

Our ref: HLEF81770

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Date: 21st October 2021

By Email: Eric Wong <Eric@EADYARCHITECTURE.CO.UK>

Dear Mr Wong,

107 Central Road, Worcester Park – SuDS Technical Note

Introduction

- 1.1 RPS Consulting Services Ltd (RPS) were instructed by Queensbury Investments to produce a Technical Note to support an application for an additional residential apartment at the above site.
- 1.2 This Technical Note provides an assessment of the constraints and opportunities with regard to provision of Sustainable Drainage Systems (SuDS) and consideration of the surface water drainage regime in the current and proposed development.

Background

- 1.3 It is understood that a planning application has been submitted for creation of an additional residential unit. This will involve splitting of a consented unit to form two residential apartments, one at first floor and one at second floor with a bedroom and access from the first floor. It is understood that the application has yet to be validated as there is a requirement for the consideration of a SuDS strategy for the site. In particular, the following comment had been provided by the Validation officer at Sutton Council:

'A SuDS strategy must be provided setting out details of all proposed site drainage/SuDS measures and documentary evidence to demonstrate how the proposed development will meet the following requirements in Policy 32:

- *Use SuDS unless there are practical reasons for not doing so and aim to achieve greenfield run-off rates by managing run-off as close to source as possible in line with the Mayor's drainage hierarchy;*
- *If greenfield rates cannot be achieved, ensure that the runoff rate in the 1 in 100 year rainfall event (plus climate change) is no more than three times the calculated greenfield rate for the same event;*
- *Demonstrate that the proposed site drainage/SuDS strategy can contain the 1 in 30 year rainfall event (plus climate change) without flooding; any flooding occurring between the 1 in 30 and 1 in 100 year event (plus 30% for climate change) will be safely contained on site; and that any rainfall in excess of the 1 in 100 year event is managed to minimise risks; and*
- *Give consideration to green roofs, walls or site planting measures where feasible.*
- *If infiltration SuDS measures are proposed, the submitted details should include the results of infiltration testing to BRE Digest 365 or similar.'*

- 1.4 This Technical Notes has been produced in support of the planning application for the residential apartment at the site, in particular focussing on the development proposals and the constraints

associated with the location of the development within the site. This document should be read in conjunction with the Planning Statement / Design and Access Statement and the planning application drawings.

Site Location and Description

- 1.5 The site is located north of the area known as Worcester Park, at National Grid Reference 522454, 165854. The site is broadly rectangular in shape, with the total site area within the Applicants control occupying an area of approximately 400 m². A site location is provided in Appendix A.
- 1.6 Surrounding land use is predominantly commercial and residential uses, with the areas in the immediate vicinity of the site wholly developed. A car park is located to the west of the site, whilst northeast of the site is Central Road.
- 1.7 The site is accessed via the existing consented residential access to the rear (southwest) corner of the site. Central Road is located to the north of the site, however, there is not direct access from Central Road to the area of the site that is subject to this application.
- 1.8 The site currently comprises a mixed-use building, which includes commercial use at ground floor and residential uses above. The site is 100% impermeable primarily due to the footprint of the existing buildings.

Planning History

- 1.9 The site has been subject to a number of recent consented planning applications in order to allow the change of use and development of residential apartments within the existing building footprint.
- 1.10 Overall, the consented applications have not changed the surface water runoff regime for the site. Alterations may be required to facilitate the drainage of the site, but the development remains 100% impermeable. The existing building will remain positively drained as a result of the previously consented applications, with the proposed drainage tying into the existing drainage systems at the site and overall. The form of this application means that there will be no breaking of ground. Furthermore, based on the scale and nature of the existing site it provides negligible opportunity for the provision of any meaningful surface water attenuation or SuDS, as would be expected for a site within an urban location, whereby the building occupies the entire site boundary.

Development Proposal

- 1.11 The proposed development seeks planning permission for the provision of an additional residential apartment at the second floor. This will comprise the splitting of the previously approved residential apartment at the first floor to comprise a single smaller residential apartment at the first floor, with an access to the new second floor apartment, with a bedroom and ensuite bathroom at first floor. Access to the site will remain via the existing consented corridor from the rear of the existing building via a new residential access door. The proposed changes will result in an alteration to the existing pitched roof, to form a new area of flat roof and a new area of pitched roof at a higher level along with dormer windows. Proposed plans are included at Appendix B.
- 1.12 As a result of the development proposals, the site will remain 100% impermeably surfaced, with the primary alteration being the additional of the new higher-level apartment. Consequently the alterations to the drainage system will be to accord with this, tying into the existing system from the new flat and pitched areas of roof.
- 1.13 It should be noted that the development proposal includes only the application area of the site and not the whole area within the Applicants ownership, which were subject to the aforementioned previous consented planning applications.

