ADDENDUM D&A STATEMENT

Hatton Square

Information to support S73 application for minor changes as a result of detailed design development

May 2015

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Revision Nr.				
01	29.05.15	Planning Approval	VV/TB/KS	KS

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Window Studies: retention or replacement options

(See following pages within this document for further detail)

Windows to the rear retained elevations:
It is proposed to replace the existing windows with new high-performance double glazed windows in the existing openings to a specification matching the windows proposed within the new façade areas.

It is also important to note that the proposed location of the windows is to the rear and side elevations of the building, which are landlocked behind the surrounding residential buildings on Leather Lane and Dorrington Place, and are not visible from the surrounding streets.

Existing windows:
The existing windows to the rear and side elevations are a mixture of old single glazed multi-panel metal frame windows and later aluminium/PVC replacements - see overleaf for photographic survey.

Current consent:
The current planning approval allows for replacement of these windows with new double-glazed crittall-type windows to match existing.

This proposal was based on the assumption that replacement steel framed windows could be installed within the existing openings. However detailed design investigation has proved this not to be possible if the project is to meet the required sustainability performance: where new windows are installed in existing openings the minimum requirement is as stipulated by Building Regulations Part L2B is to achieve 1.8W/m2k.

Typical double glazed traditional style steel frame window U-values are as follows:
W20 – 2.9 W/m2K
W40 – 2.0 W/m2K
Jansen Arte (marginally different in appearance) – 1.9 W/m2K

As can be seen from the figures above - none of these window types are sufficient to meet the required U-values.
In addition, the U-values given are typically values at centre pane. The more that the windows are divided into small panes, the worse the U-value becomes, as the frame is a weak point for thermal transmission. Therefore the anticipated final U-value for this design of window will be worse than the manufacturer's standard data.

Proposals:

Two alternative options were therefore investigated
1.Retention and improvement of Existing windows.
2.Replacement of windows with high performance alternative specification.

Option 2 is deemed preferable due to the higher thermal and solar performance achievable as detailed below, as well as improved security and operability. Details of each below:

1.Retention and Improvement
The possibility of retaining and improving the existing windows was investigated.

The frames of the existing windows have degraded to a poor quality over time, making them difficult to repair fully.

The frame depths of the windows are too thin to be able to replace the existing glass with new double glazing, limiting the level of improvement to thermal performance that can be made.

The opening area of these windows is limited to small pivoting central sections. The pivoting sections prevent the installation of secondary glazing that would improve the thermal performance of the windows (currently with an estimated U-value of 6.00W/m2k) as this would restrict the already limited opportunity to naturally ventilate the interior spaces.

The resulting small area of openable window within each work unit would not provide sufficient area for proper natural ventilation of the space.

The opening sections are located at the centre of the windows, with the latch at a height of above 2.2m above finished floor level. This is not easily operable, and would therefore also not meet accessibility requirements in Part M of the Building Regulations if installed new.

2.Replacement of windows with high performance alternative specification.

The alternative approach is to install new windows with a specification to match the windows proposed elsewhere in the building.

These are high performance double-glazed composite windows with a typical U-value of 1.3W/m2K, exceeding the U-values required by the Building Regulations and therefor helping to reduce energy loss and heating requirements.

Glazing with a high level of solar control can be specified, providing a significant reduction to solar gain to the interior spaces. Comfort levels in terms of overheating and heat loss to occupants of the interior will be improved, and the overall energy performance of the building will thus improve further.

The proposed larger area of openable window within each work unit will also greatly assist the natural ventilation requirements of these spaces. This also makes them significantly easier to clean and maintain.

The windows are easily operable (to comply with Part M of the Building Regulations) and have improved security performance over the existing as recommended by the Secured by Design Officer.

The windows have a narrow frame width, and are proposed with a natural anodised aluminium finish common in twentieth century industrial buildings.

This approach is proposed due to the higher thermal and solar performance that can be achieved and the resultant consistent visual approach to the external building façades.

