

## 5.5 LAS Proposed Floor Plans







6

## design response



# 6. DESIGN RESPONSE

## 6.1 Appearance & Materials

The retained Edwardian Morant building adds to the character of the street and associated Dartmouth Park Conservation Area. The 'green, semi-rural' character of the area is defined as being about the boundary treatments and the predominance of hedges, trees and shrubs. The existing close-boarded timber fence is noted in the Dartmouth Park Conservation Appraisal as a negative feature as it restricts views through to the building. To address this it is proposed to be replaced with 2m high 'park' style railings, enhancing the boundary and opening up views to the school site. Additional trees are also to be planted along the Highgate Road boundary with the existing trees retained.

The proposed single storey LAS building sits as a pavilion to the front of the 2007 Performing Arts building. It is clad with dark grey Fibre-cement panels with a green wall to the south and east facades, the green wall planting is supported by a stainless steel trellis. This type of green wall has the least maintenance requirements of the various green wall systems available which was felt to be important for a School building. A green roof is also proposed; through the use of the green wall and roof the building further enhances the green character and biodiversity of the area. The use of these materials ensures that the building doesn't try to compete with the brickwork of the Morant building but instead has it's own contemporary language appropriate for the context.

The building is articulated in its massing through the location of the glazing; direct windows facing onto Highgate Road have been avoided; instead the building steps in and out along the south and east facades with glazing in the returns, which fold over onto the roof creating rooflights that bring daylight into the centre of the building.

The north and west facades to the classrooms face onto the school site and here the cladding is the Fibre-cement cladding panels with full height vertical glazing.

Green Trellis Wall



Fibre Cement Panels



Proposed North-East Elevation to Highgate Road



Proposed North-East Elevation to Highgate Road note: some trees omitted to show the proposed elevations





LAS Elevation Key Plan



Proposed North-West Elevation of LAS



#### PHS new teaching building:

The proposed new teaching block of PHS - the 'Ribbon building' runs east-west along the southern edge of the site. A glazed circulation route links the existing Morant building with the New building and visually creates a break between the existing and the new, reflecting how the Performing Arts building adjoins the Morant building at the Northern end.

The Ribbon building is proposed to be clad in standing seam copper, giving a rich, warm appearance to the building that tones well with both the Morant building and the adjacent red-brick mansion blocks of Lissenden Gardens. It also reflects the use of copper in the 2007 recent addition of the Performing Arts building but rather than using pre-patinaed copper it is proposed to use copper in its natural state which will weather and be more sympathetic to the surrounding buildings whilst still giving a contemporary feel to the new building.

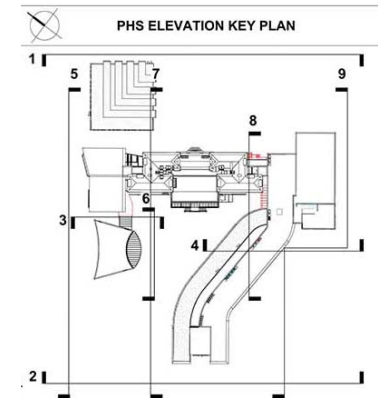
The new Sports Hall forms the bookend to the Highgate road elevation and is proposed to be clad in grey render with the same stainless steel green wall trellis system, creating a softer edge to the development at this part of the site which sits in relative close proximity to Lissenden Gardens and the small park.

The glazing to the south facade facing onto Lissenden Gardens is set-back 0.8m from the face of the facade, providing shading as required by Passivhaus but also enhanced privacy. Perforated angled metal screens are also provided to the glazing to minimise any overlooking along this sensitive facade.

Vertical channels have been introduced at some points along this facade to introduce some verticality and rhythm as can be seen in the elevation below.



PHS part Section and Elevation 4 looking East showing the deep reveal to the south elevation



1- Metal Standing Seam Cladding



2/4- Perforated Metal Standing Seam Clad-



3- Green Trellis Wall



6- Brickwork



PHS proposed South-East Elevation 9 facing onto Lissenden Gardens



The end of the 'Ribbon building' faces onto Hampstead Heath; the central portion of the building, which contains the large, multi-purpose commons rooms is full height glazed curtain walling, maximising the view to the Heath from inside the building and signifying from outside that a special activity takes place at this point - it is not just standard classrooms.

Facing onto the re-landscaped central courtyard is the north facade of the 'Ribbon building'. This facade is also clad in standing seam copper with perforated screens to the openable windows, however here they are not angled as there are no privacy/ overlooking concerns and the windows are set-back a normal amount of approximately 250mm.



Proposed South-East Elevation 6 of the new Dining Pavilion



Proposed North-West Elevation 5 of PHS facing onto WES site



Proposed South-West Elevation 2 of PHS facing onto Hampstead Heath

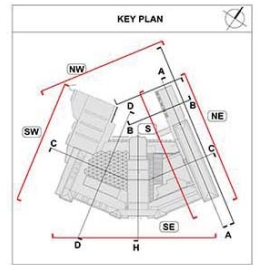
WES:

The new two storey extension is proposed to be clad in rich brown brindle brickwork, this tones with the existing red-brown brick. The proportions of the windows match those of the existing building although they are single panes of glass giving the elevation a cleaner, more contemporary feel.

The new building is two storeys high, with a flat roof and so sits substantially lower than the existing three storey pitched roof building, minimising it's impact on the surrounding area. Where the new building links with the existing building the facade is set-back at the first floor, separating the two buildings.

On the side facing onto the playground an external stair is integrated into the building. This stair provides escape access from the first floor as well as providing access to the roof.

The western central courtyard is covered by a partially glazed canopy. The height of this is level with the height of the main hall roof as it connects the various buildings surrounding the courtyard. The structure is glu-laminated timber and steel whilst the vertical cladding is clear pvc sheeting with the roof of the canopy being made-up of multi-coloured glazing panels as shown in the visualisation below.



