

Two New Build Homes on a Landlocked Site in East London

NOW FIRST LIMITED



Massie Road, East London

Size: 350m²
 Value: £280,000
 Status: Completed
 Type: New build residential

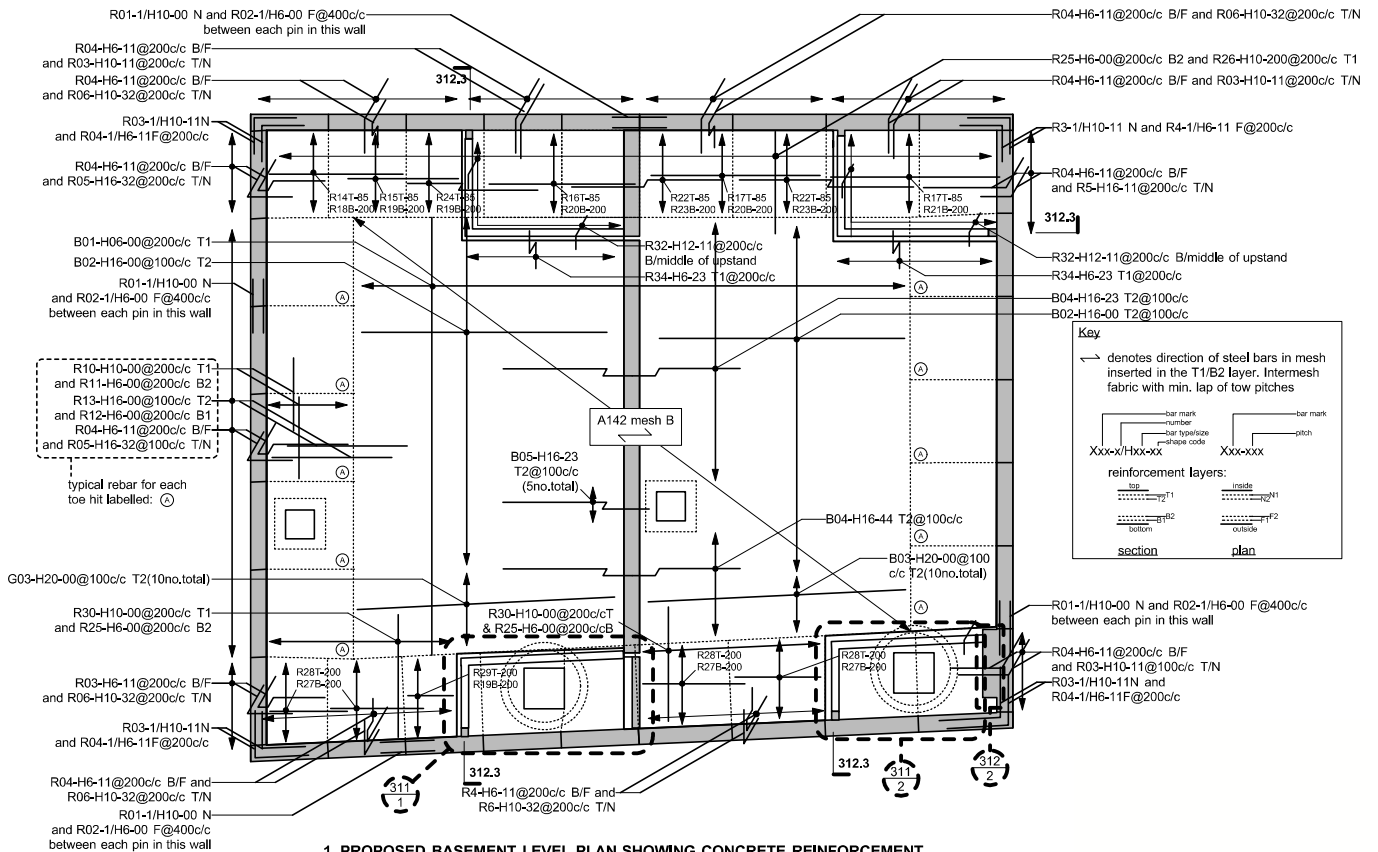
A three storey building formed of reinforced concrete, steel, aluminum and timber to create two dwellings.

The project was designed on behalf of a developer to create two residential units to be sold as a speculative development.

We provided the civil, structural and below ground drainage design engineering services to the client-developer.

The site was landlocked with new basements planned for the entire footprint of the site. This meant if the excavations required to form the basement spaces were carried out all at the same time, there would be no space left available for the contractor's welfare facilities.

This offered a difficult logistical challenge to the contractor which we helped solve offering advice as to a suitable construction method. This allowed the basement to be formed in two halves with space dedicated to the storage of materials and welfare facilities at all stages of the build.



