SinclairJohnston

26 NETHERHALL GARDENS, NW3

Structural Design and Construction Statement

For

Savills on behalf of Atlas

Project Number: 8240

Date: October 2018

Sinclair Johnston & Partners Ltd, 93 Great Suffolk Street, London, SE1 0BX
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REVISION SCHEDULE

Revision	Issue Date	Comments
-	23.07.14	Original document – Issued for planning
A	15.01.16	Original document – Responses to BIA audit by Campbell Reith
B	17.01.17	Original document – Text amendments
C	02.10.18	Revised scheme – Issued for planning
D	18.02.19	Revised reduced scheme
E	08.03.19	Revised to architect comments

DETAILS

Project Name: 26 Netherhall Gardens

Project Number: 8240

Doc. Reference: 8240 Structural Design and Construction Statement

Prepared by: Oliver Roworth BSc, Anthony Puopolo CP Eng MIEAust

Reviewed by: Richard Thiemann MA CEng MICE MIStructE MCIHT

CONTENTS

APPENDICES

1. INTRODUCTION

The following Structural Design & Construction Statement has been prepared as part of the wider Basement Impact Assessment (BIA) undertaken for the planning application, submitted by Squire and Partners, for the proposed residential redevelopment at 26 Netherhall Gardens, London, NW3 5TL.

During the course of obtaining planning, the scheme has been significantly reduced. This report is a succession of the previously issued Structural Design and Construction Statement for the new scheme. However, the site investigation and ground movement analysis reports are from a previous BIA submission. The basement has been significantly reduced in size by approx. 50% in depth and 75% on plan, however, the reports in the Appendix are still based on the larger basement in the original submission. The reports have not been updated as the impact of the smaller basement on the geology, hydrogeology, hydrology, flooding and ground movements will be greatly reduced from the acceptable limits stated in the report.

The purpose of this report is to describe the existing site and ground conditions, to present the structural scheme to be adopted for the proposed development, and to describe the proposed construction methodology for the execution of the works. The report and information contained within has been prepared for planning purposes only.

This report should be read with Sinclair Johnston & Partners Basement Impact Assessment (BIA) report and all other Consultant's reports produced for the planning application.

The original report had been prepared by Mr Thomas Musson BEng CEng MIStructE; Technical Director at Sinclair Johnston & Partners and subsequently updated by Oliver Roworth BSc for the revised proposals.

2. EXISTING SITE AND BUILDINGS

Existing building and survey drawings describing the existing site and buildings have been provided in Appendix A.

a) The site address is 26 Netherhall Gardens, London, NW3 5TL and is located at approximate National Grid reference 550453 178948.

b) The site is located within the London Borough of Camden within the Frognal & Fitzjohns ward (See Figure 1).

c) The property is not listed but lies within the Netherhall and Fitzjohns Conservation area.

d) The existing property is believed to have been constructed around 1879 to 1888. A modern garage and extension was added in the late 1950's.

e) The land around the site is occupied by large detached residential houses along both sides of Netherhall Gardens and the general area is residential in nature, although there are various retail outlets along Finchley road approximately 200m west of the site.

f) There are several Network Rail train tunnels, the Belsize Old and New tunnels some 100m to the north and 100m to the south of the site. These tunnels run approximately North-east to South-west. These tunnels are not significant in respect to the proposed development. Please see map opposite showing the locations of these tunnels (See Figure 4).

g) A site visit has been undertaken to ascertain the structural make-up of the buildings and the general site arrangement (Refer to BIA document for photo and drawing references). The site comprises:

- A three-storey detached property (26 Netherhall Gardens) arranged over lower ground floor, raised ground floor, first floor and attic storey.
- The property has been converted into flats at some point in the past and a modern garage with extension over built to the right of the property.
- The local area is on a hillside setting sloping down in a generally east-west direction toward Finchley Road (See Figure 3).
- The lower ground floor is raised some 1.0m to 1.5m from general street level with the ground floor level being some 3.5m to 4.0m above general street level.
- The property has a raised front garden with steps up to the ground floor entrance and a modern hard standing front drive to the left of the property giving level access to Netherhall Gardens.
- The rear garden gently slopes up from a rear light well to the rear boundary.
- The site is bounded to the left by 28 Netherhall Gardens, to the right by 24A & 24 Netherhall Gardens, to the rear by single storey outbuildings understood to belong to 47 Maresfield Gardens and to the front by Netherhall Gardens road.
- Access onto site is directly off Netherhall Gardens.
- There are several mature trees within the rear and front gardens.

h) Existing structure generally comprises a loadbearing masonry frame with timber floors and roof.

i) Based on SAS investigations, the existing shallow strip foundations generally comprise corbelled brick footings on a mass concrete base and typically range from 610mm – 1500+mm BGL to underside of footings.

