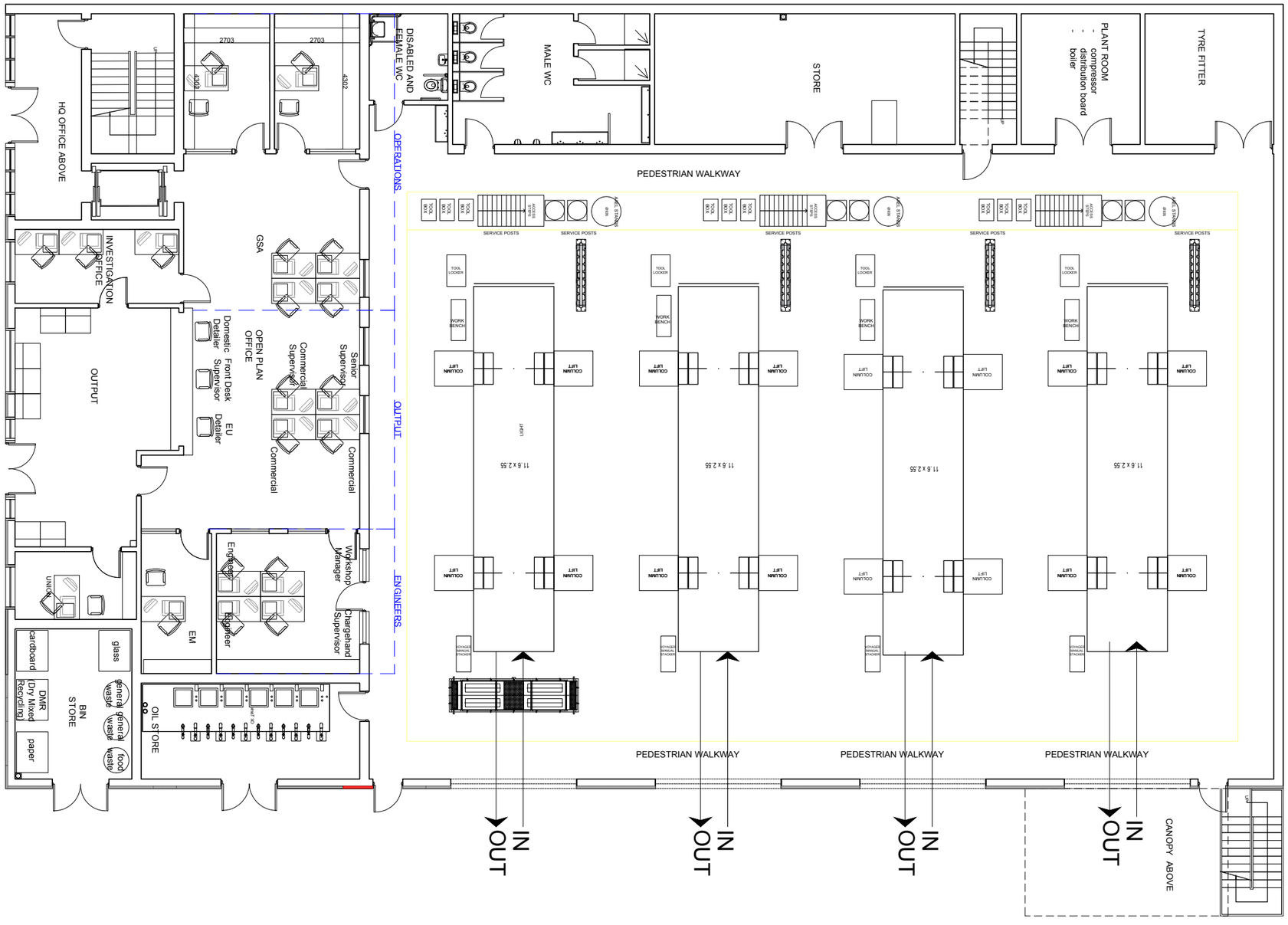
Design

Building Design

Aerial View of Proposed Site

Design

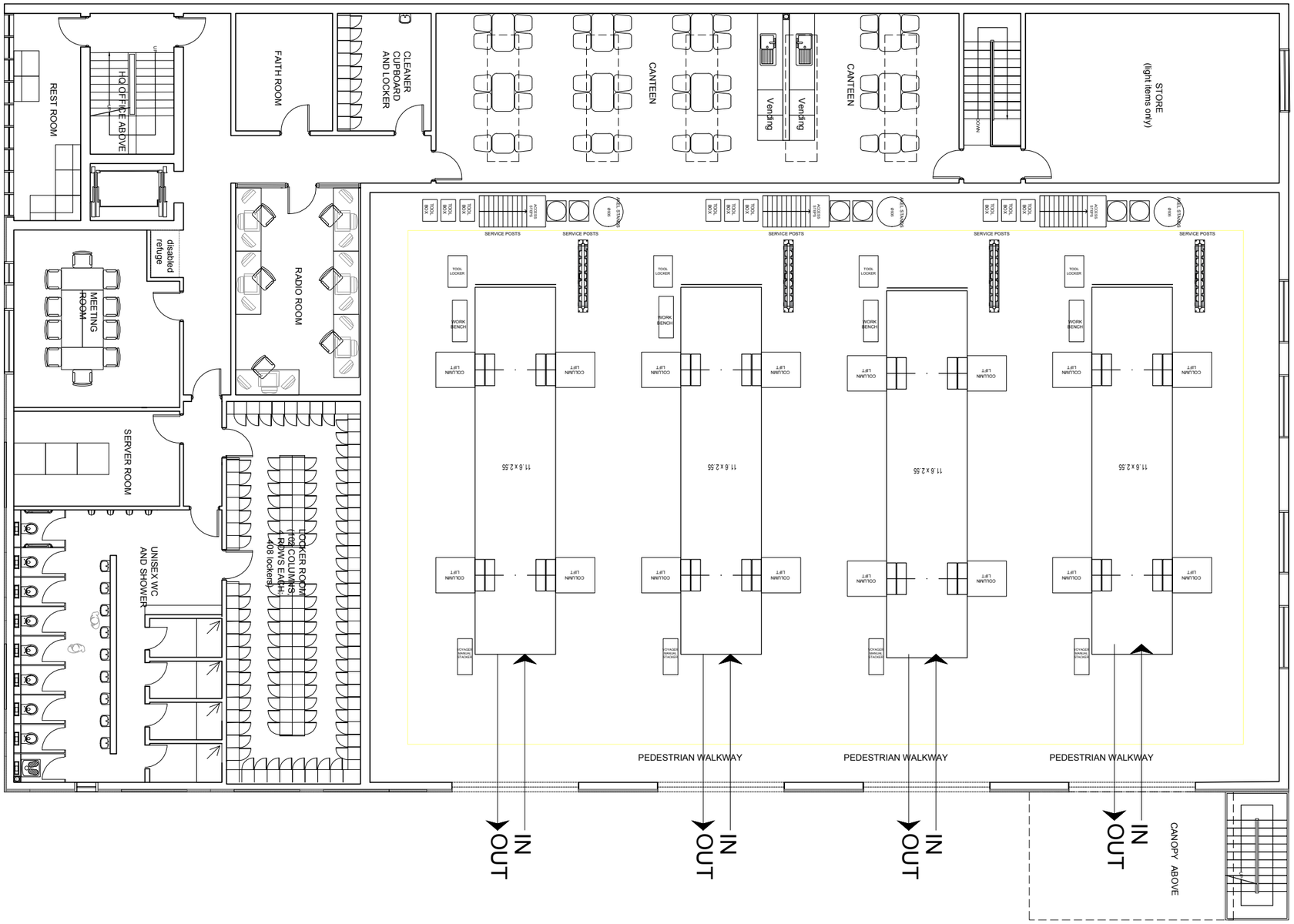
Building Design



Workshop (Office block) -
Ground Floor Plan

Design

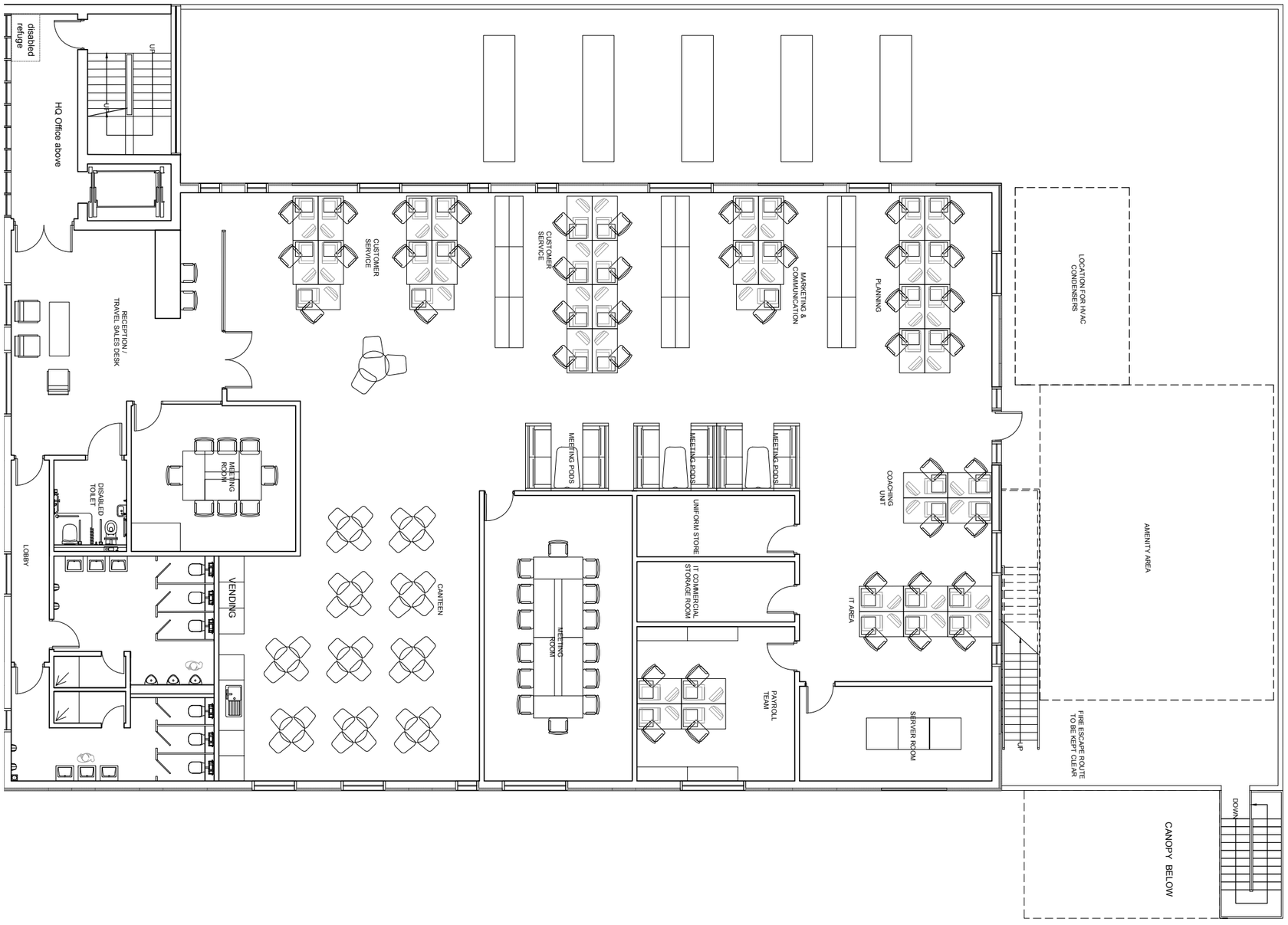
Building Design



Workshop (Office block)-
First Floor Plan

Design

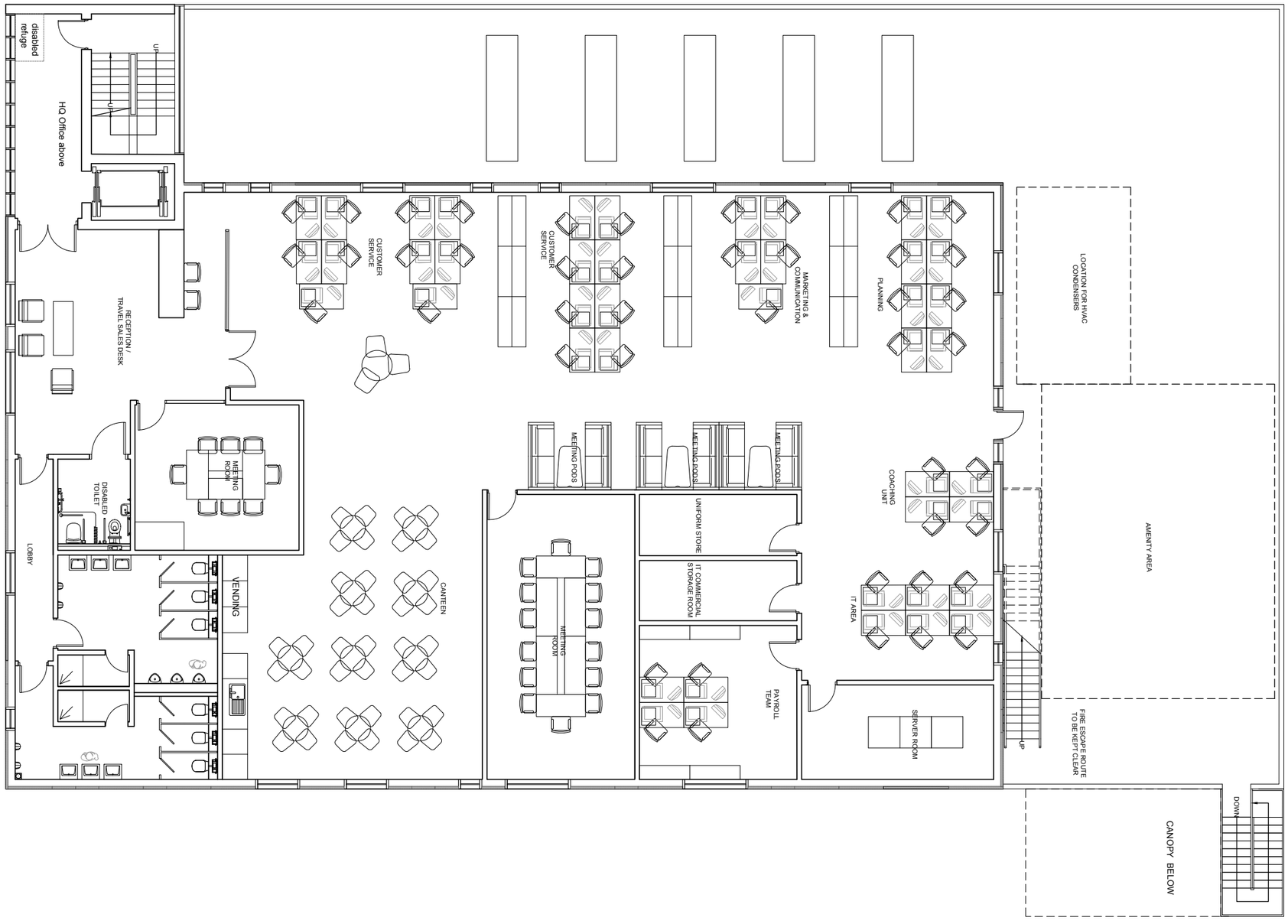
Building Design



