☑

Return Period

Return Period (years)	Increase Rainfall (%)
2.0	0.000
30.0	0.000
100.0	0.000
30.0	35.000
100.0	40.000

Storm Durations

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

ICP SUDS / IH 124

Details

Method	ICP SUDS
Area (ha)	0.003
SAAR (mm)	630.0
Soil	0.47
Region	Region 1
Urban	0
Return Period (years)	0

Results

Region	QBAR Rural (L/s)	QBAR Urban (L/s)	Q 1 (years) (L/s)	Q 30 (years) (L/s)	Q 100 (years) (L/s)
Region 1	0.0	0.0	0.0	0.0	0.0

FEH: 2 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Inflow

Inflow	Storm Event	Inflow Area (ha)	Max. Inflow (L/s)	Total Inflow Volume (m^3)
Extension Catchment Area	FEH: 2 years: +0 %: 15 mins: Summer	0.00	0.9	0.409

FEH: 30 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Inflow

Inflow	Storm Event	Inflow Area (ha)	Max. Inflow (L/s)	Total Inflow Volume (m^3)
Extension Catchment Area	FEH: 30 years: +0 %: 15 mins: Summer	0.00	2.4	1.064

FEH: 100 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Inflow

Inflow	Storm Event	Inflow Area (ha)	Max. Inflow (L/s)	Total Inflow Volume (m³)
Extension Catchment Area	FEH: 100 years: +0 %: 15 mins: Summer	0.00	3.1	1.393

FEH: 30 years: Increase Rainfall (%): +35: Critical Storm Per Item: Rank By: Max. Inflow

Inflow	Storm Event	Inflow Area (ha)	Max. Inflow (L/s)	Total Inflow Volume (m³)
Extension Catchment Area	FEH: 30 years: +35 %: 15 mins: Summer	0.00	3.2	1.434

FEH: 100 years: Increase Rainfall (%): +40: Critical Storm Per Item: Rank By: Max. Inflow

Inflow	Storm Event	Inflow Area (ha)	Max. Inflow (L/s)	Total Inflow Volume (m³)
Extension Catchment Area	FEH: 100 years: +40 %: 15 mins: Summer	0.00	4.4	1.946

FEH: 2 years: Increase Rainfall (%): +0: 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)	Half Drain Down Time (mins)	Percentage Available (%)
Cellular Storage	FEH: 2 years: +0 %: 30 mins: Summer	54.765	54.765	0.065	0.065	0.6	0.278	0.000	0.000	0.3	0.476	11	87.929

Status
OK

FEH: 30 years: Increase Rainfall (%): +0: 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)	Half Drain Down Time (mins)	Percentage Available (%)
Cellular Storage	FEH: 30 years: +0 %: 30 mins: Summer	54.896	54.896	0.196	0.196	1.6	0.837	0.000	0.000	0.5	1.184	19	63.668

Status
OK

FEH: 100 years: Increase Rainfall (%): +0: 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)	Half Drain Down Time (mins)	Percentage Available (%)
Cellular Storage	FEH: 100 years: +0 %: 30 mins: Summer	54.968	54.968	0.268	0.268	2.1	1.140	0.000	0.000	0.6	1.467	23	50.469

Status
OK

FEH: 30 years: Increase Rainfall (%): +35: 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)	Half Drain Down Time (mins)	Percentage Available (%)
Cellular Storage	FEH: 30 years: +35 %: 30 mins: Summer	54.977	54.977	0.277	0.277	2.1	1.180	0.000	0.000	0.6	1.501	23	48.769

Status
OK

AEG8953_NW5_Camden_05: 31 Spencer Rise, London, NW5 1AR Surface Water Drainage Network	Date: 24/09/2025		
	Designed by: DMC	Checked by: JA	Approved By: NB
Report Details: Type: Stormwater Controls Summary Storm Phase: Phase	Aegaea:		

FEH: 100 years: Increase Rainfall (%): +40: 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)	Half Drain Down Time (mins)	Percentage Available (%)
Cellular Storage	FEH: 100 years: +40 %: 30 mins: Summer	55.094	55.094	0.394	0.394	2.9	1.676	0.000	0.000	0.8	1.882	28	27.200

Status
OK

Appendix F – Surface Water Drainage Layout

CELLULAR STORAGE - AQUACELL OR SIMILAR CRATE STORAGE

TANK LOCATED BENEATH REAR GARDEN.

