ALLFORD HALL MONAGHAN MORRIS Architects

A437 New Garden House, 71-80 Hatton Garden, London EC1

Planning Statement

PSX 0105374

N16/15/A.

Introduction

The site consists of a complex of buildings around a central courtyard in the Hatton Garden area of Clerkenwell, including:

- 71-80 Hatton Garden
- 5-7 St Cross Street
- 40-48 Leather Lane
- 34-38 Leather Lane
- 28-32 Leather Lane

All of these buildings form part of the application with the exception of 40-48 Leather Lane.

The application involves:

- part demolition of the office building at 71-80 Hatton Garden
- the refurbishment of the remaining building in conjunction with 5-7 St Cross Street
- the erection of a new build extension to 71-80 Hatton Garden in the courtyard
- conversion of 28-32 and 34-38 Leather Lane into 14 residential units, with retail units at street level.

Design Strategy

The design strategy for this proposal followed on from a review of the existing properties within the complex and their contribution to the Conservation Area.

Prior discussion with Camden Council indicated that the frontages considered to be important in the overall complex are 5-7 St Cross Street and 34-38 Leather Lane. The new scheme retains and refurbishes both these elevations and suggests improvement to the Leather Lane frontage with the opening up of the ground floor elevation to allow for retail units onto this busy market street.

In contrast, however the refurbishment in the late 1970's has left the Hatton Garden and St. Cross Street frontages with a drab and dated array of bronze-tinted windows and unsuitable planters cut in half way to conceal the floor zone behind; the railings at ground level cut the building off from the street; the main entrance can only be reached by a flight of steps; and the Hatton Garden elevation is scarred by the presence of the vehicle access to the rear carpark.

With a view to the wider urban context and Camden's aspirations for this part of the Borough the new scheme strives to open up the street elevations with the removal of such clutter while making the building accessible to all.

Both in terms of its appearance externally and its configuration internally the review of 71-80 Hatton Garden has concluded that this office building is now outmoded and inappropriate for modern use.

In particular the existing southern block which links the Hatton Garden block to that in Leather Lane is too narrow in plan to provide practical office space. In any case, this physical link is no longer appropriate with the proposed conversion of the properties on Leather Lane to residential use and so it is proposed to demolish this block.

Consideration of the site and its neighbours has been paramount in the scheme's development. Specifically, the Rights of Light issues onto the west side of Leather Lane led us to consider the impact of the new build extension on this area and resulted in the development of its distinctive sloping profile.

In a similar way we view the currently empty space onto Leather Lane as an opportunity to create a high quality landscaped amenity space for the proposed residential development at 28-32 and 34-38 Leather Lane.

In conjunction with appraisal of the public face of the buildings there is also the existing internal courtyard to consider. It is currently used primarily for private car parking with an approximate allowance for 29 spaces. This provision is badly laid out and the remaining landscaped area of courtyard under-used by the existing tenants. Consequently, to ensure the successful rejuvenation of the principle block, 71-80 Hatton Garden, it is considered that the courtyard area warrants re-development.

The new build extension to 71-80 Hatton Garden, together with the sympathetic refurbishment of the existing street frontages, will result in a high quality improvement to the Hatton Garden Conservation Area. The consideration of the site as a whole will regenerate the use of 71-80 Hatton Garden in particular and the new build aspect will offer a 'secret' landmark building to this area.

Description of works

71-80 Hatton Garden

The building comprises a lower ground floor; a raised ground floor with mezzanine level; 1st, 2nd and 3rd floors above with 4th and 5th floors set within a mansard roof. A 5-storey link block projects from the southern end of the main block towards Leather Lane at the rear.

The original building was substantially refurbished and remodelled approximately 20 years ago.

Existing elevation

Following the previous refurbishment the existing elevations are a mix of the original stripped neo-classical brick and masonry to Hatton Garden and St Cross Street with punched brickwork and bronze-tinted curtain walling to the re-modelled courtyard elevations.

As part of the refurbishment the bronze-tinted curtain-walling system was brought through to the Hatton Garden elevation where it was used to infill both the 3-storey vertical window openings above ground floor and the stone-clad structural bays to the double-height ground floor. Large projecting planters were also introduced within these bays but set at mezzanine level, which consequently dominate this elevation as viewed from the street and deny the 'grand order' present in the original elevation.

At street level itself the Hatton Garden elevation is 'defended' by continuous railings set approximately 1500mm away from the face of the building with a flight of steps leading up to the existing arched entrance. A vehicular entrance also breaks through this elevation providing access to the rear carpark.

