TRIGRAM
PARTNERSHIP
CONSULTING STRUCTURAL ENGINEERS

36 Flask Walk, London, NW3

Subterranean Construction Method Statement, and Structural Report in Support of Planning Application.

Revision A

Consulting Engineers

Trigram Partnership
Harling House
47-51 Gt Suffolk Street
LONDON
SE1 OBS

Tel: 020 7401 8100
Fax: 020 7401 8845
Email: mail@trigrampartnership.com

Job No 4266/JF/December 2015

36 Flask Walk, London, NW6

Structural Report in Support of Planning Application

Contents

TRIGRAM PARTNERSHIP CONSULTING STRUCTURAL ENGINEERS

1. Introduction

This structural report has been prepared for the purpose of supporting the planning application for the construction of a single storey basement under no. 36 Flask Walk, NW3 1HE, and should not be used for any other purposes.

The proposed project comprises general alterations to the existing floor layout, the construction of a Third floor storey and a basement covering the entire footprint of the existing building. A large open light well in the front garden allows natural light and ventilation to the new basement.

The report is limited in scope to that which is necessary to demonstrate a suitable construction method and sequence that will ensure the structural integrity of the building, the adjoining structures, public thoroughfares and buried structures.

2. Description of 36 Flask Walk and Adjoining Properties

No. 36 Flask Walk is a three storey mid-terrace property within the Hampstead Conservation area, and is believed to have been built late 1970's together with neighbouring properties nos. 32 & 34 Flask Walk.

The building is of semi-traditional construction, having masonry walls, timber stud partitions, timber joist floors to all levels and timber roof. The floor joists span between the Party Walls to no. 34 and no. 38 Flask Walk.

The second floor has a mansard roof clad with slates. The mansard roof has been set back from the main elevations to form inboard gutters, and there is one large dormer at the front and two smaller dormers at the rear.

The ground floor is elevated above street level and under the ground floor there is an approximately 0.8 m deep unobstructed crawl space which occupies the full footprint of the property.

The property has a small patio at the rear, below which there is a communal underground car parking area.

A visual inspection suggests that the property has not been altered from its original configuration. The property, and the adjoining properties, seemed to be in sound condition, and no signs of noticeable historic movements are apparent.

The ground floor area of no. 34 provides the access and hall way to its first floor. The remaining ground floor area comprises the access ramp down to the basement car park behind nos. 32, 34 and 36 Flask Walk.

Two trial pits were excavated in order to investigate the existing foundations to the party walls.

Trial pit 1 showed the foundation to party wall 36/38 Flask Walk to consist of a corbelled brick wall resting on a concrete base. The underside of the existing foundation was found at level 101.40, i.e. approximately 2.6 m below the existing ground floor level, and protrudes 300 mm from the face of the masonry wall.

In the case of the foundation to the party wall 34/36 Flask Walk, Trial pit 2, the underside was encountered at level 101.16, which is approximately 0.8 m below the finished floor level of the communal parking area behind 36 Flask Walk. This indicates that the foundation is generally set at a constant level.

The concrete foundation was measured to be 500 mm deep and protrude 800 mm from the face of the masonry wall, and despite the geometry suggesting otherwise the foundation appeared to be unreinforced as no evidence of reinforcement bars were found when breaking an approximately 100 mm deep slot in the vertical edge of the footing.

3. Proposed Structural Works

It is proposed to extend the new basement to the boundary with the public footpath.

By extending the basement beyond the foot print of the existing building it becomes possible to include a cloakroom beneath the access steps and a good sized light well. The latter significantly improving the natural light and ventilation to the new basement.

The Structural Surface Level (SSL) for the new basement will be approximately 3.1 m below the Finished Floor Level (FFL) of the existing ground floor. Thus, the excavation for the new basement will entail a general lowering of the existing Ground Level (GL) within the crawl space of 36 Flask Walk by approximately 2.3 m.

The level of the oversite concrete under the building was assessed to be equal to the level of the road surface in front of the property.

The basement slab will be designed in reinforced concrete to accommodate the heave forces associated with the removal of an overburden on the clay strata as well as pressures arising from the assumed ground water regime.

All reinforced concrete works will be designed in accordance with the recommendations given in BS 8007 for the design of normal reinforced concrete structures for the exclusion of water, but in addition there will be a drained cavity to achieve a grade 3 level of protection against water appropriate for residential activities.

The use of the property will be retained as ‘residential’ therefore the loadings on the suspended floors will remain as existing.

4. Ground Conditions

According to British Geological Survey, sheet 256, Solid and Drift edition, the underlying soils for locality comprise an up to 30 m thick layer of Claygate Beds overlaying London Clay.

A comprehensive site specific geotechnical investigation was undertaken by Chelmer Site Investigations. The investigation involved sinking 2 no. boreholes from within the property to a depth of 10.0 m below the ground floor level. Their Factual Report, Geo-environmental Report and Basement Impact Assessment are submitted with this report.

Based on the data from their investigation the stratigraphy under 36 Flask Walk may be summarised as follows:

0.0 m - 0.8 m	BGL	Made Ground
0.8 m - 4.3 m	BGL	Re-worked Ground (Sandy Clay)
4.3 m - 5.7 m	BGL	Weathered Claygate (Silty Clay)
5.7 m - 8.8 m +	BGL	Claygate/London Clay

In the above table the Ground Level has been taken to coincide with the upper surface of the oversite concrete within the crawl space.

Similar to the situation for the existing foundations, the new foundations will be located within the Re-worked Ground strata.

Geotechnical tests demonstrated the ground to have good loadbearing characteristics, and according to the Geo-environmental Report a safe bearing pressure of 160 kN/m^2 is considered appropriate for the design of the new foundations.

The concrete mix constituents and the cover to reinforcement are to be specified in accordance with the aggressive chemical environment reported for this site, design sulphate class DS-4.

5. Hydrogeology

The records taken from the installed standpipes showed the presence of groundwater at relatively high levels. The highest of which almost coincided with the level of the underside of the new Party Wall foundations.

However, the hydrogeological investigation suggests that the water encountered is water perched in localised silt pockets within the Re-worked Ground strata, and there is no evidence of significant water flow across the site. Thus, it is anticipated that any adverse impact on the groundwater flow from the construction of the basement will be minimal.

In accordance with the ‘worst credible’ approach of current geotechnical standards the new structure will be designed in the short-term condition for a groundwater level equal

to the ground level, and in the long-term condition for a groundwater level equal to 0.5 m below the ground level.

There are no known water courses in close proximity to this site.

6. Ground Stability

There are no steep areas and the proposed basement excavation raise no concern in relation to the overall stability of the 4.5 degree slope across the site.

Owing to the re-worked nature of the ground, full ground support will be installed as the excavations for the proposed basement are progressed.

In general normal precautions in supporting the ground around the basement should be taken, though when undercutting for the spreader footings in the Re-worked Ground special provisions need to be put in place to ensure the stability of the roof of these excavations at all time.

7. Basement Construction

It is intended that the structural form of the proposed basement will comprise reinforced concrete underpins to the party walls. The width of the new mass concrete footings will match the width of the existing. The proposed design of the foundations ensures that the loadbearing capacity of the ground is not exceeded in either the permanent or the temporary condition and that the calculated settlements are acceptably small not to cause noticeable damage to the neighbouring properties (see Basement Impact Assessment for details).

The findings from the geotechnical investigation indicate that it is likely that some groundwater control will be required during the basement construction works. It is probable that only isolated pockets of water will be encountered and that sump pumping is sufficient, but should water ingress of a more persistent nature occur a specialist dewatering contractor will have to provide advice on the best dewatering system to implement.

Temporary works will be required during underpinning and construction of the RC walls, and will be maintained until the necessary permanent supports have been established, and all vertical and horizontal loads applied can be safely transferred to the ground. This includes temporary trench sheeting and shoring for supporting the footpath and the road.

8. Underpinning

A 1-in-5 underpin sequence will be adopted to minimise the risk of induced settlement.

Some cracking may nevertheless occur, but is assessed to be category 0 – 1 (BRE categories) provided good workmanship, so would be cosmetic and repairable using normal decorating techniques. Such repairs would be the responsibility of the Building Owner, and be covered by a Party Wall Award.

9. Trees

According to the guidelines by NHBC the new basement will be located within the zone of influence of the nearest trees. The nearest larger tree is located on the opposite side of Flask Walk at a distance of approximately 9 m.

