



ARCHITECTURAL DESIGN STATEMENT

06.03.2024

12th Lock Studios

South Dublin County Council

SFA42
ARCHITECTS



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1. INTRODUCTION

SFA42 have been asked by SDCC to develop a proposal for a film production studios at 12th lock which redevelops a large industrial unit located east of the R120, north of the mill buildings. This is the first project as part of the implementation of the 12th lock Masterplan which was prepared as a roadmap for the adaptive reuse of several buildings along the canal close to the 12th Lock Lucan.

SDCC enterprise department identified a need for a production studio which will provide facilities for smaller film production companies and start ups within the burgeoning Irish film industry. The buildings program is based on research and meetings with local and international businesses from the film and lighting industries to develop the brief. The proposal is to provide film production studios and related facilities for small upcoming production companies, combined with flexible office space.

The existing footprint is maintained and studio spaces are located to the rear and the street elevations are activated by office space and public areas on the ground floor. The project also includes a relocation of existing esb substation, which will be incorporated within the building envelope. By repurposing this large industrial unit with a semi public use such as this the project activate the surrounding residential area and the Canal.



Aerial view of site and surrounding context



Aerial view of site and surrounding context

2. EXISTING SITE CONDITIONS

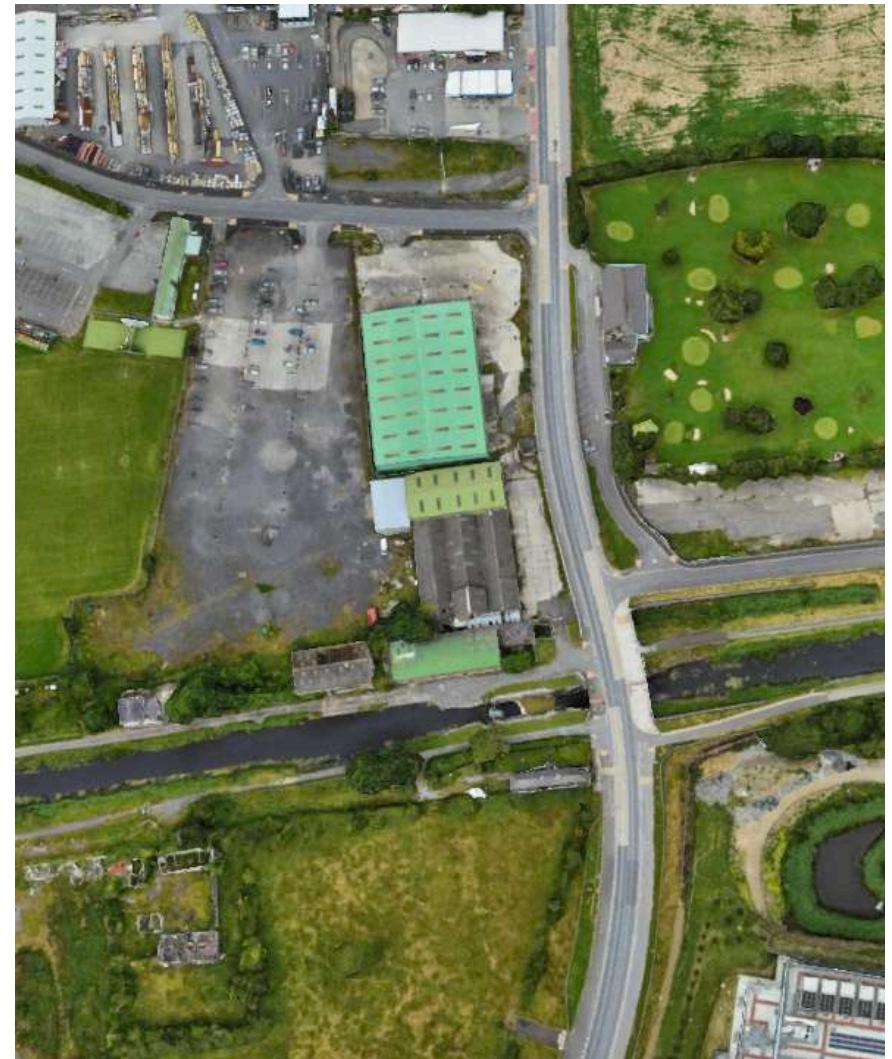
The site is located on the westside of the R120 north of the 12th Lock in Lucan Co. Dublin. It is well connected to the city centre via road and public transport. It currently contains three industrial units all single storey in various states of dereliction.

The first of which is in a dangerous state of repair and contains hazardous materials and is proposed to be demolished. The second shed is proposed to be removed as it was built over a right of way to give access to important services. The third and largest unit is in relatively good condition and is proposed to be repurposed as the film production studio.

The site perimeter is currently secured by a wall and tall metal security fence, which is proposed to be removed and replaced by soft landscaping. The entrance level of the studios is level with the canal walkway and the level difference between the road R120 is resolved by a planting berm. Vehicular entrances to the northwest corner of the site and pedestrian entrances are on the top, bottom and middle of the east elevation.



Existing Building Conditions



Aerial view of site and surrounding context

2.1 PROPOSED DEMOLITIONS

Two derelict structures which adjoin the large green industrial units are proposed to be demolished. The first building closest to the 12th lock protected structure from is a three bay single storey structure from the 1960s with concrete rendered block walls, dilapidated steel trusses and partially collapsed asbestos roof. As almost no part of the visible structure could be retained and the structure currently poses a health and safety risk the proposal is to free up the site by removing this building in its entirety. The second building is a more recent structure which was built above an existing underground electrical services route. It is proposed that this structure also be removed and the structure and cladding demounted for reuse in another location. This will free up access to services and facilitate the repurposing of the large green industrial unit as a film production studio.



Existing access and industrial sheds on site



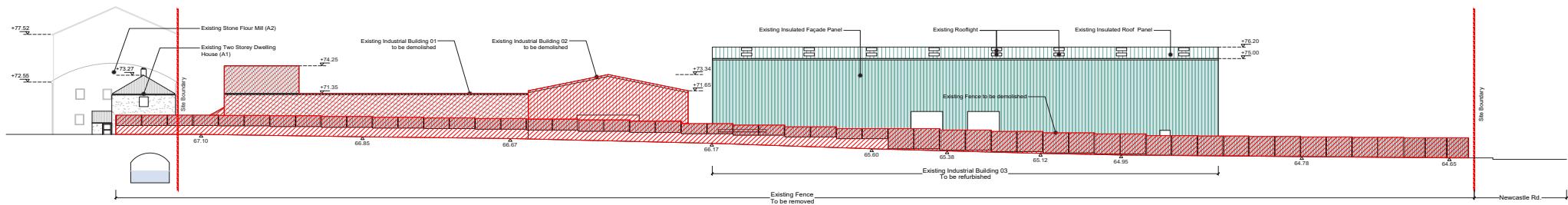
Existing industrial shed 01 to be demolished



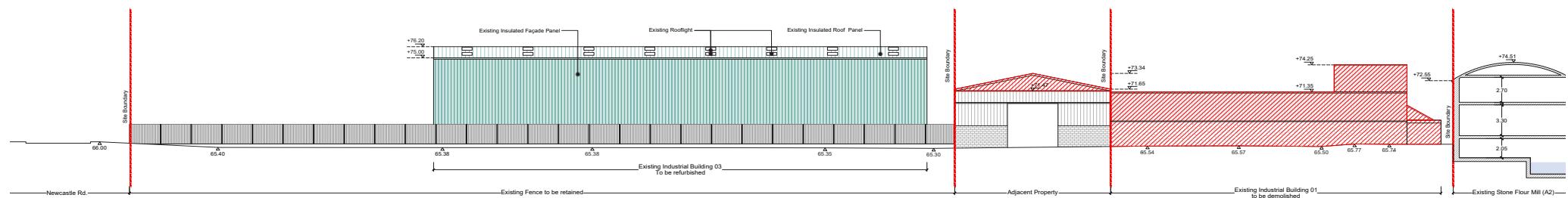
Existing industrial shed on adjacent site



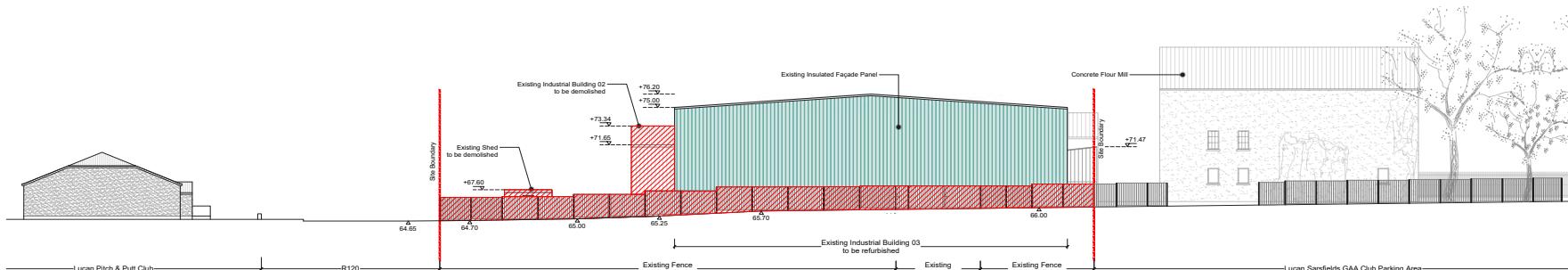
Existing industrial shed 02 to be demolished



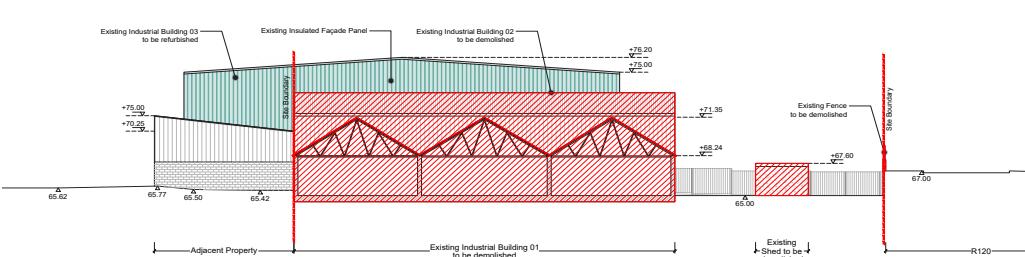
Existing Elevation 01



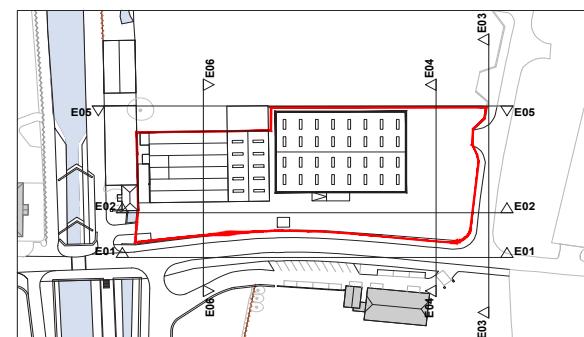
Existing Elevation 05



Existing Elevation 03



Existing Elevation 06

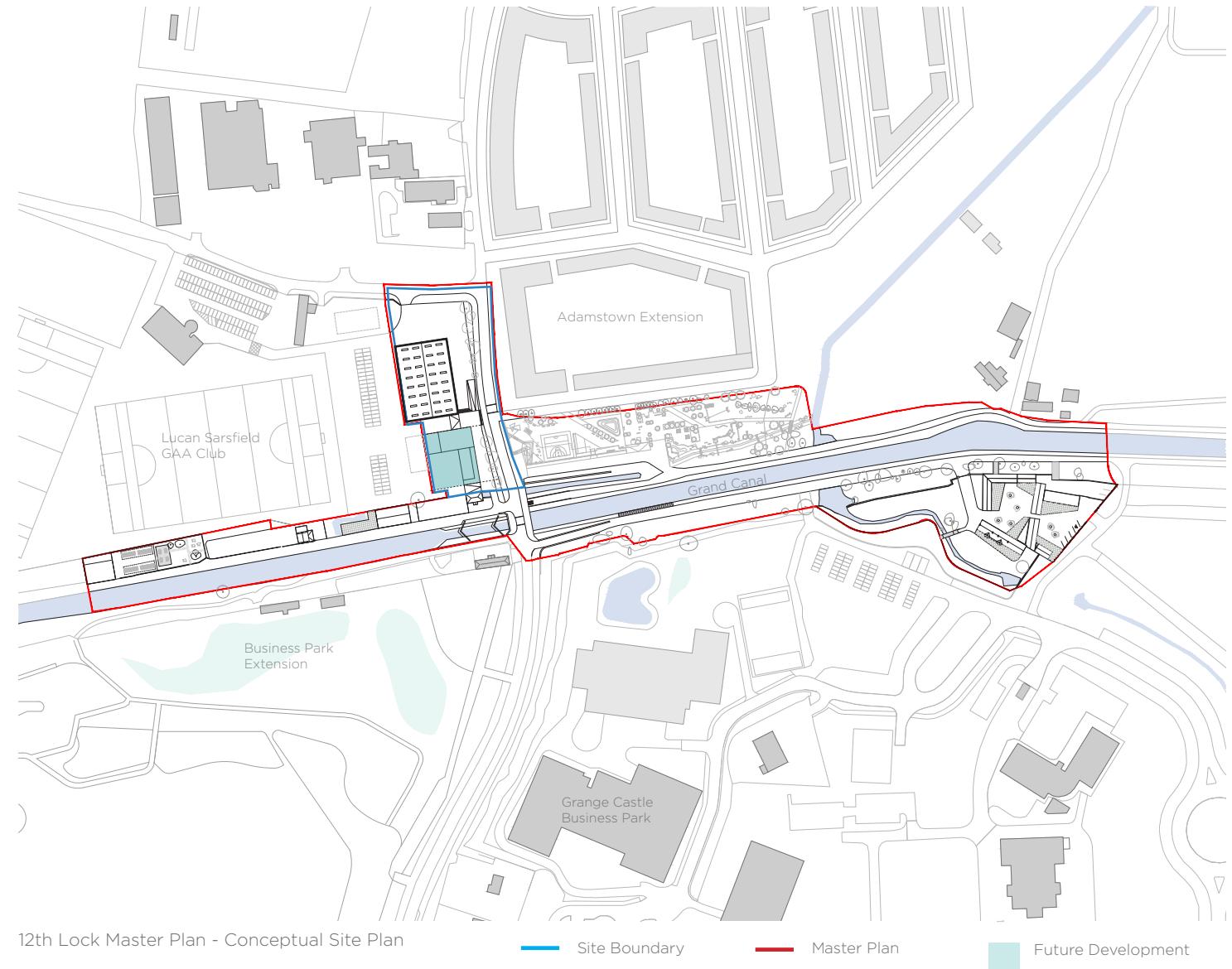


3. MASTER PLAN

The development of the proposed 12th Lock Studios building on the subject site is consistent with planning policies and objectives pertaining to the site and is in line with the zoning provisions of South Dublin County 12th Lock Master Plan.

The 12th lock masterplan takes in a section of the grand canal between the new residential areas of Clonburris and Adamstown and the Grange Castle Business Park. The area contains over a dozen derelict buildings of different scales and character in varied states of disrepair.

The project prioritizes the adaptive reuse of existing derelict structures rather than demolition and construction of new buildings. This reduces waste and embedded carbon, conserves resources, preserves cultural heritage and reduces urban sprawl with associated environmental and social impacts.



