Jennison Building

Study for the improvement of teaching & social space within the Jennison Foyer area

Jennison Building School of Engineering & Digital Arts

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Work in Progress - 4 - Next Steps?

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Client:

School of Engineering & Digital Arts. Project led by Chris Barron, School Administration Manager.

Budget & Funding:

The plan is to seek funding jointly from external sources and match these funds from the Improvement to Social Spaces fund held by the Estates department and Creative Campus. To complete the entire project (refurbishment/expansion of the foyer and the conversion of Seminar Room JS1 into a 100 seat lecture theatre) we foresee some c. £500,000-600,000 maybe required; although a lesser sum would still permit a more limited scheme to progress.

Ideally approvals will be given so that a detailed design can be prepared with a view to carrying out the work prior to the commencement of the 2011/12 academic year.

Project outline:

- To improve the quality and variety of teaching, informal learning and social environments within a rapidly expanding school.
- To encourage cross-departmental association and re-connection to the main campus through elevating the level of public permeability and engagement.
- To modernise the foyer space by aligning it to the schools needs and future aspirations, a duality of purpose: to maintain their strong sense of community as well as to create a 'shop window' for the departments work.
- To reduce energy consumption by seizing opportunities to e.g. negate heat loss, promote day lighting, utilise low-energy high-efficiency lighting and adopt natural ventilation where possible.

The proposed scope of work affects the ground floor only and includes part expansion and refurbishment of lounge foyer area and Seminar Room JS1. Other elements include a general refurbishment of the circulation, kitchen and servery areas; re-connection of foyer space to the pond opposite, by way of an improved seating area, coupled with additional wheelchair access to connect main concourse level with pond area, main entrance and lower foyer space.

Approximate areas for project zones:

Internal (inc. foyer undercroft) - 280m² External concourse - 160m² External pond seating - 130m² Gross area for project zones - 580m²

Project Milestones:

Below we have set out a provisional timescale, which is dependent on the complexity of the final works that are approved and undertaken. Key dates and timescales in principle:

December 2010 - Submission of draft outline brief.

January 2011 - Approval of draft and completion to Stage 3 of work.

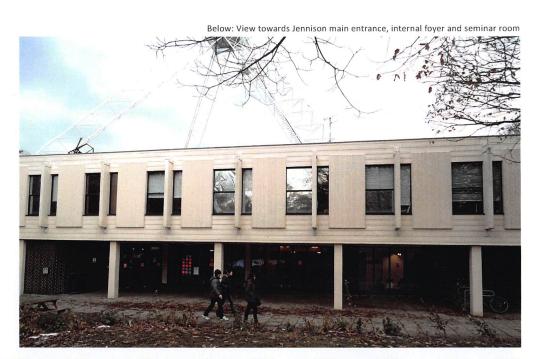
February 2011 - Funding approvals sought in principle.

March 2011 - Application to Improvement to Social Spaces Fund and other matched funding.

April/May 2011 - Outline Planning Permission & Design development complete, works tendered.

June 2011 - Site works commence.

September 2011 - Site works complete.



Current Occupants of the building:

The schools success radiates in part from its strong sense of community, an aspect some departments struggle to generate. The school runs its own not for profit '*Tea Bar*' twice daily at 10:45-11.15 & 15:45-16:15, it was discovered its success lies with its strong feeling of 'Ownership'.

In the main, the foyer provides valuable social mixing space between staff and students, many of whom at postgraduate, research levels will spend a huge proportion of their daily life inside the building. Furthermore its location beside the main entrance, lecture theatre and main staircase renders it a natural meeting place.

Occupants include:

Staff: Academic 27, Admin 5, Associates 4, Honorary 4, Researchers 15, Secretarial 4, Technicians 11, Visiting staff 14.

Students: Undergraduates 457, Postgraduates 142.

External Users: Wider university students using lecture theatre & seminar rooms 100 in, 100 out.

Temporary: Hosting external events e.g. open days for prospective students, schools commercial clients.

Below: View of foyer lounge in the early 1970s. Centre: Tea Bar opening times.





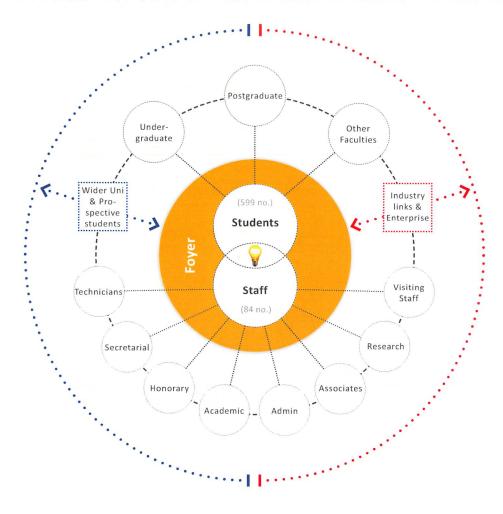


Above: Location of key occupants in relation to foyer space | STAFF - RESEARCHERS - UNDERGRADUATES

Vertical Circulation

Below: View of foyer in 2010, very little has changed - seat coverings and painted concrete.





Interviews held (17.11.2010) with building occupants have revealed a strong sense of pride about the school and its foyer space, feelings towards its renewal were generally very positive. Interviewees that expressed hesitance towards the project early on, soon saw the potential opportunity when it was made explicit that the project was completely non-commercial and sought to improve: the image of the school, accessibility for wheelchair users, comfort with a variety of fresh furniture. Furthermore is was expressed that their sensitive involvement during the projects eventual design phase would be encouraged and most likely held through a series of workshops.

School Background:

The School of Engineering and Digital Arts is located within the Jennison Building at the University of Kent's Canterbury campus. Since the schools inauguration in 1969, formerly the Electronic Engineering Department, the school has grown steadily as a responsive and receptive platform for young aspiring inventors, electronic engineers, researchers and visual artists at both undergraduate and postgraduate levels.

The schools enviable reputation of international standing is testament to the concerted efforts of its academic staff, researchers and students of whom also form a unique community within the school for which this project centres about.

Not only is high value placed upon the quality of teaching, learning and resources within the school but also upon its forward-thinking attitude all of which have allowed the school to gain extraordinary links to industry and subsequently, commercial success.

It's a desire of the school to provide a welcoming and 'neutral' foyer environment that reflects this success as well as enabling the school to host social events and showcase examples of past and current work - both digitally and physically - to all occupants and visitors including commercial clients and prospective students.

The school continues to expand rapidly, accommodating 29 academic staff and approximately 599 students (8.8% increase over last year) with a steady rise in international recruitment, with international students consisting some 24% of the total.

Employability of graduates is strong with the school being ranked in the top ten of the Times Good University Guide, a crucial aspect as the HE sector moves into the new higher fee environment.

In September 2010 the school became the 'School of Engineering and Digital Arts' to better reflect the diversity of its activities which include, for example:

- The launch of a new Digital Media Hub, based in the Canterbury Innovation Centre.
- Establishing an extensive motion capture 'green screen' facility and 3D Body laser scanner.
- Addition of two new engineering MSc programmes in Advanced Electronics Systems Engineering and in Wireless Communications & Signal Processing, furthering their portfolio of PGT courses.
- A joint MA in Architectural Visualisation with the School of Architecture.

Right: New addition - Motion Capture / Green Screen Facility

Outreach Work:

The School regularly undertakes outreach work through *XtremeMedia* workshops for arts and ICT pupils and *Totally Ballistic & Spectra* workshops for engineering pupils, resulting in a 10% increase in core application rates and a good rate for converting applications to places. The provision of a refurbished foyer would facilitate this work further and help to provide a first class experience for all potential students visiting on school open days and UCAS visit days.

