Mynydd Isa Campus

Planning Document – Design and Access Statement

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Amendment Record

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For the purposes of the Planning Application PAC process in Wales, this Design and Access Statement should be read in conjunction with the supporting documents compiled by the planning consultant'

1.0 INTRODUCTION

This Design and Access Statement (DAS) has been prepared by Sheppard Robson (SR) on behalf of the Welsh Education Partnership Company (WEPCo) and Flintshire County Council (FCC) Education Department. Additional input has been provided by Ares Landscape Architects, Arup (planning consultants) and TTP Consulting (transport and travel planning). It accompanies and supports the planning application for Mynydd Isa Campus to FCC as Local Planning Authority (LPA). The statement explains how the proposed development is a suitable response to the site and its setting, and demonstrates that it can be adequately accessed by prospective users.

This document accompanies the planning application for Mynydd Isa Campus, Bryn Road, Bryn-Y-Baal, Flintshire CH7. It is intended to supplement the information required by Flintshire County Council by summarising the functional requirements of the brief, together with the architects interpretation of the site context and the response to it.

Section 42 of 2004 Town and Country Planning Act substituted the Section 62 of the 1990 Act so as to provide a statement covering design concepts, principle and access issues submitted with an application for planning permission. It states that one statement should cover both design and access, allowing applicants to demonstrate an integrated design approach that would deliver exclusive design and address a full range of access requirements throughout the design process.

A key purpose of the Design and Access Statement is to achieve good design, supporting the role in the delivery of sustainable development through the planning system. This is a fundamental objective of the Planning Policy and as such is reflected in the National Planning Policy Framework.

This DAS has been written with reference to the guidance document 'Design and Access Statements in Wales' (April 2017, prepared for the Welsh Government by the Design Commission for Wales). It is intended that this DAS will cover all of the required aspects set out in the guidance document.

This document has been developed in conjunction with feedback received from various pre-application meetings held with the Local Authority and the pre-application advice report issued by the LPA.

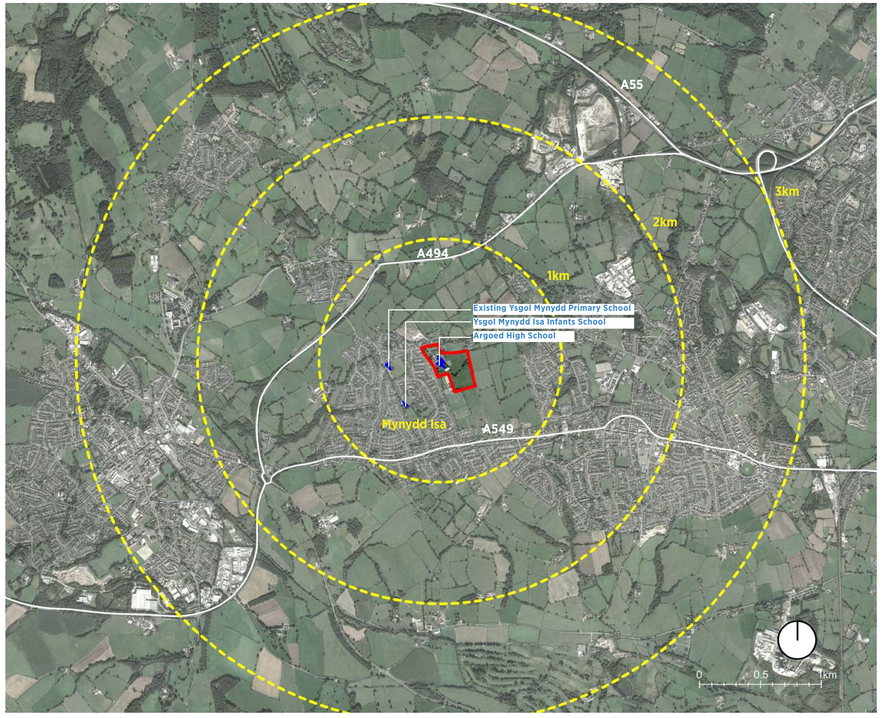
2.0 DEVELOPMENT BRIEF

The Mynydd Isa Campus will provide a new-build Primary School (Nursery, Infants and Junior) and High School (to age 16) in a co-located building.

The new building will replace the existing Ysgol Mynydd Isa Infants School, Ysgol Mynydd Isa Junior School and Argoed High School. The Primary School and High School will remain as separate schools but will operate within a single building with some shared facilities.

The new Primary School will accommodate 600 places, with a 85 place Nursery (split in to morning and afternoon sessions) and a 20 place Speech and Language Specially Resourced Provision facility. The High School will accommodate 700 places, with a 10 place Speech and Language and a 20 place Asperger's Specially Resourced Provision.

The proposed outdoor areas are intended to meet the needs of Nursery, Primary and High School pupils as well as typical facilities needed for a secure and functioning school site. These broadly consist of a variety of external play spaces, and Sports areas and pitches (including provision of an All-Weather Grass Pitch (AWGP)), plus drop-off/ pick-up including the requirement for 124 car parking spaces.



2.1 Location

The proposed site for the new Mynydd Isa Campus project is located on the grounds of the existing Argoed High School in the village of Mynydd Isa, Flintshire.

The existing Infant and Primary Schools are located within a half mile of the High School site.

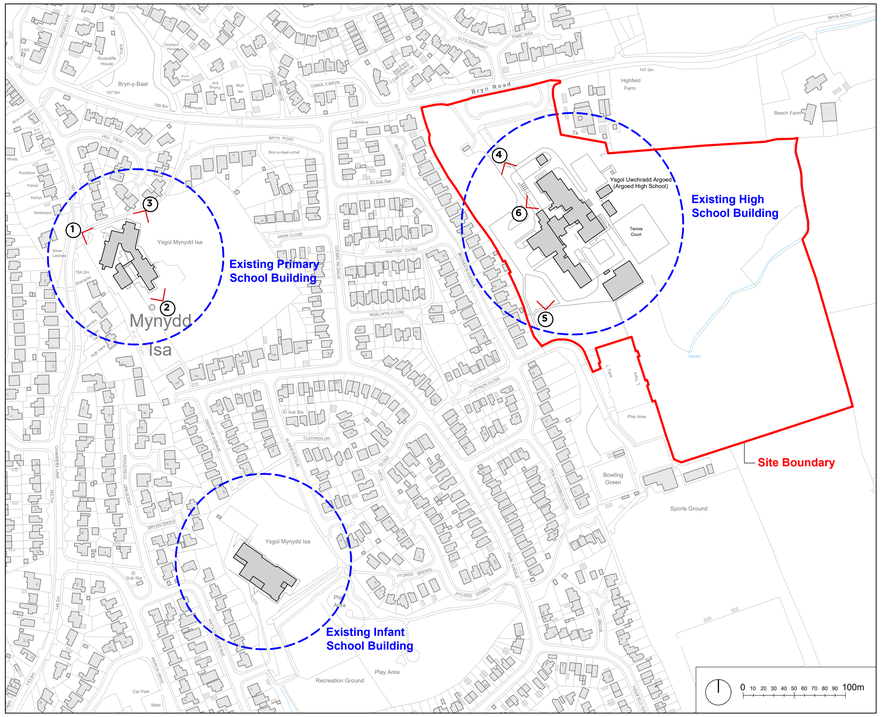
The approximate National Grid Reference for the centre of the site is (NGR) 326380 364562.

2.2 Stakeholders

The design team have engaged extensively with the Client team to meet the Brief which has been the basis of the development proposals described in this DAS.

The principal stakeholder is WEPCo, which is a joint venture between the Development Bank of Wales (on behalf of Welsh Ministers) and Meridiam, a long-term investor in sustainable infrastructure benefitting communities around the world and leading advocate of the United Nations Sustainable Development Goals. The purpose of WEPCo is to create and drive forward innovative value for money development solutions under the 21st Century Schools and Colleges (Band B) Programme that improve the education estate of today for the generations of tomorrow. Flintshire County Council are the Local Authority and the Project Participant/ end user.

Key representatives from WEPCo, FCC and the Schools have been consulted with extensively throughout the early stages of design, by means of Client Engagement Meetings (CEMs), held approximately on a fortnightly basis, plus Technical Advisory (TA) reviews.



2.3 Project's Origin

The Mynydd Isa Campus is the first project being undertaken for the 21st Century Schools and Colleges (Band B) Programme MIM.

The existing Infant, Junior and High Schools are considered unsuitable accommodation for modern schools. The size and layout of teaching spaces on all three sites are very constrained. The existing buildings do not meet the current needs of the Schools and do not allow for future expansion.

The existing Infant and Junior Schools are a mixture of Victorian school buildings and mid-late C20 extensions. The classrooms are irregular shapes and do not have adequate storage or support spaces. Acoustic separation between classrooms is very poor. Assembly spaces are extremely limited in number and size.

The existing High School main building is in a Brutalist style, with a number of mobile classrooms and a more recently constructed Sports building. The main accommodation is arranged across a number of levels with internal stepped access to classrooms and steep external ramps which do not meet accessibility standards. The layout is extremely irregular and does not support the smooth running of a large School. Although the Sports building is modern, it has inadequate changing rooms and support spaces. There is no School Hall.

The provision of suitable School accommodation cannot reasonably be achieved by altering the existing buildings.

Existing Ysgol Mynydd Isa Primary School

1 - School entrance

2 - Playgrounds

3 - View towards the main entrance block

Argoed High School

3 - School entrance

4 - View towards main building from the South

5 - View towards one of the original "Brutalist" teaching blocks

2.4 Client/ Project Aspirations

The key objectives of the project are to provide suitable new-build facilities which will support the Schools in delivering their current and future curriculum, and to operate sustainably.

(From the FCC Strategic Outline Case dated August 2020): 'The Welsh Government, through its Transformation of education provision and 21st Century Schools programme, has prioritised the modernisation of learning and delivery across Wales, so that it works efficiently and effectively. The aim is transformation across the system to benefit children, young people and adults, through the School Effectiveness Framework and the Quality and Effectiveness Framework. The intention is to deliver the highest quality learning opportunities for all.

This investment will provide learners and teachers with buildings and facilities in line with Welsh Government's 21st Century Schools and Colleges (Band B) standards, including the requirement to meet specifically designed Authority's Construction Requirements (ACRs), and will provide and will provide a high quality educational provision, in line with current requirements for curriculum delivery'.

Flintshire County Council produced their 'School Modernisation Strategy' with the aim to improve learning environments and outcomes for local children and young people. Specific aspects of the strategy to be addressed through the Mynydd Isa Campus development include:

- 'Addressing shortfalls in specialist curriculum areas by providing enhancements to these existing School faculties
- Addressing sustainability issues in existing aged building stock and reducing operational and running costs.
- Improving traffic management arrangements, including suitable car parking and drop-off/ pick-up facilities, and sustainable transport alternatives.

The main challenges at the Mynydd Isa schools are:

- Ageing buildings that are poor condition
- Buildings that do not provide suitable accommodation to meet the needs of pupils
- Primary School is on split sites
- Buildings that are unable to fully address the needs of pupils with a disability
- Mobile classrooms addressing shortfall in pupil capacity
- Lack of suitable arrangements for drop-off/ pick-up of pupils
- Lack of suitable on site parking facilities
- Shortfall in the size and number of curriculum and specialist teaching spaces
- Lack of suitable sized teaching environments, Hall and Dining space in an appropriate location
- Lack of a sufficient number of learning resource areas (small group rooms)
- Lack of Staff/ Admin. areas
- Appropriate provision for ALN needs
- The need to meet the shortfalls in the Equalities Act 2010 as physical barriers created by the existing design and changes in levels make it almost impossible to resolve.
- Poor solar gain/ temperature control.

A 3-16 campus school would improve transition, supporting learners along the learning continuum, as they move between different groups, different classes, different years and different phases. A shared educational ethos would support high expectations for all. There would be opportunity for Primary aged pupils to access Secondary phase specialisms, resources and facilities. Shared expertise and resources would also increase the schools capacity to meet the need of its pupils with additional learning needs. A wider range of extra-curricular activities could be developed that would benefit from increased/shared resources'.

3.0 SITE ANALYSIS AND CONTEXT APPRAISAL

3.1 Site and Immediate Surroundings

The site is positioned to the east side of Bryn-Y-Baal. Bryn-Y-Baal is a hamlet which shares a common border with the village of Mynydd Isa.

The site is accessed off Bryn Road. Bryn Road is a single carriageway which slopes downhill from west to east, with a main drop-off and parking 'loop' area located to the east of the entrance to the existing High School. Immediately behind the drop-off zone, there is a large landscaping mound, to the east of the gates. On the opposite side of Bryn Road to the site, there is a small, modern development of residential dwelling houses.

3.2 Site Constraints

The existing Argoed High School will remain fully in use and operational through construction of the Mynydd Isa Campus. The existing buildings will subsequently be demolished following completion of the new Campus. The existing High School is one of the main design constraints for the form and location of the new School.

The proposed location for the new-build School is towards the existing pitches to the east of the site, which slopes naturally from west to east, towards the eastern site boundary. These level changes are significant and have been addressed in the design proposals.

Access to Highfield Farm on the north east of the site (from the Bryn Road drop-off loop) must be maintained.

The area to the east and south of the site is characterised by pastoral agricultural land with a well-defined field structure created by mature hedgerows and trees.

Existing hedgerows form a natural border around much of the site. The remainder of the site boundary is made secure with railings and fencing.

To the south west are the facilities of the Argoed Sports and Social Club, these include a floodlit All Weather Pitch, playground, bowling green and grass playing fields.

The immediate western boundary is with the rear gardens of Snowden Avenue and Berwyn Close. The proximity of these residential dwellings has been carefully considered during development of these design proposals.

3no. coal mine exploration shafts have been identified within the area of the site boundary, the zone of influence around each shaft is 20 metres. It is understood that no coal mining has been undertaken on the site.

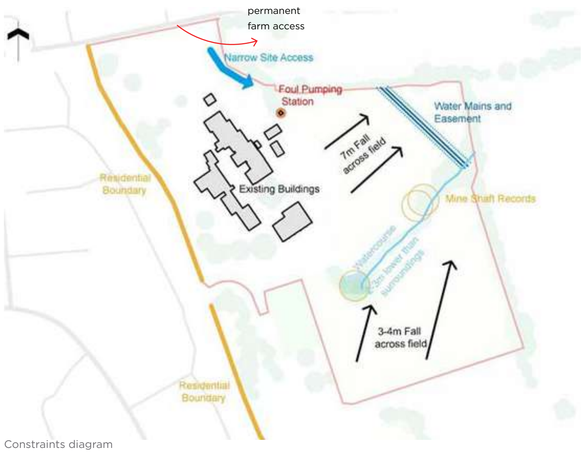
An existing below ground water main and easement has been identified toward the east of the site.

An existing foul pumping station is situated to north east, as part of the existing High School.

An existing water course brook separates the playing pitches to the north east from those located to the south of the site.

Boundary trees are mainly deciduous and predominantly found around the lower eastern half of the field. There are a number of existing mature oak trees within the site which will remain in place.

Diagram indicating demolition locations



Constraints diagram

Immediate Context trees and road pattern

Existing Site Photos

3 - View towards cabins and existing sports block

6 - View from South

4 - View from East

7 - View towards Snowdon Avenue

1 - View from Bryn Road

2 - Highfield Farm Access

5 - View towards Argoed Sports and Social Club, adjacent to the site

8 - View across playing fields

3.3 Site Opportunities

The extensive area of open playing fields within the site boundary offers the considerable space required to co-locate the Primary and High Schools together, including sufficient external play and Sports facilities.

At early stage, a basic site-fit test was undertaken to establish that the identified build zone was adequately sized to support the amount of accommodation briefed. This made some basic assumptions about the proposed building footprint, and showed that the identified zone was comfortably sufficient.

3.4 Movement Patterns

There will be a reasonably narrow site access 'throat' to the new Campus between the existing School and the site boundary.

There is a secondary access for pedestrians via Snowden Avenue in the vicinity of the Argoed Sports and Social Club.

