GENERAL

1. These drawings should be read in conjunction with all Engineers , Architectural and other Consultants' drawings and specifications and with such other written instructions as may be issued during the course of contract. All discrepancies shall be referred to the Contract Administrator for decision before proceeding with the work.
2. All dimensions are in millimeters (mm) unless noted otherwise.All levels are expressed in meters.
3. All setting out, levels and visible finishes to architects details. All dimensions relevant to the setting out and off - site work shall be verified by the contractor before construction and fabrication is commenced. The Engineer's drawings shall not be scaled.
4. Any discrepancies between all working drawings, specifications and schedules of all disciplines to be immediately notified to Green Code Engineering for clarification/correction prior to construction of relevant structure.
5. Workmanship and materials are to be in accordance with the relevant current British Standard Codes of Practice and including all amendments, and the local statutory Authorities requirements, except where varied by the contract documents.
6. For location of service penetrations through structure see Service Engineer's drawings.
7. During construction the Contractor shall be responsible for maintaining the structure and adjoining structures in a stable condition and ensuring no part shall be overstressed under construction activities.
8. During construction the Contractor shall be responsible for maintaining the structure and adjoining structures in a stable condition and ensuring no part shall be overstressed under construction activities.
9. The approval of a substitution shall be sought from the Engineer but is not an authorisation for an extra. Any extra involved must be taken up with the Contract Administrator before the work commences.
10. All waterproofing details by others.
11. All props and formwork for beams and slabs shall be removed before construction of any walls or other permanent loading on this slab.
12. All non-loadbearing walls shall be kept clear of the underside of slabs and beams by 20mm unless otherwise shown.
13. The Structural work shown on these drawings has been designed for the following live loads:-

Area	Live Load KN/m²
Flat Roof	0.75
Pitched Roof	0.75
Floors (Generally)	1.50
Corridors / Stairs	1.50

STRUCTURAL CONCRETE:

1. All bar bending schedules to comply with BS 8666.
2. All workmanship and materials shall be in accordance with BS 8110
3. Unless noted otherwise cover to all reinforcement to be 35mm above ground & 50mm below ground + 5 mm (tolerance) to each face.
4. Reinforcement laps to be 38 x bar Ø minimum (NOTE: 40 x bar Ø laps detailed).
5. Concrete grade at 28 days shall be as follows unless stated otherwise on the Engineering drawings :-

	Strength	Cement Type
• Blinding	7N/mm²	OPC
• Below Ground Mass Concrete	25N/mm²	SRPC
• Below Ground RC	35N/mm²	OPC
• Above Ground RC	35N/mm²	OPC

6. Ready mixed concrete to be obtained from a plant that holds a current certificate of production conformity to NACCB.
7. Minimum Cover (mm) to all reinforcement (including links) to be as shown on the drawing.
8. Sizes of concrete elements do not include thickness of applied finishes
9. Beam depths are written first and include slab thickness.
10. No holes, chases or embedment of pipes other than those on the structural drawings shall be made in concrete without prior approval of the Engineer.
11. Construction joints shall be formed in a manner band in locations agreed with the Engineer.
12. 8.Surface of concrete at construction joints to be sprayed and brushed whilst green to expose aggregate finish. Surface to be clean and damp when fresh concrete is cast against it.
13. Do not place concrete when it risks freezing or overheating.
14. Discharge concrete so as not to cause segregation of ingredients. Fully compact concrete to remove all air.
15. Splices in reinforcement shall be made only in the positions shown or as otherwise instructed by the Engineer.
16. Welding of reinforcements is not permitted.
17. All reinforcement shall be supported in its correct position during concreting by approved bar chairs, spacers or support bars.
18. Reinforcement Symbols:-Type and grade of reinforcement to comply with Clause 4 BS 8666.
19. All reinforcement bars and mesh to comply with BS 4449 and BS 4483 respectively and shall be from a "CARES" approved supplier.

