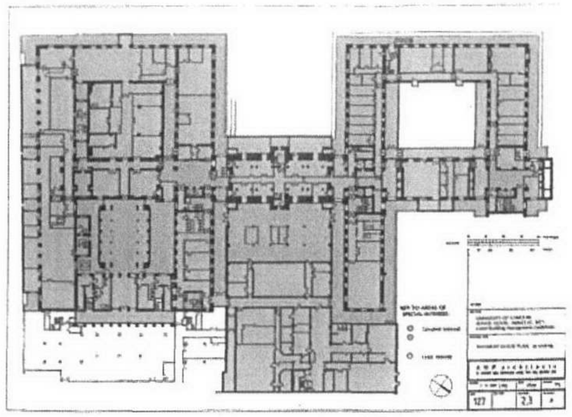
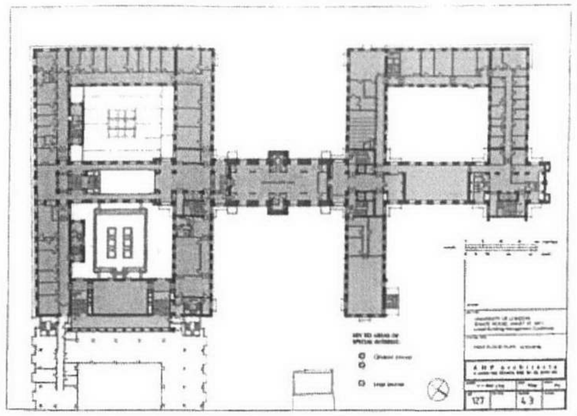
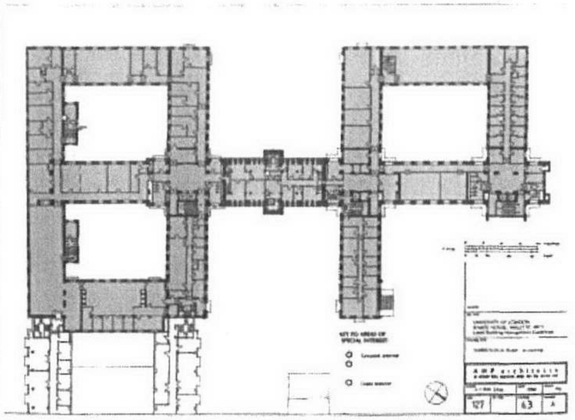


Basement



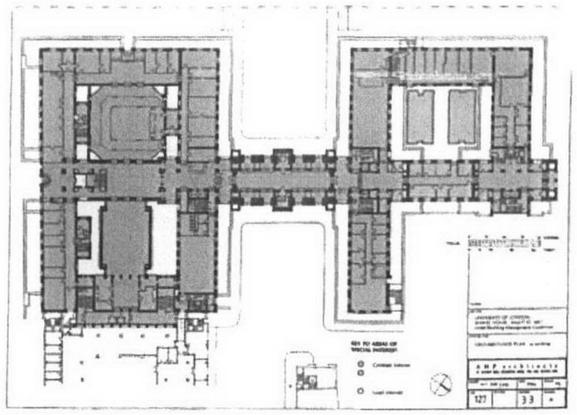
First Floor



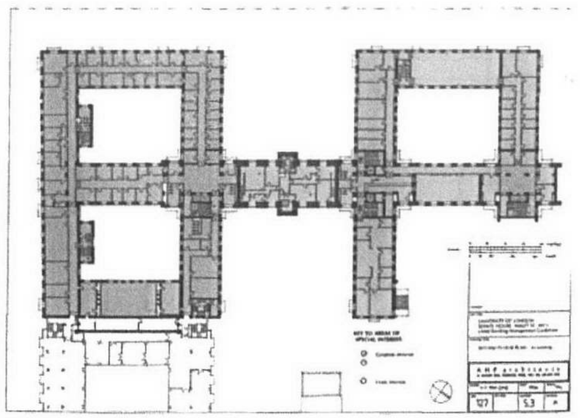
Third Floor

KEY TO AREAS OF SPECIAL INTEREST:

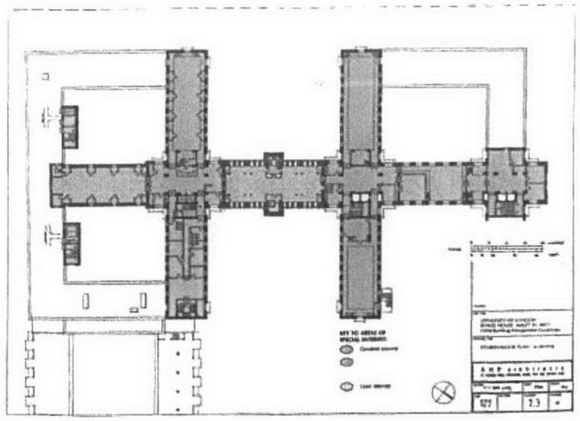
- Greatest interest
- Least interest



Ground Floor



Second Floor



Fourth Floor

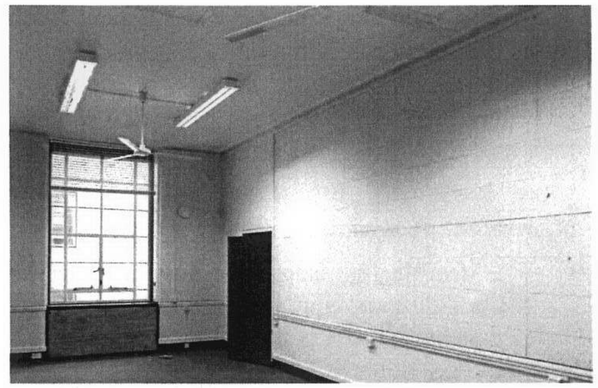
Building Fabric

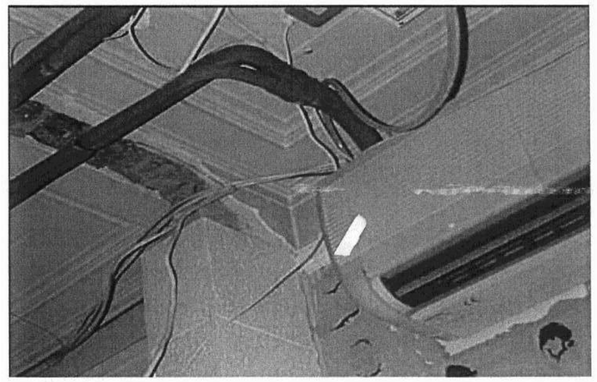
5.1 The main shell of the building remains in good condition. The principal rooms have, over the years, been conserved in a responsible manner and have retained their undoubted sense of importance as well as their attractive appearance.

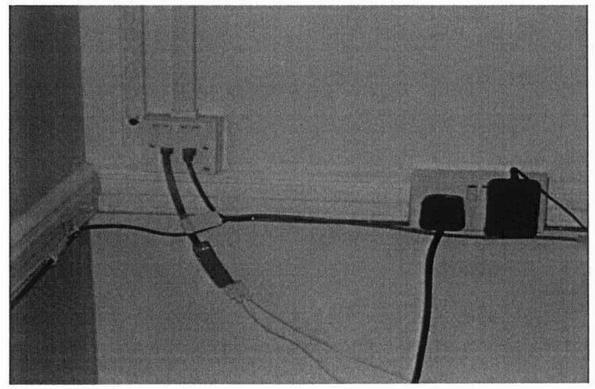
5.2 The University recognises its responsibility to respect the architectural and historical integrity of Senate House. It also appreciates the value of restoring the building from the perspective of retaining existing and attracting new staff. Many floors of medium or low significance now require substantial improvement. The proposed refurbishment of the building affords an opportunity to remove later inappropriate accretions and ensure a more sympathetic approach is followed. This can only be achieved if the Enabling Works are undertaken in advance.

Continued Use

5.3 An objective of the Enabling Works is to ensure that Senate House reinforces its academic role and focus for the University. To do this it must provide its staff and students with state-of-the-art communications facilities. The Enabling Works proposals will facilitate the continued use of the building.







6. SCHEME OBJECTIVES AND PRINCIPLES

6.1 The general objective behind the Enabling Works proposals is to provide the physical foundation for the renewal of the communications and power systems that support the work of the University's staff and students.

