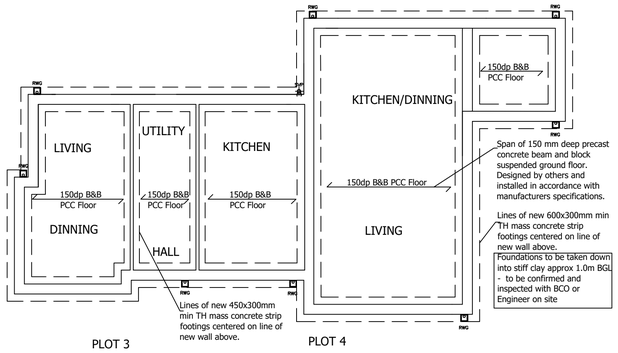
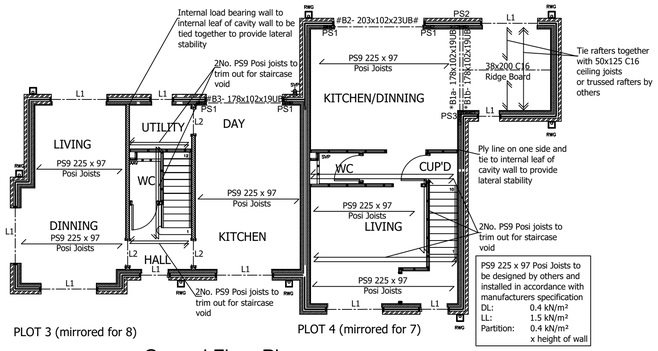
TYPE C & D



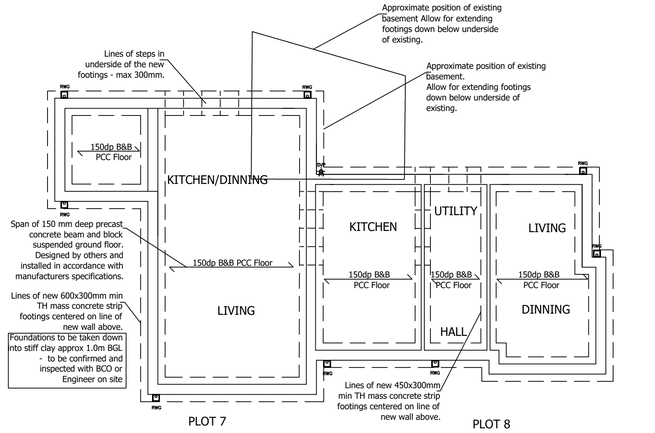
Ground Floor Plan Showing Foundations

0 1 2 3 4 5 m



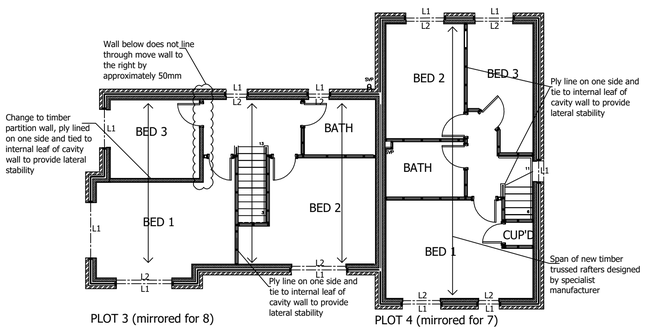
Ground Floor Plan Showing Structure Over

0 1 2 3 4 5 m



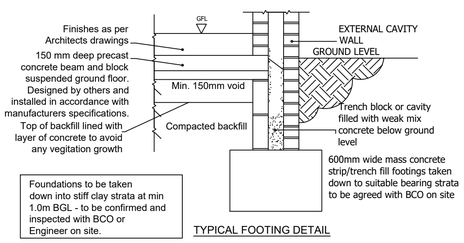
Ground Floor Plan Showing Foundations

5 m 4 3 2 1 0



First Floor Plan Showing Structure Over

0 1 2 3 4 5 m



TYPICAL FOOTING DETAIL

KEY:

- Span of new 50x150mm DP grade C16 timber rafters at 400mm centres. Timbers to be doubled up and bolted together around roof lights or openings
- PS9 225 x 97 Posi Joists to be designed by others and installed in accordance with manufacturers specification. DL: 0.4 kN/m² LL: 1.5 kN/m² Partition: 0.4 kN/m² x height of wall
- * Beams bolted together with M16 threaded bars through 30mm dia hollow tubes at 600mm centres
- ^ Beam with 8mm TH plate welded to top to suit wall thickness
- # Beam with 280x8mm TH plate welded to underside with 100mm long 6mm FPFW at 300mm centres to support outer leaf. Plate to extend min 100mm over outer brickwork bearing

PADSTONES:

Ref:	Size(LxTxD):
PS1	330x100x150mm
PS2	440x100x215mm
PS3	L Shape 440x100x215x440mm

Mass concrete (grade C28/30) concrete padstones built into existing/new walls

LINTELS:

Ref:	Type:	Min bearing:
L1	Catnic CG Type to suit wall	150mm
L2	Naylor R6 PCC lintel	150mm

Proprietary galvanised steel or precast concrete lintels installed in accordance with Manufacturers instructions

Foundations.

1. All setting out of new foundations is to be undertaken by the Contractor.
2. All new foundations are to be a minimum of 600mm wide x 200mm deep mass concrete strips or 600mm wide mass concrete trench fill taken down to a suitable bearing strata agreed with the Building Control Inspector on site before pouring any concrete. Consideration is to be given to any local vegetation and foundations extended down below zones of influence in cohesive soils. Refer to NHBC Chapter 4.1 and consult Engineer where necessary.
3. Unless noted otherwise, all unreinforced foundation concrete to have a cube strength of C30 with minimum slump of 50mm.
4. All load bearing walls are to be sat centrally on new foundations, unless detailed otherwise.
5. All masonry below ground level to be of engineering or concrete brick or dense solid blocks with any cavity fully filled with weak mix concrete upto ground level and sloping down to the outer leaf.
6. Where existing walls are to be used for new loadings, the Contractor is to expose the existing foundations and confirm with the Building Inspector or Engineer to ensure adequacy for new load pattern.

Concrete

1. All new concrete to be poured within suitable formwork to prevent loss and aid compaction. All concrete is to be suitably vibrated in-situ to ensure compaction and prevent voids forming.
2. All reinforced concrete to have a cube strength of C35 minimum with sufficient reinforcement to satisfy BS8110, i.e. 0.13% of cross sectional area.
3. Reinforced concrete to be in accordance with BS5950, with maximum free water cement ratio of 0.6, minimum cement content of 300kg/m3, maximum aggregate size of 20mm. Cover to reinforcement to be 35mm minimum, however 50mm cover to be used where concrete is below ground level and susceptible to frost action.
4. Pumped concrete in congested narrow walls to use 10mm aggregate and 100mm slump minimum.
5. All concrete below ground level and upto 1.0m above to have suitable waterproof additive included in the mix at the batching plant and slump checked on site prior to pouring. Allow for laying/installing all necessary water bars and cleaning concrete surfaces at junctions of new concrete.
6. All reinforcement to be Grade B500 steel to BS4449 bent and scheduled in accordance with BS8666. Allow for lapping bars by 40xDiameter.

Floors

1. Spans and specificaton of all new floors are to be as per the drawings -refer to Architects drawings where applicable for insulation and finishes. Spans of new floors are shown on the layouts.
2. Where partition walls are built off timber floor joists or where joists used to trim out around small openings then timbers each side are to be doubled up and bolted together with M12 coachbolts at 400mm centres, unless noted otherwise.
3. Presumed spans of existing floors are shown on the layouts. The contractor is to confirm this prior to commencing any demolition or installation of new supports. Where discrepancies occur, the Engineer is to be advised immediately to allow for any necessary re-design.
4. Where span of new joists is greater than 3.0m then suitable strutting at third span is to be provided either with full depth noggins or timber or proprietary metal herringbone struts.
5. Where new or existing floors span parallel to the external walls, then suitable lateral restraint is to be provided by fixing 1200mm long 30x5mm TH galvanised m.s straps between the external walls and internal floor construction. Where timber floors are used, then timber noggins are to be fitted between the joists (beneath the lines of the straps) and the straps secured across the tops of the outer three joists by means of 2#50mm long No5 woodscrews per joist and 2M8 resin anchors into the masonry wall or straps hooked over the inner leaf and bed into the mortar joint.
   Where precast concrete floors are used then straps are to be secured into the concrete beams/planks with suitable self drilling bolts at 400mm centres along straps.

