



Design & Access Statement

Eastern High School, Trowbridge

powelldobson
ARCHITECTS

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1 Introduction

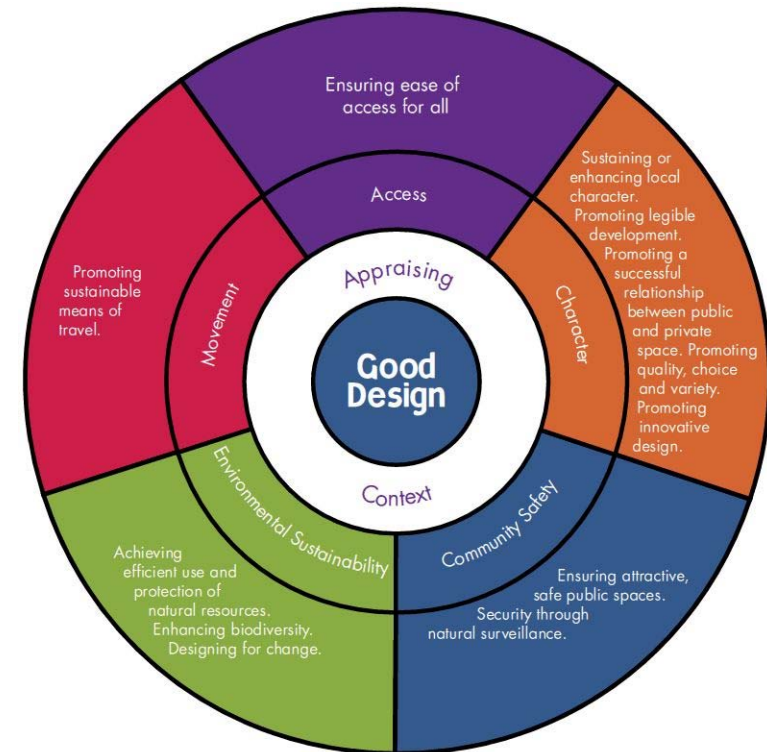
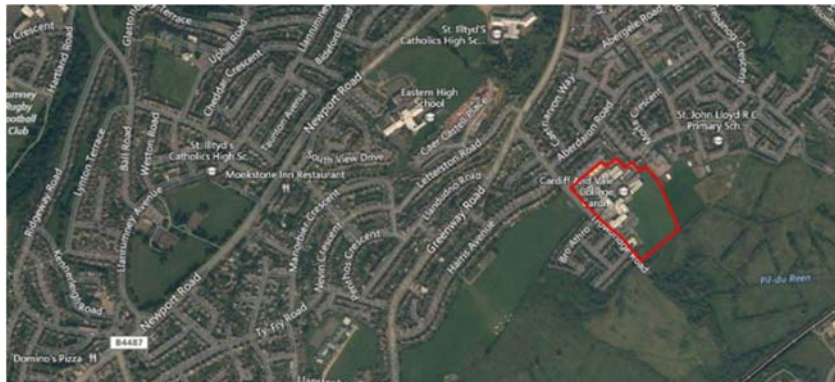
1.1 Legislative Context

It is a statutory requirement that applications for planning permission are accompanied by a Design and Access Statement (DAS), under Part 2 (7) of The Town and Country Planning (Development Management Procedure) (Wales) Order 2012.

The purpose of a DAS is to provide a clear and logical document to demonstrate and explain the various facets of design and access in relation to the Site and outline planning policy relevant to the proposal. The DAS also acts as a method of demonstrating the details of a planning application in a way that can be read both by professionals and the public.

The Welsh Government guidance on preparing a DAS, illustrates the various considerations that need to be taken into account when preparing such a document. A DAS must explain the design concepts and principles applied to the development or works and must explain the concepts and principles in relation to:

- Access
- Character (including amount, layout, scale, appearance and landscaping)
- Community safety
- Environmental sustainability
- Movement to, from and within the development.



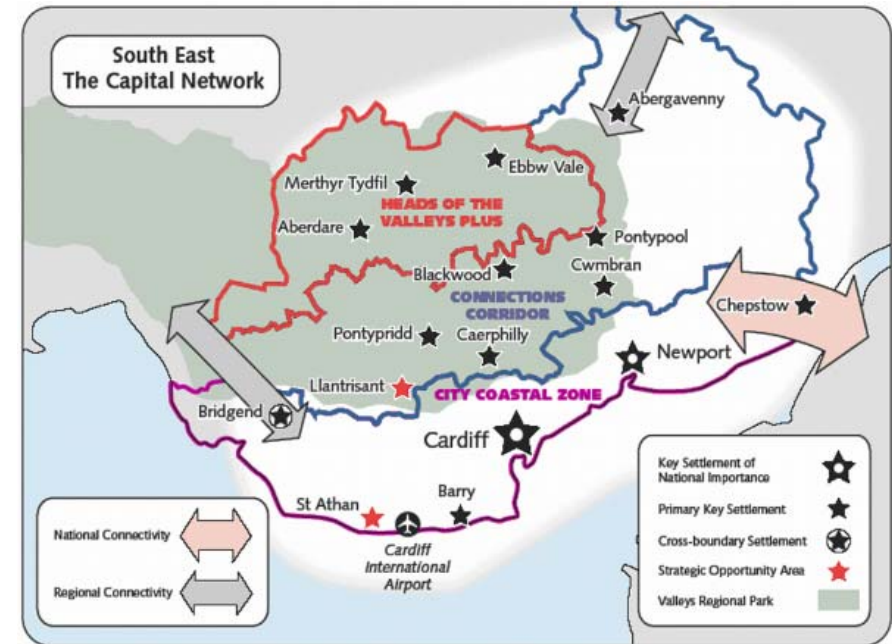
1.2 Planning Policy Framework

The planning policy framework for the determination of this application is provided by the content and scope of National Planning Policy, which is contained within the Wales Spatial Plan, Planning Policy Wales (PPW) and its associated Technical Advice Notes (TANs), together with the Development Plan for the local area.

Wales Spatial Plan: 'People, Places, Futures, the Wales Spatial' (updated in 2008) provides an overall strategic framework for the future spatial development of Wales. The primary aim of the plan is to promote sustainable development which is to be delivered through its area strategies. In this case the Site is covered by the South East Wales Capital Region, as outlined in the diagram below. The Region is described as:

'An innovative skilled area offering a high quality of life – international yet distinctively Welsh. It will compete internationally by increasing its global visibility through stronger links between the Valleys and the coast and with the UK and the rest of Europe, helping to spread prosperity within the Area and benefiting other parts of Wales'

Cardiff lies in the City Coastal Zone and is classed as a Key Settlement of National Importance. Key Settlements are identified in each of the Area Groups in Wales and are those considered likely to form the focus for the region's future development. The National Vision also identifies the area as a socio-economic hub with regional, interregional and international links and is home to a number of other key settlements.



1.3 Aim of Document

This Design and Access Statement has been prepared by Powell Dobson Architects on behalf of City of Cardiff Council (CCC) for Eastern High school, to accompany the application for full planning.

The proposed site was selected further to public consultation completed in early 2014. Pre-application consultations were also undertaken in 2014 and 2015. The full range of consultation is covered within the relevant section of this report.

The Design and Access Statement aims to record the assessment and evaluation processes that have been undertaken and from which the final design proposals have evolved. The content and format of the Design and Access Statement follows the guidelines of both the design Commission for Wales and CABE.

1.4 Executive Summary

This project comprises of the new Eastern High Secondary School incorporating Post 16 accommodation. The project includes the following facilities:-

- 1200 school pupils (8FE).
- 320 post 16 students plus vocational accommodation.
- External sports facilities including grass pitches and a 3G pitch.
- Facilities that will also be accessible to the community.
- New highways works including proposed traffic calming and a new roundabout.

The new school will be a joint facility between The City of Cardiff Council (CCC) and Cardiff and Vale College (CAVC).

The school will open the sports facilities and some internal teaching facilities to the communities for out of school core hours.



2 Assessment

2.1 Site Location and Context

The site selected for the proposed development is the existing CAVC site on Trowbridge Road. The site area is approx. 11ha and is in the ownership of CAVC and Cardiff Council.

Eastern High School (formerly Rumney High School) was opened in the 1950's alongside Llanrumney High School. Currently around 800 pupils attend the school.

The existing school buildings are in a poor condition and are falling into disrepair.

Located off Trowbridge Road, the proposed site is bounded by residential developments to the North and the South-west and by agricultural land to the South-east.

The intention is to locate the school to the north of the site (on the site of the existing CAVC buildings), retaining the open space to the South and South-east for parking/ drop off facilities and external play areas.

The proposed development will include local traffic calming measures and a new roundabout to Trowbridge Road which is currently a dead end street.



2.2 Planning Policy Wales 2014

Planning Policy Wales (PPW) – Edition 7 (July 2014) is the principal document of the Welsh Government which sets out the context for sustainable land use planning policy, within which Local Planning Authorities' statutory Development Plans are prepared and development control decisions on individual planning applications and appeals are made.

PPW is supported by topic-based Technical Advice Notes (TANs) which are also relevant. PPW sets out the land-use policy context for the consideration and evaluation of all types of development. The main thrust of PPW is to promote sustainable development by ensuring that the planning system provides for an adequate and continuous supply of land available and suitable for development to meet society's needs in a way that is consistent with overall sustainability principles.

The goal of sustainable development is described in Chapter 4 of PPW titled 'Planning for Sustainability', to:

"enable all people throughout the world to satisfy their basic needs and enjoy a better quality of life without compromising the quality of life of future generations."

Amongst other things PPW seeks to promote resource efficient settlement patterns that minimise land take and urban sprawl, locate development so as to minimise demand for travel, ensure that all communities have good quality housing for their needs and safe neighbourhoods, promote access to employment, shopping, education, health, community, leisure and sports facilities and open space.

Design is defined in PPW (paragraph 4.11.1) as:

"...the relationship between all elements of the natural and built environment. To create sustainable development, design must go beyond aesthetics and include the social, environmental and economic aspects of the development, including its construction, operation and management, and its relationships to its surroundings"

PPW (paragraph 4.11.4) emphasises:

"Good design is also inclusive design. The principles of inclusive design are that it places people at the heart of the design process, acknowledges diversity and difference, offers choice where a single design solution cannot accommodate all users, provides for flexibility in use, and, provides buildings and environments that are convenient and enjoyable to use for everyone"

Technical Advice Notes

PPW is supplemented by a series of topic-based Technical Advice Notes (TAN's) 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.

TAN 12: Design

TAN 12 provides advice on design considerations and, in relation to the design of new development it states that local planning policies and guidance should aim to ensure that:

- Create places with the needs of people in mind, which are distinctive and respect local character; promote layouts and design features which encourage community safety and accessibility.
- Focus on the quality of the places and living environments for pedestrians rather than the movement and parking of vehicles.
- avoid inflexible planning standards and encourage layouts which manage vehicle speeds through the geometry of the road and building.
- promote environmental sustainability features, such as energy efficiency, in new housing and make clear specific commitments to carbon reductions and/or sustainable building standards.
- secures the most efficient use of land including appropriate densities; and
- consider and balance potential conflicts between these criteria".

Section 5.10 of this chapter deals specifically with public buildings, and states:

"The public sector has a responsibility and an opportunity to set high standards in achieving good design in its own buildings and achieving low carbon targets or zero carbon where possible. In the design of schools, hospitals and other buildings and infrastructure intended for use by the local community the aim should be to achieve fitness for purpose, value for money over the whole life of the building, and a positive impact on the lives of those who use it and on its surroundings."

Paragraph 5.10.3 considers the design of public buildings:

"Innovative design of public buildings can act as a powerful regenerative tool and the potential for social and economic benefits associated with the design of "flagship" public buildings should not be underestimated. Similarly high aspirations should apply to local buildings which have a more direct impact on people's everyday lives."

The TAN also documents a definition of "character", which is contained within the guidance on designing in context (Paragraph 4.8).

