EIA Quality Mark
Case Study

Capital Interchange Way EIA Brentford

Key Issues –
Temple co-ordinated a multi-disciplinary team which supported the Scheme development and undertook the EIA to support the Planning Application. Key issues identified during the EIA process included:

- townscape and visual impacts (due to the proximity to Kew WHS);
- noise and air quality (due to its proximity to the M4 and A4 and Heathrow Airport);
- microclimate wind impacts (due to the height, massing and facades of the buildings);
- ground conditions (due to the construction of basements); and
- cumulative impacts based on the surrounding development particularly the adjacent Brentford Community FC (recently consented with the same build out timescale as the Capital Interchange Way scheme).

Purpose of the project
The proposals for Capital Interchange Way combine the operational needs of a bus depot with the residential and commercial redevelopment aspirations of Brentford.

Client: Facilitas Engineering Limited and Will Alsop.

Description of the project
Location: Brentford, West London
Project: The Proposed Development is of mixed residential and commercial use, including three architecturally distinct buildings up to 20 storeys, containing up to 550 residential units with flexible commercial space underneath. The buildings sit on top of a bus depot and publicly accessible open space with basements below providing car parking (247 spaces), cycle parking (946 spaces) and ancillary services.

Construction duration: the Proposed Development will be constructed over a period of approximately three and a half years with the three buildings being built almost concurrently.

Receptors: residential receptors, users of the M4/A4, heritage and visual receptors.
Lessons learnt
Given the environmental constraints on the site, primarily dictated by the adjacent elevated motorway, we worked closely with the Architects, providing detailed noise, air quality and microclimate design advice to ensure that the residential units satisfy environmental standards whilst maximising commercial value. There were a number of topic specific issues which conflicted with one another and a key role for the EIA coordinator was to strike a balance between topics whilst retaining the commercial value of the Proposed Development. An example of some of the topic ‘tradeoffs’ are evident in the purposeful location and design of the balconies and flexible internal amenity spaces within the Proposed Development.

Three months of continuous air quality monitoring was undertaken to ensure the suitability for opening windows and use of the publicly accessible open space. Preliminary iterations of the daylight / sunlight modelling were undertaken to ensure that daylight levels within the Proposed Development were optimised as far as possible.

Lessons learnt cont. -
Attended and unattended noise monitoring surveys informed the development of a Cadna noise model to show the likely noise levels measured at each of the three buildings.

Taking all these studies into account the final design proposed recessed balconies on the south-eastern and south-western facades of the northern building, with the apartments on the northern facade benefitting from flexible partitions behind the external glazing, which residents can choose to open to extend their living area or close for privacy.

The flexible partitions were adopted rather than conventional balconies which would increase the obstruction of daylight to the internal space beyond.

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