Gross area test drawing

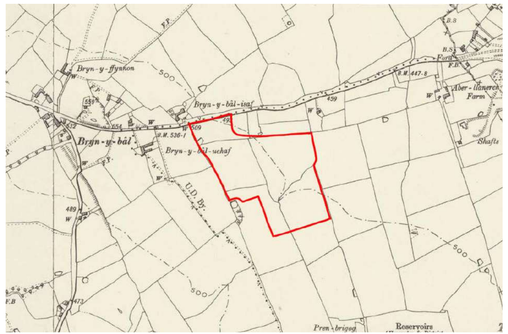
Buildable area

3.5 Site History and Existing Building

Mynydd Isa sits on a small hill above the valley of the Afon Alun, and although built around older farmsteads and hamlets is predominantly a 20th century development. The site has been a school grounds since 1978 when the current building was built by Clwyd County Council. Before that, the site was farm land, although there were some minor mine workings near the small stream which bisects the site.

3.6 Heritage Assets – Assessment of Significance

The existing buildings are not listed or locally listed and are not considered to be of heritage significance.



Bryn-Y Baal (Mynydd Isa) 1900 - copyright NLS

4.0 DESIGN STATEMENT

4.1 Design Principles and Concept

A number of key design aspects were set by the Project Brief:

- That the new building would be low rise, for an efficient form due to the number of rooms requiring direct access to outdoors
- That the new building would be of robust construction (particularly at Ground Floor)
- That the new building would have pitched roofs
- That the shape and form of the building, and the surrounding site layout, would be heavily influenced by the complex room adjacency requirements.

4.2 Site Plan and Layout

The organisation of the Campus sees the Primary School positioned towards the north of the site, in order to be convenient for the frequent drop-off and pick-up requirements throughout the School day.

The High School is to the south of the site. The proposed High School extends broadly as far south as the existing Argoed High School. The existing pedestrian site access routes can still be conveniently used. The High School will be in close proximity to the large Sports pitches, which can be accessed without crossing the Primary School.

The buildings have been positioned to be fully clear of the existing Argoed High School buildings, including offset zones for safe access during construction.

4.3 Main Entrances and Active frontages

The two Schools are connected by i) the joint Main Entrance and Reception, facing west into the non-secure area of the site, easily accessed from the car park and pedestrian approaches and ii) the joint Kitchen located to the eastern side of the building, accessed from the Service Yard.

The School building itself becomes part of the secure line, with the Main Entrance as the principal secure gateway. Halls and Sports spaces are located to the western side of the building, in proximity to the Main Entrance and public site approach.

4.4 Place-making – Private and Public Realm

It is intended that some assembly spaces and Sports facilities will be made available for community use.

Pre-application advice from the Local Authority's Case Officer states the following positive attributes of the design proposal: 'The proposal will have more open views to the front, with the parking areas arranged in front of the school entrance, there is extensive landscaping proposed.

Whilst the design is not finalised the drawings provided indicate that the final design will integrate into the landscape well and provide an attractive and welcoming School building more suitable for the locality than the current School which is very much an alien feature that has been almost apologetically screened from view.'

4.5 Movement Routes – Pedestrian and Vehicular

Arrival and Departure: Access and legibility of the site has been prioritised to create an inviting and welcoming space for pupils, staff and visitors. From Bryn road, pedestrians and cyclists have two points of access. A 3m wide path separated from the parking will be the main route in, with an additional 2m wide path on the north side of the car park, separated from vehicles with a barrier. All School pupils will use these paths and split to either access the Primary entrances or the High School entrances. These same routes are also used at the end of the day.

Parents will be able to drop off in the layby and parking spaces adjacent to Bryn Road. Staff are also able to access the car park and park in any of the spaces and walk into the site along either of the footpaths.

During the day: During the day all pupils will be within a secure area, unable to access the car park or exit the site without supervision. Primary pupils will have access directly out of the classrooms to the external play spaces.

Primary access to the AWGP and forest school/ horticulture area needs to be supervised through the entrance plaza as agreed with the School.

High School pupils will have access from corridors into the hard play areas and MUGAs around the site as well as access to the playing fields and AWGP.

Nursery parents are able to access the Nursery play area during the day without accessing any of the other secure areas of the School.

High School Circulation

Primary / Reception / Nursery Circulation

Shared Access Pathways

Vehicular Circulation

Pedestrian Access from Car Park

Vehicular visitor circulation

Pedestrian visitor circulation

Servicing and deliveries will have open access into the car park during the day with an intercom provided only to the service route along the north. An additional intercom links to Reception to allow deliveries through the Primary play area (secure to prevent unwanted access), and towards the Kitchen. The Bin Store is located within the Service Yard for ease of access. Visitors will be able to get into the car park and to the Main Entrance to speak to Reception during the day, secure from the rest of the School.

Location of the School Kitchen: The Kitchen must be safely and conveniently serviced both with food deliveries and for refuse removal and collection. The kitchen must connect directly with both Schools, specifically with the Secondary Dining Hall and with the main Primary Hall. The two dining areas need to be conveniently located in a central, pupil centred zone within each school, with direct access to safe external recreation areas and, of course, be within the secure zone of the campus.

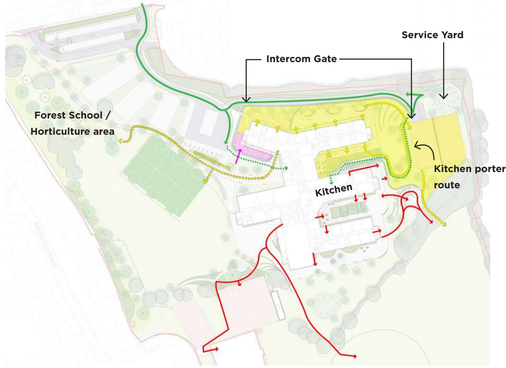
A successful Kitchen location was established to the rear of the building, which works well for school operation and enables servicing from a Service Yard and portering route along the boundary of Primary and Secondary external areas. The Kitchen portering route will cross the access between Primary play and the playing fields. The Primary School will use a managed gate to access the fields.

Out of hours Visitors and Community use: Out of hours access for Parents Evenings or Community use will be available into the School car park at the Schools discretion. The main Community facility outdoors will be the AWGP, which has easy access from the car park. There may also be use of the playing fields at the weekends, so easy access is also provided for this scenario, with only one gate being required to be open for access to the fields.

This was discussed with the Schools as being the preferred solution rather than a more secure solution preventing access to the rest of the site.

Emergency access: Fire vehicle access will be required within 18m of the façade, to 50% of the perimeter of the building. As such, provision has been made within the hard play spaces and access points around the site.

In rare cases there may be ambulance access required to the playing fields. This can be achieved through existing gap in the hedgerow to the south of the site.



High School Circulation

Primary / Reception Circulation

Nursery Access for parents during the day

Services and Deliveries

Pedestrian Servicing / Deliveries

Fire Tender Vehicle Access to 50% of perimeter

Ambulance Access to playing fields

4.6 Scale and Massing

Appropriate building form: Early in RIBA Stage 2, consideration was given to the appropriate basic form of the school. The finger-block form (low height, spread across the site with main teaching spaces in a linear arrangement) was considered the most appropriate for a number of reasons:

- It is easier to provide the necessary separation between Primary and Secondary teaching areas using the finger-block form
- It is easier to have appropriate relationships with separate Primary and Secondary external areas using the finger-block form
- An alternative arrangement (a super-block, which is a consolidated building form over multiple floors) would only be efficient through a very close - and inappropriate - amalgamation of Primary and Secondary accommodation.
- The finger-block was better suited to get good natural light to all teaching areas - for a school of this size a super-block approach would require more internal accommodation

The finger-block enabled a more nuanced relationship between the building and the quite steep site levels, to enable both good relationships to external learning and recreation spaces, but also to minimise excessive cut-and-fill

Sustainability criteria influencing building form:
The form of the building was considered in relation to the sustainability goals set by the project Brief, specifically the Net Zero Carbon in operation (NZCio) supplementary requirement. A finger-block form for a School benefits in enabling good natural environmental conditions though maximising natural ventilation and natural lighting of spaces whilst minimising summer overheating, especially if the fingers can be oriented east-west.

Through the initial CEMs we tested approaches to arranging the principal components of the overall school:

- Main entrance
- Nursery
- Primary learning (juniors and infants)
- Primary halls and dining
- Kitchen
- Secondary halls and dining
- Secondary learning
- Sports accommodation

A number of key drivers were established:

- Main Entrance/Reception must be centrally located for approaching visitors and link to both Schools.
- Nursery and early years should be located closely to the site approach and car-park
- Primary and Secondary must be generally able to operate independently
- Kitchen must link with both Dining areas (no trolleying of food allowed)
- The existing School site is an appropriate location for the proposed AWGP which compensates for building the new School on 'greenfield' land
- Sports Halls and Changing must be located to relate to the existing pitches and the AWGP

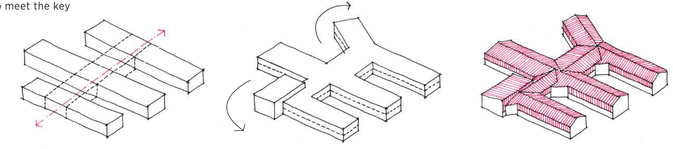
From this a number of 'finger' arrangements were tested on the site, which led to the current arrangement as being most able to meet the key drivers set out above.

Sports to south west

Splayed blocks to rear

Primary to south west

Main Halls and Sports to front
Options for 'finger' arrangements on site



Volumetric Development

Approach to site levels: The new School building zone has a west to east fall of seven meters from extreme boundaries. Considerable thought was given during the early design stages as to how this level change might be approached. Three scenarios were considered:

A - a traditional 'flat' level ground floor build, which would entail making a plateau at some intermediate level

B - a single storey step, where ground floor to the west became first floor to the east: as the land drops away a lower ground floor is slotted below

C - a half storey step, where the ground floor drops half a step to the east, so the entrance floor has a half floor approach to both ground and first on the teaching blocks.

Initially it was felt that Option B provided the best approach, which would minimise cut and fill and provide the best relationship between different parts of the school and the surrounding external areas. During the design process, however, two problems became apparent with option B:

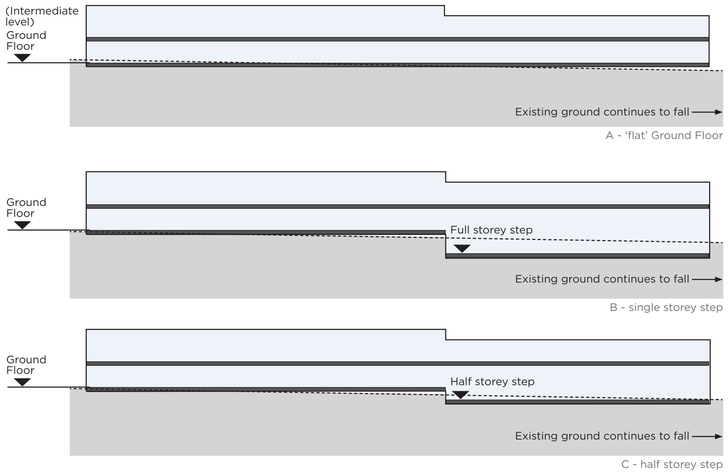
- Significant operational problems in the primary school layout, especially around early-years access to the main hall for assembly, PE and dining
- Significant retaining wall structures requires within the sub-structure, adding to cost and raising concerns for NZCio in the broadest, materialist, sense.

Due to these problems a rapid analysis was undertaken to test the feasibility of swapping to levels Option A. This analysis entailed:

- Setting an appropriate intermediate level for the building plateau
- An architectural layout test of both split and flat forms
- A landscape test to ensure i) adequate and accessible external Sport and recreation areas could be provided and ii) that accessible routes could be established across the site
- A civils test of i) cut and fill ii) external retaining structures required iii) drainage routes from and around the building. These were tested both for the final situation and for the situation where the new and old School exist side by side.
- A materiality (NZCio) analysis of the two options, particularly with respect to volumes of concrete
- Finally, a costs appraisal of the two options.

The outcome was a successful move to the flat approach (Option A).

Following establishment of the basic building organisation further analysis and briefing was undertaken through the CEMs to establish the internal operational approach of the two Schools. A diagrammatic analysis of the Schedule of Accommodation was presented which, through discussion, led to our consolidated adjacencies diagram. This diagram then informed development of the proposed general arrangement layouts proposed in this application.



4.7 Landscape Design and Principles

The proposed landscape design will meet the requirements as set out in the project Brief.

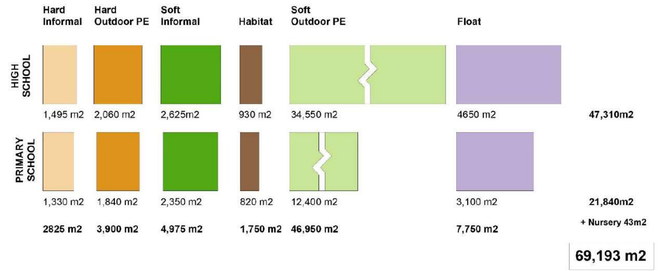
The intention is to use the landscape design proposals to create an educational campus that maximises the opportunity the site presents with its topography and semi-rural setting in order to create a unified setting for all the educational uses.

Access to the site, and circulation within it will be carefully considered to make sure it is easily navigable for pupils, staff and visitors to move around. A key part of this is ensuring clear separation between vehicle and pedestrian movements and having a dedicated route for service deliveries and bins.

The footprint of the building provides opportunity to create external spaces for each of the Schools and key stages. There is a requirement in the SSB for the site boundary to be entirely secure. A site visit and survey has been undertaken to ascertain the quality and extent of existing boundary railings and fences to inform these proposals.

An analysis of externals areas has been undertaken in relation Building Bulletin 98 and Building Bulletin 99 for the Secondary and Primary school respectively. This gives us confidence that the site can accommodate all the hard and soft social spaces, hard courts and Sports pitches required for a site with this number of pupils.

The key design principles are discussed in the following section. These have generally remained the same throughout early stage design, with the exception being the change in size and orientation of the AWGP.



Analysis of external areas

Site Area
84,430 m2

NET External Area Requirements
69,193 m2

Doesn't Include building footprints, roads, access, servicing etc.

4.8 Entrance Approach

The entrance plaza at the front of the school opens into the main visitor entrance and faces the activity studio, main hall and nursery play area. This will create an animated and active space for all visitors to the school.

The car parking is broken into smaller fragments to reduce the impact of the required spaces along the frontage of the school. Green spaces intersperse the parking - swales and meadows, enhancing green infrastructure links with the surrounding environment.

Space is provided for vehicles to loop near the school, and for delivery vehicles to access the service yard to the north east of the site.

The parking provision is as follows:

Standard Parking Spaces (2.4m x 4.8m): 112

Accessible Parking Spaces: (3.6 x 6m): 12

Minibus Spaces: 1

Parent Drop Off Spaces: 49

Pick Up/Drop Off Facility capacity: 60

Drop Off Laybys: 2

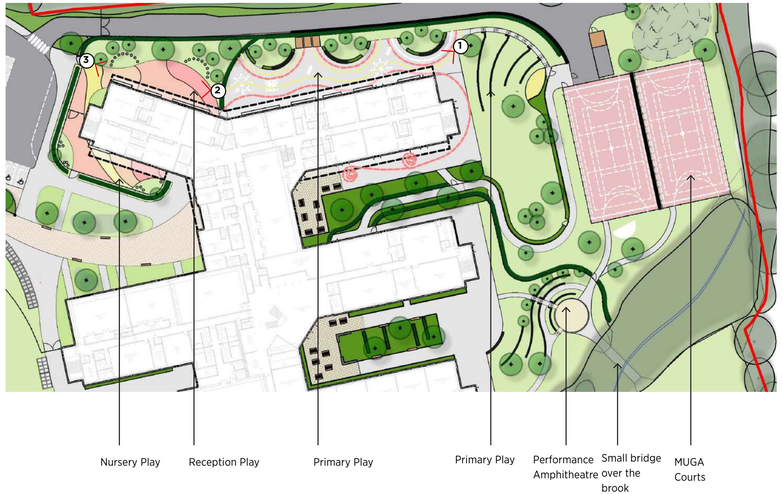
Cycle Parking: 105 Spaces for staff and pupils

4.9 Primary School External Spaces

Primary play has been designed to have a balance between hard and soft surfaces. Story telling areas are created with the planting and trees along with flexible space for play equipment. The Nursery and Reception area will have a rubber crumb type surface with varying colours to create a playful and welcoming environment.

