

The Prestwich Regeneration LLP

Prestwich Village

Ventilation Statement

17th January 2024

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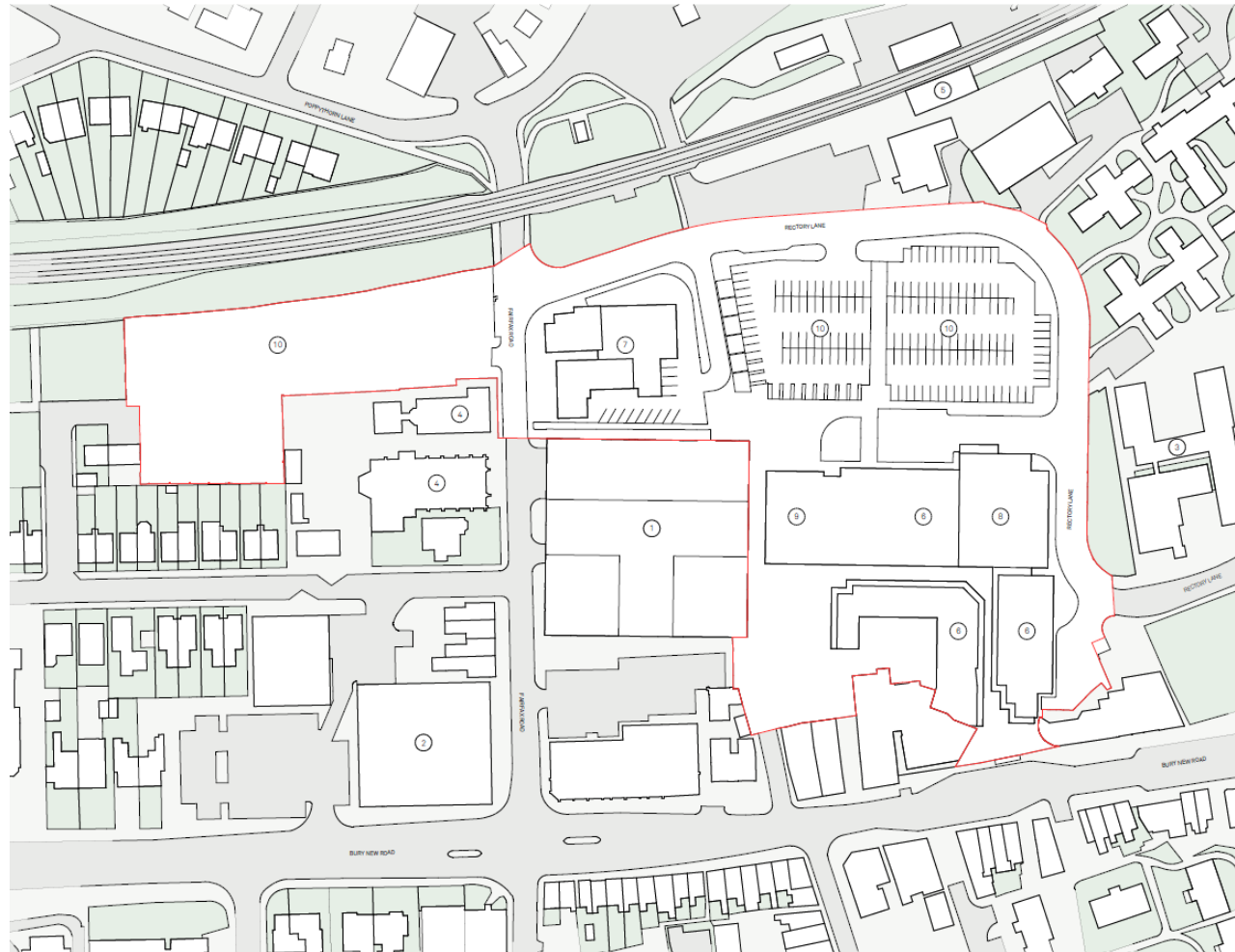
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1.0 Introduction

This Ventilation Statement has been prepared by Hannan Associates on behalf of The Prestwich Regeneration LLP, a Joint Venture ('JV') between Bury Council and Muse Places and is submitted in support of an application for hybrid planning permission at "Prestwich Village".