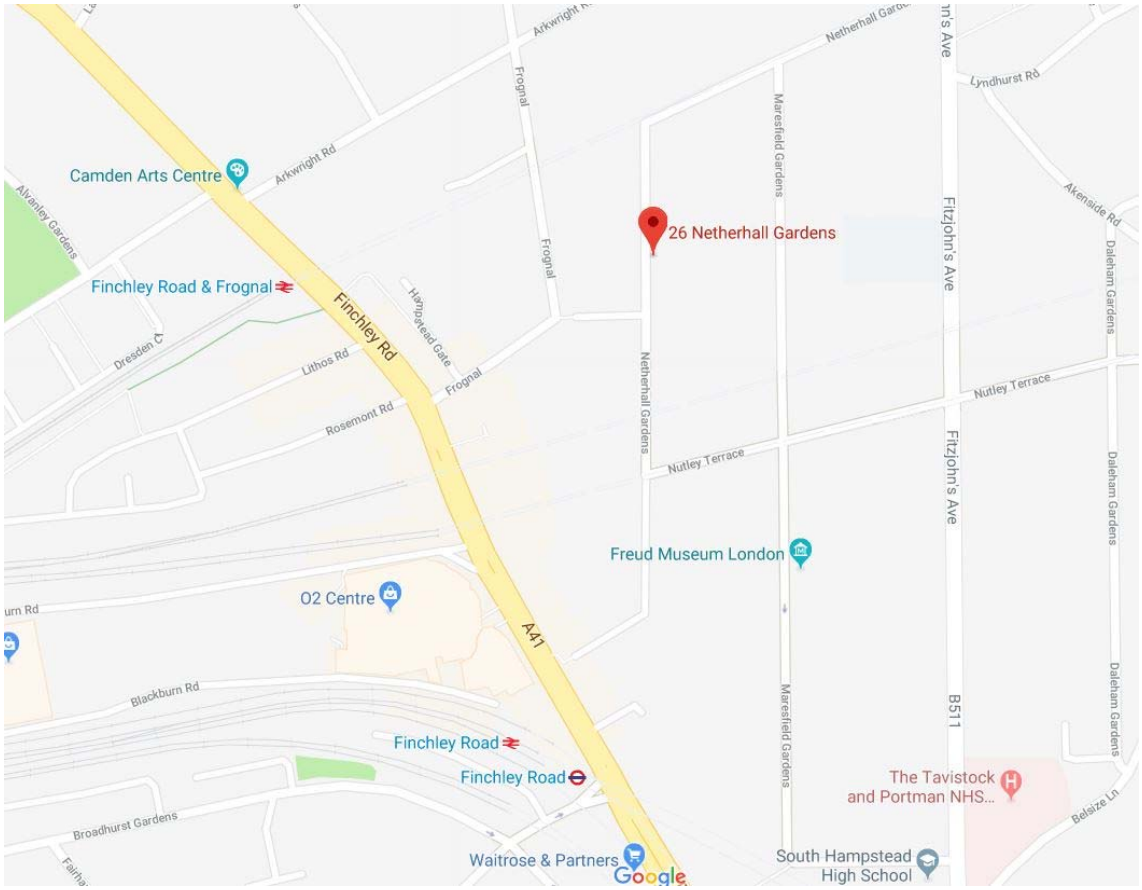


Figure 1. Site Location Map

Figure 2. Aerial View of Site looking North

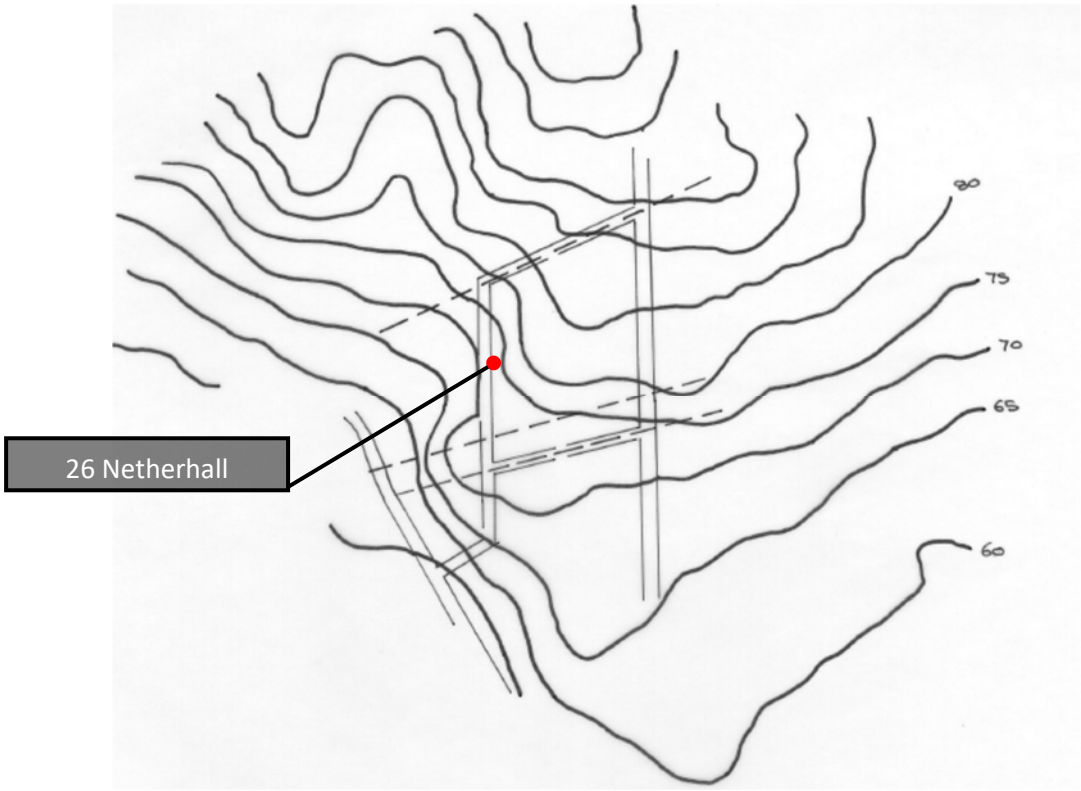


Figure 3 - Approximate Ground Contours

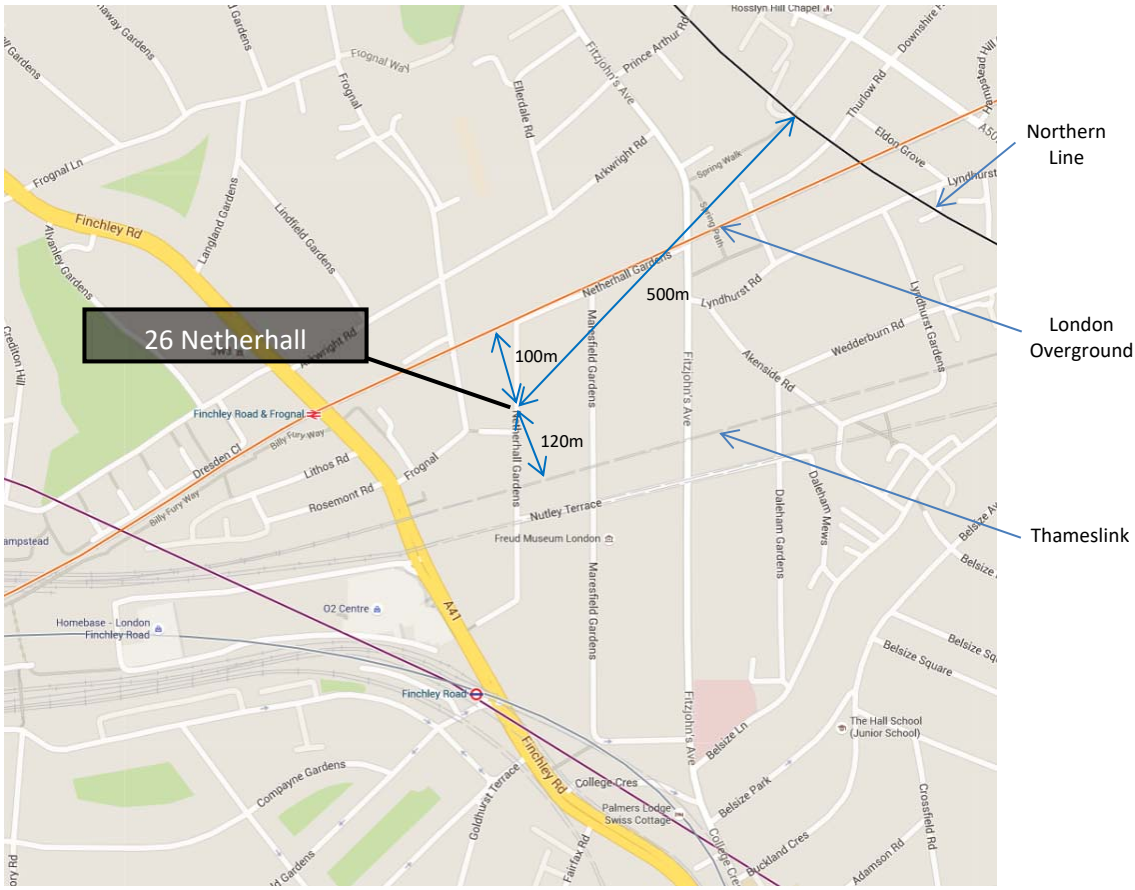


Figure 4 – Map of Nearby Below Ground Tunnels

3. SITE GROUND CONDITIONS

The following is a brief description of the site ground conditions. Reference should be made to Site Analytical Services 'Phase 1 Preliminary Risk Assessment' (Ref. 14/22068-1) and 'Report on a Ground Investigation' (Ref. 14/22068) for detailed information. The SAS report has be summarised in more detail in SJP BIA document.

3.1. Summary of Ground Conditions

The site is classified by the Environment Agency as 'non-productive' strata.

In summary the site ground profile comprises:

Strata	Depth BGL (m)	Ground Water (m BGL)	Angle of Shearing Resistance (ǿ)	Bulk Unit Weight kN/m³	BH1 Allowable Bearing Pressure (kpa)
Made Ground	0.00 – 1.50	1.14-1.88	-°	20	-
Weathered London Clay	0.12 – 9.20		21°	20	65* @ 2.25m BGL 108* @ 4.25m BGL 100* @ 6.75m BGL
Un-weathered London Clay	6.00 – 20.00+		21°	20	125* @ 9.75m BGL

Figure 5 – Summary of Ground Conditions

*Based on a factor of 3 against soil compressive capacity given in SAS report

3.2. Contamination

The results of the laboratory analysis indicate that the made ground contains elevated concentrations of Benzo(a)pyrene, Benzo(a)anthracene and Benzo(a)fluoranthene indicated in a distinct hotspot of contamination in Trail Pit 4, which exceed the residential end-user protection limit. SAS state, remedial measures to protect human health are considered necessary as part of the development at the site to break exposure pathways for the localised area of contamination.

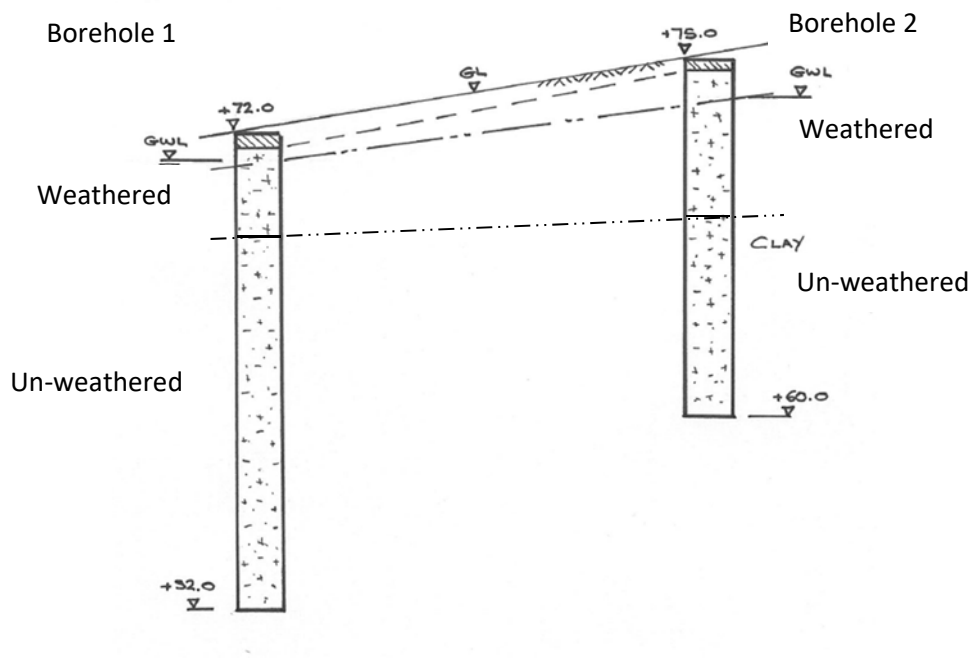


Figure 5 – Indicative Borehole Logs

4. PROPOSED DEVELOPMENT

4.1. The proposed revised development comprises constructing a new 3 storey extension and basement to the side of the main house building for a new apartment block. The structural proposals generally comprise:

a) Demolition of existing side extension

b) Partial single storey basement construction under the new extension to the side of the existing main house building comprising secant piled walls and underpinning to the main house building

c) New 3 storey loadbearing masonry superstructure with precast concrete floors and timber roof

d) Re-profiling of the front garden and sideway adjacent to No. 24 Netherhall Gardens.

The specific structural proposals are set out in Section 5 of this report.

5. STRUCTURAL PROPOSALS

5.1. Description of Proposed Structure

Drawings and mark-ups describing the structural proposals have been provided in Appendix B.

The structural works can be divided into substructure (structure below ground) and superstructure (structure above ground).

The substructure comprises

a) Secant (hard / firm) bored piled retaining walls to the perimeter of the basement providing temporary and permanent earth support.

b) Concrete underpinning to the flank wall of 26 Netherhall Gardens main house building, including transition underpins to the front and rear of the main house, providing temporary earth support and cast independent of the basement structure.

c) A reinforced concrete box structure, acting integral with, the bored piled walls to providing the permanent earth support.

d) Reinforced concrete retaining walls are to be adopted parallell to and set back from the site boundary with 24 Netherhall Gardens and to the rear of the basement to deal with varying levels of ground and adjacent properties.

The superstructure comprises:

a) Traditional cavity loadbearing masonry frame (external walls)

b) Precast concrete planks spanning side to side with a structural topping

c) Timber roof structure

5.2. Structural Stability

Secant piled retaining walls are proposed to the basement perimeter walls. The final design for the embedded retaining structure is to be undertaken by a Specialist Piling Contractor sub-contracted to the Main Contractor. At the pre-planning stage the Main Contractor and their appointed sub-contractors are not appointed. Therefore, preliminary piling designs have been investigated at the planning stage using previous experience and generally the approach set out in CIRIA C580. The form of retaining wall proposed has been successfully used on many similar basement projects and the performance characteristics of such walls in London Clay are well documented and understood.

All retaining structures are to be designed to support the lateral pressures resulting from earth, surcharge and transient hydrostatic loads. Pressures are to be calculated using the geotechnical parameters set out in Site Analytical Services' site investigation report. A design ground water level of -1.0m below the retained earth level is to be adopted for the design of all retaining structures. A minimum surcharge pressure of 10kN/m^2 is to be adopted over and above any adjacent foundation surcharge loads.

The embedded retaining walls are to be propped in the temporary and permanent cases. Temporary propping is to take the form of steel whaler beams, steel flying shores and steel props. Permanent propping is provided by the reinforced concrete ground bearing basement slabs and reinforced concrete suspended floor slabs.

Due to the topography of the site the proposed basement has varying retaining wall heights, summarised as follows:

Location	Retained Ground Level (m)	Lowest Basement Level (m)	Retained Height (m)	Permanent Prop Levels (m)
Front (single storey basement)	+72.62	+66.22	3.20	+72.62 (L Ground floor slab) +66.22 (Basement slab)

Figure 6 – Summary of Retaining Heights

The retaining walls to the sides of the proposed basement are to step along their lengths to accommodate the site slope.

A reinforced concrete cantilever retaining wall will be constructed along the boundary line with No. 24 Netherhall Gardens to accommodate the difference in site levels with sacrificial trench sheeting and propping as required.

The global 'out of balance' forces resulting from the varying retaining heights are to be resisted by the passive earth pressures acting on the opposite basement faces.

The ground investigation found ground water at 1.14m and 1.88m below the existing ground level. These readings are likely due to minor seepages of ground water within permeable Silty lens present within the Clay. A secant piled wall provides a high degree of resistance to any potential inflows of ground water during construction. This will allow the Contractor to construct the basement in a relatively 'dry' environment without the need for significant de-watering.

The excavation required to form the basement results in the removal of the original over-burden pressure. This results in the bottom of the excavation rising a phenomenon commonly known as 'heave'. Initially this heave is unrestrained as the site is an open excavation. During construction of the new building the weight of the new structure resists any on-going heave and the basement slab will be designed to resist the resultant forces.

