

Proposed Materials Palette

The existing materials are industrial and simple. The proposal seeks to retain this paired back and industrial palette to reflect the functional and robust use of the building in order to provide a practical environment for the School of Art.

As an Art-focused building, it is important that the fabric is practical and reflective of the creative energies of the users. To this end, bright colours have been employed within the facade to highlight key structural or wayfinding elements to provide relief and a positive and vibrant contrast to the more functional outer metal skin.

Within the internal environment the materials are also paired back to allow for the art work to be the main focus. The materials are mainly white, pale grey and black.

Practical and sustainable material choices have been made to suit the use and robust nature that is required for the use as studio spaces.



External Materials Palette

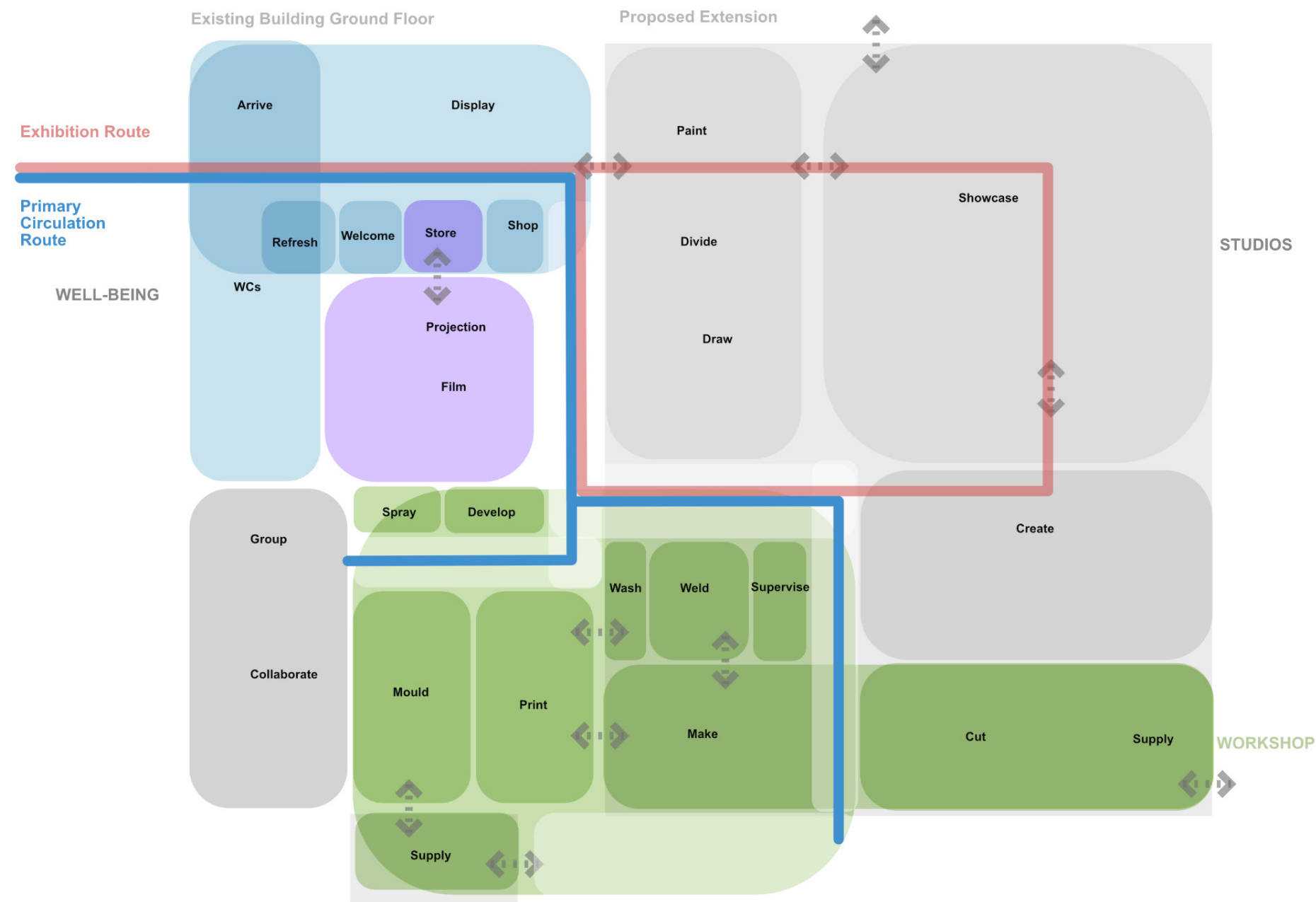


Internal Finishes Palette

3.4 Internal Relationships – Exhibition Route and Primary Circulation

Throughout the design process, the functionality of the building has been a large part of the design and the rational form allows the design to facilitate this.

The internal layout has been configured to allow for the two main uses of the building the academic teaching use of the studio spaces and associated facilities as well as the exhibition use that occurs regularly when the building is opened up to the public.





Internal Visual - Studio



Internal Visual - Main Entrance / Flexible Gallery



Internal Visual - Large Studio

3.5 Structural Design Evolution

The existing building is a braced steel frame structure with a mixture of brickwork and metal profile cladding. Some structural changes to the existing building are proposed, including new openings created in the façade, a single new roof light, and cut outs in the existing suspended slab to allow for new drainage runs.

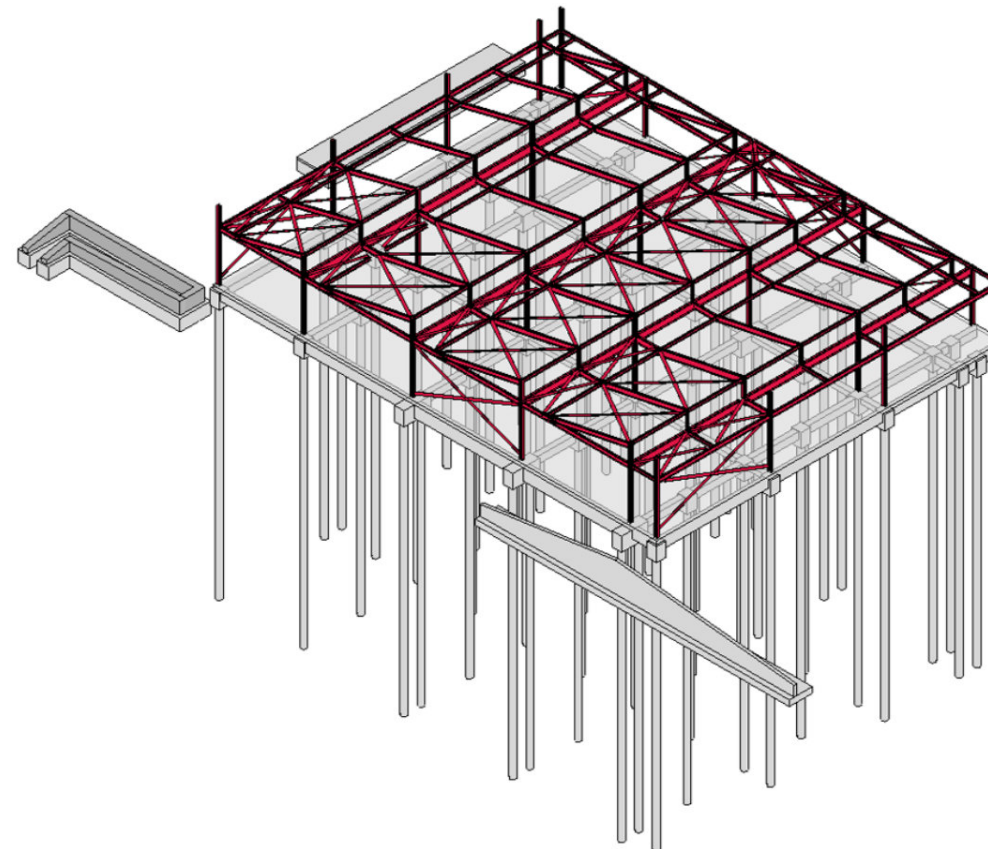
For the new extension to the eastern side of the existing building, several different structural options were considered for the superstructure. However, a braced steel frame solution with a metal deck roof was selected as the preferred solution. This is for a few main reasons:

- Large 9m spans required to maximise future flexibility and layout changes.
- The saw-tooth arrangement of the roof, and the tight deflection limits due to the glazed roof lights.
- A steel frame is likely to represent the most cost-effective solution.

Lateral forces acting on the building (e.g. wind) will be transferred from the building envelope to the primary frame. The forces will then be transferred through the frame, via a complex combination of plan bracing, diaphragm action, and moment frames across the sawtooth arrangement.

Based on the ground investigation information, piled foundations are judged to be the most suitable solution. Ground beams are required to span between the pile caps. This is to support the ground floor slab and the envelope around the perimeter of the building.

A retaining wall is required on the eastern side of the extension. This is due to the building being close to the site boundary, which has a level change down the existing contractor's compound.



Arts Building Extension 3D Structural Model

3.6 Built Footprint

The proposed design provides an increase in built footprint by approximately 926 square metres, however the development is proposed to use the redundant hardscaping to the east.

3.7 Planting Enhancement

Proposed planting areas are shown in the diagram opposite, this is an overall net gain of planiting area and will provide additional screening from Pepper Lane to the scheme.

Batboxes, bird boxes and hedgehog house are also to be included to add to the biodiversity, as explained further within the Ecology Appraisal submitted alongside this planning application.



4.0

The Proposal

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4.0 Proposal

4.1 Key Benefits

4.1.1 Form

Refurbishing the existing building has benefits for sustainability, as highlighted in Section 6, and will enhance the appearance of the building as seen when entering the campus from Pepper Lane. The extension is designed to fuse with the existing building and to activate a redundant area of the campus. The form of the extension aligns to the highest point of the existing sloped roofs, this allows for the floor to ceiling height that the department requires in the studio spaces. The form emulates the existing rectangular form and is an efficient form to allow for flexibility within use.

4.1.2 Access

The building is accessible by public transport and bicycle. Additional cycle storage will be provided to suit the levels required and there will be shower facilities. The main entrance will be enhanced and kept in the same location to retain the relationship to the campus entrance and the car park. This will be the main entrance to the building for students and staff. The entrance is highlighted with a new entrance canopy and glazed doorway that is accessible.

There are other access points within the building but these are mainly for fire escape, as well as delivery access.

4.1.3 Occupancy

The occupancy that has been requested from the University is a student and staff occupancy of 300 with a maximum of 500 in the exhibitions.

The WC calculation has been based on the British Standard BS 6465-1:2009 6.7 Schools - Secondary.

