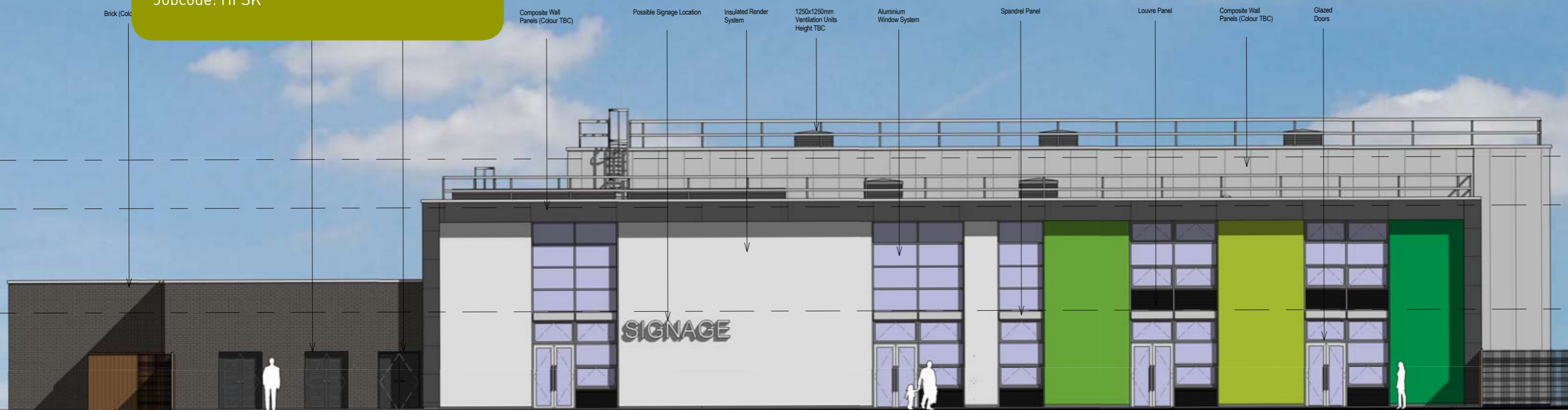


Heyford Park Free School Sport Hall

Design and Access Statement

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Date: 01.03.13
Jobcode: HFSK



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01 Introduction

This design and access statement supplements the full planning application for the re-modelling of the Sports Hall at the Heyford Airbase site for the newly formed Heyford Park Free School.

Heyford Airbase was originally established by the Royal Flying Corp in 1916. Following the Second World War the USAF Strategic Air Command took control of the site.

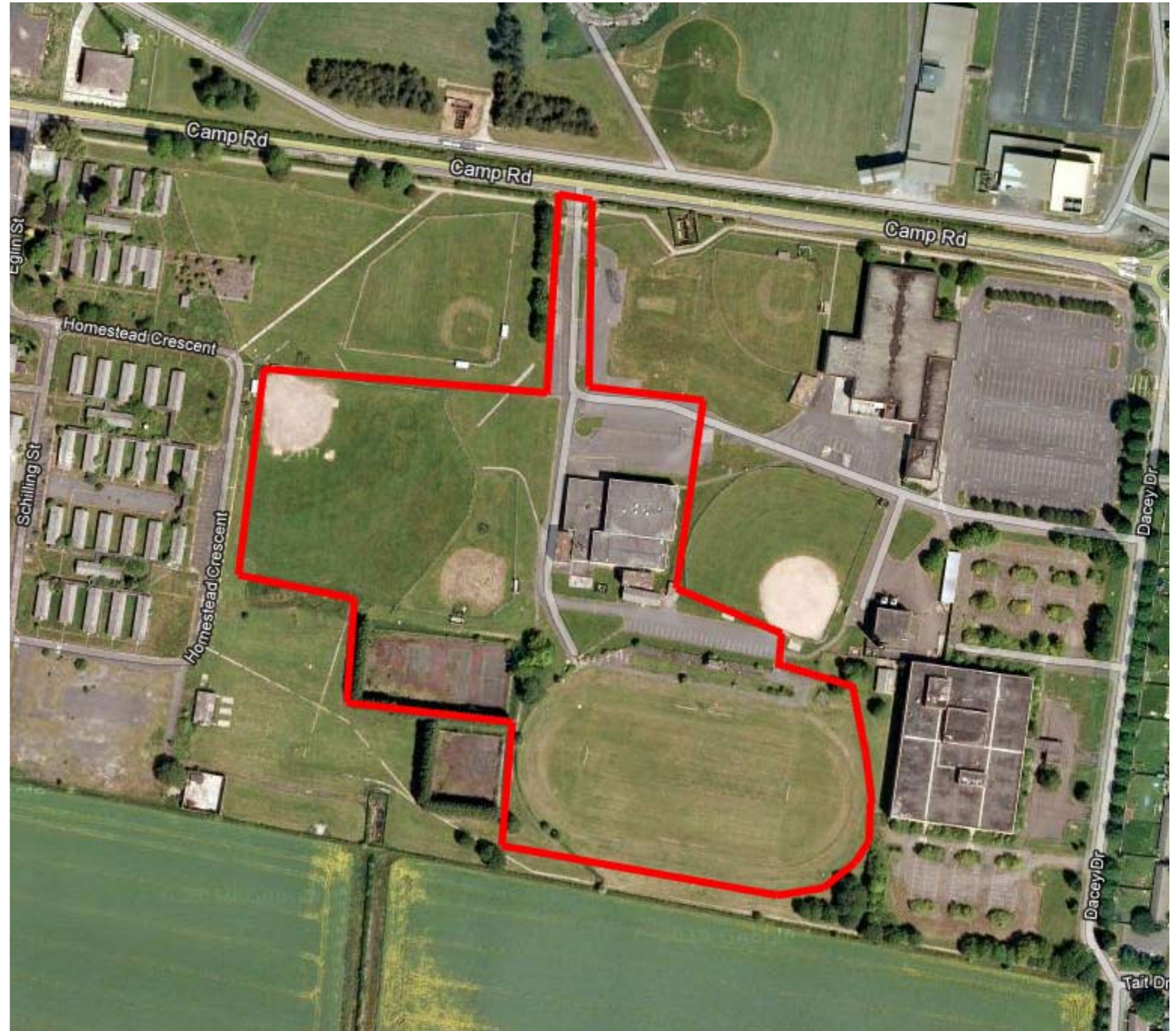
The site was handed back to Ministry of Defence in 1994 and parts of it have since fallen into a state of disrepair.

Heyford Park Free School forms part of the Heyford Park masterplan which seeks to redevelop the Heyford Airbase with a mix of residential, retail and commercial uses.

The co-educational Heyford Park Free School will provide 840 places for pupils aged between four and 19 by 2019, with the first year of intake starting in September 2013.

Two buildings have been identified on the airbase to be re-modelled to form the new school these are the Sports Hall and the Officers' Mess. Both buildings have laid abandoned and decaying since the USAF left the site (although part of the Sports Hall has remained in use).

The project will be split into two phases: the first will be the redevelopment of the Sports Hall which will be used to provide space for the first year intake, followed by the refurbishment of the Officers' Mess in 2014 which will bring the school up to its full capacity.



02 Existing Site

Site Location

The site is located approximately 1km to the east of Upper Heyford and 10km to the West of Bicester.

The aerial photo below shows how the Sports Hall site in context with the rest of the airbase. The Officers' Mess, which does not form part of this application, is shown coloured in blue to illustrate the relationship to the Sports Hall.