Structural stability of the superstructure will be provided by the external loadbearing masonry cavity shear walls transferring horizontal load to the ground through the basement foundation. Horizontal wind load will be transferred to the floor structure at each level via shear and bending of the loadbearing masonry panel, the stiff concrete floors will act in diaphragm action to transfer horizontal load to the loadbearing masonry shear walls.

5.3. Ground Movement and Damage Impact Assessment to Neighbouring Properties

GEA Ltd. carried out a Ground Movement Analysis for which the report has been included in SJP's BIA Appendix D, GEA Report Ref. J15344.

a) Description of Neighbouring properties:

24 & 28 Netherhall Gardens are similar in size, scale and form as 26 Netherhall Gardens. The properties appear to have been constructed around the same time and are of load bearing masonry construction most likely with timber floors. No. 24A Netherhall Gardens appears to be a modern addition to No. 24 but again also appears to be of load bearing masonry construction. For the purposes of the category of damage prediction No. 24 & 24A are considered a single structure.

A visual inspection of No's 24, 24A and 28, undertaken from street level, did not identify any apparent defects or evidence of historic movement. Post-planning, as part of the party wall process, a more detailed structural inspection of the adjacent properties including internal inspections will be undertaken prior to completing the detailed ground movement analysis.

b) The GEA report is based on the previous basement proposals with a much larger basement; the revised basement proposal is 50% shallower in most areas and has a reduction in floor area of 75%. The report states:

> 'The analysis has concluded that the predicted damage to the neighbouring properties (as classified under Burland et al 1995) would vary between Category 0 (Negligible) and Category 2 (Slight). On this basis, the damage that would inevitably occur as a result of such an excavation would generally fall within the acceptable limits, with mitigation measures required for those walls predicted to be Category 1 (Very Slight) of higher.'

c) With the significantly reduced basement size, it is expected that the damage categories would lessen due to the revised basement construction, considering similar mitigation methods are proposed in the method of construction to ensure acceptable ground movements.

d) Movement Monitoring:

The Contractor will be required to monitor ground movements and any potential building movements during the works to check the validity of the ground movement analysis and the performance of the temporary works and working methods. A 'traffic light' system of green, amber and red trigger values will be set with specific Contractor actions against each trigger value.

Traffic Light	Trigger Value (mm)		Contractor Action
	Ground	Building	
Green	<10	<5	No action required.
Amber	10-15	5-10	Notify the CA and Party Wall Surveyor(s). Increase frequency of monitoring. Implement contingency measures if movement continues.
Red	≥15	≥10	Notify the CA and the Party Wall Surveyor(s). Implement measures to cease movement and stop work.

Figure 6. Indicative Ground Movement Trigger Values

The monitoring method is to be developed further during detailed design but may take the form of precise levelling, geospatial surveying, inclinometers, tiltmeters or electro level beams, or extensometer's or a combination of these methods. The monitoring will be undertaken prior to installation of the piled walls and continue through to completion of the basement structure.

It is envisaged that the ground movement monitoring will take the form of targets placed on the secant piled wall capping beam (at ground level), spaced 3m apart along the length of the beam. These will be monitored on a weekly basis, against the trigger values noted above.

It is envisaged that the building movement monitoring will take the form of pairs of targets placed on the external walls of nearby buildings (at 1m above ground level and close 1m below roof eaves level), spaced 3m apart along the length of the wall. These will be monitored on a weekly basis, against the trigger values noted above.

5.4. Sustainable Drainage System (SUDS)

The proposals comprise the re-profiling of the existing front and rear gardens resulting in the following changes to total area of soft landscaping present on site:

Existing soft landscaping: 390m^2 (approximately)

Proposed soft landscaping: 310m^2 (approximately)

The proposals therefore result in an increase in the total amount of hard-standing on site with an associated increased volume of surface water runoff. To offset this increase sustainable drainage systems (SUD's) should be considered through design development to final detailed proposals.

The overall drainage system is to be designed and detailed by the appointed drainage designer. At the pre-planning stage this Designer is not appointed. Therefore, for the purposes of this planning stage report a high-level review of the various SUD's technologies has been undertaken and the potential for adoption discussed.

SuD Technology	Potential for Adoption
Living Roofs (Green Roofs)	Given the pitched roof and surrounding architectural environment living roofs would appear not to be feasible.
Recycling / rain water harvesting	Tanks and associated plant for rain water harvesting and reuse could be located within the sub-basement plant room. Rain water harvesting would appear feasible.
Permeable paving and hard standing systems and soakaway systems	Given the clay ground permeable surfacing using 'soak-a-aways' would appear not to be feasible.
On / off line storage	Storage of runoff may be feasible but requires further investigation to ascertain storage volume requirements.
Swales and infiltration basins	Given the site constraints swales and infiltration basins would not appear feasible.
Bioretention and biofiltration	Given the site constraints swales and infiltration basins would not appear feasible.
Permeable conveyance systems	Given the site constraints swales and infiltration basins would not appear feasible.

Figure 7 – Potential SUD's

From the above, it is envisaged that the most appropriate form of SUDs techniques to be adopted will be a combination of rainwater harvesting tanks and storage of rainwater run-off in attenuation tanks on site.

6. PARTY WALLS

The works comprise the excavation for a new basement adjacent to the site boundary and within close proximity to 24A Netherhall Garden. Full procedures under The Party Wall etc Act 1996 are therefore required.

The structural scheme adopted has been designed with due regard to maintaining the structural stability and integrity of neighbouring buildings & structures and surrounding land. The structural form of the basement and the method of construction have been developed to ensure that lateral deflections, and associated ground movements, are kept within acceptable limits. An initial assessment of the predicted ground surface movements using the approach set out in CIRIA C850 has indicated that the predicted category of damage to adjacent properties is not expected to be worse than category 1 – very slight.

7. CONSTRUCTION METHODOLOGY

7.1. Construction Sequence

The proposed sequence of works given below has been assumed for the purposes of undertaking the planning stage structural design of the building and is provided to demonstrate that the works can be executed with due regard to the local amenity.

Proposed Sequence of Works

a) Soft strip to be undertaken including removal of landscaping.

b) Scaffolding to be erected around existing side extension to be demolished and protective hoarding around site.

c) Demolish existing side extension using hand techniques and small items of plant. Construction vehicles to park on-site in front drive.

d) Install movement monitoring equipment to adjacent structures and base line readings to be taken. Regular monitoring to be undertaken throughout the works.

e) Site to be cleared and mass concrete underpins installed to the flank wall of No. 26 Netherhall Gardens with transition underpins to the front and rear external walls.

f) Install piling platform and secant piled walls to be installed using bored piling methods. Firm piles (weak concrete 5-10N/mm2) installed first. Hard piles (reinforced concrete say 35N/mm2) installed second.

g) Once piling is installed in-situ reinforced concrete boundary retaining walls to be constructed. Temporary trench sheets installed to retain the earth locally in the temporary case and allow the walls to be formed.

h) Capping beams to piled walls to be constructed. Monitoring equipment to capping beams to be installed and base line readings taken. Regular monitoring to be undertaken throughout the works.

i) Reduce rear garden terrace are to approximately to +75.20m.

j) Commence excavation of lower ground level. Reduce lower ground level to +70.0m and install temporary propping.

k) Continue excavation down to +68.94m and construct basement slab and RC walls.

l) Construct ground floor reinforced concrete slab.

m) Once slab has achieved its specified 28 day strength props are to be removed.

n) Cast remaining reinforced concrete walls, beams and slabs removing temporary works as 28day strength is achieved. The basement is then complete.

o) Install traditional loadbearing cavity masonry external walls up to 1st floor level and install precast concrete planks. Continued construction in this sequence to the required floor level.

p) Install timber roof.

7.2. Demolition

The proposals comprise the demolition of the existing side building. The demolition works will be required to be undertaken in accordance with the legislative documents stated in section 7.4 and, as stated in Camden

Camden Planning Guidance – Basements (March 2018) Section 5.2, Contractors are to adopt the practices outlined within the ICE Demolition Protocol in order to mitigate the impact of the works.

Where practical demolition material should be taken to recycling plants.

7.3. Temporary Works

The Contractor will be required to appoint a Temporary Works Co-ordinator to advise, design, co-ordinate and oversee all temporary works aspects. All temporary works are to be in accordance with BS 5975 'Code of practice for temporary works procedures and the permissible stress design of falsework'.

The planning stage structural design has highlighted the following specific temporary works that will need to be further developed during detailed design and construction:

a) Temporary lateral propping to the secant piled walls. This propping is required to prevent significant lateral movement of the secant walls. The propping is to be kept in place until the permanent propping (reinforced concrete slabs) are constructed. Traditional steel whaler beams, flying shores and props are indicatively proposed as per 'Indicative Temporary Works' mark-up in Appendix C.

7.4. Construction Generally

a) The works are required to be undertaken in accordance with all statutory legislation relating to construction works.

b) The Contractor will be required to demonstrate a positive attitude and commitment toward minimising environmental disturbance to local residents and will be required to be registered with the Considerate Contractors Scheme.

c) Noise, dust and vibration will be controlled by employing Best Practicable Means (BPM) as prescribed in the following legislative documents and the approved code of practice BS 5228:

- The Control of Pollution Act 1972
- The Health & Safety at Work Act 1974
- The Environmental Protection Act 1990
- Construction (Design and Management) Regulations 1994
- The Clean Air Act 1993

d) General measures to be adopted by the Contractor to reduce noise, dust and vibration include:

- Erection of site hoarding to act as minor acoustic screen.
- Use of super silenced plant where feasible.
- Use of well-maintained modern plant.
- Site operatives to be well trained to ensure that noise minimisation and BPM's are implemented.

- Effective noise and vibration monitoring to be implemented.
- Reducing the need to adopt percussive and vibrating machinery.
- Bored piling techniques to be adopted to reduce piling induced vibration.
- Piles to be broken down using non-percussive techniques.
- Vehicles not to be left idling.
- Vehicles to be washed and cleaned effectively before leaving site.
- All loads entering and leaving the site to be covered.
- Measures to be adopted to prevent site runoff of water or mud.
- Water to be used as a dust suppressant.
- Cutting equipment to use water as suppressant or suitable local exhaust ventilation system.
- Skips to be covered.
- Drop heights to be minimised during deconstruction.
- Use of agreed wet cleaning methods or mechanical road sweepers on all roads around site.
- Set up and monitor effective site monitoring of dust emissions.
- Working hours to be restricted as required by the Local Auhtority.

e) The Contractor will be required to be registered with the Considerate Contractor scheme.

f) The Piling Contractor is to be a registered member of the Federation of Piling Specialists.

g) Impacts on the local amenity will be strictly controlled and managed by the Contractor.

h) Working hours will be restricted as required by the Local Authority.

i) The Contractor will be required to provide a Construction Management Plan prior to undertaking the works. The contents of this plan must be agreed with the Local Authority and complied with unless otherwise agreed with the Council.

j) The Contractor will be required to provide a Site Waste Management Plan describing how site waste is to be minimised and dealt with.

