

**NEW CITY COURT**

## **Ventilation & Extraction Statement**

Chapman BDSP

**New City Court**  
Ventilation/Extraction Statement

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55287 - New City Court  
Ventilation and Extraction Statement

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1 Introduction

The Ventilation/Extraction statement presented below has been provided in support of the planning application for planning permission and listed building consent for the redevelopment of for New City Court, 4-26 St Thomas Street, London, SE1 9RS.

Redevelopment to include demolition of the 1980s office buildings and erection of a 26-storey building (plus mezzanine and two basement levels), restoration and refurbishment of the listed terrace (nos. 4-16 St Thomas Street), and redevelopment of Keats House (nos. 24-26 St Thomas Street) with removal, relocation and reinstatement of the historic façade on a proposed building, to provide office floorspace, flexible office/retail floorspace, restaurant/café floorspace and a public rooftop garden, associated public realm and highways improvements, provision for a new access to the Borough High Street entrance to the Underground Station, cycling parking, car parking, service, refuse and plant areas, and all ancillary or associated works.

2 Design Criteria

This is a short note summarising the design principles of the ventilation scheme for the Main Building, Georgian Terraces and Keats House developments that make up the New City Court development.

2.1 Table of Ventilation Rates

Ventilation Rates	
Main Building - Office	2.0 l/s/m²
Georgian Terraces - Offices	Not Controlled
Keats House - Offices	2.0 l/s/m²
Retail	2.0 l/s/m²
Reception	1.6 l/s/m²
Plantrooms	3 ACH
Retail Storage	3 ACH
Loading Bay	Not Controlled
Showers	10 ACH
Staff Mess	10 ACH
Building Management Suite	1.6 l/s/m²
Bin Storage	10 ACH
Office/Retail Toilets	10 ACH

2.2 Acoustic Requirements

All the ventilation systems within the development will comply with the acoustic requirements set out by the acoustic consultant. Compliance will be facilitated by the following design considerations stated below:

- All the louvres will be sized to have a maximum face velocity of 1.5 m/s;
- All the ventilation ductwork will be sized to have a maximum internal velocity of 5 m/s;
- The Air handling units and fans that are part of the mechanical ventilation systems will be fitted with adequate attenuation specified to ensure compliance with the acoustic requirements.

Additionally, compliance with BS4142 with regards to the ventilation systems will be the acoustic consultant's responsibility as it covers “Methods for rating and assessing industrial and commercial sound”.

2.3 Filtration and Odour Abatement

The air handling units and fans providing fresh air will be fitted with filter banks consisting of deep-pleated filter panels providing minimum efficiencies of 85% (F7 standard in accordance with BS EN 779) to ensure good air quality standards are achieved.

For odour abatement purposes air from the hot kitchens located in the food and drink units (Class E) will be exhausted at roof level via Halton ecology type exhaust fans with the appropriate level of filtration to ensure compliance with Southwark Council's (SC) requirements. The responsibility for the purchase, installation and maintenance of the food and drink units (Class E) kitchen exhaust fans and associated filtration is the responsibility of the tenants and will be included as a requirement in the food and drink (Class E) tenants' handbook.

3 Ventilation/Extraction Strategy

3.1 Main Building

3.1.1 Basement Levels

Fresh air is provided to the basement (B1 and B2) levels via one main louvre located on the ground floor (L00). This can be seen in the image below.

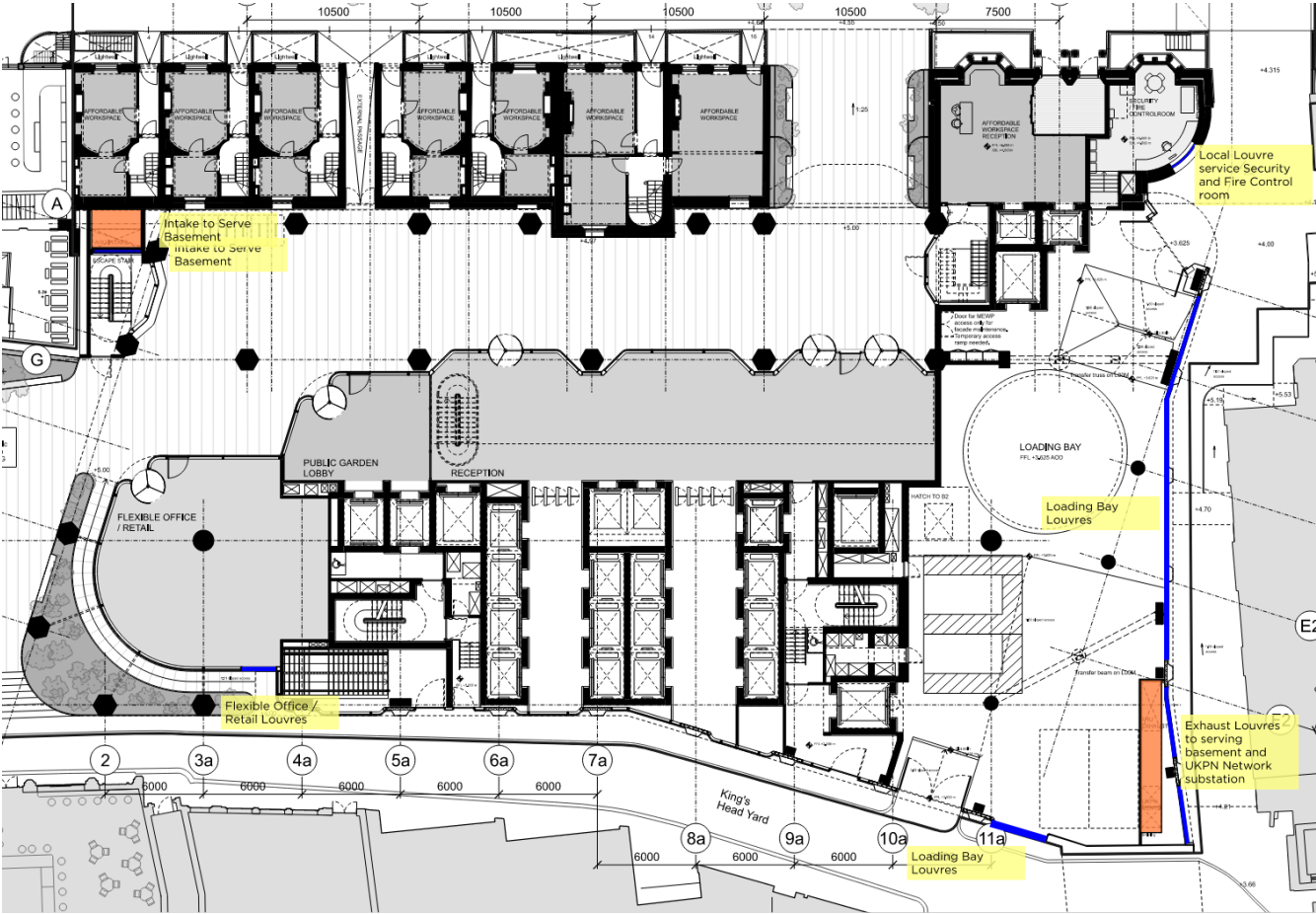


Image 01: Locations of Louvres in L00

Once the outside air is treated by the various air handling units and fans located in the plantroom the air is then supplied to the following areas:

1. B2 & B1 Plant Rooms.
2. Circulation Spaces.
3. Building Management Suite and Staff Mess.
4. B1 Cycle Storage.
5. Showers
6. Stores

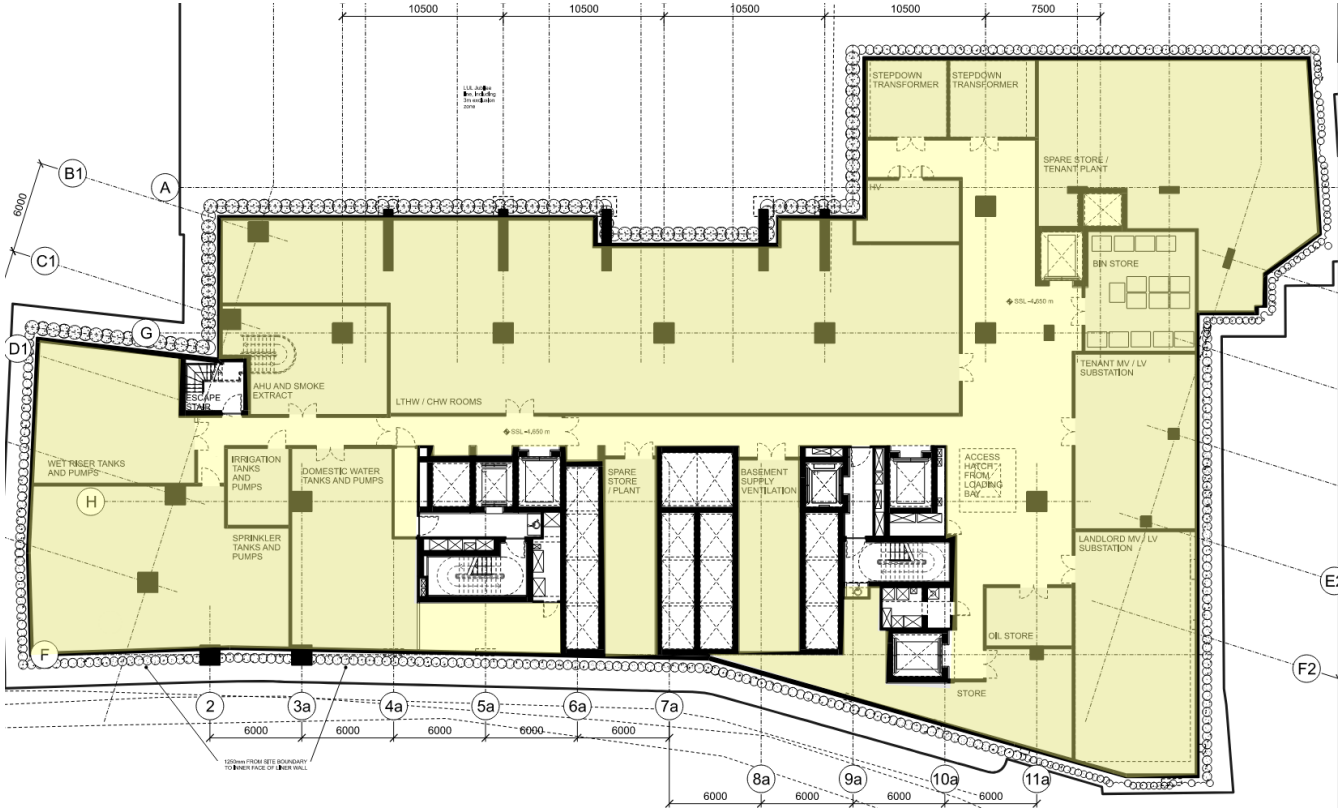


Image 02: Areas served by Louvre Intake and Exhaust in B2.



Image 03: Areas served by Louvre Intake and Exhaust in B1.

[illegible]

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3.1.3 Offices

Each office floor is supplied fresh air via its dedicated air handling units (AHUs) located in plantrooms on each office level. Both supply and exhaust louvres serving each office AHU are facilitated on each floor and separated by 10m. Additionally, the air from the W/Cs on each office floor is extracted by fans located at high level within the ceiling void of the W/C's. The number of AHUs varies on each floor due to size and number of tenants.

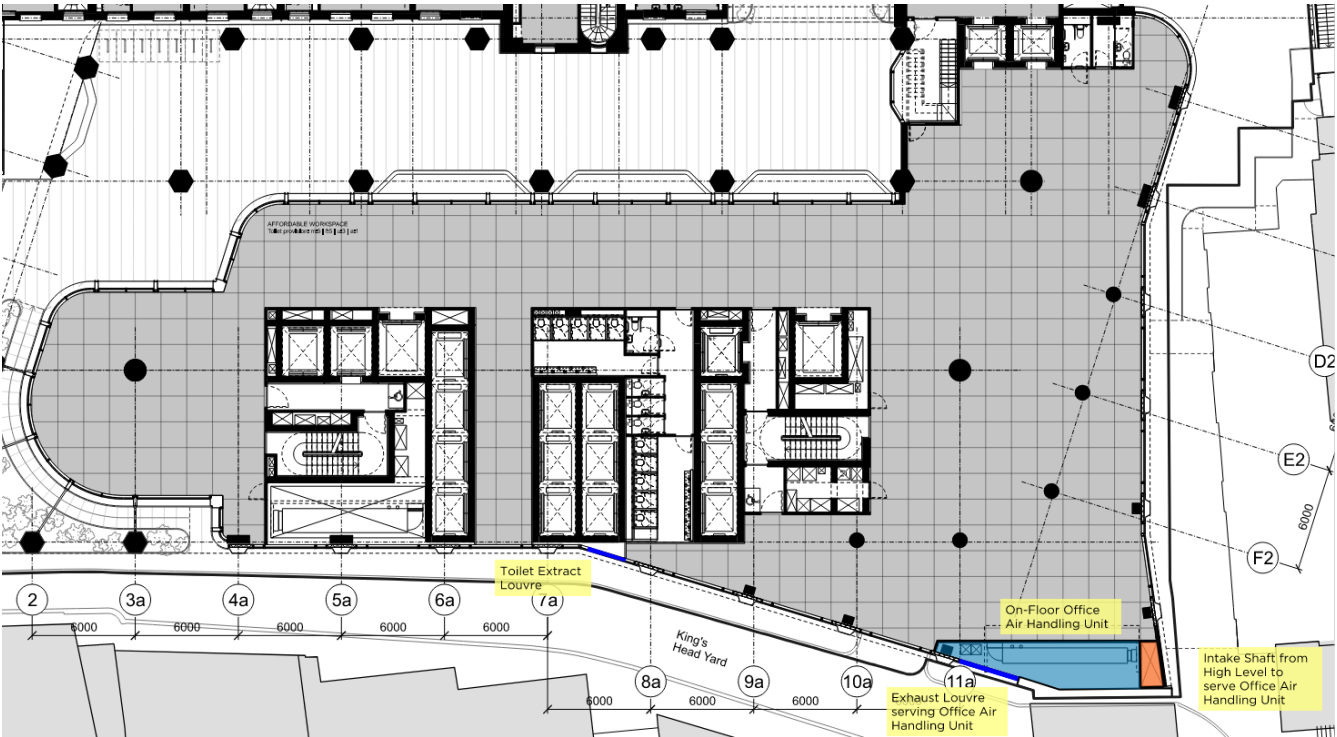


Image 05: Ventilation strategy for a lower office floor.