In addition to these forward thinking projects the School is engaged with the University-wide 'Green Impact' project with the commitment of reducing its own environmental impact aswell as offering expertise related to sustainability, energy conservation and environmental concerns. In 2010 the school won 'The Best Energy Saving Idea' award at the University's Green Impact Awards.

In summary the School strives to offer:

- An environment supportive of world-class research and excellent teaching.
- Wider learning and future employment opportunities to students through enterprise-led activity.
- Strong partnerships between the academic and industrial organisations, worldwide.
- An enviable blend of technological and design expertise that remains fresh and allows us to impact positively at the forefront of emerging technologies in the 21st Century Society.
- Development and support to the career plans and aspirations of our staff and student body.



Formal interviews were conducted in November 2010 with the aim of identifying a wide range of problems and opportunities that surround the schools social space. Initially seven school members were interviewed, their roles in the school ranged from: academic staff, technicians, administrators, post-graduates and under-graduates.

These initial findings have been cross-examined and often challenged by actively conversing and engaging with people present in the foyer and beside the main entrance, ranging from: visitors,-

-students, a 'Tea Bar worker' & cleaners. These findings in turn with the previous have been aligned with general observations and functional needs of the school, the resultant being an accurate record exposing current problems with the social space and possible opportunities for their remedy.

The extent of these findings are presented in greater depth in Section-3 of this report. The following is a general summary and will need further analysis by the client to refine this information, for purposes of constructing a design brief:

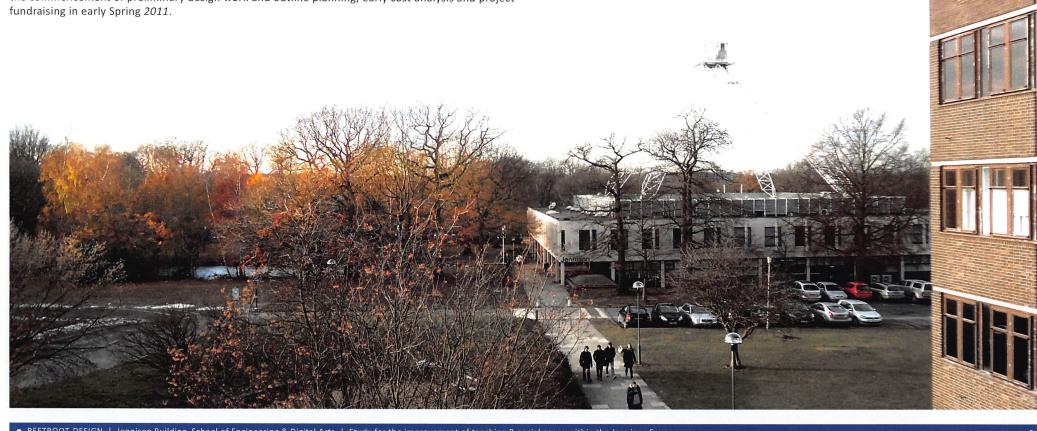
Problems +	> Opportunities
Majority of external students / departments are unfamiliar with the site and the successes of the school who are keen to collaborate with other students / university departments. The school can be seen as a 'backwater' location some minutes walk from the central campus area.	Establish sense of identity by re-configuring foyer space to improve level of public permeability, provision of flexible, comfortable seating areas inside and out, suitable for accommodating greater social events and informal learning.
No wheelchair access into foyer from main entrance, users forced around to rear of building.	Grant wheelchair users access by instating sloped/ramped areas down from upper concourse into foyer as well as automatic entrance doors.
Pond seating area too small and on bare earth, only temporary.	Create permanent pond side deck with improved semi-flexible seating, stitch in with immediate access routes.
Undercroft space at main entrance is underused and uninviting - forming a harsh transition between the 'cramped' inner foyer and outside pond area.	Extend the main entrance and inner foyer out to the buildings edge maximising internal foyer space, increasing level of public exposure through improved access, reducing distance to the pond area.
Occupants who smoke tend to do so beside the main entrance as its sheltered from the rain which is unpleasant for general occupants has smoke is drawn into the foyer space and offices above.	Create a more pleasant environment, encourage smokers away from the building by locating a sheltered seating area beside the trees.
Low visibility of physical project work produced by the school.	Provide purpose made, neutral and easily adaptable display space for exemplary work, facilitating both physical objects and digital media, 'showcasing' the work of the school.

	> Opportunities
Entrance foyer, lounge and its furniture is outdated and reflects badly upon the contemporary nature of the school and its work.	To align the space sympathetically, stylistically and functionally with the schools innovative attitude to its work, generating a positive image for visitors such as prospective students and commercial clients.
Inflexible, cluttered seating arrangements that cannot easily be re-configured.	Provision for a range of seating and tables that are comfortable, functional and are easily re-configured for: social gatherings, graduation, study, eating & drinking as well as informal teaching.
Main windows to foyer space during colder months are incredibly 'drafty' increasing heat loss, creating discomfort.	Replace sympathetically the foyer glazing with high performance double glazing with low U-values and insulated frames.
Seminar Room JS1 is underused due to its limited size.	Extend Seminar Room JS1 out to the edge of the building and install permanent raked seating. Linked to an improved larger and more flexible social foyer space will allow the school to host external events - source of additional capital for the school. (Conditional - it's a teaching and learning space, not strictly a social space.)
At peak times of the year e.g. exam times the foyer space and toilets struggle to cope with the surge of external students and subsequently heavy exposure to wear and tear has rendered them 'unfit for purpose'.	Increased functionality: refurbish foyer entrance doors and update ground floor toilet facilities to a more robust specification, so as to accommodate heavier use. (Conditional - external funding needed - Estates?)
Kitchen area is unknown to many occupants, though inadequate, 'grim' and poorly serviced its proved very popular with Asian occupants, who make their lunches and sit together as a social occasion on most days.	Encourage healthier eating and greater cross-cultural mixing between occupants through the provision of a refurbished communal kitchen area suitable for basic food preparation.
Between lessons, students who wish to use laptops find themselves re-occupying the computer labs during other lessons which can cause disruption / awkwardness.	Provision of laptop 'power points' in a range of locations will ultimately improve the foyers desirability as both a meeting place and potential study space.

Aim of the following investigation:

This Outline Brief centred about the pragmatic needs for improved social, informal teaching and learning space in an expanding and forward-thinking school for which the following investigation is conducted, seeking to establish accurately:

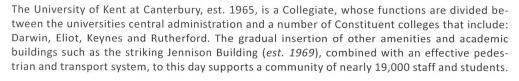
- 1) the schools physical presence and relationship to the wider campus context.
- 2) its functional requirements based on the analysis of existing social space and its users.
- 3) to identify key project strengths, weaknesses, opportunities and threats.
- **4)** based on this research the schools Design Brief can be accurately 'fleshed out' in preparation for the commencement of preliminary design work and outline planning, early cost analysis and project fundraising in early Spring *2011*.



Site Studies

Liverpool, built 1887-92

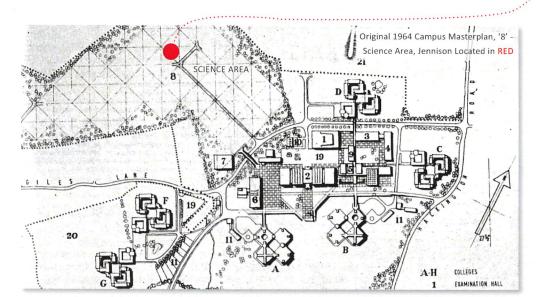
Kent University, built 1965



This period (60's) saw the rise of another seven 'New Universities' and many more; Universities of East Anglia (1963), Essex (1964/5), Lancaster (1964), Sussex (1961), Surrey (1966) Warwick (1965) and York (1963).

