

# BEXHILL HIGH SCHOOL OSP

## DESIGN AND ACCESS STATEMENT

19.06.08



**DEVEREUX**  
ARCHITECTS  
A member of the **AM** Group



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Gunters Lane site



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## 1.0 INTRODUCTION

### 1.1 SUMMARY

In September 2007 Kier Regional were commissioned by East Sussex County Council (ESCC) to deliver the new Bexhill High School under the Building Schools for the Future (BSF) One School Pathfinder (OSP) programme.

The school will provide Secondary Education for 11-16 year olds in conjunction with a separate new Skills Centre to be located on the site of the existing Down Road school buildings.

Devereux Architects were appointed along with Kier by ESCC to lead the technical design team, which comprises:

Devereux Architects	Architects
White Young Green	Structural Engineers
	M & E Engineers
	Ecology, Transport & BREEAM Assessment
Standerwick Land Design	Landscape Architects
Calford Seaden	CDM Coordinators

During the period September – December 2007 Devereux Architects and Kier's design team worked closely with ESCC and the school to define the detailed brief and to develop an appropriate schedule of accommodation.

The agreed schedule of accommodation is a reflection of the brief to deliver the national curriculum through a transformational educational concept.

The design represents a challenge to the standardised requirements of BB98 'Briefing Framework for Secondary School Projects'.

The new school intends to deliver a new way of teaching and learning in a progressive environment that dispenses with the established norms and is flexible enough to adapt to different learning styles.

The agreed vision embraces new concepts of a competency based curriculum with project based learning within a virtual learning IT rich environment.



Existing School at the Down Road site

This means the abandonment of:

- Standard 56m<sup>2</sup> Classrooms
- Long corridors
- Staff room
- School canteen
- WC blocks

The shape and form of the building will embody and reflect the hopes and aspirations of the County and the School to provide a fitting environment for new generations of learners.

## 2.0 EXISTING SITE LAYOUT

### 2.1 SITE LOCATION

The proposed school will be located on the *Gunters Lane* site, which consists of parcels of greenfield land of similar sizes. The preferred 'parcel' is the most central, which is labelled site D (see opposite).

A site assessment was carried out (see separate document) to investigate alternative site locations. This concluded that Gunters Lane is the only viable location in Bexhill for the new school.

Site A contains the existing Year 7 building, which was constructed in 1996. The site was originally earmarked for future expansion. The other sites are currently being used as playing fields and site B is owned by Bexhill College.

An options appraisal of each of the sites on Gunters Lane concluded that site D (indicated in red) was the only site capable of delivering the transformational brief for the project within the budget and timescale available without excessive disruption to the school. See also section 4.1 Siting Strategy.

### 2.2 SITE OWNERSHIP

The selected Gunters Lane site is in East Sussex County Council (ESCC) ownership and has an extant planning permission for a new Tennis Centre (Permission renewed in 2007). The Tennis Centre permission includes provision for floodlit outdoor tennis courts in addition to the indoor courts and supporting facilities. This will, however, not proceed when the school is built.

The existing 'year 7' building will be used for educational purposes and will remain in ESCC ownership. The existing access from Gunters Lane will be retained.



Sites on Gunters Lane



Approach from Gunters Lane



Existing Year 7 building



Existing Site D

### 2.3 SITE DESCRIPTION

The proposed site D is a greenfield site to the Southwest of the existing 'Year 7' building and to the West of the Bexhill College sports ground on Site B. The land has a gentle gradient of approximately 1:80 down from South to North and is surrounded by mature trees along the Northern, Southern and Western boundaries and an established hedgerow along the Eastern boundary

Currently the land provides sports pitches for the existing School. Access is via a footpath from the 'Year 7' building through the hedgerow. There is a narrow gateway in the South Eastern corner leading from Glenleigh Park. This is not suitable for use other than for emergency or grounds maintenance access.

Prior to approval to proceed with detailed designs a comprehensive ecological assessment has been carried out (see separate document) to minimise potential impact on local wildlife and landscape.

A Landscape Strategy Report (see separate document) has been prepared which demonstrates the importance of creating an appropriate environment and setting for the building

Detailed ground condition, archaeology and topography surveys have also been completed.

