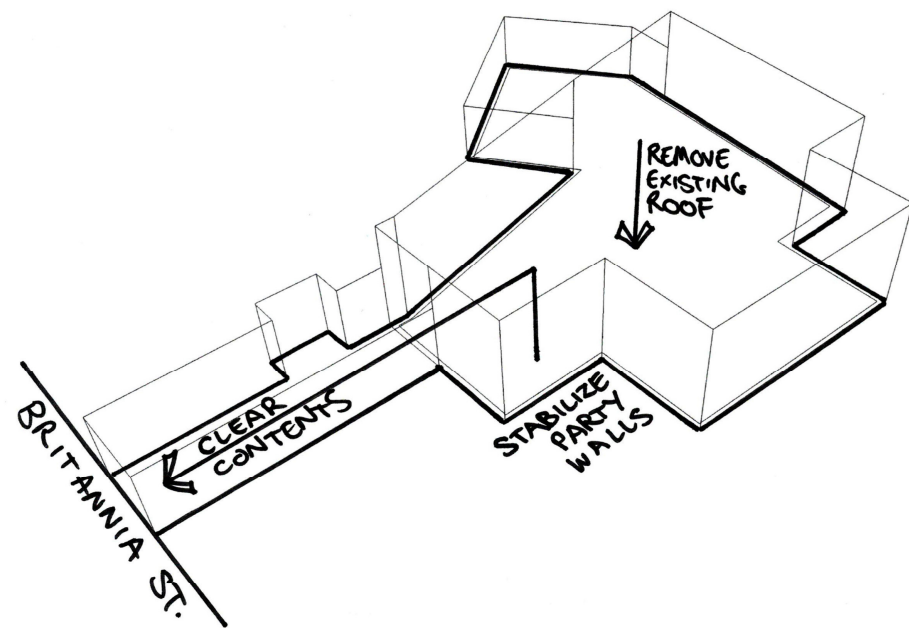


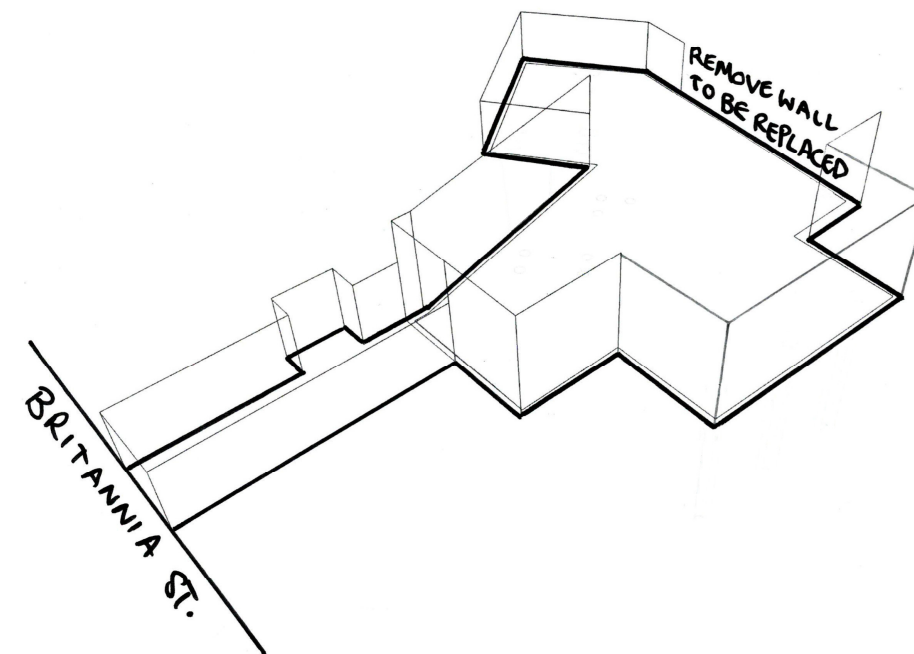
## 8 Outline Underpinning Basement Construction Sequence

Prior to works commencing, schedules of condition will be carried out to the adjoining properties as part of the Party Wall process. The monitoring regime will be agreed including precise monitoring of targets affixed to adjoining structures. Initial readings will be taken prior to works commencing, and then at agreed intervals going forward. The monitoring readings will be compared with 'trigger levels' at which further investigations or mitigation measures will be implemented. Once this is complete the works will commence with the clearing of the site with the exception of the partywalls which are to be retained.