The Canterbury campus can be described as a 'Plate Glass University', a term coined by Michael Beloff in 1968 whom documented these radical new campuses, with early architectural examples displaying masses of plate glass, in-situ concrete framing combined with precast structural as well as decorative elements, often with a machined finish; contrasting largely with the 'Red Brick Universities' of the Victorian era - the older campuses!

Interestingly, I believe the Jennison Building partly reacts to this Plate Glass aesthetic and is almost 'Brutalist' in style, displaying both its concrete structure at ground level as well as its heavy hardwood door and window frames. The Jennison Building preserves and expresses this 'modern' language that was to change the design of campus architecture in this country forever.











Above: University of Essex - 1964-5



Above: University of Warwick - 1965





Above: University of Sussex - 1961

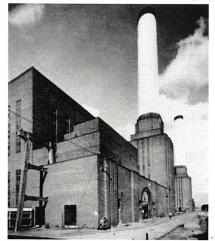


Above: University of York - 1963



Above: University of Lancaster - 1964

Historic Overview: Jennison Building by Farmer and Dark Architects









Design work for the refurbishment of the affected spaces should be conducted in a meticulous manner, seeking not only to support future growth but to balance sensitively the historic value presented by this building with the programmatic needs of an evolving school which at its heart seeks the betterment of its users: past, present and future.

The Jennison Building, formerly the Electronics Laboratory and opened in 1970 is positioned North-West of the main campus in the 'Science Area', adjacent is the earlier, much larger Ingram Building (Chemical Laboratory), built in 1967, strong orthogonal geometry allow the two to complement one another, quite well. Furthest away is the adjoining Bio-Sciences Laboratory built later in 1971.

The Jennison building was designed by London based architects Farmer & Dark, with continual design input from Prof. R Jennison, the first professor of Physical Electronics at the University and an expert in the field of Radio Astronomy, and whose name was given to the building in 2009, commemorating his death in 2006.



- 1 Brunswick Powerstation by Farmer and Dark, 1950s.
- 2 Ingram Building (Chemical Lab), built 1967.
- 3 Construction of Electronics Building, 1969.
- 4 Electronics Building and Pond, 1971.
- 5 Erecting aerial for Radio Telescope onto roof, 1972.
- 6 Electronics Building seating area, 1970s.





Farmer and Dark architects (est. 1934) had great standing in the field of architectural design, pioneering in their approach to innovative school design they also fostered close connections with the electrical industry, the firm made something of a speciality of designing power stations, it may seem then inevitable that they were chosen to design the Electronics Laboratory.

Despite these extraordinary circumstances surrounding its potential architectural and historic value, the 'Laboratory' is not protected by 'Listed Building Status'. And although the removal of the Radio Telescope dish, the buildings envelope, structure, services, fixtures, finishes and general layout remain almost unchanged.

The Phase-2 extension and general internal refurbishment of laboratories, research facilities and seminar rooms has allowed the school to successfully progress, however the foyer space, entrance way and undercroft are generally considered original. Minor additions include the recent painting of some concrete elements and installation of new servery counters - these areas are shown in greater depth later in this section.



Keynes College

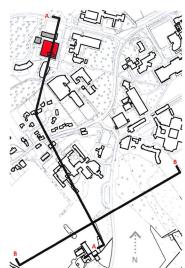
Main Bus Stop

Sports Centre

Jennison Building

Long Section AA - Looking west

Campus plan: section cut lines



The Jennison Building is built from one of the highest points on campus, elevated approximately 69m above sea level. Although the height of the main building is low at 9m, compared to 15m height of the adjacent Ingram building, the redundant steel framed aerial tower used for the 'radiotelescope' extends to a magnificent height of 32m above ground level, seen clearly in Section AA.

Section BB identifies this as an important landmark / visual signpost within the university. An important relationship exists between the school building, its foyer space, pond area and woodland setting, and one like no other on campus. A synergy in effect.

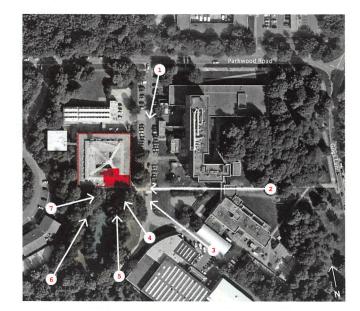


Long Section BB - Looking north-west

Becket Court

Eliot College

Site Study: Key views towards Jennison Foyer & Main Entrance



The Jennison Foyer is easily seen from all key pedestrian routes that surround it, connecting the main building to the campus. Views are had from a range of different site conditions, extending past: hard urban environments as seen in view-2, soft woodland views as seen in view-6 and delightful instances as seen in view-5.



View from main pedestrian concourse linking sciences area to main campus.



The popular sports centre overlooks the foyer area, slightly screened by the trees.



The foyer is partially visible through the masses of tree trunks. Parkwood route.



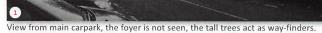
A common shortcut route from rear of sports centre offers a striking view.

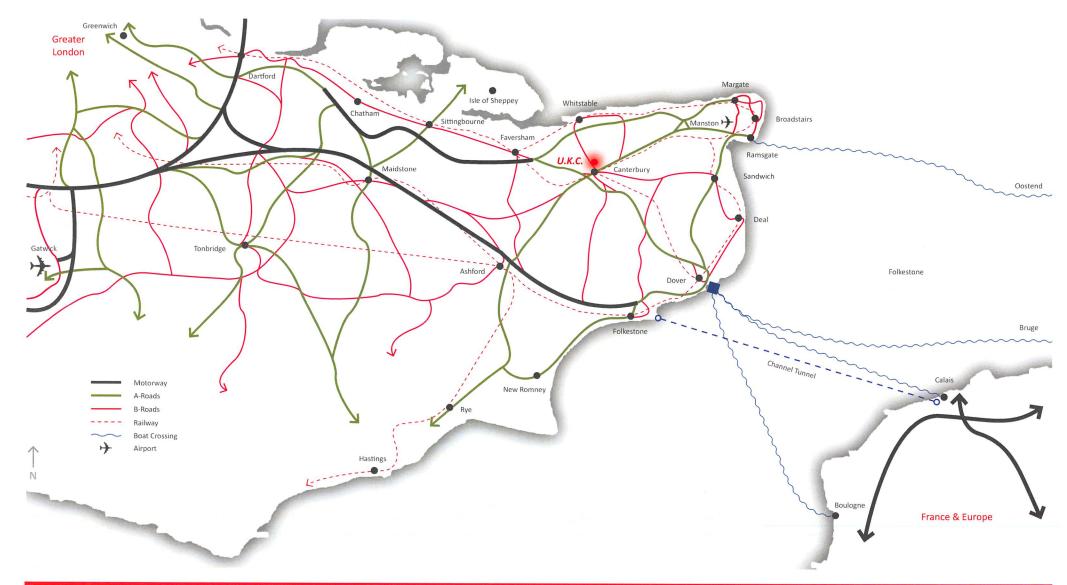


Main route to Parkwood passes alongside lower end of pond - a landmark view.



Route from K.B.S. Foyer is clearly visible as an intermediate destination.





Primary footpaths and walking times: Canterbury West Train Station -> Jennison Building

This study identifies the key footpaths and walking times from Canterbury West Train Station to the universities main campus, student accommodation and sports grounds. From the station, the Jennison Building is reached in approximately 26minutes.