Consideration of Council SuDS Policy

- 1.14 As noted above, the application has been submitted. The Validation Officer however, requires the following to be considered for the development proposal.
- 'Use SuDS unless there are practical reasons for not doing so and aim to achieve greenfield run-off rates by managing run-off as close to source as possible in line with the Mayor's drainage hierarchy;*
- *If greenfield rates cannot be achieved, ensure that the runoff rate in the 1 in 100 year rainfall event (plus climate change) is no more than three times the calculated greenfield rate for the same event;*
 - *Demonstrate that the proposed site drainage/SuDS strategy can contain the 1 in 30 year rainfall event (plus climate change) without flooding; any flooding occurring between the 1 in 30 and 1 in 100 year event (plus 30% for climate change) will be safely contained on site; and that any rainfall in excess of the 1 in 100 year event is managed to minimise risks; and*
 - *Give consideration to green roofs, walls or site planting measures where feasible.*
 - *If infiltration SuDS measures are proposed, the submitted details should include the results of infiltration testing to BRE Digest 365 or similar.'*
- 1.15 To address the above, the information below seeks to demonstrate the constraints and opportunities with regard to the provision of SuDS within the development and summarises the impact of the development proposal on the surface water runoff regime for the site.
- 1.16 With regard to points 1 and 2 above, in order to restrict discharge rates from a development, the proposal is required to demonstrate an opportunity within the site for the provisions of attenuation to hold back flows to a lower rate (i.e. the greenfield rate noted in the council comments or a multiplication of that rate). In this instance, based on the location of the development, as described earlier in this technical note and shown on the proposed development plans, practically there is not an opportunity to provide such attenuation. Features such as, but not limited to, ponds, swales, porous paving, or tanks all require some form of space, typically (but not always) located at ground level. In instances where attenuation is provided at a level higher than ground level, this is usually formed on substantial flat surfaces, such as a podium deck in large developments. Features such as blue roofs are an option that could be considered within smaller developments, however a critical requirement for these is a relatively significant area of flat roof where this has been designed into the structural integrity of the building. This is similar with porous paving or tanks as noted above. No such space is available within this development proposal, primarily as a result of the very limited area and upper floor external extension to an existing building for which the building occupies the majority of the curtilage of the site.
- 1.17 Consideration of the use of green roofs for this development is limited in a similar nature to the commentary above with regard to blue roofs, primarily dependant on the limited and sloping nature of the small roof. This is simply being relocated up one level from its current location. In addition to the nature of the roof, the limited benefit that would be provided when compared to the H&S risks that would be encountered during construction and ongoing maintenance, it is apparent that the potential benefit it significantly less than the risks associated with the promotion of such a feature.
- 1.18 Infiltration measures are not proposed as part of the development based on the development not being located at ground floor level, and in addition there being no opportunity for infiltration measures to be located a suitable distance from buildings and infrastructure, in line with building regulation requirements (i.e. 5 m from buildings and infrastructure).
- 1.19 At most the site may be able to include a limited number of small scale planters at balcony level. These could potentially offer a small element of localised improvement in relation to the existing drainage by water uptake by plants and the slowing of the movement of rainfall to the drainage system. These effects are limited to the water that falls upon the proposed roof area, recognising that this is already managed as part of the existing development.

Summary and Conclusions

- 1.20 Based on the information provided, and the scale and nature of the proposed development, it is considered that the development proposal is severely constrained in terms of the provision of SuDS

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and the opportunity is limited by both the physical size and elevated location of the proposed development. A significant factor for the development is its elevated location within the site as part of any existing building, and the limited changes likely to occur to the drainage system. This is a key consideration in terms of planning the drainage for such a site which is currently drainage and entirely impermeable in the form of existing roofs.

- 1.21 Based on this surface water will remain as existing and there would be no changes to the existing hardstanding areas. As such, the drainage is proposed to mimic the existing situation and fits with the site within its current context.

Yours sincerely,
for RPS Consulting Services Ltd

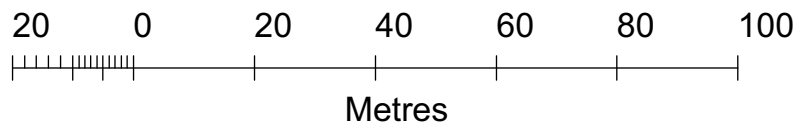
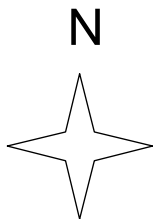


Matthew Bell
Associate Director - Flood Risk
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Appendices

Appendix A – Site Location

Appendix B – Proposed Plans



1 Site Plan
Scale: 1:1250

NOTE

This drawing is prepared solely for design and planning submission purposes. It is not intended or suitable for either Building Regulations or Construction purposes and should not be used for such.