TAN 15: Development and Flood Management:

This TAN provides a framework within which risks arising from both river and coastal flooding, and from additional run-off from development in any location, can be assessed. Paragraph 3.1 states:

"The general approach of the TAN, is to advise caution in respect of new development in areas at high risk of flooding by setting out a precautionary framework to guide planning decisions. The overarching aim of the precautionary framework is to:-

- *Direct new development away from those areas which are at high risk of flooding.*
- *Where development has to be considered in high risk areas (zone C) only those developments which can be justified on the basis of the tests outlined in the TAN are located within such areas."*

The operation of the precautionary framework is governed by a development advice map containing three zones (A, B and C with subdivision into C1 and C2) which should be used to trigger the appropriate planning tests, and definitions of vulnerable development and advice on permissible uses in relation to the location of development and the consequences of flooding.

TAN 18: Transport

This TAN requires all new schools to be subject to a Transport Assessment. It sets out the assessment process for new development proposals, which includes the production of a 'Transport Implementation Strategy' (TIS). The TIS should set objectives and targets relating to managing travel demand for the development and set out the infrastructure, demand management measures and financial contributions necessary to achieve them. The TIS should set a framework for monitoring the objectives and targets, including the future modal split of transport to development sites.

Development Plan

Section 38(6) of the Planning and Compulsory Purchase Act 2004 requires that planning application decisions should be made in accordance with the development plan unless material considerations indicate otherwise.

The statutory development plan for this site is provided in the following documents:

- Cardiff Local Plan (adopted 1996) and South Glamorgan (Cardiff Area)
- Replacement Structure Plan (adopted 1997).

A Unitary Development Plan Deposit Version was published in October 2003 but has since been abandoned in favour of producing a new Local Development Plan (LDP). However it has been given weight in appeal decisions and therefore will be reviewed in the context of this application. Cardiff's Local Development Plan 2006-2026 (LDP) has been examined by an Independent Planning Inspector, and its adoption is anticipated in November-December 2015.

Local Plan

The Local Plan was adopted on the 9th January 1996 accompanied by proposals maps. The Local Plan sets out detailed policies and specific proposals for development and land use in the city.

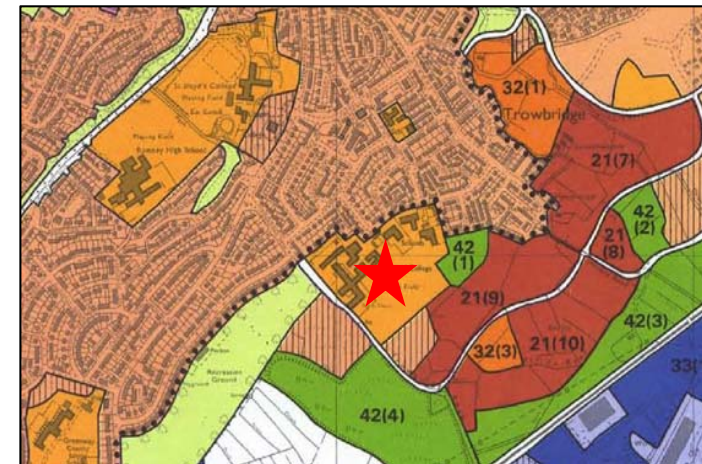
Objective 1 seeks to: *"to preserve and enhance the quality of life and environment of the city"*. This policy is relevant for this application since it is indicated in the supporting notes that this objective seeks to enhance access to and the quality of educational development within the city.

Objective 10 of the Local Plan seeks to encourage good design and policy 19 states that the design and layout of new developments will be required to retain and/or create a safe and convenient environment for pedestrians.

Policy 11 (Design and Aesthetic Quality) states that:

"All new development should be of a good design which has proper regard to the scale and character of the surrounding environment and does not adversely affect the aesthetic quality of the area"

On the Local Plan Proposals Map the site (see red star on map extract) is shown allocated as land for education purposes.



Policy 32 refers to land for educational use and reads as follows:

"Land is allocated for education use at the following locations, as defined on the proposals map:

1. West of Willowbrook Drive, St. Mellons (5.2 hectares/12.8 acres Secondary School)
2. East of Willowbrook Drive (Area 3B) St. Mellons 1.3 hectares/3.2 acres Primary school
3. South of Distributor Road (Area 12) St. Mellons 1.5 hectares/3.6 acres Primary School"

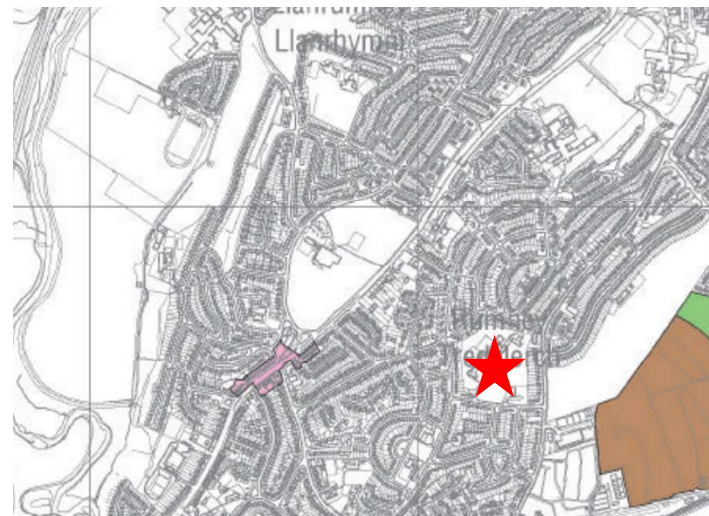
Policy 32 specifically identifies land that is allocated for educational use for the plan period up to 2001. Whilst the policy does not take account of the application site since at the time of the publication of the Local Plan, the supporting notes indicate that the Local Plan seeks to safeguard educational land, which is being accorded to within this application by retaining the site for educational uses. There is no other relevant education policy within the Local Plan.

South Glamorgan (Cardiff Area) Replacement Structure Plan

Given its publication in 1997 and therefore its largely out-dated contents, the South Glamorgan Structure Plan carries less minimal weight at present. However, there are some pertinent policies worth quoting, including policy EV1, which encourages sustainable forms of development and policy MV1, which favours developments that are well served by public transport and are easily accessible. Policy H6 'Communities Facilities' states that sufficient land will be protected within, or adjacent to residential areas and in other appropriate locations for the development of education, health and other community facilities.

The Deposit Cardiff Unitary Development Plan (deposited October 2003).

The UDP was placed on deposit in October 2003, however in May 2005, following agreement with the Welsh Government, the Council resolved to cease preparation of the UDP and commence work on a new Local Development Plan (LDP). The UDP, despite not having been adopted, remains a consideration in development control decisions until an LDP is adopted.



The site is shown on the UDP proposals map, as having no allocation, albeit is located within the settlement boundary.

The policies for schools within the Deposit UDP are similar to those in the Local Plan, as mentioned above, in that a specific land for schools policy (Policy 2.4) allocates sites for school development.

Part 1 Policy 1A provides general principles for the location of new development. It is stated that development proposals should be located:

- So as to enhance the environment where possible, or otherwise to minimise harm to it.
- To make use of redundant, previously developed land;
- To minimise travel demand and dependence on the car;
- To minimise risk of property from flooding, ground conditions or pollution;
- Where adequate community facilities and infrastructure exists or can economically be provided;
- Where neighbouring uses are compatible”.

In addition, Part 1 Policy 1B states:

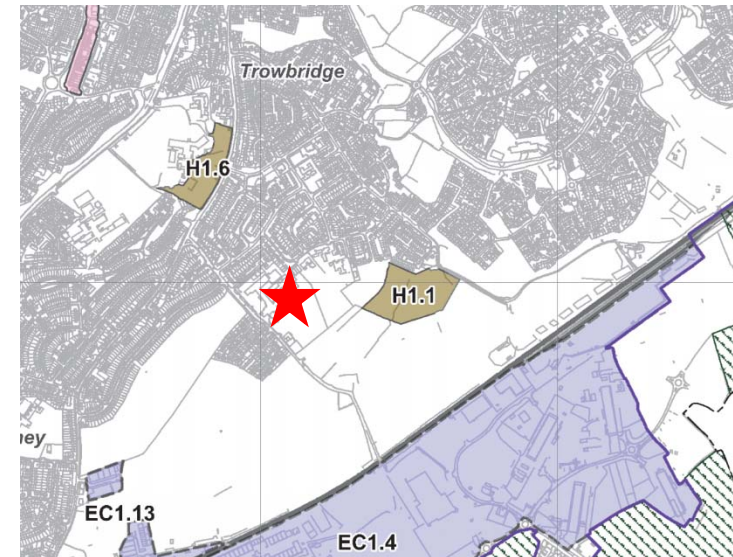
“Good design will be sought in all development”

Policy 2.20, Good Design states that:

“All development will be required to demonstrate good design by:

- Satisfactory responding to local character and context.
- Achieving a legible development which relates well to adjoining spaces and the public realm.
- Providing a safe and accessible environment for everyone who might use or visit it;
- Providing for the efficient use of resources and adaptability to changing requirements; and
- Satisfactorily addressing issues of layout, density, scale, massing, height, detailing and landscaping”
- Local Development Plan (Deposit Version October 2013)

The Cardiff LDP was placed on deposit in October 2013. It was submitted to the Planning Inspectorate for examination on 14th August 2014, and Examination procedures were undertaken earlier in 2015. It is anticipated that the plan will be adopted towards the end of 2015. Whilst the document reflects the up to date national planning policy framework and is based on comprehensive supporting evidence, it has limited status until it is pronounced sound by the appointed inspector.



Policy KP5 ‘Good Quality and Sustainable Design’ states that in order to help support the development of Cardiff as a world-class European Capital City, all new development will be required to be of a high quality, sustainable design and make a positive contribution to the creation of distinctive communities, places and spaces.

Policy C8 ‘Planning for Schools’ states:

“New and improved school facilities will be provided to meet existing and future educational needs.”

Policy C9 ‘New Educational Facilities’ is the LDP’s policy for future schools: *“Development of nursery, primary, secondary and sixth form education should:*

- Be well designed, well related to neighbourhood services and amenities, and easily accessible by sustainable transport modes; and*
- Include, where appropriate, provision for other appropriate community uses in addition to their educational use.”*

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- To make use of redundant, previously developed land;
- To minimise travel demand and dependence on the car;
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2.3

Site Opportunities and Constraints

The accompanying diagram illustrates the context of the Eastern High School site and the relationship between the site and the adjoining areas.

The diagram also illustrates the principle opportunities and constraints that the site exhibits. The opportunities and constraints inform the identification of potential development areas on the site and the appraisal of various options reviewed in this report.

Opportunities:

- Opportunity to simplify site access. There are currently 5 no site access points whether they be vehicular or pedestrian.
- Existing Cardiff and Vale College and Primary schools on site sets precedent and infrastructure for education development.
- Surplus primary school site area on adjacent land could be given over to new secondary school site.
- Opportunities to share provision with local primary schools.
- Excellent views out of site towards the estuary to the south from upper floor of new facility over existing tree tops.
- Open fields to south creates rural green edge to site.
- Urban edge to north and east creates contrast to rural land to south.
- Playing fields adjacent to site off Trowbridge road compliment school sports provision.

Constraints:

- Domestic scale massing of adjacent housing discourages over development.
- Trowbridge road, which allows vehicular access to local housing estates, will require alterations to assist service vehicle circulation.
- The sloping site has a change of level of several metres between extremities.
- Retained nursery building off Trowbridge Road and re provision of car parking constrains the use of site in this area.
- Retained workshops and secondary access to Dolgoch close contain the use of site in this area.
- Site ecology on adjacent open fields to south discourages location of buildings in its immediate vicinity.
- Potential low level background noise arising from railway line approximately 500m to south and local distributor road.
- Limited area of flood plain to south of site.