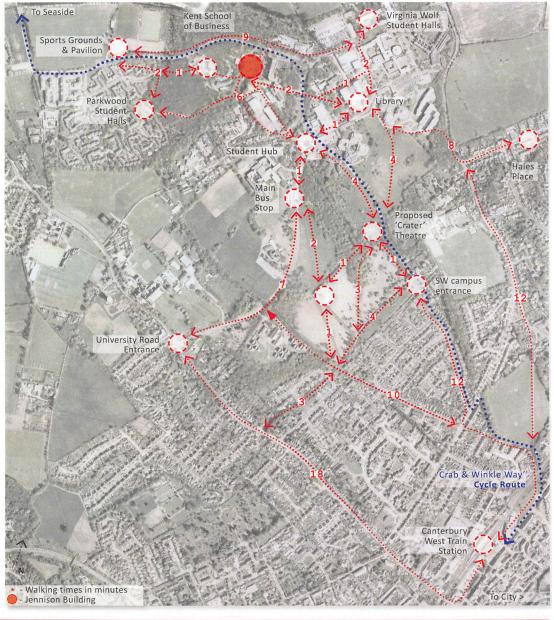
Located within an area of very high footfall, the pond area and foyer space is overlooked by many staff and students walking towards Parkwood student village and Sports Grounds.

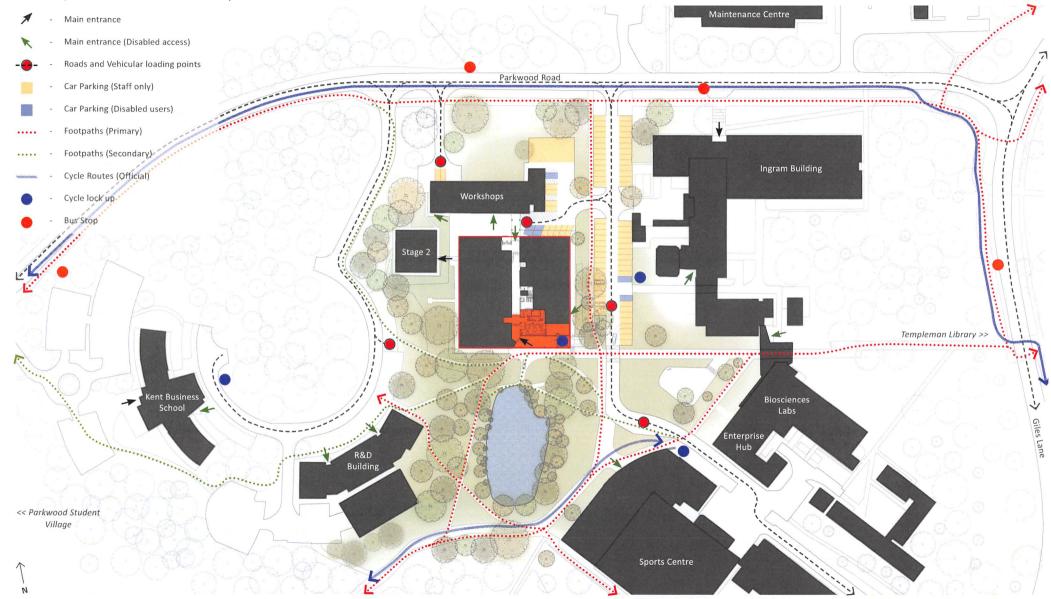
Currently this area provides very little outdoor seating with poor access to food, drink and shelter. Subsequently its underused as a social space and has become a mere waypoint enroute to Parkwood.

An opportunity exists here to re-connect the school to the wider campus community, a destination can be formed: the school building as campus landmark, its delightful pond area as meeting place and its foyer space as an inviting shop window for the school - let the school permeate its surroundings.

Right: Diagram identifying walking times from Canterbury West Train Station to Main Campus and Jennison Building. Below: View towards pond area and foyer from Parkwood footpath & cyclepath.







Not to scale indicative only

In 1970 on Prof. Jennison's instruction, the pond (Reflecting Pool) was dug during the construction of the main laboratory building and positioned with the intent of improving light reflectance to the 'Radiotelescope' upon the roof (now removed).

Built on a roughly north-south axis and measuring approximately 48m length and 24m width, the pond is now surrounded by lush planting, interconnecting footpaths and hosts a variety of flora and fauna.

Nature Trail:

Refurbished in 2010 the 'Nature Trail' runs across the campus linking ecological areas of interest. The trail passes alongside the lower end of the pond with a marvellous extended view towards the Jennison foyer area.

Seating:

In an area of such tranquillity seating is very limited, two picnic tables and two benches exist, all positioned with views over the pond. The pond is currently bisected away from the building by a primary concourse and sheltered vestibule beneath the first floor, leading to the main entrance.

Although a 20m separation occurs, an intermediate temporary seating area has been setup by the school and is in use constantly as general social space, however resting on bare earth it is not ideal, its popularity and strategic position within the site layout, holistically gives it great capability.

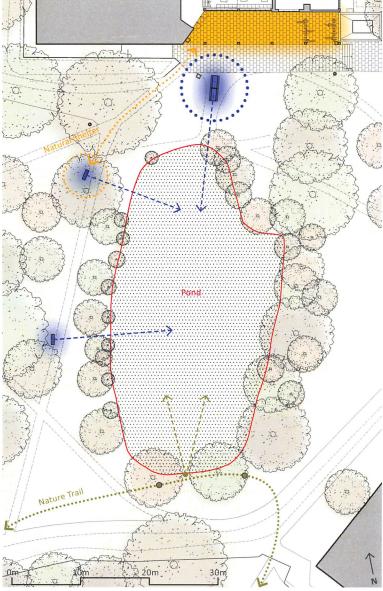
Shelter:

Interviews conducted suggested the need for more outdoor seating and social space. Particularly there is demand for some form of sheltered seating used by smokers as they're banned from smoking within five metres of the school building. Lack of suitable shelter means they reside beside the main entrance, allowing cigarette smoke to be drawn into the foyer and staff offices above.









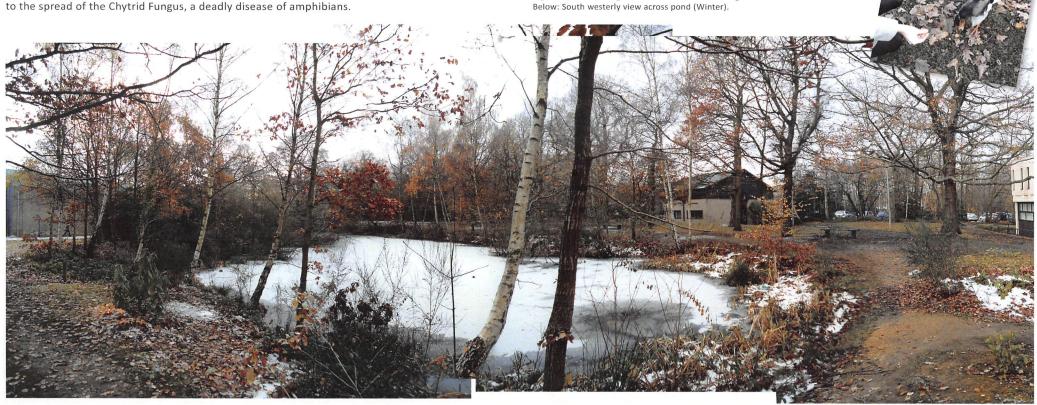
Information outlined below is based on research carried out by Dr. David Sewell of the Durell Institute of Conservation and Ecology, 2004-06. This is for indicative purposes only.

- Pond was found to not contain any species protected under the Wildlife & Countryside Act, 1981.
- A number of ponds in relatively close radius contain Great Crested Newts. Prior to any work commencing, for precautionary reasons up-to-date surveys should be carried out to ensure colonisation has not occurred in the interim if it has, authorisation from *English Nature* must be sought before any work can commence, either in the pond or surrounding area.
- The main nature interest in the pond is invasive species that ideally should be removed. The plant Crassula Helmsii is present, often in dense mats. The introduced Alpine Newt is thought to be linked to the spread of the Chytrid Fungus, a deadly disease of amphibians.