STRUCTURAL STEELWORK:

1. All workmanship and material shall be in accordance with the current BS 449 or BS 5950 and shall be CE / UKCA marked assuming Class 2 unless otherwise specified.
2. New steelwork to be grade S355 generally to BS EN 10025, unless noted otherwise. Material and workmanship to BS5950 Part 2 - good practice -On site welding will not be permitted unless agreed by Green Code Engineering Ltd.
3. The grade of bolts used shall be 8.8 unless noted otherwise.
4. All external steelwork to be hot dip galvanised to BS EN ISO 1461:1999 to give a minimum dry film thickness of 85 microns.
5. All internal bolts to be sherardized to BS 7371-8 to give a minimum dry film thickness of 30 microns (Class S1).
6. All external exposed bolts to be sherardized to BS7371-8 to give a minimum dry film thickness of 30 microns (Class S1).
7. Minimum 2 No. M16 Grade 8.8 bolts per steelwork connection unless noted otherwise.
8. Steel to steel connections are to be designed by the contractor. If reactions are not given the Contractor shall request information to be provided. Connections calculations are to be submitted for comments from Green code Engineering Ltd however the Contractor is responsible for obtaining all necessary approvals from Building Control, NHBC etc.
9. Welds to be minimum 6mm continuous fillet welds, unless noted otherwise.
10. Before fabrication is commenced the Contractor shall submit copies of the shop drawings to the Contract Administrator for inspection. Inspection does not include the checking of dimensions.
11. For corrosion protection, All internal steelwork to be thoroughly wire brushed to remove loose rust and scale and painted with two coats of high build zinc phosphate primer with touch up on side after erection or blast clean 2.5 Sa and apply 75 microns epoxy zinc phosphate primer Unless galvanised, steelwork surfaces in cavity of external wall or built into solid brickwork external walls and all steelwork below dpc level to receive two coats of heavy duty bitumen paint over shop applied primer. Externally exposed steelwork to be galvanised unless noted.
12. Holding down bolts to be to BS 729 are to include nuts and washers, and to be set in place using E. M. L tolerance tubes. The use of other materials for tolerance tubes will not be permitted.
13. The Contractor shall provide temporary bracing as necessary to stabilize the structure during erection.
14. The ends of all tubular members are to be sealed with nominal thickness plates and continuous fillet welds unless otherwise noted.
15. Member's faying surfaces friction grip bolted connections or those encased in concrete must not be painted.
16. The Steelwork Subcontractor is to provide holes in steelwork as necessary for fixing of timber plates.
17. All structure to be designed for 60-minutes fire protection unless noted otherwise (TBC by architect and the fire strategy report). Fire protection to steelwork to architects details. Fire Engineer to comment on risks to structural elements based on fire risk assessment outcome.
18. Additional 15% by weight of steelwork to allow for fixings, stiffeners, angles/plates, cleats to support slabs and masonry walls, and additional steelwork that may be required following coordination of the design.
19. Contractor MUST provide fabrication drawings & connections calculations to the Engineers two weeks prior to fabrication for approval, final appearance to be agreed with the Architect.

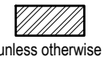
SUB-STRUCTURE / FOOTINGS / FOUNDATIONS:

1. All foundation depths indicated are measured from existing ground level and do not make allowance for new or future planting.
2. Footings to be founded in natural undisturbed ground having a safe bearing capacity of 100 kN/m². Before concrete is placed the safe bearing capacity shall be inspected by The Engineer and to the Approval of the Local Authority. Where the safe bearing capacity is not achieved at the depths indicated, i.e. local soft spots, the Engineer is to be informed immediately.
3. Foundations are to be symmetrical about walls over unless otherwise stated.
4. Expose existing foundations for Building Control's inspection & approval prior to commencing any other work. New foundations - Mass conc trench fill depth as plans - depth dependant on site conditions. Agree founding level with Building Control on site. Found below adjacent drains and min 600 below live roots. Found in natural undisturbed ground, sustaining min 100KN/m2 bearing pressure. Mass concrete grade C25P unless stated otherwise. Where drains pass through foundations provide pc lintol 100x150 dp for each leaf as bridge over. Sub floor void - Provide 100 oversite concrete. Where this is lower than the external ground level lay the oversite to fall to a gully and link to the sw drainage system with a 100 dia upvc drain.
5. Keep excavations free from water. Trench fill foundations to be dug in one operation. Formation to be consistent and competent strata. Allow inspection by Building Control Officer then place concrete immediately.
6. If tree roots are encountered at the indicated depths the Engineer is to be informed so an inspection can be carried out. Generally foundations will need to be taken down to a point 300 mm below evidence of tree roots.
7. Any excess excavation wider than required to be backfilled with hardcore or under pavings or as dug materials under landscape, compacted in layers.
8. Sub-grade below floor to be treated with a proprietary weed-killer.