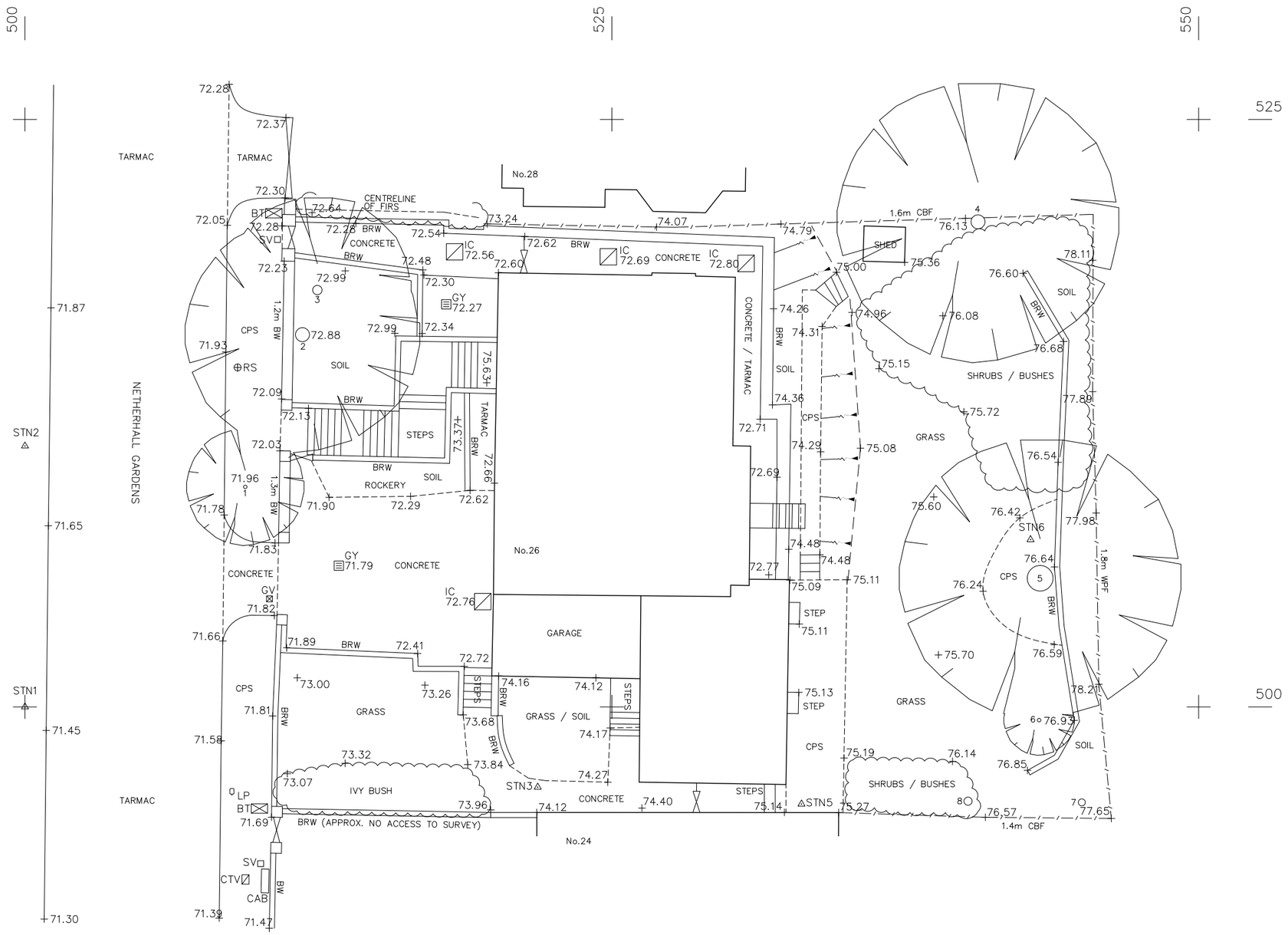
k) Ground water is well below the proposed basement formation level. Therefore, ground water will not be significant during execution.

7.5. Construction Traffic Management Plan

The Contractor will be required to develop a Construction Traffic Management Plan for submission and agreement with the Local Authority. This Traffic Management Plan is to be in accordance with Camden Planning Guidance 6 Section 8.

Refer to planning stage Construction Traffic Management Plan submitted with the planning application for further details.

APPENDIX A - EXISTING BUILDING AND SURVEY DRAWINGS



Important Information:

All survey data has been undertaken by others.

TREE SCHEDULE

NO.	GIRTH (DIA)	SPREAD	HEIGHT	TYPE
1	0.15	5.00	8.00	CHERRY
2	0.60	10.00	8.00	?
3	0.40	8.00	10.00	ASH
4	0.60	12.00	12.00	OAK
5	1.10	12.00	12.00	OAK
6	0.15	3.00	3.00	?
7	0.30	0.00	3.00	?
8	0.35	0.00	4.00	?

Survey Grid: Based to a local arbitrary grid (by others)

Levelling: Relative to OSGB datum

Drawing Title:

GPS Survey

Site Address:

26 Netherhall Gardens
Hampstead NW3

Client:

Stuart Henley & Partners

A: Building envelope amended 18-09-13

Surveyor	CD	Drawn By	WB	Verified By	AMF	Date	08.09.13

CM No: CM/13413 Rev: A

Scale: 1:100m @ A1 Date: September 2013

Cadmap Ltd
67 Meadway Drive
Horsell, Woking
Surrey, GU21 4TF
T: 01483 429385
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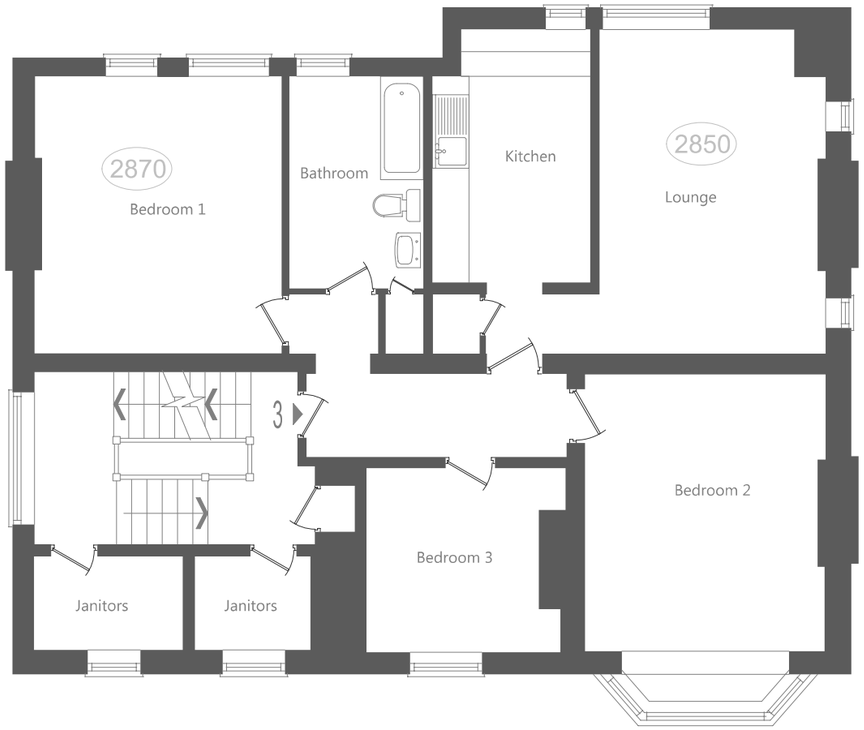
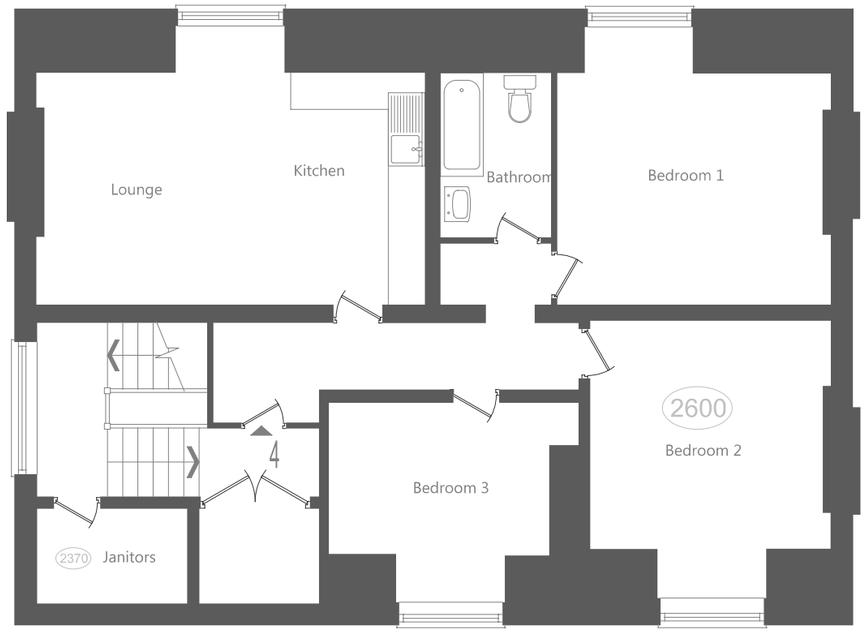


First Floor



Second Floor

First Floor:
Flat 3 NIA = 102.95 Sq. m
Total GIA = 127.46 Sq. m

Second Floor:
Flat 4 NIA = 86.25 Sq. m
Total GIA = 105.17 Sq. m

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Project
26 Netherhall Gardens
London NW3