Brickwork



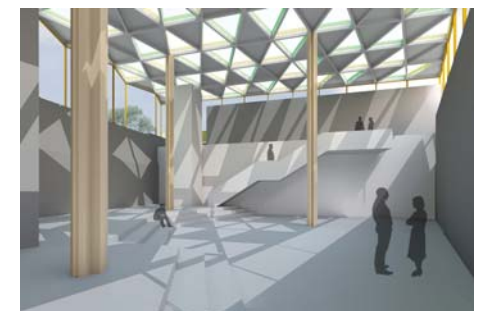
WES proposed North-West Elevation



WES proposed South-West Elevation



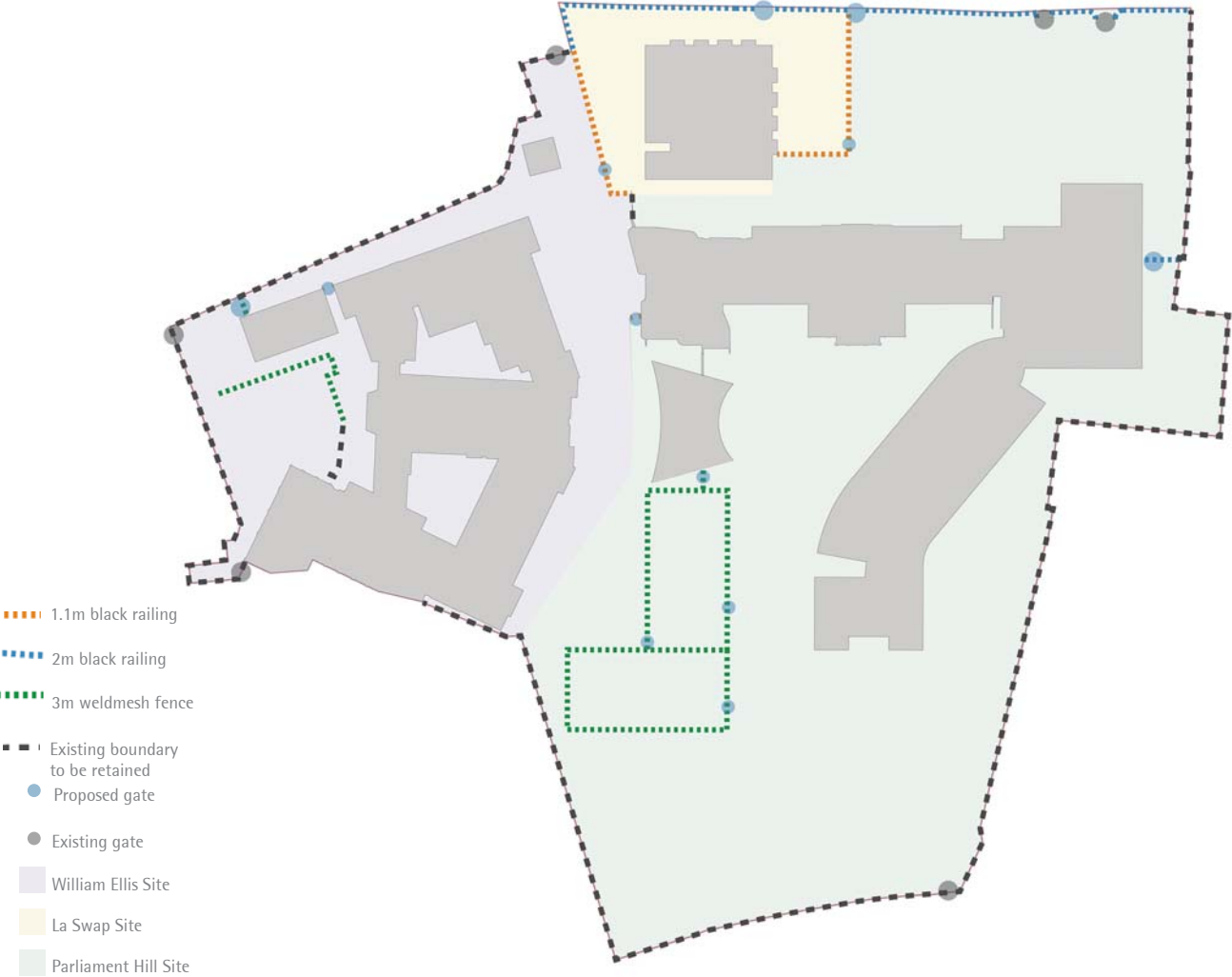
WES proposed North-East Elevation



WES proposed visualisation of covered courtyard



Proposed Site Boundary Treatment



## 6.2 Safety and Security

PHS:

The majority of the existing boundary to the site will be retained; however the existing close boarded timber fence to Highgate Road will be removed and replaced with a simple black park-like 2m high railing. This will allow views into the site and remove any potential hiding spaces.

Currently, once you are buzzed into the main gate at PHS you can then access the whole site area. With the proposals however the buildings form a secure line with a new gate at the southern edge restricting vehicular access into the rear of the site.

The new pedestrian entrance is proposed directly in line with the main entrance and reception within the Morant building, creating a clear route compared to the existing pedestrian entrance which is off to one side.

The two new MUGA's to the rear of the site are proposed to be lit with flood lights on 6no. columns at 5m high. Through keeping the height of the columns lower it minimises the external light pollution onto the Heath, whilst still providing adequate light.

LAS:

LAS is situated to the front of the existing PHS site on the area of the existing tennis courts. This building allows for passive supervision to the front of the site, and is separating from PHS and WES school sites with a 1.1m high black railing of the same design as the new railings to Highgate Road, providing an unobtrusive boundary and enclosing the dedicated external area. By giving the LAS students their own building with secure external space it addresses the current issue of the sixth form students hanging around the gates at WES School because they have nowhere to go.

WES:

The existing boundary treatment including the main entrance gates is proposed to be retained. Along the boundary with PHS there is a marked change of level and this delineates the boundary as is currently the case.

The new extension to WES encloses the playground, separating it from the adjacent Heath.

