





06

The Proposal

Overview

Description of development

The proposal is for a single main school building on Phase 1 site, a sports building on the Phase 2 site and with an L shaped primary wing and a simple rectangular secondary wing.

The site has been developed into two distinct northern and southern halves to include new buildings to the north, which will comprise a single main school building, and sports pitches and an existing refurbished sports hall to the south. An adult sized rugby pitch is also included to the northern area plateau.

The main school building on Phase 1 site is split into three connected sections: a primary phase located on the large northern plateau, a secondary phase on the lowest plateau and a shared wing connecting the two. A separate plant compound is located on the lowest plateau.

Externally over 135 parking and drop off spaces catering for cars, coaches and minibuses are provided via "off road" access with stacking provision to help avoid congestion. These will serve identifiable entrances via accessible routes.

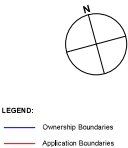
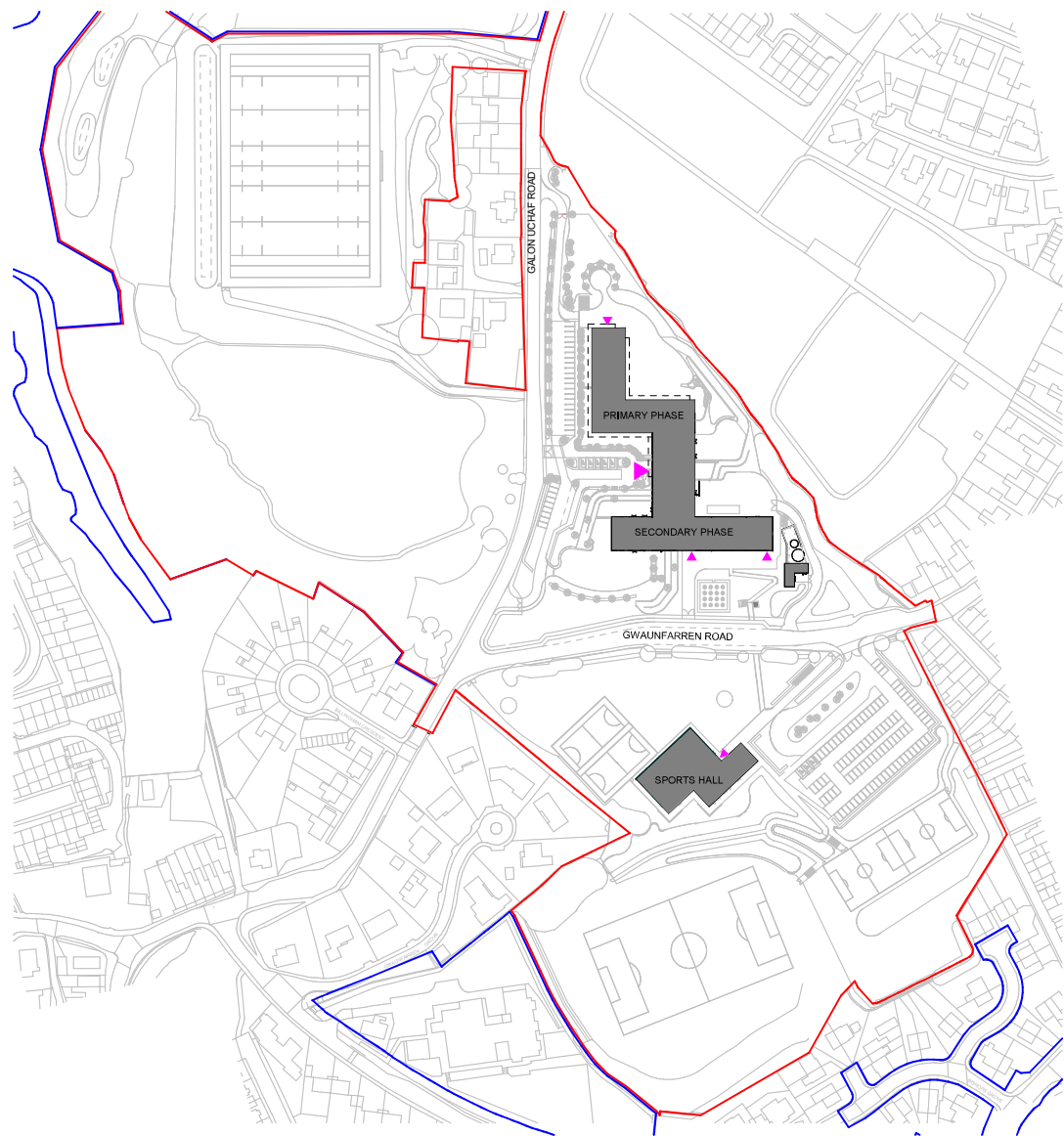
A series of external spaces are provided catering specifically for each Nursery, Primary and Secondary school, which are level, safeguarded and will contain specific educational and social space for learning and development.

Two MUGAS multi use games areas and two 3G pitches plus a football pitch are provided to the south of the site.

Overall the landscape design links habitats and green spaces throughout, retaining a good deal of existing vegetation and replacing any lost with significant new tree and hedgerow planting. New planting will provide screening habitat and improved biodiversity as well as assist in climate resilience and wellbeing. The design also successfully incorporates the new buildings into a complex topography, via a series of retaining walls and level plateaus serving the schools external needs.



