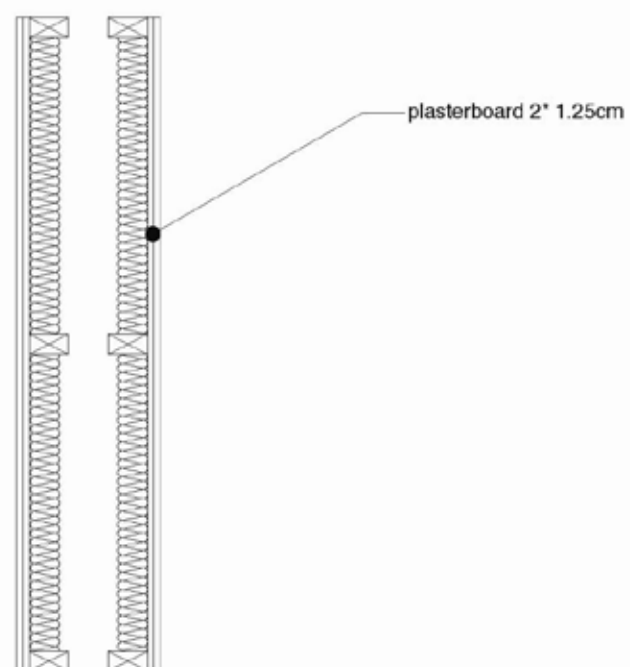
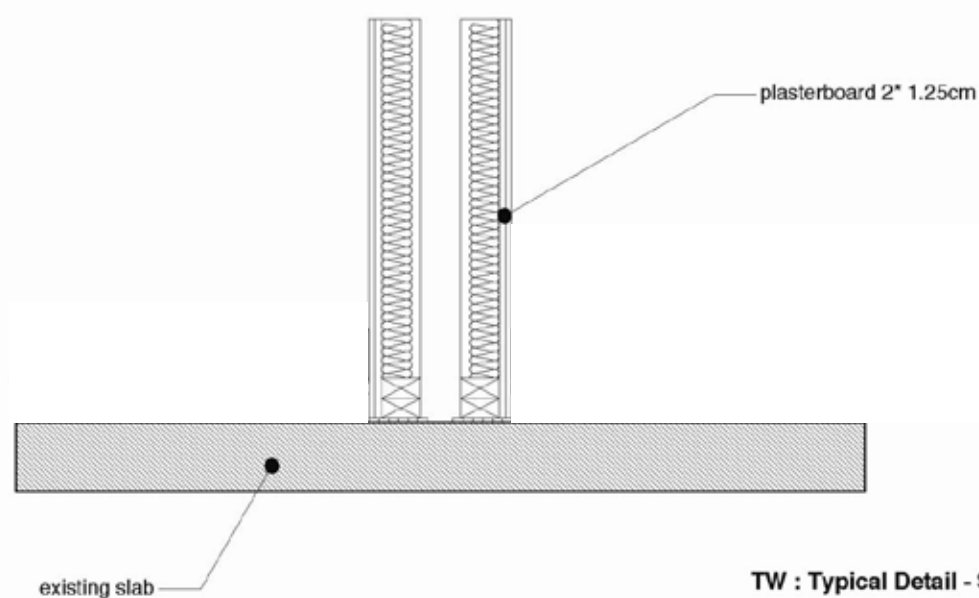


3.7 Acoustics



TW : Typical Detail - Plan



TW : Typical Detail - Section

The location of the Tobacco Warehouse is such that it is remote from any sources of significant external noise. Internally traffic noise from Great Howard Street and Regent Road is negated by both the mass of the existing buildings as well as the upgraded windows.

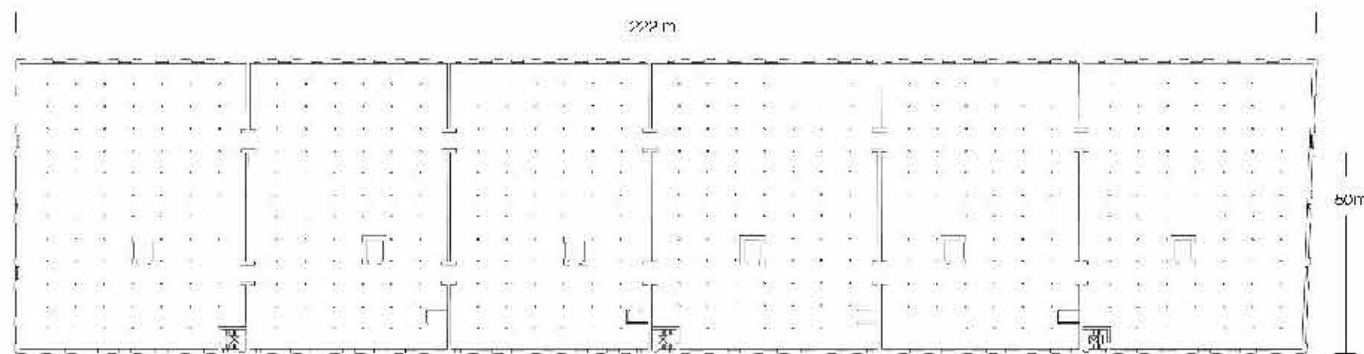
General Acoustic Strategies

Internal acoustic separation can be achieved by the use of lightweight acoustic party walls. Lightweight systems are less intrusive and put the existing historic fabric under less stress than conventional heavy mass solutions.

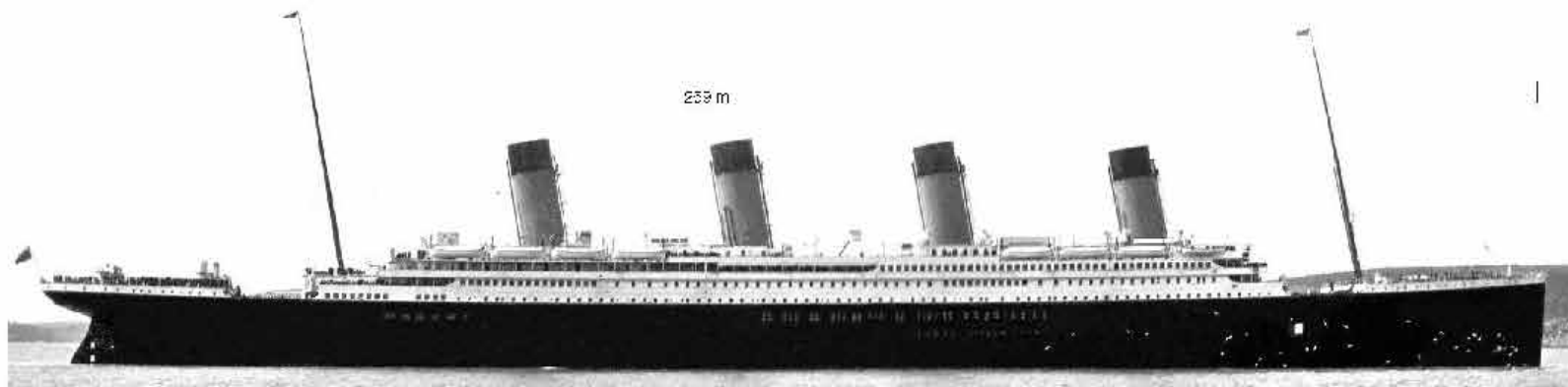
3.8 Tobacco Warehouse Massing Assessment - Macro