The Sports Hall

The Officers' Mess



02 Existing Site

Existing site

The site and existing building benefits from the following features:

- Good potential for redevelopment both in terms of the site and the building. The scale of the spaces can easily be adapted to form appropriately sized teaching rooms.
- Excellent sports field provision with existing running track, football pitch, tennis courts and baseball diamond.
- Green field land located to the South of the site.
- Once refurbished, the building will provide excellent sports facilities which can be made available to the wider community.
- Structurally sound building.

In direct contrast to this, the weaker characteristics are.

- Little architectural context until the wider site is redeveloped in the future.
- Poor quality of landscaping beyond the sports fields.
- Poor fabric condition resulting in water penetration which is damaging the building interior.
- Uninspiring architecture: the building is clad in a very utilitarian manner with very poor quality external elevations.



02 Existing Site

Existing Building - Plans

Existing Building

The existing Sports Hall has a very utilitarian feel with little architectural merit. The building is constructed with a steel frame with varying cladding types, mostly pebble dashed concrete panels, plastic UPVC cladding and timber shingles.

Exterior

The main sports hall, squash courts and weights rooms are clad with large scale concrete panels spanning the full height of the large spaces. The associated weights rooms, changing rooms and main entrance are all clad with white wood look horizontal plastic panels fixed back to an inner skin of block work. The racquet ball courts to the rear of the building are clad with timber shingles. All roofs are surfaced with asphalt which have degraded to the point that they now leak, causing significant damage to the internal spaces.

Interior

The main sports hall is of a large scale and accommodated a basketball court and roller derby track. There is a large area of bleacher seating to both side of the hall which would have accommodated both home and away fans. The floor to the sports hall is a high standard triple spring timber floor which unfortunately has been damaged beyond repair by water leaking through the roof (although the intention is to replace it with a new timber sprung floor).

There are a number of squash courts located within the main building with viewing galleries at first floor.

A number of racquet ball courts are located in extensions to the rear of the building most of them will be demolished as they are in a poor state of repair and are not required.

The Sports Hall has been selected for both its sports facility and the potential to convert some of its larger spaces (squash courts and weights rooms) into teaching accommodation.

Accessibility

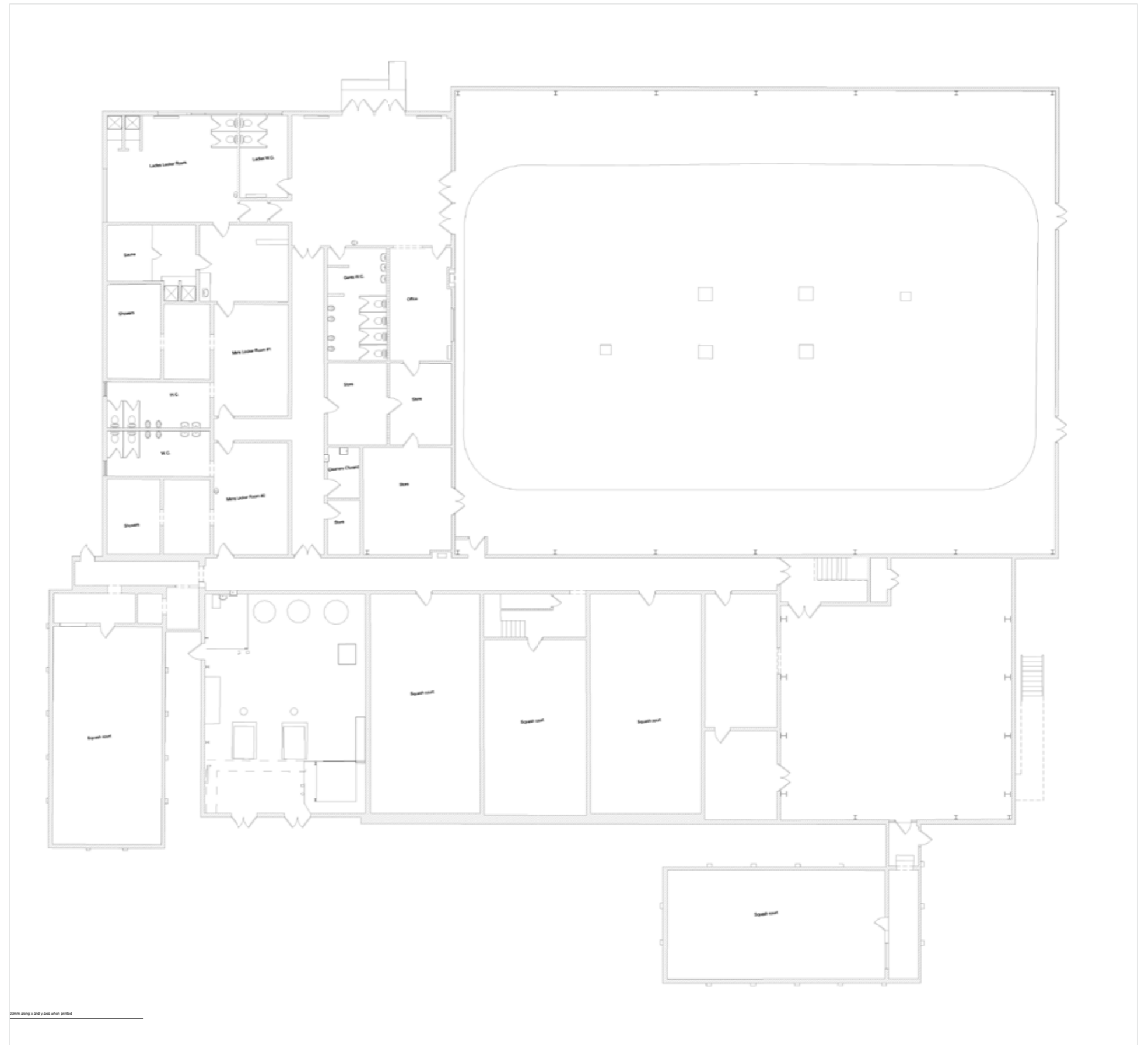
The building has limited level access from the exterior. Internally there is no lift provision to the first floor.

Existing Landscaping

There is limited formal landscaping around the building aside from the sports fields. There is a large portion of parking to the front and rear of the building access off Camp Rd.

Existing Sports Provision

There are a number of sports fields surrounding the Sports Hall including baseball, American Football, basketball, tennis courts and a running track. A number of these facilities will be retained and adapted for school and community use.