Site Area

404 m²
0.0404 hectares
0.0998 acres

Rev	Date	Comments	D/B	Chk

PLANNING

Scale: 1:1250 @ A4

Drawn: EW Checked: Date: July 21

Client: Queensbury

Upper Floor Residential Extension
107 Central Road
Worcester Park KT4 8DY

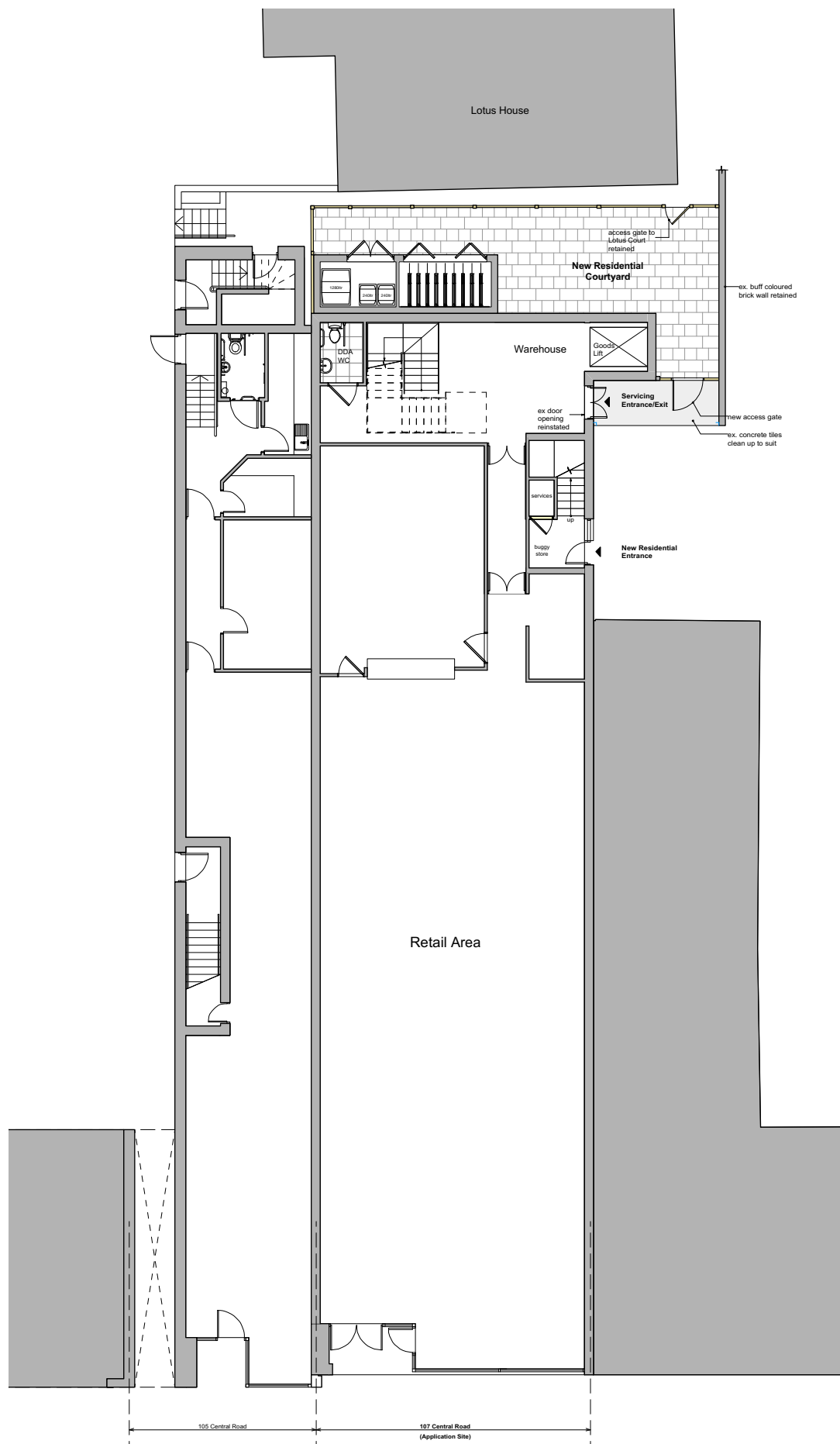
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Site Location