Site analysis



KEY	
	Existing off site buildings
	Existing school buildings
	Existing buildings to be retained
	Trowbridge Primary School
	St John Lloyd RC Primary School
	Potential noise from existing sources
	Acknowledge existing built form and future development edges
	Make use of principal views out of site
	Site access
	Sun path

2.4 Acoustic Assessment

As part of the 21st Century Schools programme, a collaboration between the Welsh Government (WG) and local authorities in Wales, to create and improve schools, CH2M HILL were commissioned in April 2013 to undertake a preliminary noise assessment of Coleg Glan Hafren (Trowbridge Road Campus), Cardiff. A second report in 2014 provided a more detailed examination of the acoustic issues associated with the site. The 5no locations surveyed and the noise climates for these locations were described as follows:

Location 1 – The largest existing car park, on the southern site boundary:

- Cars using the car park
- Train traffic noise from the nearby line between Cardiff and Newport
- Other noises including occasional distant aircraft, bird song and works to the west of the site.

Location 2 – The south-east of the site:

- Train traffic noise from the nearby line
- Other noises including occasional distant aircraft, and bird song

Location 3 – At the existing college main entrance adjacent to the car park (west of the site):

- Road traffic noise from Trowbridge Road

Location 4 – Northern site boundary.

- Cars using the car park.
- Road traffic noise from Dolgoch Close and Trowbridge Road.
- Students using site.

Location 5 – Western site boundary

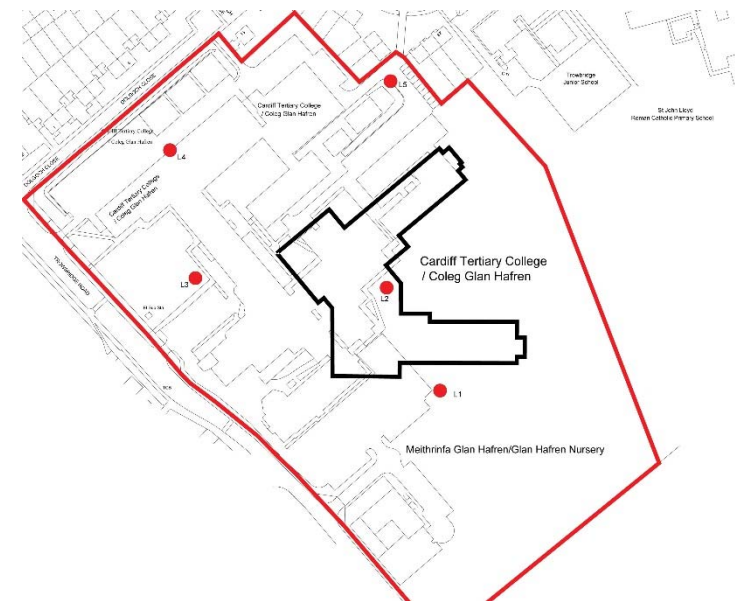
- No dominant noise.
- Distant trains and bird song.

The noise levels at 5 located were monitored over a period of time and the average background noise levels ranged between 45.7- 51.7 LAeq dB.

Mach Acoustic are currently undertaking a further acoustic survey to confirm the above readings.

Adequate protection against internal and external noise are needed for the building to be functional, to allow suitable conditions for study and work. The intended strategy is to target internal noise standards set out in both BB93 for educational facilities and BS 8233 where necessary. The building is also subject to a BREEAM rating of BREEAM Excellent.

Overall, it is concluded that with appropriately specified building envelopes, noise intrusion can be limited to provide suitable conditions for study and work within the school and emission of noise generated by future operation of the School can be controlled by design and specification to protect the existing amenity for the community in noise sensitive areas neighbouring the site.



Location of acoustic survey points with earlier feasibility study building plan shown.

3 Vision and Evaluation

3.1 Vision and Design Objectives

3.1.1 Project background

This current proposal builds on the overall educational vision for Cardiff, which has seen the development and re-provision of both English and Welsh medium secondary / post 16 education in this district. This project will also provide a first class community facility for the East of Cardiff

The brief calls for the provision of a new Secondary School incorporating Post 16 accommodation. The proposal is for a joint facility between Cardiff Council and Cardiff & Vale College (CAVC) to provide an efficient delivery of education and community facilities in the area.

A site appraisal prepared by an Architect-led team was initially commissioned by Cardiff County Council in 2014. This was included in the Invitation to Tender, which subsequently saw CCC secure Willmott Dixon's services for the design and construction of this new facility.

Powell Dobson, working for Willmott Dixon, have been engaged to design this new secondary school, prepare the planning drawings and Design and Access statement. The Willmott Dixon appointed design team, led by Powell Dobson, will complete the technical design and construction information in due course. The project is due for completion in the summer of 2017.



3.1.2 Design Drivers are:

The new Eastern High School represents an exciting opportunity to create a truly inspirational learning environment which will improve learning and teaching for all young people. Cardiff Council's ambition is one where children, young people and adults have access to high quality learning opportunities throughout their lives. In providing this in the proposed new school Cardiff Council will be able to develop:

- Successful learners, who enjoy learning, make progress and achieve.
- Produce confident individuals who are able to live safe, healthy and fulfilling lives.
- Create responsible citizens who make a positive contribution to society.

The new school will allow our pupils to:

- Attain qualifications and make the progress that reflects the expectations made of them.
- Be fully supported to reach their potential, valuing education and who are able to fully participate in community life.
- Benefit from the best possible opportunities for learning.
- Be motivated and enthusiastic learners who are fully involved in contributing to their development and to the needs of the wider community.

The new school will provide an environment that will encourage the transformation of the educational outcomes of students by providing an exciting applied learning curriculum based on progression and excellence which is relevant to the employment and social needs of the 21st century.

3.1.2. Educational philosophy.

The design solution should provide learning environments that facilitate a variety of learning and teaching models which are responsive to the individual needs of children and young people. Throughout the new school, break out spaces and larger central learning areas will be provided which can support both independent and collaborative learning. These spaces will help young people to develop personal, learning and thinking skills by providing opportunities for independent enquiry, creative thinking, reflective learning, team working and self-management.

Larger open spaces will facilitate flexible learning sessions involving mini-lectures or presentations, demonstrations, hands-on learning and problem solving. To encourage knowledge transfer, the physical environment and its ICT will encourage questioning and discussion, supporting more thematic, cross curricular delivery and project based learning where appropriate.

3.1.3. Shared Accommodation

The 'public face' will be clearly identifiable to draw the attention of both pupils and the public. The building will be welcoming to pupils from the school and college whilst creating a mature public entrance. The front of house should be designed for public use with facilities such as the cafe, activity studio and sports hall visible to the public. The careful detailing of secure lines will ensure the safeguarding of children. The front elevation will give passers-by and the wider community a glimpse of the facilities and resources on offer in order to attract community engagement. The sports facilities, Main Hall, LRC, IT facilities, meeting room and smaller interview rooms should be accessible from the central space to accommodate school and community use.

3.1.4. School and College key accommodation.

A key feature of the school will be the 'Innovation' hub which creates an exciting and inspirational environment for the teaching of subjects such as Science, Technology, Engineering and Maths (STEM). The hub will include a range of teaching environments including: traditional classrooms, group work stations, informal areas, a lecture type space, demonstration areas and self-contained staff accommodation.

A central Learning Resource Centre will be provided which can be shared between school and post 16, and out of hour's public use. The LRC will to include the opportunity for mixed media learning with a variety of work stations for group and private study.

A school shop/cafe is located to serve both the public front of house and the pupils. It will be accessible from either side of the secure line but be laid out to avoid the duplication of stock.

The dining spaces will cater for hot and cold food options as well as sandwich areas. The dining area will be designed to encourage good social interaction and provide food from both a canteen type server and less formal cafe and shop. By having multiple dining points the school can maximise the number of covers served within the lunch period. The dining area will open up onto an external area which will include covered space with seating.

The latest wireless technology and IT infrastructure will allow for a flexible and creative environment from which to teach Creative IT subjects including App development on a mix of portable and fixed devices. A number of fixed IT suites have been provided for formal teaching, but flexible spaces for the use of portable devices have been developed.

3.1.5. Playing fields and sports provisions:

In pursuance of Building Bulletin 98 and Schools Premises Regulation, the main school external site area support a range of hard and soft social spaces, habitat areas, games courts along with sports pitches. On site sports pitches include football pitches and 3G all weather floodlit pitch for school and community use. These facilities are complimented by internal school sports provisions in the form of a hall, gym and changing facilities. These provisions are located within a perimeter fence allowing appropriate safeguarding for pupils and protection of these assets during periods outside of school hours.

3.1.6. Sustainability and related objectives:

The project is required to meet the following Welsh Government conditions of grant in regards to sustainability:

- BREEAM “excellent” rating
- EPC energy rating of A
- Minimum 15% recycled content (value of materials used)
- Secure by Design.

3.1.7. Consultation and Engagement

To date the following consultations have been made:

- Initial Planning scoping meeting held with Planning Officer Tim Walter on the 28.05.14.
- Design Commission for Wales meeting held on the 17th November 2014.
- Follow up Planning scoping meeting held with Planning Officer Tim Walter on the 23.07.14
- Engagement meeting with Eastern High School Pupils held on 09.08.15
- Engagement meeting with Cardiff and Vale College students held on 24.08.15
- Pre-App meeting held with Planning Officer Tim Walter on 23.07.15 to discuss EIA Screening
- EIA Screening opinion letter issued by Asbri Planning on 9.08.15. It was subsequently confirmed by CCC planning that an EIA was not required.
- A further pre app meeting was held with Planning Officer Tim Walter and Emma Parson on 29.9.15.
- A presentation was finally given to the school Governors on the 07.10.15, held at the existing Eastern High School.

In addition to these formal consultation meetings, the school and CAVC have been extensively consulted during the design development of the scheme. In addition, focussed technical sessions have been held with planning consultees on such topics as transport and ecology.



3.3. Optional appraisal concluded.

3.3.1 Site feasibilities

Over the course of 2014, 5no sites were considered for the location of Eastern High school, subsequently the 5no sites were reduced to two potential sites, the Trowbridge Cardiff and Vale College site and the Llanrumney High School site. The Trowbridge site was considered to offer the greatest range of benefits for this project.

Trowbridge Cardiff and Vale College site



Llanrumney High School sites



3.2 Site development options.

3.2.1. Initial options:

An initial set of three options were developed on behalf of Cardiff County Council as detailed below. These were carried out to in order to appraise the site in advance of meetings with Cardiff planning department.

Option: Twin blocks angled.

- Building massing relates to both site context and East West orientation in a combination approach.

Option: Courtyard orientated due south:

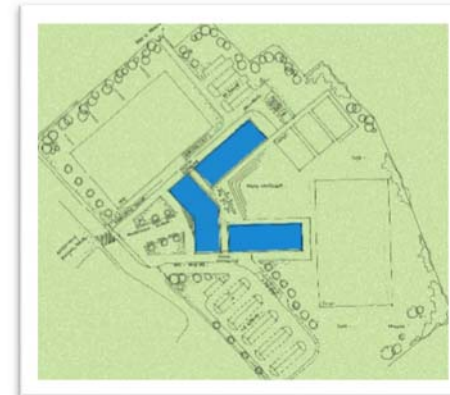
- Building massing relates to East West orientation to maximise low carbon design principles, but the building form does not relate to site context.

Option: Courtyard square to site:

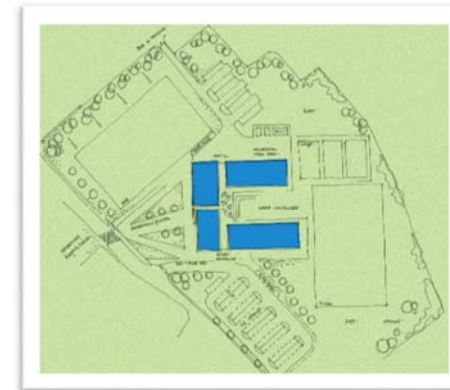
- Building massing relates to site context with the compromise being orientation.