4. SCHEME CONCEPT

4.1 CONTEXT

The fundamental objective of the project is to reactivate the 12th lock area through the adaptive reuse of existing derelict and empty structures. Creating a positive public realm to connect public and semi-public buildings in the area is key. The removal of the derelict buildings to the south will provide an opportunity to rethink and address the relationship the site has with the protected structures of 12th Lock and the canal. This is detailed more in the Architectural Heritage Impact Assessment accompanying this report.

As previously mentioned, the site is currently protected by a high security fence which is proposed to be removed. This allows the public realm to expand into the site and allows for the separation of pedestrian traffic and cycle lanes along this edge of the R120.

The modifications to the façade respond to both this by making openings in the existing metal cladding, views out of the building to give passive surveillance to the extension of the public realm into the site. To the east of site the building immediately abuts the Lucan Sarsfields GAA Club. The improvements to this façade are limited to repainting, repairing or recladding as required with no new openings or overlooking proposed.



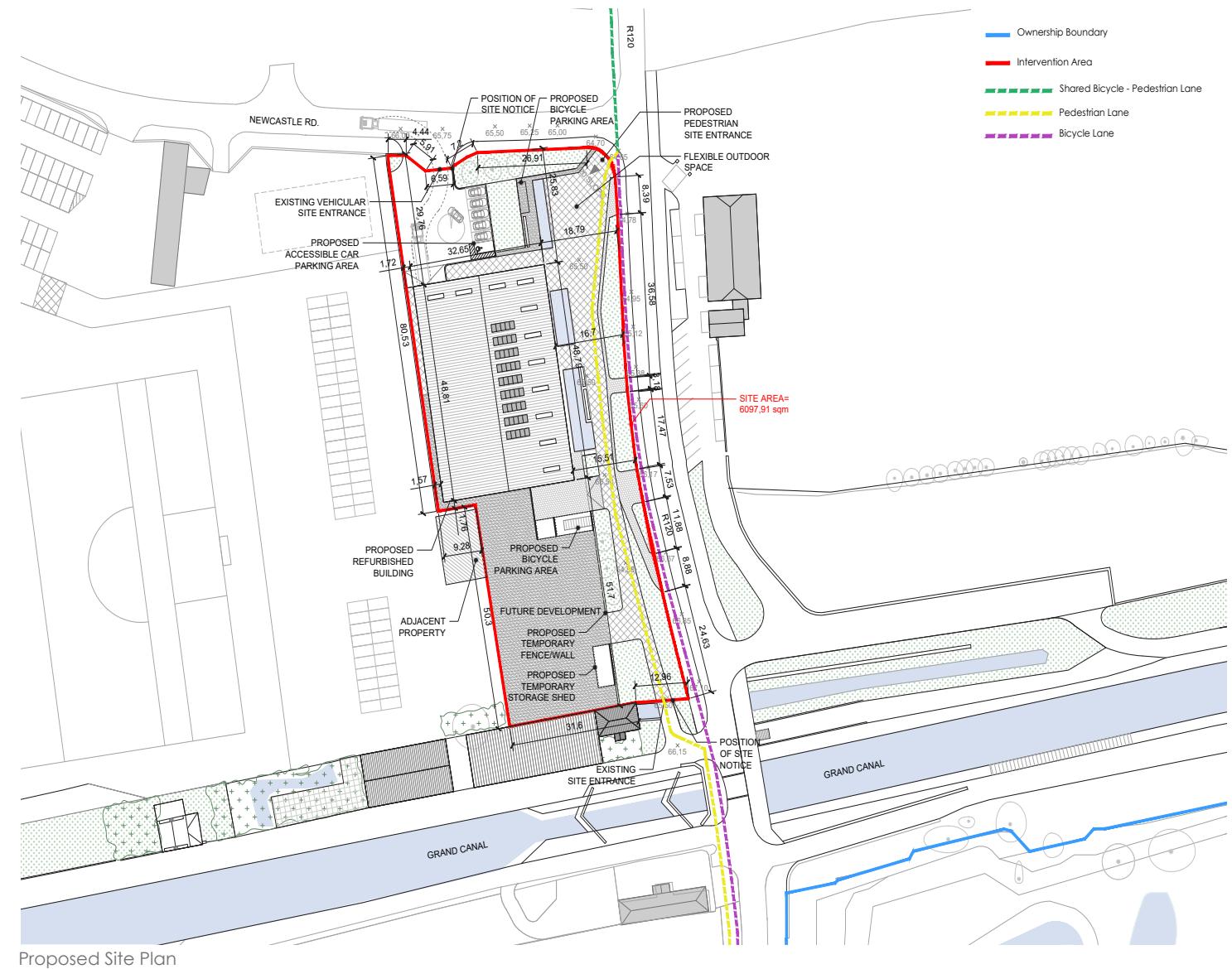
External view 01 · Existing conditions



External view 01 · Proposed

4.2 SITE STRATEGY

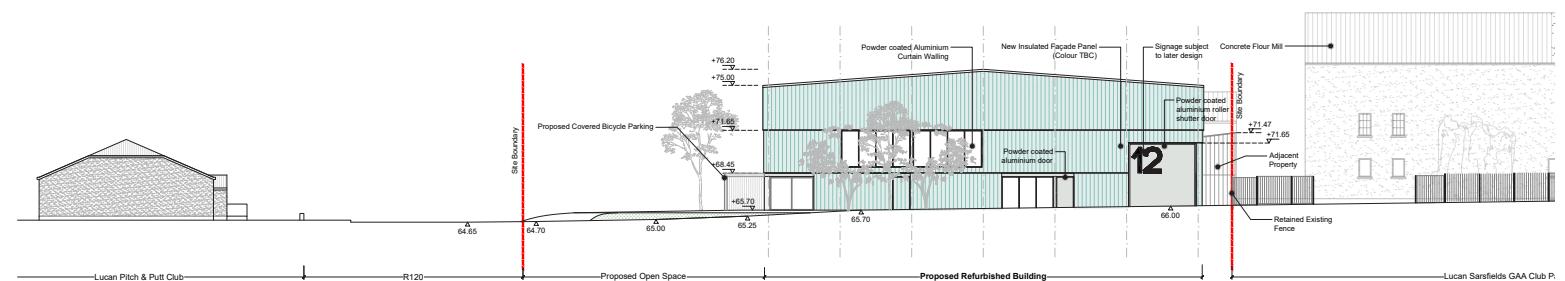
The urban strategy is set up by the following decisions: The pedestrian entrance to the studios is located at the corner of the building closest to Adamstown with an additional entrance for artists located at the centre of the long façade. This works with the organizational diagram for the studios where artists are admitted via reception to the changing rooms and studios. The vehicular entrance remains where it is currently located at the northern corner of the site. The car park is configured to provide for disabled parking/drop off and space for a truck to manoeuvre when entering/exiting the loading bay.



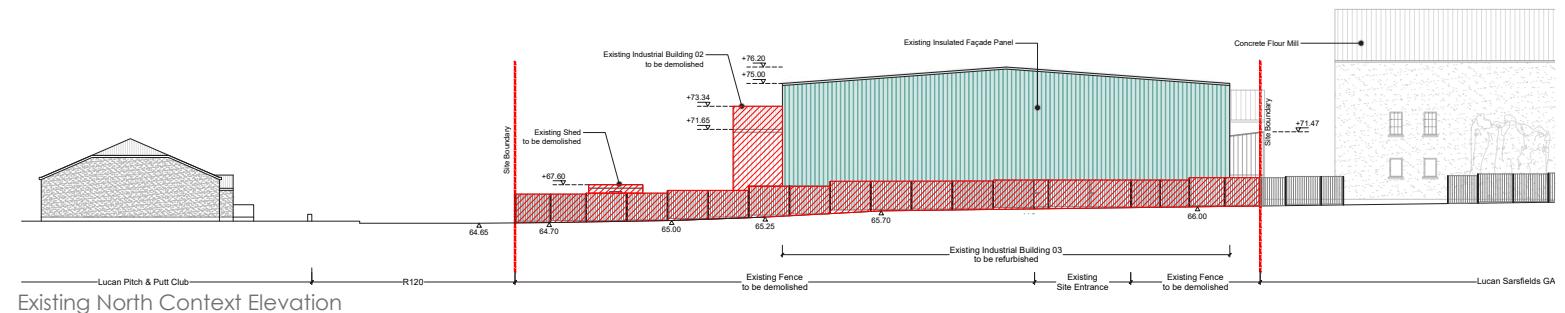
5. BUILDING DESCRIPTION

5.1 FAÇADE STRATEGY

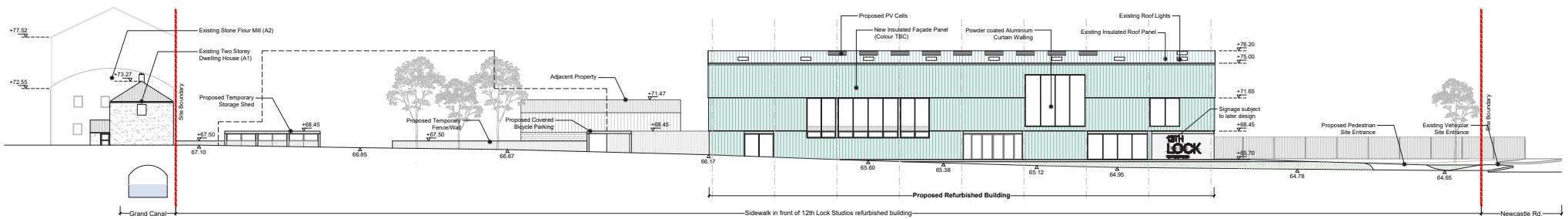
The existing industrial unit façade is made of corrugated green coloured aluminium façade and roof sheeting which has an approximate Value of .5 W/m2K and negligible acoustic properties. The proposal activates the street front by creating openings and wrapping the black box studio spaces with programmes which require natural light. The existing cladding is retained as a base layer and reclad and painted depending on the façade orientation to allow for the new openings, giving the project a more public nature. Thermal and Acoustic Insulation is increased to .16W/m2K and .44dB respectively by insulating the existing structure and creating voids around the studio space.



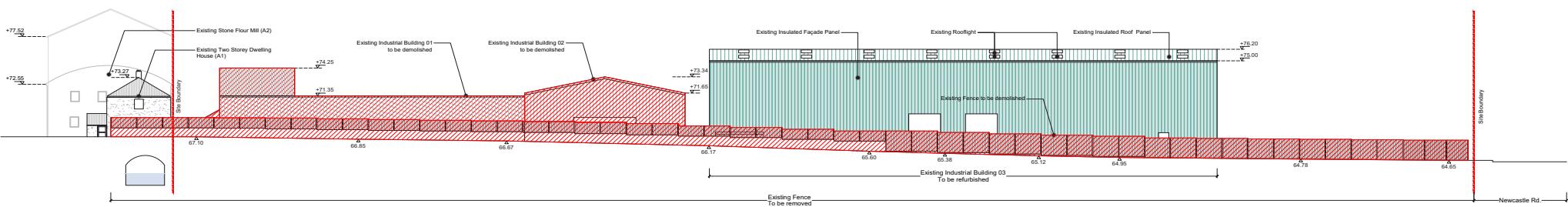
Proposed North Context Elevation



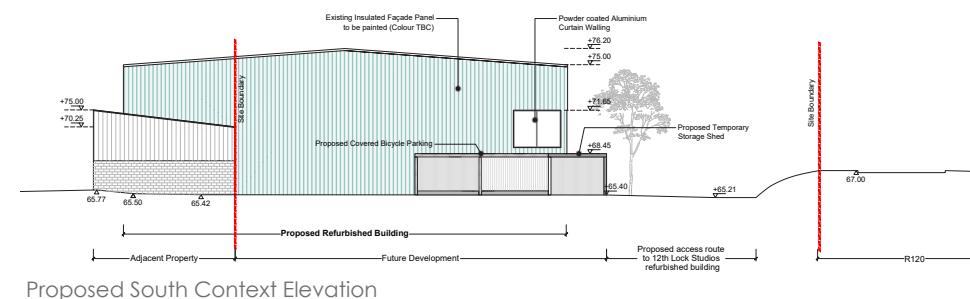
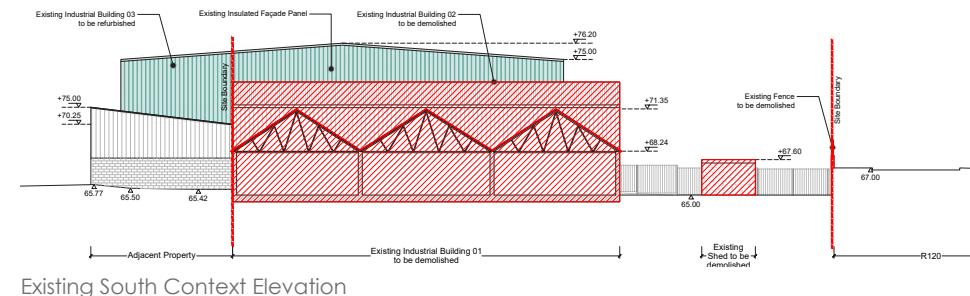
Existing North Context Elevation

