

# **HIGHGATE SCHOOL SCIENCE BUILDING ALTERATION, REFURBISHMENT & EXTENSION PROJECT**

## **SECURE BY DESIGN STATEMENT**

### **PLANNING APPLICATION SUBMISSION**

1 December 2022



## Project proposals

The proposed works in this submission are:

- Stripping out of interior of buildings back to original shell
- Internal alterations including demolition of existing stair and various local alterations to change the existing layout or walls
- Extension in Science Quad to west side of the east Science wing, comprising a 4-storey high building with basement, to include the main new lift and southern access and fire escape stairs.
- Extension in Garner Quad to north side of the Science centre block, comprising a 2-storey building at upper levels, with open colonnade at ground level and extension to ground floor offices.
- Small rooftop extension for an astronomy observatory
- Small rooftop extension for an open louvre-screened plant enclosure
- Internal alterations on the west side in the building known as “Link Block” to change existing layouts and locate a plantroom in the un-used roof space
- Complete stripping out and replacement of mechanical and electrical building services on 3 floors
- Retention of existing roof level 4<sup>th</sup> floor with minor external alterations to reduce solar gain to the southernmost classrooms
- Refurbishment and cleaning of existing building exterior fabric masonry walls
- Replacement or renovation of exterior timber windows and doors
- Local alterations of external spaces in Science Quad and Garner Quad

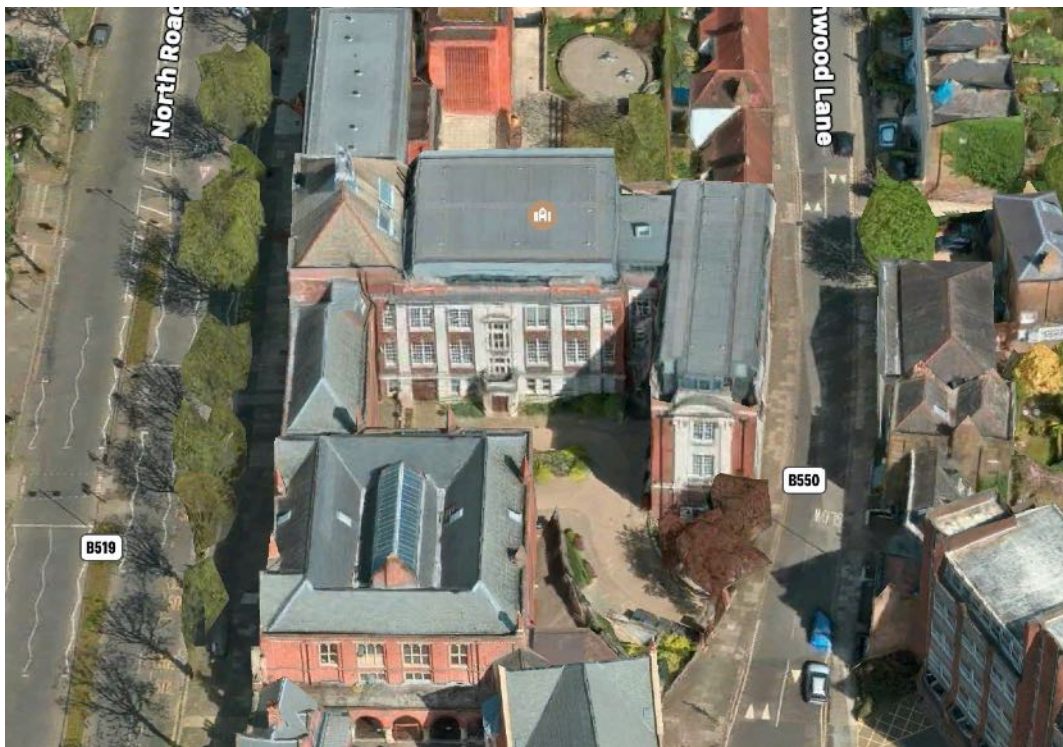
These proposals should be seen in conjunction with the associated “Island site” proposals just to the south of Science. Together they represent a major enhancement of the Science Quad and the aspect of the School as seen from Southwood Lane.

