British Board of Agreement Certificates(BBA)

Construction Product Directives (CE Marks Local Authority National Type Approvals (System Approval Certification)

All materials must be fixed in strict accordance with manufacturers printed details and workmanship must be in strict accordance with BS 8000: Workmanship on Building Sites: Parts: 1 to 16. Where materials, products and workmanship are not fully specified or described, they are to be: Suitable for the purpose stated or inferred & In accordance with recognized good practice.

EXISTING STRUCTURE

These drawings assume that the existing foundations, walls and lintels are suitable for carrying the extra load and are in good condition. However, the existing structure may need to be exposed at the discretion of the Building Control Officer / structural engineer / architect to confirm that they are adequate and suitable. This may include excavating trial pits adjacent to the existing foundation and/or opening up walls/floors. Any works that are opened up are to be made good to match the existing.

FOUNDATIONS

Trial Pits/ Existing Foundations The foundation design assumes good bearing ground conditions. If there is any doubt about the quality of bearing ground, the project engineer, architect or building inspector is to be informed 'before' commencing works so that measured can be made in good time. The contractor is to allow for underpinning at the junction of new/old footings or where additional point loads are imposed.

New Foundations Generally

Concrete strip foundations to external walls to be 600 mm x 200 mm deep Designated mix Gen3 at a minimum depth of 750mm below 'reduced' ground levels after topsoil has been removed.

BCO must be notified if there is variation in assumed bearing pressure or ground conditions. Any soft spots in formation should be removed and replaced with a suitably compacted granular fill. A layer of lean mix should be placed on the excavation for protection prior to casting if there is any delay in pouring. The foundation type should remain constant and be completed in one pour to prevent differential settlement, or adjacent pours tied with A393 mesh strips lapped 300 mm into each pour, at 500mm vertical centres. Foundations may be stepped but steps should not be greater in height than the thickness of the foundation and should overlap by twice the height of the step or 300 mm (min). Shoring of existing foundations may be required whilst new excavations are undertaken. Do not excavate within a 30 degree line on the horizontal of an existing or new foundation without temporary shoring.

Proximity of Trees

Any trees within 30m (any species) may affect the structure and require deeper foundations. The foundations are to comply with the guidelines set out in NHBC Technical Guidance Chapter 4.2 including provisions against clay heave and shrinkage. Appropriate precautions should be adopted to prevent the disturbance of foundations and services by roots. Roots should be removed from foundation excavations, but it is important that the amount of root removal does not harm the tree. Reference should be made to BS 5837:1980 – Code of Practice for trees in relation to construction. A root barrier such as Terram Root Guard or similar should be installed to the outside edge of foundations wherever trees or large hedges/shrubs are within 3 metres of a foundation, or the canopy of a tree is close to overhanging the edge of the foundation

This foundation specification will be overridden by any drawings or specifications issued by the structural engineer

DRAINAGE (Below Ground)

Generally The layout shown on the drawings is provided as a guide only and is subject to change once the location, size and gradient of the existing pipes become known. The contractor is to identify foul and surface water runs and must connect any 'new' foul drainage into existing foul sewers unless specifically agreed otherwise with the BCO.

Layout, Manhole/inspection chambers

The layout of the underground drainage system should be kept as simple as possible, with the minimum number of changes in direction and gradient. Access points should only be provided if blockages could not be cleared without them, but should be provided at any change in direction and/or at maximum spacing's of 45m. Any access point less than 1200mm deep may be constructed using proprietary 450mm diameter pre-formed plastic or should otherwise be in accordance with Table 11, 12, 13 and 14 of Part H1 of the Building Regulations. All covers to be grade A in parking areas and Grade B in other locations. Rodding eyes should also be located at suitable points to ensure that the entire system can be maintained.