Site Plan - Red and Blue Line



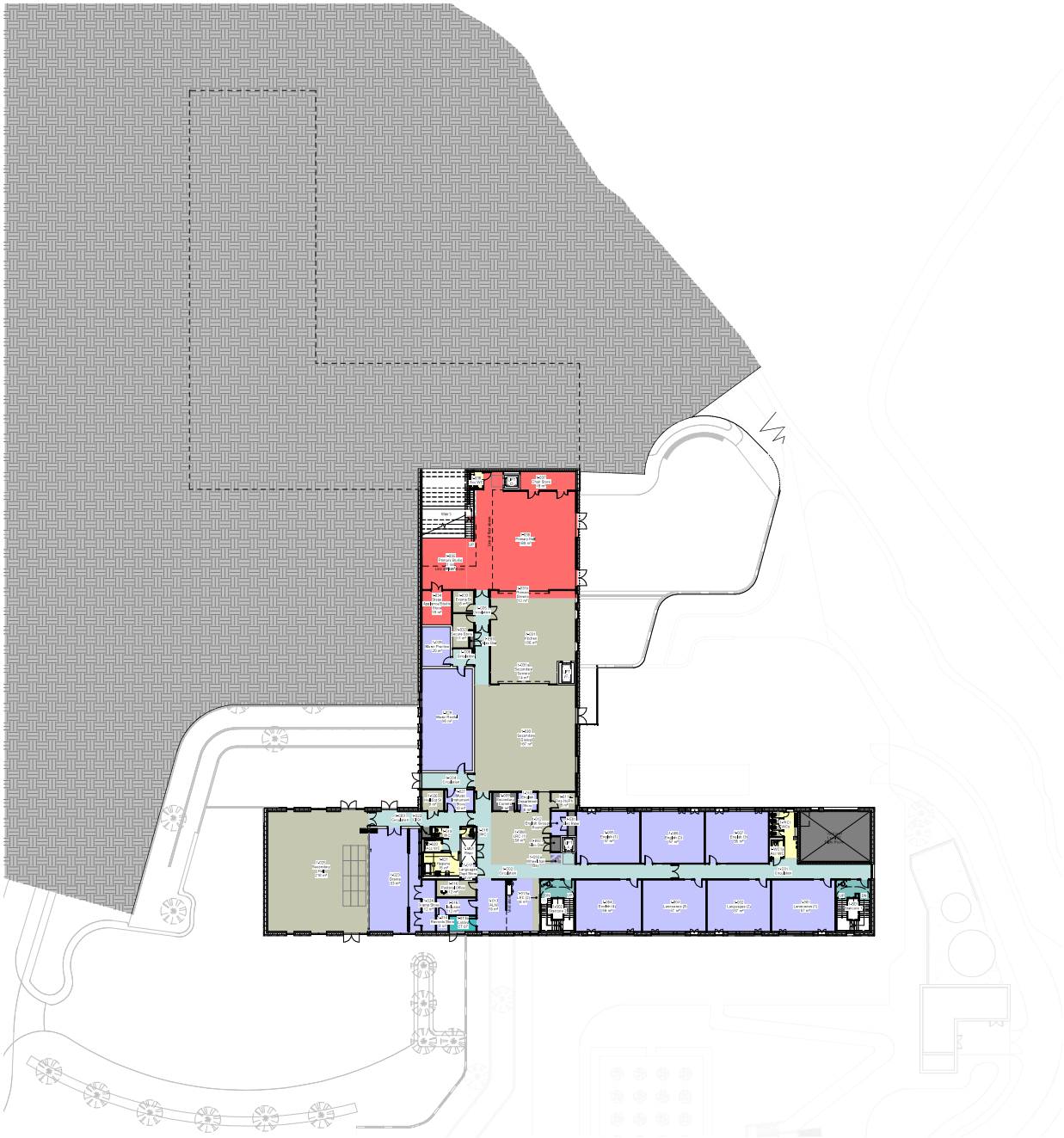
Site Plan



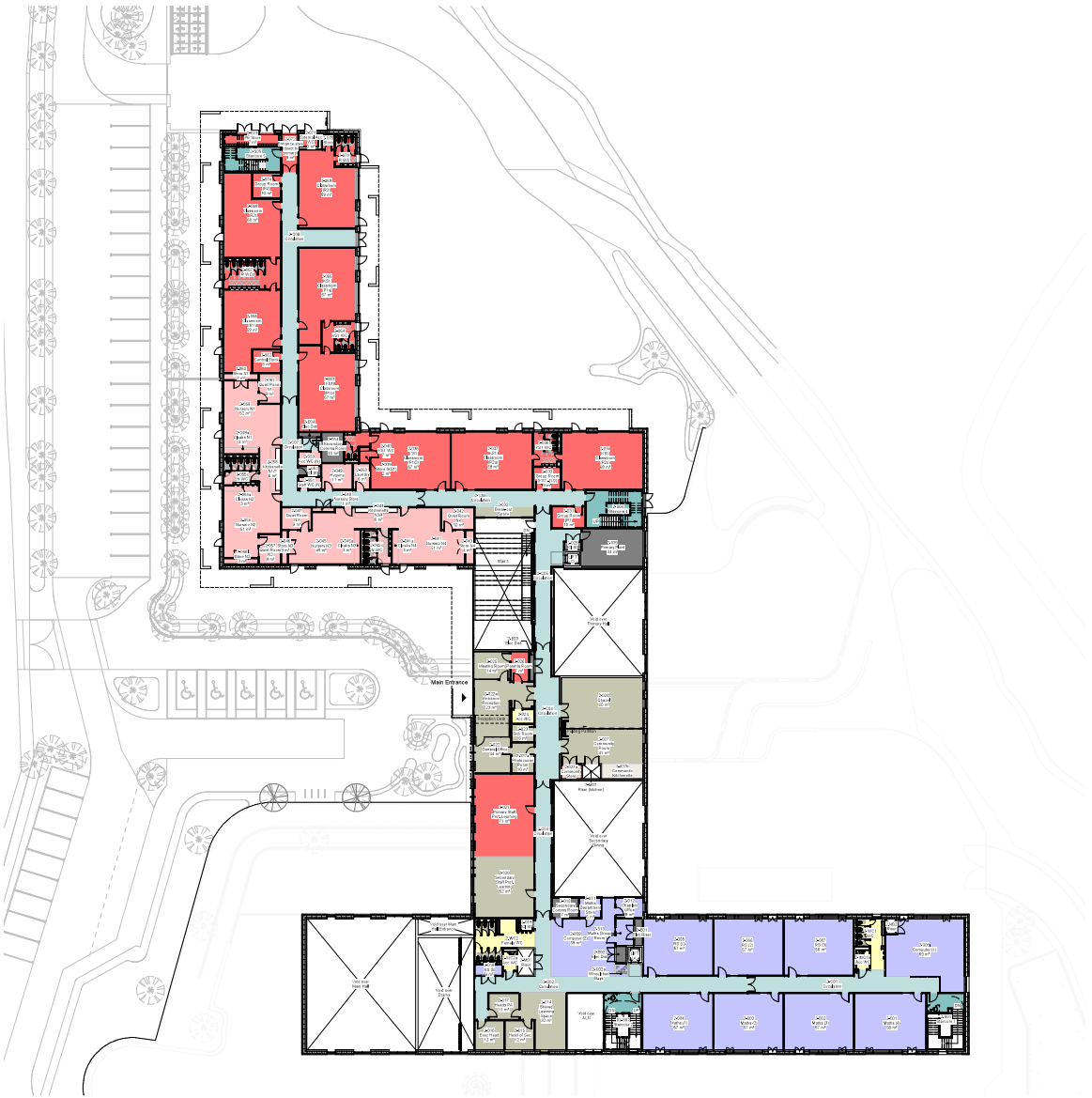
Main Building Level 00 Plan



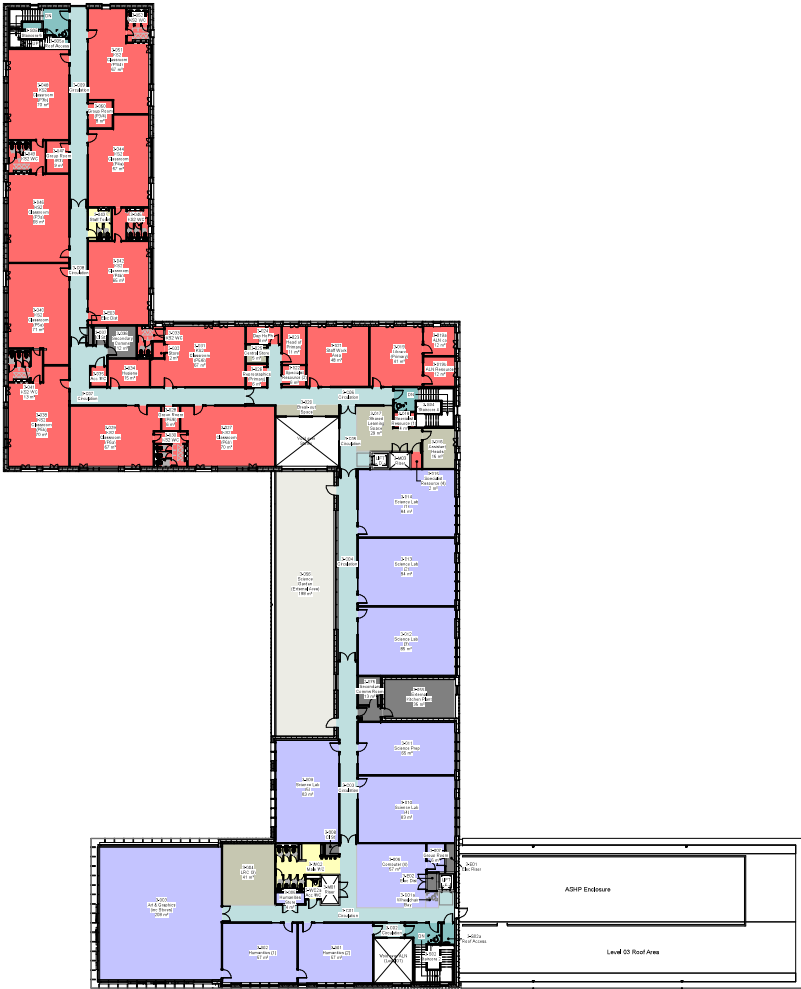
Main Building Level 01 Plan



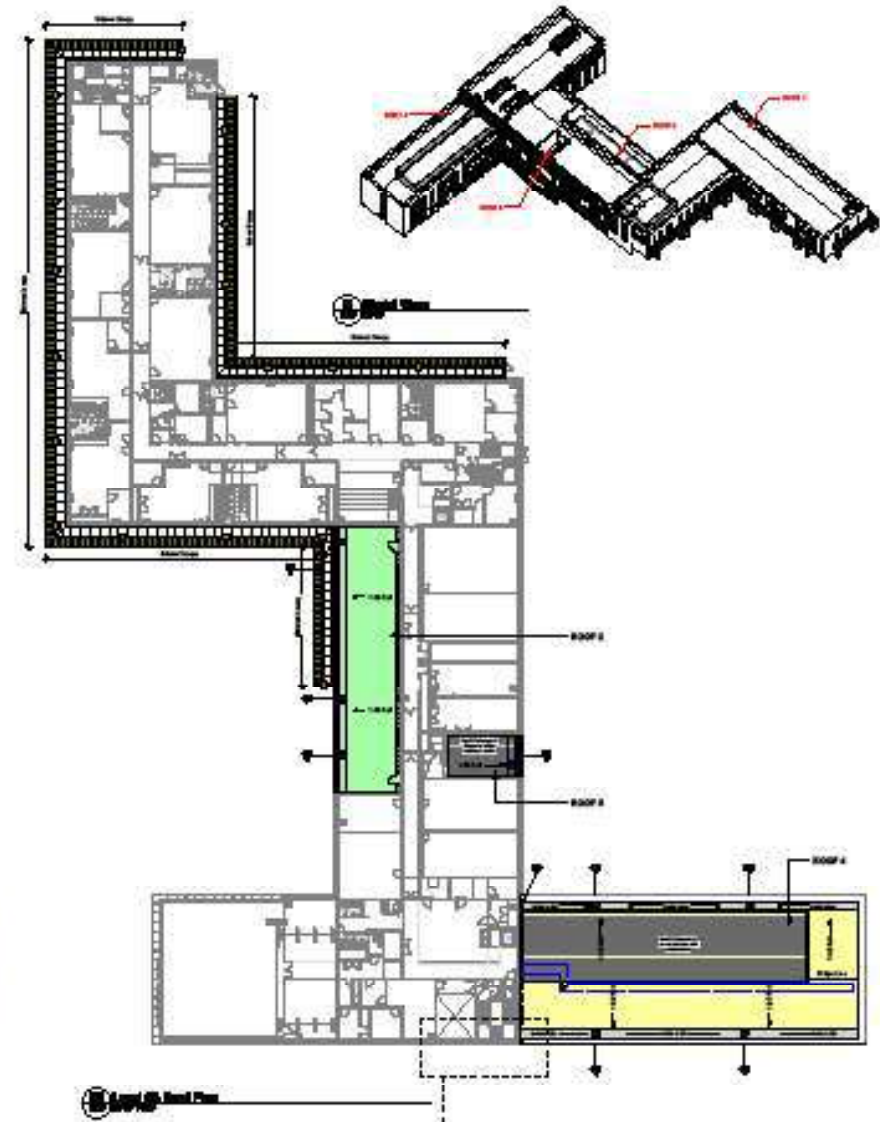
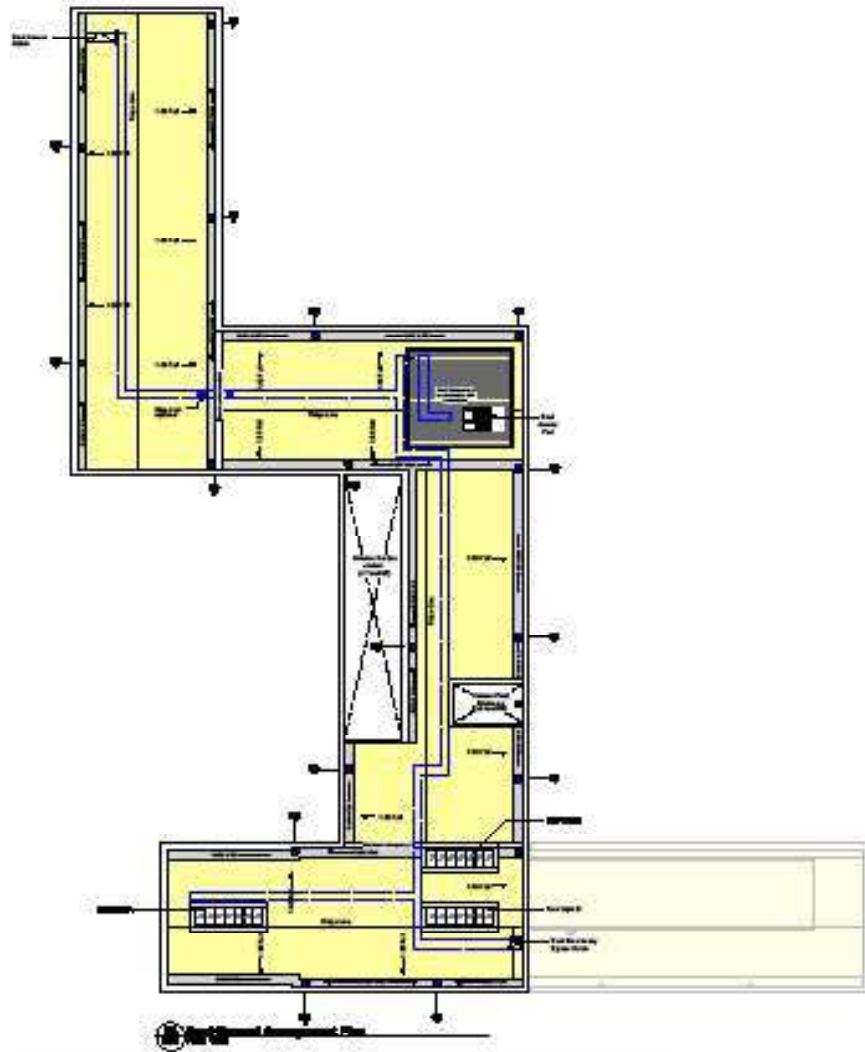
Main Building Level 02 Plan



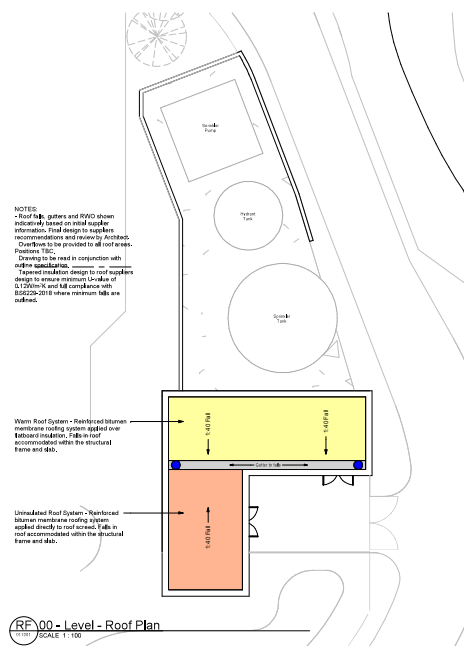
Main Building Level 03 Plan



Main Building Level 03 and 04 Plan (Roof Areas)



93



Main Building Elevations



1 North Elevation 1



2 North Elevation 2



3 East Elevation

Main Building Elevations



1. South Elevation 1

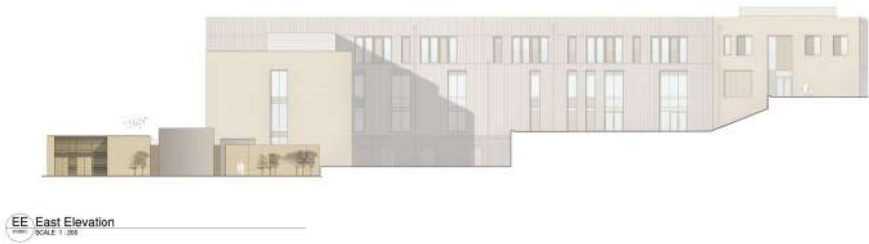


2. South Elevation 2



3. West Elevation

Main Building Elevations



Main Building Sections



AA Long Section AA
1/11/2017 10



BB Short Section BB
1/11/2017 10

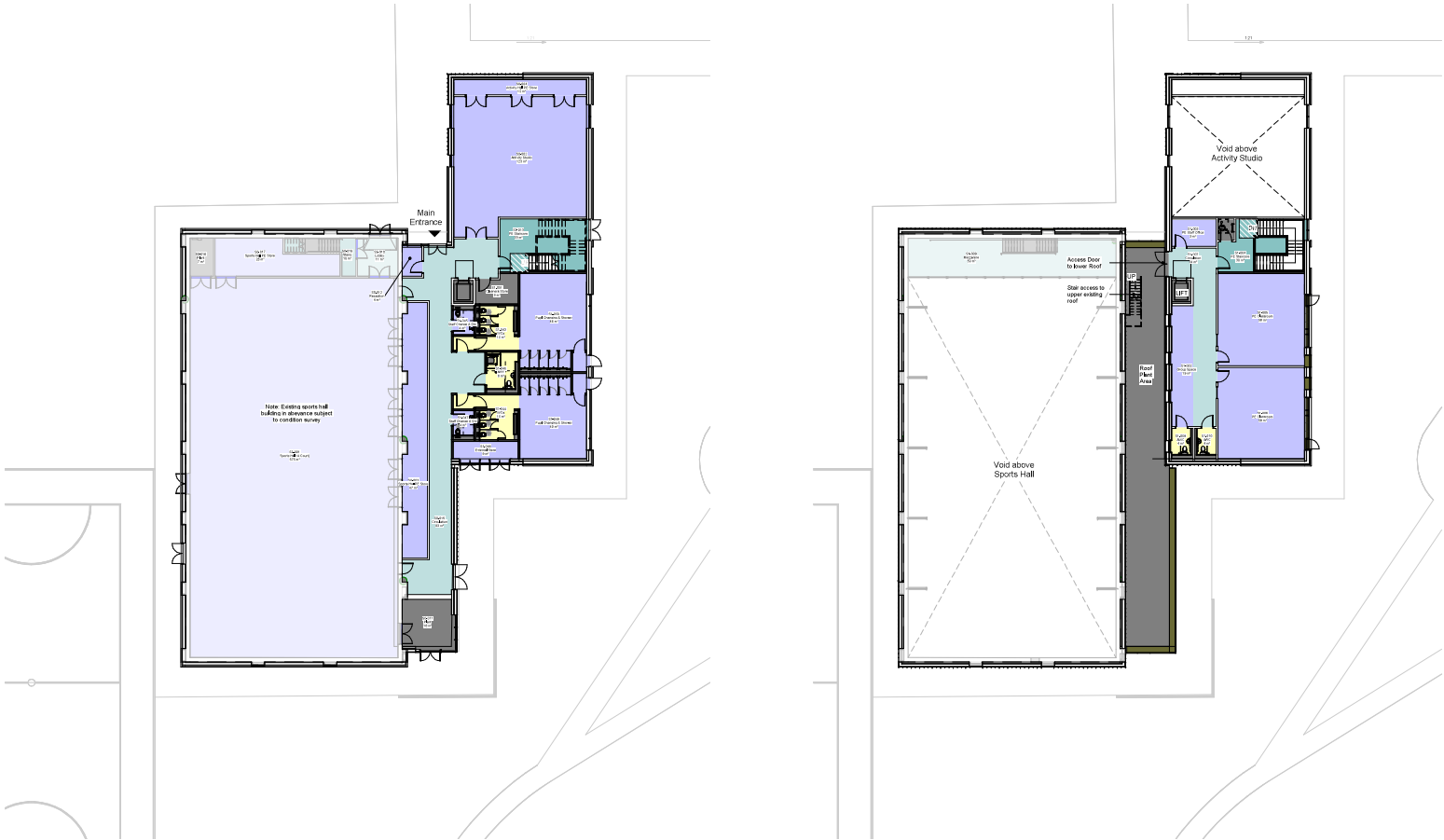


CC Short Section CC
1/11/2017 10



DD Long Section DD
1/11/2017 10

Sports Building Plans



Roof Key

- Warm Roof System - Reinforced bitumen membrane roofing system applied over flatboard insulation. Falls in roof accommodated within the structural frame and slab.
- Warm Roof Terrace System - Reinforced bitumen membrane roofing system applied over tapered insulation with pedestals and paving applied to surface. Falls in roof accommodated within tapered insulation zone over a level structural slab.



External Plant Enclosure



Rainwater Outlet - to main roof areas



Rainwater Outlet - to canopies

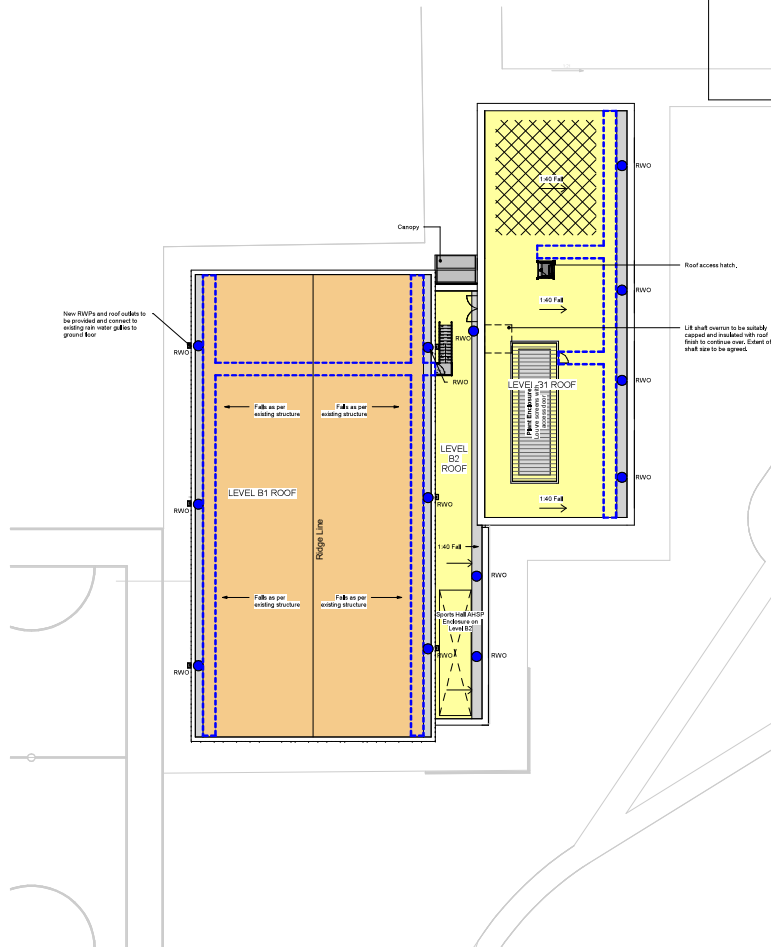


Designated Walkway

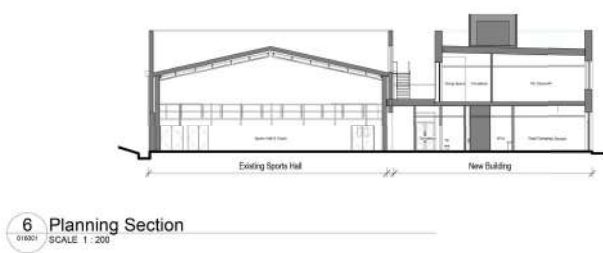
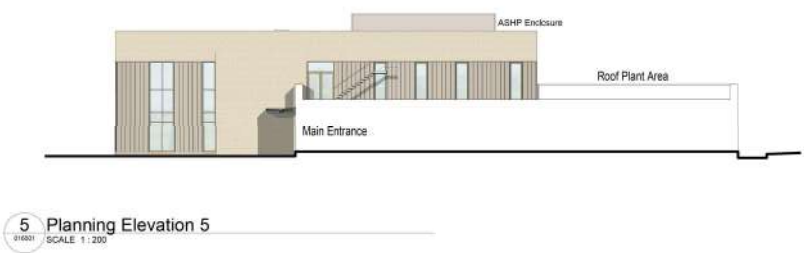
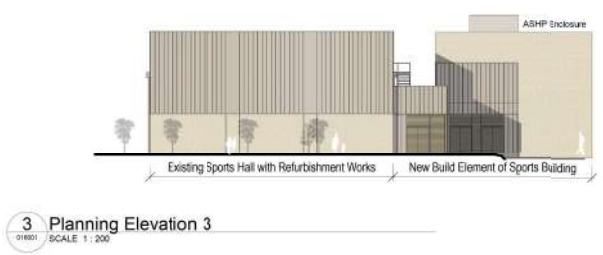
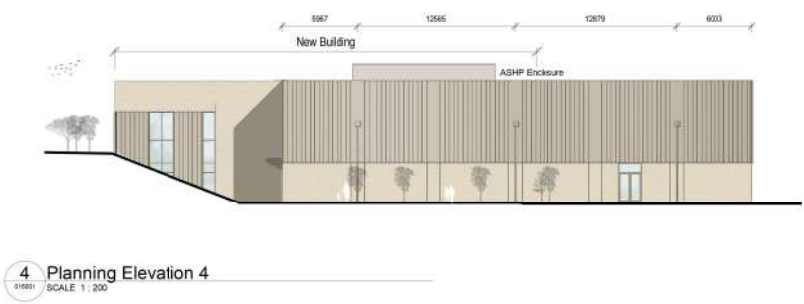


Gutter locations. NOTE: All gutters to be lined with tapered insulation to fall to outlet positions

- NOTES**
- Roof falls, gutters and RWO shown indicatively based on initial supplier information. Final design to suppliers recommendations and review by Architect.
 - Overflows to be provided to all roof areas. Positions TBC.
 - Drawing to be read in conjunction with outline specification.
 - Tapered insulation design to roof suppliers design to ensure minimum U-value of 0.12W/mK and full compliance with BS6229-2018 where minimum falls are outlined.
 - RWO to canopies shown indicatively. Final design to suppliers recommendations and review by Architect.
 - Existing sports hall roof design in abeyance following condition survey