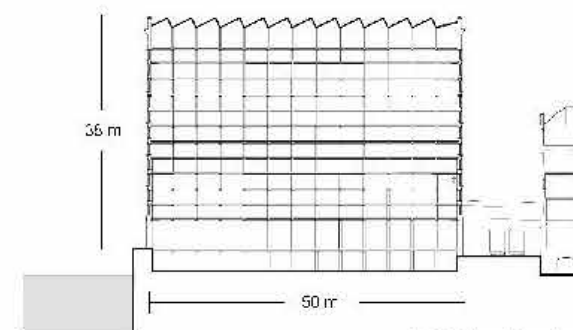
Tobacco Warehouse Elevations



Tobacco Warehouse Typical Plan



RM Titanic

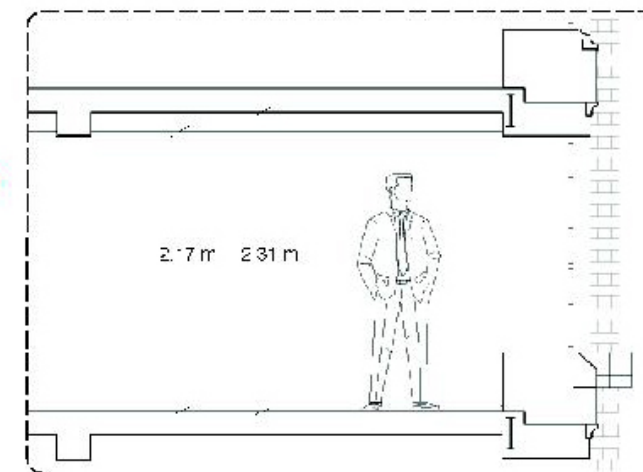
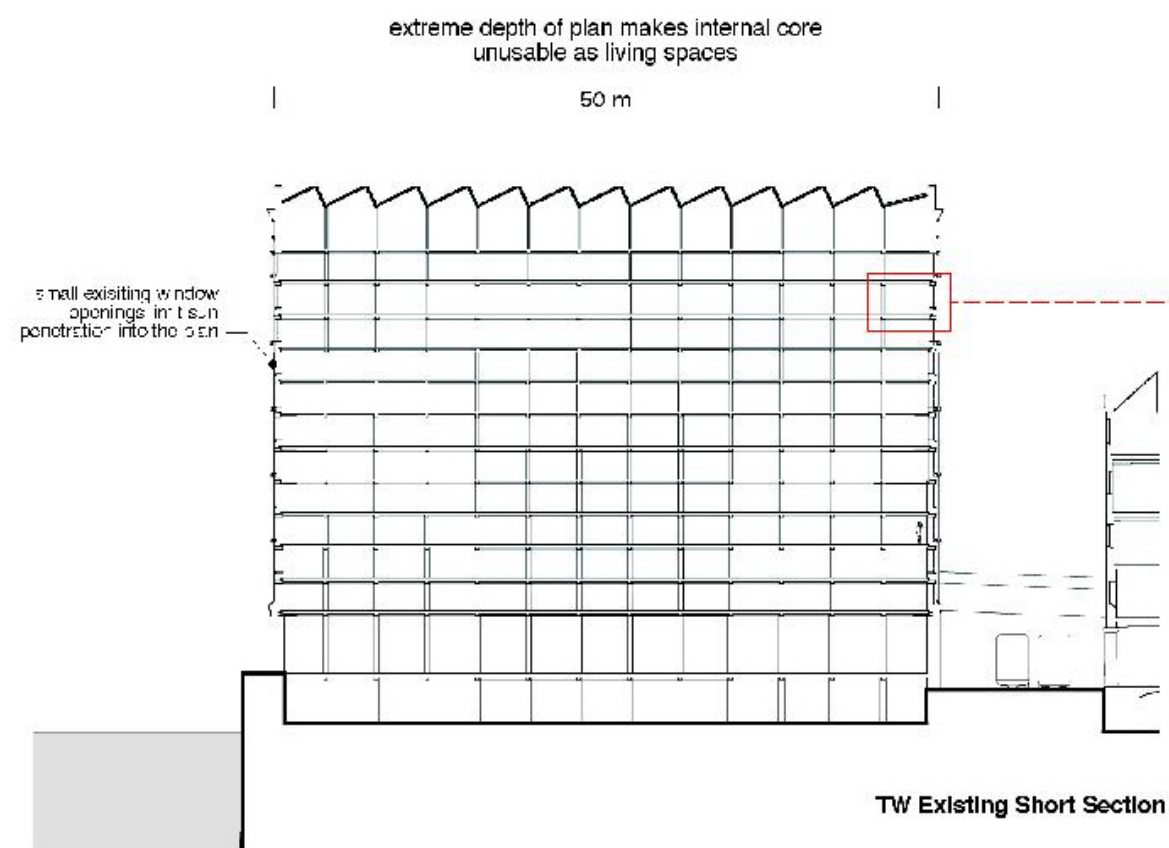


TW Short Section

The Tobacco Warehouse is an enormous structure, built with a very specific purpose: the storage of Tobacco. The scale of the exterior is barely preparation for the unrelenting quality of the interior, with each floor measuring over 10,000 sq.m in area, and the head height limited to door height -just enough to store two stacked barrels of tobacco. Coupled with a plan depth of 50m, the eleven storeys of storage levels present an enormous challenge for reuse.

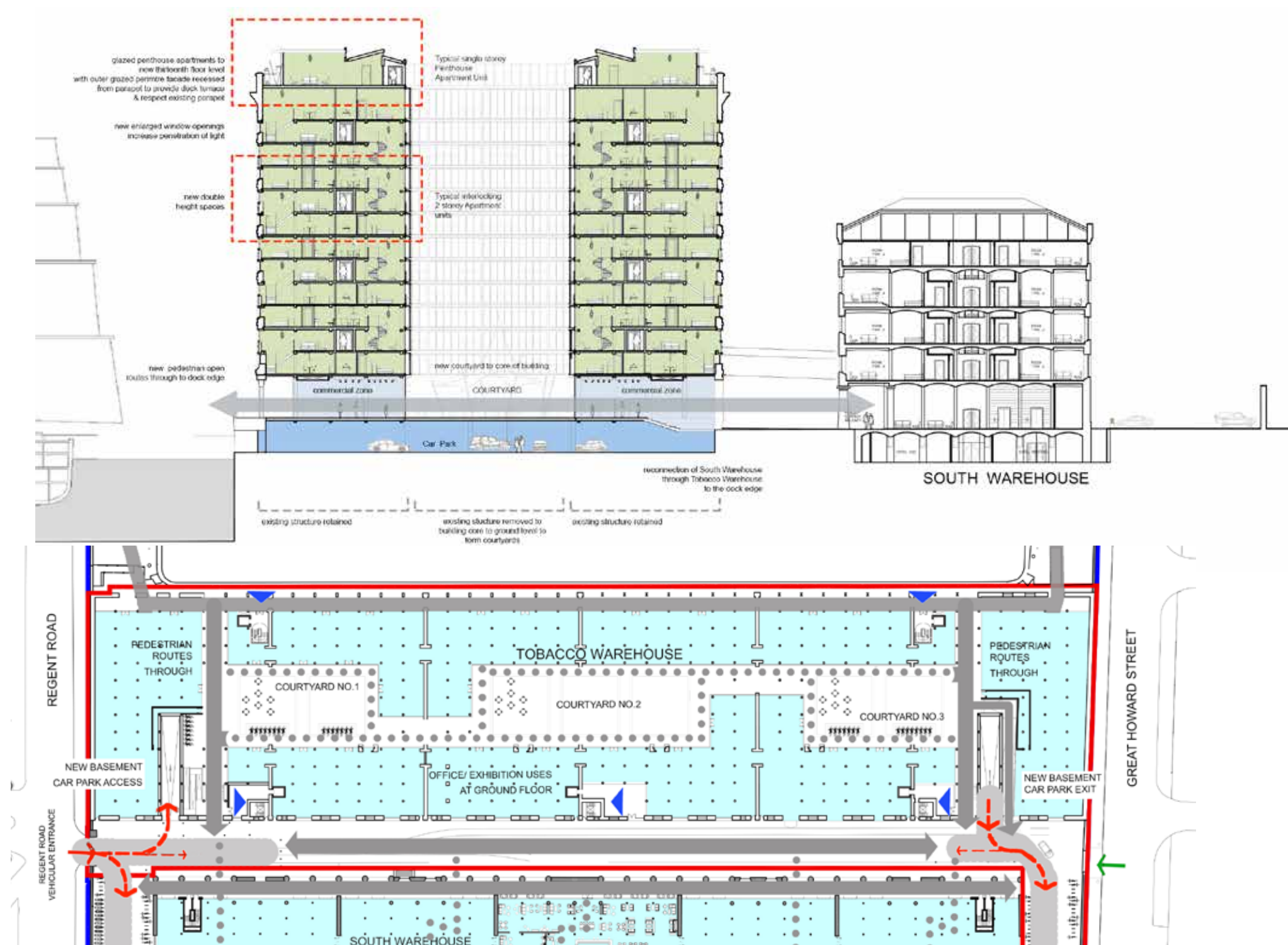
3.9 Tobacco Warehouse Massing Assessment - Micro

