



## **PLEASE READ THIS COVER NOTE CAREFULLY BEFORE READING THE FEASIBILITY STUDIES**

Following an extensive programme of primary school expansions, the Local Authority has been considering how additional secondary school provision could be created in the Borough by 2017 to meet the growing demand for secondary school places.

As part of this work, the Local Authority (LA) has identified two potential sites for secondary school provision; (i) The 'Sutton Hospital Site' and (ii) 'The Rosehill Recreation Ground Site'.

In order to understand the potential of these sites, the LA commissioned feasibility studies to assess their suitability in more detail. These studies are technical in nature and look at a variety of issues including size and layout of sites, ground conditions, ecological issues, planning related issues as well as design and cost related issues. They show how additional secondary school provision could be created on each site. The following points are important to note with respect to the feasibility studies:

- The studies do not represent 'final solutions'. More extensive work would be required before a planning application could be progressed for either site.
- The studies do not indicate a preference for one site or the other.
- Proposals for new school provision are necessarily iterative. There has been some early engagement with the Local Planning Authority but there remain planning concerns/risks that have not been fully addressed by these studies.

Prior to the completion of these studies, the Department for Education approved Greenshaw Learning Trust's (GLT) bid to open a Free School in Sutton. Should the Free School meet the standards set out by the Department for Education and OfSTED, it is expected that the school will open in September 2017. The Free School will provide the necessary additional places required in the Borough and there wouldn't be a need in 2017 for further secondary school places beyond that being provided by the Free School. At present, the LA will not be taking these feasibility studies any further. Instead, the LA has passed them to the Education Funding Agency (EFA) and GLT for their consideration as the responsible bodies for taking proposals forward. The following points are important to note in this regard:

- Free Schools are commissioned independently of the LA. The LA has no formal role in the management of Free Schools.
- The EFA/GLT will investigate the sites and consider whether either of these sites are suitable for the proposed secondary free school. Should the EFA identify a suitable site, this may be one of the two sites that are the subject of the feasibility studies but it may be neither.

- Should the free school proceed, the EFA will fund the capital costs of the secondary Free school, will prepare a planning application and will project manage any construction works in partnership with GLT. Proposals from the EFA/GLT may differ from those contained within the feasibility reports.
- Consultation will take place on any proposals as part of the normal planning process but the timing and nature of that consultation is yet to be determined.

Whilst they have been shared with the EFA and GLT, the feasibility studies remain in the ownership of the Local Authority. Please note that cost information has been removed from the feasibility studies on the grounds that it is commercially sensitive. Should you have any questions about them please contact [kieran.holliday@sutton.gov.uk](mailto:kieran.holliday@sutton.gov.uk)

# New 8FE Secondary School\_Rosehill Recreation Ground Feasibility Report

Document Ref: 5135007 Feasibility Report  
April 2015



# New 8FE Secondary School on Rosehill Recreation Ground

Sutton Borough Council  
Feasibility Report

## Notice

This report was produced by Atkins Limited for the Client (Sutton Borough Council) for the specific purpose of the proposal of a new 8FE Secondary School on the Rosehill Recreation Ground Site, Sutton. This report may not be used by any person other than the Client without the Client’s express permission. In any event, Atkins accepts no liability for any costs, liabilities or loses arising as a result of the use or reliance upon the contents of this report by any person other than the Client.

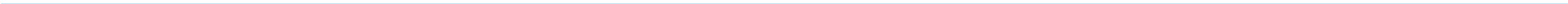
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# Executive Summary

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## 1.1 Executive Summary

### Purpose of Report

This report has been prepared for London Borough of Sutton to test the feasibility of the Rose Hill Recreation Ground Site accommodating an 8FE Secondary School with a Sixth Form. This would mean the school will have a 1,575 students capacity.

### Scope of Report

The scope of the Feasibility Report is simply to confirm if the site is suitable to accommodate an 8FE Secondary School with a Sixth Form. This is a high level study which proposes building configuration, location on site and external areas and excludes any detailed information regarding its design. Should the proposals progress, further studies to develop the plan of the building, the adjacencies of spaces and how to resolve some of the more complex issues should be undertaken.

### Methodology

The site appraisal and outline proposals are based on a desktop study. All work outlined in this report is based on DfE Building Bulletin 103.

Limited consultations have been undertaken. Full consultation with relevant stakeholders will be required during the next stage.

The proposed site plans are based on area requirements from BB103 and give an indication of the size and location of external areas. Floor plans have been developed as simple schemes follow BB103 guidelines and adjacencies should be developed further in the next stage.

The main report contains much of the text, key images and overall project information. For other detailed information such as surveys that have been undertaken are included within the appendices. These surveys have informed the feasibility report.

### Total Site Area

Guidance from BB103 establishes that an 8FE Secondary School with Sixth Form site requires a site area between 87,551m<sup>2</sup> (min) and 109,687.5 m<sup>2</sup> (max) or if the site is restricted\* between 27,426 m<sup>2</sup> (min) and 43,912.5 m<sup>2</sup> (max).

#### \*DfE Advice on Standards for School Premises states:

Some schools will be on 'restricted sites' and will not have enough outdoor space to meet requirements on site. In these situations pupils will need to be provided with access to suitable off-site provision.

The Rose Hill Recreation Ground has a total site area of 46,176m<sup>2</sup> and is 2,263.5m<sup>2</sup> above the maximum restricted site area.

As the site is within the BB103 minimum restricted site area range and could not accommodate a full size playing field the

report suggests a MUGA will be required to provide additional area for external PE.

DfE Building Bulletin 103 recommends the following external areas for a 8FE restricted Secondary School with Sixth Form and where possible these area guidelines have been used in creating the Proposed Options:

- Habitat Area: 787 m<sup>2</sup>
- Hard Informal & Social Area: 1,775 m<sup>2</sup>
- Hard Outdoor PE Area: 2,762 m<sup>2</sup>
- Soft Informal & Social Area: 3,750 m<sup>2</sup>
- Soft Outdoor PE Area: 0 m<sup>2</sup> (MUGA games court provided)

### Site Zoning Options

Two site zoning options were developed during the feasibility development and Option 1 was chosen as the preferred option. Section 4.2 explains rational behind both options.

### Summary of Internal Area Requirement

Based on DfE Building Bulletin 103, the model brief for a 8FE Secondary School with Sixth Form requires an Gross Internal Area of 11,585 m<sup>2</sup>. The full schedule of this accommodation is shown in Section 4.4. A visual schedule of areas is indicated in Section 4.5. Further development of this area schedule will be required with the end users input during the next stage.

### Building Configuration Options

Four generic options were explored during the feasibility development and the Superblock and Finger Block options were chosen to be further developed for this site. Section 4.3 illustrates the advantages and disadvantages of the proposal.

### Planning

Following initial discussions with officers within the Local Planning Authority and Highways Departments early comments were given in response to the developed options. The site lies within the Metropolitan Open Land and a change in the redline boundary for the school site is recommended in terms of limiting the impact on Metropolitan Open Land and retaining the access road into the site. In response to these comments Option 2 Site Plan was developed (preferred option by the Local Authority and relevant stakeholders). This is shown in Section 4.18. This shows the total site area at approximately 25,546m<sup>2</sup> which is 1880m<sup>2</sup> under the minimum restricted site area.

Pre-application engagement with the Local Authorities and

relevant stakeholders is key during the development of the project and it is recommended that this is carried out prior to the next stage.

### Archaeology

The site is not within any known Archaeological area. Further investigation maybe required as the project develops.

### Conservation Area

The site is not within any known Conservation area, however is close to an adjacent Conservation area. Further investigation maybe required as the project develops.

### Highways

The site appears well served by several streets and public services such as bus lines, railway and tramlinks. Improvements to the connections are not required.

A draft Transport Assessment has been undertaken based on current information and assumptions. This is illustrated in Appendix F.

### Pollution

Being surrounded mostly by extensive green areas and low residential buildings, however the railway line to the west may cause noise pollution. It is recommended that an acoustic survey is carried out prior to the next design stage. No air quality surveys were carried out during this feasibility report.

### Environmental Impact Assessment

Due to the location and size of the development, it is envisaged that an Environmental Impact Assessment will be required for this site. No surveys were carried out during this feasibility report.

### Ecology

A preliminary Ecological Appraisal (Appendix D) has been undertaken for the Rosehill site. Whilst the appraisal indicates no significant ecological constraints further surveys maybe required as the design progresses regarding the mature trees and bats.

### Flood Risk

Reference to data published by the Environment Agency indicates that the site is not with a flood risk zone however the site lies next to a flood plain, Zone 3. Further studies are required to inform any further design proposals. A draft Flood Risk Assessment has been carried out and this is illustrated in Appendix B.

### Structural & Geotechnical

The site appears to be used as recreation area and it is probably made up of three soil types which are predominant in the entire area of Sutton: upper chalk, which is in the higher lying southern parts of the Borough, London clay, which is in the North West, and river terrace sands and gravels, which is in the lower lying north east near the River Wandle. (See Appendix H for Geotechnical Survey Report).

A topographical survey (Appendix G) has been carried out, however no sewer records are available to enable determination of the capacity of the existing private and public below ground drainage systems to accommodate any additional surface water.

Further surveys would be required to ascertain the below ground drainage and if there are any unknown issues underground.

### Summary

In summary, the site area is at the minimum restricted area allowed for an 8FE Secondary School with Sixth Form and will require a building that has a compact footprint due to external play areas being at or below a minimum standard. Planning consultations will be key in the next stage to ensure the school external areas are not compromised and due to the site lying within a larger area of MOL. The proposed Options 1 and 2 suggest an 8FE Secondary School with a Sixth Form is possible on this site with some compromises.

The preferred option by the Local Authority and relevant stakeholders is the Finger Block which is Option 2 and the Option 2A Site Plan.



## Introduction & Context

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## 2.0 Introduction and context

### Sutton

#### The borough

Sutton is an outer London Borough forming part of the South-West London Sub-Region identified in the London Plan, along with the neighboring Boroughs of Croydon, Merton, Lambeth, Wandsworth, Kingston and Richmond.

The Borough largely comprises five categories of place:

- Sutton town centre: the main centre of the Borough;
- The District Centres: spread across the Borough;
- Industrial areas: largely concentrated in the north of the Borough;
- Suburban residential heartlands: the predominantly residential elements of Sutton's suburban fabric, characterized by low-rise, low-density housing; and
- Strategic Open Land: principally Green Belt to the south and west of the Borough and a swathe of Metropolitan Open Land to the north and east.

The southern parts of the borough are suburban in character, consisting predominantly of relatively affluent low-density residential areas. By contrast, the northern parts of the borough, including Rosehill, St Helier and the Wrythe, along with Roundshaw and South Beddington towards the south east, share many of the characteristics of inner London, with significant pockets of social deprivation, environmental degradation and limited access to employment, social infrastructure, community facilities, housing and transport services.

#### 2.1 Demographic Forecasting

According to 2009 GLA projections the total resident population of the borough was estimated at 183,348 in 2010, made up of 89,807 males and 93,541 females, representing an increase of 1.1% since the 2001 Census. Based on projected births, deaths and future migration patterns, the borough's population is predicted to increase by approximately 2.24% to a total of 187,469 by 2016, and is further projected to rise to 190,731 by 2020.

#### 2.2 Housing Requirements

One of the main issues identified in the Core Planning Strategy was the extent of new housing required in the Borough in view of evidence of supply and demand.

According to the GLA's projections, the number of households in London is estimated to be 3.327m in 2011, rising to 3.606m by 2021, an increase of 8.38%. In the London Borough of Sutton it is predicted that the number of households will increase by 6.92% over the same 10 year period.

Looking at the distribution of housing needs in different parts of the borough, shown in map 2.1, it can be seen that the highest level of need occurs in Wandle Valley (where there are also large amounts of social housing) and Wallington North. The lowest level of need is in Sutton North.

The Core Planning Strategy supports that the provision of new dwellings will be broadly located within the Borough as follows:

- Sutton town centre– 2,000 to 2,150 units (40%);
- Hackbridge – 1,000 to 1,100 units (20%);
- Wallington – 500 to 550 units (10%);
- Other District Centres – 500 to 550 units (10%); and
- Remainder of the Borough – 1,000 to 1,100 units (20%).

These ranges set out the amount of development that may be needed in each location to meet the planned spatial distribution of housing growth. The ranges are based on rolling forward the Mayor's 10 year housing target to cover the whole of the Plan period.

#### 2.3 Secondary Schools in Sutton

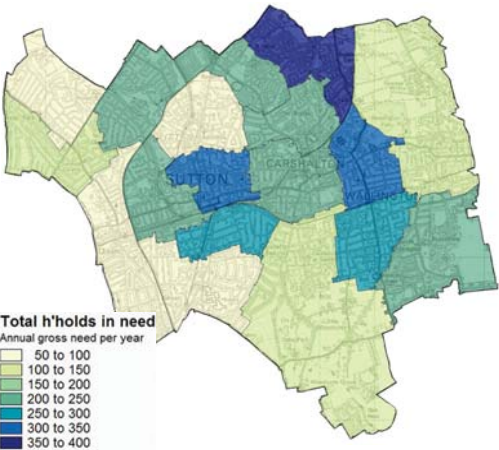
New housing development in Sutton has the potential to increase the number of children within the Borough and therefore to place greater demand upon existing educational resources. Schools in Sutton are currently under pressure in terms of demands on existing educational facilities, particularly in the secondary school sector

The South London Sub Regional Development Framework notes that there is significant pupil movement from inner London boroughs into schools in boroughs within the sub-region. In relation to the maintained sector, Sutton is a net importer of secondary age pupils with pupils coming mainly from Croydon and Merton. There is a high level of independent sector provision in south London, however Sutton has the lowest level within the sub-region.

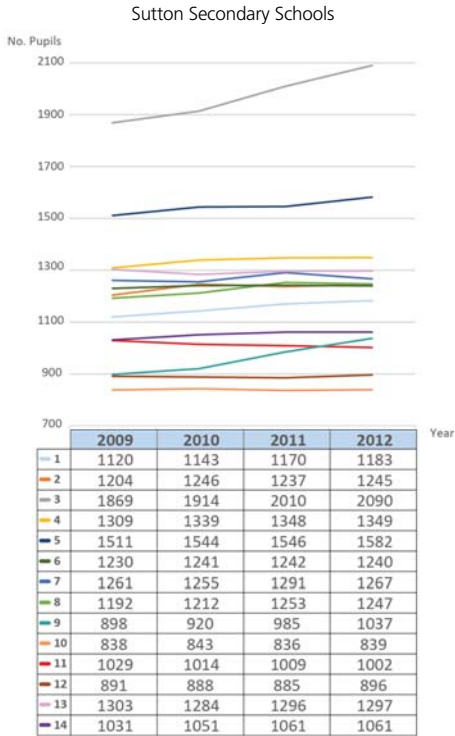
There are 14 secondary schools in the Borough attended by over 18,000 pupils and 41 primary schools attended by just under 16,000 pupils. In addition, there are 4 special schools, 10 independent schools and 2 institutions of further education within the Borough.