Sports Building Elevations and Sections



Objectives of Good Design

i. Character

Placemaking

The brief requires a unified building to express a single all-through school, whilst maintaining the necessary segregations between age groups. This proposal provides a single form broken down into its component elements to create a sense of place for nursery, primary, secondary, shared, sport and community spaces, expressing these both in the building form and landscape. Each element of the building has its own identity within the overall composition of a single building:

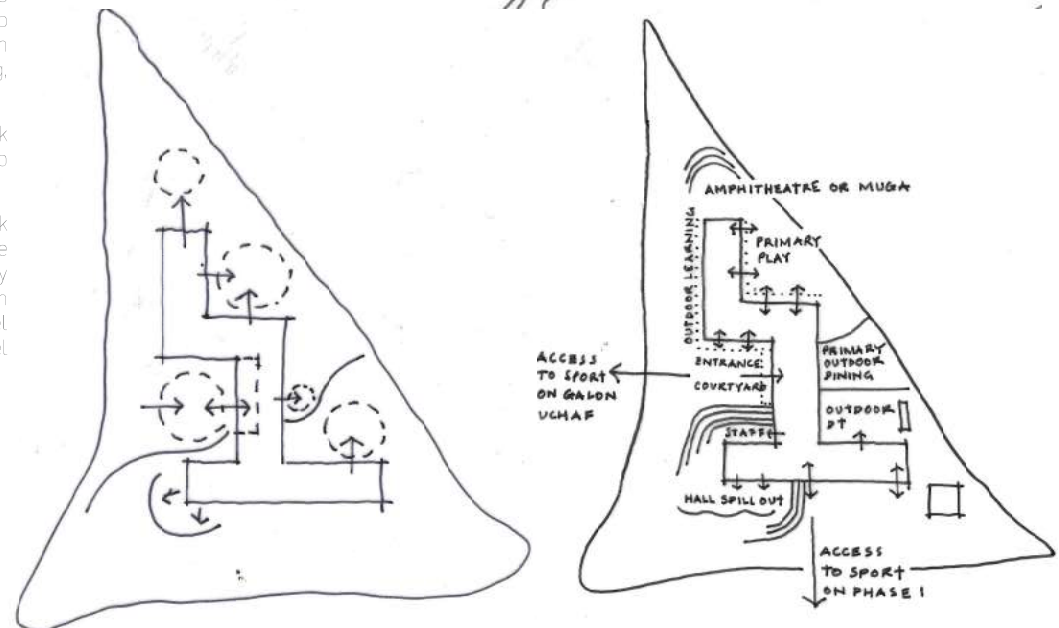
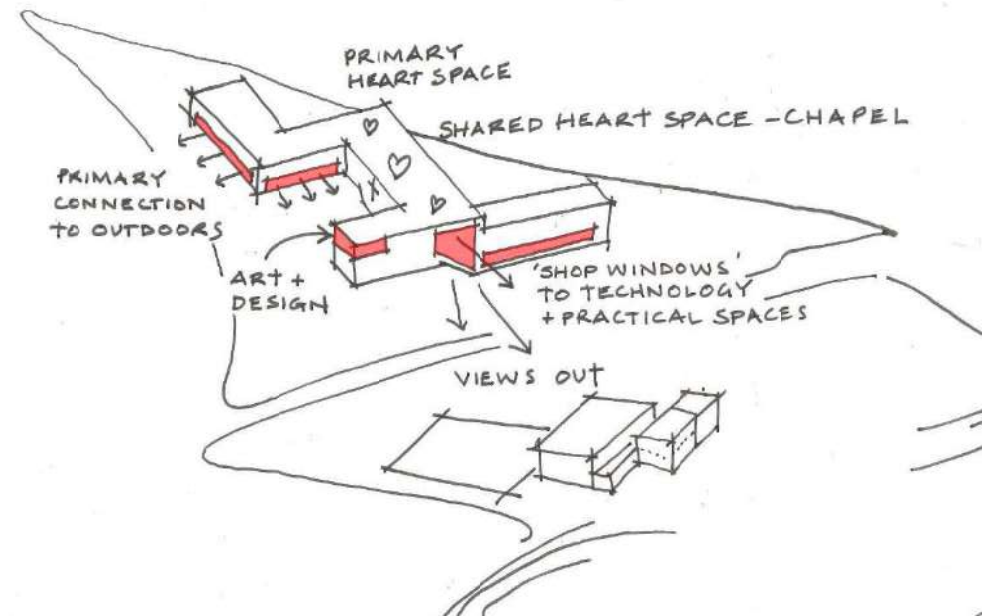
The shared wing creates the heart of the school where visitors and community users arrive, where staff from across the school meet, where children dine and where the primary phase can gather in large groups. The centrally placed chapel provides a focal point and a sanctuary with views looking toward the landscape to the east. The shared wing accommodates the large communal spaces of the primary hall and secondary dining, shared reception and staff spaces to promote communications and idea-sharing across the school.

The primary wing and secondary wings are clearly identifiable; they each intersect with the shared wing to create their own heart spaces. Within the secondary phase, this is defined by a central open learning atrium space into which pupils arrive. This extends as IT and learning resource space to all floors. In the primary phase the heart space is formed by a top lit open presentation stair and activity studio on the lower levels and by a shared learning space for transition pupils at the upper levels.

The building massing is designed to provide interesting and useful landscape areas with its interlocking forms and internal and external corners generating opportunities for a roof garden, external courtyards and spaces to gather outdoors. The building responds to the undulating topography, helping to define and to create separation between spaces and providing a variety of outdoor settings. These include spaces for play, outdoor dining, gathering for community events, for ALN decompression and learning.

The building enclosure between the wings creates a natural entrance courtyard, the L-shaped primary block defines a play space and the projection of the ground levels around the secondary hall and drama studio provides an opportunity for a south facing terrace for break out during school and community events.

The connection of the different elements of the building to the landscape is key. For example, the shared link block will create a vibrant area which is connected to the entrance courtyard, the centrally placed entrance creating a focal point on the visitors' route into the school. The perimeter of the primary phase is clearly defined by a zone of outdoor teaching space over which weather protection canopies extend. On the eastern side of the shared wing, the landscape levels are used to create an external dining area, the change in level from north to south creating a natural separation from the outdoor Design Technology space on the level below.



i. Character

Placemaking continued

The sense of place is strengthened visually by internal and external connections: the primary phase teaching spaces with large glazed windows allowing views in and out and the relationship of the DT spaces where the larger windows display the practical learning areas with opportunities to showcase work.

While the teaching areas will be experienced only by the school population, various areas such as the entrance courtyard and the spill out area of the hall and drama space will also be experienced by community users.

The broader public will also benefit from the enhancement of the site; a new landmark building with welcoming spaces and a landscape that provides wider environmental benefits through enhanced biodiversity, green infrastructure and sustainable drainage management.

The existing sports hall is to be retained in situ and extended to provide changing facilities, PE classrooms and an activity studio, which, together with the surrounding sports pitches on the Phase 1 site will create a sports hub.

The building is naturally segregated from from the main school during evenings and weekends,for community use and may operate independently.

While adopting a material and elevational style consistent with the main school building, the sports building is clearly identifiable. Its extension provides a simple block form linked to the existing sports hall by a single storey circulation spine which generates a clear entrance route from the pedestrian paths, car park and drop off area.

i. Character



View of school from the west looking into the visitors' entrance courtyard



View of school from the north east into the primary phase play area

i. Character



View of school from the south west looking from Galon Uchaf Road towards the secondary hall with its external terrace to the south and the visitors' entrance courtyard



View of school from the south looking from the drop off area on Gwaunfarren Road

i. Character



View from Galon Uchaf Road looking south



Approach to the sports hall

Objectives of Good Design

i. Character

Amount and Density

The overall size of the school and its site area has been determined by its accommodation requirements and how this is translated into a deliverable building form and site layout that will provide a high quality 21st century learning environment.

The accommodation schedule were developed with the school based on pupil capacity and their particular curriculum needs and tested against DfE area guidance which generated a target gross internal floor area (GIFA) of 8839 sq m..

The briefing process determined a series of adjacencies and these were tested against the particular constraints of the site through a rigorous optioneering and design development process as described in Section 5 of this report.

The overall GIFA generated by the proposal is 9554 sq m for the main building and the sports hall.

The building is designed to be flexible and adaptable for current and future learning styles. Classrooms are standardised and the non-loadbearing structure will allow for classrooms to be opened up to create larger spaces..

The building has the potential to extend to provide additional pupil numbers, for example, by creating additional classrooms at roof level.

The requirement for extensive external space generates a naturally low density of development on the site. Great emphasis has been placed on avoiding building development near the boundaries and maximising green space.

Use

The site remains as an educational facility with community use. The only proposed change in use is that the school site will now incorporate nursery and primary school provision together with extended community use. The community facilities will extend the operating hours of the school to evenings and weekends helping to enliven and intensify the use of the site.

The area known as Plateau 2 on the Galon Uchaf site will now incorporate a rugby pitch for the sole use of the school.

i. Character

Scale

With the exception of Gwaunfarren Primary School, the neighbouring development is generally two storey residential. The new school building adopts a broader scale reflecting its status as a community building.

Notwithstanding this, the scale of the building has been considered to avoid over-imposing forms, particularly as elements of it is to be used by young children. Furthermore, all new buildings are located away from existing neighbouring buildings.

The main building has been developed as a series of two and three storey elements which step down the site in response to its topography.

As previously described, the development includes a main building and a separate sports building. The main building massing is broken up into distinct wings.

The scale of each wing is further broken down visually by the use of contrasting materials and articulation of form, for example, through the use of rain canopies which provide a strong horizontal emphasis. Child scale is considered through the use of lower level eills in the ground floor primary phase.

The storey heights reflect the floor to floor heights required to achieve the structural, mechanical services and daylight penetration requirements of a typical classroom.

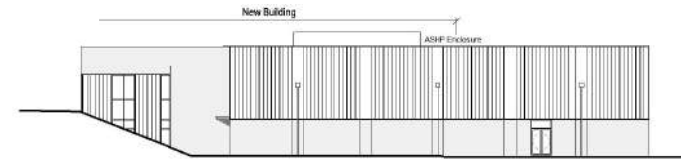
The facades are continued to a parapet to height of 1100mm above roof level to allow safe roof access. The highest point in the building is the top of the air source heat pump enclosure to the primary phase. This is a localised element which is set back from the main building facades.

The sports hall building adopts the same floor to floor heights as the main building. It also incorporates extended parapet walls and an air source heat pump enclosure. The proposal is to overlaid the existing sports hall, the parapets extending to 1100mm above the roof ridgeline.

Key block dimensions are indicated opposite.

Approximate dimensions of blocks

Sports hall block length 52m Parapet height 10m, Height to ASHP 12m



Sports hall block width 36.5m



Main building block length west to east 82m, Parapet height, Height to ASHP 16m



Main building block length north to south 113m



i. Character

Detail Design - Materials and Detailing

Materials have been chosen for their robustness and to create visual contrast to break up the scale of the building, using facing brick and powder coating aluminium cladding and curtain walling.

The secondary and primary wings are predominantly brickwork while the shared wing is predominantly faced with the aluminium cladding.

The window patterns optimise glazing area, balancing the daylighting, thermal performance and overheating criteria as part of the net zero carbon strategy. The window head heights have been maximised to achieve good daylight penetration into the back of the classrooms.

A standardised solution for each classroom type has been developed for the nursery and Level 02 primary, Level 03 primary and secondary classrooms. The window heights increase for tall communal spaces.

Weather canopies, rainwater pipes, flashings and parapet cappings are to be powder coated aluminium. Rainwater pipes are to be flush.

Key areas of facade treatment: Secondary Phase

This part elevation illustrates part of the south elevation to the secondary wing with two floors of typical classrooms (at Levels 01 and 02) and the Food Technology rooms at Level 00.

A window pattern for a standard classroom was developed to achieve the appropriate environmental requirements while considering the visual elevation treatment. To achieve good horizontal distribution of daylight across the width of the room, and to visually break up the facade, the windows were split into two so that each classroom has a large and a small window.

The ventilation strategy requires a louvre panel to the top of each of the outermost windows. These are veiled by aluminium screens.

The windows to the technology spaces are larger to promote views into the practical areas.



Detailed elevation to secondary classroom wing

i. Character

Key areas of facade treatment: Primary Phase

A standard glazing pattern has been developed for each classroom type. The ground floor (Level 02) primary and nursery classrooms incorporate two glazed screens. One screen has a door to the external teaching area and the other is larger with a low level cill and opaque glazing panels at high and low level. A high level panel above the door incorporates a ventilation louvre. This detail is repeated to the high level panel on the second screen.

A continuous canopy, with a powder coated aluminium finish, to the external teaching area will incorporate roof glazing.

Powder coated aluminium faced screen walls will provide a further degree of enclosure for weather protection, to screen play equipment and to conceal rainwater pipes. The screens will provide signage or graphics to identify of each classroom.

The Level 03 classrooms incorporate higher cill levels. The outermost lights on each side of the classroom incorporate louvre vents at high level with a mesh screen that extends to the full height of the window.



Detailed elevation to primary wing

i. Character

Key areas of facade treatment: Shared Wing

The façade of the shared wing is predominantly faced in aluminium cladding which extends to parapet level. The windows here are tall and linear to differentiate these from the primary and secondary teaching wings.

The aluminium cladding façade of the shared wing changes to a series of vertical fins across the front of the roof garden, forming a full height screen. An aluminium screen will sit behind the fins veiling the roof garden.

The fins will incorporate a crucifix sign above the doors to the main visitors' entrance at Level 02.



Detailed elevation to the shared wing



Detailed elevation to roof garden and main visitors' entrance

i. Character

Key areas of facade treatment: Hall Area to Secondary Wing

The facade of the hall will have tall windows reflecting scale of the double height communal spaces. Some of these are set within recesses in the brickwork to visually extend the opening proportion and break up the brick facade.

The art and graphics studio is a strong corner feature in a prominent position on the corner of the building. At this point, the curtain walling is set back from the main facade. Vertical aluminium fins, which assist with solar control, wrap around all three sides. Signage will be incorporated into the facade for the main school signage.



Detailed elevation to secondary hall and art area



Detailed elevation to secondary phase entrance

i. Character - Materials



i. Character - Materials

Detail Design - Materials and Detailing - facing brick



i. Character

This section sets out the proposed site layout and the parameters which have influenced the design of the external spaces for the new all-through 3 to 16 school in Galon Uchaf Park, Merthyr Tydfil.

The proposed development and its associated landscape supports Merthyr Tydfil County Borough Council's commitment to establishing modern, high quality learning environments that meet the school's aspirations. From a landscape perspective, this includes outdoor spaces with variety which accommodate movement and access, spaces for learning, social & informal use and sports. Many of the features in the proposed scheme, on a constrained site, are multi-functional, providing not only amenity and social value for educational use but an enhancing wildlife, promoting sustainable drainage and enhancing biodiversity value, reflecting the local character. This will result in an innovative schools ground design which is practical, memorable and stimulating.

The site sits within a semi-rural location with long distant rural views towards the Valleys to the south and east. Expansive views of the surrounding countryside to the south will be capitalised on with open and framed views which reflect the local landscape patterns and distributions of vegetation. The design intent is to celebrate these 'green' credentials and to capitalise on the complex site topography, zoning the site into a series of functional spaces which are tied to adjacent internal uses. The topography will be utilised to create usable level areas, connected to each building zone, which step up the site allowing the development to sit comfortably within a sloping site.

The relationship of the site to its landscape setting has been carefully considered, retaining the sites connection to the long distance views, reinforcing existing boundaries and reflecting local species to deliver a successful relationship between the public and adjacent private spaces.

The design provides a legible sequence of experiences with clearly identifiable entrances lying off main routeways. The site interior will be divided in to zones to reflect the different functions for nursery, primary and secondary users. Each sub-zone will have its own character with differing scales of space and content in terms of materials, planting and play provision regards hard formal and soft informal areas.



The design of these spaces will provide high quality, varied and engaging spaces conducive for learning and social interaction. We have also considered sustainable urban drainage systems (SuDS) and ecological considerations which have been key drivers in developing the landscape design for this project, with rain gardens and habitat linked to a series of green spaces which permeate the site. Rain gardens will capture surface water and improve amenity and biodiversity value through the use of plants that are able to withstand extremes of both wet and dry conditions. These rain gardens are also a great educational tool teaching children valuable lessons on climate change.

A fully coordinated multidisciplinary approach from the early stages has allowed the landscape team to produce a functional and attractive design solution which meets the requirements for ecology, surface water management and parking space provision; It also includes the requested number, size and variety of sports pitches whilst fostering excellent opportunities for other outdoor student activities all of which will be integrated with the building and wider landscape setting.

Of equal importance will be the selection of hard landscape materials and furniture elements, with the overall principles to be robust, attractive, maintainable and relevant to the site context. They must also meet the many British standards and reflect the BB recommendations to meet the rigorous demands that will be placed on them through daily educational use.