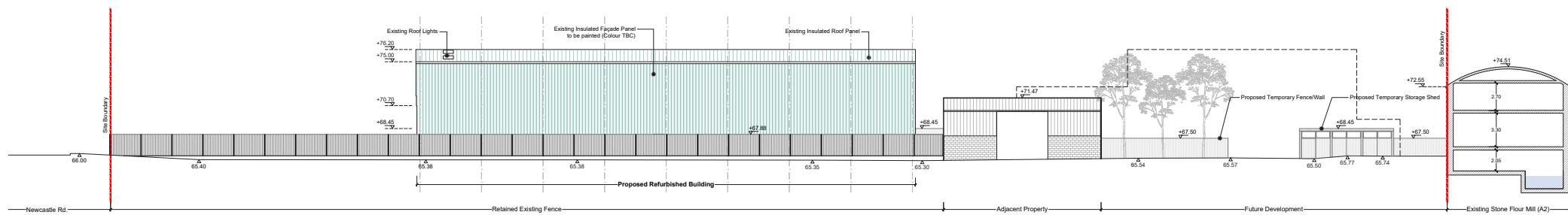


Proposed East Context Elevation

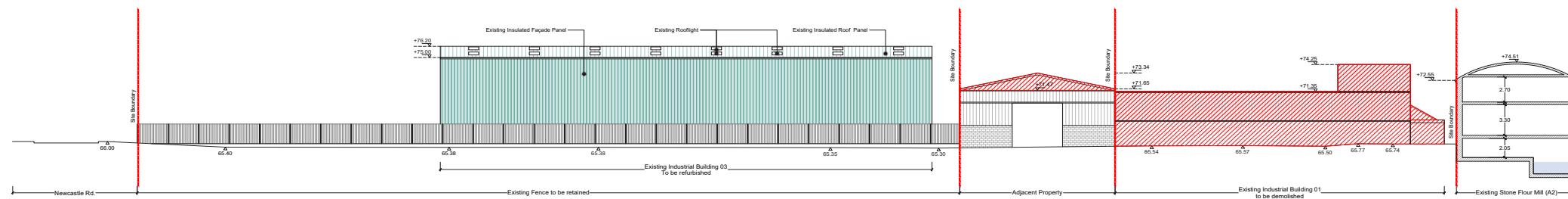


Existing East Context Elevation





Proposed East Context Elevation



Existing East Context Elevation



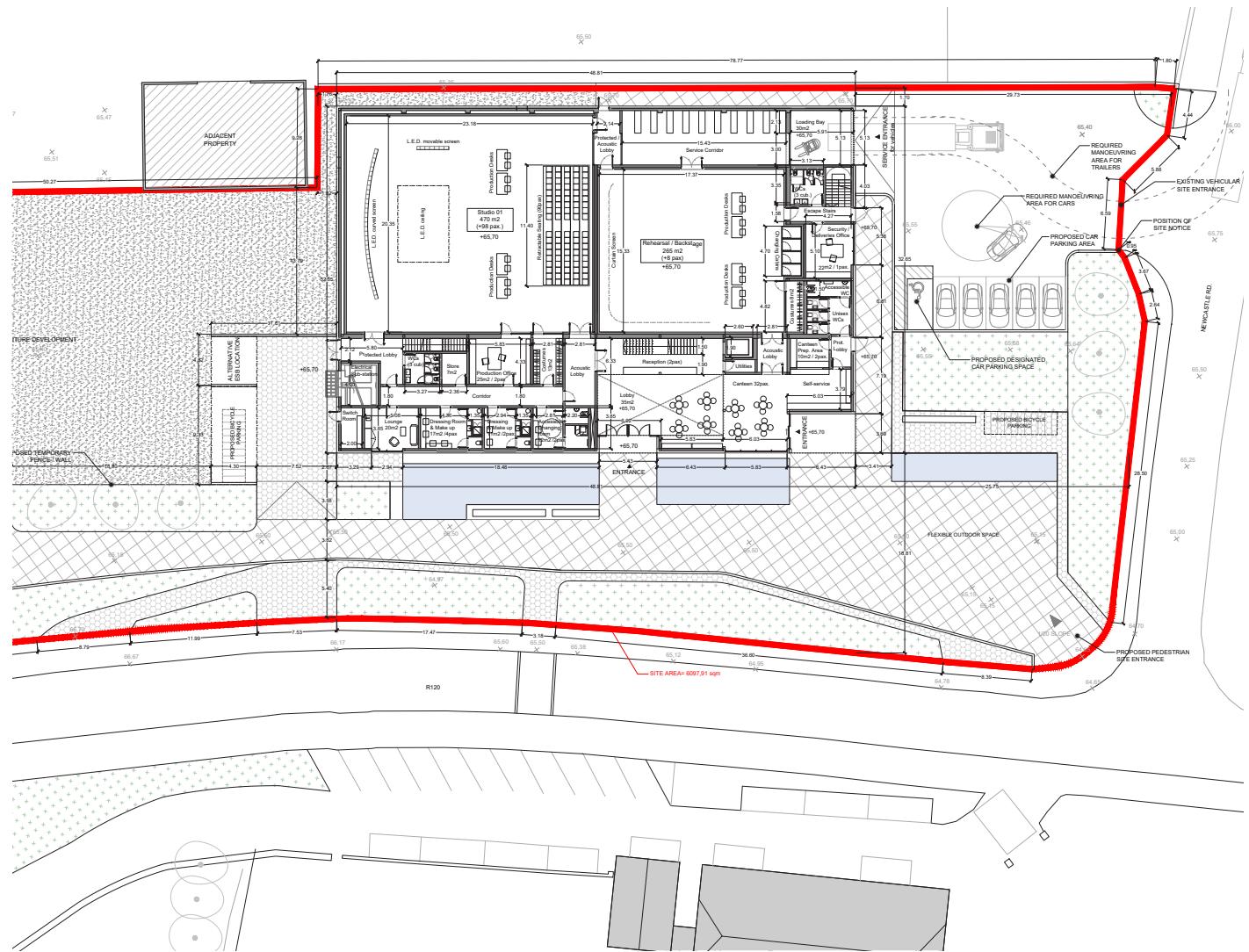
Proposed Exterior Image 01



Proposed Exterior Image 02

5.2 GROUND FLOOR

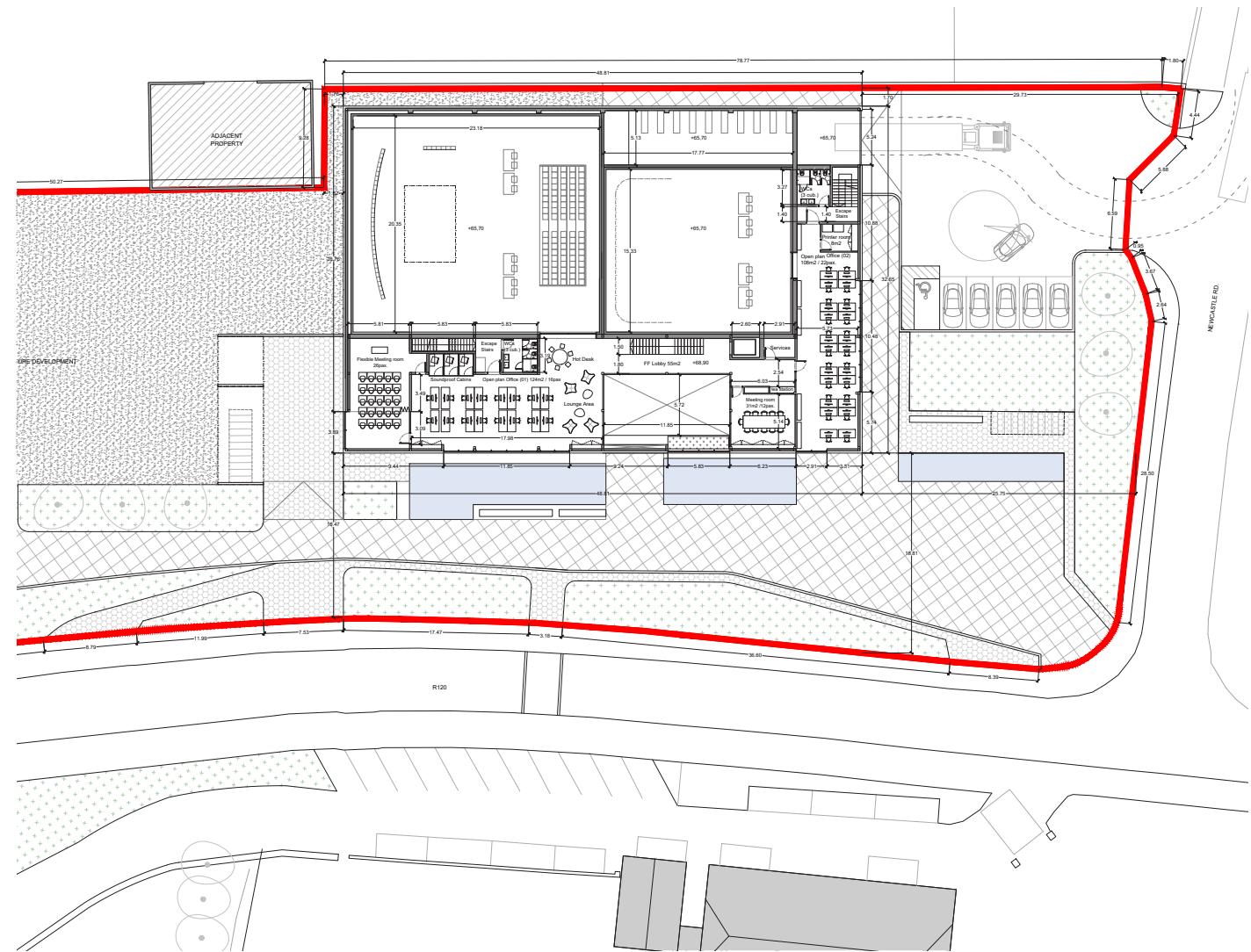
Internally the changing rooms and service areas such as makeup rooms, artist rooms, wcs and showers as well as switch rooms are all located on the southern corner of the ground floor. The canteen/cafe is located at the public entrance in the extension of the reception lobby space activating the corner elevation. The existing structure is modified at this entrance by removing a corner column at ground level to create a cantilever, welcoming people in and announcing the new public nature of the building.



Proposed Ground Floor Plan

5.3 FIRST FLOOR

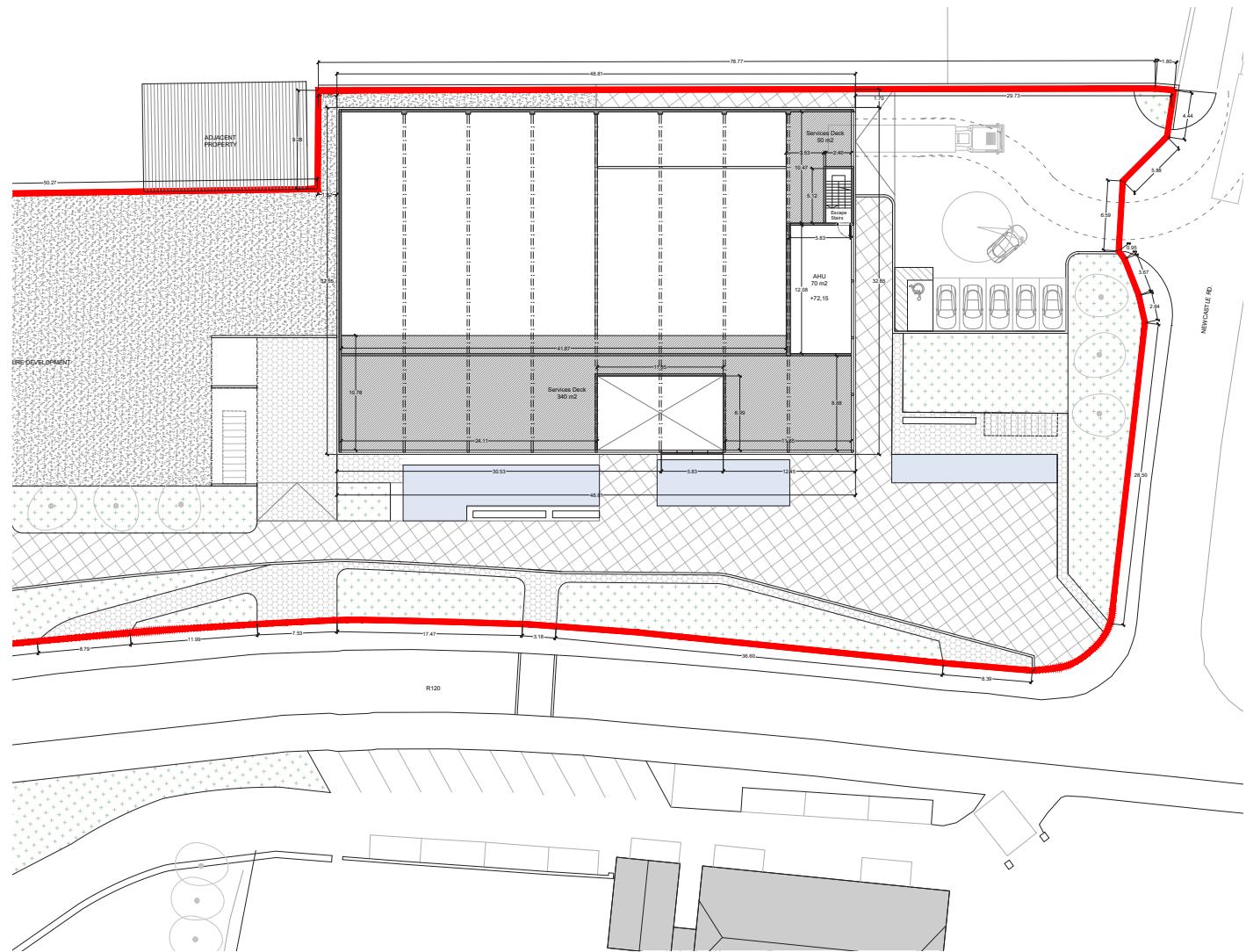
An open plan office/laboratory space, bathrooms, classrooms, meeting rooms and private offices make up the enterprise centre which is located on the first floor. It is envisaged that the enterprise centre will be primarily used by small production companies or enterprises with activities related to the film production industry. Additional glazing is added to the façade to provide light to the office space and views out of the building to the canal.



Proposed First Floor Plan

5.4 SECOND FLOOR

Occupiable space is located on the ground and first floor only. Services and plant are located on the second floor accessible from the stairwell on the north façade which also gives access to the mechanical and electrical systems at high level in the studios and above ceiling level on incubators, laboratory spaces and meeting rooms on the first floor eliminating the need for access hatches in these areas.



Proposed Second Floor Plan

5.5 BUILDING PROGRAMME

Working Spaces Concept - Incubator

The ground floor is accessed through the main entrance to the lobby, an open space with a clear height that visually blends with the first floor. A set of metallic stairs and a lift behind the reception desk connecting both floors. A seating/waiting area may be placed by the main entrance.

The hall gives way to common spaces/cafeteria in the northeast area of the ground floor, with large openings to the landscape. Changing rooms may be placed south of the lobby, distributed along a corridor accessible from the hall.

Working spaces are found in the first floor, which adopts an open concept for workspaces, also including isolated cabins and a conference room, as well as a common resting area. Large windows placed in the façade provide the work stations and the lobby with natural light and views to the street and the canal. The modular structure also allows the integration of luminaires in the ceiling, bring light deep into the plan. There is also an opening from each office wing into the studio spaces which will have a black out acoustic blind.