In 2011-12, these schools were attended by a total of 17,335 pupils (an increase of nearly 166 pupils from 2010-11, 440 from 2009-10 and nearly 650 from 2008-09).

Table 2.3 provides a breakdown of secondary school pupil numbers by school over the last years.



Map 2.1 - Distribution of housing need in Sutton



1. Carshalton Boys Sports College
2. Carshalton High School for Girls
3. Cheam High School
4. Glenthorne High School
5. Greenshaw High School
6. Nonsuch High School for Girls
7. Overton Grange School
8. St Philomena's Catholic High School for Girls
9. Stanley Park High School
10. Sutton Grammar School for Boys
11. The John Fisher School
12. Wallington County Grammar School
13. Wallington High School for Girls
14. Wilson's School



Map 2.2 - Secondary schools locations in Sutton

Table 2.3 - Secondary school provision in Sutton

## 2.4 Sutton Spatial Strategy

### (Core Planning Strategy)

The Key Diagram contained in the Core Planning document (Map 2.4) illustrates the Spatial Strategy for the Borough. It identifies areas of future strategic development, broad areas of protection and key infrastructure developments required to ensure the implementation of the Spatial Strategy.

To ensure that Sutton retains its role as an attractive suburb of London in which to live and work, there must be a balance between housing and employment growth. Growth should be concentrated on the town centre as the most sustainable locations and also to secure their long-term renewal and prosperity.

Accordingly, the Council will expect development and investment to be focused in locations as follows.

### Sutton Town Centre

Major redevelopment and growth will be targeted at Sutton town centre in order to tackle urban renewal issues and its relative decline as a shopping centre in South London. The Spatial Strategy assumes that there will be significant retail, employment and residential growth in the town centre in the period up to 2024. Sutton town centre will be an appropriate location for tall and landmark buildings.

In order to ensure that Sutton becomes a vibrant town centre, it will be the focus for cultural facilities with the development of a new theatre/arts complex.

The benefits of the proximity of green spaces to the town centre, especially Manor Park, will be maximised and comprehensive improvements to the public realm will be an integral part of any proposals.

Public transport improvements will be required to facilitate this level of development and will be provided through the development of an upgraded public transport Interchange around the station; other improvements to facilitate better bus operation; improved pedestrian/cycle links; and eventually a Tramlink extension.

Changes to the town centre road network, linked to development proposals, will be considered if they secure environmental improvements. Planned improvements to the Thameslink rail service will also increase the accessibility of the town centre.

### Hackbridge

This existing local centre is identified as a 'Centre for Growth and Regeneration' involving a comprehensive redevelopment of the wider Hackbridge area, to provide a district centre and a sustainable mix of homes, businesses, shops and community and leisure facilities.

Within the Hackbridge area, established industrial areas such as the Felnex and the Wandle Trading Estate and land north

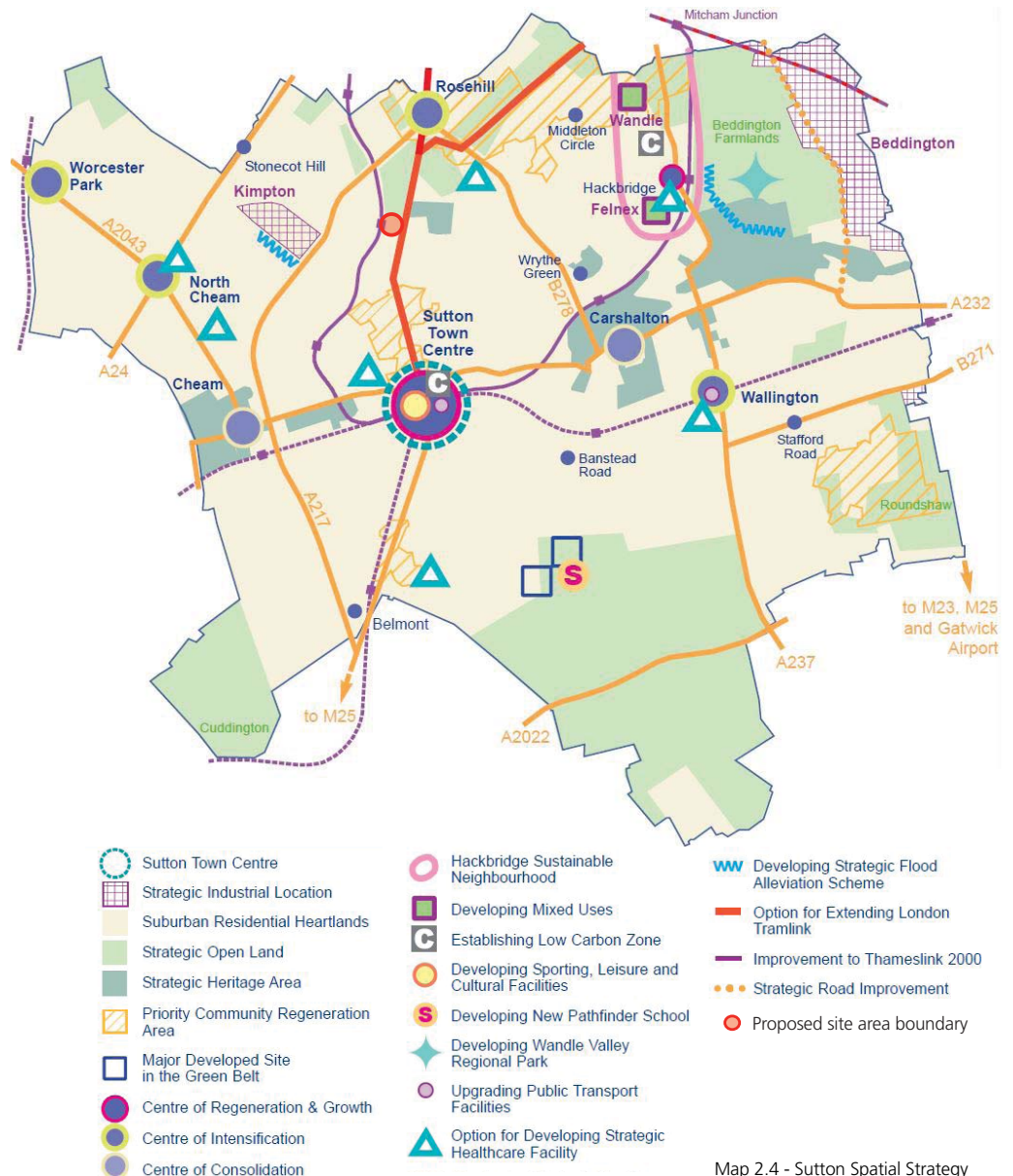
The infrastructure improvements required to support this level of development will include access and environmental improvements to the station, local road, Pedestrian and cycle networks. In terms of social infrastructure the SMPCT has identified the need for the development of a local healthcare centre, and an additional primary school will be required to meet the education needs of the additional children living in the area.

### Wallington

This is the most significant district centre in the Borough, with opportunities for 'Intensification'. Within the Centre a number of possible sites have been identified, which will accommodate additional residential, retail and employment development. The Council recognises the need for the current retail offer to be diversified and seeks to promote a café culture in Wallington in line with residents' aspirations, together with significant townscape and pedestrian environment enhancements. An integrated package of sustainable transport improvements is planned for Wallington as part of the 'Enabling Smarter Travel Choices' legacy for the Smarter Travel Sutton project. This will involve significant enhancements to pedestrian and cycle access to the town centre and station and other key destinations within an 800m area as well as improvements to public transport interchange and access. There are also significant opportunities to enhance the environment of the station and adjoining sites. The SMPCT has identified the need for a local healthcare centre in Wallington.

The other Centres for 'Intensification' are **Rosehill**, **Worcester Park** and **North Cheam** – renewal of these centres will largely be achieved through residential development and mixed use, although the SMPCT is seeking a town centre site to develop a local healthcare centre to serve the western wards of the Borough.

As 'Centres of Consolidation', **Cheam Village** and **Carshalton Village** are historic centres, which have been designated as Conservation Areas. Both centres have important heritage assets and heritage centres (which now have museum status). Carshalton also has a theatre and the Ecology Centre. Both are therefore well placed as centres for cultural tourism. Therefore, whilst the Conservation Area status of these District Centres means their potential to accommodate significant growth is limited, there are opportunities for improvement.



Map 2.4 - Sutton Spatial Strategy



Site Overview

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## 3.0 Site Overview

### 3.1 Sutton

The London Borough of Sutton is a London Borough in South London, England and forms part of Outer London. It covers an area of 17 sq mi and is the 80th largest local authority in England by population. It is South of the London Borough of Merton, West of the London Borough of Croydon and East of the Royal Borough of Kingston Upon Thames.

Sutton has 41 primary and 14 secondary schools. The secondary schools include 5 selective grammar schools (2 for girls and 3 for boys), two single sex Roman Catholic schools, 1 boys' school, 1 girls' school and 5 mixed schools. All schools have specialist status and the general further education college has two centres of vocational excellence.

#### 3.1.1 Rosehill

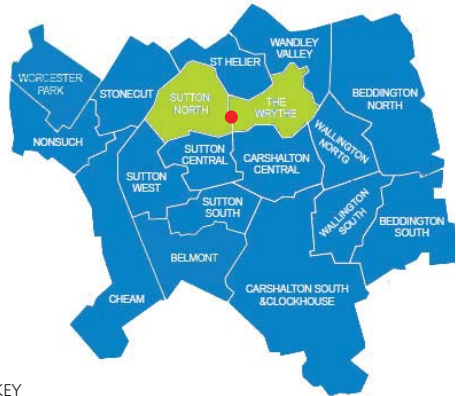
Rosehill Recreation Ground Site is located to the north of Sutton town centre within the London Borough of Sutton.

Being a suburb of Sutton, Rosehill lends its name to the Rose Hill roundabout, which connects the A217, A297 and B278.

Rosehill has been identified as a Centre for 'Intensification', according to the current Core Planning strategy, the renewal of this location will largely be achieved through residential development and mixed use.



KEY  
London  
Borough of Sutton  
01 Map of the British Isles



KEY  
Site location  
02 Map of London Borough of Sutton



03 Location map of Rosehill Recreation Ground Site on the London Borough of Sutton context



### 3.2 Sutton Conservation Area

Sutton used to be a collection of rural villages, linked to feudal and royal estates. The 'village' feel remains, and people still refer to locations such as Carshalton, Cheam and Belmont as villages. The quality and historic development of the Borough is reflected in the number of high quality heritage areas designated as Conservation Areas and Areas of Special Local Character.

The Borough has 14 Conservation Areas (CAs) with special architectural or historic interest as shown on Map 1. Some Areas have significant heritage value with many listed buildings, others have a more recent twentieth century appearance encapsulating the best architectural and urban design practices of their time.

The Sutton UDP designates 15 Areas of Special Local Character (ASLCs) on the basis of their high quality townscape, architecture and landscape (Map 2). ASLCs are defined in the Sutton UDP as older parts of the Borough that have a special local character in terms of their townscape, architecture and landscape features.

### 3.3 Sutton Archaeological Heritage

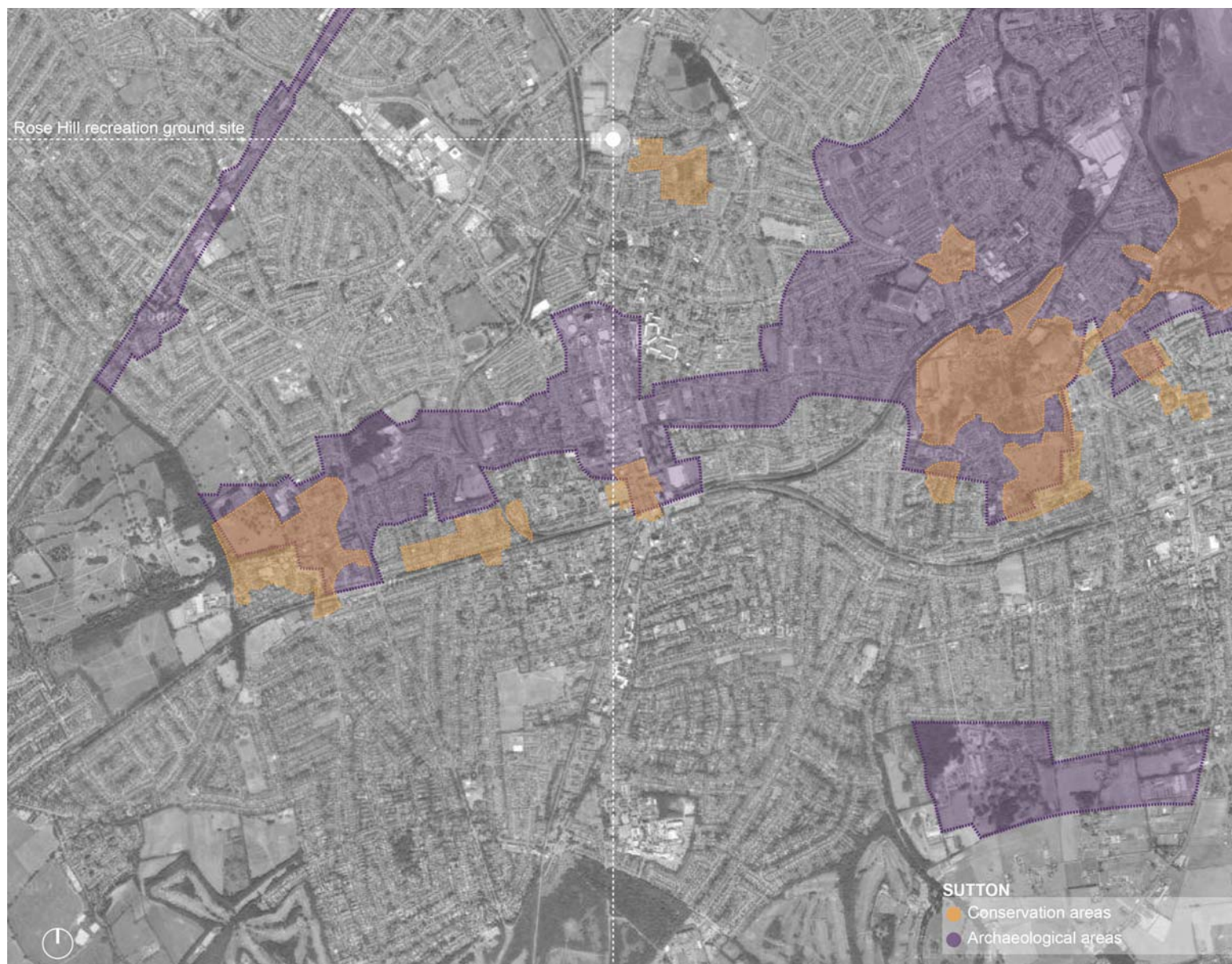
Protection of areas of archaeological importance is of great importance for conserving the Borough's heritage. Statutory safeguards existing for the protection of monuments of national importance under the provisions of the Ancient Monuments and Archaeological Areas Act 1979.