EXCEEDANCE LEVEL 55.70m
IL: 54.70m
PLAN AREA: 4.48m²
DEPTH: 0.40m
MAXIMUM RESIDENT VOLUME: 1.676m³
TOTAL VOLUME AVAILABLE: 2.302m³

INLETS:
'EXTENSION ROOF CATCHMENT'

OUTLET:
FLOW CONTROL TO PROPOSED SURFACE WATER MANHOLE

EXISTING AND PROPOSED MANHOLE

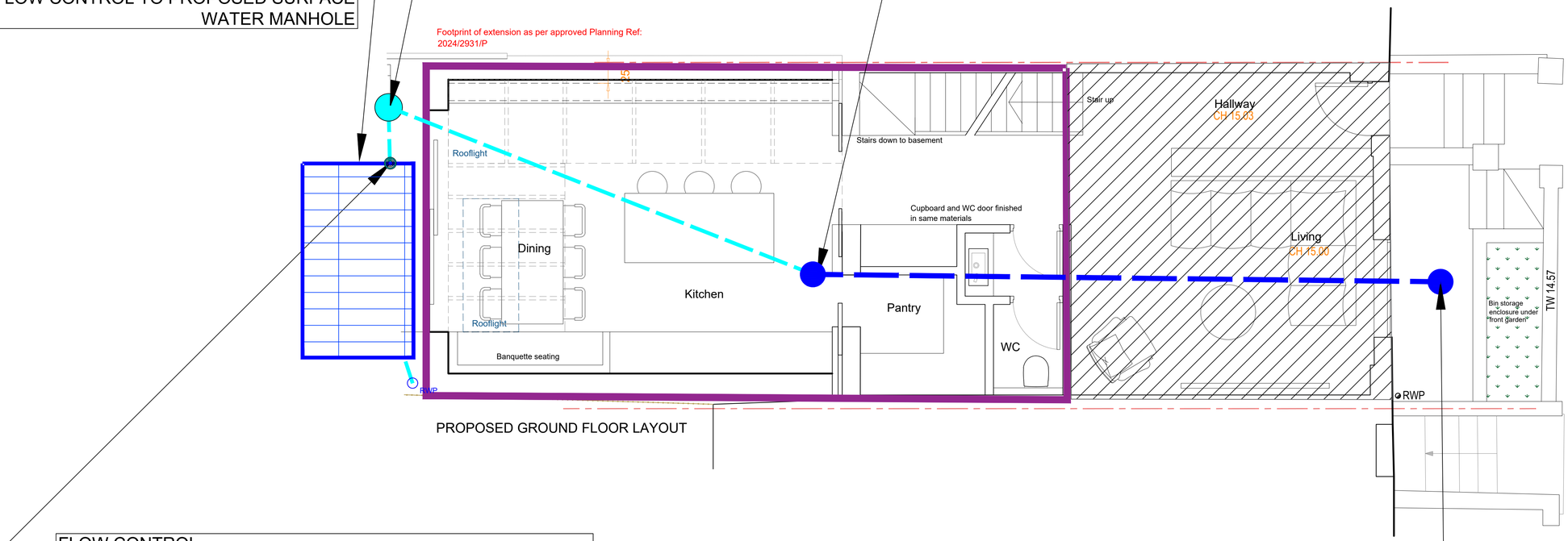
EXISTING MANHOLE TO BE MOVED DUE TO THE CONSTRUCTION OF THE EXTENSION.

EXACT LOCATION OF NEW MANHOLE TO BE CONFIRMED AT DETAILED DESIGN

STRATEGY:
SURFACE WATER RUNOFF FROM THE PROPOSED EXTENSION TO DISCHARGE TO A GEOCELLULAR TANK WITH A CONTROL FEATURE TO REDUCE RUNOFF RATES.