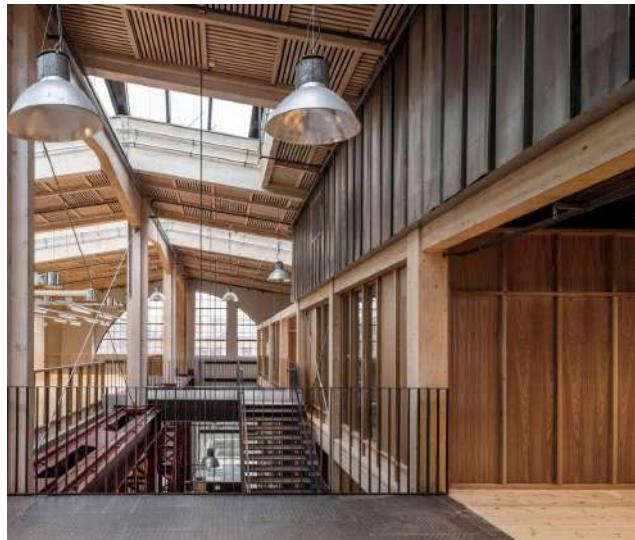
Proposed Interior Image 02 - Open Plan Office



Finsa Headquarters - MRM Arquitectos



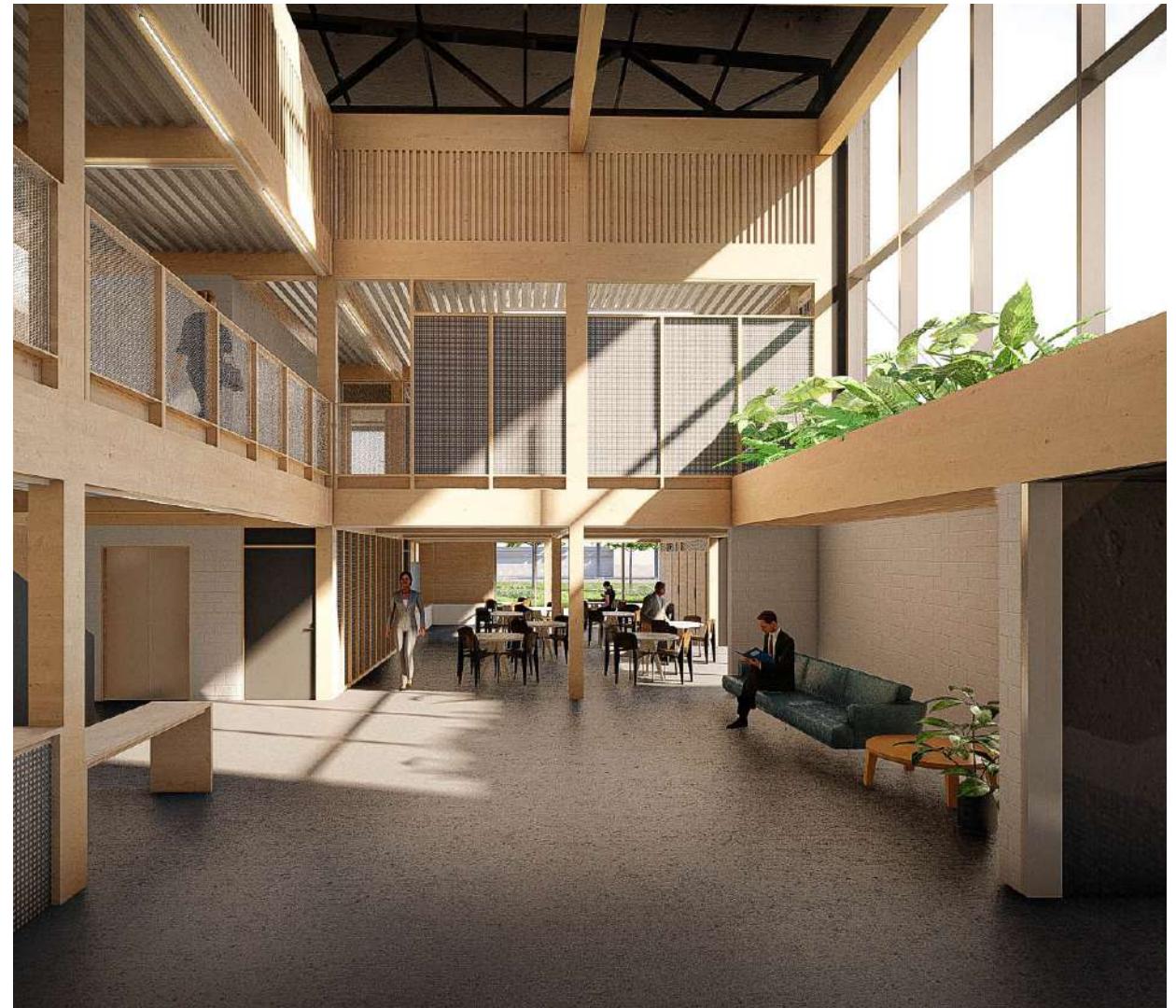
Gjuteriet Renovation - Kjellander Sjöberg



Gjuteriet Renovation - Kjellander Sjöberg



Finsa Headquarters - MRM Arquitectos



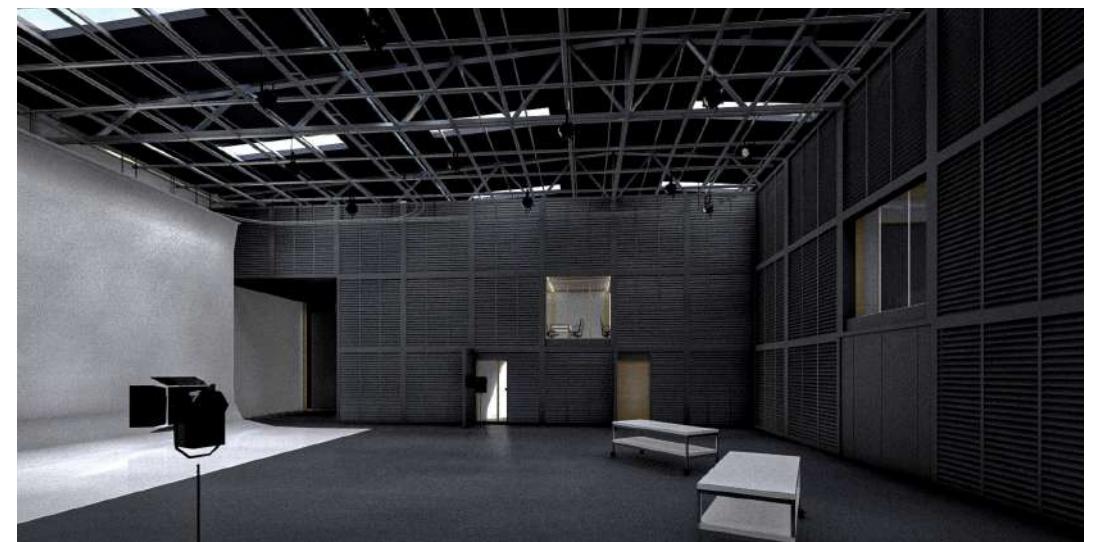
Proposed Interior Image 03 - Lobby

Studio Concept

The space is divided in two studios. A rehearsal, workshop and backstage area is located northwest of the plan, directly connected to the docking area and vehicular entrance. The main studio, situated south of the latter, will be equipped for film production companies to use for projects of short duration such as advertising or live performance.

Facilities may include retractable seating in the Main studios for live audiences, white curved background and a curved LED screen for digital display. It will also be equipped with other technical resources such as a stage lighting grid, which will provide flexibility to rearrange or install screens, lights and acoustic curtains, adapting to the needs of each shooting.

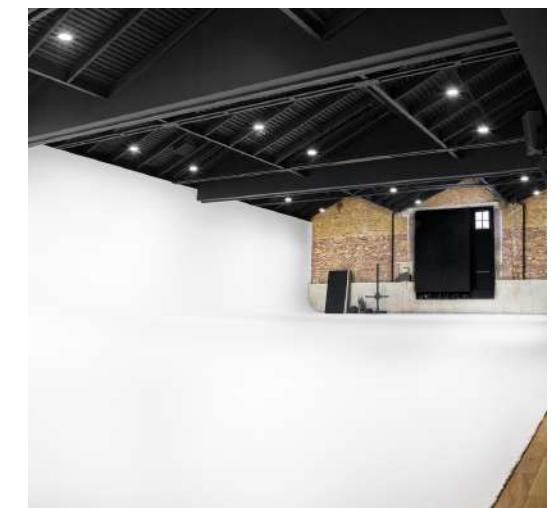
The recording studio will also have a direct access to ancillary spaces such as changing rooms, lounge and production/ director's office. As previously mentioned both studios will be visible from specific points of the first floor through large interior windows which can be screened if required.



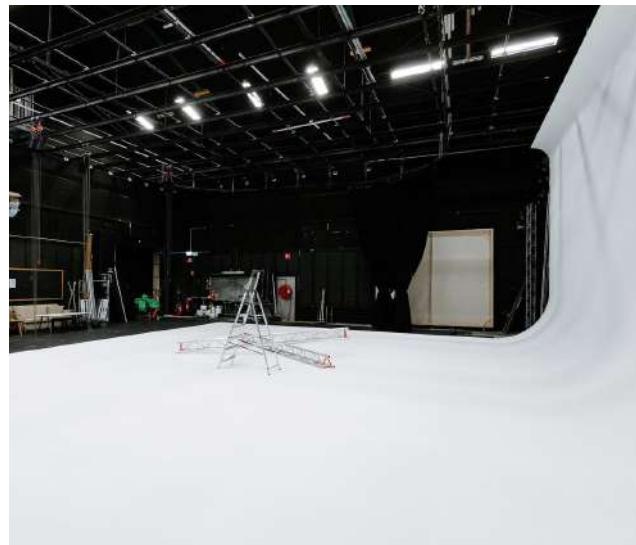
Proposed Interior Image - Rehearsal Studio



Independent Studios - Sweden



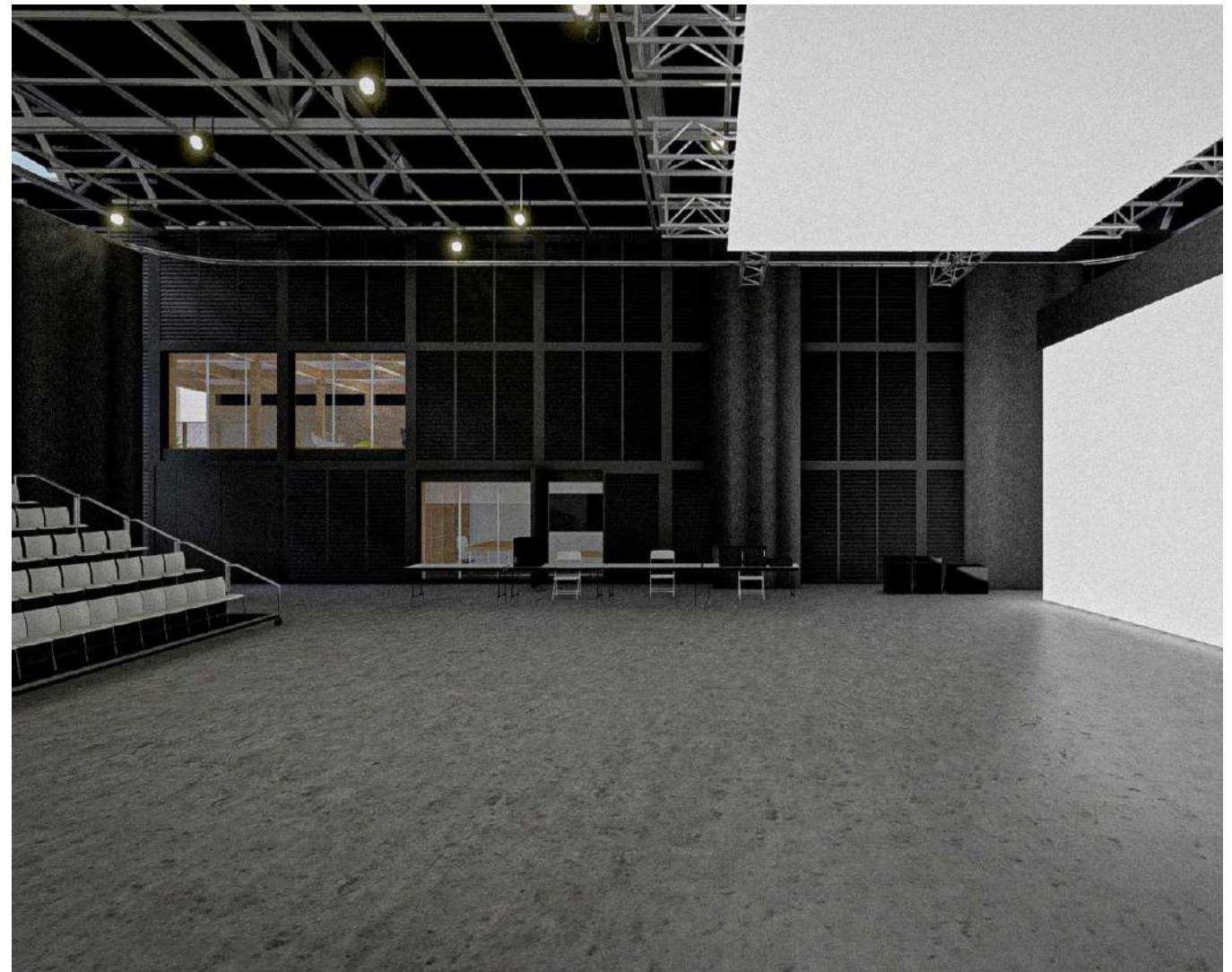
Alva Coachworks - Ackroyd Lowrie



Independent Studios - Sweden



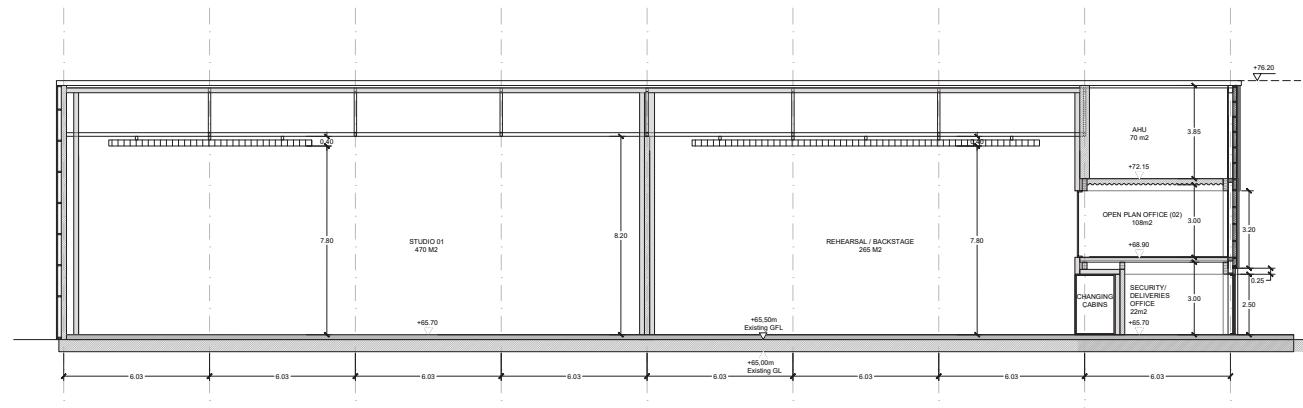
ReadySet Studios - Amsterdam



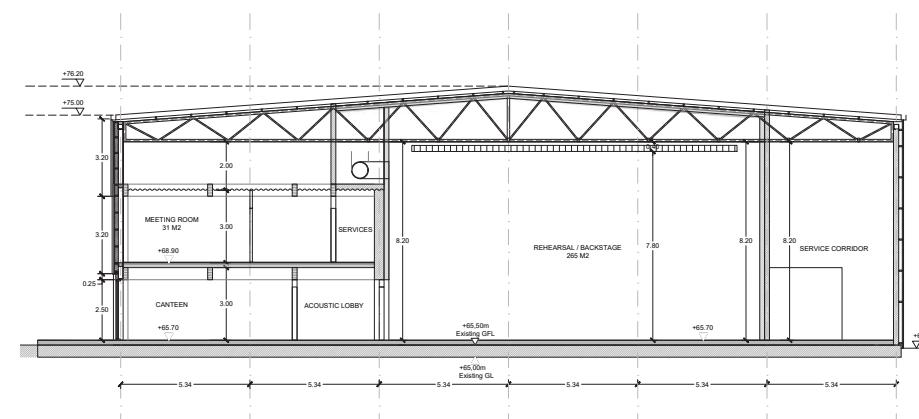
Proposed Interior Image - Main Studio

5.6 STRUCTURAL STRATEGY

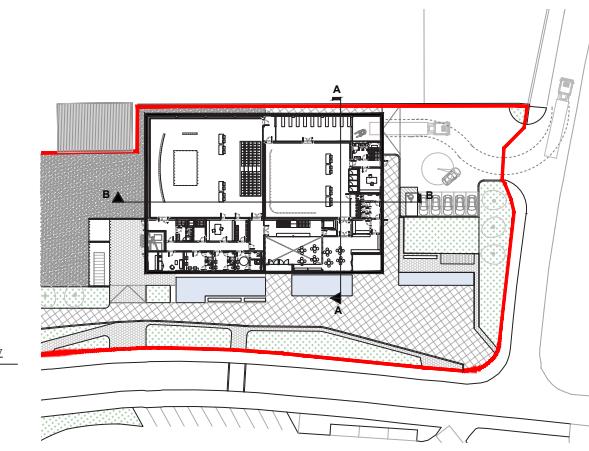
The existing structure is made of braced steel columns supporting a lightweight welded steel truss at roof level. The intervention is proposed to follow the existing structural bays with a timber and blockwork structure tied to the existing columns supporting the first floor offices and services deck above. The existing steel truss is reinforced and braced in the opposite direction to take the weight of cameras and lighting.