There are 6 Scheduled Ancient Monuments scheduled under this Act within the Borough. In addition, 21 Archaeological Priority Areas (APAs) identified by the Greater London Archaeological Advisory service (GLAAS, English Heritage) are identified in the 2003 UDP.

### 3.4 Sutton Landscape and Geology

The underlying geology of Sutton has had a significant influence on the settlement patterns in the Borough. Sutton is made up of three predominant soil types: upper chalk in the higher lying southern parts of the Borough; London clay in the North West; and river terrace sands and gravels in the lower lying north east near the River Wandle. As a consequence of the changes in height and the interface between soil types there is a ridge of Thanet Sand along a north/south divide. Here water descends through the deep chalk until it meets impermeable clay, rising through the sand to produce abundant springs and pools used firstly for farming then for industry and subsequently essential as a source of artesian water for the growth and reputation of Sutton. The presence of this water led to the development of the "spring line" settlements of Carshalton, Beddington, Sutton and Cheam. See Appendix D and H for further information on the geology and ecology of the Rosehill site.

The site is not within any known Conservation or Archaeological areas, however is close to an adjacent Conservation area. Further investigation maybe required as the project develops.





## 3.5 Site Overview

### 3.5 Site Description

#### Location

The proposed site is located in the South area of Rosehill Recreation Ground, comprised within an extensive open area, it is bounded to the west by the railway which connects Sutton with central London; to the east by Rose Hill road (B2230); to the south by an extensive residential area; and to the north by Sutton Tennis Academy and Rose Hill park. Within 15 min walk from the city centre.

The plot selected comprises a bowling green club, which will be preserved, and some sports courts that won't be considered in the new design scheme. In addition, the proposed site is connected to the main transport network on its east boundary, running along Rose Hill road, as the rest of its boundaries are constrained by the railway and existing buildings.

#### Access

Currently there is only one vehicular access to the site from Rose Hill Road which connects to the existing parking area, therefore an additional pedestrian access is suggested.







### 3.6 Services and facilities

Sutton is reasonably well served in terms of facilities available within the town. However many of Sutton's commercial and industrial areas are largely concentrated in the north of the Borough, with further expansion in this area due. Conversely, the majority of residential areas are found in the south of the town.

In terms of educational system, there are 41 primary schools and 14 secondary schools in the Borough. Additionally, there are 4 special schools, 10 independent schools and 2 institutions of

further education within the Borough.

Most of the cultural and leisure facilities are gathered around the town centre. However, Rosehill's small retail area contains a range of shops; there is a focus on food, in the form of both restaurants and supermarkets.

In addition, Rosehill is largely green in character - with a diverse range of large green spaces distributed within the area, such as Rosehill Park, Reigate Avenue Recreation Ground, Thomas Wall Park and St. Helier Park; all of them designated as Metropolitan

Open Land (MOL) by the current Core Planning Document.

The proposed site lies within an open area surrounded by extensive residential areas to the East, South and West, which makes the proposed site an ideal location for a secondary school.

### 3.7 Site Connectivity

#### Roads

The Borough's road network includes three strategic 'Red' Routes which link central London to the M25 (A24 and A217) and provide

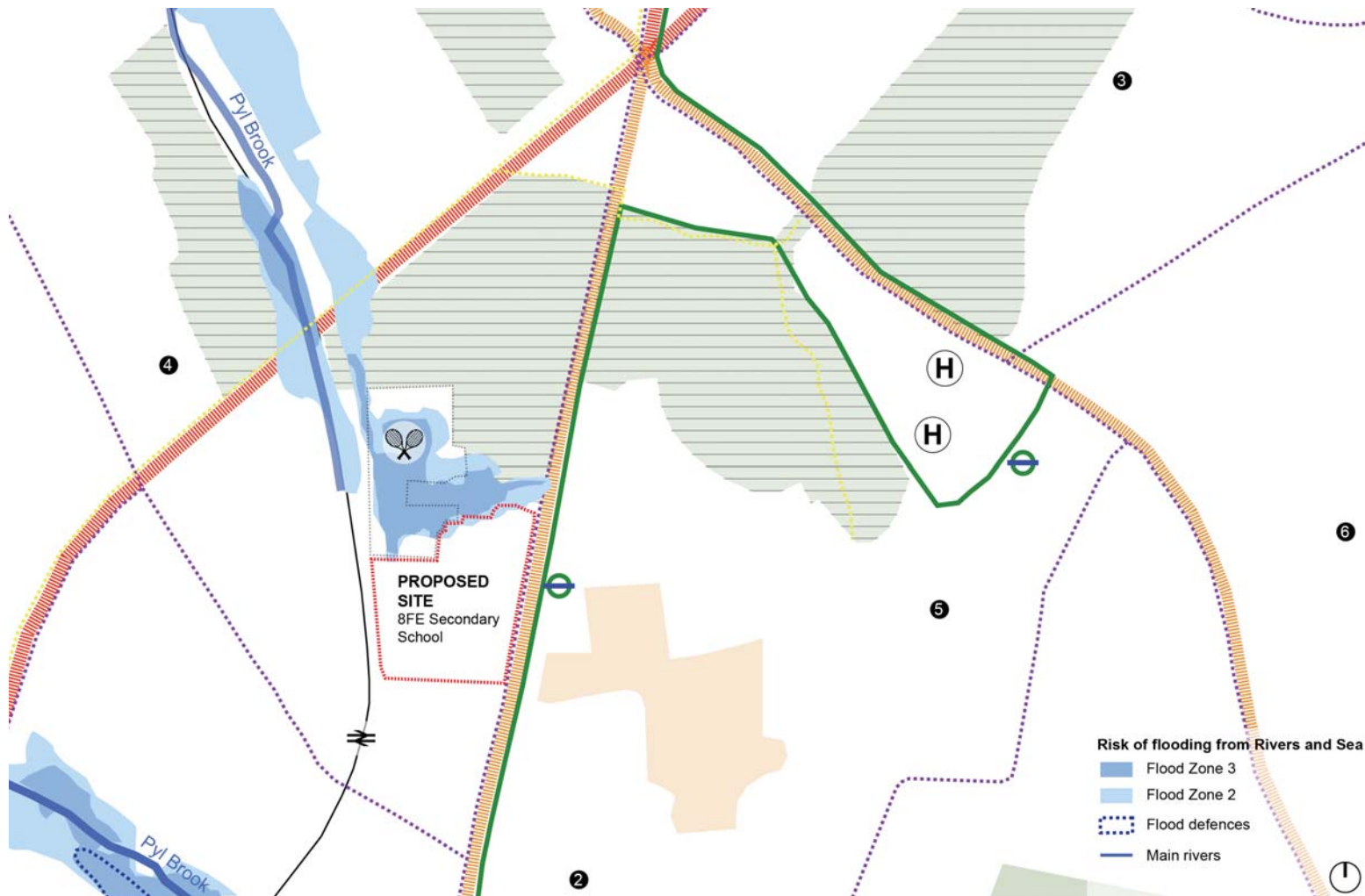
an east-west route across the Borough (A232). These roads are managed by Transport for London. The remainder of the road network is managed by the Council. The proposed site extends along Rose Hill Road (B2230) which cross the town following a north-south axis connecting with the main commercial zones.

#### Bus routes

Sutton is well served by public transport, frequent buses connect the borough to Kingston, Wimbledon, Morden, Croydon, Caterham, Purley, Tooting, Crystal Palace and Putney. Regular but



## 3.8 Flood Risk



### 3.8 Flood Risk

The Brook Phyl runs adjacent to the railway located on the west edge of the site, and based on information from the Environmental Agency, the proposed plot lies next to a flood plain, Zone 3, which means that this area could be flooded:

- from the sea by a flood that has a 0.5 per cent (1 in 200) or greater chance of happening each year;
- or from a river by a flood that has a 1 per cent (1 in 100) or greater chance of happening each year.

Without taking into account the effect of flood defences. Additionally, since these maps only cover flooding from rivers and the sea, it should be considered that flooding can occur at any time and in any place from other sources. Therefore, a detailed area Flood Risk Assessment will be necessary. As a first stage, some comments on the topic have been addressed by Paul Timmins from Robert West:

1. The site is located near the head of the East Phyl Stream. Looking at the site contours, the recreation ground is within a small "bowl" which drains to the stream. The railway bisects this bowl longitudinally, but acts as a barrier for rainfall runoff to drain to the stream. This is overcome by a culvert under the embankment. The culvert is predicted to cause a restriction to high flows following storm events which results in flooding of the tennis academy. So, as the area around the tennis academy is within a fluvial flood zone, buildings should not be placed within that zone.

2. In addition, there are pluvial (i.e. overland) flow paths which cross the playing fields. These flow paths should be considered when deciding where the new school buildings are to be placed. It is recommended that new buildings are not placed across these flow paths.

3. Any new buildings constructed will be placed on areas which are currently grassed. In order to comply with the NPPF, the runoff from the site should match the existing flow rates (which in this case will be defined as the "greenfield run-off rate" (GFR)).

Infiltration into the underlying soils will not be possible as the BGS website identifies London Clay overlain by Head as the Bedrock and Superficial strata. So, surface water flows from impermeable areas will need to be restricted to the GFR during extreme storm events. This will result in large volumes of attenuation being required. It is recommended that these take the form of swales, wetlands, detention basins and other form of SuDS rather than below ground attenuation tanks as they would have significant biodiversity, amenity and water quality benefits in addition to the hydraulic benefits.

The dis benefit from a masterplanning perspective is that these features take up developable space, however in some circumstances they can serve a dual purpose (e.g. portions of the playing fields could be allowed to flood during extreme (more than 1 in 30 year) events). Clearly the main SuDS features should be located at the downstream end of the site, i.e. close to the tennis academy, although it would be prudent to allow surface water runoff to be managed throughout the site in smaller portions, rather than one large pond at the downstream end (for example).

less frequent services serve Banstead, Reigate / Redhill, Epsom and Heathrow Airport. Rosehill area is served by bus routes 151, 154, 157, 164, 280, S4 and N44; S1 is available from St. Helier Hospital. A wide range of bus stops have been identified in the proximity of the proposed site, the nearest one is located in Rose Hill Road.

#### Cycling routes

Limited cycling routes have been identified, apart from the ones running inside parks and open spaces, there is one located

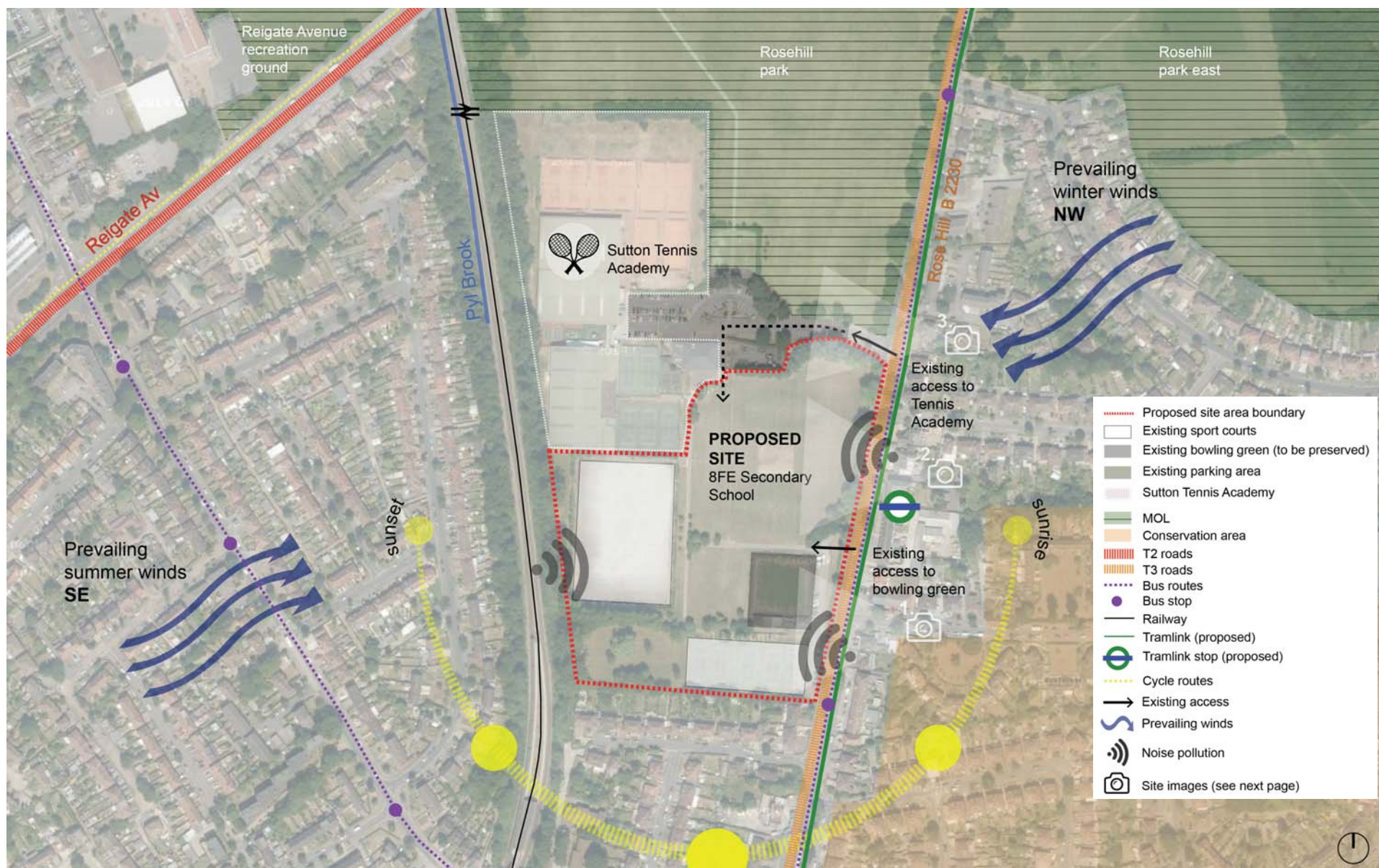
along Reigate Avenue (A217) which could be connected to the proposed site through Rosehill Park (South boundary).

#### Train routes

The Borough is well-served by a number of suburban rail services, with London terminals at Victoria, London Bridge and Waterloo as well as Thameslink, which provides a cross-London service to St Pancras and Luton. Rosehill area does not have its own named railway station, but St Helier and Sutton railway stations are within walking distance, and Morden tube station

is easily accessible by bus. Nowadays Tramlink links Croydon and Wimbledon, with two stops in the north east corner of the Borough. Transport for London is currently undertaking feasibility work looking at options for extending the Tramlink network, including a route to Sutton town centre via Morden, see Appendix E. The option being considered branches from the existing network at the Morden Road Tramlink stop, and runs via Morden town centre, Rose Hill town centre, St Helier Hospital and Angel Hill to Sutton Town Centre terminating near Sutton Station.