Ensuring that school premises are not rendered unusable by acts of arson, vandalism or blighted by thefts and that pupils, staff, visitors and neighbours can enjoy a safe environment in and around a school remains a key driver in informing the design development. However, security should not be at the expense of good place making and achieving a high quality built environment.

An early collaborative approach has been agreed, involving the Architects, Landscape Architects, Planners, Crime Prevention Officer, Camden Council and the Head Teachers to ensure the best outcome is achieved. Please see the following link for additional guidance:

<http://www.securedbydesign.com/pdfs/New-Schools-2014.pdf>

The Secured by Design Officer for Camden was consulted regarding the proposed scheme at a Pre-application meeting. At this meeting a number of recommendations were made which have been absorbed into the design development.

Particular issues raised were:

All entrances/ windows to be in accordance with Secure by Design recommendations (e.g. laminated glazing, approved locks etc.), in particular raised for the LAS windows. Consider security to cycle storage whilst maintaining controlled access for school and community use.

Different uses for the building were discussed including during the day, lock down at a night, and other uses such as community users out of school hours.

It was discussed that in case of community use out of school hours, areas within the school can be zoned off to prevent further entry into other parts of the building.

The existing boundary line would remain the same, although different materials



Existing boundary to Highgate Road

will be used, it was discussed that it should be at least 1.8m high. Gating within the boundary would be fitted close to the building. The design of these gates should prevent climbing and be at least 1.8m high.

Reception. We discussed an air lock system, where a person may enter the building at reception. Reception office would deal with the enquiry. A secondary security enhanced door would be fitted to prevent unauthorised entry into the building.

Passivhaus. I suggested another security enhanced door is fitted beyond the entry door to preserve a security line.

1. All perimeter doors will be to a security enhanced standard. That is BS PAS 24-2012 or LPS 1175 sr2 or higher, or other security enhanced standard. This will include rooms with assets (computer, music room, offices). Secondary door in reception, and other security use doors will be to an enhanced standard.

2. All opening and accessible windows will be to BS PAS 24-2012 with laminated glazing to P1A rating.

3. Stud partition. In a room that requires security 9mm plywood or expanded metal mesh will need embedding in the wall. A crime scenario of cutting through the plasterboard, will be prevented.

4. Other security values may be fitted. Such as a computer room with lap top computers may have a lap top safe.

5. General conversation around security such as gutter down pipes, and utility meters, post being delivered to reception, was discussed to a satisfactory solution.

6. Alarm and CCTV was discussed. CCTV will be registered with and comply with the information commissioners guidelines. [www.ico.gov.uk](http://www.ico.gov.uk)



Proposed boundary to Highgate Road



## 6.3. Civic and Structural Design Statement

### Introduction

The William Ellis and Parliament Hill schools on Highgate Road, London are due to undergo modifications, extensions and are to have new buildings (including a 6th form centre La SWAP) added.

This document presents the Civil and Structural Design Statement in support of the main Planning Application. Details are given about the existing and new buildings including their structural framing.

### Background

William Ellis School (WES) is located on Highgate Road, London, NW5 1RN. It is an all-boys school.

The main building was constructed in 1937 and is a 2-3 storey structure of load bearing brick construction.

Since then there have been many alterations and additions some of which are of lightweight construction.

Parliament Hill School (PHS) is located on Highgate Road, London, NW5 1RL, to the south of WES. It is an all-girls school.

The main block was built in the early 1900's and is 3 storeys tall of traditional load bearing brick construction with some later additions including the Performing Arts extension of 2006 (which is considered here as part of the main building).

The Technology Building of 2006 is single storey only. This is located in the centre of the garden to the rear of the main building and comprises a steel frame supporting a green roof.

The other buildings are due to be removed under the proposals.

The 6th form centre LAS will sit on the PHS site adjacent Highgate Road.

### WES existing building and extension

The main block dates from 1937. It is of 2-3 storeys and is of load bearing brick construction with timber upper floors spanning onto walls and steel beams. There have been various phases of modifications with the earlier ones of traditional construction and later ones of partially lightweight construction.

Removal of internal walls: many of these are non-structural partitions and can be easily removed. Where walls are structural walls nibs will be left to support steel beam lintels over.

Courtyard infill: It is intended to remove the courtyard infill building and replace it with a lightweight roofed dining space. The space is to be covered with a steel and timber roof with glazed skylights supported by an exposed steel frame. There will be a new lift and new steel stair under the new dining space canopy.

New build rear extension: Additional space is to be provided at the rear of the school as a new-build extension. The construction is relatively simple, although, with the building cutting into the higher ground of the play area at the rear, part of the ground floor would be below external ground level. The existing external storage sheds would need to be removed.

The main frame of the new extension is of structural concrete (walls and beams) with hollow core planks to upper floor and roof. The foundations will be concrete pads and strips – they will not be particularly large or deep. There is no basement.

### PHS existing buildings

The Morant Building is the main building (and includes the green copper clad Performing Arts extension of 2006). The main section of the original building was constructed during the early 1900's. It comprises a 3 storey load bearing brick construction with filler joist upper floors spanning onto walls and steel beams.

Removal of internal walls: Many of the internal walls are non-structural partitions and can be removed. Where walls are structural walls nibs will be left to support steel beam lintels over.

The Technology Building dates from 2006 (comprising a single story steel frame with green roof and masonry infill facades). The new building is planned to wrap around and build over this building.

### PHS LAS new buildings

A 2.54m internal diameter storm water relief sewer has been identified as running at a depth of around 13m directly under the site. The main new buildings will sit partially over this existing sewer.

Thames Water has no objections in principle to the use of shallow (pad, strip or raft) foundations where buildings overlay this sewer.

PAS ribbon: the main frame is of structural concrete (walls, columns and beams) with in situ concrete and hollow core planks to upper floors and roofs.

The sports hall roof is long span steel beams with composite deck slab over.