THE PROPOSED DRAINAGE STRATEGY PROPOSES TO RESTRICT SURFACE WATER FLOWS TO A MAXIMUM OF 0.8L/S FOR ALL STORM EVENTS UP TO AND INCLUDING 100 YEAR +40%CC.

THIS WILL THEN DISCHARGE TO THE EXISTING PUBLIC SEWER ON SPENCER RISE.



PROPOSED GROUND FLOOR LAYOUT

FLOW CONTROL

INTEGRAL FLOW CONTROL THAT RESTRICTS THE FLOW RATE TO 0.8l/s IN THE 1 IN 100 +40%CC EVENT INTO THE PROPOSED MOVED SURFACE WATER MANHOLE.

EXACT LOCATION AND DESIGN OF FLOW CONTROL TO BE CONFIRMED AT DETAILED DESIGN

OUTFALL

DISCHARGE TO EXISTING SURFACE WATER MANHOLE BASED ON CCTV SURVEY THAT CONNECTS TO THE SEWER ON SPENCER RISE

EXACT LOCATION AND DESIGN TO BE CONFIRMED AT DETAILED DESIGN

0 5m @ 1:50

NOTES:

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT REPORTS, PLANS AND ARCHITECTURAL DRAWINGS
2. THIS DRAWING SHOULD NOT BE SCALED. THERE SHOULD BE NO RELIANCE ON THIS DRAWING WITH REGARDS TO DIMENSIONS. ALL DIMENSIONS SHOULD BE CONFIRMED ON SITE.
3. ANY DISCREPANCY ON THIS DRAWING SHOULD BE REPORTED TO AEGAEA IMMEDIATELY FOR CLARIFICATION.
4. THE CONTRACTOR IS RESPONSIBLE FOR ALL WORKS AND FOR THE STABILITY, INSTALLATION AND HEALTH AND SAFETY OF THE WORKS.
5. AEGAEA HAVE PRODUCED THIS DRAWING BASED ON THE DRAWINGS AND INFORMATION PROVIDED BY THE CLIENT AVAILABLE AT THE TIME OF PRODUCTION. WE CANNOT ACCEPT RESPONSIBILITY FOR DISCREPANCIES RESULTING FROM NEW PLANS/ INFORMATION BEING ISSUED POST-ISSUE OF THIS DRAWING. THE CONTRACTOR SHOULD REVIEW THIS DRAWING IN LIGHT OF WIDER SITE INFORMATION SUCH AS CONTAMINATION, UTILITIES SURVEYS AND SITE INVESTIGATIONS
6. IT IS THE RESPONSIBILITY OF THE PRINCIPLE CONTRACTOR TO MAKE THE DESIGNER AND CLIENT AWARE OF SITE-SPECIFIC RISKS AND HAZARDS THAT MAY AFFECT THE DRAWING AND SPECIFICATION

LEGEND

- GEOCELLULAR TANK
- FLOW CONTROL
- RAINWATER PIPE
- CATCHMENT BOUNDARY
- CATCHMENT AREA NOT INCLUDED (DRAIN AS EXISTING)
- PROPOSED SURFACE WATER DRAIN
- EXISTING SURFACE WATER DRAIN
- PROPOSED SURFACE WATER MANHOLE
- EXISTING SURFACE WATER MANHOLE

CLIENT:
PIERRE GUENIN

SITE:
31 SPENCER RISE, LONDON, NW5 1AR

DRAWING:
SURFACE WATER DRAINAGE LAYOUT

DRAWING NUMBER:
AEG8953-DR01 SHEET 1 OF 1

DATE: 20/03/2026

REV: - 02

DRAWN BY:
DMC

DRAWING SCALE:
SEE DRAWING

PRELIMINARY DRAWING FOR PLANNING ONLY - NOT FOR CONSTRUCTION

aegaea
water, civils and environment