28 CHESTER TERRACE
REGENTS PARK
LONDON
NW1

DWELLING HOUSE REFURBISHMENT

METHOD STATEMENT

August 2016

the ELLIOTT PARTNERSHIP
14 Great Molewood
Hertford
Herts
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1. INTRODUCTION

28 Chester Terrace is a 5 storey, mid-terrace, traditionally built 19th Century town house with solid masonry walls and timber floors. There are pavement vaults at the front, separated from the house by a lightwell. The house was substantially reconstructed in 1960's, including the installation of a lift.

It is proposed to deepen the pavement vaults, lowering the finished floor by approximately 1.2m, to improve the headroom, and using this as habitable space and a plant room.

At roof level the central flat roof area is to be removed and a new terrace created, between the front and rear pitched roofs to remain.

Other alterations inside the house are minor in structural terms.

2. SITE INVESTIGATION

2.1 Geology

Examination of the British Geological Survey map for the area shows the property to be founded on the predominant London clay found in this area. From local experience, we expect the soil conditions at or below the existing basement level to be weathered London clay with no significant water present.

2.2 Flood Risk

The Environment Agency flood risk map shows Chester Terrace to be in the zone of "Very Low" risk.

The proposal here is only to deepen the level of the existing pavement vaults to create headroom. The house lower ground floor level will remain as it is now. There is no increase in the risk of flooding to the main property caused by the proposed lowering of the basement, only the vault will be at a lower level than it is now.

2.3 Hydrology

The London clay strata is not an aquifer or a groundwater source. There is expected to be no groundwater present at the vault level. There is no significant groundwater migration through the clay due to its impermeable nature.

3. STRUCTURAL PROPOSAL

3.1 Structural Details

3.1.1 Vault

The deepened vault structure has been designed by The Elliott Partnership Consulting Engineers. Refer to Figures 1 & 2 for details.

At the front of the house, there is an existing lightwell, and beyond this the pavement vaults, entirely separate from the house. The deepened vault is to be formed by underpinning the existing walls to a depth of approximately 1.3m and forming a new reinforced concrete slab at basement level.

This will require simple mass concrete underpinning of the existing masonry vault walls, including those on the party walls although one side has already been underpinned to deepen the neighbouring vault.

A new concrete basement floor slab will complete the new structure. The waterproofing system will then be installed to line the vault. The cavity drain membrane will be laid over the slab and extended up the inside of the underpinning. The lining walls and floor screed retain and protect the membrane.

3.1.2 Roof Terrace

The roof structure is currently a number of timber trusses spanning between party walls. The truss support to the front roof pitch, to remain, will be left in place. The central area will be removed and 3 new steel beams inserted spanning party wall to party wall, to carry new joists. Refer to Figure 3 for an outline section showing this principle.

3.1.3 Internal Alterations

The existing internal structure is largely supported by the lift core, with joists spanning onto the external or party walls. The only significant loadbearing walls are in the basement. A new opening in one wall will be formed with a steel beam on padstones.

3.2 Ground water

We expect the soil conditions to be clay soils throughout, as usually found in this area.

There is no significant water table to be affected, as the new vault level is only 1.0m deeper than the existing. The design intention is to utilise concrete underpinning, with a new concrete slab. This is a Type C basement to BS8102, where the concrete structure minimises water ingress and an internal cavity drain ensures the vault remains dry. There will be no significant influence upon the local ground water regime, or upon soil conditions below adjacent premises in the short or long term.