## Photographs of existing site

[Bird's eye aerial photos are from Googlemaps circa 2020]



*Bird's eye aerial view of the Science site from east*



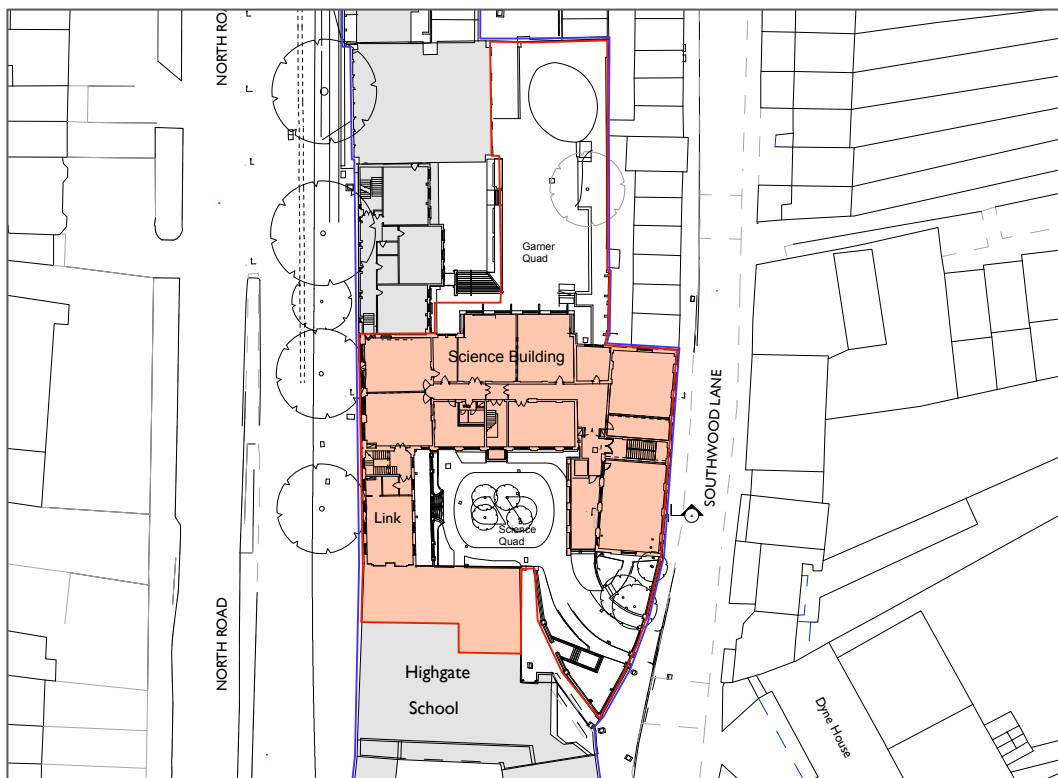
*Bird's eye aerial view of the Science site from south*

## Site and Site boundaries

This is an existing building in the central area of the School's North Road campus, spanning across the site from east to west. The buildings that are the subject of this submission form part of the main "hilltop" campus of Highgate School, bounded by North Road to the west, and Southwood Lane to the east, and with shared boundaries to the north and south with other owners. The whole site is comprised of a number of developments carried out over time at different periods, with the buildings all interconnecting, from the Chapel at the southern end, to the Charter Building at the northern end. Each reflects the architecture of its own time, but is in harmony with its neighbours.

Of these buildings, the Big School and the Chapel, built in 1865 and 1866 respectively, are Grade II listed and of particular historic, heritage, architectural and townscape significance.

The other buildings, notwithstanding age or quality, lie within the curtilage of the two listed buildings noted, and therefore must be accorded sensitive and careful treatment for any alterations, refurbishments or additions, as if they were themselves listed. This is the approach that has been taken in preparing these designs.



*Location plan of the Science Building– refer to planning drawings for full details*

The whole Highgate School North Road campus is bounded and made secure by either building perimeters, or some painted steel railings of traditional design, approximately 1.6 – 1.8 metres high [varies with the ground].

The building presents itself to a south quad, called Science Quad, and a north quad called Garner Quad. Both areas are landscaped courtyards that proved amenity outdoor space for pupils, as well as

some service access. Garner Quad on the east side has a boundary with residential almshouse cottages on Southwood Lane, with a brick wall. Science Quad has a service entrance off the street.

The campus site is very clearly defined both as a School site, and provided with appropriate security, with limited points of access, forming a safe general area for pupils. It is not considered necessary in the local context for more secure or taller fencing railings.

There are no public footpaths across the site.

There are limited numbers of cycle parking stands on site at present.



*View of the Science building on Southwood Lane*

Access gates are controlled by magnetic locks and coded electronic entry devices. There are both pedestrian and vehicular gates leading to Southwood Lane off Science Quad, and a further set of gates on the north side leading to the lane up to Castle Yard, which runs north of the site behind the backs of residential houses.

There are CCTV cameras covering the site and buildings linked back to the School's security team on the School network.

The whole site is in a Conservation Area, there are listed buildings.

## **Existing building**

The existing Science building has multiple points of entry at ground floor from the Quads, as well as internal links to connected buildings to north and south. There is no direct street access to the Science building, it is accessed only via the two principle site entrances, at Charter Building main entrance to the north, and the southern smaller entrance to the south.

