

Appendix 3

Detailed Design

The replacement of curtain walling and windows at Great Arthur House represents a challenging project for the following reasons:

- The block has listed status being listed Grade II in December 1997
- The original and current curtain walling and windows are constructed from narrow aluminium sections and incorporate only 4mm glazing
- The original façade access system has been adapted and is structurally unable to support the weight of a cradle for cleaning and maintenance purposes
- The current curtain walling and windows do not meet Building Regulations with specific reference to Part A (Structure), Part B (Fire Safety), Part E (Resistance to passage of sound), Part F (Ventilation), Part L (Conservation of fuel and power) and Part N (Glazing.)
- The replacement curtain walling in particular will need to be constructed with components that meet current Building Regulations which will result in a greater overall weight.
- From investigation of the structure it has been ascertained that the construction of Great Arthur House was built within very narrow tolerances. The structure will not be able to accommodate a heavier curtain wall construction without some structural strengthening.

The Design Team investigated a number of options to obtain a proposal that would meet the above parameters. Particular emphasis was given to design a curtain wall system that was:

- Light in weight
- Elegant and compatible with the original design
- Structurally robust
- Complied with the various Building Regulation requirements
- Improved the thermal qualities & included double glazing
- Incorporated equivalent fenestration
- Can be installed via a systematic and modular approach
- Would minimise disruption during installation to residents in occupation

The following is the recommended option for approval as part of this report.

- a) Sketch of curtain wall (external)
- b) Sketch of proposed structural strengthening truss
- c) Section through of profile – showing additional thickness
- d) Drawings showing impact to balcony and flank

Further detail is available as background papers: JRA Stage D Report