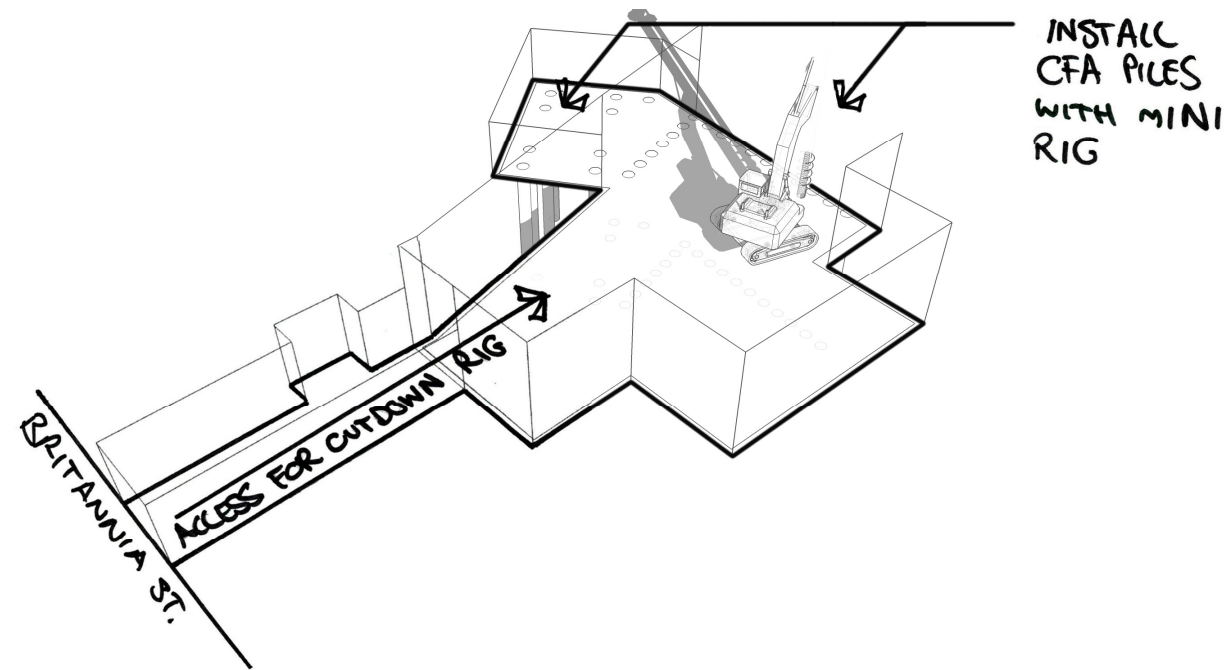
### 8.1 Site Clearance

- After the clearance of internal freestanding structure has been completed, roof removed, and the party wall stabilised, the site will be cleared and monitoring equipment will be installed
- Excavation plant will be brought on site and preliminary site set up will commence.