PILED FOUNDATIONS

1. Piled foundations to be adopted to specialist piling designers details (to Green Code Engineering loads).
2. Piled foundations to be adopted to specialist piling designers details (to Green Code Engineering loads).

STRUCTURAL MASONRY:

1. All workmanship and material shall be in accordance with BS 5628.
2. Load bearing walls below ground floor slab level to be constructed in min 7.3N/mm^2 blockwork min 1500 kg/m^3 suitable for below ground as specified by the manufacturer. Solid Class B engineering brickwork can also be used. Mortar mix to be 1:1/4:3 with sulphate resistance cement. The above to be used unless otherwise noted on the Engineer's drawings.
3. Internal walls below ground floor level, except cavity walls, are to be constructed in 215mm thick brickwork symmetrical about centre lines of walls over unless otherwise stated.
4. Refer to Architect Drawings for positions of walls over for setting out foundations unless otherwise shown on the Engineers drawings.
5. All brick and block walls shown on the layouts are structural loadbearing walls and are to be constructed before commencing work on the floor or roof over.
6. Structural brickwork is shown thus:- 
Compressive strength of 37.5 N/mm² solid brick set in 1:1:6 mortar mix, unless otherwise noted on the Engineers drawings. Density 2000 kg/m.
7. Structural blockwork is shown thus:- 
Compressive strength of 3.6 N/mm2 solid block set in 1:1:6 mortar mix, unless otherwise noted on the Engineers drawings.
8. Vertical back to back chases will not be permitted in single skin loadbearing walls. Horizontal chases will not be permitted.
9. Architect to confirm acceptance. Wall ties shall be placed at 900mm horizontal and 450mm vertical staggered centres. At the vertical edges of openings and at vertical unreturned or unbound edges, for example, movement joints and up the sloping verge of gable walls, additional ties at 225mm vertical centres shall be placed within 225mm of the edge.
10. Wall ties to be: stainless steel to architects details - stainless steel double triangle.
11. Vertical back to back chases will not be permitted in single skin loadbearing walls. Horizontal chases will not be permitted.
12. Vertical joints in brickwork and blockwork are indicated thus:- - MJ
For joint details refer to architects drgs.
13. Lateral restraint to the building will be in accordance with requirements and guidance given in BS 5628 parts 1 and 3 as follows:
Lateral restraint is to be provided to all walls at floor and roof levels, including ceiling levels and to the tops of walls in roof voids using M30mm x 5mm galvanized mild steel straps, at 1.0m maximum centres, with 6 No fixings unless otherwise noted or shown on the drawings. Straps are to displaced locally and equally spaced each side of any openings where these occur.
14. Restraint systems to all blockwork walls to be allowed for where blockwork meets slabs and columns. All return walls to be fully toothed and bonded.
15. Contractor to co-ordinate lintels with proposed window and door reveals. Lintels over internal openings greater than 3.6m to be certified by approved provider. Calculations to be submitted to Green Code Engineering for comment prior to manufacture. Minimum bearing for precast lintels 150mm.
16. DPC membranes and cavity trays all to architects details.
17. Restraint systems to all blockwork walls to be allowed for where blockwork meets slabs and columns. All return walls to be fully toothed and bonded.
18. Contractor to provide full fabrication drawings for windpost for design team review and approve.

