

“...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

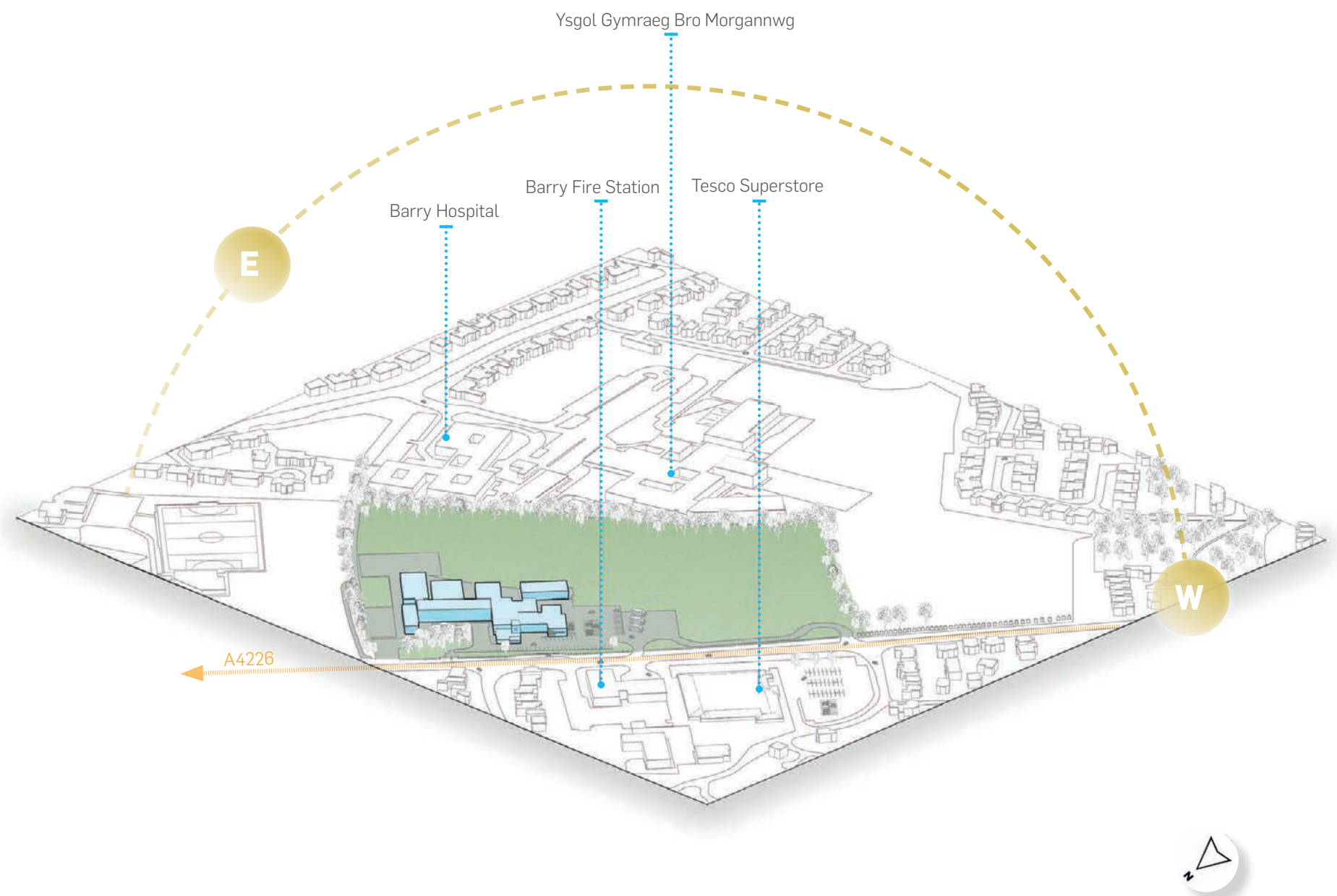
The existing school buildings are situated in the Northern corner of the site. The school has been developed over several decades and comprised of buildings of various dates, styles and materials.

