

**MORGAN  
SINDALL**



**ATKINS**  
Member of the SNC-Lavalin Group



# Whitmore High School

Design & Access Statement  
26W006-ATK-X-XX-RP-A-X-2000

March 2019



# Contents

1.	Executive summary	4			
2.	Introduction & Context	7			
2.1.	Introduction	8			
2.2.	Purpose	8			
2.3.	Proposal Overview	8			
2.4.	Vale of Glamorgan Schools	8			
2.5.	Barry Secondary Learning Community (BSLC)	9			
2.5.1.	Background	9			
2.5.2.	Proposals	9			
2.6.	The Site & Surrounding Context	10			
2.6.1.	Surrounding Context	10			
2.6.2.	Application Site	10			
3.	Whitmore High School	13			
3.1.	Site Analysis	14			
3.1.1.	Application Site	14			
3.1.2.	Existing Layout & Massing	14			
3.1.3.	Existing Appearance	16			
3.1.4.	Existing Access and Movement	17			
3.1.5.	Existing Site - Immediate views	18			
3.1.6.	Existing Site - Constraints	21			
3.2.	Design Evolution	22			
3.1.7.	Client Vision	22			
3.2.1.	Design Development	23			
3.2.2.	Initial Concepts	24			
3.3.	Design Proposals	28			
3.3.1.	Views	40			
3.4.	Landscape Strategy	42			
3.3.2.	Landscape objectives	42			
3.4.1.	Indicative Planting Choices	44			
3.4.2.	Indicative Landscape Materials & Features	45			
3.5.	Access	46			
3.5.1.	Proposed Access Strategy	46			
3.5.2.	Pedestrian, Cycle and Vehicle Access Routes	46			
3.5.3.	Vehicular Access	46			
3.5.4.	Building Access - Pedestrians	48			
3.5.5.	Community Safety	48			
3.5.6.	Pedestrians	49			
3.5.7.	Bicycles	49			
3.5.8.	Vehicles	50			
3.5.9.	Emergency access	50			
4.	Other Considerations	53			
4.1.	Transport Statement	54			
4.2.	Energy Statement	55			
4.3.	Acoustic Report	56			
4.4.	Lighting Strategy	57			
4.5.	Flood Consequence Assessment (FCA)	58			
4.5.1.	Flood Sources	58			
4.5.2.	Surface Water Management	58			
4.6.	Flood Risk & Drainage	59			
4.7.	Sustainable Urban Drainage Systems (SUDS)	60			
4.8.	Preliminary Ecology Report	62			
4.9.	Tree Survey Report	63			
4.10.	Planning Policy	64			

# 1. Executive summary

This Design and Access Statement has been prepared in support of a planning application, submitted on behalf of the Vale of Glamorgan Council, for:

'The Construction of a replacement secondary school building at the site of the existing Whitmore High School and the demolition of the existing secondary school building upon completion.'

The existing school was constructed in 1966 and is beyond economical repair and will be demolished after the new school is completed. The proposed development will cater for mixed sex pupils between the ages of 11 – 18. It will cater for 1,100 places, of which 200 are sixth form. The proposal supports the Vale of Glamorgan Council's commitment to establishing mixed sex education in Barry as well as establishing modern, high quality learning environments that meet the school's aspirations.

The application proposal consists of:

- A three storey secondary school building including facilities for sixth form pupils;
- Indoor sports facilities that will be considered for community use;
- Landscape design for learning, social and informal use; and
- An all-weather pitch and games court that will be considered for community use.

The design has been developed in parallel with the proposals for Ysgol Gymraeg Bro Morgannwg (YGBM), to fulfil the aspiration of the Vale of Glamorgan's 21st Century Schools. The programme demonstrates the Council's approach to sustainable development, contributing to The Well-being and Future Generations (Wales) Act 2015 to address social, cultural, economic and environmental wellbeing. Education is a key contributor to improving these with high standards of modern learning environments, supporting pupils to achieve their best potential. The programme takes a long-term view of need, considering projected growth and Welsh Language Strategy.







## 2. Introduction & Context

## 2.1. Introduction

This Design and Access Statement relates to a full planning application for the redevelopment of Whitmore High School, Barry. It should be read in conjunction with all other drawings and documents submitted as a part of the application.

The planning application is submitted by DPP and Atkins on behalf of the Vale of Glamorgan 21st Century Schools Team. The application is for replacement facilities for the existing secondary school catering for 11-18 year olds.

## 2.2. Purpose

The purpose of this statement is to provide details of the proposed scheme, including an appraisal of the development against the relevant design guidance. A summary of the scheme evolution is provided to demonstrate how the proposal has been shaped by an in-depth options appraisal process and by input from key stakeholders. The statement also provides details of the scheme's accessibility and shows that the proposed scheme will be fully accessible and inclusive, both internally and externally.

## 2.3. Proposal Overview

The proposal is for the construction of a new-build secondary school (approx. 11,000 m<sup>2</sup>) and associated sports provision.

Following completion of the new buildings, there will be a demolition package and external play areas will be created, including all weather pitch and car parking. The existing school will remain live throughout the duration of the project with the proposed start on site in late Summer 2019. Following completion of the new build the existing buildings will be demolished with staff and pupils moving in to the new build during 2021.

## 2.4. Vale of Glamorgan Schools

Vale of Glamorgan council has 56 schools, primarily Nursery, Primary, and Secondary schools. Other schools include a 3-19 Welsh Medium School, and a Special School. Whitmore High School is one of five Community English Medium Secondary Schools which deliver secondary education to 11-18 year olds within Barry.

Whitmore High has several feeder primary schools within the local area: All Saints Church of Wales, Barry Island, Colcot, Gladstone, High Street, Rhws, and Romily. Whitmore's catchment area extends from Culverhouse Cross in the North to the coastline in the South, and from the A4231 in the East to the A4226 in the West.

Vale of Glamorgan Council's 21st Century Schools project is a long term strategic investment in educational estate throughout Wales. It is a collaboration between Welsh Government, the Welsh Local Government Association (WLGA), local authorities, colleges and diocesan authorities. It aims to transform teaching and learning throughout the County, and to provide learners with the best life and work chances and an opportunity for them to reach their potential. It is the ambition for each school to raise attainment, aspirations, opportunities and outcomes for all within the community, by creating a centre of excellence for inclusive teaching and learning.

The schools within the county have been divided into Bands for development. Band A improvements received £31.849m from the council and the Welsh Government and are due to be completed in 2019.

The second wave of investment for the Band B improvements is due to commence in April 2019, with a proposed investment of £142.417m. This project, Whitmore High School is within the Band B tranche of investment. It is one of two mixed sex 11-18 English Medium Comprehensive Schools, that will receive funding, the other being Pencoedtre High school within Barry.

# Ysgolion yr 21ain Ganrif

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## 21st Century Schools

## 2.5. Barry Secondary Learning Community (BSLC)

### 2.5.1. Background

The establishment of mixed-sex secondary school provision in Barry has been debated since public consultation was undertaken in 2013 to determine the extent of local support for co-education. In March 2014, the Council's Cabinet considered a report addressing the projected shortfall in the number of Welsh medium Secondary School places by September 2020 and requested work to be carried out to ensure there would be future accommodation. Despite an initially separate approach to co-education and Welsh medium expansion, it became evident a coordinated approach was necessary and resulted in the creation of the 21st Century Schools Programme.

21st Century Schools is a unique collaboration between Welsh Government; the Welsh Local Government Association (WLGA); Local Authorities; colleges and diocesan authorities. The programme was launched in March 2010 to address the projected shortfall in the number of English and Welsh medium Secondary School places by September 2020. Band A of the programme for the transformation and enhancement of a number of schools was approved by Welsh Government in December 2012 and will conclude in 2019. Following this, a comprehensive community engagement strategy was devised and implemented for Band B, the second wave of investment to address investment objectives for:

- growth in demand for Welsh medium education;
- reductions of surplus capacity and inefficiency in the system;
- expansion of schools in areas of increased demand for educational services;
- improved condition of educational assets; and
- making assets available for community use where demand exists.

### 2.5.2. Proposals

In August 2018, the Welsh Government approved the outline case for the Band B project 'Transforming English and Welsh Medium Education in Barry.' This Schools Investment and Reorganisation Programme will involve re-organisation of Secondary Schools in Barry to create the 'Barry Secondary Learning Community' (BSLC) involving:

1. Part refurbishment and extension of Ysgol Gymraeg Bro Morgannwg; and
2. Building of the new Whitmore High School.

In addition, on 7th January 2019, the Vale of Glamorgan Cabinet agreed to deliver an enhanced 21st Century Schools Programme following confirmation of increased funding from Welsh Government. This is to fund the new school planned for Pencoedtre High School, instead of the proposed refurbishment and extensions.

Prior to commencement of these projects, the following groups were consulted according to the community engagement strategy:

- Staff and governors;
- Parents and pupils;
- Community and Town Councils;
- Local Councillors, Ministers and AM's/MP's;
- Directors of Education and Central South Consortium Joint Education Service;
- Vale of Glamorgan Youth Forum and Youth Cabinet.

Amalgamation of Secondary School education in the new BSLC, allows a shared vision and leadership whilst minimising the number of transitions between schools; maximise the benefits of continuous transition; and offer greater potential to improve levels of achievement for all pupils.

The programme demonstrates the Council's approach to sustainable development, contributing to The Well-being and Future Generations (Wales) Act 2015 to address social, cultural, economic and environmental well-being. Education is a key contributor to improving these with high standards of modern learning environments, supporting pupils to achieve their best potential. The programme takes a long-term view of need, considering projected growth and Welsh Language Strategy. Furthermore, creation of two new mixed-sex schools to replace aging single-sex schools shows a collaborative and inclusive approach aligning well with the Well-being Act's key objectives.

The programme is also reflective of commitments in the Welsh in Education Strategic Plan (WESP), ensuring demand for Welsh medium education is met in the long-term to contribute towards the Welsh Government's target of 1 million Welsh speakers by 2050. Furthermore, the Council have committed to part of the Corporate Plan 2016-2020 with a vision of achieving 'Strong Communities with a Bright Future' which is reflective of the Well-being of Future Generation's Act. Outcome 3 'An Aspirational and Culturally Vibrant Vale' offers objectives contributing to the 21st Century Schools programme; specifically, by raising achievement.

## 2.6. The Site & Surrounding Context

### 2.6.1. Surrounding Context

Whitmore High School, formerly Barry Boys School which converted to a Comprehensive School in 1966, is located on the North Western fringe of the town of Barry, adjacent to A4226 (Port Road West) which connects Barry to Bonvilston and Cardiff International Airport (CWL). The A4226 bounds the site to the North West, and Colcot Sports Centre and 3G pitches bound it to the North. To the South and South East, the site is bounded by Ysgol Gymreag Bro Morgannwg and Barry Hospital.

The land across the A4226 is primarily residential, with two and three storey detached and semi-detached housing being the norm. Opposite the school is a large Tesco supermarket which is accessed from Stirling road. To the North East of the supermarket is Barry Emergency Services Station, housing both the Fire and Ambulance services. The emergency station's forecourt is directly opposite the vehicle entrance to the school site.

The A4226 is a busy 40mph road that runs along the northern boundary of Barry. It has a shared pedestrian and cycle path along its length. There are several controlled crossing points in close proximity to the school, as well as several bus stops.

The school site is accessed from the A4226, however vehicles, travelling north are prevented from turning right into the school, across the lane of oncoming traffic. A one-way traffic system is in operation within the school, and vehicles exit via a signal-controlled junction, opposite Stirling road.

On the North East boundary of the site is a footpath that runs between the school and the sports pitches of Colcot sports centre, it then skirts the boundary of the Barry Hospital and emerges on the A4050, Colcot Road. It is noted that there are no significant Heritage Designations in close proximity to the site.

### 2.6.2. Application Site

The site is of an irregular rectangular form. Whitmore High School is the sole occupier.

The school is comprised of various separate buildings that have been developed over several decades. The majority of the buildings are housed in the Northern-most corner. Surrounding the buildings is a series of tarmacked areas, forming both play areas and parking facilities for the school. The rest of the site, to the South, is given over to grassed playing fields.

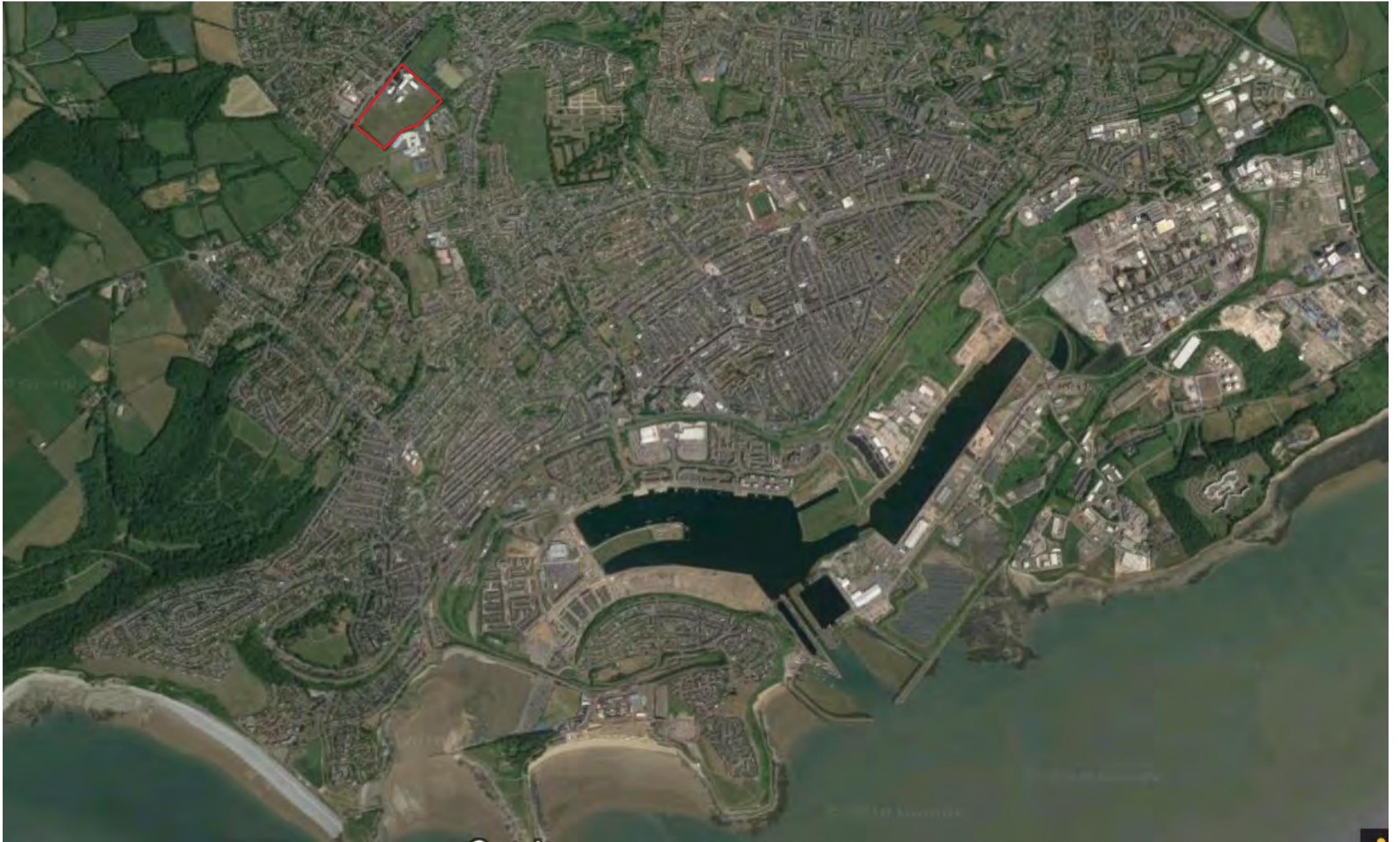
It is envisioned that the proposed new school will be built to the South of the site, on the existing playing fields. This location was agreed following an extensive options scoping exercise and will allow the existing school to function normally while the new school is being built. Once constructed, the new building will be occupied, and the existing school will be demolished and redeveloped into sports facilities.