STRUCTURAL TIMBER:

1. All timber to be grade C24, unless noted otherwise, free from shakes/wanes and in accordance with BS5628, unless noted otherwise.
2. All new timber to be treated against fungal and insect attack; with cut ends thoroughly treated before fixing.
3. Doubled or trebled trimming joists are to be bolted together using M12 bolts at 400mm centres with 51mm diameter double-sided toothed plate connectors and 38 x 3 bolted head and nut washers.
4. Where stud partitions are supported parallel to the span of floor joist, these are to be supported on 2 No joists bolted together with M12 diameter bolts with large washers under head and nut at 600 c/c. Where stud partitions run at right angles to the floor joists, doubled-up blocking is to be provided between the joists beneath the partition, and nailed to the joists.
5. Timber Herringbone strutting or solid noggins to be provided at 400mm from any support and at minimum 1500mm c/c's throughout the span of the joists.
6. Vertical restraint to timber roof construction will be in accordance with the guidance given in BS 5628 Parts 1 and 3 as follows:-
Vertical restraint is to be provided for rafters, trusses and roof joist at supports using M30 x 2.5 standard galvanized mild steel straps, at 1.2m maximum centres with 6 No fixings unless otherwise noted or shown on the drawings. Straps are to be displaced locally and equally spaced each side of any openings where these occur.
7. Timber construction to be securely fixed to structural steel via timber plates bolted to steelwork. Horizontal and Vertical SW plates to be bolted with M12 grade 4.6 bolts @ 600 max c/c. Vertical SW plate to rest on bottom flange of beam and be trimmed to clear the root radius. Joist hangers and brackets to be fixed strictly in accordance with manufacturer's specification. All brackets + joist hangers to be by Simpson Strong tie or equal. Refer to plans for joist hanger types, if details are not given request specification.
8. Timber Shrinkage - Set timber joists supported on steel beams min 12mm clearance above beam and 2mm below as NHBC Cl 6.4 - D11 to allow for timber shrinkage.
9. All timber floor joists to be fixed to extg. of new solid or cavity walls using 30 x 5 galvanised restraint wall straps @ 800 c/c unless noted otherwise

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12 Berghem Mews,
Blythe Road,
W14 0HN
LONDON

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020 800 444 64

NOTES
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- All discrepancies must be reported to the Main Architect before works proceed.
- Only figured dimensions are to be used.
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STRUCTURAL NOTES
All Structural Elements Spans must be measured on site before ordering.
This drawing must be read in conjunction with the Architectural Drawings, Structural Engineer's Drawings, Calculations, Specifications, and other details.

For Building Control Approval
Do not use these drawings for construction until local authority gives approval.
Client is responsible for works carried out prior to receiving Building Regulations approval.