The WC strategy for the building is based on unisex 'superloos' these WCs comprise a WC, sink, vanity & mirror within one space and the client can either badge these as male/female or keep these as unisex.

4.1.4 Site Strategy

The site concept has been driven by key considerations for site access, to allow for the deliveries required for the department. The access to the store for large sheet materials was taken on board when developing the site strategy and vehicular access. There is vehicular access from Carter Drive as well as Pepper Lane, with a managed approach required due to the close proximity and occasional usage required of the adjacent contractors compound for Arctic. deliveries.

Existing parking is being retained within the adjacent car park 11, the car park is not within project scope and remains as existing.

4.1.5 Layout and Circulation

The internal layout has been configured with the delivery access, natural lighting and flow through the spaces.

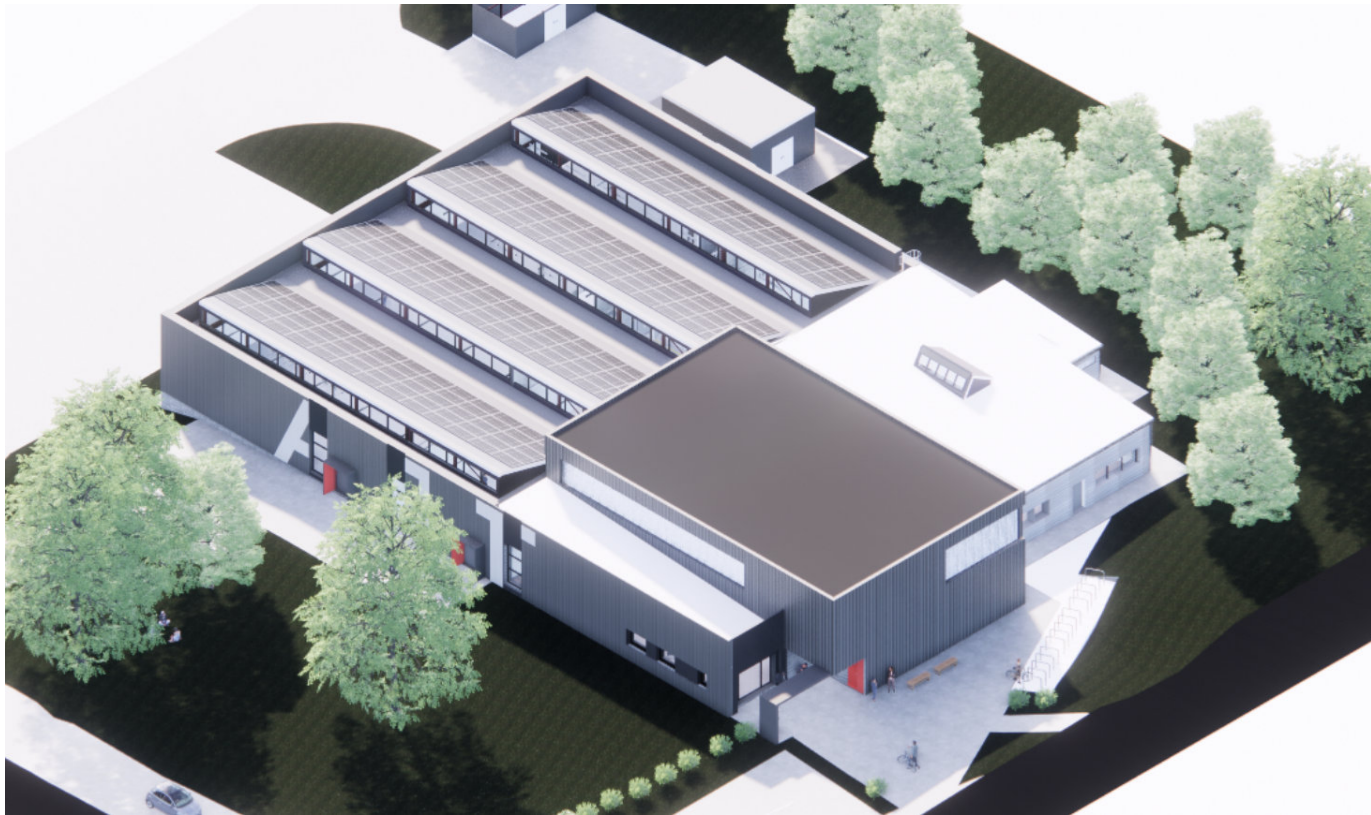
The design brief has been split broadly into:

Existing which houses the Art department spaces that do not need as much natural light.

Extension which houses the Art department studio spaces which have a northern light saw tooth roof that is necessary for the studio spaces.

Utility Zone which comprises the loading bay, bin store and area for skips as required.

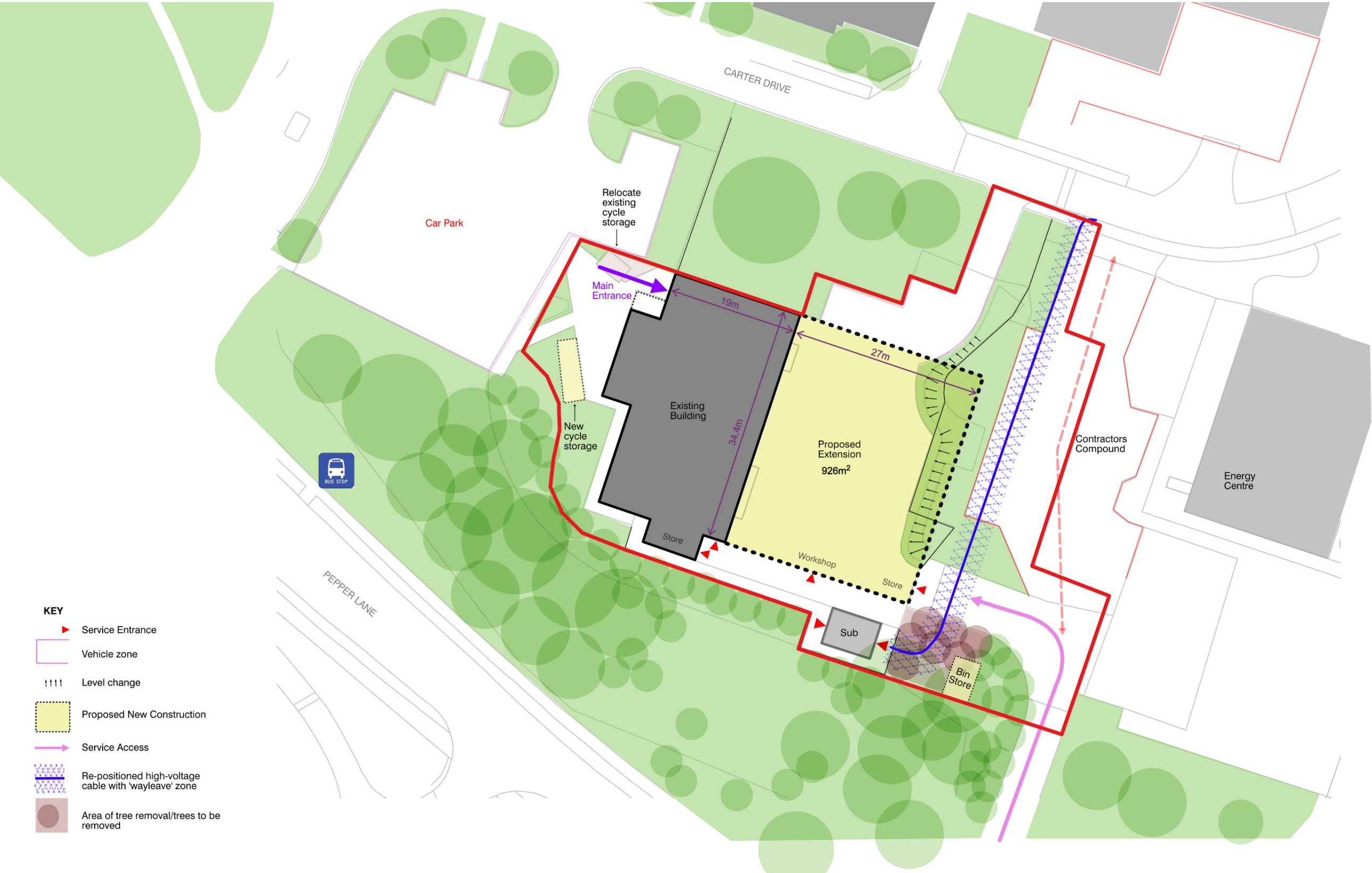
The Site Proposal Diagram on the following page shows the constraints of the layout and access to the building.