Pipes and Gradients

Foul and surface water drains to be 100mm diameter PVC-U with flexible joints laid on min 100mm granular fill at minimum falls of 1 in 80 falls (unless otherwise stated). All joints are to be watertight and adequately packed to avoid differential settlement. PVC-U pipes to comply with BS 4660 and BS 5481. All building drainage to comply with Part H1 and H3 of the 2002 Approved Documents and to be set at falls to comply with Approved Documents Part H1 - Table 6 for foul drains & Approved Documents Part H3 - Diagram 3 for surface water drains (generally at minimum of 1 in 80).

Protection of drains

All drains & sewers passing underneath building to be encased in 150mm of pea shingle. Where drains run through walls provide concrete lintels for an opening with at least 50mm clearance all around the pipe to be masked with rigid sheet material each side to prevent ingress of fill or vermin. Void to be filled with expanding foam to prevent ingress of gas. Where drains are in garden areas and have less than 0.6m cover they should have concrete paving slabs laid over as bridging with at least 75mm granular fill between the pipe and slabs and a minimum of 100mm granular fill below the pipe. (See Part H1 of the 2002 Approved Documents). Any drain trench excavated within 1m of a foundation trench must be filled with concrete up to the lowest level of the foundation or a level equal to 150mm less than the distance from the building if over 1m away.

Ventilation

The drainage system should be ventilated by a flow of air, normally provided by a ventilating pipe situated at or near the head of each main

drain at each house. **Existing Foul drain**

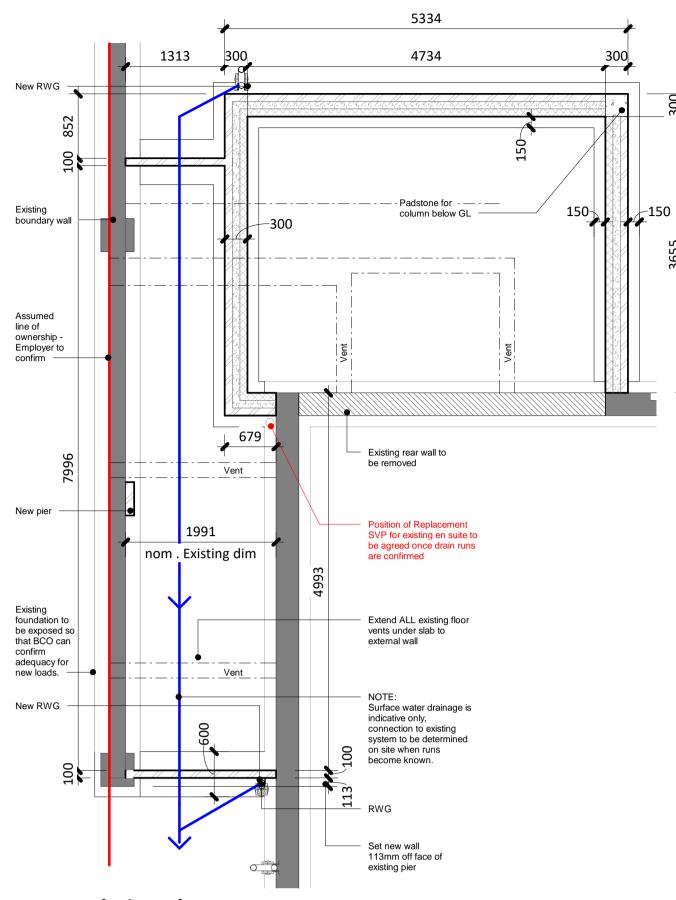
The contractor is to investigate the existing foul drainage at pricing. It has been assumed that the en suite foul drain is boxed in vertically on the rear elevation on part of the wall that is to be removed. An alternative foul drain is therefore proposed on the side

DRAINAGE (Above Ground)

All drainage points are to discharge into the existing drainage system with water seal traps of 75mm depth that retains at least 25mm seal during normal working conditions. Pipes, fittings and joints to be installed in accordance with BS 8000 Part 13: Code of practice for above ground drainage. Gradients, pipe diameters, junctions, bends and ventilation should be designed to prevent failure of the water seals, and the system is to pass a positive air pressure test of 38mm water gauge for min. 3 min. with min. air seal of 25mm maintained. Ensure suitable access points are provided for cleaning

Branch Pipes/Outlets:

The diameter of branch pipes must to be at least equal to the trap size and in accordance with table 2 Part H. Pipes to discharge into soil stack so as not to cause cross flow into other branch pipes (see diagram 2 Part H) and not into open hoppers.