Site wide masterplan

i. Character

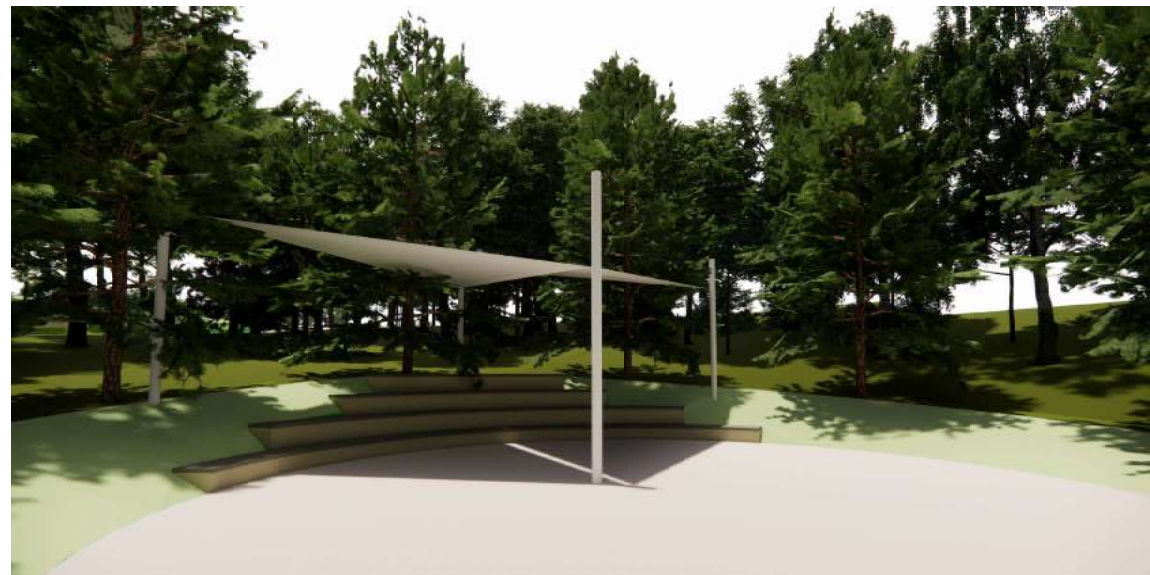
The following images illustrate the proposed general character created throughout the site. For up to date elevational treatment refer to Architects elevations.



Nursery entrance looking towards approach road



Entrance Plaza



Amphitheatre space



Nursery play space



Playspace adjacent to school hall



Primary play space

i. Character

Material selection – indicative materials subject to design development:

- Main entrance surfaces – block paving attractive and permeable to meet SuDS standards.
- Courtyard surfacing – will be varied to suit individual years needs, ie bitmac, PCC Flags, play surfaces.
- Footpaths – Bitmac, block paving, bound gravel, bark chippings with PCC or Timber edging.
- Maintenance routes / surfaces – asphalt / bitmac.
- Play equipment and incidental items.
- Boundary fencing – to denote boundaries between year definition and the main site boundary for safeguarding, plus sports areas - likely to be palisade / metal mesh.
- Shelters Canopies and shade features – shade sails, building fixed canopies.
- Cycle storage Sheffield cycle stands and shelters – bollards stainless steel or recycled plastic – seating various types envisaged from reclaimed log timber to formal with arm and back rests seats and low bench style
- Balustrades to protect wall heights and possible edges to slopes.

The design will seek to comply with the following guidance where possible:

- Schedule 3 of the Flood and Water Management Act 2010
- CIRIA C753 The SuDS Manual design guidance.
- Building Bulletin 98 + 99
- BREEAM 'Excellence' rating



Bow top fencing



Bark mulch surfacing



Block paving



Cycle stands



Sports pitch fencing



Benches

Precedent Images on this page from non-Atkins schemes

1. Character - planting palette

Material selection – indicative materials subject to design development:

Outdoor Learning:

- The internal character of the site will be dominated by the provision to deliver an outdoor learning environment. SuDS areas will provide some of the natural outdoor educational experiences but the landscape design has also introduced specific areas for outdoor teaching, including habitat areas, which will provide an area for an allotment, a sensory garden with culinary herbs, an orchard, a natural amphitheatre, a boulder garden, bird hide and forest garden.
- A small memorial garden will also be provided in a prominent location by the main entrance.
- Outdoor learning is high on the schools agenda and these elements will provide a stimulating environment, where learning outdoors provides activity, increasing students' physical, mental and social health.
- Outdoor learning and access to and views of nature can also decrease stress levels of students, teachers and visitors. The grounds will be divided in to 3 principal areas.

Early Years Courtyard - indicative features to include

- Climbing features
- Nature walls
- Play markings
- Incidental play ie sand pits, water play items

Primary Courtyard

- Boulder garden
- Bird hide
- Play markings, incidental play equipment
- Grass amphitheatre

Secondary Courtyard

- Construction compound
- Run around space with markings
- Allotment spaces
- Nature trail, forest garden, orchard and sensory garden,



Sensory garden



Climbing walls



Play track



Boulder garden



Floorscape graphics



Grass amphitheatre

Precedent Images on this page from non-Atkins schemes

1. Character - Site materials - retaining wall options

These will be a key feature of the proposal, significantly contributing to the site character and can be handled in a number of ways to ensure they are robust, attractive easy to construct and maintain and are cost effective. Given the school and wider green site context more naturalistic solutions are being explored as indicated below.



Gabion stone wall



Pre cast concrete



Green walls



Gabion with integrated seating



Tensar geogrid



Green walls

Precedent Images on this page from non-Atkins schemes

1. Character - planting palette

General characteristics

The planting will be a key aspect of this project adding huge value to the site, offering biodiversity, SuDS, nature and well-being value as well as contributing to climate resilience, micro climate protection and a range of other benefits including air quality, aesthetics shade and carbon reduction.

Site boundaries

Supplementary Planting to site boundary areas will be considered to provide additional visual screening where sensitive areas may be exposed to views of the development. This will include planting along Gwanfarren and Gallon Uchaf Road and selected planting to help screen the plant buildings and associated tanks.

Northern part of the site

A well-considered palette of trees shrubs hedgerows and grassland will create a robust 'amenity' landscape, with feature tree planting in and around the new buildings on the northern part of the site to help integrate the development. Any existing trees on the site, removed as part of the works will be replaced at a ratio of 3:1. Lines of Hedgerows will also be replaced where lost and distributed around the site where appropriate.

Each SuDS element will also provide the opportunity for a diverse planting scheme and will overall contribute greatly to increasing biodiversity on the site.

A diverse mix of planting is proposed to become a valuable habitat of food and shelter for wildlife. Importantly, the arrangement of the SuDS elements combined with the diverse planting species will create habitats for wildlife to live, thrive and commute across the proposed school site. Consultation with ecologists will ensure species choices are robust, climate resilient and native where possible. The use of planted terraces will also provide opportunities to increase bio diversity and well-being also helping to disguising the large changes in level across the site. Sizes in these locations are anticipated to be larger sized nursery stock for instant impact.

The southern site will be more given over to sports use where planting will be on a larger scale, more native and less ornamental in character supplementing the existing woodland and understorey species. Sizes are anticipated to be whips and feathered tree and shrub planting for fast establishment. Selected Species: In consultation with the local authority a detailed species list of native species and ornamental planting will be developed. The species below have been considered in the design which will be developed further at the next stage:

Hedgerows comprising : Beech/Holly/ Hawthorn

Trees: Hornbeam, Ornamental pear, Hazel, Hawthorn, Oak, Field Maple and Small leaved Lime. Pines will provide a feature around the amphitheatre and in selected locations for screening

Wild flower will comprise of a species rich swards.

A range of ornamental shrubs for planting in and around the school buildings will be chosen, selections to be made based on their long term viability and for use in schools grounds, avoiding poisonous berries, thorns etc.

Trees and Specimen Shrubs



Ornamental Planting



Memorial / Sensory Garden



Precedent Images on this page from non-Atkins schemes

1. Character - Planting types and functions

SuDS Planting



Bulb Planting



Bio-retention / Rain Gardens and SuDS



Trees



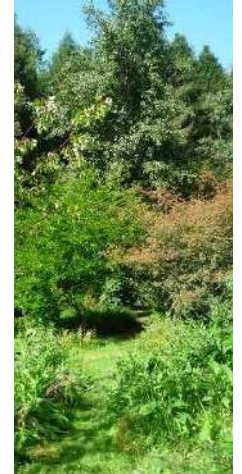
Native Woodland Planting



Native Hedgerow Mix



Forest Garden



Precedent Images on this page from non-Atkins schemes

1. Character - Nature based features



School orchard and habitat creation



Insect wall and other ecological habitats



Swales and SuDS planting



Willow tunnels



Mini allotments and growing spaces

Precedent Images on this page from non-Atkins schemes

5.1. BB 98 & BB 99

This page illustrates the distribution of spatial types across the site and the recommended BB 98 & BB99 areas. The design is currently over provided for regarding hard informal play and under on soft informal

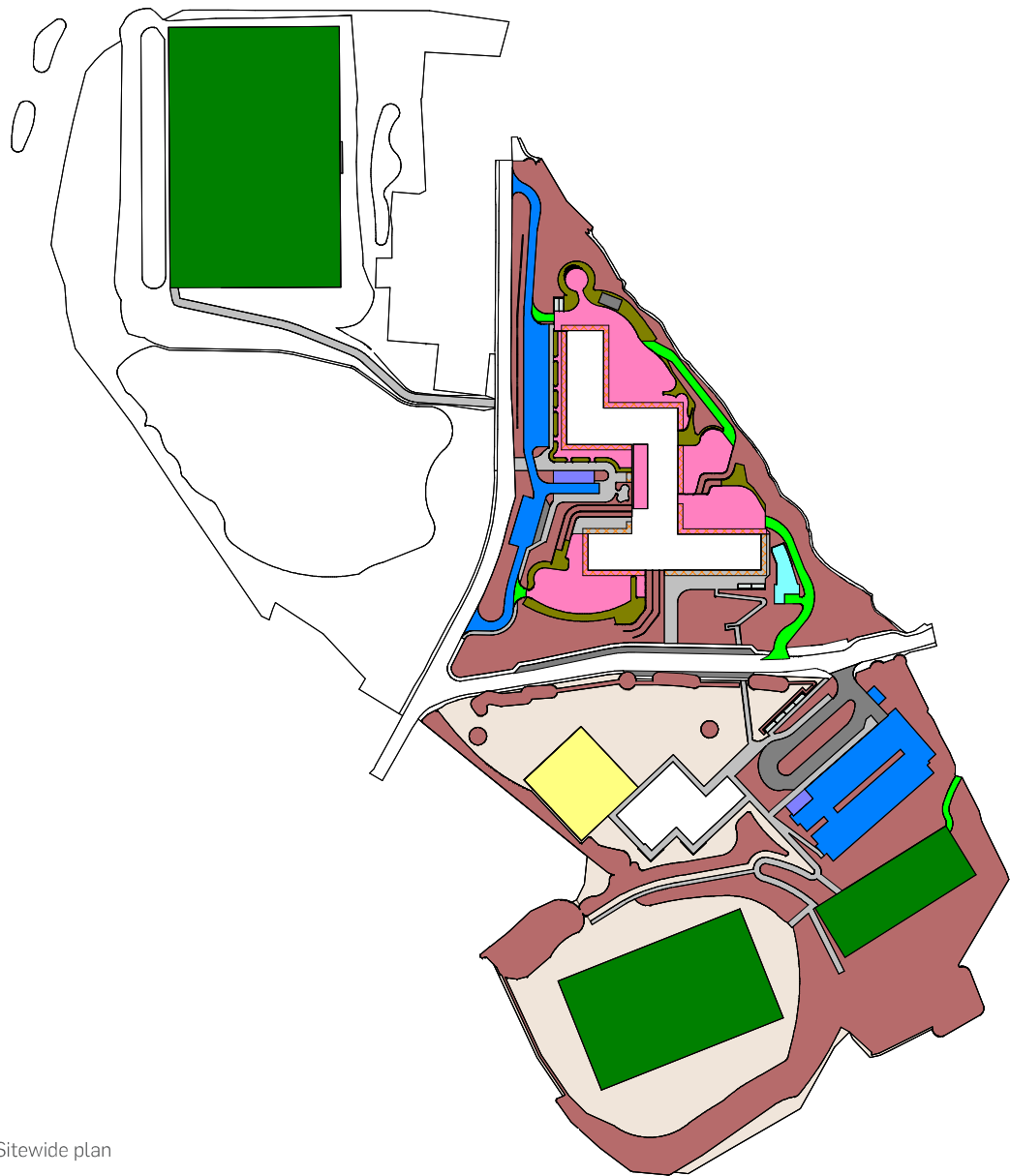
As the design develops this will be addressed with the opportunity to convert some of the hard space to provide more soft informal play to get closer to the recommendations in the BB98 and 99.

The table shows the current allowances for all types across Nursery Primary and secondary.

Area calculations (in progress):

	Landscape net area required by Building Bulletins				Distribution of area across site for this option				Difference between Building Bulletins & Option			
	Nursery	Primary	Secondary	Total m²	Nursery	Primary	Secondary	Total m²	Nursery	Primary	Secondary	Total m²
Net external				17266				14855				-2441
Sports pitches				2303				2300				-3
Hard surfaced games courts				2638				4935				2297
Hard informal & social areas	150	1188	1300	2638				1426				-3237
Soft informal & social areas	250	2113	2300	4663				6456				4831
Habitat	100	725	800	1625				707				-6418
Float (remainder of site)	500	2625	4000	7125				194				124
Accessible Parking				70				1241				506
Bus drop off				735				4079				-916
Parking				4995				838				706
Deliveries & access				132				1727				38
Hardstanding around building - fire tender/maintenance				1689				3657				3657
Miscellaneous paths and pavements				0				255				55
External plant enclosure				200								
Total				43441				42345				-1096

5.2. BB 98 & BB 99 area plan



KEY	
	SOFT SPORTS 16688M ² BB 98 & 99 RECCOMENDED AREAS: 17266M ²
	HARD SPORTS 1424M ² BB 98 & 99 RECCOMENDED AREAS: 2303M ²
	HARD INFORMAL & SOCIAL 4646M ² BB 98 & 99 RECCOMENDED AREAS: 2638M ²
	SOFT INFORMAL & SOCIAL 1258M ² BB 98 & 99 RECCOMENDED AREAS: 4663M ²
	HABITAT 23396M ² BB 98 & 99 RECCOMENDED AREAS: 1625M ²
	FLOAT REMAINDER OF SITE 12828M ² BB 98 & 99 RECCOMENDED AREAS: 7125M ²
	ACCESSIBLE PARKING 188M ² BB 98 & 99 RECCOMENDED AREAS: 70M ²
	BUS DROP OFF 1534M ² BB 98 & 99 RECCOMENDED AREAS: 735M ²
	PARKING 3863M ² BB 98 & 99 RECCOMENDED AREAS: 4995M ²
	DELIVERIES & ACCESS 827M ² BB 98 & 99 RECCOMENDED AREAS: 132M ²
	HARDSTANDING AROUND BUILDING - FIRETENDER/ MAINTENANCE 1016M ² BB 98 & 99 RECCOMENDED AREAS: 1689M ²
	MISC PATHS & PAVEMENTS 4157M ² BB 98 & 99 RECCOMENDED AREAS: 0M ²
	EXTERNAL PLANT ENCLOSURE-214M ² BB 98 & 99 RECCOMENDED AREAS: 200M ²

Sitewide plan

ii. Access

As described in the site constraints section, the site topography is highly complex with steep banks and stepped plateaux generally falling 14m from north to south and 5m west to east.

The building concept for the main building and sports building has been developed to utilise the different plateaux as closely as possible to assist with generating level access internally and externally.

The buildings and their external areas are designed to ensure that all users will have equal and convenient access, as a first principle.

Design standards will meet or exceed Building Regulations Part M and the requirements of DfE Building Bulletins.

Building Access

Accessible parking spaces will be provided in locations near to principal entrances with all paths leading to entrances achieving a gradient of 1:21 or less. These entrances will incorporate a weather canopy and large weather mat to reduce water transfer.

The brief requires multiple entrances; the elevational treatment seeks to create clear visible entrances throughout.

Space is provided outside the entrances for powered wheelchairs and scooters.

Main doors and circulation routes will follow BS8300:2009 guidance regarding the 20-22.5N opening pressure requirement and where this is not possible, powered entrances will be provided.

Reception desk

This is designed to suit seated and non seated users, and will incorporate a hearing loop.

Layout

The layouts of the buildings are designed to allow for clear zoning and wayfinding with simple, linear circulation routes, daylight either directly or with borrowed light from adjacent spaces. The interfaces between the primary, shared and secondary phases incorporate open hub areas which clearly mark the threshold of each zone. Further visual cues will be generated through the interior design proposals.

Alternative Learning Needs provision is incorporated into the heart of the school in the central 'hub' locations integrating ALN learners with the rest of the school.

All doors and corridors are designed to the widths required by Building Regulations. Level access will be provided throughout the main building and sports building with lift access between floors.

