

115-119 Camden High Street

Detailed Basement Construction Plan



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## 1. Compliance Letter

Clancy Consulting have provided a compliance letter on 04 March 2021 to cover the below points outlined in the S106 Agreement, confirming the following:

- The design plans have been prepared incorporating proper design and review input into the detailed design phase of the relevant part of the Development and ensuring that appropriately conservative modelling relating to the local ground conditions and local water environment and structural condition of Neighbouring Properties have been incorporated into the final design;
- The result of these appropriately conservative figures ensure that that the relevant parts of the Development will be undertaken without any impact on the structural integrity of the Neighbouring Properties beyond “Very Slight” with reference to the Burland Category of Damage; and
- The basement Design Engineer having confirmed that the design plans have been undertaken in strict accordance with the paragraphs (a) and (b) above provides a letter of professional certification confirming that the measures set out in sub-clauses (i)-(vi) below have been incorporated correctly and appropriately into the Detailed Basement Construction Plan and are sufficient in order to achieve the objectives of the Detailed Basement Construction Plan.

Compliance letter can be found in Appendix L.

## 2. Structural appraisals and condition surveys

Detailed structural appraisals and condition surveys of the neighbouring properties have been undertaken and are appended to this document as follows:

- Appendix A - Phase 2 Geotech Survey
- Appendix B - Rooftop Survey
- Appendix C - Rear basement Survey

### 3. Method statement and temporary works sequence drawings

The below methodology / sequence of works outlines the Main Contractor's approach in managing the works relating to the basement construction on 115-119 Camden High Street development.

It is worth noting that the temporary works engineer will design any propping to the below basement level which will be in place, during this works.

#### **Preparation works for Piling**

##### Main Piling Activity

- Following completion of main demolition down to ground level the existing ground floor/ basement slab shall be broken out.
- Piling Probing maybe carried.
- Reinforcement cages shall be delivered fabricated on site and lifted into position with specified machine, this will be within piling zone as the machine shall also operate and feed the piling rig.
- Piling Method for the Perimeter piling shall be a CFA/Secant piling Method, this will allow the basement excavation to be carried out.
- Piling arising will be removed via attendant and loaded onto lorries.
- Concrete shall be received as per Piling requirements via the site entrance.

The Temporary Works calculations, drawings along with the piling calculations that form the temporary retaining wall can be found in Appendix Q.

##### Underpinning, Excavation, Pile Cap and Ground Beam

- Following completion of the perimeter piling the RC capping beam shall be constructed.
- Whilst the basement excavation is being carried out the installation of the pile caps and ground beam will be constructed to the new ground floor structure
- Basement excavation to commence from the front of the property and completion to the rear.
- During the excavation works, any existing foundations discovered are to be removed or used so that the new basement construction can be carried out and completed in accordance with the drawings.
- New concrete pile caps and ground beams will be constructed according to the structural engineer's drawings.

- Drainage for foul, ground water, relevant sumps and pumps will be placed. It is noted that the pumps are used to discharge foul and ground water into the sewer system. Please refer to SUDS Strategy and Drainage drawings under Appendix F.
- Existing walls of the building are to be temporarily propped using steel beam, as necessary. Temporary concrete pad foundations may be required under the proposed props. The props may be supported on the concrete bases of the underpins already constructed.
- The new basement slab will be constructed according to the structural engineer's drawings and as soon as the concrete has reached its required crushing strength the column etc will progress to form the ground floor.

#### Underpinning works

The existing party wall of the building will be underpinned in a "hit and miss" underpinning sequence. For further details of the underpinning construction sequence. Please refer to Appendix K for the underpinning drawing.

The proposed works are to underpin the neighbouring building to form a basement below part of the existing lower ground floor level. The underpinning will be carried out in two stages up to ground floor level. Underpins will be propped and set out by Engineers, included in the Neighbouring Basement Impact Assessment. All underpinning methodology and design together with the temporary propping will be designed by the temporary works engineer and verified by the Structural Engineer.

A conditions survey of the neighbouring property has been undertaken and can be found in Appendix N.

The detailed construction sequence drawings along with the design intent, calcs and report for the basement dig and support works can be found in Appendix O.

Deep Trial Pit information can be found in Appendix P.