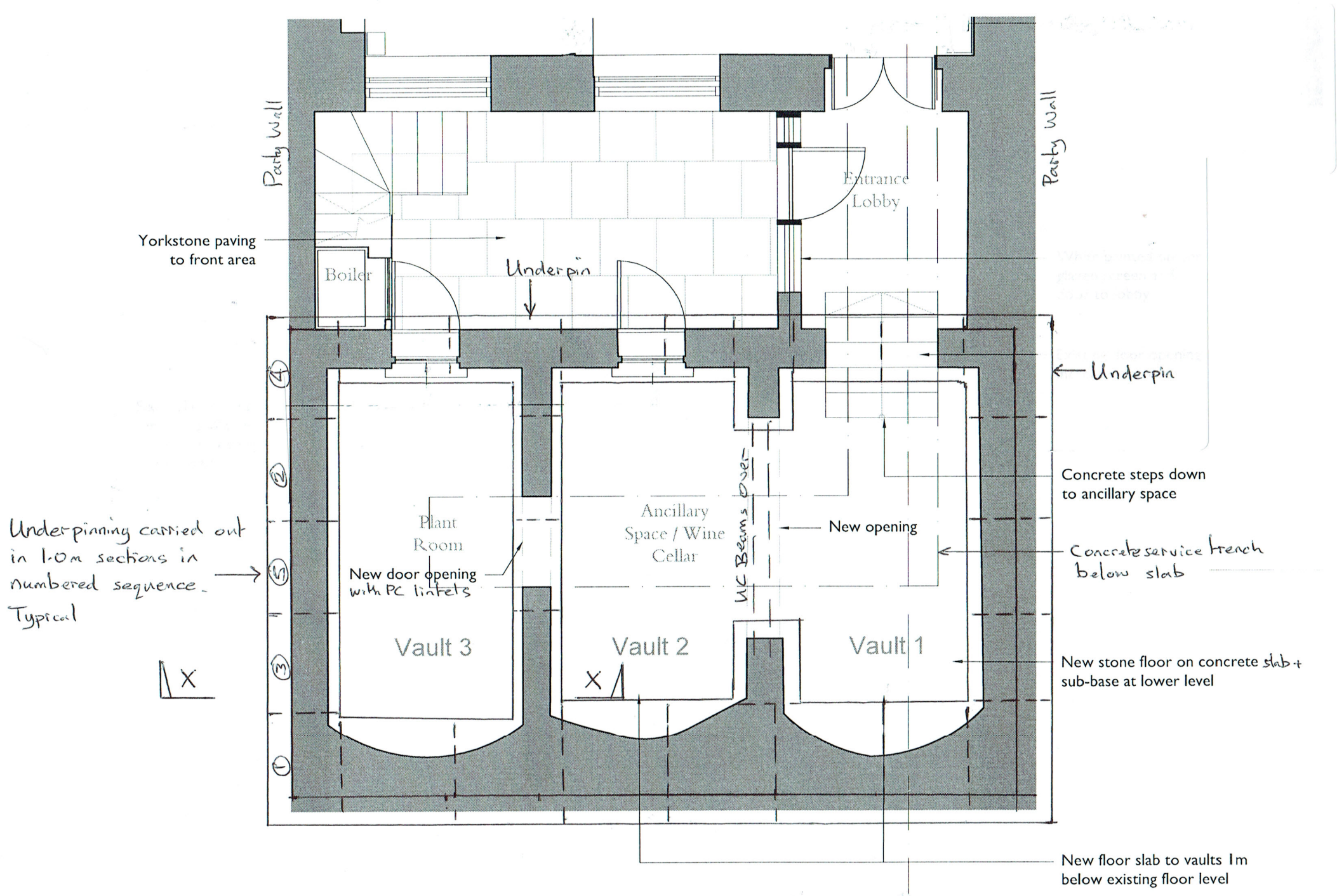


FIGURE 1

Proposed Lower Ground Floor Vault

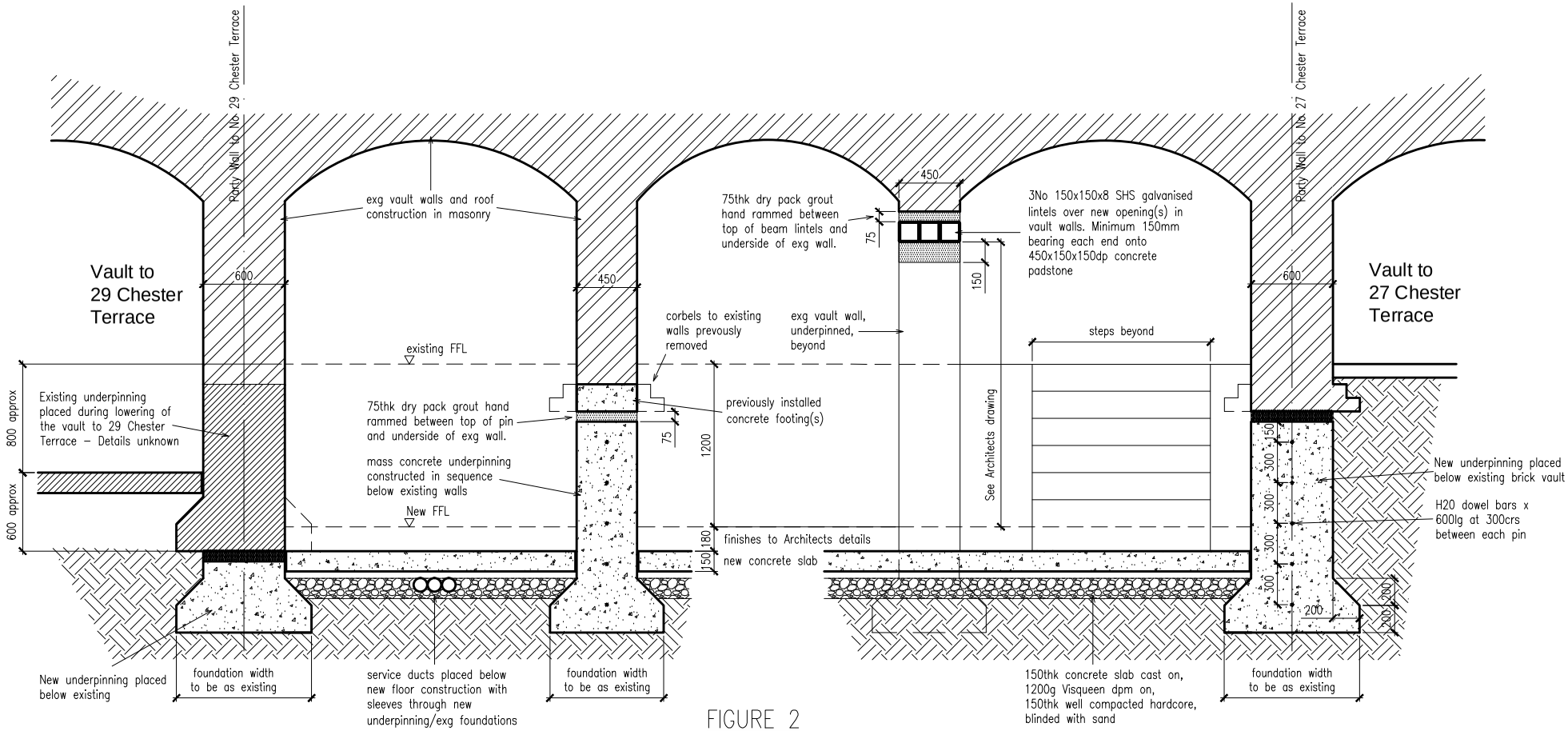


FIGURE 2

Section X–X

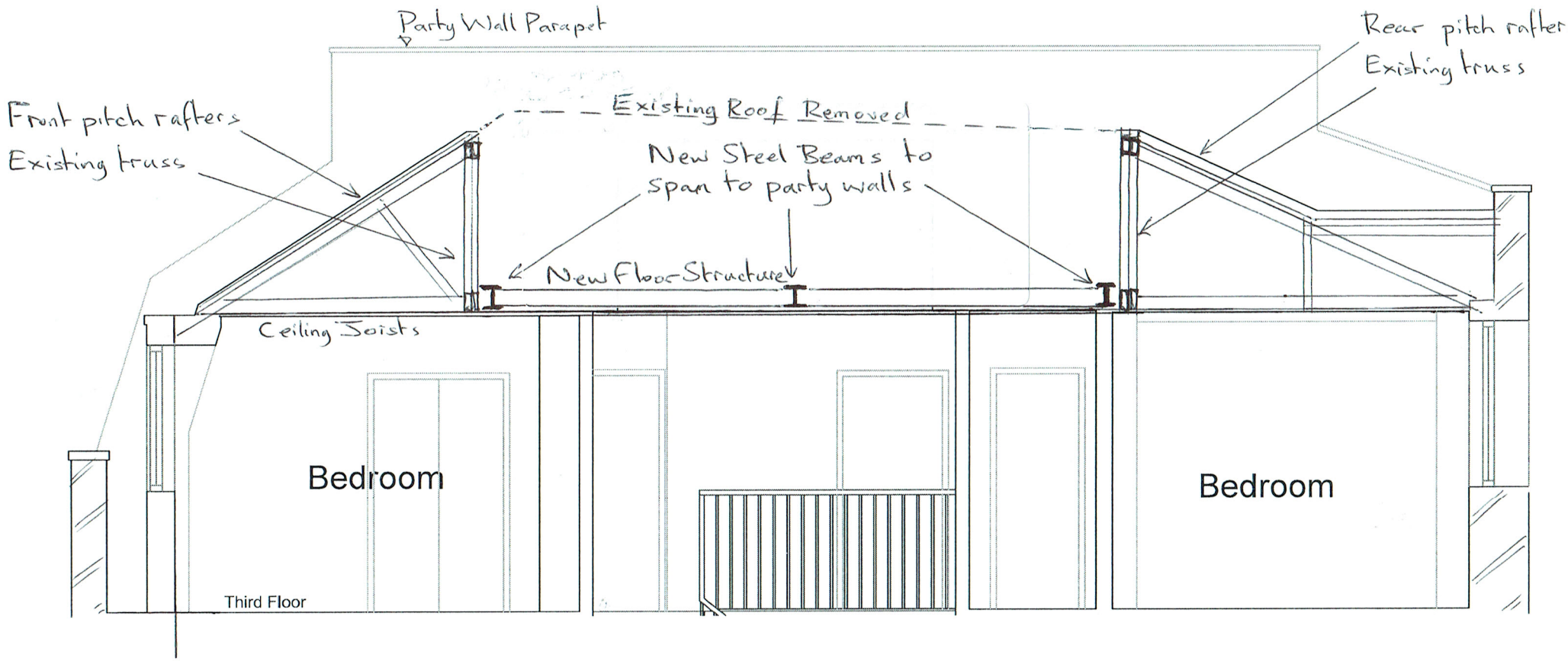


FIG. 3
ROOF TERRACE

4. METHOD STATEMENT

4.1 Preparation and General Notes

This terraced property has a lightwell at the front. At the rear there is an access road directly behind the house. Space is limited but there is enough room for the small scale works envisaged. Work and storage will be carried out behind a timber hoarding.

The first phase of works will involve general stripping out, including removal of the existing basement floor concrete slab, including in the vault to allow access for underpinning. The internal structure, the upper floors and main load-bearing walls to the rest of the house, are unaffected by the works.

Rubble and spoil from the site will be brought up, by hand, for loading into skips.

The Contractor will produce a traffic management plan and programme before starting work. Traffic management should ensure that disruption to neighbours is kept to a minimum.

4.2 Basement Construction

Inside the existing vault, the depth to be excavated averages only 1300mm. The shallow depth of excavation and underpinning requires no special propping measures or specialist techniques. The construction techniques to be employed are all conventional and straightforward.