02 Existing Site

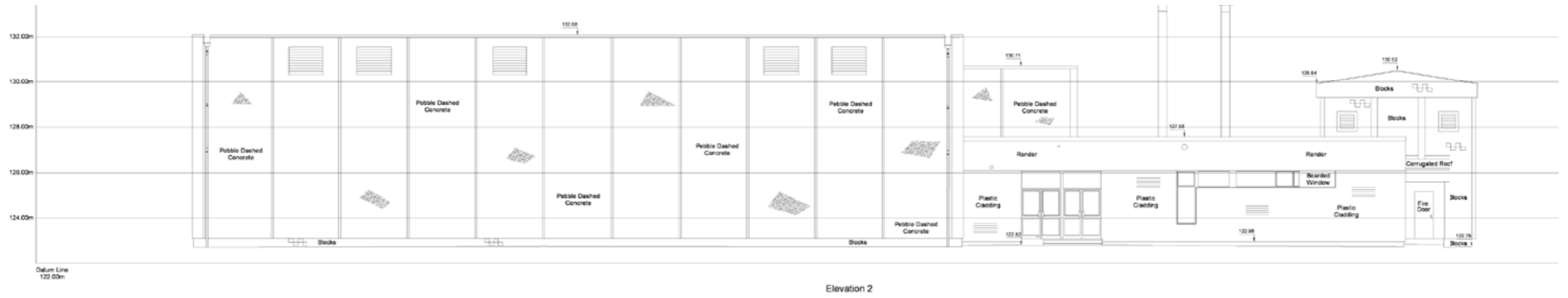
Existing Building - Plan



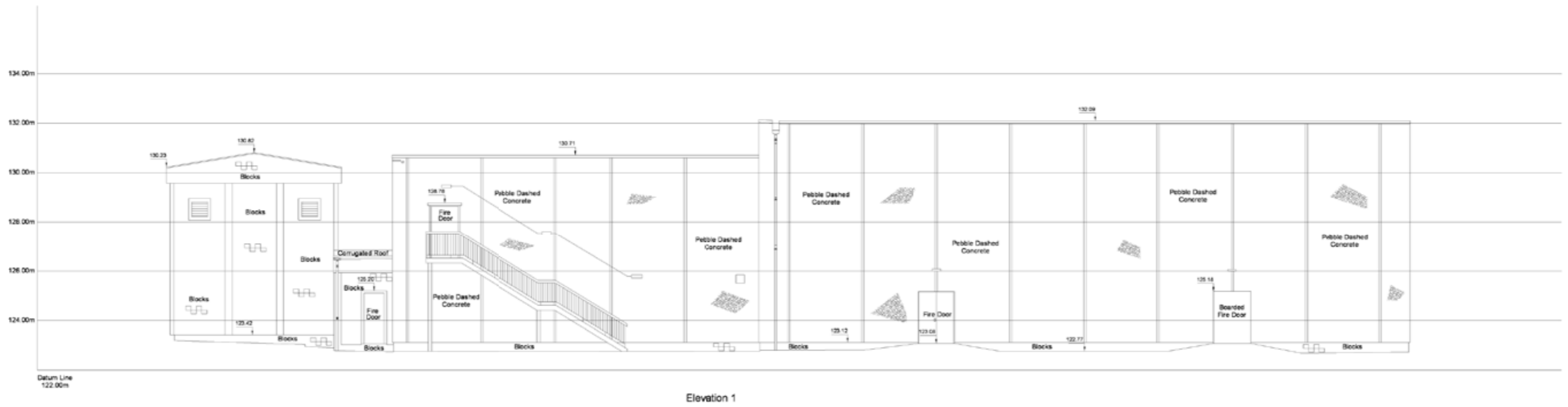
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02 Existing Site

Existing Building - Elevations - NTS



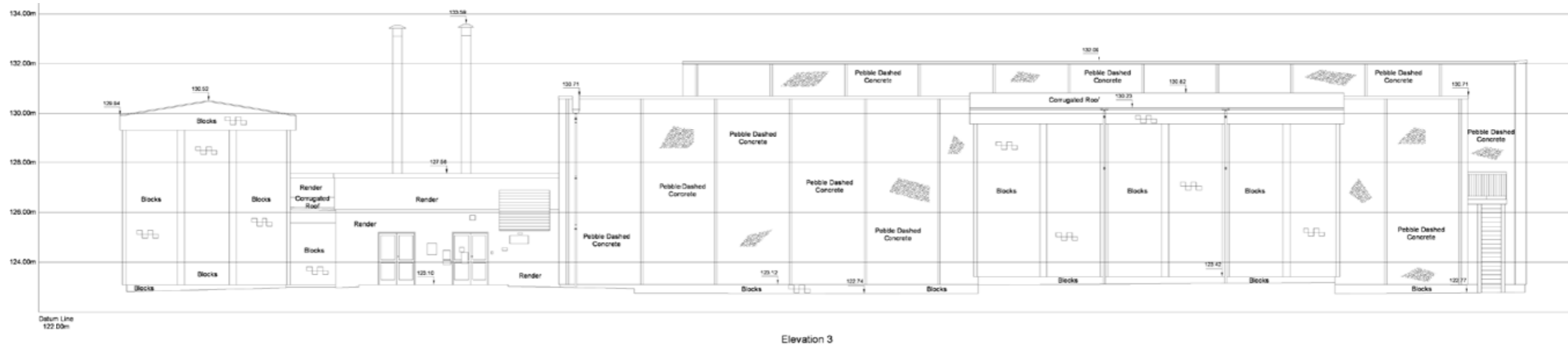
1 Existing Elevation - North



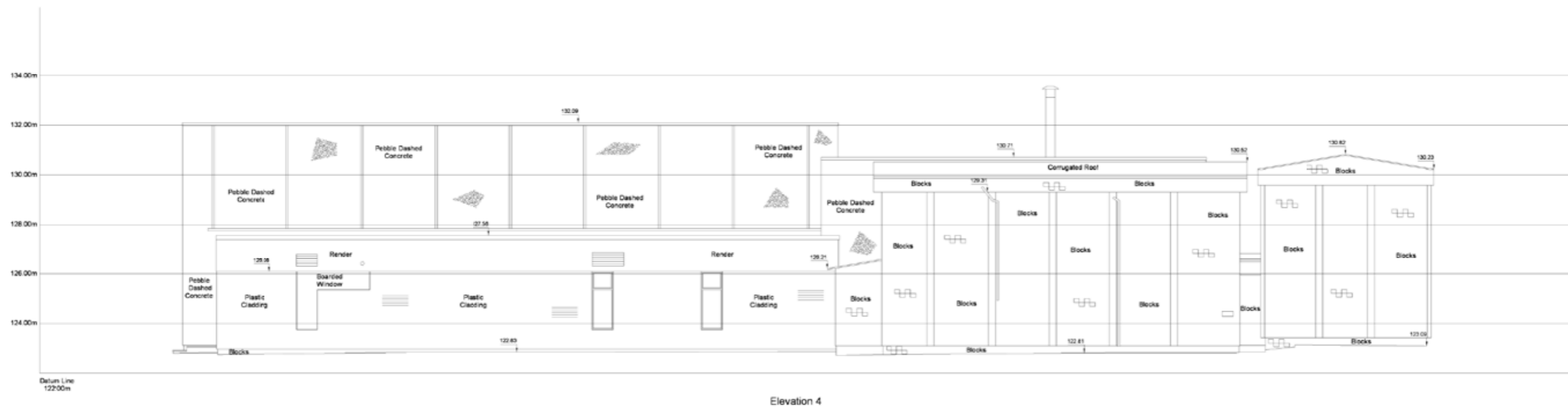
2 Existing Elevation - East

02 Existing Site

Existing Building - Elevations



1 Existing Elevation - South



2 Existing Elevations - West

03 Design Philosophy

Consultation

Since January 2013 there have been regular meeting with the Design and Construction team to develop the school design.

Along side these meeting consultations has taken place with the school to ensure the design meetings their requirements.

Response to Brief

The project brief is to form a new school with a 2 phase construction programme beginning with the redevelopment of the Sports Hall. Once completed Phase 2 will follow with the redevelopment of the Officers' Mess and the change of use to a number of the classrooms at the Sports Hall.

Phase 1 of the project will consist of:

- Refurbishment of the existing Sports Hall to provide a sports facility for use by both the Free School and the wider community. The facility will include the refurbishment of the large sports hall with bleacher seating, Gym, squash court external running track with sports pitches, and associated changing facilities. A cafe will be formed at the main entrance for both School and Community use.
- Teaching facilities will be established in the Sports Hall for the initial two form entry school in 2013. Associated external teaching areas will be provided with direct access from the classrooms.
- A reception classroom with an external play area will be formed with separate access to the main building.
- During phase 1 pupils will spend all their time on the Sports Hall site.