#### 4. Structural Engineer – Roles and Responsibilities

Clancy Consulting Ltd. have been appointed by Demar (BVI) Holdings Ltd. to act as Structural Engineer from RIBA Stage 2 through to RIBA Stage 6.

Clancy Consulting Ltd. will undertake the role of the Design Guardian of the Structural Design up to project completion. Part of the Structural Engineer's responsibilities during the construction phase, will be to review and sign off any CDP items relating to the structural design of the basement as well as to make sure that the works undertaken adhere to the agreed ER's.

## 5. Ground water diversion measures

Cavity drainage channels have been allowed in the design of the basement to ensure water diversion.

The cavity drain channel must be fully accessible and maintainable along its entire length by introducing jetting points, typically at intervals of no more than 10-12 metres. The cavity drain manufacturer and type are outlined below:

- Manufacturer: Sika Limited, Watchmead, Welwyn Garden City, Hertfordshire, AL7 1BQ.  
product reference: sika cd channel
- Type: Sika cd channel is a PVC drainage conduit designed explicitly to control water ingress in below ground situations.

The Sika cd channel is fitted around the floor's perimeter at the vulnerable wall/floor junction and can be used in most waterproofing situations. It is particularly suited for use in conjunction with sika cd membrane systems. Water entering the building through the walls is controlled behind the sika cd membrane and diverted to the sika channel at the wall's base. The water enters the gutter through pre-drilled drainage holes and must then be redirected to a suitable drainage point, either natural or a sump and mechanical pump. Jetting eyes (cleaning ports) can also be incorporated into the channel.

The Sika cd channel is to be formed/inserted into the slab at the all/slab junction.

Please also refer to the SUDS Strategy under Appendix F.

An Electric Submersible Pump will be installed in each of the rising water levels with the pump inlet located near the base of the well. The pump will be fixed by 2 nos. safety support ropes. The electric drop cable from the Submersible Pump will be connected at ground level to an isolator switch. The pumps will be lowered into the wells using the safety support rope and machinery. An armoured rubber flexible hose or UPVC riser pipe shall then connect the headworks to the discharge pipework. The water will then be pumped into a silt tank.

When operating the water pump, we will ensure that the pump outlet is positioned away from the excavation to prevent water running back in. This will be monitored during works, also the pumps will be switched off before it begins to suck up the last dregs of water as these are likely to contain high levels of silt.



## 6. Ground water and vibration monitoring

### Vibration monitoring

A number of vibration impact assessment surveys have been undertaken to date for 115-119 Camden High Street project to ensure minimal disruption to adjoining properties and LUL tunnels. Please refer to the list below:

- Ground impact assessment audit was undertaken in October 2019 and can be found under Appendix I.
- Ground movement assessment was undertaken in September 2019 and can be found in Appendix E.
- Impact assessment on LUL tunnels was undertaken in July 2020 and can be found in Appendix H.
- Baseline Vibration Monitoring Assessment was undertaken in February 2021 and can be found in Appendix D.

Please note that vibration monitoring will be undertaken by Hann Tucker on behalf of Demar (BVI) Holdings Ltd throughout the duration of the construction works. Displacement monitoring will also be undertaken to adjacent buildings and a traffic light system will be implemented during the Construction phase as per the recommendations set out in the GCG Ground Monitoring Report.

### Ground water management plan

Ground water management plan is covered in Section 5 of this report as well as Appendices A and F.

## APPENDIX A – PHASE 2 GEO-ENVIRONMENTAL APPRAISAL REPORT

## APPENDIX B – ROOFTOP SURVEY

## APPENDIX C – REAR BASEMENT SURVEY

## APPENDIX D – BASELINE VIBRATION MONITORING REPORT

## APPENDIX E – GROUND MOVEMENT ASSESSMENT REPORT

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## APPENDIX L – COMPLIANCE LETTER

## APPENDIX M – SITE WATER MANAGEMENT PLAN

## APPENDIX N – CONDITIONS SURVEY OF NEIGHBOURING PROPERTY

## APPENDIX O – DETAILED CONSTRUCTION SEQUENCE DRAWINGS



## APPENDIX P – DEEP TRIAL PIT INFORMATION

APPENDIX Q – TEMPORARY WORKS CALCULATIONS AND DRAWINGS