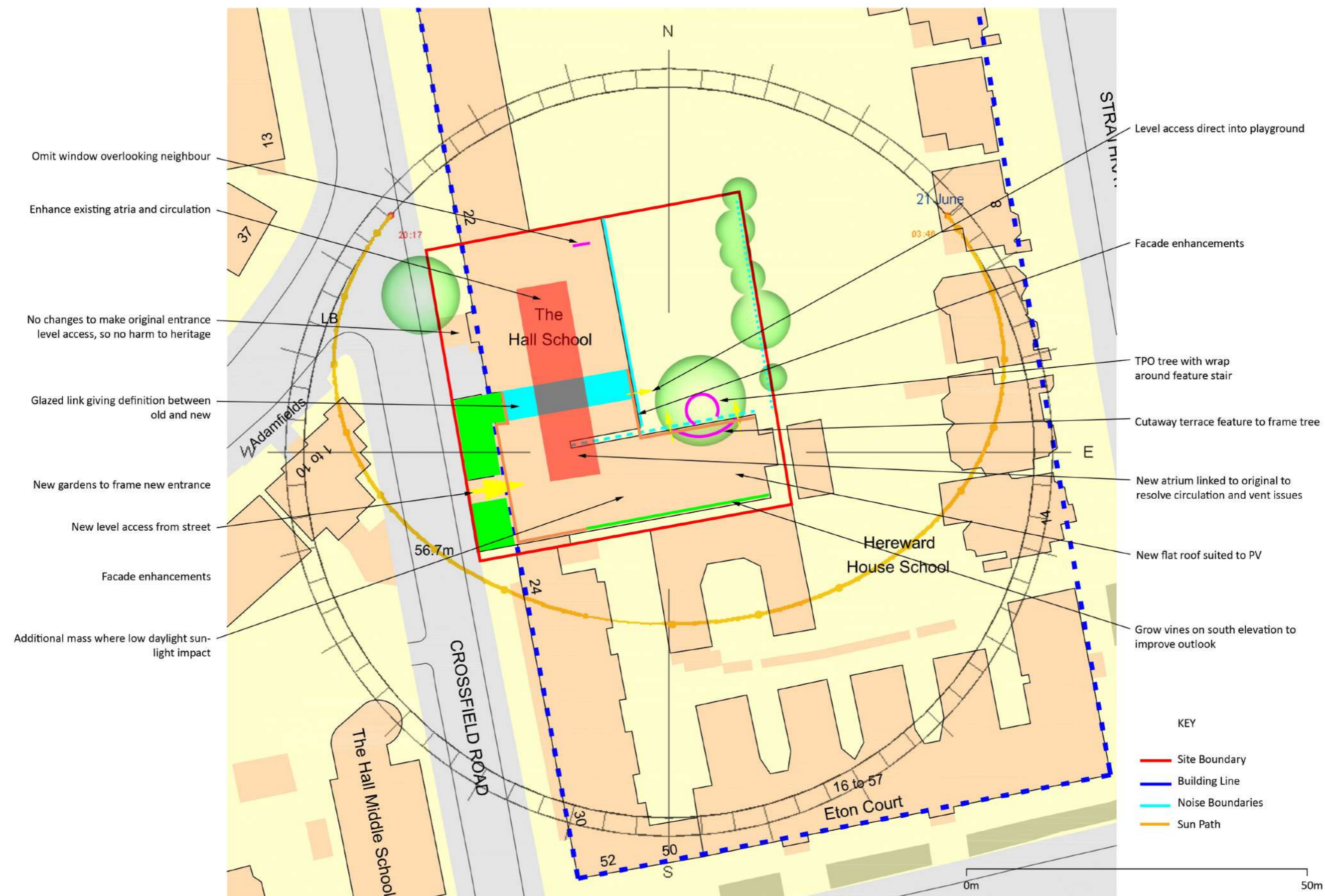


OPPORTUNITIES ANALYSIS



The Hall





PART 3 DESIGN

DESIGN DEVELOPMENT

Full planning permission for the demolition of the Centenary and Wathen Hall Buildings and the erection of a new building was granted on 5th July 2018, followed by a Section 73 planning application to vary planning permission 2016/06319/FUL for the redevelopment of The Hall Senior School which was granted in November 2019.

CURRENT STATUS

NORR have been approached by the School to undertake a design review of the recently approved scheme, for which the planning permission was granted in November 2019, to ensure it complies with the new, soon to be adopted London Plan, if the construction works were to be undertaken post 2021.

Due to new planning objectives, the Mechanical and Electrical strategies were reviewed, and necessary amendments were made in order to comply with new thermal comfort and ventilation requirements. As a result, a new planning application will be submitted for the scheme. The purpose of this document is to outline minor architectural alterations to the permitted redevelopment scheme to suit the revised ventilation and heating/cooling strategies. Architecturally, the scheme remained unchanged, the same design principles were adopted including elevation treatment, internal layouts and external spaces within the site.

The design amendments comprised of the following:

- Change from NVHR units to MVHR units as a localised system per classroom and support space
- Swapping standard radiators with electric panel radiators which offers more space saving as the electric panels are slimmer. Electric panel radiators will be utilised in circulation spaces.
- Omitting wall mounted radiators in classrooms and offices. Provide coils within the MVHR units to provide refrigerant based heating/cooling.
- Proposing new three external condensers on the existing roof with acoustic enclosures for noise attenuation. These units will not be visible from street level due to the pitched roofs of the building.
- Additional plant on the proposed roof at low level, meaning it is not visible from the street level. Acoustic enclosures will be provided for additional noise reduction.

Other Consideration	Existing	Consented Scheme in 2019	Adopted scheme with revised M&E strategy
NO OF CLASSROOMS (EXCLUDING SPECIALIST SUBJECTS)	12	15	15
TOTAL GIA	3060 SQM	3985 SQM	3985 SQM



Consented West (Front) Elevation



Consented North Elevation




Consented East (Rear) Elevation

BRIEF PRINCIPLES & OBJECTIVES


The overarching proposal is to replace the existing 1980s Centenary building with a new building which will link into the original and historic main school building. The following brief priorities were reviewed with the school:

 **MULTI-PURPOSE HALL**

Wathen Hall will be extensively refurbished to provide a multi-use sports hall. The existing structure will be retained, with the exception of the single storey at lower ground floor level which will need to be demolished and rebuilt to structurally support an additional storey on top. The connection between the internal sports hall and external playground will be created through the glazed openings in the facade which overlooks the playground. This will provide general surveillance, and allow natural light into the sports hall.