Proposed Section BB



Proposed Section AA



Key Plan

5.7 MATERIALS

Minimalizing the ecological impact of the project is one of the first considerations before choosing the structure material. Through maintaining the preexisting steel carcass, a new modular wooden structure integrates inside the vast spaciousness of the industrial unit, resembling the distribution of the original design order. These decisions minimize the carbon footprint of the process by using a prefabricated structure, as well as through the choice to preserve most of the preexisting conditions and not to rebuild from scratch.

As the modular arrangement of the new structure correlates with the old design of the building, it allows to harmonise the facades of both structures. Large windows on the exterior metal façade translate into the same openings on the inside, framed by wood pieces.

The skylights, the broad beams, the furniture and the interior partitions make up one continuous interior wooden envelope for the workspace and the common areas.

The extended use of wood includes a set of advances in heat and sound absorption, convenient for both the workplace and the studios. This is enhanced through the use of interior partitions such as acoustic wood panels.

The ceiling and the floor represent the main material variation, with the choice of the materials, concrete and metal, being inspired by the industrial character of the former use of the building.



Fibrocement Panels - Euronit



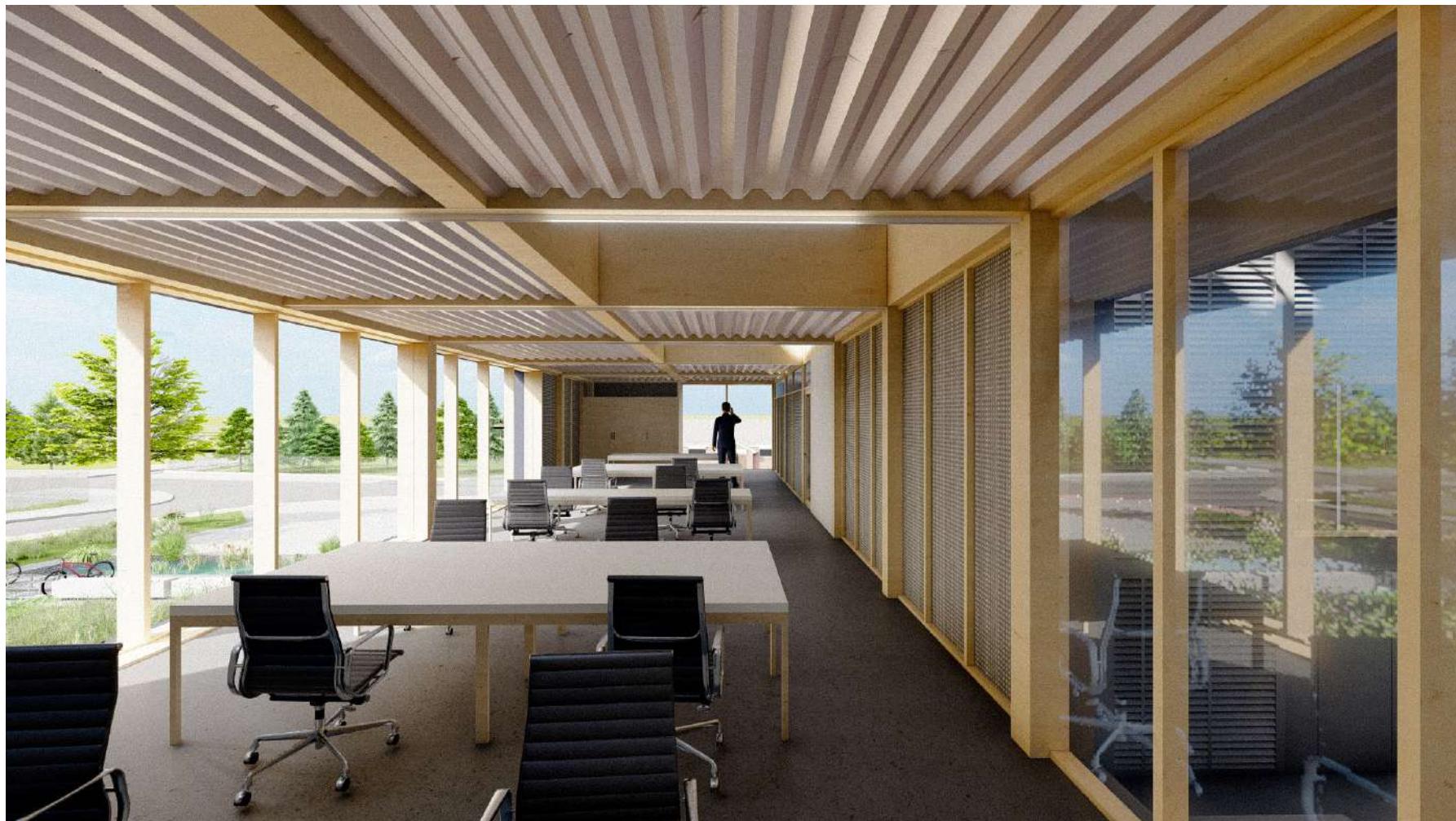
Lumber 4 Headquarters - Oslo



Kingspan Facade -
Vorwerk Uster by Spillmann Echslé



Gjuteriet Renovation - Kjellander Sjöberg



Proposed Interior Image 04 - Open Plan Office

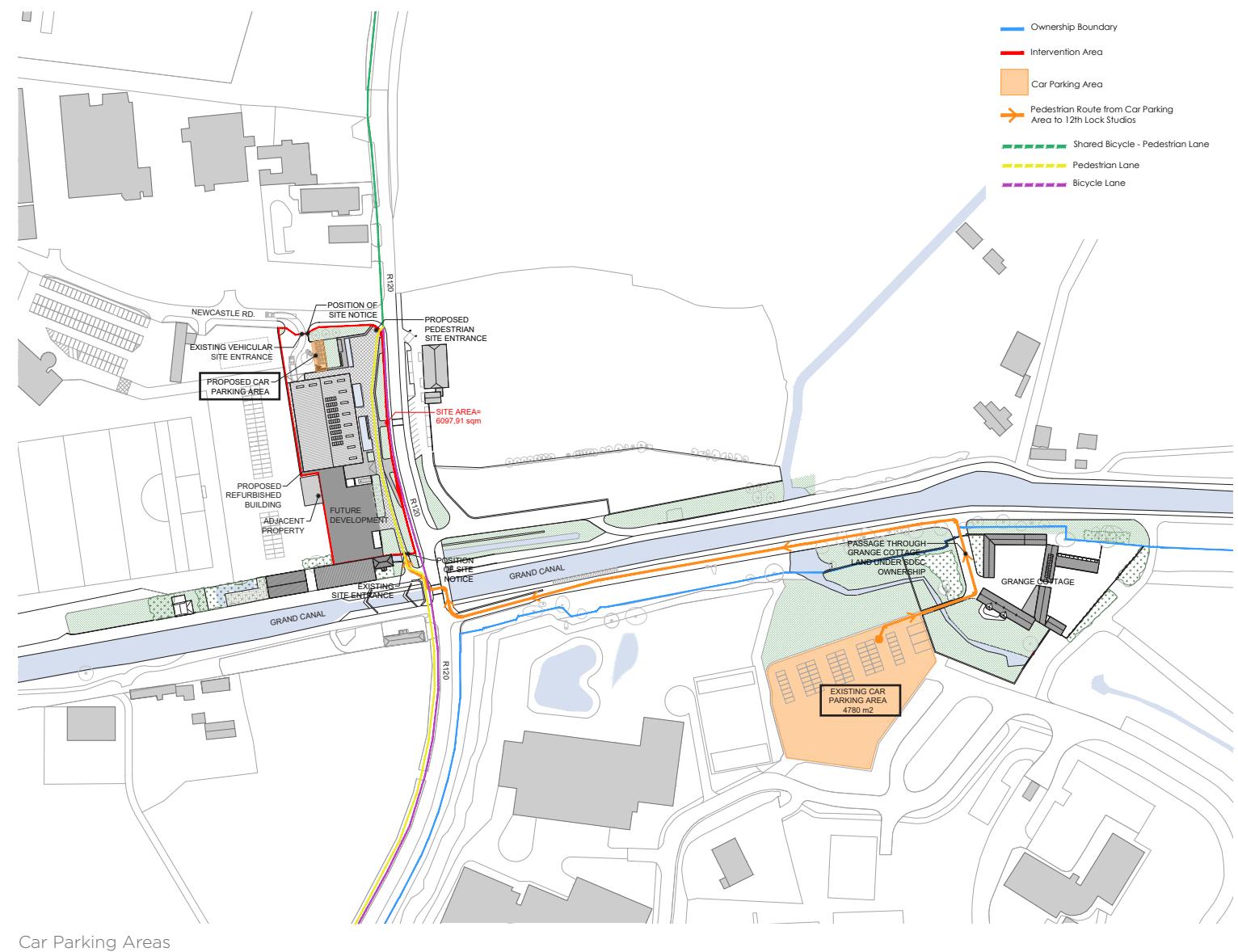
5.8 ACCESS

Regular vehicular access to the grounds is limited to the parking spaces, although a course that exits to the canal can be enabled in case of emergencies or special circumstances.

The main access for visitors and workers is placed in the east façade of the building.

5.9 CAR PARKING

Five number staff, drop off and disabled parking spaces are located onsite, northeast of the building. In addition to this, SDCC has allocated a large 100 car surface car park within 400m metres of the site, as shown in the diagram to the right.



5.10 BICYCLE PARKING

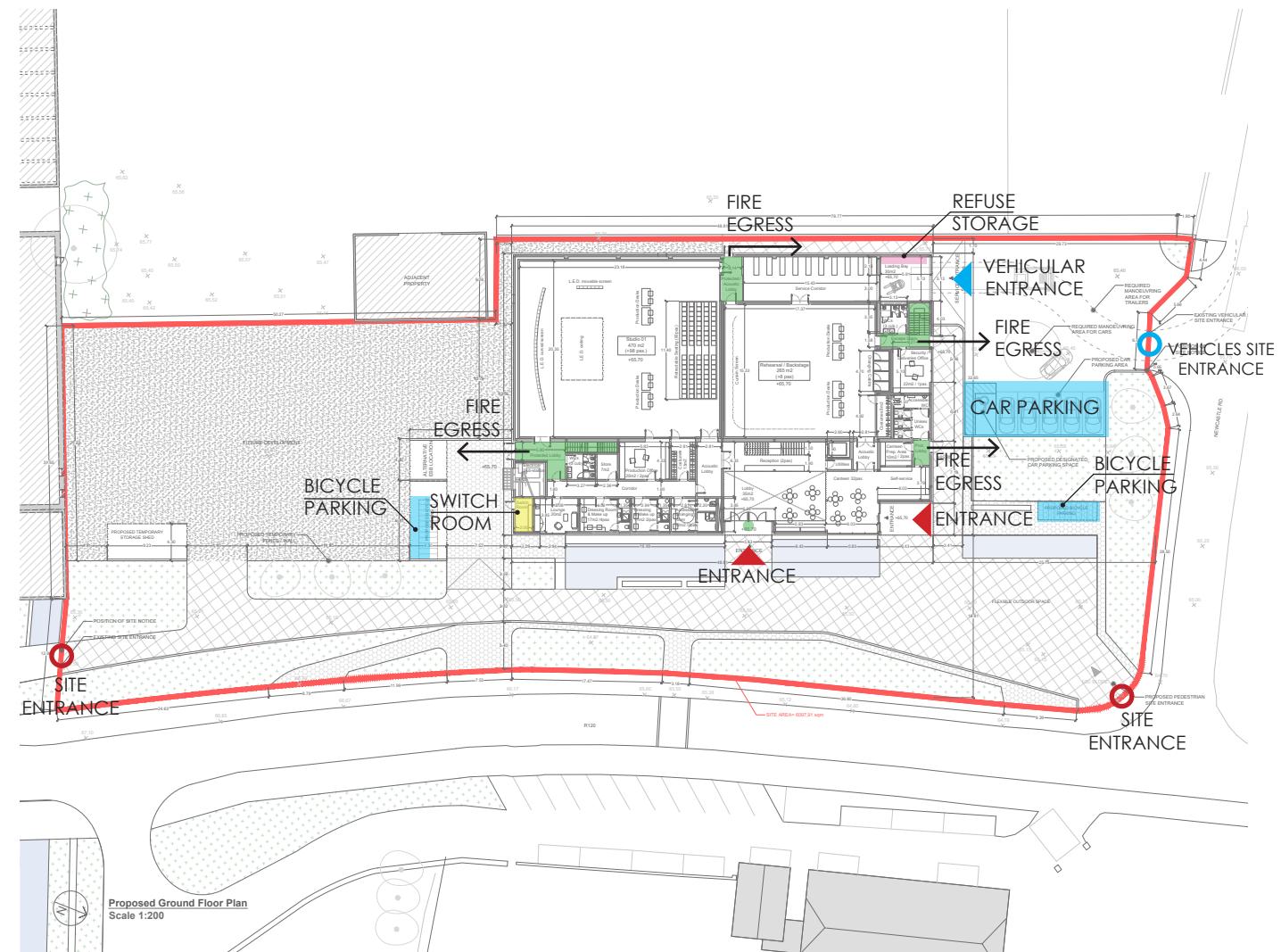
A bicycle parking is located next to the main entrance.

5.11 REFUSE STORAGE

A section of the loading bay by the vehicular entrance is dedicated to bin storage. It will be taken out of the building for recycling as required.