Sanitary accommodation

WCs are distributed throughout the school buildings based on Building Regulations, Building Bulletin recommendations and the Workplace Regulations. Accessible WCs are located to limit travel distance to 40m from any location. Fully accessible independent WC rooms are provided which are for staff and pupil use. Ambulant cubicles are provided within the main WC blocks.

Groups of WCs are arranged to allow the facilities to be assigned to suit different gender requirements.

Hygiene rooms with washdown and hoist facilities are placed within the secondary and nursery and primary phases.

The secondary phase WC provision adjacent to the hall and drama areas incorporates a hygiene room and independent WC. These will be available for out of hours community use, for example, for performances and evening events.

Access to outdoors for wellbeing

The design of the building promotes access to the outdoors for wellbeing with direct external access for dining for both primary and secondary phases, external soft and informal spaces, sports pitches, outdoor break out and quiet outdoor decompression areas for ALN learners.

A roof terrace at Level 03 provides a garden for learning and break out.

Sports pitches will be accessible for all, refer to Landscape section.

Interiors

The interior design will take a holistic approach to design for access and wellbeing. We will ensure that all aspects of finishes and detail will be mindful of neurodiverse requirements. The materials palette will use natural materials and muted colourways avoiding garish, highly contrasting colours. We will ensure that visual noise is managed in the use of pattern and repetition and reducing its occurrence in circulation and ALN areas, specifically.

All teaching areas will have wheelchair accessible furniture and ensure that the positions of these is not a compromised teaching experience.

We will also ensure that indoor planting is encouraged throughout the school, where possible.

The Acoustic Environment

Despite being on a relatively noisy site with challenging elevation constraints, the external form of the building helps to create a number of acoustically sheltered zones that can be utilised for external teaching and also providing quieter periods for pupils to enjoy during break times.

Internally, the layout of the school has also considered noise disturbance throughout the school, with the aim of optimising layouts to reduce noise disturbance by situating noise generating areas such as the music spaces and the design and technology workshops from the more noise sensitive parts of the building, the ALN areas in particular.

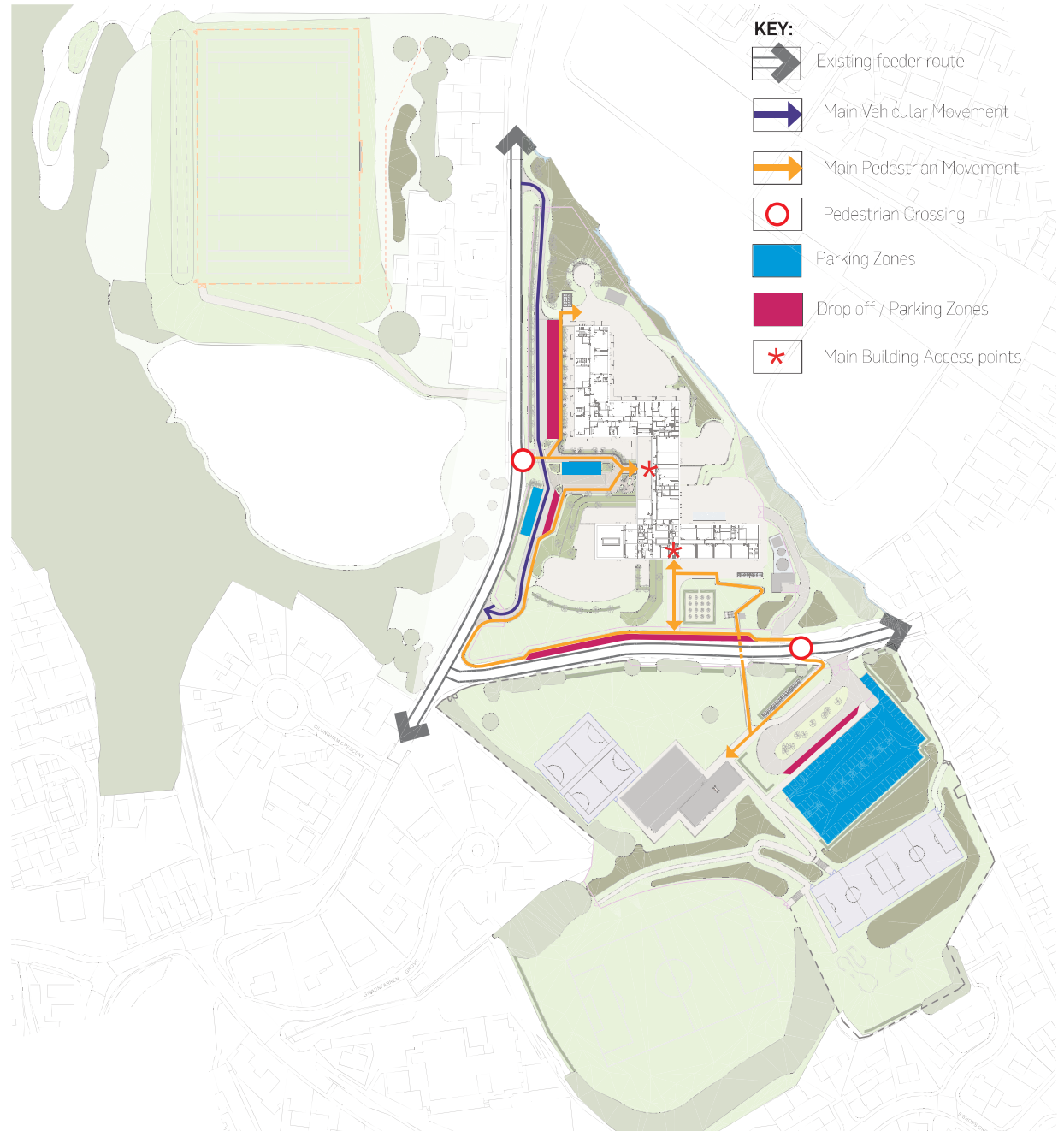
External Space Approach to Access

The site constraints are significant with a building footprint and external spaces that falls over a 14m change in level north to south and 4-5m east to west. The strategy is to create usable level areas connected to each building zone which steps up the site as well as tie into the existing boundary levels and to reduce the amount of retaining walls to a minimum.

The wedding of the site layout to the complex local topography has required considerable attention to ensure safe convenient and compliant access. This has required a building and its associated external spaces to step up the site in a series of 4m increments. The images opposite illustrate how this has been achieved, with a solution which celebrates its surroundings and creates an exciting and varied external experience which also accommodates generous spaces for external use and convenient access into all entrances.

The site levels have been developed to reduce the amount of retaining walls significantly across the site. This will create usable and level access and external play areas and to integrate the building into the landscape generally. Where changes are inevitable we have introduced terraced walls to soften the impacts. These will be planted to improve amenity biodiversity and visual amenity. The landscape team has worked closely with architects and the civil engineers and this multidisciplinary approach from an early stage has enabled us to produce a functional and attractive design solution.

The school entrances will be formal open spaces enhanced by native trees and ornamental shrubs. These are key areas which set the first impression for the school and can help to create a positive identity. Small areas for congregating will be provided by the entrances for friends and family to wait.



iii. Movement

Site location and connectivity

Prior to developing proposals for the new school, MTCBC undertook a site selection process from which the Bishop Hedley School site in Merthyr was chosen.

As a faith school, BCA has a wide catchment area and Merthyr Tydfil is provides a central location with an existing transport and highways infrastructure.

- The secondary school population is already established at the Bishop Hedley site and the three feeder primary schools, which will be incorporated into the new school, are also already located in Merthyr.

The wide catchment area will require the use of vehicles to travel to school for a large proportion of the staff and pupil population. A full transport assessment (TA) has been prepared, included within the PAC report, to promote long term sustainable transport measures and provision for child safety.

To minimise use of the private car, school buses will be provided from key locations across the catchment area. For staff and pupils living locally, travel to school on foot or by cycling will be encouraged by providing safer travel routes through highways improvements and better facilities on site.

Parking space calculations are set out in the assessment, based on an increase in the number of parking spaces over and above the parking standards based on drop off demand and safety concerns.

Highways Improvements

The TA has generated a number of improvements to road safety on Gwaunfarren Road and Galon Uchaf Road through discussion with MTBCB Highways. Details of the proposed S278 highways improvements are described in separate drawings within the PAC submission.

These proposals incorporate highways improvements for the safety of road users and pedestrians. These include:

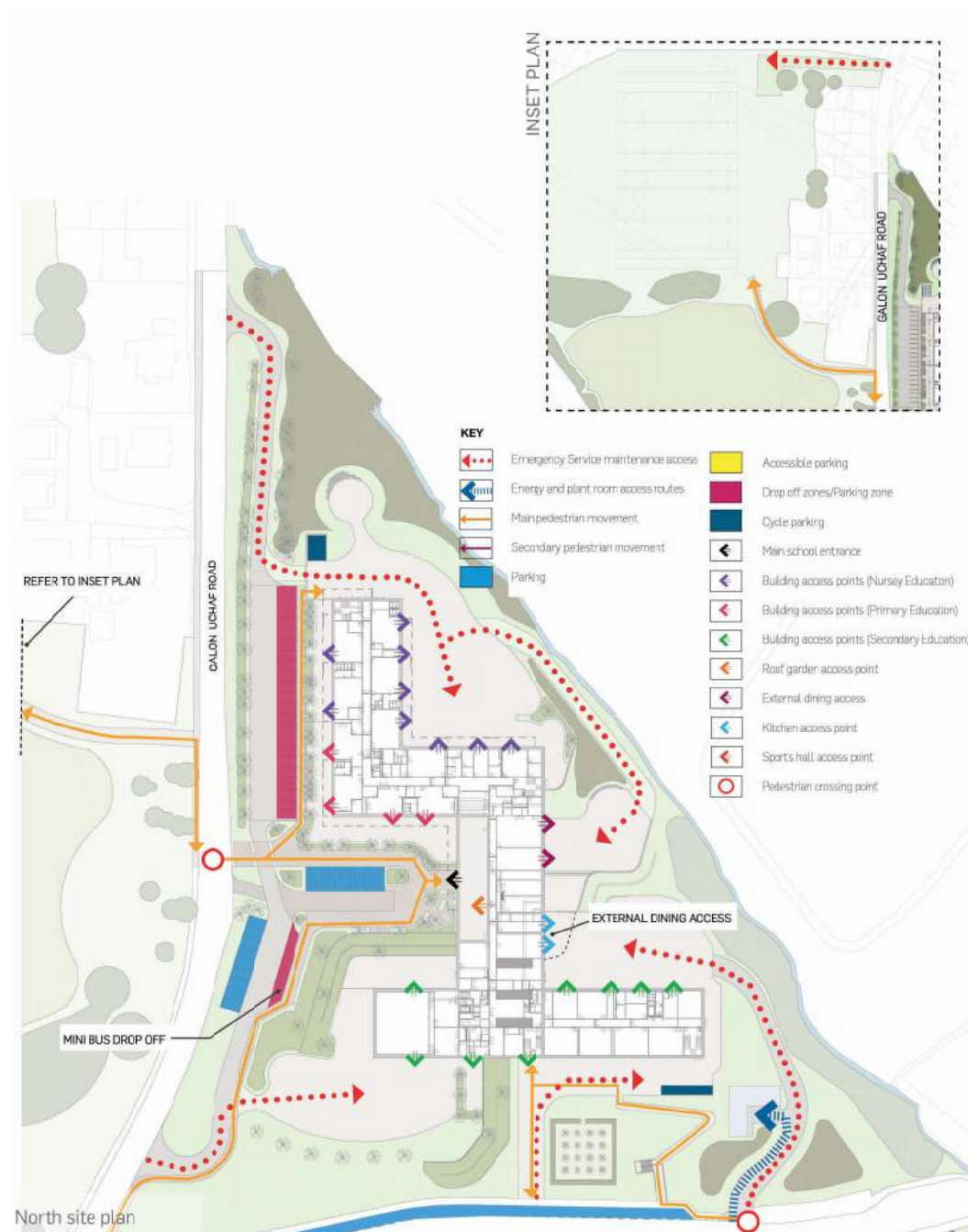
- New traffic calming and formalised pedestrian crossing points along the key walking routes to the school.
- Production of a travel plan to promote long term sustainable transport measures.
- Parking mix based on travel surveys, TA and relevant parking standards (CSS Wales Parking Standards).
- Table top crossings at each pedestrian site entrance
- Road junction improvements with parking restrictions on Galon Uchaf Road and Gwaunfarren Road

It should be noted that there is no existing pavement to the northernmost section of the south bound carriageway to Galon Uchaf Road - there is no scope to improve this due to the land ownership boundary.

On site measures include improved accessible cycle parking provisions and a bus parking area within the site.

Active travel

The planning proposals map indicates a proposed *active travel integrated network route* running along Galon Uchaf Road immediately to the west of the school site to improve walking and cycling routes in future.



iii. Movement

Arrival by coach or bus

Primary pupils arriving by minibus will be dropped off and picked up within the Phase 2 site in the minibus bay.

Secondary pupils arriving by coach or bus will be dropped off and picked up in the new drop off area within the Phase 1 site. Pupils will approach the Phase 2 site via the tunnel or via the footway and new road crossing with direct, clear access to the main secondary phase entrance. A turning area is provided within the site for buses to avoid reversing.

The bus stop on gwaunfarren Road is to be retained and relocated for public transport services.

Arrival by car

On-site parent parking and drop off for nursery and primary children removes the requirement for road crossing. Parking spaces outside the nursery and KS1 area of the primary phase will allow parents to take younger children to their classroom area. Children will alight on the pavement to the school side of the parking areas away from vehicular areas. Pupils will alight on the north side light onto the pavement on the same side of the road as the school without having to cross the road.

Secondary pupils arriving by car would be dropped off in the parent drop off layby to the south of the Phase 1 site where there is direct access to the main secondary phase entrance. They would use the crossing or the tunnel to approach the Phase 1 site.

Staff arriving by car will park in the car park on Phase 1 site.

Accessible spaces are provided close to the main entrances in accordance with Building Regulations requirements. Out of hours community users for the sports building will park within the Phase 1 car park. Out of hours community users may use the Phase 1 car park areas for events within the main school building.

Arrival by bicycle

Covered bicycle parking spaces will be provided on the Phase 1 and Phase 2 sites. On the Phase 2 site, these are designated to the primary and secondary phase areas.

Cycle storage areas will be overlooked from the buildings for good natural surveillance. Showers for cyclists will be available within the sports building.

Parking Areas

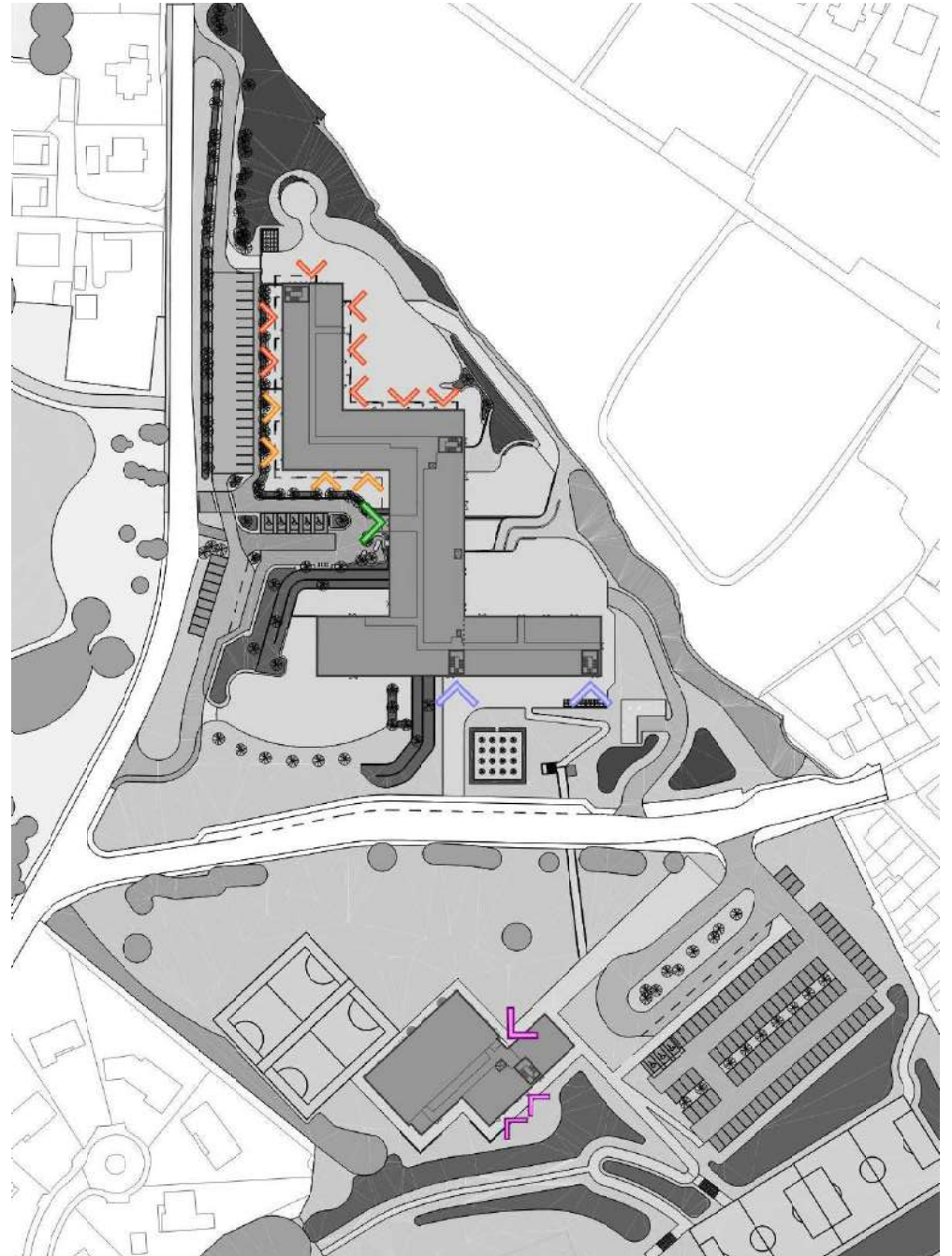
Parking areas are placed in areas where they are overlooked for security with clear entrance routes into the school buildings. The approach road within the Phase 2 site provides a generous stack length to reduce congestion at peak periods as agreed following discussions with the local authority.