Challenges common to all schemes area:

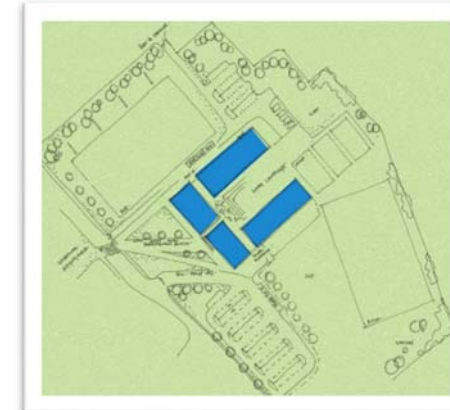
- Playing fields split by buildings.
- Car parks segregated.
- Building forms lead to areas of the site which are difficult to resolve.
- Three storey massing, while maximising site available for playing fields, gives rise to increased vertical circulation through building.
- Proposed sports provision predominantly in grass requires supplemental off site sports provision in order to fulfil statutory compliance.
- School bus and drop off area on site and in vicinity of pedestrian areas.



Option: Twin blocks angled.



Option: Courtyard orientated due south:



Option: Courtyard square to site:

3.3.2 Preferred Option:

In response to the above challenges, the preferred option currently being proposed sought to address these concerns. Key characteristics of this site option are:

- Two storey massing minimises vertical circulation for pupils and staff.
- Open “atria” for social, dining and learning resource areas creates a compact energy efficient plan form.
- Position entrance addresses Trowbridge Road with no fenced enclosure, reducing visual impact of perimeter fence on entrance, encouraging community use and creating a welcoming open entrance and approach to the school front door.
- Positioning the school in a central location on the site reduces the impact of the change in levels on the school and immediate environs.
- School positioned on site to segregate vehicular provisions from traffic free pupil area.
- Area of land to the south given over to sports, social and habitat areas.
- Area of land to north given over to car parks, deliveries and services.
- School provisions requiring deliveries and vehicular access located adjacent to service areas on the north range.
- Site access restricted to two points (down from 5 in current existing form), to improve school safeguarding.
- Creation of limited sports provision shared between secondary and primary schools via a pedestrian linkage between primary and secondary schools.
- New roundabout on Trowbridge Road to limit school vehicular access and divert traffic away from residential areas. This will allow Cardiff busses to turn in due course.
- The creation of car and bus drop off areas on Trowbridge road, segregating peak period vehicular movement from main school site.



Site plan

4 Final Design Proposals

4.1 Transport and Movement

The proposed scheme seeks to improve access to and around the site as follows:

- Segregate pedestrian and vehicular movement by limiting on site vehicle access to the north of the site.
- Create new roundabout to facilitate vehicular manoeuvring.
- Create car and vehicle pull in areas for pupil drop off, all off site.
- Limit cycle access to the areas around the main entrance for pupils and the area of the car park for staff.

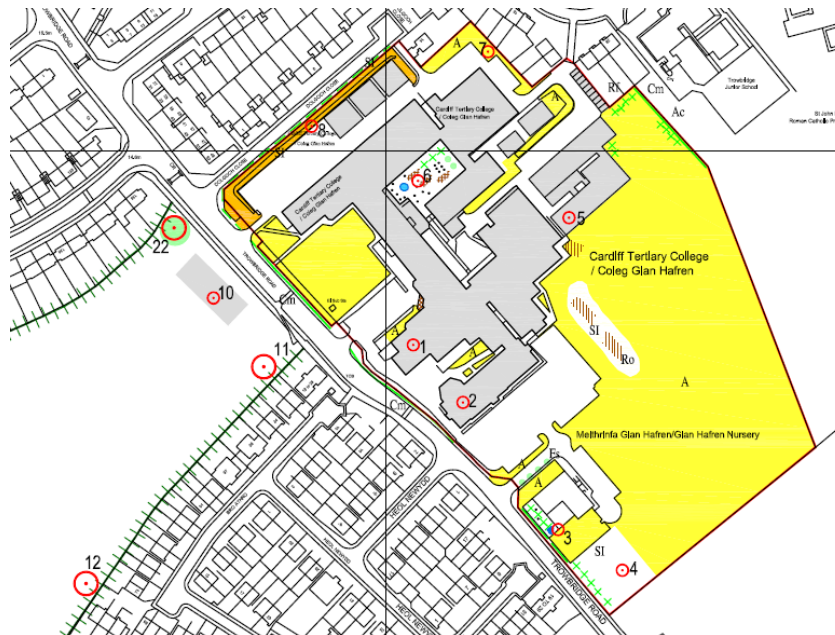


4.2 Existing Site Ecology

Soltys Brewster have completed a desktop study and Extended Phase 1 Habitat Plan for the site which has identified that the site itself is not covered by any statutory nature conservation designations but is approximately 1.9 km from the Severn Estuary SAC/SPA/RAMSAR site and less than 50m from the Gwent Levels – Rumney and Peterstone SSSI.

The Extended Phase 1 Habitat survey, carried out in August 2015, identified that the site supports a limited number of habitats dominated by buildings, hard-standing and amenity grassland. The site is bordered by a fragmented network of species-poor hedgerows with poor connectivity to the wider landscape, with the exception of the hedgerow along the south-eastern boundary. Tall ruderal vegetation, poor semi-improved grassland, introduced shrubs and scattered scrub are also distributed around the site in small amounts.

Habitats across the site are generally considered to be of low ecological value and are unlikely to support protected or notable species, including those associated with the nearby designated sites.



Key:

	Scrub - scattered		Intact hedge species-poor
	Scattered Coniferous Trees		Defunct hedge species-poor
	Semi-improved Neutral Grassland (SI)		Dry ditch
	B6 Poor semi-improved grassland		Bare ground
	C3.1 Tall kerb ruderal		Target Note
	Open Water		Boundary
	Amenity Grassland (A)		Swamp
	Building		Hedgerow and trees (species-poor)

It is acknowledged that there are areas which need to be addressed as part of redevelopment of the site as follows.

- It is acknowledged that Bat surveys have been progressed on the instruction of Cardiff City Council, to establish if bats are using existing buildings and this will be reported by others, with suitable mitigation strategies, as necessary, in relation to building demolition approvals.
- There are also known reptile populations on adjacent land, although the majority of the existing site has low potential to support these species. On the assumption that only small numbers of reptiles would be present in parts of the site (e.g. in south west corner, along southern and northern boundaries) a suitable mitigation strategy to transfer reptiles to the land immediately south (which is a SINC) is proposed at an initial stage of site works in spring/summer 2016. This has been agreed in principle with The County Ecologist.
- Woody vegetation across the site is likely to be used by a variety of nesting birds. Vegetation clearance should therefore be programmed to avoid the bird breeding season (March – August inclusive).
- The hedgerows across the site, particularly the south-eastern boundary are likely to act as locally important habitat for foraging bats and birds. It is therefore recommended that any development seeks to minimise light spill on to these habitats through sensitive design of site lighting.

4.3 Landscape Strategy

4.3.1 Existing Landscape and Context

The existing site is dominated by an existing college building and playing fields, with open grassland to the east of the current eastern site boundary. Fenced boundaries along the east and west of the site allows local open views of the campus, the southern boundary abutting overgrown scrub land, adjacent to wider sensitive habitats. The existing site has minimal landscape structure.

An Arboricultural survey was produced in January 2015 by CH2MHill identifying a number of trees on site, 12 of which are C class (not a constraint to development), and one B class tree in the far north western corner of the site. This B class tree is proposed for retention and is not a constraint to development.

4.3.2 Proposed Landscape Context

The landscape proposals include the following strategic components:

- Native woodland buffer landing along the southern boundary adjacent to ecologically sensitive habitat
- An extended site to the east, with new fence line boundary to Cemaes Community Park, Trowbridge Junior School and St. John Lloyd RC Primary School.
- New native hedge planting along the western external social play as a privacy boundary between public highway and secure school areas.
- Native landscape buffering abutting retained residential boundaries and Trowbridge Junior School to the east.
- Structural and feature landscape to external social play spaces
- Feature tree planting to the main site frontage and Public Realm entrance to the School.
- Replacement trees to general external areas.
- Feature mounding is proposed with external social green space.



4.4 Sports Provisions

The following schedule summaries the proposed external playing field provision, which includes a new 3G football and hockey pitch, full size grass rugby pitch, Baseball Diamond, 100m Athletics track, one kick board MUGA and 4 Netball/Tennis Courts.



Sports provision and indicative landscape and boundary treatment.

4.5 External Lighting and CCTV Philosophy

4.5.1. External lighting

The external lighting within the school's boundary will be designed and installed to provide adequate illumination of vehicular routes, pedestrian walkways permanent car parking areas and fire escape routes with minimal light spillage onto boundary hedges and adjacent neighbours.

The external lighting system has been designed in accordance with CIBSE Lighting Guide 6. The external lighting strategy shall be designed in compliance with Table 1 of the ILE Guidance Notes for the Reduction of Obstructive Light.

Luminaires will be selected to give 0% upward light distribution and will have optical controllers to minimise any horizontal light emission at an angle greater than 70°. The controllers will be selected to give forward and sideways distribution to reduce over-spill light at the site boundary onto hedgerow, wet-ground areas and areas designated for wildlife to minimise the influence of artificial light on the movements of bats and other wildlife.

Lamp sources will be energy efficient high output LED sources to minimise power consumption and to reduce ultra violet emission which attracts insects which in turn disturbs the normal feeding movements of bats.

Glare to neighbours of the site will be considered and luminaire mounting heights will be kept as low as possible to avoid direct vision into the lamp source of the fitting from distant locations.

Pole mounted fittings facing into the site with minimal backwards light distribution will be installed to ecologically sensitive boundaries. Building mounted luminaires facing neighbours will be mounted at first floor window sill height to reduce direct glare towards neighbouring property and to avoid glare into first floor windows.

Floodlighting to the sports pitches will be via 16m columns with high output Metal Halide sports flood lights mounted and angled to efficiently illuminate the pitches.

4.5.2 Controls Philosophy

External building mounted and car park lighting shall be controlled via photocell ON/timelock OFF automatic control. The system(s) shall also be provided with a manual ON/OFF/AUTO override control facility adjacent to the corresponding distribution board. Sports

Flood lights shall be manually controlled

4.5.3. CCTV

CCTV will be provided to external areas to monitor carpark areas and building elevations including all entrances/exits.

Carpark CCTV cameras shall be fixed IP65 Vandal Resistant Dome type mounted on dedicated columns.

Building elevation CCTV cameras shall be fixed IP65 Vandal Resistant Dome type building mounted cameras.

All cameras shall be IP type.

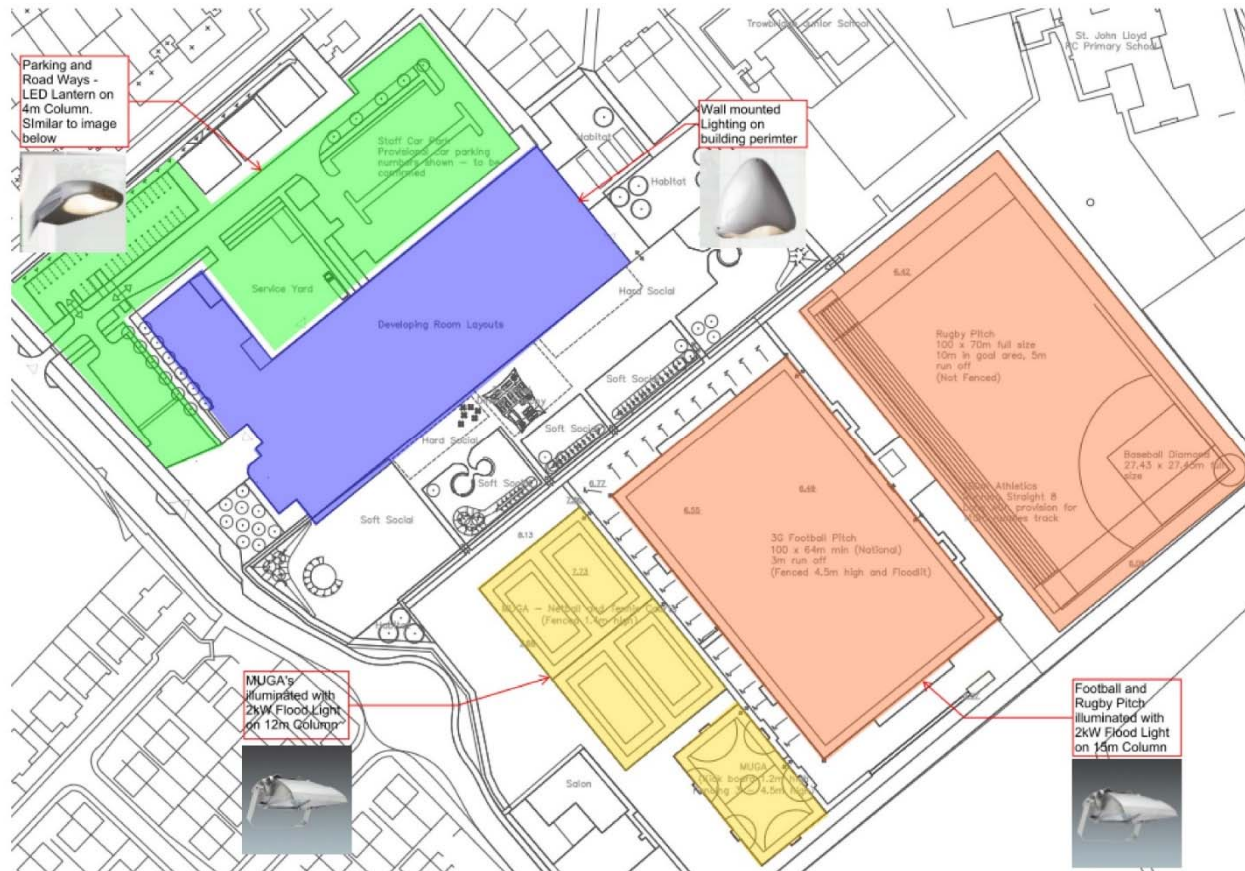
Recording equipment shall be located internally within the buildings Comms Room, with playback facility at the main reception.