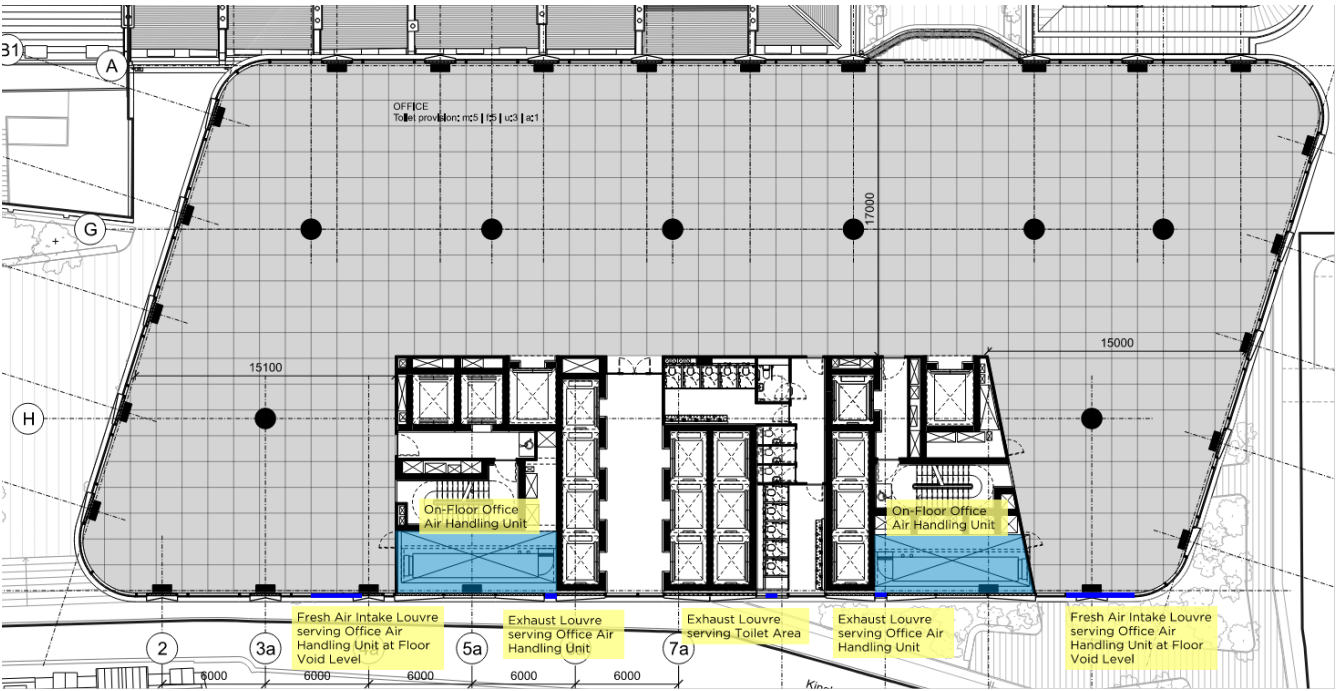


Image 06: Ventilation strategy for a Middle floor office floor.

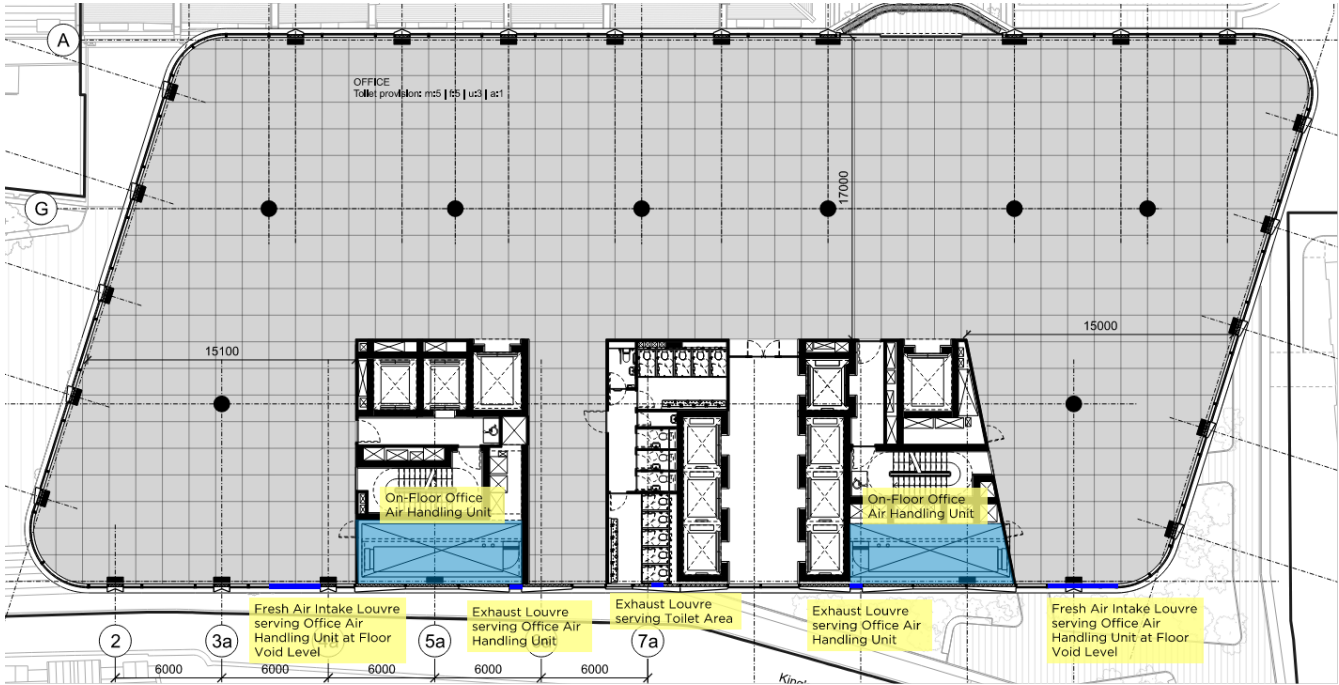


Image 07: Ventilation strategy for a Middle floor office floor.

The office areas within the tower will have openable facades to facilitate natural ventilation and a mixed-mode strategy to reduce operational energy and carbon emissions. For the ventilation rates to be achieved the offices are not dependant on the windows being open and the air handling units can provide the full ventilation requirements. The windows will be in the control of the tenants to choose to open them.