The total volume of spoil to be removed is relatively small. It is anticipated that it will be bagged and brought out by hand for loading into skips. Alternatively small volumes may be barrowed to a skip.

Initially, the existing 150-200mm concrete slab in the vaults will be broken up and removed. The edge of the slab adjacent to the party walls shall be saw cut, before breaking starts, to ensure it is detached and to minimise vibration.

The deeper vault is to be formed by first underpinning the front wall to the lightwell. The party wall underpinning will follow, starting near the front of the house and then working towards the rear, and finally the rear wall under the road. The concrete wall formed by underpinning will carry all the applied loads safely, including lateral loads in the short term.

The underpinning will be carried out in sections not exceeding 1.0m in length, with a maximum of 1 section open at any one time on any wall. An access pit will be dug in front of the wall to commence the underpinning. On the party wall pins, the far face will be shuttered to ensure the new concrete pin extends only as wide as the wall. The outer shutter will then be positioned and braced. Concreting of the section will be made in one pour, as soon as possible following excavation. The new pin section will be grouted the following day.

As the excavation reaches formation level, the Delta system drains will be laid. Concrete blinding will be laid, reinforcement fixed and the basement concrete slab cast.

The new vault will have a Delta cavity drain system installed across the floor and all walls, to achieve the BS8102 standard for habitable basements.

5. SITE MANAGEMENT

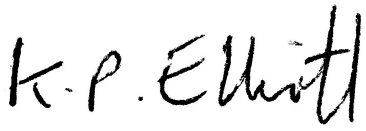
A site hoarding will enclose the works at the front and provide storage. The site has a narrow frontage but all deliveries can take place directly in front of the site boundary at the front or rear. Traffic management should ensure that disruption to neighbours is kept to a minimum.

The main contractor shall implement measures in accordance with any Planning Conditions imposed to keep noise from construction activities to within acceptable limits and within specified working hours.

6. CONCLUSIONS

The deepened vault and new roof terrace to be constructed will have negligible effect on the adjacent properties.

The works are standard for a dwelling house construction and use well proven techniques.



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