External Axo View - North West Corner



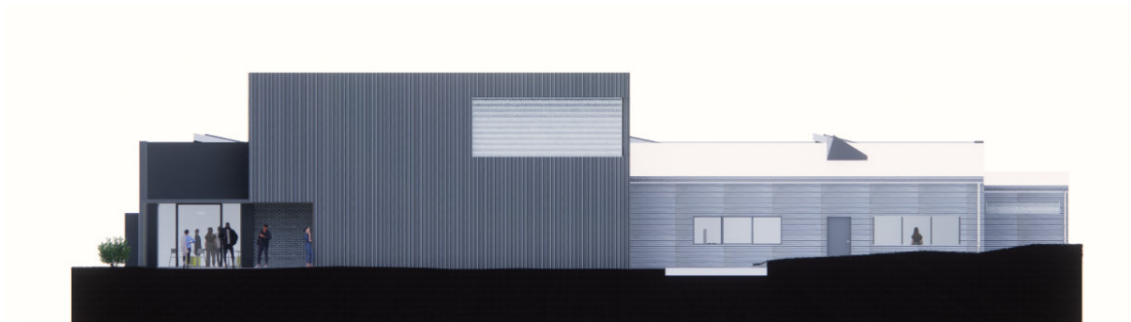
External Axo View - North East Corner



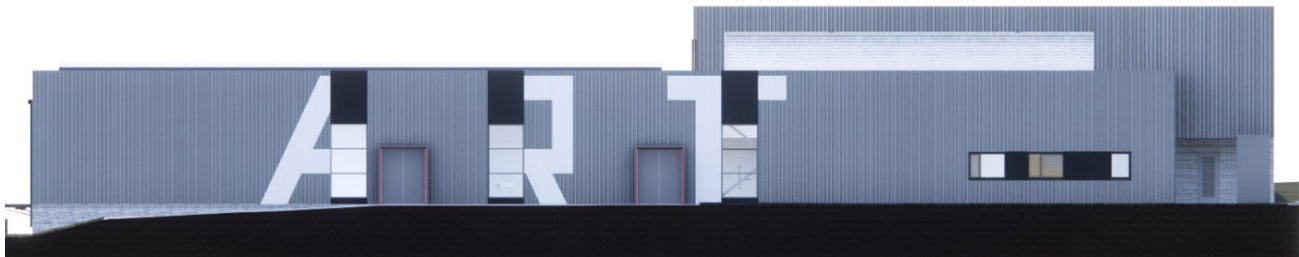
Site Proposal Diagram

4.2 Design Intent - Materials

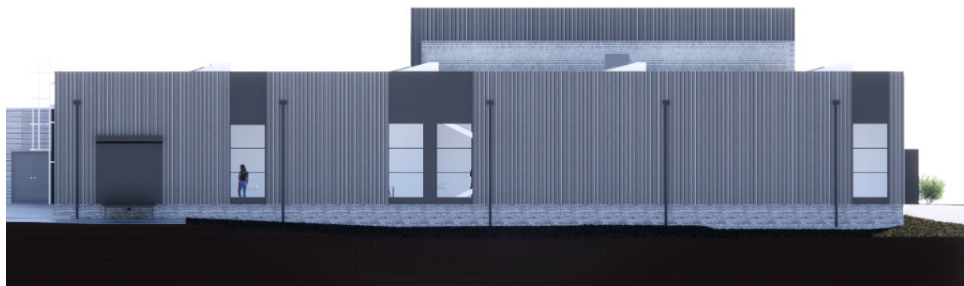
To tie in with the materiality of the existing building, the extension is to be a vertical metal profile cladding with a brick plinth. The glazing responds the surroundings, with portrait windows to highlight the views to the trees and buildings opposite. Where adjacent to the contractor compound, the windows will be high-level and horizontal. As the existing plan is deep with little glazing, it is important to improve the existing by adding in further windows and rooflights.



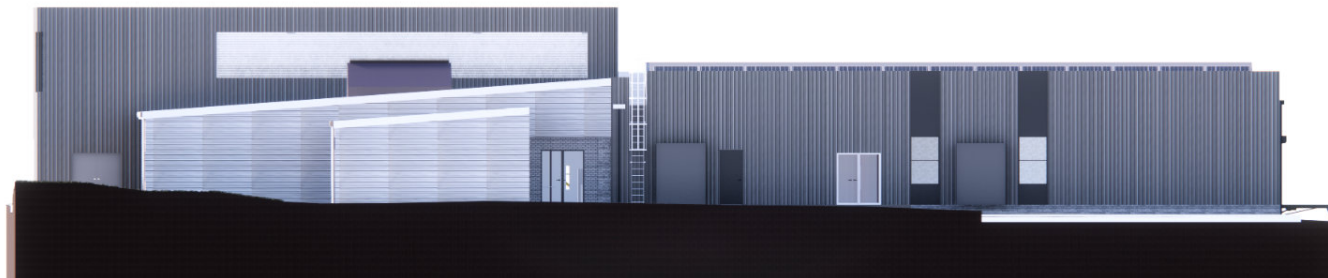
West Elevation



North Elevation



East Elevation



South Elevation

4.3 Stakeholder Consultation

Stakeholders have been consulted at each RIBA Stage, and feedback has been incorporated into the design.

At each stage there has been a Teams presentation to the end users, and also to the estates and maintenance department. This has allowed comments to be raised throughout.

A tracking document has been produced where all stakeholder comments are responded to by the design team. The feedback is then captured and integrated where possible into the scheme.

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Stakeholder Engagement Tracker

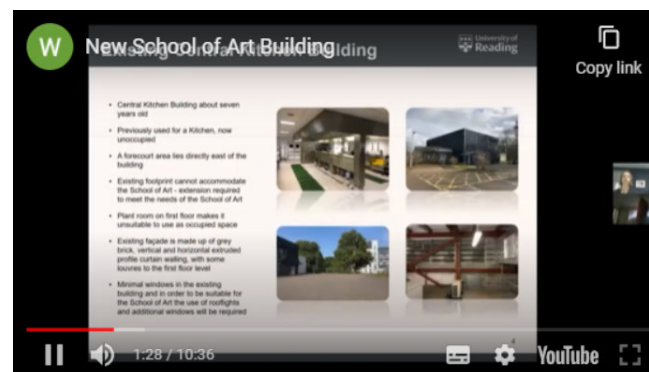
4.4 Public Consultation

A public consultation was recorded and published online on the University of Reading website on 3rd February 2020 and ran until 18th February 2022. Local residents close to the Whiteknights campus, staff and students at the University were consulted and encouraged to comment on the proposals.

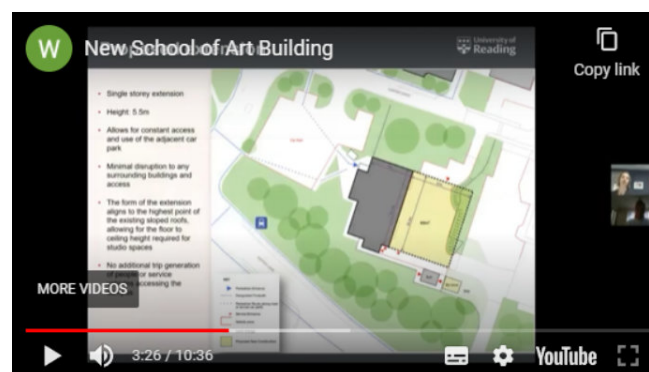
The Covid-19 pandemic has brought about many changes across the country and has shaped how we interact with communities. At the time of the consultation, there had been and continued to be a steep rise in COVID-19 cases due to the Omicron variant – both nationally and in Reading. In order to keep members of the public, staff, students and the project team safe, the decision was made to hold the consultation digitally via a website which also hosted a recording of the proposed scheme presented by the project team.

An A4, two page letter was posted to 55 local addresses surrounding the site, made up of 54 residential addresses and 1 business address. The letter gave information about the importance of relocating and building a purpose built School of Art - for existing and future students - on the redundant Central Kitchen building; illustrative images on how the proposed building could look and invited people to view the website and leave their feedback via the online feedback form. The leaflet asked for all comments on the application to be submitted by Friday 18th February 2022. Full details of the consultation including the website details were widely advertised on the University's student and staff portal.

The comments the public consultation are shown in the planning statement.