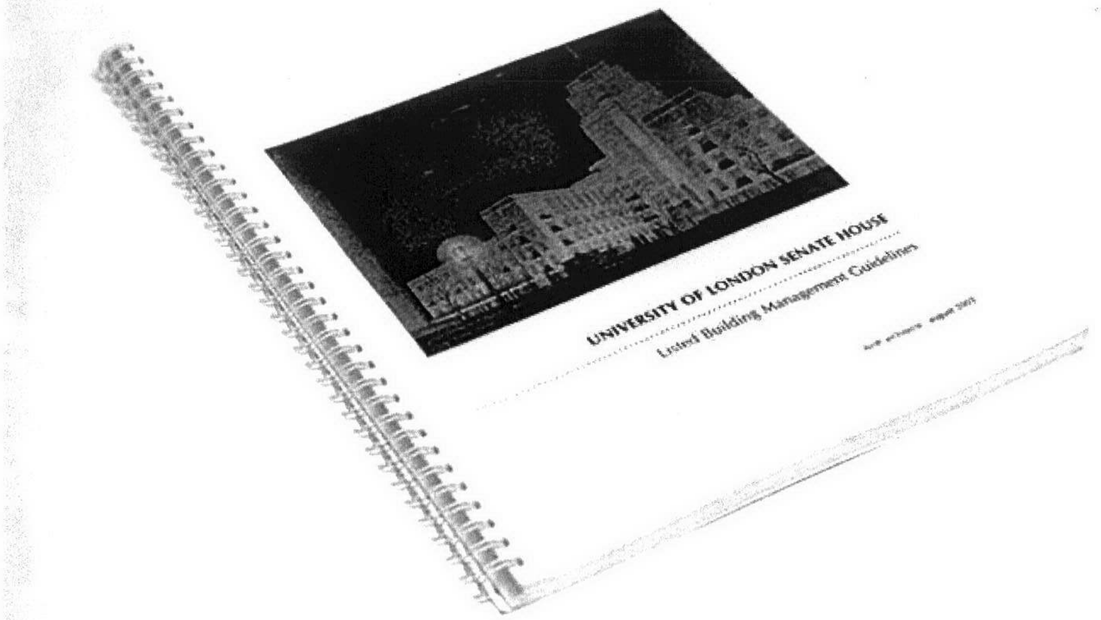
6.2 More specifically the project is intended to achieve the following:

- The insertion of risers a various points within the building to handle the vertical distribution of communications and power; and
- The creation of and alterations to existing basement trenches that facilitate horizontal distribution of the main power and communications network.

6.3 The proposals are derived from an understanding of Holden's original design for Senate House. The Listed Building Management Guidelines identify areas of importance and these have been significant in terms of the amount of and approach to alteration in certain spaces. In areas of greatest importance very little work is proposed.

6.4 The LBMG outline that the following principles must inform any design decisions:

- Any alterations should preserve the special architectural and historic interest of the building;
- The details and materials used should be sympathetic to, but not necessarily copy, the original;
- In all areas, it should be possible to distinguish new work from the original;
- Original features should be retained in-situ, where possible, and new interventions should be reversible, so that the original features can be reinstated at a later date;
- Where the removal of original features is approved, this should be done carefully, with the minimum disturbance to adjoining finishes;
- Where practical where original fabric is removed and is capable of reuse I future, this will be stored on site.



7.1 The project proposes that the following works are undertaken:

Basement Trenches and Risers

7.2 The incoming supply to the building is provided via two transformers located within the basement of Senate House. These transformers serve the main switchgear for the building which is located within a separate Low Voltage Switch Room adjacent to the transformers. The transformers and switchgear have been replaced during the Phase 1 Works. The power supply cables from the switchgear are run horizontally to various parts of the building using a sub basement level tunnel and trenches set within the floor structure of the basement. The trenches link to vertical risers at various points throughout the building to serve each of the floors above. The power distributes horizontally from the risers to final circuit outlets using the void between the teak flooring and the concrete floor slab structure. Power for lighting on the floor below the slab is also run through this void. This principle of power source and distribution is part of Holden's original design for Senate House.