Summary of other minor amendments as proposed

(Please refer to application drawings for further detail)

Relocation of substation / Baldwin Gardens
The building houses a substation that serves both the building and the surrounding area. As a result of the extension to the building a new larger transformer was required to provide sufficient capacity. Statutory provider UKPN have requested that the new substation is provided at ground floor level with direct 24 access off the street.

As noted above, the substation is an interconnected network transformer serving the surroundings as well as the building itself. It therefore needs to remain in operation while the new substation is built, with only a short planned permissible period of down time when the switch from old to new is made. To achieve this the incoming cable ducts into the new substation need to be built before the switch over. Therefore the new substation cannot be built directly over the existing one, as the cables would be in the location of the still operating existing substation.

The substation has therefore been shifted to the adjacent structural bay to the west. Consequently the position of the louvred panel on the elevation has shifted position two bays to the west providing direct access into the new substation. A fully glazed panel replaces the original position of the louvred panel. NB: These shifts all occur within the openings of the consented pattern of fenestration and brickwork elements, and are of no significance to the quality or appearance of the elevations.

Rearrangement of door locations / Leigh Place
Some minor internal layout alterations have resulted in the rearrangement of the positions of some doors and louvred panels at ground floor on the West elevation. Again, these amendments occur within the bays of the consented brickwork frame, and are of no significance to the quality or appearance of the elevations. The reduction and rationalisation of the doors also simplifies and improves the elevation.

Additional doors / Baldwin Gardens
Two additional access doors have been included in existing panels of fixed glazing. This is to ensure that the escape distances to the rear of the A1 unit meet the requirements of the fire strategy and Building Regulations for means of escape. NB: These shifts all occur within the openings of the consented pattern of fenestration and brickwork elements, and are of no significance to the quality or appearance of the elevations

Enclosure of flues / Leigh Place
The extent of the brickwork enclosure on the west elevation has been modified slightly so that the boiler flues are now enclosed within the brickwork. This improves the visual appearance of the element by concealing the pipework which was previously exposed.

Amendments to lightwell fenestration
The arrangement of the windows to the new enclosed lightwell has also been slightly amended as necessary to accommodate the structural work and new structural members around the lightwell perimeter. These windows are not visible from anywhere on the surrounding streets or buildings as the space is enclosed by the building and only visible from the interior.

Configuration of lightwell stair
The configuration of the external stair within the lightwell from ground to first floor has been rationalised and made more efficient as part of the structural detailed design. It now runs in a single orientation rather than a dog-leg, improving daylighting to the basement level. This is also not visible from the street.

Configuration of rooflights to basement units and bike store.
An additional rooflight is included over the ground floor bike store.

The rooflights in the low walled-in roof area to the south have been rationalised in form due to buildability issues, structural design, and maintaining access over the roof to the external façade.

These are not visible from the street.