 **CLASSROOMS**

One of the primary drivers is to provide classrooms which are larger than the existing, and to increase the number of classrooms to better accommodate the pupils and offset against some of the smaller existing classrooms which will remain. The school have decided to rethink their approach to the allocation of classrooms, and have decided to designate classrooms as ‘General Teaching Classrooms’ rather than being allocated specific subjects, this along with the other strategic decisions made has allowed the team to reorganise the spaces within the consented scheme to free up areas so that the extent of basement extension can be significantly reduced without compromising the brief requirements. All specialist teaching areas are retained.

 **ENTRANCE AND RECEPTION**


The entrance and reception area are retained as the consented scheme. The atrium, which is an important feature for the school now will also enclose the retained basement. This will become a feature within the space.

 **RESOURCE AREAS**

The requirement for resource areas aligned with teaching spaces has been retained.

 **INCLUSIVE DESIGN**

Providing level access through the building has been a key consideration and a difficult constraint to overcome. For this reason a portion of the existing basement does need to be extended, albeit to a much smaller degree as the consented scheme. This allows the staircase and lift core to serve the existing basement multi-use sports hall..

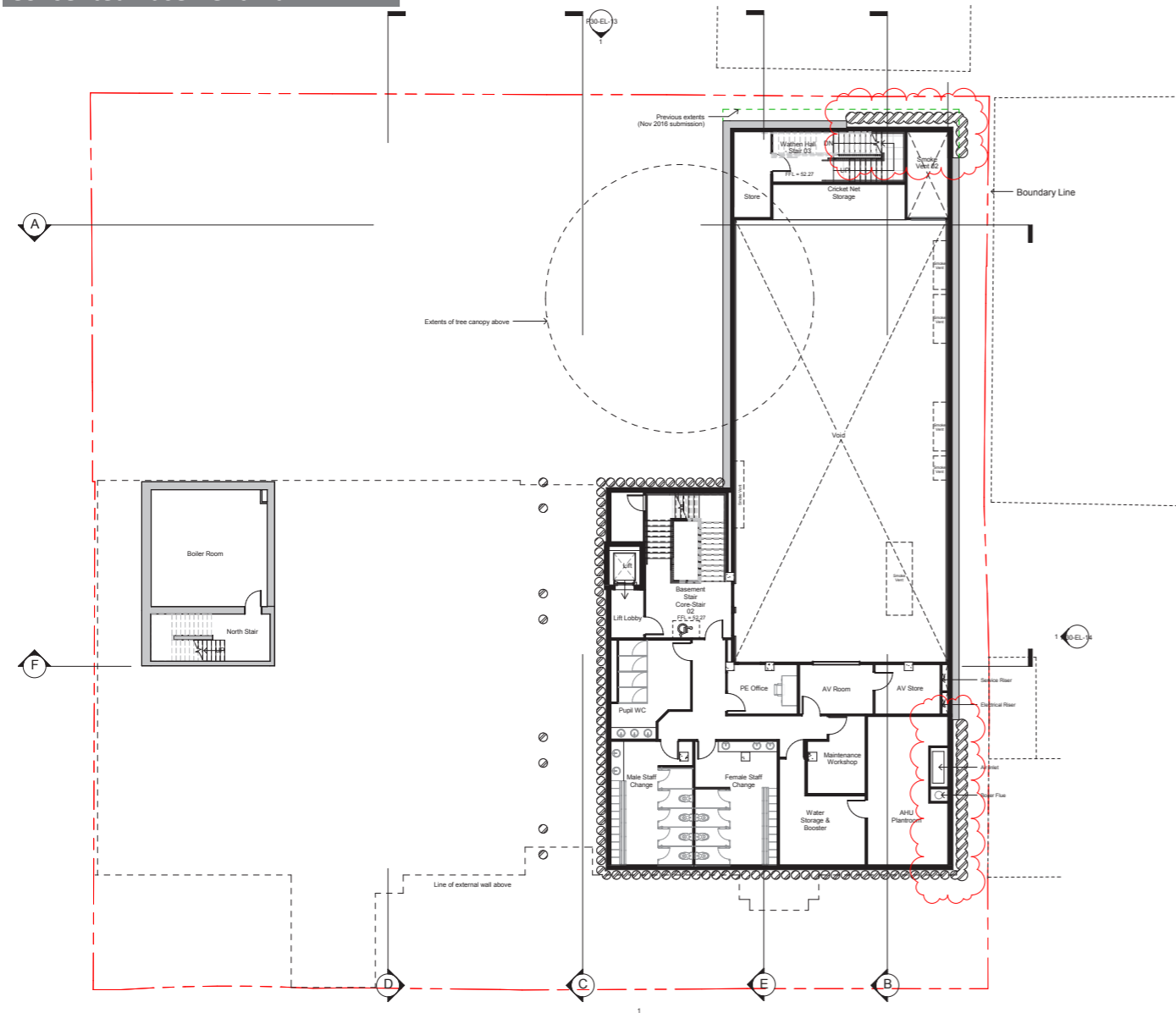
 **FLEXIBLE STUDIO SPACE**

The consented scheme provided a dedicated studio space for drama performances which could spill out into the playground and the Cooper Hall. This was deemed as lower on the priority list for the school so has now been omitted from the proposals to suit the overall reduction in mass. The school is however going to investigate how changes in timetabling could allow the Cooper Hall and the new atrium space to provide a performance area for the school. The refurbished multi-use sports hall will also incorporate a demountable stage with associated AV equipment to enable it to be used for performances.

