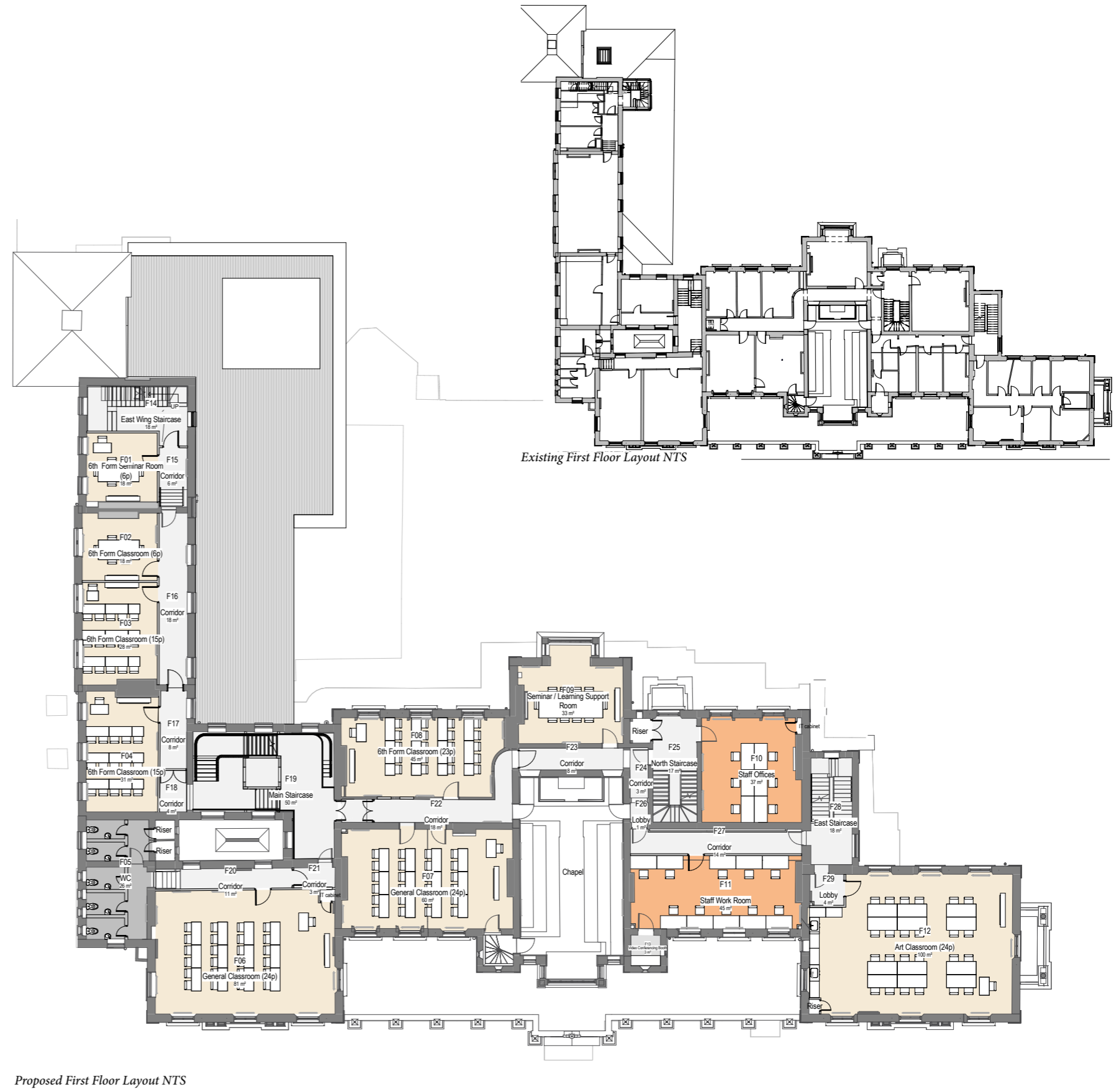


## 07 Kneller Hall

### Floor Plans - First Floor

The principles established on the ground floor continue on the first floor. Here are located classrooms (including one art studio) and staff offices and work space. Points to note are:

- + **The Chapel:** is retained unaltered but with new lighting and services to replace modern fittings that have reached the end of their life. Plaques removed by the MOD will be reinstated in their original location.
- + **WCs:** are located in the south-west corner of the building in the historic location of sanitary facilities



## 07 Kneller Hall

### Floor Plans - Mezzanine Floor Proposed

The mezzanine floor is the additional level in the west wing and sits between the first and second floors. It accommodates sixth form classrooms in the main part of the wing and WCs in the south-west corner including an accessible WC.



-  Learning Space
-  Staff Area
-  Social Space
-  WCs

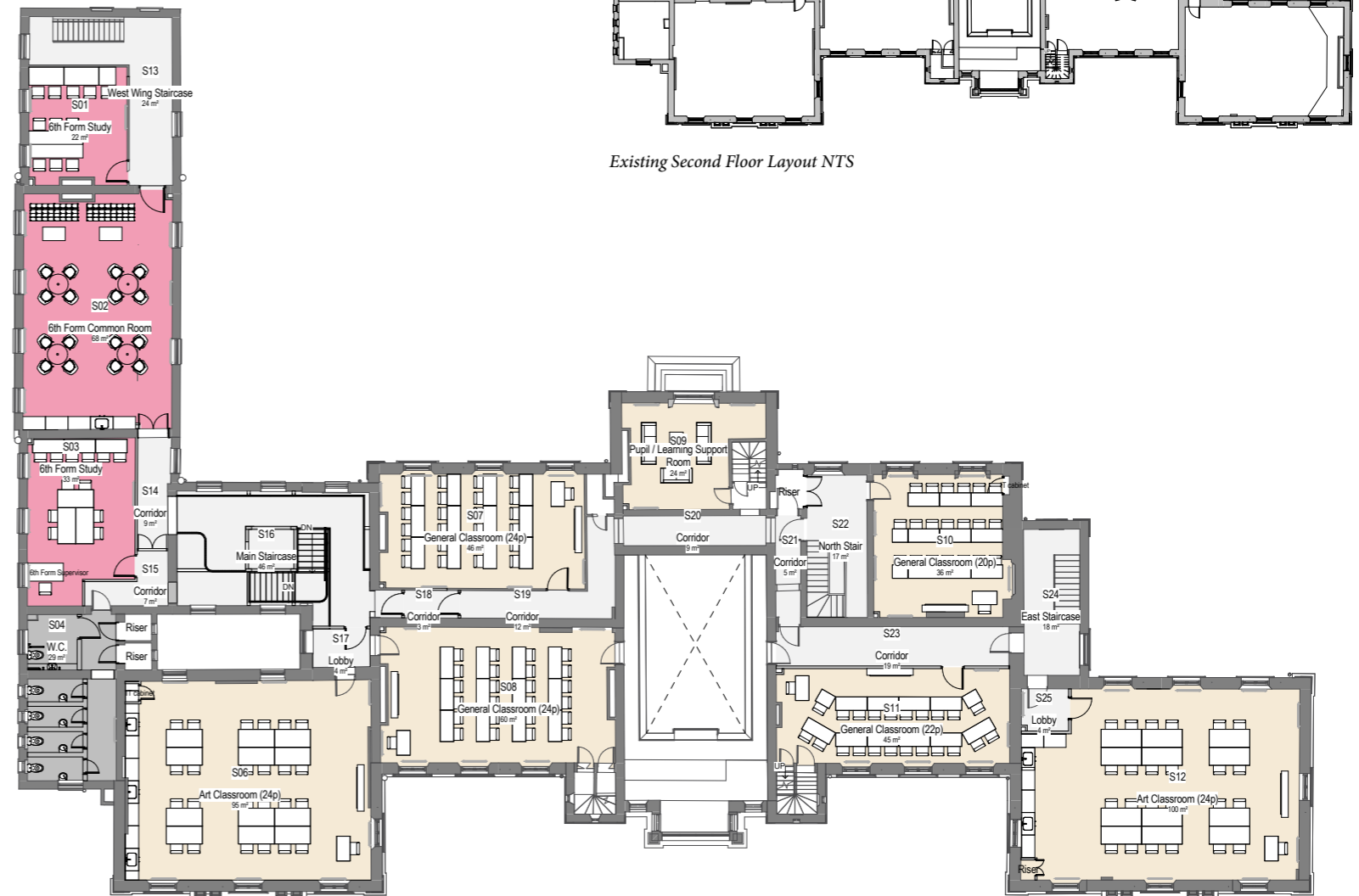
## 07 Kneller Hall

### Floor Plans - Second Floor Proposed

The principles established on the ground floor continue on the second floor. Here are located classrooms (including two art studios) and the sixth form hub.