The new foundations will all be founded within soils characterised as having medium volume change potential and will be sufficiently deep so as not to be affected by the trees and seasonal moisture movements.

10. Buried Services and Tunnels

Tunnels for the Northern Line are known to pass close to the west of the site, though at a considerable depth. London Underground will have to confirm that the proposed basement is outside any of their exclusion zones prior to commencing construction.

No detailed information is available regarding existing and buried services, such as drainage runs, gas and electricity services, and a survey will have to be carried out prior to commencing construction.

As noted above, services in the public footpath and highway will be protected from ground movements. Those serving this property will be modified as part of these works.

11. Monitoring

A suitable movement monitoring scheme will be designed and implemented as agreed with the Party Wall Surveyors representing the party walls on either side.

Potential building movements will be closely monitored during the execution of the works, and continue until all underpinning works within the existing basement have completed, the new basement walls are constructed and restrained and that all new permanent steel works supporting the front elevation have been installed and fully operating.

TRIGRAM PARTNERSHIP CONSULTING STRUCTURAL ENGINEERS

12. Indicative Construction Sequence for the Works

A proposed sequence for the construction of the works is appended.

The Main Contractor will be responsible for defining the detailed construction sequence, and for the design of all temporary works. The design and method statements will be vetted by the Design Team prior to implementation.

13. Conclusion

By adopting these measures, the proposed basement extension can be constructed with no detrimental effect to the structural integrity or stability of the house or the existing structures adjoining or adjacent to the house.

This Report was prepared by:

Dr Jesper Friis, BSc, MSc, PhD

Bruce Huxtable, CEng, MIStructE, MICE, MSt, BSc (Hons)

December 2015

Appendix A - Indicative Construction Sequence

- Install monitoring targets in accordance with the requirements of the Party Wall Award.
- Install waling beams, props and bracing to provide lateral support to perimeter walls at Ground floor level (see drawingTW.01).
- Remove the existing ground floor joists to facilitate excavation for new basement.
- Install a row of Temporary Works piles with plunge columns on either side of the front façade.
- Place two no. carrier beams on top of the plunge columns and parallel with the front facade.
- Carefully cut out masonry and install needle beams between carriers. Dry pack joints between existing masonry wall and needles. When completed the foundation of the front façade can be removed.
- Progress with underpinning in accordance with standard detail D.82 following a 1 in 5 of sequence.
- First underpin the rear wall.
- Working from existing ground level excavate a 1.0 m wide trench between the party walls. Install trench shoring as the excavation progresses.
- Carefully cut away 1.0 m wide section of existing foundations, complete trench excavation and cast new concrete bases under party walls.
- Fix reinforcement, erect shutters and cast RC wall stems under party walls.
- Strike shutters when concrete has gained sufficient strength and dry pack joint between existing masonry wall and new RC wall.
- Cast 1.0 m wide strip of basement slab within trench to connect wall stems and form a U-shaped monolithic RC structure.
- Repeat this this procedure until full length of both party walls have been underpinned. The temporary trench shoring installation is to be modified in accordance with progress.
- At front of building construct the retaining RC wall against the trench sheet employed to temporarily retain the ground under the pavement.

- Complete installation of the steel box frame to support front façade over.
- Remove Temporary Works needles, break down piles and make good masonry wall and RC slab.
- Complete the installation of all permanent steel works and timber joisted ground floor prior to removing temporary diaphragm.

Appendix B - Designer's Risk Assessment Summary

General

The works involve excavations below an existing building.

Particular Residual Risks

Full ground support will be necessary during all excavations in the reworked soils.

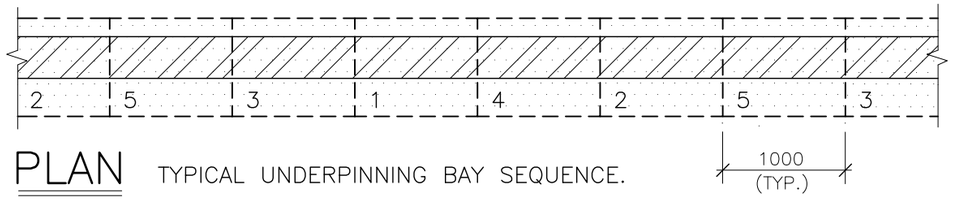
The basement excavation will extend beyond the front façade. The façade will be supported on temporary works propping, using piles. The piles must be designed to provide vertical support and should be braced as necessary for lateral stability. The piles/columns are to be designed as if out of plumb, but within the specified 1 in 75 verticality tolerance.

TRIGRAM PARTNERSHIP CONSULTING STRUCTURAL ENGINEERS

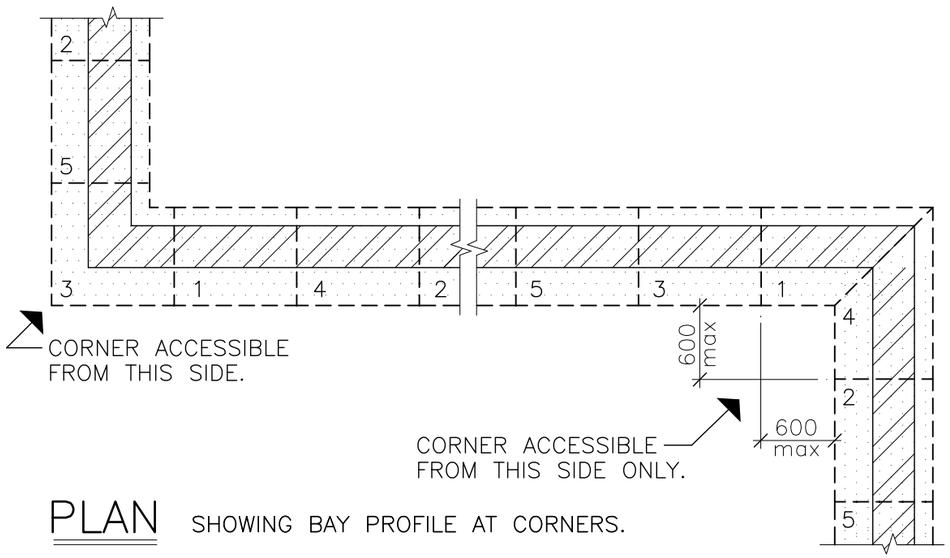
Appendix C - Underpinning Specification

The general specification will be in accordance with the Standard Detail D82, overleaf.

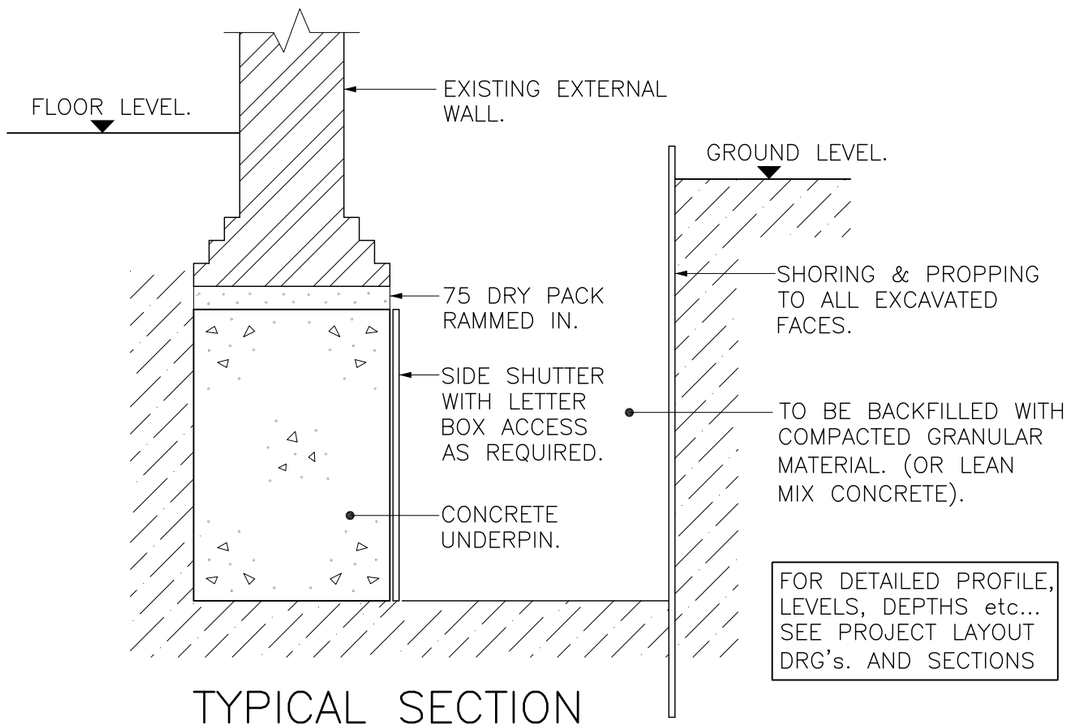
The main contractor will produce a layout drawing defining the bays and sequence, to take account of the particular site features. Their proposal will be reviewed in principle by the design team.



