
University College London

UCL Bulge Modular Laboratories

Summary of Proposals for the Provision of Drainage and Water Services to Modular Laboratories

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1. Introduction

The existing temporary modular building is located to the south of the Main Quad and comprises of a two-storey construction housing of two large and two smaller lecturer rooms linked by a single internal staircase with an additional external fire escape staircase to the rear of the building.

Existing Rainwater drainage discharges directly into the soft landscape below.

There is currently no provision for sanitary accommodation and no water or drainage connections serving the building.

The proposed works will convert the existing lecture rooms into Laboratory accommodation comprising two large Laboratories with adjacent prep rooms and locker areas.

The description below outlines infrastructure works required to provide drainage and water to the new facilities.

2. Proposal - Drainage

Drainage shall be provided to serve the new laboratories by means of new gravity and pumped systems.

A new shallow underground polypropylene access chamber shall be located towards the west corner of the building, under the existing ramped walkway to the laboratory entrances, providing gravity drainage to the south and west sides of the new laboratories.

A single 100mm foul drain shall be routed from the new access chamber to connect to the existing foul drainage within the quad.

A new manhole shall be built over the existing foul drainage to receive a backdropped drain from the Laboratories. All finishes shall be made good, replaced as existing once drainage works is complete.

All excavation works required around trees shall be carried out by hand digging only utilising an air spade around tree roots.

2No surface mounted waste-water pumping stations shall be provided to pump wastewater from the north and east sides of the building. Pump stations shall be mounted externally to the rear of the building within the escape stair compound. Pump stations shall pump to the single access chamber to the front of the building to minimise external excavation and pumped mains shall be mounted on the modular building face inside the façade cover.

3. Proposals – Water

Water shall utilise an existing underground water supply pipe connected to an underground irrigation water storage tank, currently decommissioned until the modular buildings are removed. The existing supply runs from the close to the east façade of the modular building from the South Wing. Hand dug excavation shall be carried out to locate the existing supply, visually inspect the pipe for condition and suitability of materials. Where digging is required around tree roots an air-spade shall be used. Excavated pipe shall be insulated throughout. In addition, if the supply route is less than 750mm deep the existing line shall be hand excavated throughout and frost protection tape shall be connected to the pipe to prevent freezing. If the existing pipe system is deemed not suitable for re-use, a new pipe shall be laid within the same trench and protected as detailed above.

The existing supply is currently connected to a galvanised water supply adjacent to the south block. It is proposed that the underground pipe shall be disconnected from this supply and reconnected to a Category 1 Potable supply taken from the laboratory below.

A new branch from the main shall be routed to a new underground meter box within the existing Main Quad Pop-up building enclosure. Once inside the enclosure the supply shall be routed to a new ground level internal storage tank. The depth of the existing supply shall be established.

4. Re-instatement

Once the Temporary modular building is removed, the new drainage access chamber under the entrance walkway shall be removed backfilled and re-instated to the original finish. The new 100mm drain run routed to the existing foul drainage system shall be capped at each end of the pipe run and left 'insitu'.

In addition, the water meter and new pipework shall be removed, backfilled to connection to the existing irrigation supply main and original soft landscape replaced. If frost protection is installed, power supply shall be removed and cables above ground removed. All cables underground shall be left 'insitu' to minimise disturbance to finishes.



Appendix A – External Services Proposals

