

Architecture Report

Project 277a Gray's Inn Road

No 1-529

Date Issued For Planning 16 April 2015

Planning Design Statement

What Change Is Sought?

The team seeks to amend the original consent in order to permit a change in height to the consent. The change varies in magnitude along the length of the building as it is based on change in height to the typical floor meaning that the effect is greater where there are more floors and lesser when there are fewer.

The largest change is to the top of Core A where the 'FFL' now stated in the drawings is 1m higher than the extant consent. By way of contrast, the FFL at level 03 (the roof level of core C) has been revised to only 300mm higher than the consent.

In the drawings, we have sought to reflect the additional build up required to deliver parapets / green roofs, so the finished roof level is drawn subtly higher than the stated FFL which refers to the internal environment. The exception to this is the top roof where the FFL stated is the top of the roof finish. Parapets are 150mm higher.

Why Is Change Sought?

During the course of developing the consented design into a package of drawings for tender, we have audited the scheme to ensure that the commitments made in the various consented reports and documents can be delivered, as well as in terms of building regulations. It is also necessary to coordinate this with available building materials and technologies – for example coordinating the design for standard brickwork setting out.

In the process of this audit, it became clear that the zone left for the floors and roofs could not accommodate all of the necessary components / criteria to deliver the building. Some of the following became clear to be mutually exclusive in the heights provided:

- compliance with the building regulations for the passage of sound
- provision of 2.5m floor to ceiling heights as identified in the consent / London Housing Design Guide
- coordination with commercially available brick heights
- provision of a green roof as consented.
- coordination with mechanical and electrical distribution
- thicknesses of structure required

The change sought via this Section 73 application is to allow space for the relevant criteria to be achieved.

What Alternatives Were Investigated?

In order to evaluate the options, a number of methods were sought to try to deliver the building, disregarding potential financial implications.

Non-Standard Brick Sizes

The key limiting factor is the size of bricks. A saving on the floor build up of less than 75mm cannot be taken as it would mean building the storey to less than a whole brick height which gives rise to serious knock on effects (for example the window heights would vary in relation to each floor).

We investigated all commercially available variations but found that, actually, this had little effect as the floor thicknesses we were investigating were closest to a whole UK brick and were further from European sizes meaning the problem was often exacerbated, not improved.

Innovative Construction

We investigated innovative constructions to reduce the slab thickness including pre-cast planks, post-tensioned slabs and SFS metal frame systems. Unfortunately, we found that all lighter weight constructions added other problems in terms of reducing the passage of sound (building regulations Part E). Invariably, this led to increase in thickness of other elements either to add mass or introduce insulating layers.

This negated the space saving, making the approach unsuitable. A professional acoustic consultant was engaged to verify and advise on these approaches.

Innovative Specification

We also assessed whether more innovative materials could be specified to achieve some of the building regulations criteria within thinner zones, as well as to see whether MEP specification (eg slimmer lights in the ceiling) could help. Cost was not considered a limiting factor.

Some of the approaches we assessed were used to reduce the potential overbuild proposed significantly and are reflected in the variation sought here. However, none could reduce the required build-up's enough to keep the proposal within the consented envelope.

What Is The Proposed Change Based On?

The proposal presented in the revised drawings presented in this application is the result of an exhaustive exercise, working closely with the contractor, to ensure a deliverable proposal based on commercially available technologies that is able to meet all of the relevant criteria.

The main structure will be an in-situ concrete frame which provides acoustic mass, reducing the need for additional layers of material beyond those ordinarily provided. The floor levels are set out to coordinate with UK bricks.

The roofs have been designed to incorporate realistic thicknesses for commercially available green roof systems.

To reduce the additional height needed by the additional build-up of the green roof, we have designed the top floor of each block to be a steel pavilion structure with the insulation tucked between the beams. In these top floor duplexes we are also able to use thinner concrete planks for the 'middle' floor due to the reduced requirements inside of a demise, reducing the need for extra height still further.

In Conclusion

The changes are sought in order to ensure the building can be constructed in accordance with the statutory criteria and the requirements of the consent for elements that define quality and sustainable construction such as Lifetime Homes, London Housing Design Guide and Code For Sustainable Homes.

There are no changes to quantum or area sought in this application. There is no aspiration to increase profitability, simply deliverability. Likewise, complex elements and more costly solutions have been fully explored without prejudice to minimise the necessity to increase height.

The scheme now presented is suitable to deliver the same number, mix and type of high quality, sustainable homes in a way that was not possible within the envelope secured by the extant consent.