PLAN TYPICAL UNDERPINNING BAY SEQUENCE.



PLAN SHOWING BAY PROFILE AT CORNERS.



TYPICAL SECTION

GENERAL NOTES.

(REF. CIRIA REPORT 111: STRUCTURAL RENOVATION OF TRADITIONAL BUILDINGS).

A. THE CONTRACTOR IS TO SUBMIT FOR APPROVAL THEIR LAYOUT PLAN SHOWING THE PROPOSED PIN LAYOUT AND SEQUENCE.

B. HEALTH AND SAFETY FILE / RECORD DRAWINGS: COLLATE AND SUBMIT A FULL SET OF RECORDS FOR INCLUSION IN HEALTH AND SAFETY FILE.
CONTENT FOR EACH UNDERPINNING BLOCK RECORD: DATE OF CASTING; DEPTH OF BASE BELOW DATUM; LENGTH; WIDTH EITHER SIDE OF WALL; DETAILS OF DRAINS AND SERVICES BUILT INTO BLOCK AND DIAMETER OF SLEEVING. (LATEST DAY FOR SUBMISSION: 14 DAYS AFTER COMPLETION.)

C. UNDERPINNING (EXCAVATION, CONCRETING & DRY PACKING) IS TO BE CARRIED OUT IN THE NUMERICAL SEQUENCE SHOWN i.e. BAY(S) 1 FOLLOWED BY BAY(S) 2 etc.

D. NO UNDERPINNING BAY(S) IS TO BE STARTED UNTIL THE PREVIOUS BAY IN THE NUMERICAL SEQUENCE HAS BEEN COMPLETED.

CONSTRUCTION SEQUENCE.

1. EXCAVATE TO UNDERSIDE OF PROPOSED UNDERPINNING BAY INSTALLING APPROPRIATE SHORING AS NECESSARY TO FORM BAY PROFILE WHILE KEEPING THE WORKS FREE FROM GROUND WATER.
2. SET UP SIDE FORMWORK AS REQUIRED.
3. CAST CONCRETE FOR BAY UP TO 75mm BELOW UNDERSIDE OF EXISTING FOUNDATION. (CONCRETE GRADE FND2 DESIGNATED MIX TO B.S.8500.)
4. ALLOW 2 DAYS FOR CONCRETE TO SET.
5. INSERT DRY PACK BETWEEN NEW CONCRETE AND EXISTING FOUNDATION. (DRY PACK MIX PROPORTIONS BY WEIGHT - 1:3 CEMENT/SAND MIXED TO DRY CONSISTENCY)
6. ALLOW ONE DAY FOR DRY PACK TO SET.
7. CARRY OUT STEPS 1 to 6 inc. ABOVE FOR ALL OTHER NUMBERED BAYS (IN NUMERICAL SEQUENCE) UNTIL FULL LENGTH OF WALL IS UNDERPINNED.
8. REMOVE SIDE SHUTTER.
9. BACKFILL AND REMOVE SHORING AS REQUIRED.

REV	DATE	DESCRIPTION	BY

DRG STATUS PLANNING

ARCHITECT
XUL ARCHITECTURE

JOB TITLE
STANDARD DETAIL

DRG TITLE
TYPICAL UNDERPINNING DETAIL.

TRIGRAM PARTNERSHIP
CONSULTING STRUCTURAL ENGINEERS
HARLING HOUSE
47-51 GREAT SUFFOLK ST
TEL: 020 7401 8100
FAX: 020 7401 8845

JOB NO	DRG NO	REV	SCALE	
4266	D.82	/	NTS	
			DRN _	DATE _

Appendix D - Temporary Works Specification

The main contractor will be responsible for the design of all temporary works supports for vertical loads; lateral soil pressures; and for the overall stability of the various structures.

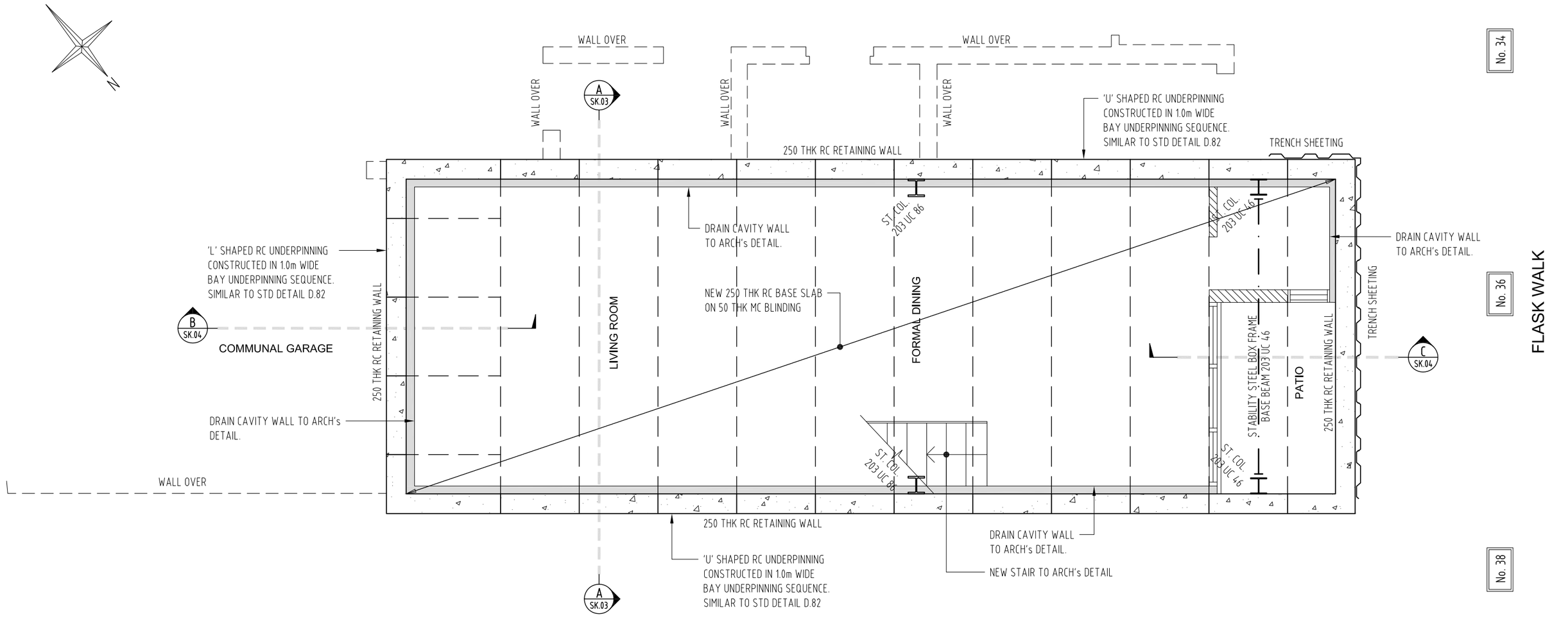
However, drawing TW.01 provides a suggested method, which the contractor should adopt and detail design.

The design loadings will be agreed with Trigram Partnership LLP, and the proposed methodology and sequence of works must be vetted by the design team.