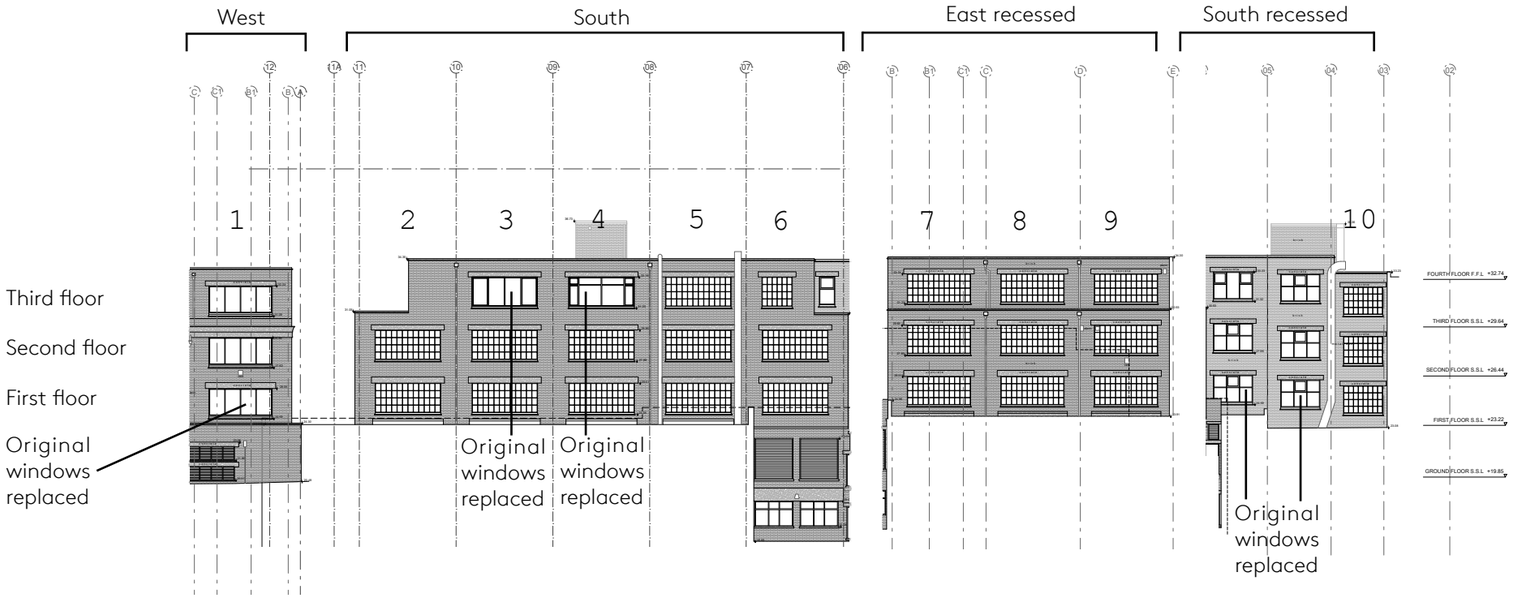
Internal layout changes with no visual implications
Club Workspace area relocated to ground floor.

Main lift core: 2 large lifts replace earlier proposal for 3 small lifts.

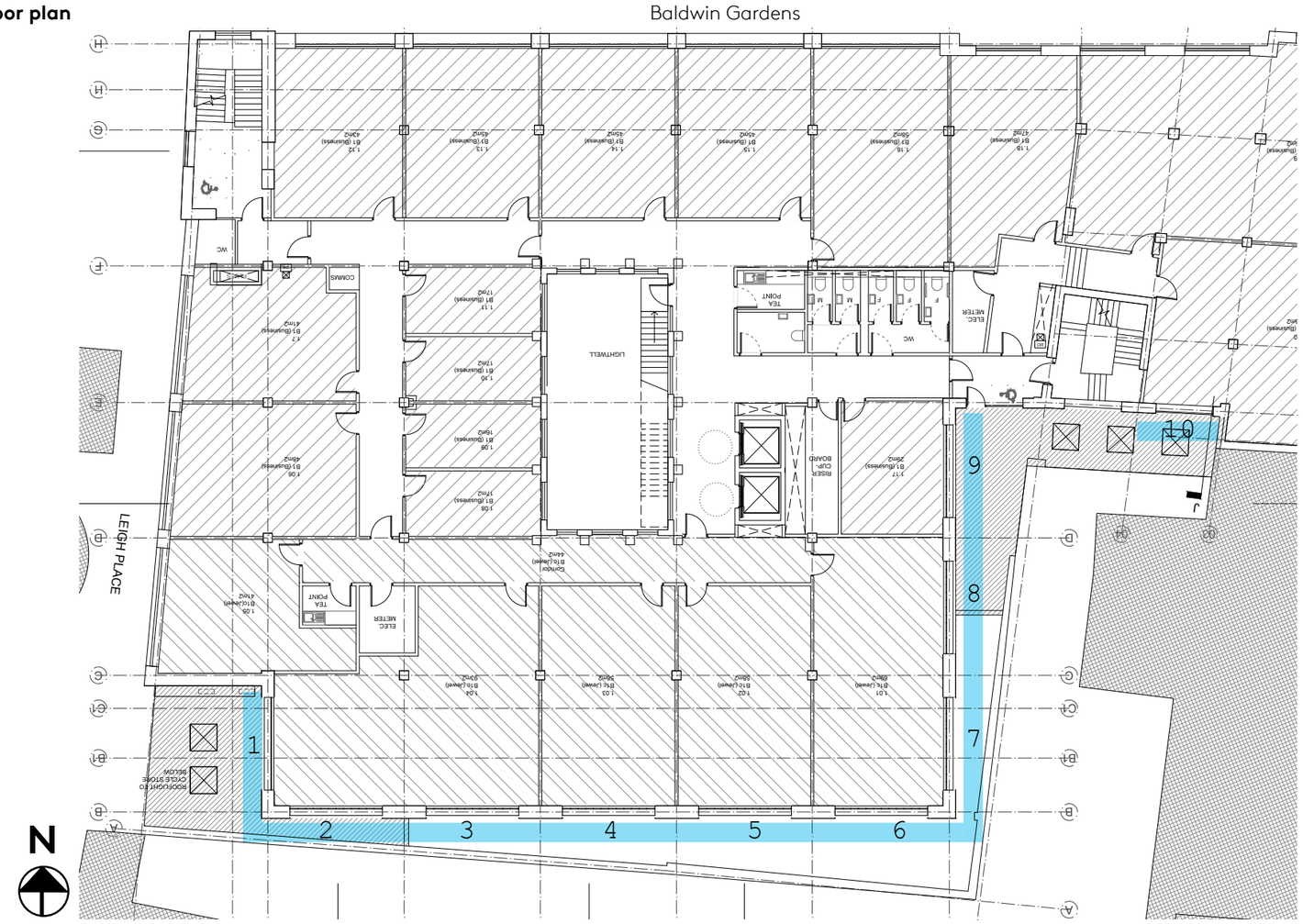
Goods lift: the earlier goods lift was impractically small, and has been replaced with increased provision of WCs.