Public Consultation Presentation



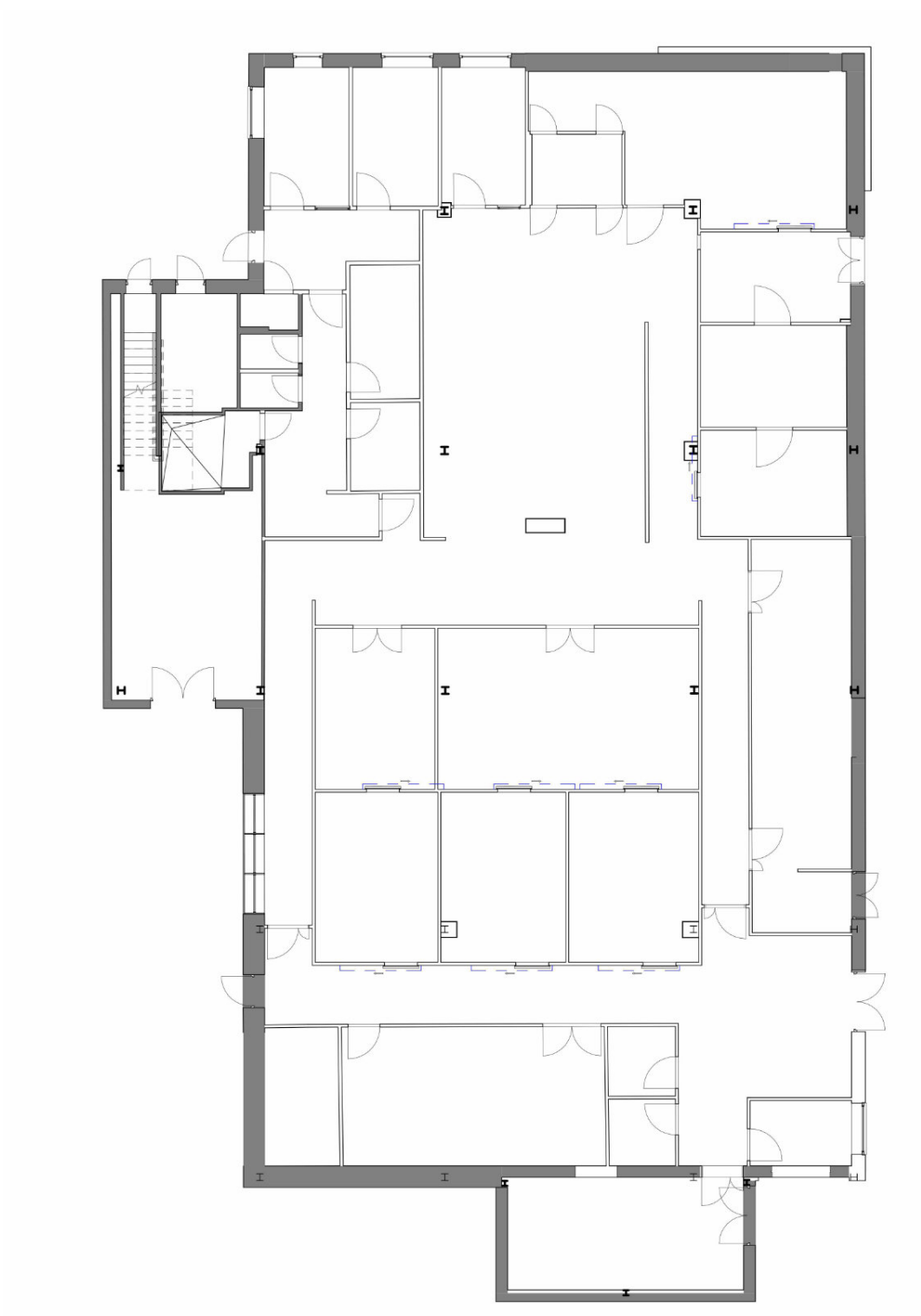
Public Consultation Presentation

4.5 Proposal Drawings

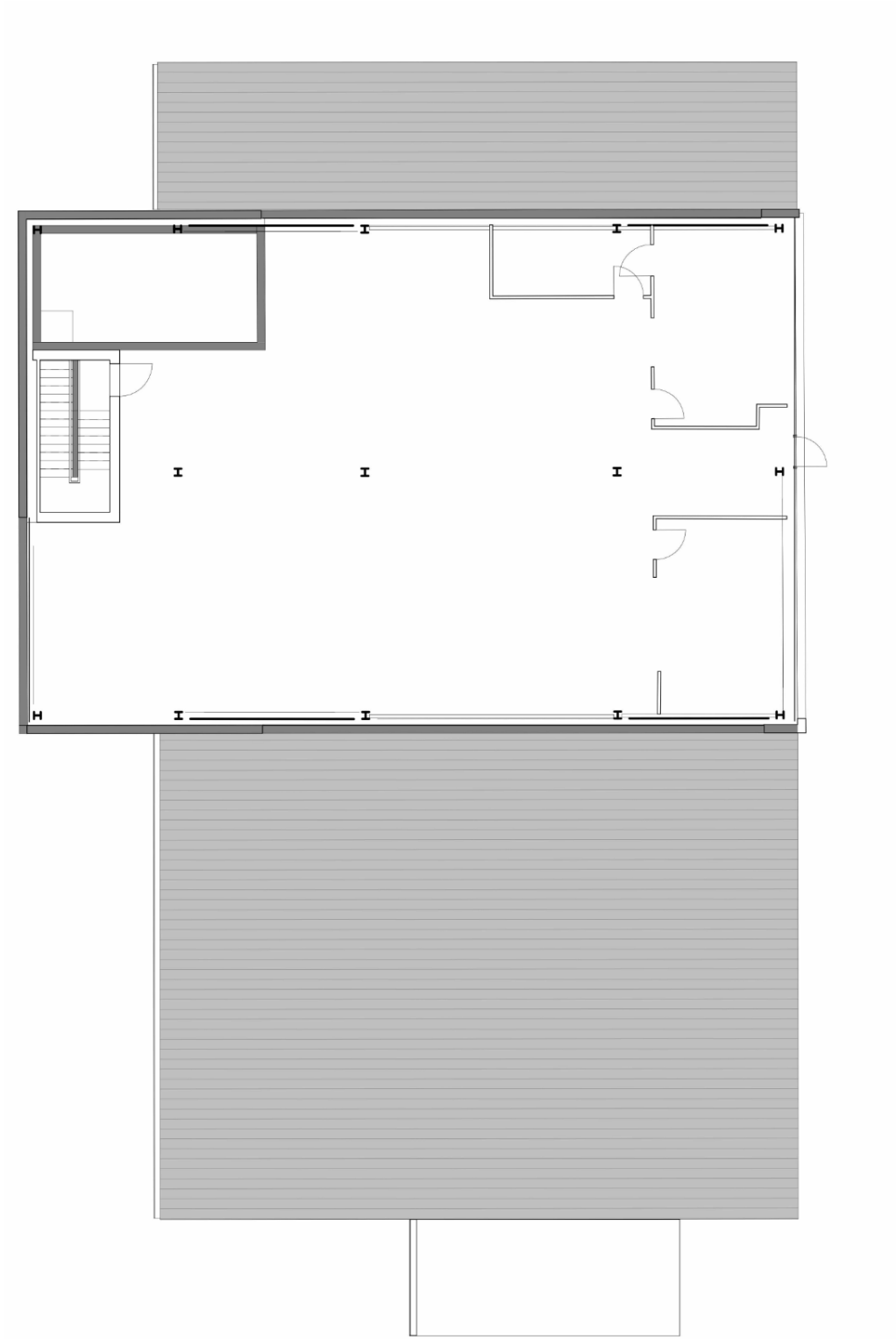


Site Location Plan

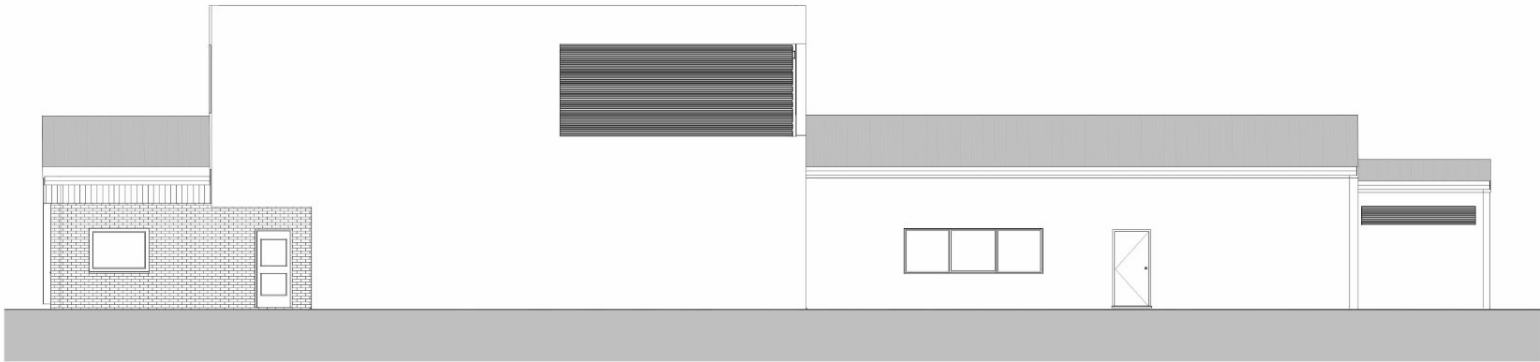




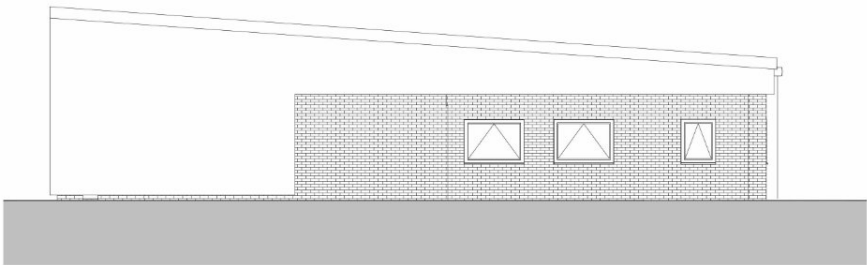
Existing Ground Floor Plan



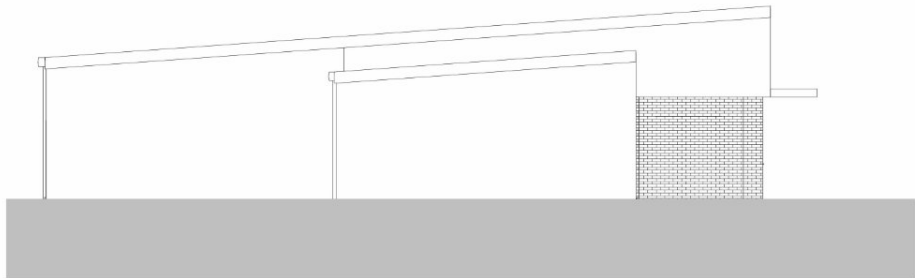
Existing First Floor Plan



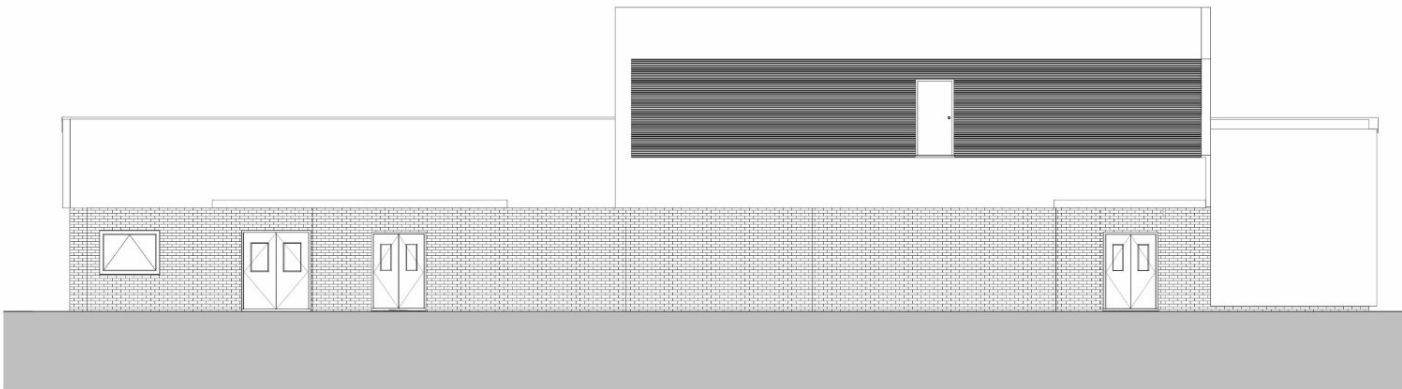
1 Existing West Elevation
1:100



3 Existing North Elevation
1:100

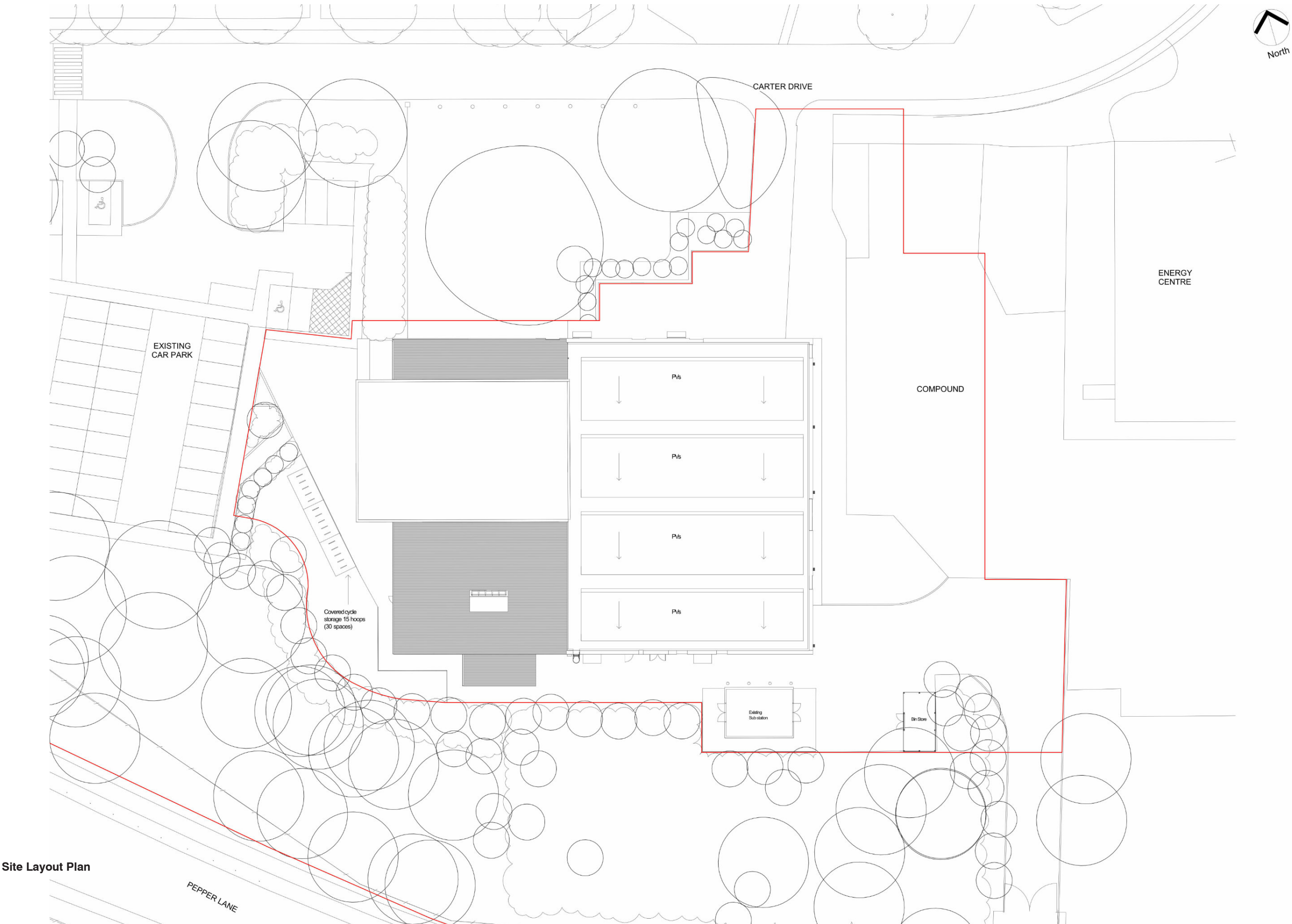


2 Existing South Elevation
1:100

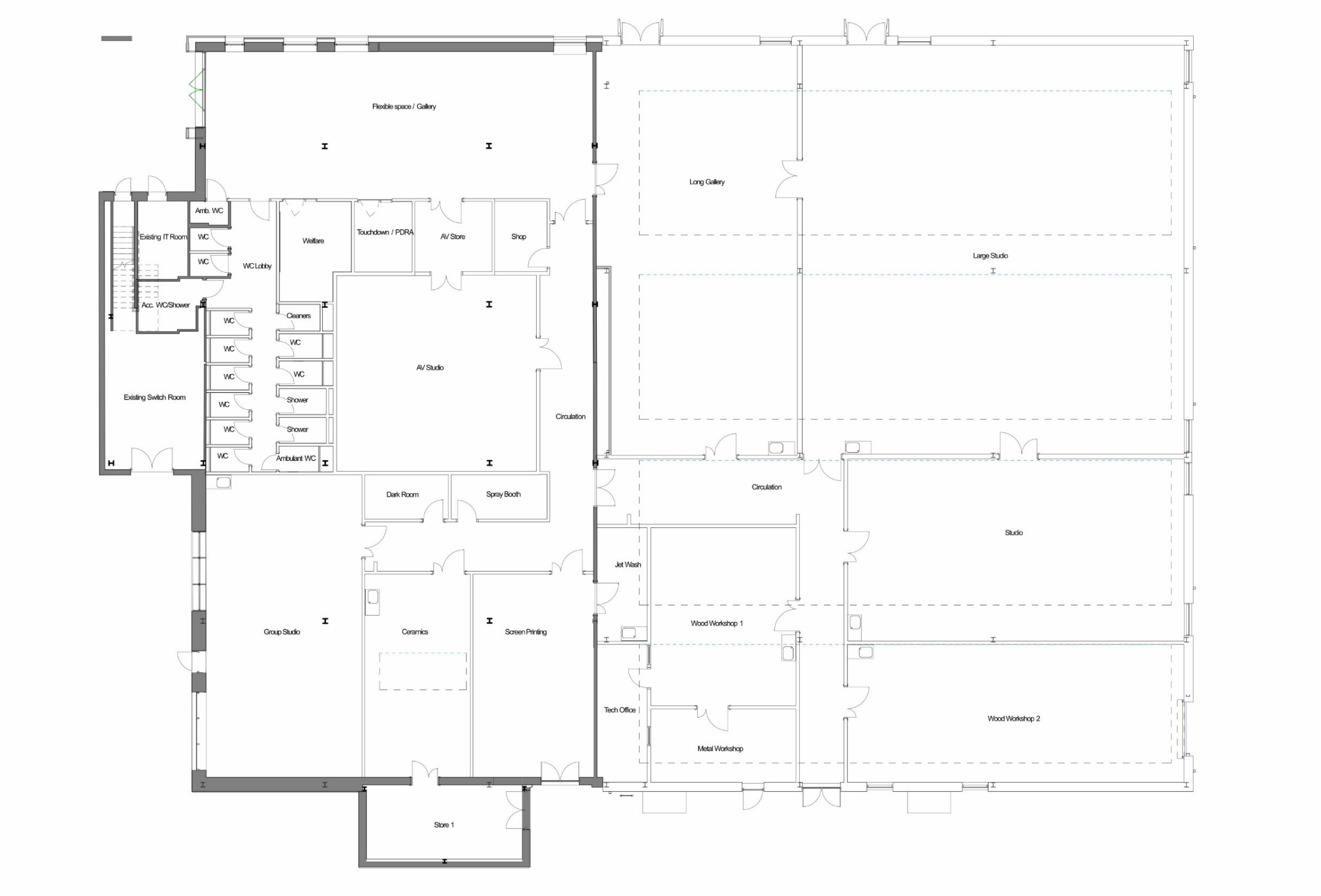


4 Existing East Elevation
1:100

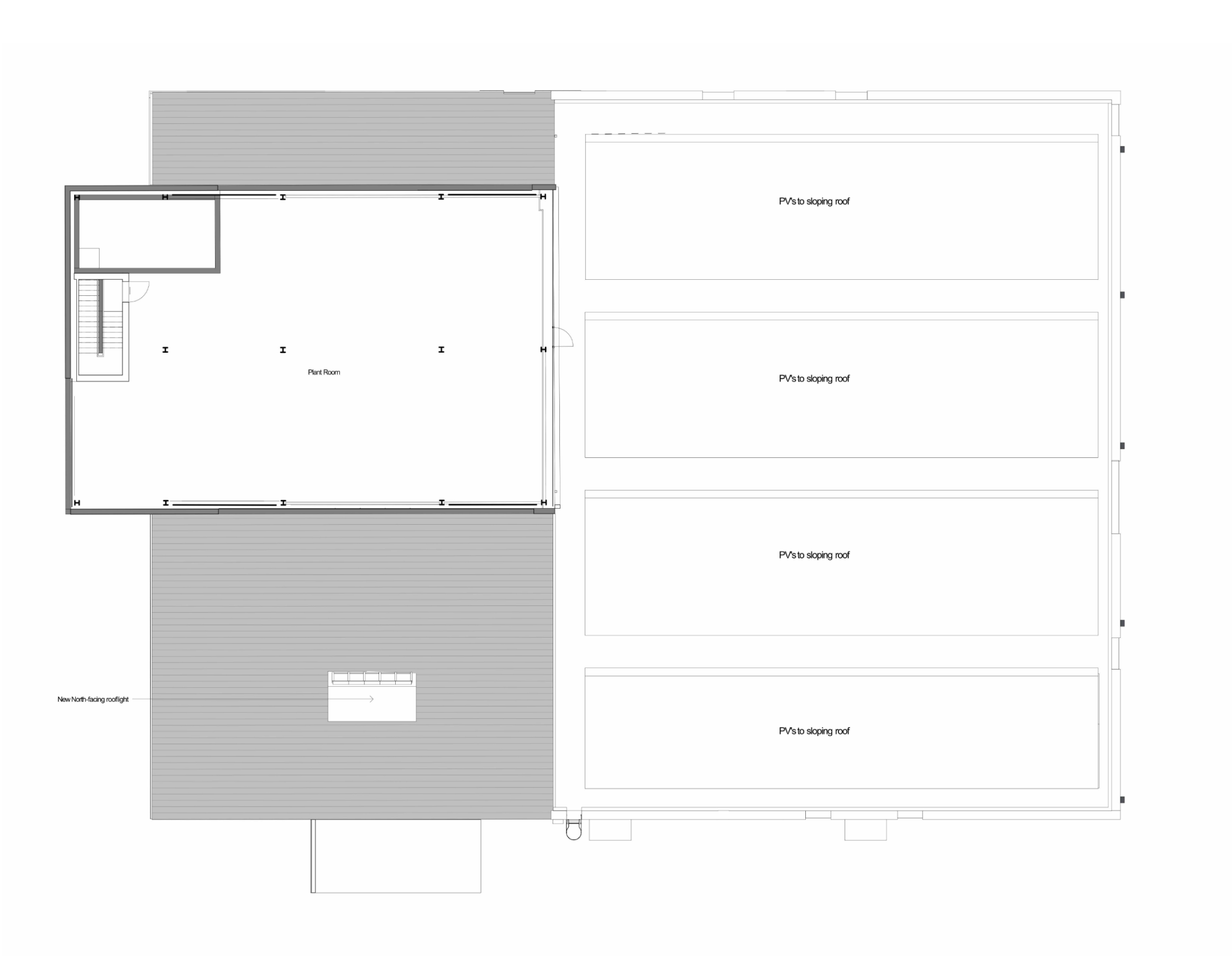
Existing Elevations



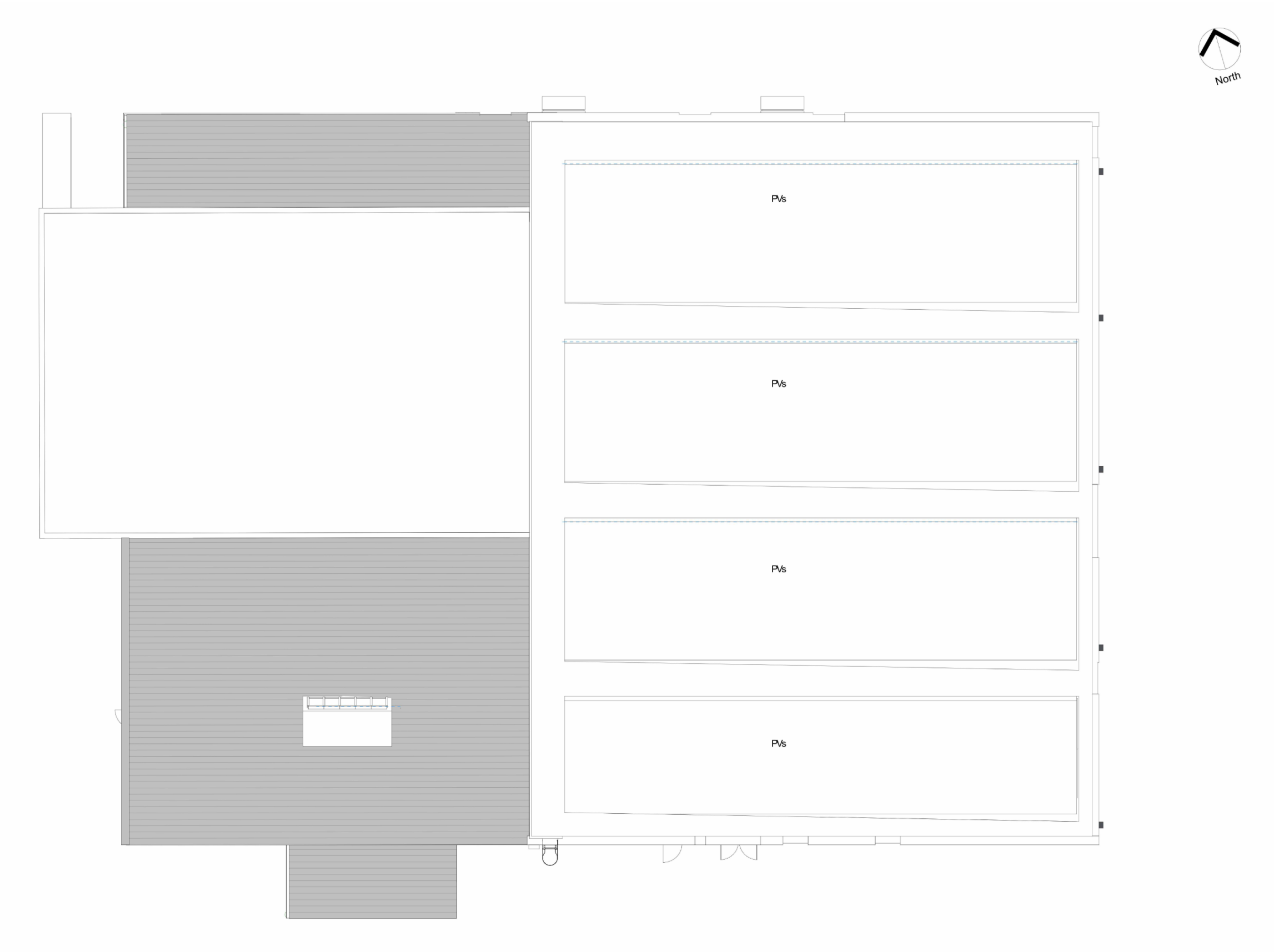
Site Layout Plan



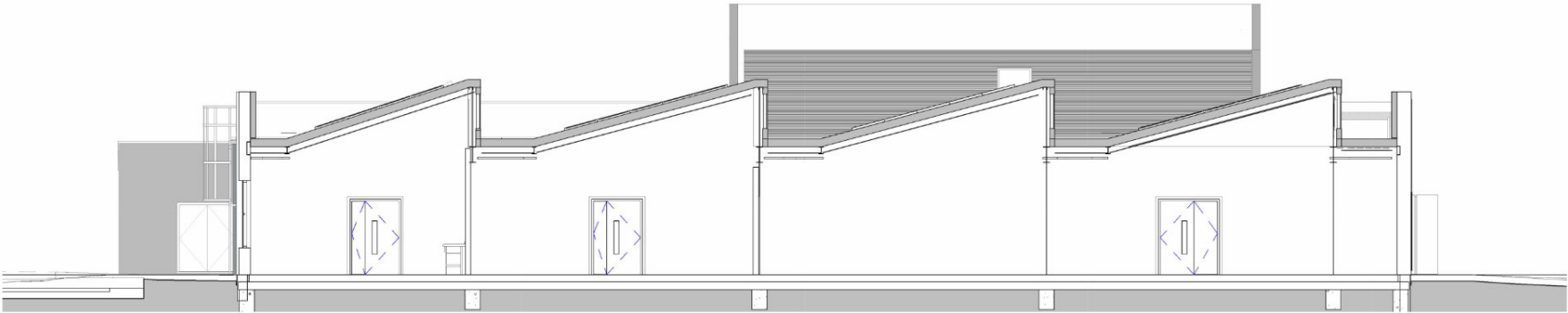
Proposed Ground Floor Plan



Proposed First Floor Plan



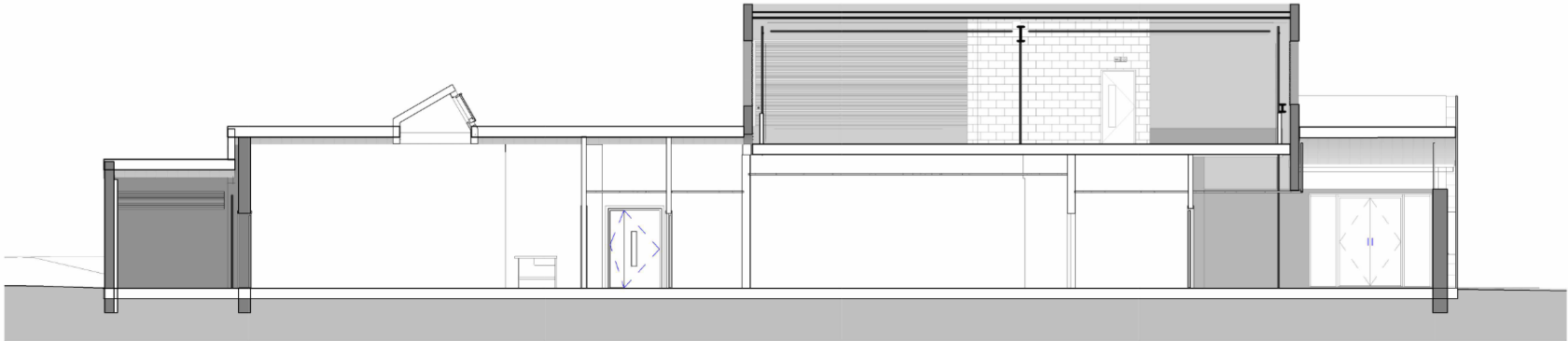
Proposed Roof Plan



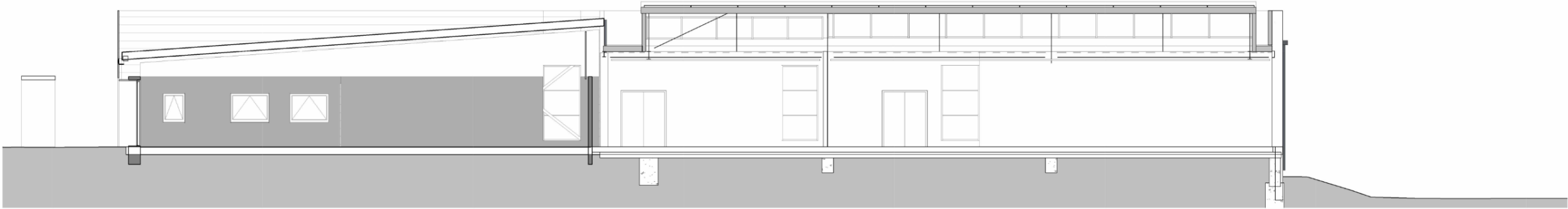
1 Cross Section 1
1:100



2 Planning - Long Section 1
1:100



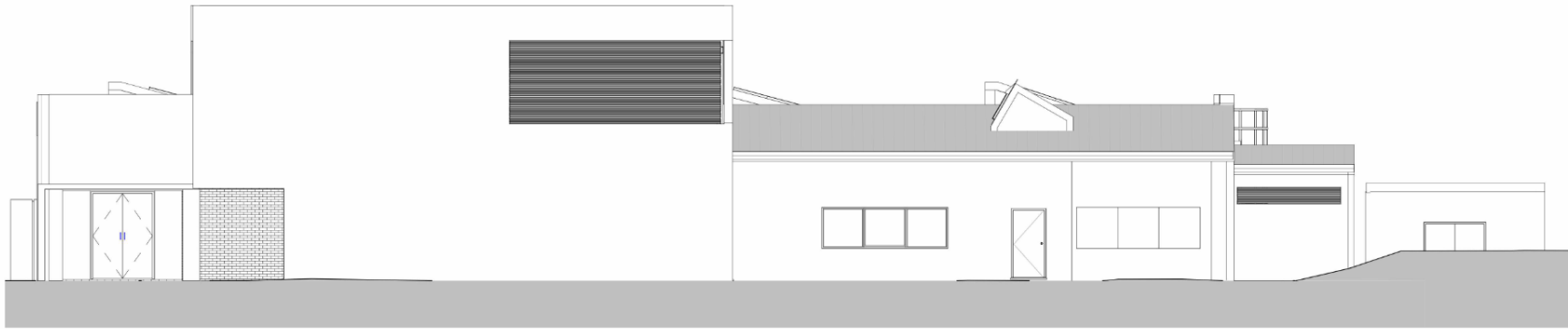
1 Cross Section 3
1:100



2 Long Section 4
1:100

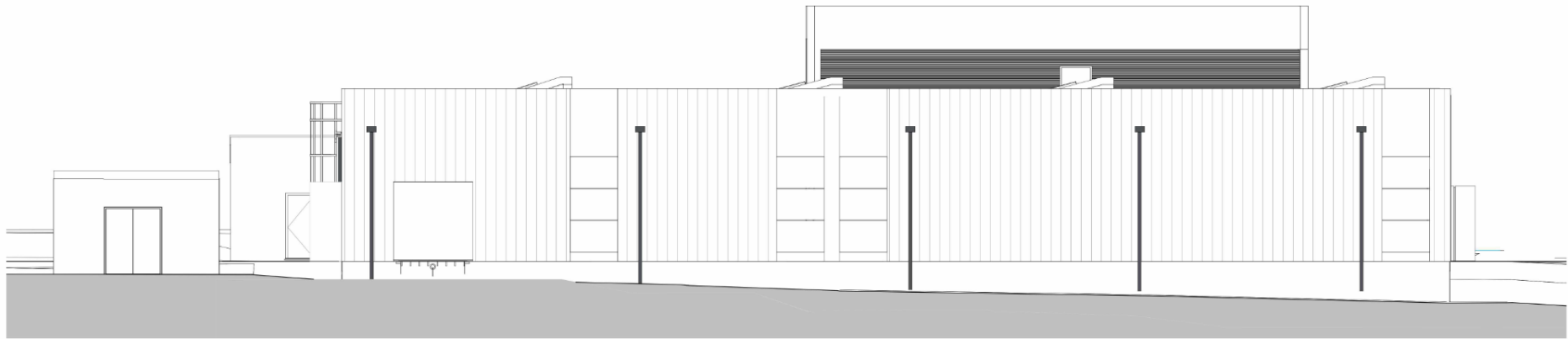


1 Proposed North Elevation
1:100

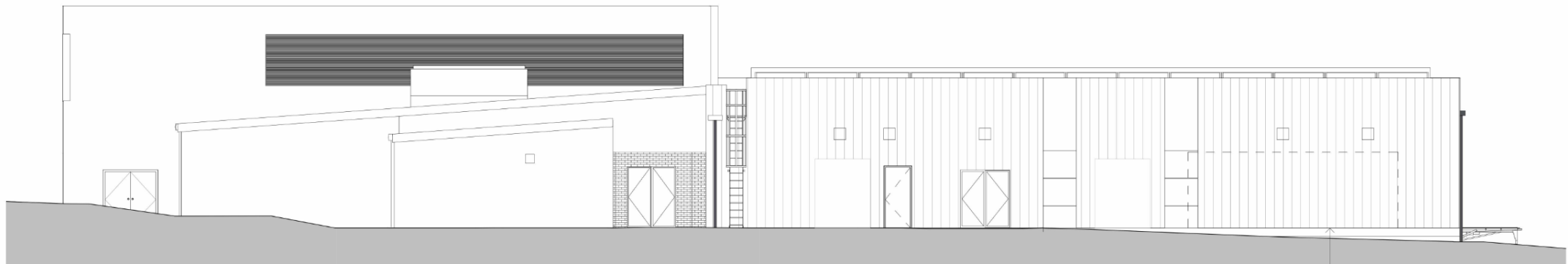


2 Proposed West Elevation
1:100

Proposed Elevations



1 Proposed East Elevation
1:100



2 Proposed South Elevation
1:100

Sub-station

5.0

Access and Servicing

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5.1 Proposed Access

The proposal encourages a more connected site by strengthening the connection between campus teaching facilities.

Pedestrian access to the building is primarily from the north east at the main entrance. Cycle storage is also provided adjacent to the main entrance.

Delivery access is provided and will primary be from Pepper Lane to the south east side of the building. This includes material deliveries, refuse collection and sub station access, allowing seperation from the student access to the north and east. Occational maintenance vehicles and emergency vehicles can access the building from Carter drive to the north.



Proposed Access Diagram

5.2 Transport Assessment

Please see full Transport Assessment for details.

5.3 Parking Strategy