The roof comprises two stories of slate mansard with individual dormer windows matching the rhythm of the openings to the floors below. A substantial roof plant enclosure sits on top of this.

Proposed elevation

At ground level it is proposed to remove the existing railings, tinted curtain-walling, projecting planters and the stone clad columns up to cornice level to create a new, more open ground floor elevation with a greater connection to the street.

A simple, good quality steel-framed glazing system, more sympathetic to the original building fabric, will be installed in front of the structural column line.

The existing stone arch entrance will be replaced with a new glazed entrance, which balances the street composition and, for the first time, provides level access into the building. The existing vehicular access and associated crossover are closed off and become part of the newly modelled elevation.

The existing stone cornice will be cleaned and repaired where necessary and the new glazing will be capped by a projecting metal cornice designed to provide both a neat junction between the new glazing and original stonework above but also to emphasise the generous double-height scale of the raised ground floor.

Above ground floor the brickwork will be cleaned, repaired and re-pointed where necessary and the existing tinted curtain-walling replaced with three-storey clear-glazed panels, set back into the masonry to give brickwork reveals and so to emphasise the modelling and articulation of this elevation.

The existing mansard roof and dormer windows will be replaced with a simple raked elevation. This will be clad in a metal standing seam roofing system broken up by a regular rhythm of windows matching that of the openings in the elevation below. Projecting brise-soleils are set above these windows to give further three-dimensional modelling to the roof-scape as viewed from the street.

<u>New Build</u>

The existing rear elevation of the 7-storey Hatton Garden block and the whole of the 5-storey southern link block will be demolished along with the primary circulation core within 71-80 Hatton Garden.

The link block which dominates the southern aspect of the site, is currently very narrow and restrictive in its possibilities for improvement. We therefore consider its demolition as fundamental to the improvement of the site as a whole. It allows the potential to orientate the new extension with the southern aspect benefiting not just the new build but also allowing natural daylight deep into the existing 71-80 Hatton Garden building.

The new extension is attached to the rear of 71-80 Hatton Garden building by a new vertical circulation core and a new internal courtyard, and provides approximately 4500sqm of new office space.

The new atrium allows daylight to penetrate deep into both new and refurbished buildings and forms a dramatic 5-storey entrance space off the new Hatton Garden entrance.

Each floor is served with four lifts and centrally located toilets including disabled facilities. The lower ground floor also provides for changing and shower facilities.

In profile the new building rakes steeply from east to west, starting at seven storeys where it abuts the rear of the Hatton Garden block and reducing to five storeys towards Leather Lane. This profile is motivated by protection of the rights to light and gives the building a dramatic form. On the south elevation the new building is set back at 5th floor level to ensure that views and day-lighting onto 84-85 Hatton Garden beyond are maintained.

The metal standing seam roof wraps over both office space and the central courtyard / circulation zone, completing the new building within a crisp envelope.

A series of strip rooflights above the 5th floor double height office space break up the single roof plane along with a bank of rooflights above the internal courtyard. Elements of roof

plant, which emerge above the pitched roof profile are contained together within discrete sculptural enclosures.

The elevations to the new building will be faced with glazed bricks in reference to the traditional inner courtyards typically found within the central London. The elevations are animated with a varied arrangement of steel framed glazed windows, which has been developed in response to the internal office planning grid and the requirement to avoid excessive solar gain while maximising day-lighting to the lower levels of the building.

Roof plant has been sited on the Hatton Garden block and has been designed to sit within the sight lines of the existing roof plant as viewed from the residential units of Leather Lane. A continuous, powder-coated perforated metal, plant screen is set in front of the roof plant on the Hatton Garden and St Cross St elevations to ensure an uncluttered appearance from the street and adjacent properties.

5-7 St. Cross Street

The Langdales building will be refurbished internally and will be considered as part of the above development of 71-80 Hatton Garden in its office use. Externally the brick elevation will be cleaned and the windows refurbished.

28-32 & 34-38 Leather Lane

These two buildings will be converted into a private residential complex consisting of 14 units with a new stair and lift core at the rear. Retail units will be reinstated at ground level with new shop frontages thus re-opening and animating the existing blank elevation to the street.

The masonry and brickwork of the remaining elevations will be cleaned, repaired and re-pointed where necessary and the windows replaced as necessary to match. The side and rear brick elevations of 34-38 Leather Lane will be rendered to match the existing white stone street frontage.

