

Bellevue Road, Edinburgh.

Project Number; 4170

Proposed Residential Development.

Rev A; 3RD May 2013

Outline Structural Specification Notes.

Contractor designed Elements.

Balustrades and Handrails(to the stairs, roof terraces, Juliet balconies and stairwell smoke vent windows).

1. The contractor shall be responsible for the design of the Balustrades(to the stairs, roof terraces, Juliet balconies and stairwell smoke vent windows) and Handrails, including fixings, in conjunction with any architectural requirements.

2. The loading should be determined in accordance with BS 6399 Part 1 Clause 10 as follows;

Stairs, Landings, External balconies, edges of roofs and adjacent to sunken areas;

Horizontal uniformly distributed line load = 0.74kn/m .

Horizontal uniformly distributed load applied to the infill = 1.0kn/m^2 .

Horizontal point load applied to part of the infill = 0.5kn .

Vertical point load = 1kn .

Vertical uniformly distributed load = 0.6kn/m .

External Balcony vertical load = 1.5kn/m^2 .

3. Dead loads include from the system self weights. (Refer to Architects Drawings).

4. The contractor shall prepare such calculations, drawings and schedules as required for the manufacture/erection of the system (including fixings). Calculations, and drawings shall be submitted to the client & design team for certification for building warrant purposes and comment and the contractor

should not proceed with the manufacture of the system until such time as agreed with the client/design team.

5. CV of individual responsible for the structural design and detailing of these elements (including details of their qualifications and experience).
CV of individual responsible for in-house checking of the structural design and detailing of these elements (including details of their qualification and experience).

6. The system shall also be designed in accordance with any architectural requirements.

7. All fixings to comply with relevant British Standards and are to be covered by Agreement Board Certificates.

8. For all setting out refer to architects drawings.

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Quattro Consult

Bellevue Road, Edinburgh.

Project Number; 4170

Proposed Residential Development.

Outline Structural Specification Notes.

Contractor designed Elements.

Elevation Windows (Glazing, Frames and Fixings).

1. Information to be provided to the certifying engineer;

Type and thickness of glazing.

Type and cross section dimensions of frame (horizontal and vertical members sizes).

Type, diameter, length and crs of fixings from frame to main structure.

For the glazing, frame and fixing elements either calculations or information sheets or test results are required that prove the structural adequacy in relation to the applied loads and element spans.

2. The contractor shall be responsible for the design of the Window including glazing, frame and fixings, in conjunction with the architectural requirements.

3. The wind loading should be determined in accordance with BS 6399 part 2 and the following site information.

Site reference NT 259 752.

General wind speed (V_b) = 23.5 m/s.

Existing ground level approx = 19 m.

Max height ground to top storey window = 15 m.

4. The barrier impact loading should be determined in accordance with BS 6399 Part 1 Clause 10 Domestic Residential activities as follows;

Horizontal uniformly distributed line load = 0.74kn/m at 1.1m above floor level.

Horizontal uniformly distributed load = 1.0kn/m² up to 1.1m above floor level.

5. Dead loads include from the system self weights, finishes, and associated build-ups (see architects drgs).

6. The contractor shall prepare such calculations(or information sheets), drawings and schedules as required for the manufacture/erection of the system (including fixings). Calculations(or information sheets), and drawings shall be submitted to the client & design team for certification for building warrant purposes and comment and the contractor should not proceed with the manufacture of the system until such time as agreed with the client/design team.

7. CV of individual responsible for the structural design and detailing of these elements (including details of their qualifications and experience).
CV of individual responsible for in-house checking of the structural design and detailing of these elements (including details of their qualification and experience).

8. The system shall also be designed in accordance with any architectural requirements.

9. All fixings to comply with relevant British Standards and are to be covered by Agreement Board Certificates.

10. For all setting out refer to architects drawings.

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Project Number; 4170

Proposed Residential Development.

Outline Structural Specification Notes.

Contractor designed Elements.

External Timber Deck with Timber Balustrades.

1. The contractor shall be responsible for the design of the External Timber Deck with Timber Balustrades including foundations, fixings etc, in conjunction with any architectural requirements.
2. The external timber deck(including fixings, foundations etc) should be designed for a vertical uniformly distributed load(from BS 6399 part 1) = 1.5kn/m^2 .
3. The Timer balustrade(including fixings, foundations etc) should be designed for the following loads(from BS 6399 Part 1);
Horizontal uniformly distributed line load = 0.36kn/m .
Horizontal uniformly distributed load applied to the infill = 0.5kn/m^2 .
Horizontal point load applied to part of the infill = 0.25kn .
Vertical point load = 1kn .
Vertical uniformly distributed load = 0.6kn/m .
4. Dead loads include from the system self weights. (Refer to Architects Drawings).
5. The contractor shall prepare such calculations, drawings and schedules as required for the manufacture/erection of the system (including fixings). Calculations, and drawings shall be submitted to the client & design team for certification for building warrant purposes and comment and the contractor should not proceed with the manufacture of the system until such time as agreed with the client/design team.

6. CV of individual responsible for the structural design and detailing of these elements (including details of their qualifications and experience).
CV of individual responsible for in-house checking of the structural design and detailing of these elements (including details of their qualification and experience).

7. The system shall also be designed in accordance with any architectural requirements.

8. All fixings to comply with relevant British Standards and are to be covered by Agreement Board Certificates.

9. For all setting out refer to architects drawings.

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Quattro Consult

Bellevue Road, Edinburgh.

Outline Structural Specification Notes.

Contractor designed Elements.

Timber Stairs and Balustrades.

1. The contractor shall be responsible for the design of the Timber Stairs and Balustrades, including fixings, in conjunction with any architectural requirements.

2. The loading should be determined in accordance with BS 6399 Part 1 Clause 5 and 10 as follows for Domestic and Residential activities all areas within or serving exclusively one single family;

Stairs; vertical imposed load = 1.5 kn/m^2 .

Balustrades;

Horizontal uniformly distributed line load = 0.36 kn/m .

Horizontal uniformly distributed load applied to the infill = 0.5 kn/m^2 .

Horizontal point load applied to part of the infill = 0.25 kn .

Vertical point load = 1 kn .

Vertical uniformly distributed load = 0.6 kn/m .

4. Dead loads include finishes and self weights. (Refer to Architects Drawings).

5. The contractor shall prepare such calculations, drawings and schedules as required for the manufacture/erection of the timber stair and balustrade system (including fixings). Calculations, and drawings shall be submitted to the client & design team for certification for building warrant purposes and comment and the contractor should not proceed with the manufacture of the elements until such time as agreed with the client/design team.

6. CV of individual responsible for the structural design and detailing of these elements (including details of their qualifications and experience).
CV of individual responsible for in-house checking of the structural design and detailing of these elements (including details of their qualification and experience).
7. The Timber Stairs and Balustrades shall also be designed in accordance with any architectural requirements.
8. All fixings to comply with relevant British Standards and are to be covered by Agreement Board Certificates.
9. For all setting out refer to architects drawings.
10. Timber frame elements shall be preservative treated and all cut ends of timber cut on site to be coated with brush applied preservative.

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Project Number; 4170

Proposed Residential Development.

Outline Structural Specification Notes.

Contractor designed Elements.

Glass and steel canopies.

1. The contractor shall be responsible for the design of the glass/steel canopies including fixings, in conjunction with the architect.
2. The wind loading should be determined in accordance with BS 6399 part 2 and the following site information.
Basic wind speed (V_b) = 23.5 m/s.
Site Reference NT 259 752.
Existing ground level approx = 19 m.
Max height ground to canopy approx = 3 m.
3. The Imposed/snow loads should be determined in accordance with BS 6399 parts 1 and 3.
glass/steel canopy roof (access for cleaning and maintenance (refer to architect for strategy)) = 1.5kn/m² or 1.8kn whichever results in worst load effect.
4. Dead loads include from the glass/steel canopy system self weights, roof finishes, and associated build-ups (see architects drgs).
5. Information to be provided in relation to the glazing to the certifying engineer;
Type and thickness of glazing.
Type and cross section dimensions of frame(horizontal and vertical members sizes).
Type, diameter, length and crs of fixings.

For the glazing, frame and fixing elements either calculations or information sheets or test results are required that prove the structural adequacy in relation to the applied loads and element spans

6. The contractor shall prepare such calculations, drawings and schedules as required for the manufacture/erection of the glass/steel canopy(including fixings). Calculations, and drawings shall be submitted to the client & design team for certification for building warrant purposes and comment and the contractor should not proceed with the manufacture of the glass/steel canopy until such time as agreed with the client/design team.

6. CV of individual responsible for the structural design and detailing of the glass/steel canopy(including fixings) (including details of their qualifications and experience).

CV of individual responsible for in-house checking of the structural design and detailing of the glass/steel canopy (including fixings) (including details of their qualification and experience).

7. The glass/steel canopy(including fixings) shall also be designed in accordance with any architectural requirements.

8. All fixings to comply with relevant British Standards and are to be covered by Agreement Board Certificates.

9. For all setting out refer to architects drawings.

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Bellevue Road, Edinburgh.

Project Number; 4170

Proposed Residential Development.

Rev A; 6th May 2013

Outline Structural Specification Notes.

Contractor designed Element.

Precast concrete stair flights and landings.

1. The precast stair flights and landings are to be designed for the following loads;
Imposed load = 3 kn/m^2 .
Dead load from PC unit self weight.
Dead load from any balustrades, screeds/finishes(see archts drgs) to main landings, half landings and flights.
Dead load from any perimeter glazing/cladding etc(see architects drgs).
Edges of landing units of stair cores are to take a 10 kn/m line load(from self weight of internal leaf blockwork over).
Other loads as shown on the structural drawings.
2. The contractor shall be responsible for the design of the precast concrete stairs and landings including fixings to main frame in accordance with BS 8110 and in conjunction with any architectural requirements.
3. All fixings to comply with relevant British Standards and are to be covered by Agreement Board Certificates.
4. For all setting out refer to architects drawings.
5. The precast stairs and landings units are generally to span onto main blockwork walls.
6. The contractor shall prepare such calculations, drawings and schedules as required for the manufacture/erection of the stairs and landings (including fixings). Calculations, and drawings shall be submitted to the client & design team for certification for building warrant purposes and comment and the contractor should not proceed with the manufacture of the units until such time as agreed with the client/design team.

7. CV of individual responsible for the structural design and detailing of these elements (including details of their qualifications and experience).

CV of individual responsible for in-house checking of the structural design and detailing of these elements (including details of their qualification and experience).

8. The design shall include for all service holes and penetrations and the design shall include for overcoming these, in the form of steel bridles or support angles which shall be supplied by the contractor.

9. Additional reinforcement and lifting points shall be included in the design to ensure units are not overstressed during handling and storage.

10. The finish(top and underside) of the precast units is to be to the architects spec.

11. The units are to be designed for a min of 1 hour fire resistance.

12. Precast units shall be handled and stored in accordance with the recommendations of the manufacturer to avoid overstressing of the units.

13. Slings and chains should be fixed to any special lifting points and care should be taken to avoid damage to surface finishes and arises.

14. Damaged units shall not be acceptable in the finished works and shall be replaced at the contractors own expense.

15. Units shall be manufactured and erected to the tolerances set out in BS 8110.

16. Reinforcement detailing of the precast units is to take cognisance of fixings required for balustrades into the units (see architects details).

17. Precast Concrete stair and landing units to comply with BS 8500, BS 6399 and BS 648.

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Quattro Consult

Bellevue Road, Edinburgh.

Project Number; 4170
Rev A; 22nd Feb 2013
Rev B; 3rd May 2013

Proposed Residential Development.

Outline Structural Specification Notes.

Contractor designed Elements.

Timber Frame

1. The Timber Frame Contractor shall be responsible for the design of all timber frame elements including any temporary bracing in accordance with BS 5268.

2. The timber frame elements are to be designed to resist forces from the following vertical and horizontal loads and for progressive collapse;

Wind loads in accordance with BS 6399 Pt2 using basic wind speed = 23.5m/s, site reference NT 259 752 and site altitude approx 19m.

Imposed/snow loads in accordance with BS 6399 parts 1 and 3.

Floors, stairs etc; general = 1.5kn/m^2 plus 0.25Kn/m^2 (timber partitions)= 1.75kn/m^2 .

Flat Roof ; general(access only for cleaning and maintenance) = 0.6kn/m^2 .

Flat Roof; Solar Roof Panels(refer to architects for manufacturer information on loads).

Flat Roof Terrace; general = 1.5kn/m^2 .

balustrade loads in accordance with BS 6399 Pt1 clause 10 and table 4;

Horizontal uniformly distributed line load = 0.74kn/m .

Horizontal uniformly distributed load applied to the infill = 1.0kn/m^2 .

Horizontal point load applied to part of the infill = 0.5kn/m^2 .

Vertical point load = 1kn.

Vertical uniformly distributed load = 0.6kn/m .

Progressive collapse for building type class 2B(ie residential flats greater than 4 storeys), see relevant British Standard.

Dead load from timber frame self weight.

Dead load from any roof/floor/ceiling finishes build-ups(see archts drgs).

Dead load from any perimeter glazing/cladding etc (see archts drgs).