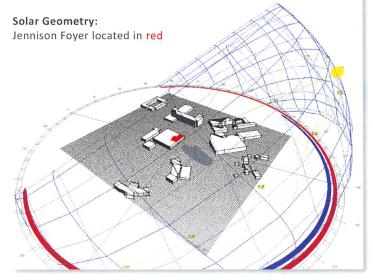
- Wildlife in the pond is relatively common. Generally two water-birds use the pond, Moorhens and Mallards. There are no reptile records from the immediate surroundings, but amphibians recorded include common Frog, common Toad, Palmate Newt and Smooth Newt. Invertebrate fauna is mixed, mainly a good variety of water beetles are present.

The information outlined here is of great relevance to this project. Potential improvements to the schools social spaces identified the pond area as extremely significant, being frequented throughout the year by the Schools students, staff, visitors as well as a wider campus community who pass through the site, mainly leaving or returning to the Parkwood Student Village or Sports Grounds.

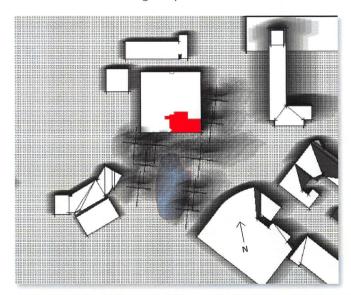
Right: A Mallard being fed can result in social mixing.



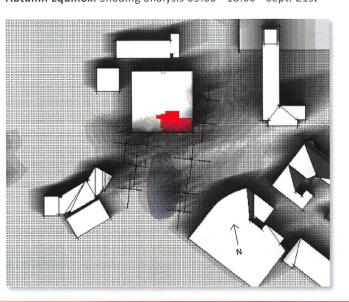
Solar shading & orientation study: Jennison Foyer



Summer Solstice: Shading analysis 09:00 - 18:00 - June 21st



Autumn Equinox: Shading analysis 09:00 - 18:00 - Sept. 21st



Early Conclusions:

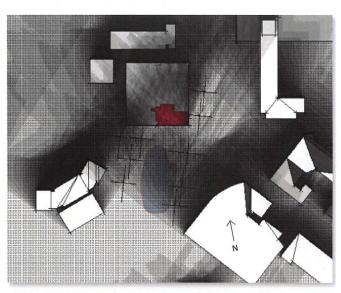
The shading analysis indicates that solar gain to the south and west facades is unlikely to result in unwanted summer time solar gain. This would also be the case if the foyer area were to be extended out into the undercroft area.

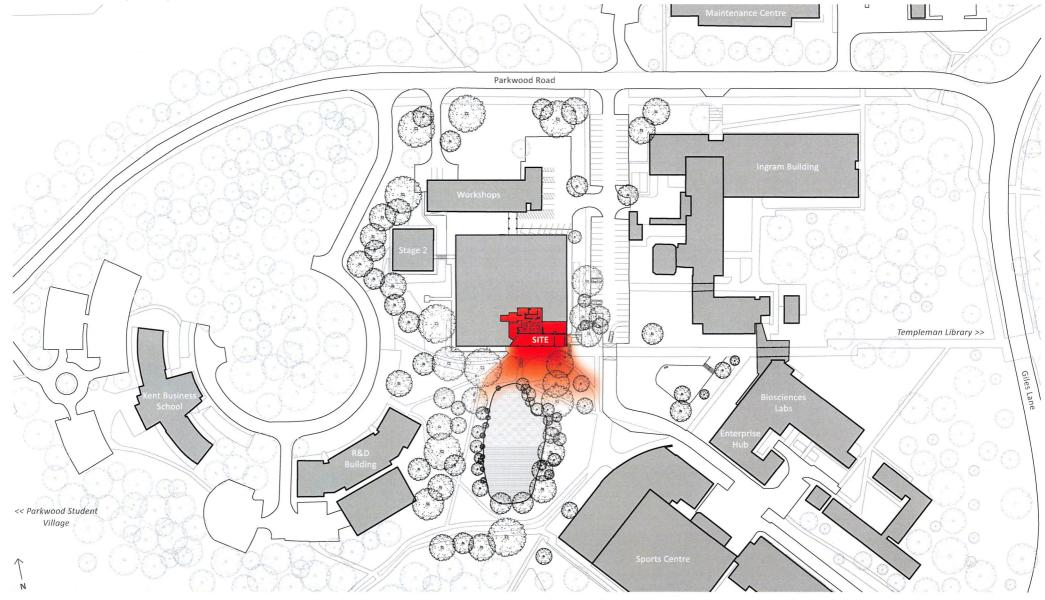
Recent tree felling to the foyer side pond edge have improved considerably the internal daylighting to both foyer and office spaces above. The pond acts as a natural light reflector, illuminating considerably the foyer facade, bouncing extra light into the foyer.

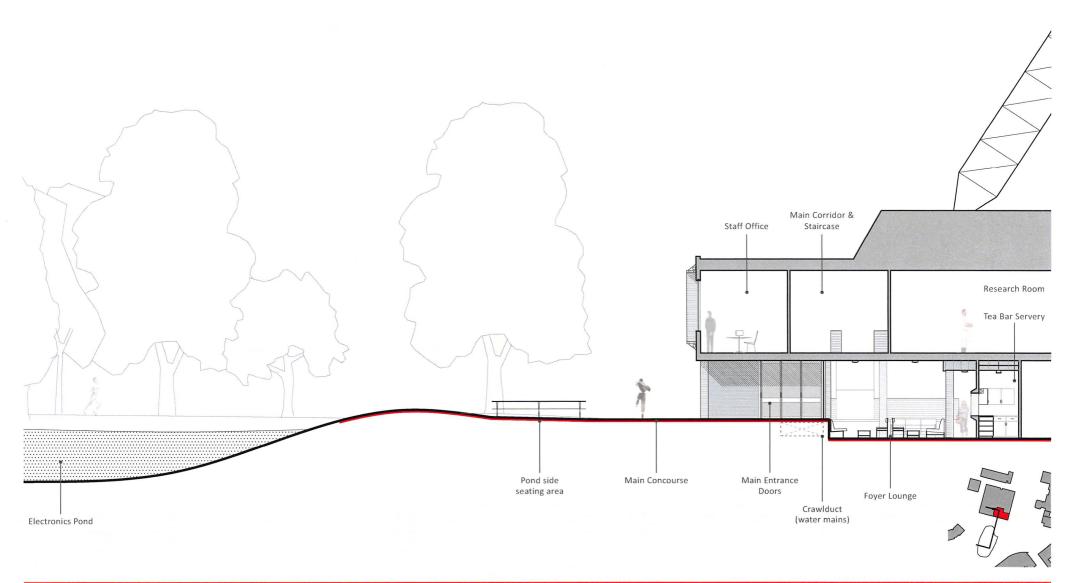
However, the location of certain remaining trees directly south could impact on daylighting levels if tasks required increased illumination levels or an average daylight factor of 2%. (Though more detailed analysis should be undertaken to calculate actual internal daylight levels). As the foyer area is predominantly used as an informal social space and seating area, this is unlikely to be too much of a hindrance.