WHS from the South - with Bro Morgannwg in the foreground



WHS from the North



“...provide learners with the best life and work chances and an opportunity for them to reach their potential.”





### 3. Whitmore High School

## 3.1. Site Analysis

This section provides a detailed analysis of the application site and its context, identifying in particular the site constraints and opportunities that have informed the design of the proposals.

### 3.1.1. Application Site

The site is occupied by Whitmore High School, who are the sole occupiers of the site. The majority of the buildings are housed in the northern-most corner. The school comprises of several separate buildings that have been developed over several decades. Surrounding the buildings is a series of tarmacked areas, forming both play areas and parking facilities for the school. The school site is accessed from the A4226, Port Road West, directly into a dedicated vehicle one-way system. This one-way system follows the north western boundary and culminates in the signal-controlled vehicle exit from the site. The rest of the site, to the south, is given over to grassed playing fields.

It is proposed that the new school will be built to the south of the site, on the existing playing fields, this will allow the existing school to function normally while the new school is built. Once constructed, the new building will be occupied, and the existing school will be demolished and redeveloped into sports facilities.

### 3.1.2. Existing Layout & Massing

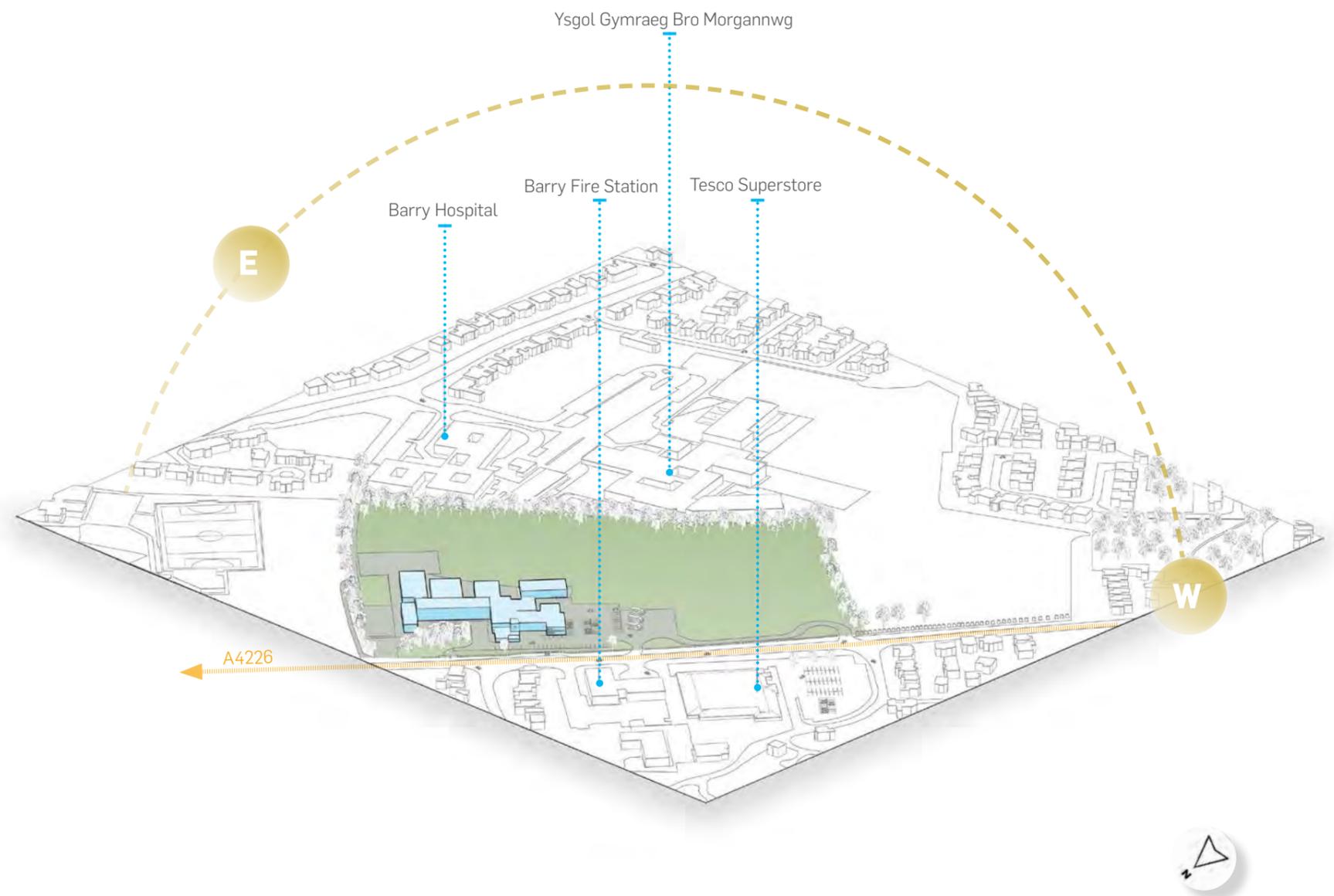
The existing school buildings are situated in the Northern corner of the site. The school has been developed over several decades and comprised of buildings of various dates, styles and materials.

The plan of the school loosely resembles an H footprint. The oldest part of the school, which dates from 1966, is situated at the centre of the H and contains blocks that are either two or three storeys high. These buildings have flat roofs and linear, white painted metal windows along their length. These buildings contain the main entrance as well as a 4-storey clock tower.

Later additions to the school have been made to the south east of the original building. These date from around the 1990s and consist of buff brick two and three storey teaching blocks with pitched composite roofs.

The spaces between many of the large teaching blocks house additional smaller amenities for the school as well as glazed and covered walkways. Throughout the school's history, development of the buildings has been sporadic and ad-hoc; many outdoor play spaces have been utilised to accommodate new buildings.

Although most of the buildings have physical connection to each other, their incoherent styles and ad-hoc planning does not represent a unified school ethos, nor deliver an optimal teaching and learning environment for a 21st Century Curriculum.





WHS from the East



WHS from the West



WHS from the air - the site highlighted in blue

### 3.1.3. Existing Appearance

The existing school buildings vary in height from single to three storeys, the tallest building being the Clock Tower. The topography of the surroundings mean that there is a lack of significant views to and from the site, although from the upper floors there are views over Barry centre to the sea beyond. There is not a cohesive architectural style on the site, and certainly not one which responds to the local vernacular. There are a number of different construction types on the site, from mid 1960s system build with cladding panels and brown brick. A number of temporary modular buildings are currently in use on the site to accommodate some of the general teaching.



Existing Site showing the current Whitmore High School highlighted in blue.



Existing Whitmore High School Entrance



Existing Whitmore High School from Port Road West.

### 3.1.4. Existing Access and Movement

#### *Vehicle access and movement:*

The site for Whitmore High School is directly adjacent to the A4226 leading up to the A4050 and then A4232 in the north.

Drop off points for Parents and school buses both arrive in a one way route off Port Road. The school car park comprises of 116 spaces in total.

Bus terminal points from Barry Island to Ysgol Bro Morgannwg/ Whitmore High School run in the mornings and after school hours.

#### *Pedestrian access and movement:*

The majority of students walking to school arrive via Port Road West through the two entrance points leading into the car park. There is also a footpath to the north of the existing school for students accessing the site from the East.

#### *Cycle access and movement:*

National Cycle Route 88 is to the south of the site and there is a direct bike trail on Port Road West as well as Colcot road. The school has a secure covered bike storage provision at the front of the building.

#### *Public transport provision:*

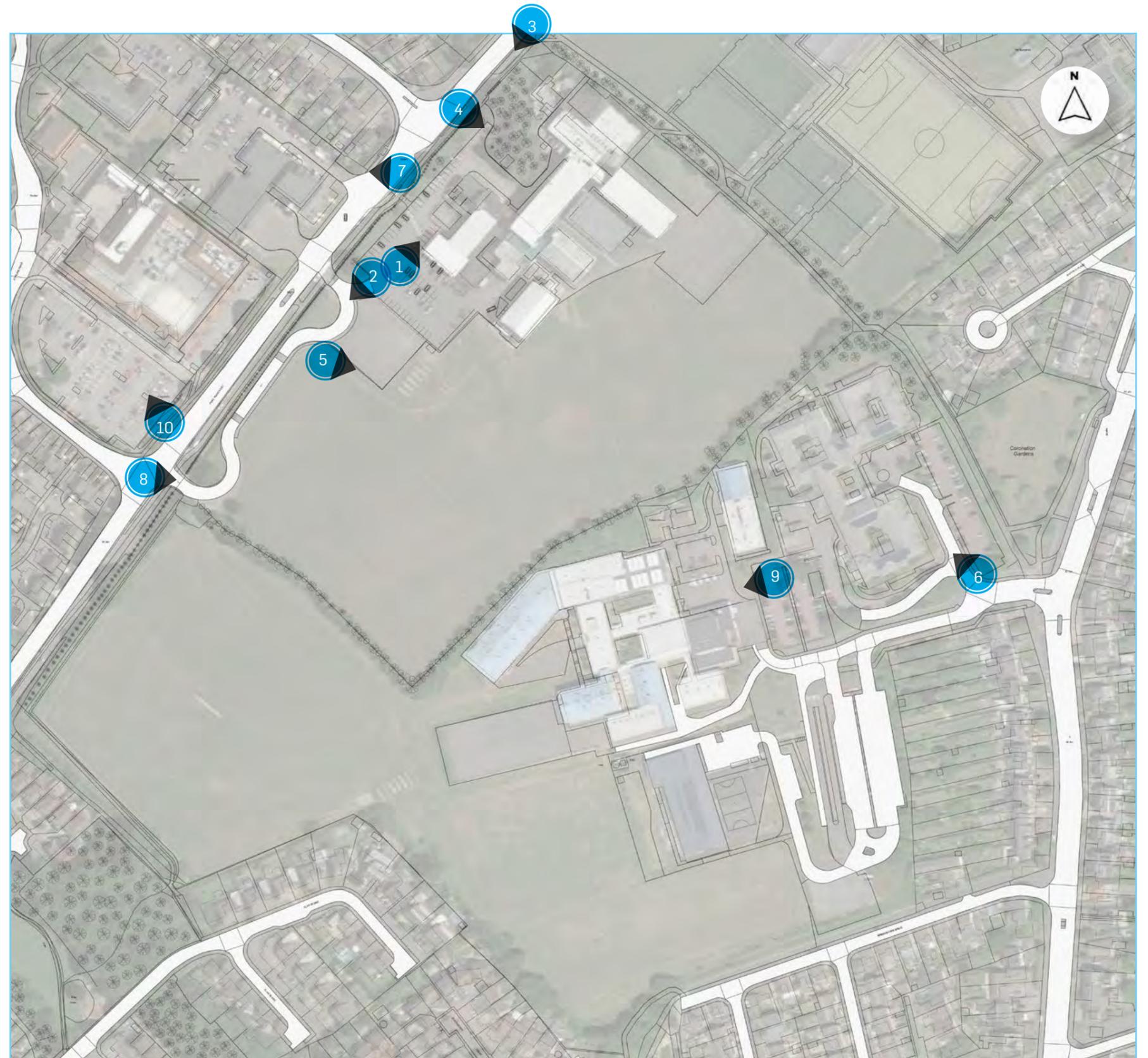
There is a bus stop directly in front of the school (Highlight Park) running routes from Bridgend, Holton, Llantwit Major, and the Airport.



### 3.1.5. Existing Site - Immediate views

The setting and buildings are shown in the following photos:

- > 1 Existing Car parking of Whitmore High School
- > 2 Main Access point/ Bus drop off
- > 3 Port Rd looking South West
- > 4 Front elevation of existing Whitmore High School
- > 5 Existing Whitmore High School playing fields
- > 6 Barry Hospital Minor Injuries Unit
- > 7 Barry Fire Station
- > 8 Drop off/Car Parking Exit Point
- > 9 Ysgol Gymraeg Bro Morgannwg
- > 10 Tesco Superstore







### 3.1.6. Existing Site - Constraints



Traffic direction:

Existing road layout for entry and exit retained. Ysgol Bro Morgannwg buses to use Whitmore site from Port Road to reduce stress of Colcot Road.



Noise:

Port Road (A4226) is a loud busy road, as it connects Cardiff in the east to the airport in the west.



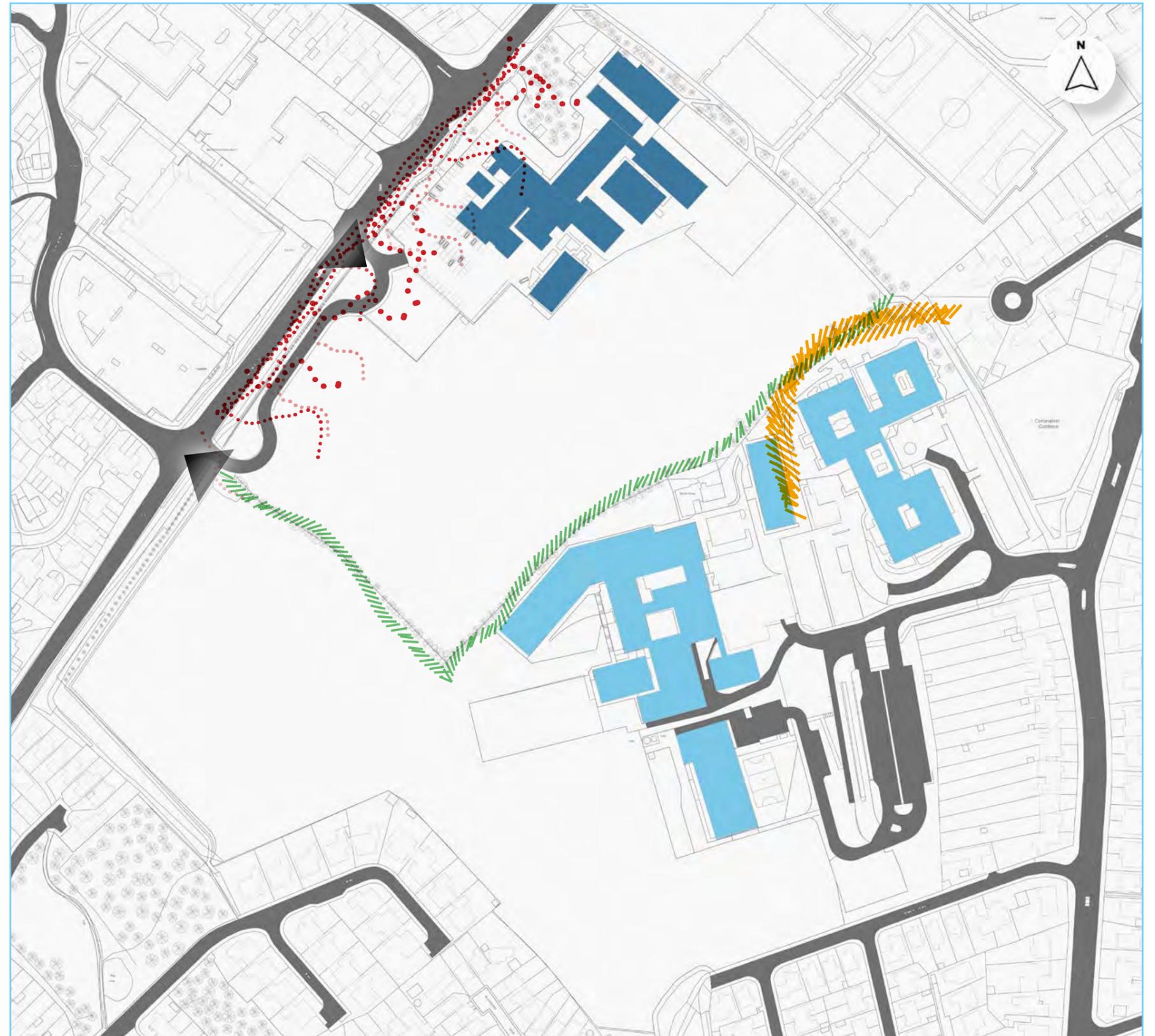
Hedgerow School Boundary

The Hedgerow boundary separating Whitmore High and Ysgol Bro Morgannwg to be taken into account - security.