PROJECT
71 Goldhurst Terrace
Kilburn,
NW6 3HA

TITLE
STRUCTURE

DWG REF GCE-173

TAB

DRAWN	CP	CHECKED	IF
DATE	24/05/2023	SCALE	

REVISION	DESCRIPTION	BY	CHECKED BY	DATE

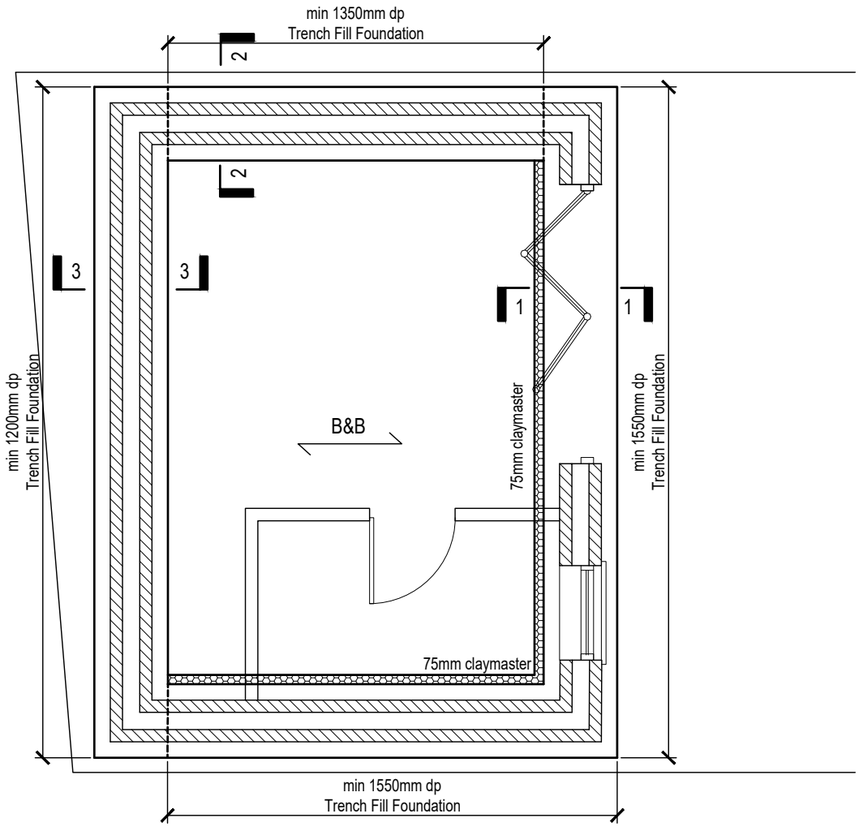
Legend

WALL CONSTRUCTION
Blockwork
Timber/Stud 'Non-Load Bearing'

New Foundation

B&B — Beam & Block floor. Design by specialist.

75mm claymaster



PROPOSED GROUND FLOOR PLAN

SHOWING FOUNDATION

Scale 1:50

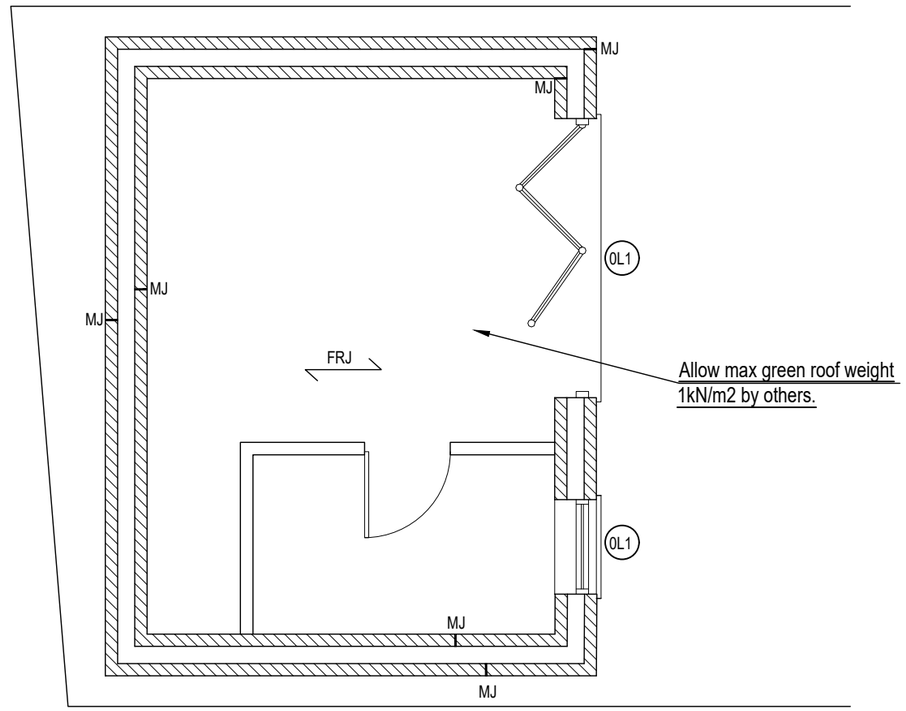
Legend

WALL CONSTRUCTION
Blockwork
Timber/Stud 'Non-Load Bearing'