Landscaping

A new private garden for the adjacent residential units will be implemented adjacent to Leather Lane. This will comprise of a simple paved area with high quality planting and the potential for public art, such as sculpture. A secure access to the residential units will be created through a new perforated enclosure, which will also provide glimpses at street level from Leather Lane onto the new garden.

The surrounding footprint to the new building will be paved with stone and the vehicle bay tarmac. Provisions for the office users include secure covered cycle stands and seating areas while the residential complex will have a separate secure cycle stand and refuse area.

The external area will be lit evenly and securely to ensure a safe environment for both the officer workers and the residential tenants.

Environmental and Building Services Strategy

The environmental control strategy seeks to create a robust solution using passive engineering techniques incorporating thermal mass, solar shading and insulation to moderate the influence of the external environment. In so doing internal comfort conditions are generally improved and the reliance upon the building energy systems is reduced. The result is a comfortable environment and a building that is energy efficient to own, construct and operate.

The façade is thermally efficient with a level of glazing that is appropriate to the orientation and exposure to solar gain that will provide good daylighting without the need for external solar shading devices. The glazed roof of the atrium will collect skylight and so provide daylighting to the deeper plan areas of the building. This improves the quality of the light as well as reducing the reliance on artificial sources. Consideration is given to the use of thermally massive components within the occupied spaces. Exposed concrete soffits or masonry walls act as flywheels to dampen internal temperature swings and so reduce peak heating and cooling requirements and primary plant sizes. Well insulated walls and roofs further reduce energy consumption and plant requirements.

The infrastructure for a conventional heating ventilation and cooling system will be provided, however the system design will also be able to offer the potential occupier a number of different air conditioning upgrade options which could be tailored to suit their specific functional requirements or preferences.

Plant location strategy

Primary boiler, generator, high and low voltage electrical equipment and water storage are located in the basement with access for plant removal from the adjacent service yard. Boiler flues and generator exhaust are routed to roof level via the external elevation.

Primary air handling plant and air-cooled chillers are mounted at roof level. These will be screened and where necessary attenuated to meet acoustic design criteria relative to the adjacent properties.

British Standard Daylighting Calculations and BRE Daylighting and Sunlighting Study

Proposed Redevelopment / Refurbishment of New Garden House, Hatton Garden, London EC1

Introduction

Drivers Jonas have been appointed by Wilmar Estates Limited to undertake a British Standard daylighting study and a BRE daylighting and sunlighting study. The British Standard daylighting study analyses the effect of the proposed redevelopment of the Sweeps Building into residential. The BRE study will analyse the effect of the proposed redevelopment / refurbishment of New Garden House on the residential properties along St Cross Street and Leather Lane.

Summary of Results

British Standard – Daylighting results

The Average Daylight Factor analysis will clearly demonstrate that thirty eight habitable rooms out of a possible forty pass the daylighting standards for their appropriate use by reference to British Standard 8206, Part II. The remaining two bedrooms only just fail the Average Daylight Factor test, both just failing by 0.1%. This level of daylight will still be good, especially as the design has been restricted by the existing structure of the Sweeps Building. Therefore the proposed scheme is acceptable in terms of daylighting standards for residential use.

BRE – Daylighting and Sunlighting results

The results will show that the proposed development passes the daylighting and sunlighting tests set out in the BRE guidelines for the residential properties to St Cross Street and Leather Lane. Therefore the proposed scheme is acceptable and will not produce a notice loss of daylight or sunlight to its neighbouring residential properties.

Analysis

The following calculations are based on site survey information and drawings showing the proposal from Allford Hall Monaghan Morris Architects, drawing series A437/PL102-108, A437/PL110-112, A437/PL050-PL058 and A437/PL068-069.

Attached is an A4 Ordnance Plan (Appendix 1) of the site with the relevant reference points along St Cross Street and Leather Lane indicating the points taken for the BRE daylighting and sunlighting calculations. Additionally attached are floor plans of the proposed residential Sweeps Building with referencing for room identification (Appendix 2-4).

British Standard Average Daylight Factor Calculations

The daylighting calculations have been based on the formula as set out in the British Standard document BS8206 Pt 2 'Lighting for buildings code of practice for daylighting'. The minimum values of Average Daylight Factor in dwellings are 1% for bedrooms, 1.5% for living rooms and 2% for kitchens.