## 3.9 Site Analysis





### 3.8 Site Analysis

#### 3.9 Site Environmental Analysis

Due to the openness of the location, the site is widely exposed to the south-westerly winds during summer. This fact could be extremely beneficial, making the most of the cold winds coming from the park to promote natural ventilation during the warm season.

Additionally, the absence of any massive built form and open nature of all the site boundaries provides good solar access throughout the day. Daylight is one of the main factors to consider when designing educational buildings so further solar studies should be considered.

In order to provide good levels of natural ventilation and daylight, it is suggested that the proposed building should be located within the southern area of the site, as its wider spatial configuration will allow the building to benefit from suitable orientations.

In terms of noise, the plot lies adjacent to the railway network on its west boundary and faces road B2230 on the east side, which currently carries high volumes of traffic. Furthermore, Rose Hill road will have a future tramlink extension running along the site boundary. As it can be seen from the location map and site views, adjacent to the west boundary of the site there is an existing green barrier, made of leafy trees, which acts as a buffer space, mitigating the train noise effect. Nevertheless, an acoustic survey is recommended in order to assess the noise impact on the proposed building.

Being surrounded mostly by extensive green areas and low residential buildings, no power nor fuel pollution sources that might have affected the air quality of the area have been identified.

#### 3.8 Site Views

Site View 1



Site View 2



Site View 3



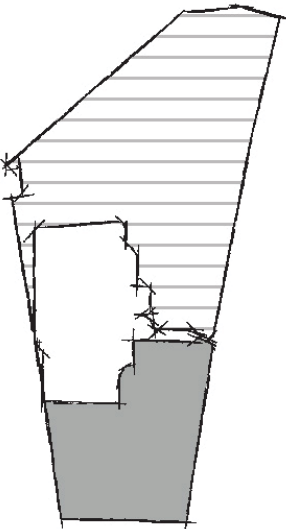
Site Options

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## 4.0 Site Area requirements

### Existing Site Area

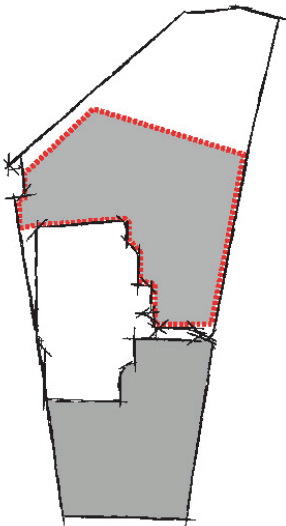


46,176 m<sup>2</sup>

-  Area required for Soft Outdoor PE
-  Area required within existing plot
-  Area for potential Soft Outdoor PE Area not part of existing site allocation

### 8 FE Site Area Requirements (Normal)

DfE Building Bulletin 103 recommends the following external areas for an 8FE Secondary School with Sixth Form:

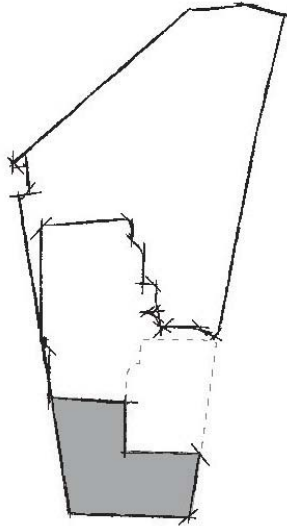


Unrestricted site	
<b>Minimum</b> total site area	<b>87,551 m<sup>2</sup></b>
MINIMUM	
Item	Area
Habitat Area	787 m <sup>2</sup>
Hard Informal & Social Area	1775 m <sup>2</sup>
Hard Outdoor PE	2762 m <sup>2</sup>
Soft Informal & Social Area	3750 m <sup>2</sup>
Soft Outdoor PE	60125 m <sup>2</sup>
NET SITE AREA	78875 m <sup>2</sup>
TOTAL SITE AREA	87551 m <sup>2</sup>

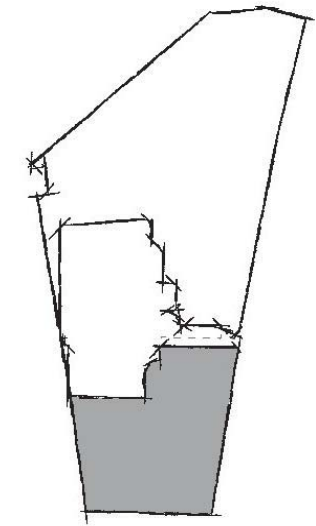
Unrestricted site	
<b>Maximum</b> total site area	<b>109,687.5 m<sup>2</sup></b>
MAXIMUM	
Item	Area
Habitat Area	2762 m <sup>2</sup>
Hard Informal & Social Area	3750 m <sup>2</sup>
Hard Outdoor PE	4737.5 m <sup>2</sup>
Soft Informal & Social Area	5725 m <sup>2</sup>
Soft Outdoor PE	65775 m <sup>2</sup>
NET SITE AREA	87750.5 m <sup>2</sup>
TOTAL SITE AREA	109687.5m <sup>2</sup>

### 8 FE Site Area Requirements (Restricted)

DfE Building Bulletin 103 recommends the following external areas for an 8FE 'restricted site' Secondary School with Sixth Form:



Restricted site	
<b>Minimum</b> total site area	<b>27,426 m<sup>2</sup></b>
MINIMUM	
Item	Area
Habitat Area	787 m <sup>2</sup>
Hard Informal & Social Area	1775 m <sup>2</sup>
Hard Outdoor PE	2762 m <sup>2</sup>
Soft Informal & Social Area	3750 m <sup>2</sup>
Soft Outdoor PE	0 m <sup>2</sup>
NET SITE AREA	18750 m <sup>2</sup>
TOTAL SITE AREA	27426 m <sup>2</sup>



Restricted site	
<b>Maximum</b> total site area	<b>43,912.5 m<sup>2</sup></b>
MAXIMUM	
Item	Area
Habitat Area	2762 m <sup>2</sup>
Hard Informal & Social Area	3750 m <sup>2</sup>
Hard Outdoor PE	4737.5 m <sup>2</sup>
Soft Informal & Social Area	5725 m <sup>2</sup>
Soft Outdoor PE	0 m <sup>2</sup>
NET SITE AREA	21975.5 m <sup>2</sup>
TOTAL SITE AREA	43912.5m <sup>2</sup>

## 4.1 Proposed Zoning of the Site

### 4.1 Site Layout

Having analysed the outdoor areas needed for an 8FE secondary school, and taking into consideration the size of the proposed plot, the site will be defined as a restricted plot as it does not include enough area required for soft outdoor PE areas, which will be provided in grassed area north of the school site and adjacent to the Tennis Academy.

The proposed site layout is designed based on the following principles:

- **Zoning of vehicular and pedestrian zones:** by locating vehicular access to site near Rose Hill and the car parking immediately adjacent, the majority of the site can be kept as a "car-free zone". This creates a safe site for pupils and also allows for greater flexibility of the layout. We would look to expand the existing Bowling Green vehicular access to become the main entrance to the school site.

- **Zoning of uses:** The layout separates uses in order to allow for different activities to be carried out simultaneously without interrupting other users. For example, games courts and sports

halls can be accessed without entering the main school building area.

- **Mitigation of noise pollution from railway:** A Nature area/ green barrier is proposed along the dividing fence located on the West boundary of the site, adjacent to railway line.

- **Future proofing:** the proposed site outline better suits the possibility of future expansion. Similarly, the 8FE School Building Area allows for future provision of accommodation. Car parking and other outdoor areas can also be easily expanded if required.

- **Main access:** The location of the main pedestrian access to the site, off Rose Hill, should be placed and designed considering the possibility for future expansion.



Cycle parking / playground



Teaching space



Plaza

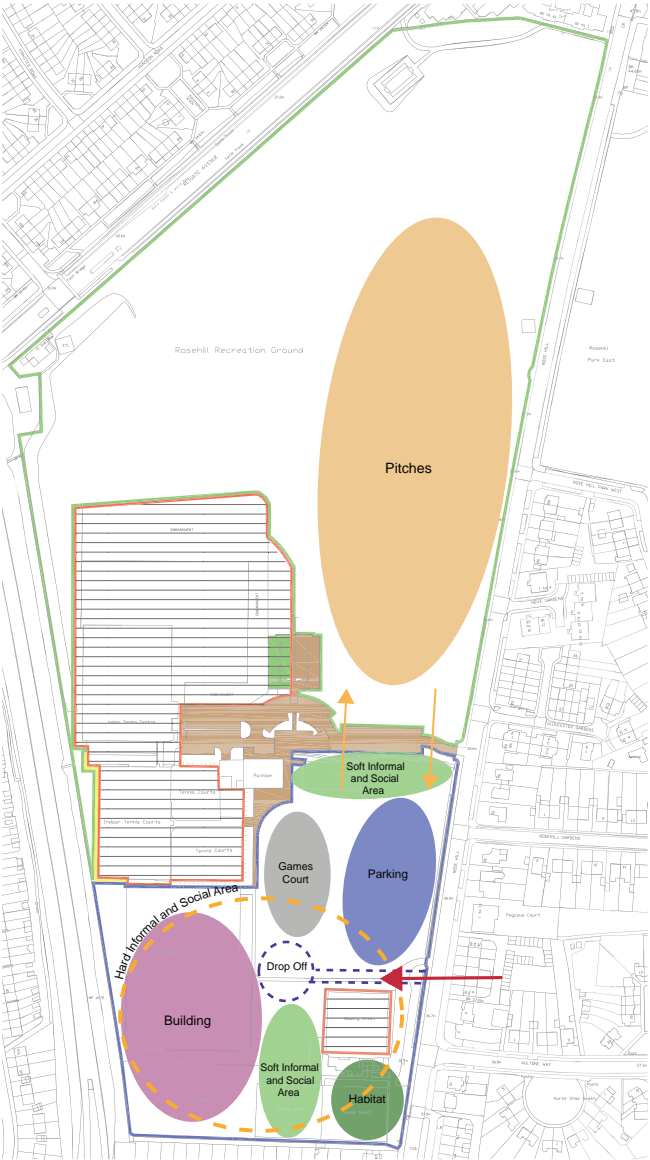


## 4.2 Site Zoning

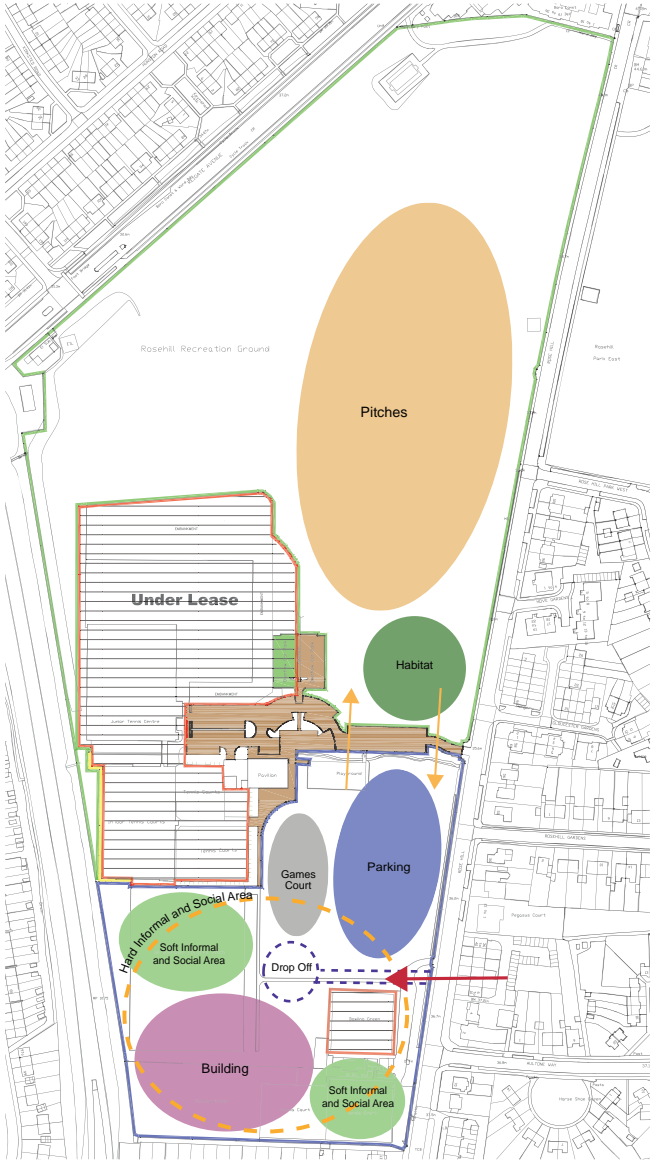
### Site Zoning

The adjacent options indicate two alternative layout arrangements.