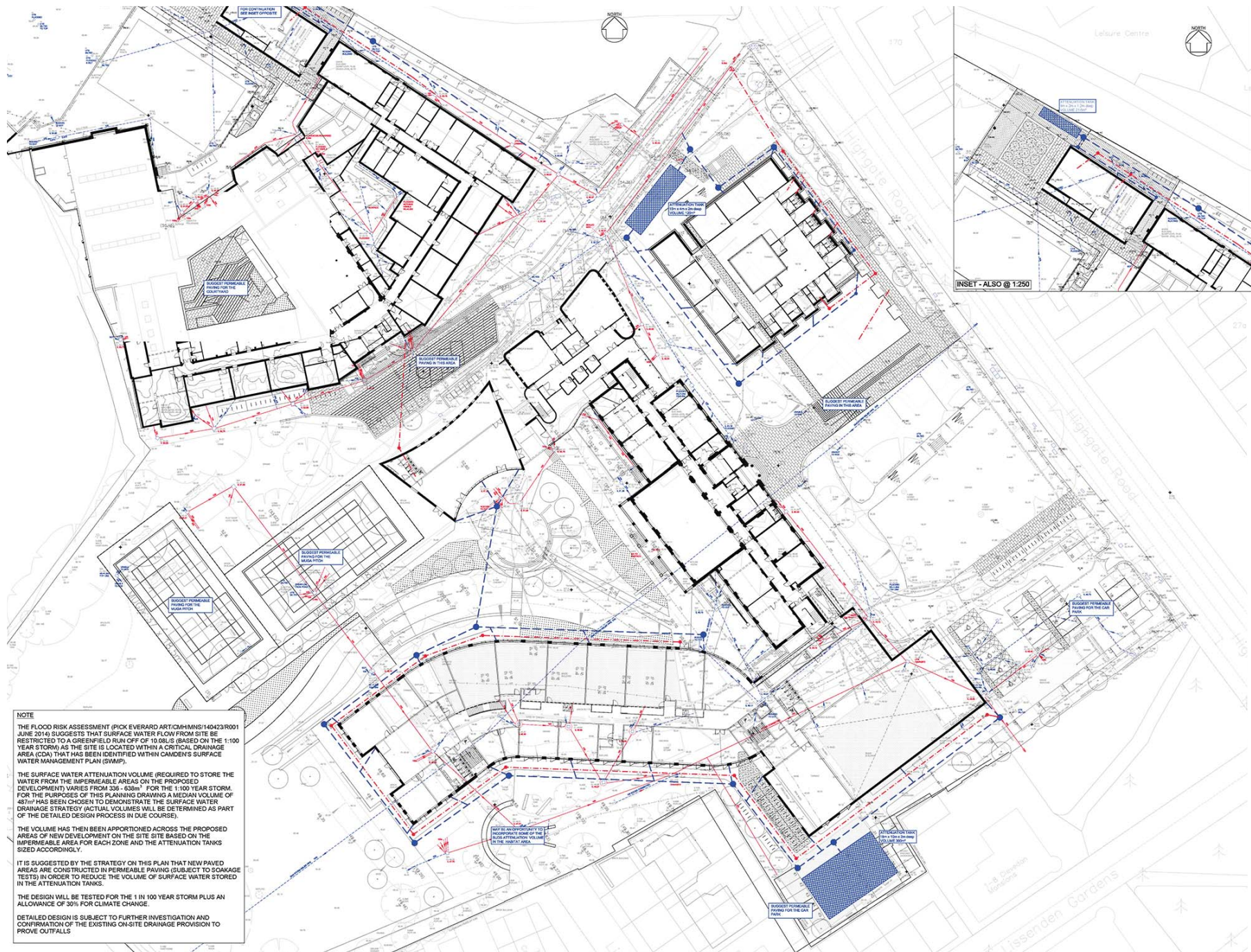
The foundations will be concrete pads and strips or a raft – they will not be particularly large or deep. There is no basement.

PAS dining: the main frame is in structural steel. The foundations will be concrete pads and strips or a raft – they will not be particularly large or deep. There is no basement as the existing basement is being backfilled.

LAS: the main frame is in structural steel. The foundations will be concrete pads and strips or a raft – they will not be particularly large or deep. There is no basement.

### Summary

The Civil and Structural Design Statement in support of the main Planning Application for the WES PHS LAS schools project in Highgate has been presented.



**KEY**

- SURFACE WATER DRAIN
- Foul water drain
- SURFACE WATER MANHOLE/INJECTION CHAMBER
- Foul water manhole/injection chamber
- PROPOSED SW STORAGE CHAMBER SYSTEM - PROVISION (ON SCALE APPROVED) DEPENDENT ON RESULTS

**NOTE**

THE FLOOD RISK ASSESSMENT (PICK EVERARD ART/CMH/MMS/140423/R001 JUNE 2014) SUGGESTS THAT SURFACE WATER FLOW FROM SITE BE RESTRICTED TO A GREENFIELD RUN OFF OF 10.08LS (BASED ON THE 1:100 YEAR STORM) AS THE SITE IS LOCATED WITHIN A CRITICAL DRAINAGE AREA (CDA) THAT HAS BEEN IDENTIFIED WITHIN CAMDEN'S SURFACE WATER MANAGEMENT PLAN (SWMP).

THE SURFACE WATER ATTENUATION VOLUME (REQUIRED TO STORE THE WATER FROM THE IMPERMEABLE AREAS ON THE PROPOSED DEVELOPMENT) VARIES FROM 336 - 638m<sup>3</sup> FOR THE 1:100 YEAR STORM. FOR THE PURPOSES OF THIS PLANNING DRAWING A MEDIAN VOLUME OF 487m<sup>3</sup> HAS BEEN CHOSEN TO DEMONSTRATE THE SURFACE WATER DRAINAGE STRATEGY (ACTUAL VOLUMES WILL BE DETERMINED AS PART OF THE DETAILED DESIGN PROCESS IN DUE COURSE).