Certain constants were assumed in the formula, which are as follows:-

The diffuse light transmittance of glazing was 0.65, which is the value for a sealed unit of two 6mm clear glass sheets. A correction factor of 0.9 for the effects of dirt has been applied giving a total diffuse light transmittance of 0.6.

The average reflectance of interior surfaces was taken as 0.5, which is a value for a white ceiling and mid reflectance of walls.

Calculations and results

The Average Daylight Factor (ADF) results were obtained for each room individually and expressed as a percentage. Where there were two or more windows within one room the ADF was found separately for each window, and the results summed.

Ground Floor

There are no habitable rooms at ground floor level.

First Floor

Living / Dining room (A) passes with an Average Daylight Factor of 1.5%

Bedroom 1 (B) fails with an Average Daylight Factor of 0.9%

Bedroom 2 (C) passes with an Average Daylight Factor of 2.7%

Second Floor

Bedroom 2 (A) passes with an Average Daylight Factor of 2.1%

Bedroom 1 (B) passes with an Average Daylight Factor of 1.4%

Bedroom 1 (C) passes with an Average Daylight Factor of 1.3%

Bedroom 2 (D) passes with an Average Daylight Factor of 1.0%

Bedroom 1 (E) fails with an Average Daylight Factor of 0.9%

Bedroom 2 (F) passes with an Average Daylight Factor of 1.9%

Bedroom 3 (G) passes with an Average Daylight Factor of 1.4%

Living Room (H) passes with an Average Daylight Factor of 4.1%

Living Room (I) passes with an Average Daylight Factor of 3.7%

Living Room (J) passes with an Average Daylight Factor of 2.6%

Bedroom 1 (K) passes with an Average Daylight Factor of 2.8%

Bedroom 1 (L) passes with an Average Daylight Factor of 2.8%

Living Room (M) passes with an Average Daylight Factor of 2.6%

Living Room (N) passes with an Average Daylight Factor of 3.4%

Third Floor

Bedroom 1 (E) passes with an Average Daylight Factor of 1.7%

No other rooms were calculated as reciprocal rooms on the second floor passed.

Fourth Floor

No rooms were calculated as reciprocal rooms on the second floor passed.

Fifth Floor

No rooms were calculated as reciprocal rooms on the second floor passed.

Conclusion / Recommendations

The Average Daylight Factor analysis clearly demonstrate that thirty eight habitable rooms out of a possible forty pass the daylighting standards for their appropriate use by reference to British Standard 8206, Part II. The remaining two bedrooms only just fail with Average Daylight Factors of 0.9%, whereas the British Standards require 1%.

Bedroom 1 (B) on the first floor only just fails due to the size of the bedroom compared to the area of glazed window. The existing first floor level cannot provide any further windows to this room as it is adjoining neighbouring properties. Alternatively, the size of the bedroom could be reduced to ensure this room passes, although it seems pointless as the functional quality of the main bedroom will be reduced. As this room is a bedroom, it does not require task lighting and therefore the quality of the daylight it will receive will be adequate for its use.

Bedroom 1 (E) on the second floor only just fails, although the daylighting levels will be better than the calculation suggests, as the proposed extension to New Garden House does not run the full extent of the main window. The Average Daylight Factor calculation uses an angle subtended by the visible sky as one of its permutations, which is produced by measuring an obstruction normal to the glass, at the centre point of the window. However, the obstruction does not run the full extent of the window, so therefore the Average Daylight Factor should be better than suggested. Again, this room is a bedroom that does not require task lighting. Therefore we would not make any recommendations for altering the scheme, as the quality of the daylight it will receive will be adequate for its use.

BRE guidelines

We have undertaken our study of the above site based upon the Building Research Establishment Guidelines set out in the report of 1991 entitled "Site Layout Planning for Daylight and Sunlight: A Guide to Good Practice". The guide is intended for building designers and their clients, consultants and planning officials, and is not mandatory.

Daylighting

The BRE guide has a process to see whether there is an infringement to daylighting of adjoining properties and normally only residential are considered.

The first of these tests is to strike a line at an angle of 25° from the centre of existing windows. If the profile of the proposed building subtends an angle greater then 25° then the second test needs to be applied. This involves using a skylight indicator, which calculates the Vertical Sky Component at the centre point of each affected window. A pass rate of 27% Vertical Sky Component (VSC) is given in the BRE guidelines. If a window does not achieve the 27 % Vertical Sky Component, then the third test is used. This involves calculating the Vertical Sky Component of the window in the existing situation, i.e. before redevelopment. If when the Vertical Sky Component, with the new development in place, is both less than 27% and less than 0.8 its former value, then the occupants of the existing building will notice the reduction in the amount of skylight.