Arrivals by all modes has considered the safety, convenience and legibility of access within a constrained site, challenged by site levels and existing highway arrangements. The design solution seeks to create convenient and attractive routes for all.



iii. Movement

Entrance points into the buildings



iii. Movement

Site wide parking and drop off provision:

Phase 1 (South)

- 01. 3 no. Disabled bays
- 02. 82 no. Staff Parking Bays
- 03. 7 no. 15m Luxury Coaches* Stacked (Only 2No. Drop-off / Pickup i.e. doors aligned with kerbline – area will need to be managed).

*Clarification required on Bus fleet:

Phase 2 (North)

- 04. 5 no. Disabled bays
- 05. 28 no. Primary School Dropoff / Pickup Bays/ Visitor Bays
- 06. 2 no. Mini-Bus Bays

Offsite Laybys (Gwaunfarren Road)

- 07. 18 no. Parking Bays

Overall

- 8 no. Disabled Bays
- 110 no. Parking Bays
- 7 Bus Bays
- 2 no. Mini Bus Bays
- 18 no. offsite drop off / pick up bays

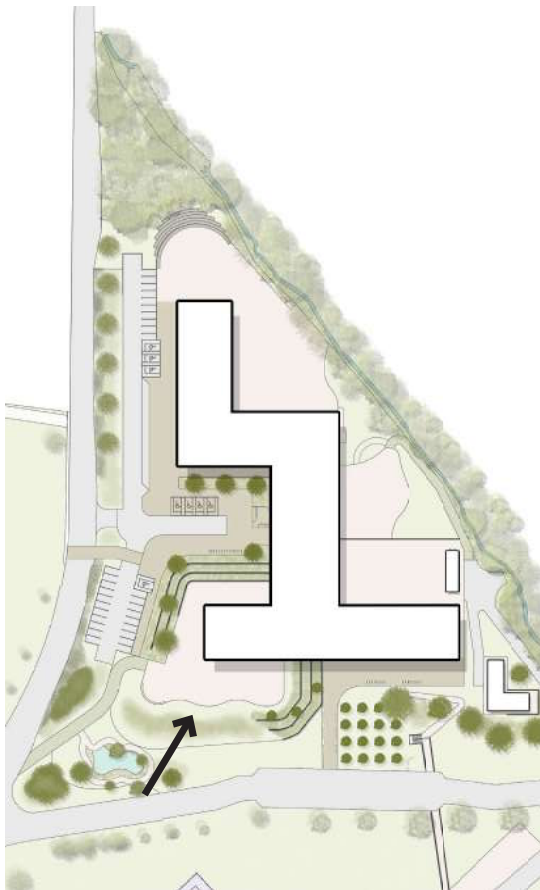


iii. Movement

The visuals below and opposite show how the site levels have been developed across all the hard and soft spaces, to create accessible and compliant routes throughout the site. They indicate spot levels and the general gradients to be achieved in a readily understandable format.

The focus was on achieving easily accessible gradients up to main entrances from vehicle parking and drop zones with compliant pedestrian routes exceeding 1 in 21. External play spaces associated with each part of the School have been achieved with gentle gradients that allow water to fall away from the building as well as providing safe useable space for activities run around teaching and social interaction.

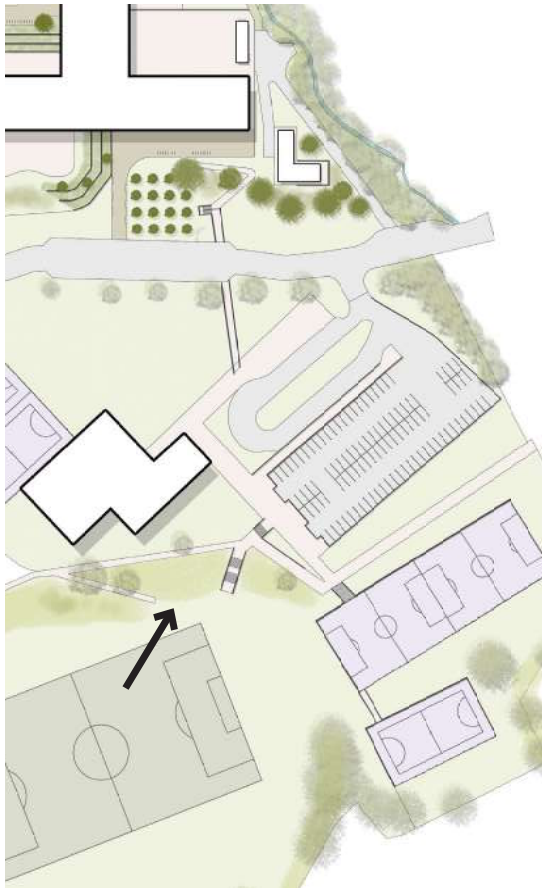
Large changes in level will be achieved through the use of stepped retaining structures to soften the impact. The next design stage will consider the use of vegetated systems for these changes in level to help further soften their appearance as well as provide enhanced biodiversity.(See retaining wall materials page 131)



VIEW LOCATION PLAN



iii. Movement



VIEW LOCATION PLAN



iv. Environmental Sustainability

Energy and Resource Efficiency

Net Zero Carbon

In accordance with the Sustainable Schools for Learning Programme, BCA Catholic School will be designed and delivered to achieve Net Zero Carbon in Operation, with a maximum embodied carbon footprint of 600 kgCO₂e/m².

The project definition of NZC is as per the UK Green Building Councils' Net Zero Carbon Buildings: A Framework Definition.

The UKGBC defines NZC in whole life terms as: "When the amount of carbon emissions associated with a building's embodied and operational impacts over the life of the building, including its disposal, are zero or negative."

With specific regards to embodied carbon, NZC is defined as: "When the amount of carbon emissions associated with a building's product and construction stages up to practical completion is zero or negative, through the use of offsets or the net export of on-site renewable energy."

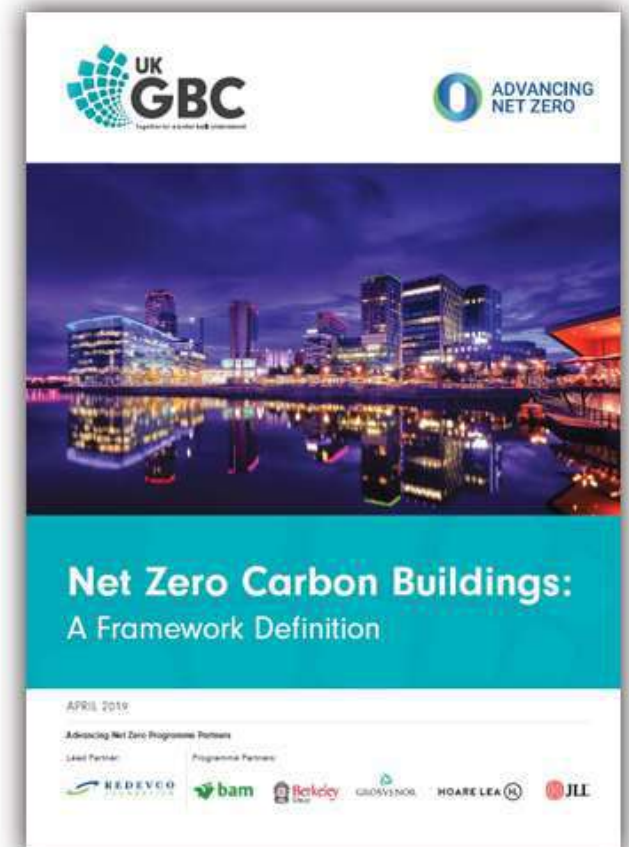
With regards to operational energy, NZC is defined as: "When the amount of carbon emissions associated with the building's operational energy on an annual basis is zero or negative. A net zero carbon building is highly energy efficient and powered from on-site and/or off-site renewable energy sources, with any remaining carbon balance offset."

NZC in Operation – Approach to Date

The project team have taken a proactive approach to achieving NZC in Operation at BCA Catholic School during RIBA Stage 2 with a focus on a fabric first approach to design. An initial fabric performance and glazing strategy review was undertaken by the project team to understand corresponding areas of heat loss and heat gain across the school.

Current space heating demand of the building is expected to be 24 kWh/m². Opportunities to reduce overall space heating demand to 15 kWh/m² were identified, including enhancements to external wall, roof and ground floor U-Values, and a focus on construction detailing to reduce the impact of thermal bridging. In addition, the project team will continue to investigate opportunities to improve the efficiency of MVHR systems to reduce losses associated with ventilation.

The Key Performance Indicators detailed by LETI have been used as a key metric of the energy strategy. The key performance indicators cover all items which contribute towards low energy and net-zero carbon buildings such as building fabric, efficiency measures, heating and hot water and renewables. The key performance indicators will be used to determine what measures should be adopted in the design of the development to achieve low or net-zero carbon and whether future adaptability should be included in the design to allow the building to achieve net-zero carbon.



BREEAM

The target for BREEAM is to achieve BREEAM Excellent rating under BREEAM New construction 2018. A number of co-ordination meetings have been held with the BREEAM consultant and the design team to ensure that targetting of early credits are being met.

A Life Cycle Assessment and Life Cycle Cost has been carried out by Sustainable Construction Services for material selection for superstructure, substructure, hard landscaping and services to assist in the selection of materials in the following work stages.

Opportunities/ Measures which will accommodate future changes has been assessed which include the following:

Accessibility

All plant is placed externally on the roof or within designated plant room zones for ease of replacement and maintenance. This allows the plant equipment can be easily removed and changed using the correct lifting equipment in the event of future adaptability requirements. WC's and vertical circulation space have been positioned together to allow maximum adaptability to the rest of the internal spaces.

Versatility, Convertability, Expandability

The building is proposed to be a steel structure, set out on a grid formation to provide maximum flexibility within the internal layout. Lightweight stud partitions between classrooms allow for future proofing and ease of alternative room functions. Any bracing proposed to support the structure can be strategically placed within vertical circulation and amenity areas.

Adaptability

The building has been designed with a mixed mode ventilation strategy. This allows for full building flexibility for future changes as all spaces are fully serviced. Should the building require increased service provision there are service risers positioned around the building. As part of the ventilation strategy all external perimeter rooms can be single sided naturally ventilated.

Adaptation to Climate Change

The strategy for weatherproofing and detailing, material durability, and health and safety of building occupants has been reviewed against the roof design, wall design and building envelope.

Material Optimisation

The design has gone through a number of iterations to simplify buildability, with a view to minimise retaining walls to simplify the detailing, waterproofing etc. Design has allowed for standard material dimensions, removing redundant materials from the design, recycling and re-use of materials at the end of their lifespan, using pre-fabricated elements and minimising have been considered and will continue to be reviewed through the design stages.

iv. Environmental Sustainability

Well-being of Future Generations Act

Key Drivers of the Well-being of Future Generations (Wales) Act 2015 and 21st Century Schools programme are linked in terms of focussing on sustainability for future generations.

The Design Team have reviewed the strategy and initial design which overlaps with achieving net zero, a BREEAM Excellent standard and delivering community benefits encouraging more holistic approaches to developing schools and enabling the wider community to benefit from public investment. Well-Being Goals will be established with the Client in the following stage of the project.

Areas of Work Considered

- Safe Access - Health and Safety Strategy has been developed.
- School Stakeholders consulted on design - Engagement Sessions have been carried out through the design process.
- Materials - Identification and evaluation of potential use of low or zero carbon materials and potential design for re-use/ deconstruction has been undertaken through the BREEAM process.
- Transport/ Infrastructure - A transport assessment has been prepared and included in the PAC report
- Energy - Passive design solutions have been developed as part of the net zero strategy described above
- Water - Flood risk and surface water run off potential has been evaluated by the civil engineers and a SUDs strategy developed
- Pollution - Building ventilation system proposals has been developed.
- Ecology/ Landscaping - An ecological assessment has been carried out and has been incorporated and developed as part of the landscape strategy.
- Climate Change - Future Climate change adaptation strategies have been reviewed as part of the BREEAM process.



iv. Environmental Sustainability - Landscape

Sustainability and environmental requirements are embedded into all aspects of the landscape design to help ensure that existing natural resources and the built environment are protected and enhanced, helping us meet our own needs without compromising the ability of future generations to meet their own needs.

Site wide principals:



Bio diversity enhancement



Promote local labour and suppliers



Climate change adaption



Promote cycling and walking



Responsible sourcing of materials



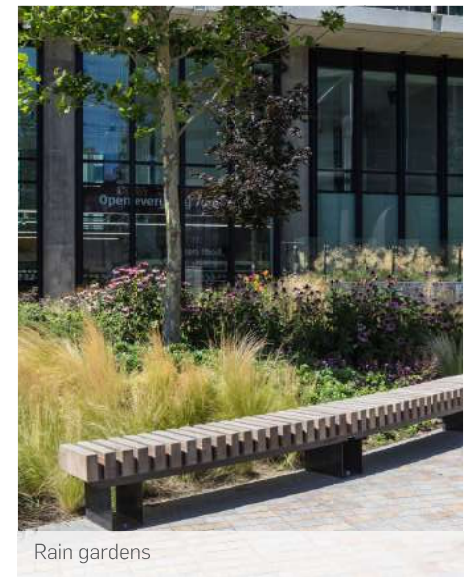
Shared community use

We will help to achieve these goals by:

- Promoting cycling, walking and the use of public transport and promoting more active lifestyles through formal and informal sports provision and play provided cross the site creating a places that is inclusive and accessible for all.
- Reducing flooding and other risks from the impact of climate change through effective SUDS designs and intergrated sustainable water management which will be allied to the creation of more natural habitats with increased biodiversity.
- The site wide planting proposals with an estimated additional 500 new trees will help to collect air borne pollutants, release oxygen, absorb CO2, filter noise and provide shade and shelter as well as provide a more calming and relaxed environment for staff visitors and pupils well-being and enhanced biodiversity and shelter and food sources for local wildlife.
- Selection of all hard and soft materials. We will specify locally sourced materials wherever possible and use recycling of existing ones such as site won material for sub bases and re use of topsoils and sub soils.
- Sourcing of all key hard elements including surfacing site furniture, seating, gates signs plus play equipment will be provided from proven sustainable sources and suppliers with a view on their long term durability to avoid replacement over their life cycle.
- During detail design we will consider size and detailing which will be structurally robust to allow correct loading, minimising long term maintenance and management liabilities and the palette selection will also reduce cutting and waste on site.
- We will review the existing drainage network, its capacity and potential for outfall into local waterbodies. We will also consider re distribution and filtering through site via permeable surfaces and the use of green features including rain gardens, swales, ditches and water bodies.
- We will promote the use of local labour and supplies in delivery of the project working with the proposed contractor and specifying local sources where possible to reduce transport to site.
- We will consider all long-term maintenance needs especially for paving to ensure longevity and ease of replacements .Our planting approach a long track record of developing planting palettes to ensure maintenance implications are not onerous and we will work with the site maintainers to ensure their views are incorporated into our long term management plans.
- Wellbeing will be a critical aspect and the designs have incorporated outdoor dining areas and ALN areas for primary and secondary schools plus spaces for formal and informal social interaction and play as well as for quiet contemplation.



Sports pitches



Rain gardens

- Growing areas will be provided for formal and informal teaching and the nurturing of nature
- Community use will be encouraged with facilities to accommodate outdoor access for sports and out of hours school use of the building.