To facilitate a larger number of children, the Primary play area needs to be larger and more robust so a macadam surface is proposed with colourful line markings, and access to small gardens defined by low hedges and seating. This will create exciting play spaces for children to occupy and learn. The softer grass spaces to the west contain an amphitheatre and open grass run around space.

A small pedestrian footbridge over the brook and through the woodland will be introduced.



1 - View towards Primary East finger

2 - Primary external play

3 - Primary external play

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4.10 High School External Spaces

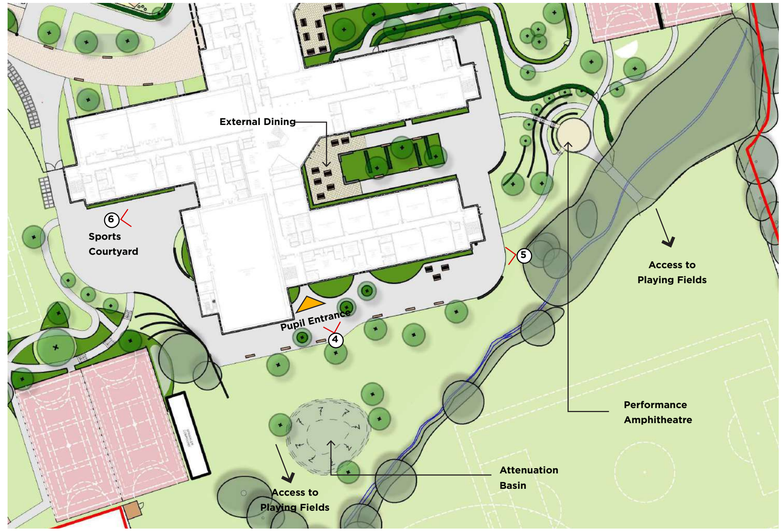
High School pupils have access to a variety of spaces hard and soft for play, Dining, and recreation. Adjacent to the Dining Hall, there is a paved space with furniture for outdoor Dining and views of the central rain garden. This acts as a SUDs feature but also enhances well-being, views from Classrooms and improves air cooling between the buildings.

The south elevation of the building accommodates the main access point for the majority of High School pupils along with an adjacent access for Pastoral Staff and students. Views at the ends of corridors lead to feature trees and green space beyond.

The area adjacent to the Sports Hall is a large flexible space for informal play. This leads to steps and footpaths to the High School MUGAs, and a Secondary School entrance point from Snowdon Avenue.

Access to the playing fields will be through the mature tree planting.

An amphitheatre/ performance space is also provided to navigate the level change falling east.



4 - View towards pupil entrance

5 - View towards south elevation

6 - View towards sports hall entrance

SHEPPARD ROBSON

4.11 Proposed AWGP and Playing Fields

The existing school buildings will be demolished to create space for a replacement pitch area. Whilst the existing field is used for rugby, the gradient and drainage is poor so the new playing field area will improve this and create space for a variety of sports including football, sprint track, training grids and rounders. Rugby can then be played on the larger more suitable fields to the south.

As part of this replacement, an All-Weather Grass Pitch is also provided which can accommodate 3no. five-a-side football pitches (and other informal sports which are not demarcated). This will be a facility available for use by the Primary School, High School, and lettable to the local community. Lighting will be proposed for evening use. Noise mitigation is provided with a 3m high acoustic fence to the south and west edges. Screening is provided along the boundary for local residents to improve the outlook from these properties.

To the south of the playing fields are the 3no. MUGAs which can accommodate tennis, netball and football for the use of High School pupils.

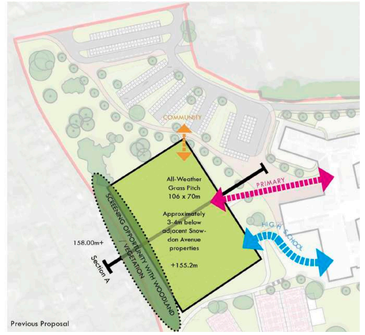
SHEPPARD ROBSON

AWGP design development: The most significant change to the site layout has been around the size of the All-Weather Grass Pitch. The early stage proposal showed a full size football pitch located on the west of the site. This accommodated the amount of space required for a School of this size and provided suitable facilities for the curriculum and Community use.

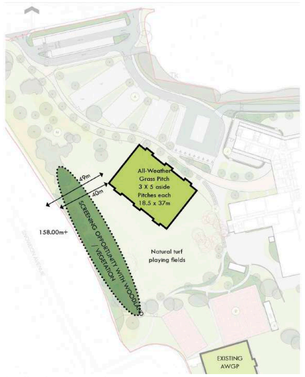
As the detail developed, concerns were raised that siting an AWGP in this location may result in an acoustic issue for nearby residents. This could be solved with a 4.5m acoustic fence along the boundary but this would impede on residents outlook, so alternative options were explored.

A number of alternative locations were reviewed with the design team and Client team, including a potential location on the southern field. However, this location had a number of significant drawbacks including access, security and cost.

As a result, the smaller AWGP has been proposed. This still provides the School with enough space for curriculum needs, Community use and can be used in tandem with the existing AWGP further south to ensure the School has enough total area in line with BB99/98 guidance.



Stage 1 AWGP Proposal



Application Proposal

Location Optioneering

4.12 Site Levels and Topography

The proposals work in line with the existing topography and utilise the steeper level changes for dramatic and interesting landscape interventions.

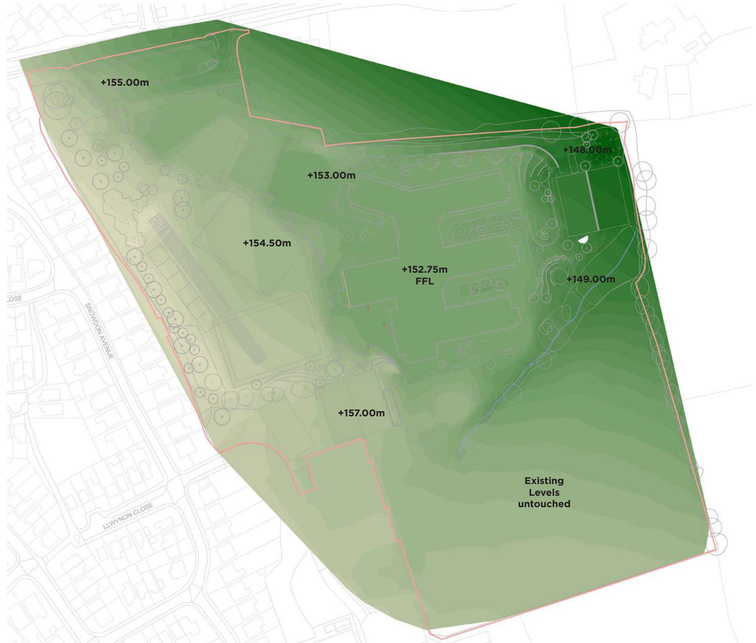
The building is across a single level of 152.75m FFL which sits lower than the existing buildings, improving outlook for nearby residents and limiting the external visual impact from the surrounding locality.

The playing fields to the west of the School sit higher and grass banks are utilised to navigate the level change.

The play areas and MUGAs to the east of the school are lower and a mixture of retaining walls, amphitheatres and grass banks are used for level change. The Primary School MUGAs sit at the same level as the watercourse to limit excess runoff.

The service yard sits at the lowest point of the site resulting in a high retaining wall here and a 1:20 gradient footpath for wheeled deliveries to the Kitchen and School building.

All areas of the site are accessible to mobility impaired people and those using wheelchairs in line with Building Regulations AD Part M.



1 - Aerial view towards school entrance

2 - Aerial view looking West

3 - Main Entrance approach

5 - High School Amphitheatre Performance Space

4 - High School External Dining Courtyard

4.13 Plans – Internal Layout

Primary School organisation: The Primary School is organised over two floors and the arrangement of learning spaces follows an age-based progression around the building. At ground floor, the journey starts with the Nursery accommodation to the westernmost end, nearest the car park approach. The Reception classes are co-located opposite nursery, forming a combined early years zone. At the opposite eastern end of the building, Year 1 and Year 2 classbases sit on opposite sides of the wing, forming another cohesive learning zone. All classbases at Ground Floor have direct access to external learning/ recreation areas via a cloaks and WCs lobby off the classbase.

Between these two classbase hubs, in the centre of the Primary Ground Floor accommodation, is a collection of central resource areas. The connection to the joint Main Entrance and Reception is flanked by the main Primary Staff and Admin. spaces. At the centre of the plan are the Primary Halls, the Primary Studio space, the Changing Rooms and the Ground Floor Speech and Language (S&L) rooms. These are all arranged around a connecting 'Hub' space, which allows light and spaciousness into the centre of the plan, acts as a lining-up zone for the Halls etc, and allows direct access out into the Primary external play and PE areas. The principal stair access to First Floor also connects to this Hub.

Ground Floor plan

At First Floor the Primary journey of age progression continues, this time from east to west, with Years 3, 4, 5 and 6 in clusters of three classbases. In the middle of the First Floor plan there are further central resources, principally the Primary Library and the First Floor S&L space, and a specialist practical room (for ICT).

Secondary School organisation: The Secondary School is organised over Ground and First floors in four 'fingers', although the fourth is just the Sports Hall. The accommodation is organised on a subject basis, with General Teaching (Maths, English, Humanities, Languages) in the south east finger, and all Specialist Teaching in the two northern fingers. The Specialist areas are arranged to facilitate a number of subject groupings. Principally, Science occupies the whole upper floor of the north-east wing as a stand-alone department. Technology is at the lower floor, with Food Technology in proximity to the Kitchen and Dining, whilst Art, Music and Drama occupy the north west wing in an 'Expressive Arts' grouping, close to the Main Hall and Sports Changing Rooms. ICT spaces are located at the centre of the School nearby the Library.

In the centre of the School are the Dining Hall and Library on Ground and First Floor respectively. The Dining space acts as a central student hub, placed to be easily accessed from all other areas, and sits in close proximity to the main Hall and Main Entrance, facilitating both Dining overflow and a variety of support functions for events. The Dining space also provides direct access out into the Secondary School external recreation zone. The Library at First Floor is centrally located between teaching departments.

The Pastoral Unit is positioned at Ground Floor, with required direct access to outside. Generally, Staff work areas have been located at the ends of fingers to support passive supervision.

First Floor plan

Building access and egress:

The building has a number of entrance points forming different functions. Mostly these sit within secure zones and are directly managed by Staff.

A - Main entrance. This is the joint visitor entrance to the whole campus, securely controlled by Reception Staff

B- Primary AWGP access. This is a 'shortcut' to allow controlled Primary access to the AWGP, across the entrance plaza

C - Nursery access to dedicated external secure space

D - Emergency exit

E - Reception access to dedicated external secure space

F - Yr 1 access to dedicated external secure space

G - Emergency exit

H - Yr 2 access to dedicated external secure space

J - Primary access to external play and PE areas, includes direct from primary hall and changing

K - Kitchen service access

L - Emergency exit

M - Direct external access from technology spaces

N - Secondary access to external recreation areas from central dining zone

P - Emergency exit

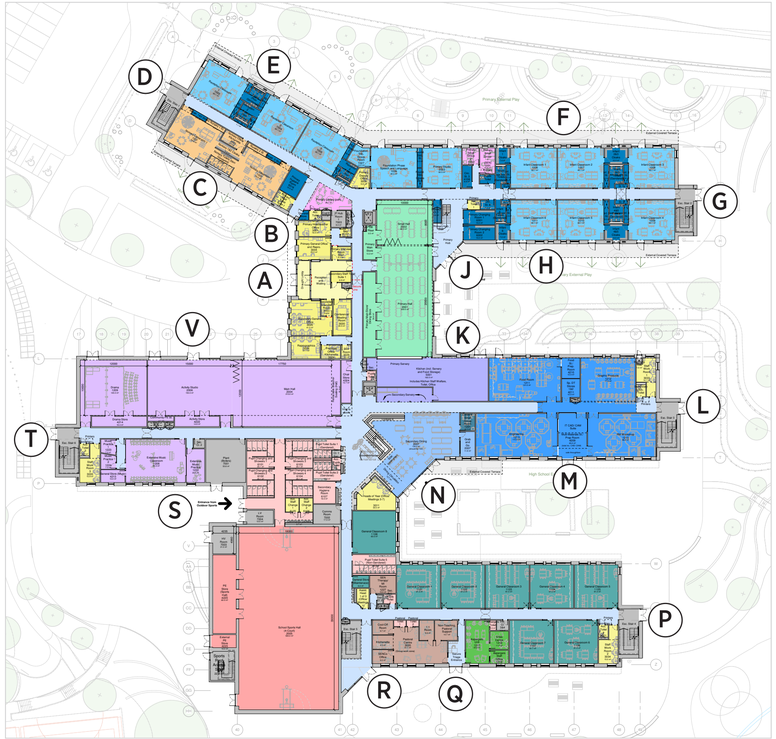
Q - Pastoral Unit entrance

R - Secondary Pupil Entrance and access towards fields. This access point forms part of the School planned management approach.

S - Changing access to external sports fields, MUGAs and AWP

T - Emergency exit

V - Direct access into main halls for events



4.14 External Appearance and Proposed Façade approach

Developing on themes explored during WEPCo Stage 1 and developed at the start of WEPco stage 02 and, the concept of "agro industrial' as the architectural expression of the building remain at the heart of the buildings design.

The approach takes influence from agricultural barns and small holdings which are simple and adaptable building forms. The architectural mass and lively roofscape echo architectural forms found across Flintshire. The design adopts motifs such as asymmetric roofs, materiality wrapped from roof to walls, use of robust materials such brick and metal, panelised arrangement of the elevations and stepped brick bonding to gable walls.

The whole site elevations on the following pages show the articulation and expression of each teaching wing and the roof scape which unifies the School as one building.

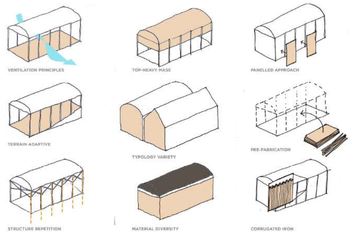
The requirements of the different users within each block, together with the overall scale and massing of the forms are reflected in the fenestration and window openings. Spaces accommodating younger learners feature lowered windows to allow views out for all users and the window configuration playfully staggers from GF to FF. Windows in the Secondary School areas are formally arranged and are set at a consistent cill height. The larger group spaces such as Primary Hub, Halls and Secondary Dining are expressed with large areas of curtain walling allowing a greater connection with the external play space. Typical elevations of the younger years and secondary blocks are provided overleaf which demonstrate this variety in form.

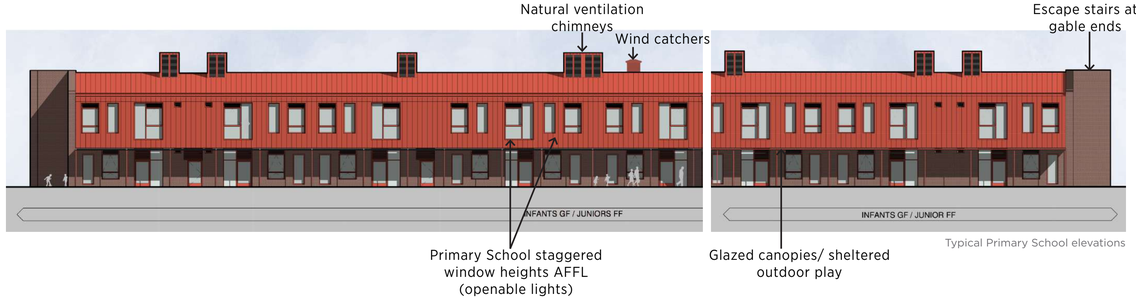
This approach provides each of the teaching wings with a shared architectural language and materiality which also reflects the transition in age ranges and users across the campus. This helps to unify the development while providing individual identity to each block.

The design of the elevations has also been tested through Stage 3 to respond the technical requirements of the project including the requirements for natural light and ventilation. These have been co-ordinated with the buildings structure and services zone to define internal and external height parameters such as the floor-to-floor and floor-to-soffit dimensions, as shown on the following pages.