The subsequent sections of this report provide an overview of the corresponding ventilation strategies for each development plot.

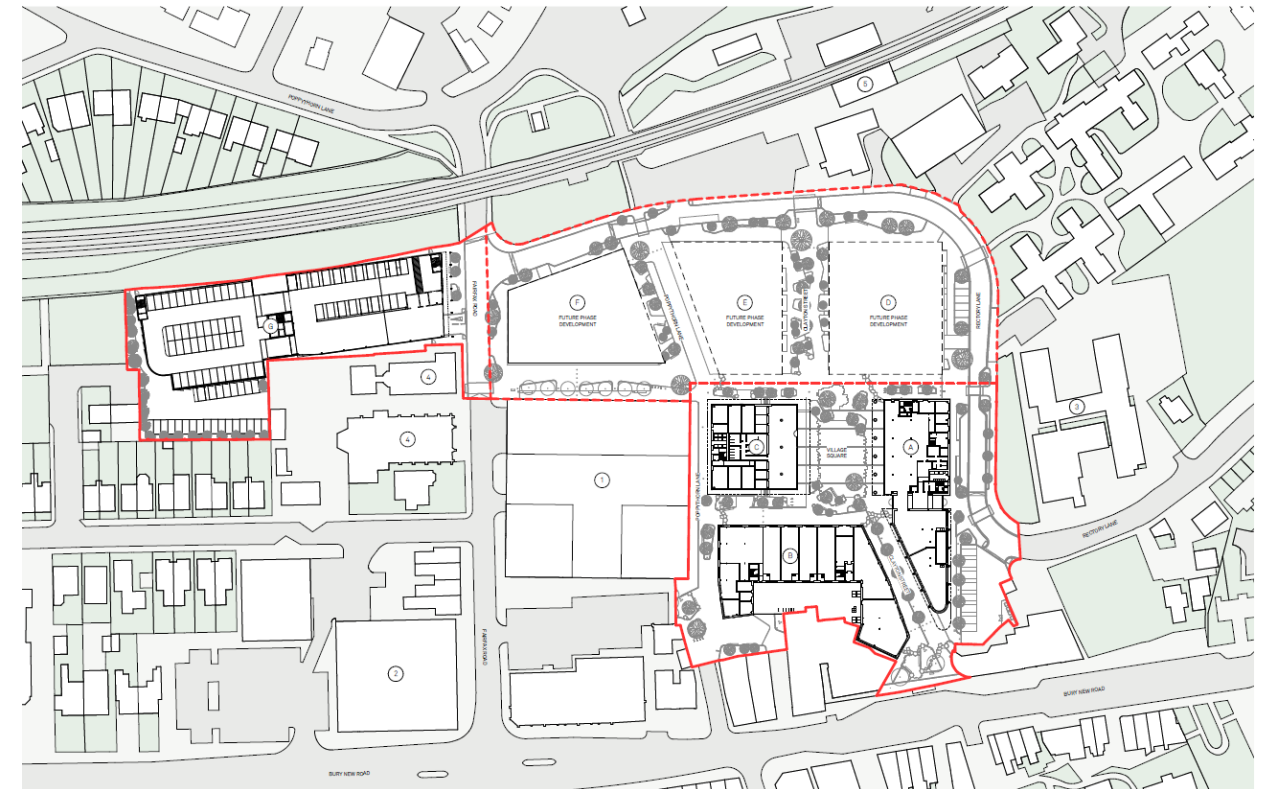
Figure 1: - Existing Site Plan



2.0 Development Description

The existing brownfield site is bound by Bury New Road (west), Fairfax Road, Rectory Lane (south), and Metrolink (east). The masterplan will comprise two phases; Phase 1 (full application) includes Plots A, B, C, and G, while Phase 2 (outline) includes Plots D, E, and F which will be subject to future reserved matters applications and therefore only high-level principles are included within this report. Full details would be required to be submitted with subsequent reserved matters applications.