Preliminary Ecological Assessment Adherence:

There are a number of recommendations made in the Preliminary Ecological Assessment and Bat survey and we have worked closely with allied disciplines including the ecology and drainage teams. We have also consulted the Local Planning Authorities Landscape Architect to develop a strong landscape framework for the site, with widespread benefits for nature, people and place. Key elements are listed below

- At least some of the habitat currently found within the site boundary will be retained as part of any development proposals. In particular the tree line to the north east of the site and part of the small woodland area to the very north of the site.
- Hedgerow losses, where unavoidable will be compensated by translocation if possible, or replacement with 2 for 1 new hedgerows, sited to link up areas of woodland or habitat wherever possible.
- Tree losses will be compensated for with 3 to 1 replacements using varied age nursery stock and species, mainly native, with new planting across the site to provide habitat screening shelter improve biodiversity or link existing blocks of vegetation. A blended approach to stock size is considered appropriate to provide both instant impact, fast growth and visual variety across the site.
- Provision for bird boxes will be made around the site, which will be located to Ecological recommendations and for potential use as teaching aids
- Design proposals have made provision for green corridors with links created between natural habitats to avoid fragmentation and to support wildlife
- Management of the whole site will be discussed with the school (long term grounds manager) to encourage varying grass heights and to reduce intensive mowing, plus grass cutting collections to improve biodiversity and reduced maintenance operations and costs.



Bird boxes



Species rich grassland



Hedgerow



Cycle Shelter

v. Estimated Tree Retentions and Removals

For full details refer to ArbTS drawings:

ArbTS_1492.1_Bishop Hedley Catholic High School_TreeCP

ArbTS_1492.1_Bishop Hedley Catholic High School_TreeCP_AERIAL

Category A (High)
(*Highly desirable for retention*)

Category B (Moderate)
(*Desirable for retention*)

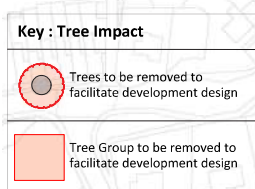
Category C (Low)
(*Optional for retention*)

Category U (Poor)
(*Unsuitable for retention*)

Root Protection Area (RPA) (A layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure is treated as a priority.)

A16 - Tree Grading, Tree Area and Woodland Area removed to facilitate development						
B00187 - Category	Grass, Area or Woodland Removed	Number Approved	% Reduction of Forest, Area A, Forest Woodland Removed (Based on the Number Approved)	Total Area of Grass, Area A, Forest Woodland Removed (Based on the Number Approved)	Adoptive Requirement	Adoptive or Other Impacts to the Forest, Wetland Impact (I)
A		0	0.0			
B	G47 (3 trees), G48 (1 tree)	2	100.0	250.0	Y	4
	G50 (3 trees), G57 (2 trees), G50 (207), G15 (2 trees), G50 (4 trees), G53 (3 trees)	6	50.0	1500.0	Y	3
C		0	0.0			
Total A2.1.2 (Proposed)		8	75.0	1840.0		

AIA – Hedgerow removed to facilitate development						
B05437 Category	Hedge (CAI Removed)	Number Removed	% Hedge Removed from Total Surveyed	Total Length of Hedgerow Removed (Meters)	Mitigation Required	Arboreal/structural Adverse Impact (0 No Impact, 10 High Impact)
A		0				
B		0				
C	H03, H09, H12	3	100.0	358.0	Y	2
D		0				
Total A.I.C.U. Removed		3	100.0			



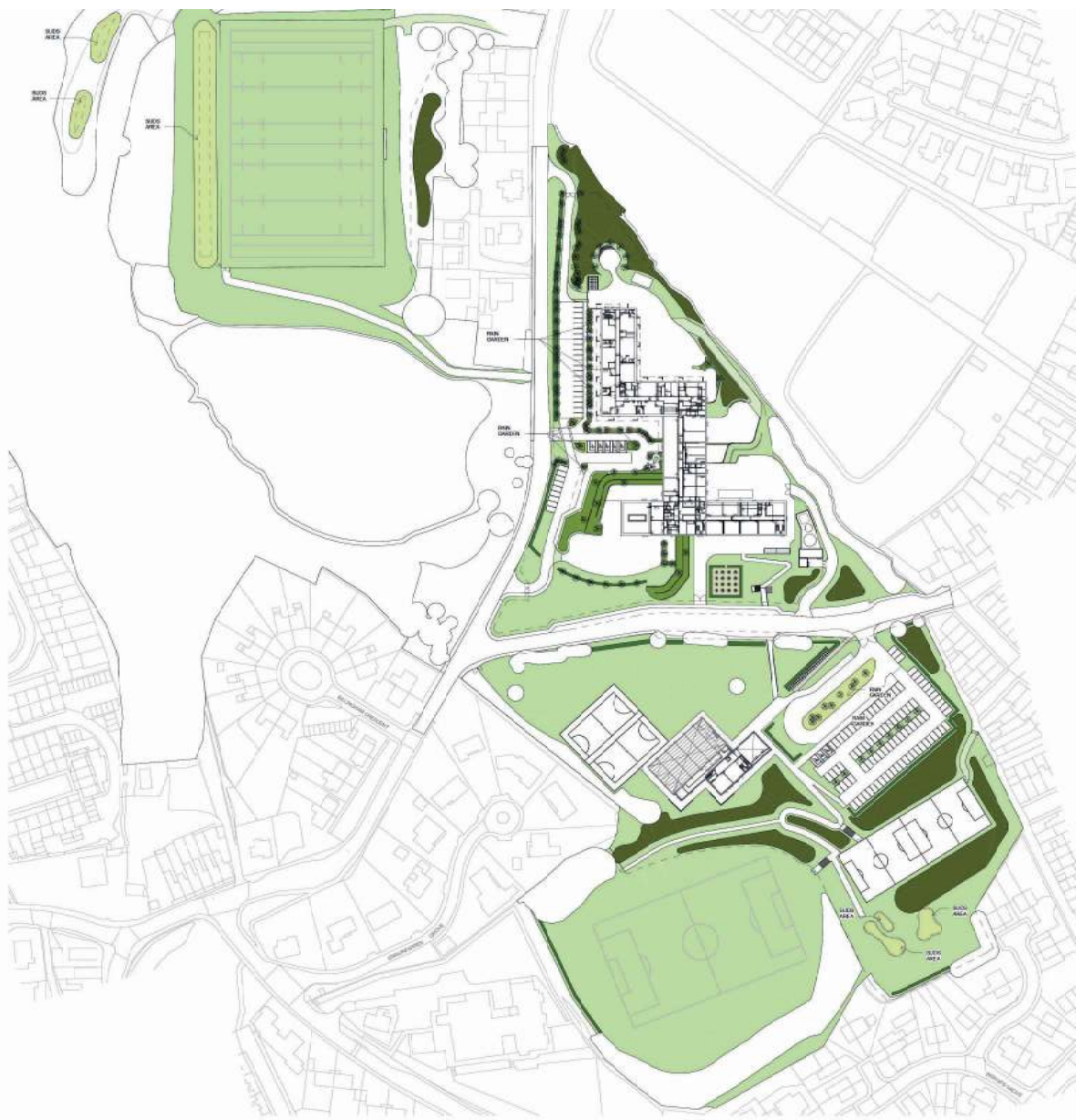
v. Planting compensation strategy

This drawing illustrates the overall planting strategy for the site which has been developed in line with advice from the Ecology team, the Arboricultural consultant, MTBCs Landscape Architect and the drainage designers.

The design provides an exciting framework for the creation of a comprehensive set of soft spaces and habitats which will benefit nature and people. It will also respect the local context and site neighbours, be climate resilient and help to improve biodiversity, whilst adding to the richness of the educational experience, creating formal and informal play as well as social interaction spaces for pupils, staff and visitors.

PROPOSED SOFT LANDSCAPE

-  PROPOSED AMENITY / SPORTS GRASS
-  PROPOSED WILDFLOWER / HABITAT GRASS
-  PROPOSED SUDS PLANTING
-  PROPOSED SHRUB PLANTING
-  PROPOSED NATIVE HEDGE PLANTING
-  PROPOSED NATIVE WOODLAND PLANTING
-  PROPOSED TREE PLANTING



v. Community Safety

Legibility and Wayfinding

The concept for the main building and external areas generates clearly defined zones between primary, secondary and shared areas through its scale, massing and layout. Maintaining safeguarding principles has been central to the brief and to the design concept.

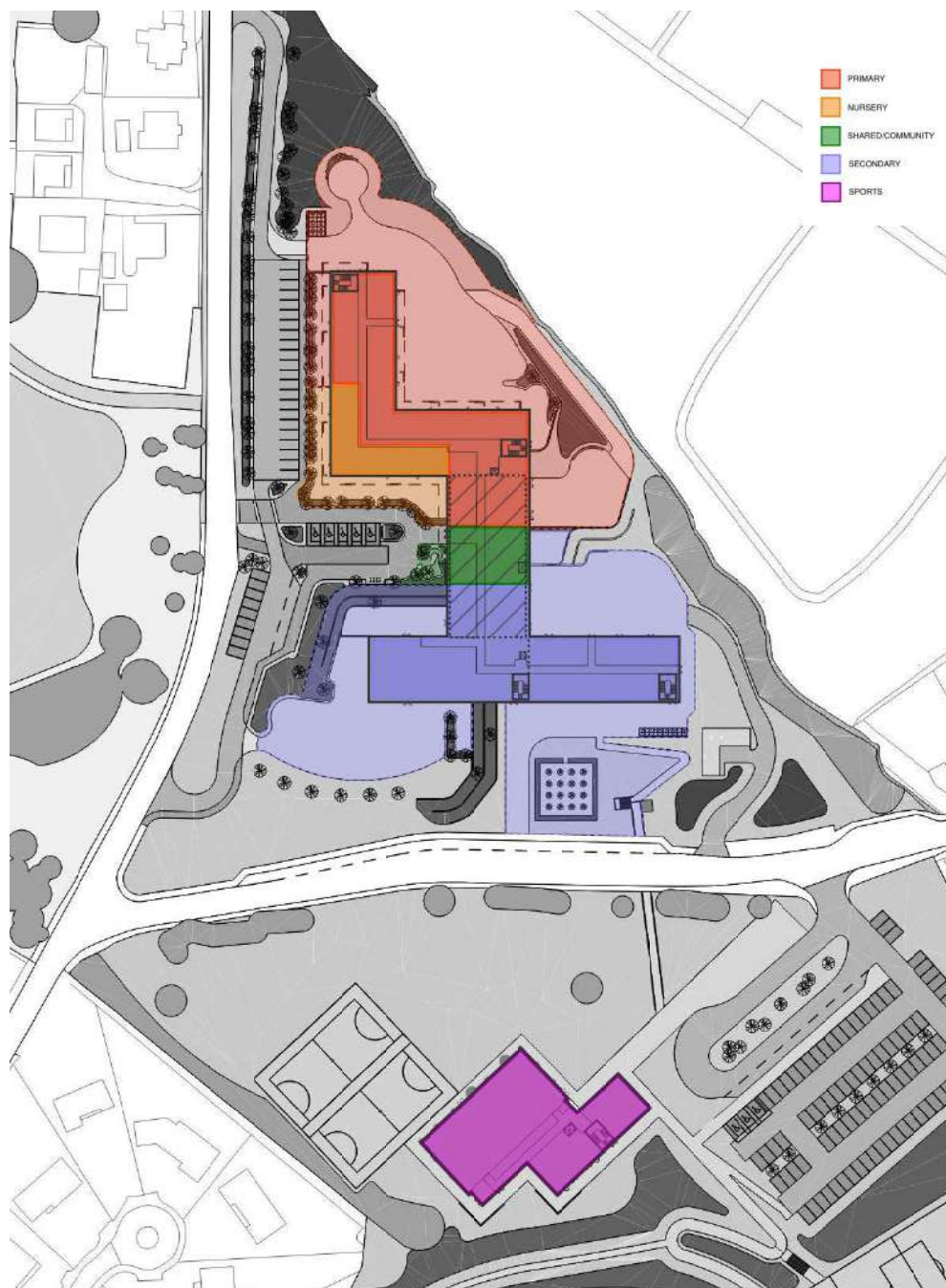
The phase 1 and 2 sites are to be secured to their entire perimeters by a security fence and gates.

Clear entrance routes through the site lead to distinctly marked entrances to each phase of the building, including a simple linear route to the main visitors' reception from the site entrance and paths to entrances are overlooked by the school accommodation to achieve natural surveillance.

Within the buildings, corridor layouts are simple minimising dead end corridors. Corridor ends are glazed to allow views out for orientation and to receive daylight. Circulation areas at junctions between the different phases are widened to assist with orientation. WC blocks are developed as an open style, a commonly adopted anti-bullying measure.

The layout and access control strategy will allow for the appropriate separation of the primary and secondary phases in line with the brief. Access control will allow for the zoning of visitor and community use areas, to prevent unauthorised access to areas occupied by children. For example, the visitor's reception area is self-contained with an adjacent meeting room and WC so parents and visitors to reception remain outside the secure line unless by arrangement when they will be greeted and accompanied through the school. Further secure lines through the school will prevent access between the primary and secondary phases. Shared learning experiences where, for example, Year 7 children may be invited to engage with secondary pupils, will be managed by staff.

The buildings and sports pitches will provide community use outside school hours during evenings and weekends:



v. Community Safety

Although secured by design accreditation is not sought as part of this development, the building has been designed with reference to SBD principles and to ensure that the development proposals will feel welcoming and safe and discourage anti-social behaviour.

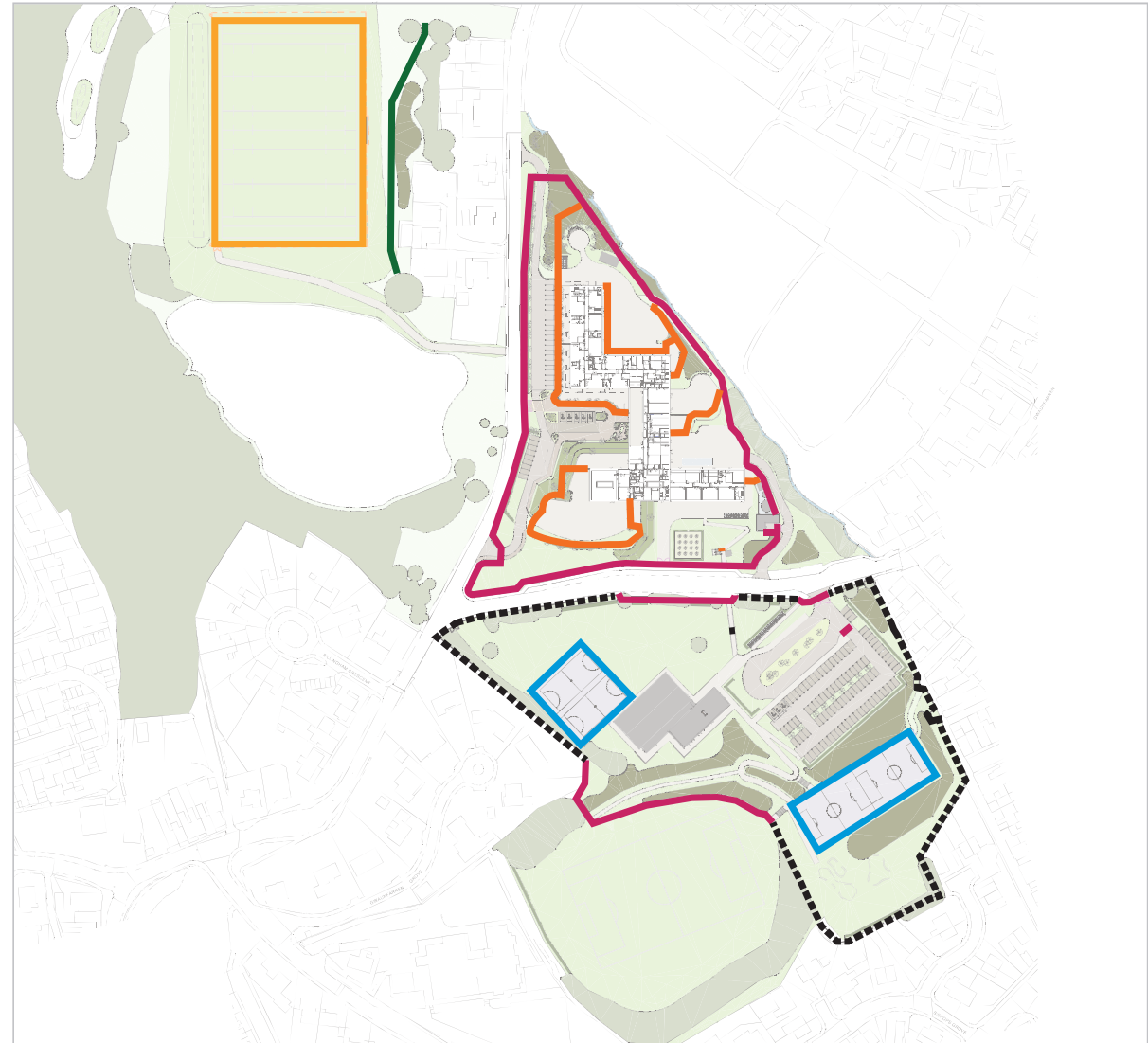
As detailed in the plan opposite, a 2.2m high secure fence line encloses the main school building and associated external spaces. A secondary 1.2m high fence provides additional protection to the nursery and primary zones and limits access and egress between the external school play areas. Acoustic fencing along the northern boundary provides noise mitigation between private and public areas. Sports fencing has been provided to the rugby pitch (4m high) to the north and ballstop fencing (3m high) to the two MUGA and two 3G pitches.