Phase 2 of the project will consist of:

- Change over of the teaching spaces in the Sports Hall to incorporate design, drama and art facilities as the class bases are moved to the Officers' Mess. A 6th study centre will replace first floor classrooms as they are decanted to the newly refurbished Officers' Mess.
- Redevelopment of the Officers' Mess in 2014 to form the main body of the school and to accommodate the full pupil intake of 840 places.
- Once the two phases are completed the younger pupils will spend at least one whole day at the sports hall to minimise travel between the 2 sites. The 6th form will move more regularly between the site with transport provided.

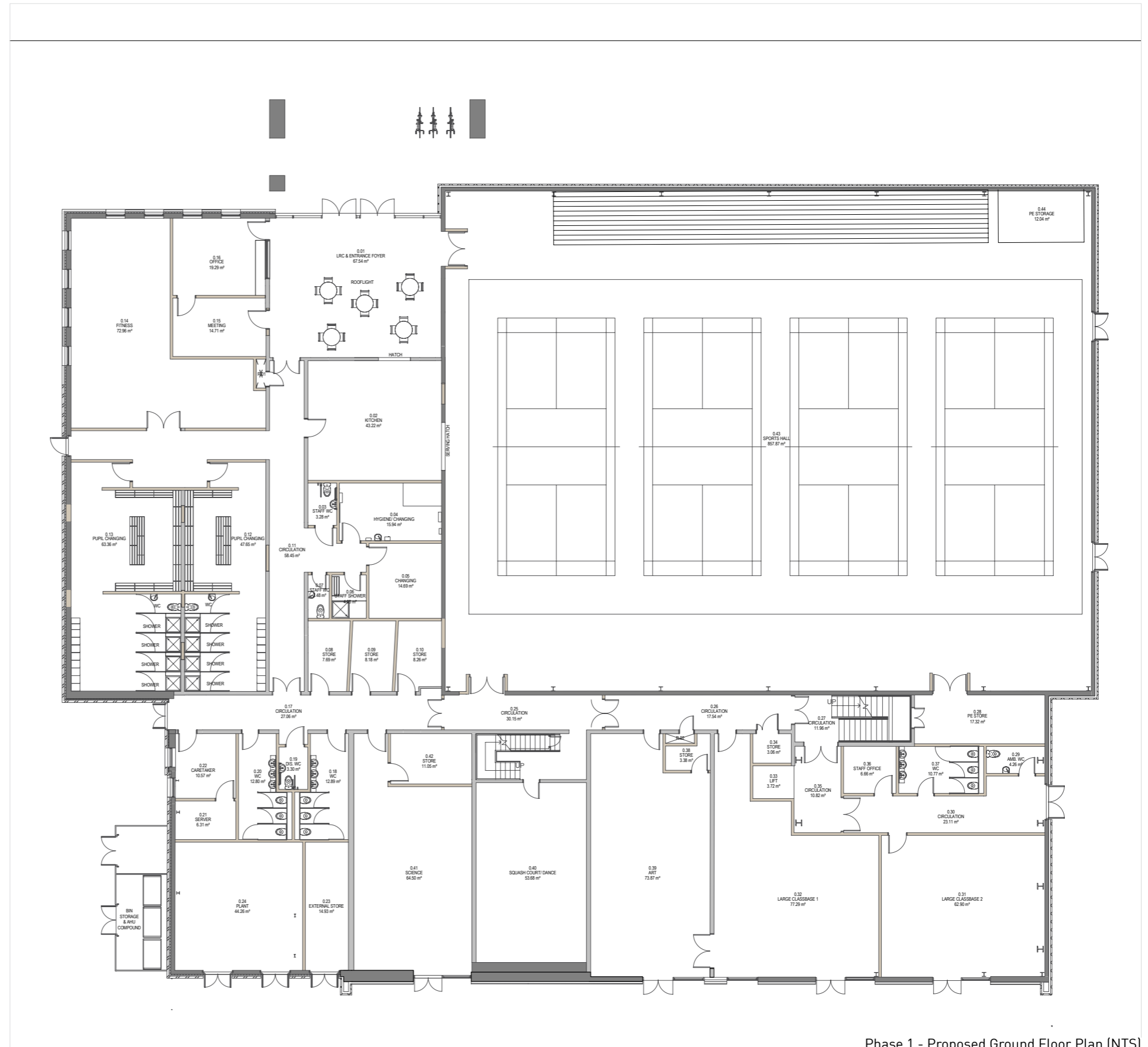


04 Building Layout

Ground Floor

The Ground floor will accommodate the following:

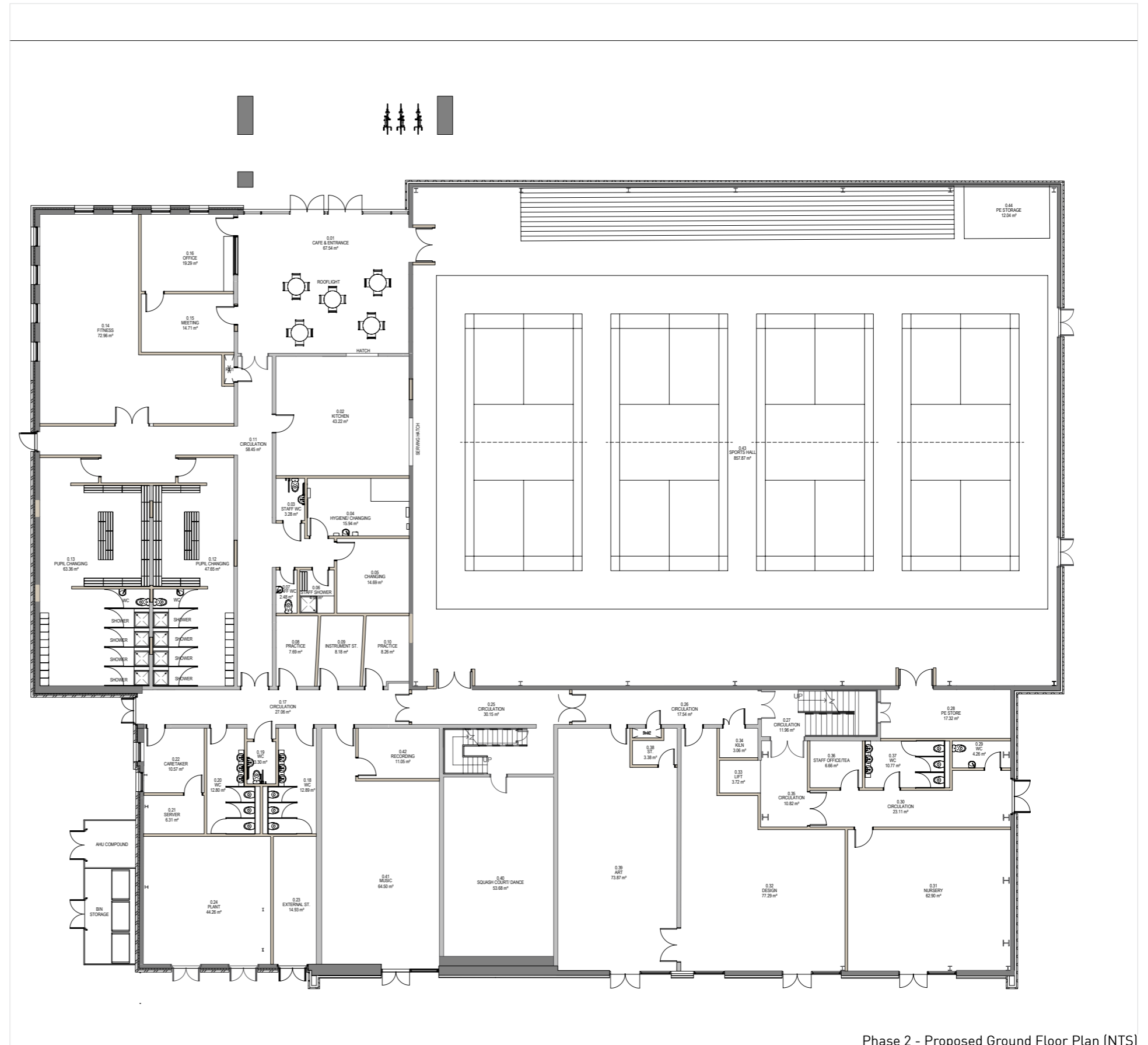
- The main entrance will be the primary access point into the building for teacher and pupils during day and for community use out of hours as it will provide restricted access to the sports facilities alone
- The main entrance leads into a space which in phase one will be the learning resource centre changing to a cafe in phase 2. A large roof light will be located over the seating space to provide good levels of natural light to the occupants. Accessed immediately off this space will be office and meeting room facilities, the sports hall and circulation back in to the teaching and changing room accommodation.
- A kitchen facility will service both the cafe and the sports hall for dining.
- The sports hall is 858sqm and able to accommodate a basket ball court and 4 badminton courts. The existing bleacher seating will be retained and associated storage space.
- Associated with the sports hall will be a fitness centre, squash court and staff and student changing rooms both with access to disable facilities.
- To the rear of the building will be located large teaching rooms accommodating the spaces previously used as squash courts and weights rooms. Within phase 1 the teaching spaces will be science, art and 2 large class bases. These will change over to art, design, music and a nursery within phase 2. All of the teaching spaces will have direct access to the external teaching / play areas. All the phase 2 teaching rooms will have a portion of double height space which will enhance the quality of the teaching space particularly with the use of double height glazing to provide ample day. light essential for activities such as art.
- Within phase 2 a nursery will be located at the South East corner of the building replacing a class base. It will be able to function as a stand alone operation with separate toilets and entrance. The nursery will have its own dedicated external space.
- Ancillary spaces will include toilets, stores, music practise rooms, plantroom and caretakers office.
- A lift and staircase will service the first floor accommodation.