Figure 2: - Proposed Site Plan



Hybrid application comprising: Full planning application proposing demolition of existing buildings and structures and the erection of a phased mixed use development including a Community Hub comprising flexible uses including library, offices, medical or health services (Use Classes F1 (a-f), F2(b), E(c), E(e), E(g)) and retail uses (Use Classes E(a), E(b) F2(a)) and Sui Generis (hot food takeaway and bar), a new Market Hall (Use Classes E(a), E(b) and Sui Generis (hot food takeaway and bar)), a Commercial Building comprising flexible uses including retail, offices, gymnasium (Use Classes E(a), E(b), E(c), E(d), E(g), F2(a)), a Travel Hub comprising car parking and cycle parking (Sui Generis), a public square and public realm and associated landscaping, car parking provision, cycle storage and other associated works; and part Outline planning application (with all matters reserved) proposing a phased residential led mixed use development comprising residential (Use Class C3), flexible commercial, business, service, local community and learning uses (Use Classes E, F) and Sui Generis (hot food takeaway and bar), engineering works to Rectory Lane, new public realm, associated landscaping, car parking provision, cycle storage and other associated works.

3.0 Ventilation Strategies

The following sections provide an overview of the primary ventilation strategies which are to be incorporated into each of the buildings which form the development masterplan. These ventilation strategies include; mixed mode ventilation, natural ventilation, central mechanical ventilation, local mechanical ventilation and strategies for the anticipated future fit-out of shell retail spaces.

3.1 Retail Ventilation Strategy

General Retail / Commercial Units

Areas designated for retail/commercial space shall generally be delivered to 'shell specification' to maximise flexibility for future fit-out by the incoming retail/commercial tenants. Tenants will have the freedom to tailor their ventilation systems based on their specific requirements of their fit-out.

Under the base build works, each unit will be provided with high level perimeter louvres integrated into the building façade, to facilitate future installation of fresh air intake and extract discharge as required by the incoming tenant/operator.

Future tenants will be responsible for ensuring adequate filtration, odour and noise control to meet the demands of their fit-out, taking cognisance of any planning conditions imposed.

Food and Beverage (F&B) Units & Stalls

Retail units designated for food and beverage (A3 type) fit-out are anticipated to require dedicated kitchen ventilation system(s). Future tenants will be responsible for providing their own ventilation systems tailored to their specific needs.

Designated routes have been allowed in the base build design for extract ventilation ductwork, and associated zones for tenant-installed plant.

Future tenants will be responsible for ensuring adequate filtration, odour and noise control to meet the demands of their fit-out, generally in line with DEFRA 'Guidance of the Control of Odour and Noise from Commercial Kitchen Exhaust Systems' and taking cognisance of any planning conditions imposed.

3.2 Plot A – Community Hub

Plot A has a mixture of primary uses across the differing floors of the building, which generally comprise Community Hub at ground floor, CAT A Open Plan Library / Business Hub at first floor, and CAT A Open Plan Office / medical and health facilities to second and third floor. Back of house and plant areas are also incorporated at ground floor. Furthermore, Plot A features a single storey 'pavilion' section containing retail units – For details of the ventilation strategy for retail units please refer to Section 3.1 (previous).

The open plan elements of Plot A will employ a mixed-mode ventilation strategy (a combination of natural and mechanical ventilation), whereby manually controlled openings shall be incorporated into the building façade to promote natural ventilation. Due to the depth of floor plate and likely future subdivision of the floors to create cellular spaces, full mechanical ventilation is not considered to be appropriate, and as such; central mechanical air handling plant will also be installed to provide mechanical ventilation to the floor plates.