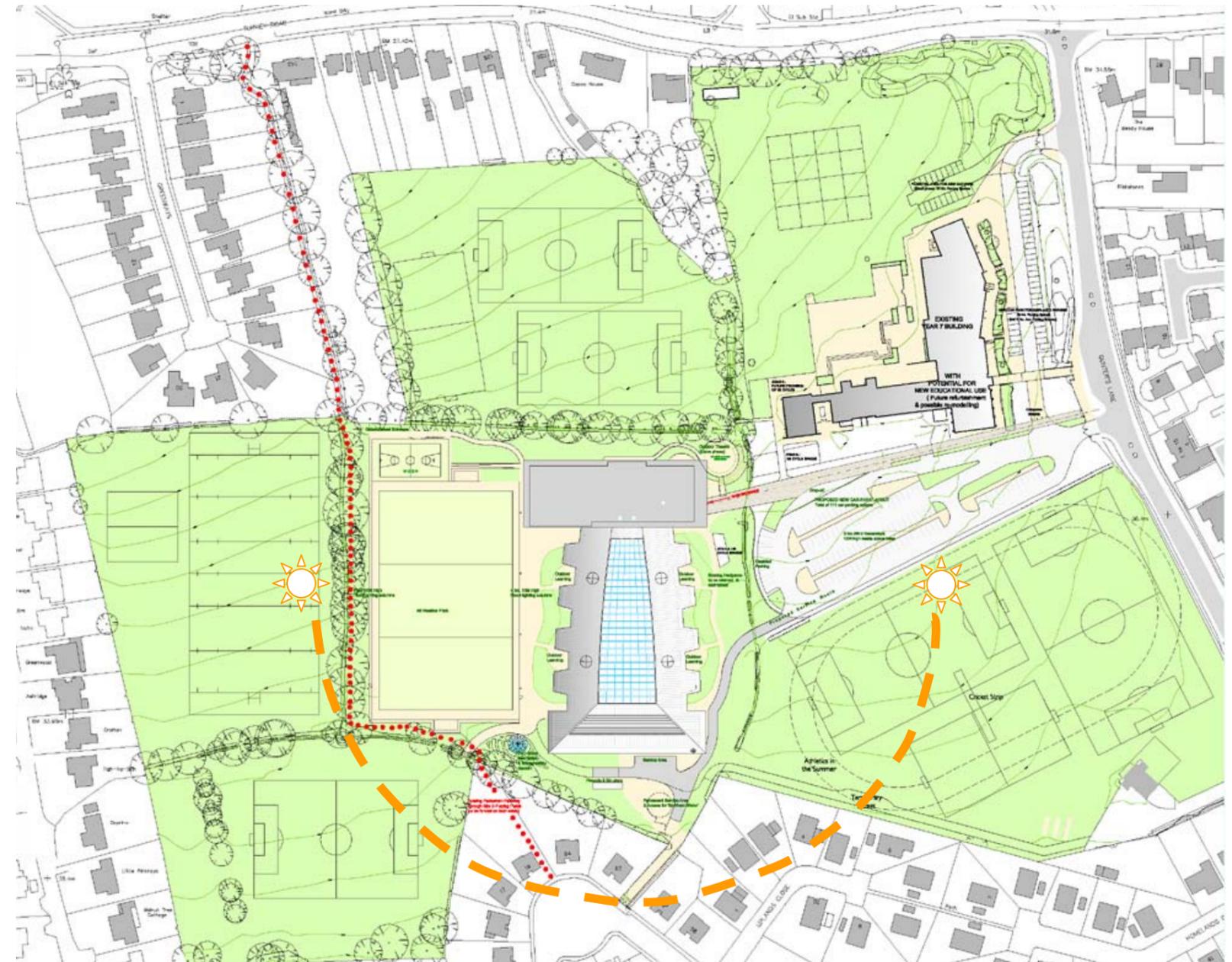
### 2.4 SITE ACCESS - PEDESTRIAN

There is currently a public footpath that runs along the edge of Site D from the North-western to the South-western corner. The footpath will be retained but securely fenced, with access gates provided for school and grounds maintenance access only.

The proposed principal access for pedestrians will be from Gunters Lane alongside a newly formed parking area to the South of the existing Year 7 building. A secondary access will remain from Turkey Road to the North-Western corner via a managed and secure gateway to the public footpath.

### 2.5 SITE ACCESS - VEHICULAR

The vehicular access to the site (as indicated on the Site Plan) is from Gunters lane. Public buses and school coaches will use stops located on Gunters lane.



Proposed Site Plan

### 3.0 DESIGN CONCEPT

#### 3.1 EDUCATIONAL VISION & REQUIREMENTS

The new school will be the first BSF scheme in the county with a transformational approach to Teaching and Learning. This was developed by the school (Head Teacher, staff, pupils and governors) in conjunction with ESCC and educational advisors. (See separate document 'School Management Plan').

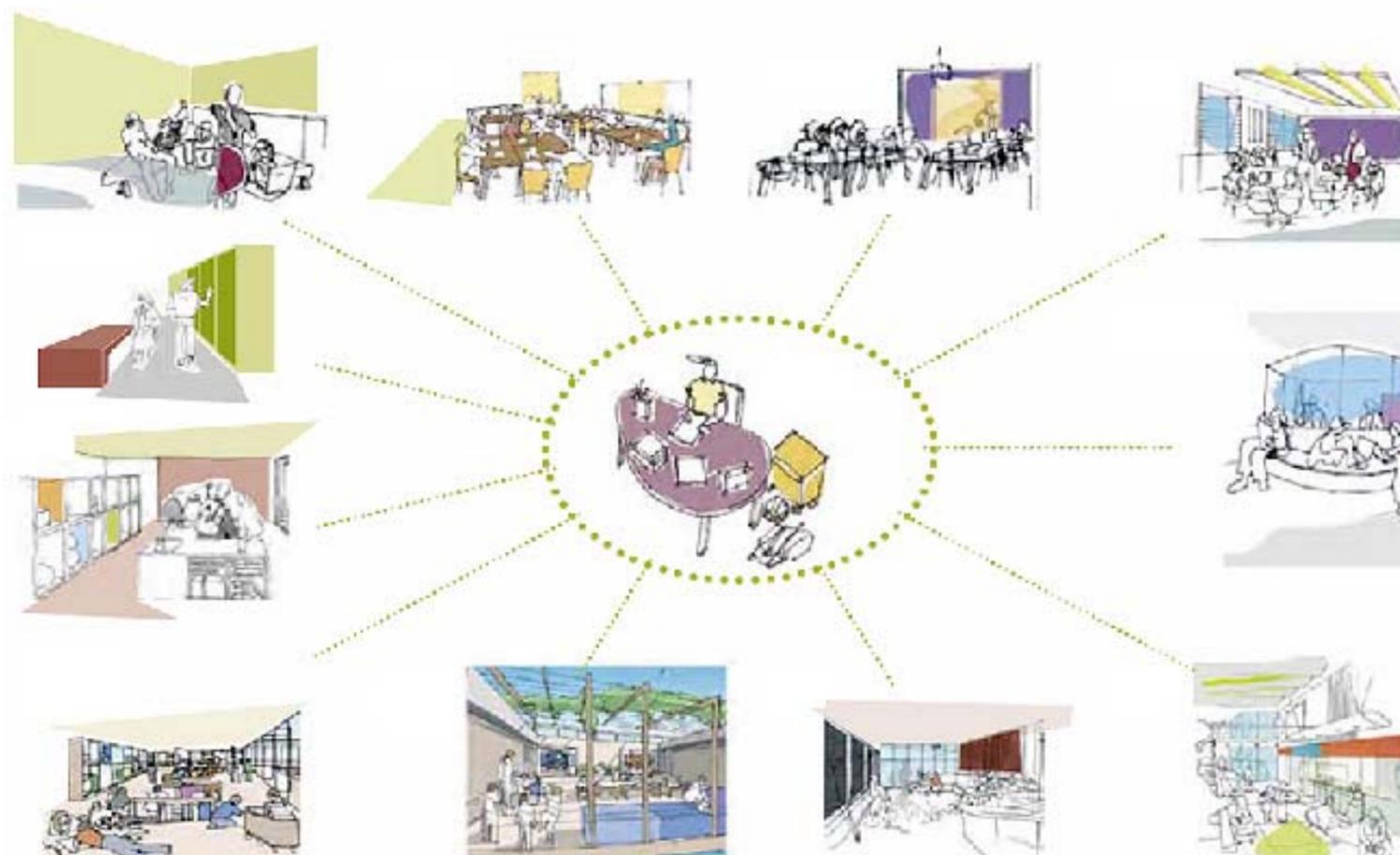
In summary, Bexhill High School is developing a transformational learning programme for all students, where personalisation of the learning on offer will stimulate, nurture and stretch each student in accordance with their own abilities, interests and needs in accordance with key Government initiatives including 'Every Child Matters'.