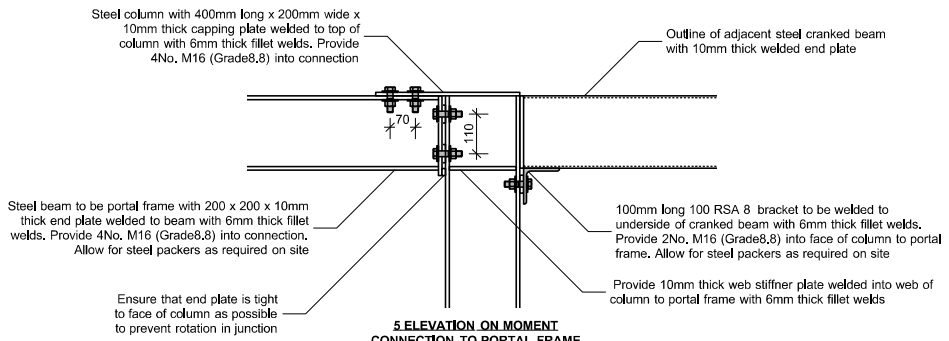
As no access was available in neighbouring sites, the civil and structural design had to consider a scheme that had a superstructure that could be built entirely from within the site boundary. The design also had to perform to a level where it safeguarded neighbouring properties during the excavations.

The design also featured a double height column-less internal spaces that lead to a creative structural solution to give the Architect and client the result they desired.

The basement level featured an external lightwell to bring light into the space. This area raised the technical challenge for the disposal of rainwater in a space that was at a depth lower than the mains sewer. We designed a fail safe double pump system with back up battery to allow the area to continue to be drained even if one pump failed and power was temporarily lost.

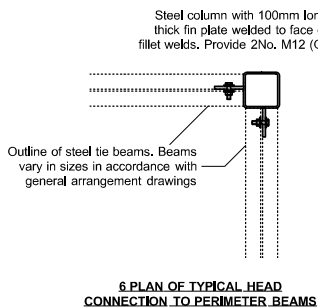
Other interesting aspects of the project were the use of exposed aluminium work to form the front facade of the upper level and a green roof.



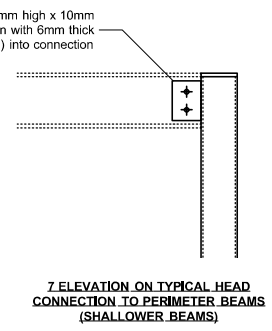


Notes

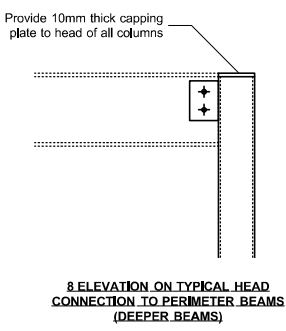
1. Do not scale from this drawing
2. Read in conjunction with all other Architect's and structural engineer's drawings
3. Report any discrepancies to the contract administrator before undertaking the work described in the drawings



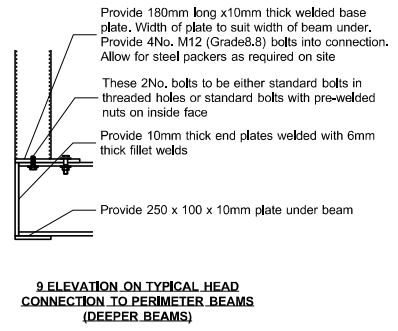
6 PLAN OF TYPICAL HEAD CONNECTION TO PERIMETER BEAMS



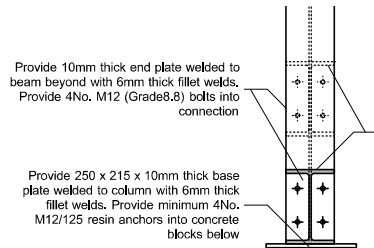
7 ELEVATION ON TYPICAL HEAD CONNECTION TO PERIMETER BEAMS (SHALLOWER BEAMS)



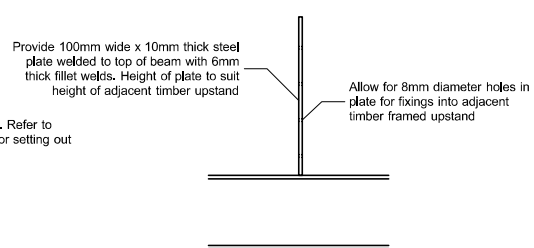
8 ELEVATION ON TYPICAL HEAD CONNECTION TO PERIMETER BEAMS (DEEPER BEAMS)



9 ELEVATION ON TYPICAL HEAD CONNECTION TO PERIMETER BEAMS (DEEPER BEAMS)



10 SECTION THROUGH BASE TO PORTAL FRAME



11 ELEVATION ON STIFFNER PLATE TO BALUSTRADE