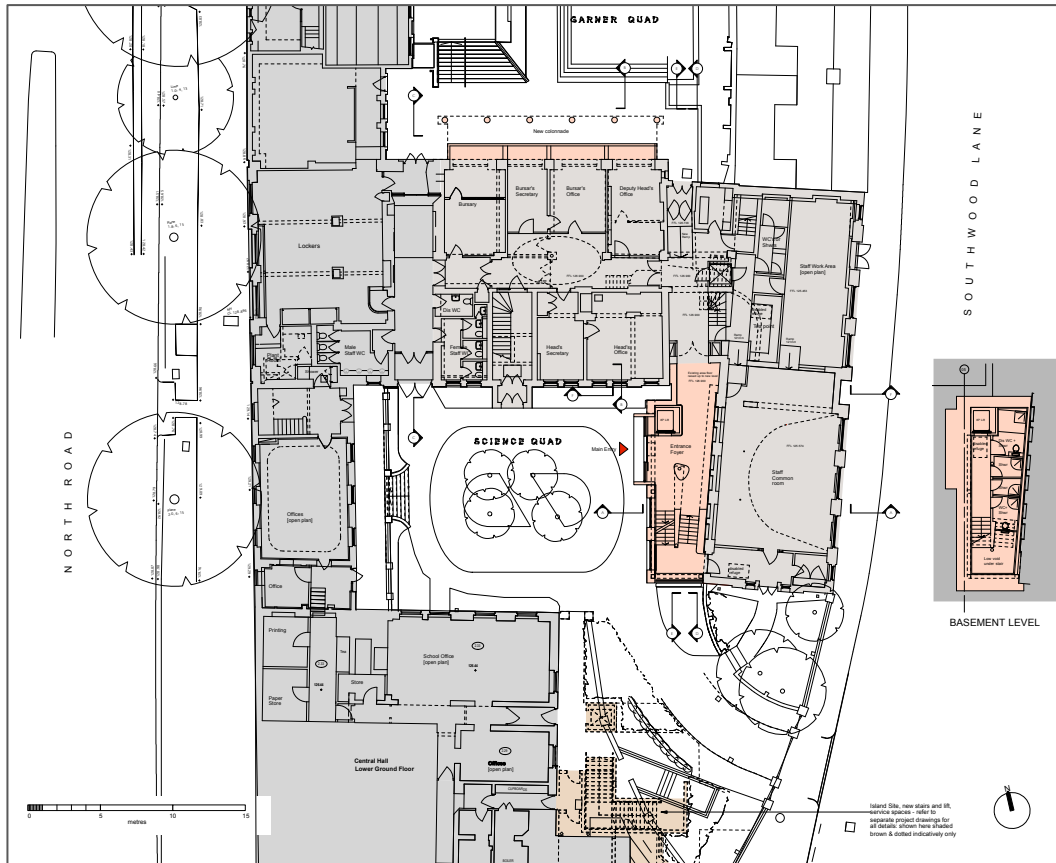
In the proposed scheme the south extension will create a new main entrance for Science department, with a new main stair and lift for inclusive disabled access to all floors. The north extension will provide additional space for laboratories and offices at 3 levels. The other points of access will be retained.

## **Community Uses**

There are limited external uses for the laboratories as these are dedicated technical spaces for School Science teaching and administrative support.

## New project building design and security arrangements

The proposal is to add two new modest-sized extensions to the existing building, extending towards Science Quad and Garner Quad, on the west and north faces respectively. These modest extensions enable extremely beneficial alterations to be made to improve accessibility, identity, layout and efficiency of planning the spaces.



*Diagrammatic plan at first floor with proposed extensions shown coloured*

In townscape terms, neither extension is seen directly face on from the public realm, but rather both are seen as glimpses from particular locations along Southwood Lane. Within the quadrangles of Science and Garner the extensions will have more impact, creating modern and vibrant new elevations that respond to the particular context of each.

The Science Quad extension addresses important current issues with disabled access, main entrance, main new stairs, movement and identity. It will resolve the problems of circulation from floor to floor and arrival at key departments, providing more generous areas.

The Garner Quad extension provides space adjacent to existing laboratories that enables them to be re-planned, creating more labs of medium size compared to existing. The extension is mainly on two upper floors, while at ground floor the offices have small extensions with an open external covered loggia area, so that the Garner Quad external amenity space is maintained.

As a result of the proposed extension, a new lift will allow complete accessibility for disabled users to all areas of the building, which is not currently wheelchair accessible.

Generally during the School day the main doors will be openable, the entry doors being on automatic electric opening systems for disabled and Part M access. After School hours it is anticipated that the main doors at both entrances doors will have access security control, operated by coded entry devices with magnetic closing locks, or be locked by School security team overnight. An option being investigated is to have the entry systems operated by pupil and staff cards, that will serve several other functions in the School also.