The new design will encourage students to develop the skills and attitudes that are identified by the 'Teaching and Learning in 2020 Review Group'. These include the following:

- knowing how to work with others in a team
- knowing how to evaluate and inform critically
- taking responsibility for and being able to manage ones own learning ability and developing the habits of effective learning.
- knowing how to work independently without close supervision.
- being confident and able to investigate problems and find solutions.
- being creative, inventive, enterprising and entrepreneurial.

The move to longer, less structured periods is reflected in the principles of the school design solution. As a consequence, there will be a move away from traditional 30 student classrooms and corridors, in favour of larger open-plan multi-purpose learning zones housing up to 90 students supervised by 5/6 teachers permanently based in this new environment.

A typical open-plan multi-purpose learning zone will house an area equivalent to 3 traditional classrooms with dedicated Faraday soft science spaces for Key Stage 3 (KS3). All learning zones will have dedicated toilets for both students and staff and will include provision for those with disabilities. It is envisaged that the new curriculum ensures that students spend most of their school day in the ICT rich learning zones. New timetabling will ensure that students will have access to dedicated highly equipped/serviced areas for Science, Technology, Art and Sport.



Open plan concepts will provide a wide variety of learning environments



Acoustic enclosure concept for open plan spaces



Seating & table solutions will support project-based learning

### 3.2 CONCEPT DESIGN

The flexible learning zones or 'pods' accommodate a varied range of educational activities without any physical demarcation between them. These activities, which occur simultaneously, have designated sub-spaces within the 'pods'. These sub-spaces maintain a coherent identity, which fuse into each other to create an integrated learning environment capable of accommodating a range of learning styles. The flexible learning zones and specialist areas surrounding a large central open plan space will support different learning styles and will be flexible to adapt to the changing needs of the learners.

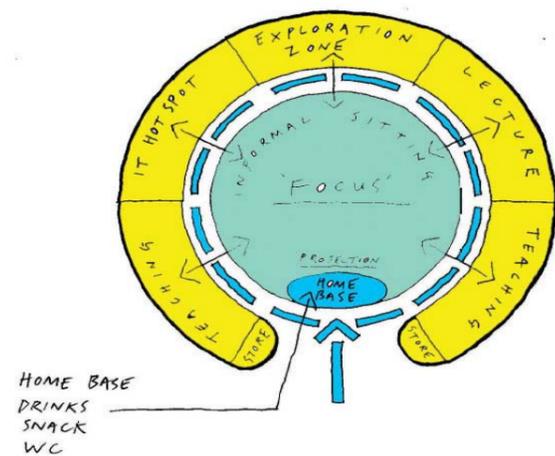
This main communal space, also known as the 'Heart' of the school is designed to be used principally as a dining and breakout area for both students and staff. This space will inevitably develop into a large scale flexible assembly area for formal and informal school, community and learning events.

The design ensures that the 'Heart' space is the spatial link that binds all the learning zones together and avoids the need for corridors and long disorienting circulation routes. Effectively, the area that would conventionally be allocated to circulation is combined into one single multi functional space.

The design will also include two main specialists areas. These are defined in the school brief as the following:

1. Communication & Well-being (Sports, Music and Art)
2. Science & Technology

The delivery of science & technology will be through open plan practical only areas which are supported by adjoining ICT rich learning pods where theory and written work is carried out.



