Appendix **E**

ALECK ASSOCIATES LTD

Consulting Structural Engineers

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March 2016

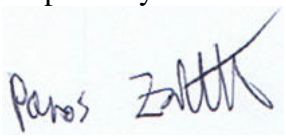
Job Reference: 2693

1A Glastonbury Street, London NW6 1QJ

Construction Method Statement

Rev B	18/03/2016	PZ	Updated Architect's drawings due to planning requirements, updated underpinning plan and beam plan to reflect amended drawings.
Rev A	25.11.2014	PZ	Amendments to report

Prepared by



Panos Zannetou MEng

Checked by

Stephen Aleck BSc CEng MICE MIStructE

CONTENTS

1.0 Introduction

1.1 Aleck Associates (AA) was instructed by Ashton Bennett (the Client) in October 2014 to complete a Construction Method Statement (CMS) in relation to the proposed basement development at 1A Glastonbury Street, London NW6 1QJ (the Site).

1.2 This Construction Method Statement has been prepared in connection with the proposed works at 1A Glastonbury Street, London NW6 1QJ. The proposal is for the existing building to be demolished, and for a new single storey basement to be excavated within the existing extents of the property. This will be followed by a new Ground floor, First Floor and Roof above. The site is not in a conservation area and the immediate surrounding area is residential in character.

1.3 This CMS will also outline the construction methods involved as well as the impact, if any; this might have on neighbouring properties and the procedures that will be employed to safeguard the integrity of the properties.

1.4 This Construction Management Plan is based on preliminary plans received on 23/02/2016. These are included in the Appendix 1.

1.5 The proposed works when executed correctly in accordance with this structural methodology, management plans as well as all relevant plans and specifications will not pose any significant threat to the structural stability of adjoining properties

2.0 Project Overview

2.1 The subject property is located in a residential street with access for vehicular traffic.

2.2 The existing property is a car servicing Garage ‘Motorworks’ consisting only of a ground floor, with a flat roof. The property footprint is triangular in shape, with one side facing Glastonbury street, another side sharing a party wall with a semi-detached house next door, and the third side is an external wall which also acts as the rear garden wall for 3 houses on Ravenshaw street.

2.3 Access to the new basement will be created via an internal staircase.

2.4 An application will be required to Camden Council for storage of materials and appropriate Enclosure Licenses to execute the works.

2.5 Party Wall Notices will need to be served to relevant parties.

3.0 Site Preparation and Enabling Works

3.1 Hoarding is to be a maximum of 2.4m high and to be painted.

3.2 Spoil arising from the works will be removed by hand and bagged from the working area and deposited within a roadside skip.

3.3 Pavements and roadside kerbs will be cleaned on a daily basis at the end of each shift or as and when required.

3.4 Temporary water supply and electrical services are to be provided to the working area.

4.0 Proposed Works

4.1 The proposal is for the existing property to be demolished, and for a new single storey basement to be excavated within the extents of the boundary, with headroom of approximately 2.0-2.4m to the underside of the ground floor slab. The proposal also includes a new Ground floor level within the current extents of property, and a new First floor and a new roof above. The Ground Floor and First floor will have a smaller footprint than the basement, but will have the same footprint as each other. The Basement walls will consist of Reinforced Concrete Underpinning sections, in order not to destabilise the neighbouring properties and Public Street.
Sketches including proposed RC underpinning sequence and proposed steel beams to support the floors have been included in the Appendix 2.

4.2 There will be one lightwell into the basement from the front side of the house, with another lighwell at the rear of the property hidden from the street, and 4 discrete ‘light tunnels’ to provide daylight in the basement. The basement is being developed as a habitable space.

4.3 The Existing party and boundary walls will need to be underpinned in 1 metre lengths, using Reinforced Concrete retaining walls, a typical section of which is included in the Appendix 2.

5.0 Below Ground Drainage

5.1 In the event that ground water is encountered within the construction of the basement area, it is proposed that the concrete retaining walls and slab will act as the primary barrier against water ingress. An internal drain cavity system will be installed to form a watertight enclosure. The cavity drain system will incorporate a drain sump to collect any water which will then be connected to the existing below ground surface water main drain.

5.2 A survey of the existing drainage system on site will need to be carried out to assess its condition and the connection point to the public sewer.

6.0 Existing Utilities and Underground Services

6.1 Any existing utilities and services on the property's land will be maintained during construction and re-routed if required. The exact location of these services will not be known until the works begin. If it is necessary to relocate or divert any utilities, the Contractor and Design Team will be under a statutory obligation to notify the utility owner prior to any works, and work with them to agree a diversion or relocation proposal.

6.2 There are no known tunnels in the vicinity of the proposed basement.

7.0 Slope Stability

7.1 The site is located on ground that can be classified as flat (less than 7º) and so geological slope instability is not applicable to this site. The proposed works will not alter the slope of the site profile to greater than 7º so geological slope instability will not become applicable to this site.

8.0 Sequence of the Works

8.1 The site will be accessed from Glastonbury Street. Access to basement area will be through surface excavation during construction and demolition of the original existing structure.

8.2 Trial pits will first need to be carried out to determine the nature, extent and depth of the existing foundations, underground drains and any other obstruction or service runs.

8.3 The Ground floor slab will be broken out and levels reduced in a sequential pattern enabling the party walls to be underpinned in short lengths.

8.4 Underpin bases and vertical sections are to be connected via steel reinforcement starter bars and dowel bars cast in, or resin anchored, to each un-concreted adjacent underpinning bay (horizontally and vertically) at the size and centres required from the reinforcement scheduling. This will ensure reinforcement continuity between underpinning bays.

8.5 Adequate temporary support must be provided to the exposed face of excavations and the existing building to ensure stability throughout the works e.g sheet piles, or trench sheeting and acrow props. Trench sheets will be propped across the site using RMD slim shores (or similar) as props and walers.

8.6 The permanent underpinned retaining walls to form the new basement will require temporary horizontal propping (lateral support) until completion of the basement slab.

8.7 Excavation of underpin bases are not to exceed 1.0m in length and 2.0m deep, and no two adjacent sections should be excavated simultaneously.

8.8 Dry packing to underpin sections must only take place a minimum of 24hrs after concreting. Maximum thickness of dry packing shall not exceed 75mm and should only be placed after the underside of the existing foundation is cleaned and regularised thoroughly.

8.9 Once the first lift of underpinning has been completed, repeat the underpinning sequence with the second lift of underpinning. As excavation progresses, install waling beams and lateral props to provide temporary support to the permanent works, specifically the underpinning retaining walls.

8.10 Install the permanent Ground Floor slab; this can also be done after the first lift of underpinning has been completed, to provide propping to the top of the retaining walls.

8.11 Install sump and drainage runs. Install reinforced concrete basement floor slab.

8.12 Seven days after the floor slab of the basement has been cast, the temporary lateral propping can be removed, allowing the permanent retaining walls to stand without further support.

9.0 Construction Traffic Management Plan Draft

9.1 Access to all vehicles, construction and excavation is from Glastonbury Street. Types of vehicles likely to be used during the construction of the proposed works are ready mix concrete lorries, excavators, and a standard builder's merchant lorry. We anticipate an average of two deliveries per day throughout the construction period.

9.2 Proposed vehicle sizes and type will ensure safe navigation within the road network. The property is serviced by the Local Authority waste and recycling collections and as such, access will be ensured without any difficulty.

9.3 The proposed working hours within which vehicles will arrive and depart are 08:00hrs – 16:00hrs Monday to Friday and Saturdays 08:00hrs-13:00hrs. No vehicle movements on Sundays and bank holidays.

9.4 All delivery vehicles to the site will be subject to the requirements of the Road Traffic Act and will pay due care and attention to the Health and Safety of members of the public.

9.5 A designated banks man will be on site throughout the duration of the works and will manage any vehicular traffic and/or members of the public on foot.

9.6 Measures will be taken to reduce the number of vehicles to and from the site by using recycling of existing material whenever possible and by compaction of bulky waste materials. Movement of traffic will also be reduced by effective coordination of delivery vehicles.

9.7 Any debris and dust arising from the works which might spread to the public highway will be the responsibility of the Foreman to ensure the public highway is hosed and swept on a daily basis.

9.8 The scale and nature of the project has a minimal impact on local businesses, trades, and tenants other than those occupying the property. Due to the low number of vehicle movements per day envisaged it is not proposed to establish a Construction Working Group.

9.9 The site Foreman will be appointed as Community Liaison for the client as far as any queries that may arise in relation to construction issues.

9.10 The site Foreman's contact details will be printed and clearly displayed on the boundary of the property in line with the Contractors Considerate Scheme recommendations.

9.11 The contractor will follow all relevant guidelines set out in the Contractors Considerate Scheme as well as guidance set out in the Code of Conduct within that organisation.

9.12 The agreed contents of this Construction Management Plan must be adhered fully unless otherwise agreed with the Council. The site Foreman shall liaise closely with the council to review this Construction Management Plan if problems arise in relation to the construction of the development. Any future revised plans or deviations from this document must be submitted to the Council for approval.

10.0 Machinery

10.1 For the proposed single storey basement, excavation machinery may be used if the contractor requires it, as best as site access allows. Site machinery will also consist of compressors and air tools.

11.0 Conclusion

The proposed works when executed correctly in accordance with this structural methodology, management plans as well as all relevant plans and specifications will not pose any significant threat to the structural stability of adjoining properties.

ALECK
ASSOCIATES LTD

APPENDIX 1

N

OS Map

0 10m 50m 100m

DRAWING NOTES

Dimensions	Written dimensions to be taken in preference to scaled dimensions. The Contractor is responsible for checking all dimensions before work starts.
Local Authority	All work is to be carried out to the requirements, and to the satisfaction of the Local Authority. These drawings are for planning purposes only.
Discrepancies	Any discrepancies to be brought to the attention of Drawing And Planning Ltd. Immediately.

REVISIONS

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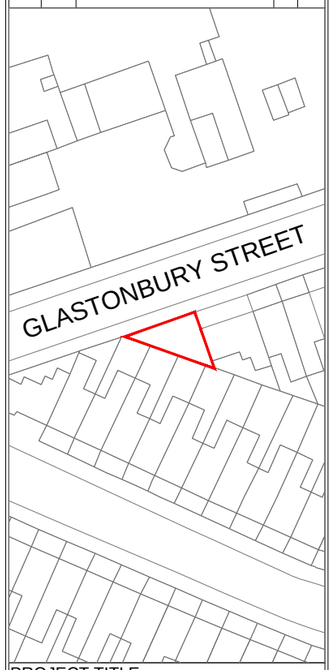

PROJECT TITLE

1a Glastonbury Street, NW6 1QJ

DRAWING TITLE

OS Map

CLIENT

Cape Property Holdings Ltd.

DRAWING No	REV
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SCALE @A3 1:1250	

DATE	DRAWING STATUS
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0 1m 5m 10m

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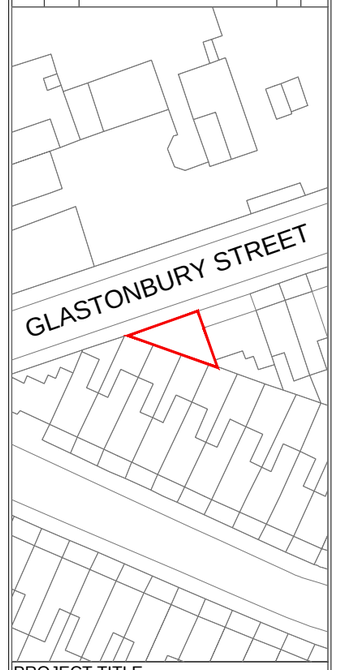

PROJECT TITLE

1a Glastonbury Street, NW6 1QJ

DRAWING TITLE

Existing - Street Front Elevation

CLIENT

Cape Property Holdings Ltd.

DRAWING No	REV
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DATE	DRAWING STATUS
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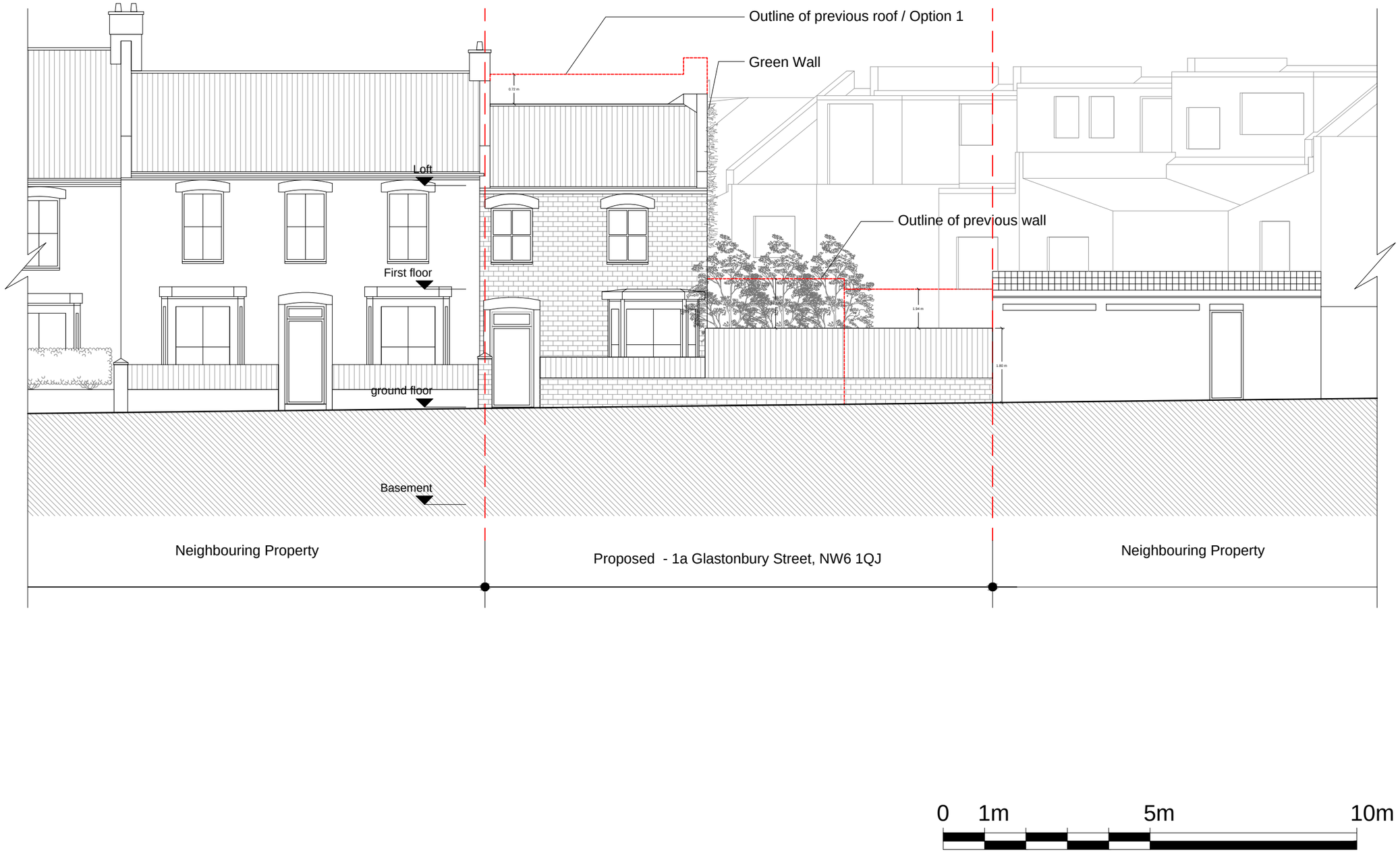

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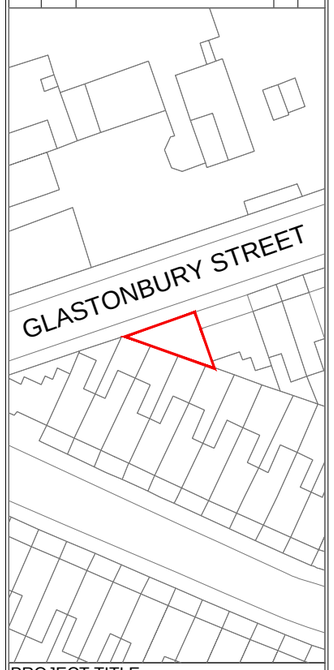

PROJECT TITLE

1a Glastonbury Street, NW6 1QJ

DRAWING TITLE

Proposed - Street Front Elevation

CLIENT

Cape Property Holdings Ltd.

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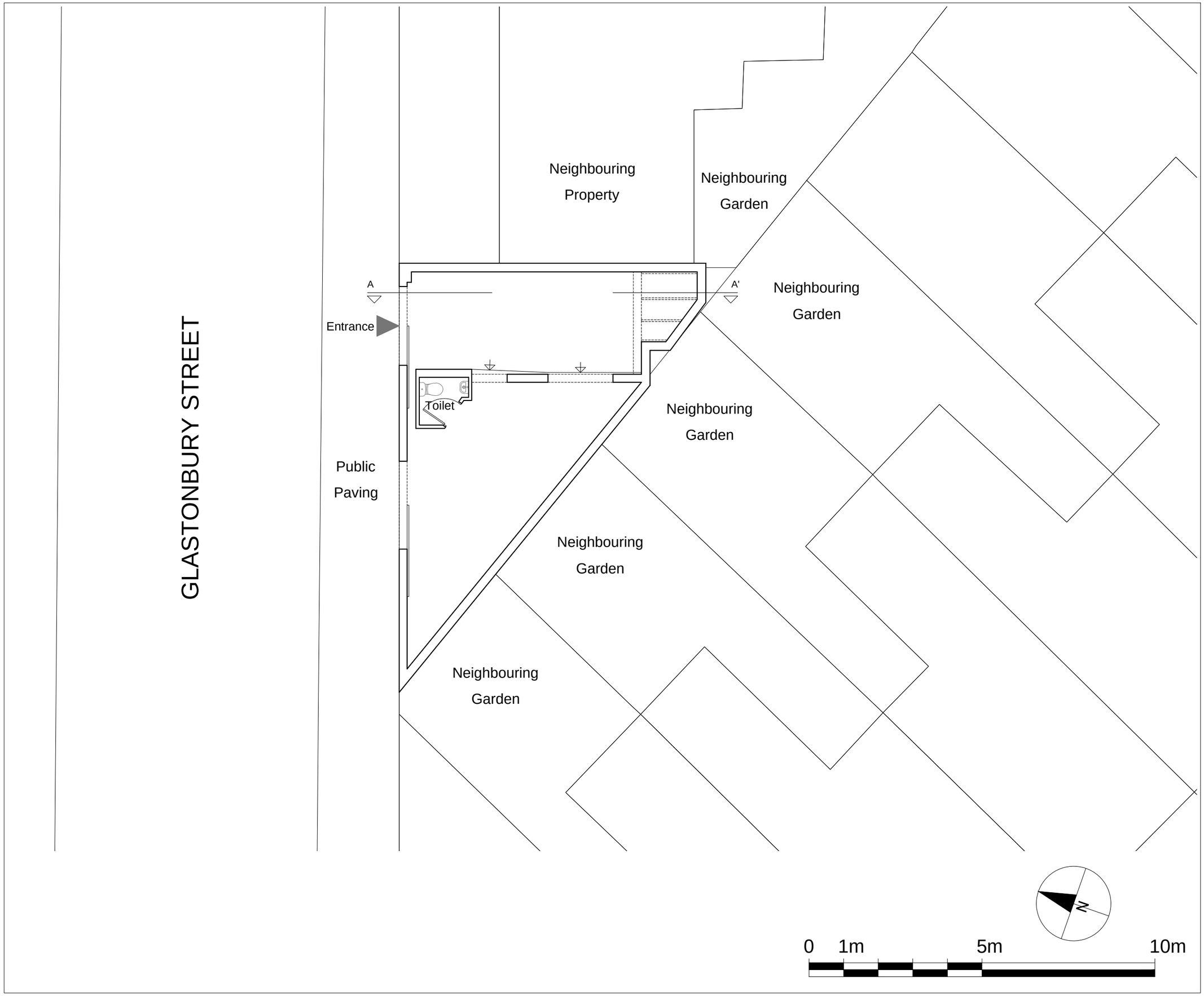

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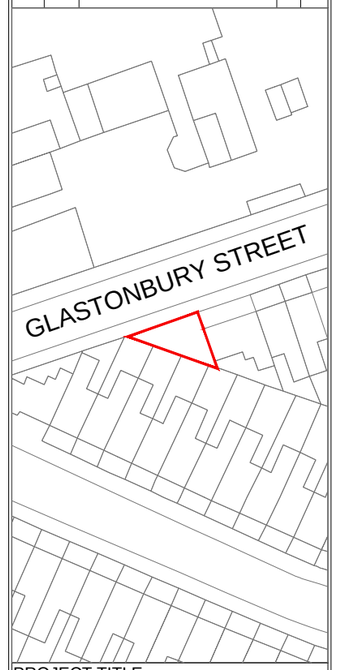

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1a Glastonbury Street, NW6 1QJ

DRAWING TITLE

Existing - Ground Floor

CLIENT

Cape Property Holdings Ltd.

DRAWING No	REV
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SCALE @A3 1:100	

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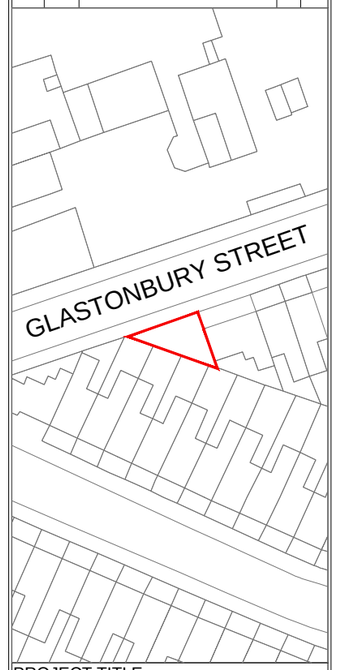

PROJECT TITLE

1a Glastonbury Street, NW6 1QJ

DRAWING TITLE

Existing - Roof Plan

CLIENT

Cape Property Holdings Ltd.

DRAWING No	REV
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DATE	DRAWING STATUS
Feb 2016	Planning

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Typology	G.I.A
2 Bedroom 4 Persons	84.2 Sqm

GLASTONBURY STREET

Neighbouring Property

Neighbouring Garden

Neighbouring Garden

A

A'

WM

Kitchen

Bathroom
4.5 sq.m

Dining

39.2 sq.m

Living

Public Paving

Neighbouring Garden

Sunken Garden

Neighbouring Garden

Neighbouring Garden

N

0 1m 5m 10m

DRAWING NOTES

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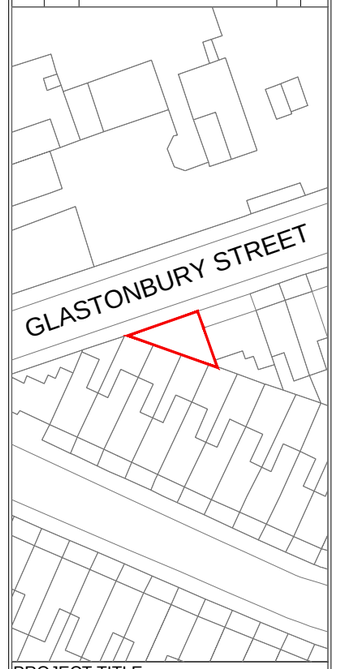

PROJECT TITLE

1a Glastonbury Street, NW6 1QJ

DRAWING TITLE

Proposed - Basement Plan

CLIENT

Cape Property Holdings Ltd.

DRAWING No	REV
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SCALE @A3 1:100	

DATE	DRAWING STATUS
Feb 2016	Planning

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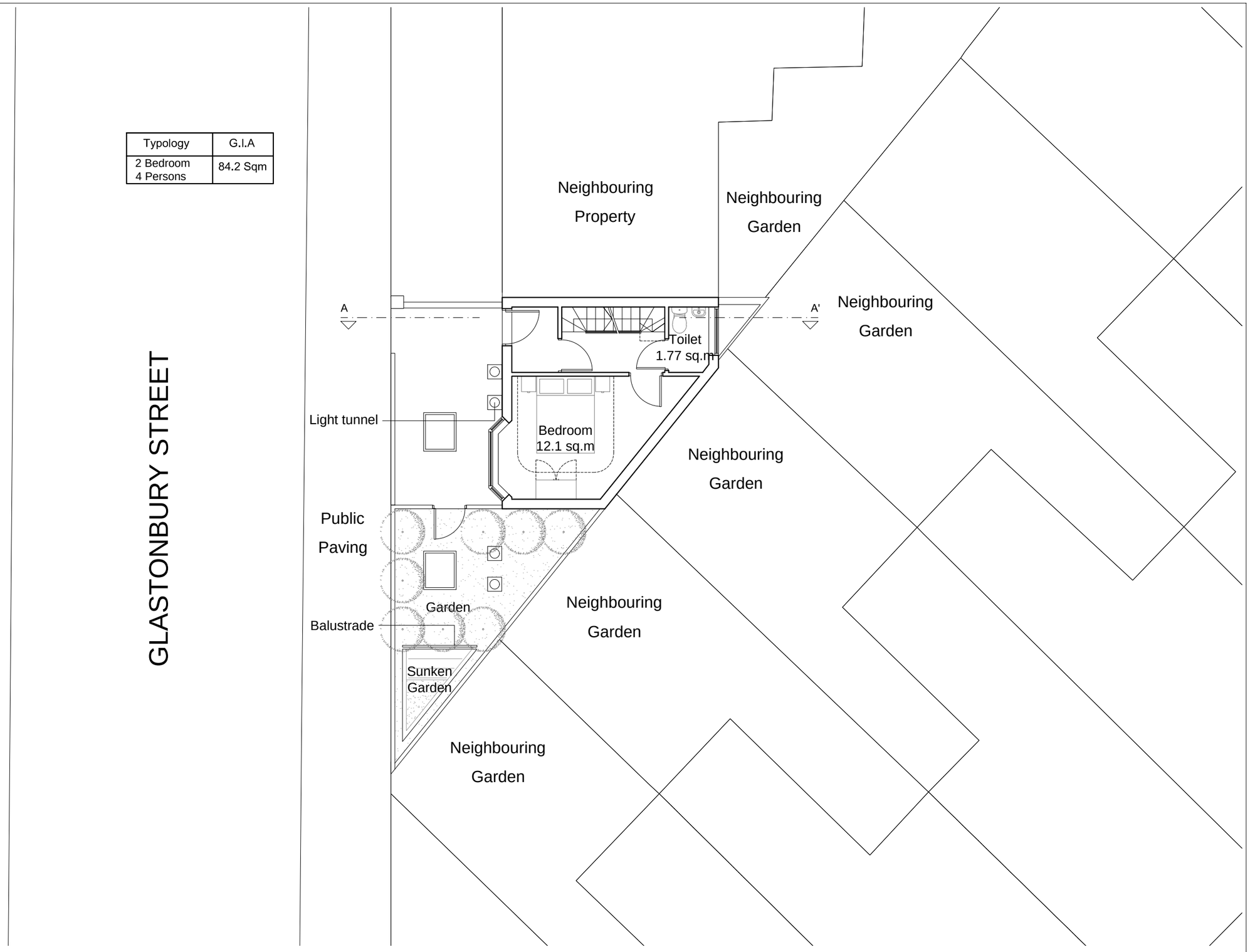
Typology	G.I.A
2 Bedroom 4 Persons	84.2 Sqm



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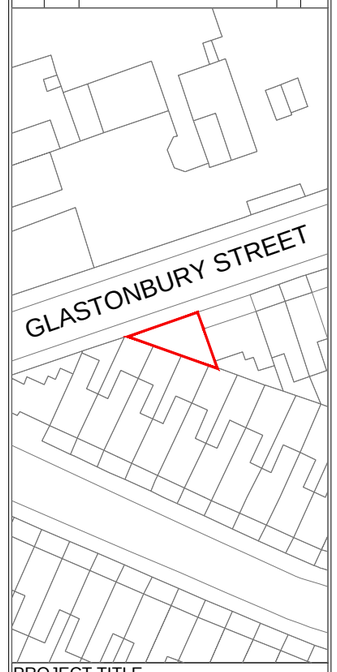

PROJECT TITLE

1a Glastonbury Street, NW6 1QJ

DRAWING TITLE

Proposed - Ground Floor

CLIENT

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DRAWING No	REV
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SCALE @A3 1:100	

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Typology	G.I.A
2 Bedroom 4 Persons	84.2 Sqm

GLASTONBURY STREET

Neighbouring Property

Neighbouring Garden

A

A'

En-Suite
2.1 sq.m

Bedroom
15.4 sq.m

Neighbouring Garden

Neighbouring Garden

Public Paving

Green wall

Garden

Sunken Garden

Neighbouring Garden

Neighbouring Garden

N

0 1m 5m 10m

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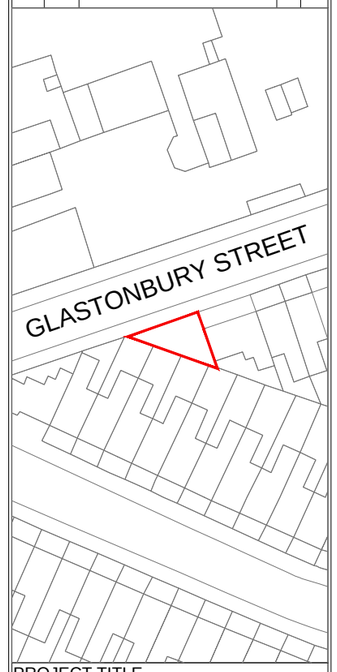

PROJECT TITLE

1a Glastonbury Street, NW6 1QJ

DRAWING TITLE

Proposed - First Floor

CLIENT

Cape Property Holdings Ltd.

