

- Excavating building area to be stripped of all vegetable matter and rubbish to a min. depth of 150mm below excavation commences.
- Concrete mix for foundations to be GEN3 in accordance with BS5828:1981
- Excavation extends to the external ground level i.e. min. 600mm wide x 100mm deep and 400mm x 250mm to any internal load bearing walls.
- Excavate down to solid firm strata i.e. 750mm deep (min. 1000mm if soil is of a shrinkable nature).
- Width of foundation to be consistent about the base and top of the trench after excavation
- Remove all mud, rock projections, boulders and hard spots and replace with well consolidated granular fill.
- Hardest local soil spots by tamping in granular fill.
- Keep trenches free from water at all times and the exact depth to suit conditions on site and the strict approval of the LA Building Inspector
- Any irregularities in the subsoil during the excavation should be brought to the immediate attention of the Building Inspector & advice to be sought from a Chartered Engineer. Precautions against root damage to be agreed on site with the Inspector and in accordance with BS5828: Standard Chapter 4.2 "Building near Trees"

- 3no. Courses of Class B brickwork below D.P.C on outer face and 1no. course of blocks on inner skin of cavity face.
- Elsewhere to be either concrete blockwork or full width trench blocks. Both to be within 225mm of DPC level.
- Cavity to be filled to within 225mm min. of below DPC with lean concrete mix.
- Blocks used below dpc should comply with BS 5628 : Part 3 : 2005 : Table 12 or standard strength requirements.
- If they are to be used on the external leaf of the wall they should also comply with ONE of the following requirements

- have a net density of at least 1500 kg/m³ or
- be made with dense aggregate to BS EN 12620 or
- have a compressive strength of at least 7.3 N/mm²

- Floor to achieve a min U Value of 0.19w/m²K:
 - 65mm mortar screed with a light gauge reinforcing chicken wire
 - 50mm polythene separating layer
 - 150mm Anstruth R-R insulation board or similar approved, provide 30mm thick primer insulation between screed and floor insulation up to d.p.c. level
 - 100mm thick GRC concrete sub-floor on a 1200 gage DPM lapped onto DPC within walls
 - 150mm clean and well compacted hardcore. Depth of hardcore must not exceed 600mm and must be compacted to 150mm thick layers.
- All service entries to be sealed with pressure sensitive tape.
- Floor Insulation Installation guidelines (underneath) below:
 - 1. Install a Damp Proof Membrane (DPM) below the slab OR apply a liquid waterproofing material to the top surface of the slab.
 - 2. The DPM must provide continuity with DPCs installed within the surrounding walls.
 - 3. Level the surface of the slab, it should be smooth and free of projections.
 - 4. Use a thin chisel binding on a rough tamped slab to ensure that boards are continuously supported. Cut strips of board as required to fit around floor perimeters to eliminate heat bridging at screed edges.
 - 5. Upstand depth should equal to the sum of the slab insulation and screed thickness.*
 - 6. The upstand thickness should not exceed the combined thickness of wall plaster and skirtings.
 - 7. Lay boards directly onto the prepared slab, cutting ridging ridges as required. Joints must be tightly butted. The use of a polythene vapour control layer over the insulation is recommended by the BRE to minimise the risk of condensation forming at the insulation/slab interface.
 - 8. Apply a sand/cement screed over the GA3000Z boards to a minimum thickness of 65 mm. Use scaffold boards or other protection to prevent wheelbarrows and other traffic damaging boards.
 - 9. A flow screed to dry thoroughly before an impermeable surface, such as a vinyl floor finish, is applied.
- The following recommendations are suitable for normal domestic floor loadings. If higher loadings are required it may be necessary to increase screed thickness and provide reinforcement within the screed

- Floor to achieve a min U Value of 0.18w/m²K
 - 100mm Powerfloat trowelled concrete standard mix (ST3) to BS5328: Part 2:1991
 - 1200 gauge damp proof membrane lapped
 - 2000 gauge damp proof course in walls
 - 125mm Xtratherm Thin R rigid insulation with 30mm thick perimeter insulation between slab and floor insulation up d.p.c level
 - 150mm clean and well compacted hardcore. Depth of hardcore must not exceed 600mm and must be compacted in 150mm thick layers.
- All service entries to be sealed with pressure sensitive tape.