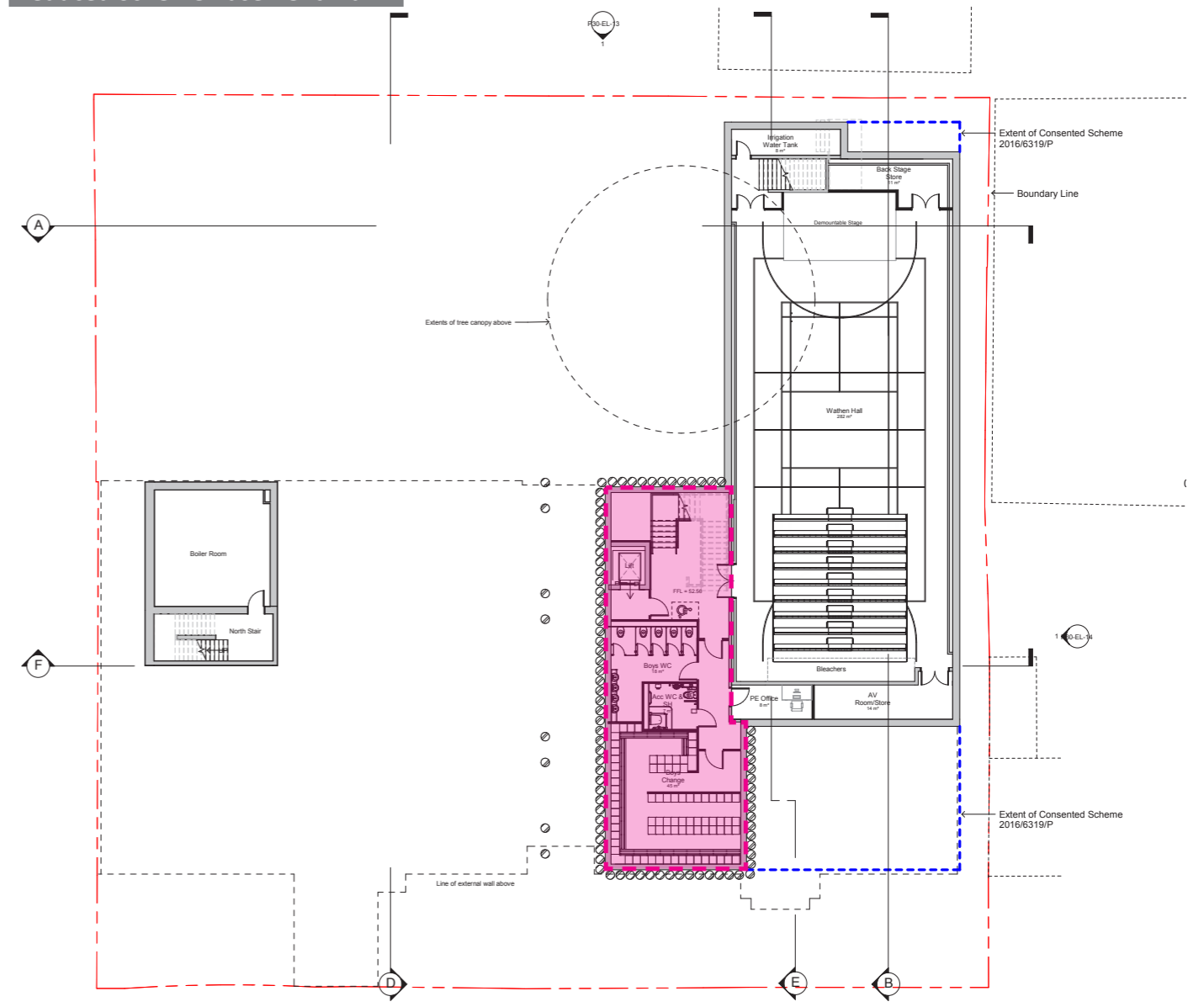
BASEMENT CHANGES

- The basement will not be extended down by 3.9m (consented scheme) instead the existing basement will be retained and refurbished. This change will address the following issues-
 - Reduce the civil design for below ground works extensively
 - Avoid the logistical issues of constructing the basement
 - Address the complaints of neighbours on the basement works
 - Reduce the financial impact on the project
- Footprint of basement is smaller than the consented scheme, see pink highlighted area on the plan below which shows the new size of the extension. The consented scheme provides approx. 205sqm, the reduced scheme only requires 124sqm of floor area to accommodate the stair/lift core, pupil changing rooms and toilets.
- The gross floor area for the **multi-use sports hall** remains the same.