THE VOLUME HAS THEN BEEN APPORTIONED ACROSS THE PROPOSED AREAS OF NEW DEVELOPMENT ON THE SITE SITE BASED ON THE IMPERMEABLE AREA FOR EACH ZONE AND THE ATTENUATION TANKS SIZED ACCORDINGLY.

IT IS SUGGESTED BY THE STRATEGY ON THIS PLAN THAT NEW PAVED AREAS ARE CONSTRUCTED IN PERMEABLE PAVING (SUBJECT TO SOAKAGE TESTS) IN ORDER TO REDUCE THE VOLUME OF SURFACE WATER STORED IN THE ATTENUATION TANKS.

THE DESIGN WILL BE TESTED FOR THE 1 IN 100 YEAR STORM PLUS AN ALLOWANCE OF 30% FOR CLIMATE CHANGE.

DETAILED DESIGN IS SUBJECT TO FURTHER INVESTIGATION AND CONFIRMATION OF THE EXISTING ON-SITE DRAINAGE PROVISION TO PROVE OUTFALLS





7

landscape

7.0 Landscape Introduction

This section details the design of the landscape across the site. A short introduction to the context and the initial site analysis is covered. This leads on to a more in depth approach to the design starting with the overall masterplan before delving into the more detailed areas.

Site wide sections display the topography across the site, and diagrams show the way that the site works from planting strategy to hardworks, furniture to access.

7.1 Site Context

Ecological context

The site is located on the periphery of Hampstead Heath – locally known as “the Heath” – a large, ancient London park, covering 320 hectares. This grassy public space sits astride a sandy ridge, one of the highest points in London, running from Hampstead to Highgate, which rests on a band of London Clay.

The character of the Heath is rambling and hilly, with expansive spaces of acid grassland, enveloped by broadleaf woodland, both recent and ancient. As the Heath is an area of diverse ecology it is important to both preserve and enhance the existing habitats.

In addition to these themes the over arching principle of preserving the environment and enhancing biodiversity is key, preserving links with the surrounding landscape and the structure of the site such as the existing tree population on site. The proposals are designed to take into account the findings of the Phase 1 Ecological Habitat Report and any other relevant ecological data such as Biodiversity Action Plans, the Hampstead Heath Woods SSSI listing, etc.

Urban context

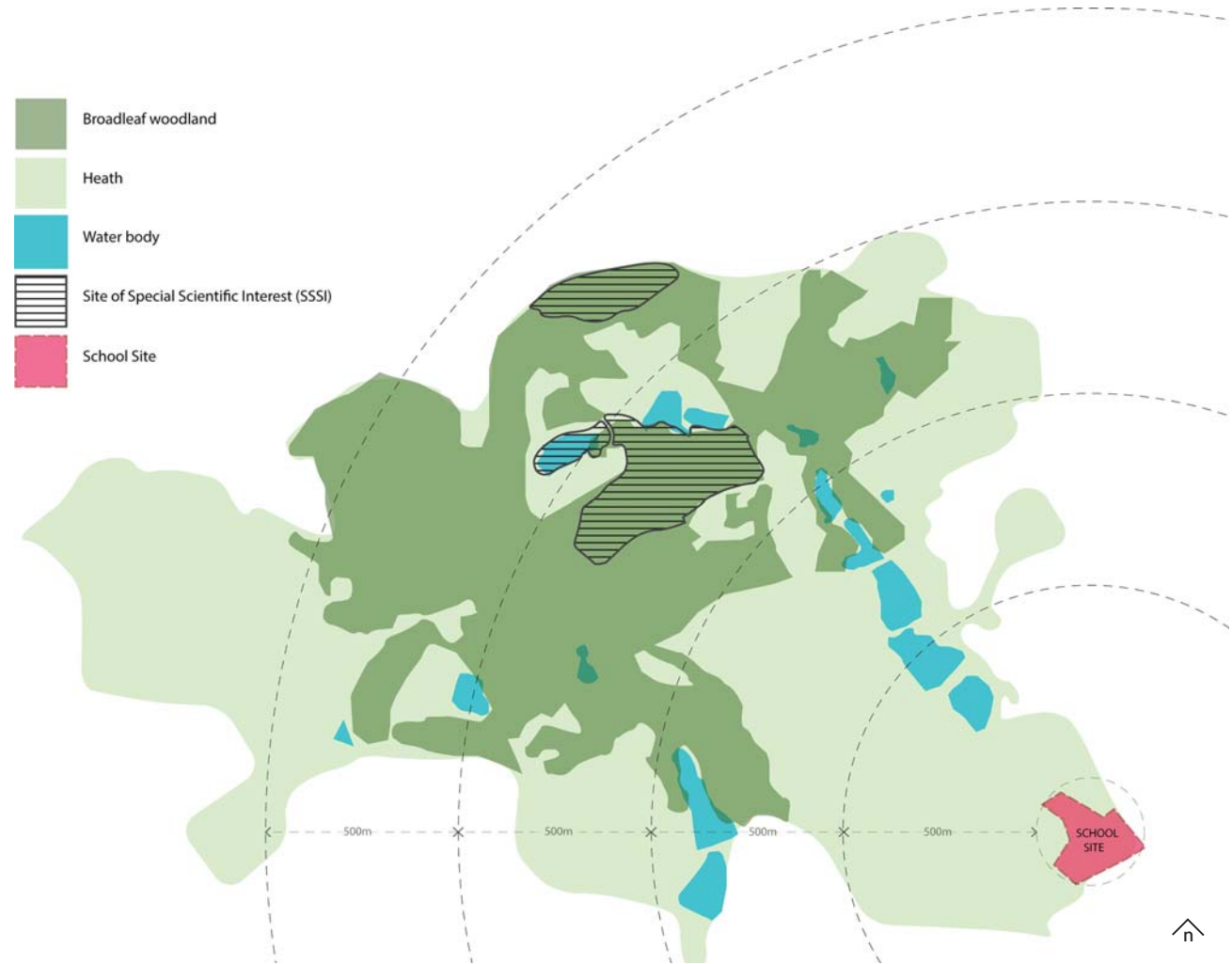
South-east part of the Heath is Parliament Hill, from which there are protected view corridors. One view passes over the site (it sits approximately 30m above the highest foot of the Morant building), but the surrounding trees to the north west conceal the buildings from the view point.