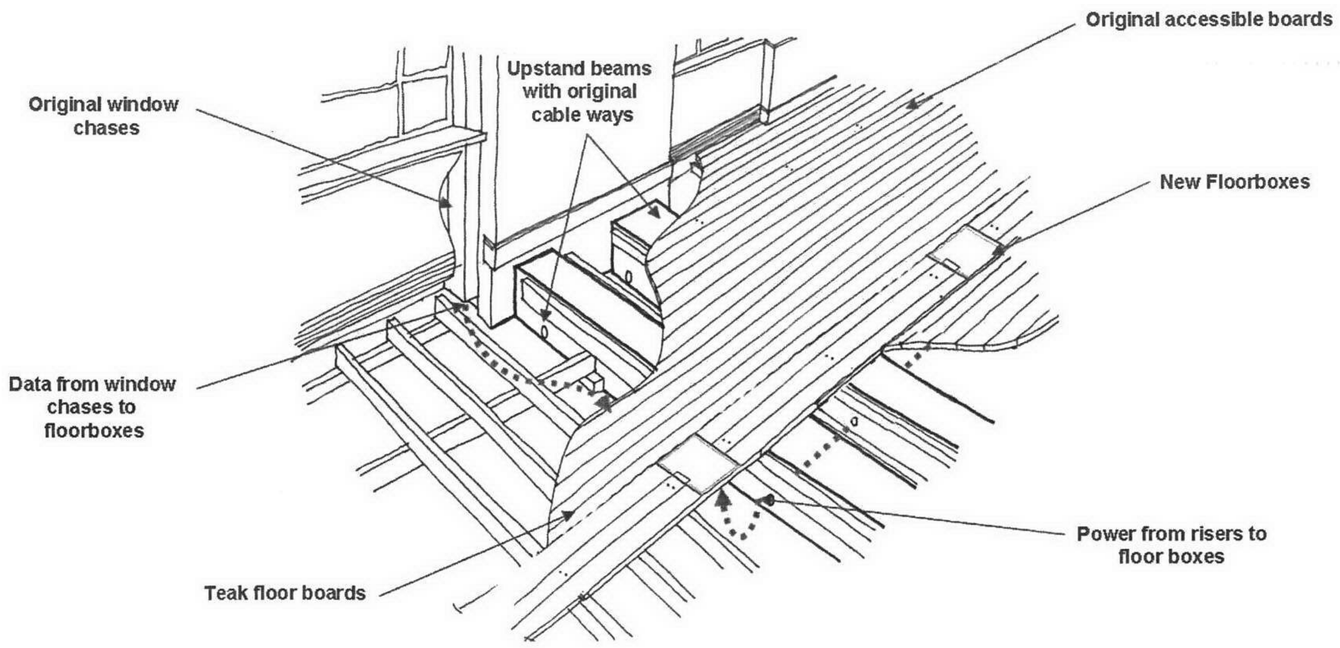
7.3 The power and data requirements of the University have increased in recent decades and the capacity of the original containment routes and risers is no longer adequate. The rewiring proposals include the introduction of new sections of basement trench and four new risers to provide the additional capacity for the new services systems.

7.4 The location of new sections of basement trench are shown on drawing LB33 D B10. The new sections will be constructed by breaking through the existing floor slab and forming a concrete trench. The structural details for the new trenches are shown in the specification document SPC S 001. The existing floor finishes in the vicinity of the new trench sections will be carefully removed prior to breaking out. New trench covers and perimeter frames will be fabricated using stainless steel angles and the floor finish infilled into the covers and up to the perimeter frames.

7.5 The horizontal distribution using the basement trenches links into the bottom of risers at various locations around the building to allow vertical distribution of services to each floor level. The location of new risers has been influenced by the need for them to link to this trench network whilst avoiding greatest interest areas, public areas and special finishes areas on the floors above.

Floor Level Horizontal Services Distribution Principles

7.6 The services running vertically in the risers serve distribution boards at each floor level from where the power is distributed horizontally to reach the end users in offices, teaching spaces and libraries on that floor and to serve lighting and fire alarm systems serving the floor below. Where teak floors exist the original building has cableways within the floor void that include



holes through the upstand beams that form the structure of the floors. This is illustrated in drawing LB21 D 010. Where solid floors exist the original cableways consist of buried conduit runs and it is intended to reuse these where possible. The proposed rewiring maximises the use of the floor void format for horizontal distribution. As a consequence new risers have to be located close to or within teak floor void areas to facilitate horizontal distribution of cabling out from the riser.