3.1.4 Roof Restaurant

Levels 24 and 25 within the Tower contain a restaurant area. The restaurant will be ventilated locally with louvres. These floors also contain two office units which take up half of each floorplate. As these floor on the façade connected to the AHUs within. A kitchen extract plant area has been identified within the Level 25 plant enclosure. The kitchen extract system will include carbon and grease filtration to remove the odours.

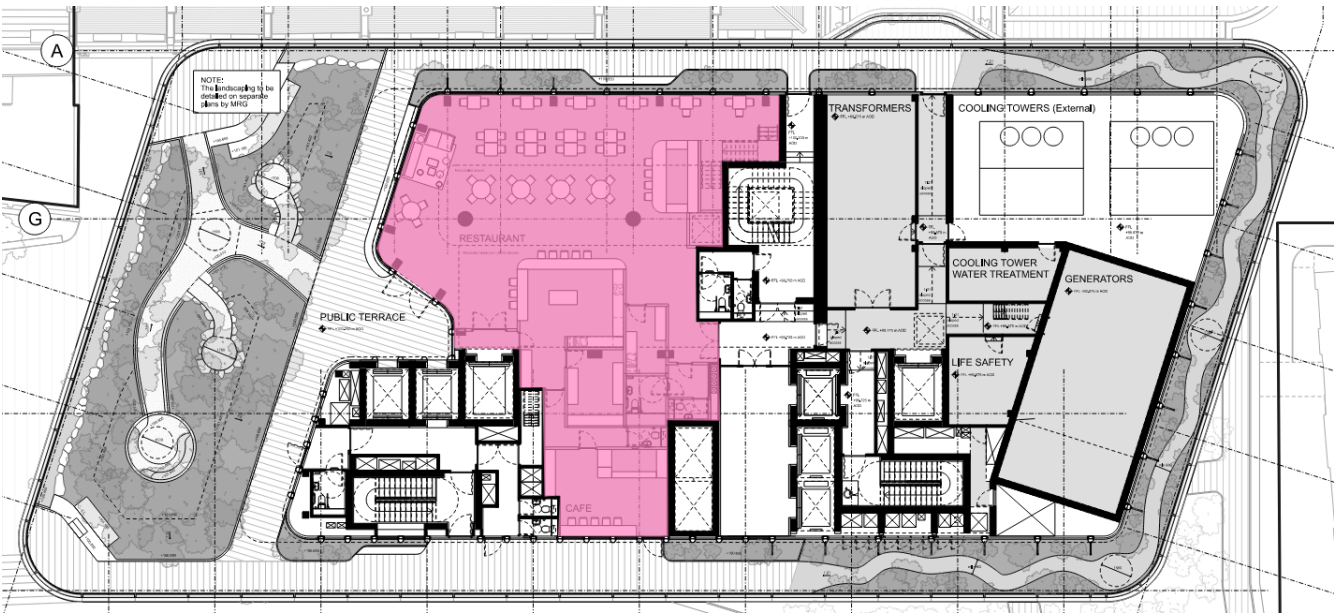


Image 08: Level 24 – Location of Restaurant

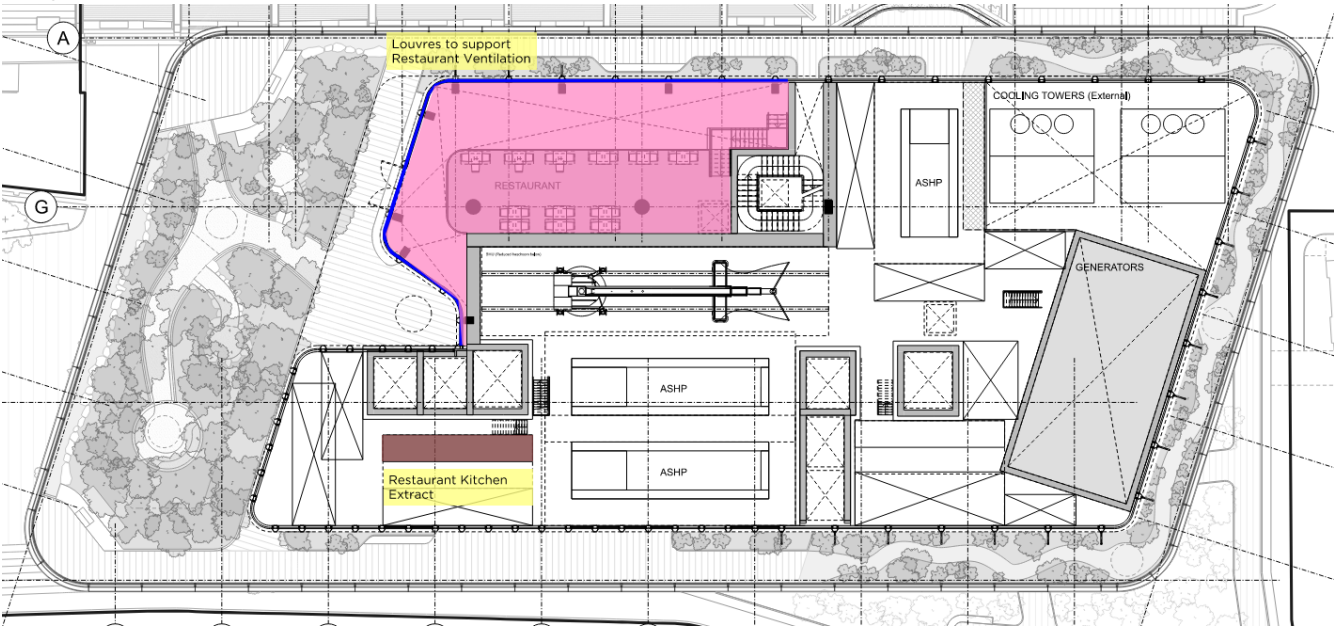


Image 09: Level 25 –Location of Restaurant, louvres serving restaurant and Kitchen Extract plant



3.1.5 Roof Plant Levels

Levels 24 and 25 contain the roof plant for the energy centre. The plant areas are open to atmosphere above and do not have louvres on the facades. This strategy is primarily to reduce the noise impact on the garden space at level 24.