5.12 PLANT AND COMMUNICATIONS

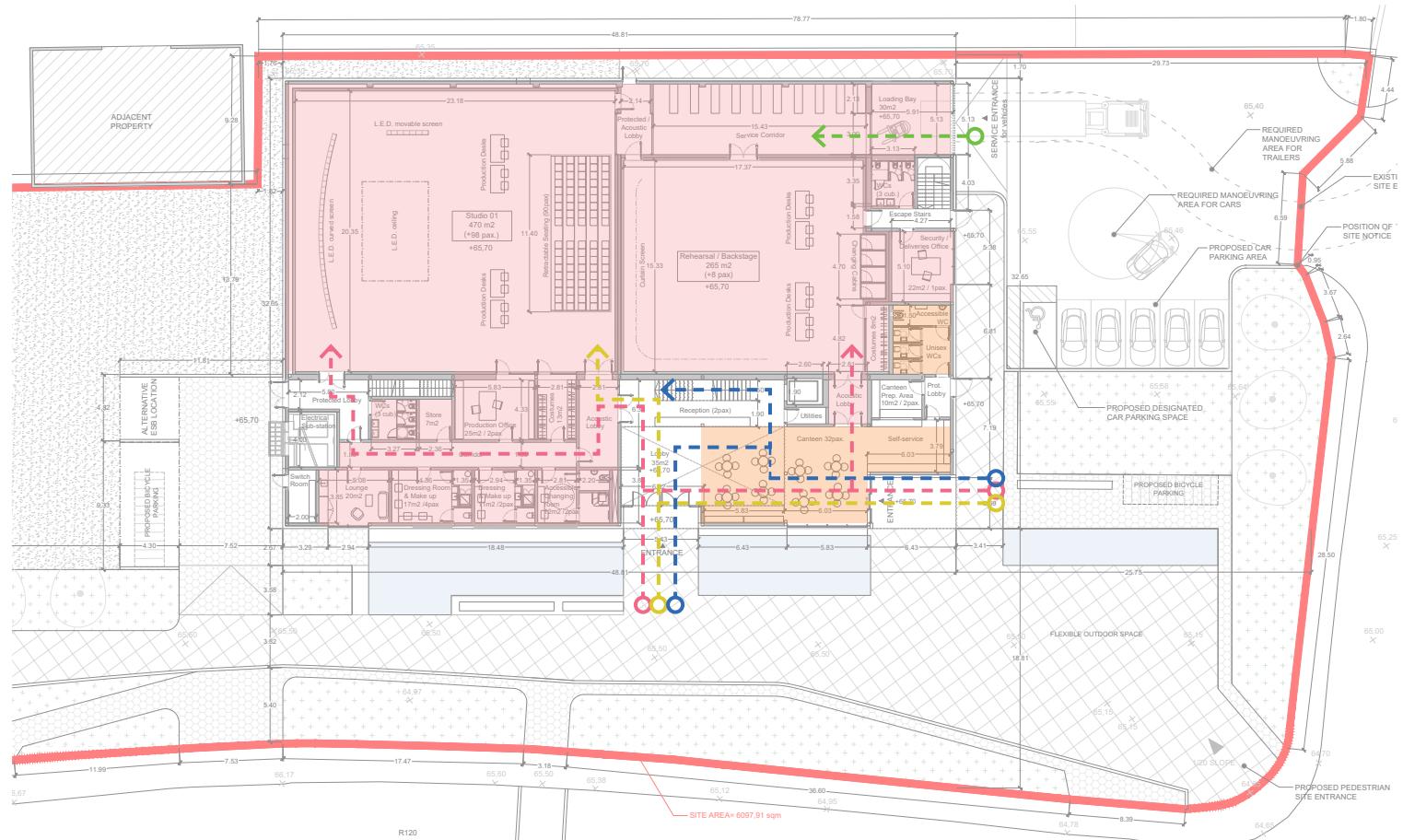
The existing ESB Substation is relocated with the building envelope, locating the switch room adjacent to it. Both spaces will have external access to the south elevation.



Services - Ground Floor Plan

5.13 USES & CIRCULATION ANALYSIS

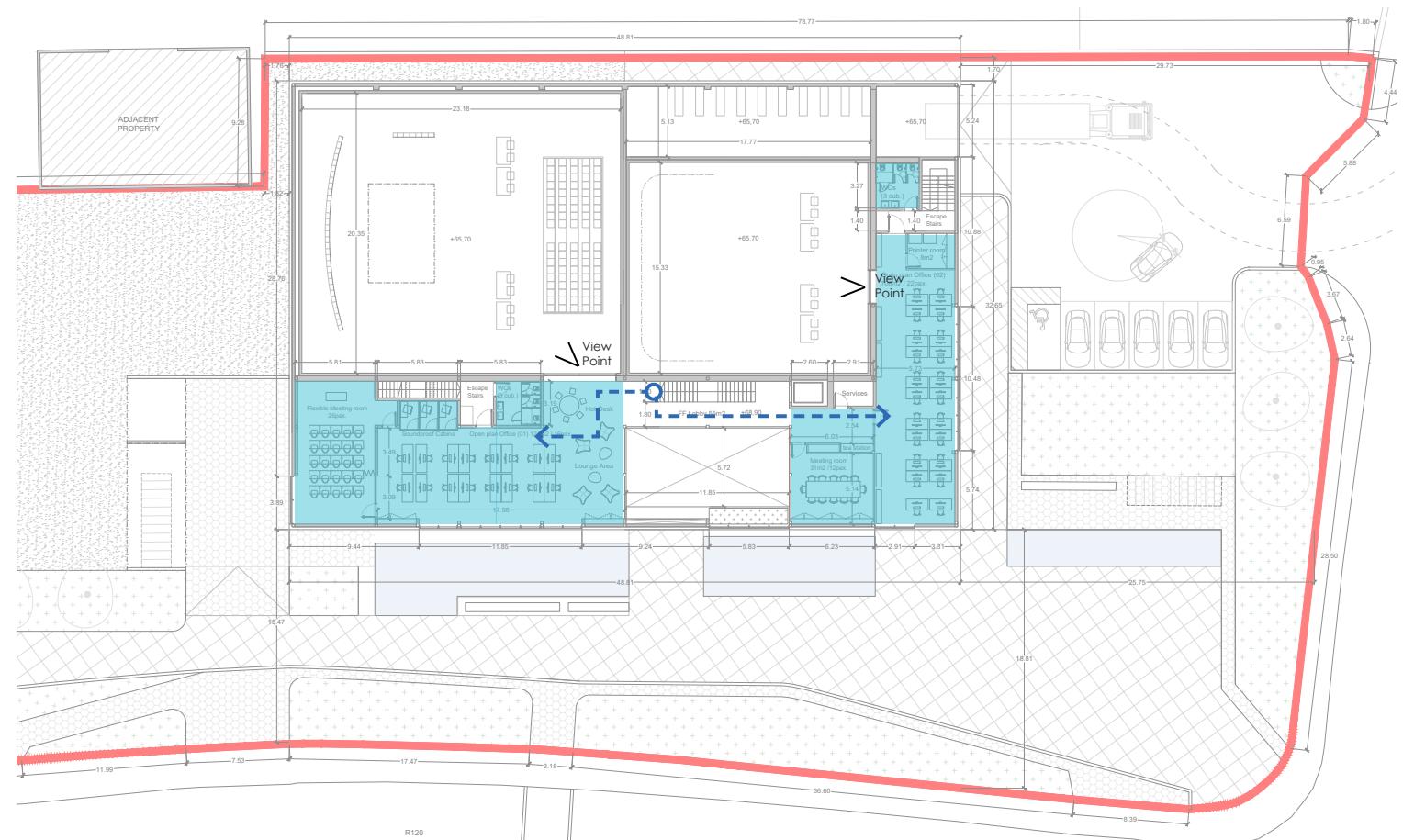
Circulation routes are marked on the adjacent drawing showing the three main user groups: Studios (artists), Office/Enterprise Centre Users and Audience/ Public Access. The general public will have access to the canteen area and Main studios for live performances while the rest of the building is for artists film production companies and users of the enterprise centre at first floor. There are two entrance doors to the entrance lobby which provide approach and escape from two directions. All access to the studios and ground floor facilities for the main studio is controlled via the reception area. The second, more informal rehearsal studio can be accessed via an acoustic lobby from the main entrance lobby or directly from the front carpark.



Uses and Flow analysis - Ground Floor

5.13 USES & CIRCULATION ANALYSIS

The first floor level is split in two allowing both wings to work independently if required and are access via the main stairs in the lobby and the lift in the centre of the plan. The escape stairs located at each end may provide additional access between the studios and the first floor offices if required.



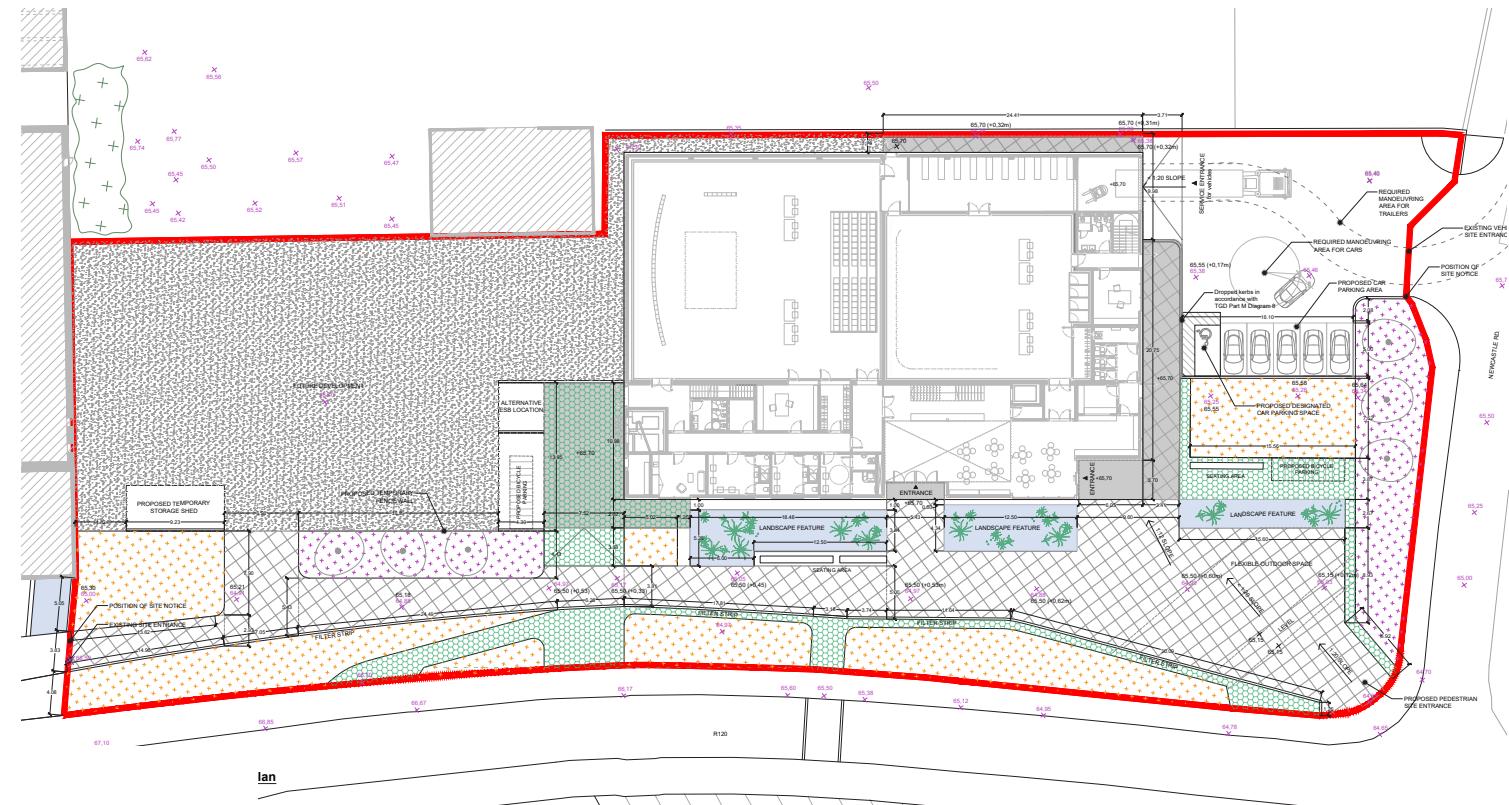
Uses and Flow analysis - First Floor Plan



Proposed Exterior Image 03 - Landscape intervention

5.14 LANDSCAPE STRATEGY

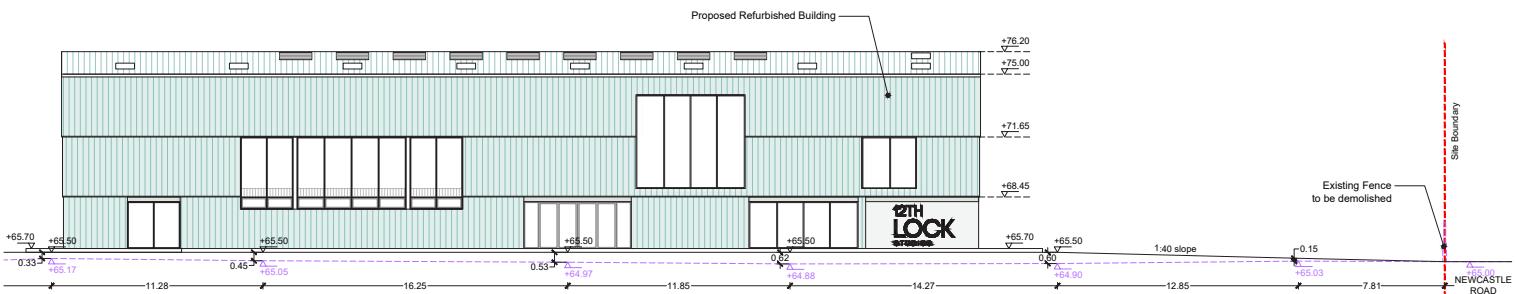
The main driver for the landscape is the level change between the site and the main road which is dealt with by creating a planted berm (slope) separating the cycle lane from area around the building. Another feature is the introduction of a bio retention swale as part of the Sustainable Urban Drainage Strategy. This area of water and plants next to the façade helps relate the project to the adjacent mill run and Grand canal.



Landscape Plan



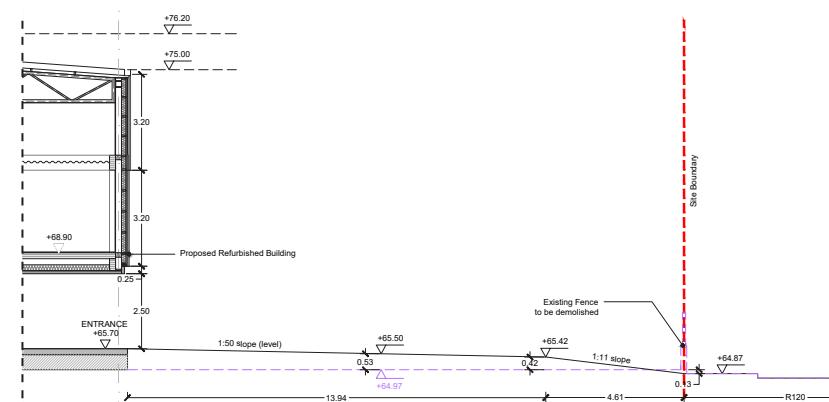
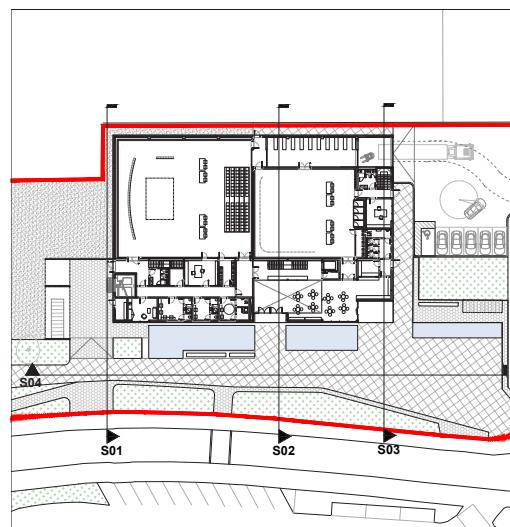
Landscape Section 04



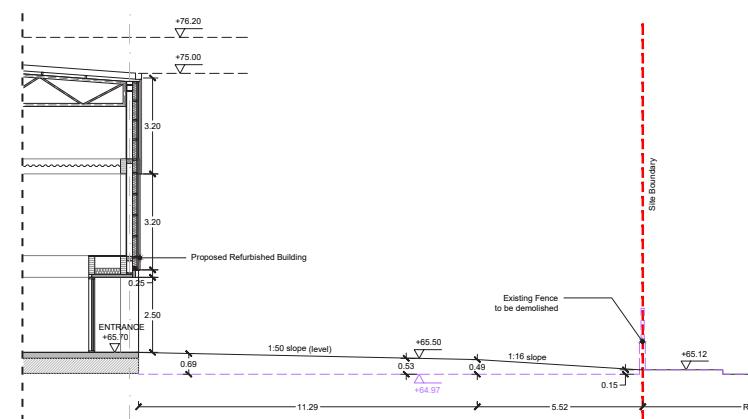
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5.14 LANDSCAPE STRATEGY

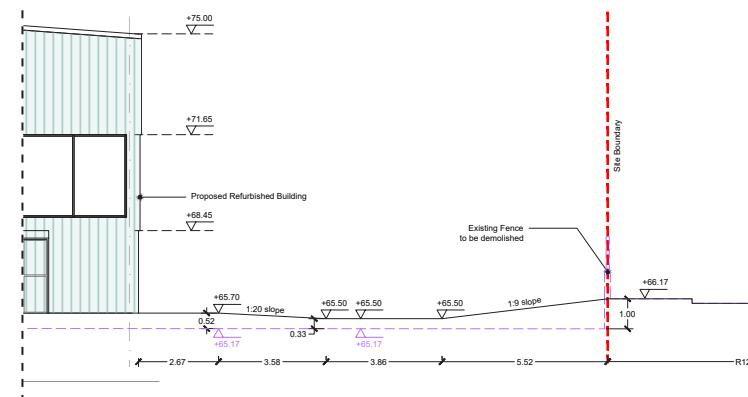
The sections adjacent show the level changes in the landscape in more detail. To provide level access to the building the ground slopes gently away from the entrances. A planting berm as shown in the plan links the cycle lane to the level of the entrance plaza.