Points to note are:

- + **The Chapel:** the gallery level of the Chapel is retained unaltered but with new lighting and services to replace modern fittings that have reached the end of their life.
- + **WCs:** are located in the south-west corner of the building in the historic location of sanitary facilities including an accessible WC.
- + **Sixth Form Hub:** this includes two study spaces with a full width common room in the centre of the west wing. Please note that the existing partition walls in the west wing are proposed to be removed. They comprise non-historic fabric, including stud partitions and blockwork. The latter walls are responsible for compromising the structural integrity of the wing. Their removal was consented in 2015 LBC as part of structural stabilisation works. Removal of the walls will improve quality and ensure future use of the wing, and also presents an opportunity to open up the space to better integrate it into the active educational use of the building.



Existing Second Floor Layout NTS

Proposed Second Floor Layout NTS

## 07 Kneller Hall

### Alterations and Repair Strategy

Alteration plans which detail alterations and repairs to the fabric are included in the planning and listed building application and are included in the appendices of this report. The ground floor only is included on the following page.

A strategy has been developed which is based on the approach to retain and repair historic fabric, doors and windows, but to replace non-historic poor quality doors with new.

Our strategy is to:

- + **Windows:** Retain and repair all windows, removing detractive vents from glazed panels and to ensure all windows are eased and adjusted to open easily to provide natural ventilation to the spaces. Detractive secondary glazing will be removed to allow windows to be easily opened.
- + **Historic Doors:** Retain and repair all historic panelled doors. There is a relatively small number of panelled doors extant. Some of these door leaves (noted on the drawings) are on routes out of the building that need to be fire protected. Rather than propose to upgrade the individual door leaves to be fire rated, we propose that these are relocated close by in a new wall (so we can ensure that the new structural opening is the correct size) that is not part of the fire route. A reproduction fire rated panelled door to match the original would then be used in the original opening.
- + **Non-historic Doors:** Remove and replace non-historic poor quality door leaves. The majority of these would be replaced with clearly contemporary designs that include clear glass vision panels to aid pupil safeguarding. The doors are primarily to classrooms. Doors that open onto the Hall G14 would be of replica historic

panelled design using the historic doors as a template. This will give the Hall design cohesion.

- + **Blocked up Doors:** A number of door openings are removed in the plan. These are doors with non-historic architraves and door leaves and the existing casings and doors will be removed from site.
- + **Cornicing, skirting, panelling:** All extant panelling, cornicing and skirting will be retained and redecorated. Where any cornicing is missing locally (due to later partitions or services having cut through) this will be repaired with profile to match the existing. Heights and profiles of skirting differ across the building and will be matched if in-fills are needed or if one wall within the room has skirting missing. Skirting to new partitions or to rooms without any existing skirting will be nominally 150mm high or to match existing height with a contemporary pen round profile.
- + **Services** drawings are included as part of the planning and listed building application. All services will be energy efficient and designed as part of the site wide energy strategy. Routes for pipework within Kneller are complex, as in any historic building. This is exacerbated in Kneller due to shallow floor voids and structural limitations on notching joists which were revealed in the consented opening up works carried out in Summer 2022. Primary service routes will run high level in the central corridors with a new suspended plasterboard ceiling to conceal them. There are no cornices in these spaces and the very high ceiling levels in the main wing will allow this marginal lowering of ceiling height without impact on the quality of the space. Routes from the corridor into rooms are proposed on a room by room basis, and have been designed to achieve

the lowest potential impact on decorative fabric, with proposed changes designed to be reversible, on the following premise:

- Pipework and cabling to run in floor void where possible
- Pipework and cabling to run in a boxed out skirting along room walls where necessary. Where any historic skirting exists the boxed out skirting will sit in front of the existing and be lower in height. This will allow the top of the historic skirting to be visible. Where no existing skirting exists a 150mm high boxed skirting is proposed.
- Where pipework cannot pass either through or above the floor it will be run at high level of the room below and be concealed by a shallow suspended ceiling. This is only proposed where there is no decorative cornicing.
- Where pipework needs to drop from ceiling level to floor level it will run within new partitions where these occur. If there is no new partition the pipework will be surface mounted on existing walls and boxed in and not chased into historic fabric.
- Radiators: The majority of radiators will be new in a simple contemporary flat panel style in a grey colour. Locations are shown on the relevant drawings in the application. For a number of rooms we have proposed new traditional style column radiators where the greater level of decorative detail makes this more appropriate. This includes the main spaces on the ground floor and the more highly decorative rooms on the first floor. These are shown on the MEP drawings.

- + **Fire Strategy:** a number of protected lobbies and corridors are needed to fire escape routes to protect the routes in the event of a fire. These have been incorporated to minimise impact on the historic layout and the flow of pupils and staff around the building. These are shown as new partitions on the alterations drawings.



## 07 Kneller Hall

### Alterations and Repair Strategy

A set of alterations plans and a room by room schedule is included within the application to set out the alterations and repairs for Kneller Hall, and the Guards House and former Band Practice Hall.

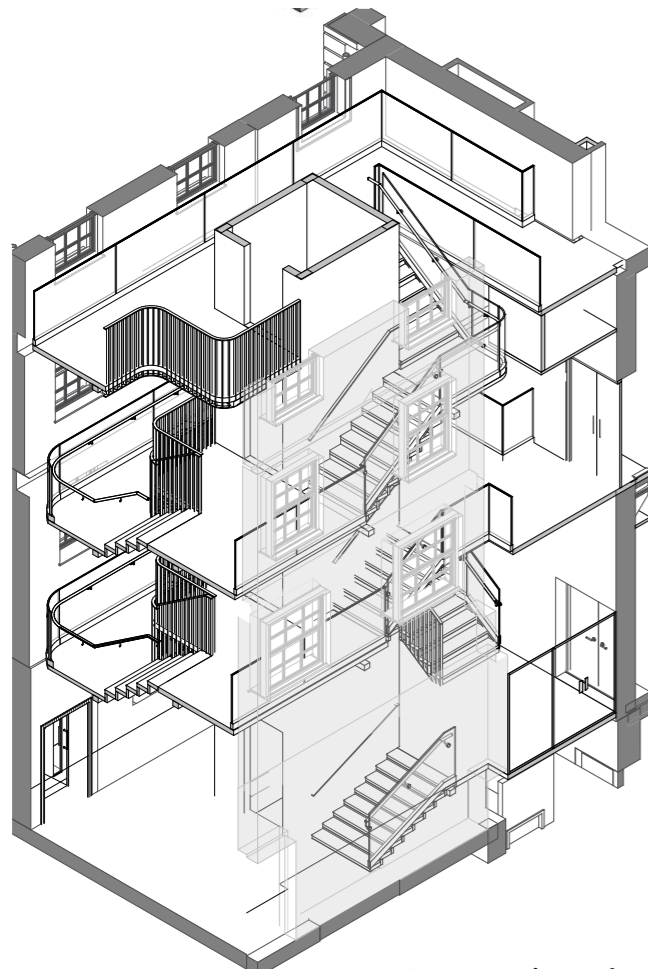


## 07 Kneller Hall New Staircase and Lift

As discussed in the introduction to this section a new staircase is proposed, located at the junction between the two wings of Kneller Hall to connect the different levels on each side.