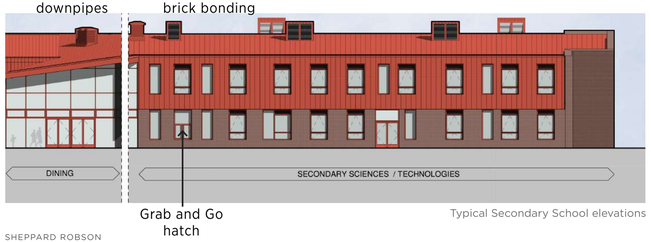
With the majority of spaces naturally ventilated during the summer months there is a requirement for opening windows across the building. These need to be balanced with security and safety concerns with restrictors used on most openings. By virtue of this limitation in opening size most windows on the building will need to be operable with the required impacts on projects cast, maintenance and management.

The requirements for the mechanical ventilation systems (used during the winter months) have also been incorporated with louvred panels incorporated into the fenestration to allow for local intake and extract, minimising ductwork runs through the building.





Typical Primary School elevations

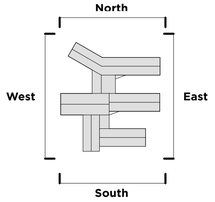


Typical Secondary School elevations

Elevation colours shown are indicative: standing seam colour and brick type to be determined. A range of brick types are shown on the following pages.

North Elevation

South Elevation



East Elevation

West Elevation

Elevation colours shown are indicative: standing seam colour and brick type to be determined. A range of brick types are shown on the following pages.

4.15 Elevations and Materials

The external material palette has been carefully considered to provide an architecture which is robust, fit for purpose and which compliments the surrounding buildings and landscape. Material choice has been heavily influenced by our rethinking of agricultural buildings and as such the principal materials are brick and aluminium standing seam. Brickwork will be used on the end gables, up to first floor level and has been chosen for its robustness and affordability. The colour of the masonry has been selected to reference red brick which is common in the surrounding area. Varying brickwork bond patterns will be used on the gable walls to add articulation and relief, such as stacked bonded brickwork above window heads and stepped Flemish bond brickwork patternation. Aluminium standing seam will be used to clad all expressed roofs and wrapped down to first floor on the external walls. The standing seam folds will be set to align with the window placement and will create shadow and depth across the facades.

The proposed materials are:

1. Red Brick – providing a robust ground floor plinth to areas of aluminium cladding

2 . Aluminium standing seam – used to clad all expressed roofs and wrapped down onto external walls and feature chimneys

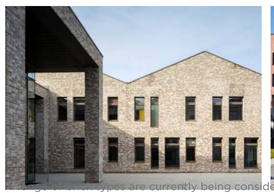
3. Red metal work – the preferred colour for window and door framework and ancillary trims

4. Glass – provided with solar control coating and a neutral appearance

5. External glazed canopies above GF lower primary play space.



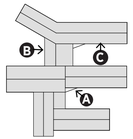
Precedent images of red standing seam and feature brickwork




Precedent images of red standing seam and feature brickwork

Glazed canopies

One of several brick types being considered alongside a range of standing seam colours

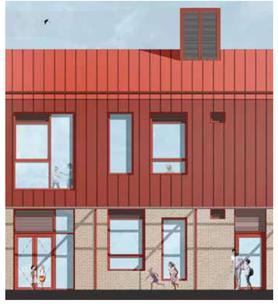


B Main Entrance Bay Study

C Typical Primary School Bay Study

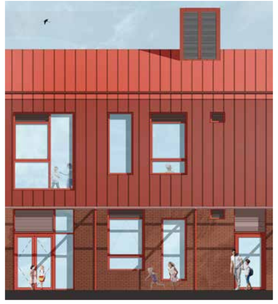
4.16 Elevation Materials Optioneering

Variation with grey frames



Indicative brick types including: Buff brick

Red brick (textured)



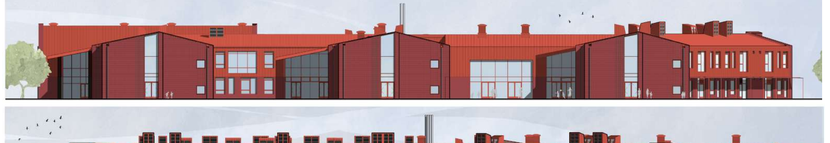
Engineering brick

Red brick (multi)

North Elevation
Option: Buff brick

East Elevation
Option: Buff brick

North Elevation
Option: Engineering brick

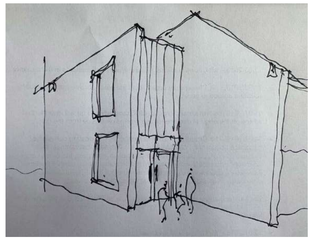


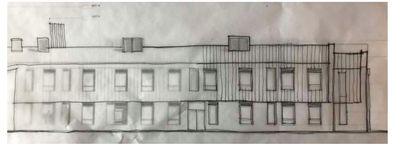
East Elevation
Option: Engineering brick

North Elevation
Option: Multi brick

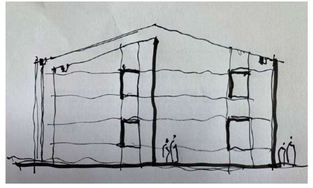
East Elevation
Option: Multi brick

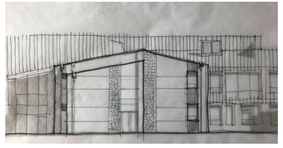
The extents of facade across this large building will be worked into with feature patternation and brick bonding. The spacing of the standing seam will be tailored around window openings. Precedent examples of feature brick bond types are shown in the previous pages of this report. Suggestions for how feature brick bonding might be applied to gable ends are shown in the sketches on this page.

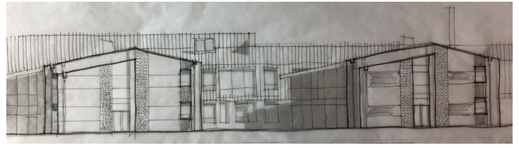


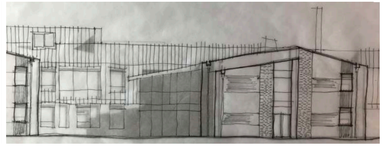


Suggested standing seam along the "finger" elevations









Suggested feature brick bonding to gable ends

4.17 Visual Impact Assessment

A full Visual Impact Assessment has not been deemed necessary for these application proposals. A Visual Impact Scoping Report has been prepared by the Landscape Architect and is appended to this DAS.

4.18 View Locations
South elevation view

View towards Main Entrance

South aerial view

4.19 Verified Views

Verified Views have not been deemed necessary for these application proposals.

5.0 SUSTAINABILITY STATEMENT

5.1 Approach - Sustainable Facilities and Features incorporated in the Design

The project aspiration is that the Mynydd Isa Campus will deliver a net zero carbon in operation. A net zero carbon in operation building is a building that is highly energy efficient and powered from renewable energy sources. The NZC carbon target will influence all aspects of the design from façade detailing, U-value calculation, passive measures such as daylight, ventilation, shading, and renewable technologies to reduce energy.

The project is working to a maximum embodied carbon target has been set at 800kgCO2/m^2 and the relates to the building en-masse, including substructure, super structure, facades and finishes. Material specification will be assessed and measured as the design develops in order to highlight any elements with a substantial impact.

5.2 Specification of Materials

To align with the agreed BREEAM targets, specification of materials will consider a number of sustainability aspects, including:

- Timber – all timber and timber-based products used during construction must be legal and sustainable timber (following the UK Government's definition as outlined in the Central Point of Timber (CPET) 5th Edition of the UK Government Timber Procurement Policy (TPP))
- Volatile Organic Compounds (VOCs) – at least three out of the five product types listed in BREEAM Hea 02 shall meet the emission limits, testing requirements and any additional requirements listed in the Hea 02 criteria in order to achieve one credit for Hea 02 Emissions from Construction Products
- Responsible sourcing certifications – specifications will require that more than 20% of available BREEAM Mat 03 points will be achieved through procurement of materials from manufacturers with a BREEAM Mat 03-recognised responsible sourcing certifications for their products (e.g. BES 6001, ISO 14001 certification).

The BREEAM Mat 01 Life Cycle Assessment (LCA) options appraisal will also investigate the embodied carbon impact associated with key building elements. Where possible, alternative material specifications will be modelled for materials which are found to have a substantial impact, in order to allow for the environmental impacts of different specifications to be considered in decision-making, alongside other factors.

5.3 BREEAM

The Mynydd Isa Campus aspires to achieve a BREEAM Excellent rating which reflect the commitment to an holistic sustainability approach for the project from inception through construction and in-use energy consumption. The project has been registered with the BRE and is being assessed against BREEAM 2018 UK New Construction.

The target scoring required to achieve this rating was agreed at a BREEAM pre-assessment workshop, and this continues to be adjusted and refined in line with design development. Scoring is being tracked via a live tracker, TrackerPlus. At the time of writing, the target scoring is as follows:

Target	Potential
77.80%	96.67%
Excellent	Outstanding

All minimum standards required for the Excellent rating are targeted, and the required 70% threshold is exceeded with a scoring buffer.

5.4 Environmental Engineering

In order to minimise the buildings overall energy usage and CO2 emissions a three-stage approach has been adopted to the design of the schools and their associated systems. The three stages are:

1. Passive design – reduce the need for energy
2. Active Design - supply energy efficiently and recover energy wherever practical
3. Use of renewable technologies

The passive design stage is crucial in helping to achieve a low energy building as it looks to reduce the need for energy to be generated in the first instance. Following the early stages of design development, close attention was paid to co-ordinating and integrating the structure and the occupied areas to:

- Minimise internal areas requiring mechanical ventilation to enable natural ventilation in summer months.
- Minimise direct solar gain to reduce unwanted overheating, but balance to maximise daylight factors in all areas.
- Maximise utilisation of plant and systems.
- Maximise control and flexibility of the installations.
- Improve the performance of the building thermal envelope (reducing fabric u-values and optimising glazing g-values).
- Reduce air permeability.

In terms of active design these are systems that allow the generation and delivery of energy in an efficient way have been incorporated, including:

- High efficiency lighting systems.
- Use of LED lighting.
- Lighting controls with perimeter areas switched separately from internal areas possibly with daylight linking.
- Absence detection for lighting control rather than presence detection.
- Low velocity pipework and ductwork where possible to reduce fan and pump power consumption.
- High efficiency motors with variable speed drives.
- Specification of high-performance MEP plant.
- Local control of heating systems to prevent overheating.
- Equipment will be zoned in such a way as to allow plant to be turned off or enable out of hours setback in appropriate unoccupied spaces.
- Waste heat recovery from VRF cooling. A VRF heat recovery simultaneous heating and cooling concealed fan coil unit is necessary for cooling the ancillary IT area. This system will incorporate a heat exchanger to utilise waster heat recovery from the VRF system into the LTHW buffer vessel.
- Separate metering on power and lighting systems.
- Central Building Management control System (BMS) and Energy Management System (EMS) with monitoring of key system parameters. This allows the facilities/building managers to gain insights into the collected data as well as highlight any inefficient practices, aiding them in making better informed decisions affecting energy usage.

In terms of renewable technologies, air source heat pumps (ASHPs) and a photovoltaic (PV) array were found to be the most beneficial systems for the project and have therefore been incorporated into the design. The photovoltaic array required to achieve net zero carbon (NZC) is likely to be substantial in size for this project and will likely occupy a large percentage of the roof space.

There is an environmental and carbon footprint associated with potable water consumption, this is attributed to the energy and resources that are required to extract, treat, and pump this water from its source to where it is needed.

The first priority is to reduce the demand for water through the use of water economic fittings and fixtures, the second is to match demand to use. Not all uses require water to drinking standards and some demands can be met using rainwater or greywater, depending on its quality.

To meet the BREEAM requirements, the following demand management and water efficiency measures have been considered to develop a water conservation strategy that is sustainable and reduces the economic, environmental and social impacts of developing water sources and waste stream discharges:

- Match non-potable supply to non-potable demand
- Consider supply of water from local sources
- Conservation measures e.g. WCs with low water volume dual flush cisterns, low water use appliances and fittings, flow restrictors, automated supply shut-off where practical
- Management of water consumption through metering & monitoring via the BMS – such as leak identification

A hierarchical approach has been used to define the storm water drainage strategy for the proposed development's runoff in compliance with 'Statutory standards for sustainable drainage systems - designing, constructing, operating and maintaining surface water drainage systems 2018'.

One of the key aspirations to the project is to be net zero carbon in operation and in addition the team recognises the importance of embodied carbon, and thus a target of 800kgCO2/m2 has been agreed.

5.5 Building Ventilation Strategy

In order to achieve the NZC aspiration of the building a combination of natural ventilation (in the summer) and mechanical ventilation (during the winter) will be provided.

Cross-flow natural ventilation will be utilised during the summer to provide passive ventilation and achieve an even distribution of air across the classroom. Air will generally enter the classrooms from the opening windows on the perimeter of the classrooms, and be exhausted from the rear of room via dedicated exhaust ventilation chimneys that rise above roof level.

During the winter, windows will be closed to prevent cold air entering the building and local Mechanical Ventilation Heat Recovery units (MVHRs) will supply and extract air to the classrooms. The units will include high efficiency heat exchangers (~80% efficiency) to recover heat from the exhaust air and temper the incoming air as required by BB101 to minimise cold draughts. This provision of air will be supplied to mix and distribute evenly in the classroom.

In the main halls and double height spaces within the building they shall solely be ventilated by rooftop Windcatchers that shall provide supply and extract air into the spaces below all as natural ventilation. In order to improve performance on still days when the wind pressure is calmer, the Windcatchers shall utilise a solar powered integral fan to boost airflow.

5.6 Heating and Cooling Strategy

The schools space heating requirements will be fulfilled by a series of air source heat pumps (ASHP's) located on the roof-level plant space above the sports stores. A thermal storage buffer vessel will be included on the primary return side to meet the minimum system water content required by the ASHP's. This water content is required to limit the on/off cycling of the units and to aid with the defrost cycles during cold weather.

The mechanical cooling within the school will be limited wherever possible. There are some areas within the building such as the IT server rooms which will experience high heat gains and it is proposed to provide some mechanical cooling services. Cooling shall be provided through a VRF system to allow waste heat recovery which shall allow the waste heat from the IT server rooms to be rejected to the thermal buffer vessel for use in the heating system.

5.7 Energy Usage

Mynydd Isa School has been designed to meet a strict operational net zero carbon target, whereby all operational energy consumed on site (both regulated and unregulated) shall be generated by an extensive roof mounted solar photovoltaic (PV) array. This array shall offset 100% of the carbon emissions annually for the energy usage of the building, thus being 'net zero carbon' in operation in line with the UKGBC definition. In addition, the school has been designed to minimise energy demands through extensive modelling and assessment of the building (in line with contract requirements, the BREEAM assessment and a detailed energy prediction study).

To put this energy consumption into perspective the design is aiming for a target of 40 kWh/m^2/year (note this is all electricity). The PV array shall be integrated into the building that will provide 40 kWh/m^2/year in return, thus meeting the definition of net zero carbon in operation. Based on modelling to date the following quantities of electrical energy have been predicted as follows (and will continue to be refined as the design progresses):

Electricity	kWh/year
Predicted Consumption	412,000
Predicted PV Generation	408,000

6.0 ACCESS STRATEGY

6.1 Access and Inclusion

The proposals have been designed to meet the requirements of current Building Regulations, The Equality Act and other relevant regulations and standards, including those accessibility standards specific to Welsh policy.

6.2 Access to Site

It is proposed that the main vehicle access is retained from Bryn Road as per the existing situation, with changes to provide a formalised one-way system and an improved Active Travel environment. The main pedestrian and cyclist access will also remain as per the existing situation from Bryn Road with internal improvements including the following:

- Zebra crossing.
- Tactile paving.
- Dropped kerbs.
- Reduced crossing widths across the access points that reduce crossing times and improves safety.
- Formalisation of one-way system to reduce the number of conflict points.
- An internal network of 3.0m shared footways / cycleways.