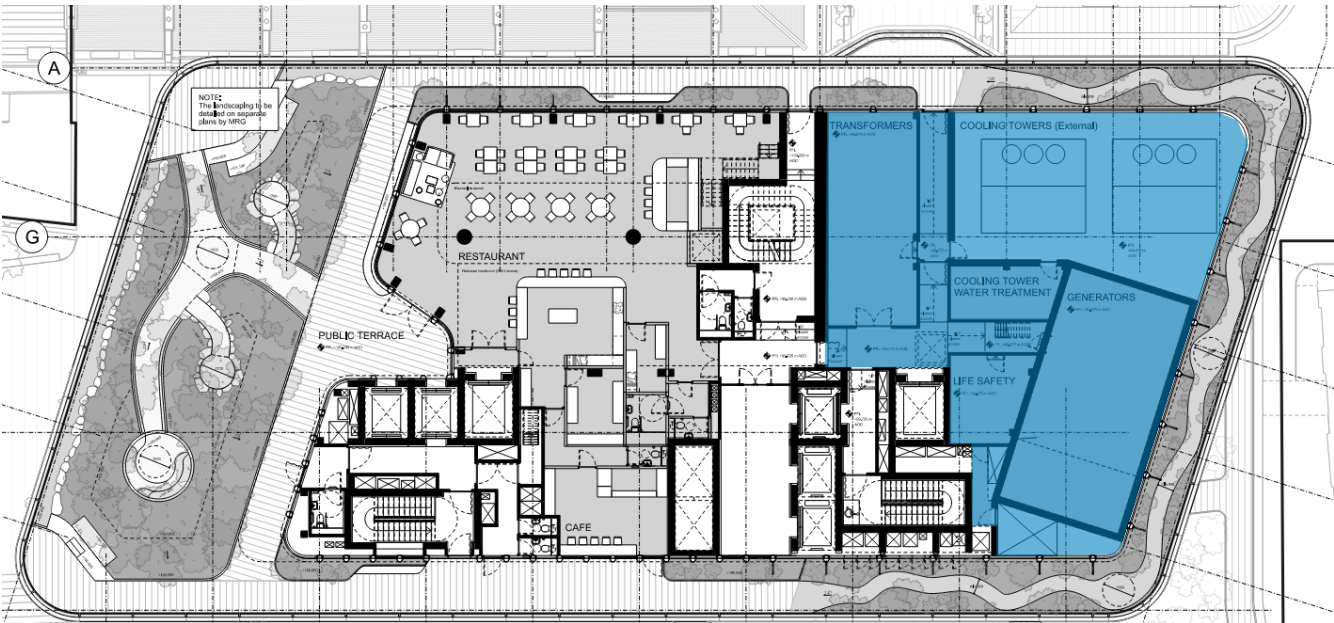


Image 10: Level 24 – First level of roof plant

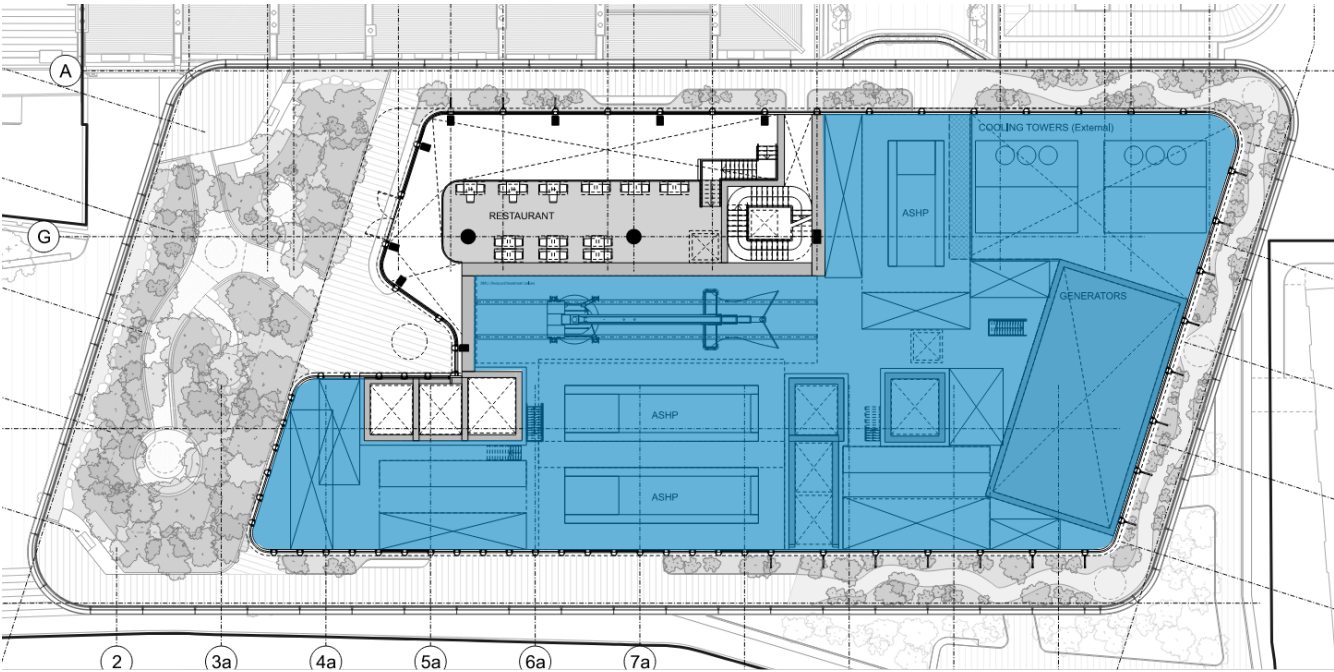


Image 11: Level 25 – Second level of roof plant and louvre locations.