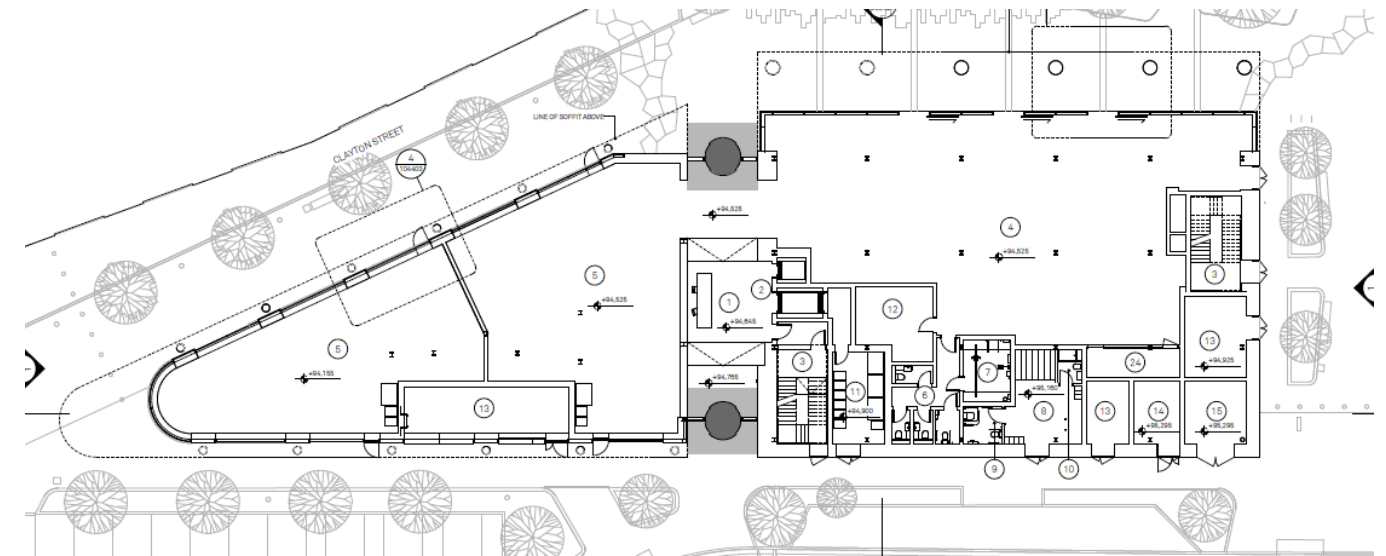
The building shall be suitably zoned with occupied floors served via dedicated air handling plant. Air handling units (2nr minimum) shall be located at roof level, enclosed within a screened plant enclosure. Setting out of the plant enclosure and routing of atmosphere ductwork shall maximise separation between intake and discharge to minimise the risk of re-circulation.

Fresh air supply is to be delivered onto each office floor via Variable Air Volume (VAV) control dampers to maintain the desired CO₂ levels. Balanced extract air shall be routed to discharge at roof level via dedicated landlord core area risers.

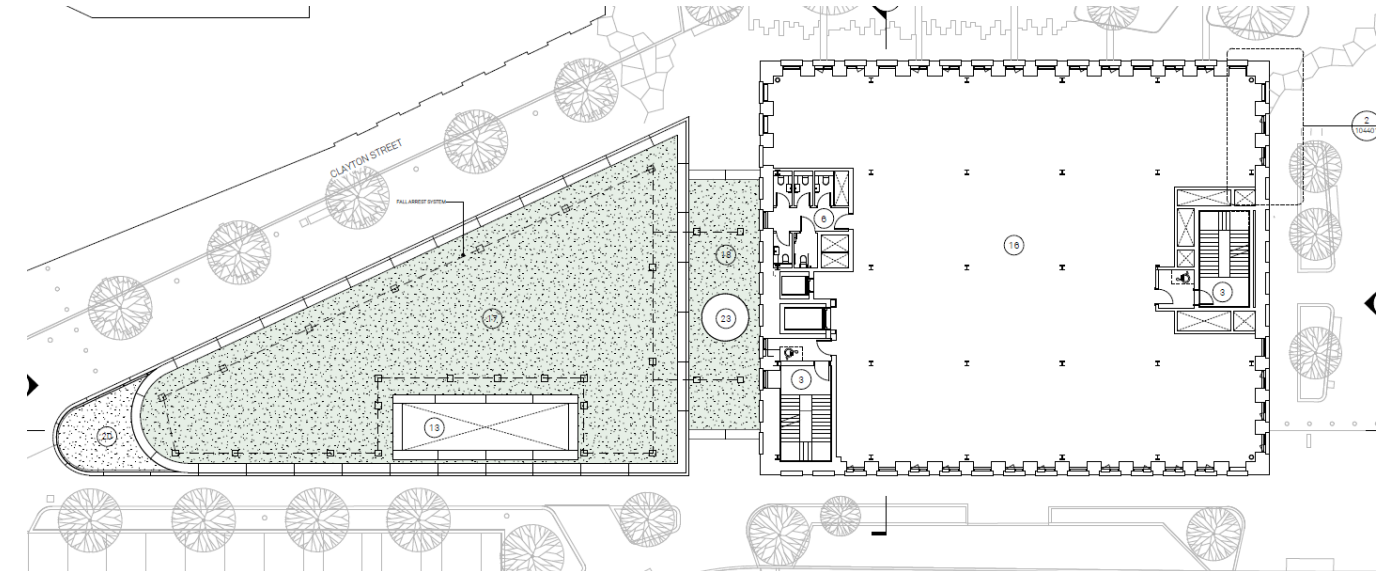
On each floor, the fresh, filtered supply air shall generally be delivered in line with BCO design flow rates, and shall be discharged onto the back of terminal units mounted at high level within dedicated services zone.

