CHESS RMA Structural Consultants

Park House
15-19 Greenhill Crescent
Watford
Herts., WD18 8PH

01923 772155

Chess RMA Structural Consultants

SPECIFICATION OF WORKS

Project: **PROPOSED RESIDENTIAL DEVELOPMENT**
29A TANZA ROAD
LONDON (NW3 2UA)

Client: **Solidad Martinez**

Date: July 2010
2325/AR/tb
Chess RMA Structural Consultants

GENERAL

1. Do not scale drawings. The Contractor is to check all dimensions on site before carrying out works.

2. This specification is to be read in conjunction with Architect's and all other Consultants' drawings, which should be used to verify layout, setting out, finishes etc. Any discrepancies are to be brought to the attention of the Architect prior to construction.

3. The Contractor is to inform the Architect and Structural Engineer if the existing fabric, including foundations, is opened up and found to be inadequate, unsuitable to support the proposed works, or at variance from the details shown on the drawings.

4. Items noted on the drawings "to be verified on site" are to be exposed by the Contractor for inspection by the Structural Engineer at the earliest opportunity.

5. Do not cut any holes or chases through any structural members without first obtaining the written consent of the Structural Engineer.

TEMPORARY WORKS

1. The Contractor is entirely responsible for maintaining the stability of all existing buildings and structures, within and adjacent to the works, and of all the works from the date for possession of the site until practical completion of the works.

2. The Contractor shall design, install and maintain all necessary temporary works and shall advise the Architect, before commencement of the works, of his proposals for temporary supports and sequence of construction for the works. These proposals shall be supported by design calculations if requested.

STABILITY

1. The Contractor is to accept full responsibility for the stability and structural integrity of the works during the Contract and provide support as necessary. He shall also prevent overloading of any completed or partially completed elements. Details of design loads may be obtained from the Architect.

TOLERANCES

1. All tolerances are to be agreed with the Architect, and the Contractor will be responsible for ensuring that sufficient tolerances are provided and integrated throughout all elements of the works.

2. The Contractor is to take account of tolerances detailed elsewhere in the drawings and appended Specifications when complying with the above clause.

MATERIALS AND WORKMANSHIP

1. All articles, materials and goods shall be new and of good quality, suitable for the required purpose and shall conform to the appropriate British Standard where such exists. Where references to the above are made it shall be inferred that the latest edition applies, together with subsequent amendments, unless otherwise specified.

FOUNDATIONS

1. New foundations have been designed to impose a bearing pressure not exceeding 100kN/m^2 on the clay. The Contractor is to ensure that all new foundations bear onto firm clay and is to notify the Building Inspector/District Surveyor for his inspection before concreting.

2. If the Building Inspector/District Surveyor requests amendments to the foundations or if conditions differ from those noted above, the Architect and Structural Engineer are to be notified immediately. The Contractor shall not proceed without receiving instructions from the Architect.

3. Foundations are to be cast symmetrically about piers, stanchions, or walls, unless noted otherwise on the drawings.

4. Depths of new foundations are to be designed in accordance with NHBC Standard Chapter 4.2 Building near trees assuming a highly shrinkable clay soil.

MASONRY

1. Workmanship is to comply generally with BS 8628: Parts 1 & 3. Brickwork to be to BS 3921. Blockwork to be to BS 6073.

2. All masonry below d.p.c. is to be set in 1:3 mortar with sulphate resisting cement.

3. New brickwork below d.p.c. is to be Class B engineering bricks.

4. New blockwork below d.p.c. is to be specified as suitable for such use by the manufacturer, and of minimum strength 3.5N/mm^2, or as noted otherwise on the drawings.

5. New brickwork above d.p.c. is to be minimum Class 3 set in 1:1:6 mortar, unless noted otherwise on the drawings.

6. New blockwork is to be minimum strength 4N/mm^{2}set in 1:1:6 mortar, unless noted otherwise on the drawings.

7. Brickwork and blockwork are to be laid properly bonded as agreed with the Architect and fully bonded into existing work.

8. Cavity wall ties shall be stainless steel flat double triangle ties to BS 1243 spaced at 450crs vertically, 900crs horizontally staggered, and at 225crs vertically 150mm from all openings, corners and reveals. Minimum embedment to be 50mm into each masonry leaf.

9. Wall ties elsewhere are to be stainless steel flat double triangle ties, to BS 1243, as noted on the drawings. Minimum embedment to be 50mm into each masonry leaf.

10. Do not lay masonry when the ambient air temperature is less than 5^{o}C.

CONCRETE

1. Materials and workmanship are to comply generally with BS 8110-1.

2. Concrete for new foundations to be designated concrete GEN 3 and ground slabs to be designated concrete RC25 to BS 8500 and BS EN 206-1 with OPC and 20mm max aggregate. This assumes Class 1 sulphates only.

3. Concrete for padstones and lintels is to be 2:3:6 (cement:fine sand:coarse sand) nominal mix, with OPC and 10mm max aggregate.

4. Ready mixed concrete must be obtained from a plant which holds a current Certificate of Accreditation under the Quality Scheme for Ready Mixed Concrete.

5. Do not place concrete when the ambient air temperature is less than 5°C.

6. All holes shall be formed and all inserts cast in at the time of pouring concrete. No part of the concrete works shall be drilled or cut away without the approval of the Structural Engineer.