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 do 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:

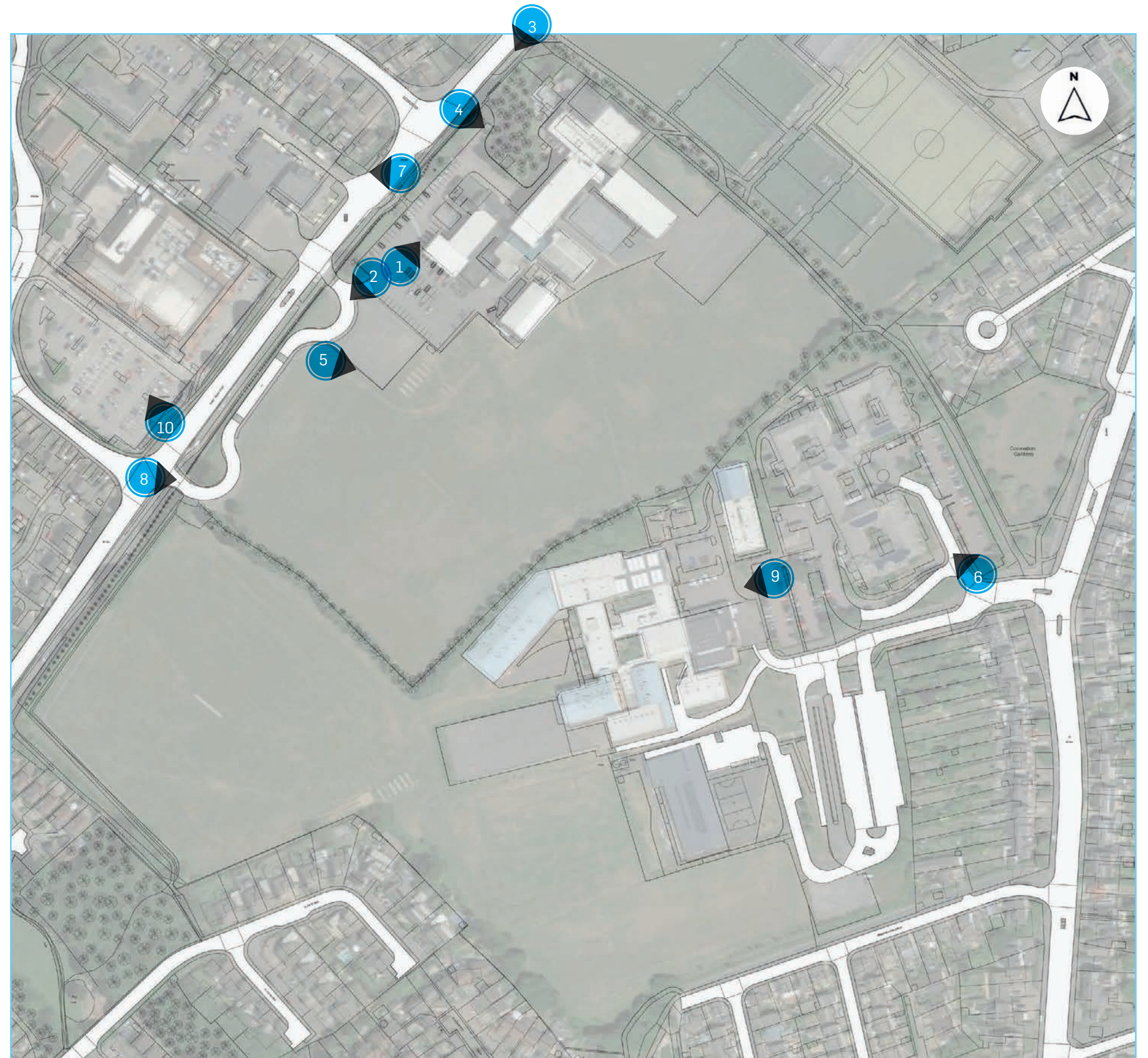
There is a bus stop directly in front of the school (Highlight Park) running routes from Bridgend, Holton, Llantwit Major, and the Airport.



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
- › a new caretaker's house located close to the front of the school site with vehicular access from the existing road loop. We have carried this philosophy into the current design.

However the proportions of the 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.