Please refer to technical drawings for details of lighting and CCTV.

4.6

Demolitions and Tree Removals

The demolition of the existing buildings and the site clearance is being undertaken under a separate contract directly by the City of Cardiff Council.



Lighting design principles including floodlighting, car park and building mounted lighting.

4.7 Scheme Design

4.7.1 The brief for the site.

The overall new Eastern High School building totals approx. 11232m² Gross Internal Floor Areas accommodation and replaces the existing Eastern High School and the Cardiff and Vale College.

The site area is 59820m² which includes:

- Hard landscaped social space.
- Soft landscaped social space.
- Habitat for nature and ecology.
- An All-Weather 3G floodlit pitch (ATP).
- Multiple use games areas (MUGA).
- Courts for racket sports.
- Rugby pitch.
- Staff and visitor car parks.
- Service yard.
- Entrance plaza.

The application also covers the works to Trowbridge Road necessary for the implementation of a new roundabout layout.

The works associated with the existing nursery and workshops do not form part of this application and is excluded from the overall above site area.

The new works will be implemented as a single phase. The existing college buildings will be demolished under advanced works undertaken by CCC. The permission for all the building and tree/vegetation demolitions required in advance of this project have been obtained separately by CCC.

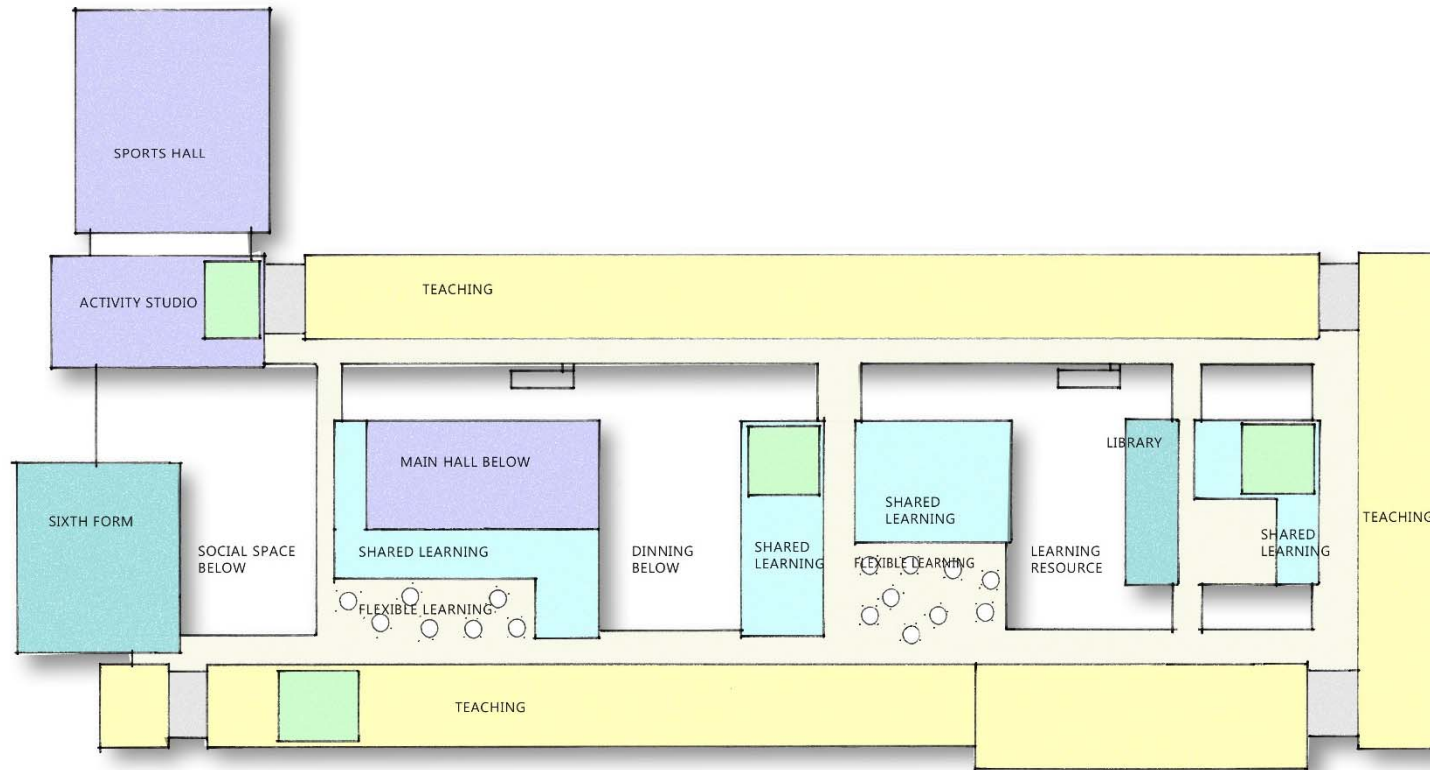


Proposed site layout.

4.7.2 The brief for the building.

The school building is located over two floors with the key building elements being:

- Specialist teaching classrooms such as Science, Technology and Maths.
- Teaching class rooms.
- Flexible teaching / learning spaces.
- Learning resource areas.
- Dining area and associated kitchens.
- School hall and supporting drama facilities.
- Sports hall, gym and activity studio.
- Ancillary staff and teaching support areas.
- Dedicated 6th form provision.
- Specialist SEN and inclusion provisions.
- Cardiff and Vale College shared resources.



Building diagramme at first floor.

4.7.3. The Response

The concept for the school responds to the key briefing issues in the following ways:

- The building is welcoming to pupils from the school and college whilst creating a mature public entrance. The glazed two storey entrance is transparent, the architectural language is contemporary, crisp and energised.
- The internal architecture is deliberately open with multiple double storey spaces giving a sense of arrival and place. Connections between these spaces are wide. Conventional corridors are avoided.
- The facility provides learning environments that facilitate a variety of learning and teaching models. Key teaching areas are given a high profile and location within the school.
- Science Technology Engineering and Maths (STEM) teaching areas are positioned at the front of the building, visible to the public both internally and externally.
- The nett effect of the above initiatives are:
 - The school is an inspirational learning environment.
 - The building places all learning opportunities on show, in a form of shop window facilitating educational achievement.
 - School has a legible wayfinding strategy and is easy to navigation.
 - The school facilitates passive supervision and minimises bullying.
- The front of house has been designed for public use with facilities such as the cafe and restaurant, activity studio and sports hall visible to the public.
- The lines of security both externally and internally ensure the safeguarding of children, while giving reasonable access to the public.
- The front elevation gives passers-by and the wider community a glimpse of the facilities and resources on offer in order to attract community engagement.
- The sports facilities, Main Hall, LRC, IT facilities, meeting room and smaller interview rooms should be accessible from the central space to accommodate school and community use.



4.8 Movement

Pedestrian arrival will concentrate on Trowbridge Road, as would those pupils arriving by coach or indeed being dropped off by car.

Pupils cycling to school will have access to a secure cycle storage which is accessible from the plaza, having secured their cycle they would access the school via the main entrance on Trowbridge Road.

It is envisaged that all pupils will enter and leave the school at the beginning and end of day via the main entrance, as such the entrance foyer and draught lobby has been suitably sized to facilitate the large volume of people trafficking this area at peak periods. The main entrance also functions as a visitor and community entrance effectively becoming the front face of the school.

Staff arriving by car would enter the car park through the secure gate. Upon parking staff can enter the building through one of two secondary entrances adjacent to the car park. Staff cycling to work can store their cycles in a dedicated provision which is located near the staff car park. They can gain access to the building using the above secondary entrances in a similar manner to staff arriving by car.

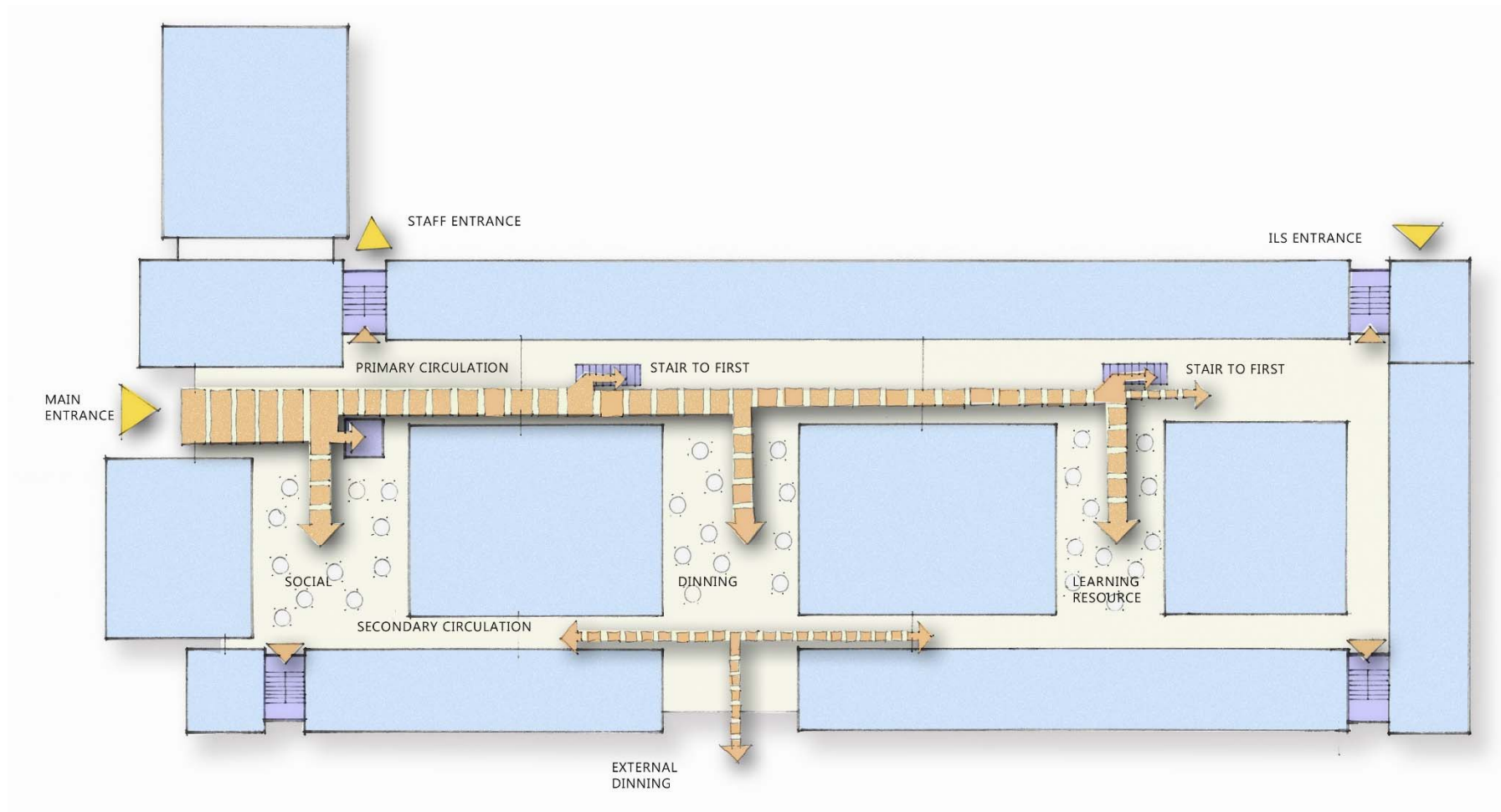
A separate entrance is provided for the Integrated Learning Skills Suite (ILS) for reasons of security, and safeguarding.