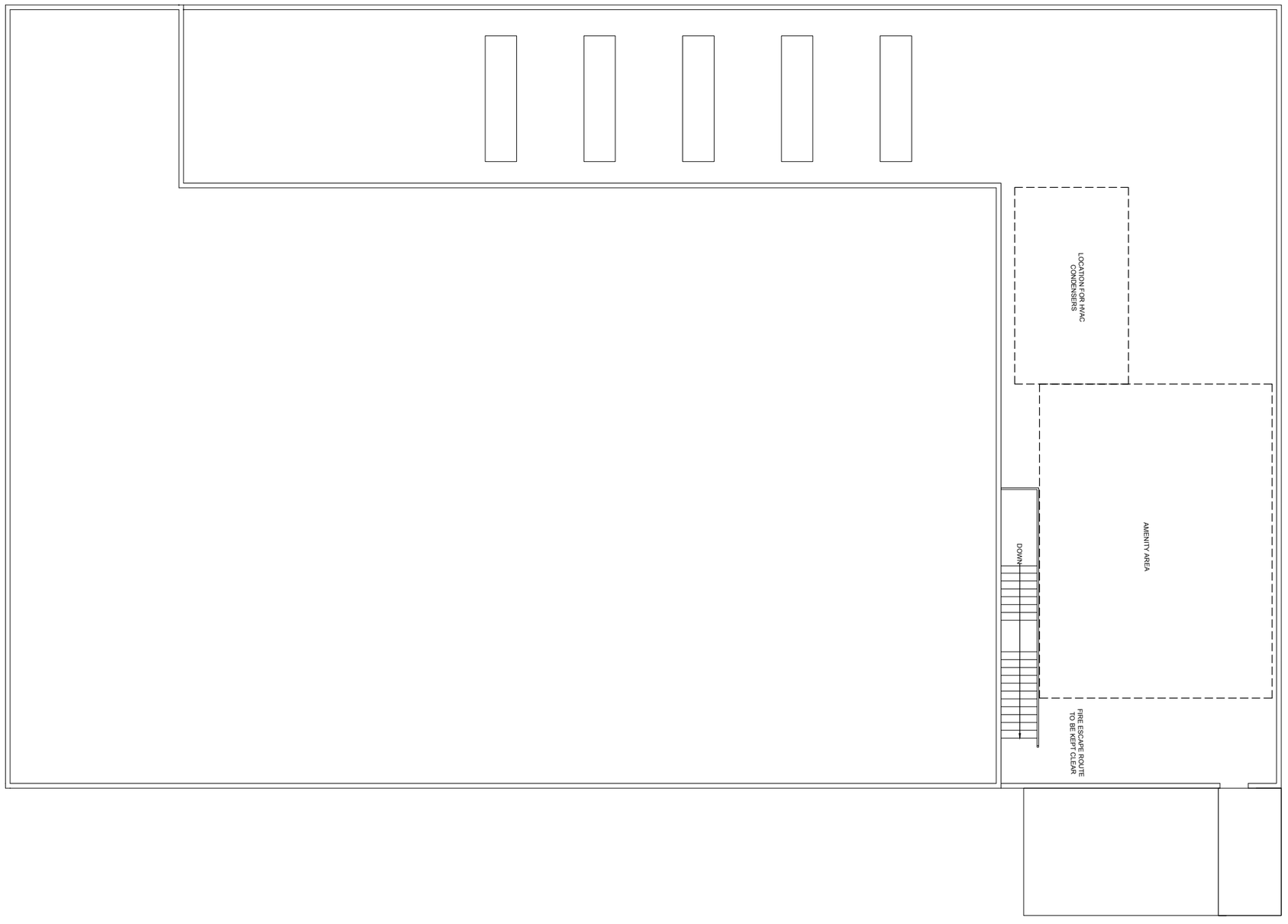
HQ (Office block) -
Second Floor Plan

Design

Building Design



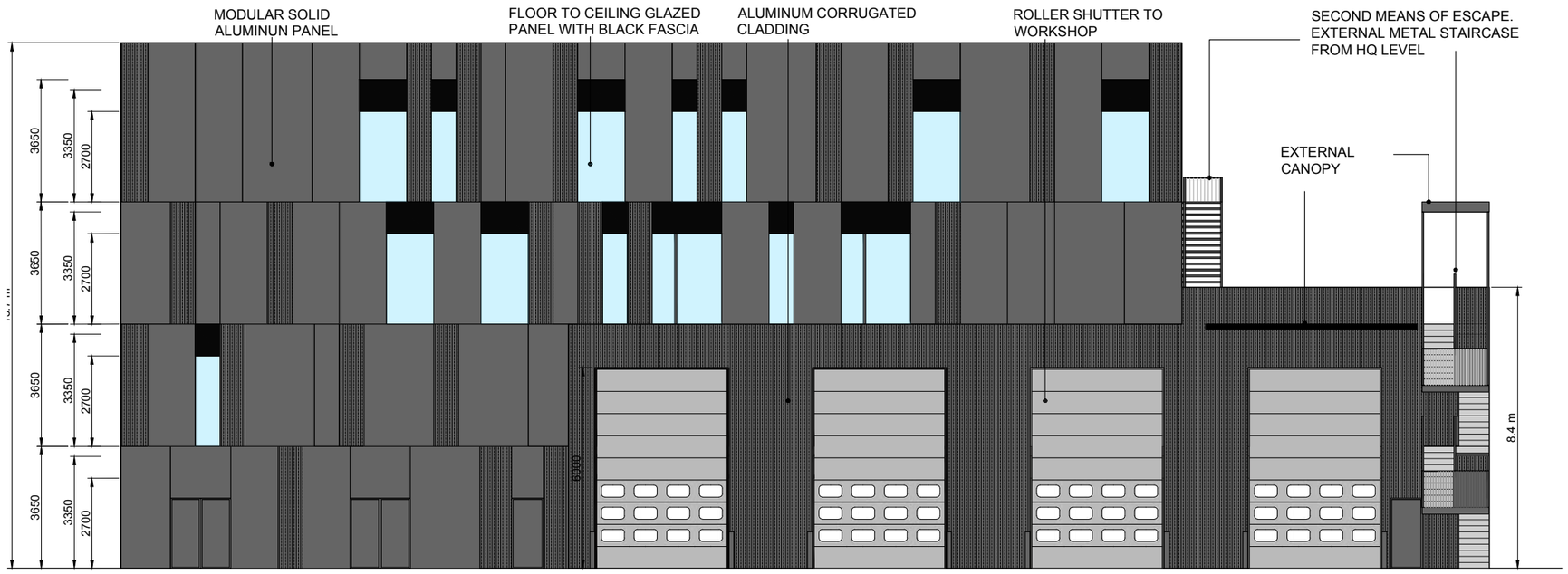
HQ (Office block) -
Third Floor Plan



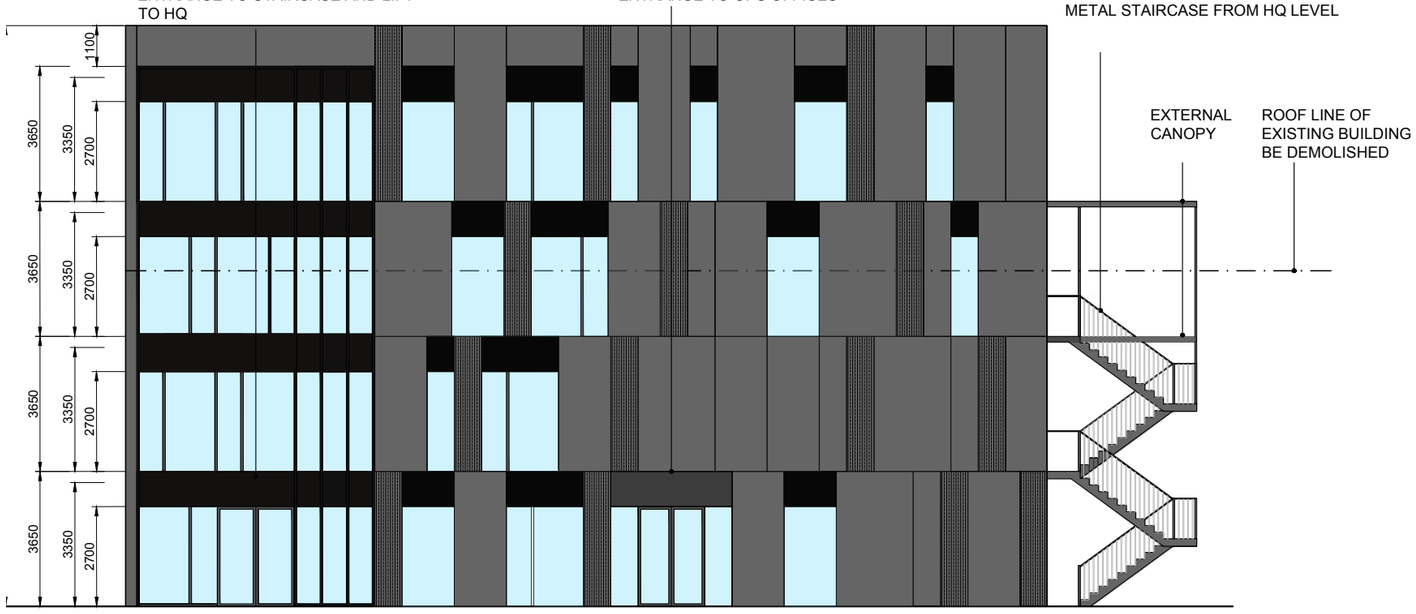
HQ (Office block) -
Third Floor Plan

Design

Building Design - Elevations



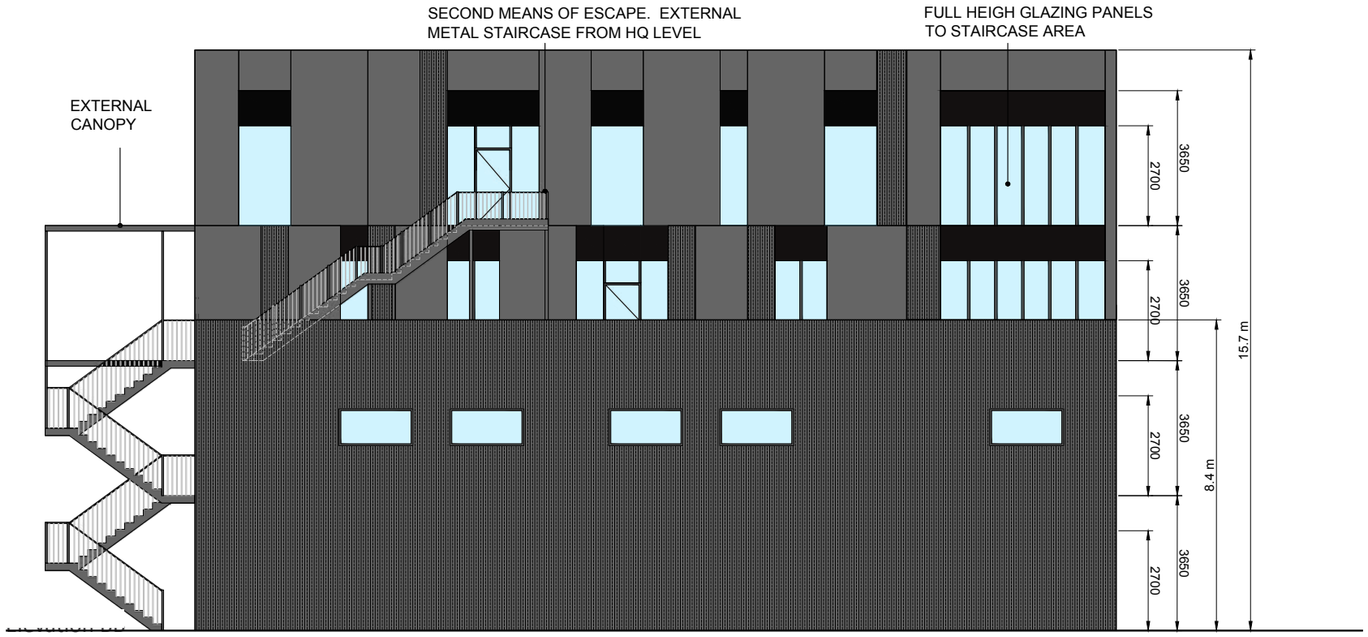
Elevation AA



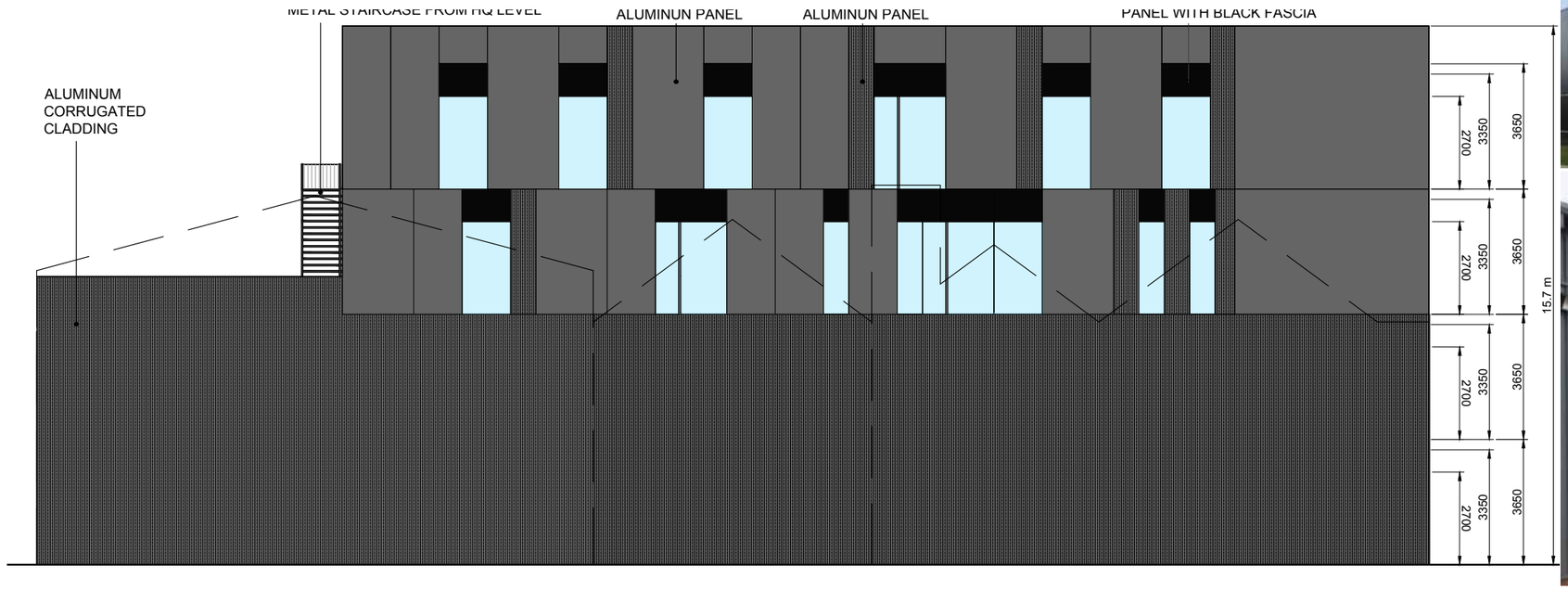