Option 1



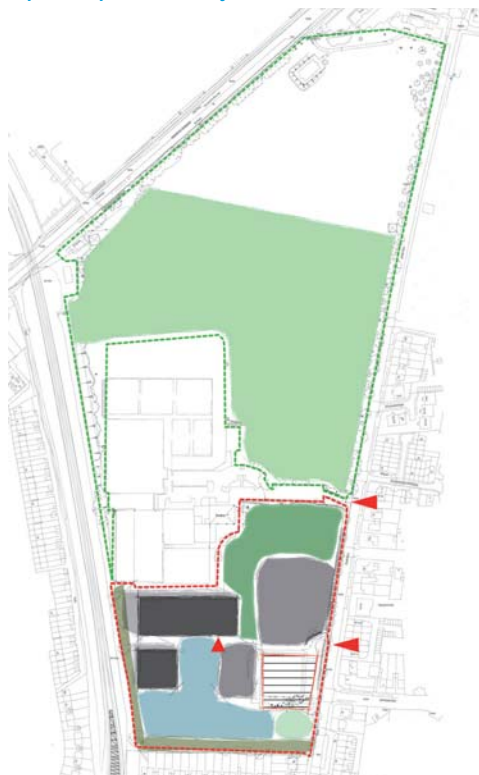
Option 2





## 4.3 Building Arrangement Options

**SUPERBLOCK** - Based on EFA Baseline design with separate Sports Block Layout



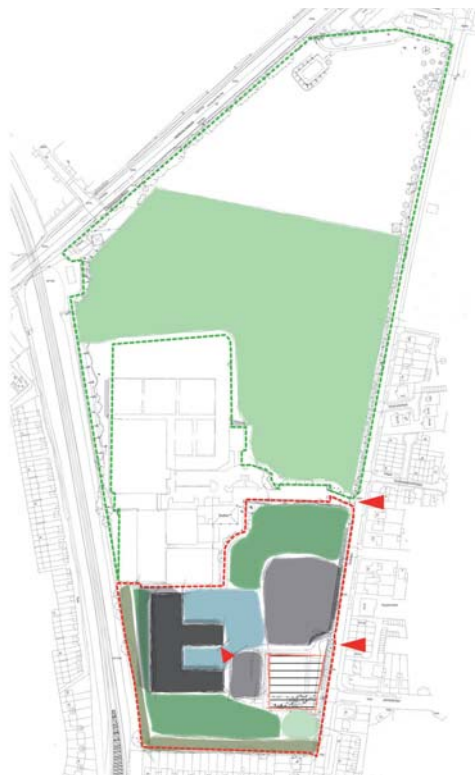
**Advantages:**

- Good access to the building from pedestrian/vehicular routes
- Allowance for better outdoor areas distribution
- Flexibility for future expansion
- Community Bowling Green retained
- Correct North-South orientation
- Allows for out of hours sports community use

**Disadvantages:**

- Long connecting corridors
- Sinuous connections between main blocks
- Possible self-shading during certain moments of the day
- Building close to the railway line, noise attenuation measures could be required.
- Majority of the building is not on the existing all weather pitch

**FINGER BLOCK** - Based on EFA Baseline Designs



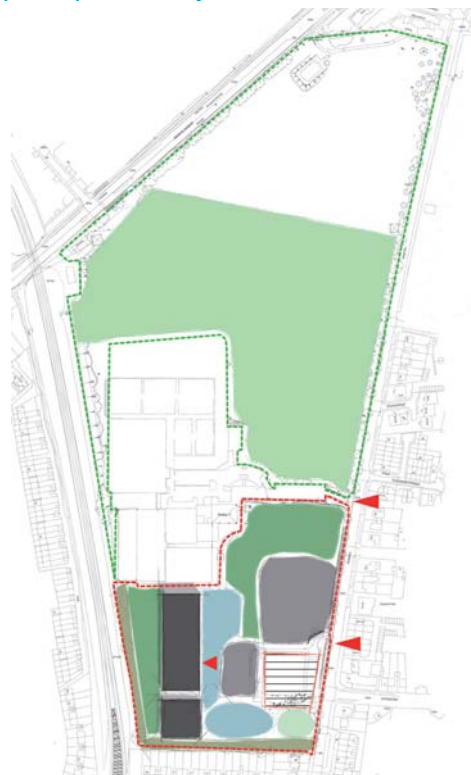
**Advantages:**

- Good access to the building from pedestrian/vehicular routes
- Allowance for better outdoor areas distribution
- Flexibility for future expansion
- Community Bowling Green retained
- Courtyard could become an attractive architectural feature and good space for external teaching.
- Allows for out of hours sports community use

**Disadvantages:**

- Sinuous connections between main blocks
- Building close to the railway line, noise attenuation measures could be required.
- Building enrouches further off the existing all weather pitch

**LINEAR SUPERBLOCK** - Based on EFA Baseline design with separate Sports Block Layout



**Advantages:**

- Good access to the building from pedestrian/vehicular routes
- Building is away from the railway line
- Allows for out of hours sports community use
- Flexibility for future expansion
- Community Bowling Green retained

**Disadvantages:**

- Poor orientation
- Teaching areas not connected to main entrance
- Possible problems of self-shading due to building configuration
- Division of outdoor areas
- Sports Block close to the southern boundary of the site near the residential rear gardens.
- Sports Block building is not on the existing all weather pitch

**T-SHAPED** - Based on EFA Baseline design with separate Sports Block Layout



**Advantages:**

- Building is away from the railway line
- Provides a secure boundary for the external areas
- One main car parking area
- Correct orientation

**Disadvantages:**

- Long connecting corridors
- Division of outdoor areas
- Community Bowling Green removed
- Division of outdoor areas
- 3-storey building close to the main road
- Building is not on the existing all weather pitch

## 4.4 Facilities Brief

### Requirements

The DfE BB103 (Area guidelines for mainstream schools) provides the current recommendations for best practice in the design of secondary school accommodation.

### Gross Internal Area Requirements

In order to assess the suitability of the proposed site and the preferred outline of the building, a preliminary schedule has been prepared based on DfE BB103. The adjacent schedule includes the 8FE and the 375 sixth form areas required. The recommended total Gross Internal Area for an 8FE Secondary school plus 375 Sixth Form, is **11,585 m<sup>2</sup>** (based on a single storey provision). Additional area will be required for circulation should the building be over single storey.

### Proposed Options 1 and 2

The proposed building layout for Option 1 has an estimated GIA of 11,866 m<sup>2</sup> with Option 2 having an estimated GIA of 11,585m<sup>2</sup>. Both the options have been based on the EFA Baseline design layouts.

### Building footprint

Taking into account the internal gross area needed for 8FE Secondary school plus sixth form, a proposed four storey option has been considered in order to assess the building footprint.

The final two Options are as follows:

**Option 1:** three storey super block building with a two storey Sports Block, represents a footprint of **5,143 m<sup>2</sup>**.

**Option 2:** three storey finger block building with a two storey Sports Block, represents a footprint of **5,020 m<sup>2</sup>**.

A two storey solution is the most efficient way to fit the accommodation on the restricted site to allow for suitable use of outdoor space.

INTERACTIVE SCHEDULE OF ACCOMMODATION FOR SECONDARY SCHOOLS										BW JANUARY 2012	
INTERACTIVE SCHEDULE FOR ANY MAINSTREAM SCHOOL WITH SECONDARY PLACES										Version 5.2 July 2012 BW	
date	age range	11-18	school name	years	net capacity for SoA below = 1575 within a potential range of:	type of school	community	net capacity for recommended SoA below: 1575	as a check:		
	4 to 10 places				1441 to 1602	curriculum model	C: typical	1441 to 1602			
	11 to 16 places	1200		5		classrooms	all standard except post-16				
	16 to 19 places	375		2		science	all labs				
Total Mainstream Places		1575		max. group size		dining	in specific dining area				
additional places for SEN				(for size of space chosen)		notes	37 m2 float not over gross				
for:											
curriculum analysis data		tha									
Basic Teaching Area										general teaching suites	
general learning spaces											
classrooms										En Ma Hu MFL	
seminar room			22	41	5	205			41	5	
standard classroom			30	55	34	1870			55	34	
large classroom			30	62							
-			-								
ICT/business studies										(11)	
ICT-rich classroom			30	62	3	186			62	3	
ICT/business studies room			30	62	8	496			62	8	
language laboratory			30	62							
practical learning spaces										(12)	
science											
science studio			30	69							
standard laboratory			30	83	9	747			83	9	
specialist laboratory			33	90	3	270			90	3	
large group/ demo			41	83							
art										(4)	
small art room			30	83	2	166			83	2	
general art room			33	90	1	90			90	1	
large art room (3D)			30	97	1	97			97	1	
music and drama										(4)	
music classroom			30	62	3	186			62	3	
large music classroom			24	69							
drama studio			33	90	1	90			90	1	
audio-visual studio			27	76							
design and technology										(7)	
resistant materials			23	104	2	208			104	2	
food room			26	104	2	208			104	2	
graphic products			25	83	2	166			83	2	
textiles			25	83	1	83			83	1	
electronics and control systems			25	83							
-			24	69							
PE basic teaching spaces										(3)	
fitness/ exercise studio			20	69							
TOTAL AREA										5068	
min	4680	max	5453			in recommended range		5068			
Large spaces: halls and indoor PE											
main hall / auditorium	assembly	328		226	1	226			226	1	
4-court school sports hall		60		594	1	594			594	1	
10 x 15 activity studio		30		150	1	150			150	1	
Dining and Social Areas											
dining area		438		394	1	394			394	1	
other social and sandwich areas											
sixth form social space		170		153	1	153			153	1	
TOTAL AREA										1517	
min	1345	max	1703			OK: area within recommended range		1517			
Total timetabled spaces										(80)	
Learning Resource Areas											
library resource centre and careers		137		209	1	209			209	1	
sixth form study area(s)		62		97	1	97			97	1	
-		-									
creative art											
kiln room		-									
music group/practice rooms		5		8	8	64			8	8	
large music group room		13		16	1	16			16	1	
control room for recording		-									
lighting/ audio control room		4		6	1	6			6	1	
-		-									
SEN and support spaces											
SEN resource base		7		16	1	16			16	1	
small group/ interview room (FLA etc)		6		9	5	45			9	5	
medium group room		-									
large group room (SEN etc)		13		16	1	16			16	1	
informal small group/ discussion		-									
TOTAL AREA										469	
min	443	max	748			OK: area within recommended range		469			

INTERACTIVE SCHEDULE OF ACCOMMODATION FOR SECONDARY SCHOOLS									
BW JANUARY 2017									
SCHEDULE BY AREA CATEGORY (CONT.)									
0	max. group size	average area of space (m <sup>2</sup> )	TOTAL no. of spaces	TOTAL AREA (m <sup>2</sup> )	SUPP AREA (m2)	notes	recommended area of space (m <sup>2</sup> )	no. of spaces	
Staff and Administration Areas									
staff work/ prep rooms	18	32	5	160			32	5	
other staff work rooms	8	16	2	32			16	2	
senior management and pastoral heads		7	13	91			7	13	
community and other	1	8	1	8			8	1	
community entrance/reception		4	1	4		for community use outside core hours	4	1	
admin suite									
head's office	-	16	1	16			16	1	
PA to head	0	7	1	7			7	1	
general office		54	1	54			54	1	
reprographics		26	1	26			26	1	
entrance/reception		12	1	12			12	1	
interview room (adjacent)		6	1	6			6	1	
sick bay (adjacent)		4	1	4			4	1	
central and medical									
staff room (social)	37	63	1	63			63	1	
conference/ meeting room	14	26	1	26			26	1	
deputy or assistant head(s)	1	9	3	27			9	3	
ICT technician/ data manager	1	9	1	9			9	1	
FM, caretakers	1	9	1	9			9	1	
office (SENco and learning support)	-	12	1	12		(no. of offices 24 )	12	1	
SEN therapy/ MI room	4	12	1	12			12	1	
TOTAL AREA min 415 max 751 578 OK: area within recommended range 578									
Storage									
teaching storage									
general teaching/IT walk-in stores		5	6	30			5	6	
central science prep room		147	1	147		154 m <sup>2</sup> total recom'd 2 m <sup>2</sup> min recom'd	147	1	
chemical store		7	1	7			7	1	
other science prep room(s)		12							
light practical walk-in stores		5	14	70		2 stores off each light practical space	5	14	
music store(s)		5	2	10		shared stores for music suite	5	2	
drama store		10	1	10		1 store off any drama space	10	1	
instrument store(s)		3	1	3		music instrument store recommended	3	1	
multi-materials store/ prep room		41	1	41		41 m <sup>2</sup> min recom'd	41	1	
food store/ prep room		10	1	10			10	1	
SENco/ library stores		3	2	6			3	2	
teaching store(s)									
PE store (sports hall)		60	1	60		60 m <sup>2</sup> total recom'd	60	1	
community stores		4	1	4			4	1	
PE stores (activity studio)		15	1	15			15	1	
external store		8	1	8			8	1	
non-teaching storage									
chair store (off hall)		16	1	16		16 m <sup>2</sup> recom'd for all chairs	16	1	
central stock		15	1	15			15	1	
secure/ exam/ community stores		8	2	16			8	2	
wheelchair/ appliances storage area(s)		1.5	6	9.0		as 'bays' off circulation areas	1.5	6	
retractable bleacher seating (hall)		16	1	16			16	1	
personal storage (lockers)									
community lockers (out of school hours)		14	6	84		71% of pupils have locker space	14	6	
cleaners' stores		3	1	3		for community use outside core hours	3	1	
maintenance equipment stores		1.5	12	18			1.5	12	
		8	1	8			8	1	
TOTAL AREA min 519 max 830 606 OK: area within recommended range 606									
Float 598 max 949 37 NOTE: float available 37 37									
Total Net Area recommended 8275 8275 OK 8275									
Non-net Area									
kitchen (incl servery, staff and stores)		158	1	158		158 m <sup>2</sup> minimum recom'd	158	1	
toilets (and personal care)									
pupil changing & shower cubicles	78	90	2	180		180 m <sup>2</sup> min recom'd for 60	90	2	
staff changing & showers	2	6	2	12			6	2	
hygiene facilities		6	1	6			6	1	
pupil toilet suites	14	45.5	6	273		79 pupil toilets required	45.5	6	
accessible toilets for visitors and staff		4	11	44			4	11	
other pupil toilets	1	3					3	0	
other staff toilets									
plant including ICT hubs and risers									
server room		1.4%		113		over 1.0% of net + 30m2 minimum rec'd	113	1.4%	
circulation		16	1	16			16	1	
partitions		26.2%		2169		over 25.0% of net minimum rec'd	2169	26.2%	
		4.1%		339		under 4.1% of net minimum rec'd	339	4.1%	
TOTAL AREA min 3145 max 3724 3310 OK: area within recommended range 3310									
Total Gross Area funded 11585 11585 OK 11585									

## 4.5 BB103 Visual SOA Schedule

### Visual SOA

The adjacent schedule of areas (SOA) is a visual representation of the net internal areas required for the 8FE Secondary school plus 375 Sixth Form building.