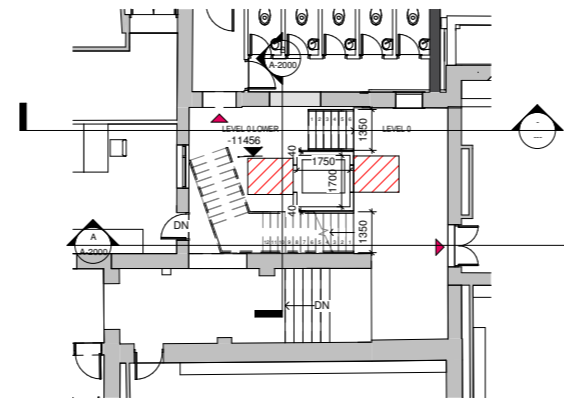
The new lift is a 'through lift' which connects all the different levels making all floors of the building accessible. The new stair wraps around the new lift and incorporates new landing areas. To be able to construct landings at the correct level to connect the stairs and lift entrances the existing floors will be removed within the existing stair core.

The stair and lift are designed to sit within the larger void of the space and to be articulated from the existing building - so that they can be clearly read as a new insertion. A small gap between stair balustrade and wall will be maintained to provide this articulation. The stair will be of contemporary design with glazed balustrades to the outer run of balustrading and vertical metal bars to the inner balustrade. The lift enclosure will be of plaster finish allowing this to be decorated.

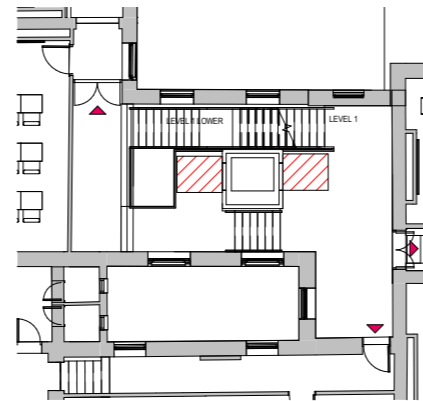


Axonometric of proposed stair/lift arrangement

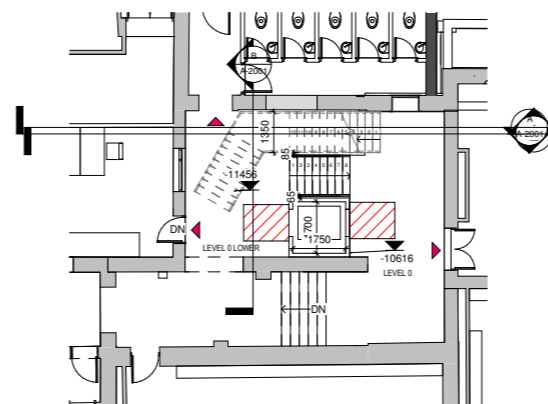
Different layouts were tested for the stair to ensure all levels were connected and the lift crucially has connection to both sides. Pink dashed lines on the adjacent demolition section highlight where floor levels do not connect across.



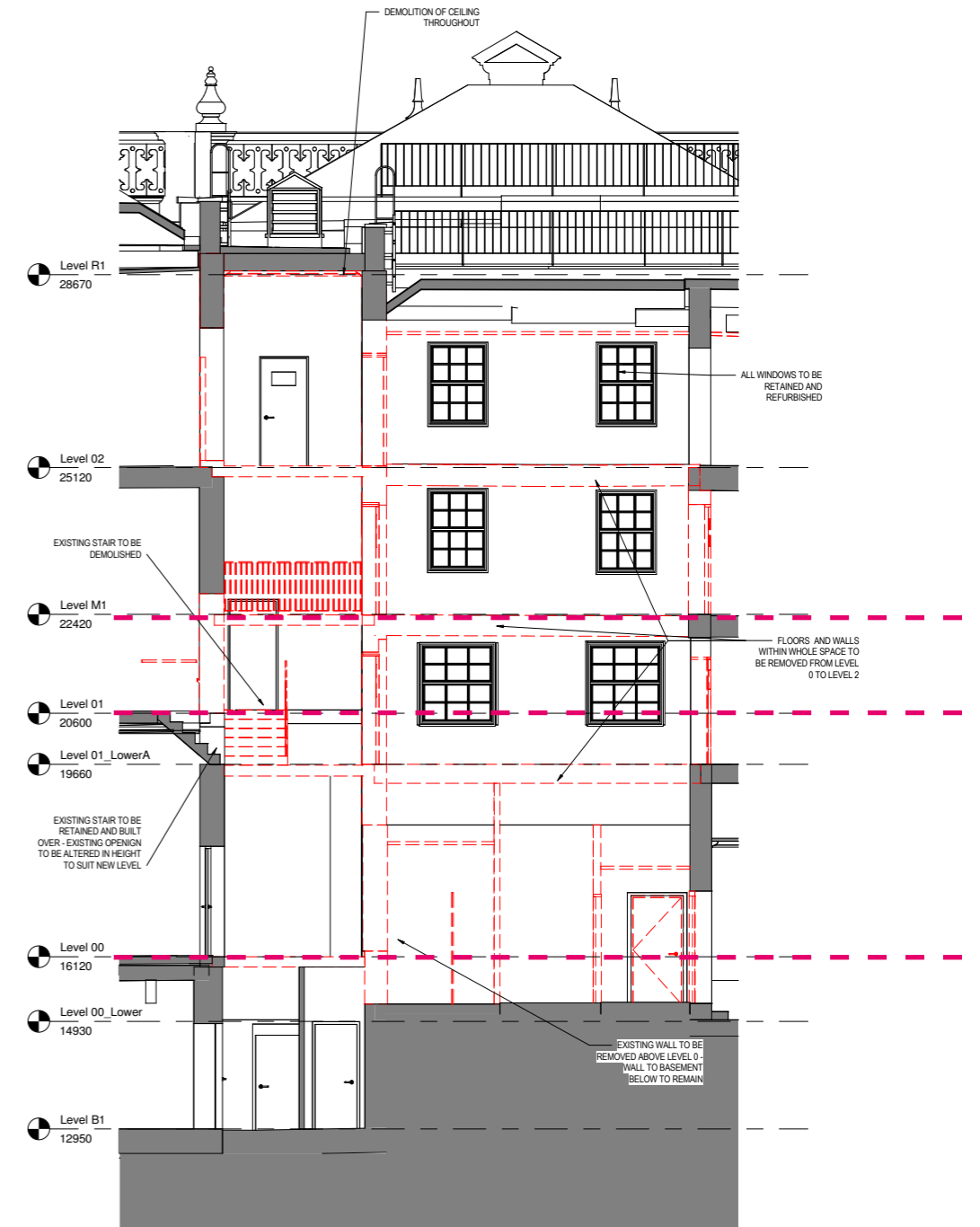
Development of layout showing an option with a cranked stair, not pursued



Development of layout showing an option with a larger stair enclosure, not pursued



Development of layout showing an option with the stair to the side, not pursued



2 SECTION B STAIR - DEMOLITION

Existing Cross Section through Stair Core showing proposed Demolition looking south, NTS