The Site lies within Dartmouth conservation area in the sub area 10. In the description of the ‘school sub-area’ it is stated that;

“Despite their size the three schools do not overpower their surroundings due to the large areas of open space around the buildings which allow them to be set back from the road and provide a spacious setting.”

“Given their close proximity to Hampstead Heath this open space makes a valuable contribution to the area by providing a transitional zone from the more densely developed residential streets to the east and the green open space of Parliament Hill to west.”

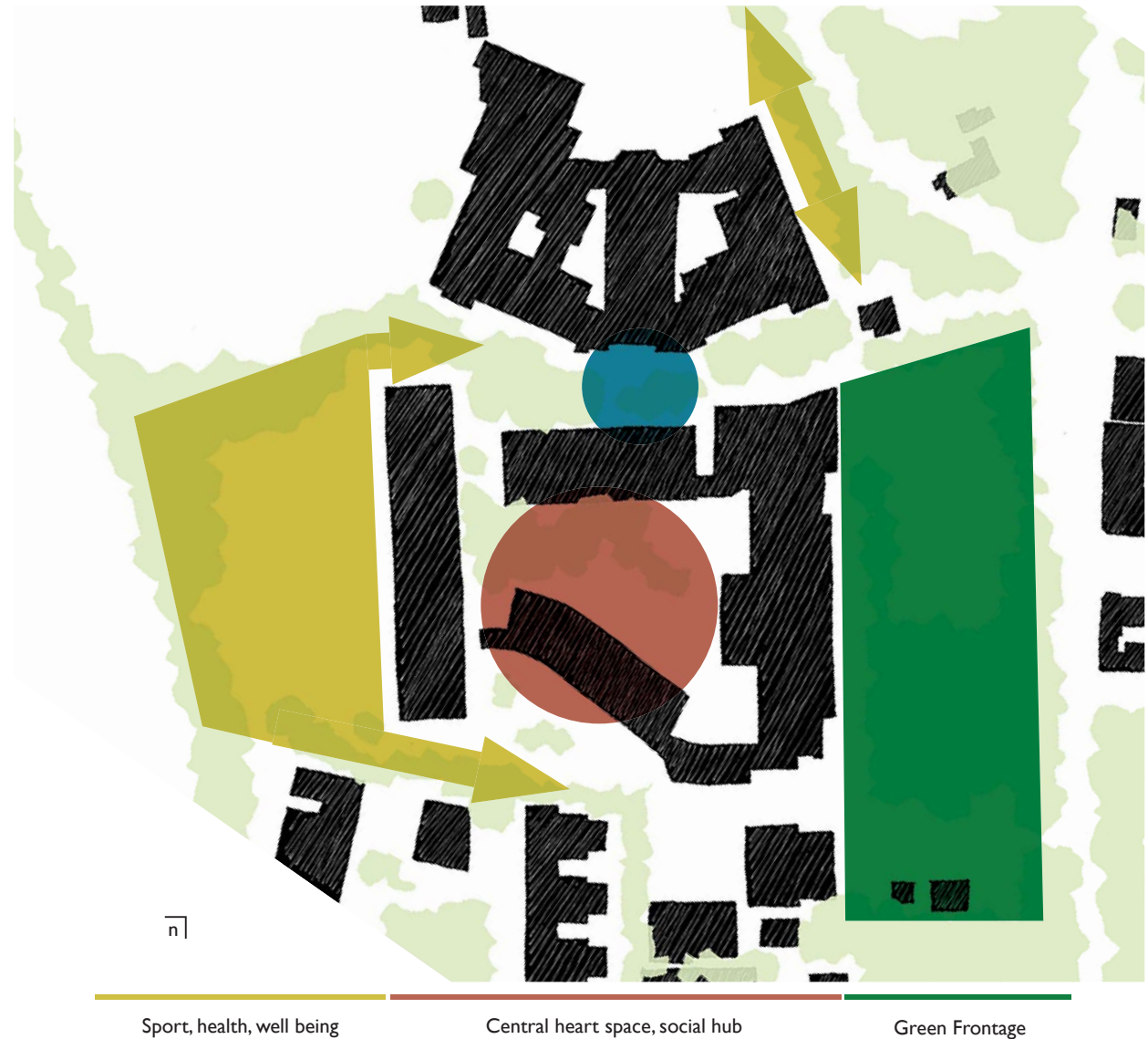
The sensitive nature of developing in a conservation area is acknowledged in the proposals, ensuring that the existing qualities of the space are preserved as best as possible and the development has a positive impact on the area.





## 7.2 Landscape - Site Strategy - Parliament Hill & La Swap

- **Frontage**
  - Retain strong green frontage
  - Improve the presence of the school and sixth form from Highgate Road
  - Inclusion of swales - sustainable drainage
  - Clear arrival and circulation routes
  - Improved boundary treatment and public realm interface
- **Interface**
  - Arrival space for William Ellis School
  - Potential orientation point for La SWAP
  - Maintain the independence of both schools but create a link
  - Retain planted character
  - Create a more open space with improved light levels
  - Improve connection to the heath
- **Central space**
  - Retention of good quality existing trees and habitat
  - Work with the site levels to create a series of usable spaces
  - Incorporate an external dining space
  - Spaces to be related to the form and function of the proposed buildings
  - Outdoor classrooms of a range of scales
  - Potential performance space
  - Focal point for the school
- **Edges**
  - Enhance connection with Hampstead Heath
  - Maximise views out
  - Improve the existing edge planting for biodiversity and ecology
  - Consider incorporating playing field uses
  - Create an enhanced environment for learning and recreation
  - Connect this space more clearly to the wider school
  - Retain the green character of the space
  - Integration of allotments for school and community use
  - Rain water collection and use within the landscape



## 7.2 Landscape - Site Strategy - William Ellis

In reviewing the existing key features of the site, key zones were clearly defined. The landscape objectives for each zone are as follows:

### Frontage

- Improve legibility to main entrance.
- Pedestrian priority from Highgate Rd.
- Retain strong green frontage.
- Create 'entry plaza' outside of existing building.
- Landscaped open quad space.
- Separate La Swap access.
- Maintain independence between both schools
- Improve visual linkage to Parliament Hill School
- Relocation of parking to Parliament Hill site.