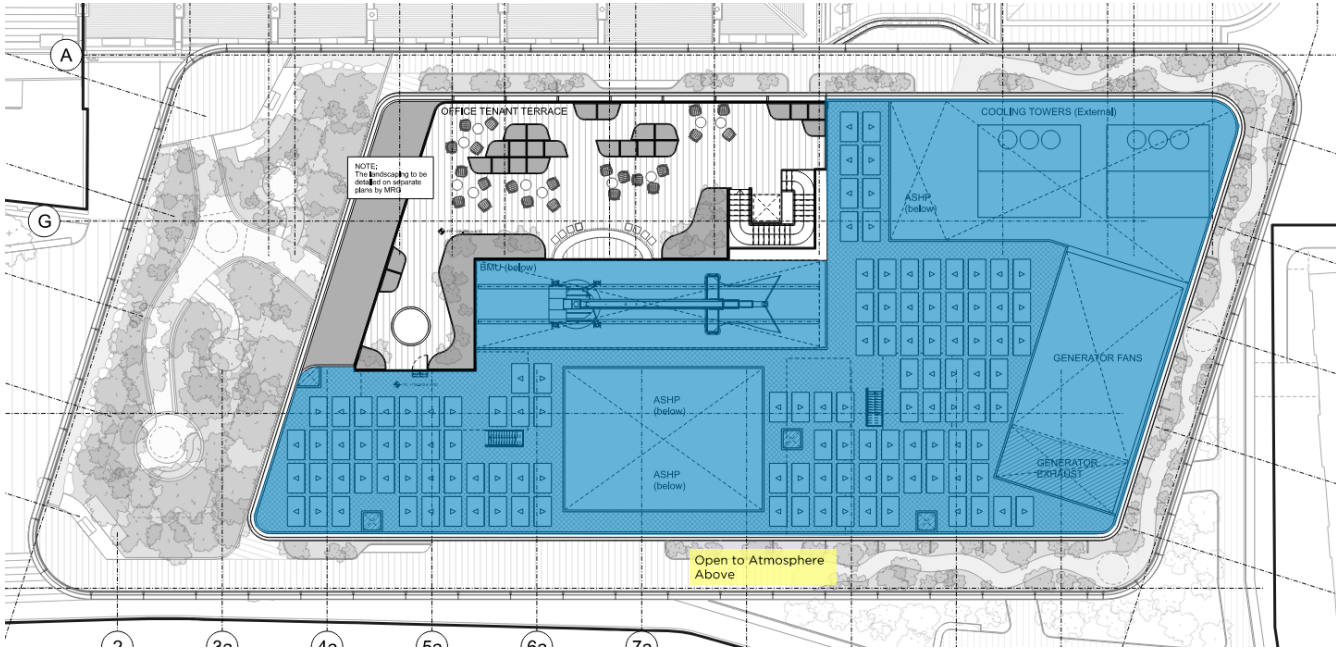


Image 12: Level 26 – Open Area of Roof

3.2 Keats House

Each office floor in Keats House is supplied fresh air via its dedicated air handling units (AHUs) located in plantrooms on each office level. Both supply and exhaust louvres serving each office AHU are facilitated on each floor and separated by 10m.

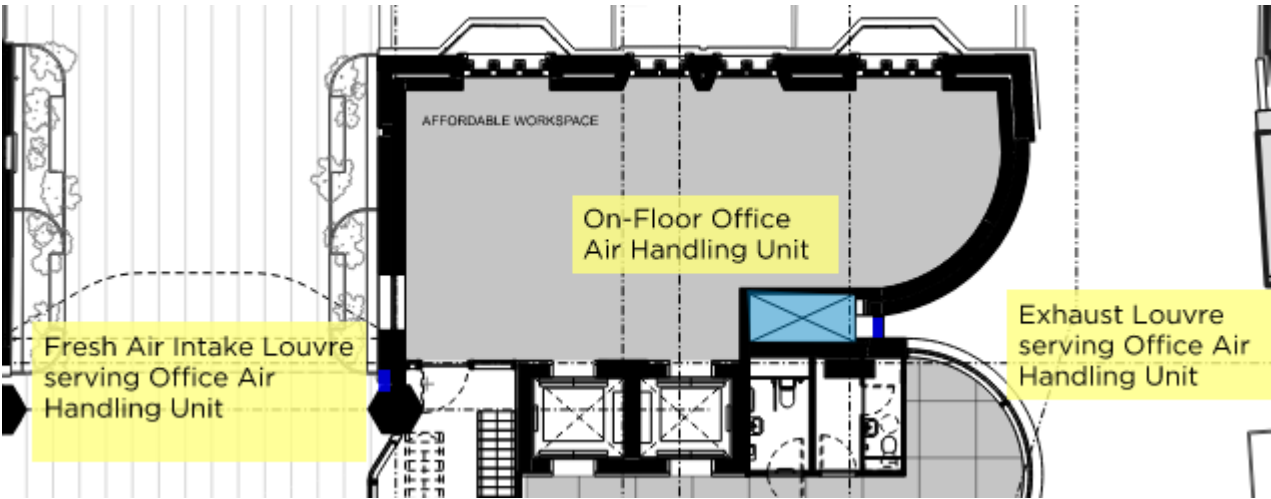


Image 13: Typical office floor plate in Keats House

3.3 Georgian Terrace

The Georgian Terrace contains a total of 7 independent townhouses (Units 4, 6, 8, 10, 12, 14, 16). The office units in the Georgian Terrace will be serviced by natural ventilation.

The toilets will be served by centralised toilet extract systems discharging through louvres on the side of each of the chimney breasts at roof level.

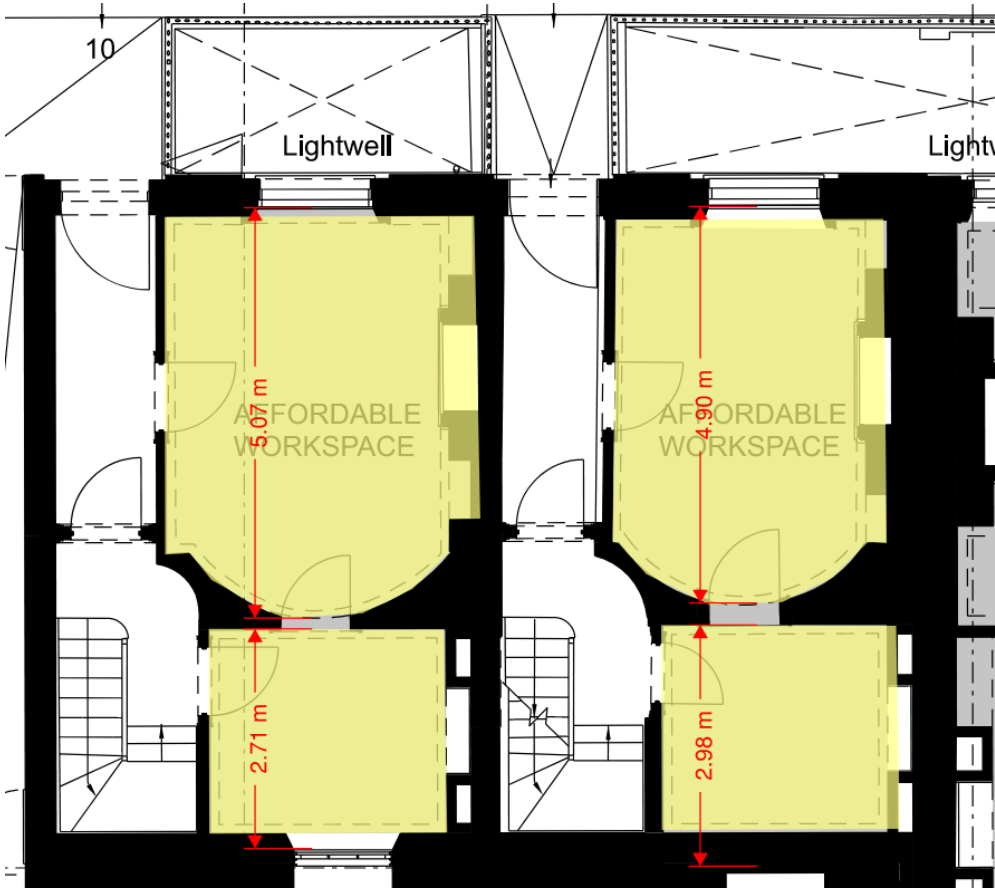


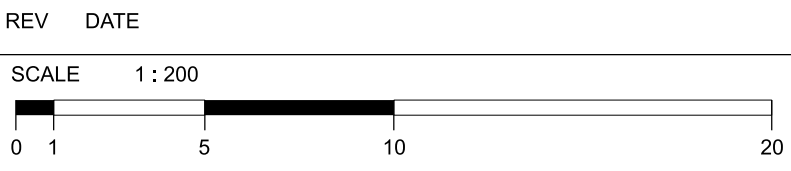
Image 14: Ground Floor in Typical Georgian Houses