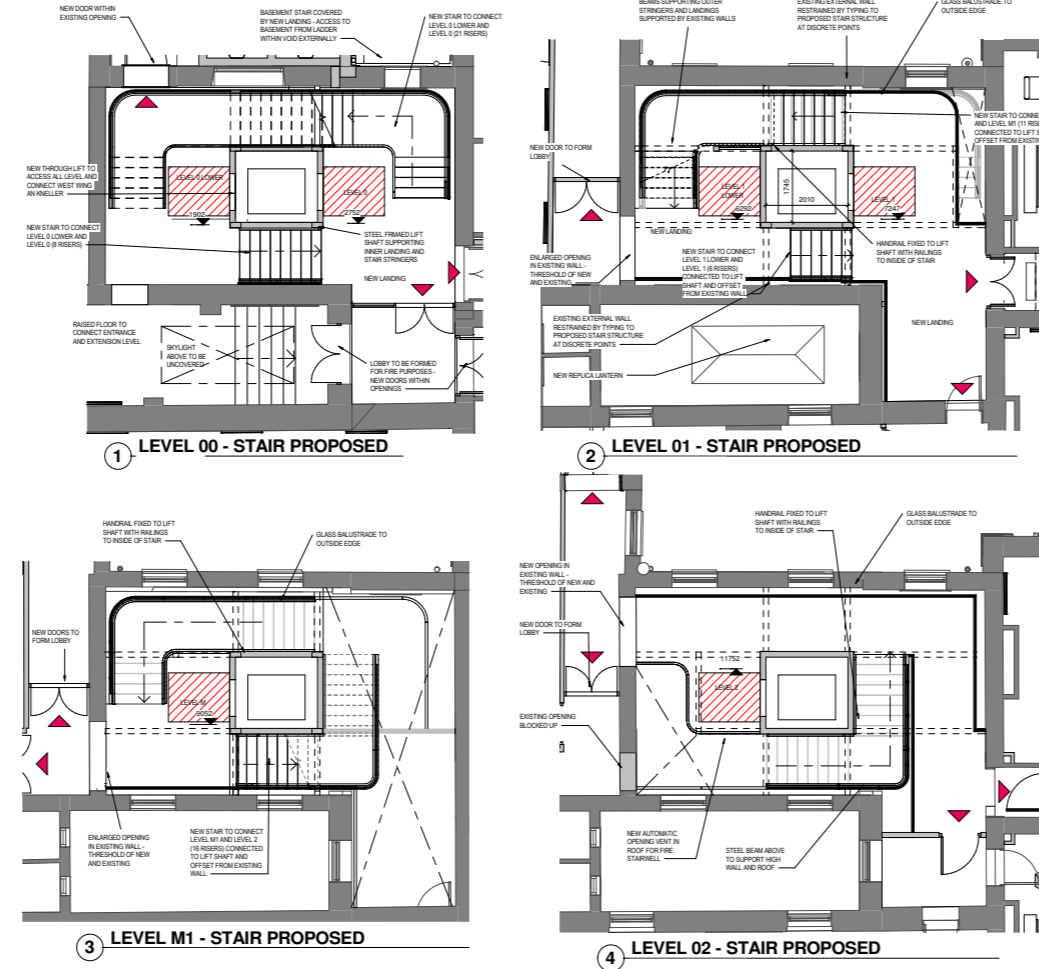
## 07 Kneller Hall New Staircase and Lift

### Structural Approach

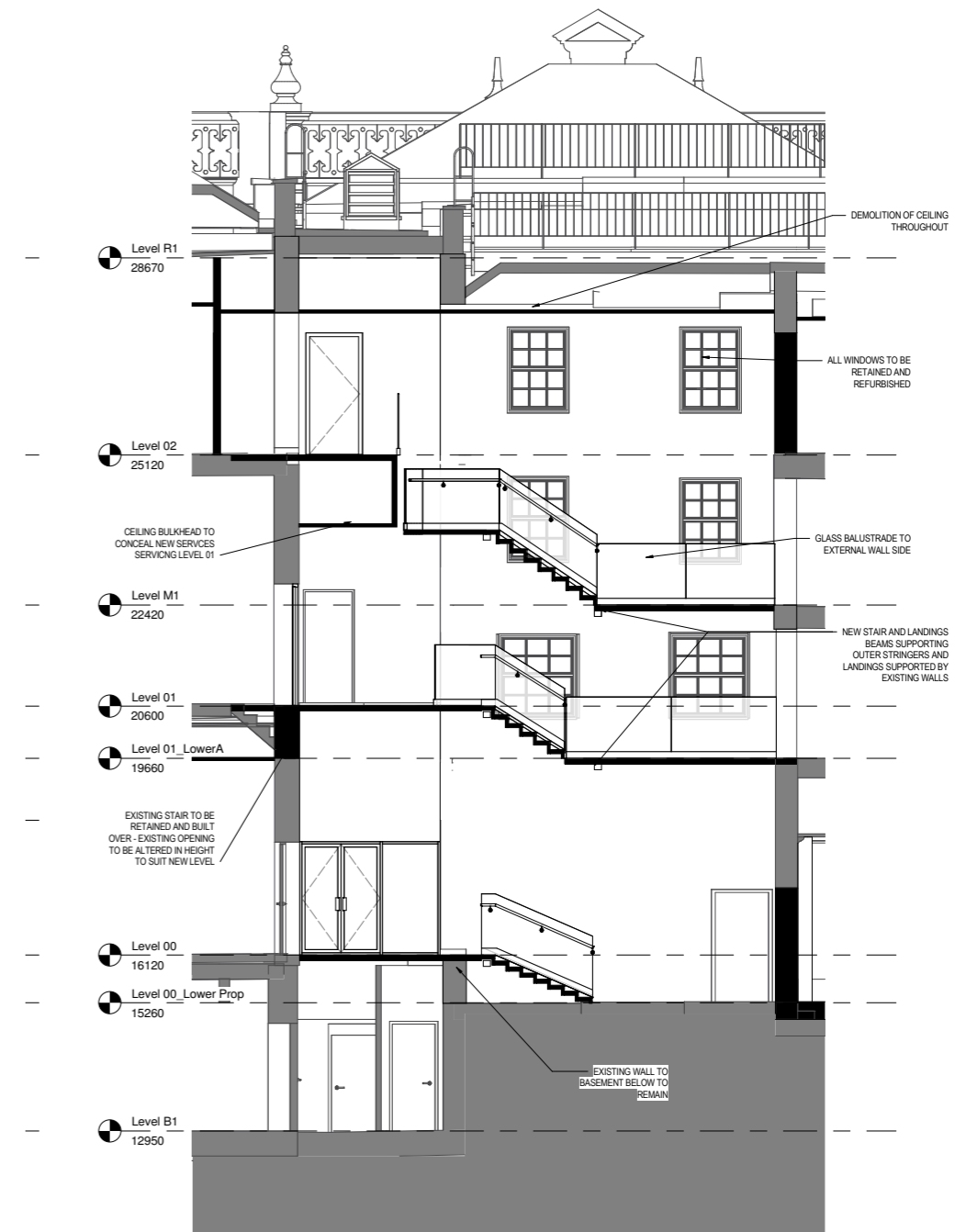
It is proposed to construct the new lift and stair core within the footprint of an existing stair core and the adjacent rooms (occupied by a toilet on the ground floor). The existing stair, landing and floor structures, as well as the load bearing dividing wall will be removed in order to accommodate the proposed structure. The loadbearing wall is to be removed above the ground floor but will remain in place at high level to the underside of the roof structure.

It is proposed to construct the new lift shaft and stair/landing structures as a steel frame with folded plate treads/floor panels with concrete infill and lightweight stud construction to the shaft wall. The flight stringers and landings will be supported by steel beams spanning between columns to the corners of the lift shaft and the existing load bearing masonry walls bounding the area. The lift structure will be supported by a new concrete pad foundation with bearing depth taken down to basement level in order to avoid surcharging the basement wall. The portion of the existing wall remaining in place at high level will be supported by a new steel beam designed to support dead and live loads from the masonry above and roof structures supported by the wall.