TRIGRAM PARTNERSHIP CONSULTING STRUCTURAL ENGINEERS

Appendix E - Concept Drawings

Proposed structural works	-	Plans SK.01 & SK.02
	-	Sections SK.03 & SK.04
Temporary works	-	Plan TW.01



PROPOSED BASEMENT FLOOR PLAN

SCALE: 1:50

LEGEND:

- EXISTING WALL
- NEW NON LOAD BEARING PARTITION
- NEW RC WALL

NOTE 'A'

FLOOR FINISHES, INSULATIONS, DPM & ETC.... TO ARCHITECT'S SPECIFICATIONS AND DETAILS

NOTE 'B'

ALL NON LOAD BEARING STUD WALLS SHOWN INDICATIVELY. FOR SETTING OUT REFER TO ARCHITECT'S DETAILS

NOTE 'B' - TEMPORARY WORKS

THE CONTRACTOR IS TO BE RESPONSIBLE FOR ALL TEMPORARY SUPPORT DURING THE EXECUTION OF THE WORKS, AND TO SUBMIT HIS OWN METHOD STATEMENT FOR THE TEMPORARY AND PERMANENT CONSTRUCTION. THIS INFORMATION IS TO BE SUBMITTED TO TRIGRAM PARTNERSHIP FOR COMMENT.

SCALE BAR
(1:50 @ A3)
0 1 2 3 4 5

PLANNING

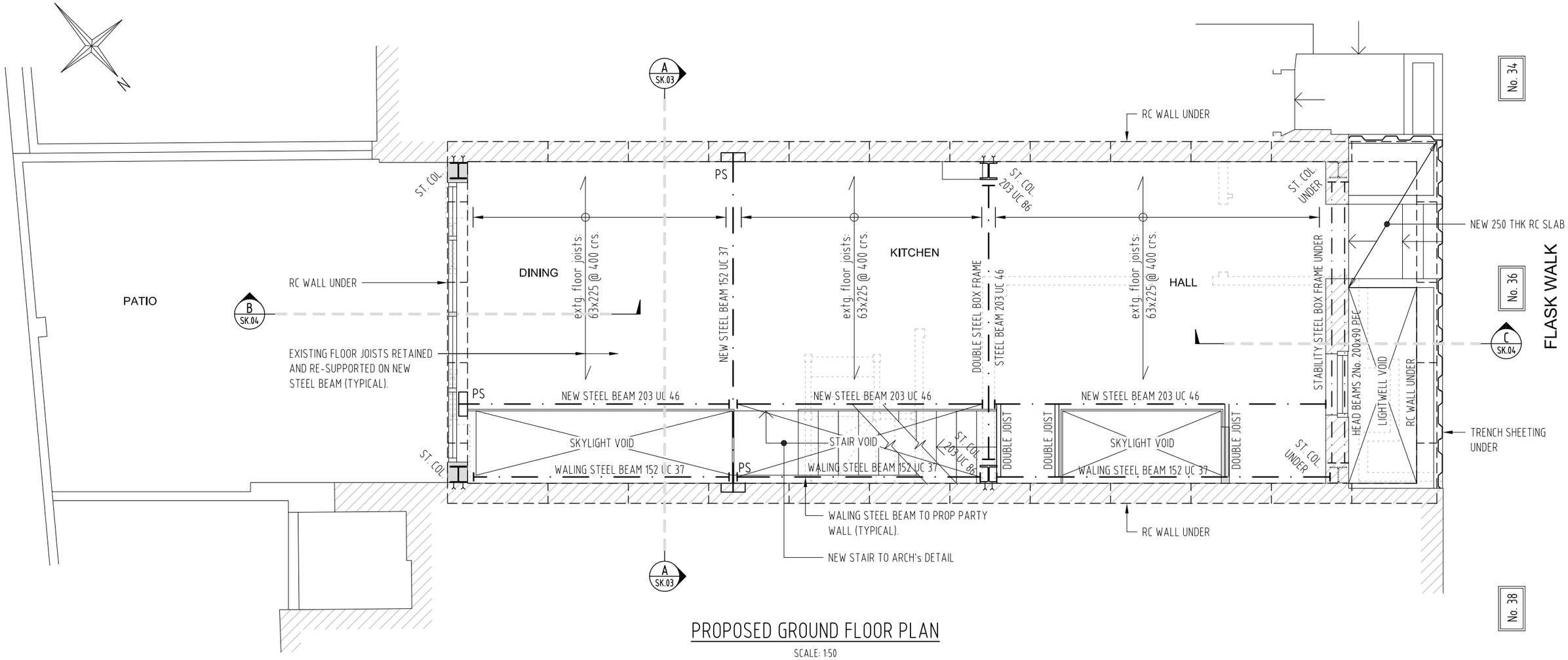
STANDARD NOTES

1. GENERAL:
1.1 NO DIMENSIONS ARE TO BE SCALED FROM THIS DRAWING, ALL DIMENSIONS ARE TO BE ESTABLISHED ON SITE.
1.2 THIS DRAWING IS TO BE READ WITH ALL RELEVANT ARCHITECTS AND SERVICES ENGINEERS DRAWINGS AND SPECIFICATIONS FOR CONSTRUCTION DETAIL, PLUMBING, DRAINAGE, ELECTRICAL WORK, HEATING WORK, INSULATION, DAMP PROOF DETAILS, VENTILATION, FINISHES, JOINERY ETC.
1.3 THE CONTRACTOR IS TO NOTIFY THE CONTRACT ADMINISTRATION (C.A.) OF ANY DISCREPANCIES BETWEEN THIS DRAWING AND SITE CONDITIONS BEFORE IMPLEMENTING THE WORK.
1.4 ANY TEMPORARY WORKS NECESSARY SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

	REVISION	DATE
A	DESIGN DEVELOPMENT	26/11/2015

DRG TITLE: PROPOSED STRUCTURAL WORKS BASEMENT FLOOR PLAN
JOB TITLE: 36 FLASK WALK LONDON, NW3
ARCHITECT: XUL ARCHITECTURE
JOB NO: 4266 | DRG NO: SK.01 | REV: A | SCALE: 1:50 @ A3 | DRN: IP | DATE: 11/2015

TRIGRAM PARTNERSHIP
CONSULTING STRUCTURAL ENGINEERS
HARLING HOUSE
47-51 GREAT SUFFOLK ST.
LONDON SE1 0BS
TEL: 020-7401 8100
FAX: 020-7401 8845



PROPOSED GROUND FLOOR PLAN

SCALE: 1:50

LEGEND:

- EXISTING WALL
- NEW NON LOAD BEARING PARTITION
- LOAD BEARING WALL UNDER
- WALL TO BE DEMOLISHED
- lower case text– denotes existing structure/construction
- UPPER CASE TEXT – DENOTES PROPOSED STRUCTURAL WORKS

NOTE 'A'

FLOOR FINISHES, INSULATIONS, DPM & ETC.... TO ARCHITECT'S SPECIFICATIONS AND DETAILS

NOTE 'B'

ALL NON LOAD BEARING STUD WALLS SHOWN INDICATIVELY. FOR SETTING OUT REFER TO ARCHITECT'S DETAILS

NOTE 'B' - TEMPORARY WORKS

THE CONTRACTOR IS TO BE RESPONSIBLE FOR ALL TEMPORARY SUPPORT DURING THE EXECUTION OF THE WORKS, AND TO SUBMIT HIS OWN METHOD STATEMENT FOR THE TEMPORARY AND PERMANENT CONSTRUCTION. THIS INFORMATION IS TO BE SUBMITTED TO TRIGRAM PARTNERSHIP FOR COMMENT.