The diagrams below illustrate the extreme depth of plan in relation to the relatively small windows provided in the exterior walls. Very little light is able to penetrate the plan not only because of its depth, but also due to its extremely low floor to ceiling heights. The existing interior conditions are dark and oppressive, resulting in an oppressive, compressed atmosphere.



TW Existing Typical Internal Space

3.10 Tobacco Warehouse Design Strategy



The design for the Tobacco Warehouse had to achieve a solution that created accommodation that would yield sufficient revenue to carry out the high level of renovation required. A wide range of uses have been promoted for the building over the years, with a recent wide-ranging study concluding that demolition was the most viable solution.

Our studies have shown that re-use of the upper floors as large area floorplates of dual aspect Apartment units could produce attractive flexible accommodation while also maintaining the fundamental characteristics of the building. However, due to the extreme spatial characteristics of the building this requires substantial intervention into the internal structure of the building. Essentially, the solution is very similar to the permitted 2008 scheme and it revolves around creating 3no. central light-wells in the building. The new internal and external building perimeters created would then be ringed with mezzanine style dual aspect Apartment units, each with their own double-height space. By giving every unit a grand central space, the limited head height to all areas would then be relieved. This reconstruction of the centre of the building also presents the opportunity of resolving the site's other major limiting factor by absorbing the car parking requirement in the basement in a way that does not flood the site with car parking. As discussed in previous sections, it was a prime objective to reconnect the Warehouse with its waterside setting by opening up the dock-side colonnade and creating an avenue through to the South Warehouse at ground floor level.

3.11 Tobacco Warehouse Courtyards



The 3no. public courtyard spaces will be new additions to Stanley Dock. Concealed within the centre of the building they will be unique spaces, urban in scale yet not in setting.

Priority has been given to pedestrian routes to allow permeability through the site, through the 2no. outer courtyards linking the perimeter of the dock and Pneumonia Alley and the South warehouse reaffirming the dock as the center of the site. Lateral pedestrian permeability is promoted with undercroft links to the third inner courtyard. Office and Exhibition uses that line these courtyards at ground level will have contemporary glass facades with coloured glass used to highlight the areas that extend into the courtyards at ground floor with glazed roofs above. It is envisioned that these publicly accessible ground floor

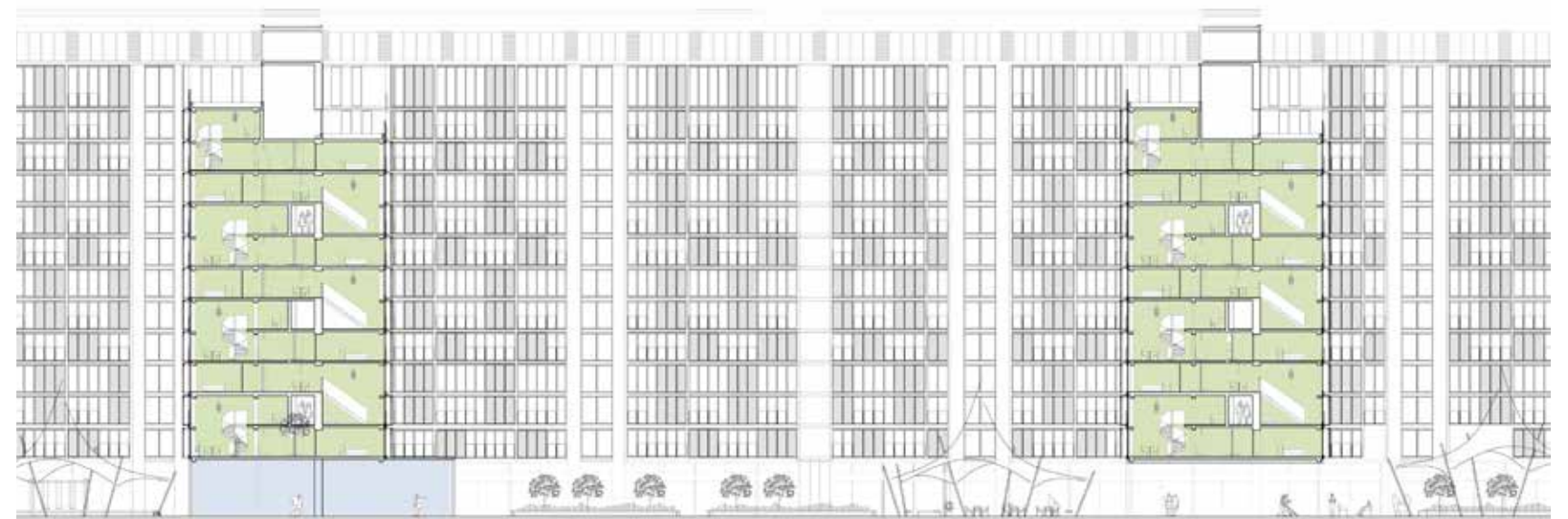
uses can spill out into the courtyards in the form of seating areas. The section drawings suggest using large scale stretched membrane umbrella structures to provide shelter but currently are not part of this application.

The dual aspect mezzanine style loft apartments Units, open onto the courtyards through a fully glazed bi-folding contemporary façade with metal guardings and adjustable privacy screens held off the façade creating a layered elevation. This gives a regular active rhythm that reflects the alternating single and double height spaces behind and indicators of their occupancy. The overall effect will give a generosity of scale to the courtyards with a vertical emphasis that echoes the external character of the building while contrasting the existing

brick exterior heavy solid /void ratio with a light glazed façade to the interior as a modern intervention.

The vertical circulation cores are expressed on the courtyard elevation as are the original bay walls, this breaks down the elevations into legible bays and gives a visual indication of how the building works. Part of the original 6no. brick lift structures will be retained and integrated in the internal courtyard facades.

Pedestrian corridors bridge across the north south links allowing continuous perimeter access at the new penthouse/ thirteenth floor level, increasing permeability across the extensive floor plates. The bridging floorplates between the 3no. courtyards have been held one and two storey lower than the perimeter floor plates to assist in allowing light penetrate to the courtyard level at ground floor level.