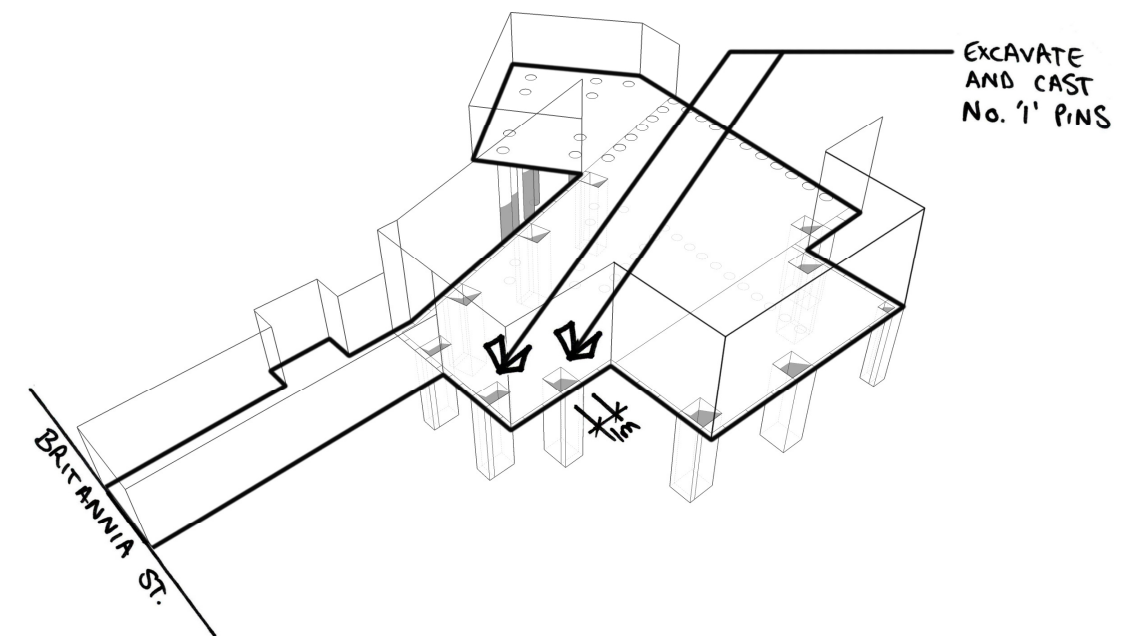
### 8.2 Removal of Existing Wall to be Replaced

- The existing wall to the south of the site which is replaced in the proposed scheme is to be removed sequentially course by course from the top to ground level.
- Temporary propping of the associated walls will be required to ensure stability.



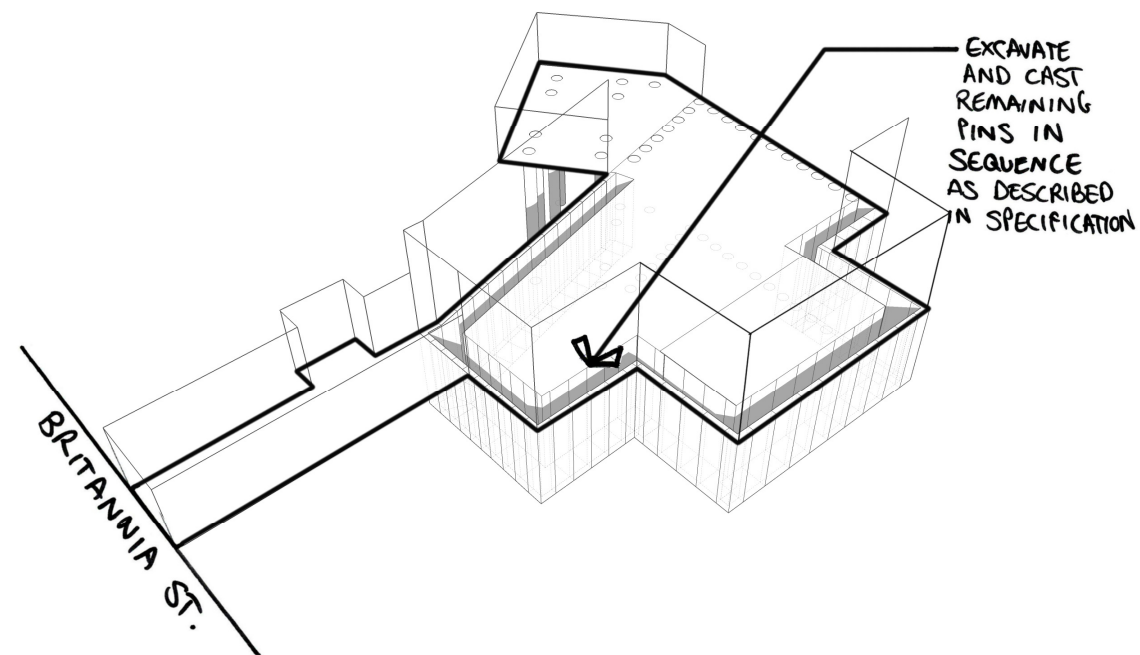
### 8.3 CFA Pile Installation and Contiguous Wall

- A cut-down CFA rig will drive into site from Britannia Street
- Piles will be installed on the south and west ends of the site with suitable clearance from the partywalls and boundaries.