- Provide and install Pre stressed 1500mm concrete floor beams bearing on inner skin of cavity wall on top as per manufacturers details.
- Contractor to provide details and calculations of manufacturers design to Building Control prior to placing materials on order.
- Lay 100mm thick blocks of 77mm weight average crushing strength and edge slip blocks as required.
- Lay on top of thick blocks a minimum 120g gauge mesh DPM with min. 150mm lapped joints sealed with an approved tape. Joint tape to be applied vertically in accordance with manufacturer's instructions.
- DPM to be carried across cavity wall to join with DPC's.
- Provide cavity tray above DPM with weep holes at 450mm c/s.
- Separate cavity tray & dpm by mortar bed.
- Provide telescopic vents and air bricks at max. 1800mm c/s to ventilate void around floor beams.
- Provide a sand bedding layer on top of dpm to ensure 15mm X20mm X20mm This insulation boards or similar approved are fully supported.
- Provide strips of insulation tamped up around perimeter to eliminate thermal bridging at floor edges.
- Upstand depth should be equal to floor insulation and screed finish.
- The upstand thickness should not exceed the combined floor slab and skirting thickness.
- Provide 500 gauge coarse control layer over insulation and 50mm c/s sand / cement screed reinforced with chicken wire.
- Has specified brand and type before screed is laid, derived from all trade.

- Horizontal heavy duty polythene DPC 'Hyload' or similar approved to all walls in accordance with BS 6515 and set min.150mm above all external ground levels.
- DPC in walls must be linked / lapped with DPM in ground floor.
- Provide performed cavity wall trays above windows & doors with weep vents at a max of 2m centres with a min. of 2no.per opening.
- Provide D.P.C.s and Cavity Trays to meter boxes.

- All external lights to have a sensor which will extinguish the light when there is enough daylight and when not required at night

- uPVC guttering and downpipes to clients approval.
- Falls for guttering to be 1:600 and brackets fixed at max. 2m ctrs.
- Downpipes to be connected into underground drains via reducing adapter.
- Underground drains to be 110mm Ø Osma uPVC or similar approved with flexible joints laid on 100mm pea gravel and 110mm diameter main surface water drains that carry the discharge from multiple rainwater pipes may be laid at a fall of not less than 1:100 (10mm fall per metre), while branch drains from individual rainwater pipes should be laid at a steeper gradient of 1:50 (20mm fall per metre) to new soakaway.

- All rainwater to discharge into soakaways and to be min of 5m from any building & a min of 1m³ filled with rubble to within 450mm of external ground level.
- Overlay rubble with polythene sheet and backfill with clean topsoil.
- Note the soakaway inlet pipe must discharge to the centre of the soakaway in all directions.
- The contractor should carry out percolation tests to determine the feasibility prior to constructing the soakaways.
- Detailed below is brief guidance on how to carry out the tests:
 1. Excavate a trial pit to the same depth as the anticipated soakaway below the invert of the drain.
 2. The trial pit should be 300mm – 1000mm wide and 1000 - 3000mm long.

5. The trial pit should then be filled and allowed to drain three times to near empty, with readings taken for:
 - The time taken for the water level to lower to the 75% level
 - The time taken for the water level to lower to the 25% level
6. When granular material is used, a full height, perforated, vertical observation tube should be positioned in the pit so that the water levels can be monitored with a dip tape
7. The trial pit should be filled on three separate occasions to give a true reading on the ground conditions

- Available at this office is a Soil Infiltration check sheet to be completed on site and a copy issued to the LA Building Control Officer upon completion.