Initial learning zone diagram

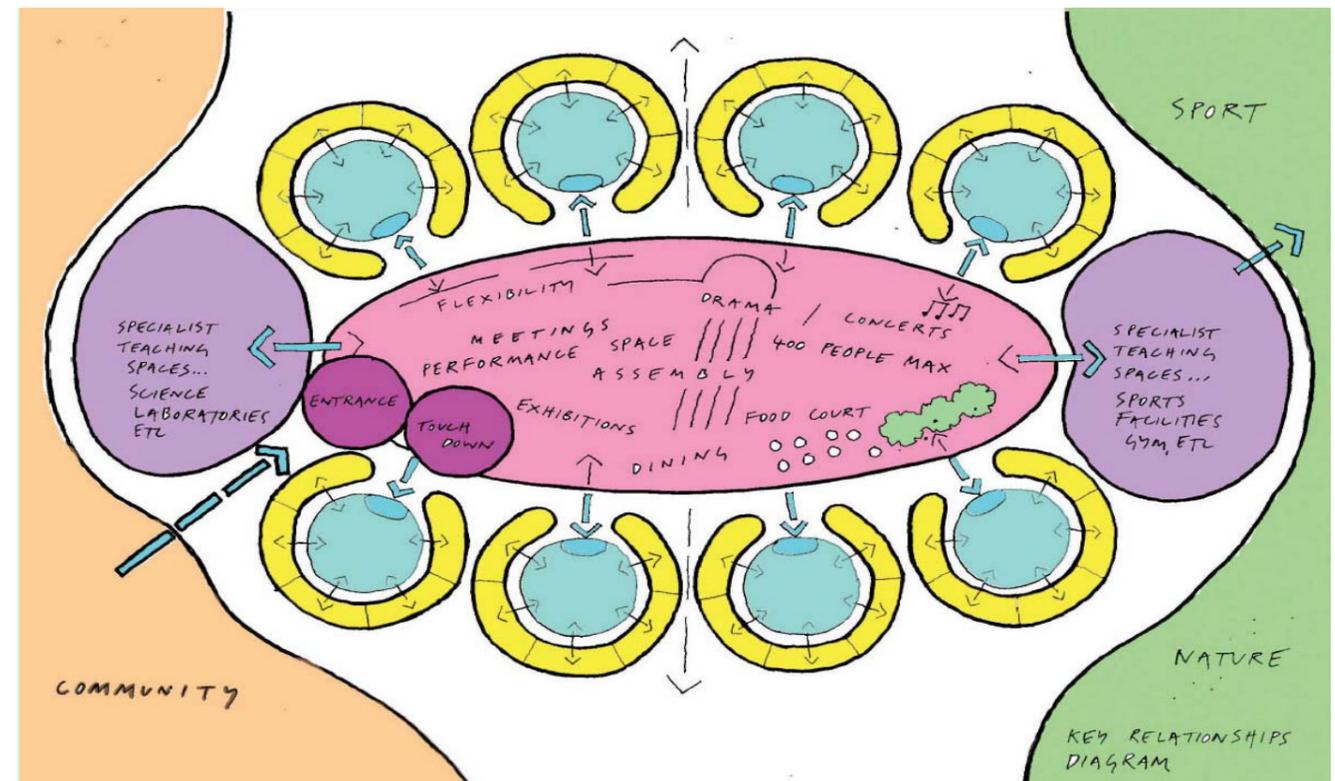
### 3.3 DESIGN PRINCIPLES

A single building approach was adopted to minimise the site footprint. The amount of accommodation is based on the requirements of Statutory document BB98 'Building Framework for secondary School Projects'.

Open plan learning spaces will allow for a flexibility of pedagogy and future adaptation. Organising all of the learning areas around the Heart space will make the building easy to understand and to maintain. The Heart space acts as the central circulation hub and will be monitored by every staff base within each learning zone, the senior staff offices and will be used by all staff for formal and informal meals and meetings. This approach will give a clarity to the layout and enable easy way finding throughout the school.

Sports and drama facilities are located at the front of the building to allow maximum community access during out of hours use. This approach also allows the majority of the school to shut down whilst these facilities are still in use. To minimise disturbance between spaces, the specialist areas are kept separate from the main learning zones and music spaces are located at the highest level above the drama areas.

The building is designed to contrast with the surrounding buildings and is intended to act as a landmark representing the importance of the building to the local modernising community and expressing the 'pathfinder' nature of the brief. A contemporary building is an appropriate vehicle for delivering secondary education through a transformational curriculum.



Initial conceptual diagram

## 4.0 PROPOSED SITE LAYOUT

### 4.1 BUILDING ORIENTATION STRATEGY

The proposed school is orientated approximately North – South and parallel to 'Gunters Lane' in order to enhance the visual impact and provide a strong presence from the main access road and to serve as a focal point for the community.

The orientation of the proposed school facilitates optimum usage of the site. It also promotes easy pedestrian and vehicular access to the school especially for the areas that are opened to the community.

The orientation also ensures adequate and even light penetration to all of the learning zones either side of the central heart space and maximises external views from inside the building, allowing a strong connection with the landscape.

### 4.2 SITE ACCESS – PEDESTRIAN

The main entrance to the proposed school is expressed strongly to ensure that it is visible from Gunters Lane. A clearly defined tree lined pedestrian avenue leads from the road to the front entrance of the proposed school.

Provision will also be made for a secondary pedestrian access via a footpath from Turkey Road to the North-Western corner of the site.

External lighting along all access routes will be designed and maintained to comply with or exceed the standards stipulated in BS 5489.

Appropriate signage will be provided along all routes.

### 4.3 SITE ACCESS – VEHICULAR

The vehicular approach to the site is via the existing entrance off Gunters Lane, which leads directly into the new car park. Provision will be made for a service route, which links the car park to the service area at the rear of the proposed school for deliveries and servicing.

The access to the Year 7 building will be maintained and controlled with bollards. This will provide potential overflow parking for the school when infrequent one-off school events require additional parking space.

A discrete access route for emergency services and general maintenance has been provided to the west of the new building via the service route. This also provides access for grounds maintenance vehicles.



Landscape Master plan (Standerwick Land Design)

### 4.4 CAR PARKING

The car park will provide 111 parking spaces with direct access from Gunters Lane. Although the spaces are predominantly for staff during school hours, 2 spaces for visitors and 9 disability spaces are included.

The access to the existing Year 7 building will be raised to provide a level approach to the new school and to provide traffic calming.

### 4.4 PUBLIC TRANSPORT

The existing bus services that run along Gunters Lane will continue to use the purpose built layby in front of the existing Year 7 building. . Additional services will be discussed and agreed with the bus companies. In the interests of safety, no bus services will be permitted to enter the site.

## 5.0 DESIGN PROPOSALS

### 5.1 DESIGN APPROACH

The design was conceived through a comprehensive analysis of the site and a thorough evaluation of the agreed Vision for the school (refer to sections 3 & 4). A number of design development options were reviewed and developed until the preferred option was achieved through a series of interactive meetings with ESCC and the School and through public consultation.

The Design process has been validated by two recognised design evaluation tools. The first evaluation was by an independent Design Quality Indicator (DQI) Coordinator on 6<sup>th</sup> February 2008 and the project met or achieved nearly all the requirements set by the stakeholders. The DQI process involved a full day's assessment of the scheme by an invited group of stakeholders including teachers, school management, pupils, ESCC personnel and Kier Regional with members of the design team. There were no significant objections and many constructive comments were taken on board and incorporated into the design including the desire to visibly demonstrate sustainability credentials through Solar Panels etc. A further DQI review session is planned later in the programme.

The second evaluation was through the South East Regional Design Panel (SERDP) on 20<sup>th</sup> February 2008 and the design was well received. Some constructive points were raised regarding the landscape setting, the elevation design and other minor points, and these have been incorporated into the design.

ESCC organised three Public Consultation evenings on 5<sup>th</sup> March, 26<sup>th</sup> March and 7<sup>th</sup> May 2008. The first two were held at the Year 7 building and were well attended by local residents and other stakeholders. The third evening was held at the existing school on Down Road to ensure that those who could not attend at Gunters Lane had the opportunity to review the project. Positive comments were received from several attendees on the building design and feedback was captured on questionnaires. Some concerns were raised regarding site fencing and security, the public footpath and car parking. The design has been adjusted to accommodate appropriate fencing and security measures and adequate car parking measures are incorporated.