7.7 The quantity of risers required to service a floor level has been influenced by the need to limit the distance between the riser and the areas it serves to 50 metres in order to limit the final circuit lengths and consequently the thickness of cabling required. There is also the need to accommodate adequate numbers of distribution boards to limit the number of circuits and cables passing through the holes in the upstand beams. If fewer risers and distribution boards are used the cable mass near to the boards will exceed the ability of the holes to accommodate the numbers of cables.

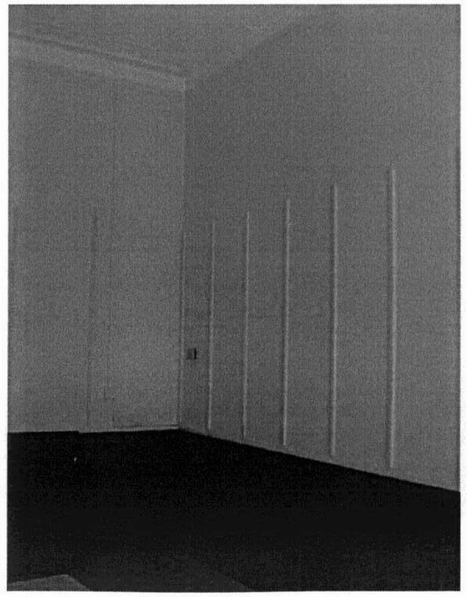
7.8 After careful consideration of the riser location requirements and the cabling capacity constraints the optimum distribution design has evolved and is shown on drawing LB21 D 011. This shows the ground floor area colour coded to identify the areas served from each new and existing riser. This design generally applies at each floor level.

Riser Details

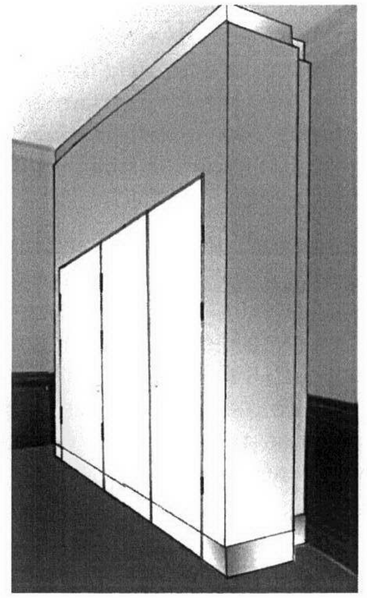
7.9 The existing risers and the proposed new risers are located on the Existing General Arrangement Plan drawings LB21 D B10, G10, 110, 210, 310, and 410. The new risers are highlighted and coded Riser 1.1, 1.4, 2.1, 3.1 and 4.1. Details of each riser are shown in plan and section on drawings LB00 D 010, 011, 012, and 013. The rising services pass through new apertures formed in the structure of each floor and are contained within a fire rated riser enclosure at each floor level. The enclosure will generally be formed in plasterboard with solid doors though some locations use the existing masonry structure as part of the enclosure. The various formats of risers are described below.

Riser 1.1 (drawing LB 00 D 010)

7.10 Riser 1.1 runs from basement to fourth floor within the room areas immediately to the west of the main lift lobby. These rooms have skirtings, dado rails and plaster cornices and, apart from the basement woodblock finish, have teak floors. Room 101 at first floor has a relatively ornate moulded plaster frieze and teak wall panelling at skirting to dado level. It also has an original bronze panel heater unit centrally located on the north wall. In order to minimise the damage caused to the plaster cornice and frieze the rising services have been set away from the room wall on a secondary framework. The secondary framework is lined with non combustible board from floor to ceiling within the riser enclosure which will provide a surface for services equipment and will also protect the original building fabric. The details of the enclosure and secondary framework are shown on drawing LB22 D 010 and sketch LB22 D 011 shows a perspective representation of the enclosure.



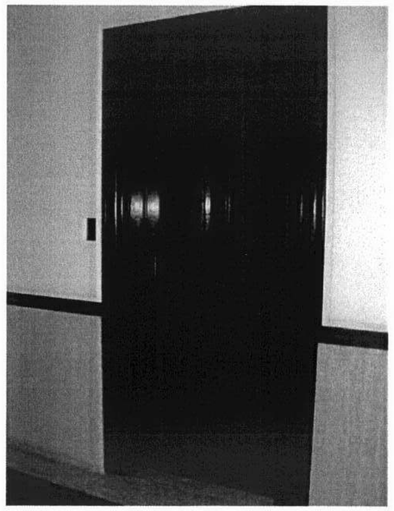
7.11 The visual design of the enclosure provides a



simple element within the room space that is obviously not part of the original building. Applied pastiche of the cornice, frieze, panelling and skirting has been avoided and only modulations of the surface planes of the enclosure are used to follow the horizontal lines of the main original features. The riser enclosure doors are set flush with the enclosure surface.