The building entrances will avoid recessed areas as much as possible, so that all areas can be easily included under surveillance, whether by CCTV or visual.

The building facades are to be retained for the existing building. New extensions will have facades of cavity wall masonry construction with steel frame. The walls do not have obvious opportunity for climbing or access to roofs. In this area there is no evidence to suggest that that graffiti will be a problem.

Roofs are accessed from within the building, so they are secure.

Toilets/showers are provided in the basement of the new south extension of the building. Cubicles in the showers and toilets are typically full height from floor to ceiling, with only a small gap for air ventilation purposes. Additional toilets are being provided at each level.

New internal stairs are being provided to improve accessibility and inclusivity between floors, in addition to the new lift. The stairs are to be open and generous in width, and in general designed to the recommendations of Internal stairways in schools Published by DCSF ISBN: 978-1-84775-091-4, in addition to the Building Regulations Parts B & K.

The locking system of doors will be carefully considered with the Science Building users, so that as a general rule when the building is not in use many areas will be locked. The School has their own security team who will be actively consulted at the detail stage of design.

### **Landscaping & External Works**

The new extensions do not really affect existing limited planted areas significantly. In the Science Quad, a new central circular planted area is proposed which will become the main external feature, relating both to existing and to new buildings. It is proposed to have small tree planting here for additional emphasis and softening of the courtyard, and new hard landscape ground finishes of high quality will enhance the quality of the courtyard.

All "street" outdoor furniture, such as seating and bins, is appropriately situate, fixed in place, and of robust long-lasting construction.

External lighting will be designed for paths and building perimeters in association with the landscape plan, particularly at entrances and access points. Lighting will be coordinated with CCTV installations, which are monitored by the School in-house security team. Lighting will be designed to meet movement and emergency access criteria, with a balance between good illumination and sensitivity to neighbouring residential properties and the setting of the Conservation Area, with light pollution to neighbours minimised or avoided.

### **Meeting spaces**

The designed meeting spaces are associated with the Quads. All of these are in areas that can be well controlled and supervised.

### **Servicing**

The east side in particular is largely a service access part of the site as existing, and this will be maintained.

A new waste storage includes for recycling in keeping with the School's environmental policies is being provided by a separate project under this masterplan.

Utility meters are all to be located inside plant rooms, accessed only by authorised persons.

### **Car parking & Cycle storage**

There is no car, moped, motorbike or vehicle parking on the Island Site Campus. As this school campus is so historically developed there are not vacant areas available for cycle parking adjacent to the Science building.

### **Building components and materials**

Wall construction is generally in solid masonry cavity wall construction, with external clay facing bricks or Portland stone facings.

Windows are to be replaced with new timber windows, with curtain walling systems to the south extensions, with double glazed glass units. The glazing in will include security glazing tape, dedicated security sealant or gasket and a secure mechanical fixing system – in general all glass units will include safety glass, laminated and toughened in compliance with Part N and beyond – this will apply to glass at all levels, as the sports activities will also require safety glass.

The ground floor curtain wall windows and door systems will be specified as RC 3 with minimum P4 glazing.

Roofs are constructed with a base which might be profiled metal sheeting, fixed to the main structural frame, and finished with rigid insulation and bituminous flat roof waterproofing systems.

Roof apertures will be protected by roof lights certificated to LPS 1175 Security Rating 1 or STS 202 Burglary Resistance, securely fixed in accordance with the manufacturer's specifications. It is anticipated that the rooflight glazing will be double glazed glass units with safety glass as above. There are no suntubes in the design.

The whole project will be Part M compliant in accordance with the Equality Act.

External door apertures will be protected and will meet one of the following minimum standards when the building is unoccupied:

- PAS 24:2012
- LPS 1175 Issue 7 SR2
- STS 201 or STS 202 BR2

All external doors will be in aluminium, either entrance doors, plantroom doors, and louvred plant doors, and where glazed will include safety and secure glazing units as above in compliance with Part N and certified to:

- PAS 24:2012
- LPS 1175
- STS 202

BS 6375 will be referred to for the classifications to ensure that doorsets will adequately meet the demand placed upon them.

External doorsets and windows will be certificated by one of the following UKAS accredited certification bodies (Note 63.5):

- BM Trada Certification
- British Board of Agrément
- British Standards Institute
- Loss Prevention Certification Board (part of the Building Research Establishment)
- Exova Certisecure Scheme
- ER Certification
- UL International UK
- Buildcheck

### **Intruder Alarm systems**

Intruder alarm systems, with contact devices at all opening doors and windows, will be provided – these are to be suitably designed, fit for purpose, monitored, and comply with the requirements of the ACPO Security Systems Policy.