A kitchen is proposed to be incorporated at ground floor level and as such, separate dedicated kitchen AHU plant shall be incorporated within the roof plant enclosure, with riser space allocated to facilitate routing of ductwork from roof level to serve the kitchen area.

Ground Floor GA Plan



Typical Floor GA Plan



3.3 Plot B – Leisure / Retail

Plot B comprises shell retail units at ground floor level, with a CAT A open plan gymnasium / office at first floor. The main entrance to the gym is also located at ground floor, with access via the public square. For details of the ventilation strategy for retail units please refer to Section 3.1 (previous).

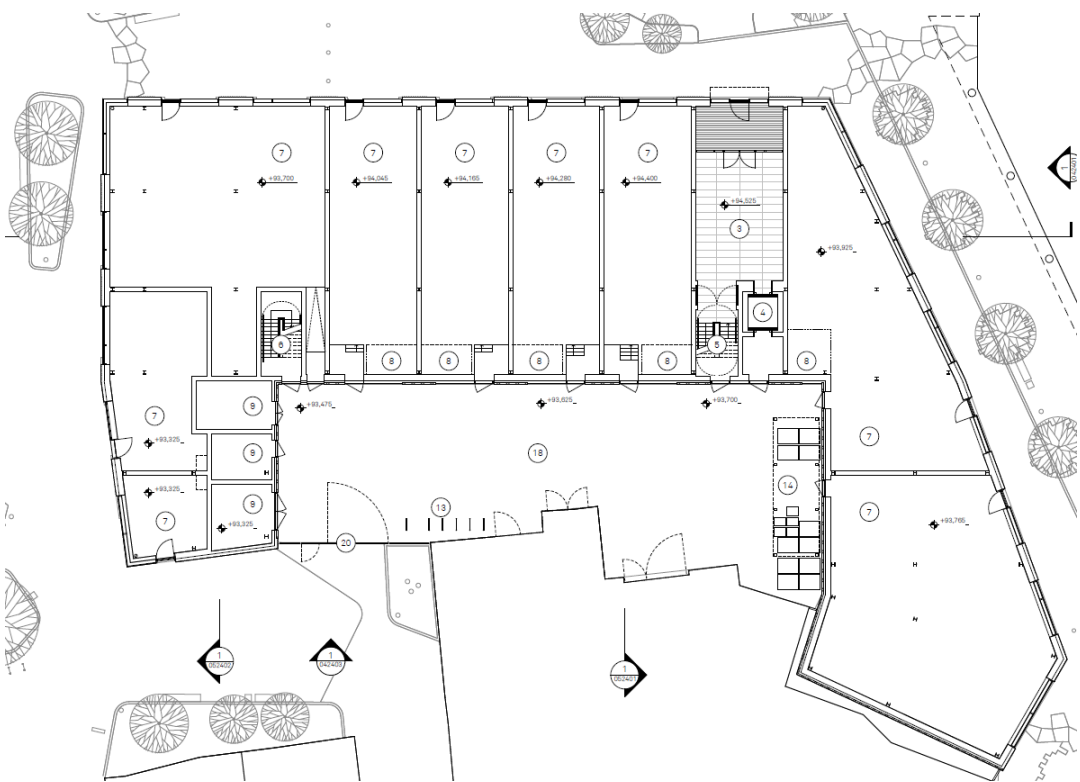
The gym area and main entrance shall be mechanically ventilated via central air handling plant. It is currently envisaged that the WC/Changing areas will be provided with separate dedicated air handling plant to the fitness areas. Manually openable ventilation panels are also proposed to be incorporated to first floor level to facilitate natural ventilation.