Phase 1 - Proposed Ground Floor Plan (NTS)

04 Building Layout

Ground Floor



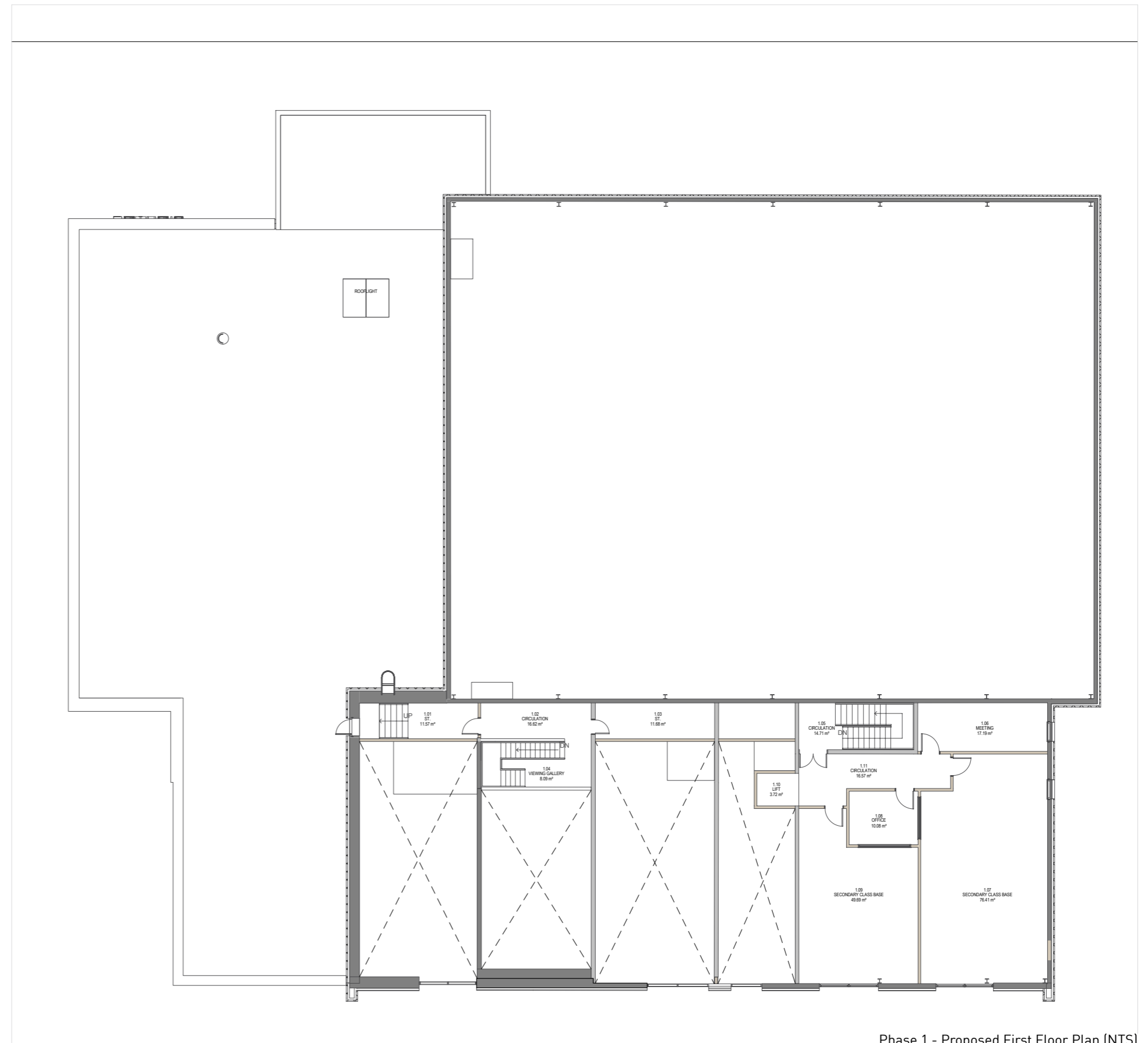
Phase 2 - Proposed Ground Floor Plan (NTS)

04 Building Layout

First Floor

The First floor will accommodate the following:

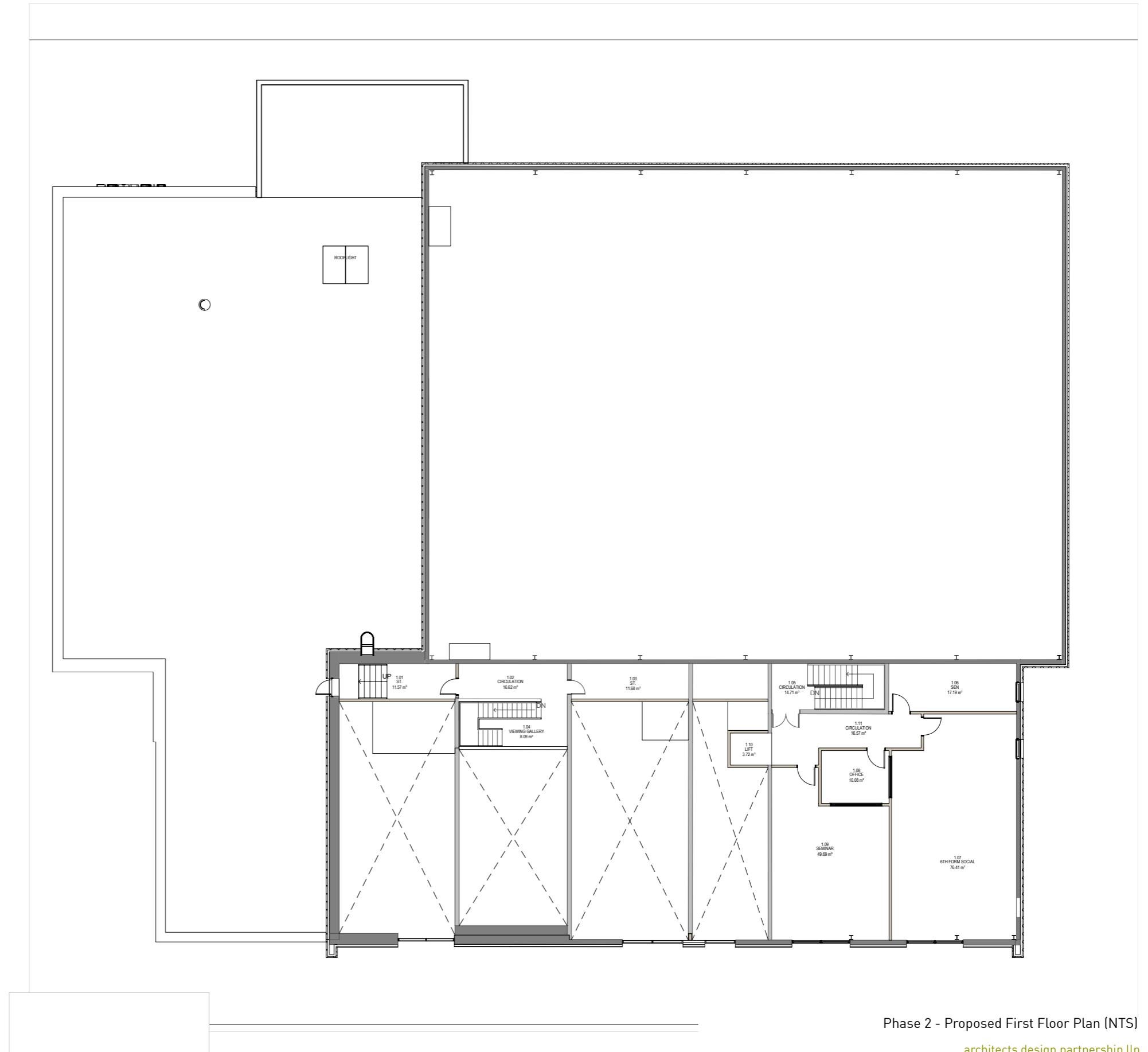
- Two large class bases which in phase 2 will be converted to a sixth form social space and a seminar room.
- A viewing gallery to the squash court accessed via a staircase to the rear of the court which services a series of stores.
- An office and SEN room.
- Access for roof maintenance will be gained via a door from one of the stores adjacent to the squash court. From this door the upper roofs will be accessed by cat ladders.



Phase 1 - Proposed First Floor Plan (NTS)

04 Building Layout

First Floor



Phase 2 - Proposed First Floor Plan (NTS)

05 Massing and Materials

Elevations

North Elevation



East Elevation



Materials

- A - Composite metal panels
- B - Brickwork
- C - Curtain walling
- D - White render



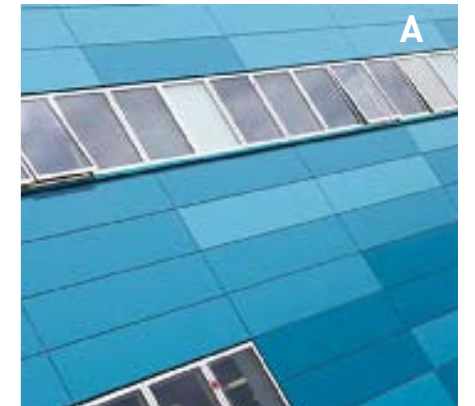
05 Massing and Materials

Elevations

Materials

E - Rain screen cladding
F - Coloured render

South Elevation



West Elevation



05 Massing and Materials

3D Massing

The following elevational treatments will be applied:

- The large sports hall space is currently clad with large scale precast concrete panels spanning from ground to roof level. The proposal is to retain the panels and over clad them with vertically orientated insulated metal panels with a 900mm module. This will dramatically improve the thermal properties of the space as well as the visual appearance externally.
- A similar approach will be applied to the teaching spaces to the rear of the building where the concrete panels which currently clad the squash courts and weights rooms will be retained. The same insulated metal panel will be applied in a horizontal format to provide a contrast against the mass of the sports hall. The cladding will wrap around the South elevation of the teaching spaces framing them as a composition. At the roof level a deep soffit will be formed where the frame is pushed out from the face of the elevation to provide both articulation to the architecture and an aspect of shading to the facade.
- A number of whole concrete panels will be removed to the South elevation to allow curtain wall glazing to be installed. This will ensure adequate daylight levels to the converted teaching space. Coloured Spandrel panels will be utilised where the existing structure interfaces with the glazing. The glazing will help to open up the teaching spaces providing a visual aspect into and out of the building. As part of the building services strategy louvre panels and opening windows on restrictors will be incorporated into the glazing to provide natural venting to the classroom spaces. At certain times of the year the natural vent system will be supplemented by a mechanical system with heat recovery.
- The concrete panels to be retained on the South elevation will be over clad with an insulated render system again to improve the thermal performance of the building. There will be a mix of white and greens to reflect the School's branding, although the exact colours will be determined following consultation with the planners.
- The existing plastic cladding to the single storey block will be stripped back to the blockwork. Brickwork will be used to provide a durable finish to the changing room and plant room elevations with an insulated cavity. Again the exact colour of the brickwork is yet to be confirmed but our current preference is for a blue coloured engineering brick.
- Insulated white render will replace the plastic cladding around the main entrance and the fitness room elevation. Like the South elevation coloured render will be used between the newly formed windows at the North West corner of the building.
- A newly formed large scale canopy will be constructed at the main entrance clad with a rain screen cladding system. The canopy will both provide shelter at the entrance and visual focal point to the front elevation. The size of the canopy reflects the scale of the building.
- A galvanised metal handrail will be installed to the roof of the sports hall and the teaching spaces. It will be set back from the edge of the roof to provide safe access for maintenance. The use of a roof mounted fall-arrest will also be explored as this will be less visually obtrusive.



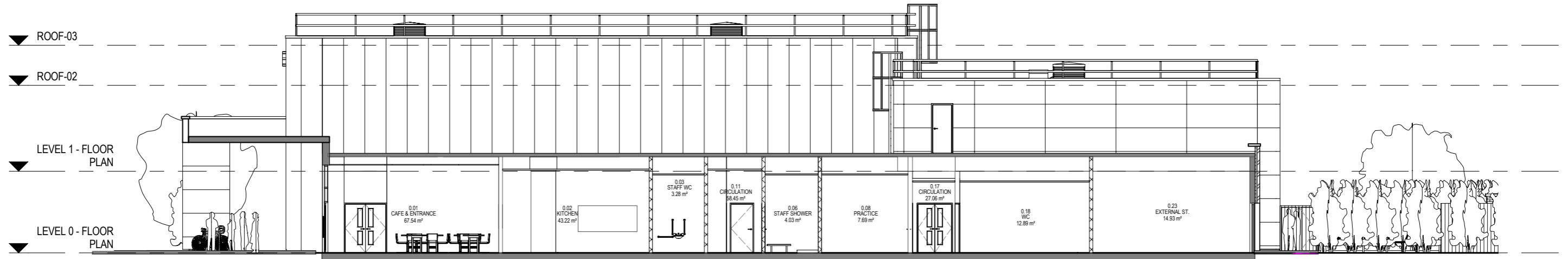
View of the main entrance - North Elevation