The following information is based on the recommendations in BS 5955: Part 6 'Installation of PVCu pipework for gravity drains and sewers' and BS EN 1610 'Construction and testing of drains and sewers' and is intended as a general guide to good practice in the selection of bedding and backfill material for Marley solid wall and Quantum underground drainage systems.

Trench widths should be as narrow as is practicable but not less than the pipe diameter plus 300mm to allow adequate sidefill to be placed.

fall per metre). However, branch drains from individual gullies, sanitary fittings or soil stacks should be laid at a steeper gradient of 1:40 (25mm fall per metre).

Drain runs must be no less than foundation depth unless min of 1m from any building Provide roddable access to all change in bends and junctions. Contractor to ensure no live drains run beneath proposed works.

- Information essential to the correct application and use of these facilities should be permanently posted within the dwelling. A notice plate should be provided containing the following information:

- The location of the hearth, fireplace or the location of the beginning of the flue
 - The category of the flue and generic types of appliances that can be safely accommodated
 - The type and size of the flue and the manufacturers name and address details
 - the installation date.
- The notice plate should be robust and fitted next to the electricity consumer unit.



Keynote Legend	
Ref.	Description
001	Existing Foundations and Lintels to be exposed and checked for suitability for additional loading. The foundations must be to the satisfaction of the LABC officer before commencing with any additional work.
004	Ensure trenches for strip foundations have stable sides and the width is to suit specification notes. Width of foundation to be consistent at both the base and top of the trench. Remove all mud, rock projections, boulders and hard spots and replace with well consolidated granular fill. Harden local soft spots by tamping in granular fill. Keep trenches free from water at all times.
006	Walls below DPC to be within 225mm of DPC level. Cavity to be filled to within 225mm min. of below DPC with lean concrete mix.
012	All rainwater pipes to discharge to soakways min. 5m from any building
016	New L/C in accordance with Building Control Specification.
017	Underground drains to be as Building Control Specification. Contractor to ensure no live drains run beneath proposed works.
018	Ensure new and existing floors are level.
021	Provide 30mm thick perimeter insulation between screed and floor insulation upto DPC level. The upstand thickness should not exceed the combined thickness of wall plaster and skirting.
027	Internal non-loadbearing blockwork to be built directly off concrete slab
120	Proposed Ejoicops (© ctrs to suit specialist manufacturer's details and calculations. Contractor to check with supplier in order to gauge floor levels prior to work commencing.
122	30x5 n/s anchor straps (s) @ 2m ctrs with solid strutting beneath Notch straps into minimum 3no. joists to allow level floor boards.

01 - Structural Foundation Schedule			
Length	Width	Foundation Thickness	Volume
7620	600	250	1.17 m³
8818	600	250	1.32 m³
2488	600	250	0.35 m³
3700	600	250	0.53 m³
1400	600	250	0.23 m³
2110	600	250	0.32 m³
1100	600	250	0.14 m³
Grand total			4.06 m³

02 - Blockwork below Ground Schedule		
(Based on a depth of 900mm)		
Length	Material: Area	Block Qty's
1250.0	0.9 m ²	9
1250.0	1.2 m ²	12
2110.0	1.7 m ²	17
2638.0	2.1 m ²	21
3850.0	3.1 m ²	31
7470.5	6.3 m ²	63
8818.0	7.3 m ²	73
Grand total	22.5 m²	226

Name	Area	Perimeter
Kitchen	20.15 m ²	18.6 m
Open Plan Living	29.15 m ²	24.6 m
Shower Rm	4.50 m ²	12.0 m
Utility / Bootroom	5.90 m ²	9.7 m
Grand total: 4	59.70 m²	64.9 m

13 - Proposed First Floor Schedule		
Name	Area	Perimeter
Bedroom 1	13.80 m ²	17.8 m
En Suite	3.25 m ²	7.5 m
Grand total: 2	17.05 m ²	25.3 m