Foundation Plan

GROUND FLOOR IN EXTENSION

The new floor specification assumes that the existing floor is insulated 'below the screed' . It is also assumed that the floor is a beam and block floor construction (due to their being periscopic vents). The contractor is to request a revised specification if this is not the case. The existing floor construction can be confirmed when the rear wall is removed and the edge of the floor is visible. The existing floor has an electric undertile heating. system. Care must be taken not to damage the existing floor tiles and heating wires during construction.

The doors of the new extension are to have a level threshold and therefore periscopic vents are not suitable, a ground bearing slab is therefore proposed - however

subject to change to a suspended floor if ground conditions are not suitable.

P(17.7)/A(19) = 0.93

The new floor construction will achieve a minimum 'U' Value of 0.19W/msqK as follows:-

- Floor tiles to match existing to be approved by Employer/Client bonded to tile backer board with electric underfloor heating system. Thermostat and control points are to be agreed. on Minimum 65mm 3:1 sharp sand/cement floating
- screed on 500gauge polythene Separating layer minimum 75mm Kingspan Kooltherm K103 rigid
- insulation with 25mm perimeter insulation upstands on 150mm concrete slab on
- 1200g DPM with 300mm laps double welted and taped at joints and service entry points. At the edges of the floor the membrane is to be turned up to and lapped with the D.P.C. in all walls on 50mm sand blinding covering on
- 150mm well compacted DOT 1 hardcore compacted in layers.

Ventilation of Existing suspended Floors The existing floor is vented - it is not known if this is due to radon gas or as part of the beam and block floor installation,

but the latter is assumed. Ventilation for the existing floor void is to be maintained by extending and diverting the floor vents underneath the new floors to terminate on the side elevation. Vents on the rear

elevation are also to be diverted to the size elevation.

The openings should not be less than 1500mm2 per 1m run of external wall or 500mm2/m2 of floor area whichever is the greater. Ventilation pipes must have a minimum diameter of 100mm. The ventilation openings should incorporate suitable grilles which prevent the entry of vermin to the sub floor but not restrict airflow. Ensure the pipes are ducted below the slab, and are not cut through insulation.

GROUND FLOOR IN EXTERNAL STORE The store is an unheated room and the floor construction

100mm concrete slab on

is to be as follows:-

1200g DPM with 300mm laps double welted and taped at joints and service entry points. At the edges of the floor the membrane is to be turned up to and lapped with the D.P.C. in all walls on

50mm sand blinding covering on 150mm well compacted DOT 1 hardcore compacted in layers.

EXTERNAL WALLS

Ensure walls are set central about foundations. Openings for any drainage runs through walls are to be protected by a 50mm gap with rigid board each side to prevent vermin ingress, with concrete lintels over.

Substructure walls to be 7N/mm² dense concrete block wall, with fair faced brick work to start a minimum of 2 courses below external ground level. Ensure the selected block and brick is suitable for use below ground.

All external walls generally to be 300mm cavity wall construction to achieve an overall U Value of 0.28W/m²K, with jambs and reveals to achieve a 'U' value of 1.2W/m²K. Following wall construction achieves 0.27W/m²K:-

- Internal lining of 12.5mm plasterboard with
- 3mm skim on adhesive dabs onto 100mm inner skin of medium density
- block work 100mm cavity filled with Earthwool Crown
- Dritherm cavity slab insulation Below DPC, the wall is to be engineering brick to match the existing as close as
- Where elevations indicate cladding, medium density block can be used instead of facing brick.
- Horiztontal cladding to be 120x22mm Western Red Cedar boarding - with microline channel to BS EN 350-2 with FSC certification treated with clear and breathable UV protective coating.
- Cladding to be secret nailed vertical 38x38mm tanalised battens at 600mm centres on vertical DPC.

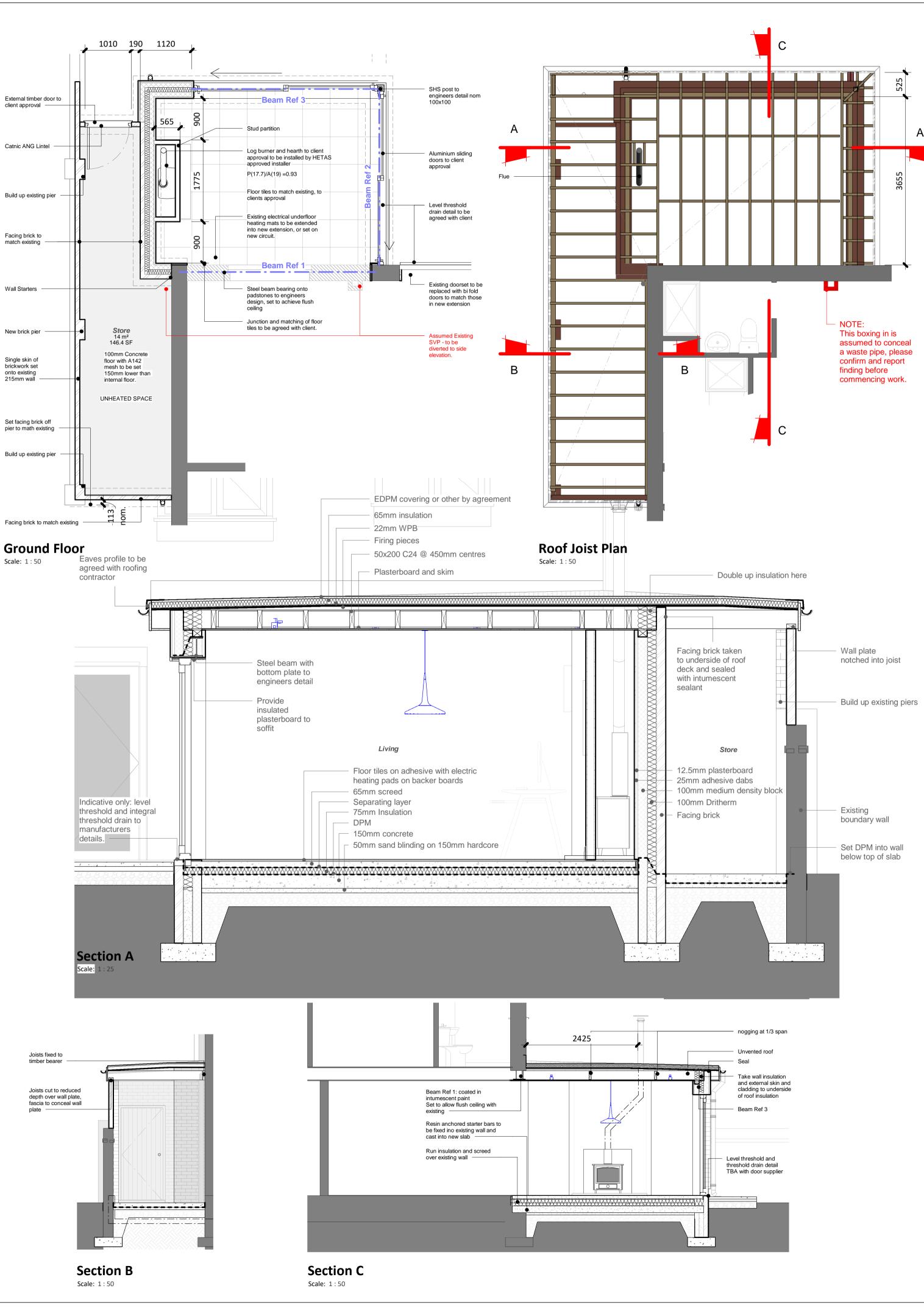
The head of all cavity walls or partitions is to be sealed off below wall plate level with noncombustible material to prevent transfer of warm moist air into the roof spaces. Ensure that wall insulation is taken up between joists to abut the roof insulation.