Consented Basement Plan



Reduced Scheme Basement Plan





Consented Scheme - Section E



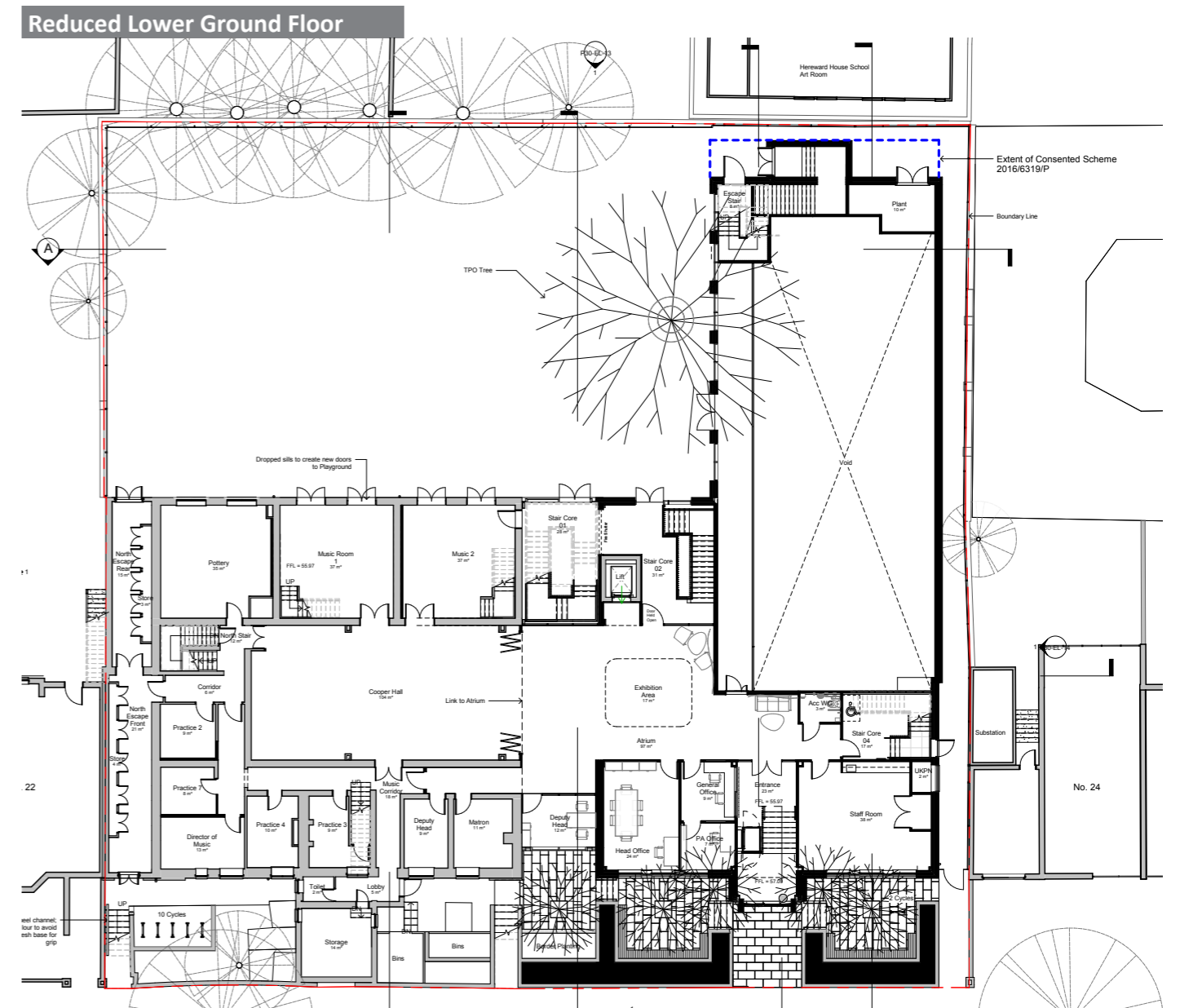
Reduced Scheme - Section E

SECTION E

- The section highlights the reduction in the length of the basement as well as the depth.



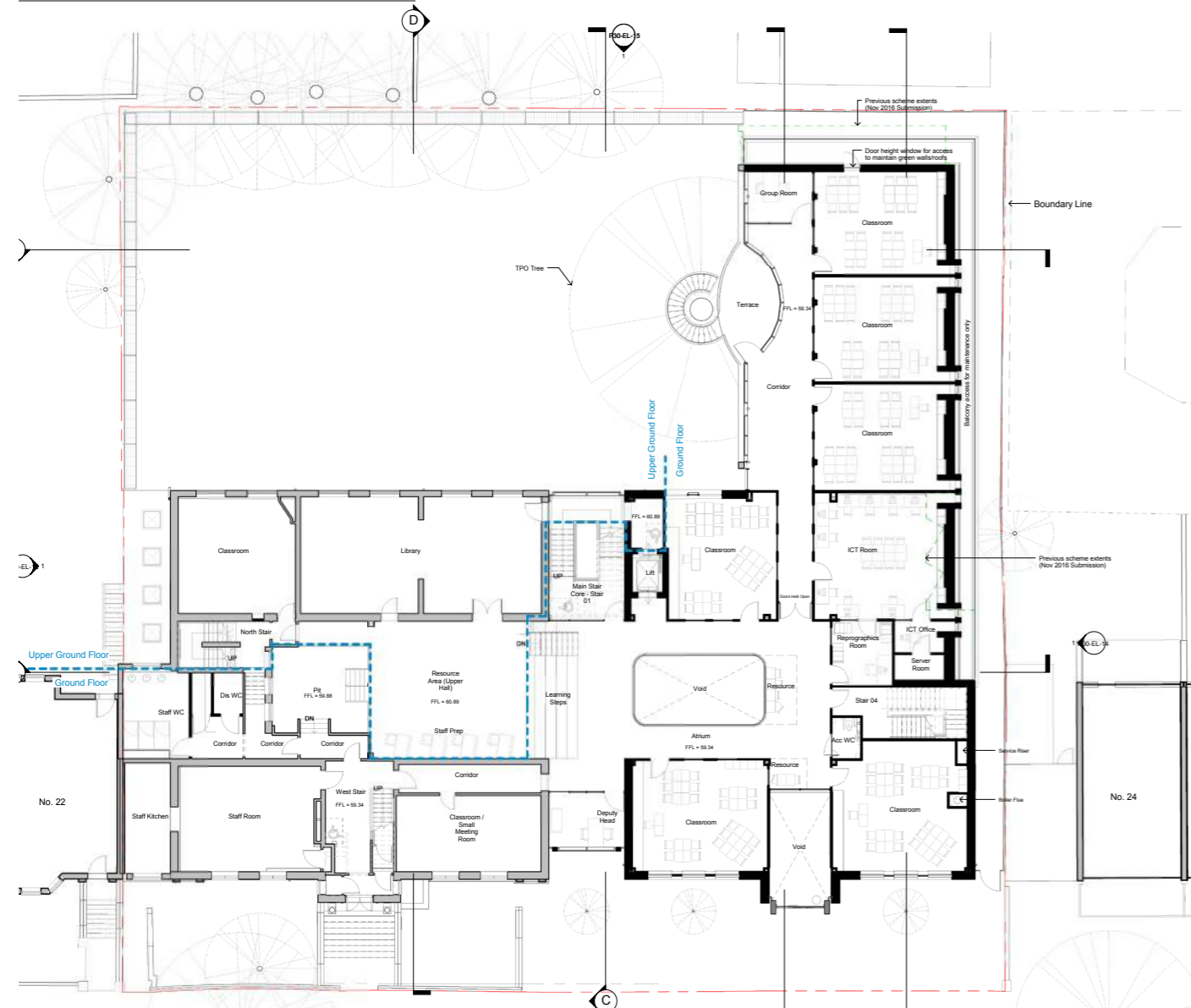
- The lower ground floor walls and roof for the **multi-use sports hall** will be rebuilt out of a new lightweight structural steel frame to accommodate the single storey extension on top.
- Of the three classrooms in the consented scheme (above the **multi-use sports hall**), two have been lost and the other one relocated elsewhere in the proposals.
- The studio space has been omitted from the scheme.