The parking strategy is to remain as the existing University strategy. The University has a number of car parks across the campus which will be used to access the department. Students and staff can apply for a permit. Visitors can pre-arrange parking and can use the Pay & Display car park on campus.

There is currently 8 cycle spaces and the proposal is to increase the amount of spaces to park 30 cycles securely close to the main entrance with a covered shelter.

5.4 Disabled Access

There are 3 no. Existing accessible parking spaces in Car Park 11 which is adjacent to the Central Kitchen Building.

A level, step free approach to the main entrance, free of obstructions, will be provided. The threshold will be level for ease of access to and from the building.

The entrance surface will be firm, durable and slip resistant. The principle entrance will be clearly identified and well lit to ensure ease of way-finding for all people.

The set of main entrance double doors will have an effective unobstructed clear open width of over 1000mm with all necessary door furniture. The doors will open automatically on pressing of a remote access button (compliant with AD M1 2.21).

All the spaces within the School of Art are on the ground floor and can be accessed from the corridor which leads off from the flexible gallery space.

Vision panels will be provided to doors, where required to provide a zone of visibility at eye level.

Circulation walkway widths will be 1800mm minimum.

Internal door widths generally will be a minimum of 850mm unobstructed clear opening with 300mm width to be provided to the leading edge of doors.

Door furniture generally will be chosen for ease of use.

Colours have been chosen to provide suitable contrasting environment for visually impaired people.

The signage provided will be in accordance with recommendations.

Switches and controls will be set in compliance with AD M1 4.30.

Accessible Sanitary Provision

WC facilities are provided near the main entrance.

The WC core comprises of:

- A unisex wheelchair accessible WC (compliant with AD M1 5.18 and diagram 24).
- A unisex wheelchair accessible WC and shower.(compliant with AD M1 5.18 and diagram 24).
- A unisex ambulant superloo with an outward opening door.
- 10 no. Unisex superloos with inward opening doors.

5.5 Inclusive Design

The following standards and sources have been referred to in the design of this development:

- The Disability and Discrimination Act 1995
- Building Regulations Part M

5.6 Refuse

Refuse provision will be provided in line with the University's and School of Art requirements.

The bin store is to be located to the south east of the site to allow for ease of refuse collection.

The School of Art currently has both general waste and recycling broken down into glass recycling, paper recycling, general recycling. These will be accommodated as part of this proposal. The current School of Art has 2x1100L Eurobins for general waste, 3x1100L Eurobins for recycling as well as 2x 120 wheelie bins.

5.7 Crime Prevention

An access control system will be operated on all entry doors; all fire escape doors will be inaccessible from the outside and only for use in an escape situation.

The main entrance will be well lit to safe lighting levels.

A full intruder alarm system will be fitted to the premises as part of the University's wider site security plan.

5.8 Access, Cleaning and Maintenance Strategy

The proposed development is sited in close proximity to numerous trees. The proposed cladding material is intended to provide a robust, inert finish which will need minimal maintenance and cleaning in this environment, to avoid disruption to the University. A maintenance strip will be provided around the perimeter of the building.

The proposal is to provide external window cleaning to all elevations as far as possible by telescopic waterfed pole from ground level.

Replacement and maintenance of elements above ground level will be from mobile scaffolding or MEWP from adjacent hardstanding.

Access to the roof of the new extension is via the plant room at existing first floor level.

PVs to be pole cleaned from the walkable gutters on the roof with an 1100mm high parapet to the new building edge.

Access to new northlight in existing building via proprietary roof walkways only.

Fall restraint may be required depending on operability of northlight.

No-access policy to Plant roof. Visual inspection via temporary ladder (to be kept in plant room). Fixings to be provided to external face of plant room to provide fixings for temporary ladder.

Internal face of north lights to be cleaned using a mobile scaffold.

6.0

Sustainability

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6.0 SUSTAINABILITY

