INTRODUCTION

This method statement has been prepared to describe the removal and reinstatement works of external paving/road surfaces to enable the installation of drainage connections to the temporary Pop-Up lab at University College London's Main Quad. Works should be carried out in accordance with BS 7533 and EN 1341, and all relevant standards and codes of practice.

No works to be undertaken until written approval is received from Camden Planning Department and Conservation Officer. The works shall only compromise work to external hard and soft landscaped areas no works shall be undertaken to existing Listed buildings or structures (including basement elements).

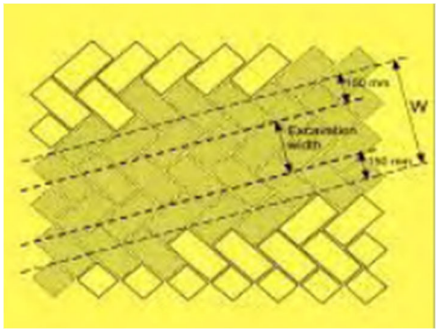
This method should be read inconjuncion with the following drawings and documentation:

- 12.2126_(EX)001_PL – Site location plan
- 12.2126_(EX)010_PL – Existing site plan
- 12.2126_(EX)100_PL – Existing plans
- 12.2126_(EX)400_PL – Existing elevations
- 12.2126_(EX)410_PL – Existing elevations
- 12.2126_(PL)010_PL – Proposed site plan
- 12.2126_(PL)100_PL – Proposed ground plan
- 12.2126_(PL)500_PL – Proposed External Works Site Plan
- 12.2126_(PL)510_PL – Proposed External Works Plan

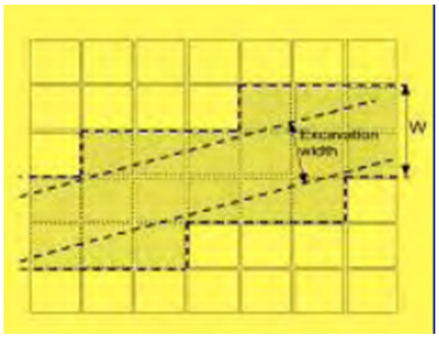
Excavation works below external finishes and surfaces to be carried out in accordance with Arboricultural Consultant (Tree Fabrik) instructions. Installation and connections of drainage and water supply to be carried out in accordance with MEP Consultant (BDP) instructions. No works to be undertaken until written approval is received from Camden Planning Department and Conservation Officer.

Removal of Modular Paving Types

1. Prior to removal of any surface materials and any excavation works, the proposed drainage routes are to be agreed and identified on site, and methods approved by Camden Planning and Conservation Officers.
2. Contractor to fully record and document the affected areas of paving/external surfaces to enable the complete reinstatment of cobbles setts, paving slabs etc to original locations and orientations. Full photographic and scaled drawings to be produced by contractor of existing conditions.
3. Individual paving units to be numbered and orientation recorded (to underside) with suitable paint marker. Take care not to mark or discolour any exposed surface or edges of paving.
4. Remove paving units:
    a. For modules up to 300mm, all modules within 150mm of excavation (as shown below) must be removed:



    b. Remove modules: For modules larger than 300mm, all modules overlapping the excavation 150mm of excavation (as shown below) must be removed:



5. During the works take care to avoid disturbing additional modules (cobbles, paving) as this is likely to weaken the structure and make reinstatement more difficult.
6. Locate and favour flags or cobbles with mortar joints already missing where possible to reduce risk of damage to paving units and simplify removal.
7. Where paving is ‘mortared-in’ mortar joints of paving units to be cut out. Use a dust-suppressed power-saw where possible without damage to paving flag. Alternatively, joints

can be chiselled out with a hammer and bolster, again care should be taken to avoid damage to paving units.

8. Store paving safely for-reuse, in such a way to avoid damage or erosion of identifying markings.
9. Check that all necessary materials for reinstatement are on site. Care to be taken to ensure no paving modules are damaged however should replacements be required these should be from premium reclaimed stock to match dimensions, colour and finish.
10. Material Samples: samples representative of colour and appearance of Yorkstone flags and Granite cobbles (if required) to be submitted for approval before placing orders.
11. Excavation for new service connections to be carried out in accordance with methods described by Arboricultural and MEP Consultants.