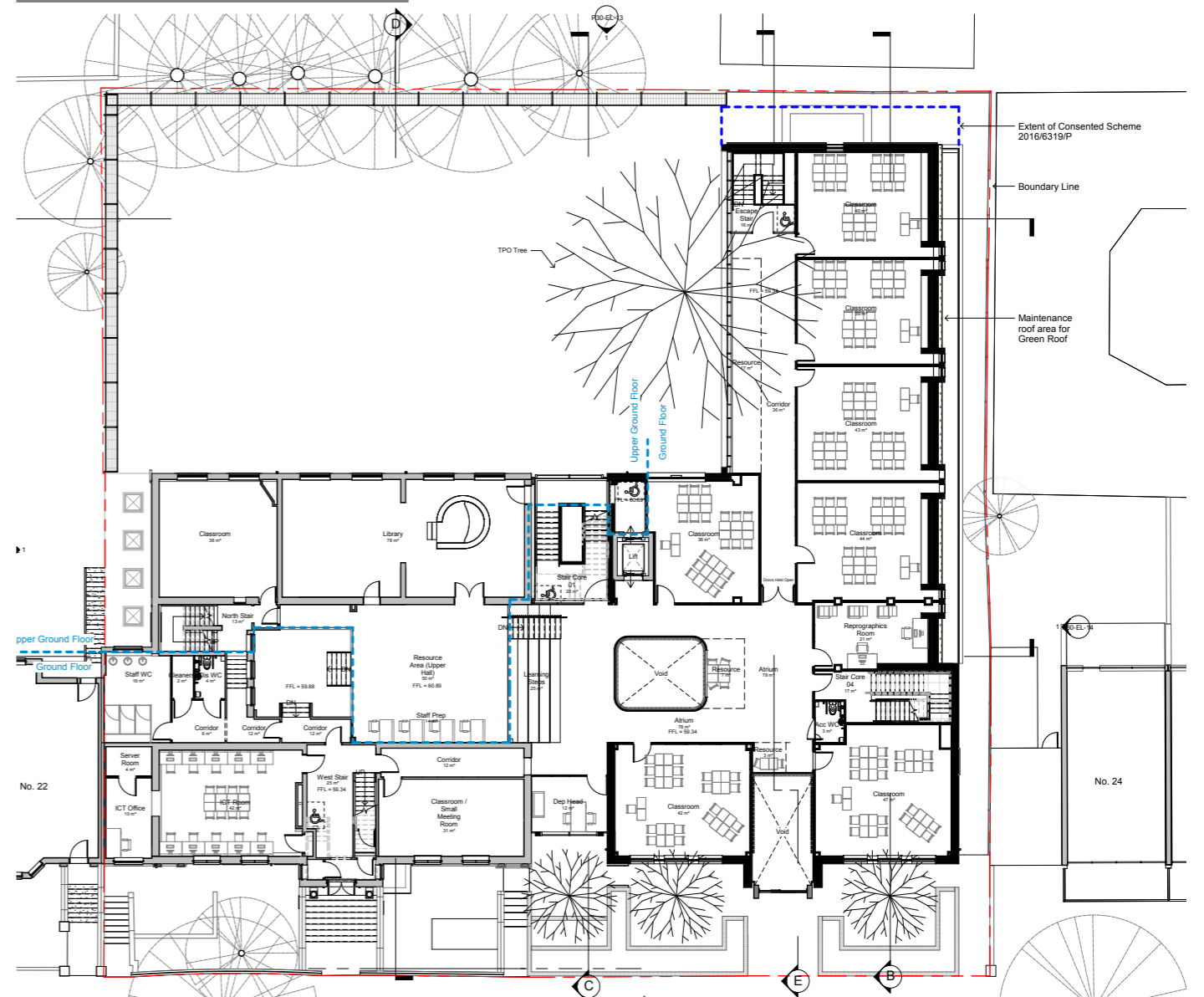
GROUND FLOOR

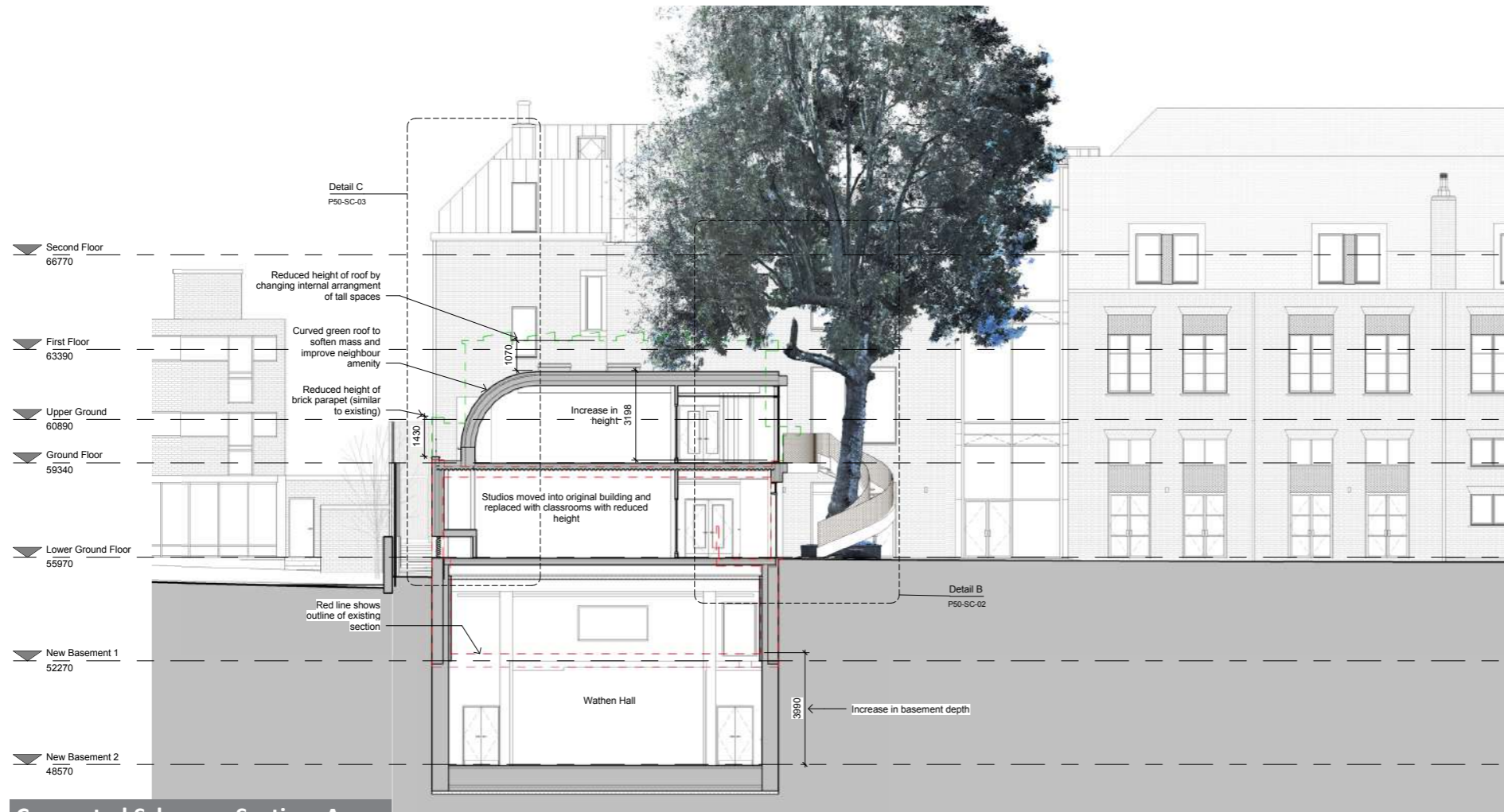
- The staircase around the tree and the balcony have been omitted. This change was brought about due to changes in the fire strategy where previously the corridor was only used as circulation because it was deemed a sterile environment due to the increased escape distance. The design team have since reviewed this and have replaced the small group room with an escape stair which means the corridor can be used as a large resource area. This is in line with the schools aspirations of delivering education to meet future requirements.
- It also eliminates a point of contention for the neighbours who raised concerns of overlooking from the balcony. The permission had been conditioned to include screens on the balcony which would have detracted from the overall aesthetics.