7.12 The extent to which the enclosure projects into the room has been carefully considered. Firstly to avoid conflicting with the original heater on the north wall and secondly to allow the room to be used for office or meeting room purposes. As a result the rising services pass through the first low profile feature band of the ceiling cornice. This riser format generally applies to all floor levels though the second floor riser is split in two to avoid the centrally located doorway within the west wall of the lift lobby.

Riser 1.4 and 2.1 (drawing LB 00 D 011)



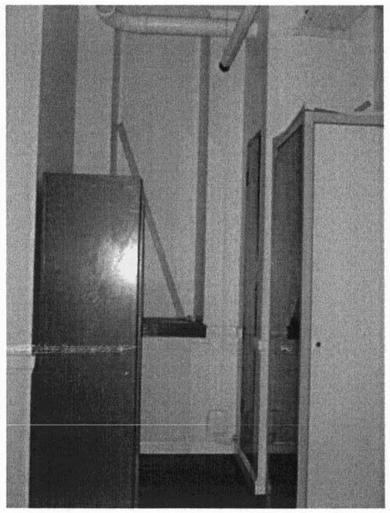
7.13 Riser 1.4 is a small enclosure that only occurs at basement floor level.

7.14 Riser 2.1 is formed from the disused passenger lift shaft located within the Staircase Number 2 structure. The riser will run from basement to third floor roof level using the original brickwork masonry shaft. The lift entrance door leaves at each floor level will be retained and lined on the rear with fire resisting board to achieve a one hour fire rating. The original copperlight vision panels within the doors will be retained intact. The original lift car, presently located at second floor level, will be carefully dismantled and stored on site. The lift machinery at third floor roof level will be removed to allow the new services systems to reach the roof level to serve the new ventilation equipment associated with the future Phase 2 works. New floor structures will be introduced at each floor level to facilitate maintenance access to the rising services.

Riser 3.1 (drawing LB 00 D 012)

7.15 Riser 3.1 runs from basement to the third floor level teak floor void and is formed in a small pocket of space that exists between the original passenger lift number 3 and the south external wall of the building. At ground and first floors the space was originally used as a porter's position and includes a bronze framed and glazed doorset to the west wall. At basement level the new riser enclosure is offset from the vertical line of the riser to maintain a circulation route within the library space at basement level. At second floor the space is presently an empty recess within a room space. Apart from basement level the proposed riser is within a teak floor void area.

7.16 To form the riser enclosure at ground and first floors the bronze doorset is secured shut and independently lined on the east side with secondary framing and boarding. A new doorway is formed on the east wall and an original salvaged Senate House doorset installed as the riser access door.



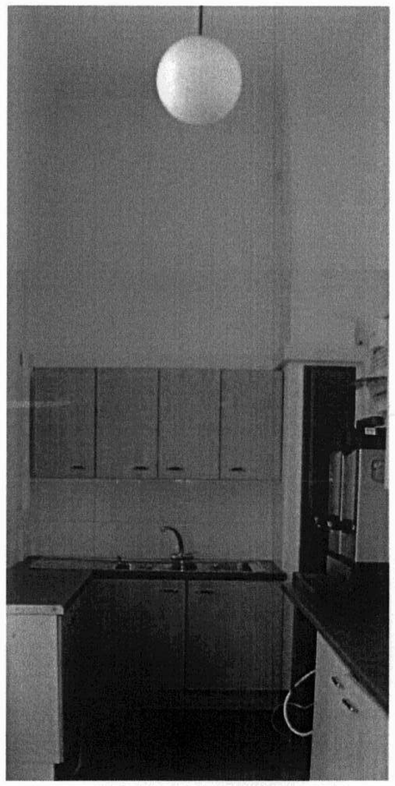
7.17 At basement and second floors new doorsets and plasterboard partitions are used to form the enclosures.