Reinstatement of Yorkstone Paving Flags

1. Prepare the sub-base. Granular sub-base material should be well graded (40mm to dust) Type 1 quality material. Avoid materials containing organic matter.
2. Sub-base should be uniform, of good quality, thoroughly compacted and blinded to BS 7533-2 to suit.
3. Sub-base compacted thickness: as BS 7533-2 table 4 cat IV. Note: sub-base to be placed in layers not exceeding 75mm in thickness.
4. Once sub-base is prepared, cover with suitable bedding to level that will leave finished paving flat and level with existing adjoining areas.
5. Full mortar bedding: mix 1:3-4 Portand cement: sharp sand. Consistency: semi-dry. Sand: To BS 882, grading lint M or F.
6. Before laying slabs spread out an area of bedding mix and compact it down. Take care to check the thickness of the slab to be laid and level the bedding mix accordingly. Use a trowel to slightly ripple the bedding mix to allow the paving flag to ‘bed down’. Bed down to line and level with a maul.
7. Mortar Pointing: In accordance with BS 7533-4. The pointing method should provide a close match to existing pointing to surrounding paved areas. A discrete sample area should be pointed for approval before continuing with remainder of paving. Pointing should be Class II mortar of 1 part sand : 3 part cement plus plasticiser, or 1 part sand : ½ part lime : 4 part cement.
8. Mixing Mortar – The sands, (lime if applicable) and cement must be thoroughly mixed by hand or in a mechanical mixer before adding any water. Ensure there is no ‘streaking’ of cement and no clumps of pure sand or pure cement remain.
9. Once dry ingredients are mixed, add cold, clean water to mix mortar. Plasticisers (if applicable) should be added to the water, and then mixed in to dry ingregients.
10. For wider paving joints half of building/soft sand can be substituted for sharp sand to give a coarse mortar. Note: coarse mortar such as this requires less gauging water to achieve a working constituency.
11. Match and place paving units to original location and orientations by referring to numbered layouts and photographic record prepared by contractor.

12. If paving units (cobbles, flags etc) require compaction, the vibrating plates should be fitted with a neoprene cover to prevent damage.
13. Temperature: Do not lay or join paving if the temperature is below 3°C on a falling thermometer or below 1°C on a rising thermometer. Do not lay bedding on frozen or frost covered bases. Protect paving with mortar joints from frost damage, rapid drying out and saturation until mortar has hardened.
14. Protection: Keep paving clean and free from mortar droppings, oil and other materials likely to cause staining. Do not overload pavings with stacks of materials. Do not damage paving unit corners arrises, or previousy laid paving. Restrict access to paved areas to prevent damage from site traffic and plant. Keep mortar bedded paving free from traffic after laying;
    a. Pedestrian traffic (minimum): 4 hours
    b. Vehicular traffic (minimum): 10 hours

Removal and re-instatement of Hot-lay Bituminous Finishes

1. The surface area to be removed should be marked out. Use a dust-suppressed power saw to cut through surface, remove surface using pick and spade taking care not to damage surrounding areas, or any tree roots that may be uncovered (refer to Arboricultural Consultant instructions). Removed surface to be disposed off-site.
2. Sub-base to be removed and service trench to be formed in accordance with Arboricultural consultant instructions in order to mitigate against damage to tree roots.
3. Sub-base / preparation: once below ground services have been installed, and trench back filled in accordance with MEP consultant instructions a Geotextile woven membrane to be laid prior to layering of sub-base.
4. Apply Class 1 MOT crushed concrete on top of Geotextile membrane. Compact and roll to final depth (150-200mm minimum depth).
5. Prior to applying Bituminous road finishes, vertical edges of cuts should be coated with a jointing compound (cold pour) prior to apply new surface material.
6. 40-50mm of bituminous 20mm binder course to be applied initially. After this, the top coat should be added (25mm of 6mm surface course to provide a close match to existing adjoining surfaces) to the base coat and compacted using a roller.
7. All tar joints to seal where new surface meets surrounding surfaces by over banding the joint with a bituminous material.
8. All works, finishes and works of making good, shall match the existing original work adjacent in respect of methods, detailed execution and finished appearance.

Removal and Reinstatement of Grassed Area Finishes

Excavations for drainage works to be carried out in accordance with instructions of Arboricultural Consultant and MEP consultant in order to mitigate against damage to tree roots.

Preparation and seeding:

1. Initial preparation: minimum top soil depth 200mm (max. 300mm).
2. Consolidation: Lightly consolidate with a light ribbed roller.
3. Finished levels: Following rolling any variation in levels wil be apparent and addressed by adding top soil or spreading the surface layer.
4. Seed bed preparation: The surface should be lightly and uniformly raked to produce a friable tith. All stones 10mm+ should be removed.
5. Fertilizer: The area to have a suitable, pre-approved, base fertilizer applied at manufacturer's recommended rates.
6. Seeding: In calm conditions apply pre-approved seed at a rate of 35-50g per m^2. The calculated seed quantity should be split in two and applied at right angles to each other to ensure an even coverage. Lightly rake to cover the seed and leave a final level surface.
7. Irrigation: Wet the top 100mm (minimum) to full depth of topsoil, ensuring even coverage without displacing seed, seedlings or soil. Repeat/apply as necessary to ensure even germination and establishment of all sown areas to result in a heathy, vigorus grass sward.

Removal and Reinstatement of Concrete Surface.

To be avoided if possible. Full depth repairs to concrete may require to be 'tied-in' to existing concrete using steel dowels.