### Courtyards

- Increase variety of spaces.
- Create external dining areas.
- Bring the Heath into the school.
- Enliven with new planting.

### Covered Social

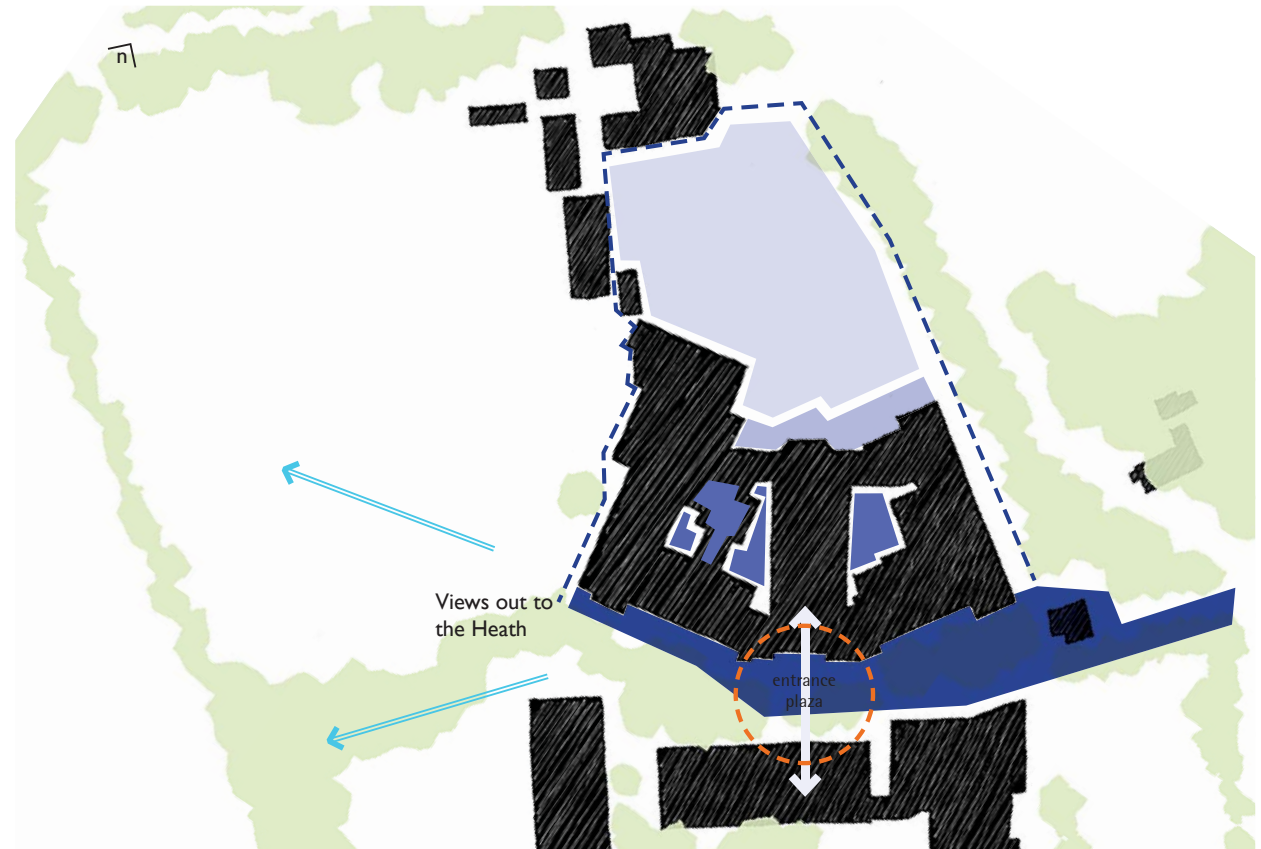
- Create colourful and lively social space
- Create a variety of seating areas.
- Use planting to provide cover.
- Work with the site levels to create a series of spaces

### Hardplay

- Refresh of hard play courts
- Maximise play space

### Boundaries

- Open up views onto the Heath.
- Maximise views out



### 7.3 Design Development

A variety of options have been explored, integrating the landscape alongside the architectural development.



Contained option 12.11.13



Site Wide Option 26.11.13





#### 7.4.0 Landscape Masterplan

The design of external spaces will link both visually and ecologically with the surrounding environment - namely the adjacent heath.

The planting typologies will be based on those found on Hampstead Heath, creating natural habitats and wildlife corridors. Ornamental planting will be implemented in a restrained way, adding formality and colour to the native heathland landscape.

Minimal hard landscape elements add structure and simplicity to the naturalistic heath planting palette; concrete edges, timber seating and a grey/buff tonal paving palette.

The site is made accessible by the careful remodelling of landform to create routes and retain as many existing trees as possible





#### 7.4.1 Landscape Concept

Reconnecting with the Heath: the concept is centered around recreating the heathland habitat in a contemporary educational setting.

The landscape interweaves structure and form with the naturalistic parkland landscape of the Heath, acting as a mediator between the architecture (both new and proposed). Strong lines, hard edges, white concrete and sculpted timber benches and features create structure in an otherwise naturalistic landscape featuring woodland and meadow type mixes.

The landscape structure allows for a variety of spatial use across the site, from outdoor teaching areas, informal learning spaces, self study areas, informal amphitheatre, sheltered spaces, expansive spaces, habitat areas, and exercise trails. Many of the designed spaces are flexible multi-use areas that provide the schools with opportunity to use the outdoor landscape in a manner that suits.