Air handling units shall be located at Level 01, enclosed within a dedicated plant zone. Setting out of the plant enclosure and routing of atmosphere ductwork shall maximise separation between intake and discharge to minimise the risk of re-circulation.

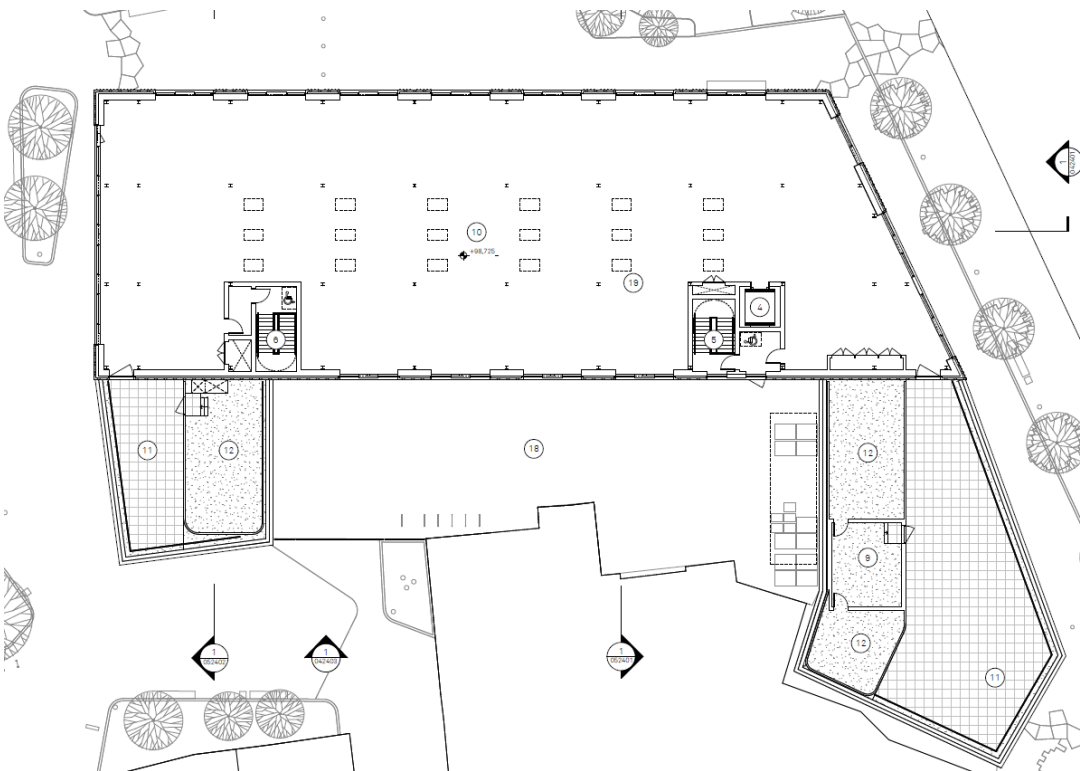
Fresh air supply is to be delivered onto each floor served via Variable Air Volume (VAV) control dampers to maintain the desired CO₂ levels. Balanced extract air shall be routed to discharge externally via dedicated ductwork routes.

