

Amendments to Structural Planning Report

The test of the Heyne Tillett Steel *Structural Planning Report* for Arthur Stanley House, dated 20-Jul-17, is amended as follows following revisions to the redevelopment scheme.

| Structural Planning Report text | Amendment |
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| <p>1 Introduction</p> <p>Heyne Tillett Steel have been appointed by 1923 Mortimer Investments Ltd. as consulting structural engineers to develop a structural scheme for the proposed redevelopment of Arthur Stanley House, Tottenham Street, London to support a planning application to Camden Council.</p> <p>The scheme has been developed with Allford Hall Monaghan Morris architects and Green Building Design Consultants services engineers.</p> <p>This report describes research, studies and investigations of the current site. The existing building is appraised and the proposed scheme for the site is described. The impact of the works on existing and neighbouring structures is also discussed.</p> <p>In support of this planning application, a geotechnical desk study has been undertaken by CGL to assess the ground conditions and the potential for contamination at the site. The Study Report and Stage 1 Screening dated July 2017 is included within the Appendices.</p> <p>A Flood Risk Assessment and a Surface Water Management Plan for the development have been described in the HTS Drainage Strategy Report.</p> | <p><i>They have also carried out a Basement Impact Assessment, which is included with this application.</i></p> |

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| <p>4.1.3 Building re-coring</p> <p>Both existing stairs are proposed to be removed and the cores extended to facilitate and new stairs, lifts and risers.</p> <p>New cores to the east and west of the existing floor plates will be tied into the existing floor diaphragms in order to provide stability to the entire building.</p> <p>Temporary stability systems will be required from before the removal of the existing stair cores until after the completion of the new cores.</p> <p>New cores and areas of floor structure will be constructed off new piles foundations. A movement joint between existing and proposed will allow for differential settlement.</p> | <p>The eastern stairs are proposed to be removed. No re-coring is now proposed.</p> |
| <p>4.1.4 Central downstand beam removal</p> <p>The existing downstand spine beams that span along the centre of the floor plates will be demolished and replaced with parallel flange channel downstand beams.</p> <p>To avoid the need for temporary propping to the existing slabs, the steel beams will be installed each side of the concrete beams and face fixed to the central columns prior to the demolition of the concrete beams.</p> | <p>One bay of existing spine beams is now proposed to be removed per floor</p> |

4.1.6 Pavement lightwell modification

It is proposed to reduce the level of the existing lightwell slab along Tottenham Street by approx. 2.8m to allow daylight ingress to Basement 2 level. Wall panels between Basement 1 and Ground Floor will also be removed and replaced with discrete columns.

In order to facilitate these works, temporary props fixed to the existing Ground Floor slab will provide temporary lateral restraint to the retaining wall at the boundary with Tottenham Street, which is currently assumed to be cantilevering from the slab at the base of the lightwell. The Ground Floor slab will transfer the horizontal retained loads to the building's stability elements to prevent horizontal movements during construction.

The existing retaining wall will span horizontally between the props. Intrusive investigations to the existing wall will confirm the reinforcement detailing and overall wall thickness to determine maximum spans achievable between temporary props.

To enable excavation within the lightwell, the existing wall will be underpinned using a traditional sequenced construction. It will be necessary to provide dowels between the tops of the underpins and the underside of the existing wall prior to casting in order to connect the pins to the wall for top restraint. Once the concrete has been poured, dry packing between the wall and the pin will ensure full vertical bearing for load transfer.

The permanent structure will be formed by providing a new liner wall in front of the existing retaining wall. The liner wall will be propped by the floor slabs at both Ground Floor and Basement 1 level.

The liner wall will be restrained at the top by props to the Ground Floor slab and at the base by the Basement 1 slab. Sketches of the above construction sequence can be found in the appendices.

A Thames Water impact study together with a ground movement analysis will be required for this area of works.

No modifications are now proposed to the pavement lightwell infill.

4.2.3 Foundations

Foundations to the new concrete buildings will consist of CFA piles under RC pile caps. The existing Basement 2 slab will be ~~broken back locally~~ to allow the installation of new pile caps.

Vertical movement joints will be installed at the interfaces between existing and proposed foundations to allow differential vertical movements.

Foundations adjacent to the existing basement perimeter (both externally and adjacent to Arthur Stanley House) are to be offset from the site boundary to minimise the excavation of existing strip foundations.

Excavation within the basement to form new pile caps and lift pits will require control measures to prevent water ingress. ~~It may be feasible to adopt local or site wide shoring through the use of interlocking sheet or Giken piles embedded into the impervious clay layer, although the feasibility of this through dense gravels will need to be considered.~~

~~As per the CGL Study Report and Stage 1 Screening, as the proposed redevelopment of the site does not involve overall deepening of the existing basement, it is considered that no further assessment is required in relation to the impacts on subterranean (groundwater) flow.~~

broken out

This will likely involve dewatering to lower the ground water level within the basement area in which excavation works will take place

The proposed development involves lowering the level of the basement slab locally to the residential block. This will be achieved by forming a secant pile wall to enable excavation. The impact of this on the surrounding area is discussed in the CGL Basement Impact Assessment.