Some plant and support spaces such as the main coms room have needed to increase slightly in size.
Fourth floor partitions are omitted to form a larger open plan unit, while some smaller units have been formed with additional partitions onto the lightwell at levels 1-3

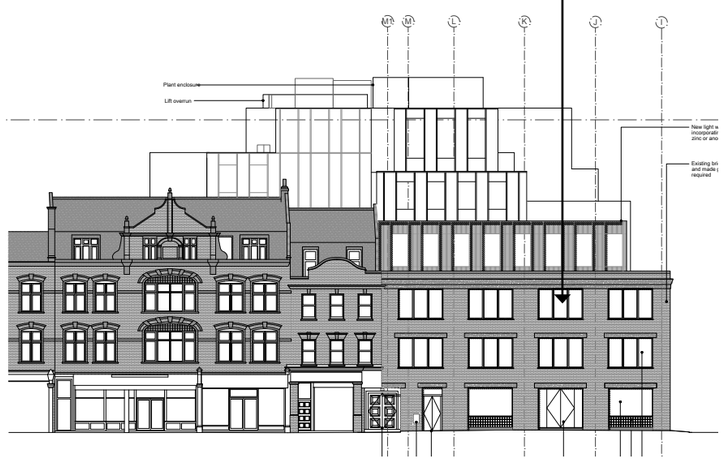
Location of existing windows in retained elevation