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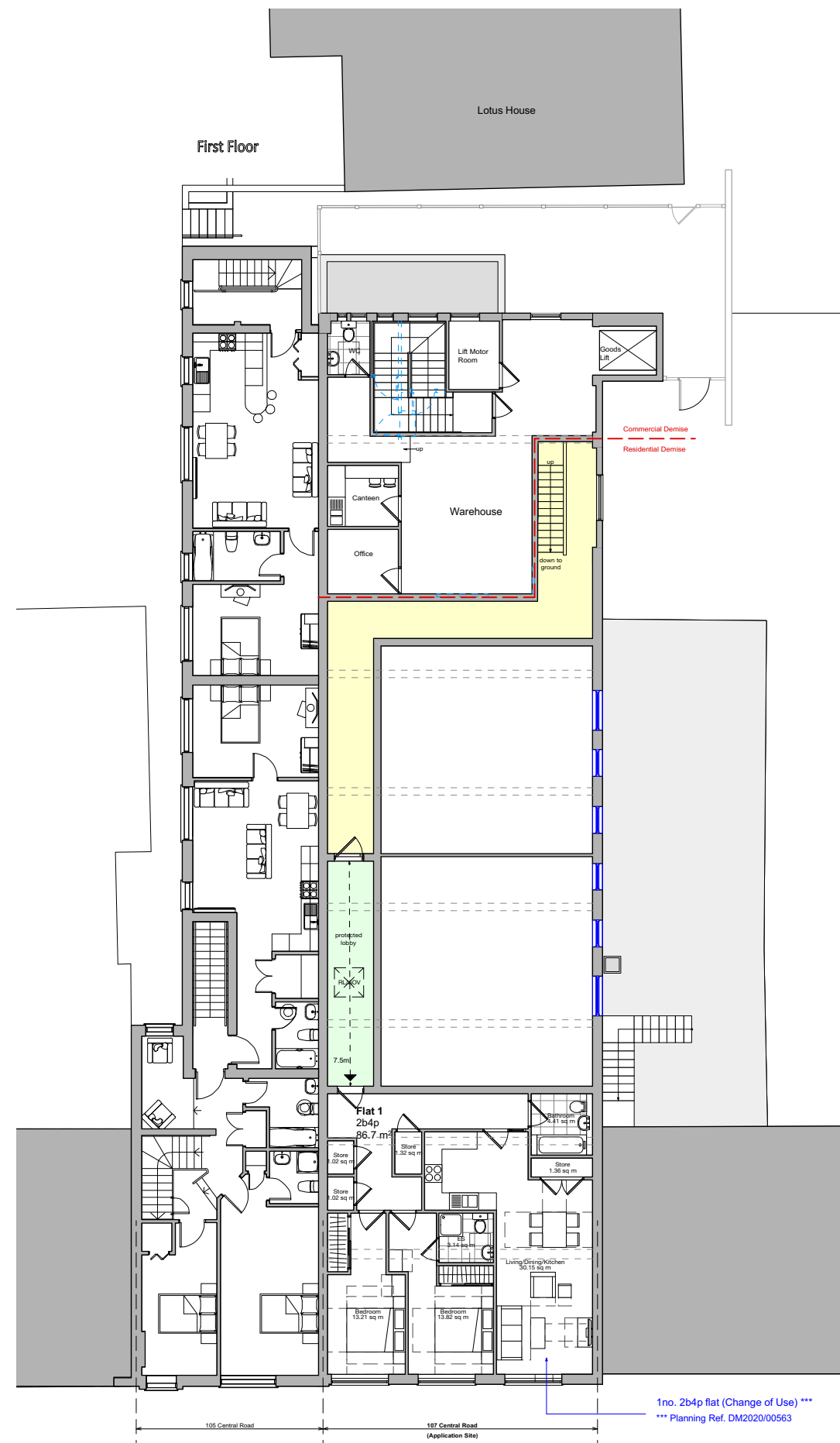
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Appendix B – Proposed Plans



2 Ground (Existing/Consented)
Scale: 1:200



3 First (Existing/Consented)
Scale: 1:200

NOTE

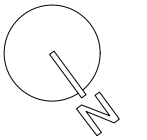
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Schedule of Accomodation

L1

1 x 2b4p (Consented)

Total = 1 flat



Rev	Date	Comments	D/B	Chk

PLANNING

Scale: 1:200 @ A3
 Drawn: EW Checked: Date: July 21
 Client: Queensbury

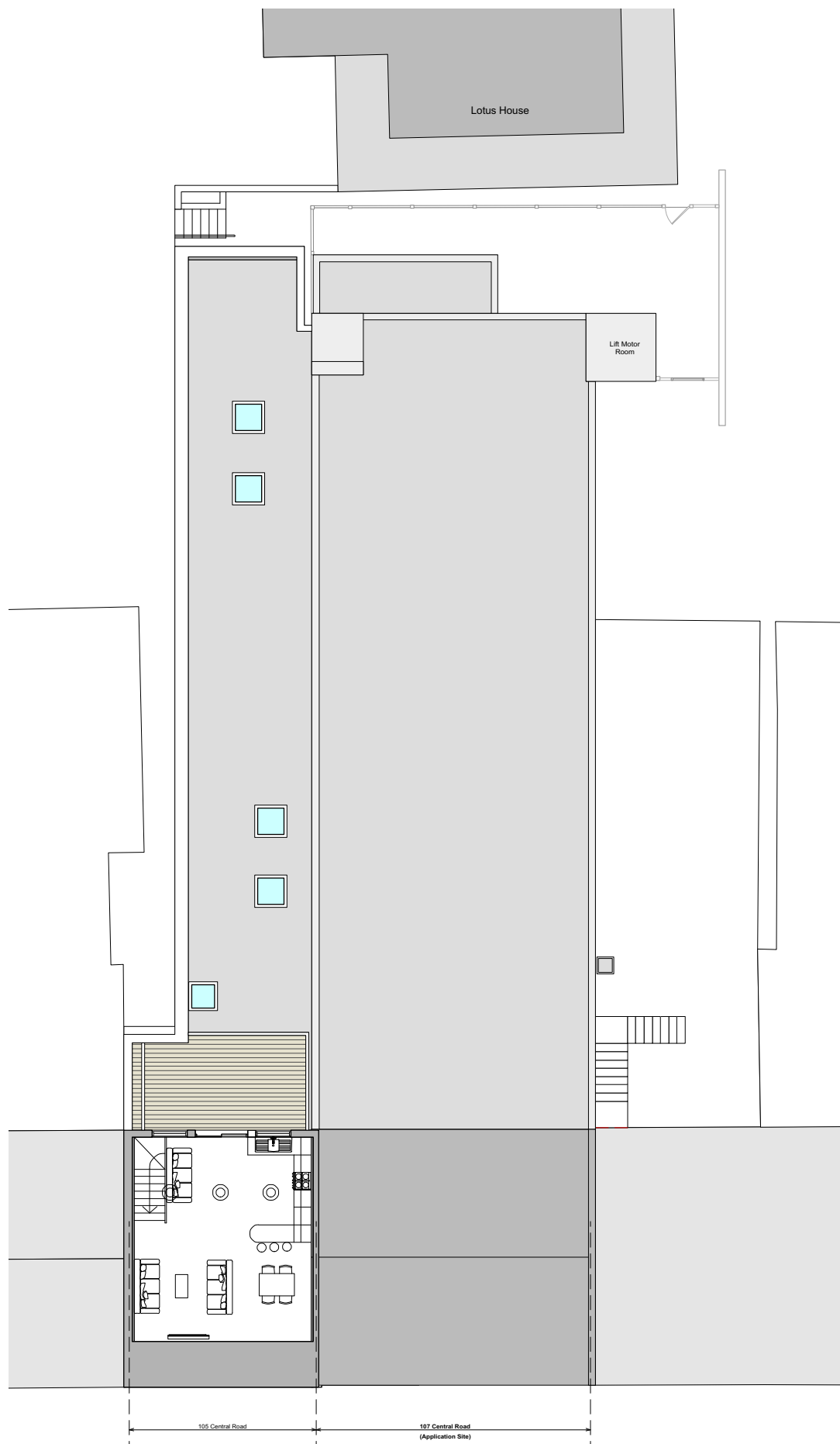
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 Worcester Park
 KT4 8DY