Image 15: Typical office floor plate in Georgian Houses

3.4 Elevations indicating Louvre Locations



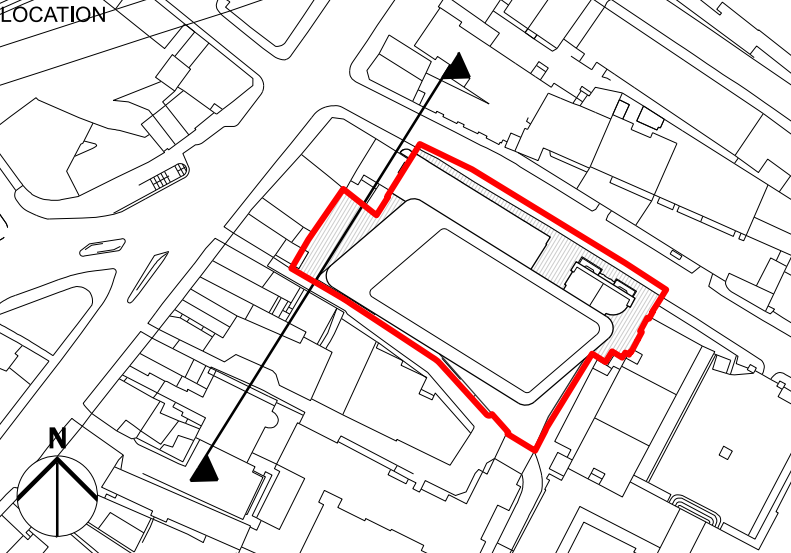


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JOB NO:

NEW CITY COURT

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PROPOSED					
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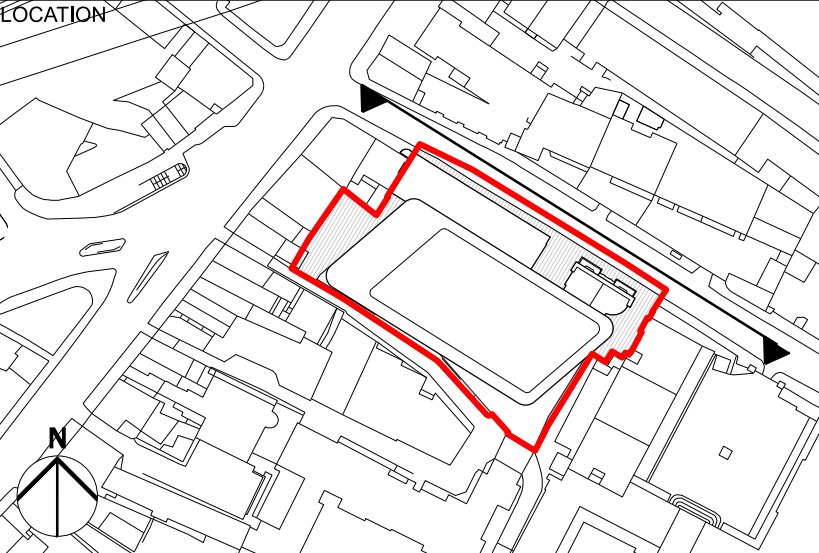




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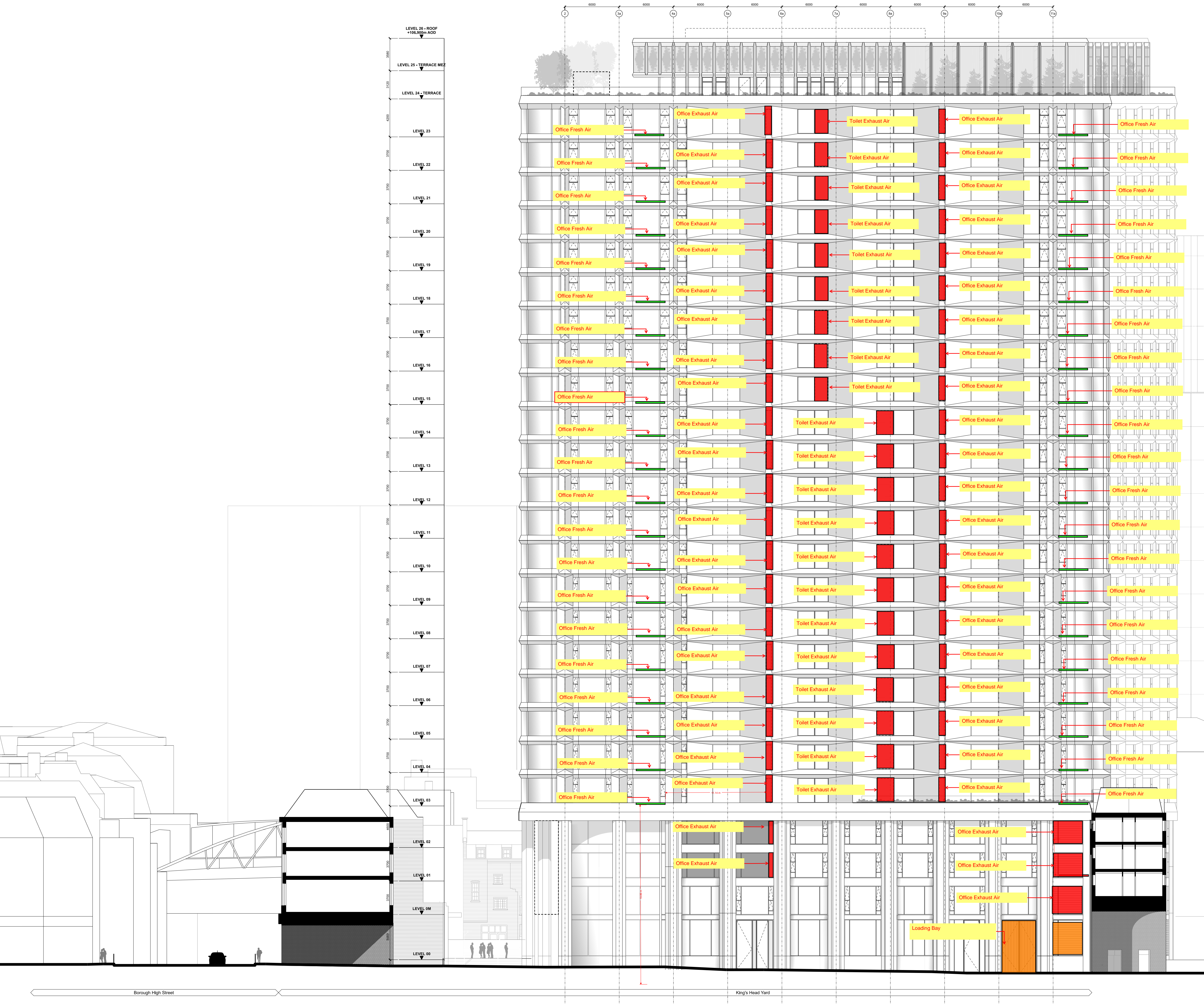
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job title: NEW CITY COURT