Circulation at ground floor is focussed on the axis leading directly from the main entrance, through the three major spaces. A secondary circulation route is mirrored on the south range of accommodation. Upon arrival at one of the three atria (the social, dining or resource areas), pupils can move into the space to access the primary function of the space (ie dining), or traffic through the space to access cellular accommodation off this space (ie drama).

The principle means of accessing the first floor is via one of two stair cases located on the primary circulation street. These stair are intended to take the majoring of the student circulation and are located in a public area where there is an excellent level of passive supervision. The lift at reception compliments the stairs allowing visitors, pupils and staff access to the first floor and is a generously sized lift car suitable for a range of DDA accessibility requirements. There are a further four stairs, located one at each corner of the building. These fire escape stairs are also available for use to supplement the capacity at peak periods and provide a more direct route between class rooms during break periods.

The pupil social and playing fields can be accessed by either the changing area or via a large range of doors connecting the internal and external dining areas. The stair cases to the south range also offer opportunity to gain direct access to these social spaces from first floor or areas of the ground floor remote from the dining area.

The changes of level in the areas of the playing fields require paths which have been graded to provide suitable DDA access.



Movement principles.



Proposed Site Plan.

4.9 Layout

4.9.1. Ground floor layout:

The building is rectangular in form with a continuous ribbon of accommodation around the external edge, maximising passive low energy opportunities for this predominantly classroom based area of accommodation. Three double height spaces are separated by three cores which, due to their transient occupation and highly mechanically serviced nature, can be located in a more central location.

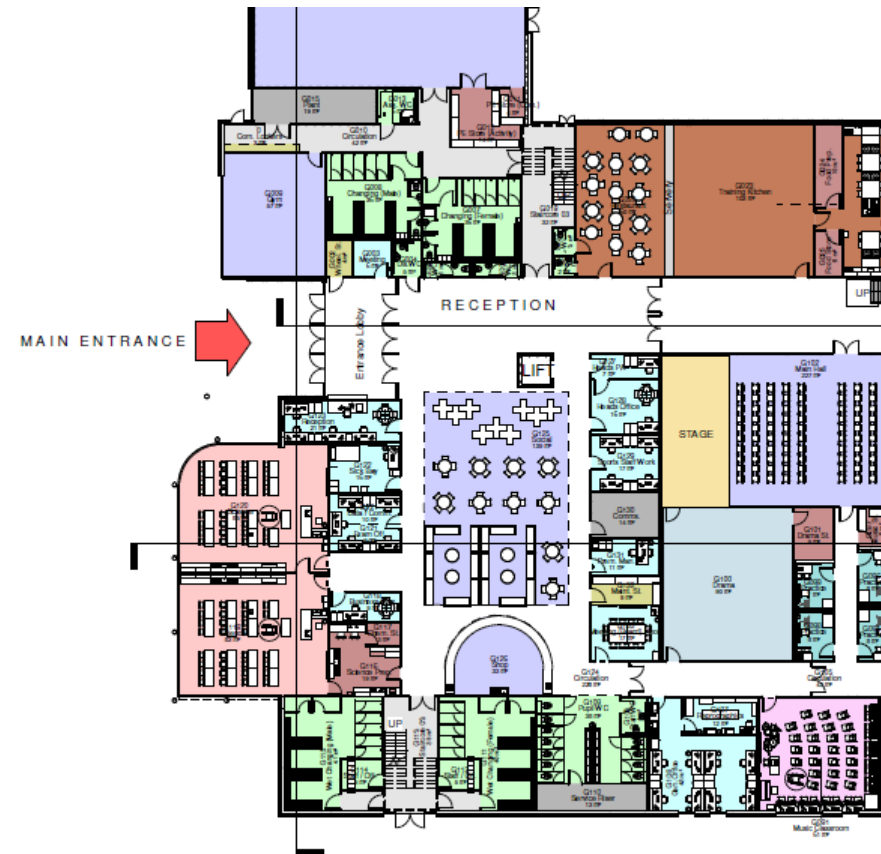
The tall sport hall is expressed as a standalone single storey form, which broadens the public elevation to Trowbridge road and architecturally "shields" the view towards the service yard and delivery areas.

Upon entering the building a cluster of public facing accommodation is located around the first of the three double height spaces, which contains the reception and social space. The public facing accommodation such as the sport hall are complimented by staff administration areas.

The first core houses the school hall and drama department with the music department in close proximity.

Leaving the reception through the glazed doors and security line defining the end of the public facing accommodation, the second double height space is arrived at which houses the dining facilities. The main hall, kitchen facilities and seminar spaces flank this space. Access direct to outside can be gained via the dining area. An external canopied dining area compliments the internal provision.

The final double height space houses the Library, Learning resource and ICT teaching provision over two floors.



Part extract of ground floor.



Proposed Ground Floor Plan.

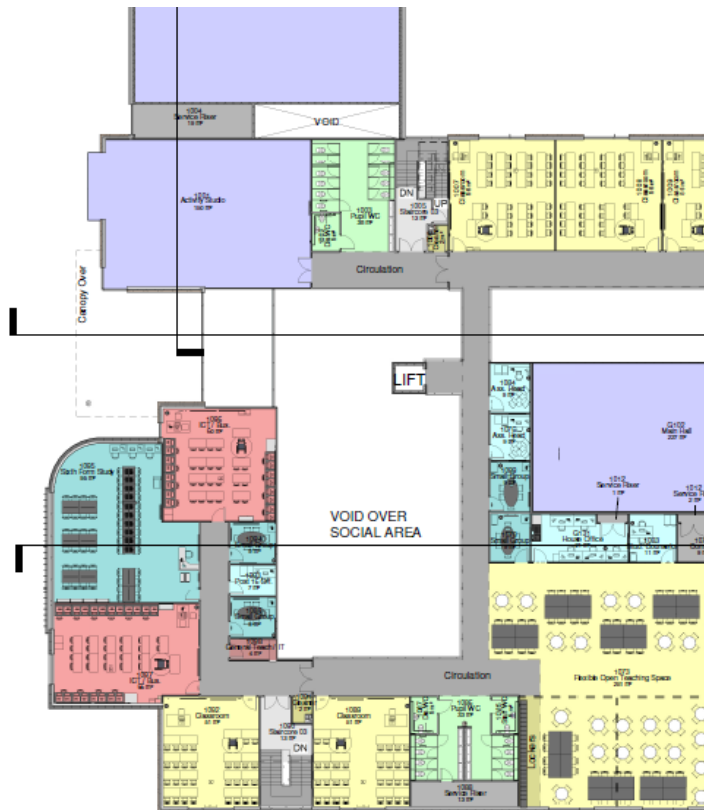
4.9.2. First floor and roof layout:

The layout of the first floor replicates the ground floor with the exception of the double height spaces which appear as voids. The balconies overlooking these atria and streets about the classes on all four wings of the facility. Links between the north and south ranges are located by additional balconied walkways in three locations which cross the atria and giving access to the central cores.

In addition to the learning resource, the teaching accommodation at first floor include standard classrooms, art and the sixth form areas.

Community access is also given to the activity studio at first floor which is located in a prominent location alongside the main entrance.

The roof of the double height atria is perforated with roof lights and natural ventilation wind catchers which provide a passive low energy solution to these areas.

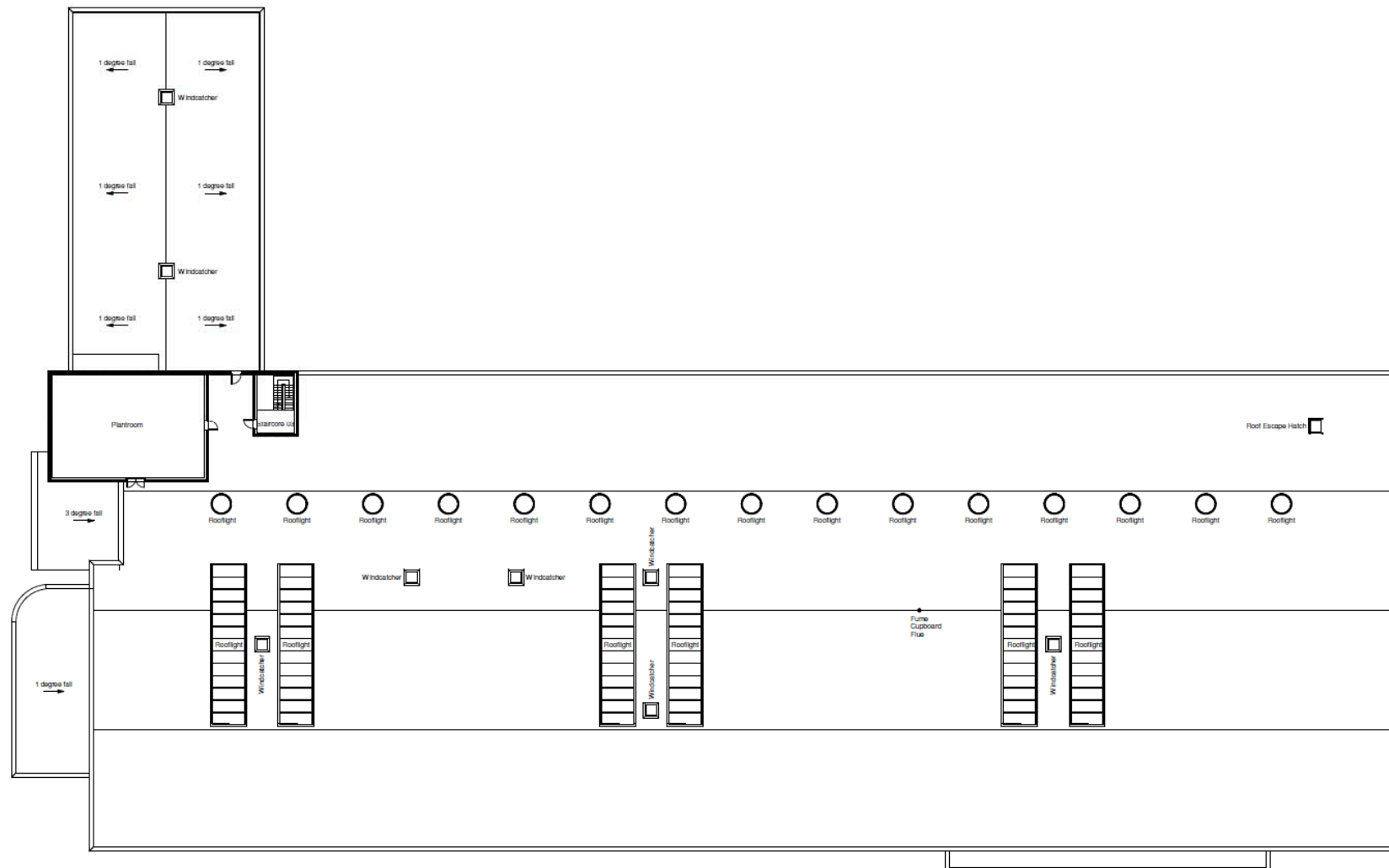


Part extract of first floor.