Drawing
Survey Floor Plans: Flats 3 & 4
First and Second Floors

Version	Scale	Date
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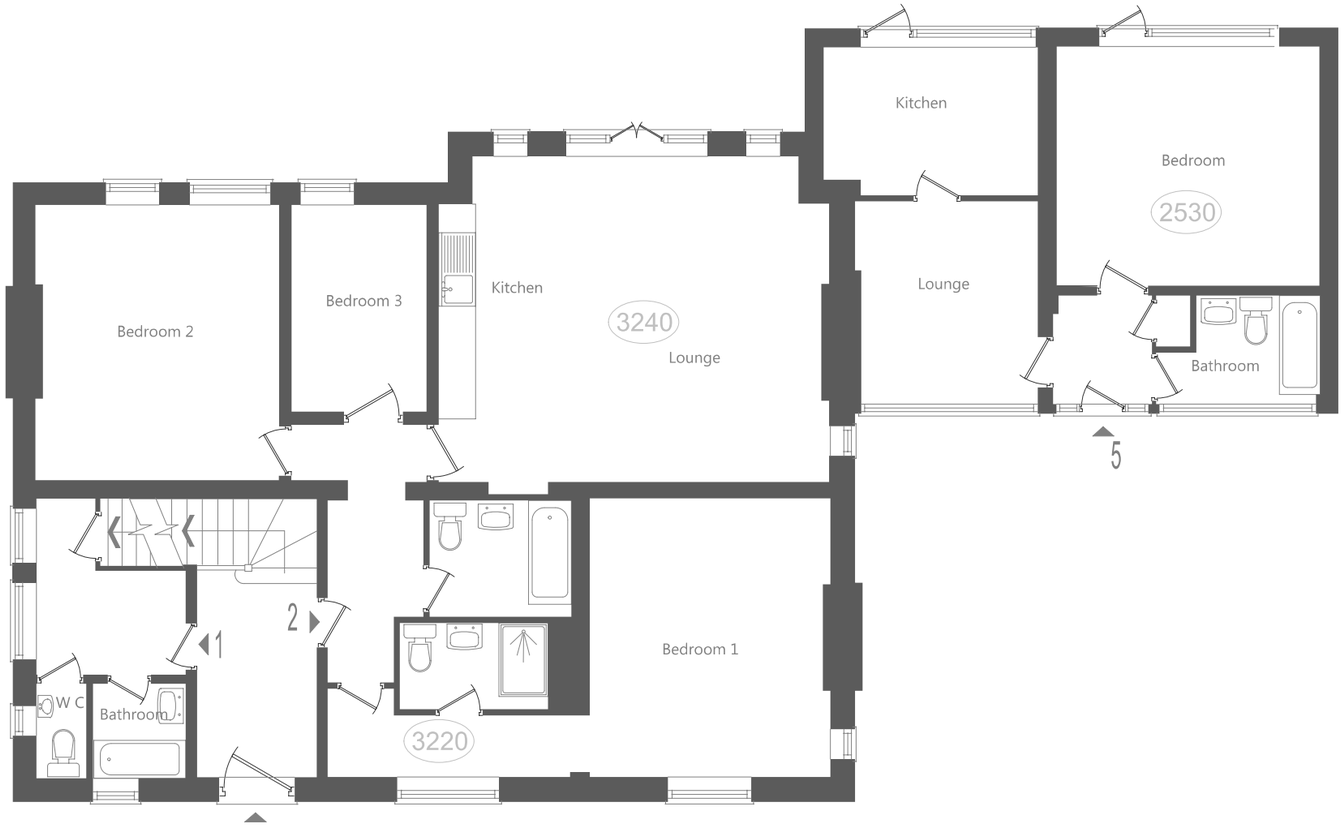
Lower Ground Floor

Upper Ground Floor



Lower Ground Floor:
Flat 1 NIA = 125.21 Sq. m
Total GIA = 125.21 Sq. m

Total Flat 1 NIA = 147.09 Sq. m

Upper Ground Floor:

Flat 1 NIA = 21.88 Sq. m

Flat 2 NIA = 103.77 Sq. m
Flat 5 NIA = 46.57 Sq. m

Total GIA = 172.22 Sq. m

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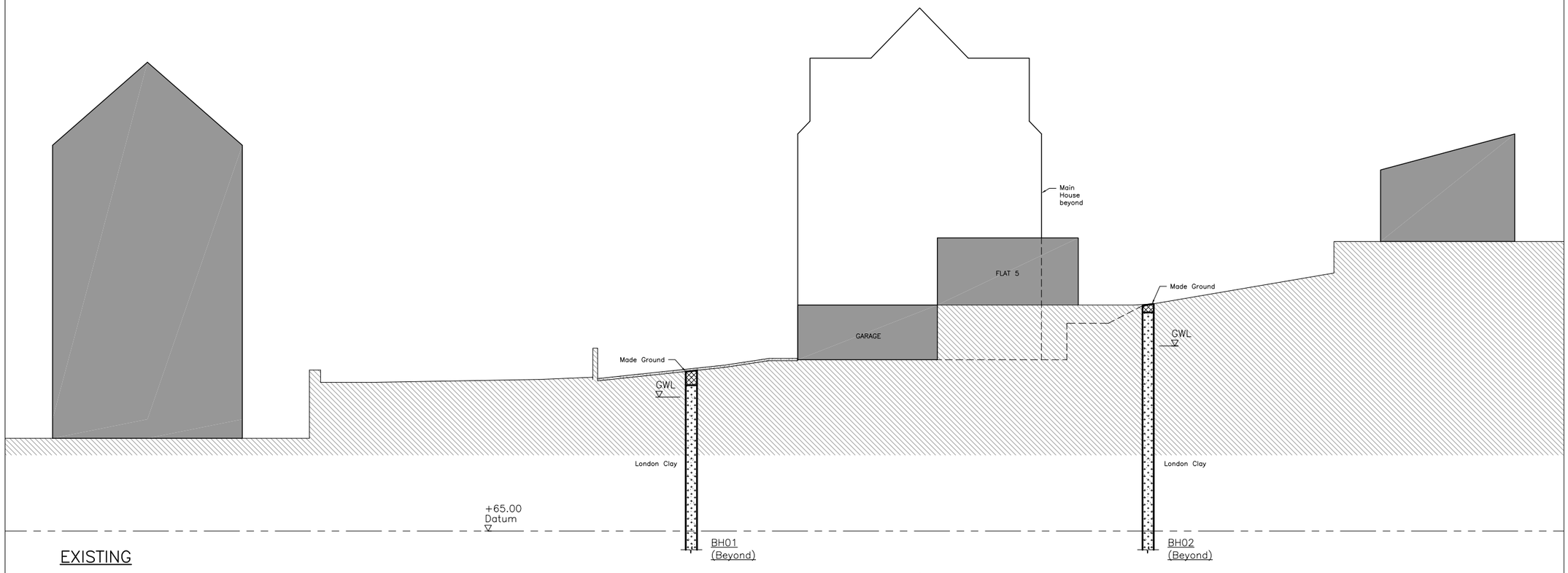
Project
26 Netherhall Gardens
London NW3

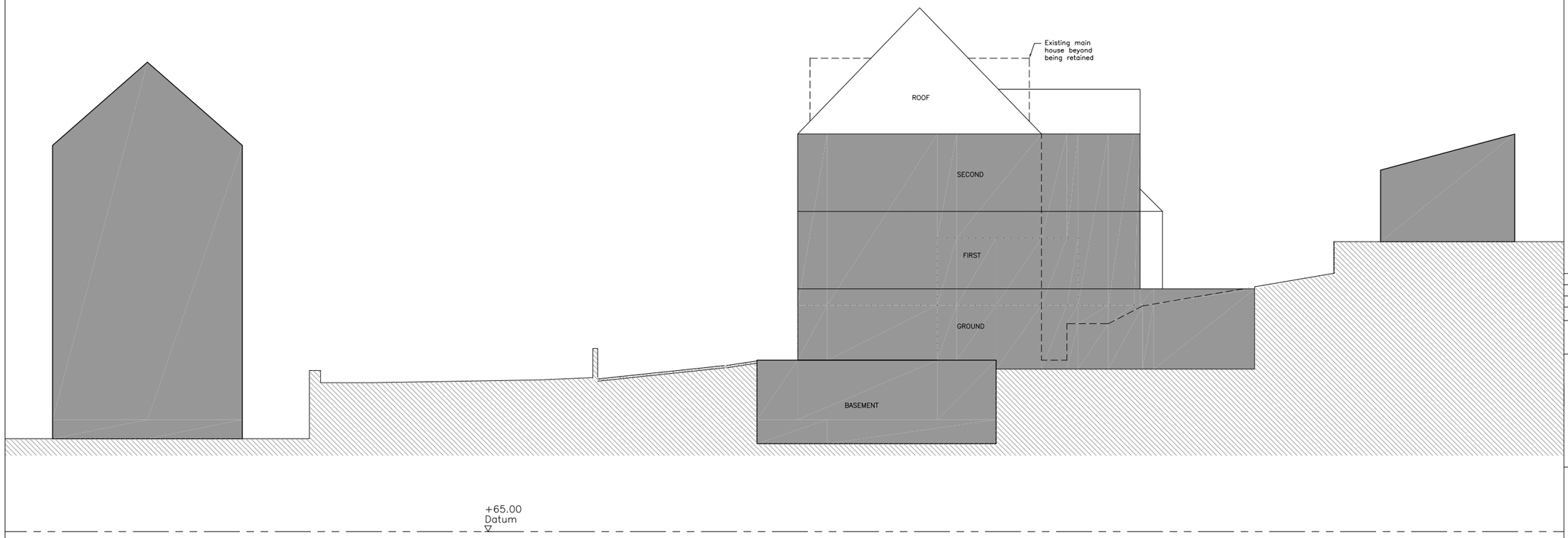
Drawing
Survey Floor Plans: Flats 1, 2 & 5
Lower and Upper Ground Floors

Version	Scale	Date
01	A3 1:100	01 05 04

APPENDIX B - PROPOSED DRAWINGS



EXISTING



PROPOSED

NOTES:

1. This drawing is for planning purposes only and is to be read with Sinclair Johnston & Partners 'Structural Design and Construction Statement' and all relevant Architect's planning documentation submit with the planning application.
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3. All dimensions are in millimetres and levels in metres.

Rev	Date	Issued	Amendment
B	18.02.19	OR	Reduced Scheme – Updated for planning.
A	01.10.18	OR	Revised Scheme – Updated for planning.
–	23.07.14	TJM	Issued for planning.

Status *PLANNING*

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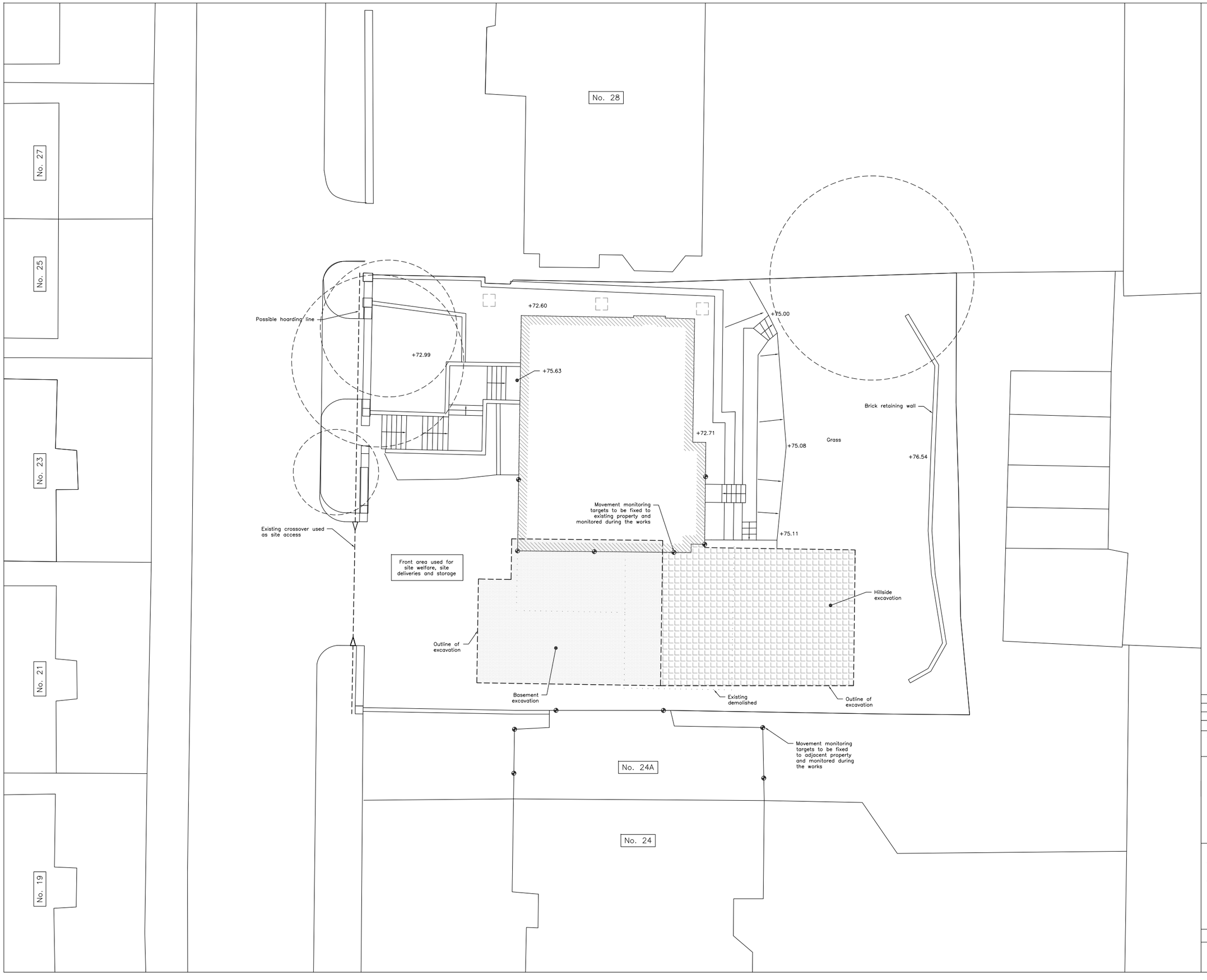
26 NETHERHALL GARDENS NW3