In addition to this, the secondary pedestrian and cyclist access point via Snowdon Avenue will also be retained, linking to an improved internal network of 3.0m shared footway / cycleways within the school grounds.

6.3 Parking Provision

Pick-up and Drop-off Parking

An improved pick-up and drop off facility will provide capacity for up to 50 cars on the northern loop and drop-off space for coaches and additional cars on the southern loop (circa 10 spaces), providing circa 60 spaces in total.

Main Car Park

FCC's standards require the following maximum levels of car parking:

- Primary and Secondary Schools - 1.5 spaces per classroom; and,
- Nursery Schools - 1 space per 25sqm and 1 space per staff.

The proposed Campus would have a total of circa 60 classrooms for the primary and secondary schools and a maximum of 5 staff for the proposed nursery (circa 50sqm floorspace) which suggests a maximum requirement of circa 97 parking spaces to accord with standards, based on the following:

- Primary and Secondary Schools - 90 spaces; and,
- Nursery Schools - 7 spaces.

In total, there will be 124 spaces provided in the main car park including 12 spaces reserved for Blue Badge holders (10% of total spaces) and 112 standard spaces, of which some will be reserved for the use by visitors. As such, the proposed overall provision of 124 spaces is circa 27 spaces above the maximum permitted based on standards. Notwithstanding the above, the April 2021 survey indicated that 85% of staff travelled by car which, based on 153 members of staff would be circa 130 members of staff travelling by car and parking across all schools. Based on the future forecast travel patterns, the Travel Plan is seeking a reduction of car driver trips by 15% (70% of staff to travel by car), which would result in 107 staff requiring a parking space. On the basis that the total provision also allows visitor parking, the provision of 112 general spaces for staff and visitors is considered to satisfy the future predicted demand and also broadly accord with the policy guidance, that also seeks to reduce the negative impacts of overspill / on-street parking.

Electric vehicle charging will be provided at a rate of 10% active charging which accords with the emerging FCC and Welsh Government guidance. The remainder of spaces (90%) will be provided with passive charging with the ability to be converted in the future.

6.4 Cycling Provision and Amenities

Cycle parking standards set out by FCC requires a minimum of 4 spaces per classroom, with circa 60 classrooms being provided in the new Campus. This would result in a requirement to provide a minimum of 240 spaces. Notwithstanding this, on the basis that current or future predicted demand set out in the Campus Travel Plan would suggest a lower requirement than this, provision has been based on a demand exercise, with the ability to monitor and provide additional spaces for pupils and staff through the Campus Travel Plan.

As part of the Campus Travel Plan, it is envisaged that a total of circa 8% to 10% (circa 90 to 120 spaces) of children could travel by bicycle in the future (circa 8% increase from current modal share) allowing for the total number of pupils expected at the Campus at any one time. On this basis, a minimum of 90 spaces for pupils will be provided, with uptake monitored a part of the Travel Plan. Should the need arise, more cycle parking can be provided. Scooter pod parking will also be provided for nursery and primary school children. Currently, very little or no staff travel by bike. As part of the Campus Travel Plan a target is to increase staff travel by bike to 10% (from 0% currently), resulting in circa 15 members of staff travelling by bike in the future. It is proposed that staff cycle parking will be undertaken in the main cycle parking are however, if required by FCC, a separate secure store can be provided. The level of uptake / usage will be monitored and should the need arise, more cycle parking can be provided. Staff changing facilities will be provided as part of the proposals.

6.5 Public Transport Amenities

Bus services are available within a reasonable walk distance of the School, located at the following locations / distances away from the nearest point of access:

- Bus service 4 – Cherry Drive (circa 200m);
- Bus service 4 – Park Avenue (circa 200m); and,
- Bus Service 5 – Chambers Lane (circa 600m).

Bus service 4 provides approximately 4 two-way hourly services between Mold and Chester, with service 5 between Mold and Ellesmere Port providing approximately 2 two-way services per hour throughout a typical weekday period.

Accessibility Index (AI)

These are a theoretical measure of the accessibility of a given point to the public transport network, taking into account walk access time and service availability. The method is essentially a way of measuring the density of the public transport network at a particular point. Based on the BREEAM AI method of calculation the Argoed High School scores less than 2.

School Arranged Leaner Travel

A number of pupils currently benefit from transport provided by the school either in the form of a bus or taxi, where the qualification criteria is met and this will continue to be provided in the form of bus or taxi where appropriate.

Travel Plan

A Campus Travel Plan (2023 to 2028) will be prepared for the new Mynydd Isa Campus with a diverse and broad range of measures, initiatives and promotional activities to positively seek to reduce travel by single car occupancy and to actively promote sustainable and Active Travel. Targets (based on an online staff and pupil questionnaire survey to inform the baseline position) and a monitoring and review programme will also be set out and agreed with FCC. The Schools are committed to start the implementation of certain measures and initiatives in advance of the 2023 opening year to influence a positive change in modal splits before the Campus is open

6.6 Internal Accessibility

The building layout and finishes will be designed to be fully useable by occupants with a range of accessibility needs including mobility needs, SEN needs, sight/ hearing needs and needs specific to young pupils.

The buildings elements and components will be designed to be appropriate dimensions, heights, weights, to be suitable for an all-through School:

-(As the External/ Façade section of this DAS) Windows will be at staggered heights in the Primary School to offer views out for small children

-Long extents of solid balustrading could have glazed sections to offer views for small children

-The weight of doorsets will be suitable for Primary School occupants

-The natural ventilation/ openable windows will be detailed without creating finger traps etc.

-In addition to specifying finishes which are of a suitable robustness for a School, the design team will also specify to the correct level of slip resistance for floors

-Teaching spaces will have desks suitable for wheelchair users (dropped benches in Science Labs) and all teaching rooms will have space for wheelchairs to turn. Desks and counters will have dropped height sections for wheelchair users.

-Hearing loops etc. will be identified on the services engineers information.

Main throughfare corridor widths have been stipulated by Brief, and are generous to allow for peak flow at busy times of the day. These wide corridors will help to support the normal functioning of the School (occasional removal of large furniture etc). Corridors will as a minimum meet, and often significantly exceed, the widths required in Approved Doc. Part M for wheelchair accessibility.

6.7 Emergency Escape

The corridors will form the principal horizontal means of escape around the building and as such will be designed to meet fire regulations. There will be regular cross-corridor doors as required by the regulations. These could be held-open by détente devices - subject to detailed design at the next stage. The Fire Strategy has been designed using guidance document BS:9999 as its basis. The Fire Strategy Report will be submitted by the fire consultant as part of the Building Regulations application.

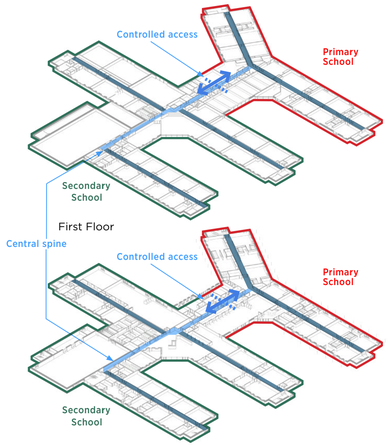
6.8 Horizontal Circulation

Circulation around both schools is principally by central corridors in the fingers and a main 'spine' corridor communicating north-south through the campus. Note that the access on this spine between the two Schools will be controlled at both levels to prevent pupils straying into the wrong School.

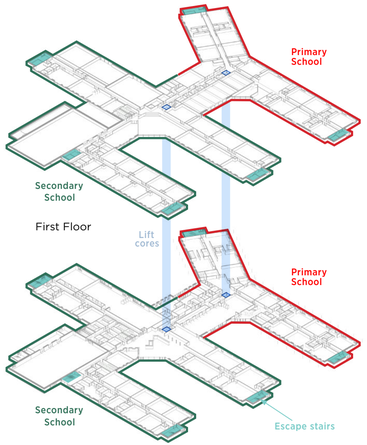
6.9 Vertical Circulation

Staircases are located to meet the general operational requirements of the School (i.e. class change access) as well as provide sufficient means of escape. The stairs will be designed to meet fire regulations, but also sized for everyday pupil flow.

Note that most of the access points defined by a specific function will also act as an emergency exit in the event of fire alarm.



Axonometric diagram indicating horizontal circulation



Axonometric diagram indicating vertical circulation

6.10 WC Accommodation

The following is the provision shown at RIBA Stage 3 which has been discussed extensively and agreed as the base strategy with the Client team.

Accessible Toilets/ facilities: Accessible Toilets are distributed across the floor plates in order to fulfil the requirement to be within 40m of any accommodation space.

The escape stairs in the Secondary School have been paired with an Accessible Toilet, and a Staff Work Room. This same cluster of facilities at the end of each corridor works well as a wayfinding strategy.

As prescribed by Brief, both Schools have provision for Changing Rooms and Hygiene Rooms (with provision for changing bed and hoist).

The main Toilet blocks described below will have provision for ambulant/ enlarged cubicles as needed.

Staff Toilets/ facilities: There is provision for Staff-only Toilets and Accessible Changing Rooms on both floors. The majority of the Staff Toilets are located near to the Staff Social Rooms at First Floor.

Visitors/ Community Toilets: There will be an Accessible Toilet Suite outside the secure line – available for visitors to either School – located in the Main Reception.

Primary School Pupil Toilets

Nursery: Non-Gendered Toilets with 1no. oversized cubicle for pupils to be assisted. Toilets and Cloaks are arranged in a central block, accessed from external play via each Classroom.

Reception: Non-Gendered Toilets. Toilets and Cloaks are arranged in a central block, accessed from external play via each Classroom.

Infants and Juniors: Toilets are Gendered and accessed off-corridor. Infant pupils accessing the Toilets from external play will do so via the Classroom and corridor. The Toilets are combined into a block along with Cloaks and Stores. These blocks are arranged between Classrooms. Cloaks and Storage are accessed from within Classrooms.

Secondary Pupil Toilets

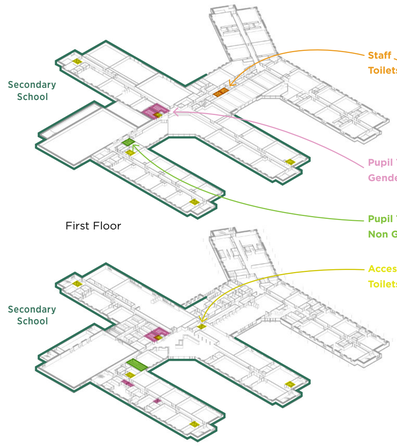
Gendered Toilets: There is a main block of Gendered Toilets positioned centrally on the floor plan (for access to be an equal distance from each teaching wing and for ease of wayfinding), stacked in the same position at Ground and First Floor.

The Toilet blocks are arranged to have the full length of the circulation and sinks area visible through the doorway opening from the main School corridor for good supervision and as an anti-bullying measure. The Toilets at Ground Floor are opposite the Heads of Year Staff Office and the busy Dining Space.

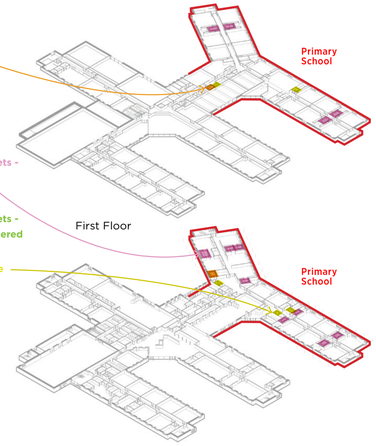
The Ground Floor Toilets are easily accessible from the Sports Hall and Changing Rooms, and from the Secondary Halls (for events and community use).

Non-Gendered Toilets: A suite of Non-Gendered Toilets is space-planned in the same format as the Gendered Suites, with a row of cubicles plus communal circulation and sinks.

The Non-Gendered Toilet block is situated close-by, but not immediately adjacent to, the main Toilet blocks in order to offer pupils some discretion whilst being conveniently located. The Non-Gendered Toilets are stacked at Ground and First Floor and are on a main throughfare location near to the main Pupil Entrance.



Axonometric diagram indicating Secondary School Toilets



Axonometric diagram indicating Primary School Toilets

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Appendix A

Visual Impact Appraisal

Ysgol Mynydd Isa, Flintshire

Visual Impact Apraisal

FOR SCOPING PURPOSES | March 2021 |ALA655R03 P01

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LANDSCAPE
ARCHITECTS

CONTENTS

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Rev: P01
Issued: 17.03.2021

Prepared by: SB/BH
Checked by: LA

1.0 INTRODUCTION

This document has been prepared by Ares Landscape Architects on behalf of WEPco as a Scoping report prior to the submission of planning application of land at Mynydd Isa

This scoping report aims to set out the principles of a subsequent Visual Impact Appraisal (VIA) for agreement with the local authority prior to the planning application. It is understood a formal Environmental Impact Assessment (EIA) is not required, but an assessment of the development's visual impact may still be required.

As such we propose an Appraisal will be sufficient instead of a statutory Landscape and Visual Impact Assessment. The VIA will follow many of the same principles and guidance as a formal LVIA as set out in *Guidelines for Landscape and Visual Impact Assessment - Third Edition, 2013*, produced by the Landscape Institute and the Institute of Environmental Management and Assessment.

The purpose of this scoping report is to allow Flintshire County Council to understand the process of this VIA and to comment on it with a Scoping Opinion. It is therefore provided to:

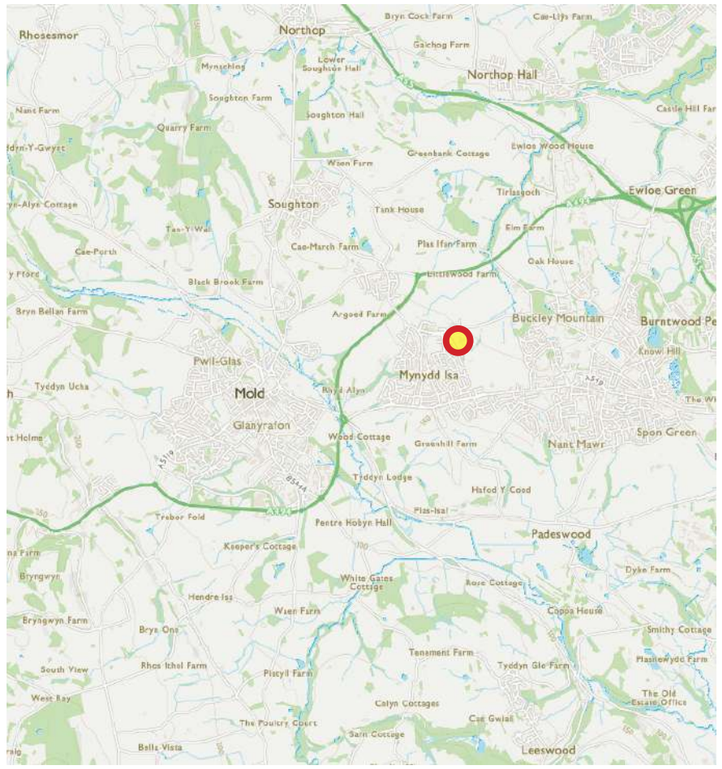
- Identify any need to extend preliminary investigations
- Confirm potential opportunities for avoidance of adverse impacts
- Agree the proposed study area and predicted receptors and effects (if any).

Site Location and Context

The site is located on the eastern edge of the Village of Mynydd Isa. To the west of the site is an area low rise mid to late 20th century housing incorporating the greenspaces of Wats Dyke Park and the grounds of the Ysgol Mynydd Isa Infants and Junior school sites. The immediate western boundary is with the rear gardens of Snowden Avenue and Berwyn Close.

Bryn Road forms the northern boundary of the site. It is a single carriageway road that provides access to the existing school site via a drop off loop that also gives access to High Field Farm which is located to the North East of the site. On the opposite side of Bryn Road to the site is some recent low rise detached residential development.

The land to the east and south of the site is characterised by pastoral agriculture land with a well defined field structure created by mature



hedgerows and trees.