### Sutton Secondary School Schedule of Accommodation (BB103) 8FE + 375 Sixth Form = 1575 PUPILS

#### Basic Teaching Area

SEMINAR ROOM 5 x 41m <sup>2</sup>	5x	41m <sup>2</sup>	SPECIALIST LABORATORY 3 x 90m <sup>2</sup>	3x	90m <sup>2</sup>	RESISTANT MATERIALS 2 x 104m <sup>2</sup>	2x	104m <sup>2</sup>
STANDARD CLASSROOM 34x 55m <sup>2</sup>	34x	55m <sup>2</sup>	SMALL ART ROOM 2 x 83m <sup>2</sup>	2x	83m <sup>2</sup>	FOOD ROOM 2 x 104m <sup>2</sup>	2x	104m <sup>2</sup>
ICT RICH CLASSROOM 3 x 62m <sup>2</sup>	3x	62m <sup>2</sup>	GENERAL ART ROOM 1 x 90m <sup>2</sup>	1x	90m <sup>2</sup>	GRAPHICS PRODUCTS 2 x 83m <sup>2</sup>	2x	83m <sup>2</sup>
ICT /BUSINESS STUDIES ROOM 8 x 62m <sup>2</sup>	8x	62m <sup>2</sup>	MUSIC CLASSROOM 3 x 62m <sup>2</sup>	3x	62m <sup>2</sup>	TEXTILES 1 x 83m <sup>2</sup>	1x	83m <sup>2</sup>
STANDARD LABORATORY 9x 83m <sup>2</sup>	9x	83m <sup>2</sup>	DRAMA STUDIO 1 x 90m <sup>2</sup>	1x	90m <sup>2</sup>	LARGE ART ROOM 3D 1 x 97m <sup>2</sup>	1x	97m <sup>2</sup>

TOTAL - 5068m<sup>2</sup>

#### Float

37m<sup>2</sup>

TOTAL - 37m<sup>2</sup>

#### Non Net Area

KITCHEN (inc SERVERY, STAFF & STORES) 158m <sup>2</sup>	1x	158m <sup>2</sup>	SERVER ROOM 1 x 16m <sup>2</sup>	1x	16m <sup>2</sup>
PUPIL CHANGING & SHOWER CUBICLES 2 x 90m <sup>2</sup>	2x	90m <sup>2</sup>	PLANT 113m <sup>2</sup>		
STAFF CHANGING & SHOWERS 2 x 6m <sup>2</sup>	2x	6m <sup>2</sup>			
PUPIL TOILET SUITES 6 x 45.5m <sup>2</sup>	6x	45.5m <sup>2</sup>			
HYGIENE FACILITIES 1 x 6m <sup>2</sup>	1x	6m <sup>2</sup>			
ACCESSIBLE TOILETS FOR VISITORS & STAFF 11 x 4m <sup>2</sup>	11x	4m <sup>2</sup>			

INC 2169m<sup>2</sup> CIRCULATION & 339m<sup>2</sup> PARTITIONS - TOTAL - 3310m<sup>2</sup>

#### Large Spaces

DINING AREA 394m <sup>2</sup>			MAIN HALL/AUDITORIUM 226m <sup>2</sup>		
4 COURT SPORTS HALL 594m <sup>2</sup>			SIXTH FORM SOCIAL SPACE 153m <sup>2</sup>		
			10 x 15m ACTIVITY STUDIO 150m <sup>2</sup>		

TOTAL - 1517m<sup>2</sup>

#### Learning Resource Area

MUSIC GROUP / PRACTICE ROOMS 8 x 8m <sup>2</sup>	8x	8m <sup>2</sup>	LIBRARY RESOURCE CENTRE & CAREERS 209m <sup>2</sup>		
LARGE MUSIC GROUP ROOM 16m <sup>2</sup>	1x	16m <sup>2</sup>	SIXTH FORM STUDY AREA 97m <sup>2</sup>		
SEN RESOURCE BASE 16m <sup>2</sup>	1x	16m <sup>2</sup>			
SMALL GROUP / INTERVIEW ROOM 5 x 9m <sup>2</sup>	5x	9m <sup>2</sup>			
LARGE GROUP ROOM (SEN) 16m <sup>2</sup>	1x	16m <sup>2</sup>			
LIGHTING/AUDIO CONTROL ROOM 1 x 6m <sup>2</sup>	1x	6m <sup>2</sup>			

TOTAL - 469m<sup>2</sup>

#### Staff and Administration Area

STAFF WORK / PREP ROOMS 5 x 32m <sup>2</sup>	5x	32m <sup>2</sup>	SENIOR MANAGEMENT & PASTORAL HEADS 13 x 7m <sup>2</sup>	13x	7m <sup>2</sup>
OTHER STAFF WORK ROOMS 16m <sup>2</sup>	2x	16m <sup>2</sup>	STAFF ROOM (SOCIAL) 63m <sup>2</sup>	1x	63m <sup>2</sup>
COMMUNITY AND OTHER 8m <sup>2</sup>	1x	8m <sup>2</sup>	CONFERENCE / MEETING ROOM 26m <sup>2</sup>	1x	26m <sup>2</sup>
COMMUNITY ENTRANCE / RECEPTION 4m <sup>2</sup>	1x	4m <sup>2</sup>	DEPUTY OR ASSISTANT HEAD 3x 9m <sup>2</sup>	3x	9m <sup>2</sup>
HEAD'S OFFICE 16m <sup>2</sup>	1x	16m <sup>2</sup>	ICT TECHNICIAN / DATA MANAGER 9m <sup>2</sup>	1x	9m <sup>2</sup>
PA to HEAD 7m <sup>2</sup>			FM CARETAKERS 9m <sup>2</sup>	1x	9m <sup>2</sup>
GENERAL OFFICE 54m <sup>2</sup>	1x	54m <sup>2</sup>	OFFICE SENCO & LEARNING SUPPORT 12m <sup>2</sup>	1x	12m <sup>2</sup>
REPROGRAPHICS 26m <sup>2</sup>	1x	26m <sup>2</sup>	SEN THERAPY / HI ROOM 12m <sup>2</sup>	1x	12m <sup>2</sup>
ENTRANCE / RECEPTION 12m <sup>2</sup>	1x	12m <sup>2</sup>			
INTERVIEW ROOM 6m <sup>2</sup>	1x	6m <sup>2</sup>			
SICK BAY 4m <sup>2</sup>	1x	4m <sup>2</sup>			

TOTAL - 578m<sup>2</sup>

#### Storage

GENERAL TEACHING / IT WALK-IN STORES 6 x 5m <sup>2</sup>	6x	5m <sup>2</sup>	SENCO / LIBRARY STORES 2 x 3m <sup>2</sup>	2x	3m <sup>2</sup>	PE STORE (SPORTS HALL) 60m <sup>2</sup>		
CENTRAL SCIENCE PREP ROOM 147m <sup>2</sup>			COMMUNITY STORE 4m <sup>2</sup>	1x	4m <sup>2</sup>	PE STORE (ACTIVITY STUDIO) 15m <sup>2</sup>	1x	15m <sup>2</sup>
CHEMICAL STORE 7m <sup>2</sup>	1x	7m <sup>2</sup>	EXTERNAL STORE 8m <sup>2</sup>	1x	8m <sup>2</sup>	CHAR STORE 16m <sup>2</sup>	1x	16m <sup>2</sup>
LIGHT PRACTICAL SPACE WALK-IN STORES 14x 5m <sup>2</sup>	14x	5m <sup>2</sup>	CENTRAL STOCK 15m <sup>2</sup>	1x	15m <sup>2</sup>	SECURE EXAM / COMMUNITY STORES 1 x 8m <sup>2</sup>	2x	8m <sup>2</sup>
MUSIC & DRAMA STORES 4 x 5m <sup>2</sup>	4x	5m <sup>2</sup>	CENTRAL EQUIPMENT / APPLIANCES STORE 20m <sup>2</sup>	1x	20m <sup>2</sup>	PERSONAL STORAGE (LOCKERS & WHEELCHAIRS) 6 x 14m <sup>2</sup>	6x	14m <sup>2</sup>
INSTRUMENT STORE 3m <sup>2</sup>	1x	3m <sup>2</sup>	COMMUNITY LOCKERS (OUT OF HOURS) 3m <sup>2</sup>	1x	3m <sup>2</sup>	CLEANERS STORES 12 x 1.5m <sup>2</sup>	12x	1.5m <sup>2</sup>
MULTI MATERIALS STORE / PREP ROOM 41m <sup>2</sup>	1x	41m <sup>2</sup>	MAINTENANCE EQUIPMENT STORES 8m <sup>2</sup>	1x	8m <sup>2</sup>	WHEELCHAIR/APPLIANCES STORAGE AREA 6 x 1.5m <sup>2</sup>	6x	1.5m <sup>2</sup>
FOOD STORE / PREP ROOM 10m <sup>2</sup>	1x	10m <sup>2</sup>				RECTABLE BLEACHER SEATING 1 x 16m <sup>2</sup>	1x	16m <sup>2</sup>

TOTAL - 606m<sup>2</sup>

# 4.6 Proposed Site and Building Zoning - Option

## Proposed site and building zoning

The building is located on the south side of the Tennis Academy, which is the preferred position in both options given that both the north and south part of the site is on Metropolitan Open Land. The south is a preferred location as the site is already partially developed.

The Main Hub social core operates as a link between the sixth form and the Sports Hall. The main hub as a central social core accommodates the main functions of the school. The building is surrounded by external areas such as Hard Informal and Social Area and Hard Outdoor PE Area. A drop off is located close to the carpark and entrance as it is the preferred location to link the entrance of the school to Rose Hill Street.

Pedestrian and vehicular accesses are located on Rose Hill Street and adjacent to the entrance. A large car park is provided which can accommodate at least 115 car spaces.

In front of the drop off area is the entrance of the school which is linked through to the central social core.

On the left side of the building is the railway which will create a significant level of noise on the site. A natural green noise barrier is proposed along the railway line.

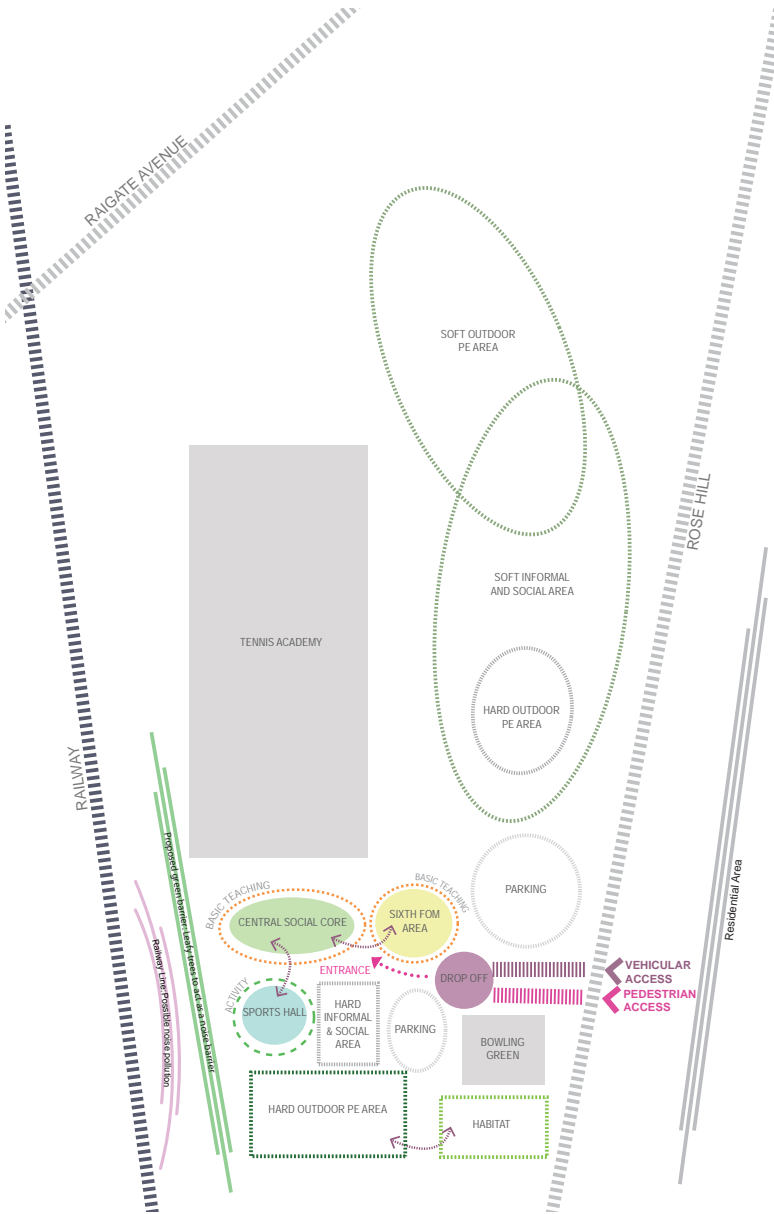
## External Area Requirements

The external area requirements have been calculated using the DfE Building Bulletin 103 based on 1575 students.

Habitat and Hard Outdoor PE Areas are located on the southern area of the site whereas Soft Outdoor PE areas occupy the northern area of the site.

This Option provides a large Hard Informal and Social Area in front of the Sports Hall which will be the heart of the external play areas. The Soft Informal and Social area will be slightly reduced compared to Option 2.

The adjacent table shows the external areas provided in this Option and the adjacent plan indicates where these areas can be accommodated on the site.



OPTION 1 TOTAL SITE AREA		46,176 m <sup>2</sup>
Item	Area	
Habitat Area	2288 m <sup>2</sup>	
Hard Informal & Social Area	6664 m <sup>2</sup>	
Hard Outdoor PE	4539 m <sup>2</sup>	
Soft Informal & Social Area	13382 m <sup>2</sup>	
Soft Outdoor PE - Offsite	0 m <sup>2</sup>	
NET SITE AREA	18750 m <sup>2</sup>	
TOTAL SITE AREA	46176 m <sup>2</sup>	

## 4.7 Proposed Site and Building Zoning - Option 2

### Proposed site and building zoning

The building is located on the south side of the Tennis Academy, which is the preferred position in both options given that both the north and south part of the site is on Metropolitan Open Land. The south is a preferred location as the site is already partially developed.

The Main Hub accommodates the 8 Form of Entry and the Sixth Form with the Sports Hall located on the north side of the main building. The building in this option works as a single block with two wings connecting to the adjacent Hard Informal and Social Area and the third wing on the north accommodating the Sports Hall. A drop off is located adjacent to the entrance and provides a good link to Rose Hill Street.

Pedestrian and vehicular accesses are located off Rose Hill Street and adjacent to the entrance is a large car park which can accommodate at least 115 car spaces.

On the left side of the building is the railway which will create a significant level of noise on the site. A natural green noise barrier is proposed along the railway line.

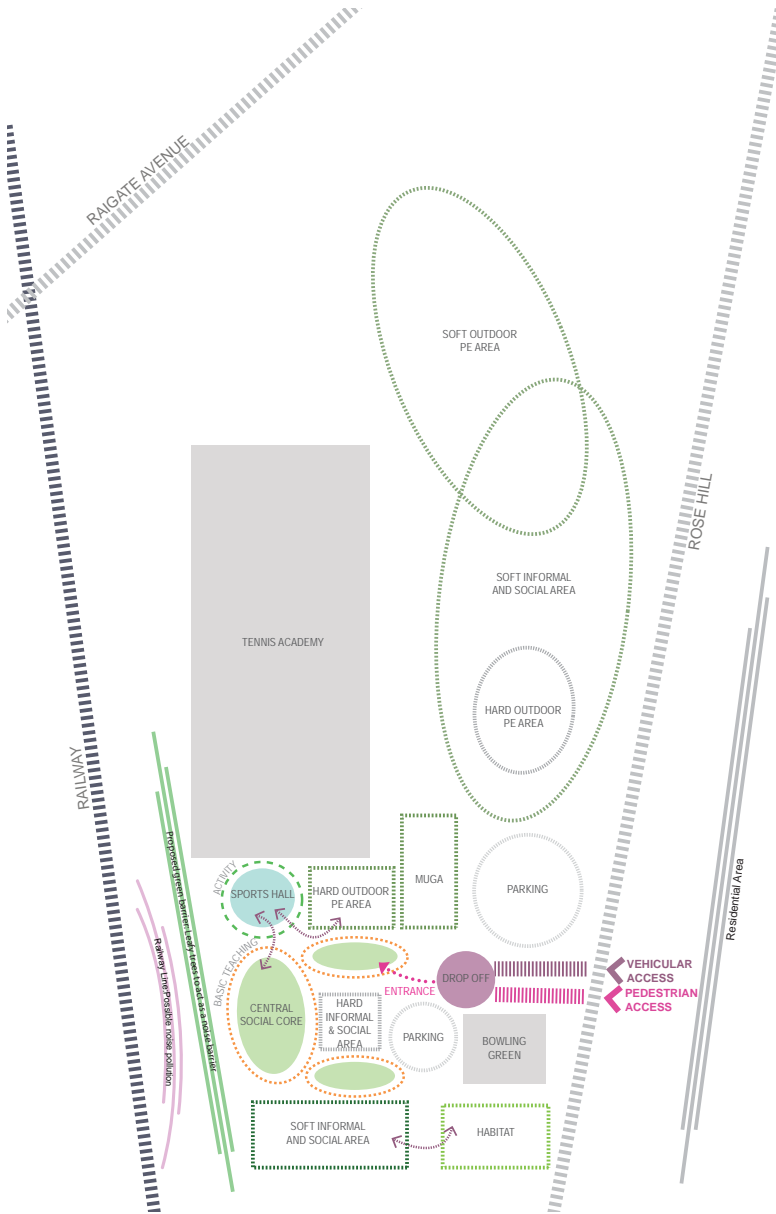
### External Area Requirements

The external area requirements have been calculated using the DfE Building Bulletin 103 based on 1575 students.