TOPOGRAPHIC SECTION EXISTING AND PROPOSED

Drawn T Musson Scale 1:50 at A1

Project No./Drawing No. 8240/SK01 Rev B



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KEY:

Indicates hillside excavation to approx. +72.100

Indicates basement excavation to approx. +69.000

Rev	Date	Issued	Amendment
B	18.02.19	OR	Reduced Scheme – Issued for planning.
A	01.10.18	OR	Revised Scheme – Issued for planning.
–	23.07.14	TJM	Issued for planning.

Status *PLANNING*

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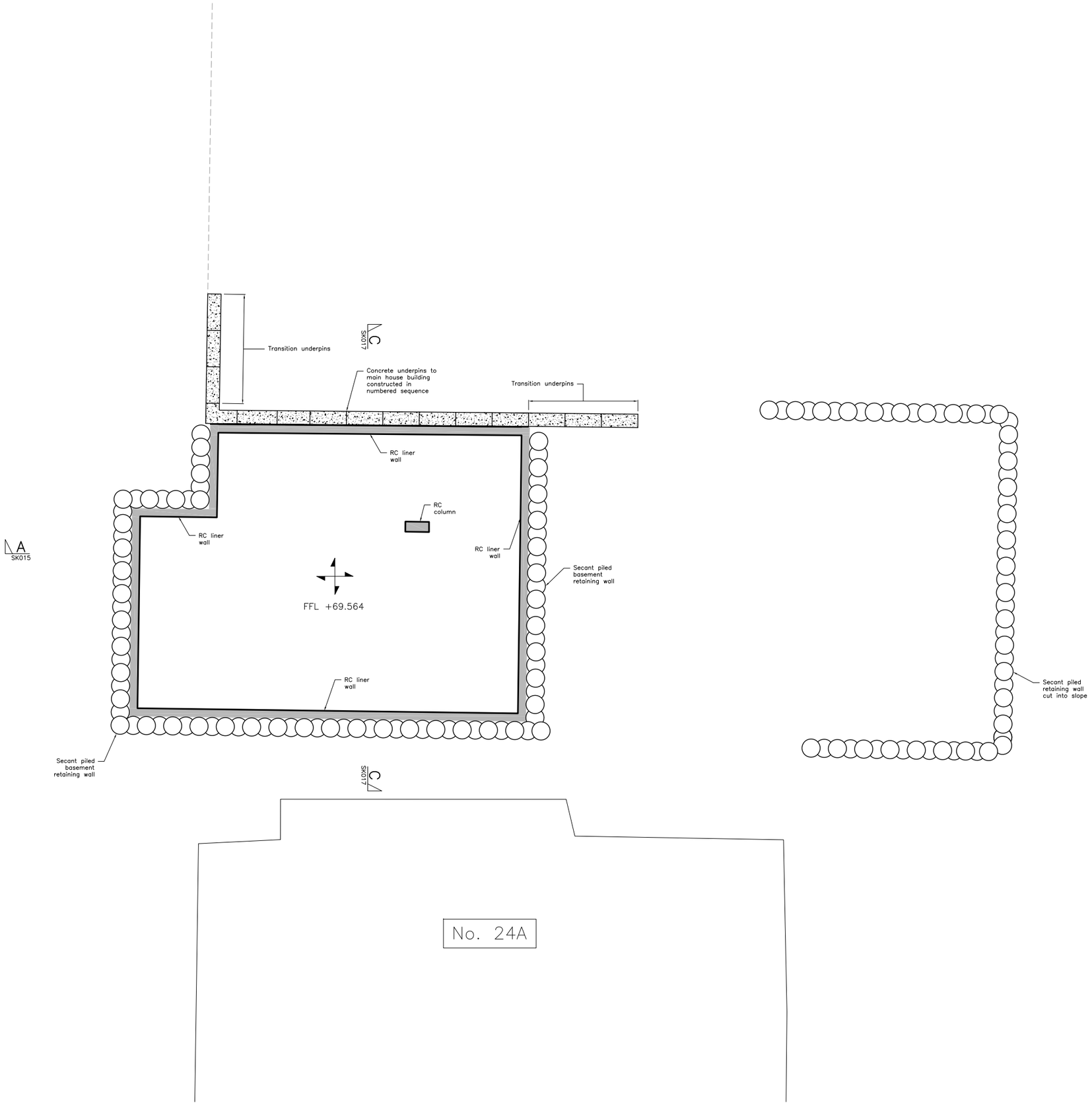
26 NETHERHALL GARDENS NW3

PROPOSED SITE PLAN

Drawn T Musson Scale 1:100 at A1

Project No./Drawing No. 8240/SK04 Rev B



NOTES:

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KEY:

RC Ground Bearing Raft Slab.

Rev	Date	Issued	Amendment
D	18.02.19	AP	Revised Scheme – Issued for planning.
C	01.10.18	OR	Revised Scheme – Issued for planning.
B	11.01.17	SH	Updated for planning.
A	27.08.14	TJM	Updated for planning.
–	23.07.14	TJM	Issued for planning.

Status

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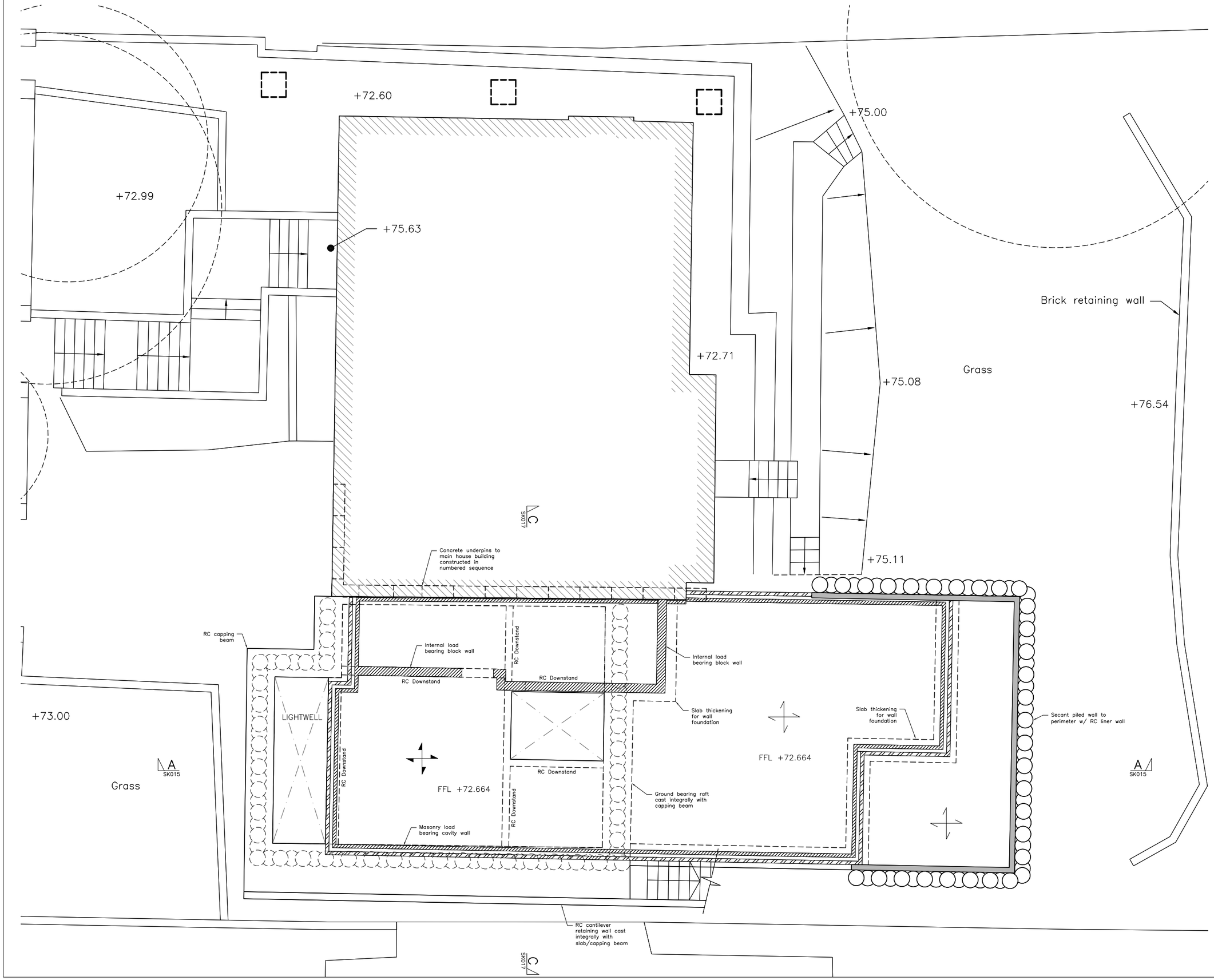
26 NETHERHALL GARDENS NW3

LOWER GROUND GA PLAN

Drawn T Musson Scale 1:50 at A1

Project No./Drawing No. 8240/SK008

Rev D



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KEY:

250thk RC Suspended Slab.