The existing load bearing masonry walls are likely to be restrained by connection to the existing floor and landing structures, as well as by buttressing from the internal loadbearing walls. In the final condition, the walls will be restrained by tying to the new structure (via the beams supporting the flights and landings) in combination with diaphragm action of the new and existing floor structures. Prior to carrying out the work, the sequencing and methodology of demolition and construction will need to be considered by the contractor and temporary works engineer in order to ensure that stability will be maintained at all times. It is anticipated that temporary stability systems may be required e.g. braced scaffolding systems and temporary ties.



Proposed floor plans - NTS



2 SECTION B STAIR - PROPOSED

Proposed Cross Section through Stair Core NTS

## 07 Kneller Hall Library Extension

The layout and footprint are discussed in the introduction and ground floor part of this section of the DAS.

The extension is single storey and wraps around the north-east corner of the west wing, connecting with an early 20thC single storey extension with a four way 'top hat' pitched roof.

The new extension is designed to respond to both the footprint of Kneller Hall and to its elevations and is intended to remain subservient to the hall in relation to its proposed scale and materiality. The 'projecting' element of the extension (where the library is housed) does not extend in front of the main significant north elevation of Kneller, and the point at which it projects is on the centre line of the rear terrace. It is also in line with a first floor window on the east elevation of the west wing. The projecting element incorporates French doors for access to the terrace for break out space in fine weather. A roof lantern sits on the corner of the extension, reflecting both the proportions of the 'top hat' roof of the early 20thC extension, and the lantern over the ground floor corridor in the main part of the building. The lantern is not only an architectural reference point, but also provides natural daylight and for passive stack ventilation of the space with opening clerestory windows.

The main part of the extension will have a green roof, contributing to the new green roofs across the site and forming part of the landscape when viewed from the upper windows. The projecting lantern will have a grey metal standing seam roof with an aesthetic to mimic traditional lead and zinc coloured roofing materials.

Early iteration of extension



Early iteration of footprint of extension

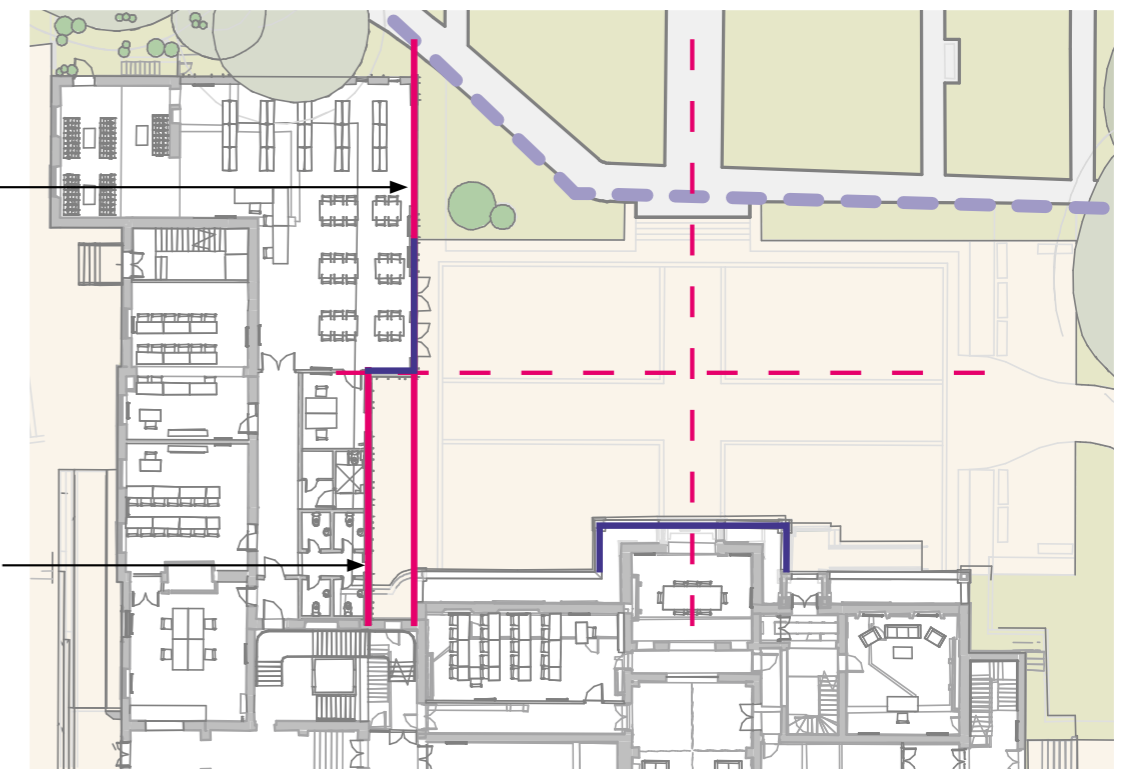
The early versions of extension did not provide clear separation to the principle part of the north elevation. The simple linear elevation missed the opportunity to provide a second elevation to the north terrace and enhance this space. By varying the width of the extension it forms two parts - a narrower connection and wider pavilion style building which is the home of the library



Proposed footprint of extension

Bay of library aligns with principle part of north elevation and addresses formality of north terrace in the same way that the north bay of the existing building does.

Narrow part of extension is on line of earlier extension and historic yard wall line.