Hospital:

Consideration of patients and reducing overshadowing as well as noise.



## 3.2. Design Evolution

### 3.1.7. Client Vision

It is important that the design for Whitmore High School aligns with the educational vision of the Vale of Glamorgan's 21st Century Schools. For this reason, VoG carried out a briefing exercise and concept design which resulted in a preferred option for the site. This design exercise resulted in the following:

- › a well thought-out site masterplan which addressed the welcome and entrance to the site
- › a design which optimised the sports provision for the site
- › car park accessed directly off the existing road, keeping vehicles segregated away from pedestrians
- › a good orientation of the building on the site, optimising microclimate and prevailing wind

However the proportions of the courtyard, compared to the height of the surrounding wings, mean that the design was not optimised to allow good daylighting to the courtyard.

In between the completion of the concept option and the subsequent development of the design, the Vale of Glamorgan client elected to omit the separate Centre for Behavioural Excellence, leading to a smaller GIFA requirement.



Image courtesy of HLM Architects



### 3.2.2. Initial Concepts

The plans were then developed into two options which took on board the above points, whilst keeping the original spirit of the scheme.

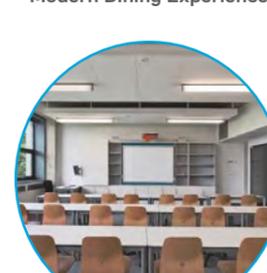
Option 1 Layout



Circulation as learning opportunities



Modern Dining Experience



Classrooms with Integrated ICT & Storage

- CBE
- SEN
- SPORTS HALL
- DT
- COURTYARD
- COURTYARD OPENING INTO FIELD
- MAIN HALL
- SIXTH FORM
- MAIN STAIRCASE
- DINING
- D&T
- KITCHEN
- PLANT
- STAFF & RECEPTION
- STORE
- ENGLISH
- IT
- SCIENCE
- MUSIC
- GENERAL TEACHING
- CHANGING ROOMS
- RESOURCE CENTRE
- DRAMA

Ground Floor

Second Floor

First Floor

Option 2 Layout



Opportunities everywhere to learn

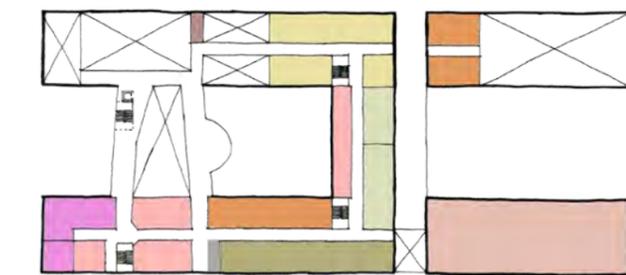
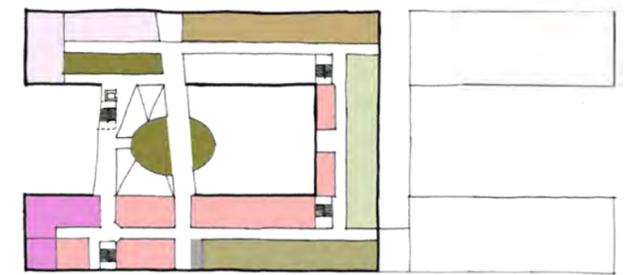


Community use



Engaging environment

- CBE
- SEN
- SPORTS HALL
- DT
- COURTYARD
- COURTYARD OPENING INTO FIELD
- MAIN HALL
- SIXTH FORM
- MAIN STAIRCASE
- DINING
- D&T
- KITCHEN
- PLANT
- STAFF & RECEPTION
- STORE
- ENGLISH
- IT
- SCIENCE
- MUSIC
- GENERAL TEACHING
- CHANGING ROOMS
- RESOURCE CENTRE
- DRAMA



## 2.2.4 Engaging with the stakeholders

### Engagement Structure

A structured consultation process has taken place with the Vale of Glamorgan's 21st Century Schools team and the school's Heads, following the process overleaf. There have also been a number of additional meetings to gather the views of other stakeholders.

To date, consultation has taken place with the following:

- › The school Senior Management Team (SMT)
- › Local Authority and key consultees
- › Heads of department
- › SBD Liaison officer

The following are planned to take place over the next six weeks:

- › Student School Council
- › All students through assembly presentations
- › Local residents
- › Parents
- › Councillors

The design team and representatives from the VoG 21st Century Schools team met with the Heads regularly throughout the early development of the design, generally on a weekly basis, in order to capture the key briefing criteria. We began by exploring the vision and the key relationships of the school, progressing through to the site drivers and access strategies and the on to the more detailed space planning and adjacencies.

Following on from each meeting with the SMT, feedback sessions to the wider Local Authority team were held in order to ensure that every element of the progressing design met the wider aspirations of the authority and the 21st Century Schools agenda. The development of the detailed educational brief continued through a series of workshops held with the existing school Heads of Department.

Student sessions, both through Student Council and through assemblies, are planned in the near future.

A drop-in consultation session will be organised at the school to provide the opportunity for teachers, parents, local residents and councillors to attend and learn more about the design.

### Summary of Scheme Evolution

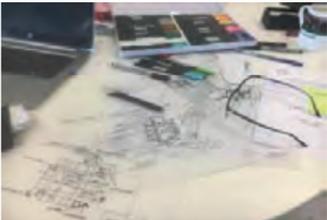
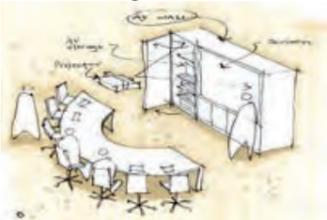
The vast majority of the design development has been through regular meetings with the school senior management team following the consultation process above, the design was refined and adapted to best suit the needs of the school and wider community. This included the following examples;

- › Site access/buses/deliveries; the location of the bus drop-off for both schools has been extensively discussed to ensure minimal disruption to either school, both in the temporary and permanent condition.
- › The school were keen to mitigate the risk to pedestrians by separating the main pedestrian access routes from the access for cars and service vehicles, and as such the new path from the north was formalised.
- › Sports provision; the provision of sports facilities within the new school building has developed considerably during the consultation process with the school and head of department. Dry and wet changing facilities have now been provided with a configuration that suits both school and community use.
- › Main entrance arrangement; the design has incorporated a visitors entrance, in addition to the main student access doors. The student entrance was also widened and a longer reception desk added, for the provision of access to student services facilities. This was in response to issues raised during both the SMT meetings the Heads of Department meetings.
- › ALN provision; the configuration of this area has been adjusted to reflect the needs of the school and is subject to further

consultation with the VoG team.

Other areas of significant change involved the following aspects of the design;

- › Car Parking and deliveries
- › Dining and catering
- › Music & Drama, including the location and orientation of the main hall and stage
- › SMT offices
- › Science department
- › Design Technology (DT) department

	Engagement 01	Engagement 02	Engagement 03	Engagement 04	Engagement 05	Engagement 06	Engagement 07
	Review of Concept and Morgan Sindall Proposals.	Concept development, technical / environmental strategies and Organisation.	Detailed Layouts /elevations, materials and landscaping.	Stratergies / finalisation of design.	Technical review	Finalisation of information to compete RIBA Stage 3	Sign off of RIBA Stage 3 proceed to Planning Application
							
AGENDA	Team introductions Process. Summary Review of Vision and Ethos . Review of Control Option Planning Context Schedule of Accomodation Building Organisation and Adjacencies Initial Design Concepts Community Benefits Strategy Other stakeholder engagements and 3rd parties. Risk Register review	<i>(Feedback from Engagement 01)</i> Masterplan Development Schedule of Accomodation Update Design Concept Development Initial internal layouts and organisation Elevational Approach and Materials Landscape Design Environmental Principles BREEAM	<i>(Feedback from Engagement 02)</i> Finalisation of Masterplan Design Concept Development Internal Layout & Organisation Design Strategies Elevational ideas & Materials Landscape Design Planning Cost update Feedback from other engagements / stakeholders Risk register review	<i>(Feedback from Engagement 3)</i> Internal Layout Finalisation Access and Circulation Strategy Zoning & Security Strategy Passive Supervision Strategy Fire Strategy Acoustic Strategy Catering Provision Toilets and Changing Provision Interior Design Strategy Development of Elevations & Materials ICT Strategy	<i>(Feedback from Engagement 04 )</i> Building Fabirc & Structure Environmental Engineering Design Sustainability Strategy Daylight Review Phasing and Construction FF&E Co-ordination BREEAM Review	<i>(Feedback from Engagement 5)</i> Presentation of the Design proposals, plans elevations sections and visuals Presentation of Environmental Design Construction phase programme Landscaping Proposals Outline specification Elemental cost plan / affordability Risk register review	<i>(Feedback from engagement 6)</i> Approval of Design proposals ready for planning application Formalisation of the costplan / sign off Planning of next Phase RIBA stage 4 Deliverables and procurement schedule
PRESENTATION MATERIAL	Analysis of School Brief Initial Massing studies Adjacency diagrams Present / initialise Human Centred Design Application Stakeholder engagement plan	Initial concept layouts Schedule of Accomodation agreed Organisational Diagrams Adjacencies Digrams Landscape proposals (soft and hard) Environmental and sustainability Principles	Initial strategy diagrams Developed Building Plans Concept Sections and Elevations Room layouts of key spaces Developed Landscaping Proposals Intial ICT Principles	Review detailed Layouts GA's Review detail design strategy and materials Discuss interior design proposals Review elevations and External Views 3D visualisation Sections Day in the life of the pupil Feedback from other stakeholder meetings	Review environmental and sustainability proposals Outline specification Structural engineering principles Room Layouts Construction logistic Plan Elevations and sections review	Proposed final Masterplan Proposed Final design information Final environmental strategies Cost plan Programme	Proposed final Masterplan Proposed Final design information Final environmental strategies Cost plan Programme
MILESTONES	Confirm Understanding of vision and Brief Agree Faculty Structure Agree Building Organisation Refine Schedule of Accomodation Agree Site Organisation	Agree preferred site masterplan option Sign off of the SOA Discuss Building LAYOUTS Discuss Initial Landscaping Proposals Discuss Environmental Proposals Agree FF+E Strategy	Agree building layouts Discuss Design Strategies Discuss Room Layouts - Key spaces Agree Elevational and materials concept Planning feedback BREEAM review Community Benefits Programme	Review detailed Layouts GA's Review detail design strategy Discuss interior design proposals Review elevations and External Views 3D visualisation Sections	Review environmental engineering proposals and sustainability strategy Agree access and circulation strategies Agree detailed room layouts (3D )	Review all of RIBA Stage 3 design information Deliverability Confirmation Affordability Confirmation BREEAM Review Full Business Case review Risk Register Review	Review all of RIBA Stage 3 design information Deliverability Confirmation Affordability Confirmation BREEAM Review Full Business Case review

### 3.3. Design Proposals

#### Site Plan Key

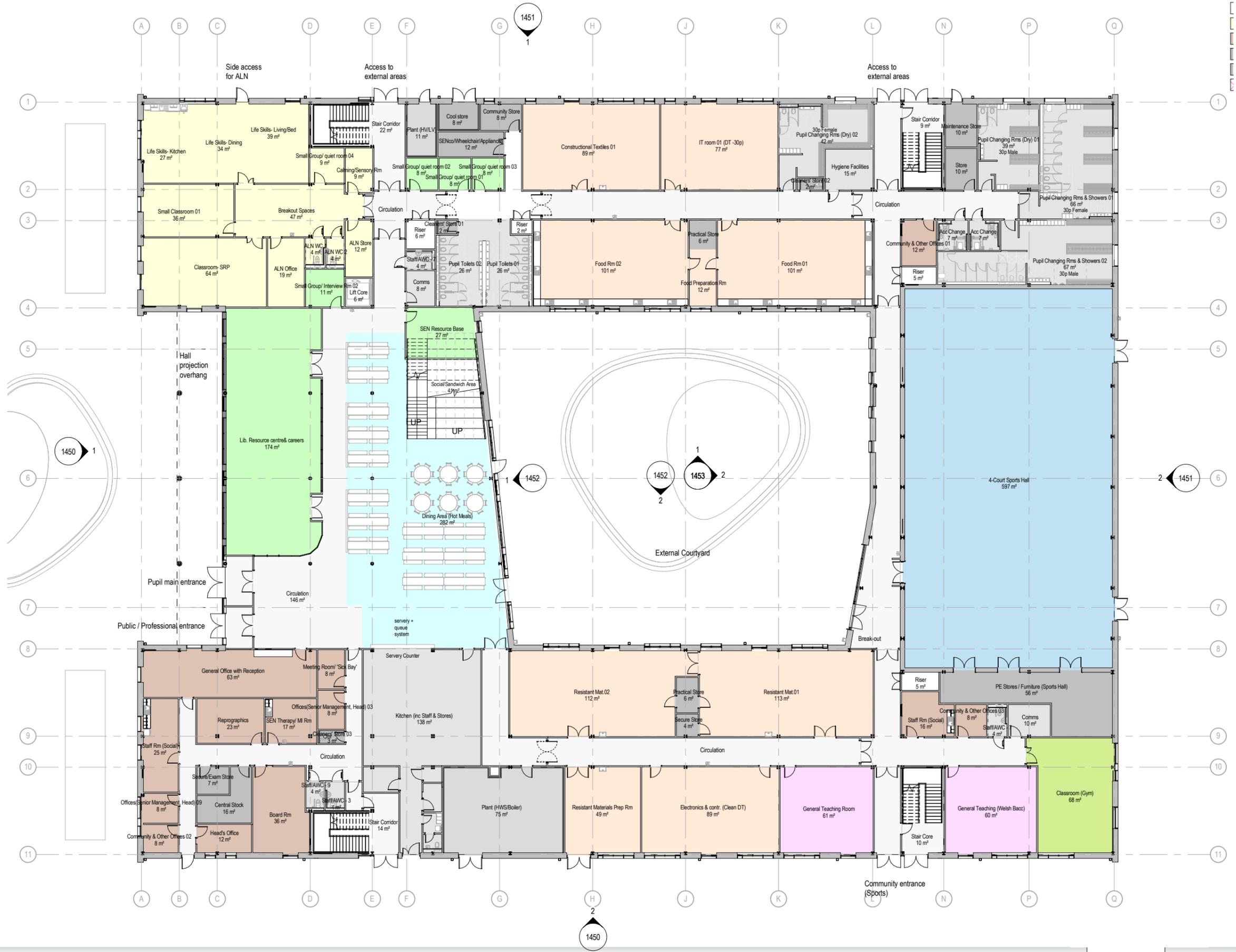
1. New Building
2. Courtyard
3. All Weather Pitch
4. MUGAs
5. Grass Pitches
6. Car Park
7. Social and Informal area
8. Bus drop off