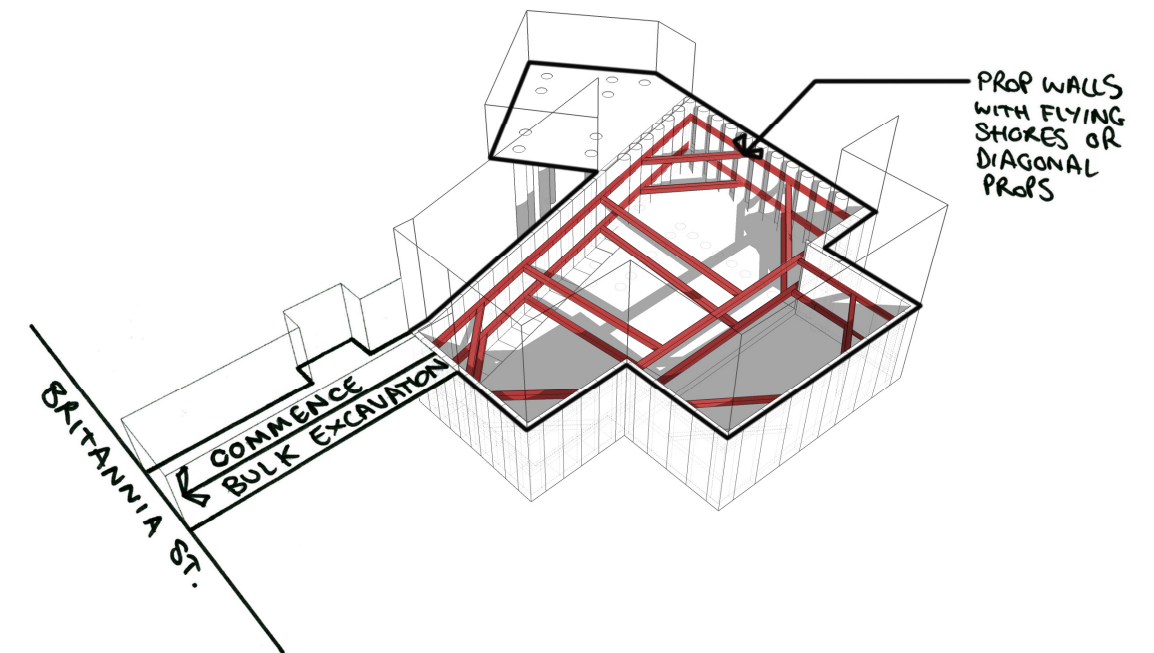
### 8.4 No. '1' Underpins

- The partywalls will be notionally divided into sections and the 1<sup>st</sup> series of underpins will be excavated with the necessary temporary works.
- Casting of the No.1 pins will commence in accordance with the specification.



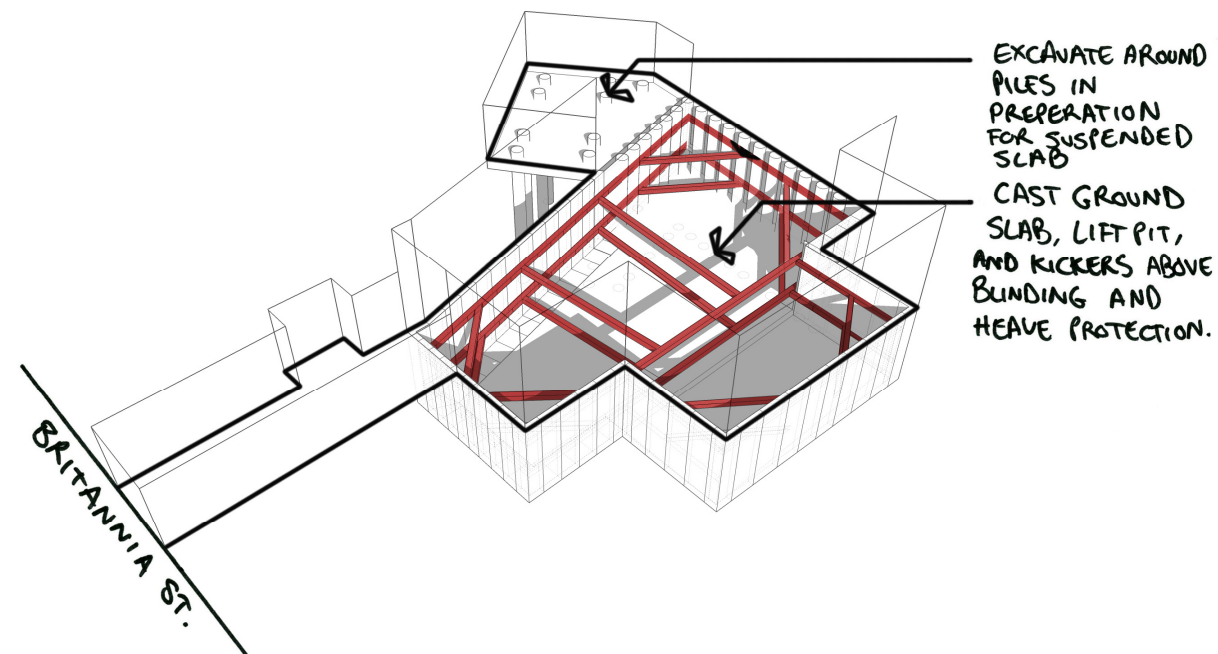
### 8.5 Completion of Underpinning Sequence