Existing & Consented Plans:
 Ground & First Floor

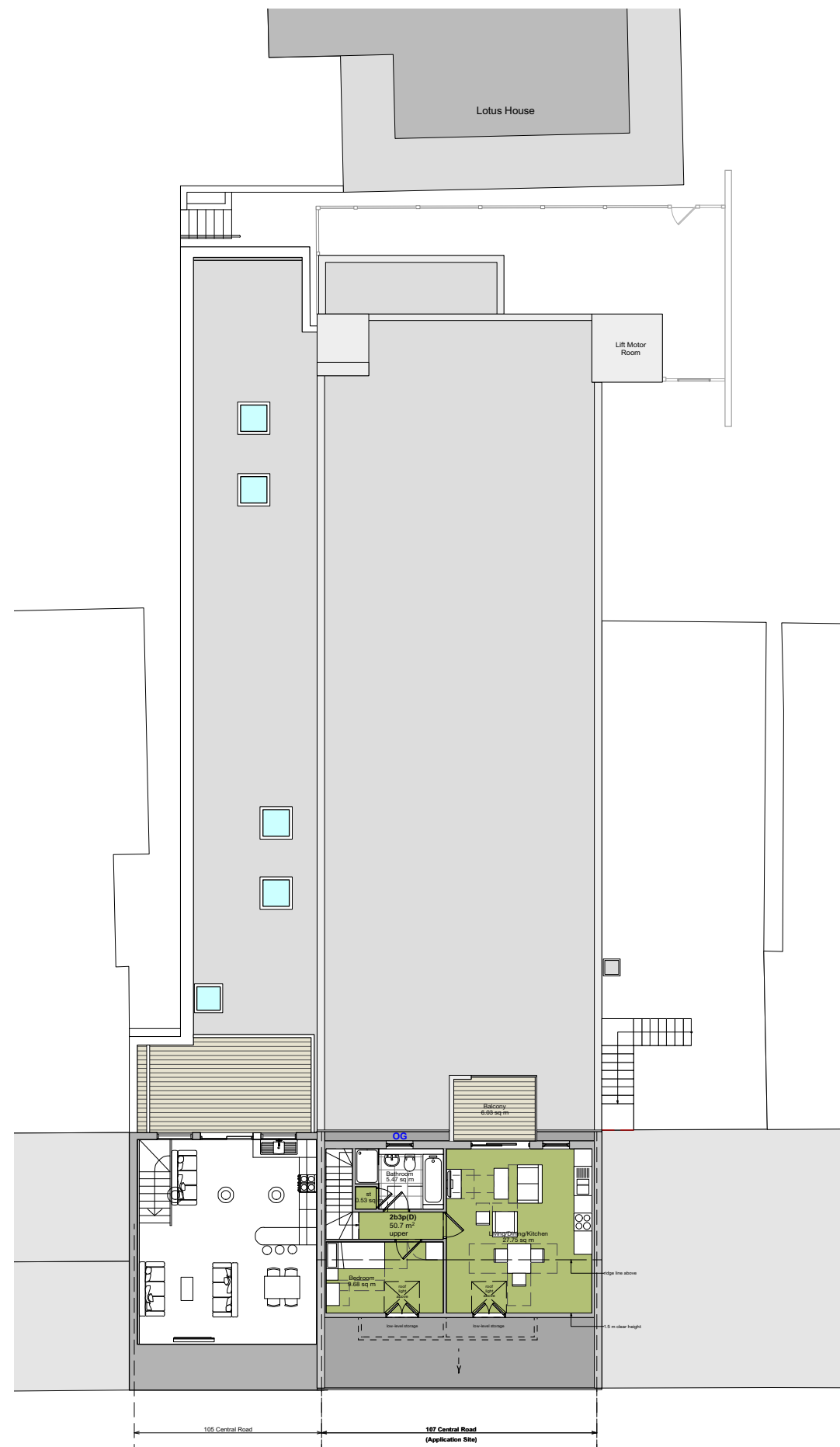
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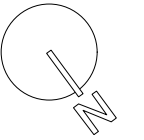
4 Second (Existing)
Scale: 1:200



