RIBA

Small budget BIG IMPACT!

RIBA Higher Education Design Quality Forum 2011

The RIBA's Higher Education Design Quality Forum (HEDQF) is a unique partnership between higher education clients and design professionals. Its aim is to improve the performance of higher education buildings and estates.

Judging panel members:

Ian Caldwell, Director of Estates at King's College, London

Rupert Cook, Director, ArchitecturePLB

Kate Goodwin, Royal Academy, Curator of the Architecture Programme

Ranald Lawrence, Post Graduate Architecture School, University of Cambridge and Editor of *Scroope*

Rod McAllister, Partner, Sheppard Robson Architects

Liz Pride, Director, MJP Architects Ltd

Julian Robinson, Director of Estates at LSE

Sarah Shalgosky, Curator of the Mead Gallery, University of Warwick

Introduction

Universities in the UK have yet to realise the impact of the new environment in which they operate. Some commentators have compared the current changes in funding to a 'seismic shift'. Students and staff have real choices across the globe as the higher education landscape becomes more competitive locally, nationally and internationally. How will the UK higher education sector continue to maintain its world rankings in this new financial environment, at a time when other countries are snapping at our heels and, in contrast to the UK, making substantial capital investments? We need to be smart and focused on how we spend the limited amount of capital that will be available; we need to seek to spend our limited funds where it will achieve the greatest value for staff and students.

We need to focus on raising the quality of the existing estate, rather than expanding it, and on achieving our challenging carbon reduction targets. In many cases this will involve partnerships with external organisations and, of course, with external donors – who themselves may favour institutions that can demonstrate that they achieve high quality with less resource. This is quite a challenge, and HEDQF is pleased to offer support by illustrating a few examples of the excellent work that is being carried out across the sector, not just in architecture, but also in technology and landscaping. Flexibility will be key. Technology and new ways of learning continue to develop at an ever-increasing pace. Who had heard of the 'cloud' a decade ago? We need to design university environments that can respond to change in a flexible and sustainable way. One of the great achievements of UK higher education estates, for example, is the reuse of historic buildings, many of which provide great flexible spaces into which contemporary facilities can be inserted. In this highly competitive world, the need for good quality remains paramount.

Ian Caldwell
Chairman
Higher Education Design Quality Forum

Lightwell Café, ArchitecturePLB
Photo: Tim Soar

The higher education environment for students

The changes in university funding will have far-reaching implications for students and for universities. As yet, we don't know the full scale of these, but quality will be paramount: quality of teaching, quality of experience and quality of facilities. Students will demand more. They'll expect the best spaces and the most up-to-date technology. Supported by their parents, students will be investing several years of their lives into higher education, accumulating substantial debt and looking to maximise their investment by making their mark on an increasingly competitive job market. They will want to make the most of this defining period in their lives.

Universities will have to commit to ongoing investments to help themselves and their students stand out. They'll need to constantly refresh and update their learning, teaching and social facilities, keep them maintained and ensure they're of the highest quality. The challenge? These demands come at a time of reduced government capital.

Adjusting to this difficult economic climate means striking the delicate balance between value for money and high impact. Large and grandiose schemes, desirable as they be, will have to be shelved in favour of smaller investments, such as those illustrated in this booklet, which despite lower budgets still have a great influence on quality and experience. The perils of non-investment aren't worth thinking about: students will quickly realise that they are being short-changed by poor quality facilities and will vote either with their feet, through the media or via the ever-increasing array of surveys at their disposal.

Student union officers, staff and student groups are here to help. Already we're involved, to great effect, as stakeholders in many universities – deciding where and how to invest. We are extremely sensitive of the need to maximise the value of limited capital funds and can advise where we think funding can best be spent and, crucially, where we think it might be wasted. Such a partnership is essential in this fast-moving world where the ways that students now learn are changing more quickly than many universities realise. I am therefore pleased to support the Higher Education Design Quality Forum in raising the profile of design quality, and its focus in this publication on small-scale investments that achieve great value.

Ryan Wain
President, King's College London Students' Union 2009/11


Glenn Turner
Nightingale Associates


Julian Robinson
LSE


Emily Rissom
architecture plb


Andrew Macintosh
Feilden Clegg Bradley Studios

Small budget BIG IMPACT! – the film

In March 2011, eight projects were selected by the HEDQF panel of judges to be included in a short film, also entitled **Small budget BIG IMPACT!** