3 Greenaway Gardens

London – NW3

Preliminary Construction Method Statement

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Introduction

The following is a proposed construction methodology for the construction of the redevelopment of the residential property at No 3 Greenaway Gardens – NW3.

The proposed new structure is described on design STUDIO2 Ltd drawings included in Appendix 1 of this report.

Existing Structure

3 Greenway Gardens is a detached property build circa 1925. The building is a traditional construction residential property with external loadbearing solid brick walls supporting the timber floors and timber roof construction. Internally, timber stud or solid masonry walls are providing additional supports to the floors and roof above.

Accommodation is provided at ground and first floor levels and partially at second floor levels in the loft / mansard space.

A coal cellar / basement is present in the South East corner of the property.

Proposed Structure

The proposed structural scheme is described on the drawings included in Appendix 1 of this report.

The works comprise the demolition of the existing building with the retention of the front façade.

It is proposed to construct of a new basement under the property and the rear garden together with modifications and extensions to the building over.

The new basement will be formed using a combination of CFA contiguous piled wall and underpinning. The basement and ground floor will be in situ reinforced concrete slabs and beam whereas the superstructure will consist of a steel frame with concrete holorib floors. Lateral stability will be provided by the reinforced concrete lift shaft walls.

Ground Conditions

The geotechnical investigations carried out by GEA has confirmed the expected ground conditions in that, beneath a moderate thickness of topsoil or made ground, the Claygate Member was encountered over London Clay which was proved to the full depth of the investigation.
Full details of the ground conditions can be find in the GEA geotechnical investigation report.

Construction Method

This report is a preliminary construction methodology outlining the proposed construction stages and temporary works required.

A full detailed design of the temporary works based on the outline methodology described in this report will be carried out once the building contractor will be appointed.

The permanent works will need to be constructed in a manner that ensures that the existing structures to be retained are continuously supported both vertically and horizontally without undue movement both during the construction works and in the final state.

The immediately adjoining properties will be monitored for movement and vibrations during the initial installation of the underpinning, excavation, construction and initial transfer of loads to the permanent floors and walls. A proposed specification for movement monitoring is included in Appendix 2 of this report.

All measures will be subject to agreement with the owners and occupiers of these premises under the Party Wall Act.

Generally, it is proposed to install permanent works in the front part of the building to be retained at ground floor, first floor and second floor in order to stabilise this part of the building during the construction of the basement and new superstructure.

A façade retention system will be installed to the one storey front wall to be retained. Prior to the piling operation to take place from ground level.

Subsequent to the piling operation underpinning will be installed under the walls to be retained and Party Walls between No 3 and No 4.

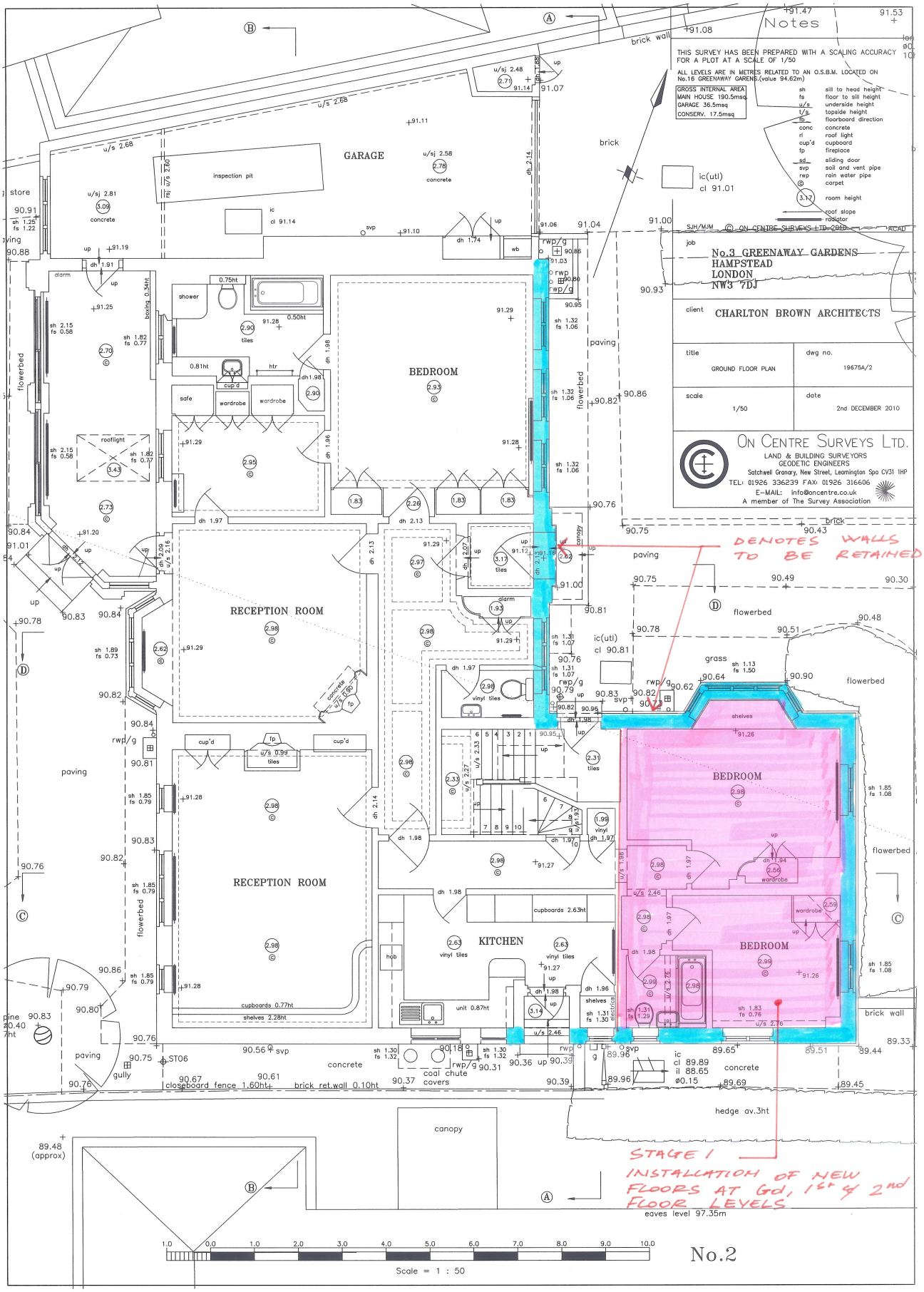
Propping to the contiguous wall capping beam and underpinning will be installed prior to excavation of the basement with the exception of the front of the property where a top down construction is proposed and the ground floor reinforced concrete slab installed prior to excavations. This will stabilise the front of the property and enable to use the front of the property for storage and site activities.

Outline Construction General Stages:

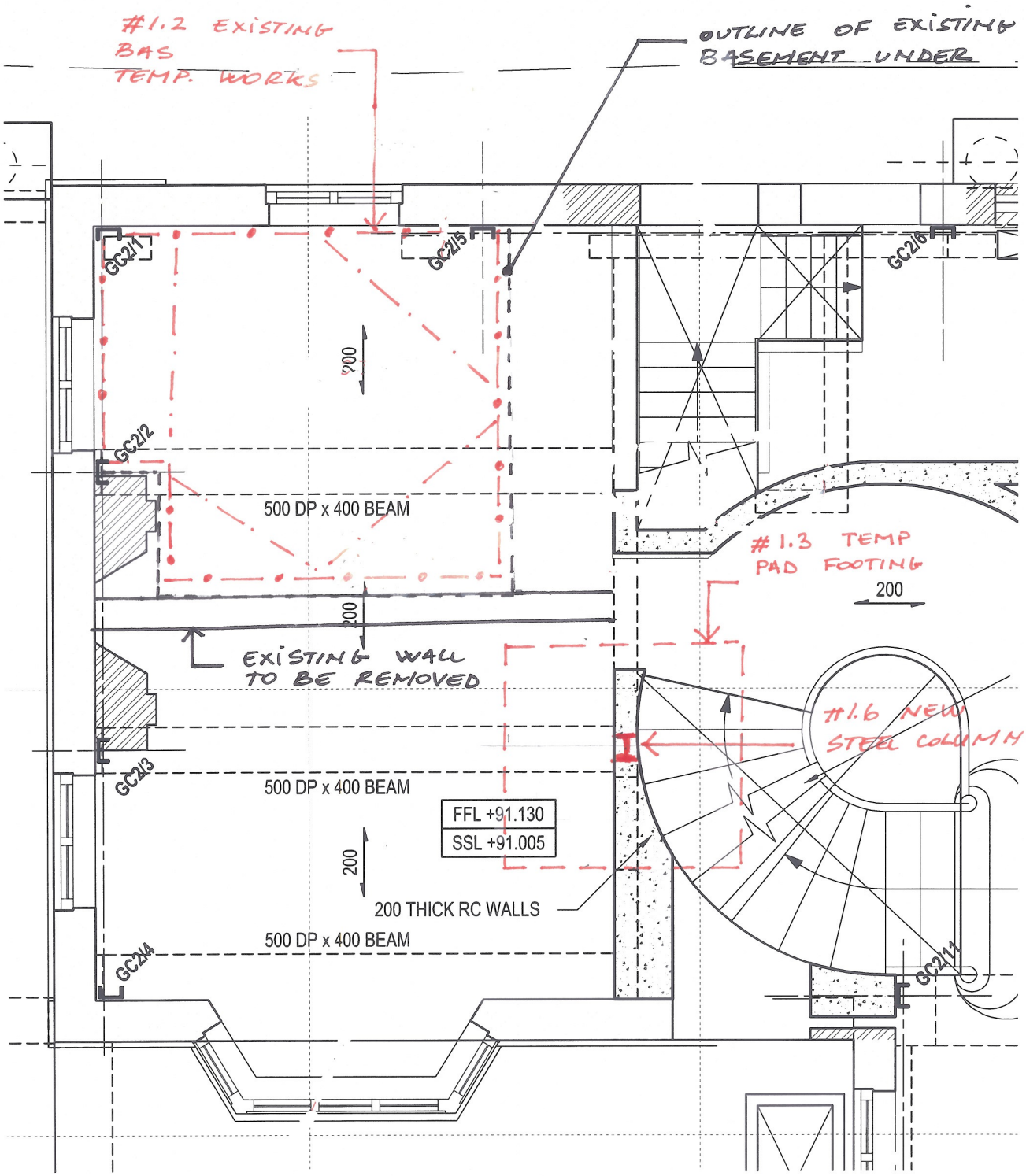
1. Stage 1: Installation of new floors at ground, first and second floor levels in the part of the building to be retained:

The front part of the building 'C' shaped on plan is proposed to be retained (see diagrams below).
New holorib floors, part of the permanent final construction, will be installed prior to demolition in this part of the building hence ensure that this part of the building is self supported with its stability and structurally integrity retained during the works.
The new floors will be installed on a floor by floor basis starting from ground level.