Proposed First Floor Plan.

Proposed Roof Plan.



4.10 Appearance

The building is articulated in two masses. The main building is consistently two storeys, with limited roof top plant rooms. The second mass being the smaller sports hall. The larger form of the school subdivides the site into a loosely defined staff / service area to the north and a pedestrianised pupil social area to the south. This simple territorial treatment is enriched by the adjunct of the sports hall which effectively extends the frontage to Trowbridge Road and conceals the service yard to the rear.

Three of the four building elevations which contain the teaching accommodation are treated simply in brick. The character of these elevations are derived from the interplay of solid and void. Glazed elements create regular and random patterns as the glazed fenestration change to reflect the function of the rooms in which they occur. The art department at first floor is expressed as a rendered cantilevered form which breaks up this façade and expresses the specific functional and spacial requirements.

The principle elevation presented to Trowbridge road is elaborated through a series of architectural interventions which enrich the composition, express the community use, celebrate the STEM teaching area and announce the main school entrance. The resulting composition is intended to be timeless, enduring, welcoming, sophisticated and inspirational.

The public facing accommodation such as the gym and activity studio are located on the main frontage and adjacent to the main entrance to increase awareness of the facilities and encourage its use by the community. Glazed oriel windows and corner windows give oblique view into the spaces and announce the entrance.

The double height glazed entrance screen is complimented by a high level canopy which reinforces the visibility of the entrance when viewed from Trowbridge Road. Key technical teaching areas such as the Science, Technical and Mathematics (STEM) have been again located alongside the entrance, with a very transparent visual treatment to celebrate education and encourage attainment.

The sixth form stud area and ICT suites are housed in a curved projecting form, which is treated in white render to accentuate this feature on the entrance façade.

The very different nature of the sports hall with its predominantly unglazed walls, are justifiably treated in a contrasting language and materials. Its high profile location on the main approach also reinforces the desire for a different and high quality treatment. Vertically banded rain screen cladding is punctuated by limited vertical glazed slots. The form also affords bold signage opportunities while an injection of colour in the window reveals combine to create a sophisticated architectural treatment far removed from the institutional school buildings of previous generations.



Visual appearance of main entrance



Precedent images suggesting use of proposed materials



North East Elevation.



South West Elevation, main entrance viewed from Trowbridge Road



North West Elevation, view from staff car park



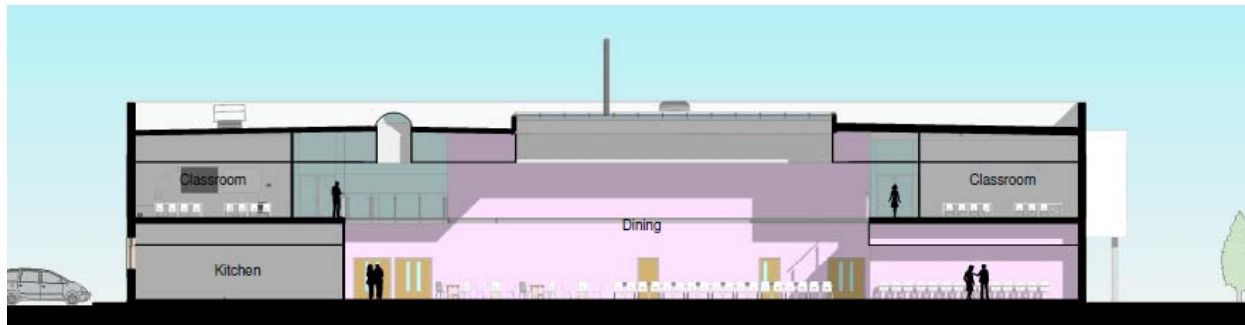
South East Elevation.

Proposed Elevations.

Proposed Building Sections.



Section at main entrance through sports hall.



Section through dining hall



Section through entrance and circulation "street"



Computer Generated Image: View towards main entrance from Trowbridge road



Computer Generated Image: View from Trowbridge road.



Computer Generated Image: View from social play areas.

4.11 Community Use

The school entrance and main frontage is located directly off Trowbridge Road. The perimeter fence is omitted in the area of this key frontage, the building effectively creating the line of security in this critical public facing area. The resulting entrance is welcoming and open to the community without the need to navigate through car parks or security fences.

The plaza linking the entrance to Trowbridge Road, leads pedestrians into the school, while the accessible car park, located off this plaza is available to visitors during both school periods or out of hours.

The school is laid out internally to give secure access to the community with the facilities most commonly used by the community closest to the main entrance. Facilities anticipated being used by the community frequently are:

- The sports hall.
- The gym.
- Activity studio.
- Restaurant associated with the training kitchen.
- Changing facilities.
- Social space adjacent to the reception.

The above facilities can be accessed direct from the main reception without the need to cross the glazed access controlled security line, which services to the teaching provisions beyond.

Other facilities beyond this secure line can be made available to the public as and when needed, however it is anticipated that their use by the community will be less frequent. These facilities include:

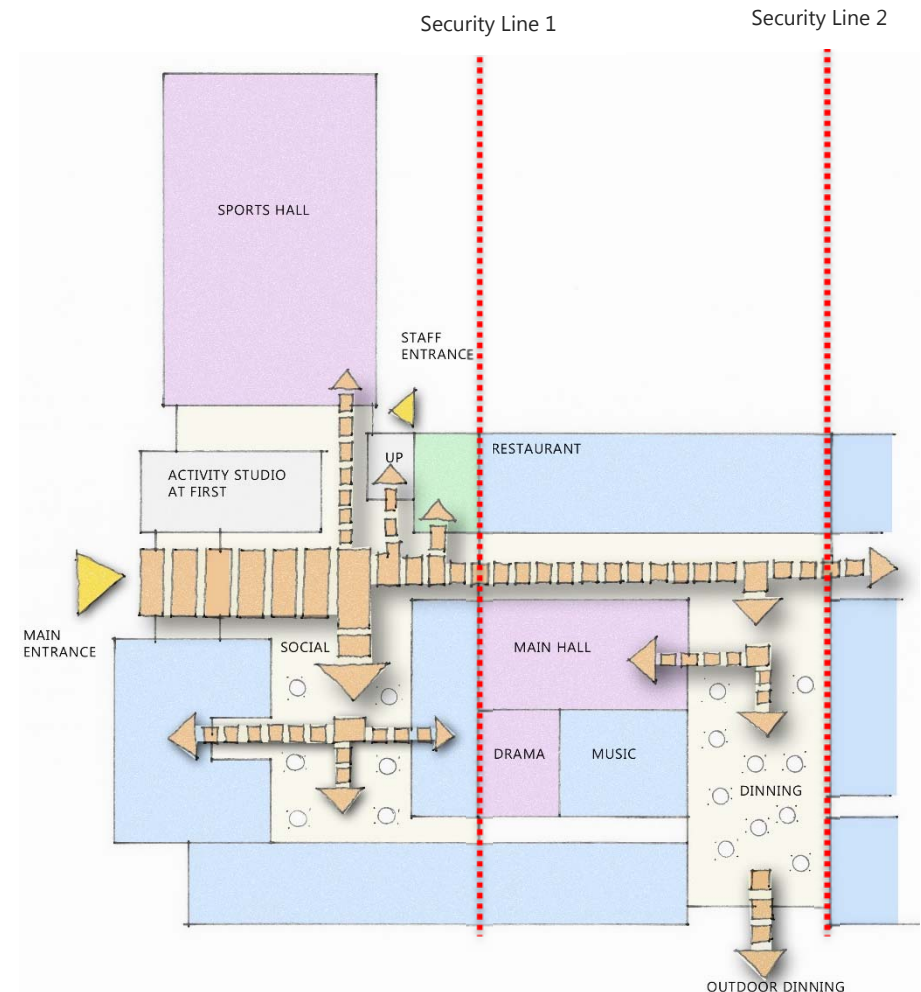
- Main hall and associated performance spaces.
- Dining facility in association with the school hall.

Teaching class rooms can also be made available by arrangement.

Passive supervision and avoidance of bullying creates an open and spacious school for the pupils. This approach also benefits the community.

Circulation routes are wide and generous as are the lifts and stairs giving access to upper floors.

The external playing fields can be accessed from the dedicated changing rooms linked to the externals, these fields are terraced down the sloping site, with DDA compliant paths linking these fields back to the school.



4.12 Environmental Sustainability.

In pursuance of the BREEAM "Excellent" and wider Welsh Government conditions of funding, the following sustainability initiatives are currently being sought:

Our low carbon design philosophy is rooted in the following three stage approach:-

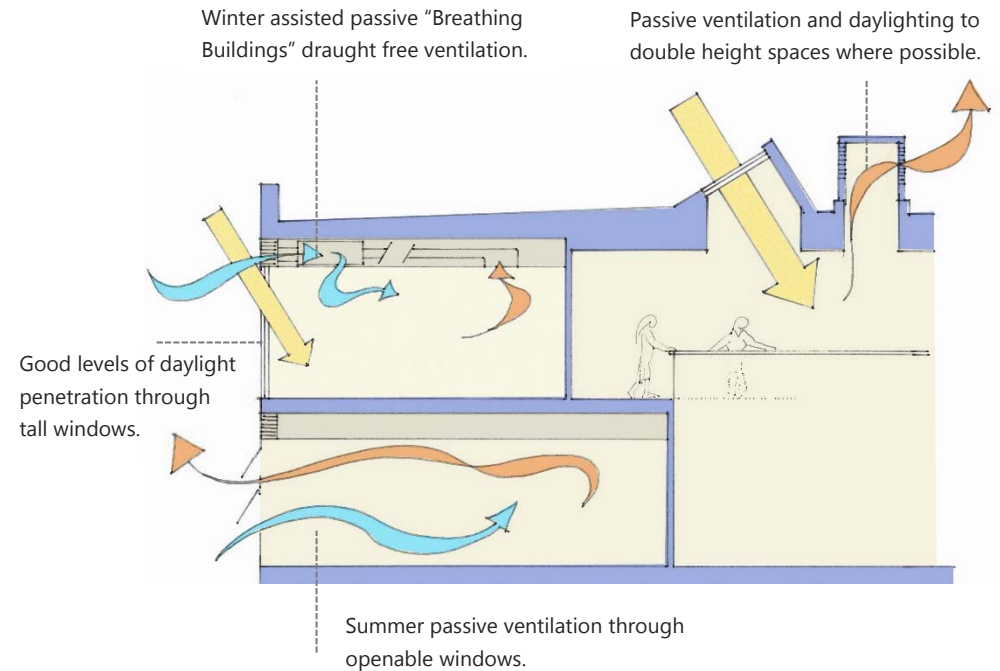
- Passive design.- Optimise building design and site layout to create compact passive form first.
- Fabric first.- Ensure envelope specification is efficient before considering expensive renewables.
- Renewables.- Finally once design has been optimised, consider the options for renewables.

Passive and fabric first initiatives include:

- Massing, ensuring the wall area for a given floor area is minimised reducing heat losses.
- Natural ventilation, avoiding mechanically ventilating spaces.
- Glazing ratio's, avoid over glazing which can increase heat loss in winter and overheating in summer.
- Daylight & room depth, limiting room depths where possible, to maximise daylight and view out.
- Night time cooling, create potential for night time cooling, by exposing thermal mass and creating secure louvered natural ventilation air paths to avoid leaving windows open at night.
- Fabric performance. Improving standards in air tightness and insulation
- Technology. Selecting cost effective renewable technology such as Photovoltaics.

Broader sustainable initiatives include:

- Responsible resourcing of robust materials.
- Water economy.
- Ecology and landscape initiatives.
- Improving levels of recycled content in specified materials.
- Sustainable transport initiatives.
- Sustainable drainage.



Eastern High School project has targeted a minimum 25% reductions in energy consumption relative to current building regulations standards by adopting the following initiatives.