Elevation CC

Design

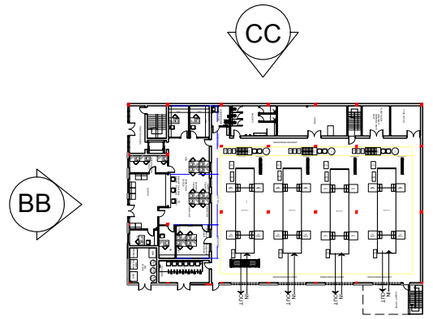
Building Design - Elevations



Elevation BB



Elevation DD



Examples of panelling facade

Design

Building Design - CGI

CGI : Proposed West Garage
View from Conway Street - East Side

Design

Building Design - CGI

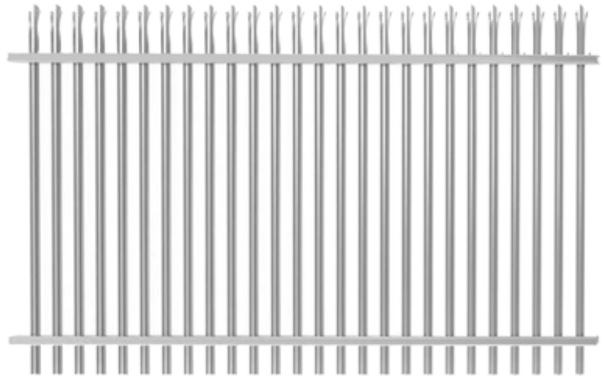
CGI : Proposed West Garage
View from Conway Street - West Side