Habitat and Hard Outdoor PE Areas are located on the southern area of the site whereas Soft Outdoor PE areas occupy the northern area of the site.

This Option allocates a smaller amount of Hard Informal and Social Areas due to the shape of the building but keeps the external playground in heart of the school. Soft Informal and Social areas will be slightly increased compared to Option 1.

The adjacent table shows the external areas provided in this Option and the adjacent layout show where these areas can be accommodated on the site.



OPTION 2 TOTAL SITE AREA **46,176 m<sup>2</sup>**

Item	Area
Habitat Area	2288 m <sup>2</sup>
Hard Informal & Social Area	3061 m <sup>2</sup>
Hard Outdoor PE	4230m <sup>2</sup>
Soft Informal & Social Area	15814m <sup>2</sup>
Soft Outdoor PE - Offsite	0 m <sup>2</sup>
NET SITE AREA	21975.5 m <sup>2</sup>
TOTAL SITE AREA	46176m <sup>2</sup>



# 4.8 Proposed Option 1 - Proposed Site Plan

## Landscape Proposal

### SETTING

The site is located in Rosehill, approximately one mile to the north of Sutton High Street, Surrey. Predominantly bounded by residential development, Rosehill Park East abuts the site to the east, and Thomas Hall Park to the north.

### VISION

The vision is to provide a stimulating and vibrant school environment, focussing on both the internal and the external environments as resources for formal and informal learning.

### CONCEPT AND PRINCIPLES

The landscape and its relationship with the proposed school will be critical to the success of the scheme, and the design strives to create a stimulating and cohesive landscape that provides a high quality educational environment for pupils, parents, and staff alike. The concept that architecture, landscape, and community are intrinsically linked will be promoted by providing efficient circulation routes through a series of age appropriate, dynamic, flexible and robust external spaces.

### NON MOTORISED USER STRATEGY

The external strategy will aim to create a cohesive, high quality exterior space for the entire site, with the objective of creating clear and defined routes for non-motorised users that facilitate safe movement through the site. The proposals will present a legible and ordered spatial pedestrian experience in order to create a strong sense of identity; careful design will ensure that all spaces will be compliant with the guidance of the Equality Act 2010 and as such, these spaces will be accessible to all. Catering for a variety of educational and social needs, the external spaces will reflect their intended uses whilst being conducive to learning and social interaction. Relating directly with the layout of the school, these spaces will be designed to provide a stimulating and rewarding outdoor learning and play environment.

### VEHICULAR STRATEGY

The needs and requirements of motorised vehicles will be accommodated within the new design, and will seek to segregate vehicular and pedestrian movements where possible. The design and functional arrangement of the exterior space as a whole will minimise vehicular impact on both the site and the wider environment by utilising existing access points, and the layout of the car park will maximise the number of spaces available. Vehicular access will be from the east via Rose Hill and in order to minimise vehicular movements through the site, the main car park will also be situated adjacent to the vehicular access point.

### MATERIALS

While existing high quality features will be retained and incorporated into the new design wherever possible, the scheme will exploit a modern palette of materials for both surfacing and external furniture, and a considered approach to detailing will ensure that all external spaces areas are appropriate and safe for their intended age groups and learning requirements. This design tactic will ensure that all spaces are perceived as 'belonging' Sutton Secondary School.

All features will be designed and selected to encourage creative play to stimulate the senses and improve development, and exciting play opportunities within a secure and safe environment will be encouraged. Mature vegetation will be retained wherever possible, and the planting palette will contribute to the overall identity of the school, seeking to provide security while enhancing the biodiversity wherever possible.

### OPTIONS

Two options are presented for the site; for both options, the soft informal/ social area located on the eastern boundary opposite Rosehill Gardens, the car park, bowling green and habitat area all remain the same but along the southern boundary, option 1 favours hard play areas and option 2 favours soft play areas.

#### KEY:

- Buffer/ Ornamental Planting
- Grassed Area
- Playground
- Footpath
- Vehicular surface



# 4.09 Proposed Option 1 - Ground Floor Plan

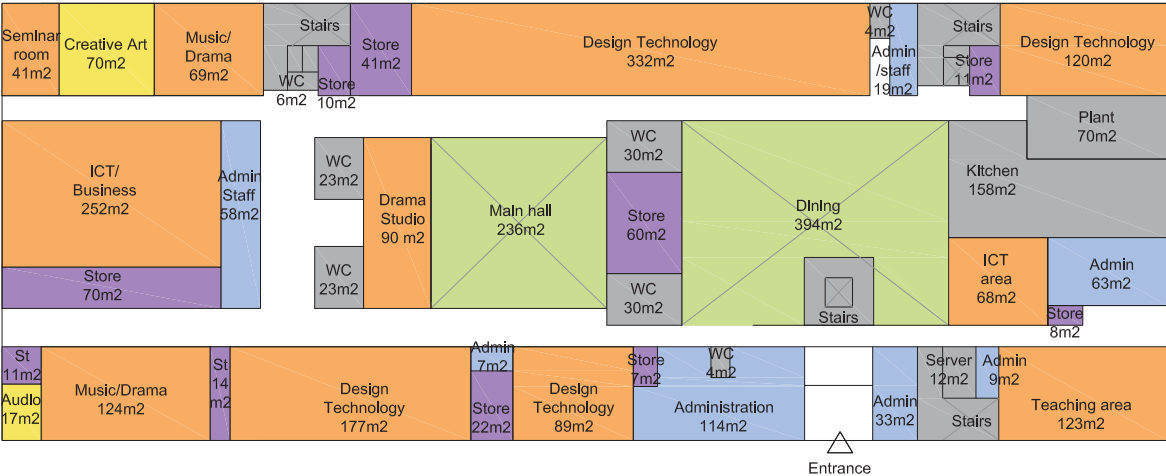
The building layout is based on the area schedule in section 4.4. The total GIA is **11,866m<sup>2</sup>**. This Design is based on the DfE Baseline Designs.

## Ground Floor

The proposed ground floor layout has an estimated GIA of **5,143m<sup>2</sup>**.

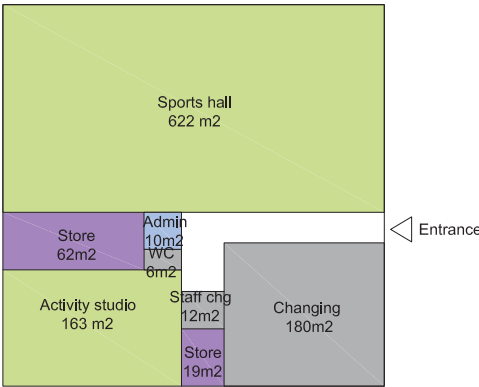
The ground floor accommodates several functions from Administration to Learning Resource Areas. The entrance is located central to administration areas and leads the occupants directly to the central circulation core adjacent to the dining hall. Dining Hall and Main Hall are adjacent double height volumes which give character to the internal environment. Classrooms are accommodated around the perimeter on the building providing good natural day-lighting and ventilation.

The Sports Hall is located adjacent to the main building and accommodates changing areas, WCs and storage areas. The Sports block retains its own identity and has opportunity to be used separately from the whole school by the community; External play areas are located in front of it to maintain links with all the outdoor and indoor activities for students.



## KEY:

- Teaching Areas
- Administration Areas
- Halls
- Storages
- WCs and Changing Areas
- Learning Resource Areas



Ground Floor Plan

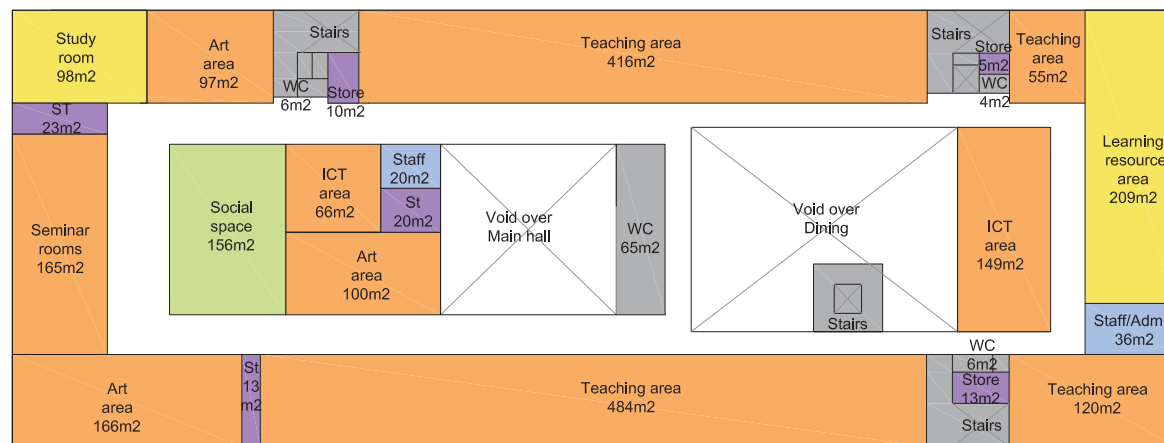
## 4.10 Proposed Option 1 - First and Second Floor Plans

The building layout is based on the area schedule in section 4.4. The total GIA is **11,866m<sup>2</sup>**. This Design is based on the DfE Baseline Designs.

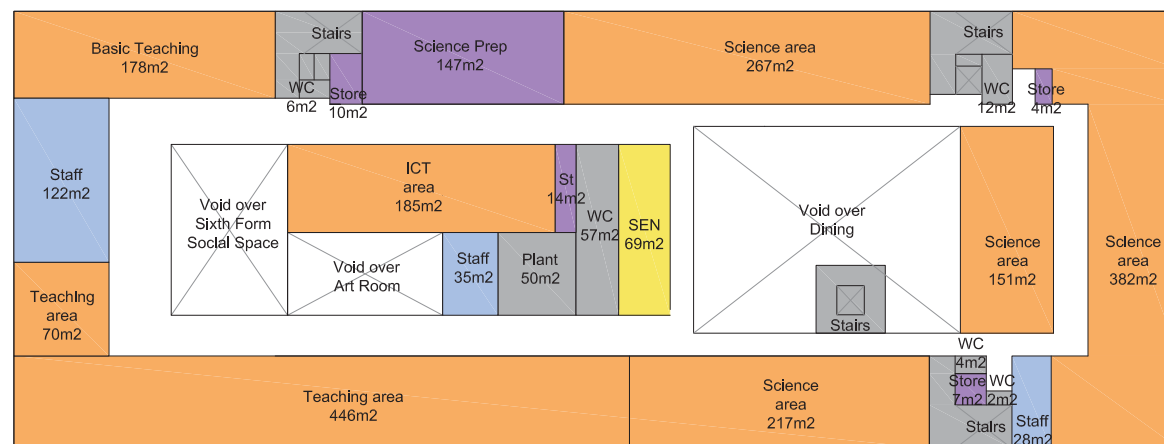
### First Floor and Second Floor

The proposed first floor layout has an estimated GIA of **3,370m<sup>2</sup>**. The proposed second floor layout has an estimated GIA of **3,353m<sup>2</sup>**.

Teaching areas are located on the perimeter of the building allowing free internal space for circulation, vertical connections and voids. Natural day-light can penetrate the building from the roof and external facade providing a light internal space.



First Floor Plan



Second Floor Plan

### KEY:

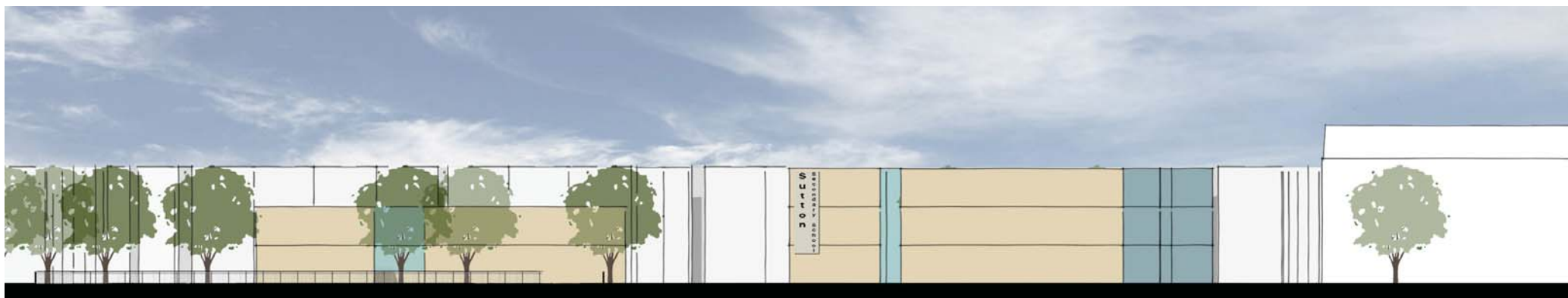
- Teaching Areas
- Administration Areas
- Halls
- Storages
- WCs and Changing Areas
- Learning Resource Areas



## 4.11 Option 1 - 3D Views

### 3D Views and Main Elevation

The building is composed of two blocks; the main block accommodates the 8 FE and the Sixth Form and the smaller adjacent block accommodates the Sports facilities. The main building is formed of three floors with voids to allow light to enter the central core. Vertical connections are dispersed in the building to allow circulation and escape in case of emergency. A drop off area is located in the middle of the site next to the entrance, close to the carpark.



## 4.12 Option 1 - 3D Views

### 3D Views and Main Elevation

The Hard Informal and Social Areas are located in front of the Sports Hall which can be used as playground and as link between the two buildings. In the main building the entrance is located on the longest facade of the building. The building volume is simple and compact from an external point of view but more complex internally; double volumes, glazed areas and walkways structure the space and give character to the building. The Sports Hall maintains its autonomy from the main building and can be used separately from the main school building.