### 5.2 ACCESSIBILITY

The scheme is designed to be fully compliant with the requirements of Approved Document M (Part M) of the Building Regulations (2004 edition) and will assist the school in compliance with the requirements of the Disability Discrimination Act 1995 (DDA).

The car park includes 9 disabled spaces designed to BS8300 and Part M standards and a further two spaces for visitors.

The surrounding ground levels will allow level access to all School entrances from the car park, the outdoor learning spaces and the areas surrounding the building. The front main entrance is set at ground level with flush entrance through automatic double electric sliding doors.

All entrances and internal doorways will allow access to all spaces in accordance with Part M. All doors will be fitted with lever handles and ironmongery and signage will be in appropriately contrasting colours.

Circulation doors will be fitted with glazed vision panels to Part M standards. Lobbies and corridors will allow space for wheelchair users to turn.

Two lifts will provide access to all levels. There are no changes in level within each floor. Internal stairs will have contrasting nosings and will be designed for ambulant disabled access. Staircases will be fitted with handrails both sides.

Every other learning zone will have its own integrated Accessible WC. There will be further accessible WCs provided near the specialist areas on each floor.

Two unisex accessible changing areas are provided near the Sports Hall and these will enable use of the external artificial surface sports facilities by those with mobility impairment.

The All Weather Pitch and the MUGA will be accessible for those in wheelchairs via appropriate access routes and wide gateways.

### 5.3 CHOICE OF MATERIALS

It was a requirement for the 'Heart' (refer to sections 3.1 and 3.2) space to have a 'covering' which maximised daylight penetration and was not visually overbearing. The preferred choice was to use a pneumatic system composed of Ethylene Tetrafluoroethylene (ETFE). Although it is relatively new technology, it has now been proven to be one of the most effective ways of covering large open spaces – the fabric is a lightweight fluoropolymer plastic material which allows high levels of light transmission with simple spanning structural solutions.

The main roofs over the learning zones will be a shallow curved standing seam type to complement the main ETFE roof and is a flexible product with low maintenance. All gutters will be integral to the roof and the rain water pipes will be powder coated metal.

The flat 3 storey Northern section of the building will be laid with a single ply waterproof roofing membrane which it is envisaged could incorporate Photovoltaic Membrane technology to generate electricity.

To maximise natural daylight penetration and the provision of external views – the facades have been designed to accommodate generous amounts of glazing. Glazing will incorporate solar control glass with low 'E' coating to control solar gain and thermal heat loss, where appropriate.

It is essential to reduce solar gain to the large expanse of glazing – this has led to the integration of 'Brise Soleil' shading and vertical louvres where appropriate into the affected facades. Solar shading will be in metallic grey aluminium. The vertical louvres will feature coloured blades in shades of blue and blue/green to reflect the school colours and landscape setting.

A flexible and low maintenance external cladding with high thermal performance is proposed for the school. A panelled cladding system was selected as this enables a modern and sustainable method of construction avoiding the need for slow and more wasteful traditional masonry construction processes. A through colour fibre cement or laminate finish is proposed, which will be finished in shades of grey and pastel blues. This system offers a wide range of colour options and a maintenance free and durable surface to overcome some of the problems frequently faced by schools.

Portions of the Communications and Wellbeing areas will incorporate semi opaque glazing to provide privacy, glare reduction and superior thermal performance.

#### **5.4 CRIME PREVENTION**

The new Bexhill High School has been designed to meet Secured by Design guidance and a number of meetings have been held with the Police Crime Prevention Design Advisor to discuss the design whose advice has been incorporated in the design wherever possible.:

##### **Site Security and Boundary**

The Campus is surrounded on three sides by residential properties and a main road Gunters Lane. There is a public footpath which crosses the site which will be securely fenced on both sides. The boundaries to the surrounding playing fields will also be securely fenced by weldmesh fencing or solid existing timber fencing preventing public access.

##### **Site Access**

The school will be accessed from Gunters Lane via a new dedicated access road and car park. All gates and fences will be designed to prevent climbing. All deliveries will be directed to the southern service area via a secure gate controlled via a communication link to the school. This will be used by Southern Water should they require access to their equipment for maintenance, although emergency access will be available from Glenleigh Park Road.

##### **Bin Store**

The skips and bins for the school will be securely located in a locked covered bin store within the service area compound to the southern end of the new school.

##### **Biomass fuel store**

The biomass fuel store is a subterranean tank located off the service access road. It will have a lockable cover, which is only removed to facilitate deliver of the woodchip fuel and will prevent unwanted access to the contents. It is therefore secure and does not present a fire risk.



View of new school from Gunters Lane

##### **External Lighting and CCTV**

CIBSE guidance will be used to finalise the lighting scheme, which will utilise bollards, poles and mountings on the face or building soffit.

An extensive CCTV system is proposed around the building exterior and at key locations internally. The design will comply with the Secured by Design guidance. Both CCTV and lighting will be designed to promote safe access to and from the buildings and grounds.

##### **Access control**

The school are looking to implement access control on all entrances and are considering using biometric technology to support this and other school functions.

##### **Cycle Storage**

Secure, covered/lockable cycle storage is located close to the main entrance and will be covered by CCTV

##### **Graffiti and Malicious Damage**

The cladding material is extremely durable and resistant to damage. The CCTV, fences and gates surrounding the site and controlling access will deter unauthorised entry. Any damage to the building can be promptly rectified and will encourage the building users to take pride in the school and deter graffiti.

##### **Alarm system**

An integrated alarm system including intruder and fire detection will be installed in the new school. The school buildings will also be protected via a sprinkler system.