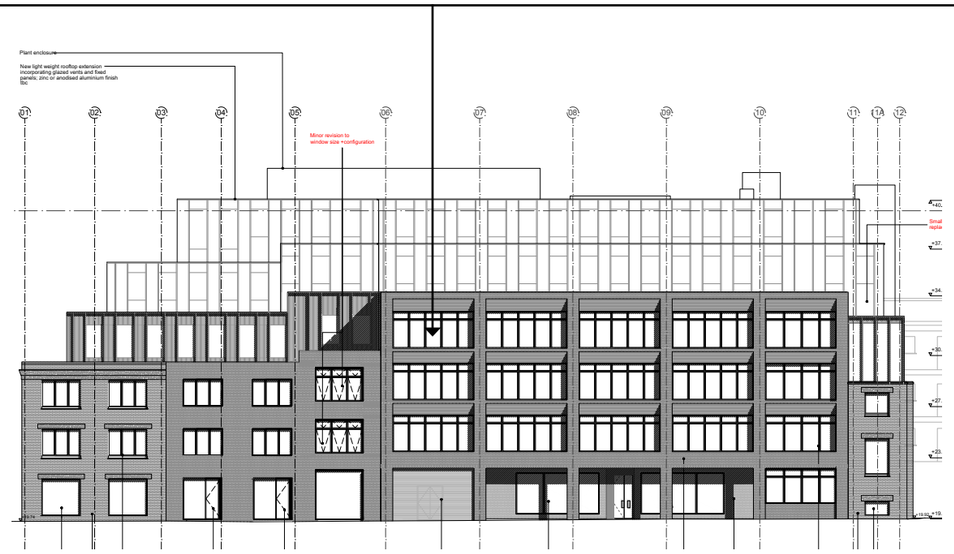
First floor plan



Window Studies: proposed elevations



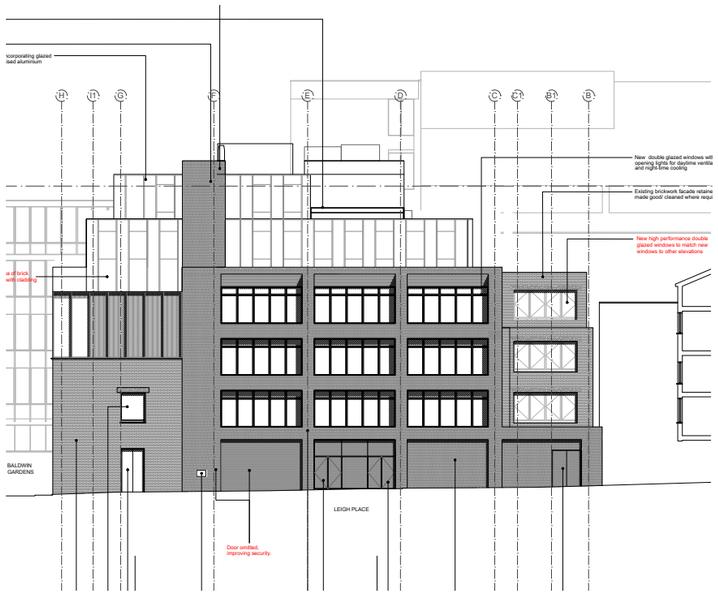
EAST ELEVATION - LEATHER LANE



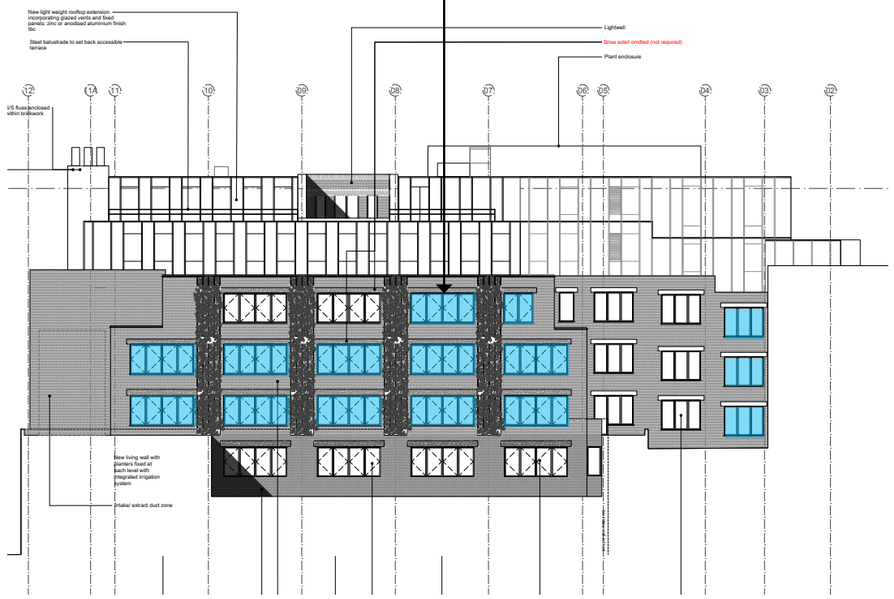
NORTH ELEVATION - BALDWIN GARDENS

Existing & new window openings - all proposed (and consented) with high performance double-glazed composite windows with an aluminium outer face; finish natural anodised