SCALE BAR (1:50 @ A3) 0 1 2 3 4 5

PLANNING

STANDARD NOTES

1. GENERAL:
1.1 NO DIMENSIONS ARE TO BE SCALED FROM THIS DRAWING, ALL DIMENSIONS ARE TO BE ESTABLISHED ON SITE.
1.2 THIS DRAWING IS TO BE READ WITH ALL RELEVANT ARCHITECTS AND SERVICES ENGINEERS DRAWINGS AND SPECIFICATIONS FOR CONSTRUCTION DETAIL, PLUMBING, DRAINAGE, ELECTRICAL WORK, HEATING WORK, INSULATION, DAMP PROOF DETAILS, VENTILATION, FINISHES, JOINERY ETC.
1.3 THE CONTRACTOR IS TO NOTIFY THE CONTRACT ADMINISTRATION (C.A.) OF ANY DISCREPANCIES BETWEEN THIS DRAWING AND SITE CONDITIONS BEFORE IMPLEMENTING THE WORK.
1.4 ANY TEMPORARY WORKS NECESSARY SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

	REVISION	DATE
A	DESIGN DEVELOPMENT	26/11/2015

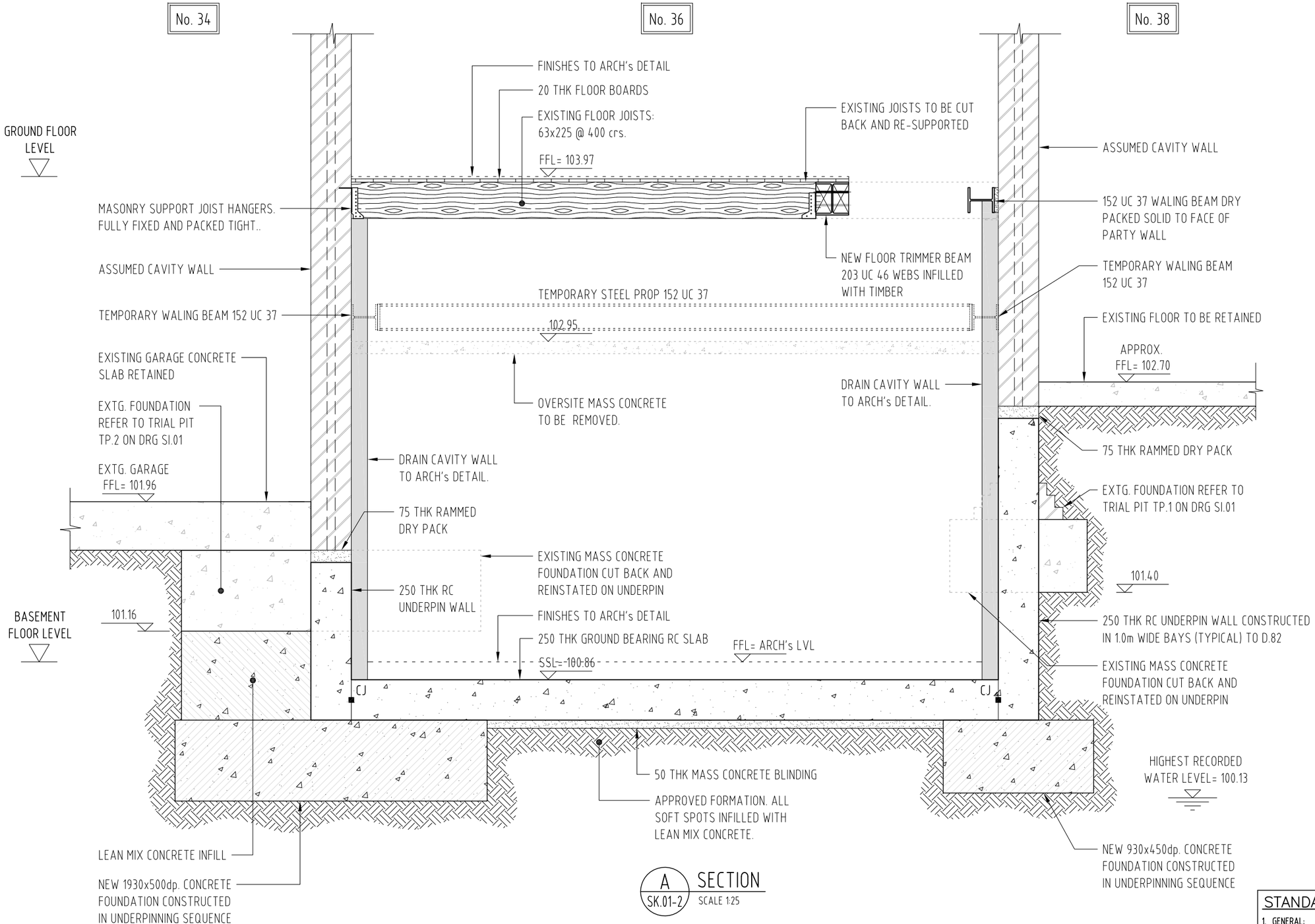
DRG TITLE: PROPOSED STRUCTURAL WORKS GROUND FLOOR PLAN

JOB TITLE: 36 FLASK WALK LONDON, NW3

ARCHITECT: XUL ARCHITECTURE

JOB NO	DRG NO	REV	SCALE	DRN	DATE
4266	SK.02	A	1:50 @ A3	IP	11/2015

TRIGRAM PARTNERSHIP
CONSULTING STRUCTURAL ENGINEERS
HARLING HOUSE
47–51 GREAT SUFFOLK ST.
LONDON SE1 0BS
TEL: 020–7401 8100
FAX: 020–7401 8845



A SK.01-2 SECTION
SCALE 1:25

SCALE BAR (1:25 @ A3)
0 1 2 3 4 5

PLANNING

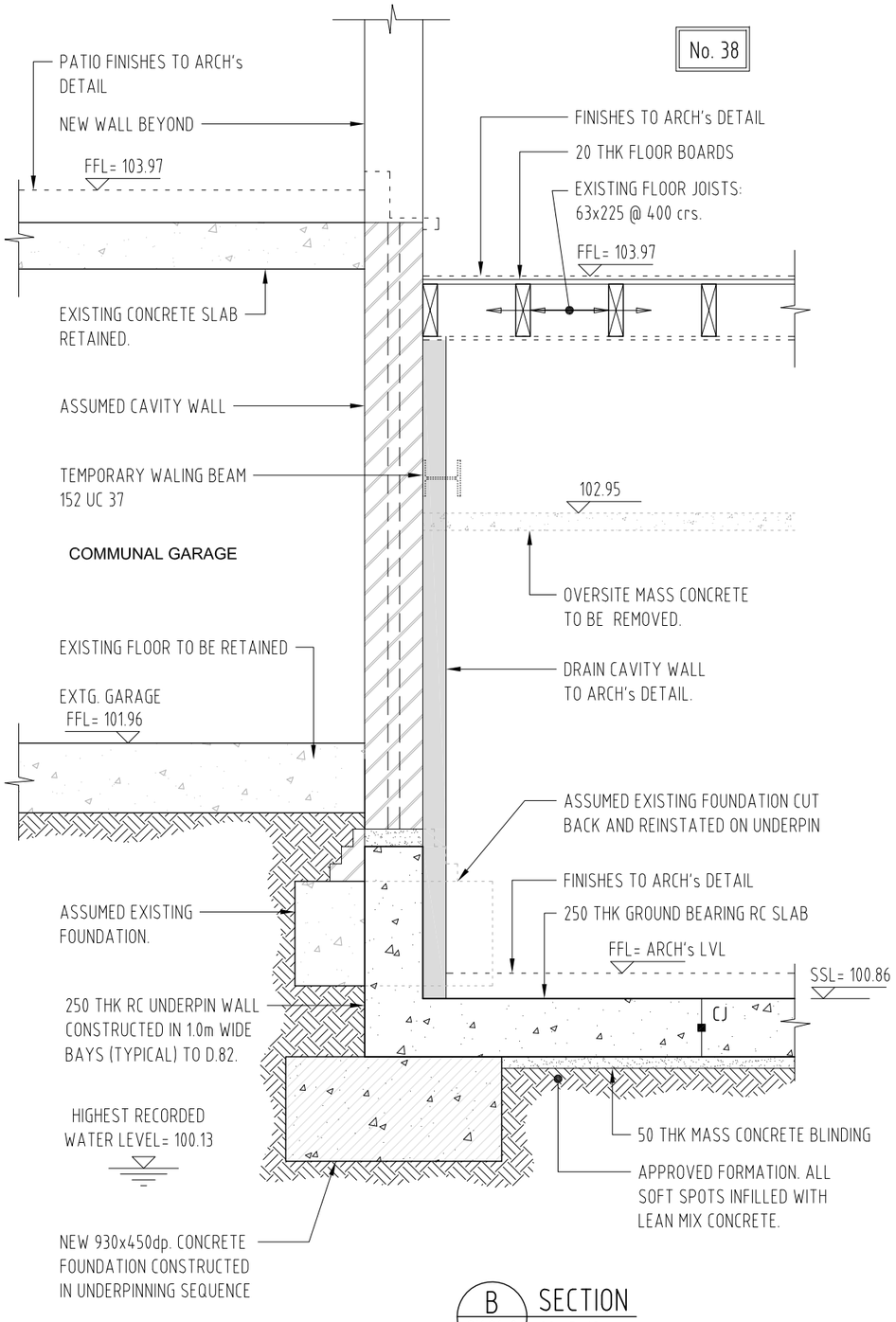
STANDARD NOTES

1. GENERAL:
1.1 NO DIMENSIONS ARE TO BE SCALED FROM THIS DRAWING, ALL DIMENSIONS ARE TO BE ESTABLISHED ON SITE.
1.2 THIS DRAWING IS TO BE READ WITH ALL RELEVANT ARCHITECTS AND SERVICES ENGINEERS DRAWINGS AND SPECIFICATIONS FOR CONSTRUCTION DETAIL, PLUMBING, DRAINAGE, ELECTRICAL WORK, HEATING WORK, INSULATION, DAMP PROOF DETAILS, VENTILATION, FINISHES, JOINERY ETC.
1.3 THE CONTRACTOR IS TO NOTIFY THE CONTRACT ADMINISTRATION (C.A.) OF ANY DISCREPANCIES BETWEEN THIS DRAWING AND SITE CONDITIONS BEFORE IMPLEMENTING THE WORK.
1.4 ANY TEMPORARY WORKS NECESSARY SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