#### 7.4.2 Landscape - Detail Areas - William Ellis Outdoor Teaching Area

The space to the rear of William Ellis around the proposed extension will create an external teaching area for small groups.

A raised platform integrating a chunky timber edge for seating and perching creates an opportunity for growing a variety of fruiting trees. This grid of trees provides a more reflective 'green room' which will be unique to this area of the school.

A native hedge bounds the existing games courts area; timber benches create social pockets for passive play and quiet play in contrast to the active existing areas set behind the fence

The new games court fence will be 3m tall, and will support climbing plants such as heder helix. This will create a strong boundary between the two spaces whilst allowing for passive surveillance.



Imaginative use of level changes



Grid of fruiting trees in self binding gravel



Sociable areas



Climbers over sports fencing

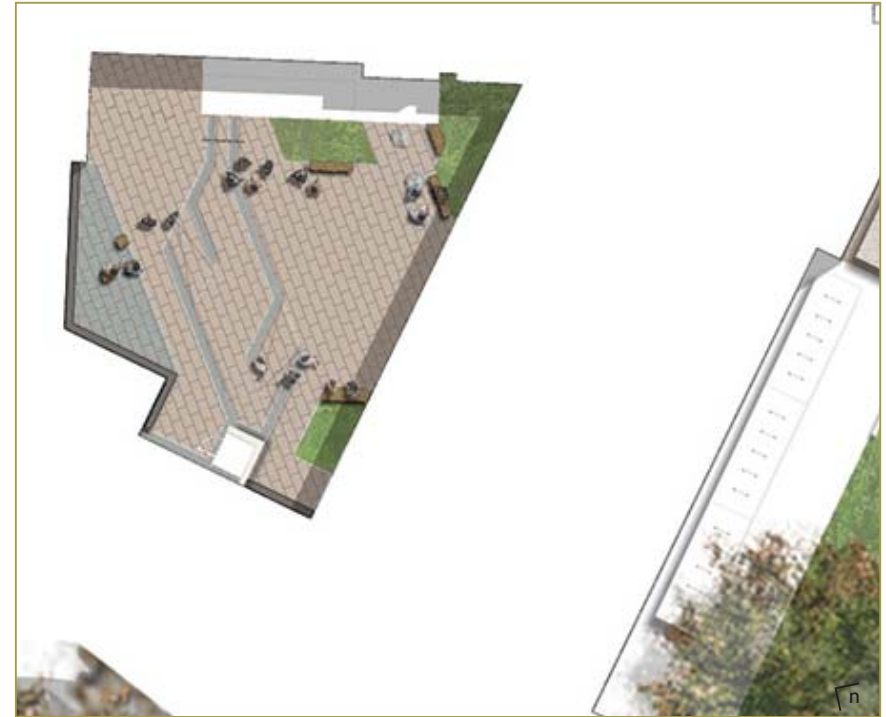


### 7.4.3 Landscape - Detail Areas - William Ellis Courtyard

This covered courtyard area is intended as a quieter play and social area with its close proximity to classrooms. Water-tight lockers are integrated into the periphery walls of the courtyard.

This area is predominantly paved, ready for heavy foot traffic. The area is covered therefore only small pockets of planting provide greening to the space. Planting will be shade tolerant with as palette derived from a woodland understory. Large boulders are integrated into the space to provide a naturalistic aesthetic and informal seating and play elements.

The William Ellis courtyard comprises stepped terraces with integrated seating that provide a variety of platforms for play and socialising. Hand rails and slopes provide wheelchair access across the site, and well as access via an external lift and staircase to the upper floor of the building.



Imaginative use of level changes



Raised planters



Boulders as informal seating / play elements



Robust timber seating



#### 7.4.4 Landscape – Detail Areas- William Ellis Entry Plaza

A plaza to the main entrance of William Ellis will define the space. The high quality paved area signifies the main pedestrian / visitor entrance creating a high quality finish that is suitable for the collegiate style of the architecture.

New entrance steps and ramp create access to the building. The plaza space is a shared surface that can support both pedestrian and vehicular traffic if necessary. The main pedestrian route into the building is signified by the change of paving colour and texture.

The existing layout is retained, yet the hard materials are refreshed and the edges of the planting areas will be renewed with ornamental biodiverse planting to suit the existing scheme, and integrate into the naturalistic existing species on the slope down to parliament hill school site.

Long views out to the Heath will be opened up by the removal of the 'Heath Building' at Parliament Hill, these views will be framed by existing retained trees.

A - William Ellis Entry Plaza

B- Parliament Hill Carpark



Textured materials



Strong edges



Biodiverse planting to slope





#### 7.4.5 Landscape - Detail Areas - Parliament Hill Carpark

This area will be re levelled and designed to accommodate 45 car parking spaces including 5 DDA bays (some parking bays not shown).

As an important interface between the school and the public realm the carpark is intended to be enclosed by trees. All existing trees that are removed in the reconfiguration will be replaced and more will be added to the periphery and the centre of the carpark.

Areas of planting will green the space at ground level and provide some mitigated for rainwater run off over this large area of asphalt surfacing.

Vehicles and pedestrians (including cyclists) are kept separate as much as possible. Two access routes are provided one for vehicles and one for pedestrians and cyclists.

Cyclists will be encouraged to dismount before entering the site, and covered cycle parking (no. 40) is provided near to the entrance to allow for safe, quick storage. More cycle parking is provided to the rear of the proposed sports hall.

Bollards will be used to designate vehicular and pedestrian zones. Drop bollards will allow for service and emergency vehicles to enter the wider school site when necessary. To the 5 DDA bays to the front of the sports hall large rustic timber sleepers will be used to direct pedestrians away from the car parking area.



Greened carpark site with shrubs and trees



Bicycle storage



Rustic Timber log/sleeper horizontal bollards



Elevation to Carpark