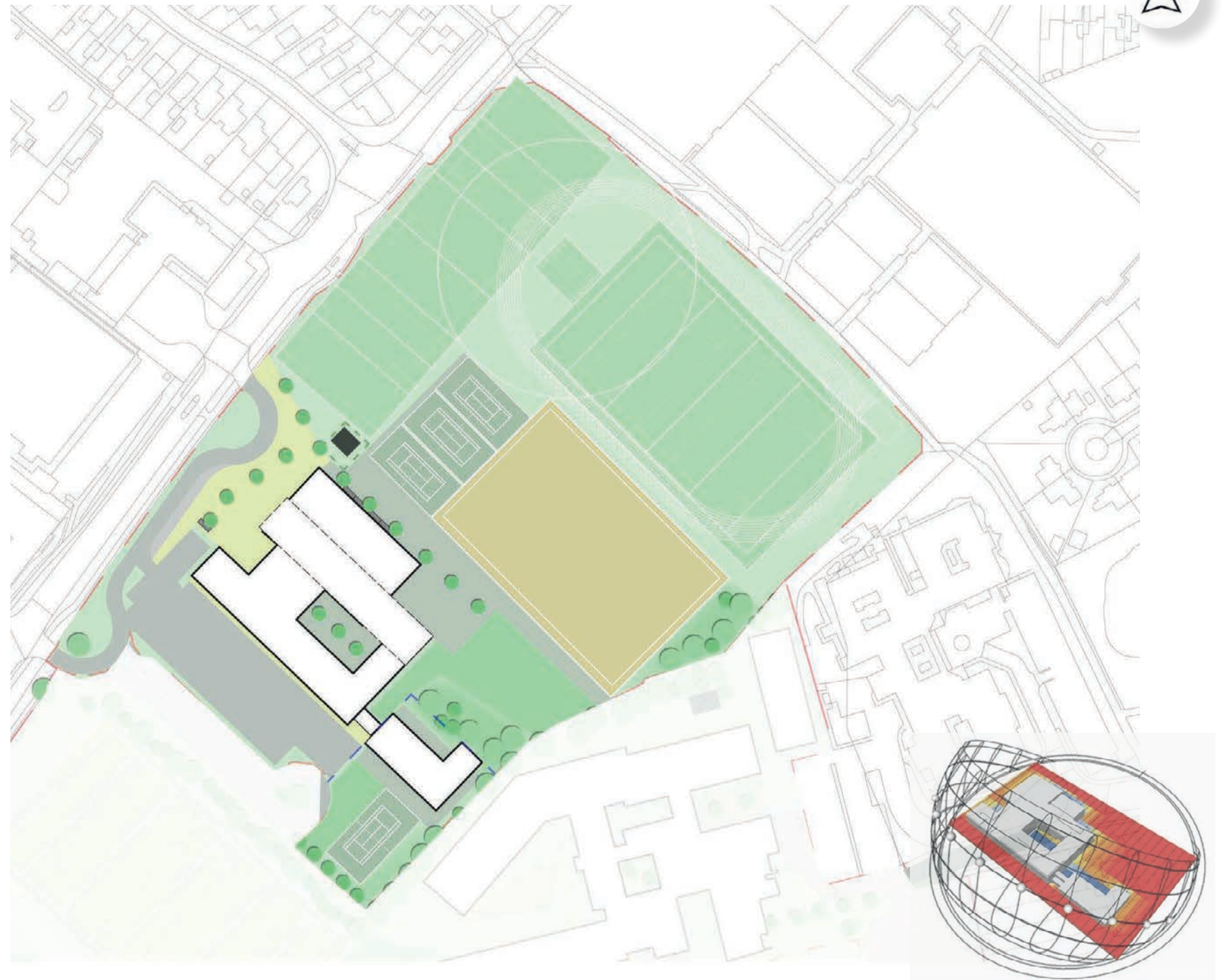


Image courtesy of HLM Architects

3.2.1. Design Development

Following initial analysis of the floor plans in the control option Atkins identified the following as potential areas for development:

- › Sports hall location - sports hall compromised the windows of science labs on second floor. Sports hall and changing rooms blank façades had a prominent position to front of building
- › Main hall located on ground floor, but away from dining which could otherwise be used for overflow
- › Narrow layout of courtyard impacting daylight in to courtyard and surrounding rooms
- › Limited circulation area around main staircase for pupils entering the building at the start of the day
- › Ground level floor to floor height can be reduced to match floors above through careful services planning