6.1 Sustainability Strategy

The University of Reading has the aspiration to be Net Zero in operation by 2030.

The University is already taking steps to achieve this goal by aiming to decarbonise the energy centre on campus by 2030.

There are currently two industry targets that seek to get to as close to Net Zero as possible, both in terms of embodied carbon and operational carbon. These targets are RIBA 2030 and LETI guidance, both of which may also need some offsetting in order to achieve full Net Zero.

The project team is also aiming for a BREEAM rating of Very good but a high score to the Very good rating.

Due to the existing building and budget constraints we are proposing that the following steps will be undertaken:

- Building fabric, thermal bridging elements and glazing G-values will be designed in accordance with LETI guidance for schools to reduce operational energy usage and cost.
- Air tightness will be designed in accordance with LETI guidance, though natural ventilation strategy will likely prohibit compliance for as-built measures.
- Construction and materiality will be selected and specified for a low embodied carbon equivalent where possible.
- Surface finishes to be reduced where possible to provide savings in embodied carbon and cost.
- Volume of structural materials to be reduced and optimised for low embodied carbon equivalent.
- Reclaimed plywood and OSB for wall finishes.
- Re-use of an existing building – reduces embodied carbon.
- Where trees are being cut down the potential to use the timber within the project.
- On-site renewables and further site-wide heating strategies to be incorporated to further the University's Net Zero operational ambitions.
- Targeting bespoke BREEAM certification to Very Good as a minimum standard.

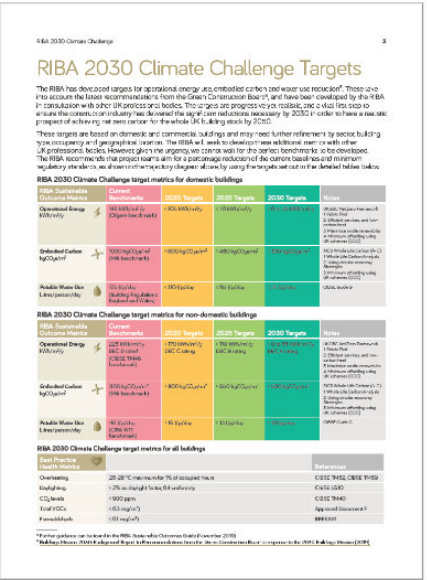
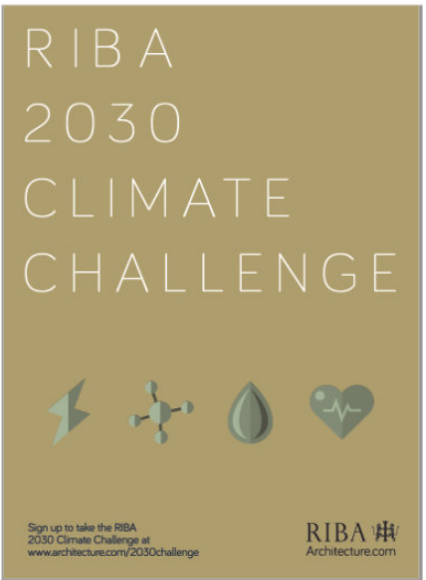
Construction

- Existing building to be retained and construction enhanced where possible and cost allows, in an effort to improve the fabric efficiency and reduce operational expenditure.
- Concrete piled substructure, suspended cast in-situ concrete ground floor construction and exposed screed floors throughout.
- Cement replacement and recycled steel reinforcement to be explored with structural engineers to reduce embodied carbon equivalent.