▲ Artist's impression of a courtyard with suggestive umbrella structures to hard & soft landscaping

▲ Proposed part
Courtyard section

3.12 Tobacco Warehouse Typical Dual Aspect Loft Apartment

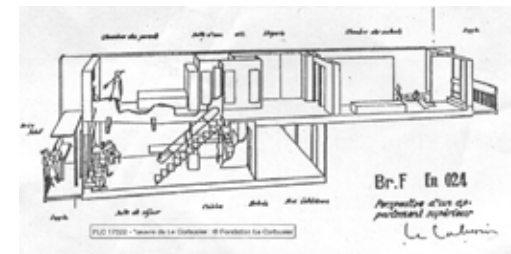


Crucial to the success of the project is producing attractive residential units that provide good amenity that people will enjoy living and working in. The enormous challenges posed by the limited headroom and poor lighting conditions have been resolved through a simple and direct approach to the spatial arrangement of the residential apartments.

The apartment units are arranged in plan and section similar to the principal of Unité d'Habitation, a modernist residential housing design principle developed by Le Corbusier, with the collaboration of painter-architect Nadir Afonso, mid 20th century. Corridors run centrally along the perimeter of every third floor of the Warehouse, with each apartment lying on two levels, and most

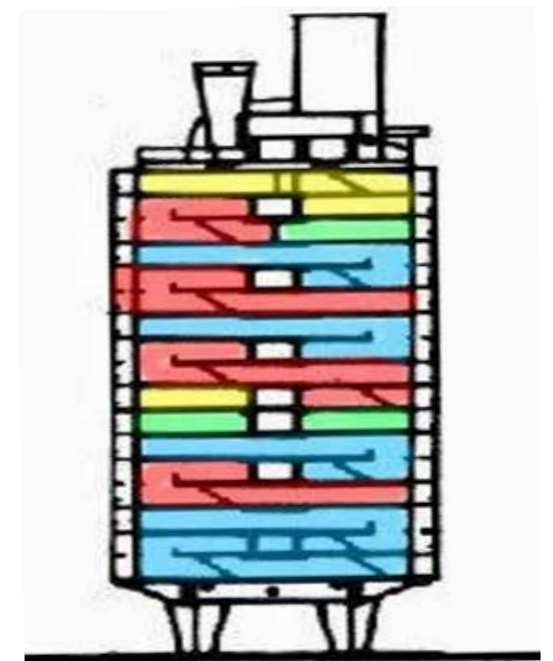
stretching from one side of the building to the other to afford dual aspect, with a fully openable glass façade onto the new courtyard. The units will have generous floorplate proportions and are designed for maximum flexibility to cater for loft style apartments. Every unit will be arranged around a double height space approximately 5 meters tall with full height glazing. This generous and dramatic space will create a sense of grandeur and drama, which the other service spaces such as kitchens, bathrooms and bedrooms will draw on.

These units will enjoy excellent levels of daylight and a simple internal arrangement that reveals the original construction of the warehouse.

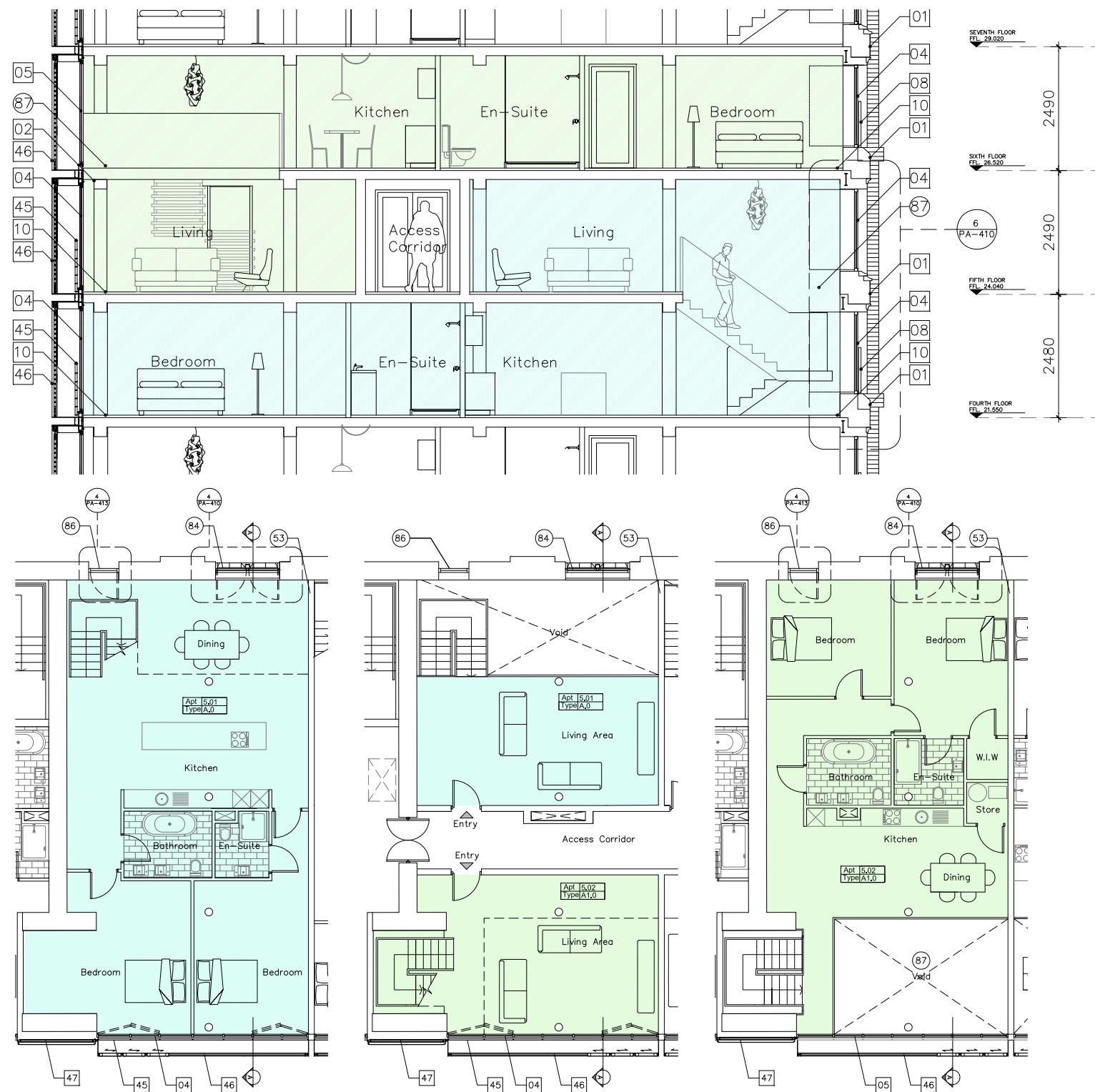


Artist's view of a typical loft style apartment with existing brick facade & concrete structure exposed

Ref. images: Le Corbusier concept sketch of a dual aspect interlocking residential unit



3.12 Tobacco Warehouse Typical Dual Aspect Loft Apartment - con't



The outer-facing units are similar in concept to the internal courtyard units, but are also driven by the spacing of the existing openings.

The glazing is designed so that the lower panel can slide back on the inside of the existing wall to create a Juliet balcony, further enhancing the sense of space and openness.