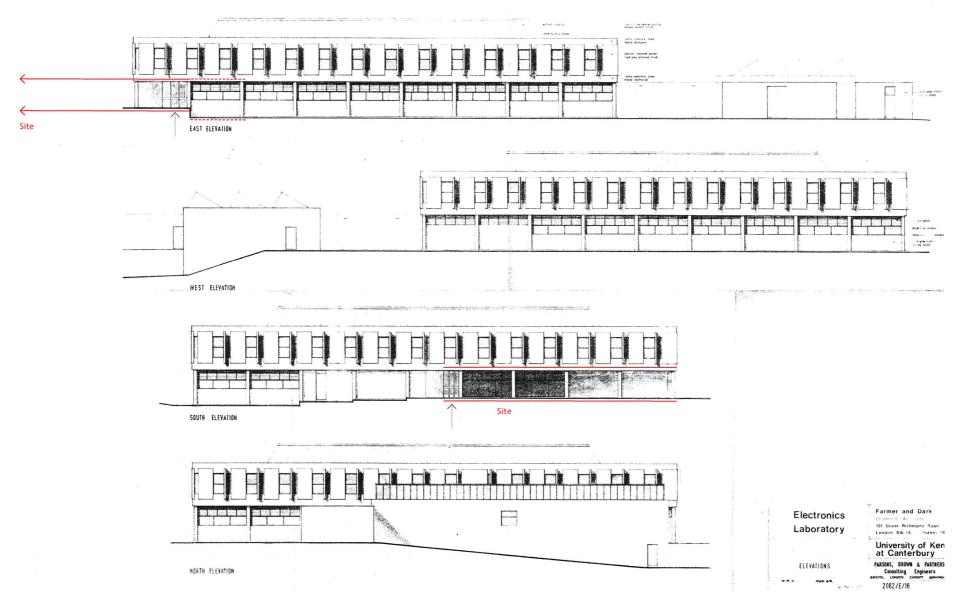
Further observations identify the wooded area surrounding the pond and foyer as a valuable outdoor informal teaching and social space particularly during warmer Summer months, the pond and trees should provide a cooler, more pleasant environment due to the natural effects of evaporative cooling provided by the pond and solar shading by the trees.

Winter Equinox: Shading analysis 09:00 - 18:00 - Dec. 21st

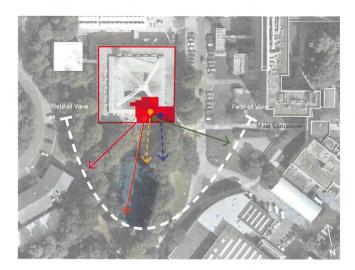






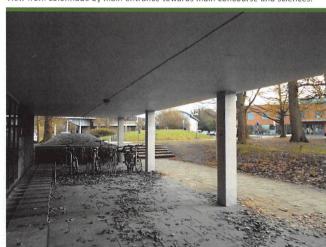


Site Study: Key views from inside Jennison Foyer area & outside Main Entrance area



The foyer plays host to a variety of views, from shorter 'framed' views overlooking the pond area to 'extended' views of the surrounding science and sports buildings. All views overlook an animated pedestrian concourse, sparking visual interest and contrasts well to the serene pond area and surrounding landscape.

View from colonnade by main entrance towards main concourse and sciences.





View looking out from foyer seating area. Low outside soffit creates framed views.



Smaller framed view towards pond is had from inside seminar room.

An extended view from staircase overlooks the pond area. A clash of busy routes.



Extended view looking towards the sites usually busy interconnecting pathways.











Foyer lounge area forms the schools primary communal space.

Main entrance, undercroft area and cycle storage.

Key areas affected by proposal: Existing

Visible Condition: Entranceway & Lobby Space





















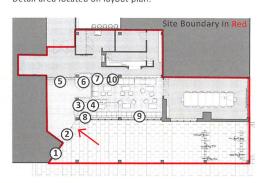
Summary of visible condition:

The main entrance, foyer and seating area is outdated and uninviting, showing obvious signs of heavy wear and tear. Many elements are in fact original. The most recent intervention being perhaps the digital timetable screen. In general the visual condition of the space reflects badly upon the contemporary nature of the school and its work.

Opportunity:

To align the space sympathetically, stylistically and functionally with the schools innovative attitude to its work, generating a positive image for visitors such as prospective students and commercial clients.

Detail area located on layout plan:



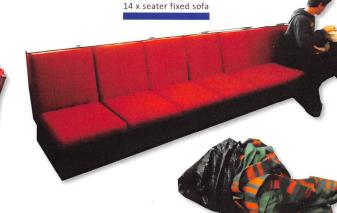
Existing Furnishings: Foyer lounge area











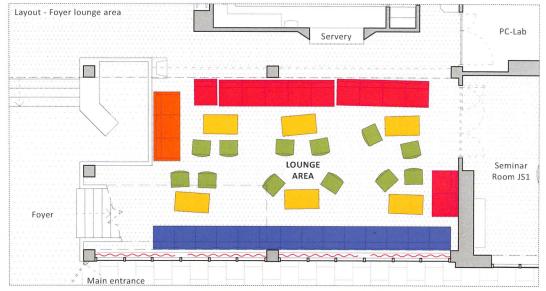
The furniture and its general layout remains almost identical to when the building opened in 1970. The seating is original but has been re-upholstered from leather to fabric at some point, however the majority is heavily worn, showing tear marks and light damage.

The current layout provides for a limited capacity of 41-50 people seated at any one time and offers an inflexible, cluttered seating arrangement that cannot easily be reconfigured, loose furniture cannot be stacked and stored away easily which restricts current adaptability. Tables are too low to comfortably eat or study from.

Solution: Provision for a range of seating and tables that are comfortable, functional and are easily re-configured for: social gatherings, graduation, study, eating & drinking as well as informal teaching.

4 x curtains heavily worn and falling off!





Proximity to food & drink: A social-generator





1 - Servery 'Tea Bar'

The servery is a crucial part of the school acting as a social generator, its helped maintain the schools strong sense of community since 1970, an aspect some departments struggle to generate. The school runs its own not for profit 'Tea Bar' twice daily at 10:45-11.15 & 15:45-16:15, serving tea and snacks; it was discovered its success lies with its strong sense of 'Ownership' made possible by running it as a Non-Commercial project.

The servery is accessed from the far side, preparation counters, storage and access to water for boiling and cleaning is in place and in good useable condition. The protruding concrete tapered surround of the servery hatch remains a striking feature in the foyer space.

2 - Kitchen Area

The Kitchen area is unknown to many occupants and is located opposite the ground floor toilets. Though inadequate, 'grim' and poorly serviced its proved very popular with Post-graduate researchers and Asian occupants, who make their lunches there and sit together in the foyer as a social occasion on most days.

Provision of an updated kitchen that is compliant with Food Safety Legislation and enforces good hygiene practice, thus encouraging healthier eating and greater cross-cultural mixing between other occupants.

3 - Coffee Machine

Many occupants use this vending machine as a source of coffee, as its not served at the Tea Bar. The majority of users spoken to were unsatisfied with the quality of the coffee and explained that they would pay a little more for quality fresh coffee. Either the servery could be supplied with suitable equipment or an uprated machine could be supplied.



4 - Vending Machines

To the rear of the building are a series of vending machines selling light refreshments and snacks, observations made saw them being used heavily at times before and after seminars.



Current wheelchair access into fover:



Obstacle: Main steps joining upper and lower concourses, ramp to side unsuitable for wheelchair users due to steep gradient.



Obstacle: Main entrance doors are unsuitable for wheelchair users to pass through. The Journey begins.

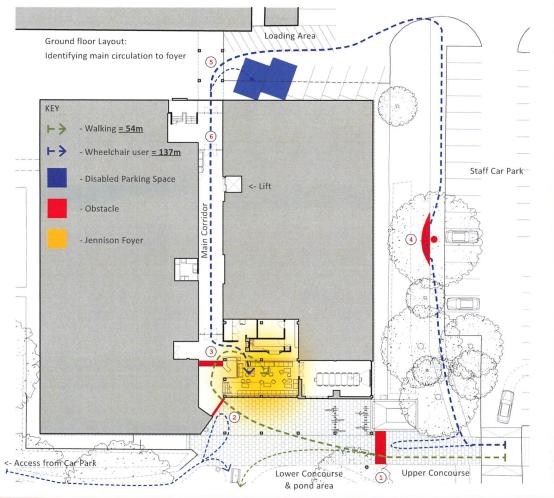
Obstacle: Main steps connecting lobby space with lower foyer. A walker reaches foyer in 54 metres.