### 2.3.1 Floor plans

#### Level 0 Plan

- Catering & Toilet Facilities
- Circulation
- Dining & Social Areas
- DT
- General Teaching
- Halls
- Learning Resource Areas
- P.E
- Plant/Support
- Riser
- SRP
- Staff & Administration
- Storage (Non-Teaching)
- Storage (Teaching)



Level 1 Plan

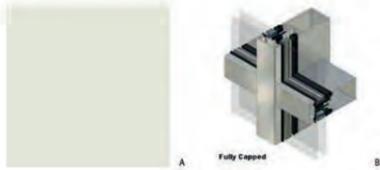
- 6th Form
- Catering & Toilet Facilities
- Circulation
- Dining & Social Areas
- Drama
- English
- Halls
- History
- IT
- Languages
- Learning Resource Areas
- Music
- RE
- Riser
- Staff & Administration
- Storage (Non-Teaching)
- Storage (Teaching)
- Welsh



Level 2 Plan

INDICATIVE MATERIAL KEY

- A - Render
- B - Aluminium Curtain walling panels and trims
- C - Aluminium Curtain wall
- D - Facing brick - colour tbc



ELEVATION NO. KEY

- 1 - Curtain walling
- 2 - Render cladding system
- 3 - Facing brick - colour tbc
- 4 - Standing seam roof
- 5 - Warm roof with nominal pitch
- 6 - Inverted ballasted roof
- 7 - Flue
- 8 - Louvre screen
- 9 - Plant deck maintenance stair
- 10 - Photovoltaic solar panels
- 11 - Ventilation wind catchers
- 12 - Inverted roof



1 GA ELEVATION - COURTYARD SE.  
SCALE 1:200



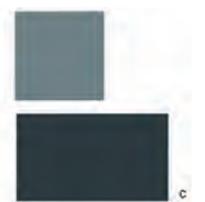
2 GA ELEVATION - COURTYARD NE.  
SCALE 1:200

## 2.3.2 Appearance and Material Palette



### INDICATIVE MATERIAL KEY

- A - Render
- B - Aluminium Curtain walling panels and trims
- C - Aluminium Curtain wall
- D - Facing brick - colour tbc



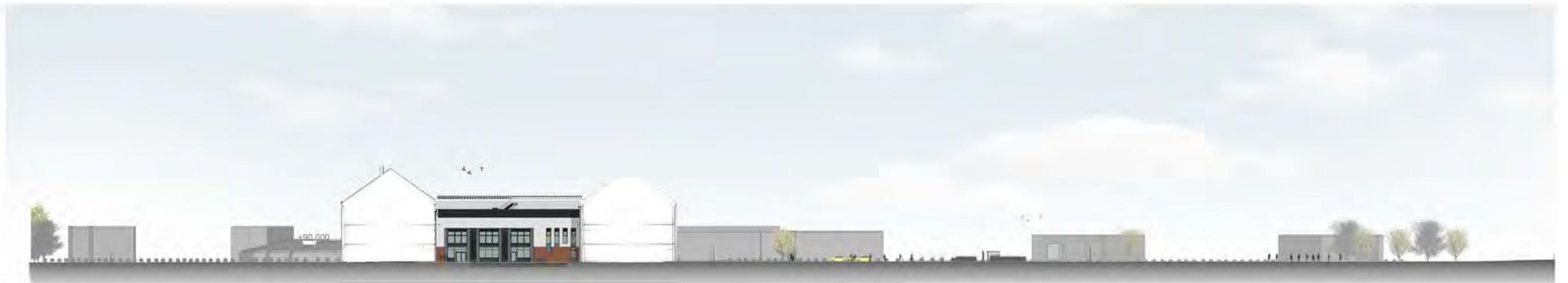
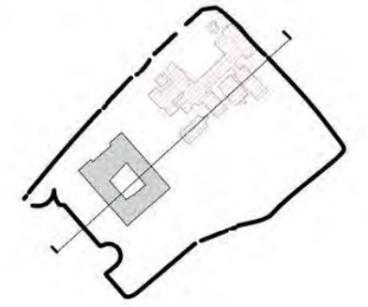


### 2.3.3 Site Sections

Existing



Proposed



Parking

Proposed School

3G Rugby/Football Pitch

Senior Rugby Pitch & Perimeter Athletics Track

2.3.3 Elevations



Proposed Front Elevation for the new Whitmore High School

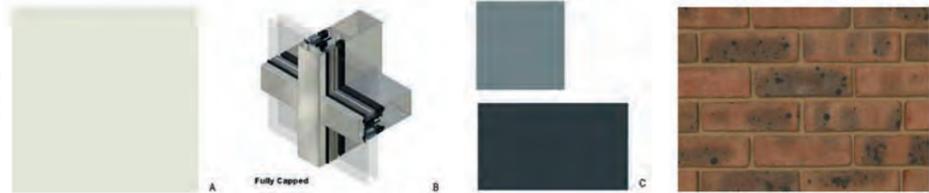
<p><b>INDICATIVE MATERIAL KEY</b></p> <p>A - Render          B - Aluminium Curtain walling panels and trims          C - Aluminium Curtain wall          D - Facing brick - colour tbc</p>		<p><b>ELEVATION NO. KEY</b></p> <p>1 - Curtain walling          2 - Render cladding system          3 - Facing brick - colour tbc          4 - Standing seam roof          5 - Warm roof with nominal pitch          6 - Inverted ballasted roof          7 - Flue          8 - Louvre screen          9 - Plant deck maintenance stair          10 - Photovoltaic solar panels          11 - Ventilation wind catchers          12 - Inverted roof</p>
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Proposed Southwest Elevation for the new Whitmore High School

**INDICATIVE MATERIAL KEY**

- A - Render
- B - Aluminium Curtain walling panels and trims
- C - Aluminium Curtain wall
- D - Facing brick - colour tbc



**ELEVATION NO. KEY**

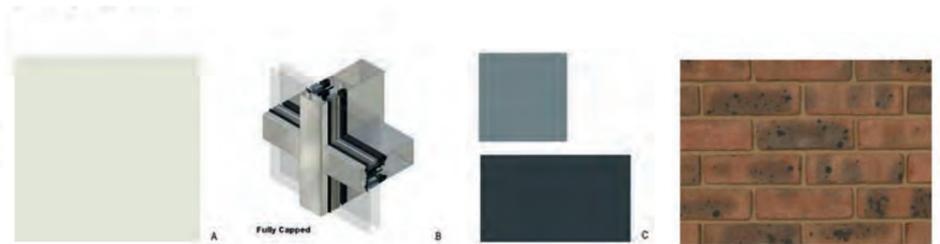
- 1 - Curtain walling
- 2 - Render cladding system
- 3 - Facing brick - colour tbc
- 4 - Standing seam roof
- 5 - Warm roof with nominal pitch
- 6 - Inverted ballasted roof
- 7 - Flue
- 8 - Louvre screen
- 9 - Plant deck maintenance stair
- 10 - Photovoltaic solar panels
- 11 - Ventilation wind catchers
- 12 - Inverted roof



Proposed North-Eastern Elevation for the new Whitmore High School

**INDICATIVE MATERIAL KEY**

- A - Render
- B - Aluminium Curtain walling panels and trims
- C - Aluminium Curtain wall
- D - Facing brick - colour tbc



**ELEVATION NO. KEY**

- 1 - Curtain walling
- 2 - Render cladding system
- 3 - Facing brick - colour tbc
- 4 - Standing seam roof
- 5 - Warm roof with nominal pitch
- 6 - Inverted ballasted roof
- 7 - Flue
- 8 - Louvre screen
- 9 - Plant deck maintenance stair
- 10 - Photovoltaic solar panels
- 11 - Ventilation wind catchers
- 12 - Inverted roof



**INDICATIVE MATERIAL KEY**

- A - Render
- B - Aluminium Curtain walling panels and trims
- C - Aluminium Curtain wall
- D - Facing brick - colour tbc



**ELEVATION NO. KEY**

- 1 - Curtain walling
- 2 - Render cladding system
- 3 - Facing brick - colour tbc
- 4 - Standing seam roof
- 5 - Warm roof with nominal pitch
- 6 - Inverted ballasted roof
- 7 - Flue
- 8 - Louvre screen
- 9 - Plant deck maintenance stair
- 10 - Photovoltaic solar panels
- 11 - Ventilation wind catchers
- 12 - Inverted roof

Proposed Rear Elevation for the new Whitmore High School

### 3.3.1. Views



View of proposed main entrance



View of proposed canteen and stairs

## 3.4. Landscape Strategy

### 3.3.2. Landscape objectives

The key aspects of the landscape brief have been driven by three main factors;

1. The client's requirements.
2. The adoption of sustainable urban drainage systems (SuDS) due to new legislation by the Welsh Government.
3. The meeting of ecology targets in order to achieve a BREEAM rating of excellent.

The proposed school has a focus on providing excellent sports facilities for their prospective students, with particular attention to providing adult rugby and football pitches. The Building Bulletin 98 (BB98) Briefing Framework for Secondary School Projects: Publication by DCSF sets out area guidelines for secondary school buildings. According to these guidelines, the recommended net site area is 64,700m<sup>2</sup>. The proposed net site area is 58,856.5m<sup>2</sup>, as this is below the recommended minimum it enters this site into the category of a 'confined site'. These guidelines have helped inform the spacial arrangement of sports pitches whilst balancing this against other BB98 guidance on hard surfaced games courts, soft informal and social areas, hard informal and social areas and habitat area. The landscape has been able to fit the maximum number and size of a variety of sports pitches whilst allowing excellent opportunities for other student activities.

The proposed scheme provides 116 standard car parking bays (including 2 electrical vehicle charging points), 6 disabled car parking bays and space for 6 motorcycles. This meets both the Vale of Glamorgan Supplementary Planning Guidance - Car Parking Standards 2015 and the BREEAM (2014) Guidance. The proposed scheme has 65 secure cycle parking spaces which meets the Vale of Glamorgan Supplementary Planning Guidance requirements.

The new SuDS legislation adopted by the Welsh Government is Schedule 3 of the Flood and Water Management Act 2010 introduced on 7th January 2019. This stipulates that all surface water is managed through a holistic network of SUDS elements

across the proposed scheme. The BREEAM ecology targets ensure there is not a reduction in species numbers once the project is complete. To accomplish this, the design aims to improve biodiversity by creating an interconnected landscape of corridors ensuring wildlife can easily commute across the site.

Many of the features in the proposed scheme are multi-functional providing an opportunity for the creation wildlife corridors, improving amenity values and creating engaging and social spaces for students.

Bio-retention gardens at the front entrance and building courtyard, capture surface water and improve amenity and bio-diversity through the use of plants that are able to withstand extremes of both wet and dry conditions.

Swales have been used to create a green corridor of wild-flower and ornamental planting which enhances the visual appeal of the playground spaces. The detention basin at the end of the suds train is a large organic land form, that has adjacent v informal earth mounds (that uses excess site cut) creating an engaging 3D landscape enhancing the visual and play appeal of the soft landscape areas.

Each suds element provides the opportunity for a diverse planting scheme and overall contributes greatly to increasing biodiversity on the site. Habitats ranging from dry to marshy have been designed into the scheme allowing for plant diversity. The planting palette includes, species rich grassland along swale edges, wild-flower planting in the swale base and ornamental planting for wet & dry conditions in bio-retention gardens, the diverse mix of planting will establish to become a valuable habitat of food and shelter for wildlife. The detention basin has been planted with native & non-native trees that are able to withstand extreme wet & dry conditions, once established the trees will also offer valuable habitat and amenity improvements. Importantly, the arrangement of the suds elements combined with the diverse planting species creates a green corridor for wildlife to live, thrive and commute across the proposed school site.

Although the use of SUDS provides site wide outdoor educational experiences, the landscape design has also introduced specific areas for outdoor teaching. This has been provided within the BB98 habitat area which provides an area for an allotment, a sensory garden full of culinary herbs and an adjacent orchard and forest garden.

The landscape department has worked very closely with all the design departments, especially the architects and the civil engineers, this multidisciplinary approach from an early stage has enabled us to produce a functional and attractive design solution for our client.

## 2.4.2 Landscape proposals

### GENERAL ARRANGEMENT KEY

-  Site Boundary
-  Trees to be retained
-  Trees to be removed
-  Pedestrian Hardscape
-  Vehicular Hardscape
-  3m Ball stop fence with matching double gates
-  2.4m Weld mesh fence with matching double gates
-  Post and rail fence with matching double gates
-  1.8m close boarded fence
-  Playground Shading
-  Swales
-  Amenity sports grass

Note: All planting is indicative

- Parking Provision
- 116 no. Car Parking Spaces (2no. Electric Charging Point)
  - 6 no. Disabled Parking Spaces
  - 6 no. Motorcycle Spaces



3.4.1. Indicative Planting Choices

Specimen Shrubs



Ornamental Planting



Memorial / Sensory Garden



Swale Planting



Bulb Planting



Bio-retention / Rain Gardens



Trees



Native Woodland Planting



Native Hedgerow Mix



Forest Garden



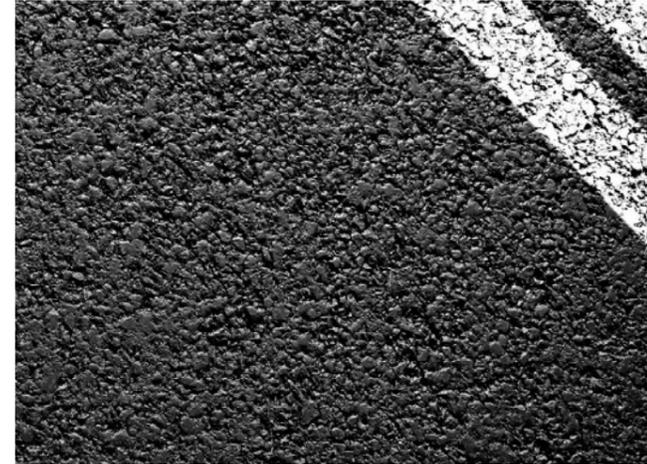
3.4.2. Indicative Landscape Materials & Features



Insect wall



Raised vegetable beds for easy access



Tarmac finish



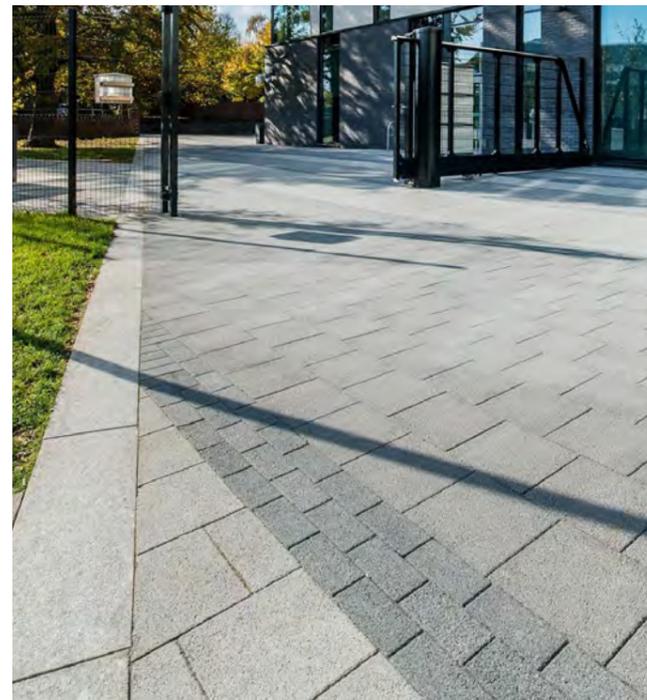
Ball stop fencing



Shade sail



Self Binding Gravel



Front entrance block paving



Timber Post & Rail Fence

## 3.5. Access

### 3.5.1. Proposed Access Strategy

The current access to the Whitmore site is primarily from either Port Road West, or from Colcot Road across the footpath to the north of the school. Both of these links would be maintained in order to keep the access to the school as easy as possible. A site entrance will also be formalised in the North East corner of the site (closest to Barry Hospital) to allow students to cut across the site before and after school times.

