GRENFELL TOWER REFURBISHMENT BUILDABILITY REVIEW DECEMBER 2012

Remodelling lower floors

The remodelling works will see each of the lower floors being worked on simultaneously in one phase. In order to achieve this it is proposed to carry out enabling works to the walkway level to create a temporary entrance for the tower residents. Once the enabling works are complete the remaining lower floors and surrounding external areas can be hoarded to create a secure construction site. All access points to the lower levels from the main stair core will be closed with exception of the walkway level entrance/exit route. This will include re-programming of the lift to prevent access to ground floor also. A second phase of work will see the entrance switch from the temporary entrance at walkway to either the new entrance on ground floor or new bridge at walkway to allow the internal walkway level works to complete.

New Mechanical and Electrical installations will at some point connect or interface with the existing services. At a predefined stage during the works services feeding the current residential units may have to be interrupted or temporarily made unavailable whilst final connections are made. Temporary installations maybe required in order to maintain some services. Further review of the design, existing systems against the build programme is required in order to understand the requirement and scope of temporary installations required.

Items of risk requiring further understanding or review in relation to the above areas;

- Prior to any works being undertaken including the enabling works an intrusive asbestos survey needs to be undertaken and findings dealt with accordingly.

- The proposed temporary entrance routes need to be confirmed as acceptable in relation to the buildings fire risk assessment. Clarification is needed as to the requirement for any access control, reception and associated services to this area throughout the construction phase.

- In order to consider the buildability of the proposed new slabs further information / investigation is needed. A full intrusive survey to all connecting existing slabs is required to confirm the current build up, connections, reinforcement, condition and strength of concrete.

- Dowelled connections to slab infill's will cause considerable disturbance to the existing residents. These connections should be looked at and reduced or change to steel frame where possible.

- All existing communication cabling within the lower floors needs to be removed by the owner (telephone lines, CCTV etc) prior to any works commencing.

- A detailed survey and report is required of all the existing M&E installations in order to ensure any new installation can connect or interface with existing infrastructure. The findings of this report will need to be discussed and agreed with the Building Control Officer and client.

- The design requires work and alteration to existing life safety systems such as smoke vents and dry riser. In order to plan for this work risk assessments need to be developed and agreed with the client, building control and emergency services due to the assumption some levels of the tower block will be occupied during the works.

Existing Residential

Works should commence floor by floor to the existing residential units on the completion and commissioning of the builders works, vertical runs and plant room installation.

The horizontal pipe work within the communal areas needs further discussion to determine if it is safe to install whilst residents have access to that floor. Once the new installations are complete in the communal areas it is proposed that works is then undertaken within the flats.

In order for this work / design to progress the following risks need to be reviewed and understood further.

- Understanding the extent of relocation of existing tenants and how this can influence the programme of works.

- Asbestos survey to be carried out before any BWIC can be undertaken within the residential floors.

- Condition schedules of each flat & communal areas to be produced and agreed.

- M&E surveys to be completed on all systems to be retained and connected to. This should include what looks to be a fire detection system within the communal areas where lowered ceilings have been

proposed. As with the remodelling the new scope and retained infrastructure is to be agreed as acceptable with the BCO and client.

Envelope

The envelope is likely to be installed with the use of a mast climber; works will progress in a single phase. Any access required to the buildings plant room or bin store will need to be planned and managed as free access will not be available in the interest of everyone's safety. It is assumed that any existing cabling will be clad over to allow the envelope to complete.

Phasing and sequencing the removal of existing windows very much depends on both the asbestos survey results, the fixing details of the new cladding system and resident decant plan.

In order for the work / design to progress the following risks need to be reviewed and understood further.

- Structural survey to be undertaken to allow cladding fixing methods to be designed further. This will probably include pull out tests and potentially core samples.

- Asbestos survey results for fixing methods.

- Full fabric condition report should be undertaken to understand any defects in the fabric that may have an impact on the envelope or its performance.

Plant Room

Due to the lack of space at ground level for any sizeable crane the plant should be specified to allow it to be transported to the roof via the mast climber and fit through the existing double doors. The existing roof finishing and cabling that sits on the roof will require protection from the proposed works.
BWIC within the plant space will need to be one of the first items of works completed to allow the vertical pipe distribution to continue prior to the works commencing within the existing residential units.
To ensure the roof slab has the strength for additional plant further intrusive surveys should be completed to establish the thickness / strength before adding further load to the slab.