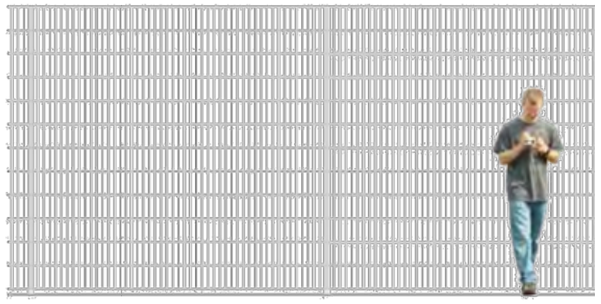
Design

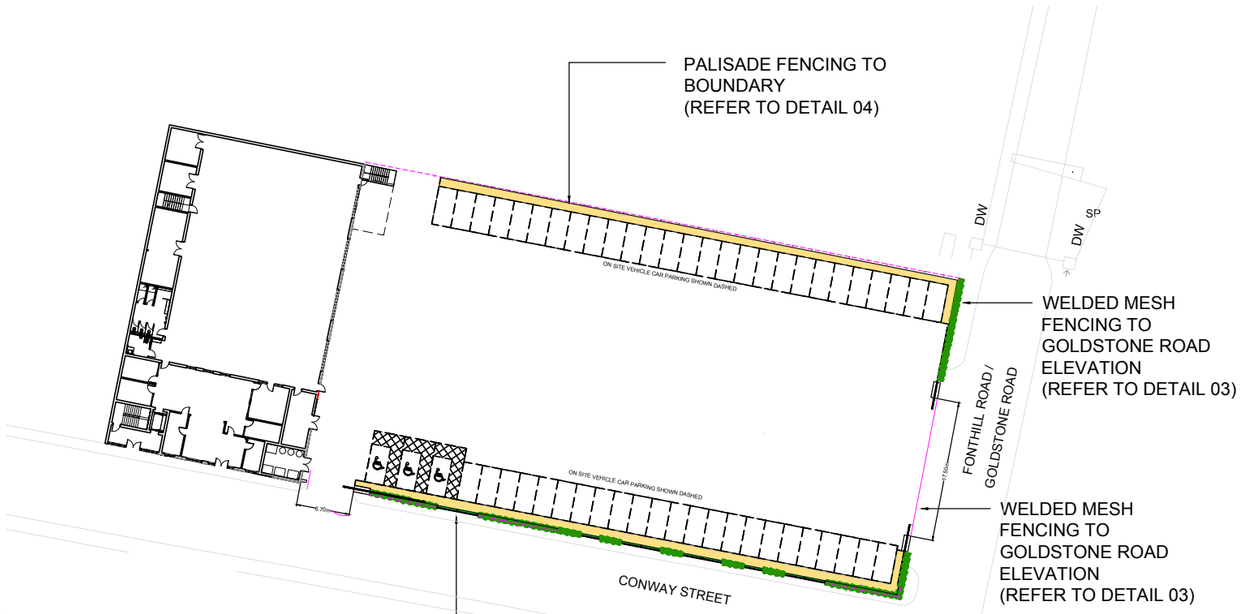
Building Design - CGI

The main elevations of the site on Conway Street, and the one in Fonthill Road will be treated with a green and artistic approach.
The proposed mesh fencing that will enclose the garage on those sides will be planted out with greenery encouraging wild life and improving the public realm.
The proposed planted mesh fencing will be interrupted by a series of solid walls partition which are intended to be used from the community for artwork.
The rest of the elevation on Fonthill Road will be enclosed with a central sliding gates and mesh fences.

The north boundary of the site, looking at the railways will instead be treated with metal palisade fencing.