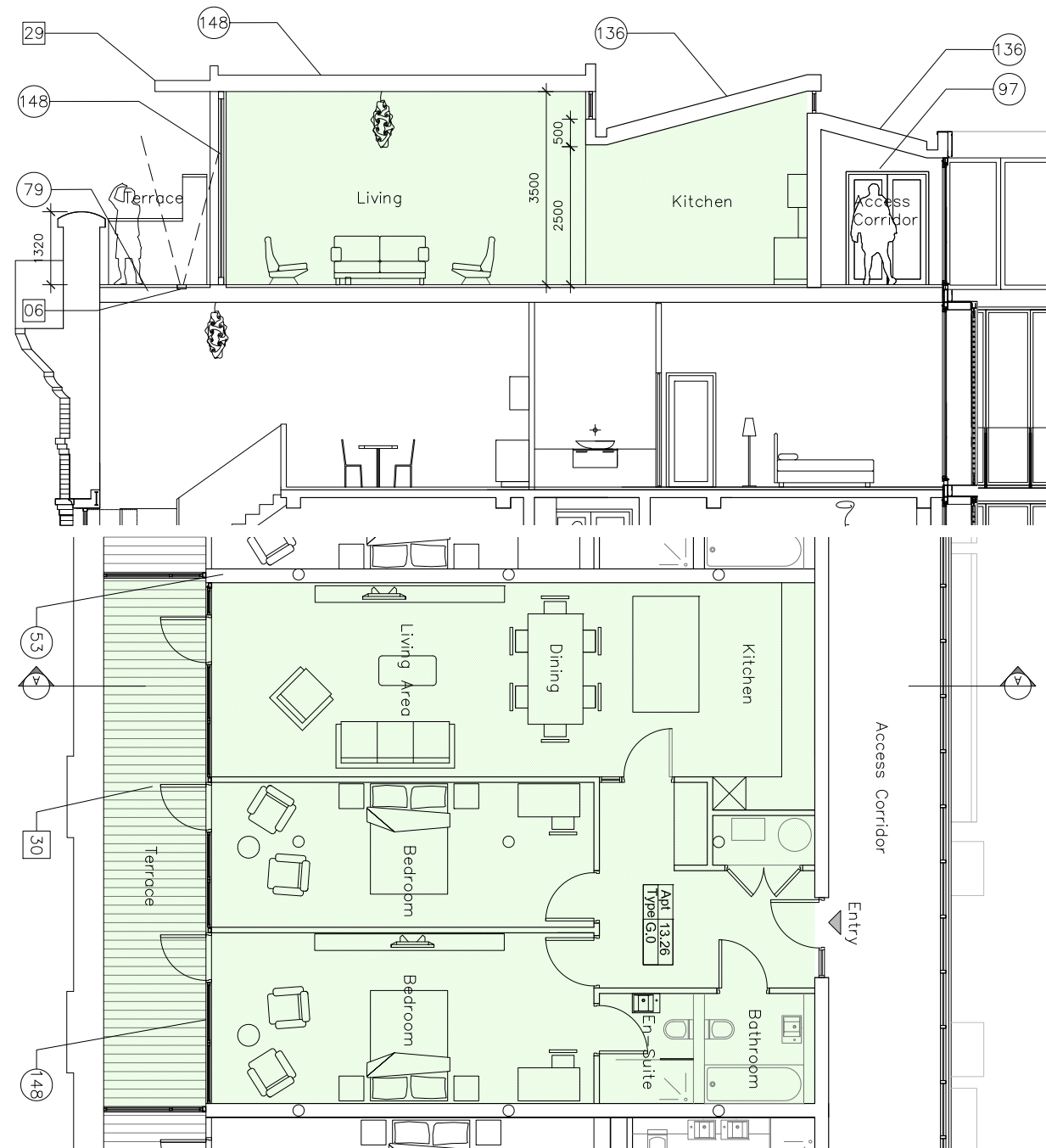
Typical interlocking pair of two storey apartment units



Typical interlocking pair of two storey apartment units: lower level, entry & upper level

Artist's view of double height space to courtyard living spaces

3.13 Tobacco Warehouse Typical Penthouse Apartment & new 13th floor



▲ Typical penthouse residential unit in section & plan

It is proposed to construct a new thirteenth floor level using the established structural grid within the former roof space to provide single storey penthouse loft style apartment units. These units will be accessed from an internal courtyard perimeter corridor & their outer facades are held back from the existing brick parapet with decked terraces.

These penthouse units are planned to take advantage of their rooftop location without being too visible from the surrounding area.

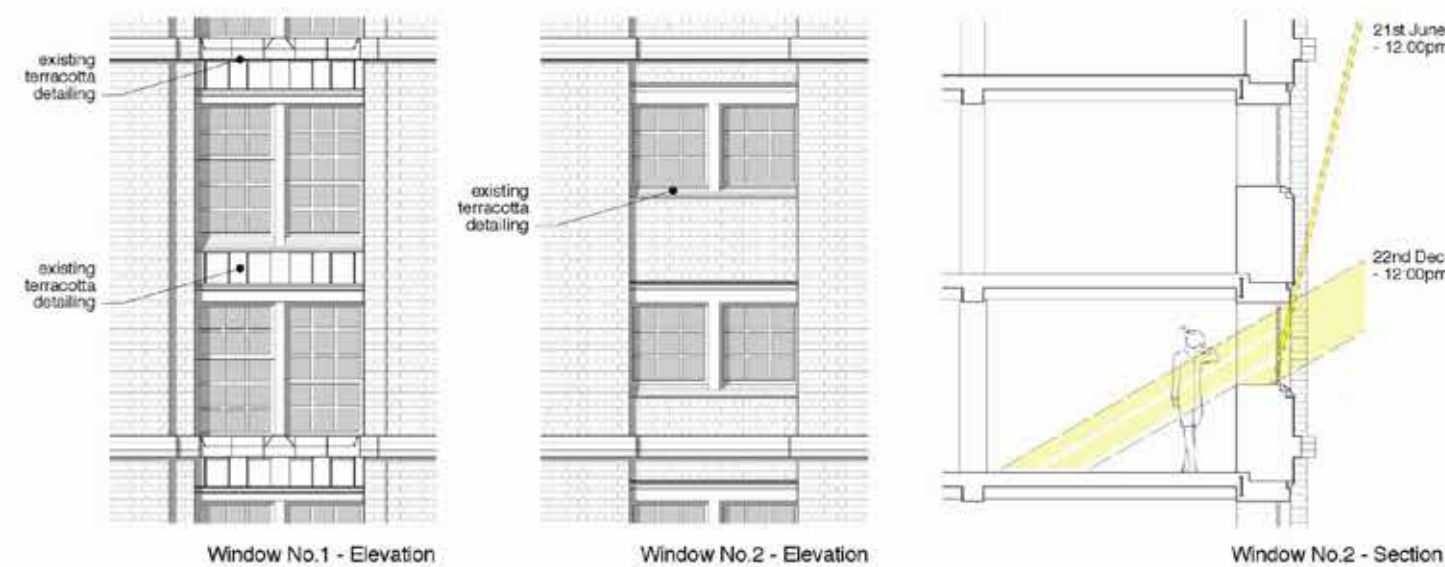
The main living space has a raised flat roof ceiling, with the apartment service accommodation under an inclined zinc clad lower sloped roof echoing the ridge and furrow form of the original roof.

Each unit has access to a roof-level terrace offering panoramic views of the surrounding city and wider area. Materials are selected from a muted palette.

▼ View of North facade with proposed penthouse level



3.14 Tobacco Warehouse Typical Elevation Treatment Existing



As discussed earlier, the spatial challenges of the Tobacco Warehouse are extreme, but so also are the challenges associated with creating attractive internal spaces while retaining and enhancing the special character of the building.