Consented Ground Floor



Reduced Ground Floor





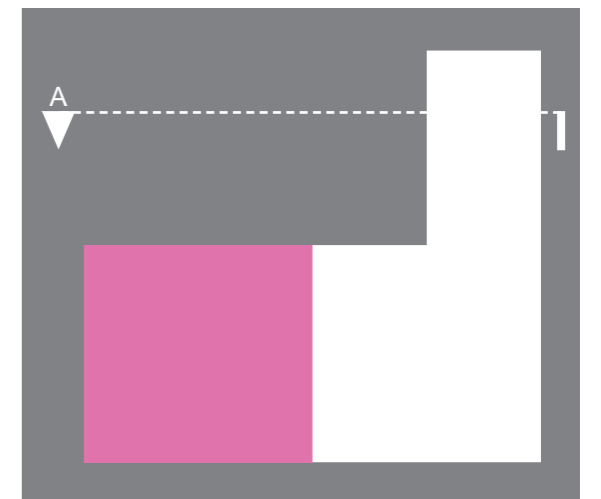
Consented Scheme - Section A



Reduced Scheme - Section A

SECTION A

- The section highlights the reduced depth of the basement level by utilising the existing location of the **multi-use sports hall**.
- The consented mixed-use hall height was approximately 7.2m, the refurbished basement in the reduced scheme will be approximately 6.2m.
- The overall height of the single storey extension above the **multi-use sports hall** has been retained as the consented scheme.
- New PV location on the main roof of the School, to offset the loss from the consented scheme, where the Wathen Roof which housed PV became a Green roof.





Consented Scheme - North Elevation



Reduced Scheme - North Elevation

NORTH ELEVATION

- The bulk and mass does not change, and there will be no greater impact on neighbouring properties.
- The elevation treatment is the same as the consented scheme with regards to the use of materials.
- The proportions of the glazing have been reworked to improve the symmetry of the elevation.
- The staircase around the tree has been omitted as has the balcony.
- The existing escape from the basement will sit subservient to the rest of the elevation, and to reflect this it will be treated differently in its materiality.
- Fibre cement cladding (Concrete appearance) to the stair enclosure so that the enclosure reads as subservient to the rest of the elevation. The enclosure is being retained in the existing footprint of the building. An example of this product is manufactured by Equitone.
- Existing basement is being retained, so the vertical louvres on the elevation have been omitted. However due to a change in the ventilation strategy high level louvres have been introduced to the glazing.



Consented Scheme - West Elevation

WEST ELEVATION

- The ventilation strategy for the school has changed due to changes in compliance. The previous strategy was purely natural ventilation, we have now incorporated NVHR units to the classrooms. This has resulted in high level horizontal louvres to the heads of all windows.



Reduced Scheme - West Elevation

CONSULTATION

PRE-APPLICATION

Pre-application advice was sought on the reduced scheme, a meeting was held on the 12th October 2018. Subsequently the planning officer issued a formal response which recommended that a Section 73 application should be submitted. The document also highlighted areas where further information was required, most of this has been covered on the drawing with the exception of the following:

- Details of the revised cycle strategy
- Demonstrate that accessible facilities are provided for disabled users
- Maintenance information for the green roof