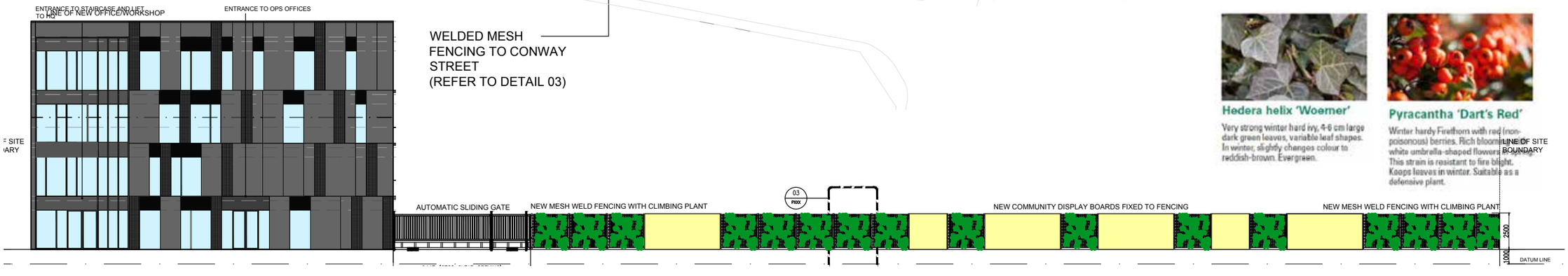


Hedera helix 'Woerner'

Very strong winter hard ivy, 4-6 cm large dark green leaves, variable leaf shapes. In winter, slightly changes colour to reddish-brown. Evergreen.

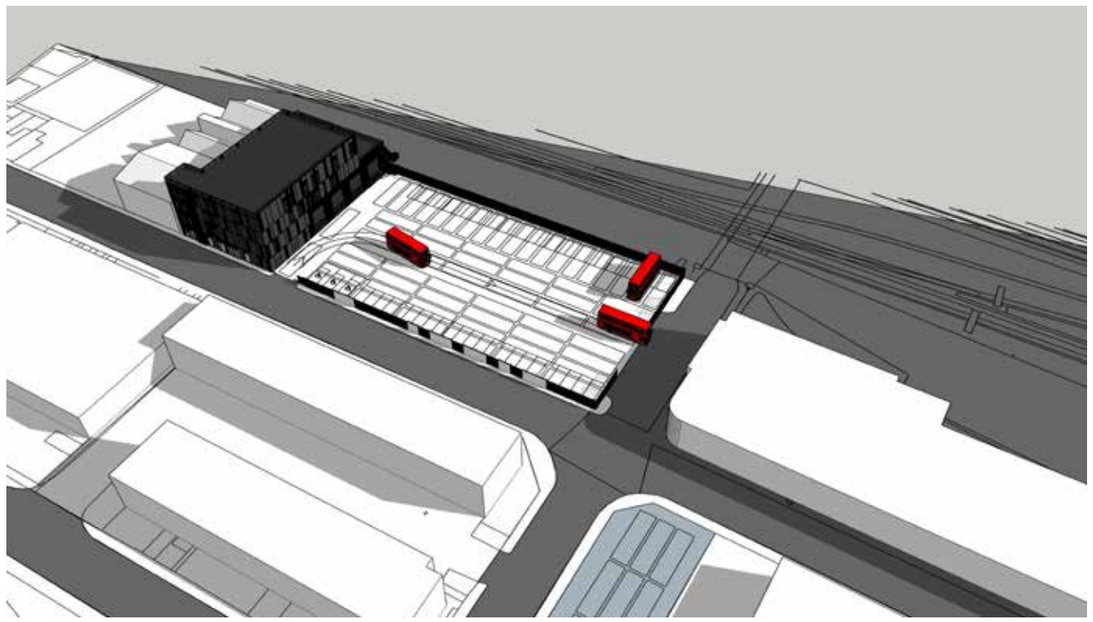
Pyracantha 'Dart's Red'

Winter hardy Firethorn with red (non-poisonous) berries. Rich bloom of white umbrella-shaped flowers in spring. This strain is resistant to fire blight. Keeps leaves in winter. Suitable as a defensive plant.