All the primary pedestrian access would be Equality Act 2010 compliant.

Vehicles: All vehicles will enter through the existing entrance off Port Road West. The existing bus drop-off will be widened to ease congestion and the car park and deliveries zone will lie to the south of the new building. Access to the Bro Morgannwg bus drop-off will also be to the south of the car park.

### 3.5.2. Pedestrian, Cycle and Vehicle Access Routes

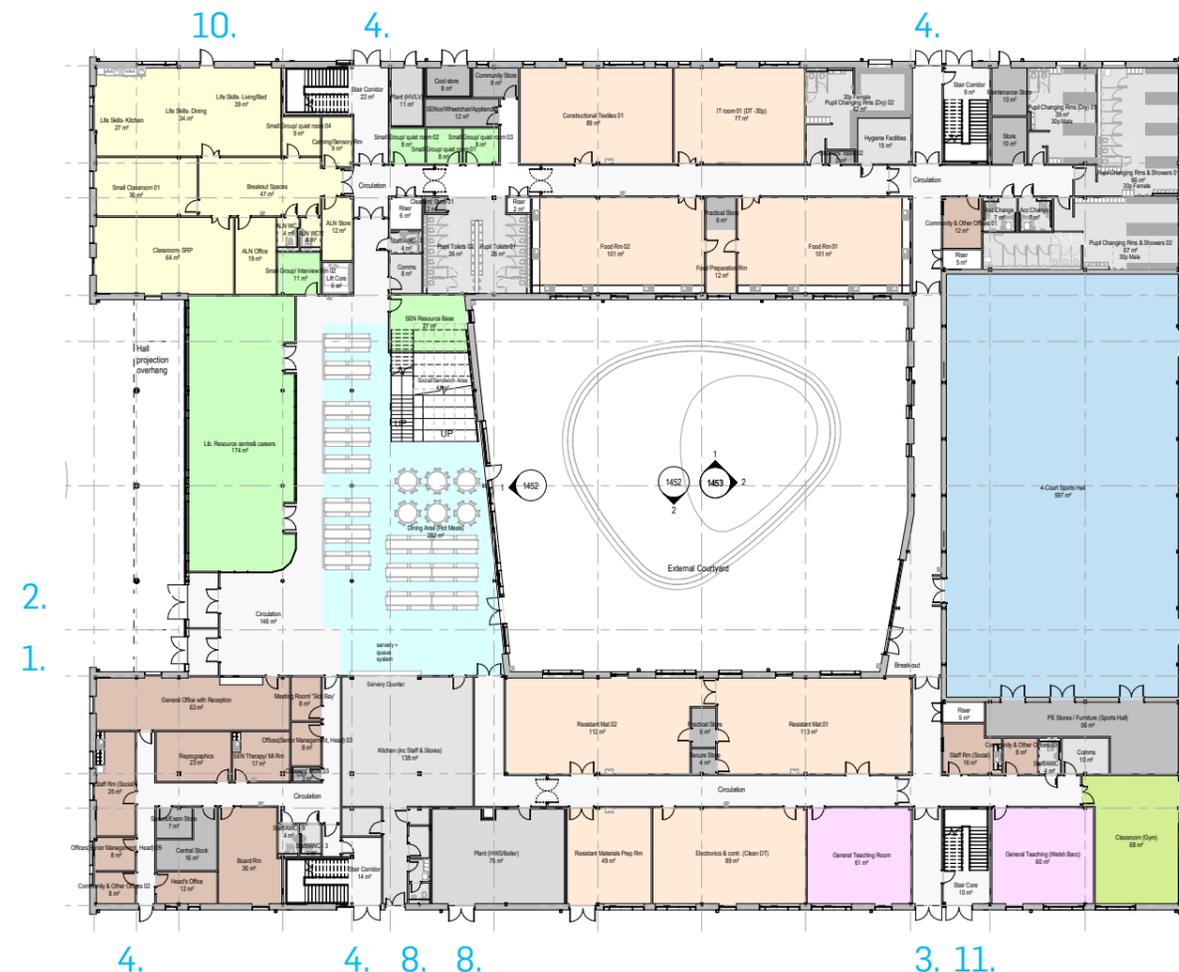
The intent of the new building is to create a united provision for the students and staff of Whitmore High School, and also to create a public-facing welcome and showcase of the school's activities. The new building will have its main access on the main elevation facing Port Road West. This will consist of two entrances: a student one which will be opened for before and after school access and egress; and a visitor one which will be the main entrance during student hours.

Should the school's sport facilities be used by the community the door to the South West of the building, adjacent to the car park, would be used for access. This would give access to the sports facilities and changing rooms only, with the other facilities and rooms capable of being locked off for security.

Other doors on the ground floor are primarily for access to the grounds during the school day but are also to be used as fire escapes.

### 3.5.3. Vehicular Access

1. Delivery vehicle / servicing access is adjacent to the south façade of the building, beyond.
2. Car parking will be accessed from the bus loop and provide a safe location for cars away from pedestrians.
3. Emergency vehicle access will be gained on the front and south sides via the bus drop off and car park. Access to the north side will be via an access gate to the social play area. The adjacent electricity sub station will have 24hr access.



- 1 – Primary Building Entrance
- 2 – Student Building Entrances
- 3 – Sports Entrance
- 4 – Fire Exit
- 5 – WHS bus drop off
- 6 – Bro Morgannwg bus drop off
- 7 – New pedestrian path
- 8 – Deliveries point
- 9 – Cycle shelter
- 10 - ALN Pupil Entrance
- 11 - Community Entrance (Sports)

- 1 – Primary Building Entrance
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- 3 – Sports Entrance
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- 7 – New pedestrian path
- 8 – Deliveries point
- 9 – Cycle shelter
- 10 - ALN Pupil Entrance
- 11 - Community Entrance (Sports)



### 3.5.4. Building Access - Pedestrians

The Building is in the southern perimeter to the WHS Site and sits on a plateau of land circa 1m above the adjacent Bro Morgannwg school site to the east and south. The site plan and landscaping on the WHS site has been designed to accommodate this level change within all pathways and routes provided as 1:21 or less slopes (no ramps or steps). This has not only ensured there is no separation in use by any ability but it is equally supportive of the use of the building for delivery trolleys accessing from the car park side.

Internally the building's facilities are arranged over three levels that are all a uniform level with no changes in floor level across each storey. All levels are served by one lift which complies with the Building Regulations in terms of distances and car dimensions. All the doors are a minimum of 840mm clear opening and the main circulation is generally wider than 2m except for some small areas of single direction low occupancy where it reduces to 1800mm and 1500mm as a minimum for short connections.

The building has been designed and will continue to be developed in detail as fully compliant with approved document M: access to and use of buildings, The Equalities Act 2010 and BS8300:2018 (Part 1 & 2). Further to these design benchmarking standards the Vale of Glamorgan's Equality Policy has been consulted during engagement workshops to ensure the school remains and continues to improve its Access For All Policy.

#### Main entrance

The main entrance to the building is clearly visible from Port Road West and is at the main welcome point for the building.

The visitor entrance and the student entrance will operate slightly differently:

- The Student entrance will have sliding doors to maximise the flow of people before and after the school day and after the school day the student and visitor entrance will not operate during the school day to ensure that any student arriving or leaving is accounted for.

- The main entrance will be open throughout the school day, allowing access to visitors and students who arrive and leave during this time. The access control will be controlled from the office.
- ALN Entrance this entrance will be available for the students using the ALN provision as a separate entrance door throughout the day.

The primary vertical circulation (i.e. stairs and lifts) are easily accessible to the left of the main entrance. The balcony edge above provides clear visual orientation to the internal circulation at each level seen from the main entrance. The lift running to all levels is located a short distance from this main entrance atrium to the north.

Other than the main entrance there are four fire exits, two on each wing, the south eastern one of which will be the community sports entrance. The doors on the north wing will double up as access doors to the school grounds. These secondary access doors will be power assisted double swing doors with push button internally and access control offset totem external control. External door guarding will protect from the free edge of the doors. The main and secondary glazed entrance doors will have suitably contrasting manifestations.

Other than these entrances to the building there are deliveries entrances to the DT room and kitchen, the plant room and the electrical intake room, as well as an evacuation door for the admin suite. All these access points are designed to provide the appropriate level of access and security. All doors will be of sufficient width and flush threshold to accommodate all users and their activities as appropriate.

### 3.5.5. Community Safety

The design has been progressed with the aim of making the site secure for the users whilst at the same time creating an attractive and welcoming facility. The team has met with Gwyn Batten, the Designing Out Crime Officer, to identify the various elements in this regard and to develop the designs accordingly.

The proposals have been developed to create a simplified access to the site and the building, and to create a secure line around the perimeter of the site. This will make use of the existing perimeter fencing to the north and east, as well as that on Port Road West. New fencing will delineate the south and the boundary to the car park. The building will become the secure line at the front and the south façade. The passive supervision innate to the design of the school will be supported by external lighting and CCTV.

### 3.5.6. Pedestrians -----

The safety of pedestrians travelling into, out of, and around the school grounds has been paramount in defining the layout of the site. Pedestrians do not share the same routes as vehicular traffic and have discrete entrances to the school grounds. Where possible, pedestrians crossing vehicular traffic routes has been avoided. Zebra crossings are proposed for all other instances. Traffic flows are strictly controlled, please refer to '2.5.4 Vehicles.'

### 3.5.7. Bicycles -----

Cycle routes are kept out of roads and motor traffic routes. Secure cycle storage is located adjacent to the MUGA.

Pupil entrances have been designed to accommodate current pupil routes to school. As well as approaching from either end of the site from Port Road West, it is understood that some pupils arrive from the other side of the road: in the interest of pupil safety an additional pedestrian access point has been introduced to encourage pupils to use the safest crossing point.

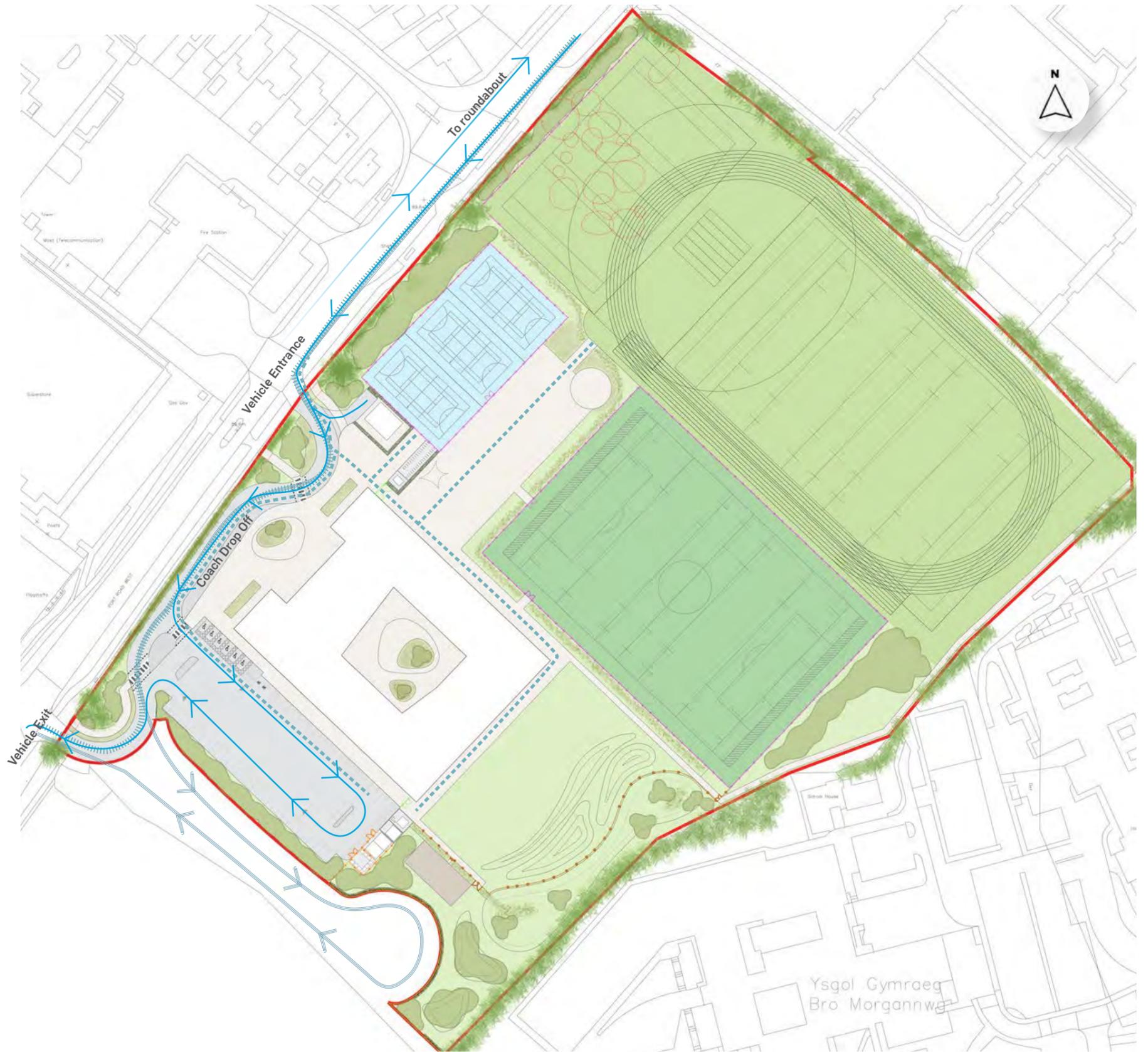


### 3.5.8. Vehicles

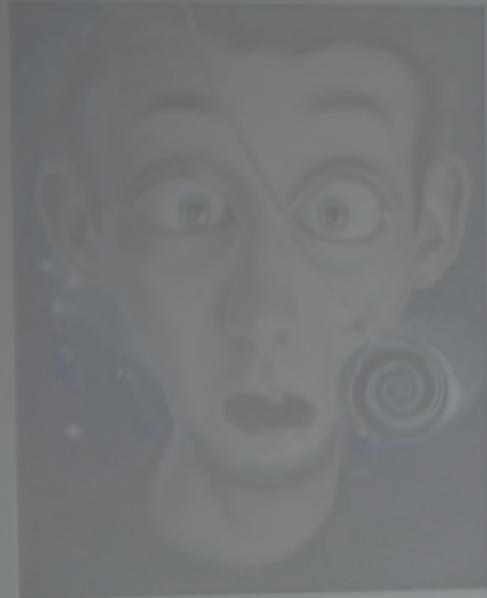
- Cars 
- Emergency vehicles 
- WHS School buses 
- Ysgol Gwmraeg Bro Morgannwg bus access 

### 3.5.9. Emergency access

Sufficient access and turning space has been provided for emergency vehicles in line with current regulations.