- Steel frame primary superstructure with SFS infill to external walls; metal frame Metsec internal partitions with plasterboard, OSB or other linings to suit application. Steel frame primary superstructure with SFS infill to external walls; metal frame Metsec internal partitions with plasterboard, OSB or other linings to suit application.
- Where required the steel beams will include apertures formed locally in beams to accommodate services.
- Recycled steel products to be utilised wherever possible to reduce embodied carbon equivalent; volume/section sizes of steelwork to be rationalised where cost allows.
- Bolted steel connections where possible to allow the structure to be demounted.
- Demountable / Movable partitions with mechanical fixings employed in some areas to allow flexibility of future spaces throughout.
- Rainscreen cladding systems to be used for new-build, with external materials selected to match or complement the existing building.
- Single-ply roof coverings utilised, on warm construction steel-framed roofs.
- Glazing extent, performance and products are to be optimised for a balance of heat loss/gain and provision of natural daylight. Daylighting assessment and energy analysis required for design development.
- Materials wherever possible to be selected using EPDs (Environmental Product Declarations) to reduce embodied carbon equivalent.
- New sink and sanitaryware locations to work with the constraints of existing underground foul water drainage network, including manholes, both within the footprint of the existing building and the extension.
- HV cable feed to be relocated as it appears it currently passing under the proposed extension.

6.2 Ventilation Analysis

Wherever possible it is proposed to utilize passive design solutions (openable windows and powered vents at roof level) to ventilate each naturally ventilated space within the building. In areas where natural ventilation has been proposed, a preliminary thermal model assessment has been carried out in order to assess and ensure appropriate levels of indoor comfort and air quality all year round. The control of the natural ventilation in designated spaces will be a combination of manual operation by occupants and automatic CO2/temperature monitoring space mounted sensors controlling the internal environment to pre-determined levels of comfort during the occupied hours.



Where mechanical ventilation is required to support occupancy and associated School of Art syllabus activities it will generally take the form of balanced supply and extract ventilation fitted with heat recovery (approximately 80% efficient) and inverter speed controlled fans.

Local extract ventilation (LEV) will be deployed within the Workshops and Practical Area wherever required to capture air borne contaminants such as saw dust, heat and chemical fumes at source (work/bench).

- Natural ventilation strategy throughout the extension and teaching spaces to reduce energy usage and operational cost where possible. In areas that require mechanical ventilation such as the workshops and ceramic and screen print areas these will be by localised individual heat recovery units ducted horizontally from each space to louvres in the external walls. Where localised extraction is required, horizontal POU mechanical extraction will also be provided.
- Opening vents to be provided within rooflight assemblies and at low level (windows) throughout the extension, operated automatically by sensors and with automatic weather detection and controls.
- Natural ventilation will likely prohibit LETI compliant as-built measures for air-tightness.

6.3 Heating and Cooling

Generally, in naturally ventilated spaces and ancillary areas, low temperature hot water heating will be provided to wall mounted radiators and under floor heating (UFH). All radiators will be fitted with thermostatic radiator temperature control valves. UFH will also be thermostatically temperature controlled during occupancy hours and reduce to a night set back temperature when the building is un-occupied.

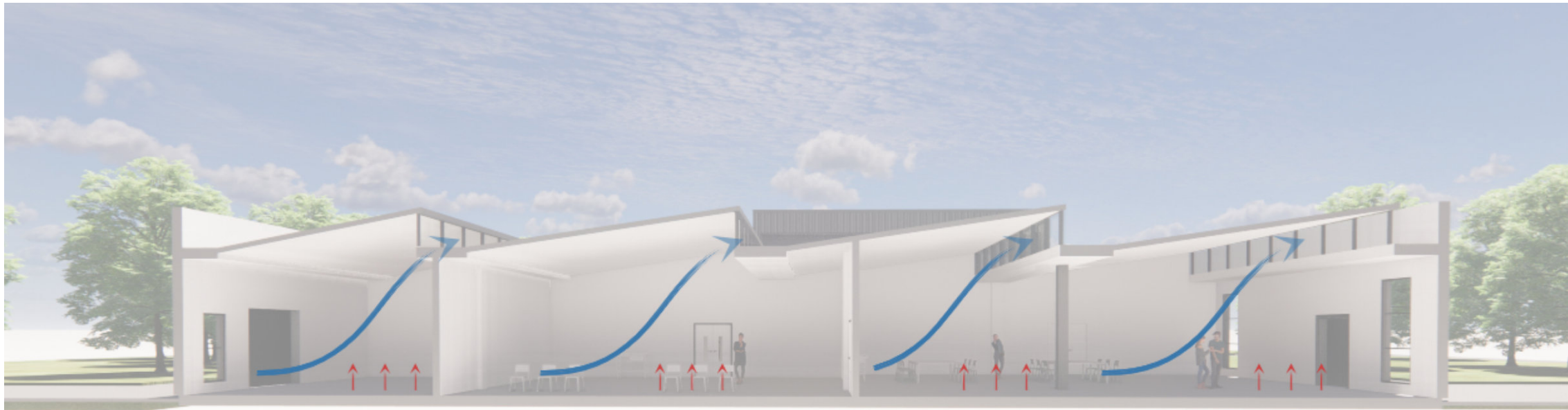
Where mechanical heating/cooling is required (workshops and practical areas) to maintain internal environmental conditions within stated comfort criteria, electric air source heat pumps (ASHP's) connected to high level ducted FCU's will be deployed.

- Underfloor heating installed throughout new-build areas to minimise operational expenditure
- Heating be supplied by site-wide district heating system that is to become net zero by 2030
- Task- or zone-based heating controls employed to increase level of control.

6.4 Internal Lighting

BYA to comment

- Daylighting assessment required to optimize functionality of



Natural Ventilation Strategy Diagram

- north-facing rooflights and reduce reliance on artificial lighting.
- Further lighting provision is to be confirmed. Artificial lighting levels within the building are to be developed with the MEP engineers to all relevant standards.
- Solar shading may be required to East/ South-facing glazed elements.

6.5 Health and Safety and Wellbeing

- Fire strategy to be designed in accordance with Approved Document Part B for compliance with Building Regulations.
- Existing structures to be protected against fire using cement or plasterboard encasement, intumescent coatings or others to suit application.
- All materials and finishes to be selected for limited combustibility where possible and cost allows.

All studios have windows which provide views out to enhance wellbeing and there is ample green amenity space existing to the North of the building.

A welfare space is provided to be used by staff and students to have refreshments and take a break.

6.6 Drainage

A complete new above ground foul and wastewater drainage system shall be provided to suit the proposed School of Art facilities in accordance with Building Regulations and prevailing industry standards. The new system shall collect foul and waste water drainage from the appliances and sanitaryware via gravity drain while being permanently vented to atmosphere. All above ground waste appliance water traps will be anti-syphon type and include rodding eyes in pipework at strategic at strategic locations for ease of maintenance.

The above ground drainage system will connect directly to the existing below ground drainage where possible. A series of new underground drain points will also be required to suit final scheme requirements (new extension, etc)

Any new above ground drainage pipework from workshop/ studio/ practical sinks shall be provided in chemical resistant Vulcathene plastic with solids interceptor traps fitted prior to discharge to the drainage collar at finished floor level.

The provision of any specialist traps and filters will be incorporated accordingly.

It is proposed to continue to discharge the surface water run-off

from the site to the existing wider university surface water infrastructure.

The permeable paving currently provides attenuation storage for the existing building. A new drainage network will pick up the overflow from the soakaways. A new attenuation storage volume is required to serve the site. To accommodate storms up to the 1 in 100-year event plus a 30% climate change allowance whilst

limiting flows from the site to 5l/s in line with the requirements of Wokingham Borough Council, it is assessed that approximately 120m3 of attenuation storage is required for the scheme. This will be provided via two underground cellular storage units.

It is proposed to re-use the existing foul drainage as far as possible. This will result in internal manholes in the extension. To minimise the likelihood of blockages, it may be necessary to upsize the existing foul drainage around the perimeter of the existing building.

New drainage spurs have been provided to pick up the expected outlets in both the extension and existing building. Where possible, existing connections in the catering building have been re-used.

Drainage will be designed to the following standards:

- Building Regulations Part H - drainage and waste disposal

- Wokingham Borough Council 'Wokingham SuDS Strategy'
- CIRIA Suds Manual C753.

6.7 Waste, Recycling and Composting

The proposal will follow the University of Readings campus wide waste management specification set out in the Employers Requirements.

This includes colour coded mixed recycling bins throughout the internal spaces.

50% capacity of external bins will be for recycling. In most cases 1100L wheeled external bins will be used.

7.0

Conclusion

7.1	Concluding Statement	70
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7.0 CONCLUSION

7.1 Concluding Statement

The proposed development to which this planning application relates, is for the refurbishment and extension of an existing building, for the University of Reading School of Art.

SITE

The site is an existing building adjacent to the Pepper Lane Entrance to the Whiteknights campus, a redundant catering facility. The central kitchen building includes ground floor accommodation; redundant kitchen, associated office and storage with first floor plant room and a goods yard to the east.

LAYOUT

The form and layout has been influenced by the site and existing building. The proposed location aims to take into account the site constraints, while maximising the benefits and opportunities available by utilising the redundant goods yard.

DESIGN

The development will provide studio spaces and associated workshop facilities, as well as providing welfare space for students.

The development respects the context of the overall campus, and reflects some of the materiality from its surroundings. The proposed development improves the Pepper Lane entrance, by bringing activity to the current redundant site. It also improves the appearance of the existing building, providing a welcoming entrance.

The proposed development will provide modern studio spaces and workshop facilities, in line with current teaching practices. This will replace the existing tired facilities, and ensure that the University of Reading can continue to provide it's modern progressive art programme, within the Whiteknight's campus.

LANDSCAPING

The scheme proposes a net gain of planting, which will provide additional screening from Pepper Lane.

The areas of planting is to be included into the Universities landscaping and ecology plan for the campus.

SCALE

The development seeks to reduce its visual impact, as it is a one storey mass that has little visual impact from Pepper Lane and further planting will be added to reduce this further.

ACCESS

Pedestrian access to the building, has been improved by providing an accessible entrance space. A marked entrance has been created by a entrance canopy.

Cycle provision has been enhanced to provide a total of 30 cycle spaces and 3 showers, as well as locker provision.

SUSTAINABILITY

By reusing the existing structure and majority of the fabric of the existing building, enables us to reduce the embodied carbon. It also reduces the amount of materials required for the development.

BREEAM Very Good is being targeted. The project also seeks to improve upon this, by targeting LETI standards for the U-values of windows and external fabric.

The scheme uses natural ventilation where possible, and is to be heated by the energy centre, which the University is committed to making Net Zero by 2030.

To summarise, it is important for the School of Art to remain on the Whiteknights Campus and this proposal provides an appropriate option in using a redundant building (and adjacent service yard) as a new location for the School. The design has evolved in response to stakeholder comments, comments from the Council through the pre-application process and public engagement.



External Visual - North-West Corner, Main Entrance