Sunlighting

The BRE guide then uses the skylight indicator, at the same reference points to calculate the annual probable sunlight hours, which is expressed as a percentage. The guidelines say, " If this window reference point can receive more than one quarter of annual probable sunlight hours... including at least 5% of annual probable sunlight hours during the winter months between 21 September and 21 March, then the room should still receive enough sunlight." Sunlighting may be adversely affected if less sunlight is experienced than this, and may be noticeable if less than 0.8 times former sunlight is experienced after the development is completed.

Calculations and Results

New Hatton Garden - 17-10-01
DAYLIGHTING AND SUN LIGHTING CALCULATIONS

	P1		P2		P3	
	Existing	Proposed	Existing	Proposed	Existing	Proposed
First Floor Level						
Vertical Sky Component	13.0%	13.0%	20.0%	19.5%	20.5%	20.5%
	Ratio 1.0 - Pass		Ratio 0.9 - Pass		Ratio 1.0 - Pass	
Total Annual Probable Sunlight Hours	38.0%	38.0%	22.0%	22.0%	26.0%	25.0%
Of which % in winter months	0.0%	0.0%	2.0%	2.0%	2.0%	2.0%
	Ratio 1.0 - Pass		Ratio 1.0 - Pass		Ratio 0.9 - Pass	
Second Floor Level						
Vertical Sky Component	18.0%	17.5%	24.5%	24.5%	25.0%	24.0%
	Ratio 0.9 - Pass		Ratio 1.0 - Pass		Ratio 0.9 - Pass	
Total Annual Probable Sunlight Hours	50%	49%	29%	29%	n/a	34%
Of which % in winter months	4%	3%	3%	3%	n/a	7%
	Ratio 0.9 - Pass		Ratio 1.0 - Pass		Pass	
Third Floor Level						
Vertical Sky Component	21.0%	19.5%	n/a	30.0%	n/a	28.5%
	Ratio 0.9 - Pass		Pass		Pass	
Total Annual Probable Sunlight Hours	59.0%	58.0%	n/a	36.0%	n/a	38.0%
Of which % in winter months	5.0%	4.0%	n/a	7.0%	n/a	7.0%
	Ratio 0.9 - Pass		Pass		Pass	
Fourth Floor Level						
Vertical Sky Component	27.0%	23.5%	no window		no window	
	Ratio 0.9 - Pass					
Total Annual Probable Sunlight Hours	n/a	65%				
Of which % in winter months	n/a	10%				

Point 1

Daylighting Calculations

Point 1 passes the third daylighting tests at first, second and third floor levels achieving ratio levels of 1.0, 0.9 and 0.9 respectively.

Sunlighting Calculations

Point 1 passes the sunlighting tests at first, second and third floor levels achieving ratio levels of 1.0, 0.9 and 0.9 respectively.

Point 2

Daylighting Calculations

Point 2 passes the third daylighting tests at first and second floor levels achieving ratio levels of 0.9 and 1.0 respectively. Point 2 passes at third floor level achieving a Vertical Sky Component level of 30%.

Sunlighting Calculations

Point 2 passes the sunlighting tests at first and second floor levels both achieving ratio levels of 1.0. Point 2 passes the sunlighting tests at third floor level achieving an Annual Probable Sunlight Hour of 36%, of which 7% are in winter months.

Point 3

Daylighting Calculations

Point 3 passes the third daylighting tests at first and second floor levels achieving ratio levels of 1.0 and 0.9 respectively. Point 3 passes at third floor level achieving a Vertical Sky Component level of 28.5%.

Sunlighting Calculations

Point 3 passes the sunlighting tests at first floor level achieving a ratio level of 1.0. Point 3 passes the sunlighting tests at second and third floor levels achieving an Annual Probable Sunlight Hours over the recommended 25% of which 5 are in winter months.

Conclusion / Recommendations

The results show that the proposed development passes the daylighting and sunlighting tests set out in the BRE guidelines for the residential properties to St Cross Street and Leather Lane. Therefore the proposed scheme is acceptable and will not produce a notice loss of daylight or sunlight to its neighbouring residential properties.

We are assuming that Nos. 24 and 25 St Cross Street are residential, although planning records do not indicate any residential properties currently listed.