5 Second (Proposed)
Scale: 1:200

NOTE

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Rev	Date	Comments	D/B	Chk

PLANNING

Scale: 1:200 @ A3

Drawn: EW Checked: Date: July 21

Client: Queensbury

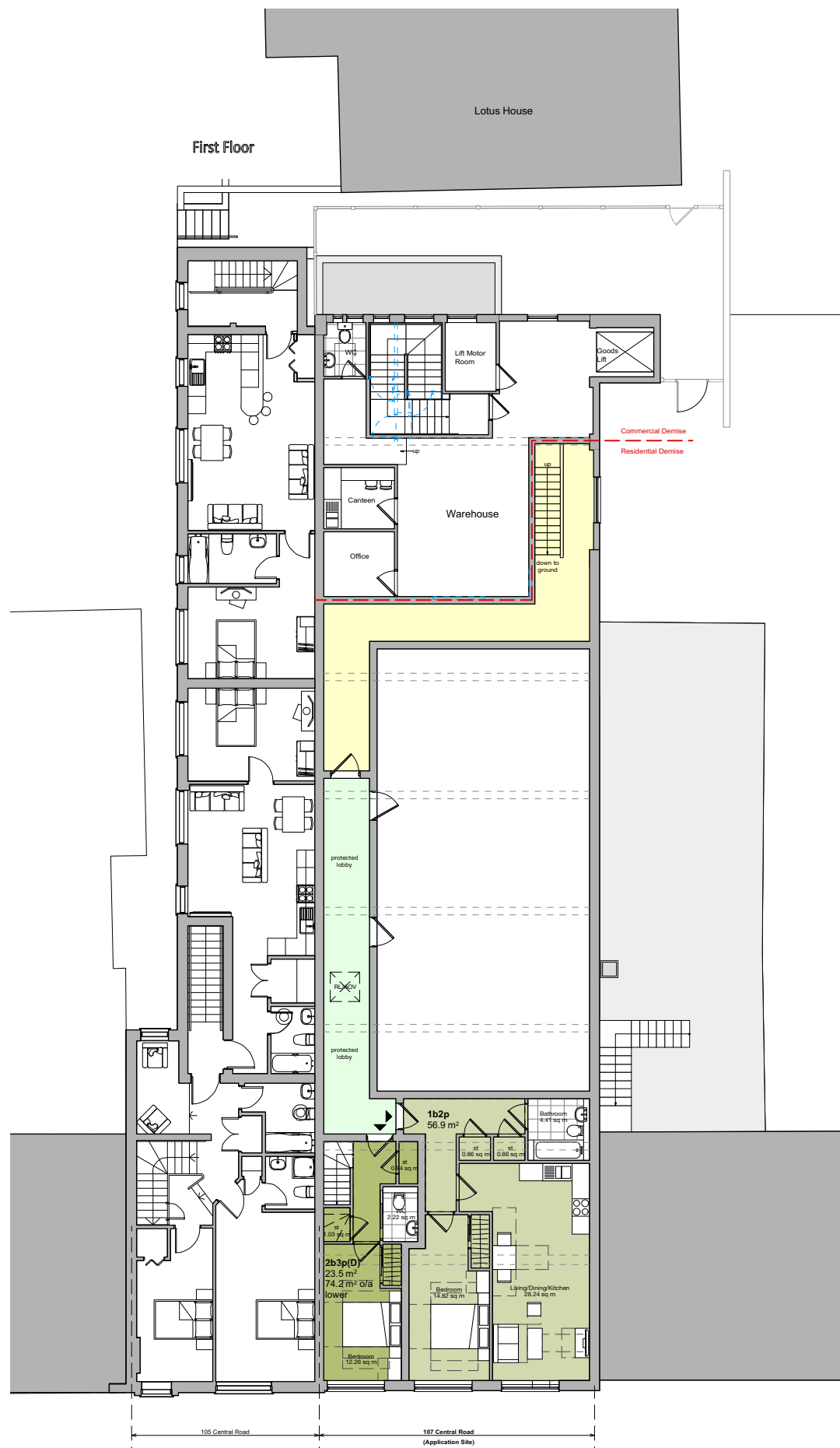
107 Central Road
Worcester Park
KT4 8DY

Existing & Proposed Plans:
Second Floor

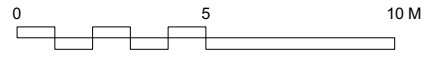
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4 First (Proposed)
Scale: 1:200



NOTE

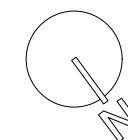
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Schedule of Accomodation

L1

1 x 2b4p (Consented)