#### Other considerations:

- External lighting to building perimeter, pathways and car parking. These will operate on timers (to reduce energy use) and proximity sensors (to come on when intruders approach).
- There will be no low pressure sodium lighting – all white light for colour rendition
- There are no single storey flat roofs and open-able or accessible hatchways
- The extensive overhangs will prevent unauthorised roof access
- All ground floor glazing will use laminated/toughened double glass units
- Hinge bolts to all doors which open outwards

### 5.5 BUILDING ORIENTATION, SCALE, SETTING AND LANDSCAPE

#### Landscape

A comprehensive design strategy including the 'Landscape Strategy Report' draws the following conclusions:

- Building impact. Although the site is perceived as high in amenity value due to the open nature of the grounds, the dominant mature Oaks and established hedgerows, the impact of the proposed new development should be considered in the context of the extant planning permission for the tennis centre, which would have altered the character of the area. Site D has low visual impact on residential properties. The report concludes that mitigation in the form of root protection to the existing trees and a height restriction to reduce bulk and roofline would reduce landscape impact. These measures have been implemented.
- All weather pitch/MUGA impact. Appropriate measures are proposed to ensure tree root protection zones and suitable planting reinforcement are implemented.
- Outdoor play spaces. These are provided in the form of artificial and natural surfaces. Landscaped outdoor learning spaces are provided to each pod Key Stage 3 Ground Floor pod
- Local ecology. Measures for supporting local species including: badgers, bats, dormice, reptiles, amphibians, birds, invertebrates and general botanic interest will be put in place. Refer to separate Ecology Report for details.

#### Orientation

The building is oriented approximately North/South to ensure that the 16 Learning pod spaces which make up the majority of the length of the building are exposed equally to either morning or afternoon sunlight. This also allows the building to follow the line of Gunters Lane and addresses the urban context and continuity of buildings facing the road.

#### Setting

The building is located within an established greenfield setting and the 'Landscape Strategy Report' defines the measures that have been taken to ensure that impact on the local ecology and landscape is minimised. The concept for the building is therefore of a linear learning pavilion within a mature landscape. Views of the building are framed by mature trees, shrubs and hedgerows.



Aerial view

#### Scale & Context

The concept for the scale of the building was to ensure that it did not dominate the skyline when viewed from Gunters Lane. The building is principally two storeys with a three storey section at the northern end away from the residences to the south.

The existing treeline is generally between 12 – 18m in height, which is similar in scale to the proposed building, and will substantially screen the building from the surrounding properties to the south, west and north.

The prevailing two storey height along Gunters lane has changed in recent years with the construction of new residential accommodation. Some of the new apartment buildings fronting Gunters lane opposite the school site entrance are three and four storeys in height.

The new school will be set back from the road at a slightly lower elevation due to the prevailing slope of the existing ground levels and will be in scale with its surroundings.

The three storey section at the Northern end away from the nearest residential properties will contain the main entrance area and will be framed by new a new tree lined pedestrian approach.

## 6.0 SUSTAINABILITY

### 6.1 ENVIRONMENT

Refer to separate Sustainability Report document.

The design team and stakeholders are committed to provide the most sustainable environment possible. This includes the building as well as services, travelling, sourcing of materials etc.

As part of the evaluation of the building design the Building research Establishment Environmental Assessment Method (BREEAM) assessment has begun and the proposed target is for a 'Very Good rating' as required by the BSF programme.

Scoring of the proposed school will give a good comparative indication of the sustainable aspects. The assessment is holistic and takes into account the location, proximity of public transport, green travel plan issues and it would also indicate where improvements could be made.

In addition to the BREEAM assessment, the following sustainability issues are being considered:

- High performance insulation to exceed the statutory requirement.
- Biomass boiler technology to provide the primary source of heat and power through renewable energy
- Water conservation will be assessed in the design and reflected in systems and products deemed appropriate such as rainwater harvesting and water saving sanitaryware.
- Taps - PIR controlled and aerated.
- Solar water heating
- The ventilation strategy is to incorporate natural ventilation where possible
- Where possible, prefabrication (off-site construction) as a means to accelerate the construction period will be implemented.
- The use of photovoltaic energy systems
- Other sources of renewable energy
- SUDS (sustainable urban drainage systems) using permeable paving

### 6.2 COMMITMENT TO SUSTAINABILITY

The Design Team have made the following commitments:

- Where possible, all materials used will be from sustainable sources. This will be part of the specification and the source will be made available for assessment by the design team.
- Where possible, materials and services will be locally produced or sourced.
- The proposed building will be supported by the latest techniques and practices with the main focus in safety, energy efficiency / low consumption, intelligence, ease of maintenance and flexibility. In order to achieve this, all installations will be supervised by an integrated building management system (BMS).
- This system will be able to check and control the operation of plant as well as record its usage pattern through energy metering for better energy management, allowing monitoring and targeting.
- Automatic presence / absence detection shall be provided in areas with occasional occupation such as WCs, stores etc. and where appropriate, will investigate the potential for use of automatic daylight linking to optimise ambient daylight use.
- The lighting installations will generally be provided using low energy high performance fluorescent luminaires, with task / decorative lighting provided where appropriate. The lighting concept is based around energy efficient luminaires with low consumption lamps.
- Recycling both during construction (refer to Waste Minimisation Statement) and when the building is in use.

## 7.0 NATURAL LIGHT - VENTILATION - DAYLIGHT - SOLAR CONTROL

### 7.1 NATURAL LIGHT & VENTILATION

Natural light in buildings is an important factor to create a positive learning environment. The building organisation allows for the maximum number of spaces to be placed on the external walls of the building. This allows the majority of the building to be naturally lit and ventilated.

One of the driving principles behind the 'denticulated' shape of the learning pods is the need to admit the maximum amount of natural ventilation into the teaching spaces. The aim is to ensure that no space is more than approximately 8m from an opening window. The areas nearest the Heart will benefit from opening louvres at high level.

The 16 learning pod spaces have been designed to allow the flow of natural ventilation through the rooms, up into the Heart and out at high level. At night fresh air will be admitted at ceiling level to allow the cool air to lower the temperature of the thermal mass of the exposed concrete. This will in turn cool the air during the day, particularly in summer when the external temperature exceeds the internal.

The central 'Heart' space is top lit via the translucent ETFE roof membrane, which allows adequate daylight penetration and borrowed light into the learning 'pods'. Solar gain into the Heart space will be reduced using integral solar control treatment on the ETFE membrane. Natural cross ventilation under the ETFE roof will allow much of the heat to escape at high level.