03 - Blockwork Above Ground Schedule		
Length	Material: Area	Block Qty's
962.5	2.4 m ²	24
1242.5	2.8 m ²	28
1242.5	3.7 m ²	37
2630.5	4.1 m ²	41
2095.0	4.2 m ²	42
2693.0	5.9 m ²	59
2630.5	8.5 m ²	85
8803.0	10.6 m ²	106
3970.0	11.5 m ²	115
4000.0	12.3 m ²	123
3608.0	17.2 m ²	172
Grand total	83.3 m ²	832

04 - Brickwork Schedule		
Length	Material: Area	Brick Qtys
1242.5	2.7 m ²	159
1242.5	3.4 m ²	206
2095.0	4.1 m ²	245
2630.5	8.6 m ²	518
8803.0	11.0 m ²	661
3970.0	11.5 m ²	691
4000.0	12.3 m ²	740
3608.0	17.1 m ²	1026
Grand total	70.8 m ²	4246

- ### **ENGINEERED TIMBER ECO-JOISTS – FIRST FLOOR CONSTRUCTION:**
- First Floor EcoJoists to be designed and installed strictly in accordance with BS 5268 Structural Use of Timber & BS 6599: Loading of Buildings.
 - Specialist manufacturer's calculations and design sheets to be forwarded to LABC for approval prior to this area of work commencing.
 - Contractor to install joists strictly in accordance with manufacturer's installation guidelines which are basically shown below.
 - First and last joist to be fixed 25mm from inside face of parallel internal blockwork.
 - Intermit to timber connections to be used using UW and HW hangers as per specialist schedules.
 - Joists spaced at centres to suit special design details.
 - 2 ply joist joists where walls above run parallel with joists.
 - 50mm primer joist noggins fixed with 2 clips perpendicular to joist joists and parallel to load bearing walls.
 - 35 x 150 strengthening boards where shown on specialist drawings.
- ### **FIRST FLOOR COVERING:**
- All timbers to be treated and floor decked with 22mm protective deck chipboard (600 x 2400) and fixed with edging tape as supplied.
 - Chipboard to be used in suspended domestic flooring applications should be marked PS or PF (conforming to BS EN 312-5 or BS EN312-7).
 - Tongued and grooved boards should be laid with their long edges running perpendicular to the joists with the joint between the short edges occurring on the centreline of a joist.
 - Square edged boards need not be supported continuously along all edges. This is best achieved by positioning the joint between the long edges on the centreline of a joist and the joint between the short edges on a noggin fixed between the joists.
 - Joists along the short edges of boards should be staggered and the length of any board should generally not be less than 2 x joist centres.
 - It is essential that boards are supported within 50mm of their edge at the perimeter of the floor by either joists or perimeter noggin.
 - Boards – 3mm nail screws with a minimum length equal to 2.5 x board thickness. Nails or screws should be positioned 8mm from edges and at 200mm centres.
 - Boards should be fixed to the joists and the tongued and grooved joists should also be glued. A PVA adhesive conforming to durability class D1 of BS EN 204 should be sufficient for these applications.
 - Under domestic floor loads 18mm chipboard can be used on joist centres up to 450mm max. And 22mm chipboard can be used on joist centres up to 600mm max.
 - It is recommended to leave a perimeter gap of 10 – 12mm between the edge of the board and the base of the brickwork. It is also recommended to leave a gap of 2mm between edges of abutting boards.



VISUAL SCALE 1:50 @ A1



VISUAL SCALE 1:100 @ A1

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PROJECT

Proposed Two Storey and Single Storey Extensions and Outbuildings

CLIENT

Cordon Villa,
4 Station Road, Gedney Hill
PE12 0NP

DRAWING

Proposed Foundation
Proposed Joist Plan

DRAWING NUMBER:

AJA/1286/23/10

DRAWN BY

DATE:

18/09/2

SCALE (@ A1):

[illegible]

HEALTH & SAFETY
The client is to ensure that the appointed contractor is familiar with and complies with Health & Safety for Building Sites and Work Places.