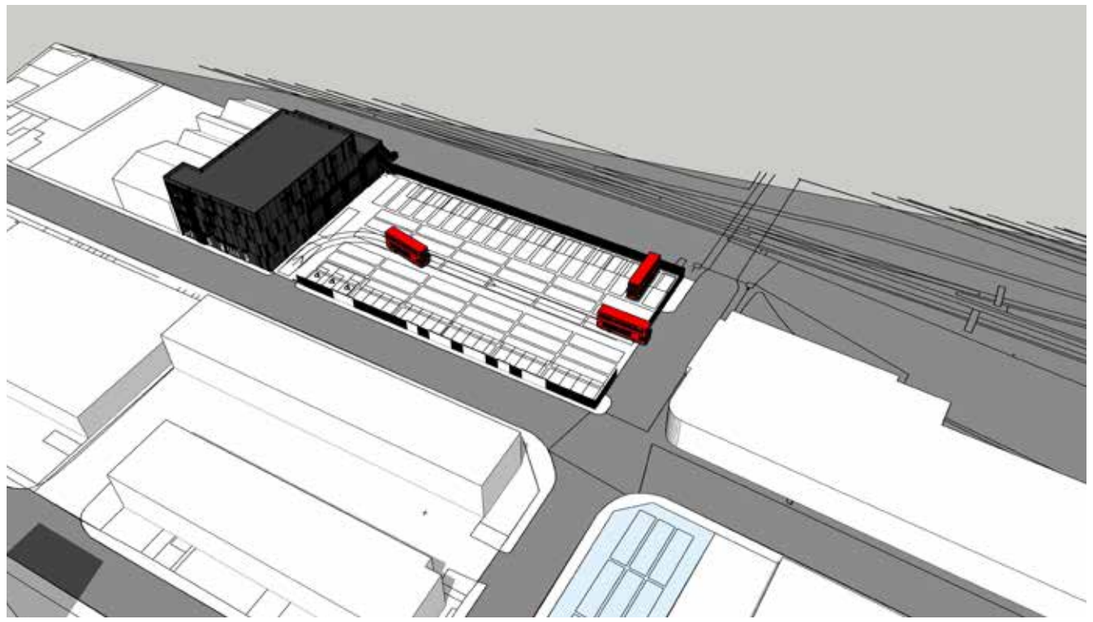


Design

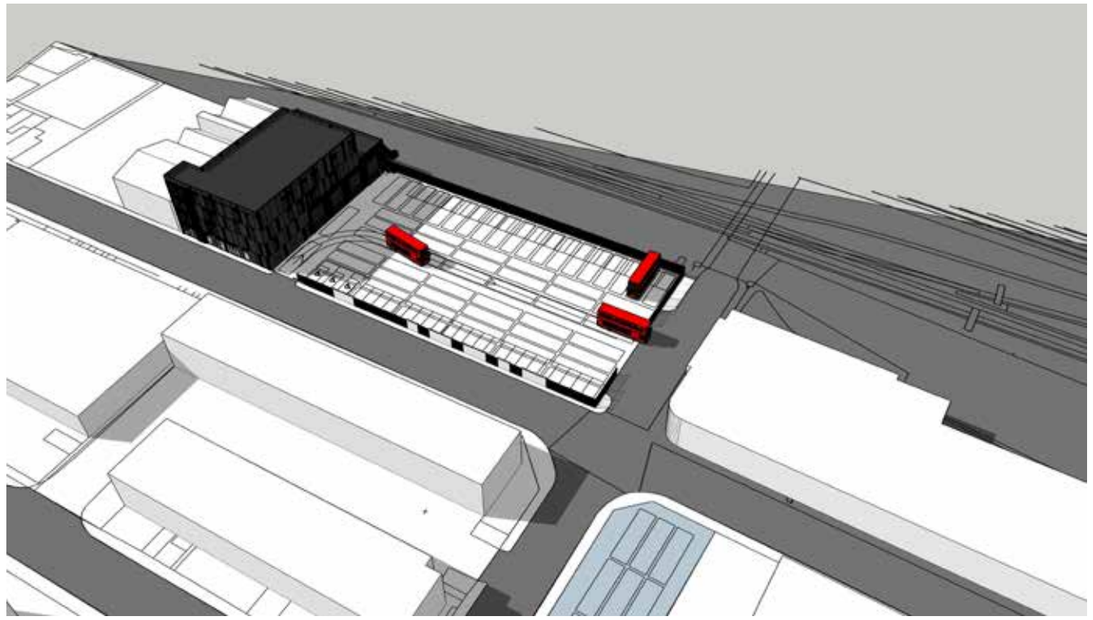
Sunlight Study



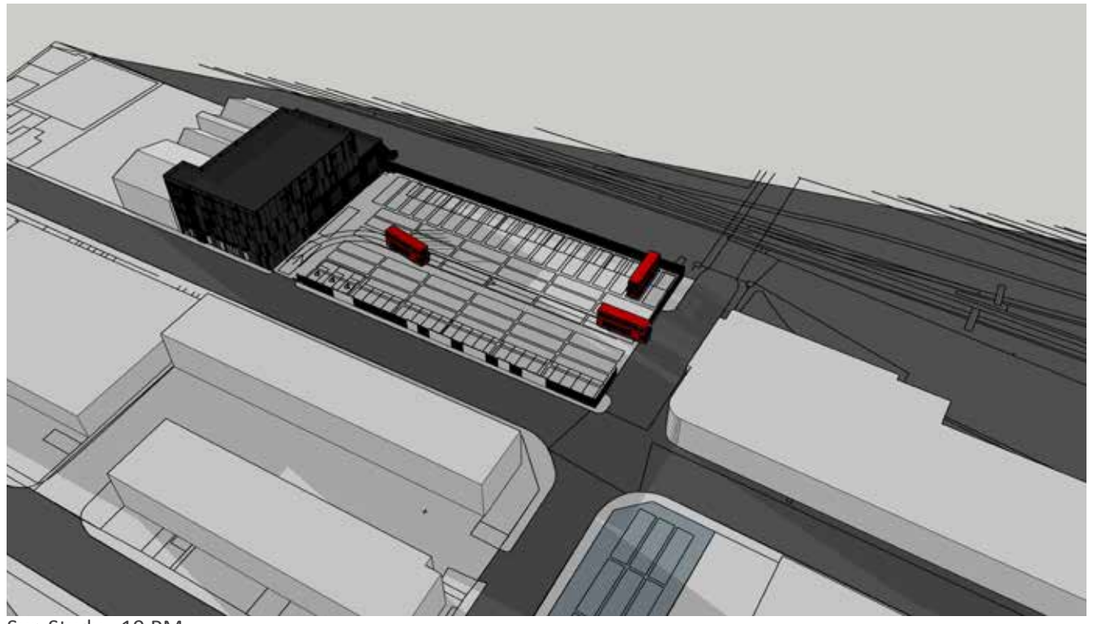
Sun Study - 7 AM



Sun Study - 12 PM



Sun Study - 16 PM



Sun Study - 19 PM

Design

Secured by design

INTRODUCTION

This Secured By Design Statement has been prepared by AIAD on behalf of the Brighton and Hove Bus Company to support the proposed development of a Bus Garage to accommodate 67 buses, including ancillary 4-bay workshop and office building with bike storage, bin storage, fuel storage, oil storage, engineering offices and the HQ offices, fencing, gates and landscaping.

DESIGN PRINCIPLES

1. Access & Movements

There is a single segregated pedestrian route running from Conway Street and around the perimeter of the development. This creates a controlled and convenient pedestrian access to the workshop and office building.
The design of this path incorporates a number of design features to enhance security:

- Straight with unimpeded visibility from one end to another.
- Protected boundaries to either side in that of a 2.4m high mesh fencing to one side and palisade fencing to opposite.
- Pedestrian walkway with contrasting paint to hard stand highlighting safe route.

2. Structure

The site is located in a light industrial/commercial area.
A mesh perimeter fencing and a palisade fencing with gated access hinders unauthorised access to the site.
The development consists of a workshop and office building located on the corner between Conway Street and Fonthill Road.
The vehicle entrance is proposed on Conway Street close to the new office building and the exit will be on Fonthill Road.

The building is constructed of a steel frame and the fabric of the building will be treated with a series of modular aluminum cladding and vertical glazed panels.
The ground floor facade of the building will be design with a particular attention to avoid potential brake in and secure the building from a material point of view.

Low level flat roofs have been avoided preventing easy access to other parts of the building or site.

3. Ownership

The site will be for private use only. Visitor and deliveries will be clearly defined via access from Conway Street.
The site is to be enclosed by 2.4m high palisade security fencing (triple point pale & anti tamper bolts) to the north embankment, by a 2.4m high security mesh fencing and solid block work walls to the south and East elevation on Conway Street and Fonthill Road.

4. Physical Protection

The Building, workshop and site will be designed to comply with the current relevant approved documents of the Building Regulations and British Standard requirements.
Certified security doors will be installed to the exterior of the building and high risk internal rooms along with secure fixing and glazing to ground floor windows.
Security systems for the site will be installed in certified and compliant access door control, intruder alarm and CCTV surveillance.
Lighting columns are provided across the site providing suitable colour rendering and uniform light to avoid poorly lit areas and discourage access.
Secured waste area is designed inside the building and fencing to prevent the use as a climbing aid to upper levels.

5. Management & Maintenance

Footpaths to the exterior of the site boundary along Conway Street and Fonthill Road will be adopted by the Local Authority.
Authority will be responsible for implementing an adequate management regime, ensuring that landscaping and street furniture are maintained and repaired as necessary, helping to sustain an attractive, safe environment.

The planting to the mesh Weld Fencing along Conway Street and Fonthill Road will require annual maintenance to create a tidy environment and not obscure surveillance. This will be designed and constructed with longevity, robustness and ease of maintenance given due consideration, and where possible, plant species will be selected which require reduced upkeep and prevent ease of climbing.

Design

Place-Making Asset Assessment

INTRODUCTION

This Place making Statement has been prepared by AIAD on behalf of the Go-Ahead Group to support the proposed development of a Bus Garage to accommodate 67 buses, including ancillary four-bay workshop and office building, bin storage, fuel storage, oil storage and associated paths, fencing, gates and landscaping.

PHYSICAL

The opportunity has been taken to provide boundary planting which will significantly improve the growth for biodiversity which starts from a baseline of zero.