drawing title / location: NORTH ELEVATION (RS-04) PROPOSED

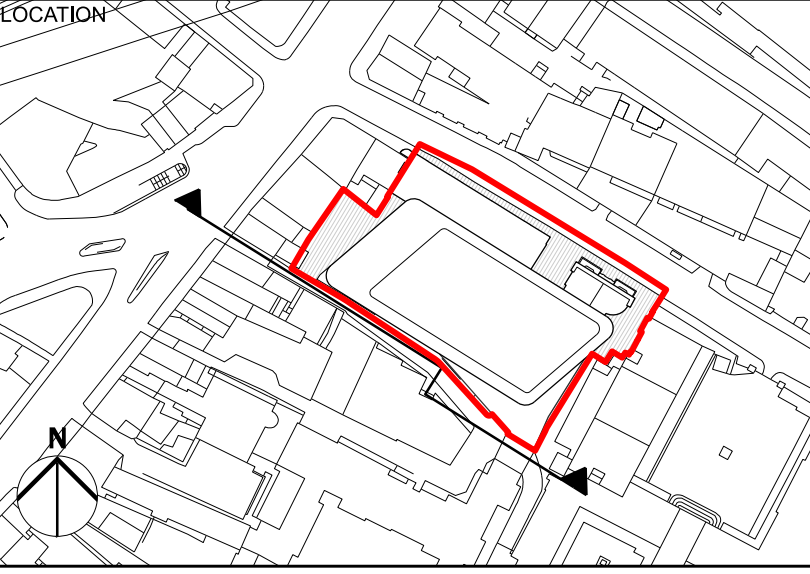
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NOTE: South facade subject to further design review.

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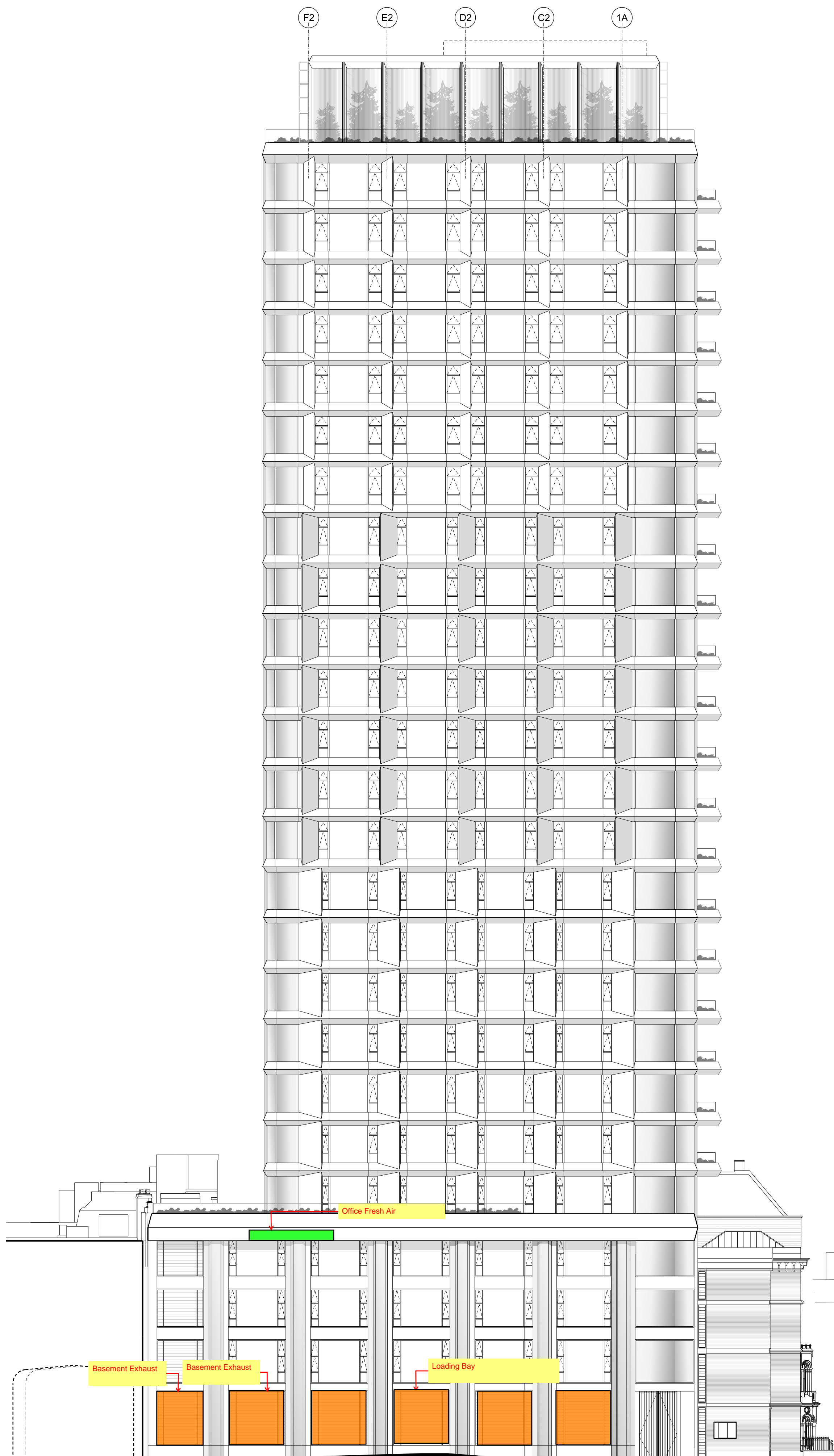
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JOB: 006

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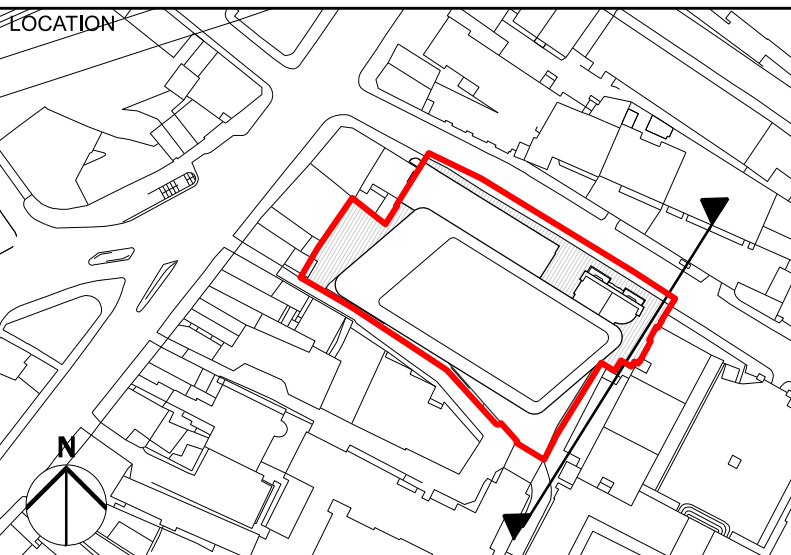
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NEW CITY COURT

drawing title / location									
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EAST ELEVATION (RS-04)									
drawn by	checked	scale	status						
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