Conclusion:

Accessibility through the main entrance as a wheelchair user is currently not permitted, due to a series of obstacles including two sets of main steps and a non-power-assisted entrance door. Wheelchair users are forced around the outer perimeter of the building and enter through the rear doors. Travel distance increases from 54m (walking) to 134m. The school actively seeks to improve accessibility into the building and has recently converted part of its lecture theatre to accommodate a wheelchair bound student.

Re-connection of the foyer space to the pond area by way of an improved seating area will only be as successful as the ease of access to it. Greater permeability coupled with wheelchair access on a steady transition connecting the upper concourse level with pond area, main entrance through automatic doors and down into lower foyer space.





Obstacle: Alternative route if avoiding car park road is partially blocked by a mature tree, forcing the track to bend towards the top of the bank.

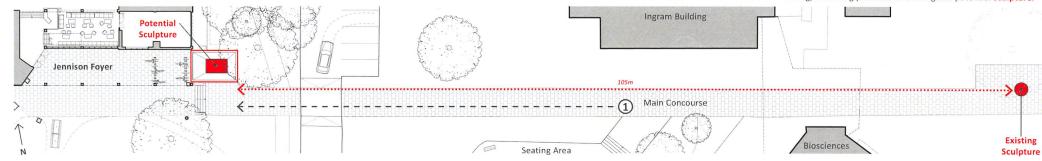


Two disabled parking spaces and easy access to rear main doors which are power assisted.

Main corridor with level surface, lift ensures connection to floor above. The foyer is in sight, <u>137 metres later!</u>







Located beside the steps along the main concourse leading to the Jennison Building (Formerly Electronics Laboratory) is a plinth for sculpture. Its built of concrete with a decorated top cap of shingle and has lain bare since the buildings construction in 1969. Professor Jennison in fact proposed a sculpture for the plinth, this is seen in the accompanying photo-montage.

Its location is both strategic and functional. Its landmark position is on axis to the main concourse and is passed by those entering the building. Beneath the Plinth is where the 'Low Pressure Hot Water Heating' mains rise into the building from the Chemistry Buildings boiler house opposite.

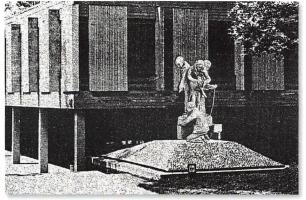
During October 2010 we held 'Love / Hate Focus Groups' across Canterbury and Medway campuses. Students and staff were rallied up and asked what they 'Loved' and 'Hated' about their campus and 'Suggestions' for improvement. Main findings:

Loves: continue to be the outside spaces; views, proximity to nature and their social use.

Hates: operational issues with commercial social hubs e.g. queuing / pricing / opening hours / food quality & variety.

Suggestions: more sheltered seats outside, <u>more public art</u> and encourage animation of spaces.

This dormant opportunity of 40 years constitutes a separate project, however negotiations should be had by the school to organise sources of funding and a potential sculptor. For all reasons demonstrated here.



Above: Original photo-montage of Prof. Jennisons proposed sculpture.



Above: Today the plinth remains bare. View from concourse main steps



Building upon the schools pro-active approach to reducing its electrical energy consumption, which currently stands at 11% of the entire university, this project could set a new benchmark for the universities refurbishment programmes. The works to the Jennison Buildings existing spaces can aim to help lower their current energy consumption by seizing opportunities to negate heat loss, promote better day lighting with low energy high efficiency artificial lighting (dimmable) and to utilise natural ventilation where possible.

Energy Conscious Design and refurbishment:

Post-war buildings such as the Jennison Building (est.1970) constructed before the energy crisis are often high consumers of energy. Building Energy consumption is a major contributor to Green House Gases and Carbon Emissions in the UK.

There are several areas of energy consumption which should be taken into consideration. Although the proposal is for the refurbishment of the Entrance Foyer area, the points below are applicable to the building as a whole.

Buildings such as the Jennison Building are often poorly insulated with Single Glazing. The appearance of the fabric should be maintained to respect and respond to the original post war design by Farmer & Dark.

The current Jennison Building is generally constructed as a concrete frame, supporting concrete floor slabs with solid concrete outter walls to first floor and cavity wall construction acting as infill on ground floor, and is of more concern - consisting of facing brick /cavity / 6"concrete block work (seen in original drawing 1098-AS(21)1).

The general U-Value of the cavity wall is estimated at 1.25 W/m^2 , currently the standard minimum is for 0.3 W/m^2 . It is not often possible to insulate cavities or over-clad either due to aesthetic considerations or budgetary constraints.

Although the ratio of glazing to floor area is relatively low, improvement to glazing specification can often result in significant reductions in heat loss which reduces the heating requirement. Either for new insulated glazed units or a more esoteric approach such as secondary glazing or insulating shutters / curtains. It is proposed that any new additional glazing or replacement glazing should be of a high performance low U-value insulated glazed unit with high performance frame.

If the University was to further increase the thermal performance of the Jennison Building, feasibility studies could be undertaken to assess the benefit and cost effectiveness of improving the building fabric through increased insulation, reduction of thermal bridges & improving airtightness.

A further opportunity in negating heat loss could see an additional transition space or small entrance lobby and second set of doors either through the re-configuration or addition to the foyer. Although any alterations to the foyer area will unlikely lead to a need to increase ventilation rates or need for additional heating / cooling requirements, it is assumed that much of the M&E servicing such as mechanical ventilation, lighting is nearing the end of its useful life.

Feasibility studies could be undertaken to assess the impact the installation of efficient fans, pumps and heat recovery systems could have on overall energy consumption. Any addition to the foyer area will utilise simple natural ventilation as much as possible.

Non-domestic buildings such as the Jennison Building use large amounts of energy to artificially light spaces. Currently the existing foyer space relies heavily on artificial lighting due to the adjacent cantilevered floor above, reducing access to natural day lighting. The Permanent Supplementary Artificial Lighting of Interiors concept can be utilised (PSALI). Refurbishment lighting should be low energy high efficiency as demonstrated in the recent Marlowe foyer refurbishment. Lighting should be attached to sensors able to 'dim' lighting when required lux levels are met.

If the project scope was widened to include partial refurbishment of ground floor toilet facilities, the buildings expansive roof area could accommodate the installation of Solar Hot Water Panels, Domestic Hot Water Storage and even Rainwater harvesting for flushing - further reducing the schools energy consumption.

Below: View of Undercroft, showing current low performance glazing to foyer area

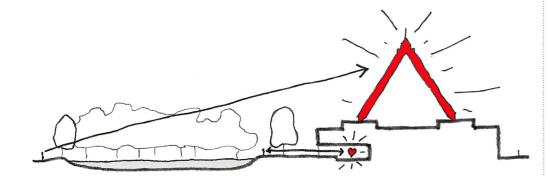


Key Intentions:

The design concept originates from both the sensitive understanding of both the implied vision and programmatic requirements of a forward-thinking school. The following depictions are indicative and present only the key ideas that contribute to a far greater scheme and one which we hope to advance in detail.

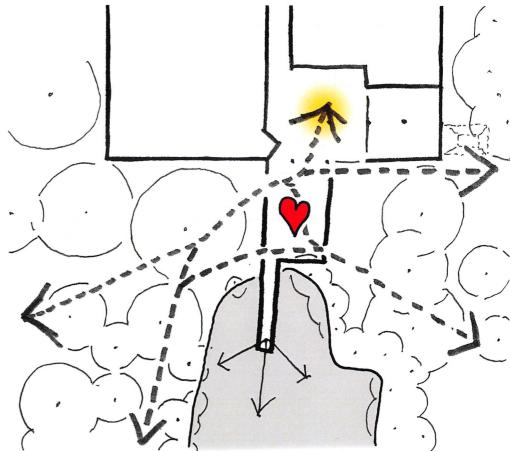
Identity

The School of Engineering and Digital Arts imposes its strong identity upon the campus landscape, a landmark and key visual signpost to a destination enhanced further by its engagement with the surrounding context, improved accessibility and welcoming social / teaching space.