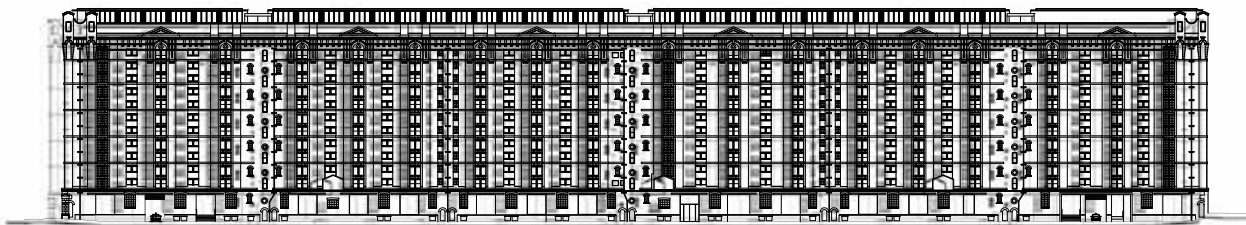
As discussed in our evaluation of the context and the existing Warehouse, the key characteristic of the Tobacco Warehouse is its scale. It also has an interesting and distinctive architecture formed of vertical masonry piers that run the full height of the building culminating in a richly detailed entablature and frieze with pediments or piers alternating the conclusion of these vertical elements. This vertical emphasis reaches its peak at the corners where strong castellated features create a strong emphasis.

Sadly this muscular and direct treatment is largely lost in the treatment of the fenestration. Its fine grain of mullions and transoms, horizontal brick-banding, and alternating stacks of smaller windows detract from the vertical piers giving the long elevations a restless ambivalence between vertical and horizontal emphasis.

In addition the frieze level is topped by a blank parapet that removes the interest present in the fine architectural expression of the pediments and castellated piers.

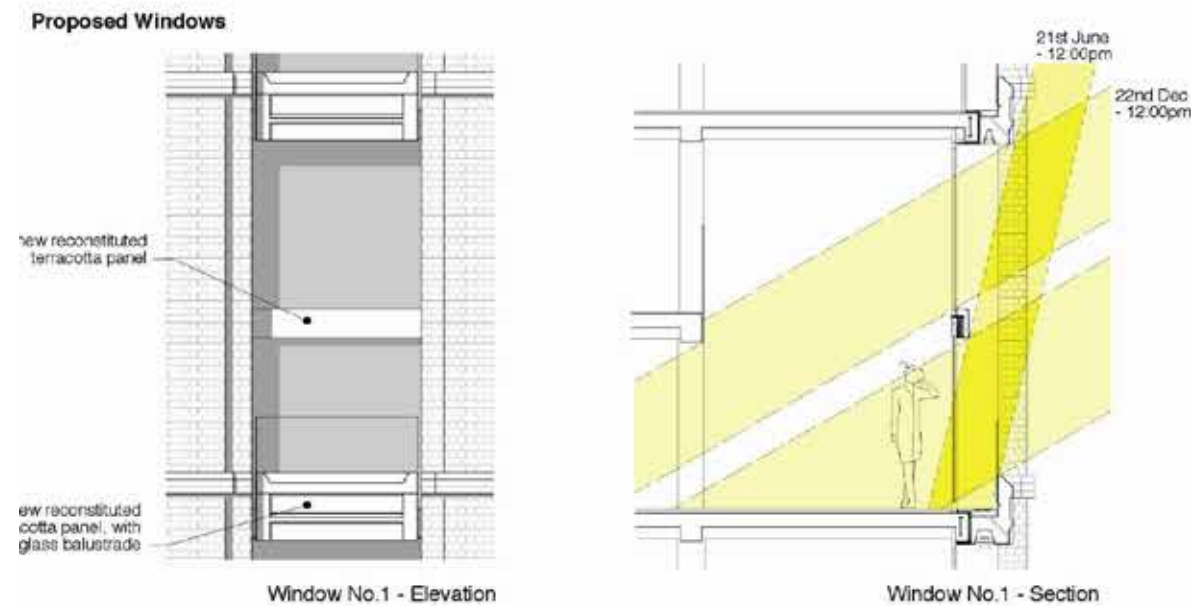


South Facade - Existing



South Facade - Existing

3.15 Tobacco Warehouse Typical Elevation Treatment Proposed



As shown in the discussion of the Apartment design, the spacing of existing windows and the limited headroom presents a great challenge. This has been resolved spatially by introducing a double height internal atrium to each Unit and increasing the floor areas and proving dual aspect opportunities, but the success of these units is equally dependant on creating good levels of daylight.

Our studies have shown that two initiatives are crucial to achieving good levels of natural light in the main residential spaces, which are themselves crucial to the success of these units, these are:

1. The simplification of the existing fenestration to increase the glazed areas in the larger windows.
2. The reduction in depth of the masonry transom to reduce shading.
3. Enlarging the existing smaller windows.

The design proposed works within the elevational parti of the existing building, creating better day-lighting by providing simpler fenestration while retaining an almost identical solid to void ratio. It also reveals the architectural emphasis of vertical piers which is present but obscured in the existing condition. This proposed design is identical to the permitted of 2008 & 2011.

Exactly how the existing windows are dealt with is a key issue in the refurbishment of this building as they are an important component in the overall appearance of the building. Consideration of this issue is complicated by two factors, the current condition of the existing windows and the requirements of the building regulations.

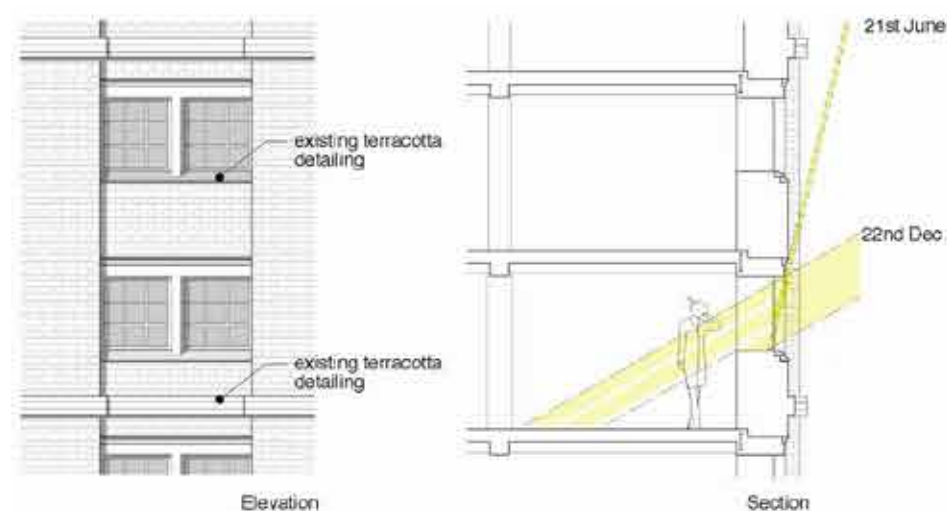
Unfortunately due to weathering of over 150 years in a coastal location and poor maintenance the existing cast iron windows are heavily corroded. This has led to the frames disintegrating in places and expanding causing the frames to bow and impose additional stress on the window frames, compounding the damage. Repair of all the windows is not therefore feasible.

Similar to our current positive experience of refurbishing the North warehouse, it is proposed to refurbish the original windows where feasible and where existing windows have deteriorated beyond reasonable repair, they will be replaced with new windows to match the original windows as closely as possible in all respects, including proportion, division, profile and method of opening.