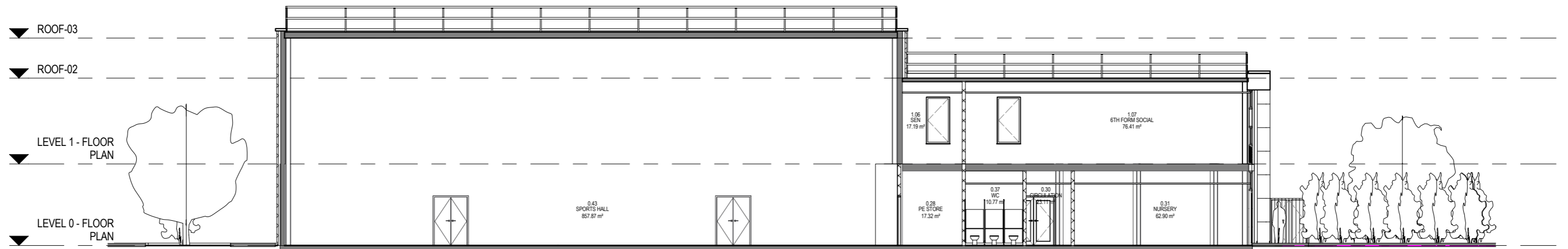
View of the teaching block - South Elevation

05 Massing and Materials

Sections



Section AA



Section BB

06 Landscape

The aim of the landscape design is to provide an external play and learning space to the rear of the building to compliment the proposed internal layouts.

Car Parking and Site Access

The site is access directly from Camp Rd which leads to the existing carpark to the front of the Sports Hall. The parking will be utilise by both the school on a day to day basis and for community use out of house. There will be 26 spaces to the front of the building with 4 disabled bay in close proximity to the main entrance. The main entrance is accessed directly front the carpark where an area of new hard landscaping will be provided to enhance approach to the building. Secure cycle hoops will be provided adjacent to the main entrance under the shelter of a new entrance canopy.

The Nursery and reception classrooms will be accessed on the East side of the building via a footpath leading directly from the carpark.

Site deliveries will be made along the access road that runs down the West side of the building where general deliveries can be made as well as bin collections. There is adequate space allowed for large vehicles to turn. The access road is only intended for vehicles, pedestrians will access the building separately via the main entrance or the side entrance leading to the nursery.

Appearance, Finishes and Landscaping

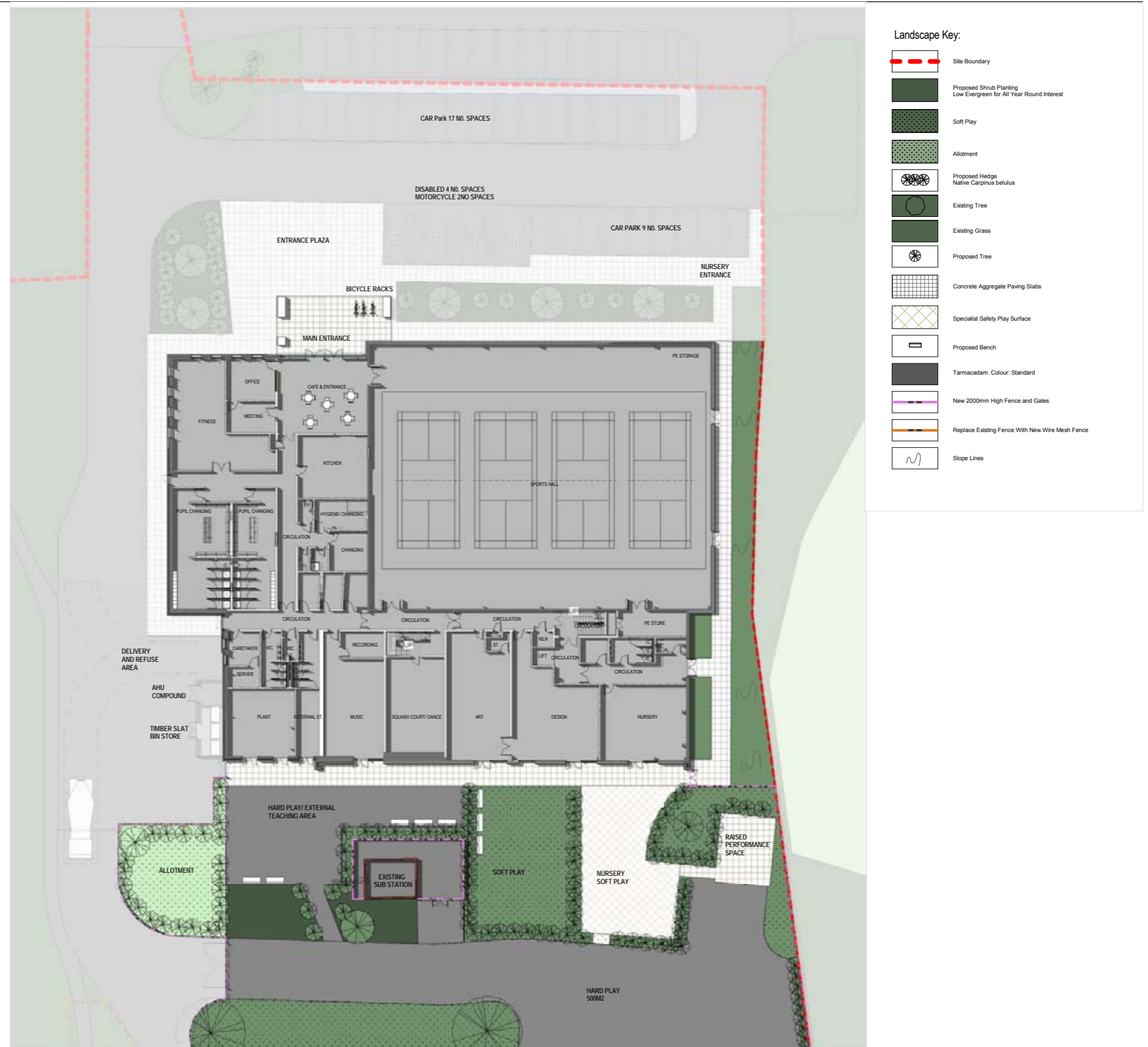
A new soft/hard play areas and outdoor teaching area will be formed to the rear of the building with direct access from the new classrooms. The nursery will benefit from a separate soft play area again with direct access from the nursery. Secure gated access will be provided from the footpath leading from the main carpark. As part of the external teaching area a new allotment will be established to enhance the learning experience.

New paving will be laid to the main entrance and around the perimeter of the building to provide suitable access for maintenance. This new hard landscaping will be supplemented with areas of soft landscaping to enhance the appeal of the main entrance.

Portions of the existing sports fields will be retained to be used by the School and community. The existing 400m cinder running track will be retained which has a football pitch to its centre .

The new play areas will be secured via a new perimeter fence to provided a safe environment for the children to learn and play.

A new perimeter fence will be installed around the entire site including the sports fields - extent TBC.



07 Inclusive Access

The design will meet all current regulations and good practice standards to provide a safe, secure and fully accessible environment to serve pupils, staff and community.

Design Standards

The Building Regulations 2000 part M and BS8300:2009 have been used to ensure that whenever possible the design of the new and refurbished facilities provide inclusive access. There has been no need to vary from the guidance in the design of the school and put forward alternative solutions to meet the standards.

Building Approach

The building has been designed in compliance with BS8300:2009. Path widths are a minimum 1800mm and are of suitable level construction (paving and tarmacadam surfacing). Generally new lighting across the site will be developed in accordance with the requirements of designing for the visually impaired. Access to the building will be flush with no step at the threshold greater than 15mm.

Planting will be designed to complement the landscaping so that path ways are clear. Any street furniture will be included to be non obstructive, nor located to causes issues to those with visual impairment. In addition the design of the hard landscaping will provide tactile surface changes to assist those with visual impairment.

Accessible Car parking

As part of the project, one dedicated disabled car parking spaces will be located close (less than 50m) to the main entrance and have flush access to the main approach footway leading to the main entrance. The car parking space will be arranged to comply with the space standards of BS8300:2009. The parking will be clearly signed as for disabled drivers and passenger use only.

External steps and ramps

The site is generally flat and where possible no falls greater than 1:21 have been used to deal with the level changes.

Entrances and internals

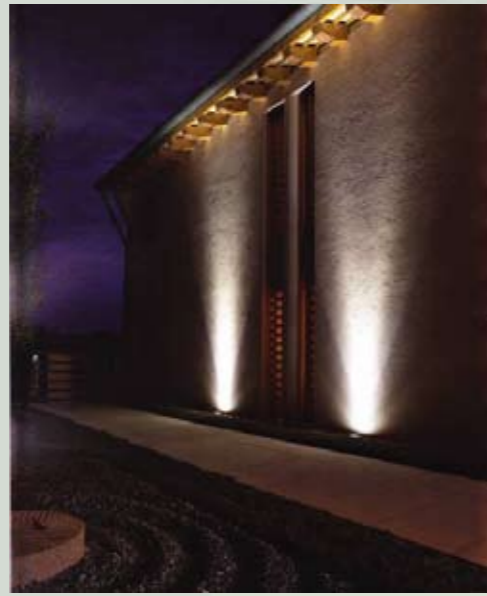
All entrances and external doors will meet the requirements of ADM section 2. The primary entrance doors will comply with ADM 2.14 - 2.17, and where possible will be openable with a force no greater than 20N. The entrance doors will be well lit and will generally contrast in colour to the immediate surrounding construction. Any within a glazed system will also have colour contrast edging. The main entrance has a canopy which gives weather protection to those that must pause whilst entering the building. Thresholds will be flush with an upstand less than 15mm.

All doors will have a minimum clear opening width of 800mm with the exception of the front entrance which will have a minimum clear opening width of 1000mm. Any glazed doors will have suitable manifestation at 1500mm and 800mm above floor level.

Internal doors to all habitable rooms and circulation spaces will have vision panels in accordance with ADM.

Ironmongery will have a brushed finish and will contrast with the background colour/ veneer of the door leaf.

A Lighting Strategy



Uplighting to front facade



Column and/or bollard lighting to car park (30lux)



Building mounted bulkhead lighting



Appendix

B Building Services

The Building Services systems within the Heyford Park Sports hall shall be designed to minimise the need for active energy expenditure through the use of passive design measures.

Key to this approach is the improvements that shall be made to the existing building thermal performance. The proposed measures include the following

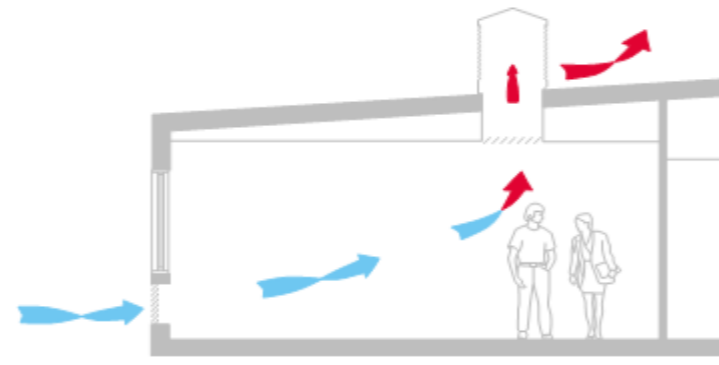
- The existing wood wool roof shall be re-covered and new insulation provided to achieve a U-Value of 0.18W/m².K
- The existing concrete walls shall be over-clad with new insulated render and cladding systems. This shall achieve a U-Value of 0.3W/m².K
- All existing windows (single glazed) shall be replaced with new double glazed units achieving a U-Value of 1.8 W/m².K

The existing primary heating plant shall be replaced with new high efficiency condensing boilers. These shall be approximately 20-25% more efficient than the existing high water content atmospheric boilers. Heating distribution shall be via a new variable volume pumping system. This will allow the pumps to vary their speed depending on the heating demand. This will allow heating to be provided only to those radiators etc which require heat. This will make a considerable energy saving compared to traditional pumping systems, which provide heating at all times, to all heat emitters.

Domestic Hot water shall be generated by high recovery indirect hot water calorifiers. These have a low stored water volume and are highly insulated to minimise the standing losses.

Lighting shall be provided by new high frequency control light fittings. These shall be equipped with occupancy control throughout and daylight dimming in the classroom spaces. Where internal rooms are created, they shall be fitted with "Sun-Pipe" daylight capture tubes. This will allow natural light to be provided to the internal spaces and shall minimise the need for electric lighting.

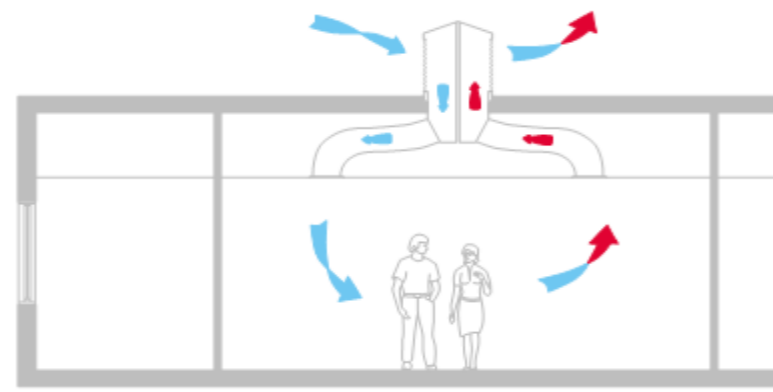
In order to provide a high quality internal environment, ventilation to the classrooms shall generally be provided by natural stack ventilation. Low level automated openings shall generally be provided below the windows. These shall modulate to control both room temperature and Carbon Dioxide emissions.



Stack Ventilation to classrooms

This system shall be entirely passive and shall require no external motive force.

The existing warm air heating and ventilation system to the sports hall shall be replaced by a new natural ventilation system. This shall consist of a series of wind driven displacement ventilation terminals. These use wind acting on the windward side of the terminal to drive ventilation through the leeward side.



Wind Driven Displacement Ventilation

Heating within the sports hall shall be provided by high level low temperature hot water radiant panels. These heat only the occupants and not the surrounding air and as such, will typically allow an air temperature 2°C lower than if a warm air system were used.

Where possible, the new UTC shall use an assisted natural ventilation system. This system will use a combination of low power mechanical ventilation in winter months and stack ventilation in the summer months.

In spaces such as the changing rooms and internal meeting rooms, where natural ventilation is not possible high efficiency heat recovery ventilation units shall be provided. These shall be provided with integral heat exchangers that shall recover up to 70% of the room's heat, which shall minimise the need for the air to be heated. The units shall be provided with integral bypass dampers which shall allow the units to provide free cooling during the spring and autumn months.

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