- Photovoltaic panels to generate electricity.
- Breathing Building passive ventilation to classrooms.
- 40% Increase in levels of insulation throughout the building.
- The facility is extensively naturally ventilated and day lit reducing need to artificially ventilate and light.
- The levels of glazing employed provides significant improvements in daylight penetration when compared with typical commercial offices.
- Natural light is complimented by automatically dimmable electric lights controlled by daylight sensors.



The energy efficient strategy is then complemented by further environmental strategies:-

- Water consumption is reduced through the use of rainwater harvesting tanks and water efficient sanitary fittings.
- Low impact environmental building materials are used where possible. Extensive use of "A" rated materials specified in accordance with the Green Guide to Specification lowers the buildings environmental impact.
- A diverse range of transport options are promoted through the provision of cyclist's facilities and management of car spaces and promotion of public transport.
- Landscape retention and interventions are made to improve the bio diversity of the site ecology.



Fabric efficiency



PV- clean electricity



Energy efficient heating



Water conservation



Landscape and ecology

4.13 Access statement

Standards

The accessible provision have been agreed with the client and draws on a number of documents such as:

- BB98 – Briefing Framework for Secondary School Projects.
- BB102 – Designing for disabled children and children with special educational needs.
- Building Regulations, Approved Document AD M.

Approach and arrival

The accessible visitor car parking spaces are alongside the main entrance. The approach between the edge of the site, accessible car park and main entrance is flat, with a gradient shallower than 1:30. There is not fence or gates separating the edge of site from the entrance, this path leading to the main entrance is generous with no localised obstructions. The footpath path along Trowbridge road crosses the vehicular entrance to the site, this crossing will be raised to create a level path with suitable tactile paving.

The staff carpark is located within the secure compound. The gate to this secure area will be managed by the school to give access during the appropriate school hours. Staff can walk from the designated staff parking areas to the staff entrances using a footpath located to avoid the need for pedestrians crossing roads used by service vehicles.

The car park and associated service areas are considered to be flat with a gradient no steeper than 1:30. There are no steps or ramps on the approach.

Internal circulation

The reception desk will be designed in accordance with BS8300. Internal circulation routes have been integrated with functional areas such as social space, dining and learning resource areas to lessen the visual appearance of potentially long corridors associated with traditional schools.

Corridors, stairs and lifts are generous to reduce the potential for bullying, which in combination with the use of open plan spaces and passive supervision creates an effective deterrent. Upper floor balconied circulation routes are at least 2m wide for the above reasons, all of which also services to benefit DDA access.

The open plan nature of the building simplifies navigation and wayfinding with strong visual connections between ground floor atrium spaces and first floor.

Sanitary provisions

The open plan pupil toilets reduced the barriers to access caused by multiple lobby doors. These pupil toilets are suitably sized with ambulant and oversized cubicles as necessary. There are multiple hygiene rooms located close to SEN provisions, while accessible toilets are located in such a manner to ensure excellent access to such provision regardless of location within the facility.

Ambulant shower within each changing room are complimented by a dedicated accessible shower room which is located outside of the changing area demise to improve access for a range of users. The “wet” changing areas gives direct access to the outdoor sports provision.

Colour contrast

Internal walls, floors, ceilings and doors will have the correct levels of contrast as set out in BS8300.

External areas

The hard and soft social areas directly adjacent to the school, along with the habitat areas are again considered to be flat with an anticipated gradient of 1:30. The playing fields and courts are terraced on a series of relatively flat plateaus separated by a series of banks and accessible ramps which connecting these sports provision with the social spaces and changing facilities within the school.

5 Conclusion

5.1 Planning Appraisal

This section aims to identify the main issues relevant to the determination of the application and assess the scheme against the relevant planning policy framework.

These matters are considered to be as follows:

- The principle of development in terms of land use planning policy and sustainable development;
- The impact of the development on the residential amenity of neighbouring properties;
- The impact of the development on the character and appearance of the surrounding area;
- Implications on the highway in terms of parking and access
- Other material considerations.

The Principle of Development

This application seeks planning permission for the construction of a new school at the former Cardiff and Vale College, in order for Eastern High School to re-locate to this site. The demolition of the existing buildings on site has already been approved, via a Prior Notification for Demolition application (planning reference 15/01059/MNR) and not a consideration in this application.

The site was an education use by Cardiff and Vale College until recently, and is allocated within Cardiff's Local Plan as land for education. In addition, there is a general presumption in favour of safeguarding existing education land in Cardiff, as outlined by supporting paragraph 6.5.12 under Policy 32 of Local Plan. With regards to the emerging LDP, local policies C8 and C9 also recognise the need for new and improved school facilities, to meet existing and future educational needs. Consequently, it is evident that the local planning policy framework presents a presumption in favour of new educational facilities, particularly at this site; the principle of a school at this site is clearly established.

Impact on the Residential Amenity of Neighbouring Properties

The proposed layout has been carefully considered in order to ensure that the amenity of adjacent existing residents is not unduly harmed. The height of the school building has been limited to two storeys in height, to preserve the amenity of neighbouring dwellings and the views they currently benefit from. Particular attention has been given to the neighbouring properties to the north of the site, along Brynbala Way; to the north-west of the site at Dolgoch Close, and to the south of the site to the south of Trowbridge Road.

With regards to the neighbours to the north-east of the site along Brynbala Way, the school building has been carefully situated so that it is set away from the north-eastern boundary of the site by a sufficient distance, and will be a maximum of two storeys. The windows proposed at first floor level will not have any impact upon the neighbouring properties, as the relationship of these windows with the neighbouring properties will be a 'side on' relationship. In addition, the neighbouring properties along Brynbala Way are on a slightly elevated level. Any impact is mitigated by an area allocated for domestic scale gardening and allotments. Please refer to the Proposed Site Layout for further information.

Any impact upon the neighbouring properties to the north-west along Dolgoch Close will be similar to the existing situation. The car park to serve the new school located to the north-west will remain unchanged, and is outside of the application site's boundary, consequently, it is considered that there will be no adverse impact upon these dwellings, as a result of the development.

The proposed school building will be set away from the south-east boundary of the site, and therefore there will be no impact upon the neighbouring properties to the south of Trowbridge Road.

The proposed school building will be set away from the south-east boundary of the site, and therefore there will be no impact upon the neighbouring properties to the south of Trowbridge Road.

All of the proposed sports pitches in the southern part of the site will benefit from flood lights. These lights have been designed and positioned so that they will not be intrusive; cause glare, or have a harmful impact upon the amenity of neighbouring properties.

It has been demonstrated the proposed development will not have an adverse impact on existing or future residential amenity in accordance with Policy 23 of the Local Plan and Policy 2.24 of the UDP.

Impact of the development on the character and appearance of the surrounding area;

The appearance of the school building will be of aesthetic interest given the unusual design, and will enhance the character and appearance of the surrounding area. The entrance to the building in particular will provide visual appeal when viewed from Trowbridge Road, given the notional and actual massing of the elevations, and the use of projection and recession within the facades. The appearance of the school buildings will also be further complemented and enhanced by the proposed hard and soft landscaping. This is discussed in more detail within this wider document.

The layout and appearance of the proposed development complies with Policy 2.20 of the Local Plan and Policy KP5 of the emerging LDP and is considered to be acceptable planning terms.

Parking and Access

Access and car parking provision has been provided in line with the Council's SPG entitled Access, Circulation and Parking Standards. Car parking will be made available on site for use by staff and visitors in a designated car parking area to the north of the site. This will include the provision of 60 spaces for staff, and 14 spaces for school visitors. There will also be 5 disabled spaces, giving a total of 79 spaces.

In terms of access, the existing access to the north-west of the site off Trowbridge road will be utilised as the main vehicular access. Pedestrian access will also be available to the front of the school, off Trowbridge Road. The Trowbridge Road entrance will be developed into a pedestrian plaza and will be the main pupil access point. Off-site works are also proposed, including a school safety zone which is required on Trowbridge Road which will include parking restrictions, traffic calming measures and pedestrian crossing facilities.

The proposed access, parking provision and off-site works are considered to appropriate, and will sufficiently serve the proposed new school without any adverse impact upon highway network. For further details of the transport implications with regards to the proposed development site, have been identified as part of the Transport Assessment undertaken by the City of Cardiff Council.

Trees

The existing trees on site which are proposed to be removed for the construction of the new building have been categorised as being of low quality and value. Please refer to the Tree Survey Report undertaken by CH2M Hill which accompanies this application.

The removal of these trees is therefore acceptable, given their value, and the extent of the proposed planting and landscaping which will mitigate for their loss. The proposed planting and landscaping is in accordance with national and local planning policy in particular the Guidance Trees and Development SPG.

Please refer to the relevant report for detail of recommendations.

Site Investigation

EN13 of the emerging LDP states that development will not be permitted where it could cause or result in unacceptable harm to health, local amenity, or the countryside, due to the presence of unacceptable levels of contamination.

Between January 7th and 15th 2015 CC Ground Investigations Ltd conducted a ground investigation for the proposed Cardiff Eastern High School, at the former Cardiff and Vale College. The investigations considered contamination; ground conditions and material properties; land contamination, and engineering. The report concluded that there was no visual or olfactory evidence of contamination in any of the exploratory holes. The report recommends that provision should be made for the investigation of the ground within the current building footprints, following their demolition.

Overall, the reports accompanying the application will demonstrate that the site is suitable for the development of a school, and any issues that arise can be overcome, thereby ensuring that there is no unacceptable harm to human health or the environment. The proposed development will thus comply with EN13 of the emerging LDP.

Flood Consequences Assessment

With regard to risk, a Flood Consequences Assessment (FCA) was carried out by Atkins Ltd. in March 2015. This FCA is currently being updated, in order to take account revised scheme; and to reflect updated modelling.

This concludes that the Development Advice Map, produced by the Welsh Assembly Government (March 2015), identifies the site as existing within both Zone A and Zone C1. Zone B is defined as an area that has been flooded in the past and Zone C1 is defined as being an area of the floodplain which is developed and served by significant infrastructure, including flood defences. Approximately 70% of the southern portion of the main school site lies in Zone C1 and rest of the site lies in Zone A.

TAN15 Guidance defines the vulnerability to flooding for different development types. Schools are classified as "Highly Vulnerable". The proposed new school and college building are defined as highly vulnerable to flood risk.

The FCA concludes that the site is considered to be at low risk of flooding from fluvial or tidal sources currently. The site is considered at low risk of fluvial flooding over the lifetime of the development. The risk due to predicted sea level rise will put the site at medium risk of flooding over the lifetime of development, taken to be 100 years to 2115, affecting the lower lying southern part of the site. The mitigation of the risk to the buildings is achieved through raising the finished floor level to 8.1 AOD.



Extent of C1 zone shown green.

Drainage

A Drainage Strategy has been prepared by Cambria. Surface water will follow a Sustainable Urban Drainage Systems Approach. Surface water will be directly into two attenuation tanks, located in the southern half of the site, as well as an existing outfall structure. The proposed development will be drained by a gravity foul system, connecting to the existing public foul sewers within on Trowbridge Road. The site foul drainage will be adopted under a Section 104 Agreement with DCWW. Further details will be confirmed as we are able to discuss with NRW and DCWW. The proposed scheme therefore complies Policy EN10 of the emerging LDP, in relation to sustainable drainage systems, as well as TAN 15 in relation to Development and Flood Risk.

Community Uses

Local Policy C9 of the emerging LDP requires that the development of nursery, primary, secondary and sixth form education should include, where appropriate, provision for other appropriate community uses in addition to their educational use. Pedestrian access links have been included to the north-east of the site, to provide links between Trowbridge Junior School so that they can utilise the sports pitches in the future. Discussions are currently being undertaken to ensure that proposed school building and sports pitches will be available for the wider community.

5.2

Conclusion

In conclusion, the application site is located within the established settlement boundary for the city as defined by the Local Plan, UDP and LDP, and it is allocated as education land in the Local Plan. The principle of the development is thus clearly established. Furthermore, the technical documents accompanying this application have also established that the scheme overcomes all of the site constraints. Consequently, the proposed development is supported by national and local policy, and overall is acceptable.