250tck RC Ground Bearing Raft Slab

Rev	Date	Issued	Amendment
E	08.03.19	OR	Reduced Scheme – Issued for planning.
D	18.02.19	AP	Reduced Scheme – Issued for planning.
C	01.10.18	OR	Revised Scheme – Issued for planning.
B	11.01.17	SH	Updated for planning.
A	27.08.14	TJM	Updated for planning.
–	23.07.14	TJM	Issued for planning.

Status *PLANNING*

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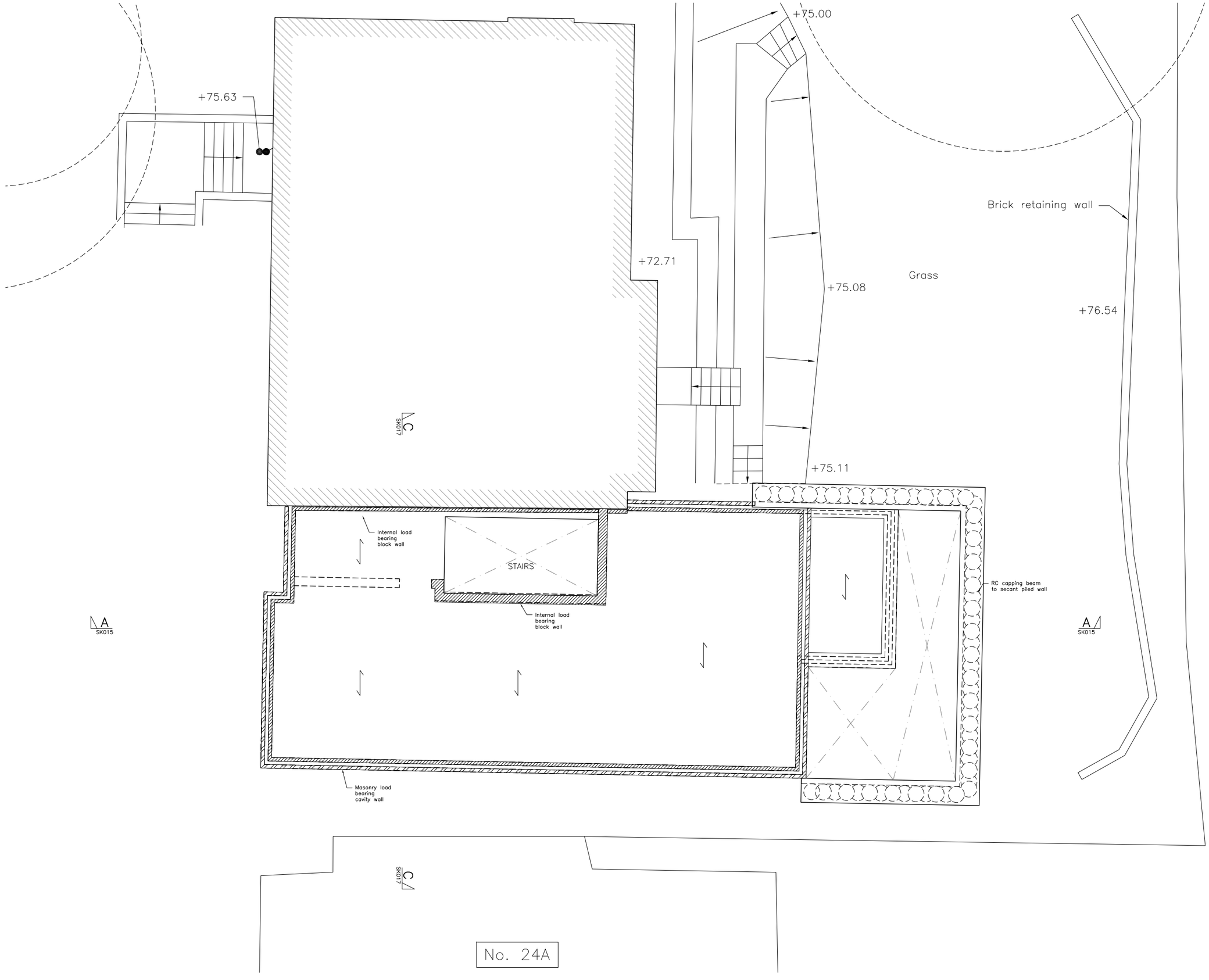
26 NETHERHALL GARDENS NW3

PROPOSED GROUND FLOOR GA PLAN

Drawn T Musson Scale 1:50 at A1

Project No./Drawing No. 8240/SK009 Rev E



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3. All dimensions are in millimetres and levels in metres.

KEY:

Precast pre-stressed concrete planks

Rev	Date	Issued	Amendment
D	18.02.19	AP	Revised Scheme – Issued for planning.
C	01.10.18	OR	Revised Scheme – Issued for planning.
B	11.01.17	SH	Updated for planning.
A	27.08.14	TJM	Updated for planning.
–	23.07.14	TJM	Issued for planning.

Status

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26 NETHERHALL GARDENS NW3

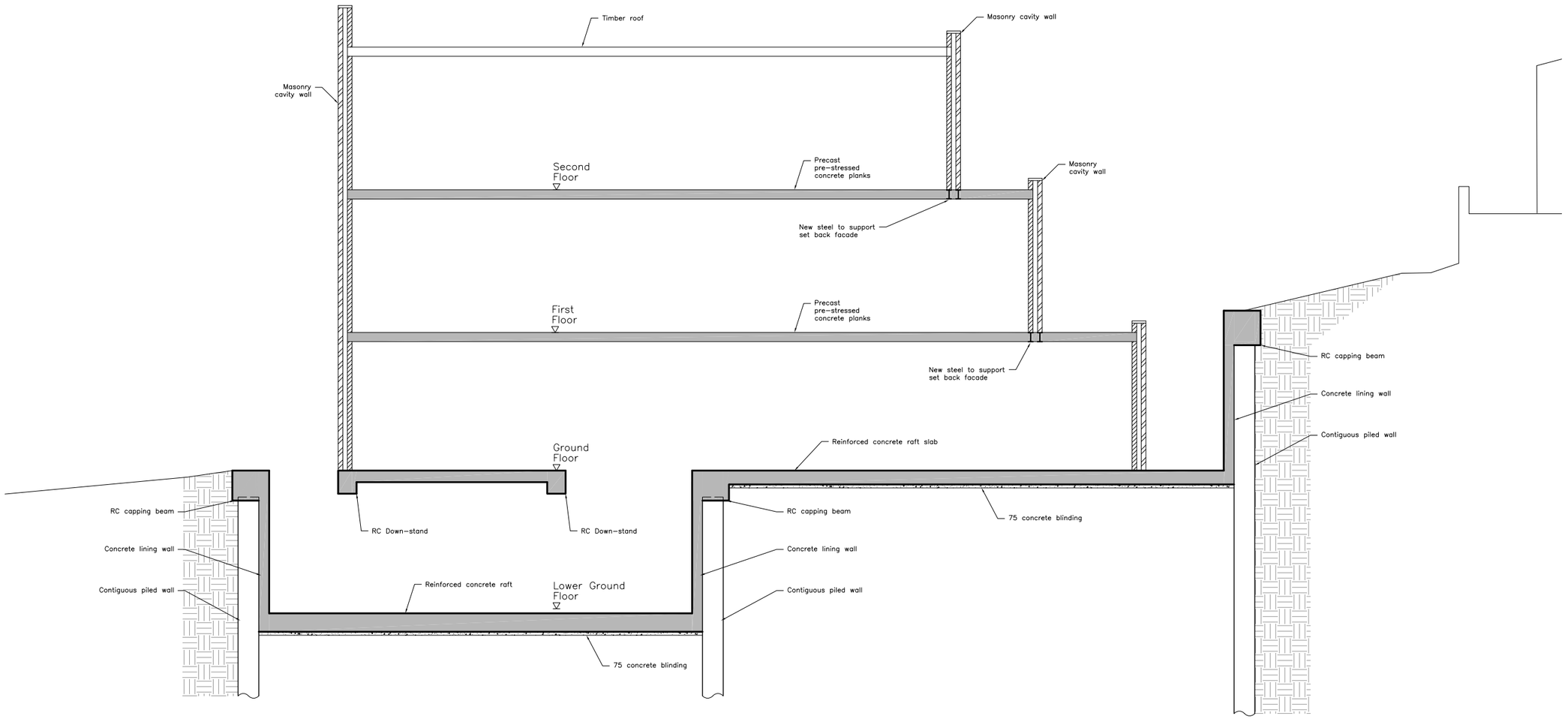
PROPOSED FIRST FLOOR

Drawn T Musson

Scale 1:50 at A1

Project No./Drawing No. 8240/SK010

Rev C



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Rev	Date	Issued	Amendment
D	18.02.19	AP	Revised Scheme – Updated for planning.
C	01.10.18	OR	Revised Scheme – Updated for planning.
B	11.01.17	SH	Updated for planning.
A	27.08.14	TJM	Updated for planning.
–	23.07.14	TJM	Issued for planning.

Status

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26 NETHERHALL GARDENS NW3

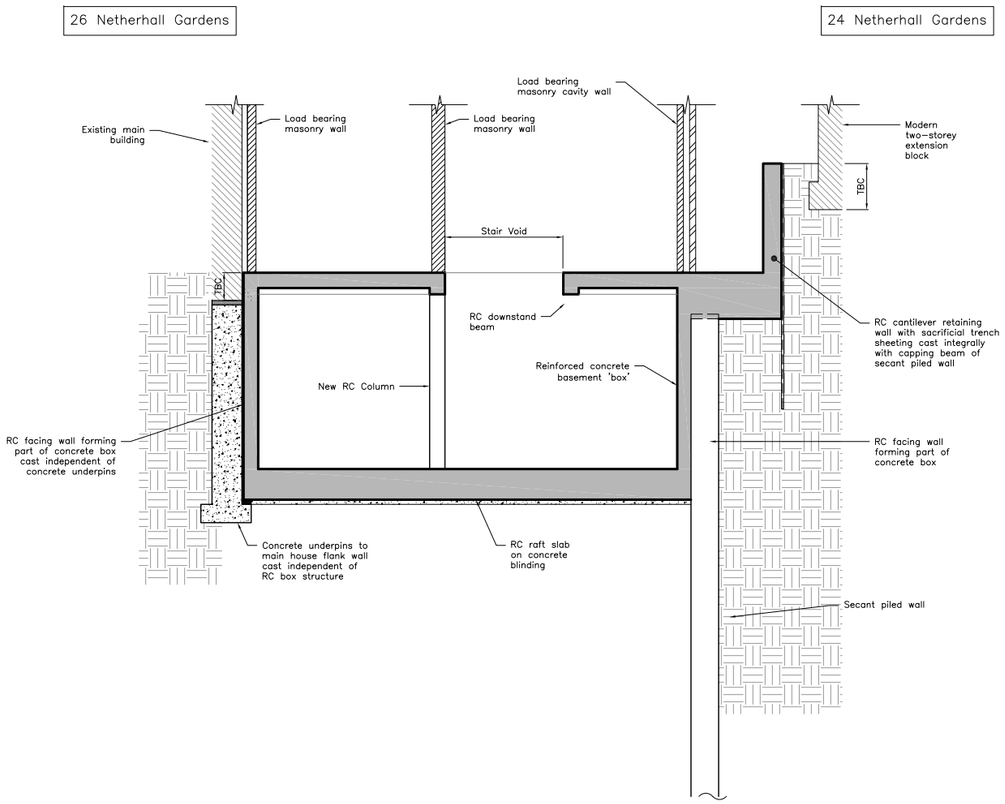
PROPOSED SECTION A–A

Drawn T Musson

Scale 1:50 at A1

Project No./Drawing No. 8240/SK015

Rev D



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Rev	Date	Issued	Amendment
D	08.03.19	OR	Retaining wall location updated
C	18.02.19	AP	Revised Scheme – Updated for planning.
B	01.10.18	OR	Revised Scheme – Updated for planning.
A	27.08.14	TJM	Updated for planning.
–	23.07.14	TJM	Issued for planning.

Status

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26 NETHERHALL GARDENS NW3

PROPOSED SECTION C–C

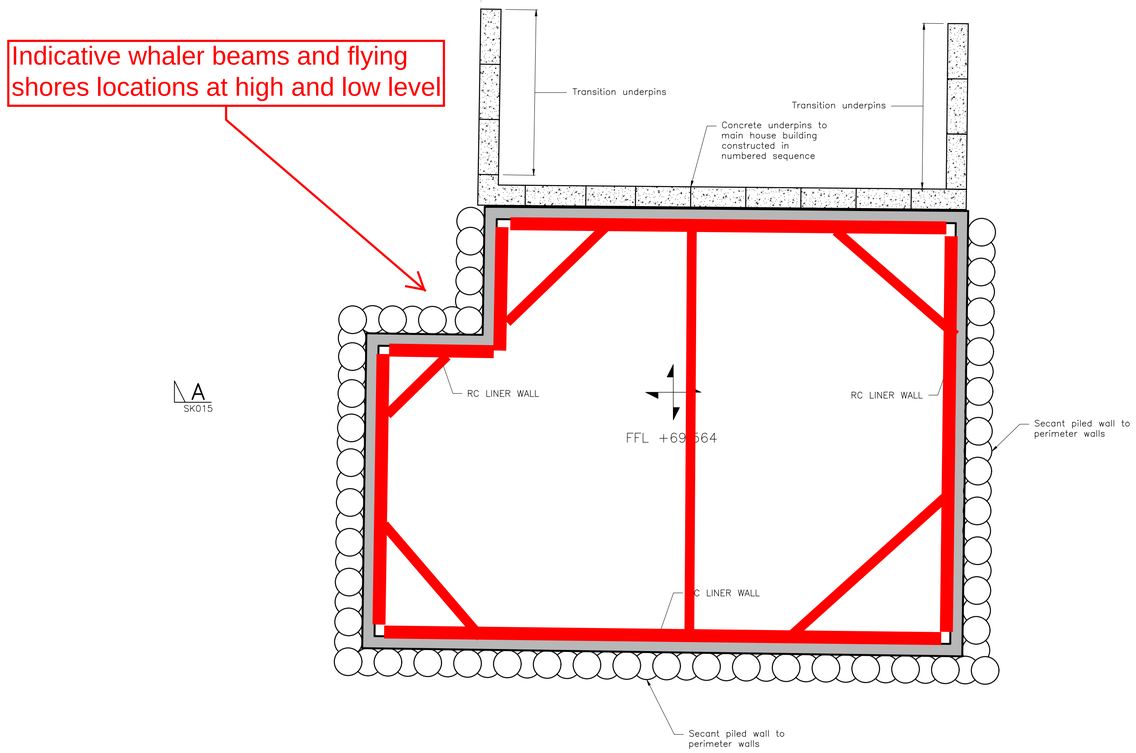
Drawn T Musson

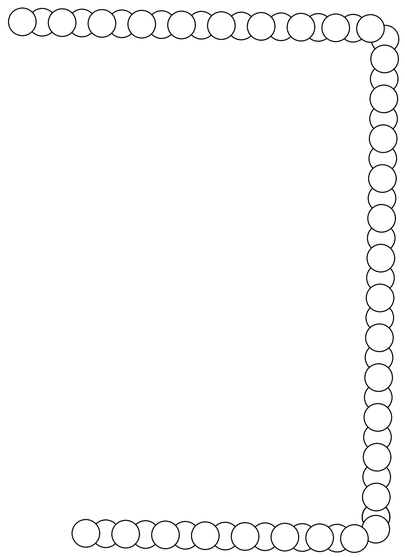
Scale 1:50 at A1

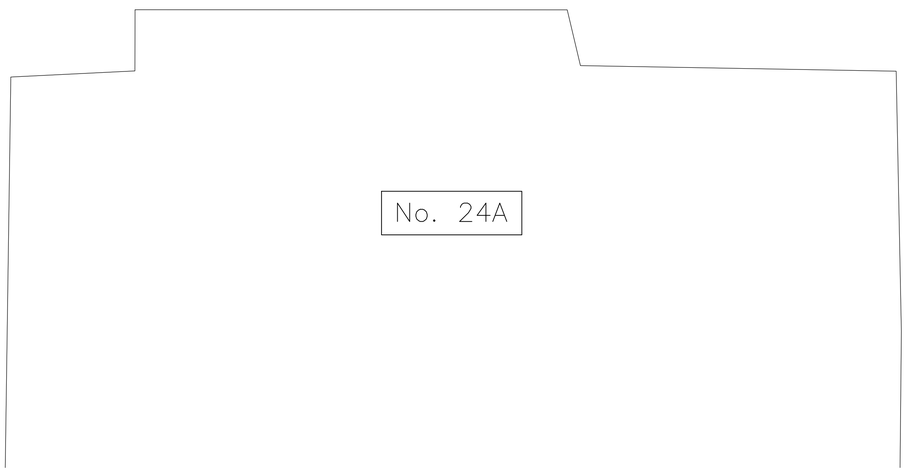
Project No./Drawing No. 8240/SK017

Rev D

APPENDIX C - INDICATIVE TEMPORARY WORKS PROPOSALS







Sinclair Johnston & Partners
Indicative Basement Level Temporary Works
8240 SJP AP 190218

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KEY:

RC Ground Bearing Raft Slab.

Rev	Date	Issued	Amendment
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A	27.08.14	TJM	Updated for planning.
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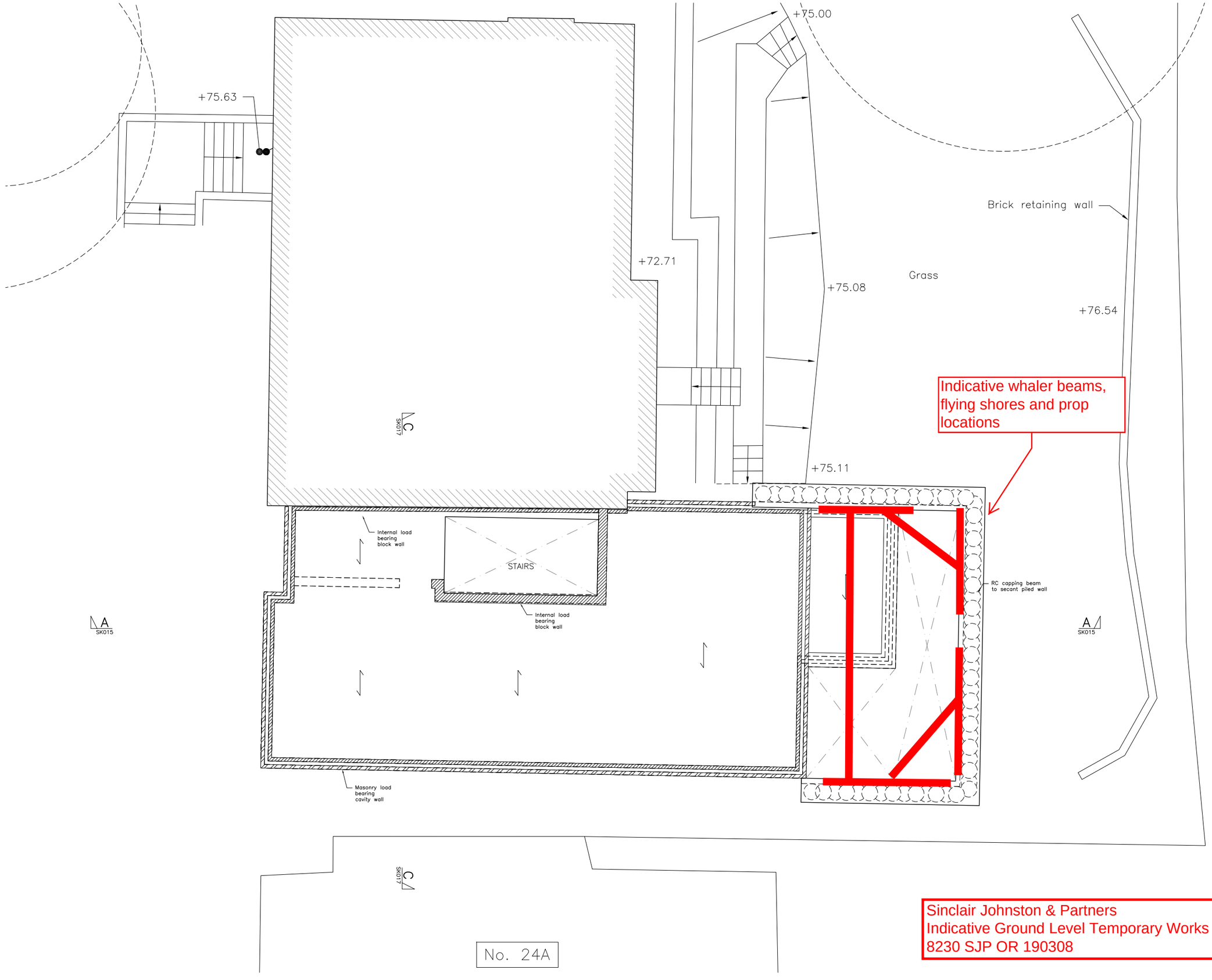
26 NETHERHALL GARDENS NW3

LOWER GROUND GA PLAN

Drawn T Musson
Scale 1:50 at A1

Project No./Drawing No. 8240/SK008
Rev C



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KEY:

Precast pre-stressed concrete planks

Sinclair Johnston & Partners
Indicative Ground Level Temporary Works
8230 SJP OR 190308

Rev	Date	Issued	Amendment
D	18.02.19	AP	Revised Scheme – Issued for planning.
C	01.10.18	OR	Revised Scheme – Issued for planning.
B	11.01.17	SH	Updated for planning.
A	27.08.14	TJM	Updated for planning.
–	23.07.14	TJM	Issued for planning.

Status *PLANNING*

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26 NETHERHALL GARDENS NW3

PROPOSED FIRST FLOOR

Drawn T Musson Scale 1:50 at A1

Project No./Drawing No. 8240/SK010 Rev C