7. Reinforcement shall be:

   (i) plain bars to BS 4449, grade 250 (mild steel), prefix R on drawings and schedule or

   (ii) deformed bars to BS 4449, grade 460 (high yield) type 2, prefix T on drawings and schedules

   (iii) mesh to BS 4483

8. Reinforcement shall be tied adequately using tying wire or steel clips. Concrete cover is to be as specified on the drawings. Chairs and spacers are to be provided as necessary to maintain the specified cover.

9. Unless noted otherwise on drawings, all reinforcement is to be lapped 40d (where d is diameter of the larger bar).

TIMBER

1. New timber in the works is to be selected structural timber not inferior to European Redwood/Whitewood grade C16 to BS 5268:Part 2, unless noted otherwise on the drawings.

2. All existing timber is to be inspected at the beginning of the project by a specialist. Refer to specialist's report for all information in connection with timber treatment or replacement.

3. New timber in the works is to be vacuum impregnated with preservative to BS 5268:Part 5 and the manufacturer's recommendations. Cut ends are to thoroughly treated with brush applied coats of appropriate preservative before fixing. All preservatives are to be to the Architect's approval.

4. Structural timbers may only be drilled or cut for services with the approval of the Structural Engineer.

5. Sizes of new structural timbers noted on the drawings are sawn basic sizes.

6. Joist hangers, straps, connectors etc shall be purpose made and of the manufacture or performance stated on the drawings.

7. All timber connectors, screws, nails, joist hangers, steel straps etc are to be galvanised or sherardised. All such items are to be fixed in accordance with the manufacturer's recommendations, unless shown otherwise on the drawings.

STEELWORK

1. All workmanship is to comply with BS 5950 Part 2.
2. All structural steel sections are to be Grade S275 to the applicable code from the following list; BS 4-1, BS EN 10210-2.
3. All bolts are to be grade 8.8 Black Bolts to BS 4190.
4. All welding is to comply with BS EN 1011 Parts 1 & 2. Site welding shall not be permitted except with the written approval of the Architect.
5. All welds are to be 6mm fillet welds or full strength butt welds unless noted otherwise on the drawings.
6. The steelwork fabricator is to obtain dimensions from site. Setting out dimensions are to be obtained from the Architect's drawings.
7. All steelwork is to be cleaned free of all mill scale, rust, oil etc. with mechanical wire brush and painted with 2 coats of high build zinc phosphate primer before erection, unless noted otherwise on the drawings.
8. Fire protection to all steelwork is to be to the Architect's details.

LINTELS

1. Precast concrete lintels are to be to BS 5977-2 by Supreme Concrete Ltd, Coppingford Hall, Coppingford Rd, Sawtry, Huntingdon PE28 5GP, Tel. 01487 833 300. Sizes and types as indicated on the drawings. End bearing lengths are to be at least 150mm, unless noted otherwise on the drawings.

2. Galvanized steel lintels are to be to BS 5977:Part 2 by Caradon Catnic Ltd, Pontgwindy Industrial Estate, Caerphilly, Mid Glamorgan CF83 2WJ, Telephone 01222 337900. Sizes and types as indicated on the drawings. End bearing lengths are to be at least 150mm, unless noted otherwise on the drawings.

3. The Contractor shall obtain the Architect's written approval, prior to commencement of the work, to the use of lintels by alternative manufacturers to those listed above.

UNDERPINNING

1. The Contractor shall be responsible for ensuring that his operations do not in any way impair the safety or condition of the existing structure or the adjacent properties. He shall provide any temporary supports required for this purpose, and shall carefully inspect the condition of the structure both before and during the execution of the work and immediately inform the Architect if he considers that any more stringent procedure than that specified is necessary.

2. Underpinning is to be carried out in short sections not exceeding 1000mm in length, in the numbered sequence shown on the drawings.

3. The underside of the footings are to be cleaned and hacked free of any dirt, soil or loose material before underpinning.

4. The body of the underpinning is to be constructed in concrete nominal 1:2:4 mix using sulphate resistant cement and 20mm max aggregate, and is to be cast to the widths and depths shown on the drawings. As far as practicable excavation and concreting of any section of underpinning shall be carried out on the same day. Unconcreted sections shall be kept covered to prevent the ingress of water.

5. The mass concrete is to be stopped off approximately 100mm below the underside of the existing footing, and the final pinning up over the whole extent of the letter is to be carried out with a semi-dry fine concrete, well rammed in as soon as possible after the foundation has set hard. The pinning -up concrete is to consist of 1 part by volume of sulphate resistant cement to 3 parts of aggregate (well graded from 10mm maximum size down to fine sand) with a water/cement ratio by weight of 0.35.

6. Excavation to any section of underpinning shall not be commenced until at least 48 hours after completion of any adjacent section of the work.

7. The joint between adjacent sections of underpinning is to be formed by creating a rough surface against which the first section is cast. Then, having thoroughly cleaned the exposed concrete face, the adjacent section may be cast.

8. The Contractor shall provide for the maintenance of drainage services during the underpinning operation and for the reinstatement of any services interrupted or disturbed by the excavations.

9. The Contractor shall prepare a Sequence of Work and submit it to the Architect for his comments prior to the commencement of the work.