Fresh, filtered supply air shall be discharged onto the back of terminal units mounted at high level within dedicated services zone.

Ground Floor GA Plan



Upper Floor GA Plan



3.4 Plot C – Market Hall

Plot C shall provide a new market and food hall containing market stalls and a large seating area, in conjunction with BOH and servicing areas.

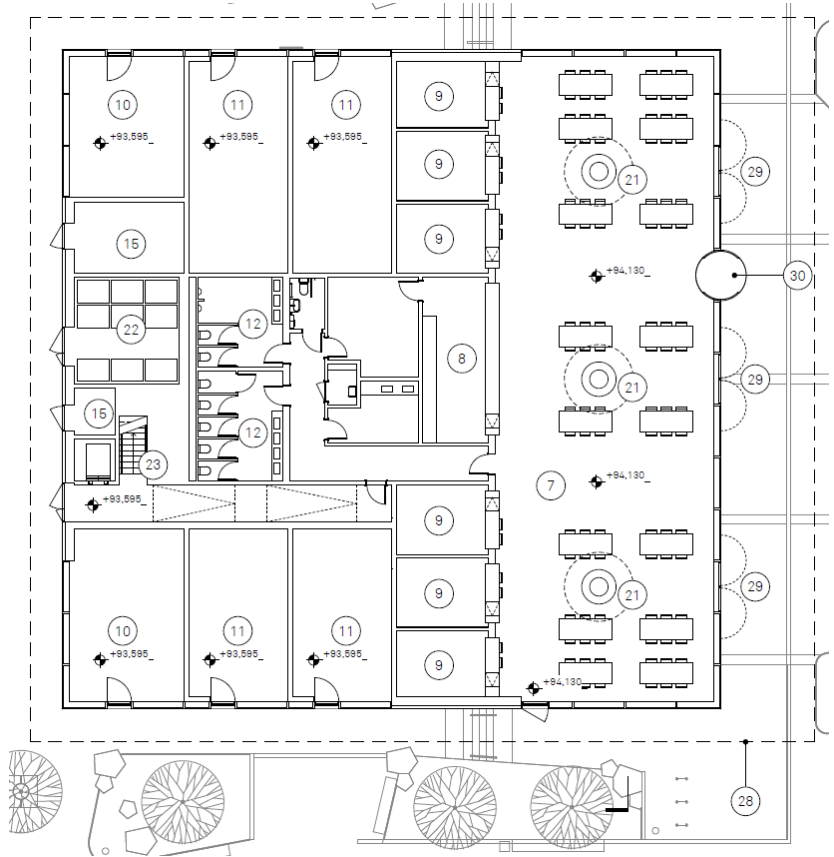
Natural ventilation is proposed to be incorporated to the food hall / seating area, which shall be achieved via louvred automatic opening ventilators incorporated into the façade, used in conjunction with roof mounted ventilators, taking advantage of the stack effect.

Dedicated extract plant shall be provided to market hall stalls and the bar area. Extract ventilation systems installed serve these stalls shall be designed to comply with DEFRA 2005 'Guidance of the Control of Odour and Noise from Commercial Kitchen Exhaust Systems', which shall be used as a means of determining odour control requirements such as carbon or UV filtration.