FRJ — Flat Roof Joist 50 x 225 (C24) @400 Ctrs

0L1 — Catnic CG 130/100 Cavity Wall Lintel

MJ — Movement Joint



PROPOSED GROUND FLOOR PLAN

SHOWING STRUCTURE OVER

Scale 1:50

0 50 100 150 200 250

Green Code Engineering LTD

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PROJECT

71 Goldhurst Terrace
Kilburn,
NW6 3HA

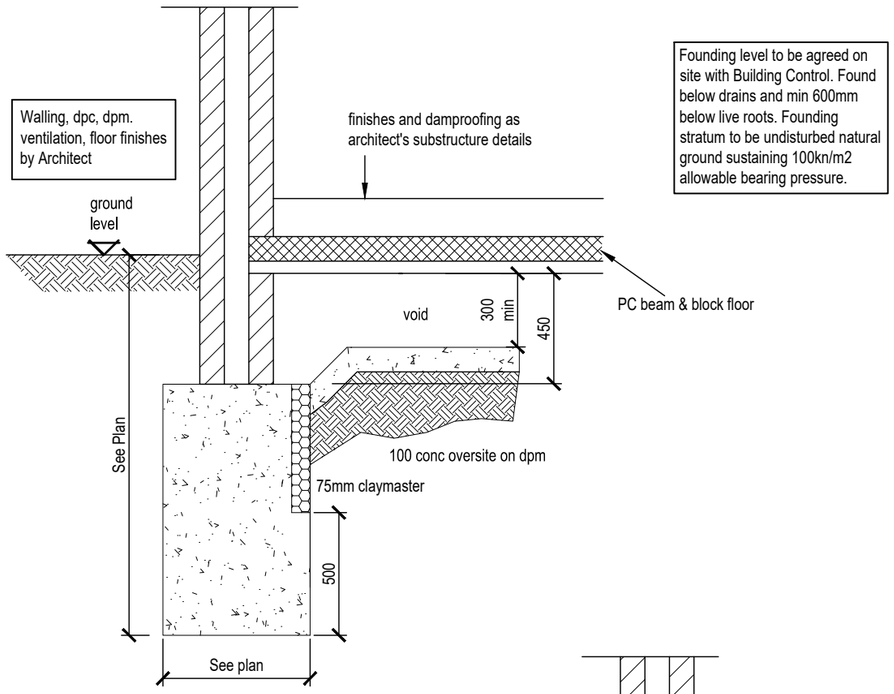
FOR APPROVAL

TITLE

STRUCTURE
PROPOSED GROUND FLOOR PLAN SHOWING FOUNDATION &
PROPOSED GROUND FLOOR PLAN SHOWING STRUCTURE OVER

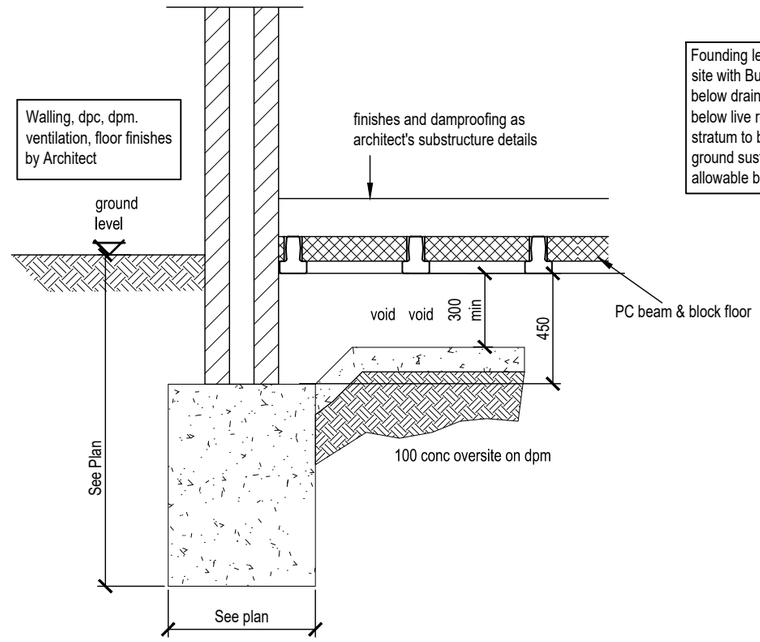
DWG REF	TAB	DRAWN	CP	CHECKED	IF
GCE-173	S02	DATE	24/05/2023	SCALE	1:50@A3