Landscape Section 03



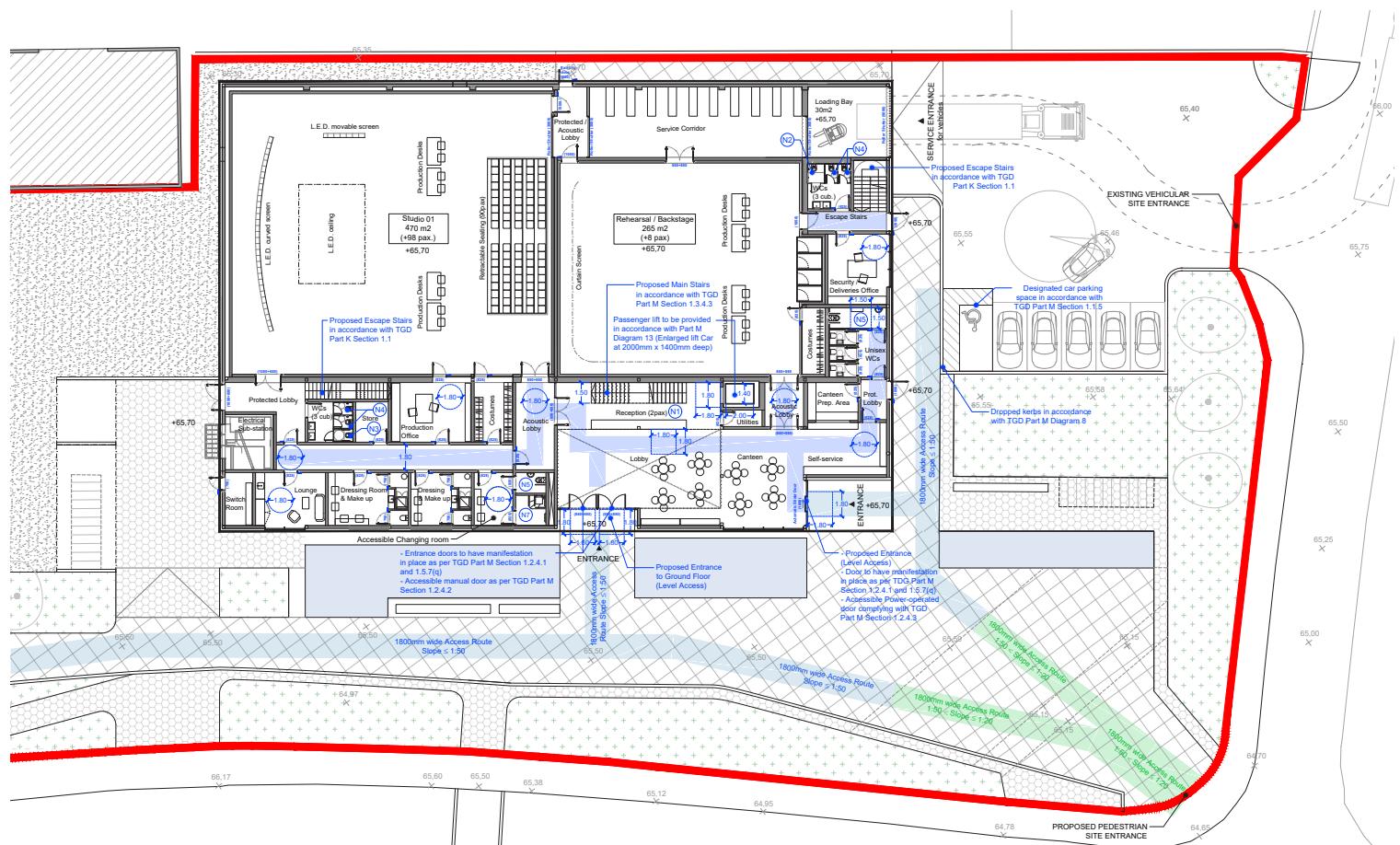
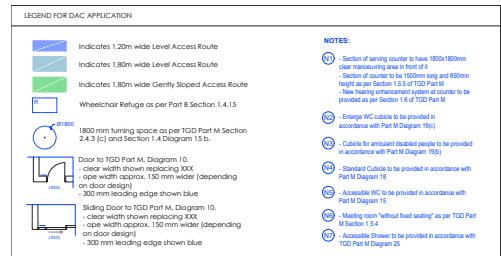
Landscape Section 02



Landscape Section 01

5.15 ACCESSIBILITY

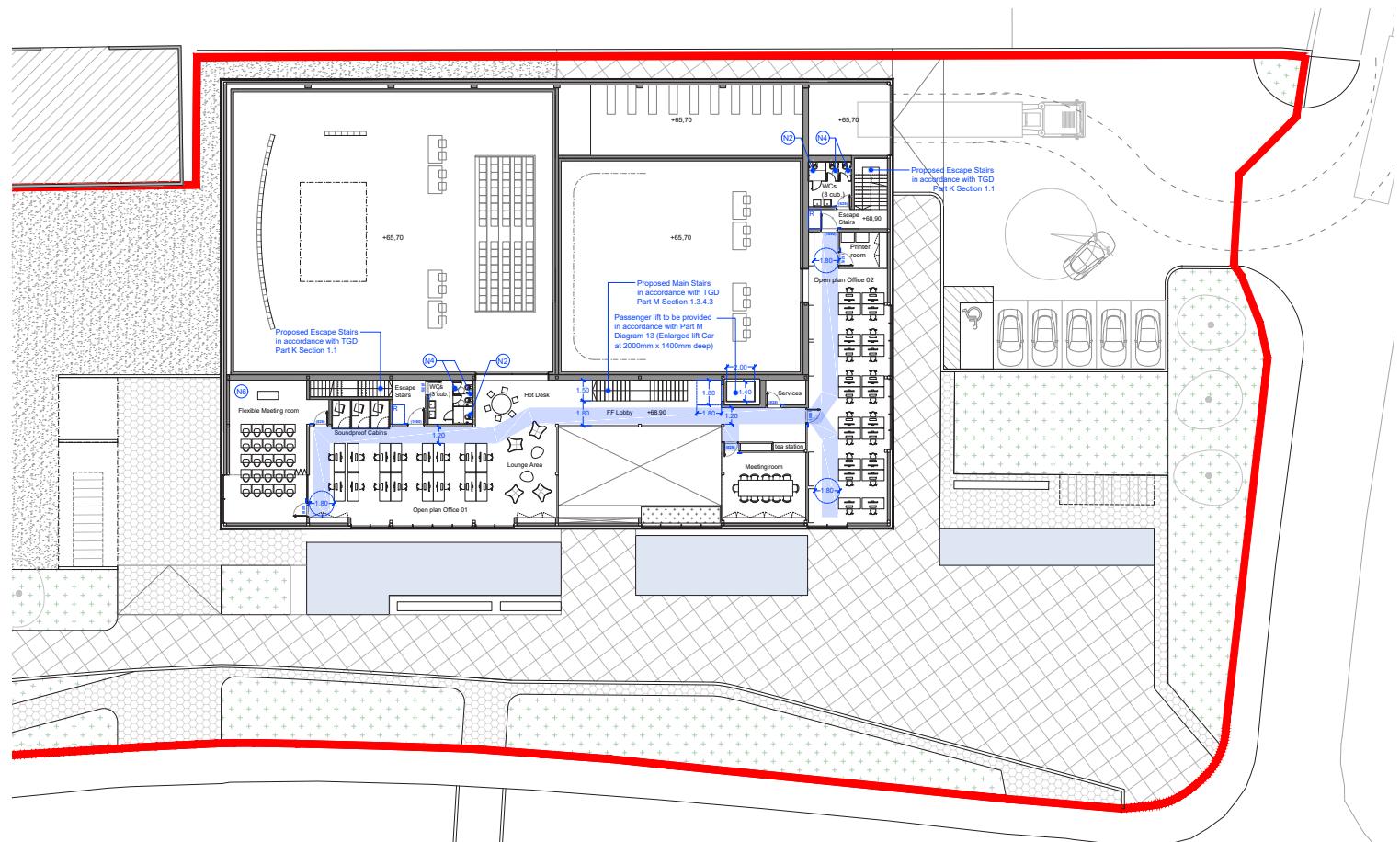
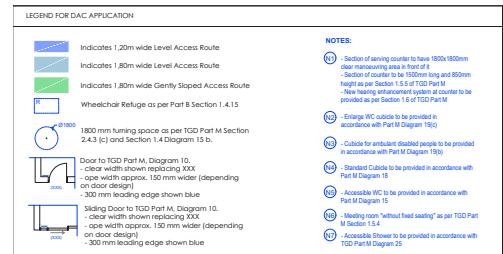
The building will have level access and be fully accessible, as per the recommendations of Part M of the Building Regulations (new Buildings). A universal changing room will be provided, and all areas of the building will be wheelchair accessible.



Access & Use - Ground Floor Plan

5.15 ACCESSIBILITY

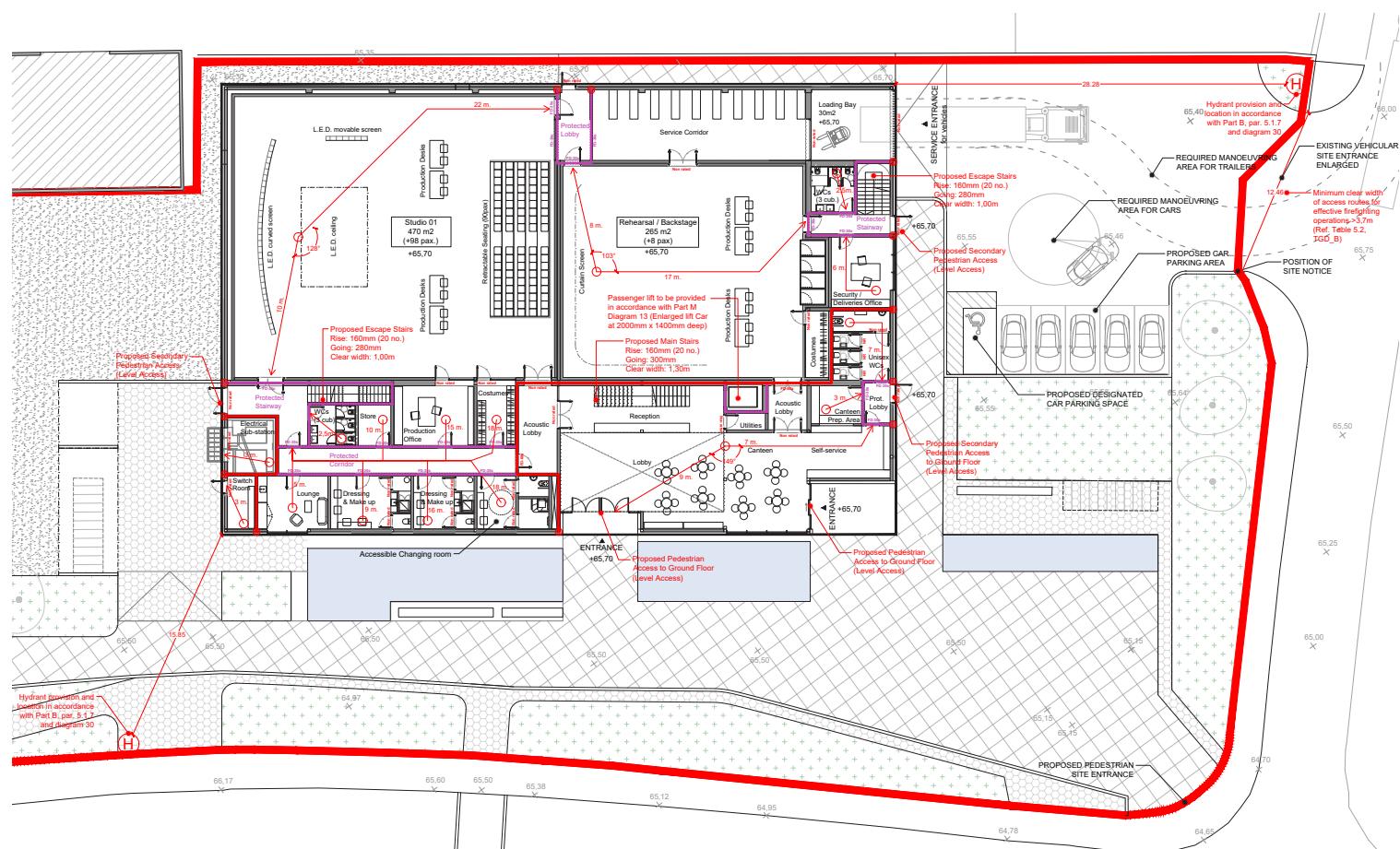
First floor classrooms and offices are accessible via the part M complaint stairs and a passenger lift. Refuge areas are provided and turning circles at the end of each circulation route.



5.16 FIRE

The following diagram represents a review of the design to ensure compliance with Part B (Fire) of the Building Regulations.

Means of escape Ground Floor
As shown in the diagram to the right safe egress is achieved to providing escape routes in two directions from all main spaces. Protected Lobbies double as acoustic lobbies for the main studio space and the changing rooms are accessible via a protected corridor.