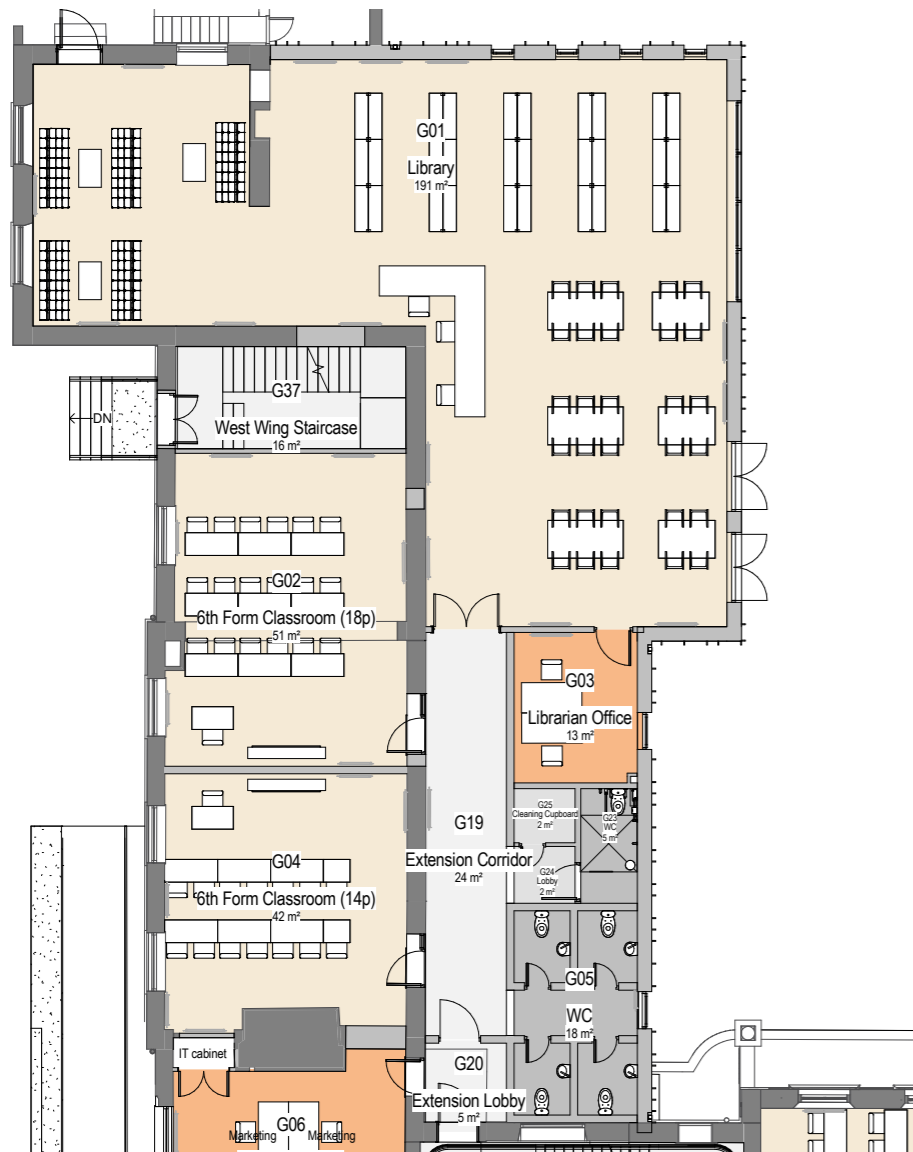




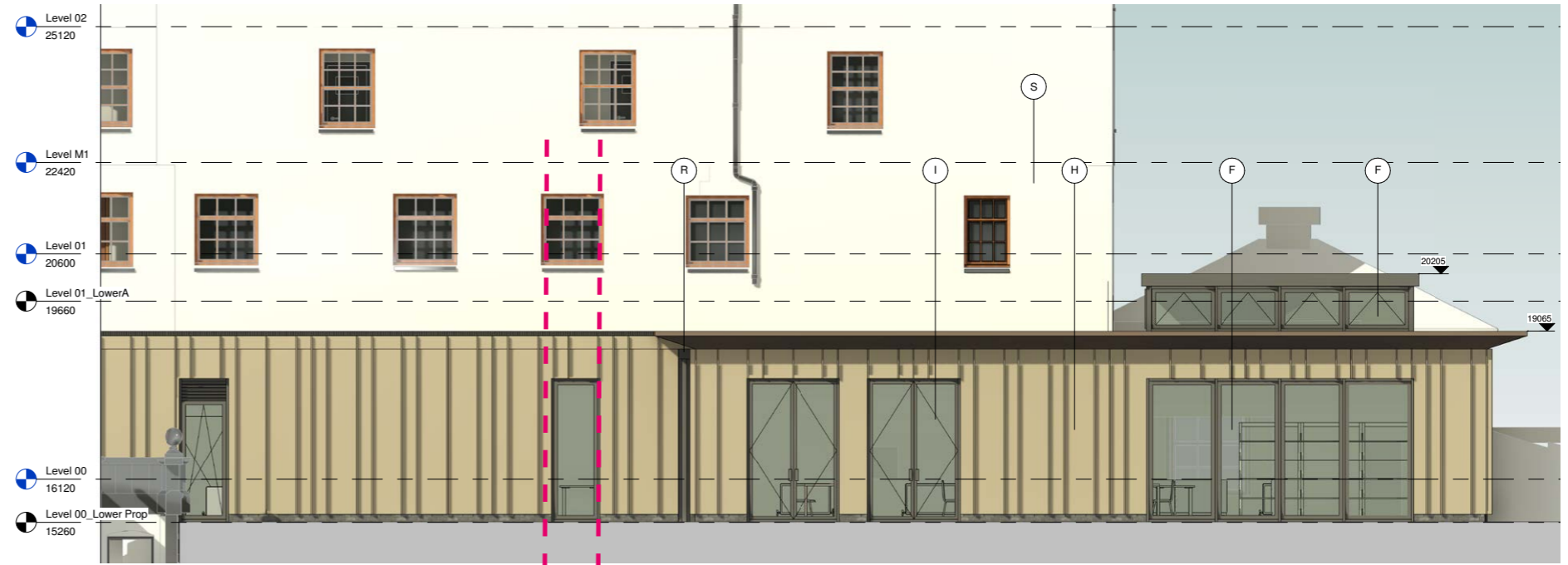
## 07 Kneller Hall Library Extension

The design of the extension also reflects the design for the other new elements on the site. The extension to the School Hall (the former Band Practice Hall) and the new sports pavilion are all single storey elements. They all have a clerestory element over the main windows and doors with a projecting roof that seems to float over the lower part. The roof has a projecting eaves with a tapering profile. The narrow connecting part of the extension does not have the projecting eaves, ensuring this part of the extension is subservient both to Kneller Hall and to the main pavilion element of the extension.

The cladding material is a metal standing seam in a light bronze colour that will harmonize with the stone on the main building and the yellow/cream brick on the surrounding buildings.



Floor Plan NTS



East Elevation NTS



North Elevation NTS



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## 08 - Teaching Building

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## 08 Teaching Building

### Introduction

**The teaching building is proposed as the main teaching block for the school housing the majority of the general use classrooms as well as 3 specialist teaching departments; DT, ICT and Science.**

The ground floor accommodates the school dining hall and associated kitchens making this building a focal point on the campus both in class time and during breaks.

The building defines the formal courtyard on two sides, with the dining hall having triple aspect out over the campus. The two wings of the building are organised to accommodate general use in the south wing and speciality classrooms with a central hub space in the north wing.

### Accessibility

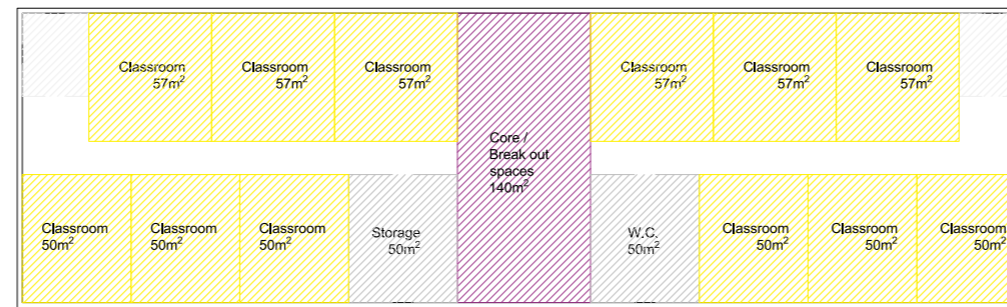
The building has level access at all entrances; a main core consisting of a triple height stair space allows for clear way-finding through the building with a lift accessing all levels accessed of this space. Each wing has a fire-fighting core which allows for escape to the outside in the event of a fire. However these will be used for day-to-day circulation around the school as well.