South Facade - Proposed

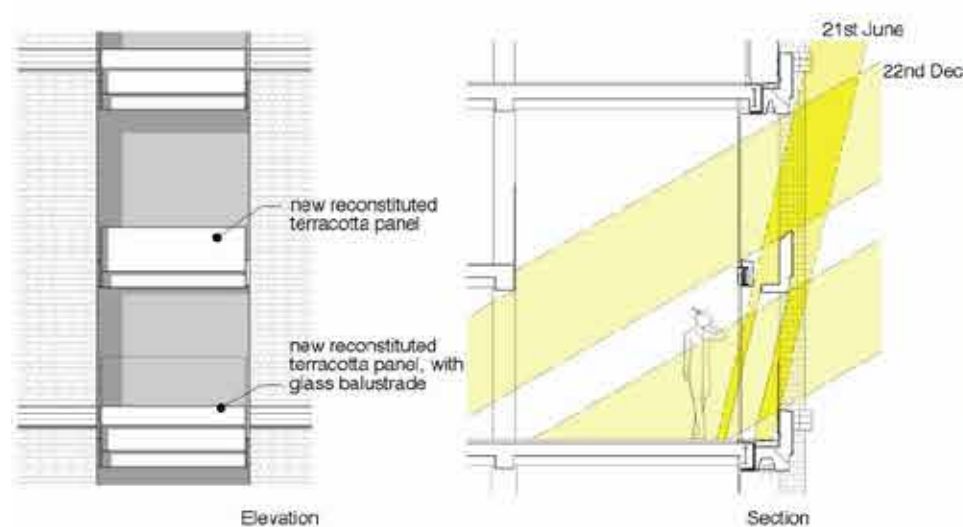
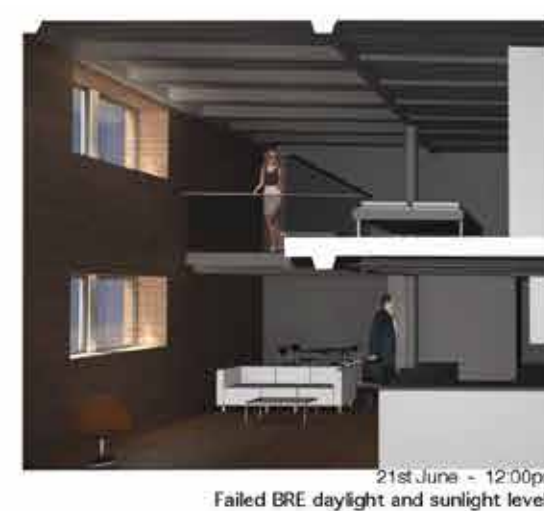
3.16 Tobacco Warehouse Window Lighting Study



Window No.2 - Existing



Lighting Study - existing window (No.2) used with proposed layout



Window No.2 - Proposed

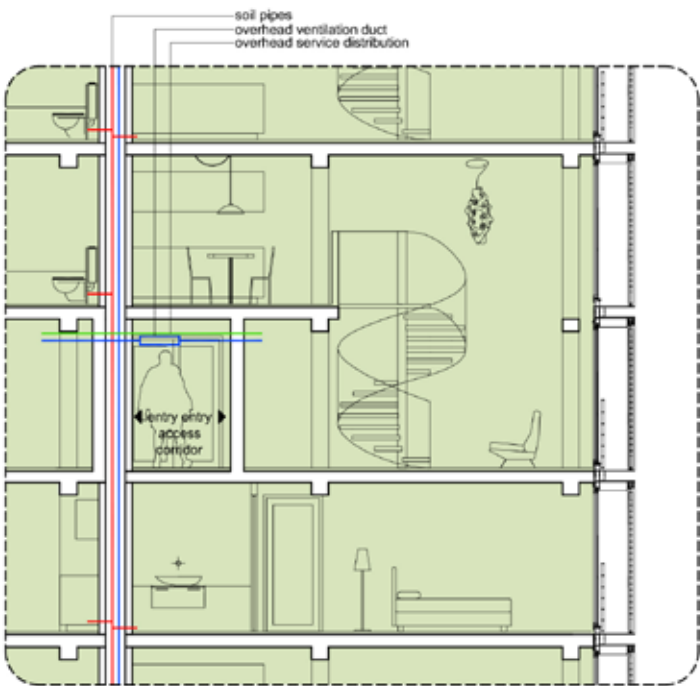


Lighting Study - proposed enlarged window (No.2) used with proposed layout



Daylight studies were carried out by independent lighting consultants BLDA Consultancy to evaluate the various possible options for creating adequate daylight conditions in the residential units for the permitted 2008 scheme. By a process of elimination, the current proposals have been determined as the minimum intervention required to produce adequate internal daylight conditions for the proposed dual aspect Apartment units in this planning application.

3.17 Tobacco Warehouse Servicing Strategy

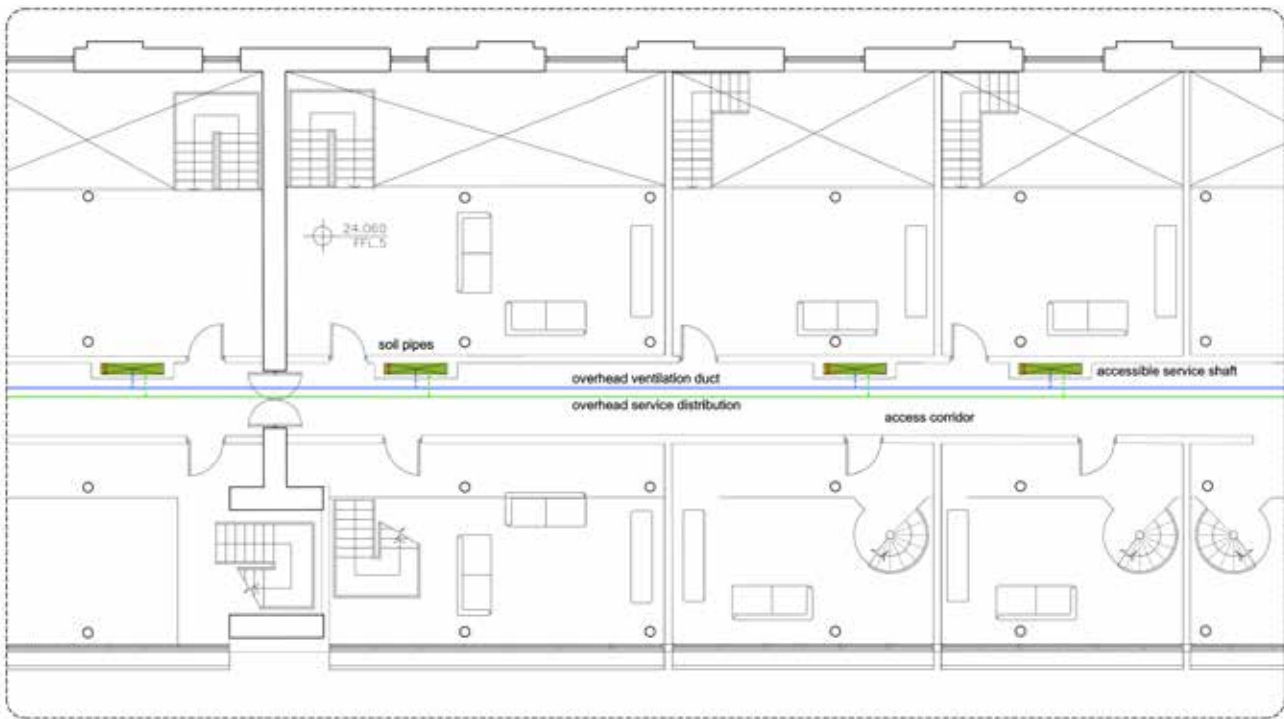


- ▲ Typical Service Distribution section detail
- ▶ Typical Service Distribution plan (to access corridors)

The servicing strategy utilises the access corridors to eliminate services travelling horizontally across the soffit reducing further the already limited ceiling height. To facilitate this, bathroom/ service pods are placed between the existing columns/ slab and incorporate a vertical service shaft that is accessible off the access corridors. Extracts and feeds will connect directly into the supply and extract runs. Regular vertical risers ensure that horizontal distribution runs are kept to a minimum therefore reducing their cross-sectional area.