Our design approach also incorporates:

- The selection of robust and easily maintainable building materials, especially at low level.
- A well-lit external environment around the building.
- Bicycle storage racks securely located in visible locations
- Waste securely stored within the building and moved to an outside container for immediate collection as part of a coordinated building & waste management strategy.

KEY:

	Secure fence line (2.2m high)
	Secondary fence line (1.2m high)
	Acoustic fencing (indicative alignment)
	Sports fencing to Rugby pitch (4m high)
	Ball stop fencing to MUGA's and 3G pitches (3m high)
	Existing fencing retained/ replaced (to be assessed on site)



v. Community Safety

COMMUNITY ACCESS KEY



PRINCIPAL COMMUNITY ACCESS POINT



COMMUNITY ACCESS



DIGITAL ACCESS CONTROL POINT



MANUAL LOCK ACCESS CONTROL POINT



MANUAL 'CLASSROOM' LOCK TO PREVENT ACCESS FROM OTHER LEVELS



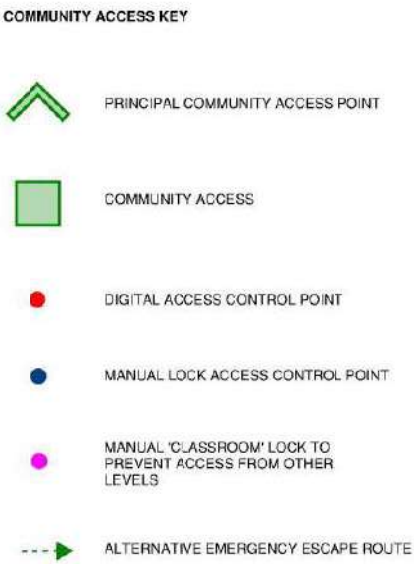
ALTERNATIVE EMERGENCY ESCAPE ROUTE

Areas for community use indicated in green



v. Community Safety



V_2 

v. Community Safety



v. Community Safety

Secured by Design

The buildings and site will address the principles of Secured by Design.

Perimeter Security

In accordance with Secured by Design principles, the rugby pitch on the Galon uchaf site, the MUGAs and all weather pitches will be protected by fencing to meet Secured by Design standard. Refer to Landscape section of this report.

Gates will be of the same height and specification as the fencing with gaps sized to prevent people from crawling below.

CCTV

External elevations of the school buildings, main entrances, public circulation areas, bin and bike stores and pupil play areas will be protected by CCTV.

Lighting

The external lighting will protect the whole of the outside of the school buildings, bicycle stores, bin stores and vehicle parking areas. Please refer to separate MEP report

Landscaping

General measures include site security fencing to the perimeter, secondary subdivision of the site with a good level security to play spaces, good natural surveillance, good wayfinding and well lit spaces. Clear stemmed trees to 2m height are to be planted. the landscape scheme has been developed to create a sense of safety and security through clear wayfinding.

Signage

Signage will be clearly displayed and multi-lingual and placed at all decision points, the building form and entrance design provide natural cues to assist with wayfinding.

Vehicle parking is to be clearly defined.

Vehicle Parking and Access

A barrier system with access control is to be in place. The car park will be marked to define clear zones.

Bin stores

The bin store is to be incorporated within the building form and is to be kept locked.

External furniture

External furniture is to be sited to avoid it being used for an aid in climbing fences or breaching security provisions.

Bicycle stores

Bicycle stores are to be in accordance with secured by design principles and are to be overlooked from rooms within the school. They are to comply with Secured by Design requirements and they are to be positioned to be overlooked from rooms in the school. These will be provided in accordance with local authority and BREEAM standards. They will be covered.

Access to drainage and service areas

Access to telephone junction points will be secured to prevent interference/removal

Building shell security

The design of the building will take into account the need to prevent features that aid scaling or climbing and hidden areas must be designed out.

The buildings are generally of brick construction at ground floor areas. the weather canopies are above the 2m critical height.

Outside covered areas are to be covered by CCTV and lighting.

Access control

Access from the reception into the main school is to be controlled by access control.

Access control from any community area into the rest of the school is to be controlled by access control when the area is in use by the general public.

Ability to lock down the site securely should there be an increase in threat and appropriate doors and locking mechanisms will be in place to achieve a reasonable response delay both externally and internally creating layers of delay

The doors leading into event spaces need to be secured and given some resilience and delay from a determined intrusion. This will allow time for escape and a delay to allow a response. There needs to be a means to communicate a threat throughout the building in order to facilitate a lock down of the building i.e. an alarm or tannoy system.

v. Community Safety

School entrances and visitor control

The number of entrances into the building are largely dictated by the school brief which requires a single, shared visitors' entrance, separate entrances for secondary and primary and entrances directly into the classrooms for the nursery and ground floor primary classrooms.

It will be possible to reduce the number to one during school hours which is to be clearly signed and well illuminated.

Drainpipes

Rainwater pipes are to be flush fitting.

Windows

All external vulnerable windows is to meet SBD standards (PAS 24 2016) or equivalent and by third party tested and certificated. Any glazing in vulnerable windows should be laminated glass.

Intruder alarm system

The school is to be alarmed with the alarm system linked to a central monitoring station.

All rooms where valuable property is to be stored is to be protected by the alarm system.

The alarm will be capable of being zoned off so unoccupied areas of the school are alarmed when other parts of the school e.g. community areas are in use and are therefore not alarmed.

Sprinkler system

A sprinkler system is to be installed.

Roof access

Roof access will only be possible from within the building via lockable hatches.

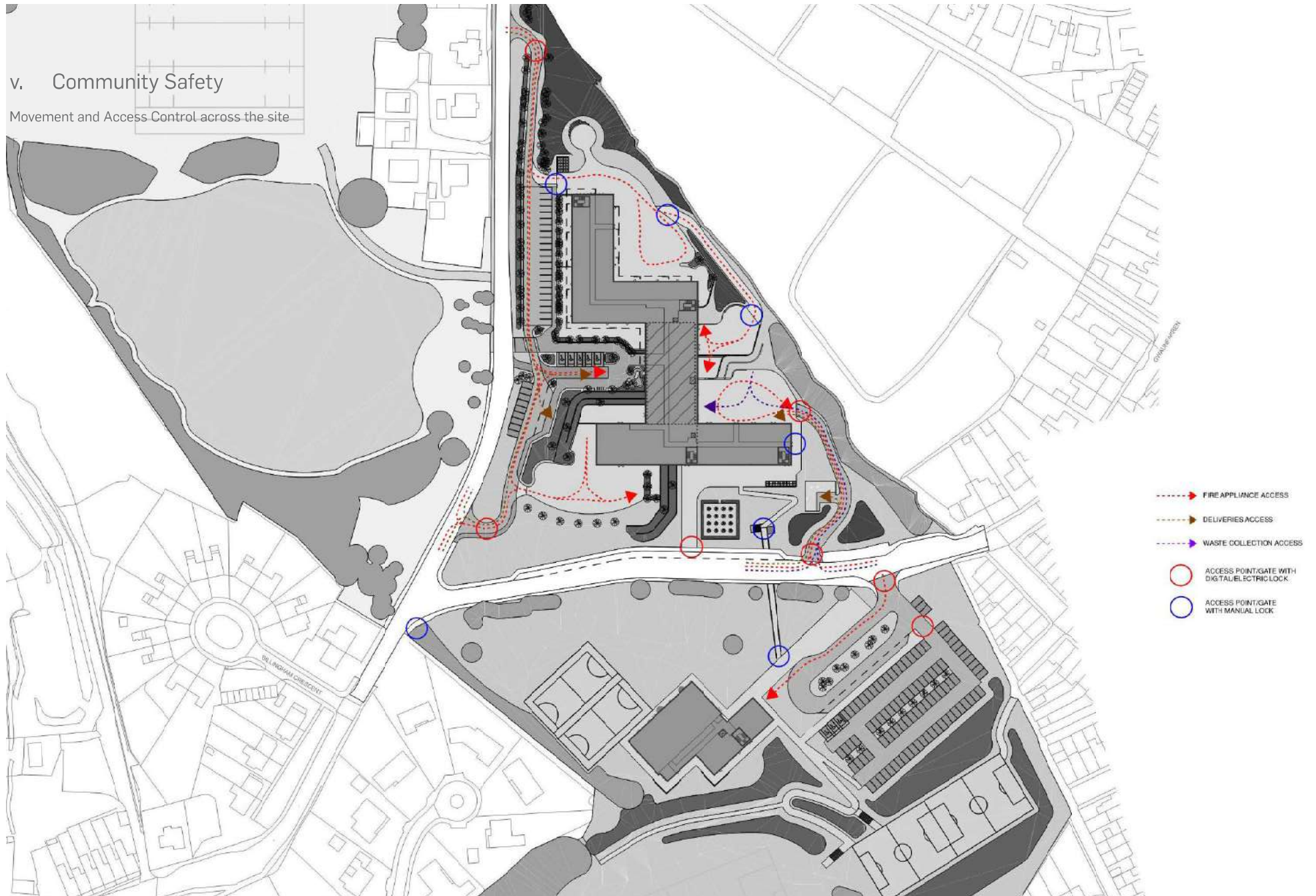
Doors

All external doors are to meet SDB standards. Fire doors are to be alarmed so a signal on opening can be transmitted to the reception area.

All glazing to external door panels and adjacent to these door panels must be laminated.

v. Community Safety

Movement and Access Control across the site



v. Community Safety

Movement and Access Control across the site



v. Community Safety

Movement and Access Control across the site



- PEDESTRIAN ROUTES & ACCESS
- CYCLE ROUTES & ACCESS
- ACCESS POINT/GATE WITH DIGITAL/ELECTRIC LOCK
- ACCESS POINT/GATE WITH MANUAL LOCK

Planning Policy Adherence

1.0 Planning Policy Overview

- 1.1 Section 38 of the Planning and Compulsory Purchase Act 2004 requires that in determining a planning application the determination must be in accordance with the Development Plan unless material considerations indicate otherwise.
- 1.2 The Development Plan for the area comprises the Merthyr Tydfil Replacement Local Development Plan (LDP) 2016 - 2031 which was formally adopted by Council on 29.1.20.
- 1.3 The design proposals seek to address and are mindful of all of the relevant national and local planning policy with particular attention paid towards the highlighted areas which has been demonstrated in the previous sections covering our design proposals.

National Planning Policy

Planning Policy Wales (Edition 11) 2021

- 1.4 **National Planning Policy is contained within the 11th edition of Planning Policy Wales (PPW)**, published by the Welsh Government in February 2021. PPW is supported by 20 topic-based Technical Advice Notes (TANs), which are also relevant.
- 1.5 PPW is the Welsh Government's principal planning policy document, with the primary objective of ensuring that the planning system contributes towards the delivery of sustainable development and improves the social, economic, environmental and cultural well-being of Wales, as required by the Planning (Wales) Act 2015, the Well-being of Future Generations (Wales) Act 2015 and other key legislation.
- 1.6 PPW and the National Development Framework (NDF) set out how the planning system at a national, regional and local level can assist in delivering these requirements through Strategic Development Plans (SDPs) and Local Development Plan (LDPs).
- 1.7 They identify the importance of education for economic, social and sustainability of Wales (para 3.61) and that they are well placed to support active and social linkages (Chapter 4). Appropriate education infrastructure is also identified as being essential for a 'Productive and Enterprising Wales' (Chapter 5). The proposal is for a new school which will provide community use.

Well-being & Future Generations (Wales) Act 2015

- 1.8 The Well-Being and Future Generations (Wales) Act (WBFG) 2015 requires bodies in Wales to think about the long-term impact of their decisions, to work better with people, communities and each other, and to prevent persistent problems such as poverty, health inequalities and climate change. See sustainability section.
- 1.9 To ensure we all works towards the same purpose, the Act puts in place seven well-being goals which public bodies are required to work towards achieving. The Act is a material consideration in planning terms and therefore its goals are considered relevant to this proposal. These are as follows:
 - A prosperous Wales;
 - A resilient Wales;
 - A healthier Wales;
 - A more equal Wales;

- A globally responsible Wales.
- 1.10 Education is a key component which influences all of the above goals. The importance of providing high quality education within inspiring and well-considered settings should not be under-estimated in terms its significance to the well-being of our future generations. See Objectives of Good Design section

Technical Advice Notes

- 1.11 Planning Policy Wales is supplemented by a series of 21 topic based Technical Advice Notes (TANs) which provide practical guidance relating to various forms of development and the role of the planning system in dealing with the determination of planning applications. The following TANs are considered relevant to this application:

- TAN 11 –Noise (1997);
- TAN 12 –Design (2016);
- TAN 16 –Sport, Recreation & Open Space (2009);
- TAN 18 –Transport (2007).

The Development Plan

Merthyr Tydfil Replacement Local Development Plan (LDP) 2016 - 2031

- 1.12 The statutory development plan for the purpose of Section 38 (6) of the Planning and Compulsory Purchase Act 2004 is the Merthyr Tydfil Replacement Local Development Plan which was adopted in January 2020.
- 1.13 The Proposals Map identifies the school as being within the Settlement limits, and highlights it as falling within a Heat Priority Area, however does not designate the land for any particular use.
- 1.14 It is considered that the proposed development will assist in achieving the objectives set out within the LDP Strategy. These include the following:
 - LDP Objective 4 Regeneration: To promote the suitable reuse of previously developed land and the continued regeneration of local communities. See Objectives of Good Design section.
 - LDP Objective 5 Infrastructure: To ensure that community infrastructure and open space supports the regeneration of local communities. See Objectives of Good Design section.
 - LDP Objective 6 Sustainable Design: To promote high quality, sustainable and inclusive design and support measures, which mitigate the predicted effects of climate change (Sustainability sub section).
 - LDP Objective 7 Transport: To support an integrated transport system, promote active travel and ensure new developments are accessible by walking, cycling and public transport links. See Objectives of Good design section - Access and movement sub section.
 - LDP Objective 8 Community Facilities: To support existing community facilities and suitable community led development. See Objectives of Good Design section - Character and Community Safety sub sections.
 - LDP Objective 10 Biodiversity: To improve ecosystem resilience and connectivity which support

Planning Policy Adherence

- 1.15 The following Local Development Plan policies contained within the LDP are considered to be of relevance to this application.
- 1.16 From a high level strategic perspective, Policy SW4 states that development will be encouraged within settlement boundaries (as proposed by this development) to encourage development within urban areas, support the re-use of previously developed land, and to protect and support the functioning of our rural economy and the countryside.
- 1.17 Policy SW10 highlights that development proposals that improve the quality, quantity or access to open space will generally be supported. The policy also seeks to protect existing open space by setting out criteria that would need to be met to justify any loss. These include, an assessment of the quantum of space in the area, whether other areas can be enhanced to compensate for the loss resulting from redevelopment.
- 1.18 Policy SW11 states that development must contribute to the creation of attractive and sustainable places through high quality, sustainable and inclusive design. Where appropriate, the development will be required to comply with a set of requirements, such as to be appropriate to its local context in terms of scale, height, massing, elevational treatment, materials and detailing, layout, form, mix and density. See Objectives of Good Design section (Character sub section).
- 1.19 Policy SW12 articulates that development that encourages a modal shift towards sustainable transport will be supported, including the enhancement of pedestrian, cycle, rail and bus facilities, in addition to any necessary road improvements. Development proposals will be expected to demonstrate how they reduce the need to travel and encourage the use of sustainable transport. See Objectives of Good Design section (Access and Movement sub sections).
- 1.20 Policy SW13 confirms that the provision of new and enhanced community facilities will be supported subject to satisfying other relevant LDP policies.
- 1.21 Policy EnW4 requires that development proposals demonstrate that they will not result in an unacceptable impact on people, residential amenity, property and / or the natural environment from issues such as pollution, contamination and noise. See Objectives of Good Design section.
- 1.22 Policy EnW5 states that development proposals will be permitted where it can be satisfactorily demonstrated that it would not cause unacceptable harm to the character and quality of the landscape setting of the County Borough. See Objectives of Good Design section (Character and Sustainability sub sections).
- 1.23 Given the site's location within a heat priority area, Policy EcW9 will need to be considered. This policy states major development will be expected to incorporate, where viable and technically feasible, infrastructure for district heating and to connect to existing systems where available.

Supplementary Planning Guidance

1.24 The following Supplementary Planning Guidance (SPG) are considered relevant to this development proposal:

- Planning Obligations SPG
- Sustainable Design SPG
- Nature and Development SPG