Riser 4.1 (drawing LB 00 D 013)

7.18 Riser 4.1 runs from basement to fourth floor adjacent to an existing riser enclosure that contains the Staircase Number 4 dry riser pipework. The existing riser is located in the corner of the narrow spaces that are located at each floor level between Staircase Number 4 and the north wall of the building. The spaces are non-public circulation areas at basement

and ground floor levels and rooms at the floors above.

7.19 The new riser enclosures are formed by introducing new doorsets and plasterboard partitions across the width of the spaces.



7.20 The floor structure in these areas does not include a void. The floors are solid concrete with a screed topping. Apart from basement level the horizontal cabling route out of the riser at each floor level will be achieved by removing the screed topping and installing a section of raised access floor to reach the teak floor void in the rooms to the west.

Supporting text

8.1 The Enabling Works provide facilitate the growth of the University's contribution to London's economy. For this to happen the University must offer facilities to its staff and students that allow them to deliver the very highest standards of teaching and research.

8.2 In 2004, research commissioned by the London Development Agency outlined the economic and social impact London's universities:

- Universities and higher education colleges in London generate approximately £8 billion in goods and services across the UK every year - nearly one percent of the UK's GDP
- Each annual cohort of graduates from London's universities and higher education colleges is estimated to generate an additional £11.7 billion in earnings over their working lives
- International students and visitors drawn to London's universities and higher education colleges contribute nearly £750 million to the UK economy each year
- Universities and higher education colleges in London win over £600 million in research funding competitions each year from within the UK and overseas
- For every one person employed by the universities and higher education colleges in London a job is created for one other person elsewhere in the economy.

8.3 The Enabling Works are a crucial step to consolidating the University's existing position as teaching and research facility of international importance. They also facilitate its growth that is welcomed in the UDP and London Plan.

securing the long term future

8.4 The works will ensure that Senate House is kept in an active and economically viable use. PPG15 agrees that this is the best way to maintain a listed building. If Senate House is to retain its status as the educational, as well as the physical, focus of the University it must provide for contemporary teaching and research needs. A critical requirement is the provision of exemplary building services such as voice, data and electrical networks.

Improving the character and appearance of Senate House

8.6 The Enabling Works will facilitate a substantial improvement to the character and appearance of the building. Senate House has suffered a gradual accretion of inappropriate alterations that currently harm its special interest. For instance many rooms have been altered with the addition of surface trunking, plastic power points and inappropriate light fittings. This application seeks to remove all such features from the building and restore the affected rooms to their original appearance.

8.7 In order to achieve the restoration of many rooms and update the communications services it is necessary to reroute and replace much of the existing cabling. Fortunately, Holden anticipated this requirement and provided horizontal and vertical trunking routes throughout the building. Unfortunately he could not have anticipated the amount of cabling that would be required and therefore in some instances new risers and channels must be created. The impact upon the building will be minimal through careful location and detailing.

8.8 The risers must obviously be located in areas where they will be effective, but a key element in that arrangement decision has been the impact upon the character and appearance of the building. Consequently the majority of risers are contained within 'soft areas' or areas of negligible architectural and historic interest. The exception to this is Riser 1.1. The position of this Riser is restricted in terms of the area it must serve but also, on the first floor, by its adjacency to an area of high importance. Clearly it could not be set into this space and therefore must be located on the other side of the dividing wall. We recognise that the enclosure for Riser 1.1 will affect the spatial quality of the rooms through which it passes. However, the enclosures for these risers will be slightly bigger in order not to affect any of the cornices when openings are formed in the ceiling. Similarly the skirting and other decorative elements will also be protected. This ensures that the works are fully reversible.

IoE number:	477487
Location:	SENATE HOUSE AND INSTITUTE OF EDUCATION (UNIVERSITY OF LONDON) AND ATTACHED RAILINGS, MALET STREET (east side)CAMDEN TOWN, CAMDEN, GREATER LONDON
Date listed:	28 March 1969
Date of last amendment:	28 March 1969
Grade	II*

CAMDEN TQ2981NE MALET STREET 798-1/99/1101 (East side) 28/03/69 Senate House & Institute of Education (University of London) & att'd railings GV II* Senate House and Institute of Education. 1932-1938. By Charles Holden, built with funding from the Rockefeller Foundation. Brick load-bearing construction with Portland stone facing. Symmetrical design, not completed, comprising central tower flanked by two courtyard ranges to either side. The southern, completed half, houses the ceremonial and administrative functions of the University of London. The northern half houses the Institute of Historical Research and School of Slavonic Studies in more functional surrounding: north-east wing not completed. The initial concept of a single, spinal building extending the length of Torrington Square was abandoned as building began, but survives in model form displayed on the first floor balcony of Senate House. EXTERIOR: central, higher fourth floor is the University library, with above it offices and bookstack housed in the formal 18-storey tower built in recessed stages with broad central buttresses on the east and west sides. 6 windows at 1st floor level. 4 and 5 storey wings with 10-window forward return and 14 windows width each. Under enriched, flat canopies, 2 square-headed entrances each side of the central buttress, all with 2-leaf glass doors with vertically patterned metal grills. Above the canopies small rectangular windows with patterned grills and keystones. Square-headed, recessed windows with metal frames, those at 1st floor level on the tower being elongated with enriched spandrel panels and flanked by medium sized windows at the angles, with balconies, culminating in lunettes at 6th floor level. From the 2nd floor to the 18th, small vertically set windows, in groups of 3 until the penultimate stage when they are continuous. Flanking wings with metal balconies to windows at angles. Flat roofs with plain bands at parapet levels. East facade similar. Inner courtyards similarly treated, with hopper heads dated 1936. INTERIOR: imposing Egyptianate entrance hall at base of tower with travertine floor and walls with broad fluted pilasters a semi-open space giving through access, with doors to south leading to Senate House and to north to Institute of Historical Research and School of Slavonic Studies. Senate House. Principal spaces all with travertine cladding to walls and floors, ceilings of moulded plaster with flat panel patterns and embellishments based on a London plane tree motif. Staircases floored in travertine, with bronzed balustrades treated as stylised Ionic columns. Principal entrance hall on two levels with first floor balcony having elaborate bronzed balustrade: Holden's original model exhibited here. On ground floor there is to east the MacMillan Hall, named after Lord MacMillan first Chairman of the University Court, with square panelled ceiling, travertine walls decorated as fluted pilasters at end and to sides set with acoustic panels to Holden's design and coloured glass, teak floor, and original light fittings. Memorials to HRH Queen Mother, Chancellor 1955-80, and to Princess Royal, Chancellor 1981- . William Beveridge Hall, named after the University's Vice Chancellor 1926-8, retains dado panelling set with brass filets in Greek key pattern under acoustic quilting, with semi-permanent seating and stage. On first floor processional stair leads to Chancellor's Hall, with square panelled timber to window recesses, travertine cladding, and square panelled plaster ceilings. Inlay pattern floors, original doors and fittings. To east a suite of rooms set round courtyard includes Court Room and Senate Room. Senate Room and ante rooms fully panelled in English walnut, the former of double height with trabeated ceilings, original fixed seating in stepped rows arranged like a council chamber with dias. Bronze uplighters. Ante rooms with heraldic glass by E Bossanyi dated 1937. On north side committee room and processional suite of corridors with dado panelling and moulded cornices, original furnishings and fittings. On south side the Vice Chancellor's offices not inspected. Second floor staff common rooms and third floor common rooms and refectories originally with painted mural ceilings. Those in refectory not seen under later acoustic tiles; war memorial tablet in corridor. Fourth floor libraries of double height. Two general reading rooms, the Middlesex Libraries, finished in oak with original bookshelves and fittings of English walnut. Goldsmith's Library to south with glazed bookcases, and ceiling of cypress wood and stained glass by E Bossanyi. Above these the bookstacks supported by steel frame on concrete raft. The offices retain original doors, lettering and fittings. The whole is a remarkably unaltered ensemble of 1930s design, with a high proportion of highly decorated ceremonial spaces over functional offices. The Institute of Historical Research and School of Slavonic Studies with ground-floor entrance hall of single-storey height, travertine floors and finishings similar in style but simpler than those found in Senate House. SUBSIDIARY FEATURES: attached cast-iron railings on stone sleeper wall and gates of radial pattern with central bosses containing coats of arms. Pillars with pilasters and geometric enrichment, those at the gates surmounted by rectangular down-lighter lamps with small defused panes and topped by stepped features. HISTORICAL NOTE: built as a landmark, in 1937 this was the tallest building in London apart from St Paul's Cathedral. (University of London: The Senate House and Library: London: -1938).