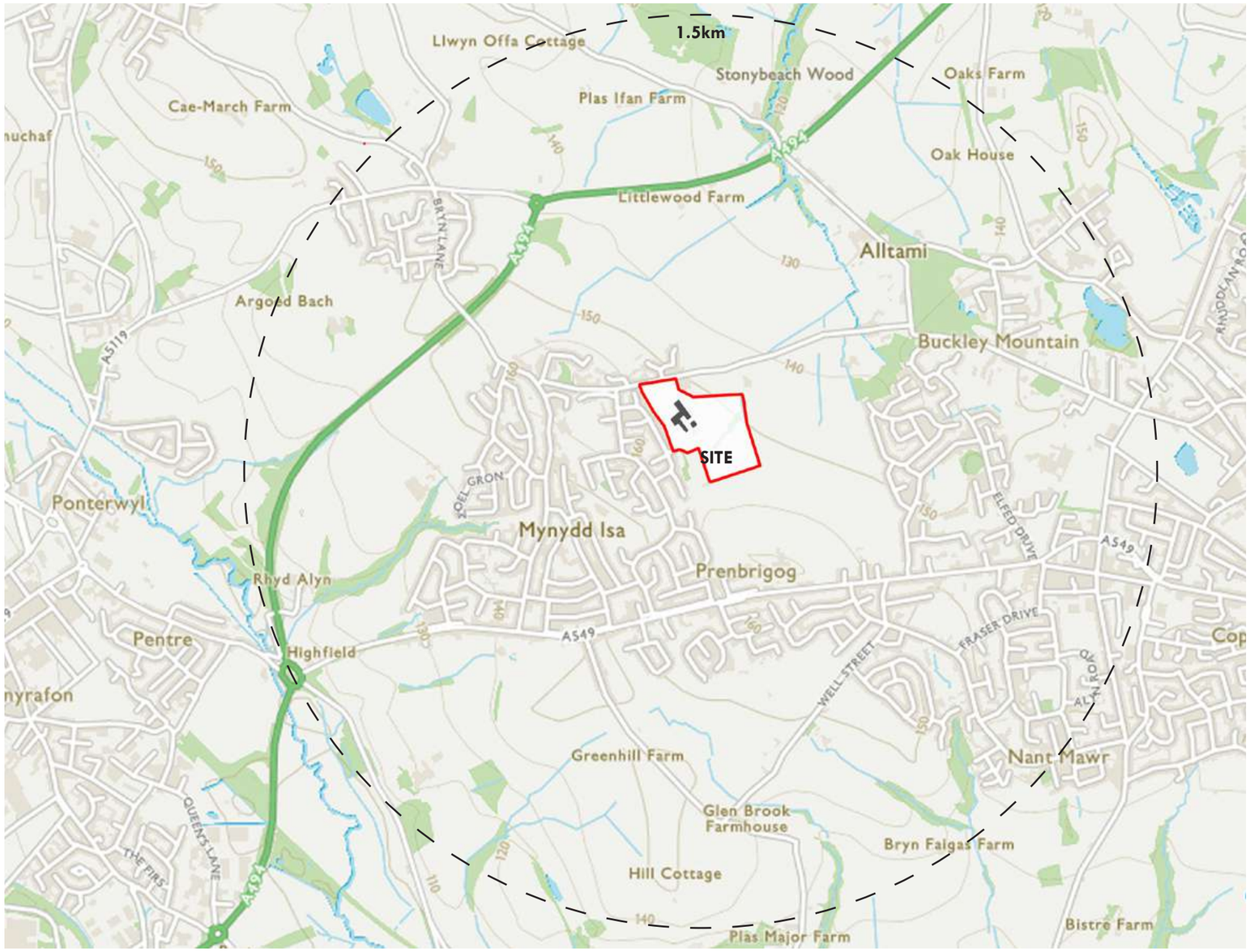
To the South West are the facilities of the Argoed Sports and Social Club, these include an All Weather Pitch, playground, bowling green and grass playing fields.

2.0 STUDY AREA

The study area will comprise of an approximate 1.5km radius around the site. Site. Given the scale of the development and in conjunction with the topography Vegetation and built environment this development site will not have any relevant impact on any areas outside of this study area.

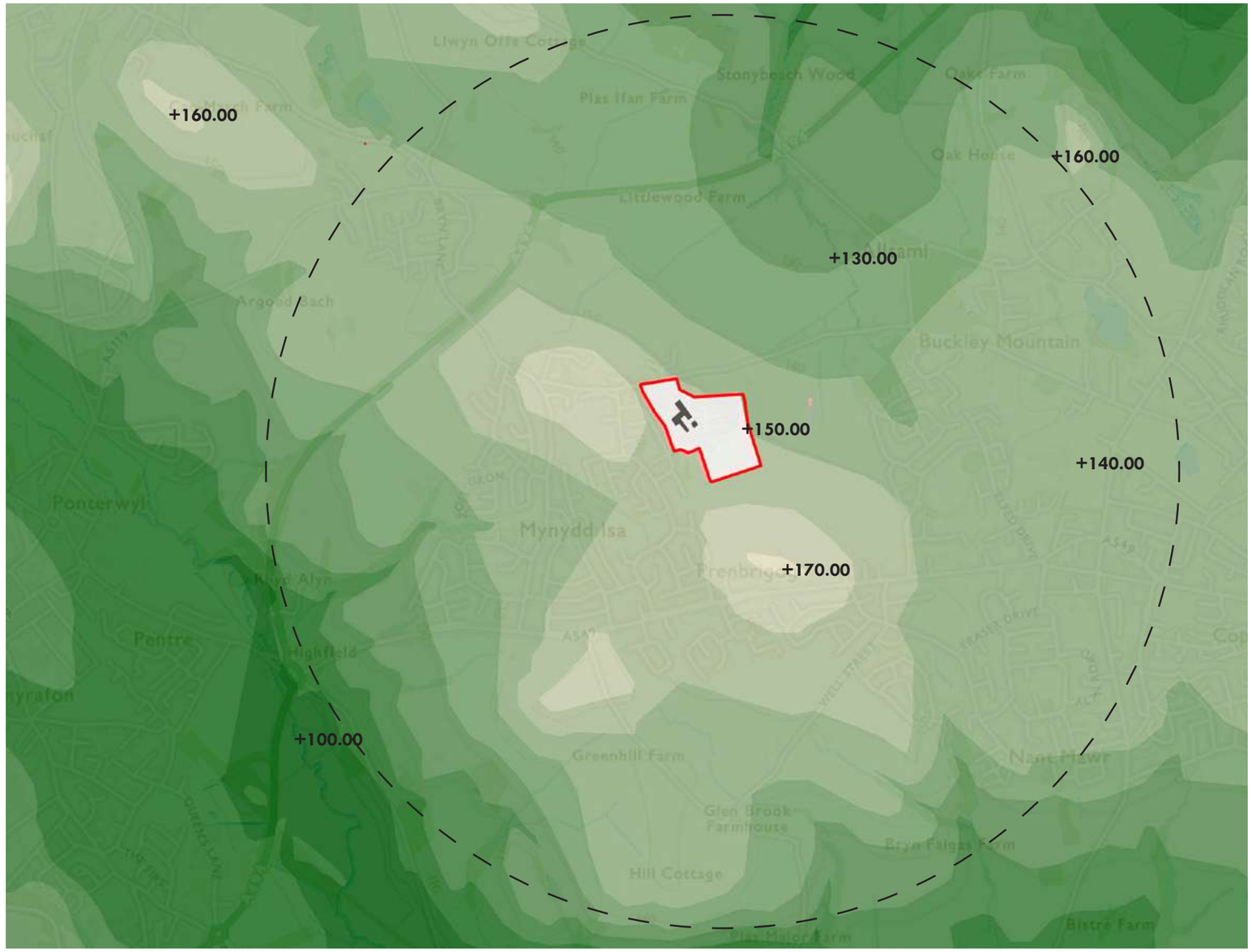
This is based on a study of the topographical features in the area, aerial photographs and map study of the vegetation and built environment.

A field visit was undertaken on 11th March 2021 to check the desk top study and the extent of study area

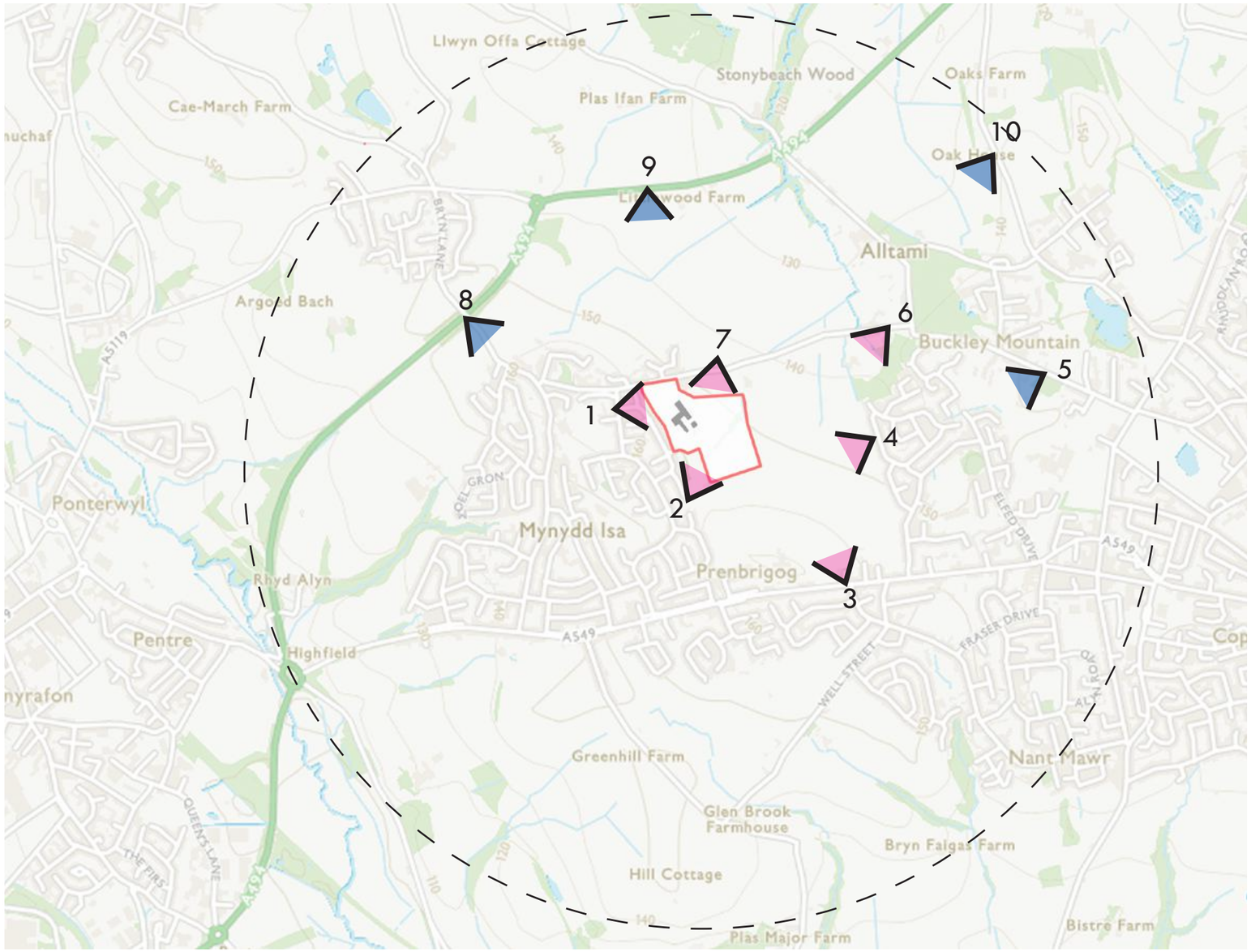


3.0 TOPOGRAPHY

The study area will comprises a notable change in level of circa 100m. There is a ridge running south east to north west. The site is located to the east of this ridge and at a lower elevation



4.0 POTENTIAL VIEWS



5.0 VIEWPOINTS

VIEWPOINT 1 - SNOWDON AVENUE

This view was chosen because is it is representitive of close views from the west from Mynydd Isa Village

Likely visual impact of new development: **Negligible**
Reason: **Intervening built development, vegetation and topography**

5.0 VIEWPOINTS

VIEWPOINT 2 - ARGOED SPORTS AND SOCIAL CLUB

This view was chosen because is it is representative of close views from the South as seen from Mynydd Isa.

Extent of Existing School Site (Not visible)

Likely visual impact of new development will change the existing view. However will be seen in the context of the existing school.

5.0 VIEWPOINTS

VIEWPOINT 3 - MOLD ROAD A549

This view was chosen because is it is representative of views from the South

Existing School (Not visible)

Likely visual impact of new development: **None**
Reason: **Intervening built development, vegetation and topography**

5.0 VIEWPOINTS

VIEWPOINT 4 - BIRKDALE AVENUE

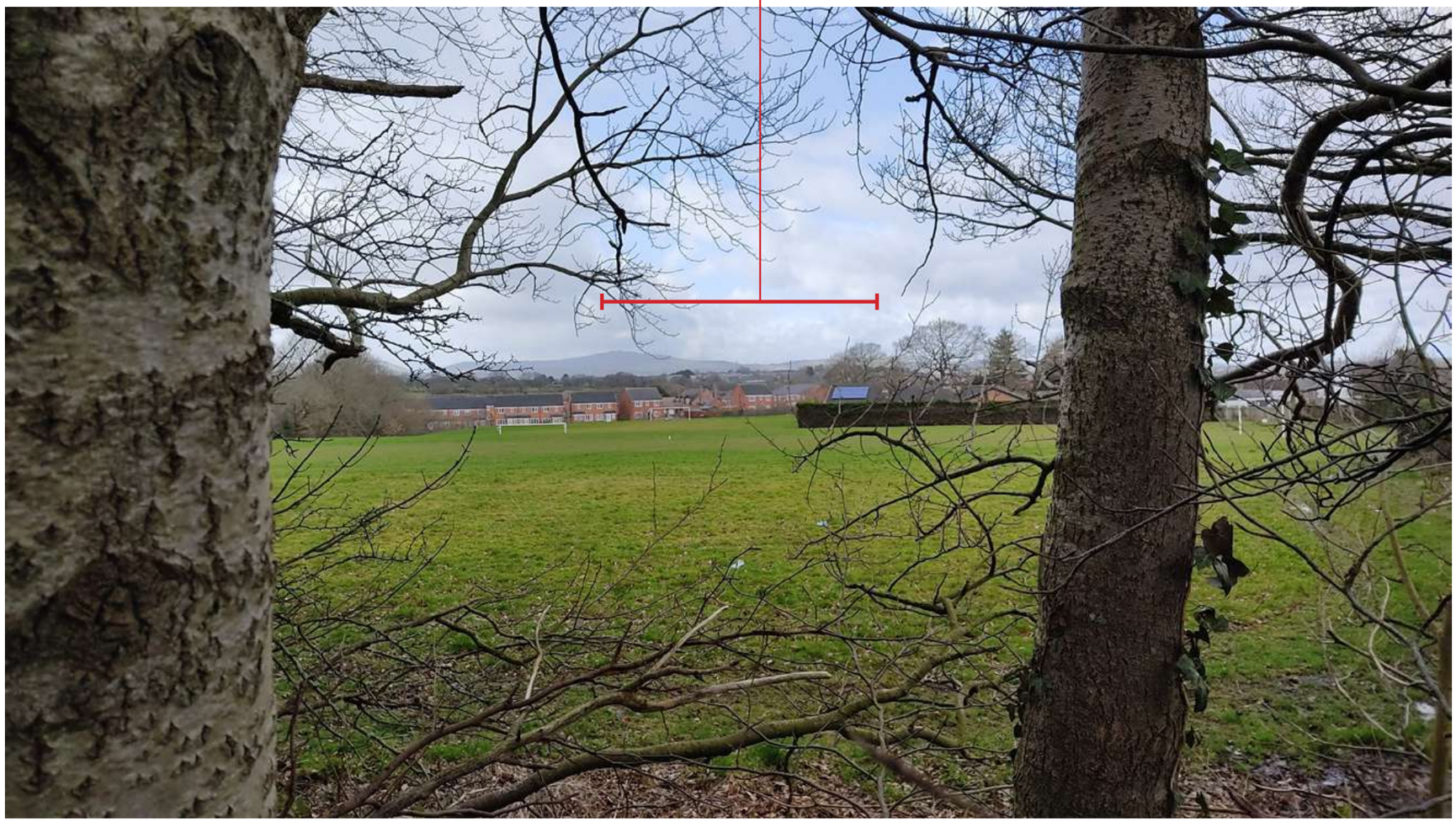
This view was chosen because is it is representative of views from the East and the nearest residential to east of site

Likely visual impact of new development: **None**
Reason: **Intervening built development, vegetation and topography**

5.0 VIEWPOINTS

VIEWPOINT 5 - ALLTAMI ROAD

This view was chosen because is it is representative of distant views from the East



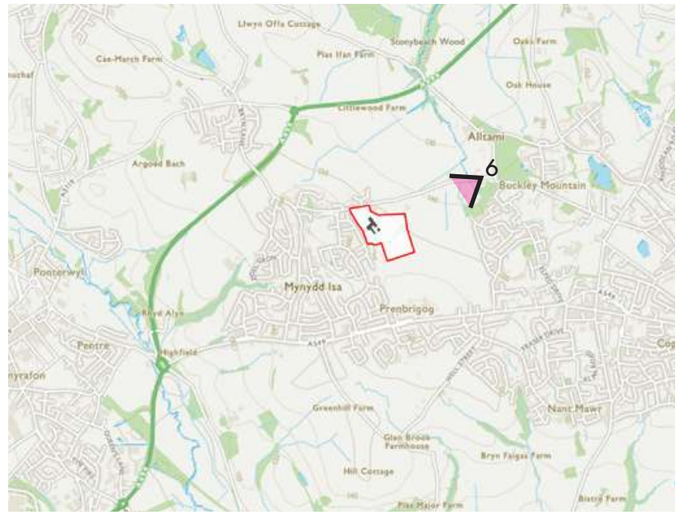
Likely visual impact of new development:
Will change the existing view. However will be seen in the context of the existing school.