STEEL BEAMS

Location and size of structural steel beams are shown on the plans. All beams to bear on suitable pad stones to structural engineers' calculations and specifications and to BCO approval. Beams are to be set so that the bottom flanges allow for a flush ceiling. All beams to be coated with Fire seal 47-4 intumescent paint to achieve 30 minutes fire resistance.

LINTELS

Provide duplex coated Catnic steel lintels or similar BBA Certified lintels by agreement. Ensure lintels are installed to manufacturers' instructions and recommendations with minimum end bearings of 150mm. Operations likely to damage the protective coatings or impair the strength of the lintels (for example, cutting, welding or drilling) must not be undertaken. Catnic lintels have been tested in accordance with the relevant parts of BS476, Methods of Determination of the Fire Resistance of Load-bearing Elements of Construction and will provide 30min fire



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he contractor is to check all dimensions on site prior to commencing setting out works and report any discrepancies. DO NOT PROCEED IN THE EVENT OF A DISCREPANCY

Rev Date Revision Description

DESIGN AND COPYRIGHT

All drawings are copyright protected and are ntended for use in obtaining building egulation approval only and not as a ubstitute for full working drawings. The specifications are project specific and are not transferable to other projects without risk. Any change or alteration to the design may require an amendment to the specification for compliance with the building egulations.

PARTY WALL

Where the proposals involve work near to or on a shared boundary the Employer has esponsibilities under the Party Wall Act to serve notice on adjoining land owners. It is the Employers responsibility to ensure that notices are served on adjoining owners in relation to the Party Wall Act.

It is the Employers responsibility to satisfy themselves that the development complies with any restrictive covenants contained

Covenants and Boundaries

within the title deeds of their property and to confirm the location, position and extent of any boundary lines to the Architect and

BUILD OVER AGREEMENTS The employer is responsible for carrying out

a drainage survey to establish the location of shared drains within the site. Shared drains within 3m of any proposed structure, may require a build over agreement with the drainage undertaker.

It is the Employers responsibility for ensuring that relevant permissions for the work has been granted and that all conditions have been discharged or satisfied before work commences, and that any ariations to the approved drawings have been authorised by the Local Authority.

BUILDING REGULATIONS

It is the Contractors responsibility for ensuring that all works are carried out in a workmanlike and professional manner, with materials that are fit for purpose and habitation when completed, and are in compliance with the standards set out in the building regulations, this specification, and any other requirements set out by the Employer.

CDM REGULATIONS

The Contractor and Employer must be familiar with, and comply with, their statutory duties and obligations under The Construction (Design and Management) Regulations 2015 (CDM).

The client must appoint a contractor, if more than one contractor is to be involved, the client will need to appoint (in writing) a coordinate the planning and design work) and a principal contractor (to plan, manage and coordinate the construction and ensure there are arrangements in place for managing and organising the project). The designer can take on these duties, provided there is a written agreement between the employer and the designer to do so.

The Health and Safety Executive is to be notified as soon as possible before construction work starts if the works: (a) Last longer than 30 working days and has more than 20 workers working

(b) Exceeds 500 person days.

simultaneously at any point in the project.

The contractor must ensure that all workers have the correct skills, knowledge, training and experience to carry out the work and that appropriate supervision, instruction and information is given. In addition, the contractor is to ensure that a written construction phase plan is prepared before starting work.

For the duration of the contract the Contractor is responsible for the health and safety of those working on the building site and those with authorised entry to it. He must comply with all relevant regulations in this

The Contractor must ensure that operatives employed are appropriately skilled and experienced for the type and quality of work undertaken.

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Project: Green Howards Road

Drawing: Detail Plans

Client: Mr & Mrs Jones

Sheet Size: A1L Scale: as shown at A1

Project / Drawing / Revision 0761 / BR01