Total = 1 flat



Rev	Date	Comments	D/B	Chk

PLANNING

Scale: 1:200 @ A3

Drawn: EW Checked: Date: July 21

Client: Queensbury

107 Central Road
Worcester Park
KT4 8DY

Proposed Plan:
Ground & First Floor

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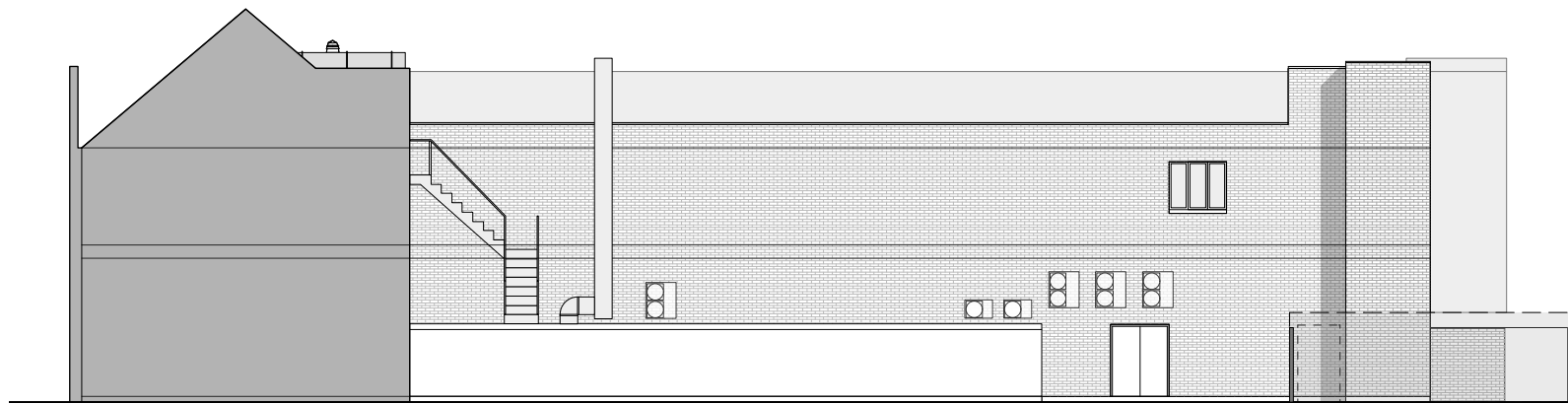
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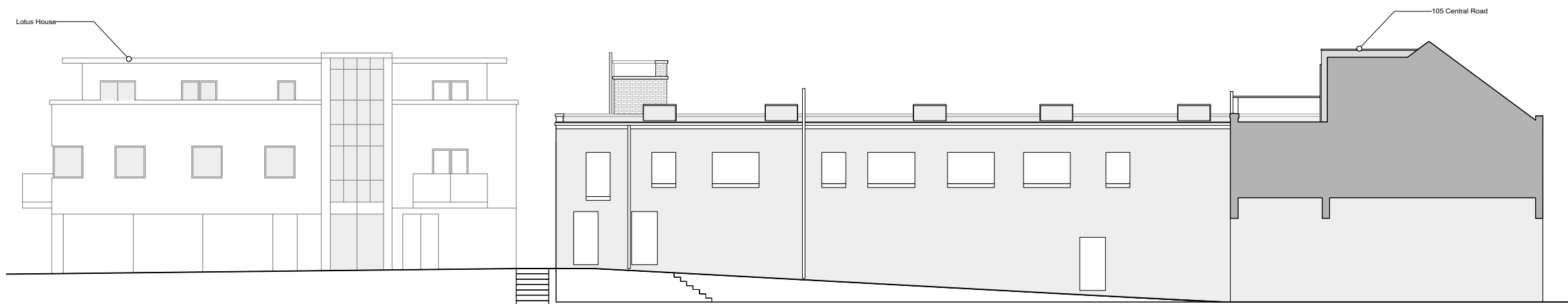
6 Front (Consented)
Scale: 1:200



7 Rear (Existing)
Scale: 1:200



8 Flank (Consented)
Scale: 1:200



9 Flank (Existing)
Scale: 1:200

NOTE
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COMMENCEMENT OF WORKS

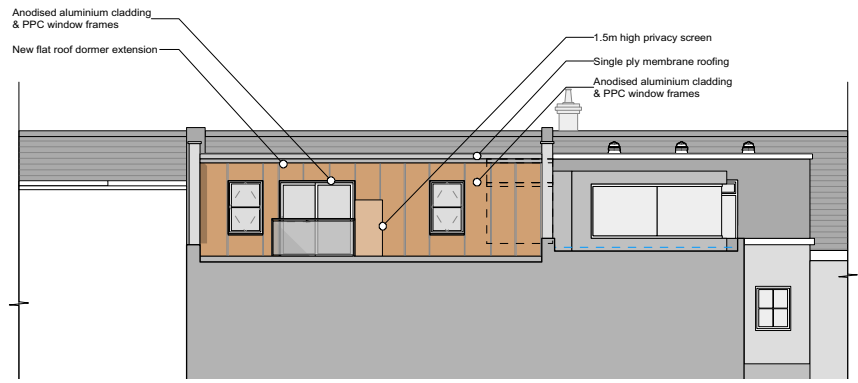
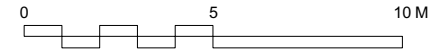
PLANNING