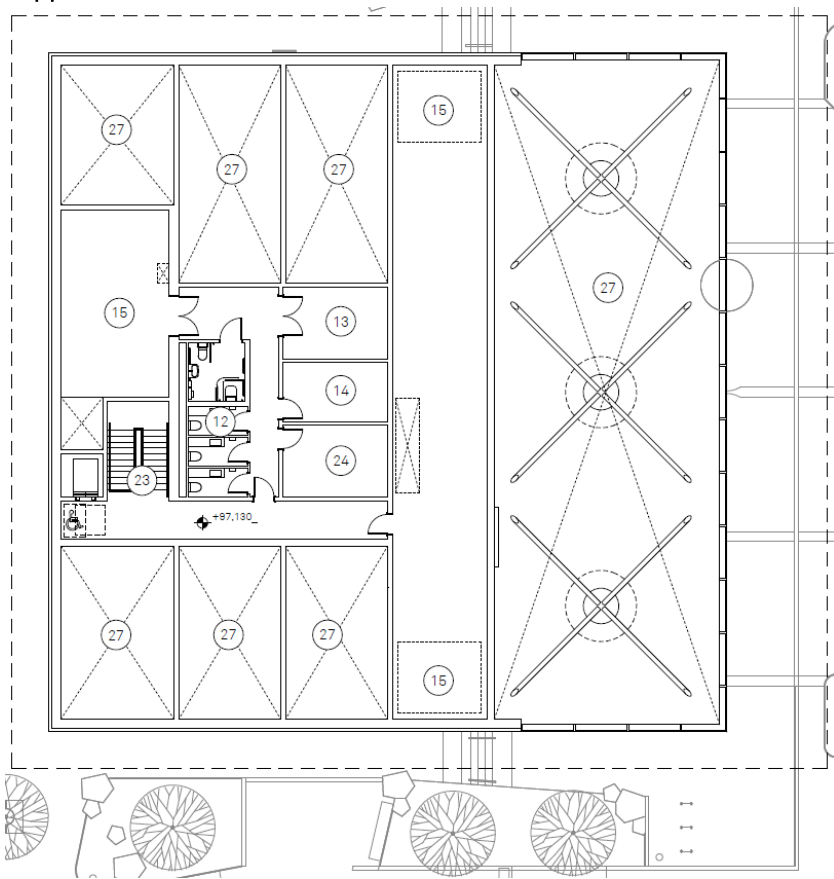
Additional shell retail type units shall also be provided. For details of the ventilation strategy for retail units please refer to Section 3.1 (previous).

Back of house areas such as the staff room/office and WC's shall be provided with mechanical ventilation incorporating heat recovery via LHRVU's.

Ground Floor GA Plan



Upper Floor GA Plan



3.5 Plot G – MSCP

The architectural design of the car park is intended to be "open-sided," allowing for natural ventilation, as per Building Regulations Approved Document B and Approved Document F.

To comply with the natural ventilation strategy, the car park must meet the following criteria:

- The equivalent free area of openings at each level must be at least 5% of the floor area.
- A minimum of 1.25% of the floor area must be provided on opposing elevations.
- The remaining free area can be distributed anywhere on the floor.

If deemed necessary in the building fire strategy, specific requirements for smoke extract and/or smoke and fume control shall be provided.

Ground Floor GA Plan



Typical Floor GA Plan



3.6 Plots D, E and F – Dwellings

Dwellings ventilation systems shall generally comprise Mechanical Ventilation incorporating Heat Recovery (MVHR) to ensure energy efficiency and to demonstrate compliance with Building Regulations Approved Document F.

Supply air shall be delivered to habitable rooms (bedrooms and living/dining) areas, while extracting stale air from ‘wet’ rooms (bathrooms, ensuite bathrooms, kitchen, and utility cupboard).

Purge ventilation shall generally be achieved to all habitable rooms via opening windows and/or balcony doors.

Overheating will be managed following Building Regulations Approved Document O. This may be achieved through window/door openings, ventilation panels, or mechanical ventilation.

By implementing these ventilation strategies, the apartments will ensure a continuous supply of fresh air while maintaining energy efficiency and complying with relevant regulations.

3.7 Miscellaneous

Within each building there are various ancillary and back of house areas. Ventilation strategies have been summarised below:

Zone		Ventilation Strategy
Toilet & Changing Areas	-	Local mechanical ventilation incorporating heat recovery or dedicated mechanical extract, sized to deliver a minimum of 6AC/Hr.
Cleaners Stores	-	Local mechanical extract ventilation, sized to deliver a minimum of 6AC/Hr.
Refuse / Bin Stores	-	Local mechanical extract ventilation with natural air make-up, sized to deliver a minimum of 10AC/Hr.
Stair & Lobby Areas	-	Natural infiltration.
Cycle Stores	-	Generally, naturally ventilated via louvres incorporated into the façade.
MEP Plant Rooms	-	Generally, naturally ventilated via louvres incorporated into the façade.