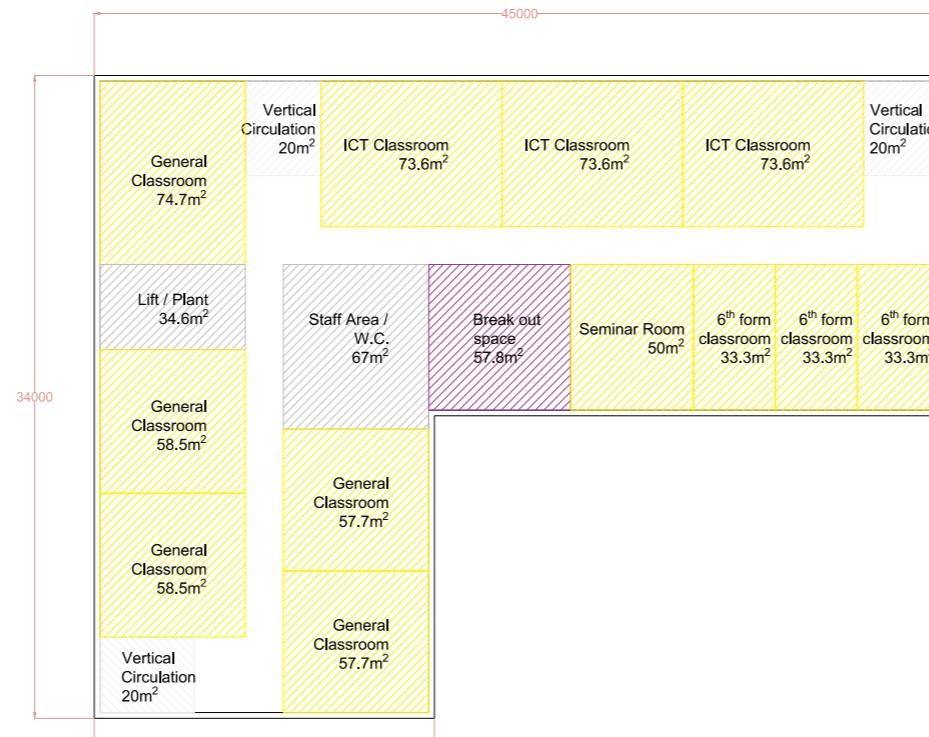


## 08 Teaching Building Concept and Development

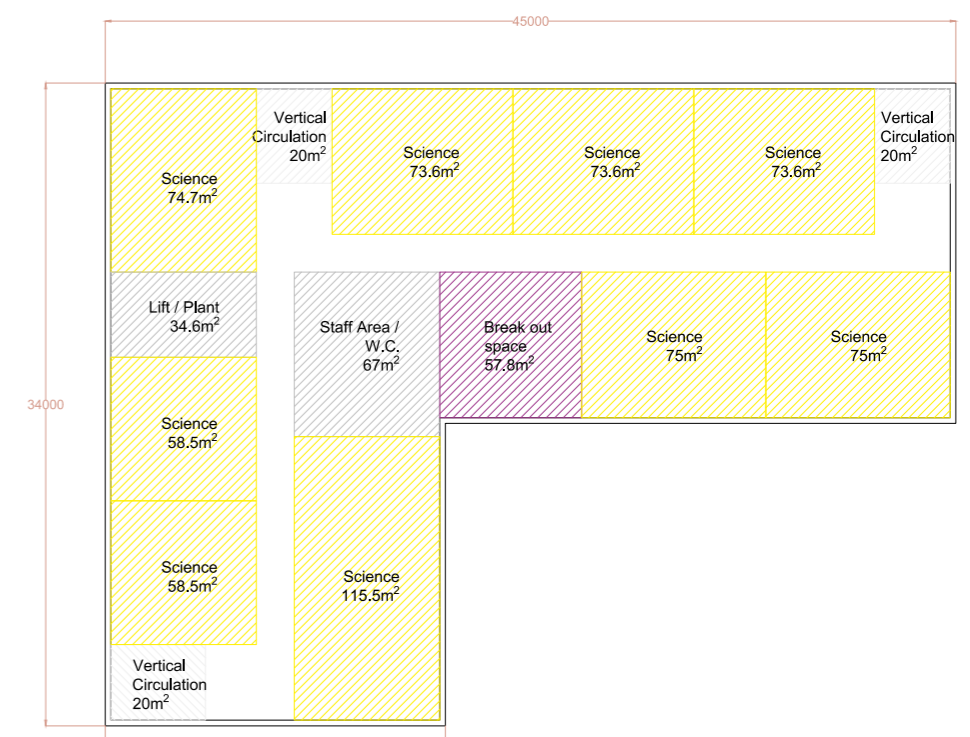
The teaching block has undergone several design iterations over the course of the project design. Initially designed as a linear infill block between the existing accommodation blocks, the design developed to become a purpose built block. An 'L' shape evolved from the design process allowing the block to define a courtyard space alongside other buildings.



Initial Spatial diagram of Teaching building



'L' shape option Ground floor layout



'L' shape option Upper floor layout

## 08 Teaching Building Concept and Development

As the whole site design developed it became apparent that the proposed dining hall in the extension to the main Kneller hall wouldn't be able to accommodate the number of seats needed by the school, and servicing to the kitchen would be problematic with routing going through the centre of the site. The dining hall and kitchen were therefore proposed in the ground floor of the teaching building.



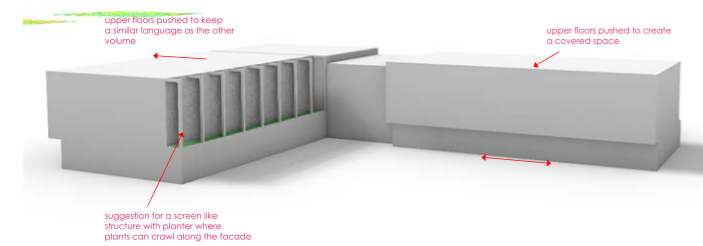
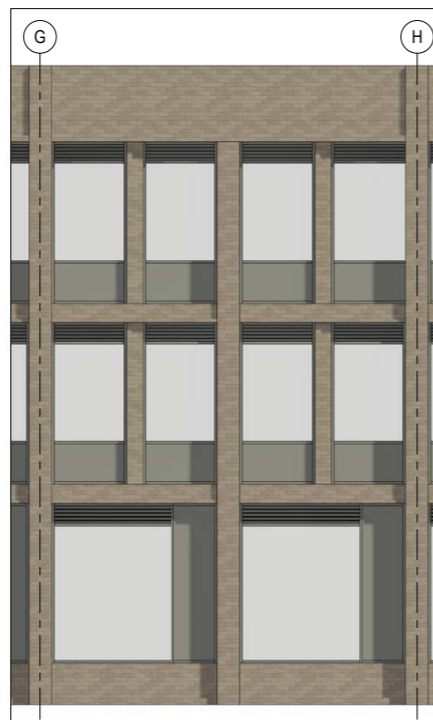
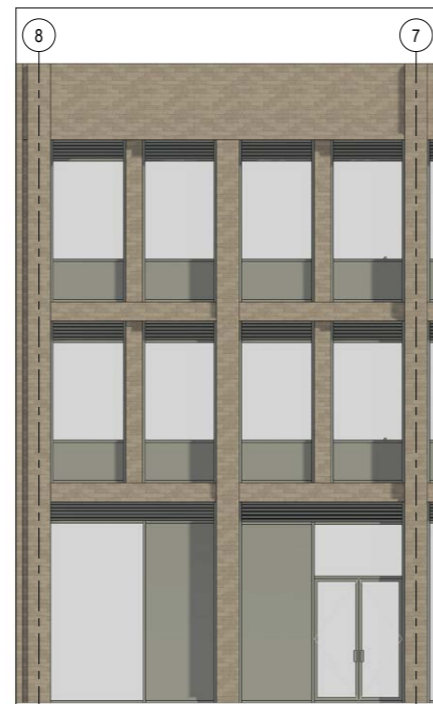


## 08 Teaching Building Concept and Development

The design of the teaching building elevations developed from simple massing models looking at how to modulate the form. Various elevational treatments were produced looking at different vertical and horizontal rhythms that responded to the internal layout and the use of the classroom spaces. Bay studies as shared in pre-application meeting ~03 are shown adjacent.

From applying the bay treatment across the building, design development then progressed to refining the bays to respond to the spaces behind and to provide variation and interest. The elevations presented to the DRP panel are shown to the right and were an early iteration that we expected to develop further.

The DRP 02 panel response felt the massing was too monotonous and needed more subtlety and refinement. This has been addressed by adding variety in bay width, a clear verticality to respond to Kneller and a richness in detailing and materiality.