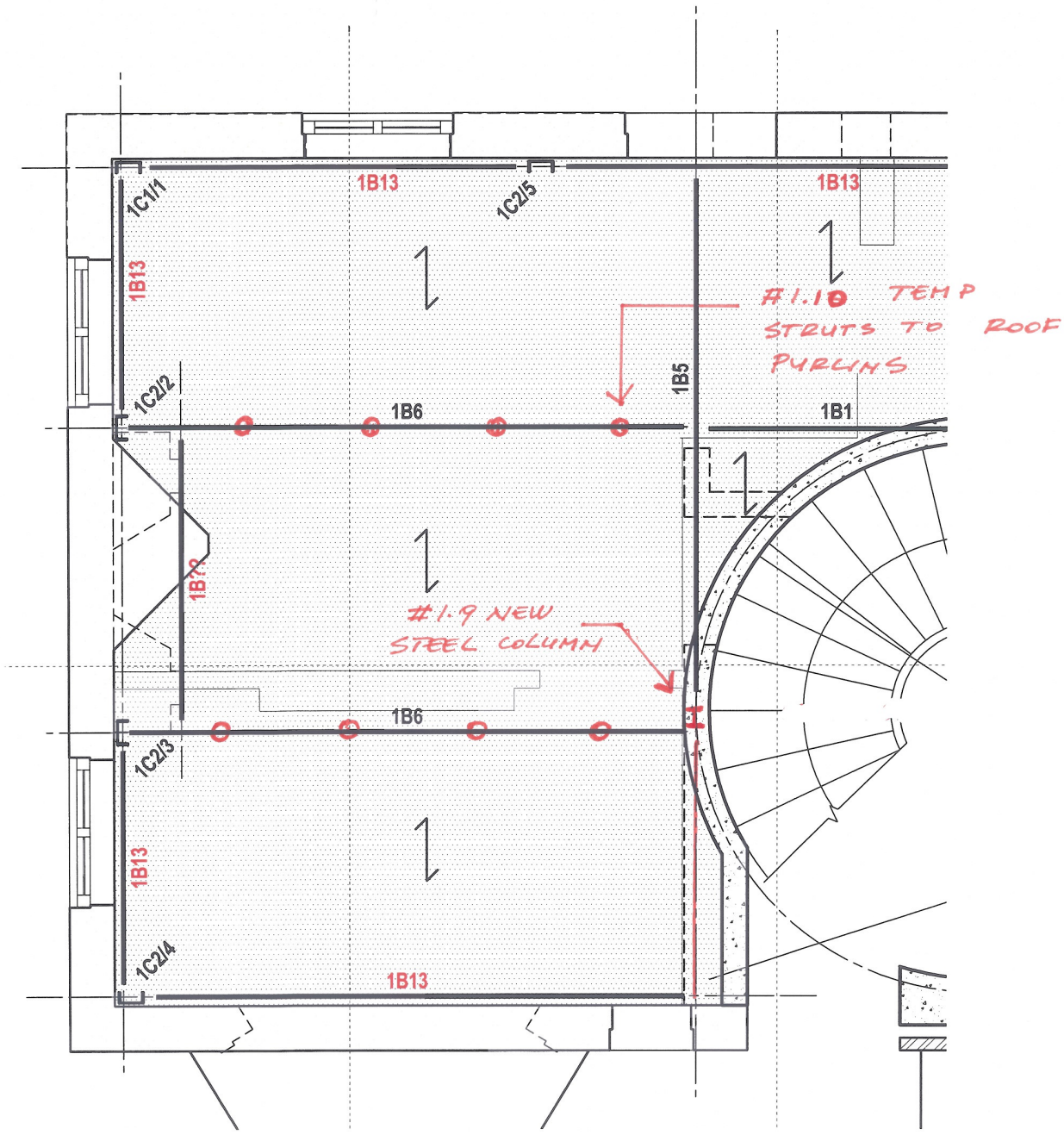
1.1. Install timber fames inside all windows braced with plywood to maintain window geometry.
1.2. Install RMD Kwikform waling beam inside existing basement at top of existing basement wall below future slab. Install RMD Kwikform superslim soldier as shown propping the walling beam.
1.3. Install 1.75 x 1.75 x 0.75 m Deep temporary pad footing base below ground level as shown.
1.4. Install Prop and Needles to support existing internal walls and joists above.
1.5. Install RC ground floor beams and slab with starter bars for future wall under. In the temporary conditions the RC beams will be designed to span onto the temporary pad footing.
1.6. Once the ground floor concrete has reached the required strength install new steel column to support the first floor beams.
1.7. Install first floor steelwork and holorib deck as shown on the drawings.
1.8. Install ties into existing walls and reinforcement in holorib deck as shown on the drawings and pour concrete.
1.9. Install steel column from first to second.
1.10. Install temporary roof purlins struts down to first floor slab using RMD kwikform superslim soldier.
1.11. Install second floor steelwork and holorib deck as shown on the drawings.
1.12. Install ties into existing walls and reinforcement in holorib deck as shown on the drawings and pour concrete.
1.13. Relocate roof purlins temporary supports to second floor.



STAGE 1: INSTALLATION OF NEW FLOORS AT GROUND FIRST AND SECOND FLOOR LEVELS



STAGES 1.1 TO 1.6



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