Walls

1. Where existing walls are to used to support the new structure, then the condition is to be confirmed on site with the Building Inspector or Engineer. Allow for locally rebuilding walls where out of plumb or where structural damage has previously taken place. Where necessary allow for crack stitching with twisted stainless steel helical bars in resin.
2. New load bearing masonry walls are to be formed in either clay or concrete bricks with a minimum compressive strength of 15N/mm2 or dense concrete blocks with a minimum compressive strength of 7N/mm2 all bedded in class iii (type M4) mortar with a 1:1:6 cement:hydrated lime:sand mix, unless noted otherwise.
3. STL Projects Ltd tend not to recommend the use of lightweight aerated blocks for walling, especially load bearing walls, as they can be prone to shrinkage if exposed to moisture during erection, which results in vertical cracking through the masonry panels. Not only does this crack any finishes applied directly to the blocks but more importantly it can significantly reduce the structural integrity of the panel which impacts the overall stability. This can be reduced by protecting the masonry during construction or by introducing movement joints to allow for designed movement. The Engineer should be advised of such use prior to design to allow for this.
4. Any concentrated loads on new or existing masonry are to be adequately spread out by means of Grade C28/30 mass concrete padstones built into the walls. Padstone sizes are as shown on the drawings. Sizes of padstones are not to be reduced as these have been specifically designed. The ends of the beams should be sat centrally on the padstones to ensure even load distribution, unless noted otherwise.
5. All new masonry is to be fully tied into existing by means of brick bonding or suitable mechanical wall starters with ties positioned at 300mm vertical centres.
   Where timber stud partitions are used as structural supporting walls or lateral restraint walls, then all timber is to be 47x97mm Grade C16. 47x97mm header and bearer timbers are to be secured top and bottom, with vertical timber studs spaced at 400mm centres and horizontal noggins at 1.0m centres between. A face of 12mm plywood is to be screwed over one side of the partition prior to plasterboard.

Roofs

1. Where existing roofs are to be recovered or altered to suit the new layouts, then the existing structure is to be confirmed on site by the Building Inspector or Engineer for adequacy. Where concerns are raised, then allow for additional design to be undertaken.
2. All new roofs are to be adequately supported and braced in accordance with current Building Regulations, British Standards and Good Building Guides.
3. Where Trussed Rafters are to be used, then all design is to be undertaken by the specialist Manufacturer/Supplier and delivered and stored on site and installed in accordance with their instructions. Allow for newly positioned trusses to be suitably braced in accordance with current guidelines in Trussed Rafter Manual.

Steelwork

1. All new steelwork has been designed to BS5950. All new steelwork to be minimum grade of S275J.
2. All dimensions are to be confirmed on site and allowance made for bearing lengths.
3. The Contractor is responsible for all connection design and weld details, unless noted otherwise. Where connections shown all bolts are to be Grade 8.8 in 2mm clearance holes upto M24 bolts and welds to be 6mm Full Penetration Fillet Welds with Grade E43 electrodes to BS639. Alternatively all ultimate loads are given on the drawings.
4. Where splice conections specified then all bolts to be High Strength Friction Grip bolts.
5. The Contractor is responsible for the design and implementation of all temporary support where new steel supports are provided to new openings in existing walls. Allow for the new structure to obtain sufficient strength prior to removing any temporary supports etc.
6. All internal unexposed steelwork is to be shop blasted to SA2.5 and primed with zinc phosphate epoxy 80microns and touched up on site as necessary.
7. All external or exposed steelwork is to be hot dip galvanised and touched up on site with suitable repair system as necessary. Where steelwork is positioned within cavity walls, the outer face of the steel must be 50mm clear of the outer leaf and steel work painted with two coats bitumen paint or encased in minimum 75mm concrete including all holding down bolts etc.
8. Fire protection to all steelwork to be as per Architects specification. Where no specification is provided, then confirm with Building Inspector.

Timber

1. All structural timber is to be strength graded and stamped and confirmed on site for compatibility in accordance with the design specification.
2. All new timber to ground floors and roof structures is to be treated.
3. Any existing timbers are to be inspected for condition and replaced as necessary. Where existing timbers are re-used then these are to be confirmed on site.
4. Where timbers are built into external walls then ends should be wrapped in suitable material or proprietary 'caps' to protect from moisture ingress.
5. Minimum free end bearing of timber sections is to be 90mm unless suitable duty joist hangers used where joists secured tightly to supports. Any gaps between joist ends to be filled with masonry or timber noggins.
6. All new timber is to be kept dry on site prior to use and stored so as to prevent warping along minor axis.
7. Any notching of timber sections is to be confirmed with STL Projects Ltd.

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For the avoidance of doubt all dimensions are measured to wall structure and not the finishes unless otherwise stated.
Where any discrepancy is found to exist within or between drawings and/or documents it should be reported to the engineer immediately.
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Revisions:

	Date	Revision Details
H		
G		
F		
E		
D		
C		
B	18.1.19	Drawing updated
A	01-10-18	Updated Layout

- ISSUED AS WORKING DRAWING
- CLIENT APPROVED
- (O) PRELIMINARY

Client: Gustav Bonnier

Project: Tudor Inn, Peel Hall RD, Wythenshawe

Title: PROPOSED BUILDING PLANS TYPE C & D

Drawn: BA	**Scale: As Shown @ A1**
Checked by: JH	**Date:**

Drawing No. 18-2830 SE02 B