Fire Safety - Ground Floor Plan

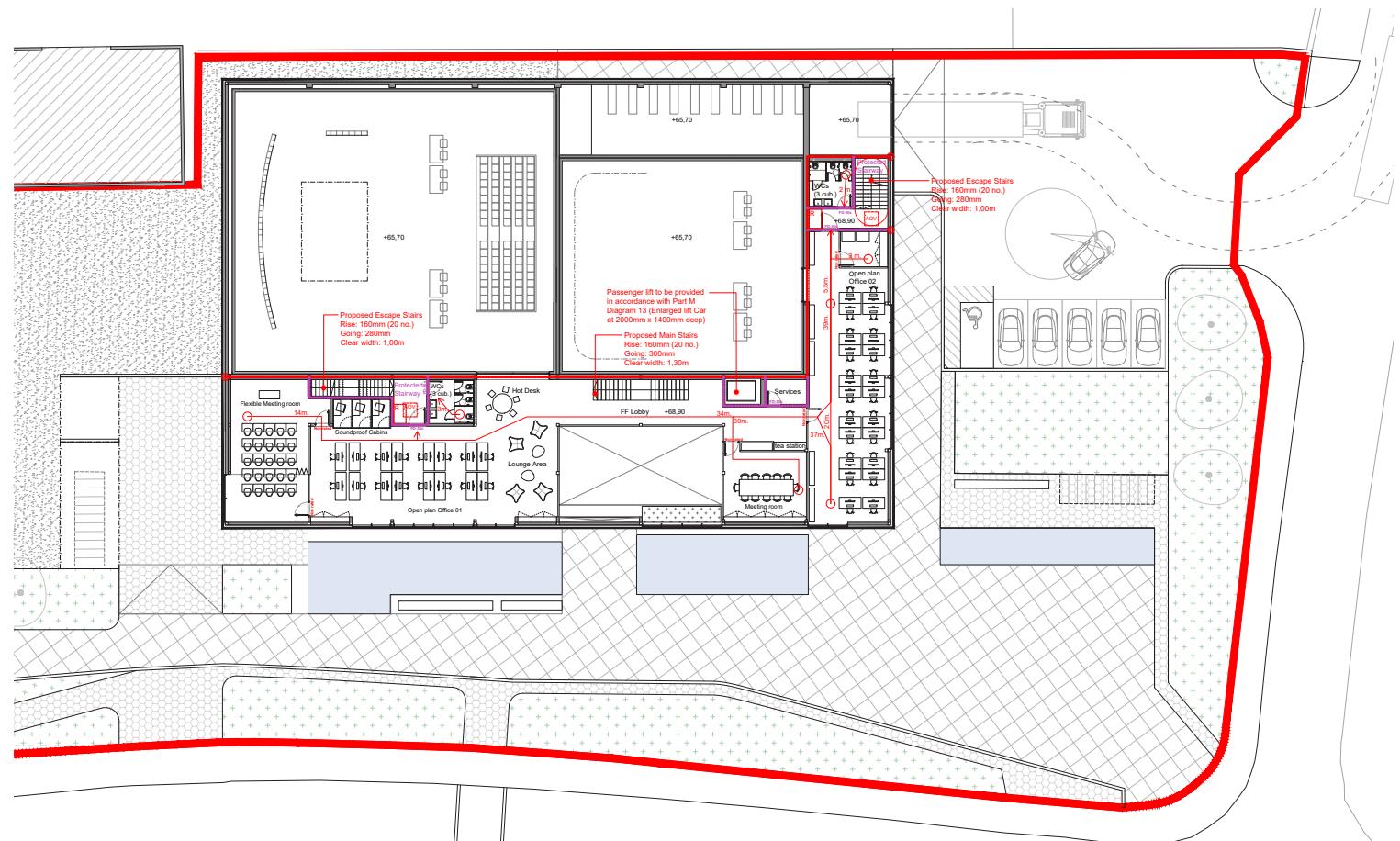
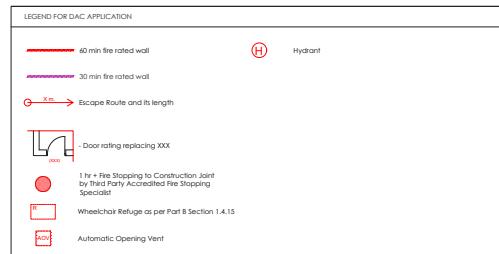
5.16 FIRE

Compartmentalisation

Fire compartments are below the area threshold for single user groups with 2 hour rating provided around the plant areas and 4 hours around the esb substation. The recommended fire resistance rating for elements of structure is 60 mins. The office and lobby spaces are treated as a single compartment connected by the open voids from ground to first floor levels.

Means of escape First Floor

As shown in the diagram to the right safe egress is achieved to providing escape routes to protected Stairwells leading directly to open air at ground floor level outside the building. Fire Walls. Stairwells are less than 45m apart. In the case of separate user groups, the offices along the north elevation can be compartmentalized.

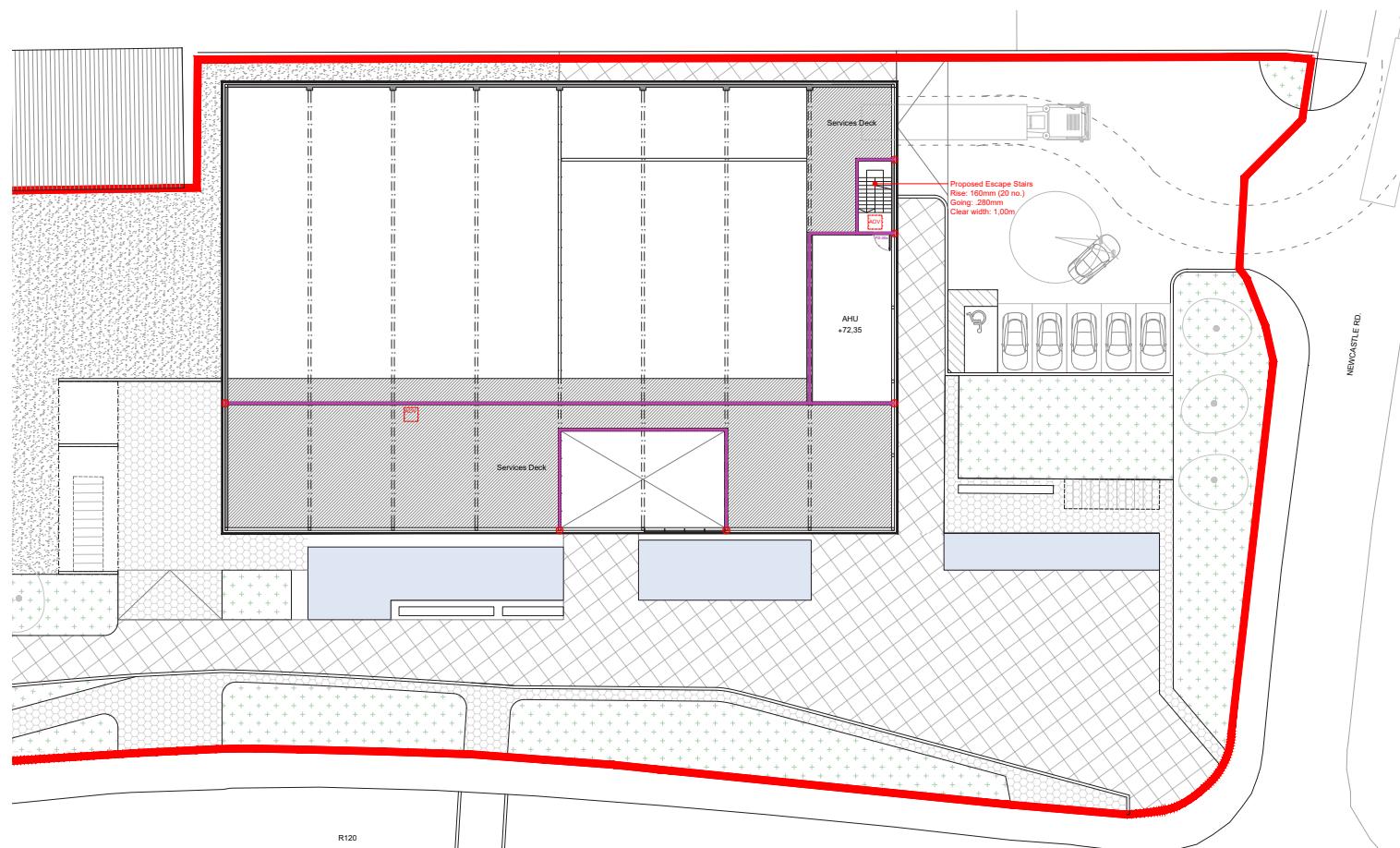


Fire Safety - First Floor Plan

5.16 FIRE

Timber Structure

As indicated in the 3d visualizations a timber structure is proposed for the internal office structure. The timber elements of structure including Glulam beams/columns and CLT panels are to be designed in accordance with Eurocode 1995-1-1 to achieve a 60min fire resistance rating. Treatment of CLT and other timber internal cladding will be applied to meet the recommendations for reactions to fire of BS9999. All acoustic paneling will be made of intumescent material.



Fire Safety - Second Floor Plan

5.17 ENERGY CONSERVATION

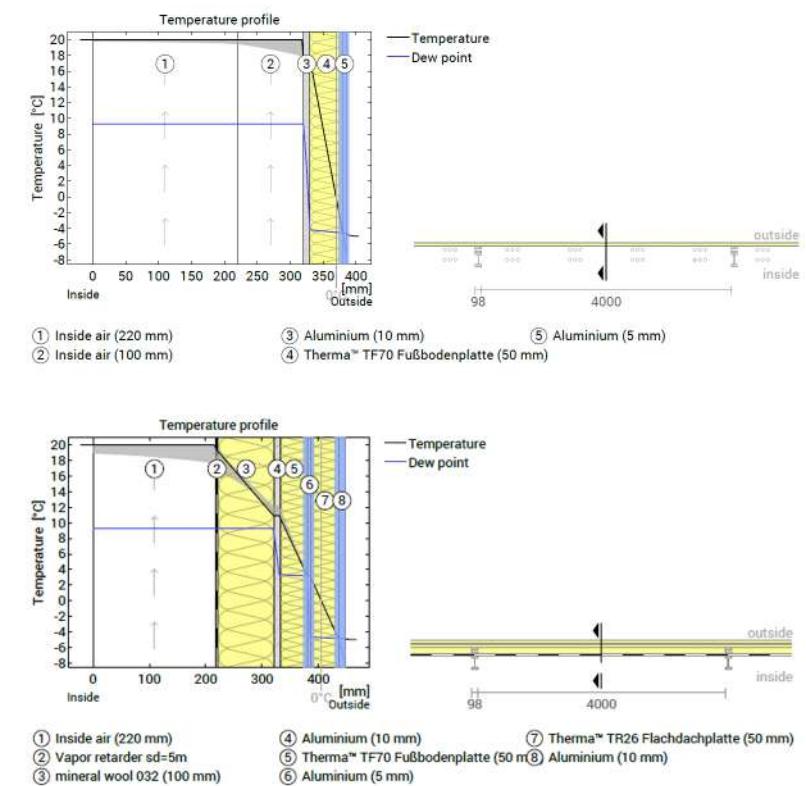
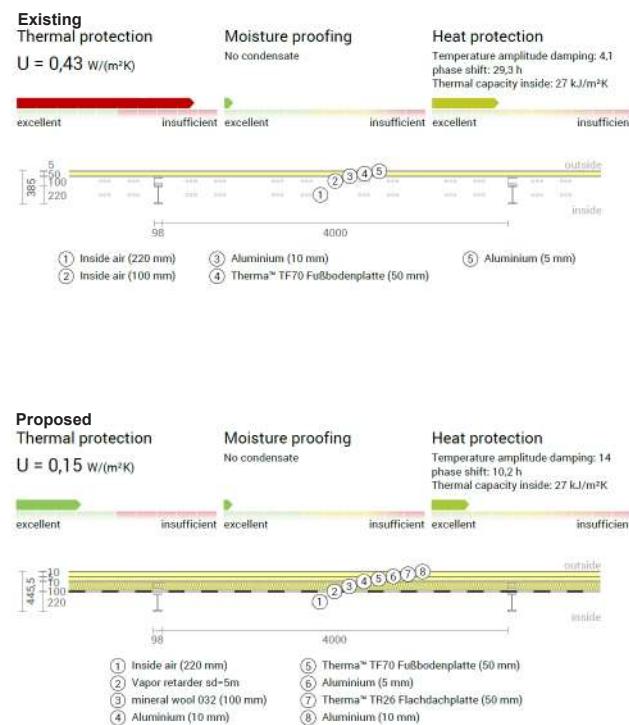
The proposal is major renovation of an existing building but will be detailed to meet NZEB Standards for new public buildings.

Thermal Insulation

To the right is the comparative analysis of the facade before and after renovation (acoustic panelling omitted from sections for clarity). The proposal is to infill the existing cladding rails with mineral wool and clad over the existing cladding creating the new stepped facade feature as well as upgrading the thermal performance of the envelope from $0.43 \text{ W/m}^2\text{K}$ to $0.15\text{W/m}^2\text{K}$ which goes beyond the current standards for major renovations on existing buildings.

Solar Energy

In addition to the upgrading the thermal performance of the building envelope and in line with Section 56(d) of the Planning and Development Regulations 2001, the roof can accommodate solar panels not exceeding 300sqm in area. A smaller area (90m²) is shown on the proposed roof plan which would generate 22.5KW/h on average for use in the office and assembly spaces. A more precise energy calculation will be carried out during Stage 2b, Technical Design.



Left: Temperature and dew-point temperature at the place marked in the right figure. The dew-point indicates the temperature, at which water vapour condenses. As long as the temperature of the component is everywhere above the dew point, no condensation occurs. If the curves have contact, condensation occurs at the corresponding position.
Right: The component, drawn to scale.

6. SCHEDULE OF ACCOMMODATION

Code	Services and facilities	Provision & Location	Dimensions / Max.Occupancy	Other Features
01	Studio 01	<ul style="list-style-type: none"> Provision: 1no Location: Ground Floor 	<ul style="list-style-type: none"> Area: 470m2 Working Height: 7.80 - 8.20m Max. Occupancy: 106 pax. 	<ul style="list-style-type: none"> L.E.D. curved screen (14 x 5.5m) L.E.D. ceiling (7.2 x 4.8m) L.E.D. mobile/movable screed (3 x 3m) Power supply: 1 x 125 Ampère and 1 x 63 Ampère
02	Rehearsal /Backstage	<ul style="list-style-type: none"> Provision: 1no Location: Ground Floor 	<ul style="list-style-type: none"> Area: 265m2 Working Height: 7.80 - 8.20m Max. Occupancy: 16 pax. 	<ul style="list-style-type: none"> Curtain screen
03	Canteen	<ul style="list-style-type: none"> Provision: 1no Location: Ground Floor 	<ul style="list-style-type: none"> Area: 100m2 Max. Occupancy: 32 pax. 	<ul style="list-style-type: none"> Preparation Area 10m2
04	Dressing rooms	<ul style="list-style-type: none"> 3 x dressing / make-up room 1 Wc & 1 Shower / dressing room (1 accessible) 	<ul style="list-style-type: none"> Occupancy: 2-4 pax/dressing room 	<ul style="list-style-type: none"> Provided with windows (daylight)
05	WCs	<p>Ground Floor:</p> <ul style="list-style-type: none"> 3 no. (Studio 01) 3 no. (Rehearsal Studio) 4 no. (Public) (1 Accessible) 	<p>First Floor:</p> <ul style="list-style-type: none"> 3no. Open plan Office 01 3no. Open plan Office 02 	
06	Offices	<ul style="list-style-type: none"> Production Office: 1no (Ground Floor) Security/Deliveries Office: 1no (Ground Floor) Open plan Office 01: 1no (First Floor) Open plan Office 02: 1no (First Floor) Reception: 1no (Ground Floor) 	<ul style="list-style-type: none"> > 25 m2 - 2 pax > 22 m2 - 1pax > 124 m2 - 16 pax > 108m2 - 22 pax > 13m2 - 2 pax 	
07	Equipment / Service Areas	<ul style="list-style-type: none"> Storage Loading Bay Plant Data and equipment 	<ul style="list-style-type: none"> > 137 m2 > 45 m2 > 58 m2 > 23 m2 	