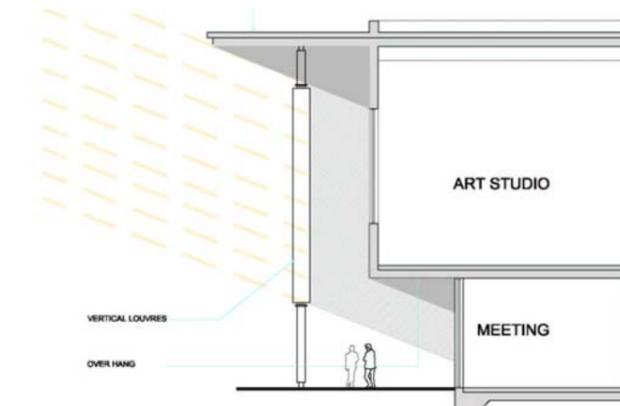
### 7.2 DAYLIGHT

The daylight impact on the surrounding area to the building has been assessed and there was found to be no overshadowing on neighbouring properties and good sunlight penetration to the area around the building. See separate document.

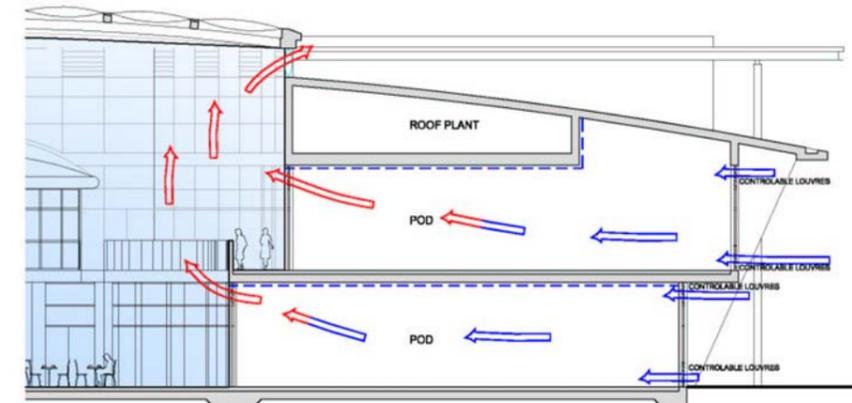
### 7.3 SOLAR CONTROL

'Brise Soleil' shading, vertical louvres, overhangs and solar glass have been integrated into the façade design to reduce solar gain and assist in solar shading where appropriate.

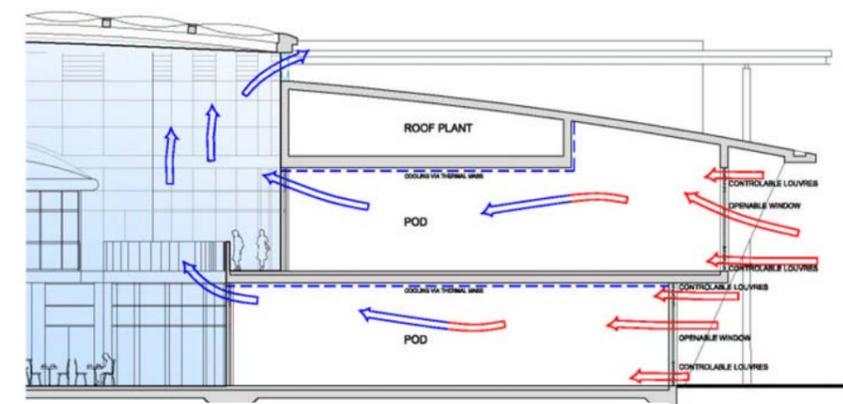
The diagrams below illustrate the use of passive technologies to reduce heat gains in the building. 1. The front (Eastern Elevation) of the building uses vertical shading to attenuate the low Eastern sun and shades the Art and admin spaces. 2 & 3. The pods are protected by deep overhanging roofs and angled side walls. The use of thermal mass for cooling is illustrated: at night cool air is introduced through automatic louvres cooling the exposed slab soffits. By day the warmer rising air is cooled on the chilled soffits and keeps temperatures down without the need for mechanical cooling.



1. PART SECTION: TYPICAL SOLAR CONTROL STRATEGY - EAST ELEVATION



3. PART SECTION: POD VENTILATION STRATEGY - NIGHT TIME



3. PART SECTION: POD VENTILATION STRATEGY - DAYTIME

## 8.0 CONCLUSION

The school has been designed to meet the brief and aspirations of ESCC and the school to provide an innovative method of curriculum delivery to suit a wide range of learning styles.

The internal layout is transformational, balancing the requirements of the relevant design and spatial guidance (eg BB98 etc) available with the needs of the users but also acting as a pathfinder for future secondary school development in the County.

The school is predominantly two storeys in height with the three storey element of the building located away from the residential properties. The single building minimises the footprint and makes use of the slope of the site. The setting within the landscape has been considered throughout the design process and supports the local character image and use of the site.



The design is light and spacious, accommodating outdoor learning and activity spaces within a landscaped setting enabling learning to be connected with the environment. The learning zones are designed to accommodate up to 90 pupils and allow for flexibility of pedagogy. The Sports facilities and theatre will maximise the potential school and