REVISION	DESCRIPTION	BY	CHECKED BY	DATE



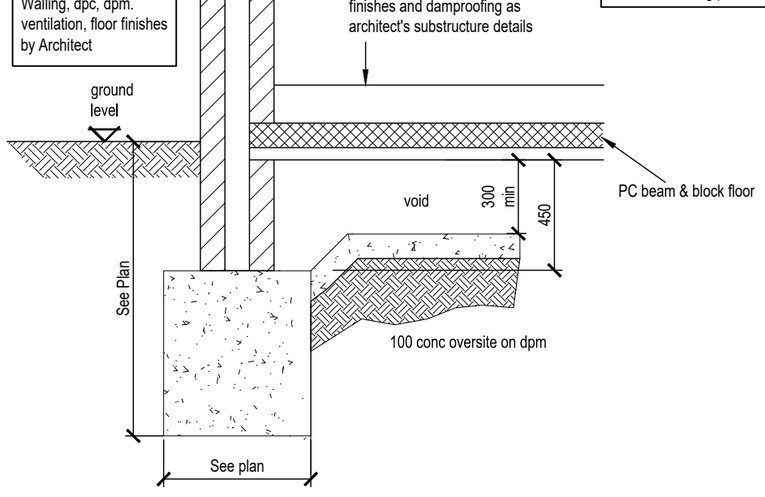
Founding level to be agreed on site with Building Control. Found below drains and min 600mm below live roots. Founding stratum to be undisturbed natural ground sustaining 100kn/m2 allowable bearing pressure.

Section 1 - 1
Scale 1:25



Founding level to be agreed on site with Building Control. Found below drains and min 600mm below live roots. Founding stratum to be undisturbed natural ground sustaining 100kn/m2 allowable bearing pressure.

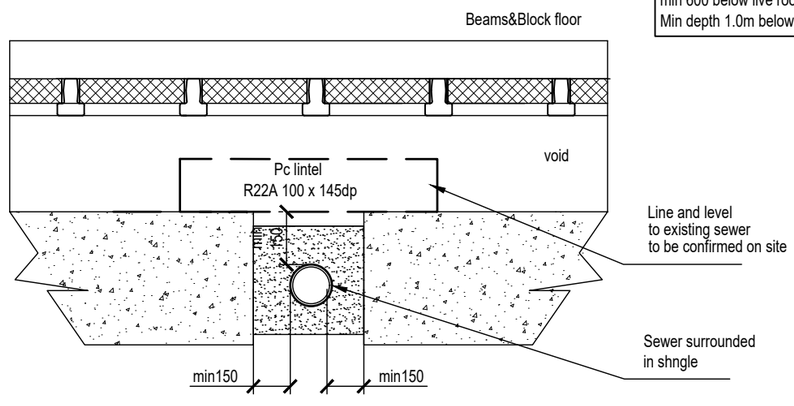
Section 2 - 2
Scale 1:25



Founding level to be agreed on site with Building Control. Found below drains and min 600mm below live roots. Founding stratum to be undisturbed natural ground sustaining 100kn/m2 allowable bearing pressure.

Section 3 - 3
Scale 1:25

Agree founding level with Building Control. Found in natural undisturbed ground sustaining 100KN/m2 allowable bearing pressure. Found below drains / sewers and min 600 below live roots.
Min depth 1.0m below external ground level.