5.0 VIEWPOINTS

VIEWPOINT 6 - BRYN ROAD (LOOKING WEST)

This view was chosen because is it is from the Lower Common Public open space

Likely visual impact of new development: **None**
Reason: **Intervening built development, vegetation and topography**



5.0 VIEWPOINTS

VIEWPOINT 7 - BRYN ROAD (LOOKING SOUTH)

This view was chosen because is it is represntative of views from the north

The proposed development will be clearly seen from this Highways view point. However it will be seen as glimpsed views in the context of existing school from a transient receptor.

5.0 VIEWPOINTS

VIEWPOINT 8 - BRYN Y BAAL ROAD

This view was chosen because is it is representive of view from residential area to the north of the Mold Bypass

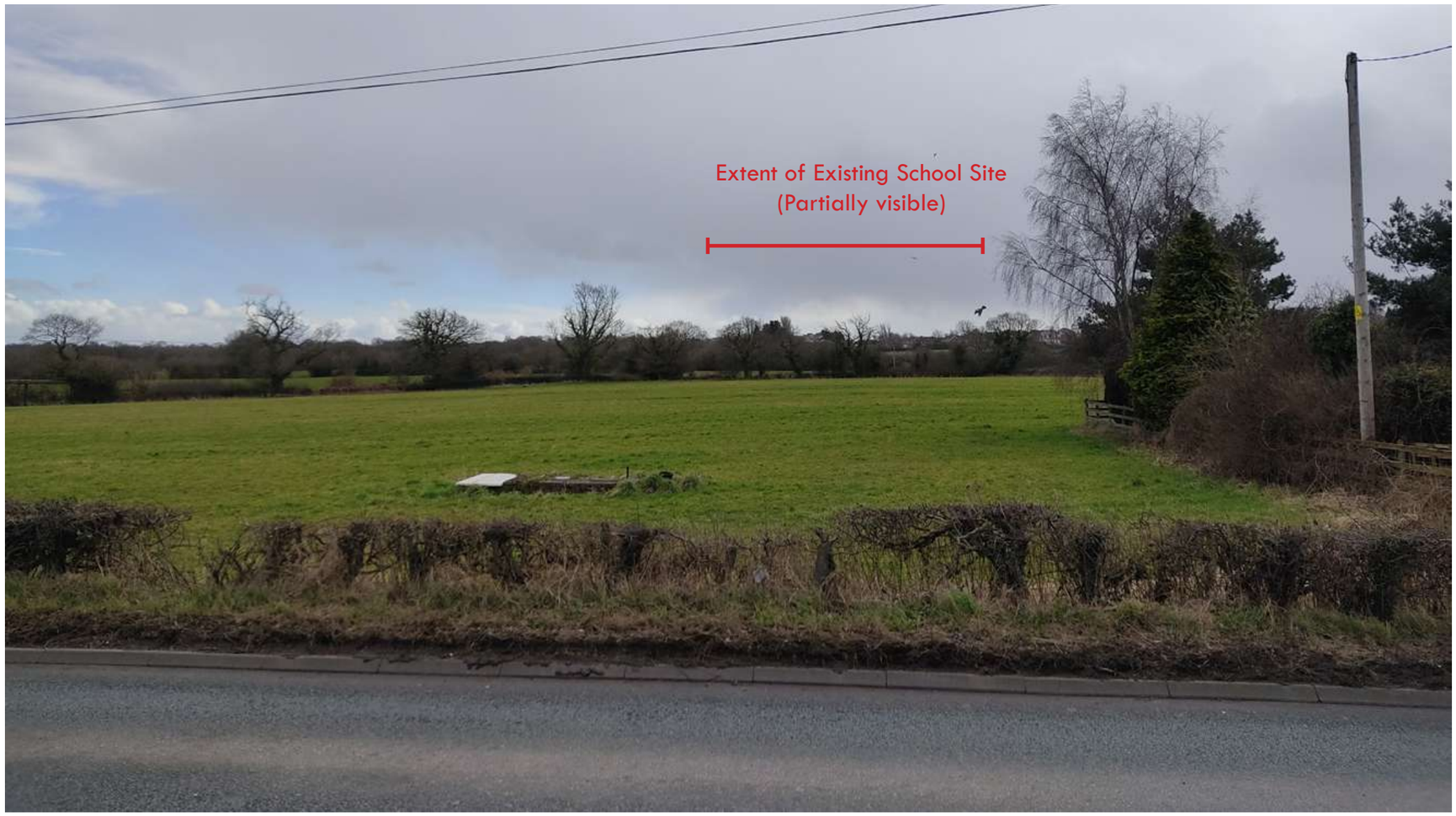
Extent of Existing School Site
(Not visible)

Likely visual impact of new development: **None**
Reason: **Intervening topography**

5.0 VIEWPOINTS

VIEWPOINT 9 - A494

This view was chosen because is gives elevated view of the site from the north



Likely visual impact of new development: **Negligible**
Reason: **Intervening vegetation and topography**

5.0 VIEWPOINTS

VIEWPOINT 10 - BRYN Y BAAL ROAD

This view was chosen because is it is representive of distant views from the east

Likely visual impact of new development: **Negligible**
Reason: **Intervening vegetation and topography**

6.0 SUMMARY

It is predeicted that the proposed development will not be seen outside of any close range view points and will be seen in the context of the existing semi rural / urban frindge environment

However we welcome the oportunity to discuss this with Flintshire County Council Landscape Officer as part of the Pre Application Process

Appendix B

View towards Main Entrance

South aerial view

South elevation view

Secondary Dining axonometric diagram

3D view at First Floor, looking towards Library and Dining stair

Primary Hub axonometric diagram

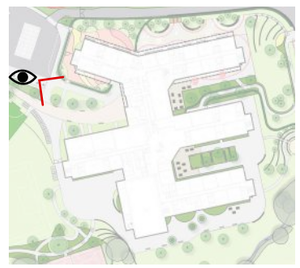
3D view at First Floor, looking towards Library and Hub stair

Section through middle fingers

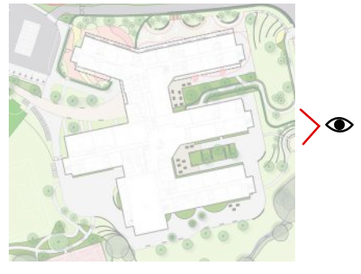
Section through spaces adjacent to main spine