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Escala hipnótica, Waterloo-Stanford Group C: a validação da versão portuguesa da escala suscetibilidade (Scale of Hypnotic Susceptibility - Bowers, 1993), refere

- I. Demonstrou-se que cerca de 30% dos indivíduos de qualquer idade e condição social podem ser induzidos em transe leves, moderados e profundos (n=720).
- II. Contudo, a presença de suscetibilidade hipnótica elevada, os participantes portugueses encontram-se em menor prevalência 11,8%.
- III. Apenas perto de 10%, devido a mecanismos psicológicos de defesa são refractários a qualquer indução hipnótica.

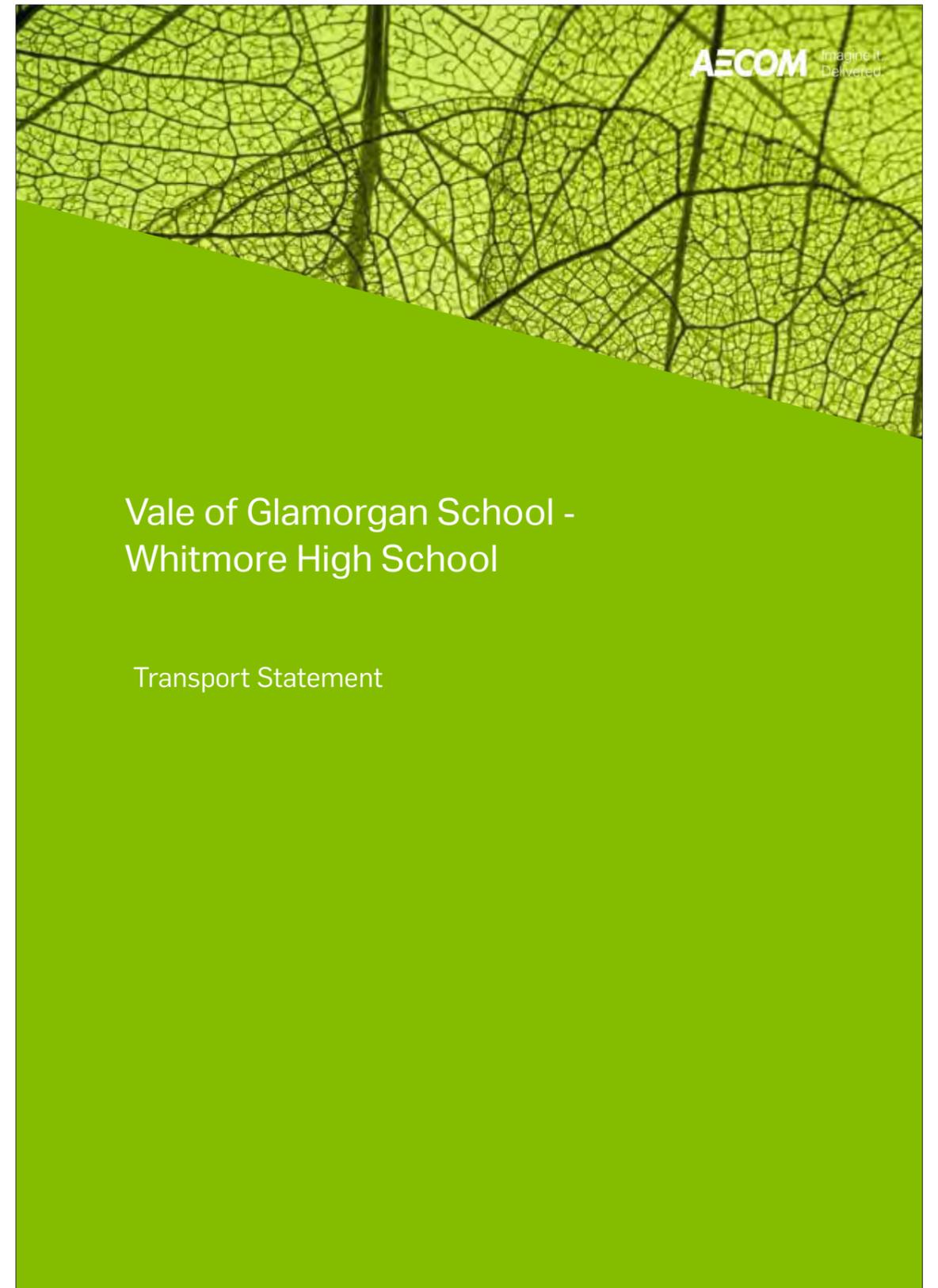
(Carvalho, C. et al.)





# 4. Other Considerations

## 4.1. Transport Statement



## 4.2. Energy Statement

The technical note outlines the approach being taken to incorporate an energy strategy which is being developed alongside consideration of the function and form of the building through the Architectural proposals, whilst considering any supplementary planning documents or core strategies. The school shall be designed to meet the requirements of BREEAM New Construction 2014. The purpose of the technical note is to outline the proposed energy strategy to demonstrate the predicted performance of the building in terms of the building fabric, services and renewables, with respect to the UK Building Regulations Part L. Consideration within the design will also address the issue of overheating in order to comply with the relevant thermal comfort criteria.

This technical note analyses the energy and CO2 savings that can be achieved by installing low or zero carbon (LZC) technologies at the proposed development. The technical note also highlights the BREEAM credits targeted for the school to achieve a minimum rating of BREEAM 'Excellent', as part of a Welsh Government requirement.



# Whitmore High School

## Energy Statement Incorporating BREEAM

Whitmore High School

22 January 2019

## 4.3. Acoustic Report

This report has been prepared to support the planning application in relation to external noise emissions from fixed plant and building services associated with the proposed Whitmore High School development.

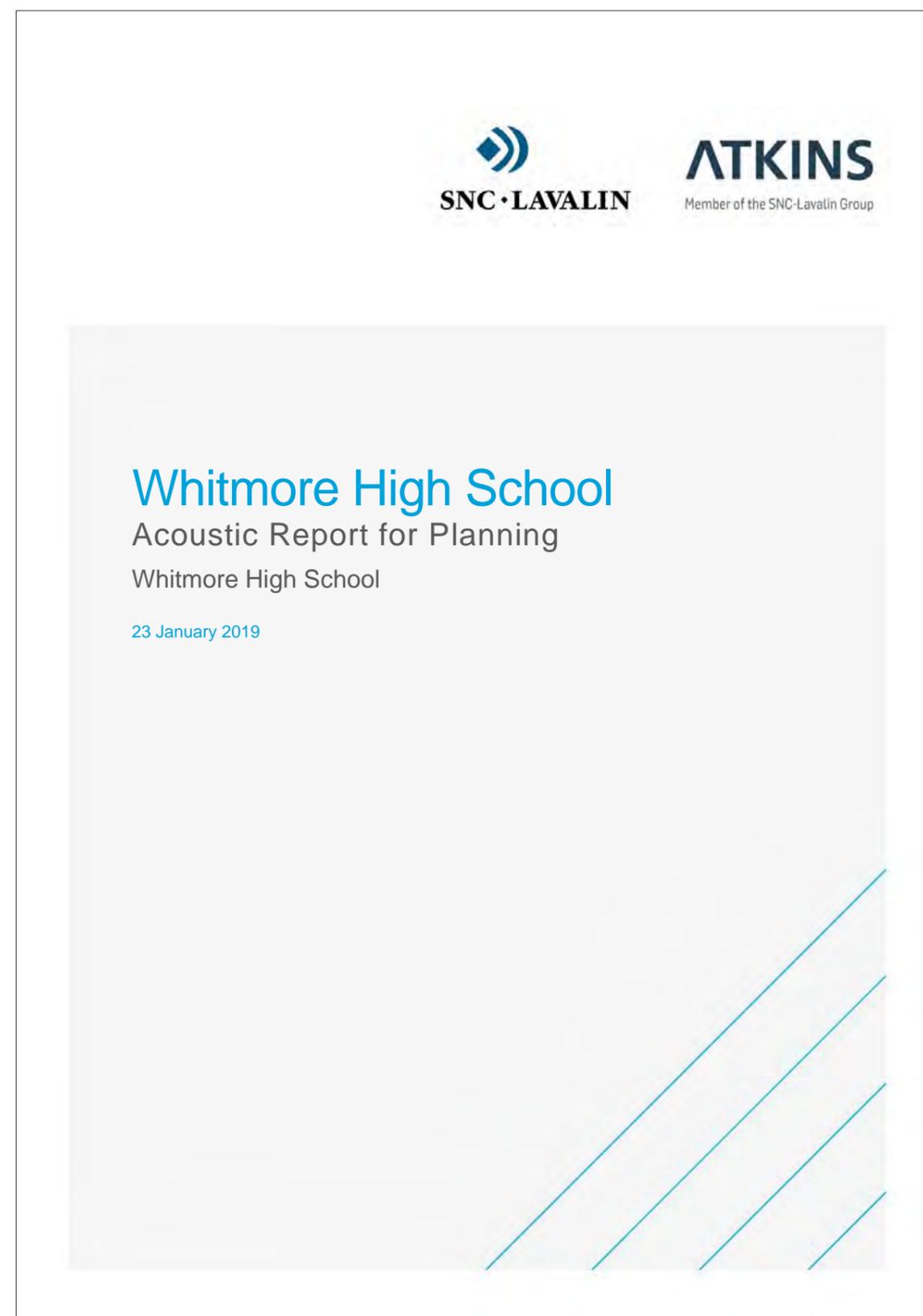
In lieu of confirmation from the Vale of Glamorgan Council regarding their site-specific noise criteria for external plant, it is expected that a noise impact assessment in accordance with BS4142:2014 will be required, where the rating level of plant noise is to be equal to or lower than 5dB below the existing background sound level, at the nearest noise sensitive receptors.

The nearest noise sensitive receptors have been identified as residential properties along Liscum Way and Stirling Road, Barry hospital and Bro Morgannwg School.

A baseline noise survey has been carried out at the proposed site and details in Section 0 of this report.

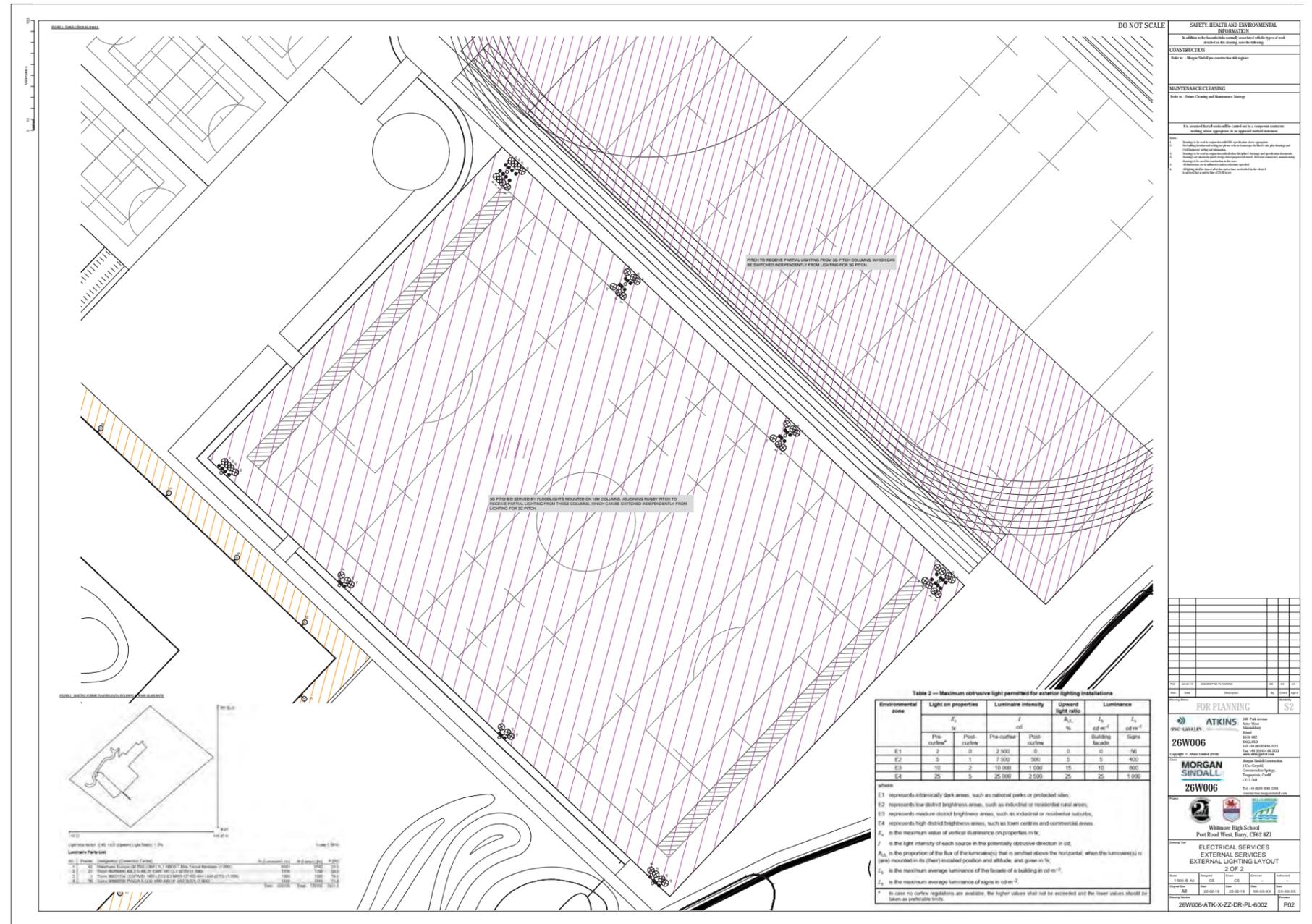
At this stage of the project, the type, quantity and location of fixed mechanical and electrical (M&E) plant associated with the Scheme has not yet been defined to allow a full noise impact assessment to be carried out. Therefore, this report sets out day time maximum plant noise limits to be achieved at the identified receptors, in Table 4. These must be confirmed with the Local Authority. Night time operation of plant is not expected.

Once sufficient information is available a full noise impact assessment is to be carried out and this report revised accordingly.



# 4.4. Lighting Strategy

There will be a full external lighting design for the project including flood lighting for the all weather pitch as shown in the image on this page.



