



Great
Ormond
Street
Hospital
Charity

Great Ormond Street
Hospital for Children
NHS Foundation Trust



GROUND CONDITIONS

REPORT

GREAT ORMOND STREET
HOSPITAL FOR CHILDREN

Southwood Courtyard Building

June 2017



Project Southwood Courtyard building
Great Ormond Street Hospital for Children NHS Trust

Review of groundworks for the proposed building.

Introduction

This Ground Conditions Report accompanies a full planning application dated June 2017. The Planning Application is submitted on behalf of Great Ormond Street Hospital for Children – NHS Foundation Trust, known as GOSH and is referred to as the Trust, hereafter. Re-development is part of the Trust's on-going commitment to updating the Hospital's existing facilities and delivers an improved model of care into the 21st Century.

Redevelopment of the wider campus is now substantially underway, with a number of buildings and associated public realm already completed, occupied or under construction. This includes: the Morgan Stanley Clinical Building, which opened in 2012; the Premier Inn Clinical Building, due to be completed mid-late 2017; and the Zayed Centre for Rare Disease in Children, which commenced construction in 2016 is due for completion in 2018.

Development of the Southwood Courtyard Building comes forward as part of the Trust's next phase of works in relation to the Frontage Building, which is described in more detail in the Design and Access Statement of the planning application.

The Southwood Courtyard Building occupies a central location in the western half of the GOSH campus site. It is adjacent to the Southwood Building, the Variety Club Building to the north, east, south and west, and to a lesser extent the Paul O'Gorman Building to the south. Powis Place, a privately owned road lies to the west of the site. In addition the building will be immediately adjacent to the grade II* listed Chapel of St. Christopher (Hospital Chapel). The Chapel was moved to its current location in the late 1980's and currently benefits from the openness of the courtyard around it and the light which penetrates its Clayton & Bell Stained Glass windows.

The location of the Southwood Courtyard Building and the Planning Application submission boundary are shown on the submitted drawing.

The proposed Southwood Courtyard Building comprises a single building over three storeys for hospital floor space, and a roof garden. The hospital use will include, physiotherapy and rehabilitation services, an Intraoperative Magnetic Resonance Imaging (iMRI) Facility, plant and equipment, two air handling units

This Ground Conditions Report has been prepared by Thomasons and should be read in conjunction with all other documents submitted in support of the planning application. These include the Design and Access Statement, Planning Statement, Drawing Package, Draft Construction Management Plan, Sunlight and Daylight Assessment, Noise and Vibration Assessment, Sustainability Statement, and Desk Based Archaeological Assessment.



Description

The current courtyard location is bounded by the Southwood Building to the north, east and west of the Variety Club Building and to a lesser extent the Paul O’Gorman Building to the south.

The feasibility of the courtyard was assessed in early 2013 for the purposes of locating a tower crane for future works to the landlocked parts of the Great Ormond Street Hospital Estate.

To investigate the feasibility, a trial excavation was carried out to determine the depth of made ground, a photo schedule, plus email description is appended to this.

The ground encountered was loose fines made ground, with brick rubble plus suspected asbestos sheeting. This was to a depth of approximately 2- 2.7m below ground level, where the brick masonry floor of a previous basement could be observed. Additional vertical masonry walls were also observed, which indicated that a previous basement of a building, existed under part of the yard.

The full extent of the basement walls could not be observed as the made ground was so loose, it posed a stability problem to the adjacent temporary building and temporary underground train (now since removed).

Attempts were made to carry out a borehole through the made ground however the size of the masonry units and location of the wards, meant that a borehole could not be forced through without causing much distress.

Proposed foundation solution

Given the site’s history, the new Southwood Courtyard Building will be supported off of piles into the natural strata below. The construction of the piles will be Continuous Flight Auger which is a quiet and quick form of creating foundations, by drilling into the ground to depth with hollow screw bit. Concrete is then pumped through the hollow bit as the screw rotates and removes the soil that the concrete occupies. Where the pile goes through the made ground, it is cased with a steel tube, such that the made ground is stable next to the pile and does not affect the pile strength. Where there are obstructions to the proposed piling, the obstruction will be moved or the pile relocated if there is an obstruction not suitable to be moved.

This non-displacement method of piling means that the ground around the pile, is not condensed or affected, so that existing piled structures and existing foundations structures are generally unaffected.

Effects to the existing buildings structure

The Variety Club Building and hospital’s Chapel to the south of the courtyard are both piled. As mentioned above, the Chapel was moved to its current location in the late 1980’s via a chassis installed under the existing building and pushed over to its current position on its current pile base. As these existing buildings are piled, the proposed works do not adversely affect them.

For the Southwood Courtyard Building, this building is founded on spread foundations into the London clay at basement level. The distance of the existing foundations away from the proposed is such that they will be unaffected by the proposals.



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Photo 1 excavation of Southwood Yard



Photo 2 excavation of Southwood Yard



Photo 3 excavation of Southwood Yard



Photo 4 excavation of Southwood yard



Photo 5 excavation of Southwood yard