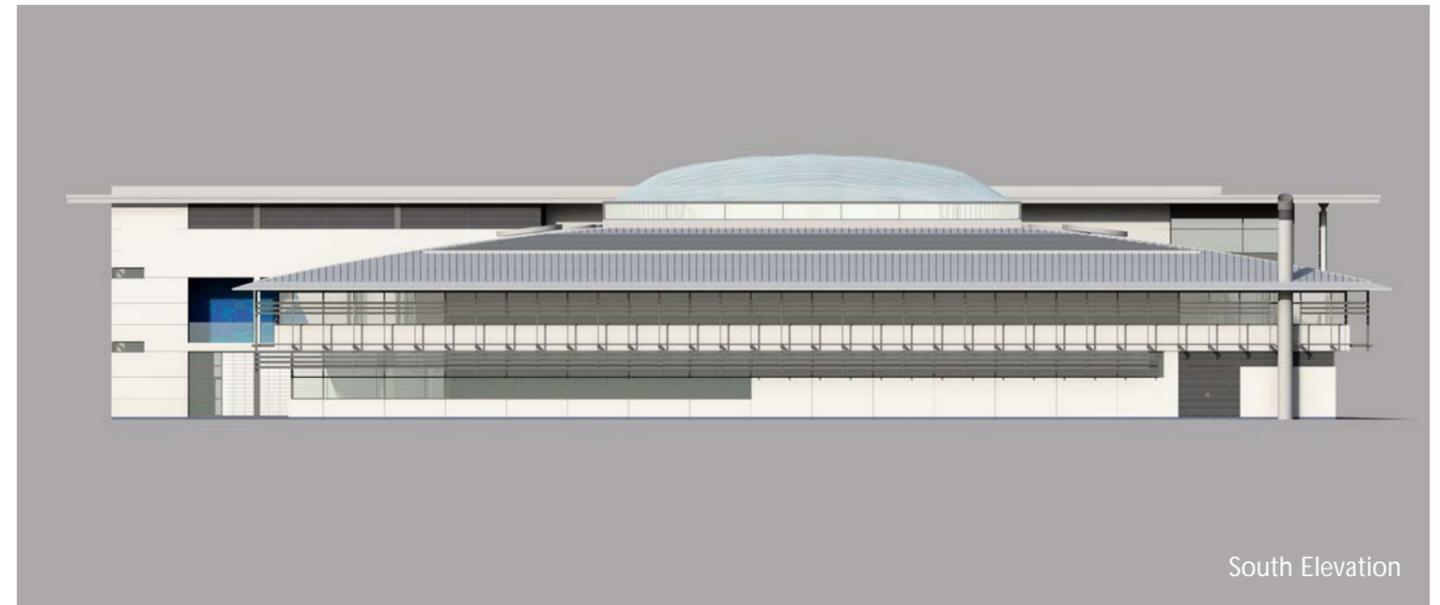
community use. The relevant adjacency of spaces and design aims to maximise the learning experience, and ease way finding and circulation.

The building seeks to provide a sustainable solution embodying passive and active technologies to reduce energy use and employing construction techniques and materials from current green thinking.

The external form of the building seeks to express the internal functions. The learning pods are clearly articulated and the 3 storey Northern portion addresses the public domain with a clear statement of entry and approach along the edge of the car park. This strategy allows the building to have a strong Community focus with all of the shared use facilities accessible from and adjacent to the main entrance.

A key feature of the building will be the ETFE roof over the Heart space. This will be visible from ground level and expresses the nature and form of the internal configuration of open plan learning zones arranged around a central focus space.

The style and proposed design of the building and external areas is suitable for a school of the future which is adaptable, durable and flexible to accommodate the changing learning needs of the school and community.

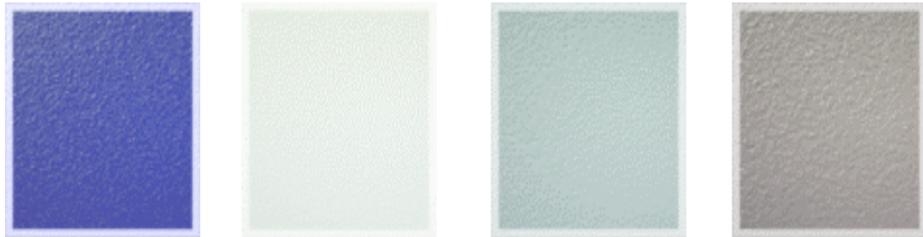


9.1 KEY ELEVATION MATERIALS (EXAMPLES)

Refer to drawings 07373/D/130C and D/131D for elevation locations of materials



01 Rainscreen cladding (light grey and shades of blue/green)



02 Standing seam roof (natural embossed)



08 Curtain walling system (Grey aluminium)



10 Brise soleil (Grey aluminium)



10 Brise soleil (Grey aluminium)



04 ETFE



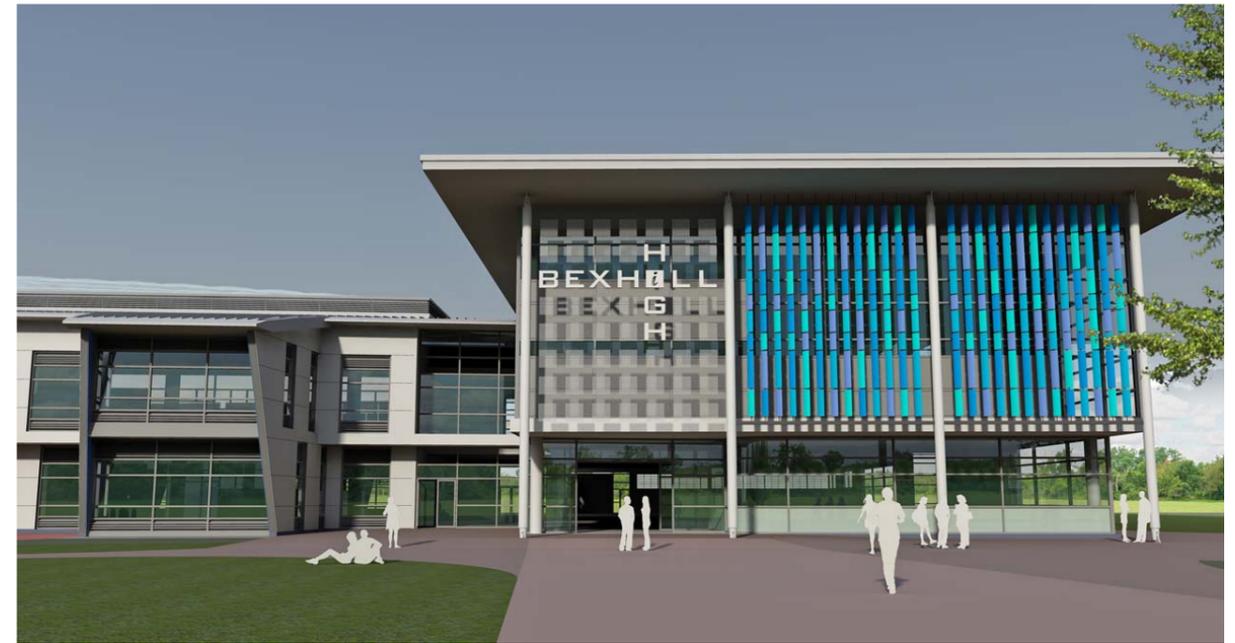
09 Translucent Cladding

9.2 IMAGES

For further images refer to drawings 07373/D/140 - 150



Aerial view



View of Front



Aerial view



View of Eastern elevation