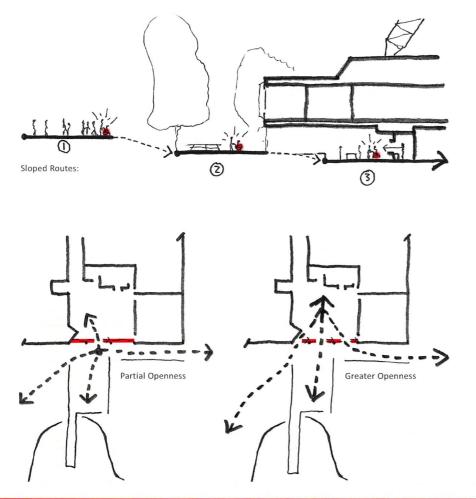
Pond Area and Terrace

Re-connecting the foyer space to its natural context, by way of an easily accessible terraced seating area, overlooking both the outdoor pond area to the south and internal entranceway / foyer space to the north. This intermediate space or 'diaphragm' encourages: contemplation, social gatherings and informal teaching to take place. Entwined pathways running through the surrounding woodland connect it further to key campus routes. Creation of a new destination!



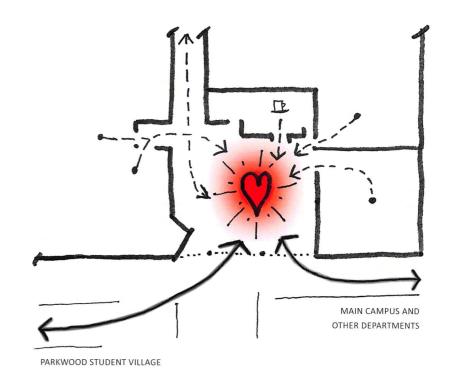
Greater Permeability

The pond terrace and entranceway configure formally the complex site levels presenting a series of sloped routes suitable for wheelchair users connecting in stages: 1) the main concourse 2) to the lower pond terrace and entranceway with electric doors 3) to the lower social / exhibition space. Internally the school is able to 'adjust' its level of openness to the campus context beyond, by way of opening or closing the additional sliding glazed doors.



Social Generator

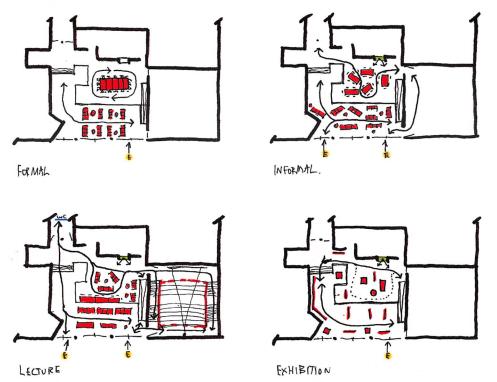
The improved space builds upon the communal strength of the school's occupants and willingness of the school to reach out to the wider campus, encouraging greater inter-relationships to occur, acting not only as a: 'meeting place' for the schools occupants with better access to food, tea and coffee as well as the preparation of it, or as an 'informal teaching' space made possible by the provision of suitable furniture, acoustics and lighting, but also as a 'showcase', helping encourage greater collaboration with other departments and future enterprise.



Flexibility

Overall design intentions must work holistically together if true flexibility is to be gained: Outward connectedness to the immediate outdoor environment coupled with improved accessibility into a welcoming school with a greater sense of arrival will provide greater public exposure, particularly at times when events/shows are being held. A potentially higher footfall of people using the space will demand improved circulation space in and around the seating area.

The seating area is capable of accommodating both formal and informal gatherings as well as playing host to different social purposes and events such as exhibitions or open lectures. Adaptable lighting and easily movable furniture inclusive of comfortable seating and tables in a range of sizes will provide a flexible layout that can be easily changed to meet the schools needs.

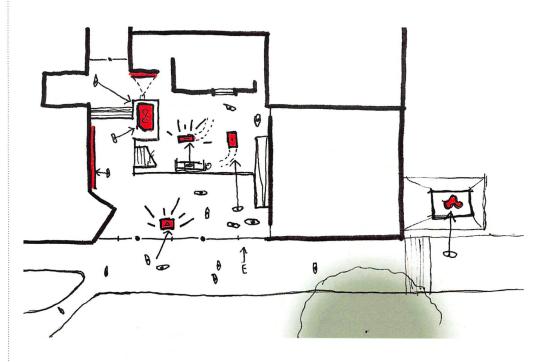


The main space, whilst being highly adaptable must also be rational, robust and low-maintenance; achieved partly by the quality of finish, neutrality of style and ease of operation.

Display Space

The school is keen to share with both its current occupants and future visitors its most recent samples of exemplary work and successes in the form of: digital representations via easily updateable screens or projections and physical displays of objects such as inventions, end of year work or material produced by in-house researchers via display cabinets that range in size, adaptability and permanence.

Adaptable 'track lighting' and well located power points will be of great support. Furthermore the school can play host to visiting exhibitions, either of interest internally or on behalf of the university externally. Digital screens, projections, display cabinets both fixed and movable.



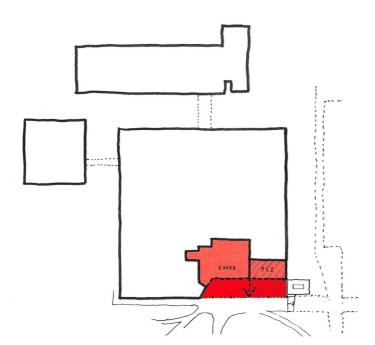
Adapt and Extend

The school's student, research and academic capacity has grown considerably since its inauguration, its sense of community with it. The undercroft that currently marks the main entrance, provides cycle storage and shelter for smokers when the weather is bad (*observation made*).

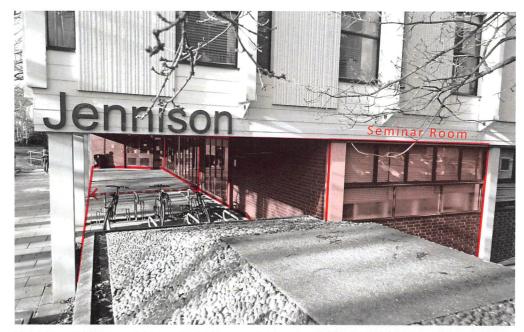
The entranceway, internal seating area and seminar room (JS1) are able to extend out towards the buildings perimeter, without major disruption to the existing concrete structure, service 'crawl duct' or building envelope - maximising the amount of usable social and informal teaching space, offering also a variation in scale (floor to ceiling height) and proximity to the pond area and concourse.

Furthermore this shift would allow for the expansion of the seminar room to a 100-seat lecture theatre with wheelchair access: a valuable asset to both the school and other departments.

Cycle storage will need re-locating to an area that is both conveniently located and secure. A shelter for smokers should be created and positioned away from the building, perhaps by the pond area.



Below: View towards outer wall of Seminar Room and area for possible expansion.



Summary:

This draft report has been produced for the School of Engineering & Digital Arts and forms part of an on-going study for the improvement of teaching and social space within the Jennison Foyer area and surrounding context. Subsequently, this is for indicative purposes only and is to be read in conjunction with the Fundraising Project Proposal form, also submitted. We very much look forward to progressing this project further.

Beetroot Design -Study by: Pier-Luigi del Renzio

[PLEASE NOTE: SECTION 2 OF THIS STUDY IS WORK IN PROGRESS, SECTIONS 3+4 OF THIS STUDY IS REMOVED TEMPORARILY]

