

# SM Design & Consulting Ltd

Consulting Structural and Design Engineers

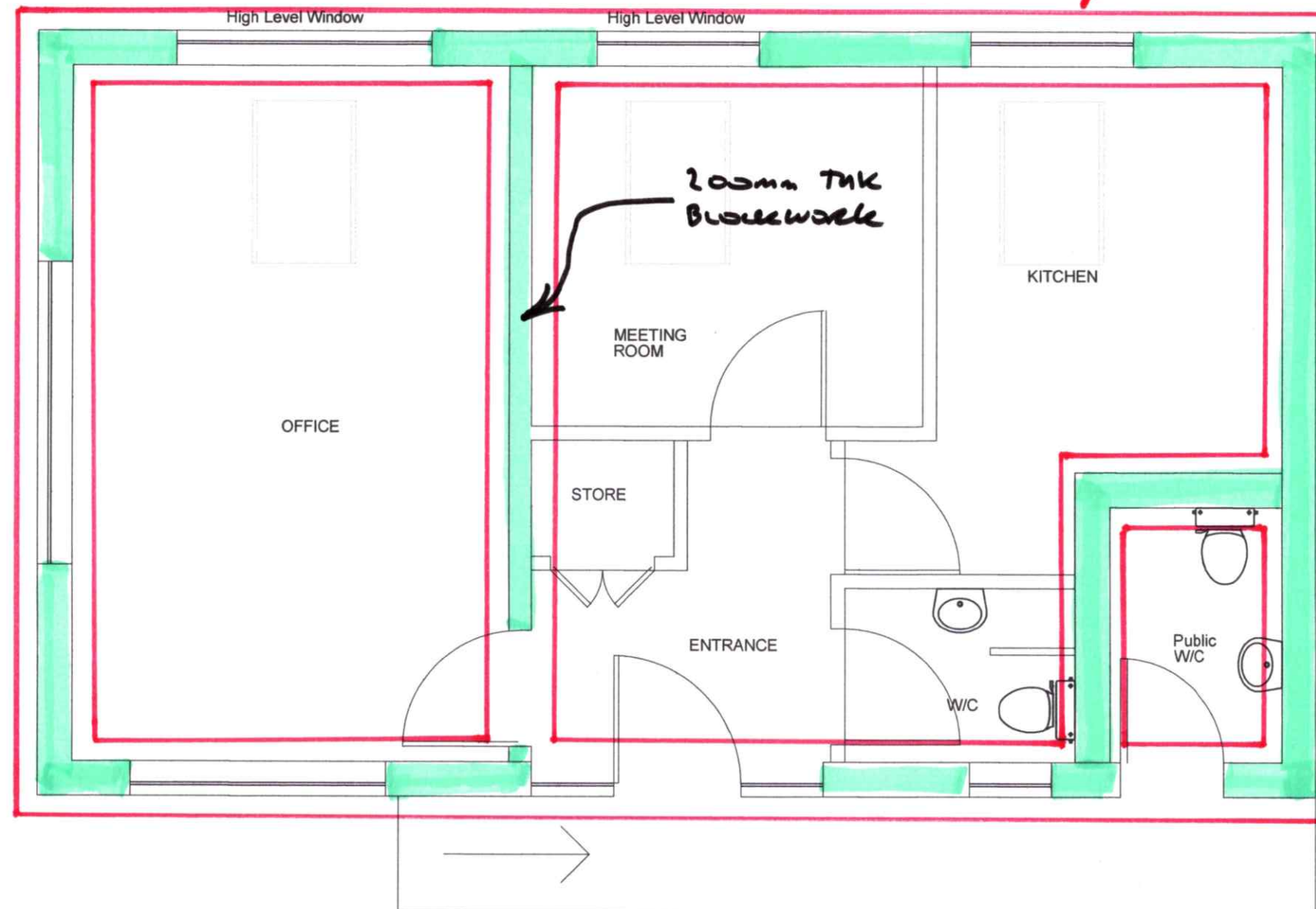
## **STRUCTURAL SKETCHES FOR NEW OFFICE BUILDING**

Site Address

**LITTLE PAXTON VILLAGE HALL  
LITTLE PAXTON  
CAMBS**

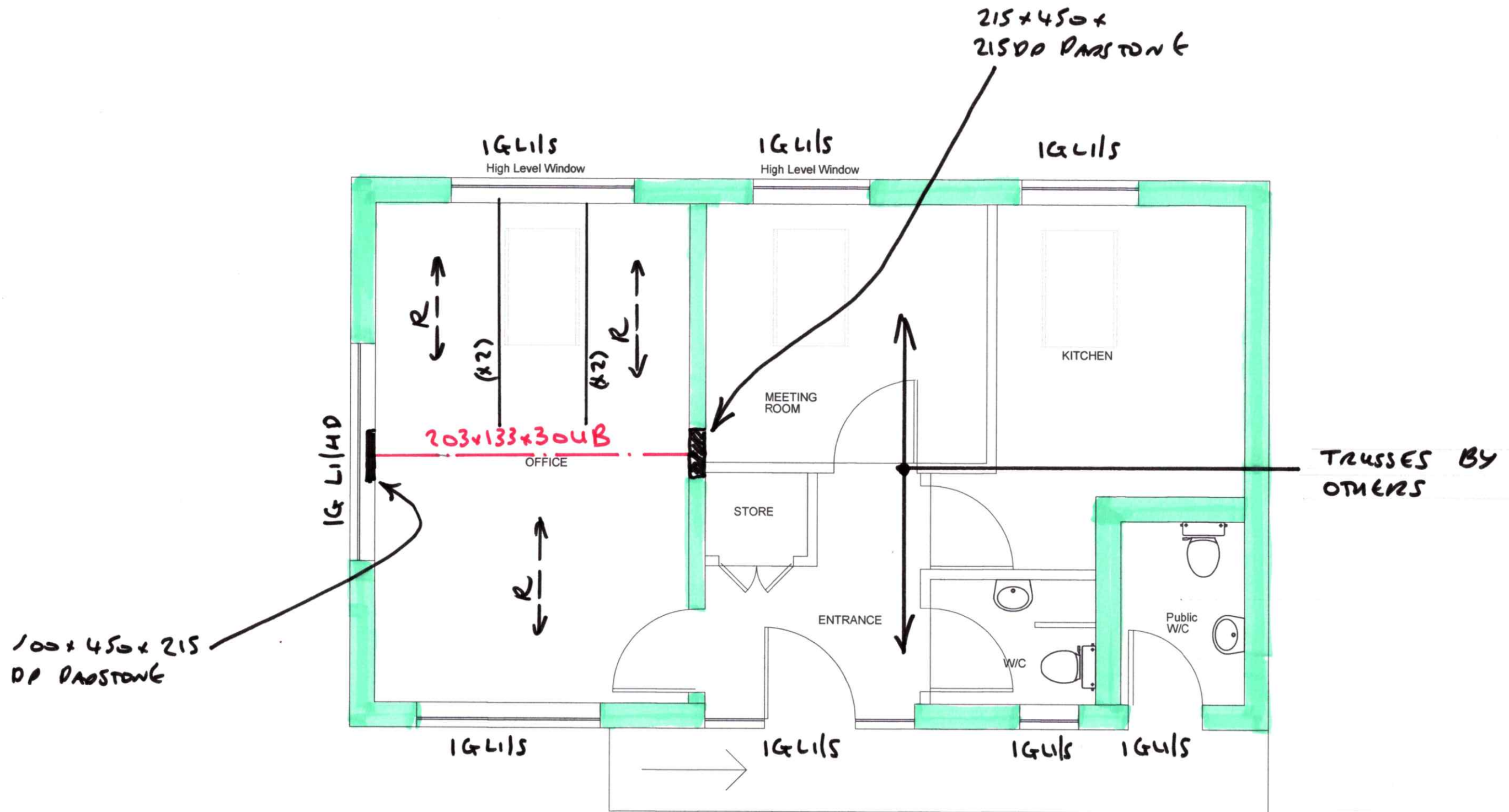
**Project No – 22-251  
Date - NOVEMBER 2022**

600mm wide fan,  
min 1000mm rd subject  
To L.A. INSPECTION &  
Approval



FOUNDATION LAYOUT  
(1:50)

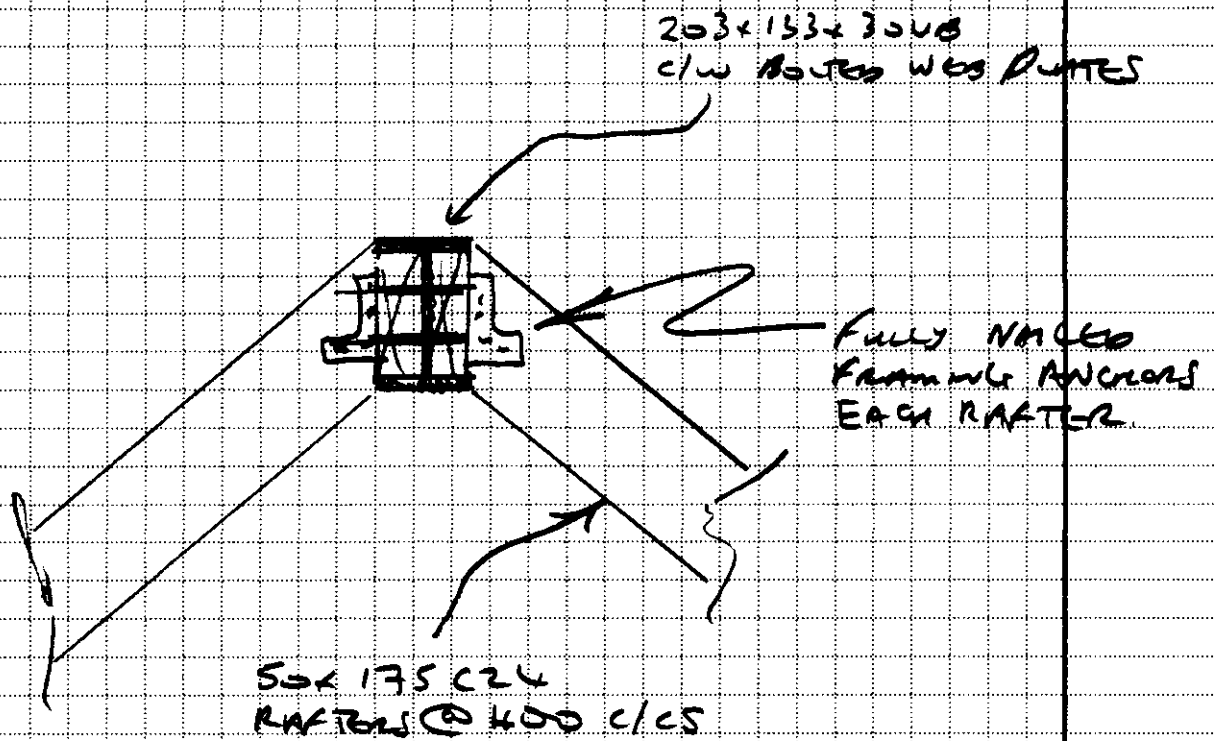
← R → - 50x175 C24 RAFTERS  
@ 400 c/c



GROUND FLOOR SHOWING

STRUCTURE ABOVE (1:50)

PROJECT Village Hall Car Park, Little Paxton, St Neots



RIIDGE DETAIL  
(1/10)

**Little Paxton Village Hall  
Little Paxton  
Cambs**

**GENERAL**

Do not scale from this drawing.

All dimensions are in millimetres u.n.o.

All dimensions are to be verified on site prior to work starting on site.

The contractor shall be responsible for all design and implementation of all necessary temporary works measures.

The contractor is to ensure that his construction method and programme of works shall have no adverse effect upon the structural integrity of the existing building.

All materials and workmanship are to be of the best quality and to the appropriate British standard.

**HEALTH AND SAFETY**

Where appropriate the client will appoint a competent CDM Coordinator to act on his behalf and ensure that the construction (design and management) regulations 2007 are adhered to.

In all cases the contractor must at all times operate safe working practices in accordance with part 4 of the regulations. The contractor is responsible for implementing all necessary safety measures to protect his welfare and any third parties during the execution of the works

The working method of any hazardous operations must first be discussed with the CDM coordinator and designer prior to commencement

Below is a list of identified hazards which have been impractical or uneconomic to eliminate at design stage. The list is not exhaustive and should be read in conjunction with the main contractors own health and safety policy.

<b>HAZARD</b>	<b>SOLUTION/PRECAUTION/SEQUENCE</b>
Demolition and creation of new openings	Contractor to ensure that satisfactory temporary propping works measures are in place to maintain the structural integrity of the building at all times. The formation of openings should follow published procedures as set out in BRE publication "Good Building Guide GBG20, Removing internal load bearing walls in older dwellings" The Contractor should carry out the work in accordance with a prepared demolition statement.
Excavation	Refer to "excavations" noted below.
Scaffolding	Erection of access and working scaffolding is to be in accordance with BS 5973. All access equipment is to be inspected on a weekly basis by a competent person. Scaffolding Register to be maintained up to date and to be made available at any time for

	inspection.
Lifting	Adequate means for moving and positioning items to be available. Handling and Construction to be carried out in accordance with relevant HSE guidelines. Individuals are not to manually lift more than 25kg
Asbestos	The Contractor should satisfy himself that the areas in which he is working do not contain asbestos. A Demolition and Refurbishment survey should be carried out prior to any works commencing. Asbestos to be removed from site by specialist, however, keep wary eye on potential sources not located previously.
Persons working at height	Works to be properly supervised with safe working platforms provided.