Elevations

View towards Main Entrance

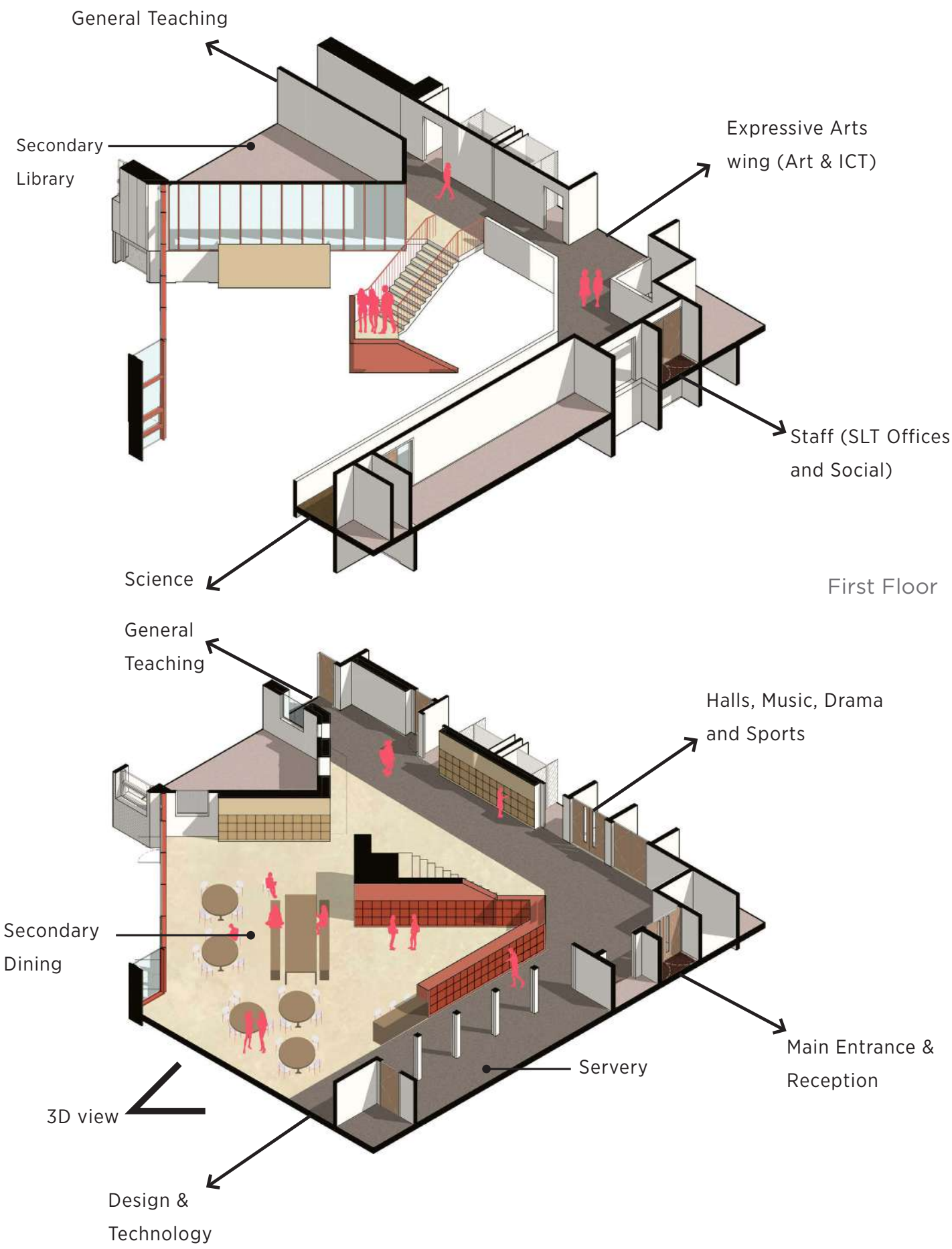


South aerial view

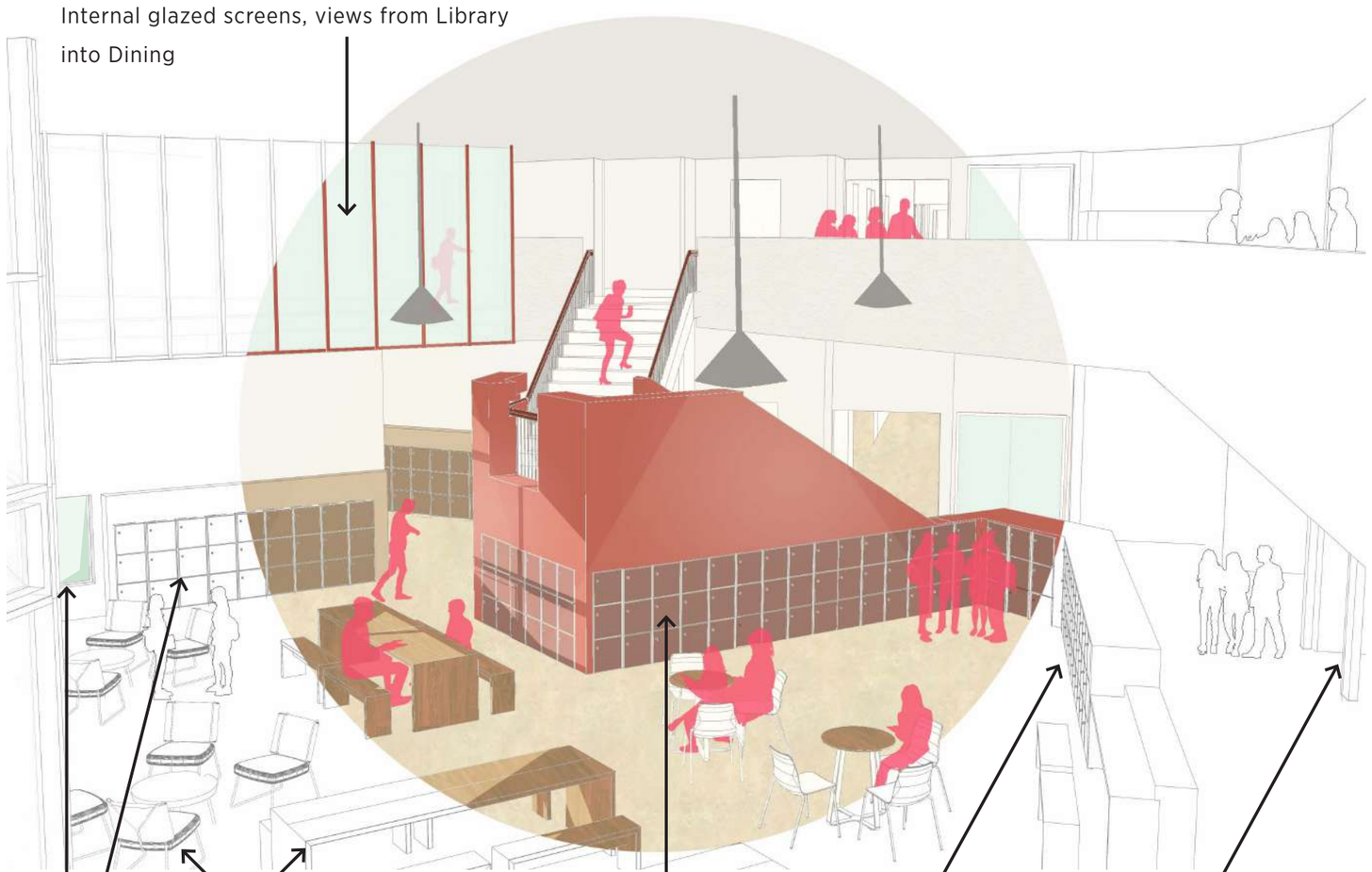


South elevation view

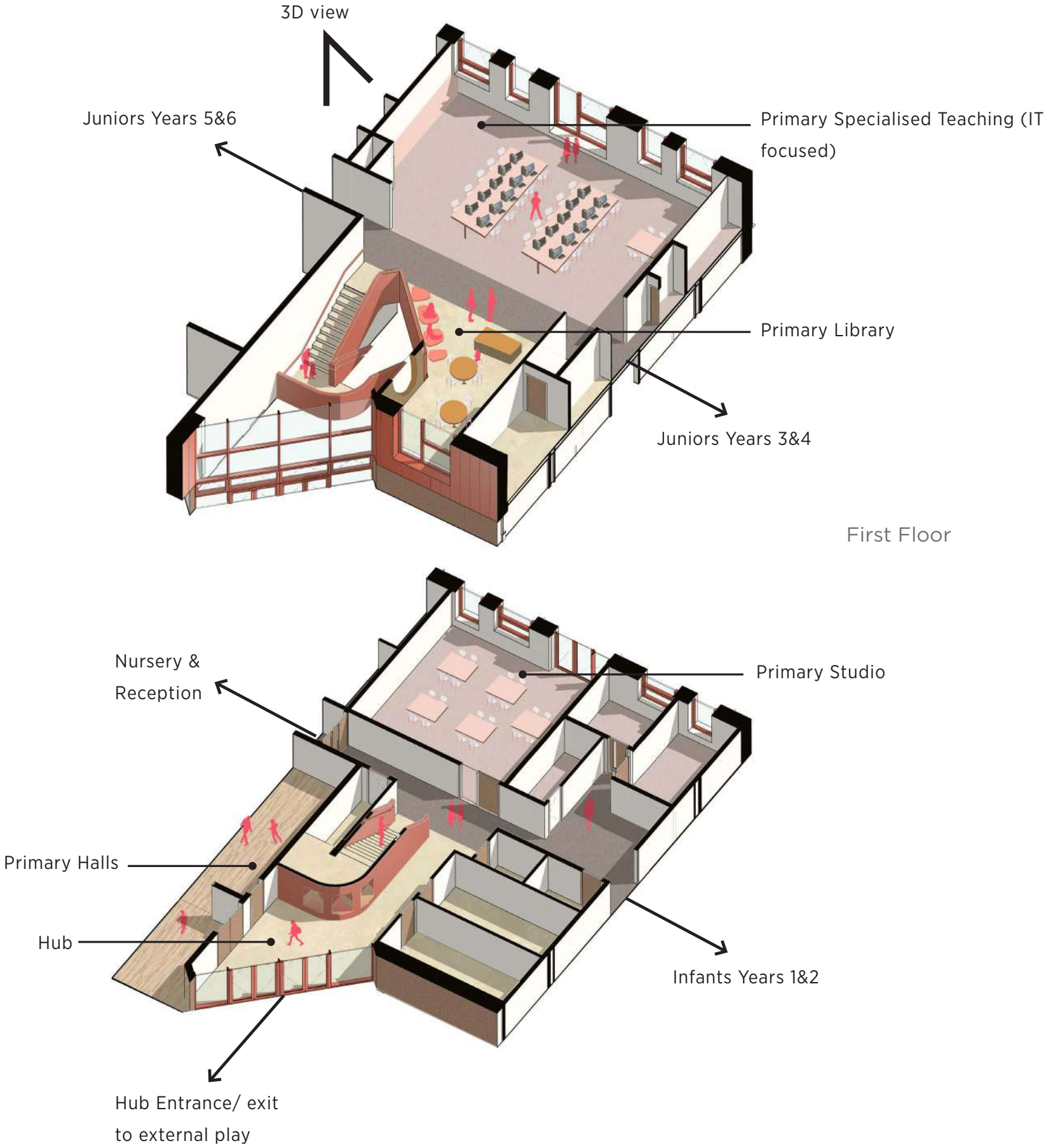
Secondary Dining axonometric diagram



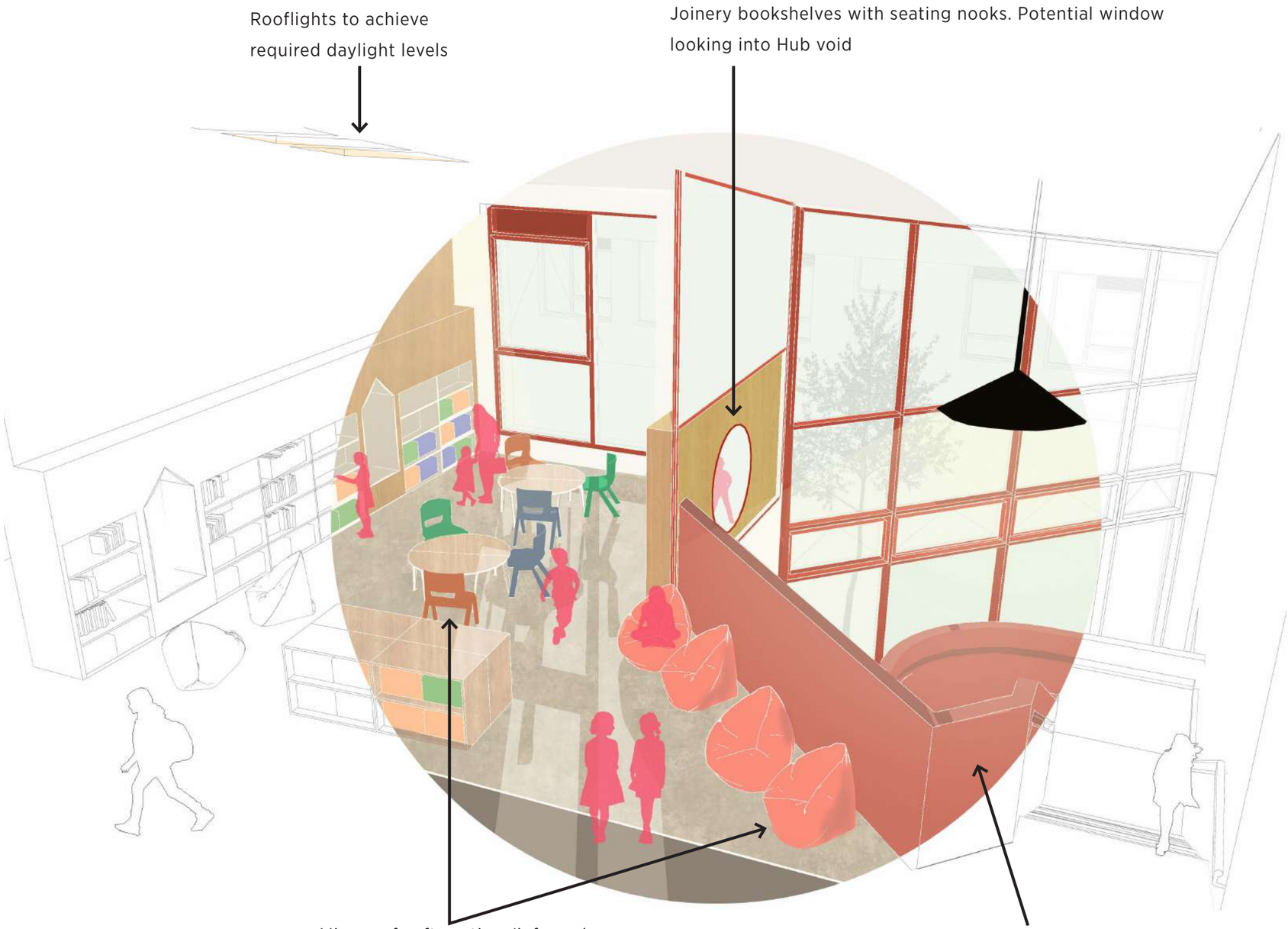
3D view at First Floor, looking towards Library and Dining stair



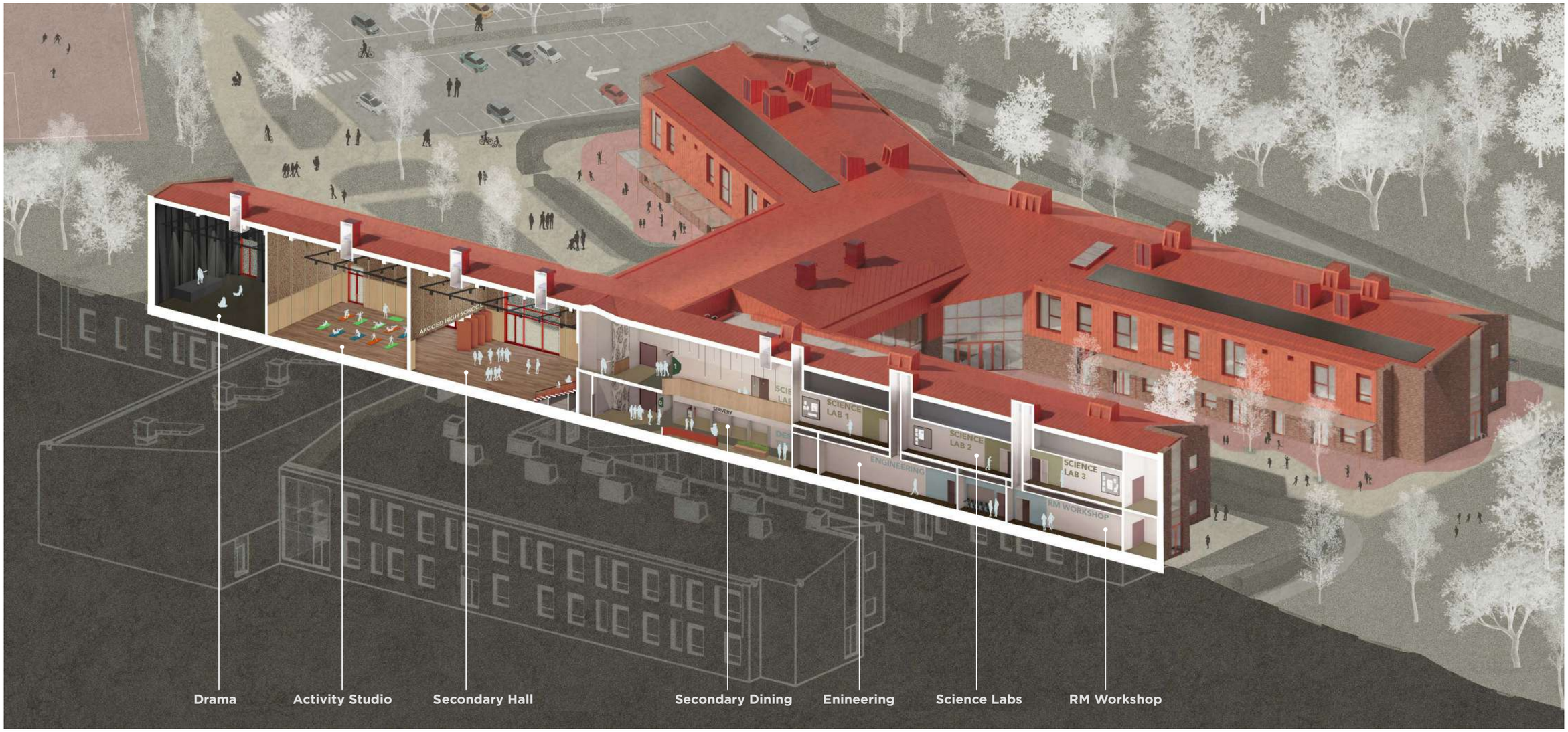
Primary Hub axonometric diagram

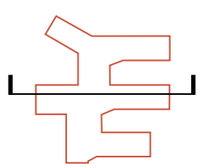


3D view at First Floor, looking towards Library and Hub stair



Cross section through Secondary School



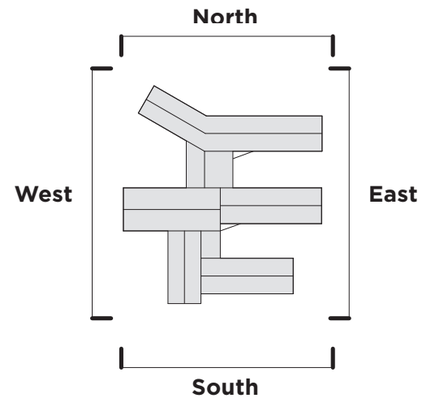


Long section through central spine

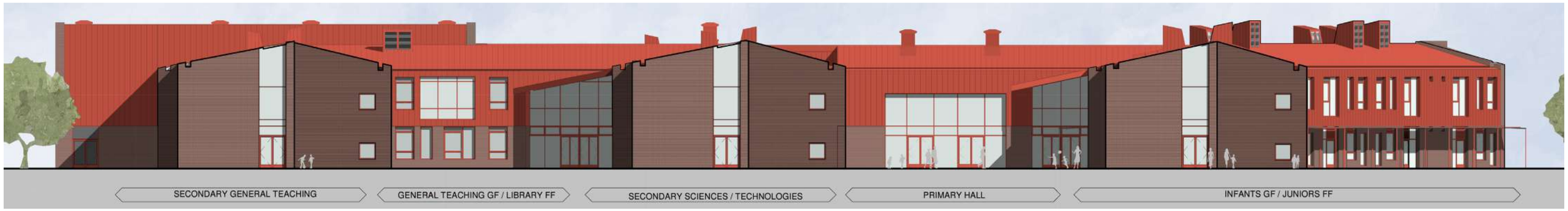
Elevations

North Elevation

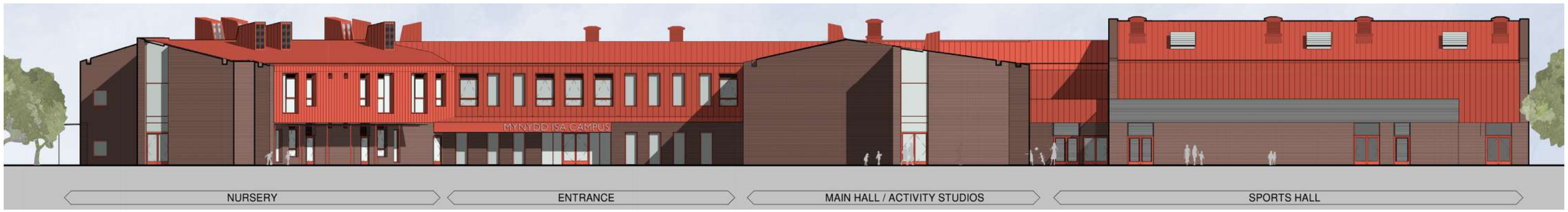
South Elevation



Elevations



East Elevation



West Elevation

Internal finger elevations

Natural ventilation chimneys

Wind catchers

Primary School staggered window heights AFFL (openable lights)

Escape stairs at gable ends

Glazed canopies/ sheltered outdoor play

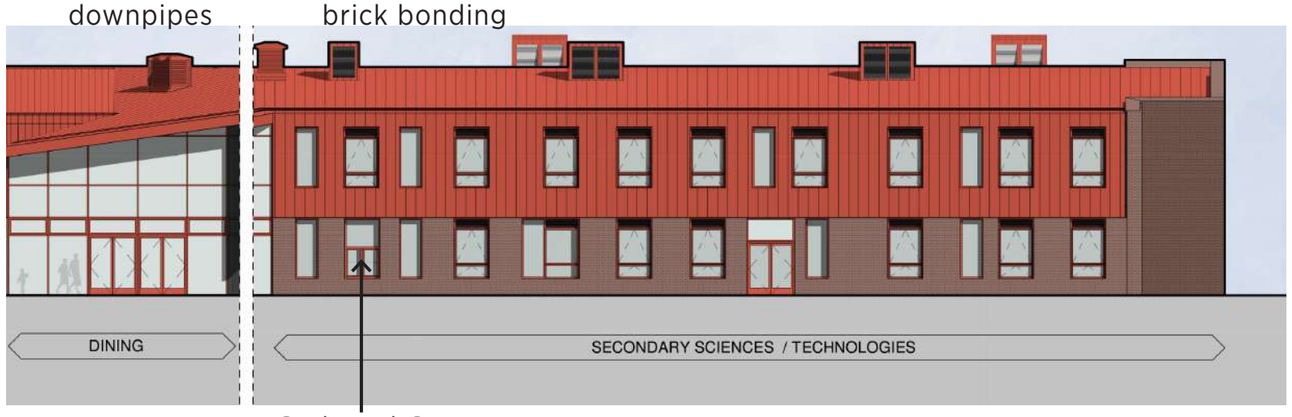
Typical Primary School elevations

Exposed rainwater downpipes

Zone for feature brick bonding

Main Pupils Entrance

Secondary School windows at consistent cill heights (openable lights)



Grab and Go hatch

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