DRAWING No	REV
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SCALE @A3 1:100	

DATE	DRAWING STATUS
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Typology	G.I.A
2 Bedroom 4 Persons	84.2 Sqm

GLASTONBURY STREET

Neighbouring Property

Neighbouring Garden

A

A'

Neighbouring Garden

Neighbouring Garden

Public Paving

Garden

Sunken Garden

Neighbouring Garden

Neighbouring Garden

N

0 1m 5m 10m

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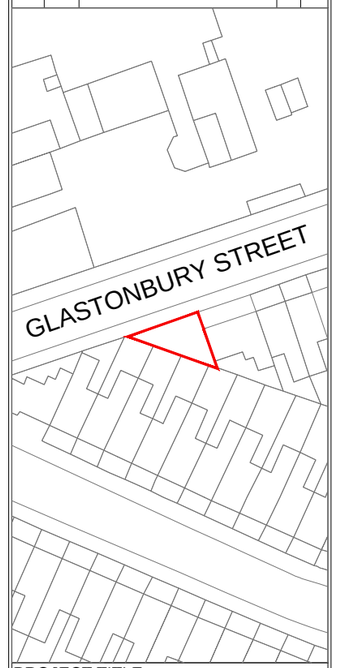

PROJECT TITLE

1a Glastonbury Street, NW6 1QJ

DRAWING TITLE

Proposed - Roof Plan

CLIENT

Cape Property Holdings Ltd.

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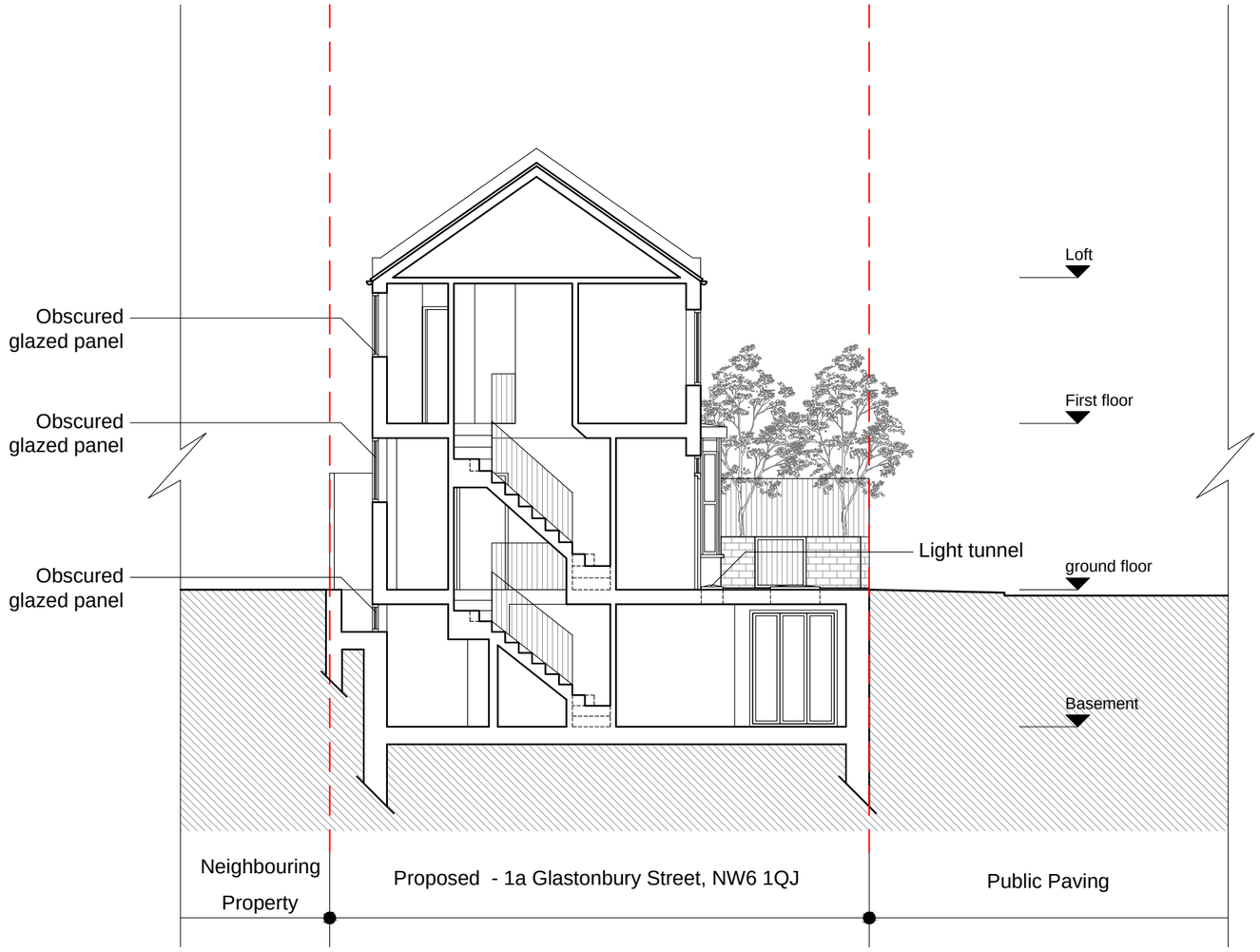

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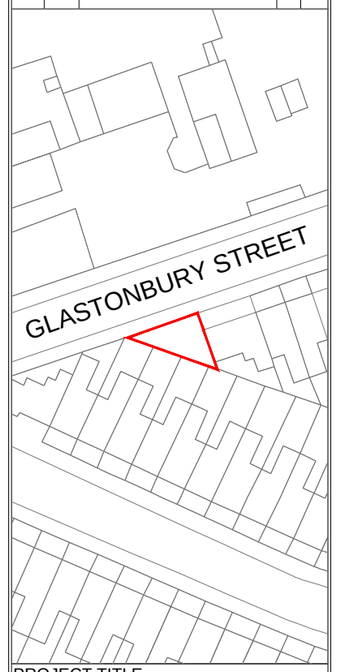

PROJECT TITLE

1a Glastonbury Street, NW6 1QJ

DRAWING TITLE

Proposed - Section AA'

CLIENT

Cape Property Holdings Ltd.