Rev	Date	Comments	D/B	Chk

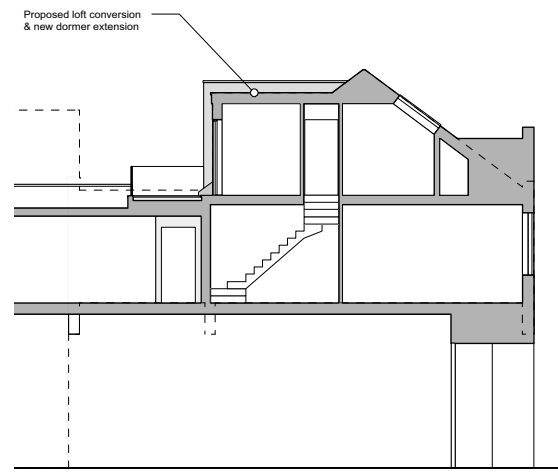
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		Date: July 21
		Client: Queensbury
		EADY ARCHITECTURE



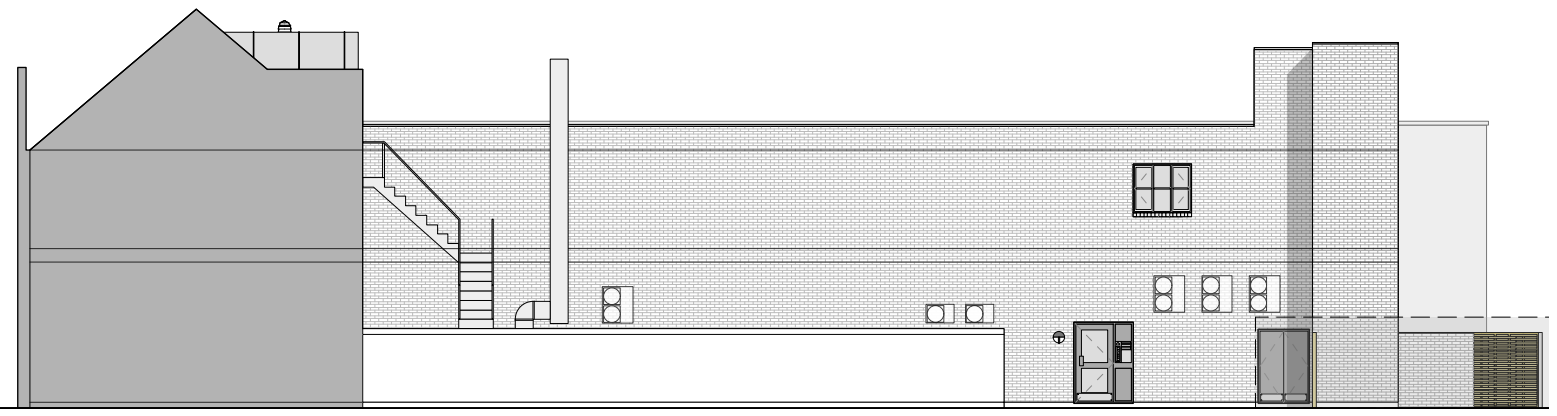
19 Front (Proposed)
Scale: 1:200



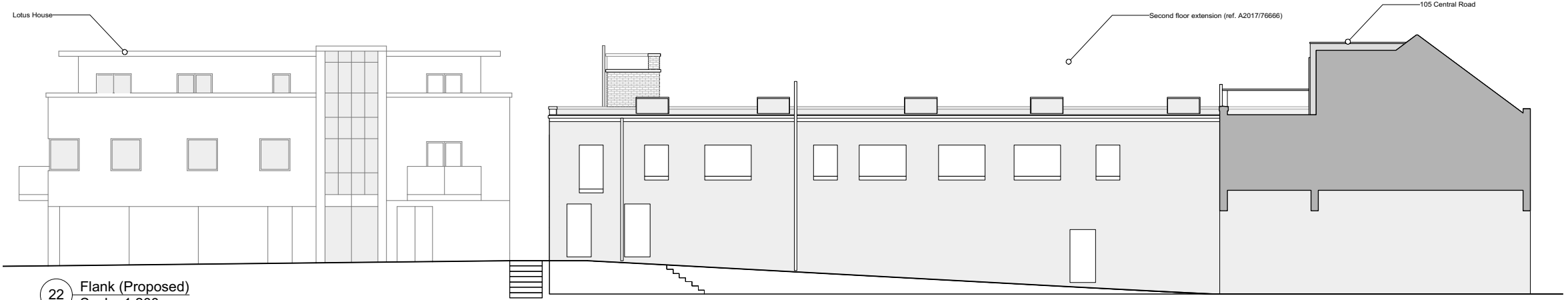
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Scale: 1:200



25 Flank Section CC (Proposed)
Scale: 1:200



21 Flank (Proposed)
Scale: 1:200



22 Flank (Proposed)
Scale: 1:200

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PLANNING

Rev	Date	Comments	D/B	Chk

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