The design team has taken on board the servicing strategy and energy strategy proposed by Cu-Tec mechanical and electrical engineers for the permitted 2008 scheme to ensure that the proposals are technically deliverable and responsible in their use of energy.

Emergency smoke ventilation opes will be formed within the ground floor colonnade to Pneumonia alley which will be similar in form to the existing access wells to the basement and similar to the smoke control strategy employed at the North Warehouse.



4.1 Appearance & Visual Impact Assessment

As discussed in section 2.4.2, six key views have been identified and agreed with the local authority planning department. The characteristics of each view have been assessed, and in this section we illustrate the affect the proposed development will have in each view.

There are minor changes proposed above the existing parapet line in this application that would effect the approved Verified views that were included in the permitted 2008 scheme. The minor changes will have no greater intervention than the permitted schemes in 2008 & 2011 and they are reproduced on the following pages with the changes illustrated for comparison to the existing and described in the accompanying text.

4.1 Appearance & Visual Impact Assessment - verified view 1



View 1: Regent Road looking North (existing)



View 1: Regent Road looking North (proposed)

Verified View 1: Regent Road looking North

The proposals simplify the skyline created by the Tobacco Warehouse, emphasizing its scale and simplicity of mass. The revised fenestration signifies a new use and clarifies the elevational composition, enhancing the appreciation of the finer terracotta detailing at high level by leading the eye up the building to frieze level. The original parapet line of the South Warehouse, with its pitched gable roof form, is restored.

The proposed roof profile of the Tobacco Warehouse has been amended to accommodate the proposed new thirteenth floor with a simple horizontal set back eave line. Note that the previously approved slot opes within the parapet are no longer required and therefore it is proposed to make no new intervention to the parapet/ frieze level.

4.2 Appearance & Visual Impact Assessment - verified view 2



View 2: Regent Road looking South (existing)

Verified View 2: Regent Road looking South

In this long view, the revised roof form of the Tobacco Warehouse is visible, indicating the new use of the building while recalling the original roof form.



View 2: Regent Road looking South (proposed)

4.3 Appearance & Visual Impact Assessment - verified view 3



View3: Great Howard Street looking North (existing)



View 3: Great Howard Street looking North (proposed)

Verified View 3: Great Howard Street looking North

Again, the roof ridge line is simplified; this emphasises the importance of the original architectural detailing, the legibility of which is enhanced by the revised fenestration. The South Warehouse appears unchanged.

4.4 Appearance & Visual Impact Assessment - verified view 4



View 4: Great Howard Street looking South (existing)

Verified View 4: Great Howard Street looking South

The demolition of the Silo reveals the full extent of the Tobacco Warehouse.



View 4: Great Howard Street looking South (proposed)

4.5 Appearance & Visual Impact Assessment - verified view 5



View 5: Whitley Garden looking West (existing)

Verified View 5: Whitley Garden looking West

The new proposals do not affect the volumetric appreciation of the main buildings.



View 5: Whitley Garden looking West (proposed)

4.6 Appearance & Visual Impact Assessment - verified view 6



View 6: Liverpool to Leeds Canal looking West (existing)

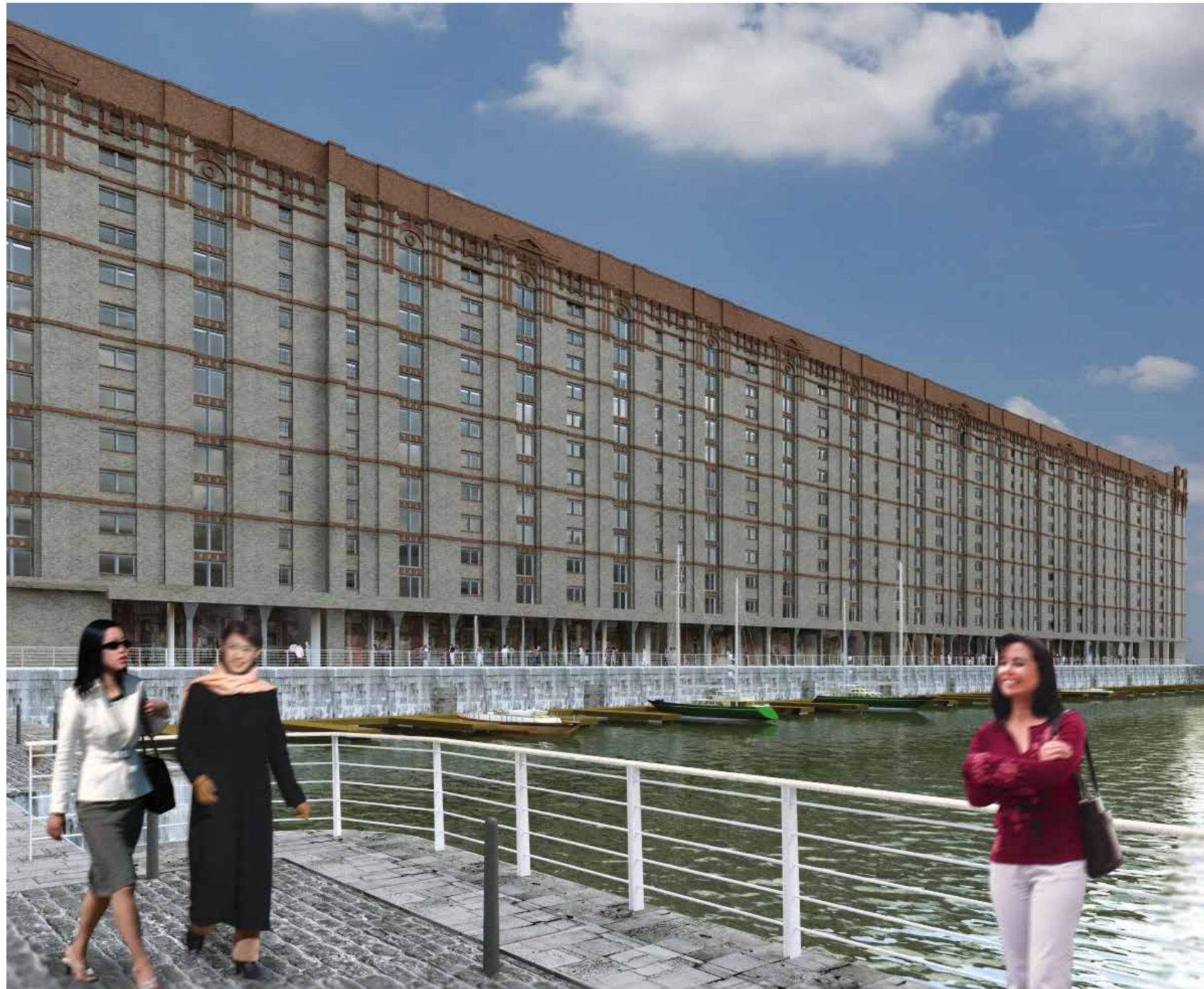
Verified View 6: Liverpool to Leeds Canal looking West

Again the removal of the Silo and non-original roof level additions simplifies the volume of the Tobacco Warehouse, allowing the corner turret elements to read clearly.



View 6: Liverpool to Leeds Canal looking West (proposed)

5.0 Conclusion



The proposals described in the accompanying application drawings and reports aim to create an exciting and vibrant regeneration of the Tobacco Warehouse at Stanley Dock that would bring the building back into beneficial use, without detracting from its historic and architectural character or the adjacent listed buildings.

These proposals, successfully implemented, would assure the foreseeable future of the Stanley Dock as a whole, and continue to lead the way in the regeneration of this part of Liverpool.



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