DRAWING No	REV
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SCALE @A3 1:100

DATE	DRAWING STATUS
Feb 2016	Planning

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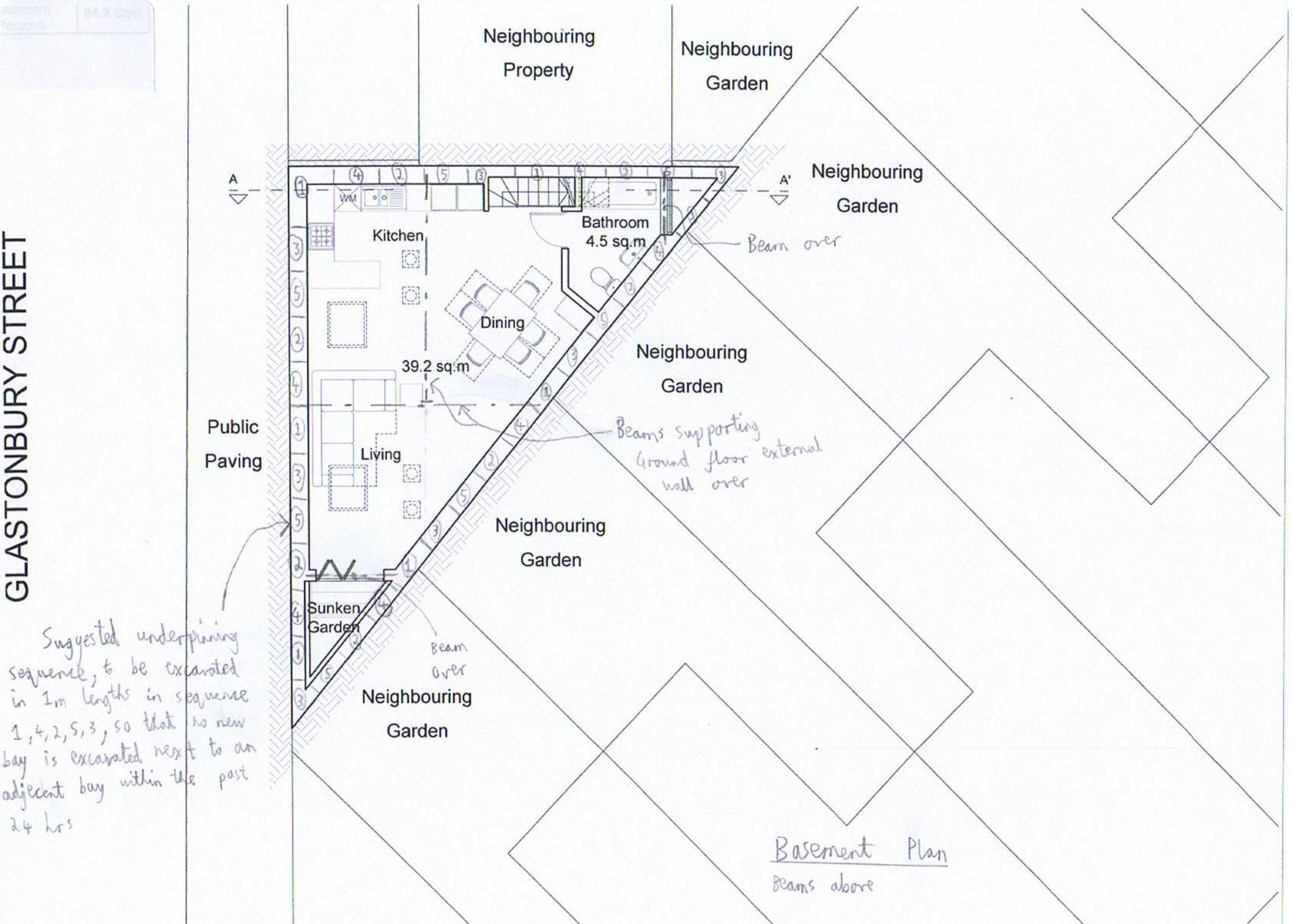
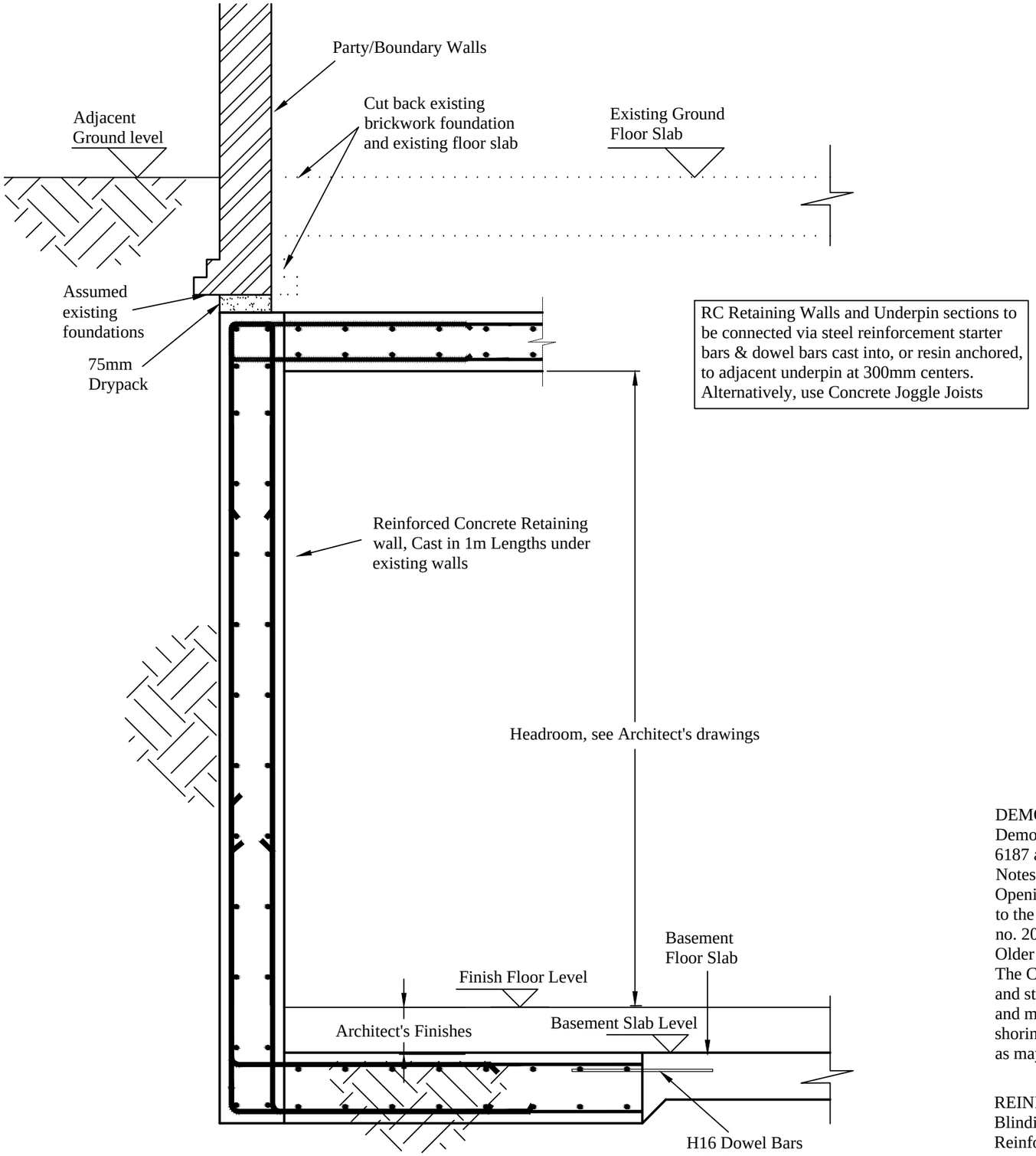
APPENDIX 2