The bus garage is an integrated and needed part of the community.

The proposed design provides good quality internal and external environments for its users, promoting health and well-being; relates positively to the public spaces around them, contributing to social interaction and inclusion; and resolves the details of operation and servicing so that they are unobtrusive and well-integrated into their neighbourhoods

It is intended to reduce the impact of the bus crossovers on the quality of the adjacent public realm and the egress point is narrowed enabling more space for pedestrians and boundary treatments.

The site is located in a light commercial area with very few residential properties near the development.
The new building site layout will provide a modern facelift to this industrial site enhancing the general street scene with the proposal of a living green screen and community wall to become art opportunity to the site boundary.

The development will be built and operated by Brighton and Hove Bus Company, part of Go Ahead Group plc. As such there is a real long-term interest and investment in the build quality. In this way lifespan is ensured.

The development is designed to the highest standards, reducing resource requirements, including for land, energy and waste. The development will be fit for purpose and adaptable over time, reducing the need for redevelopment and unnecessary waste; and will use materials and adopt technologies to minimise environmental impact.

HEALTH / WELL-BEING

Both Brighton and Hove Bus Company and Go Ahead Group plc. are committed to work with the local community to provide employment and training opportunities.
They will work with the Council's employment mechanism, currently Workplace, to maximise local employment opportunities, including appropriate lead in time in relation to training provision.
Go-Ahead understands the importance of apprenticeships and the vital role they play in upskilling colleagues.

A dedicated route from the entrance of the site to the building offers pedestrian safety.

The proposals would significantly improve public transport facilities in the area and put in place the infrastructure to enable electrically powered vehicles to be charged on site.

Accessibility on and around the site are inherent to the scheme's design, such as lift, ambulant staircase and accessible WC/shower facilities, in line with policies at both Brighton and Hove wide and local levels.

A Quiet room is included in the design as a space for the staff to relax during breaks and a Faith room is proposed for the purpose of religious observance.

Design

Sustainability & Energy Strategy

The principles for the design of the proposed bus garage follows the recognised energy hierarchy to "Be Lean- Use Less Energy, Be Clean- Supply Energy Efficiently, Be Green- Assess Low or Zero Carbon (LZC) Energy Sources", by minimising the building's energy usage before applying renewable technologies to the design.

BE LEAN

The following summarises the key drivers of the energy strategy proposed for the development:

- Building Fabric First approach: Enhanced building fabric performance has been targeted through improved thermal performance and reduced air permeability;
- High Standards of airtightness and thermal (and Acoustic) Insulation coupled with measures to minimise thermal bridging Energy efficient heating, cooling, ventilation, hot water and lighting systems have been targeted throughout;
- Energy efficient controls for HVAC and lighting to minimise building in-use energy.

Detailed consideration has been given to:

- Improved insulation of walls, roofs, glazing and floors to reduce heat losses (but not at the expense of summertime overheating). Improvements to the glazing in the existing building.
- Maximisation of potential for natural ventilation (where ambient noise levels and room function and location permit).
- Minimisation of requirements for mechanical cooling, by the application of good ventilation techniques, the orientation of the building and the internal configuration of spaces.
- Reduction in electrical power usage via specification of efficient lighting controls, high efficiency luminaries and optimisation of daylighting through careful façade and building design.
- Specification of high efficiency plant/equipment.
- Minimising uncontrolled infiltration by robust construction details.
- Use of low energy ICT equipment.

The Building Regulations now requires buildings to reduce the carbon emissions associated with energy use by some 25% over and above the targets set in the 2006 Building Regulations.
There will be higher standards of insulation and air-tightness along with high efficient of lighting whilst maximising natural light (to comply with BS 5489 and BS EN 12464) SAPS, water calculations and conservation fittings to be in compliance and checked with British Standard and by Building Control.

DETAILED MATTERS:

Thermal Insulation

Thermal Insulation thickness's will exceed the requirements of Part L of the current Building regulations. Insulation installed with vapour checks to limit degradation of insulation material through air infiltration and moisture ingress.
Heat losses through cold bridging to be minimised by the use of insulated cavity closers, perimeter insulation to be taken into all openings in the external fabric and perimeter floor insulation to be installed at junction with wall and beneath the whole of the ground floor slab
Alternatives include low water content, high efficiency convector type central heating radiators. These offer a quick space heating response and when coupled with individual thermostatic control valves help minimise heat energy wastage.

Air tightness

Measures to be adopted would include: Extensive draught sealing of the building envelope during the construction phase, gaps around windows, doors, floors etc.

Natural light

Lighting accounts for around half of the electricity used in community buildings.. Demand for artificial lighting is minimised by maximising the potential for natural daylight. The proposals incorporates large windows which allow natural daylight to filter into the internal spaces. Energy efficient lighting to be installed to minimise energy use. Photocell controlled lighting, with occupancy sensors will be used where applicable.

Water conservation

All WC's will have low volume 3-5 litres dual flush cisterns.
All showers to restrict water use, all others taps with conventional fittings will have water saving flow restrictions.
Grey water recycling will be incorporated.

Design

Sustainability & Energy Strategy

Building energy management systems

Building energy management systems will be incorporated in the systems of the building to improve the energy performance of a building and its controllability, particularly in the combined engineering/administrative areas of the building. Electrical and thermal energy consumption as well as water consumption will be monitored.

Construction materials

In the first instance all materials to be locally sourced as far as this is possible

- Window frames have a high recycled content / inputs. Whilst it is acknowledged that primary manufacture is quite energy intensive, life cycle, maintenance as well as recycle considerations are considered favourable.
- PVC-U as a material is to be minimised in the proposed works and has not been specified as an external finish for many reasons amongst them due to its high embodied environmental impacts in manufacture and limited re-cyclates value.
- All insulations including dry lining laminates to be high performance rigid board polyurethane.
- Preference will be given to locally sourced materials & suppliers, to reduce transport costs and Carbon Emissions.

Be Clean – Supply Energy Efficiently

In line with the second stage of the recognised energy hierarchy of intervention to “Be Lean, Be Clean, Be Green”, the building services for the development should be designed with energy efficiency at the forefront, with plant and systems selected to have efficiencies in excess of those required by legislation to maximise carbon reduction. A summary of the proposed servicing strategy is provided below.

Heating

Heating in the office building shall be provided by Air Conditioning Units (Heating and Cooling).
Hot water will be provided via electric water heaters.
In the main Workshop heating will be provided by radiant electric heaters and hot air curtains over the roller shutters.

Natural ventilation

Natural ventilation shall be maximised where possible areas such as offices & staff rooms. Mechanical ventilation shall be provided by a series of high efficiency heat recovery units. In accordance with the employer’s requirements and MEP performance specification, via local ceiling extract fans ducted to roof. The systems will provide continuous extract with a ‘boost’ activated upon presence detection.
Lighting control shall incorporate PIR and day-lighting, as appropriate and as detailed within the MEP performance specification.

Be Green - Low & Zero Carbon Technologies

This section provides a brief overview of available renewable and low/zero carbon technologies and discusses the advantages and disadvantages that are specific to the project.

Renwable Sources and Energy

Solar Panles and Green Roof are option that we are exploring for all the new Go-Ahead development and when suitable and valuable taken in to account.

Go-Ahead