## 4.5. Flood Consequence Assessment (FCA)

This FCA has assessed flood sources to and from the Proposed Development in context of the existing and proposed development. The Proposed Development is classified as a highly vulnerable development however the majority of the site is located within DAM Zone A, with the exception of a small area towards the south of the site which is located within DAM Zone B.

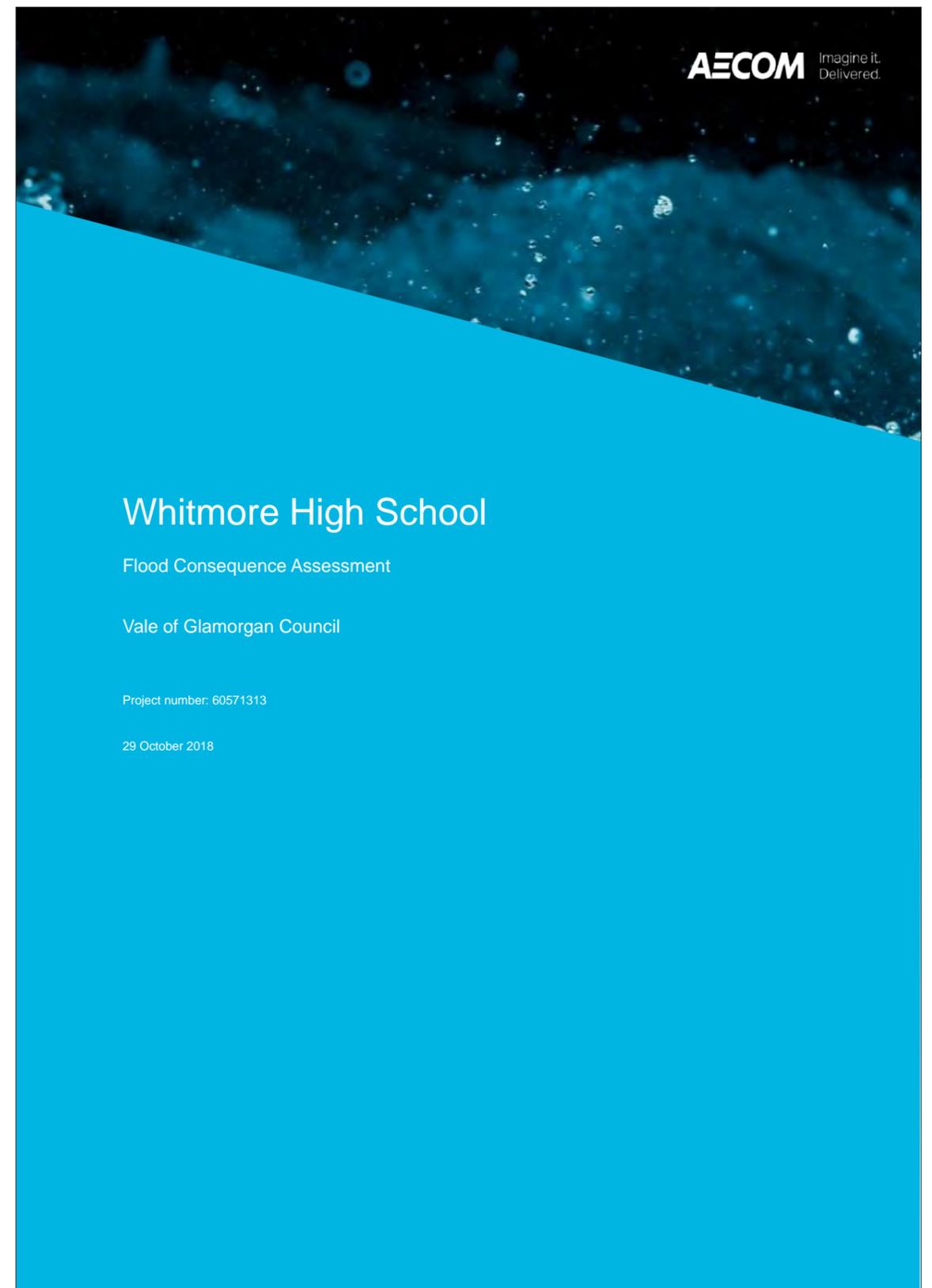
### 4.5.1. Flood Sources

The following potential sources of flooding which could affect the Proposed Development have been considered and assessed as follows:

- › The current risk from fluvial and tidal sources is considered to be low. The majority of the site is located within DAM Zone A, with a small area in DAM Zone B;
- › The risk of groundwater flooding is considered to be low;
- › The risk of surface water flooding on site is considered to be low, with the exception of small localised areas where the risk from surface water flooding is high. It is recommended that development is steered away from these small, high risk areas. Any potential off-site impacts will be addressed through a surface water drainage strategy which will be produced during the next stage of the development process once a more detailed Proposed Option is available;
- › The risk of sewer flooding is considered to be low; and
- › The risk of flooding from other sources is considered to be low.

### 4.5.2. Surface Water Management

Preliminary runoff and storage calculations have been undertaken, however these are considered conservative as they are based on the entire site area, assuming an overall impermeable area of 40%. The Proposed Development is likely to consist of minor extensions/new builds occupying a smaller area (<40%) therefore runoff and attenuation calculations should be refined once more details regarding the development are available.



## 4.6. Flood Risk & Drainage

A Flood Consequences Assessment for the site has been produced by Aecom (Ref 60571313). The assessment concludes that the risk of flooding from all considered sources is low.

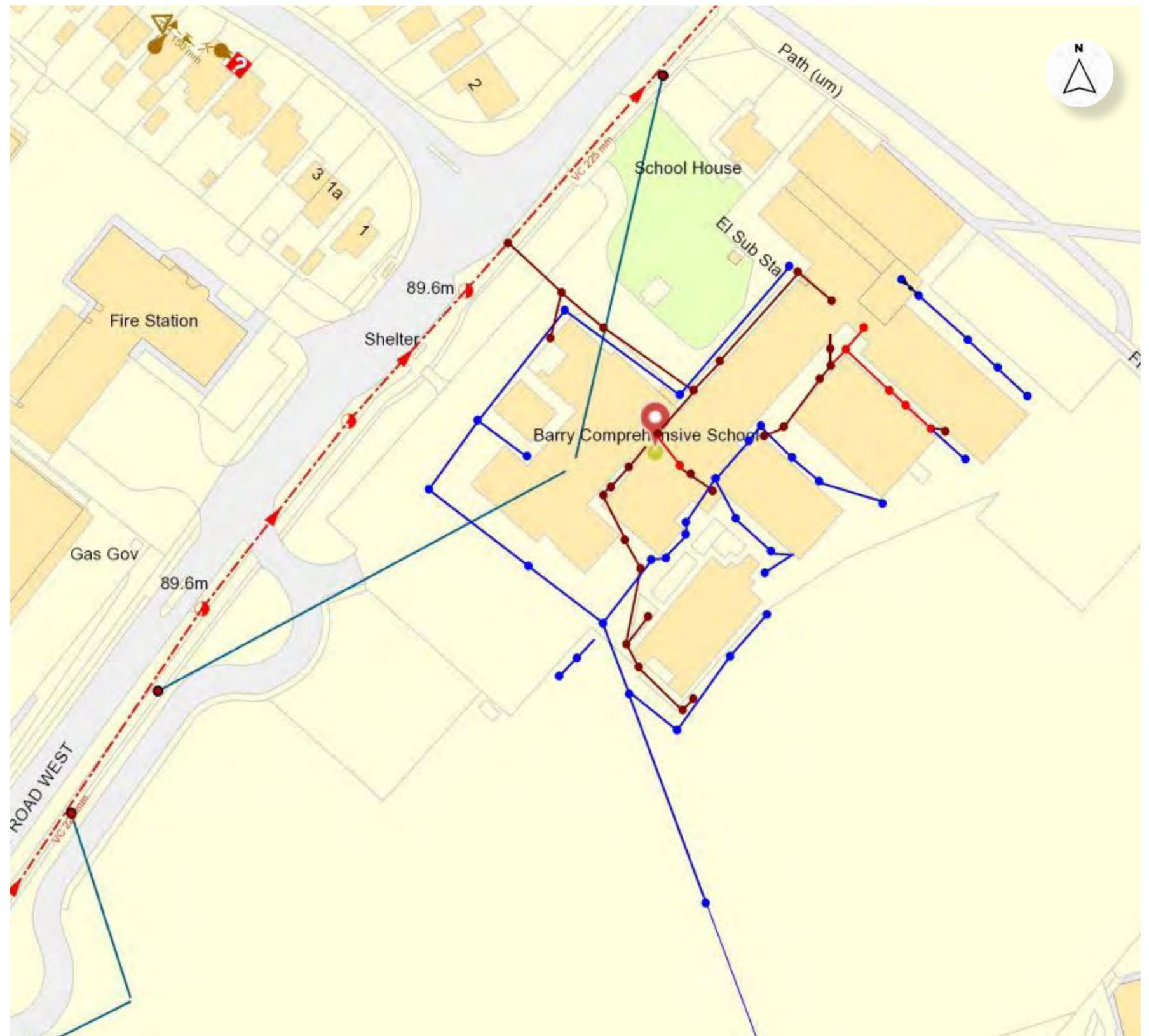
A drainage strategy has been produced separately (reference 26W006-ATK-0-X-RP-D-X-8100). A summary of relevant information follows.

The existing site surface water drainage arrangements consist of a mixed approach where parts of the site drain to a private surface water drain (that also serves Ysgol Gymraeg Bro Morgannwg) and other parts drain to the Dwr Cymru Welsh Water (DCWW) combined sewer on Port Road. Following the redevelopment of the site it is expected that all surface water will be discharged from the site via a new connection to the surface water drain.

The design of surface water drainage systems for all developments in Wales that are larger than 100 square metres must conform to Schedule 3 of the Flood and Water Management Act 2010, which is set out in the "Statutory standards for sustainable drainage systems". The development must seek approval from the SUDS Approval Body (Vale of Glamorgan Council) before construction can commence. Further detail is provided in Section 3.4.

The existing site foul drainage system discharges to the DCWW combined sewer on Port Road. The new building will not be able to make use of this connection, so a new connection point to the combined sewer will be sought. It is necessary to apply to DCWW for any connection to the public sewer under Section 106 of the Water Industry Act 1991. As the connection to the public sewer will be via a lateral drain extending beyond the property boundary, it is mandatory to first enter into a Section 104 Adoption Agreement under the Act.

Peak foul flows from the development have been calculated as 8.27 l/s. This has been based on a population of 1203, made up of 1100 students and 103 staff. Consumption of water has been based on British Water Code of Practice "Flows and Loads – 4" for school with canteen facilities which is 90 l/h/d. Infiltration has been allowed for at 10 per cent of PG.



Existing site drainage plan

## 4.7. Sustainable Urban Drainage Systems (SUDS)

In accordance with current legislation the proposed development has considered the use of sustainable drainage systems (SUDS) for surface water management throughout the site. The drainage strategy provides more in depth information on the requirements of the legislation, however it can be summarised by the need to consider the following: runoff destination; runoff hydraulic control; water quality; amenity; biodiversity; construction, operation, maintenance and structural integrity.

The contributing impermeable areas on the site are summarised below:

	Site Area (ha)	Site impermeable area	PIMP
Existing Site	6.13	1.89	30.8%
Redeveloped Site	6.13	2.73	44.5%

There is no proposal to collect and reuse water on the site (rainwater harvesting).

Ground conditions have been investigated at this site and preliminary infiltration testing has been carried out. The infiltration rate observed is  $1.1 \times 10^{-5}$  m/s. As a result, infiltration will be used as the primary destination for surface water runoff, to the maximum extent possible. Further infiltration testing is to be carried out in locations specific to the proposed infiltration systems. The CIRIA R156 methodology will be followed. Infiltration will be provided in a range of features including: swales, infiltration basins, permeable pavement, rain gardens and bioretention systems.

Flows exceeding the infiltration capability and the storage capacity of the basin are to be discharged at a controlled rate into the surface water sewer which currently serves the site. Through the use of infiltration systems throughout the site the first 5 mm of rainfall in the majority of events will be intercepted, as required in the SUDS standards.

The discharges from the redeveloped site will all be directed to the south. In accordance with the SUDS standards for previously developed sites a reduction in runoff rates of at least 30 per cent will have to be achieved.

To maximise the use of infiltration in the basin the outlet level will be raised, which ensures no discharge from the site in a 1 in 1-year event. Events exceeding this may overflow into a flow control chamber which is proposed regulate discharge to the sewer at a maximum of 60 l/s. Flows backing up from the flow control will utilise additional storage volume in the basin. The proposed maximum discharge rate represents a reduction in discharge rate of approximately two-thirds (60%) in the 2-year 6-hour event and 70% in the 100-year event. The run-off volume from the site in the 100-year 6-hour event can be reduced by infiltration to approximately 680 cubic metres with climate change uplift included in the calculation; this is around 20% less than greenfield predictions. Therefore the rate and volume predictions satisfy the requirements for brownfield sites in the standards.

To manage water quality in the receiving water course, the development will utilise source control of pollutants throughout the SUDS system in accordance with the SUDS Manual index approach.

The SUDS have been designed to contribute to the amenity and biodiversity of the site. They will provide spaces to socialise, green corridors for wildflower and ornamental planting and create variation in the landform. The story of water management will be told through the various elements. A diverse planting scheme will establish to become a valuable food and habitat refuge for wildlife.

Consideration has been given to the phasing of construction of SUDS, as the existing school facilities need to remain operational during construction.

1. Swale
2. Infiltration basin
3. Bioretention garden
4. Permeable paving



Statutory standards for sustainable drainage systems – designing, constructing, operating and maintaining surface water drainage systems

2018

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Mae'r statuten yma belyd at iaaf yn Gyrrwag. This document is also available in Welsh.



## 4.8. Preliminary Ecology Report

### Executive Summary

AECOM was commissioned by Vale of Glamorgan Council to undertake a Preliminary Ecological Appraisal (PEA) and a BREEAM Assessment of the Site of the proposed Whitmore High School in Barry, South Wales.

The assessment is focussed towards specific BREEAM Land use and Ecology Credits LE02, LE03, LE04 and LE05. The assessment includes a desk study and an Extended Phase 1 Habitat Survey. The assessment has been undertaken using BREEAM 2014 criteria.

The Whitmore High School Site is located on the former Barry Comprehensive School Site in Barry, South Wales, OS grid reference ST 10531 6916045. The Site is located within a residential area on the northern outskirts of Barry.

The proposed works are for the demolition of the existing Barry Comprehensive School and construction of a new mixed sex 11-18 school called Whitmore High School. The school will accommodate 900 11-16 year old pupils and 200 Sixth Form pupils and will be comprised of the main school building, playing fields, car parking areas, and 3G sports pitches. The Site will include a habitat area and garden. Construction of the new school building is due to commence in August 2019. The old school building will be demolished once the new school is complete, demolition will commence in August/September 2021.

The majority of the Site comprises of amenity grassland, hardstanding and buildings with areas of parkland with scattered trees, ornamental planting, rows of trees, scattered trees, intact species poor hedgerows, fences and wall.