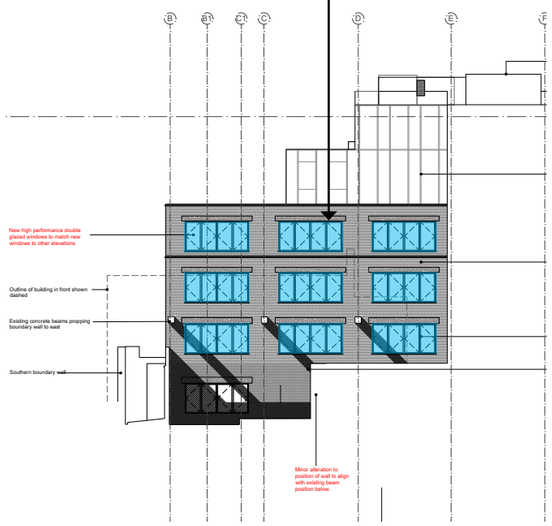
Highlighted areas indicate openings where the existing crittall-type windows are proposed to be replaced with a matching window specification to the rest of the building - improving thermal performance and creating a more unified visual appearance



WEST ELEVATION - LEIGH PLACE



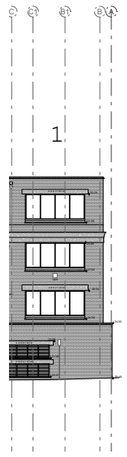
SOUTH ELEVATION



EAST (RECESSED) ELEVATION

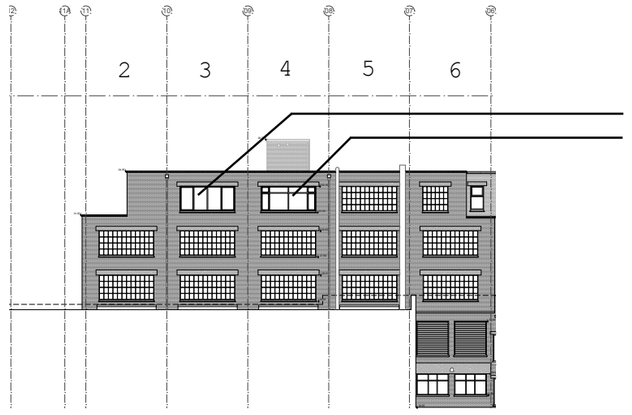
Window Studies: condition of existing frames

WEST ELEVATION



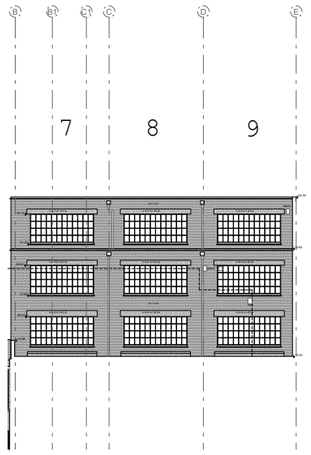
Windows have been replaced

SOUTH ELEVATION

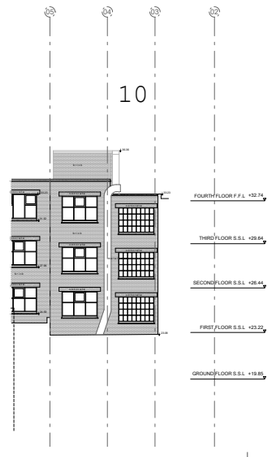


Existing replacement windows

EAST RECESSED ELEVATION



SOUTH RECESSED ELEVATION



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