

# *Structural Statement*

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18-23 Hand Court  
High Holborn Estate  
SRG Holborn Ltd.

26th September 2018

## Structural Statement

18-21 Hand Court, High Holborn Estate

### Proposed Development Summary

The proposed development at 18-21 Hand Court includes the complete demolition of the existing building within the site boundary except for the masonry retaining wall along Hand Court, which is kept. A new 5-storey reinforced concrete structure with a single storey basement is to be constructed across the full site footprint and will abut the adjacent structures.

The proposed structure will be independent to all adjacent structures and does not rely on any vertical or lateral support from existing party walls or foundations.

### Neighbouring Buildings

The proposed development site is rectangular on plan and bounded by three adjacent structures to the north, east and south. Hand Court, a pedestrianized thoroughfare bounds the site to the west.

Direction	Building	Description
North	22-23 Hand Court Montagu House	5 storey building with a single storey basement, with a reduced 3 storey structure to the rear
South	55-57 High Holborn Caroline House	3 storey load-bearing masonry building with a basement of similar depth to the proposed scheme
East	High Holborn House	Single storey building over a single storey basement
West (over Hand Court)	Mid City Place	7 storey steel-framed building over a single storey basement.

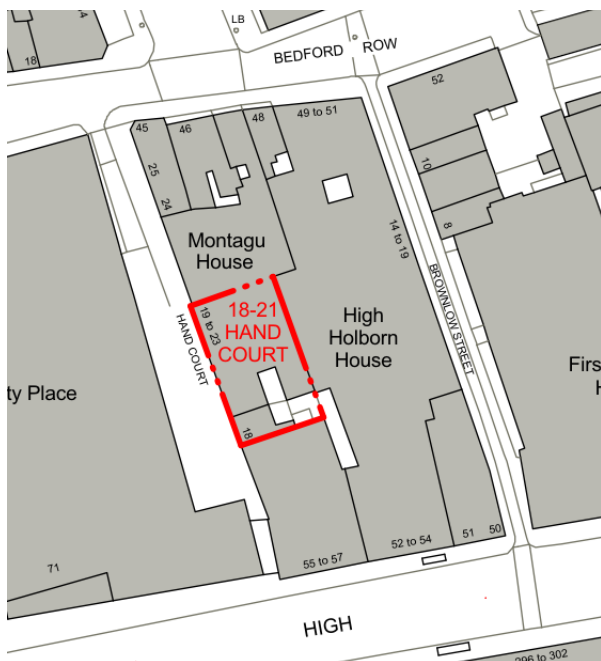


Figure 1 - Site Plan

Trial pits have been undertaken around the perimeter of the site to confirm the foundations below the boundary and party walls. The trial pits have informed where underpinning is required due to the proposed raft formation level being lower than the existing adjacent foundation. Where underpinning is necessary this will be mass concrete and completed in max. 1m sections in a typical underpinning sequence.

### **22-23 Hand Court – Montagu House**

It is understood that both structures have separate boundary walls which do not provide stability or support to the adjoining properties.

It is expected that no temporary works are required to the 22-23 Hand Court boundary wall, as it is independent to the wall belonging to 18-21 Hand Court. It is anticipated that the 22-23 Hand Court wall is restrained at each floor level by the existing floor structure.

The foundation along this boundary wall was found to be a relatively shallow brick corbel strip footing and will require underpinning as part of the proposed scheme. A mass-concrete strip footing will be provided to the perimeter of the 800mm thick raft and extend to the depth of the adjacent underpinning to avoid loading existing footings. This is indicated in section 4-4 Heyne Tillett Steel drawing 1508/HC/P250.

### **55-57 High Holborn – Caroline House**

Caroline House is believed to have an independent boundary wall towards the eastern end of this elevation. Archive drawings suggest that a party wall may be present to the western end of this elevation, however further investigations are required to confirm this. If the wall is found to be a party wall, then suitable temporary works will be installed to provide adequate restraint to the wall during the demolition and construction phases. In the permanent condition angle brackets will be installed between the new reinforced concrete floor slabs of 18-21 Hand Court and the party wall. These brackets will provide restraint without loading the wall.

The existing brick-corbelled footings are of sufficient depth to not require underpinning. A mass concrete strip footing along the raft perimeter will extend to the depth of the existing foundation to avoid loading the existing footing. Section 1-1 on 1508/HC/P250 demonstrates the proposed raft interface.

### **High Holborn House**

The adjoining building basement level is founded below the proposed development formation level, and therefore no underpinning is required. To ensure no surcharging of the retained party wall occurs a mass concrete strip footing adjacent to, and of equal depth to the existing foundation, will be provided.

The existing superstructure of High Holborn House is supported on a masonry party wall, which is to be retained. The proposed structural scheme is independent to the party wall, with no additional vertical or horizontal load applied. Temporary works are to be provided if necessary during excavation and demolition to ensure the party wall is adequately restrained. Further investigations are to be completed to ascertain the extent of temporary works required.

### **Hand Court**

The masonry retaining wall along Hand Court is to be retained as part of the proposed scheme. The existing masonry buttresses are to be removed and a new water-resistant concrete liner wall constructed up against the masonry retaining wall.

This concrete liner wall will provide all the restraint against lateral earth, water and surcharge pressure from the ground and forms part of the basement waterproofing strategy. A series of temporary props are required along this elevation to allow for the safe demolition of the existing ground floor slab and masonry buttresses.

An indicative construction sequence is shown within Section 6 of the Heyne Tillett Steel Basement Impact Assessment Report.

### **Weathering Protection**

If any of the perimeter walls require protection from the elements, then this will be provided using felt fixed back the wall using battens. This is a suitable temporary measure until the proposed structure at 18-21 Hand Court has been constructed.

### **Summary**

Adequate temporary and permanent restraint will be provided to the perimeter walls to ensure their stability during demolition, construction and in the completed state.

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