## **STEELWORK**

All steelwork is to be grade 43. All dimensions are to be checked on site prior to ordering steelwork. No holes to be burned in any steelwork. Steel beams to have a minimum bearing of 150mm unless noted otherwise.

All steelwork is to be provided with minimum 1 hour fire resistance by using an approved intumescent paint system or alternatively by cladding in plasterboard such as Gyproc Glasroc F Firecase boarding or similar approved. All to be in accordance with the manufacturers instructions.

### **Shop priming:**

cleaning: chip, scrape, disc sand and grind surfaces to remove all fins, burrs, sharp edges, weld splatter, loose rust and loose scale. Clean out all crevices. Thoroughly degrease using emulsion cleaners followed by thorough rinsing with water. Apply primer when the surface is dry and on the same day as cleaning.

### **Priming:**

One full coat of zinc phosphate alkyd brush applied to all surfaces, free from runs and sags.

### **Installation:**

Position members accurately, using steel packs of adequate area as necessary to achieve a true line and level. Fix securely using washers under bolt heads and nuts. Bolted connections: grade 8.8 bolts well tightened.

Where steel shims are required the gap is to be filled with 1:2 cement/sharp sand mixed as dry as possible with "conbex100" cement additive, consolidated by ramming until the space is completely filled. Spans over 4.0m to be preloaded prior to dry-packing to minimise deflection.

All steelwork that is within cavity and in direct contact with the outer wall to be hot dip galvanised to BS 729 and then painted with 2 coats bituminous paint.

All steelwork below ground level is to be encased in concrete with minimum 75mm cover.

Where gap between underside of stanchion base and top of foundations is between 10 and 75mm grout with "Conbextra GP" non shrink grout by Fosroc Ltd or similar approved in accordance with the manufacturers instructions.

## **TIMBER**

All structural timber is to be tanalised and to be grade C16 to BS5268.

Studwork wall construction - 50 x 100 studs at 400 c/c max. with 50 x 100 head and sole plates with 13mm plywood sheathing nailed securely to studs and head and sole plates. Fix 12.5mm plasterboard and 3mm skim to provide 1/2 hour fire resistance.

Timber to timber connections to be constructed using galvanised m/s joist hangers by "BAT" or similar approved supplier.

Timber to masonry connections to be constructed by building galvanised m/s joist hangers into the existing brickwork.

Partitions are to be on doubled up joists where parallel to span and on noggins where crossing joists except where trebled joists are specified.

Doubled and trebled joists to be bolted together at 500mm c/c using toothed plate connectors and M10 Bolts.

Install timber noggins between timber joists at 2.0m max centres along the span of the joists.

## **CONCRETE**

All concrete is to be in accordance with BS8110 with a max aggregate size of 20mm sulphate resisting concrete is to be used in concrete below ground level.

Concrete grades:

Foundations – C25

## **MASONRY WALLS**

Bricks and Blocks are to be manufactured at least 28 days prior to use in the works.

Mortar in masonry walls is to be 1:1:6 cement:lime:sand mix with sulphate resisting cement below ground level and ordinary Portland cement used above ground level.

## **TEMPORARY WORKS**

The contractor is responsible for designing and implementing all necessary temporary works required. The contractor shall ensure that his method/timing/sequence of the works shall in no way adversely affect the existing or proposed structure.

## **EXCAVATIONS**

No one shall enter an excavation deeper than 1.2m deep without adequately designed temporary shoring being in place. Where foundations are deeper than 2.5m they should be constructed in two pours. Access to unattended trenches to be protected.

The contractor should ensure that care is taken during excavations to eliminate risks due to underground hazards including contamination.

Access to unattended trenches to be protected at all times

## **HARDCORE**

Hardcore is to be granular and free from degradable material and to be placed and compacted in layers not exceeding 200mm thickness.

## **PARTY WALL ETC ACT 1996 AND OTHER CONSENTS**

The Client is responsible for confirming if the Act applies and for obtaining all necessary permissions/obtaining any necessary awards required to carry out the work.

It is also the Clients responsibility to ensure that the Local Planning Authority and Building regulations consents are obtained for the works if they apply including clearing of any planning conditions where they apply.

If in any doubt the Client should seek advice from a suitably qualified professional prior to commencing any work on site.