# 4.13 Proposed Option 2 - Proposed Site Plan

## Landscape Proposal

### SETTING

The site is located in Rosehill, approximately one mile to the north of Sutton High Street, Surrey. Predominantly bounded by residential development, Rosehill Park East abuts the site to the east, and Thomas Hall Park to the north.

### VISION

The vision is to provide a stimulating and vibrant school environment, focussing on both the internal and the external environments as resources for formal and informal learning.

### CONCEPT AND PRINCIPLES

The landscape and its relationship with the proposed school will be critical to the success of the scheme, and the design strives to create a stimulating and cohesive landscape that provides a high quality educational environment for pupils, parents, and staff alike. The concept that architecture, landscape, and community are intrinsically linked will be promoted by providing efficient circulation routes through a series of age appropriate, dynamic, flexible and robust external spaces.

### NON MOTORISED USER STRATEGY

The external strategy will aim to create a cohesive, high quality exterior space for the entire site, with the objective of creating clear and defined routes for non-motorised users that facilitate safe movement through the site. The proposals will present a legible and ordered spatial pedestrian experience in order to create a strong sense of identity; careful design will ensure that all spaces will be compliant with the guidance of the Equality Act 2010 and as such, these spaces will be accessible to all. Catering for a variety of educational and social needs, the external spaces will reflect their intended uses whilst being conducive to learning and social interaction. Relating directly with the layout of the school, these spaces will be designed to provide a stimulating and rewarding outdoor learning and play environment.

### VEHICULAR STRATEGY

The needs and requirements of motorised vehicles will be accommodated within the new design, and will seek to segregate vehicular and pedestrian movements where possible. The design and functional arrangement of the exterior space as a whole will minimise vehicular impact on both the site and the wider environment by utilising existing access points, and the layout of the car park will maximise the number of spaces available. Vehicular access will be from the east via Rose Hill and in order to minimise vehicular movements through the site, the main car park will also be situated adjacent to the vehicular access point.

### MATERIALS

While existing high quality features will be retained and incorporated into the new design wherever possible, the scheme will exploit a modern palette of materials for both surfacing and external furniture, and a considered approach to detailing will ensure that all external spaces areas are appropriate and safe for their intended age groups and learning requirements. This design tactic will ensure that all spaces are perceived as 'belonging' Sutton Secondary School.

All features will be designed and selected to encourage creative play to stimulate the senses and improve development, and exciting play opportunities within a secure and safe environment will be encouraged. Mature vegetation will be retained wherever possible, and the planting palette will contribute to the overall identity of the school, seeking to provide security while enhancing the biodiversity wherever possible.

### OPTIONS

Two options are presented for the site; for both options, the soft informal/ social area located on the eastern boundary opposite Rosehill Gardens, the car park, bowling green and habitat area all remain the same but along the southern boundary, option 1 favours hard play areas and option 2 favours soft play areas.

#### KEY:

	Buffer/ Ornamental Planting
	Grassed Area
	Playground
	Footpath
	Vehicular surface



The building layout is based on the area schedule in section 4.4. The total GIA is **11,536m<sup>2</sup>**. This Design is based on the DfE Baseline Designs.

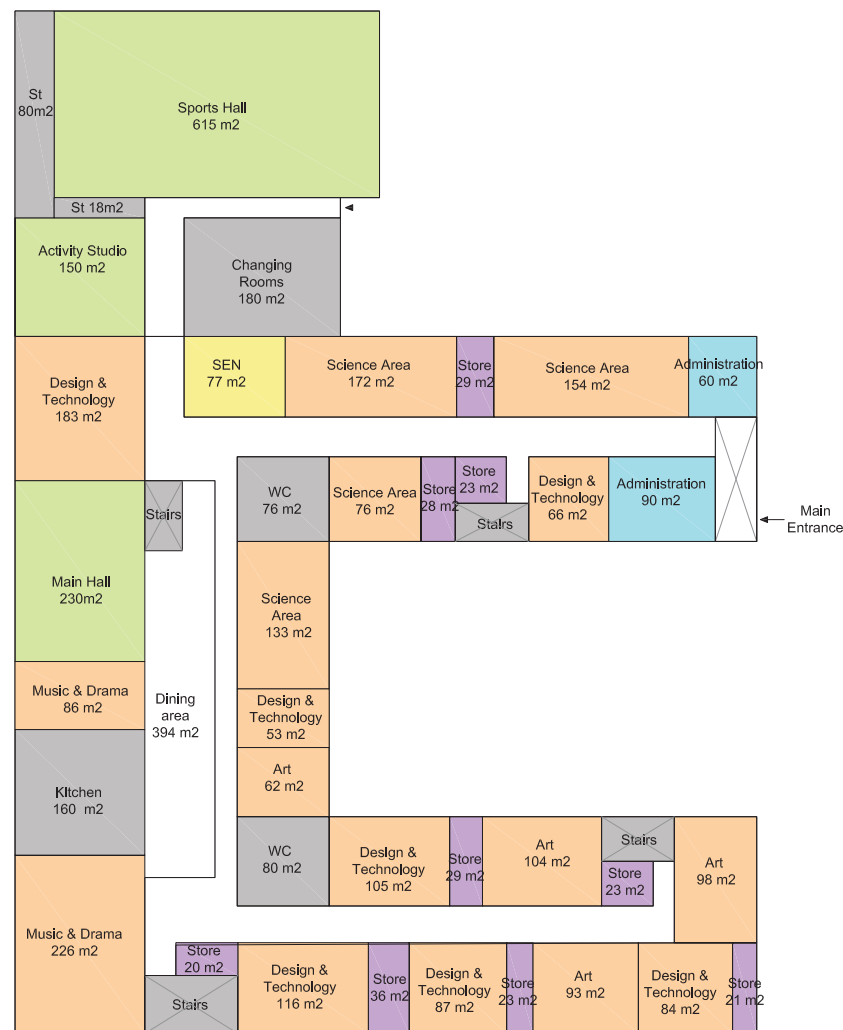
The proposed ground floor layout has an estimated GIA of **5.020m<sup>2</sup>**.

The entrance is located in the left wing and creates a safe route separated from the playground which is located between the two wings. The administration area is adjacent to the entrance and the sports hall is in a third wing on the north side of the building directly connected with the external playground. In this option every internal area is located on the perimeter of the building with good levels of natural light and ventilation.

The proposed first floor layout has an estimated GIA of **3,381m<sup>2</sup>**.  
The proposed second floor layout has an estimated GIA of **3.135m<sup>2</sup>**

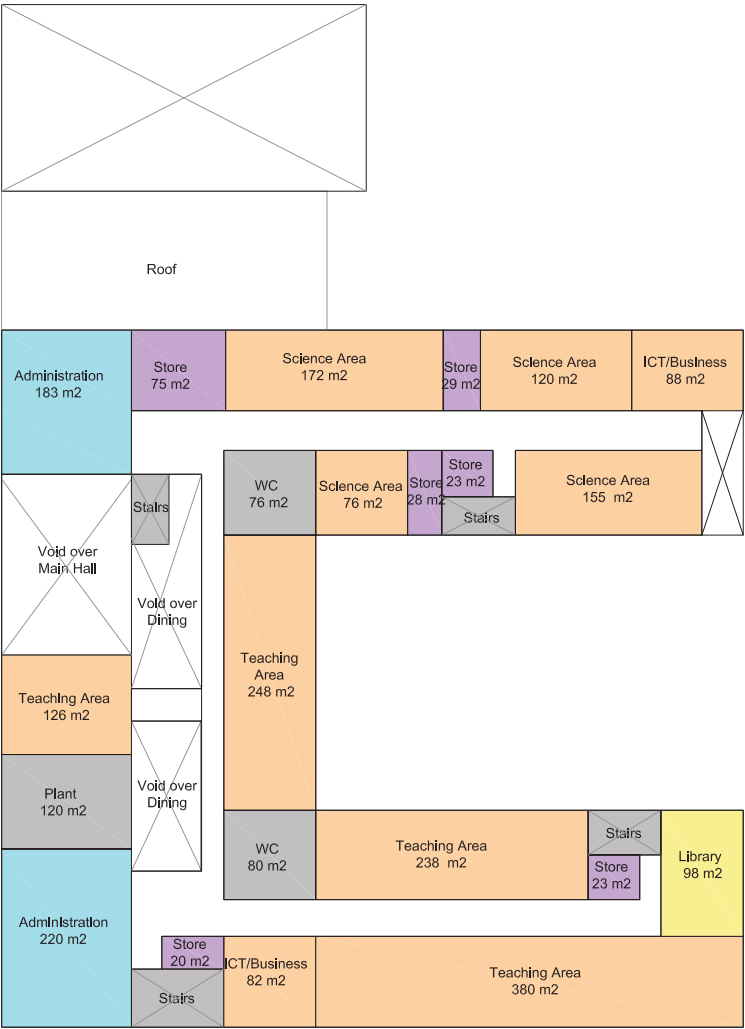
First and second floors accommodate all of the teaching areas and part of the administration facilities.

- Teaching Areas
- Administration Areas
- Halls
- Storages
- WCs and Changing Areas
- Learning Resource Areas

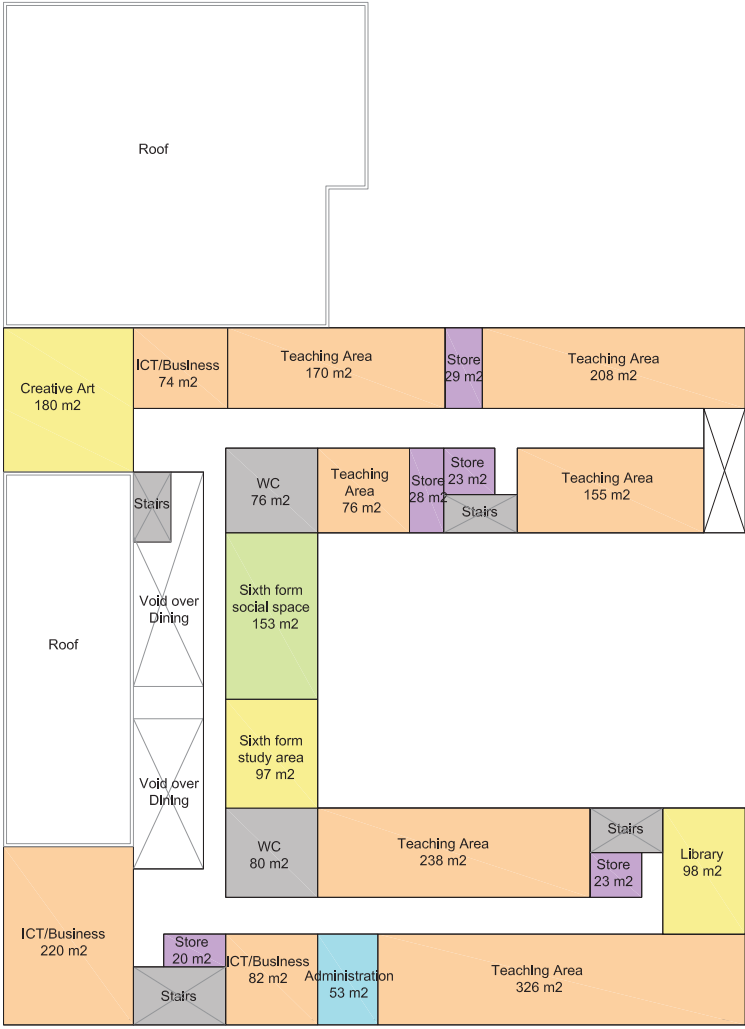


## Ground Floor Plan

## 4.15 Proposed Option 2 - First and Second Floor Plans



First Floor Plan



Second Floor Plan

## 4.16 Option 2 - 3D Views

### 3D Views and Main Elevation

The building is composed of a single block which accommodates the 8 FE School, Sixth Form in the two main wings and the Sports Hall in the small wing to the north side. The volume consists of three floors and part of it is occupied by voids to allow light to penetrate the building. Vertical connections are dispersed in the building to allow good circulation and escape in case of emergency. A drop off area is located in the middle of the site next to the entrance adjacent to the carpark.





## 4.17 Option 2 - 3D Views

### 3D Views and Main Elevation

Two main wings embrace a large Hard Informal and Social Area creating a safe and intimate playground for the students. The Sports Hall is linked to the main building but also retains its own autonomy so as it can be used for community uses separately from the main school building.



## 4.18 Proposed Option 2A - Alternative Site Plan

### Proposed Option 2A Site Plan

Following a meeting with officers from Sutton's Local Planning Authority and Highways Department on 17.03.2015 regarding Option 2 (preferred building layout by stakeholders and Local Authority) several comments were noted on the scheme. It should be noted at the outset that these are informal officer comments and do not represent the formal decision/s of the LPA. It should also be noted that these discussions have been to discuss very broad land use principles and massing studies and have not explored a number of other relevant material planning considerations.

The comments include:

- The proposed site lies within a larger area of Metropolitan Open Land (MOL) and the building of a new school would be considered inappropriate development by definition as confirmed within the National Planning Policy Framework (NPPF). As such, 'very special circumstances' would have to be demonstrated that outweigh the harm to the MOL by way of inappropriateness and the loss of openness to the MOL. The site is also within the Wandle Valley Regional Park, forms part of a Metropolitan green chain and is public open space. A development of this size in the MOL would need to be referred to the GLA for approval and they would have the power to direct refusal for any scheme should the Local Planning Authority resolve to grant planning permission. Early engagement with the GLA is recommended and it has recently been confirmed by the GLA that demonstrating a need for the provision of educational facilities can be considered a 'very special circumstance' in certain situations (e.g. lack of suitable brown field alternatives).
- To justify development within MOL a detailed sequential test would have to take place along with demonstrating 'very special circumstances'.
- The site boundary should be reduced to limit the impact on the Metropolitan Open Land.

The following comments were made by LPA officers notwithstanding the planning policy designation for the site:

- Location of building should be close to existing Tennis Centre development.
- Location/footprint of school building should be placed over existing hard play area.
- A linear building on a North/South axis was preferred although this would not provide a good orientation for the building with East/West facades. The 'Finger Block' design was seen as a better alternative allowing for better orientation.
- Sports facilities adjacent to the Tennis Centre were seen as a benefit and that community use of the sport facility should be built into the proposals.
- Retain current vehicular access to the site.

- Retain Bowling Green.
- Car parking should be split where possible to part hard landscaping and part overspill (on 'grasscrete').
- Green buffers to South and East should be retained/promoted.
- The building should be limited to no more than three storeys to reduce, as far as possible, the impact on MOL, the area and neighbouring residential properties.
- The proposals should ensure that nearby neighbouring occupiers would not be impacted by way of loss of outlook, privacy, light, noise and disturbance.

Following this meeting, an alternative option was produced and discussions are still ongoing with officers of the Local Planning Authority.

### Restricted Site Areas