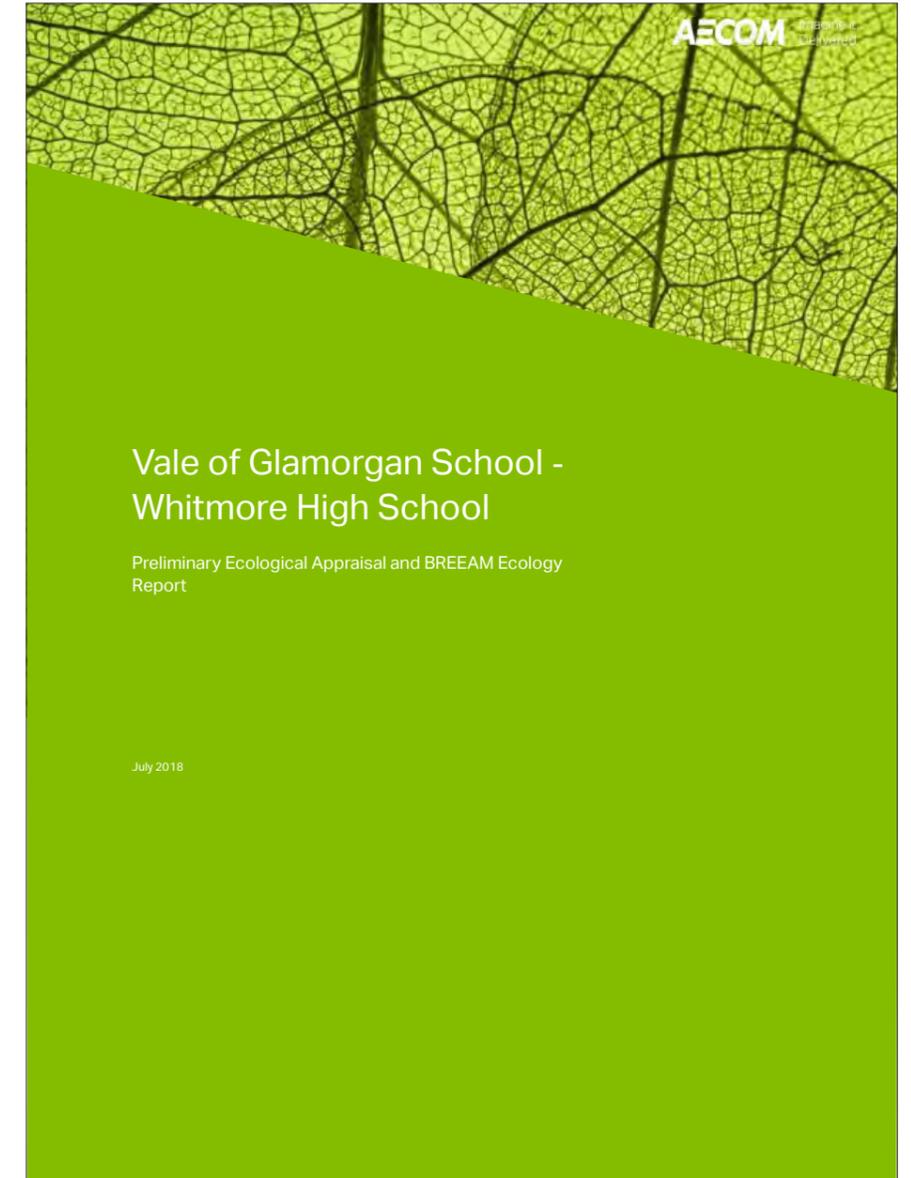
Within the Site Boundary there is potential for generalist invertebrates, breeding birds, foraging, commuting and roosting bats and hedgehog to be present. Based on Drawing Option 06b – Final Master Planning Concept provided in Whitmore High School - RIBA Stage 1 Report (issued 30/05/2018), the works will involve complete removal of amenity grassland, parkland with scattered trees, ornamental planting, hardstanding and buildings and partial removal of a row of trees along the southern boundary. Rows of

trees along the eastern boundary, standalone trees and hedgerows will be retained, however without mitigation these features may get damaged during construction. Without mitigation, there is potential for works to impact Protected and Priority species using the Site through habitat loss, injury and killing and disturbance (including external lighting disturbance). Recommendations for mitigation have been provided to avoid and reduce impacts on retained habitats and any Protected Species using the Site.

Buildings have been assessed as being suitable to support roosting bats. Bat surveys are required prior to demolition of the buildings to confirm the presence or likely absence of roosting bats. A European Protected Species License will be required if roosting bats are present and if the works will negatively impact on roosting bats.

The 'before development' BREEAM LE03 calculation is based on the Phase 1 Habitat plan (Figure 1). Calculations for 'after development' have not been calculated at this stage in the absence of a detailed development plan. The report can be used to guide Site design to achieve LE03 Credits.

As per BREEAM guidance, 'legal' mandatory recommendations are requirements for compliance with UK and EU legislation (Appendix A). Additional recommendations outline further measures which could be included to maximise the ecological value of the Site. All of the mandatory recommendations need to be completed as well as at least 6 of the 8 additional requirements to achieve the first credit under LE04. Liaison between ecologists and the architects will be required to achieve these. Some of the additional recommendations will increase species count and can count towards LE03.



## 4.9. Tree Survey Report

### 1.0 Introduction

1.1 The purpose of this report is to give an assessment as to the quality and constraints of the trees at Whitmore High School. The findings of this survey will be used to inform future design proposals, to preserve and minimise damage to the important trees on or adjacent to this site.

1.2 This report identifies the quality of the trees on or adjacent to this site as categorised by the British Standard 5837:2012, Trees in relation to design, demolition and construction - Recommendations. The survey and findings as reported here represent an unbiased third party opinion offering professional advice as to the value of the trees on this site. A Tree Constraints Plan (TCP) has been drawn, as found in Appendix 2, to illustrate the constraints identified trees pose to the design of future development.

1.3 Arboricultural constraints within the surveyed site relate primarily to the preservation of trees recommended for retention. Identified trees must be protected during the construction phase through the employment of a combination of protective barriers, ground protection zones and tree safe construction methods, designed by a suitably qualified Arboriculturist.

1.4 The trees' root systems and the associated soil structure is often overlooked during the construction process, and can be damaged or altered by compaction, causing major damage to the health of the tree. Generally, the entire root system of the tree is within the top 600mm of soil where it can be easily damaged. A calculated area of ground around the tree should be protected for the duration of the onsite construction phase. In this report it is referred to as the Root Protection Area (RPA).

1.5 No Arboricultural Impact Assessment, Tree Protection Plan or Tree Protection Method Statement are included within this report. No assessment has been made regarding the suitability of the proposed development design within this report.



Arboricultural  
ASSOCIATION  
Professional Member  
Membership No - PRO4338



ArbTS

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**Arboricultural Report**

Including:

Tree Survey Data

&

Tree Constraints Plan (TCP)

To the British Standard 5837:2012  
*(Trees in relation to design, demolition  
and construction. Recommendations)*

Date – 23<sup>rd</sup> July 2018

Site – Whitmore High School

Project Reference – ArbTS\_489.1\_WhitmoreHighSchool

## 4.10. Planning Policy

### National Planning Policy

A detailed consideration of the planning policy context of the site and an assessment of the proposals against this is contained in the Planning Statement which accompanies the planning application, but we set out below an overview of the relevant policies which have informed the application proposals.

### Planning Policy Wales (Edition 10) 2018 (figure 1)

Relevant national planning policy is contained with the 10th edition of Planning Policy Wales (PPW), published by the Welsh Government in December 2018.

The primary objective of PPW10 is to ensure that 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.

The latest edition of PPW addresses 'Productive and Enterprising Trends and Issues' acknowledges that proposals for educational uses have economic benefits and states that 'enabling training and education... supports progress towards a circular economy.'

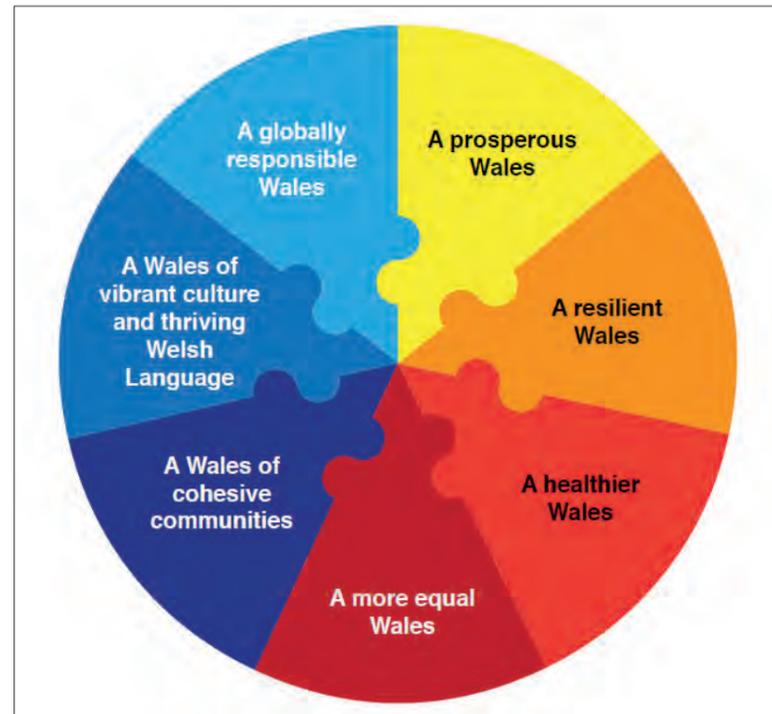
PPW10 places an emphasis on creating 'Active and Social Places.' This theme aims to ensure that new development is located and designed in a way which minimises the need to travel and reduces dependency on the private car. The proposal satisfies the 'Active and Social Places' theme of PPW10 given its proximity to the National Cycle Route 88 to the south of the site and the direct bike trail on Port Road West as well as Colcot road. There are also 65 secure cycle parking spaces proposed as part of the scheme which meets the Vale of Glamorgan Supplementary Planning Guidance requirements.

### Well-being and Future Generations (Wales) Act 2015

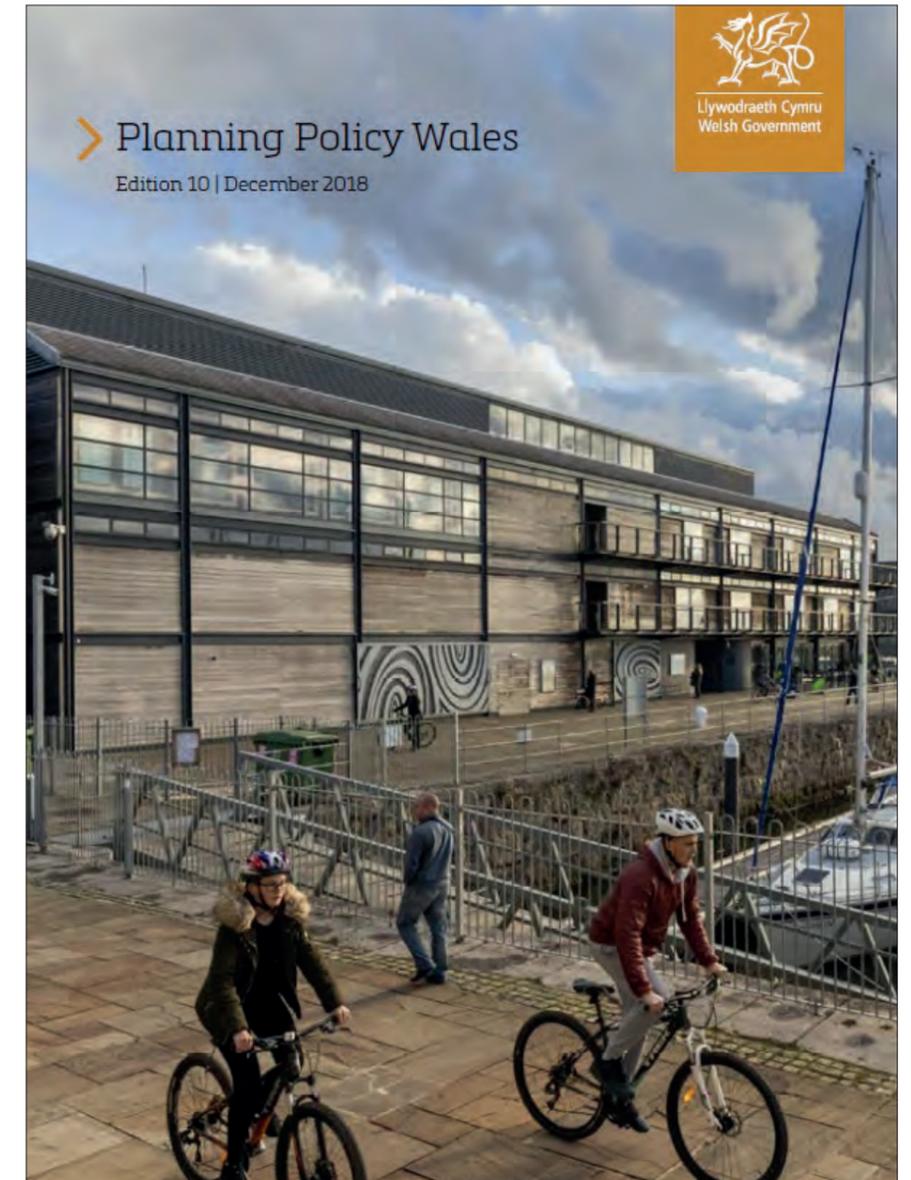
The Wellbeing Future Generations (Wales) Act (WBFG) 2015 aims to improve the social, economic, environmental and cultural well-being of Wales to achieve sustainable development.

The Act puts in place seven well-being goals (refer to figure 2) which public bodies are required to work towards achieving. A holistic approach is required to commit to these goals and not every project will meet all 7 goals. The proposal satisfies a number of the well-being goals insofar that:

- The proposal of a school promotes education and learning is a key contributor to creating 'A prosperous Wales';
- The WBFG states that a well-educated and skilled population helps to improve the economy and provide employment opportunities;
- The building will meet the BREEAM 'Excellent' accreditation, thereby supporting the goal to become 'a globally responsible Wales.'
- The sustainable design of the building also commits this project to supporting 'A prosperous Wales' as this goal ensures that development is committed to recognising global environmental limits and resource efficiency;
- A new school would help to create 'A more equal Wales' as it would help to improve education and allow pupils to fulfil their potential.



(figure 2) Wellbeing Future Generations (Wales) Act (WBFG) 2015 – 7 well-being goals



(figure 1) PPW (Edition 10) 2018 Cover

### Local Planning Policy (figure 3)

The statutory development plan for the purpose of Section 38 (6) of the Planning and Compulsory Purchase Act 2004 is the Vale of Glamorgan Local Development Plan (LDP) which was adopted in June 2017.

The Proposals Map identifies the school as being within the development limits of Barry, however does not designate the land for any particular use.

The following Local Development Plan policies contained within the LDP are considered to be of relevance to this application. All planning applications will be assessed against the Local Plan policies, which include a broad range of planning related matters:

- Policy SP1 – Delivering The Strategy;
- Policy SP10 – Built and Natural Environment;
- Policy MG6 – Provision of Educational Facilities;
- Policy MG7 – Provision of Community Facilities;
- Policy MD2 – Design of New Development
- Policy MD5 – Development within Settlement Boundaries.

In addition to the adopted (LDP), the Council has approved Supplementary Planning Guidance (SPG). The following SPG's are of relevance:

- Amenity Standards
- Parking Standards (Interactive Parking Standards Zones M)



(figure 3) Vale of Glamorgan Local Development Plan Cover:

