



-  RISK OF COLLAPSE. IN RELATION TO SIDES OF EXCAVATIONS DUE TO THE SURROUNDING SOILS, IT IS NECESSARY TO PROTECT FROM PLANT / STOCKPILES TO CLOSE TO EXCAVATION
-  RISK OF FALLING. IN RELATION TO OPEN TRENCHES, ANY OBSTRUCTIONS OR DEBRIS ON SITE, INCLUDING STAKED / STORED MATERIALS OR UNITS. ENSURE GUARDING OF ANY UNLIFTED EXCAVATION OCCURRED DURING APPROPRIATE
-  HEAVY LIFTING, RISK OF INJURY
RISK ASSESSMENT FOR MANUAL HANDLING TO BE CARRIED OUT BASED ON THE TOTAL WEIGHT OF MATERIALS USED AND THE FREQUENCY OF USE OF LIFTING MEANS FOR MOVING AND PLACING ON SITE, WHERE APPROPRIATE.
- UNDERGROUND SERVICES:**
RISK OF UNDERGROUND SERVICES HAS BEEN IDENTIFIED. THE SITE HAS BEEN CLEARED OF ALL SERVICES PRIOR TO STARTING WORKS, WITH ANY SERVICES CLEARLY MARKED OUT. THE LOCATIONS OF ALL EXCAVATIONS SHOULD BE CANNED BY A COMPETENT PERSON PRIOR TO WORKS TO ENSURE NO EXISTING OR PLACED SERVICES ARE PRESENT.

	Hatch type indicates plots that require strip / trench fill foundations at depths as per foundation schedule. No heave precautions required. See typical detail A.
	Hatch type indicates plots that require strip / trench fill foundations at depths as per foundation schedule. Heave precautions required. See typical detail B.
	Hatch type indicates plots that require piled foundations with reinforced ground beams due to raising ground levels. No heave precautions required. See typical detail C.
	Hatch type indicates plots that require piled foundations with reinforced ground beams due to raising ground levels. Heave precautions required. See typical detail D.

- Front Left Corner
- Rear Left Corner
- Rear Right Corner
- Front Right Corner

(All positions are approximate unless stated otherwise)

-
- 0.90
1.25
1.50
2.00
2.25
2.50
- Indicates minimum foundation depth from existing / reduced ground level in areas influenced by trees / hedgerows within a clay subsoil (NHBC standards chapter 4.2).
- Heave precautions required for plots that exceed 1.50m due to trees (green hatched area).
- Further investigation required for any plots which exceed 2.5m due to trees (red hatched area). Alternative foundation solution may be required.

Foundation depths can be stepped / reduced accordingly to follow minimum depths due to trees in accordance with NHBC guidelines.
Note: Actual ground conditions encountered may dictate deeper foundations than those indicated by tree influence. If contractor is unsure please contact PJS engineer or NHBC for guidance.

Volume Change Potential	Void dimension against side of foundation and ground beam	Void dimension under ground beams, and suspended in-situ concrete ground floor	Void dimension under suspended precast concrete floors
Medium	25mm	100mm	250mm

Contractor to provide a suitable product to achieve the required void dimensions. If unsure, PJS should be contacted for further advice.

Refer to PJS 200 Series drawings for minimum foundations widths.

Foundation Width	Minimum Thickness of Concrete
450 to 600mm	300mm
750 to 900mm	375mm
1050 to 1200mm	450mm

General Notes

1. Do not scale this drawing. If in doubt, ask.
2. This drawing is to be used in conjunction with all other relevant Engineers, Architects and specialist design drawings and details.
3. All dimensions are in millimetres unless noted otherwise.
4. All levels are in metres unless noted otherwise.
5. Any discrepancies noted on site are to be reported to the Engineer immediately.
6. This drawing is deemed preliminary until technical approval has been gained. PJS take no responsibility for construction undertaken prior to receipt of technical approval, or for work not undertaken in line with the design drawings.
7. All sub-floor blockwork to have a minimum compressive strength of 7.3N/mm², subject to review by a structural engineer.

- Site Layout by Davidsons. Reference BUR9_100 P07. Dated 29/08/2023.
- Private Drainage and External Works by PJS. Reference PJS21-065-000H-001J-002G. Dated 12/09/2023.
- Topo Survey by Davidsons. Reference S4560-01A-02A. Dated 30/01/2020.

1. The foundation types indicated are based on the facts established from the reports referenced below. It should be noted that natural ground may vary considerably between exploratory locations and the groundwater regime may be influenced by seasonal or other factors. The foundation designs indicated are therefore for "GUIDANCE PURPOSES ONLY" and should be constantly reviewed in light of the actual conditions exposed on site during construction works.

3. Full ground condition information, please refer to the following documents:
 - a) Phase 1 Site Appraisal undertaken by GRM. Reference GRMP9034/DS.1. Dated August 2019.
 - b) Geo-environmental Assessment undertaken by PJSG. Reference PJSG21-58-D0C-01. Dated March 2022.
 - c) Technical Note Report undertaken by PJSG. Reference PJSG21-58-D0C-02. Dated August 2022.
 4. Ground conditions encountered are generally as follows:
 - a) TOPSOIL found up to 0.4m begl.
 - b) Firm brown sandy gravelly CLAY found in all locations.
 - c) Wet clayey gravelly SAND.
- Refer to original site contours and site investigations as necessary

1. Tree influence lines based on the following documents:
 - Arboricultural Survey undertaken by RammsSanderson Arboriculture. Reference RSE_1586_TCP V1. Dated 14/02/2022.

2. Trees or hedgerows which are to be planted must be considered. PJS have not taken into consideration proposed planting. It is understood that the landscaping proposals are to be designed to impose no influence on proposed foundations.

1. The site investigation reports referenced above indicate that **No Radon Protection** is considered necessary in the construction of new dwellings.
2. Independent Radon check carried out by PJS on 21/08/2023.

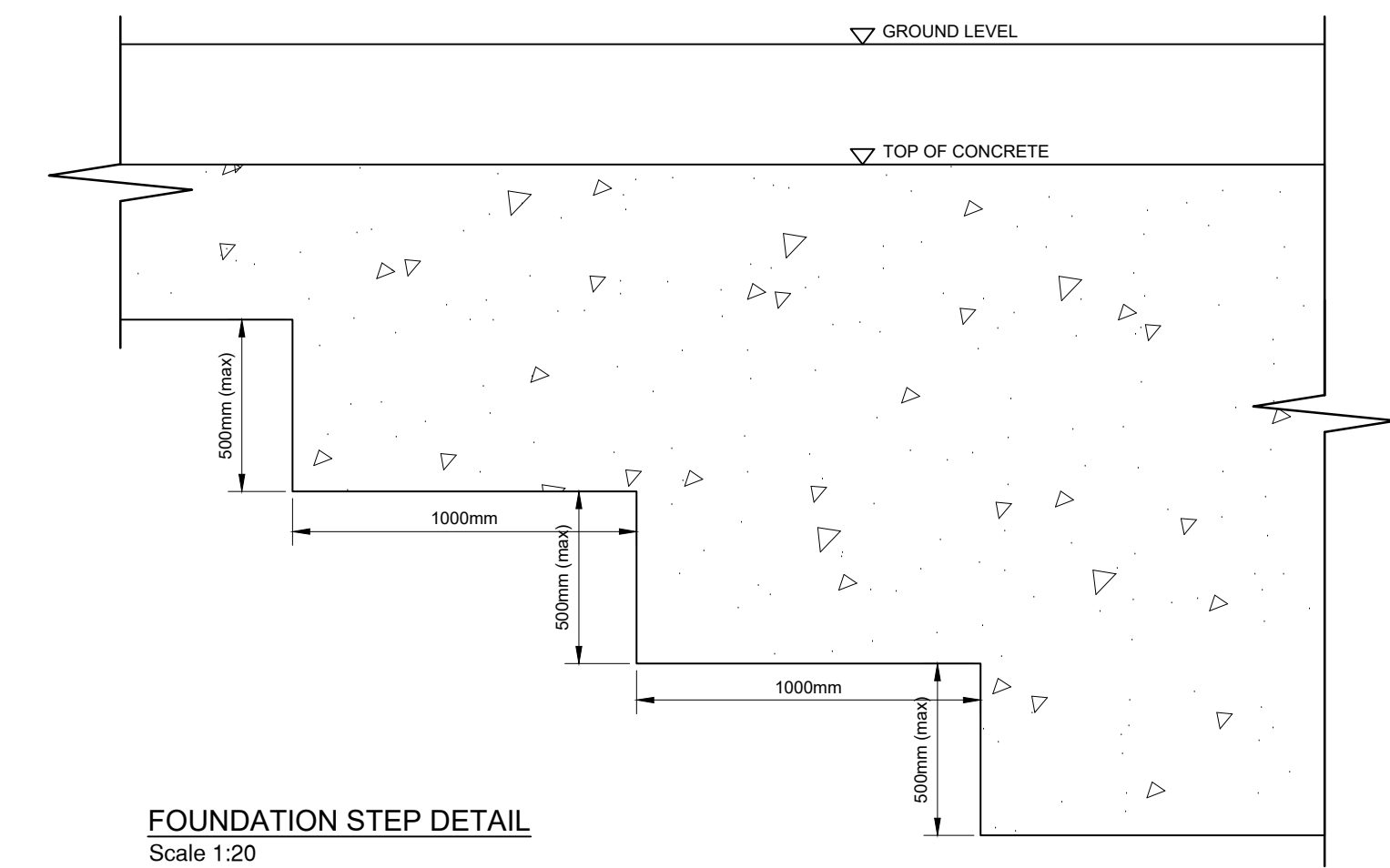
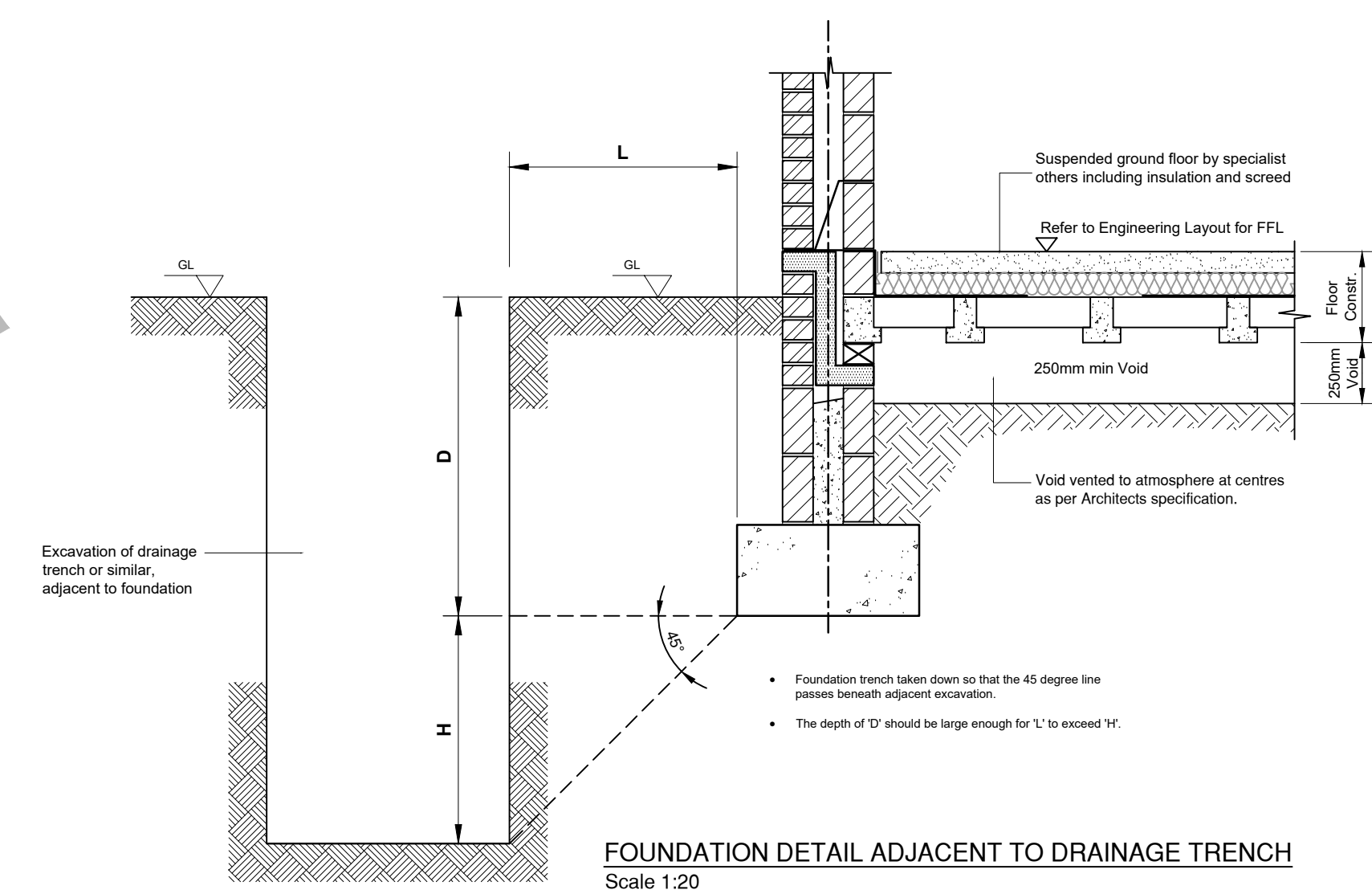
1. The site investigation reports referenced above indicate that **No Gas Protection** is considered necessary in the construction of new dwellings.

1. Floor slabs suggested take account of ground conditions only. All floor slabs to be designed and detailed by others.

- ### Foundation Type - Strip / Trench fill
- 1. Refer to plot specific drawings for foundation widths.
 - 2. Foundations are to be taken a minimum of 200mm into the natural firm brown CLAY deposits.
 - 3. Foundations to have a minimum thickness of 300mm U.N.
 - 4. Concrete designation to be D16 AC-1 GEN3.
 - 5. Foundations are to be set into the natural firm brown soils over unless noted otherwise.
 - 6. All foundations to be taken below the invert level of any adjacent drain and 300mm below any roots encountered in the trenches.
 - 7. Nominal reinforcement to be provided (1 layer B135 mesh, min 75mm cover where footing thicknesses differ). Main bars to parallel with foundation.
 - 8. If stability is noted and a dig and pour foundation is required, PUS should be consulted to provide a design for the foundation. Main bars in the concrete and reinforced ring beam to be designed by a structural engineer.

1. Foundations to be set out centrally about walls over unless noted otherwise and to dimensions/setting out by the Architect.
2. Piles to be designed by specialist others.

- 3. Plot specific drawings/designs required for ground beam designs. For tender purposes allow for:
 - Concrete to ground beams to be RC35.
 - Ground Beams: Concrete compressive strength to be 35N/mm².
 - Blinding concrete to be GEM1 to BS8500-1:201.
 - Minimum cement content 340kg/m³.
 - Max free water / cement ratio 0.55.
 - Nominal aggregate size 20mm.
 - Reinforcement to be in accordance with BS5444 and BS5966. Bars to be secured at all intersections.
 - 40mm cover to all reinforcement u/c.
 - Minimum lap to reinforcement to be 40 x bar diameter.
 - Any temporary works by contractor.
- 5. Deeper rotary boreholes may be required to aid stable pile design. This should be confirmed by specialist contractor & warranty provider.



FOUNDATION STEP DETAIL
Scale 1:20

DPC Cavity tray, void vented to atmosphere - refer to Architectural drawings.

900mm

300mm

See Plot Specific Drawings

See Plot Specific Drawings

1200 gauge membrane installed in the roof as per manufacturers specification.

Suspended ground floor by specialist on including insulation and screed

Refer to Engineering Layout for FFL

250mm min void

Void vented to atmosphere at corner as per Architect's specification.

Mass fill concrete strip footing taken a minimum of 200mm into suitable bearing strata. Provide 1 Layer B70 mesh below 200mm minimum embedable varying strata

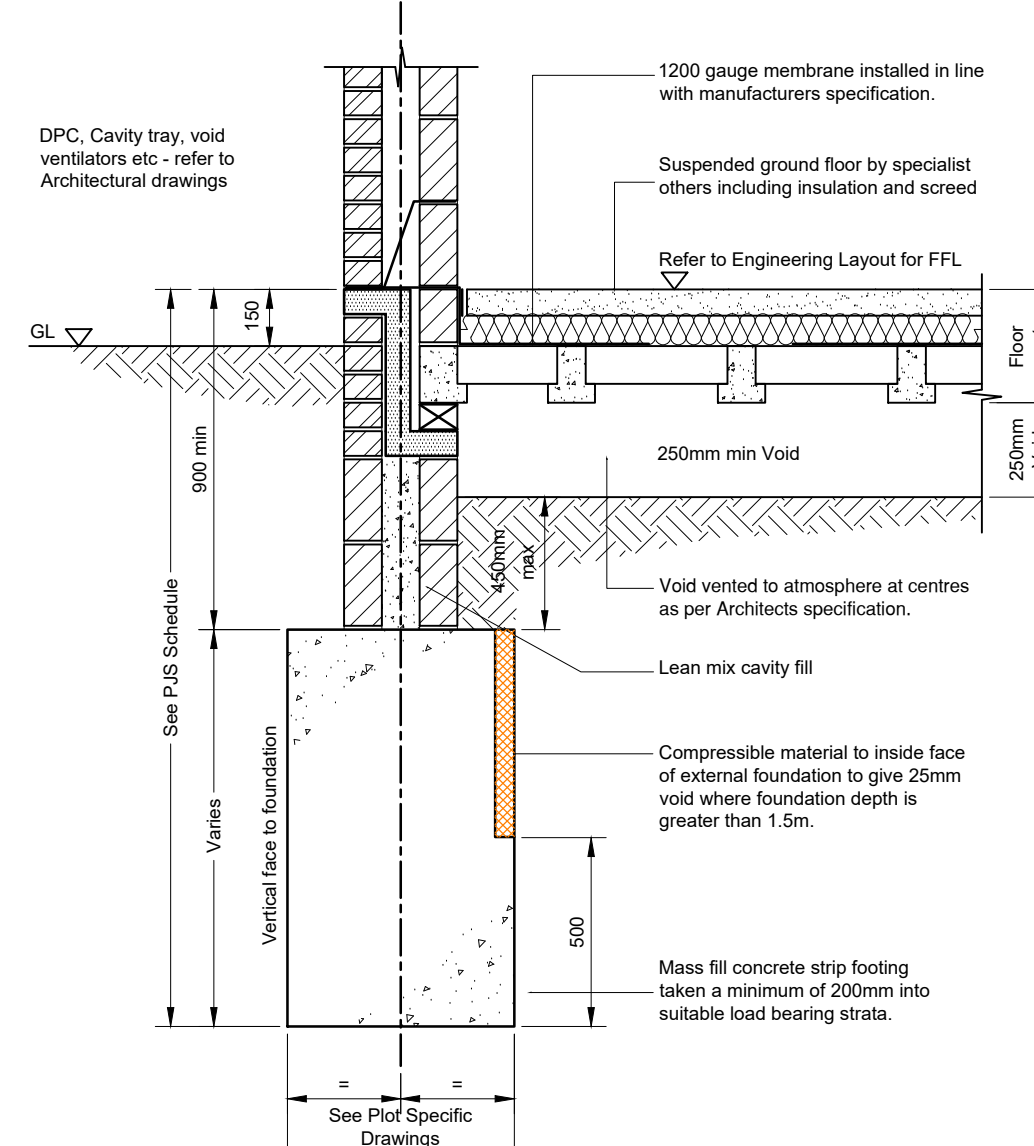
Lean mix cavity fill

Use bench blocks if required

DETAIL A

TYPICAL SECTION THROUGH STRIP FOUNDATION

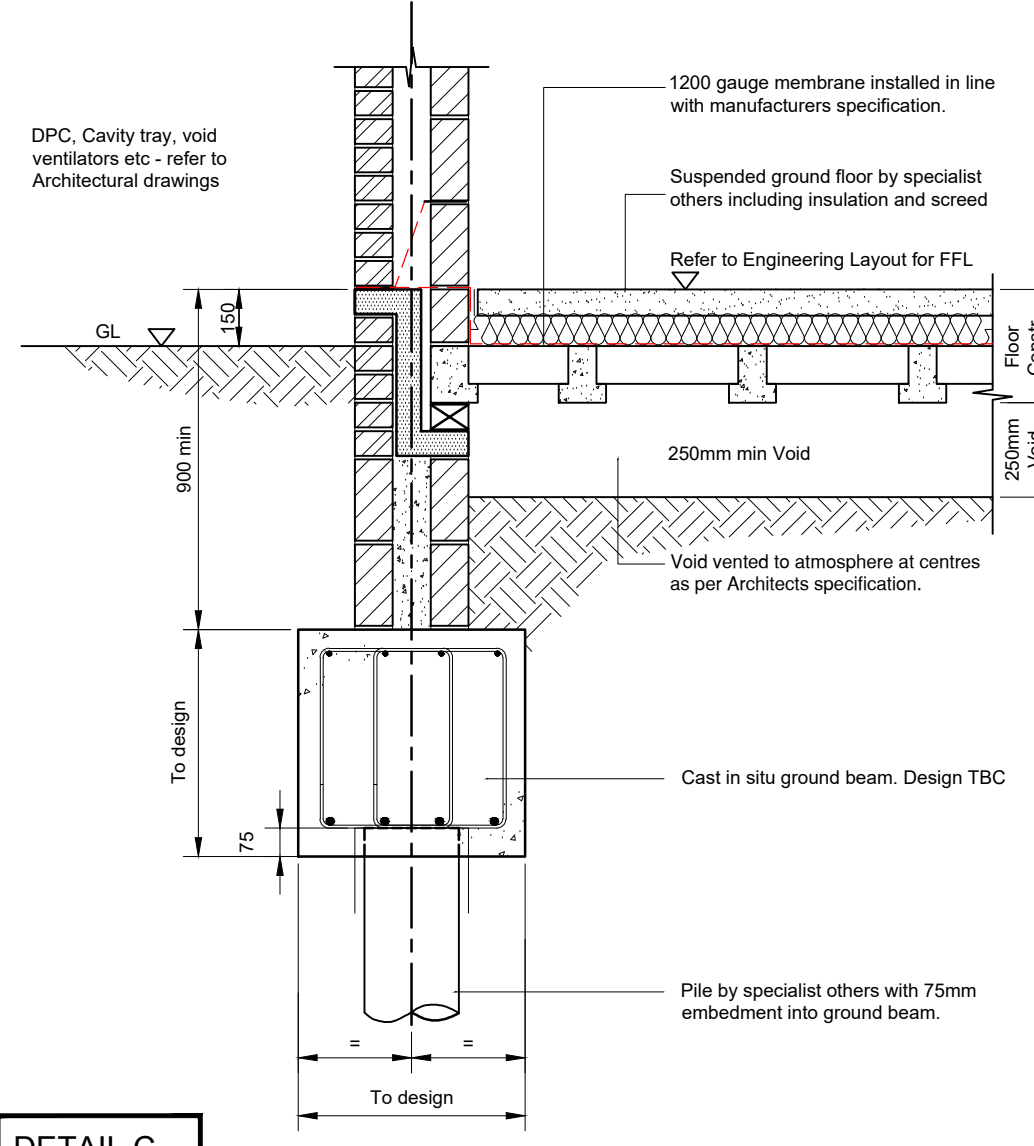
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DETAIL B

**TYPICAL SECTION THROUGH TRENCHFILL FOUNDATION
REQUIRING HEAVE PRECAUTIONS**

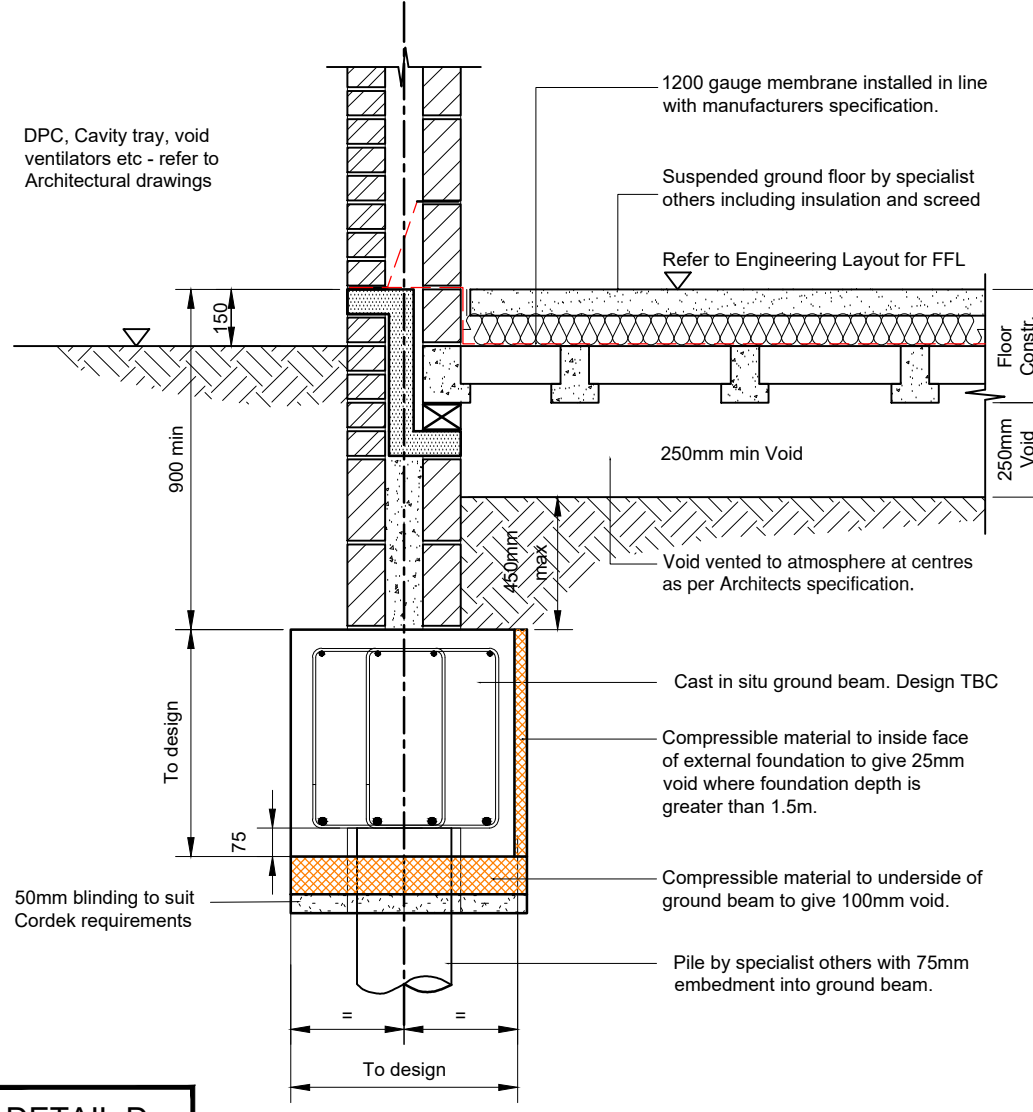
Scale 1:20



DETAIL C

TYPICAL SECTION THROUGH PILE & G.BEAM FOUNDATION

Scale 1:20



DETAIL D

**TYPICAL SECTION THROUGH PILE & G.BEAM FOUNDATION
REQUIRING HEAVE PROTECTION**

Scale 1:20

B	13/08/23	Updated site layout, external works and private drainage.	JH	OS
A	05/09/23	Updated piling outfall to 3.1m below FFL and updated masterplan accordingly	JA	OS
Rev	Date	Amendments	By	Chk



PJS Geotechnical Engineers Limited, Geneva II, Lakeside,
Sherwood Business Park, Nottingham, NG15 0ED.
Registered Number: 11882468 Tel: 0115 704 3660 Email: Enquiries@pjs-geo.co.uk

DAVIDSON'S HOMES

LUTTERWORTH ROAD, BURBAGE

Drawing Title

DETAILED FOUNDATION MASTERPLAN

	Drawn	Checked	Status	Scale
Initial	JA	CS	Tender	1:500 / 1:2
Date	01/08/23	01/08/23		
Project Number			Drawing Number	Revision
PJSG21-58			DR-200	B