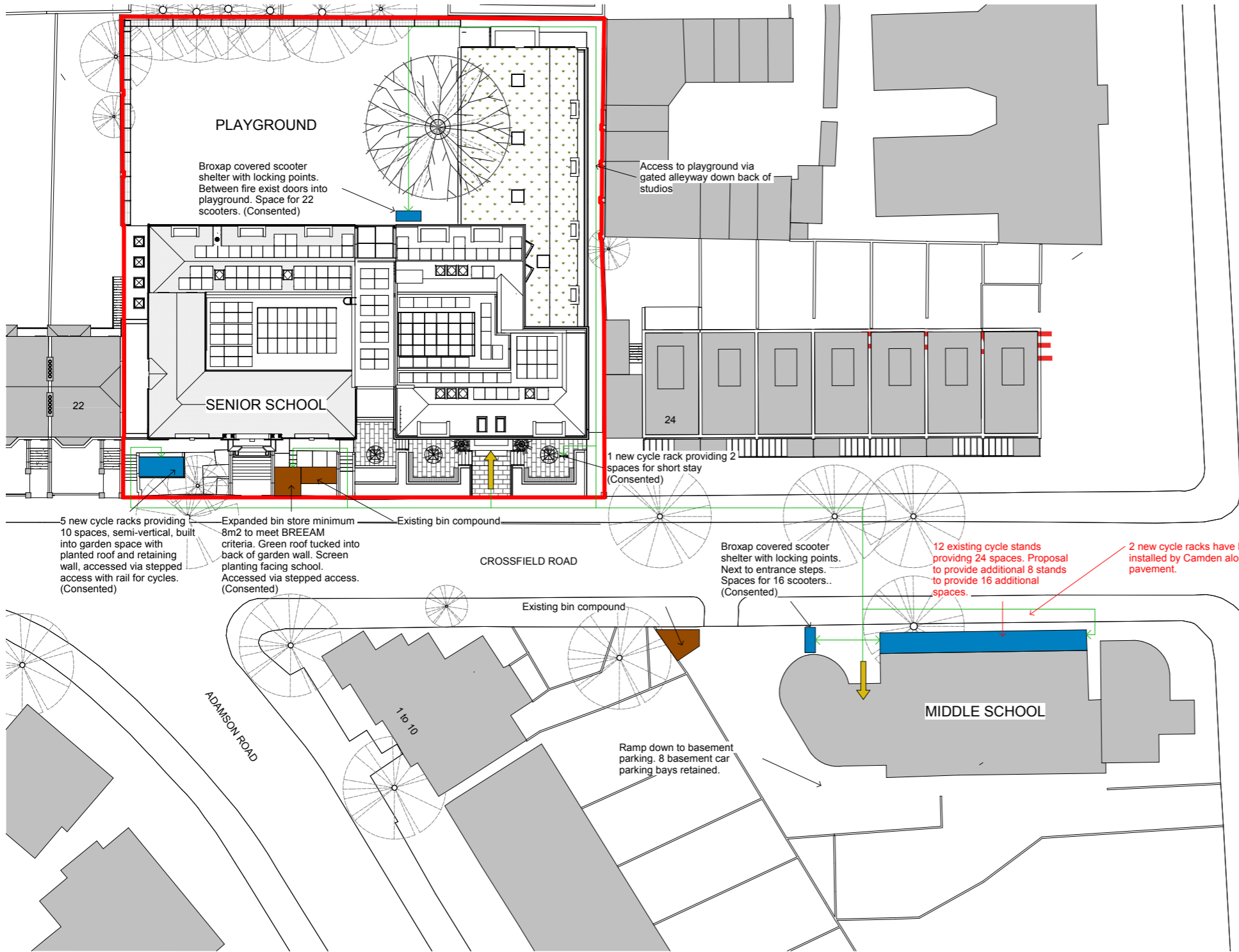
The above points will be discussed in detail in the next few pages of the DAS.

PUBLIC CONSULTATION

The school organised a public consultation event on the reduced scheme, this was held in the Middle School on the 11th December 2018. A brief report of this will be documented in Boyers Planning Statement.



CYCLE STRATEGY CHANGES



CYCLING FACILITIES

It is proposed that cycling facilities are shared between the Senior School and the Middle School as there is so much movement between the two sites.

The consented scheme provides 28 cycle spaces at the Senior School. As part of the reconfiguration we have lost 16 spaces. Space for cycle storage is limited due to complexity of levels and constrained urban sites.

There are 24 cycle existing storage spaces for cycles located under the balcony at the front of the Middle School. A further 16 spaces can be provided under the existing balcony.

Current Usage

7 Staff Cycles
6 Pupils Cycles
20-30 Pupils Scooters

Total: 23 Cycle & Scooters

Consented Scheme

24 Cycles MS under balcony
12 Cycles SS front garden*
22 Scooters SS playground
16 Scooters MS entrance*

Total: 74 Cycle & Scooters
* Subject to survey

Proposed Scheme

40 Cycles MS under balcony*
12 Cycles SS front garden*
22 Scooters SS playground

Total: 74 Cycle & Scooters
* Subject to survey

INCLUSIVE DESIGN

APPROACH TO INCLUSIVE ACCESS

These proposals have been designed to meet the requirements of Approved Document M and those elements of the Equality Act 2010 covered by it. As designers we will work with the approved inspector to ensure that these regulations are met.

However compliance with the Equality Act will need to be ensured by the service provider. In this case, the School may choose to address some requirements through management solutions as much as they can by design. Set out below is a brief summary of the design features and how the proposed scheme is still compliant:

BUILDING APPROACH

The Hall Senior School is located on Crossfield Road where ALL vehicle parking is restricted to permit holders only.

- 1 No staff disabled parking bay is provided at the Middle School.
- Staff parking is provided off site.
- Pedestrian access is via the main highway footpath adjacent the front of the Senior School.

BUILDING ACCESS

The New Main Entrance to the Senior school will be within the New build element and it will incorporate level threshold access with automated Entrance doors (subject to the final security arrangements to be agreed with the school).

All exit /access points to the new extension and newly created openings from the Music rooms onto the existing Playground will include level thresholds to approved Document M requirements. Existing external doors retained will incorporate the existing threshold arrangements.

BUILDING CIRCULATION

The new extension has been planned to provide vastly improved circulation within the school.

- The General office is located off the Entrance foyer with a glazed screen to aid communications.
- The New extension also includes Main Circulation Stairs.
- A New Passenger Lift ensures compliant access throughout the main five floors with, intermediate stops provided for the lift to suit floor areas to the existing retained building which are different to the new floor levels.
- The lift extends down to the Basement level to ensure access to the refurbished Sports Hall and changing facilities for all.
- The proposals will include wheelchair access to over 90% of the

building including all teaching spaces.

- Various additional Escape stairs are also provided throughout.
- All New stair enclosures will include a Disabled Refuge and two way communication system linked back to the Main Reception.
- Newly created circulation corridors are minimised by the creation of “break out zones” and a central open Atrium space, Corridor width to new areas will be compliant. Corridors to the existing retained areas will remain as existing.
- All newly constructed areas will incorporate doors with clear openings to suit Part M requirements, corridor doors where practical to include electronic hold open devices that will fail safe on the fire alarm. Doors will comply with the required opening force restrictions, and Vision panels provided where necessary for compliance and to enhance internal views.
- Existing retained building areas will maintain current door arrangements, any new openings formed in existing Structures will be compliant to new standards.

WC’S + WASHROOM FACILITIES

- The Basement level provides a Document M compliant Shower / Changing facility and WC adjacent to the Main Student WC / Changing area.
- All accessible WC and Changing areas will include an emergency assistance alarm system. Ambulant disabled cubicles have been provided in each standard wc block provision.
- In the existing building the male staff was in the basement and the female staff (undersized was located on the ground floor). The staff change facilities for both male and female will be provided on the second floor, close to the Staff work room and will include shower facilities. The female provision has been improved as the staff ratio is about 50/50. Although not located on the ground floor which would be the ideal situation from an accessibility point of view, the location has been selected due to the privacy and adjacency requirements. It can be accessed by disabled users via the central lift core.

GOOD ACOUSTIC DESIGN

- The internal environment of the New areas will be designed to achieve an acoustic environment that is neither too reverberant nor too absorbent, so that verbal communication can take place effectively.
- Attenuation is proposed to the Main Circulation Atrium space and the void over the Entrance lobby in the form of wall mounted timber acoustic panelling.

PROVISION FOR PEOPLE WITH HEARING IMPAIRMENT.

A suitable induction loop system will be incorporated into the Entrance area / General Office and portable plug-in systems for use around the rest of the building.

As a minimum Audio-visual fire alarm beacons will be incorporated within wc and shower areas.

PROVISION FOR PEOPLE WITH VISUAL IMPAIRMENTS.

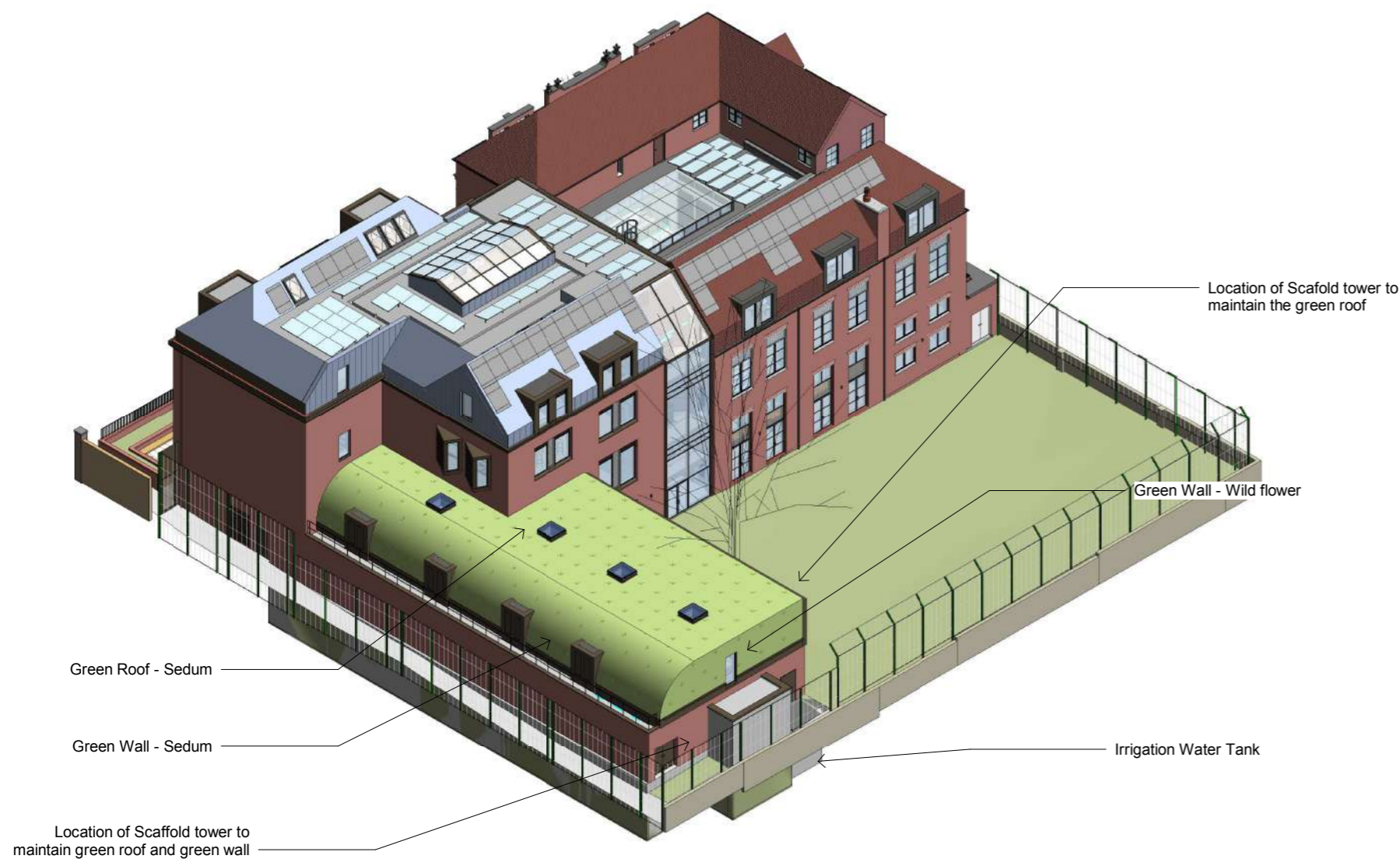
Colour contrast will be achieved within New Build areas and extended into areas receiving major refurbishment, by the informed selection of colour and tone and the correct LRV differentials.

Colour contrasting rail kits will be fitted within accessible WC’s and changing facilities so they can be clearly visible against the background walls.

MEANS OF ESCAPE ON-GOING MANAGEMENT.

The School is required to prepare PEEPS (Personal Emergency Evacuation Plans) for all students and staff who have declared that they have a disability that may impact on their being able to evacuate the building in a timely and safe manner. The PEEP should be prepared with the student/staff and should be updated and reviewed on a regular basis.

GREEN ROOF ACCESS AND MAINTENANCE



Access

Access to the base level of the walls can be gained via a mobile scaffold along the east elevation, which gives access to a maintenance walkway along the perimeter of the living walls. The walkway is protected by 1100mm high railings.

Access to the roof level can be also gained a mobile scaffold along the north elevation from where there will be a connection to a fall restraint system. System to be designed to allow abseil down the curve of the roof onto the living wall.

Only trained and certified persons to use access the roof and walkway. A method statement including risk assessment to be produced prior to access. Protective plastic should be laid before replanting works.

Plant Room

Irrigation tank and Dosetron irrigation and feed control system to be located in a plant room in the basement. A clear route will be available via the basement staircase.

Maintenance

The vertical green wall will be a mix of wild flower which requires pruning twice a year (depending on the weather normally April and October). The sedum roof will require pruning once a year.

PRECEDENT IMAGE: Green Wall - Wild flower



PRECEDENT IMAGE: Green Roof/Wall - Sedum