3. The timber frame contractor shall be responsible for specifying the wall ties(type, crs and fixings) to be connected to the timber frame in order that they are compatible with the timber frame(shrinkage, movement, stud crs etc).
4. The timber frame Contractor shall prepare such calculations, drawings and schedules as required for the manufacture/erection of all timber frame elements(including fixings). Calculations, and drawings shall be submitted to the client & design team for certification for building warrant purposes and comment and the timber frame contractor should not proceed with the manufacture of the timber frame until such time as agreed with the client/design team. All elements of the internal leaf of the perimeter cavity wall are also to be included in the timber frame design.
5. CV of individual responsible for the structural design and detailing of the timber frame (including details of their qualifications and experience).
CV of individual responsible for in-house checking of the structural design and detailing of the timber frame (including details of their qualification and experience).
6. The timber frame shall be designed for a min fire resistance in accordance with architects information.
7. Timber frame elements shall be preservative treated and all cut ends of timber cut on site to be coated with brush applied preservative.
8. All fixings to comply with relevant British Standards and are to be covered by agreement board certificates.
9. For all setting out refer to architects drawings.
10. The timber frame contractor must confirm dimensions on site prior to commencing fabrication/or construction.
11. All dimensions and levels are to be checked on site and the architect/engineer notified of any discrepancies.
12. Timber frame elements shall be handled and stored in accordance with the recommendations of the manufacturer to avoid overstressing.
13. Damaged elements shall not be acceptable in the finished works and shall be replaced at the timber frame contractors own expense.

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Project Number; 4170

Proposed Residential Development.

Rev A; 3rd May 2013

Outline Structural Specification Notes.

Contractor designed Elements.

Trespa Rainscreen Panel Cladding.

1. The contractor shall be responsible for the design of the Trespa Rainscreen Panel Cladding, including secondary support systems and fixings, in conjunction with any architectural requirements.
2. The wind loading should be determined in accordance with BS 6399 part 2 and the following site information.
Basic wind speed (V_b) = 23.5 m/s.
Site Reference NT 259 752.
Existing ground level approx = 19 m.
Max height ground to roof approx = 16 m.
3. The Imposed/snow loads should be determined in accordance with BS 6399 parts 1 and 3.
Flat Roof (access only for cleaning and maintenance (refer to architect for strategy)) = 0.6kn/m^2 .
Flat Roof Terrace = 1.5kn/m^2 .
4. The barrier impact loading should be determined in accordance with BS 6399 Part 1 Clause 10 Domestic Residential activities as follows;
Horizontal uniformly distributed line load = 0.74kn/m at 1.1m above floor level.
Horizontal uniformly distributed load = 1.0kn/m^2 up to 1.1m above floor level.

5. Dead loads include from the system self weights, finishes, and associated build-ups (see architects drgs).
6. The contractor shall prepare such calculations, drawings and schedules as required for the manufacture/erection of the system, secondary support system and including all fixings. Calculations, and drawings shall be submitted to the client & design team for certification for building warrant purposes and comment and the contractor should not proceed with the manufacture until such time as agreed with the client/design team.
7. CV of individual responsible for the structural design and detailing of these elements (including details of their qualifications and experience).
CV of individual responsible for in-house checking of the structural design and detailing of these elements (including details of their qualification and experience).
8. The system, secondary support system and all fixings shall also be designed in accordance with any architectural requirements.
9. All fixings to comply with relevant British Standards and are to be covered by Agreement Board Certificates.
10. For all setting out refer to architects drawings.
11. Refer to Architectural specifications.

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Rev A; 3rd May 2013

Outline Structural Specification Notes.

Contractor designed Elements.

Zinc Standing Seam Metal Cladding.

1. The contractor shall be responsible for the design of the Zinc Standing Seam Metal Cladding, including secondary support systems and fixings, in conjunction with any architectural requirements.
2. The wind loading should be determined in accordance with BS 6399 part 2 and the following site information.
Basic wind speed (V_b) = 23.5 m/s.
Site Reference NT 259 752.
Existing ground level approx = 19 m.
Max height ground to roof approx = 16 m.
3. The Imposed/snow loads should be determined in accordance with BS 6399 parts 1 and 3.
Flat Roof (access only for cleaning and maintenance (refer to architect for strategy)) = 0.6kn/m^2 .
Flat Roof Terrace = 1.5kn/m^2 .
4. The barrier impact loading should be determined in accordance with BS 6399 Part 1 Clause 10 Domestic Residential activities as follows;
Horizontal uniformly distributed line load = 0.74kn/m at 1.1m above floor level.
Horizontal uniformly distributed load = 1.0kn/m^2 up to 1.1m above floor level.

5. Dead loads include from the system self weights, finishes, and associated build-ups (see architects drgs).
6. The contractor shall prepare such calculations, drawings and schedules as required for the manufacture/erection of the system, secondary support system and including all fixings. Calculations, and drawings shall be submitted to the client & design team for certification for building warrant purposes and comment and the contractor should not proceed with the manufacture until such time as agreed with the client/design team.
7. CV of individual responsible for the structural design and detailing of these elements (including details of their qualifications and experience).
CV of individual responsible for in-house checking of the structural design and detailing of these elements (including details of their qualification and experience).
8. The system, secondary support system and all fixings shall also be designed in accordance with any architectural requirements.
9. All fixings to comply with relevant British Standards and are to be covered by Agreement Board Certificates.
10. For all setting out refer to architects drawings.
11. Refer to Architectural specifications.

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