Typical Sewer Details
Scale 1:25

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LONDON

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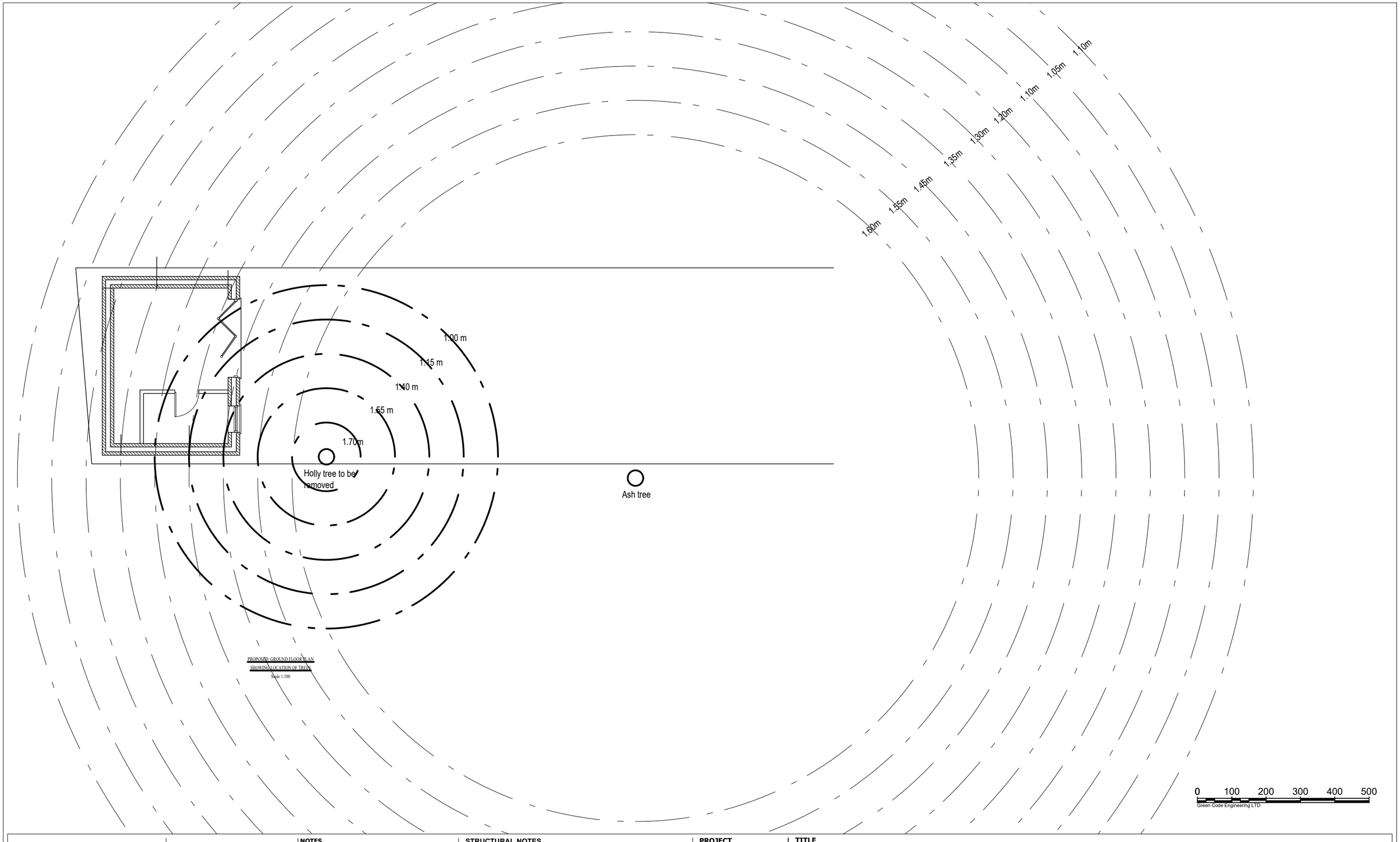
PROJECT
71 Goldhurst Terrace
Kilburn,
NW6 3HA

FOR APPROVAL

TITLE
STRUCTURE
FOUNDATION SECTIONS

DWG REF	TAB	DRAWN	CP	CHECKED	IF
GCE-173	S10	DATE	24/05/2023	SCALE	1:25@A3

REVISION	DESCRIPTION	BY	CHECKED BY	DATE



PROPOSED GROUND FLOOR PLAN
SHOWING LOCATION OF TREES
Scale 1:100

GREEN CODE ENGINEERING

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Blythe Road,
W14 0HN
LONDON

info@greencodeholdings.com
020 800 444 64

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PROJECT

71 Goldhurst Terrace
Kilburn,
NW6 3HA

FOR APPROVAL

TITLE

STRUCTURE
PROPOSED GROUND FLOOR PLAN SHOWING TREES

DWG REF	TAB	DRAWN	CP	CHECKED	IF
GCE-173	S05	DATE	24/05/2023	SCALE	1:100@A3

REVISION	DESCRIPTION	BY	CHECKED BY	DATE