Massing model of teaching block showing options to articulate form

Bay studies from pre-app 03



Elevations at DRP 02 stage

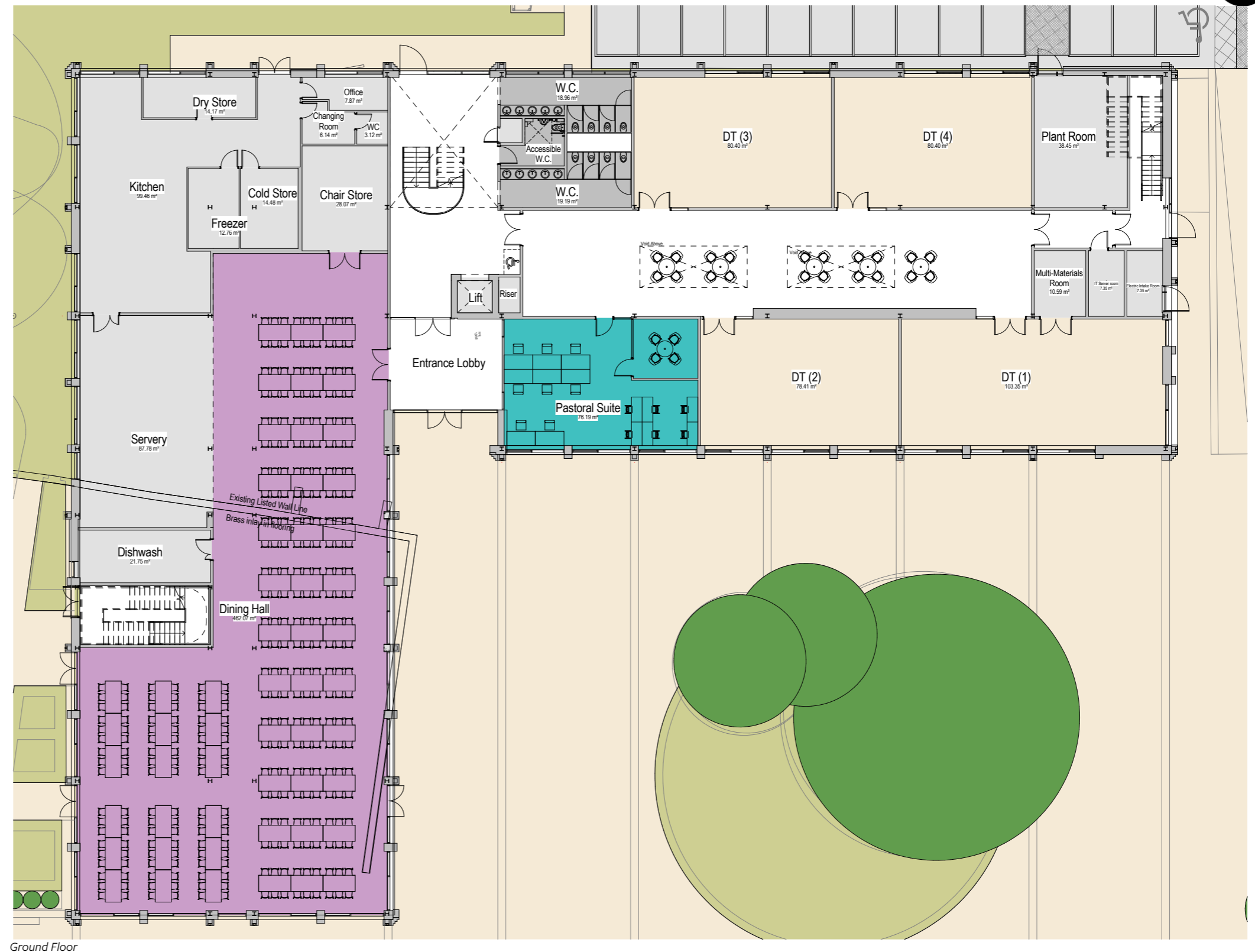


## 08 Teaching Building Floor Plans

The building is formed in an 'L' shape. The inner knuckle of the 'L' is the location of the main entrance, staircase and lift which allows for clear circulation routes around the building. The dining hall is sited at the key corner of the building (which is seen from many routes through the campus), the triple aspect allows views out over the landscaped grounds and doors allow for spill-out into the courtyard and south courtyard space (the Mellon yard) in the warmer months.

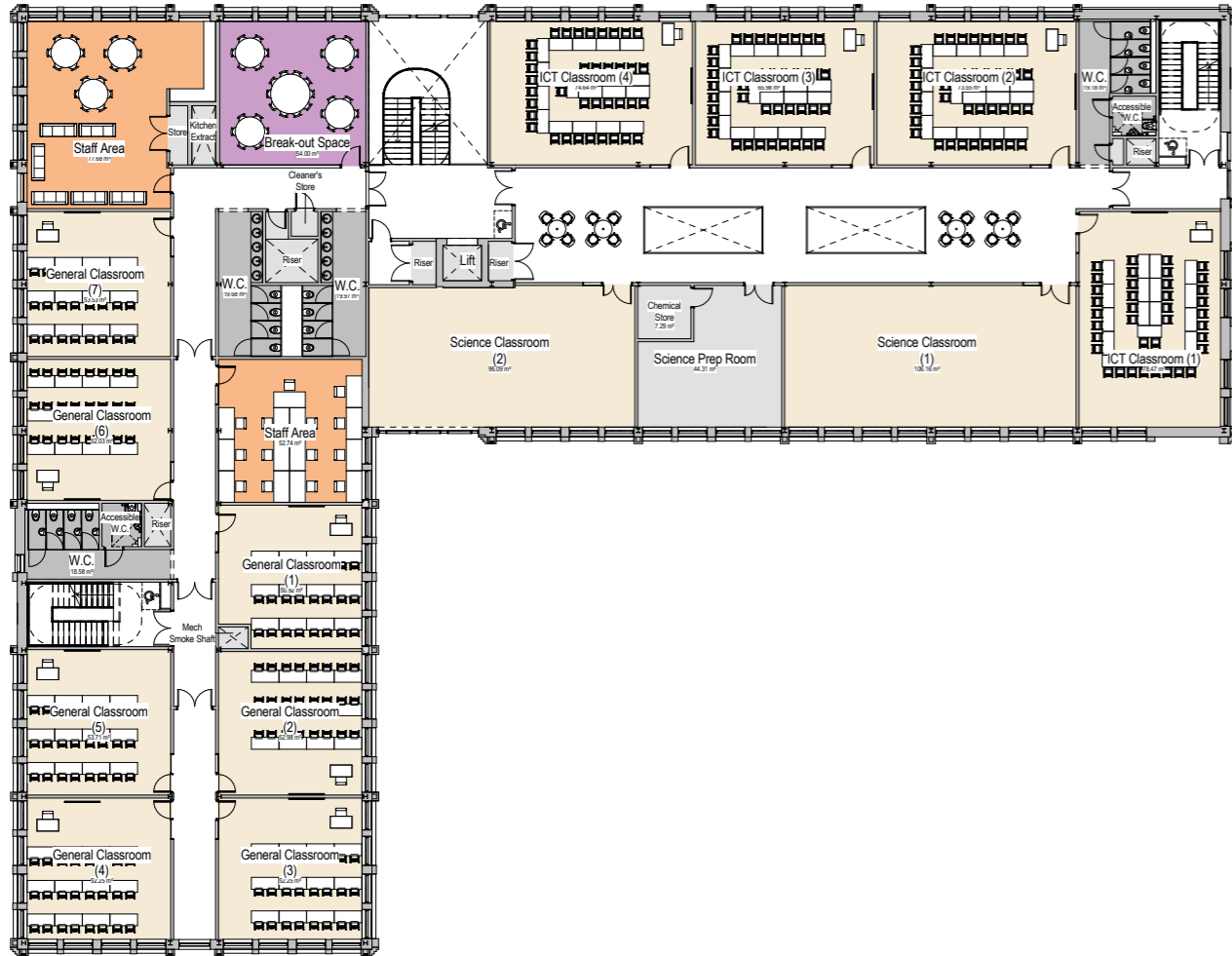
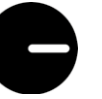
The other wing accommodates the DT department, pastoral suite and the block related plant room. The generous corridor The plant room like the kitchens are designed to be served through the side of the building reducing the amount of vehicular movements through the centre of the site.

- Learning Space
- Staff Area
- Pastoral Space
- Social Space
- WCs



# 08 Teaching Building

## Floor Plans



First Floor



Second Floor

- Learning Space
- Staff Area
- Pastoral Space
- Social Space
- WCs