GLASTONBURY STREET
Neighbouring Property
Neighbouring Garden
Neighbouring Garden
Neighbouring Garden
Neighbouring Garden
Neighbouring Garden
A
A'
WM
Kitchen
Bathroom 4.5 sq.m
Beam over
Dining
39.2 sq.m
Living
Public Paving
Beams supporting Ground floor external wall over
Sunken Garden
Beam over
Suggested underpinning sequence, to be excavated in 1m lengths in sequence 1,4,2,5,3, so that no new bay is excavated next to an adjecent bay within the past 24 hrs
Basement Plan
Beams above



RC Retaining Walls and Underpin sections to be connected via steel reinforcement starter bars & dowel bars cast into, or resin anchored, to adjacent underpin at 300mm centers. Alternatively, use Concrete Joggle Joists

Typical RC Retaining Wall Section for underpinned party walls

[Scale 1:20]

ENGINEER'S CONSTRUCTION NOTES

GENERAL

To be read in conjunction with all Engineers' drawings and method statement and with all architectural and services drawings and specifications. Seek instructions in the event of any conflict.

The structural designs shown are to be set out to suit the conditions of the site and existing works if any and the Architect's proposals.

Do not scale - please ask for information.

Some notes may not apply.

UNDERPINNING

Underpinning generally to be in accordance with BS 8004.

1. Divide length of wall to be underpinned into bays of maximum length 1000. Underpin bays in the order 1 3 5 2 4 1 3 5 ... so as not to have to work on bays adjacent to bays just completed.
2. Excavate bay and clean underside of existing foundation. No bay to be excavated if an adjacent bay has been drypacked within the preceding 24 hours. Width and depth of underpinning as shown or as directed by Engineer and Building Control officer.
3. Place 4 no T16 x 600 mm bars into each unconcreted side for continuity between bays. Alternatively use a 200 x 200 rebated notch.
4. Install polythene slip membrane and Claymaster boards.
5. After approval, concrete using C20 concrete to within approximately 75 of underside of foundation. Fill the whole excavation with concrete, unless shuttering is specifically approved by the Engineer. Concrete must be compacted with a 50 mm poker vibrator. Wait a minimum of 24 hours after concrete poured before drypacking. Alternatively, pour concrete to 150 mm above the bottom level of the old foundation, using the poker vibrator to work concrete into the back of the excavation, leaving air-holes or lengths of hose to vent spaces and prevent air-locks.
6. If the working space has not been filled with concrete, strike the shutter, and blind the bottom with 100 mm concrete before backfilling with properly compacted hardcore, or concrete if under paths or ground bearing slabs.

DEMOLITION AND TEMPORARY WORKS

Demolition to be carried out in accordance with BS 6187 and Health and Safety Executive Guidance Notes GS29/1, 3 and 4.

Openings in existing buildings to be formed according to the recommendations of BRE Good Building Guide no. 20 "Removing Internal Load Bearing Walls in Older Dwellings".

The Contractor is to be responsible for the stability and structural integrity of the Works. Design, supply and maintain during the execution of the Works all shoring, strutting, needling and other temporary works as may be necessary.

REINFORCED CONCRETE

Blinding concrete to be Designated Mix GEN1.

Reinforced concrete to be Designated Mix RC35 in accordance with BS 8500-2.

Cover to all steel 40.

Vibrate concrete to expel all air.

Top of slabs to be fine-tamped.

All reinforced concrete work is to be in accordance with the requirements of BS 8110.

Rev	Date	Drawn	Checked	Details

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SITE	1A Glastonbury Street, NW6 1QJ		
PROJECT	Structural Alterations, New Basement		
TITLE	Typical Underpinning Section		
SCALE ON A3	1 to 20	DATE	12.10.2015
DRAWN BY	PZ	CHECKED BY	SIA
DRAWING No.	2693/RC01	REV