- The No. 2, 3, 4, and 5 underpins will be completed sequentially and in accordance with the Underpinning specification to ensure the existing Partywall is supported at all times with underpins which have achieved adequate strength.
- Excavated soil is removed throughout the process



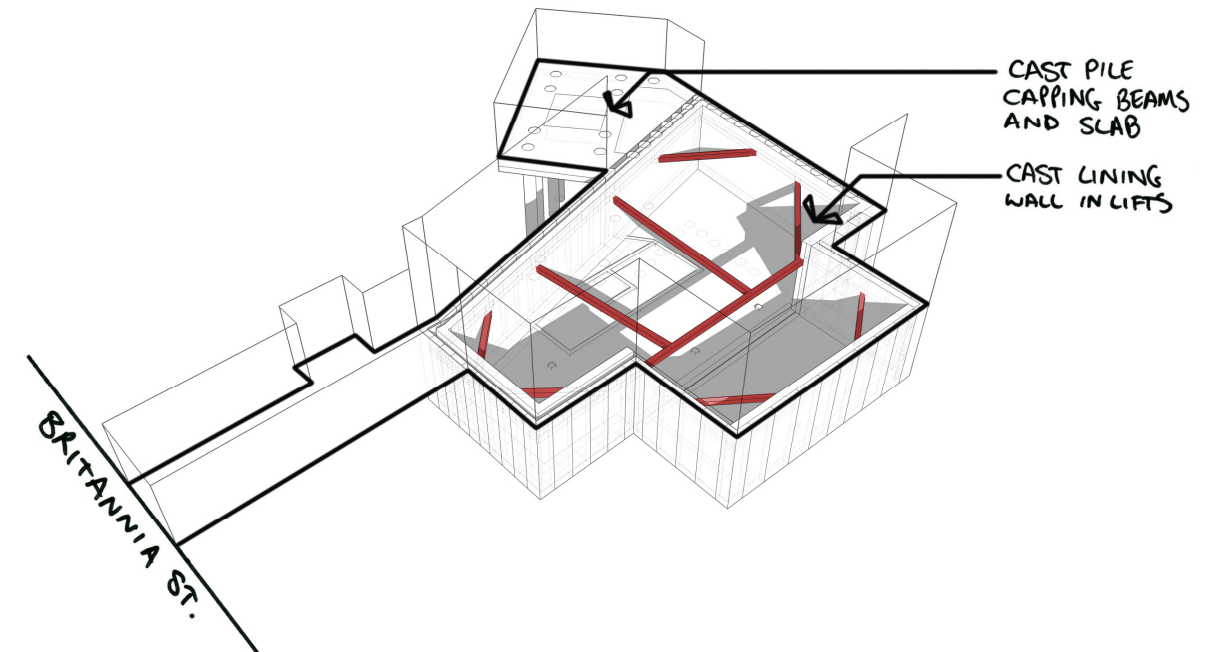
### 8.6 Bulk Excavation and Temporary Propping

- Following completion of the underpins, the excavation of the internal soil will begin.
- As the soil and propping which was installed within the underpin excavation is removed, waling beams and flying shores will be installed to maintain stability of the perimeter walls (inclined strutting may also be utilised should the Contractor find this preferable).
- Once this is complete the formation level is to be prepared for construction of the ground bearing Slab/Strips, all below slab elements to be installed.