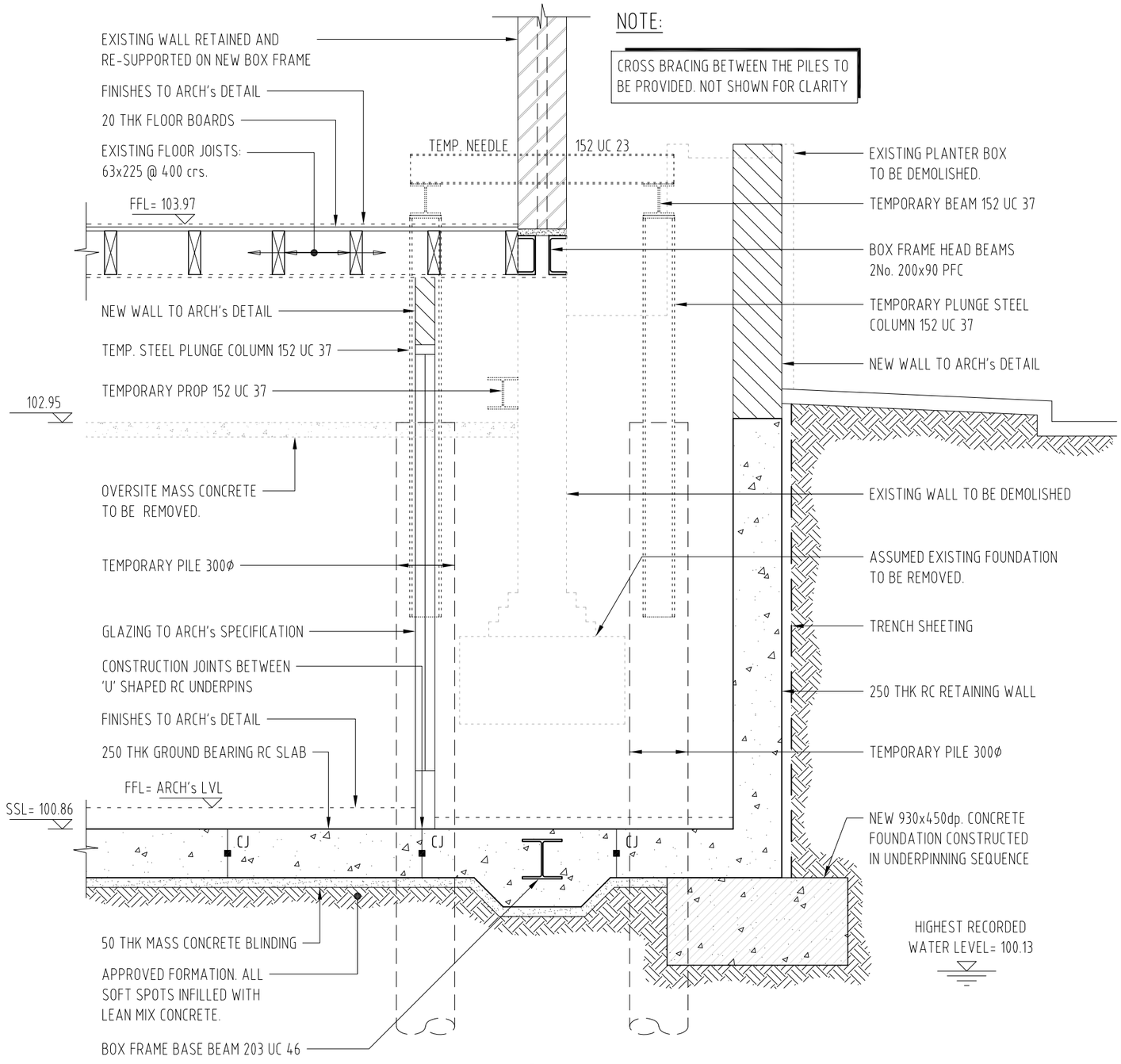
	REVISION	DATE
-	-	-

DRG TITLE: PROPOSED STRUCTURAL WORKS SECTION A–A
JOB TITLE: 36 FLASK WALK LONDON, NW3
ARCHITECT: XUL ARCHITECTURE
JOB NO: 4266
DRG NO: SK.03
REV: /
SCALE: 1:50 @ A3
DRN: IP
DATE: 11/2015

TRIGRAM PARTNERSHIP
CONSULTING STRUCTURAL ENGINEERS
HARLING HOUSE
47–51 GREAT SUFFOLK ST.
LONDON SE1 0BS
TEL: 020–7401 8100
FAX: 020–7401 8845



B SK.01-2 SECTION
SCALE 1:25



C SK.01-2 SECTION
SCALE 1:25

SCALE BAR
(1:25 @ A3)
0 1 2 3 4 5

PLANNING

STANDARD NOTES

1. GENERAL:
1.1 NO DIMENSIONS ARE TO BE SCALED FROM THIS DRAWING, ALL DIMENSIONS ARE TO BE ESTABLISHED ON SITE.
1.2 THIS DRAWING IS TO BE READ WITH ALL RELEVANT ARCHITECTS AND SERVICES ENGINEERS DRAWINGS AND SPECIFICATIONS FOR CONSTRUCTION DETAIL, PLUMBING, DRAINAGE, ELECTRICAL WORK, HEATING WORK, INSULATION, DAMP PROOF DETAILS, VENTILATION, FINISHES, JOINERY ETC.
1.3 THE CONTRACTOR IS TO NOTIFY THE CONTRACT ADMINISTRATION (C.A.) OF ANY DISCREPANCIES BETWEEN THIS DRAWING AND SITE CONDITIONS BEFORE IMPLEMENTING THE WORK.
1.4 ANY TEMPORARY WORKS NECESSARY SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

REVISION	DATE

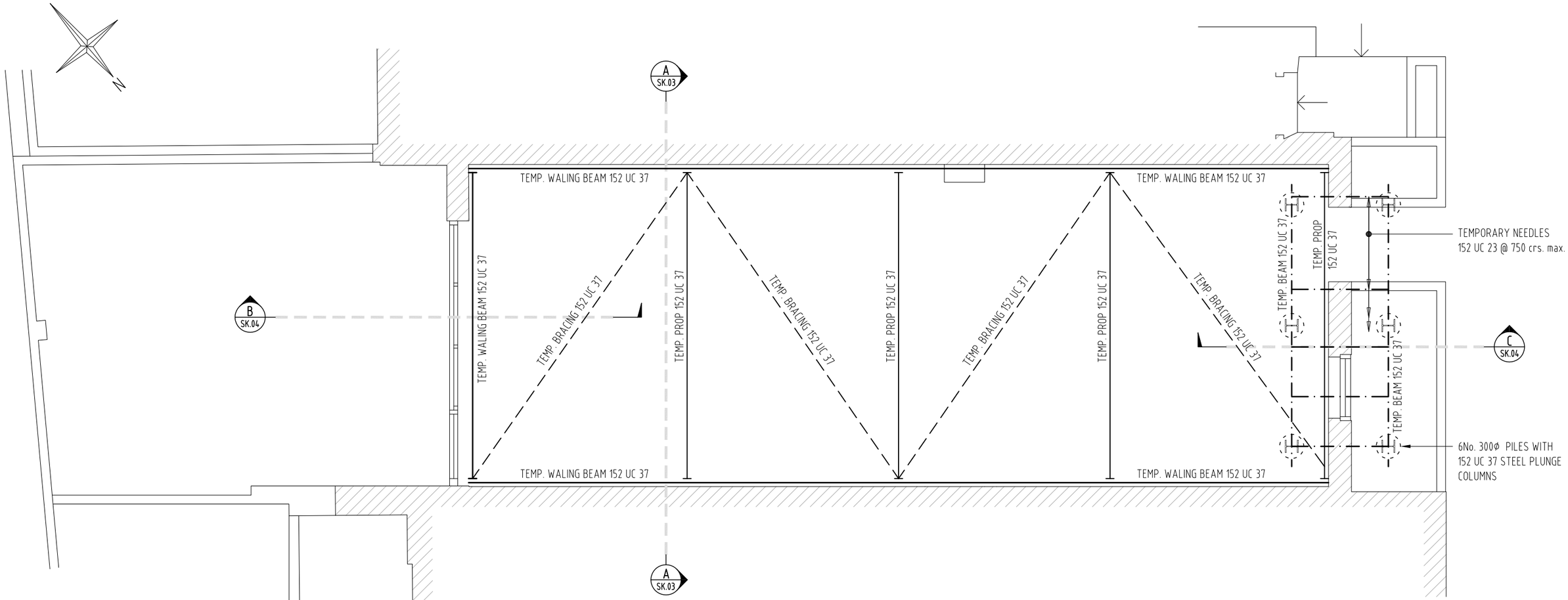
DRG TITLE: PROPOSED STRUCTURAL WORKS SECTION B–B & C–C

JOB TITLE: 36 FLASK WALK LONDON, NW3

ARCHITECT: XUL ARCHITECTURE

JOB NO	DRG NO	REV	SCALE	DRN	DATE
4266	SK.04	/	1:50 @ A3	IP	11/2015

TRIGRAM PARTNERSHIP
CONSULTING STRUCTURAL ENGINEERS
HARLING HOUSE
47–51 GREAT SUFFOLK ST.
LONDON SE1 0BS
TEL: 020–7401 8100
FAX: 020–7401 8845



INDICATIVE CONSTRUCTION SEQUENCE

- INSTALL MONITORING TARGETS IN ACCORDANCE WITH THE REQUIREMENTS OF THE PARTY WALL AWARD.
- INSTALL WALING BEAMS, PROPS AND BRACING TO REPLACE THE RESTRAINING EFFECT AND DIAPHRAGM ACTION OF THE GROUND FLOOR.
- REMOVE THE EXISTING GROUND FLOOR JOISTS TO FACILITATE EXCAVATION FOR NEW BASEMENT.
- INSTALL TWO ROWS OF TEMPORARY WORKS PILES WITH PLUNGE COLUMNS, ONE ROW ON EITHER SIDE OF THE FRONT FACADE.
- POSITION STEEL CARRIER BEAMS ON TOP OF THE TEMPORARY PLUNGE COLUMNS AND PARALLEL WITH THE FRONT FACADE.
- NEEDLE THROUGH THE EXISTING FRONT FACADE WALL. SUPPORT NEEDLES ON CARRIER BEAMS, AND DRY PACK ALLOWING THE EXISTING FOUNDATIONS UNDER THE FRONT FACADE WALL TO BE REMOVED.
- PROGRESS WITH UNDERPINNING IN ACCORDANCE WITH STANDARD DETAIL D.82 FOLLOWING A 1 IN 5 SEQUENCE.
- UNDERPIN REAR WALL.
- WORKING FROM EXISTING GROUND LEVEL EXCAVATE A 1.0 M WIDE TRENCH BETWEEN THE TWO PARTY WALLS. INSTALL FULL SUPPORT, TRENCH SHORING, AS THE EXCAVATION PROGRESS.
- CAST NEW CONCRETE BASES FOR THE PARTY WALLS.
- FIX REINFORCEMENT, ERECT SHUTTERS AND CAST WALL STEMS UNDER OPPOSITE PARTY WALLS.
- STRIKE SHUTTERS WHEN CONCRETE HAS GAINED SUFFICIENT STRENGTH, AND DRY PACK.
- CAST 1.0 M WIDE STRIP OF BASEMENT SLAB TO FORM A MONOLITHIC U-SHAPED RC STRIP.
- REPEAT THE ABOVE PROCEDURE UNTIL FULL LENGTH OF BOTH PARTY WALLS HAVE BEEN UNDERPINNED. MODIFY TEMPORARY TRENCH SHORING INSTALLATIONS IN ACCORDANCE WITH PROGRESS.
- AT FRONT OF BUILDING CONSTRUCT THE RETAINING RC WALL AGAINST THE TRENCH SHEETS INSTALLED AS TEMPORARY WORKS TO RETAIN THE GROUND UNDER THE PAVEMENT.
- COMPLETE INSTALLATION OF STEEL BOX FRAME TO SUPPORT FRONT FACADE WALL.
- REMOVE TEMPORARY WORKS NEEDLES, BREAK DOWN PILES AND MAKE GOOD FACADE WALL AND RC SLAB.

TEMPORARY WORKS - GROUND FLOOR PLAN

SCALE: 1:50

SCALE BAR
(1:50 @ A3)

0 1 2 3 4 5

PLANNING

STANDARD NOTES

1. GENERAL:
1.1 NO DIMENSIONS ARE TO BE SCALED FROM THIS DRAWING, ALL DIMENSIONS ARE TO BE ESTABLISHED ON SITE.
1.2 THIS DRAWING IS TO BE READ WITH ALL RELEVANT ARCHITECTS AND SERVICES ENGINEERS DRAWINGS AND SPECIFICATIONS FOR CONSTRUCTION DETAIL, PLUMBING, DRAINAGE, ELECTRICAL WORK, HEATING WORK, INSULATION, DAMP PROOF DETAILS, VENTILATION, FINISHES, JOINERY ETC.
1.3 THE CONTRACTOR IS TO NOTIFY THE CONTRACT ADMINISTRATION (C.A.) OF ANY DISCREPANCIES BETWEEN THIS DRAWING AND SITE CONDITIONS BEFORE IMPLEMENTING THE WORK.
1.4 ANY TEMPORARY WORKS NECESSARY SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

	REVISION	DATE
-	-	-

DRG TITLE: TEMPORARY WORKS GROUND FLOOR PLAN

JOB TITLE: 36 FLASK WALK LONDON, NW3

ARCHITECT: XUL ARCHITECTURE

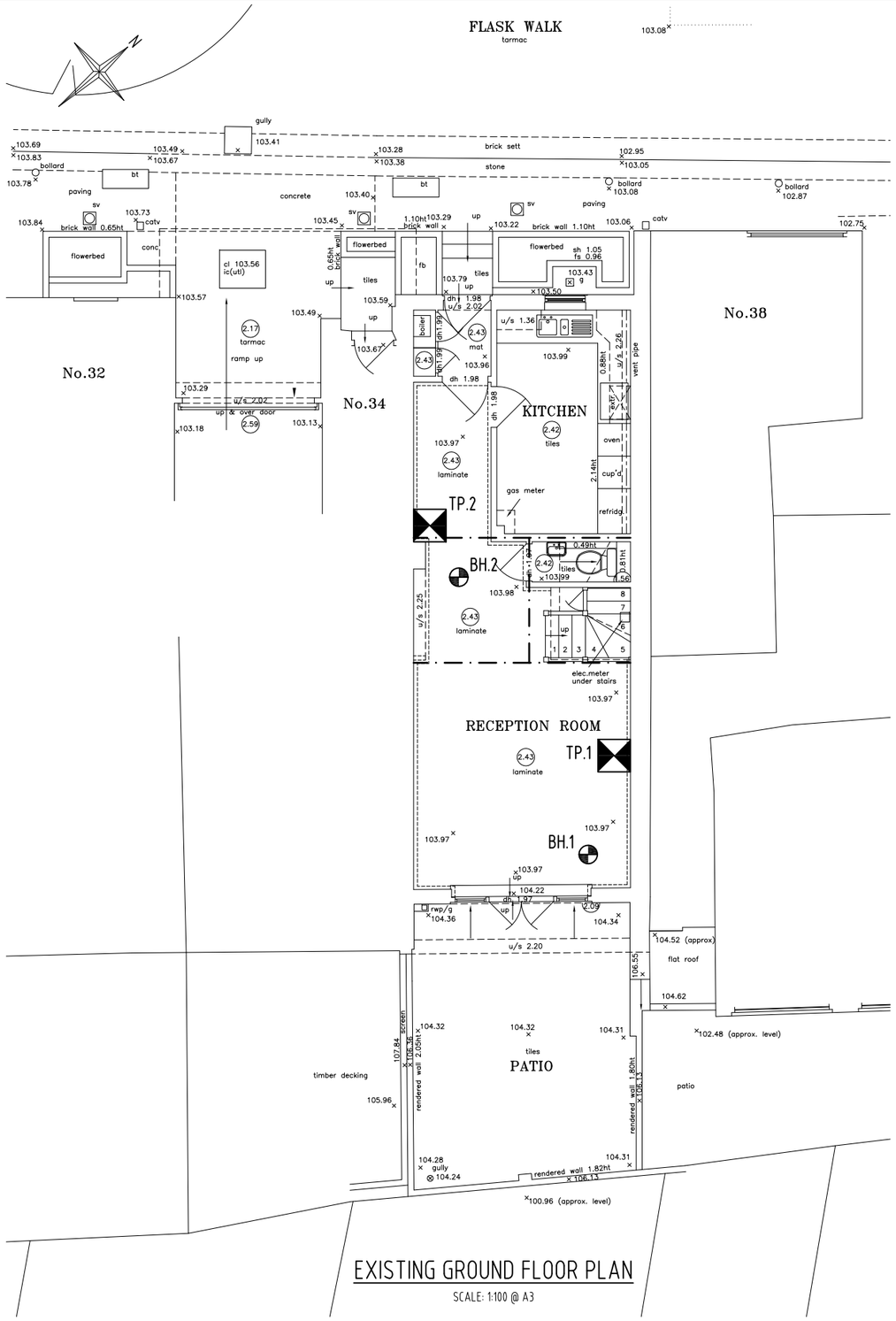
JOB NO: 4266 | DRG NO: TW.01 | REV: / | SCALE: 1:50 @ A3 | DRN: IP | DATE: 11/2015

TRIGRAM PARTNERSHIP
CONSULTING STRUCTURAL ENGINEERS
HARLING HOUSE
47-51 GREAT SUFFOLK ST.
LONDON SE1 0BS
TEL: 020-7401 8100
FAX: 020-7401 8845

TRIGRAM PARTNERSHIP CONSULTING STRUCTURAL ENGINEERS

Appendix F - Structural Exposures, Trial Pits

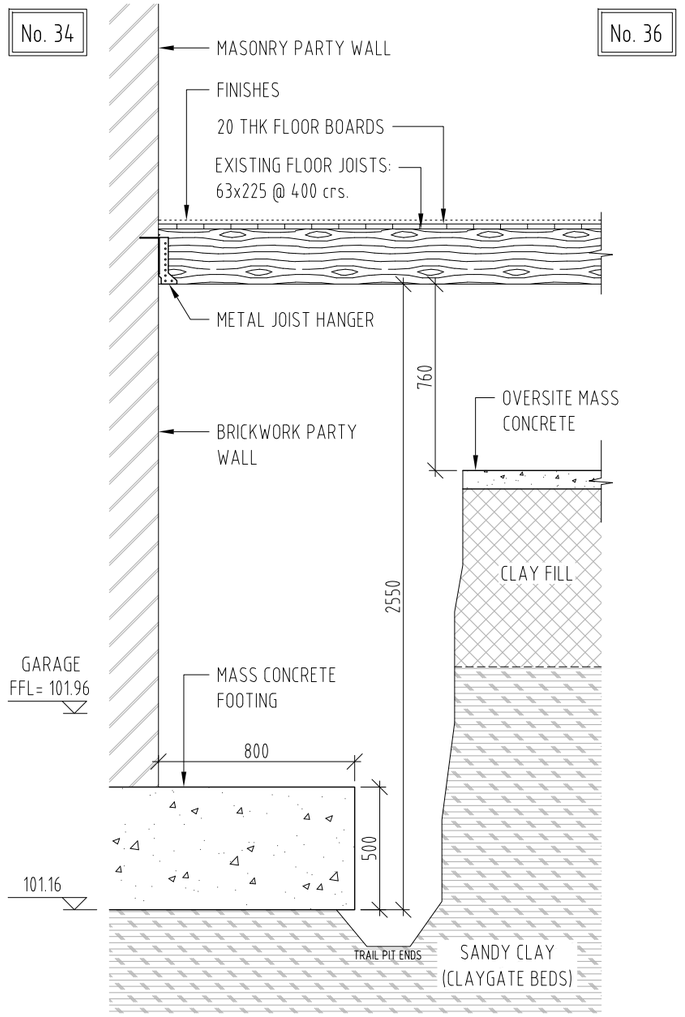
Site Investigation Plan and Sections - SI.01 B



EXISTING GROUND FLOOR PLAN

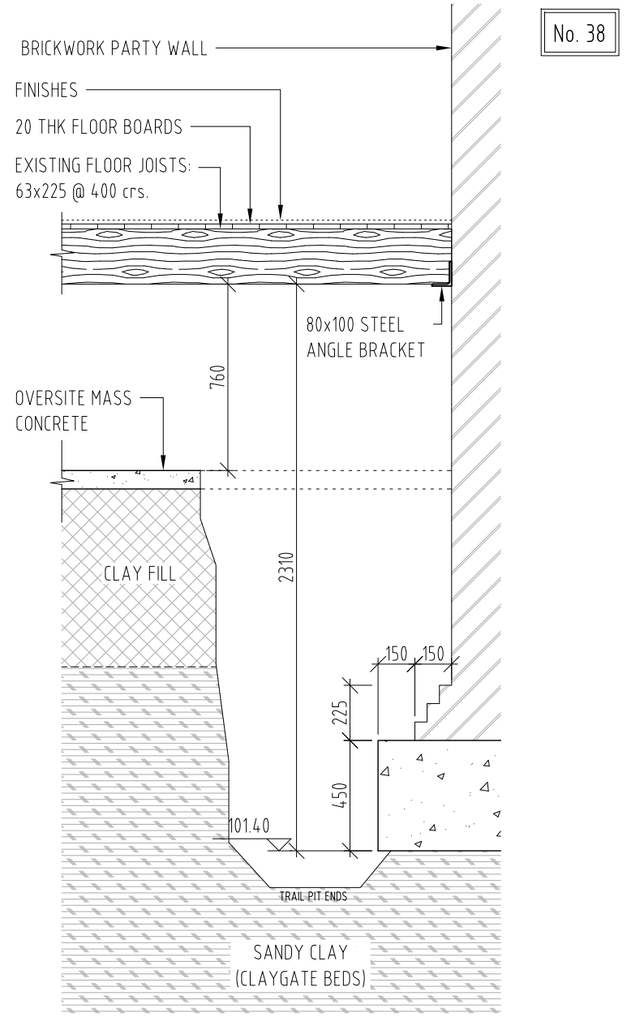
SCALE: 1:100 @ A3

SCALE BAR (1:100 @ A3) 0 1 2 3 4 5



TRIAL PIT 2

SCALE 1:50 @ A3



TRIAL PIT 1

SCALE 1:50 @ A3

SCALE BAR (1:25 @ A3) 0 1 2 3 4 5

	REVISION	DATE
A	TRAIL PIT SECTIONS ADDED.	03/12/14
B	BORE HOLE LOCATIONS ADDED.	16/01/15

DRG TITLE: SITE INVESTIGATIONS. EXISTING GROUND FLOOR PLAN & TP SECTIONS

JOB TITLE: 36 FLASK WALK LONDON, NW3

ARCHITECT: XUL ARCHITECTURE

JOB NO: 4266 | DRG NO: SI.01 | REV: B | SCALE: 1:50 @ A3 | DRN: IP | DATE: 11/2014

TRIGRAM PARTNERSHIP
CONSULTING STRUCTURAL ENGINEERS
HARLING HOUSE
47-51 GREAT SUFFOLK ST.
LONDON SE1 OBS
TEL: 020-7401 8100
FAX: 020-7401 8845