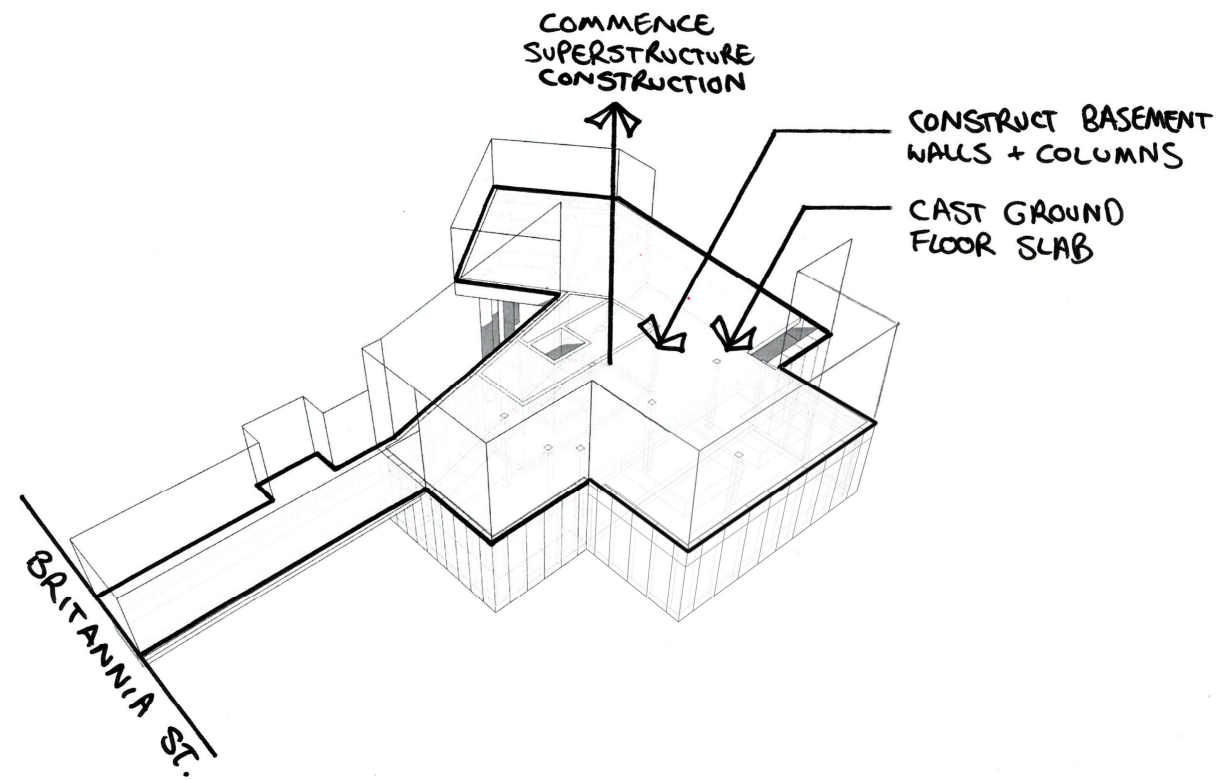
### 8.7 Casting of the Basement Floor

- Once blinding layer and heave protection is installed the Basement slab is ready for construction.
- The reinforcement is placed in accordance with the Structural drawings.
- The basement slab is cast and left to cure.
- Starter-bars and kickers are prepared for the following stages ensuring that they are properly protected in the temporary case
- Earth is excavated from around the pile heads in preparation for the suspended ground level flab.



### 8.8 Casting of the Lining Wall

- Once the basement has cured, the lining wall is cast in lifts, removing and repositioning the temporary props to ensure stability is maintained.
- The lining walls are completed with the propping to the head of the wall left in place.
- The rebar is placed and the pile capping beams and suspended reinforced concrete slab is cast.



### 8.9 Installation of Ground Level Diaphragm and Basement Columns/Walls

- The internal columns and walls are constructed to provide support to the Ground level slab
- To restrain the top of the perimeter walls once the temporary props are removed the Ground level slab must be installed to act as a rigid diaphragm.
- Once this floor is complete the temporary props are removed and the construction of the superstructure is commenced.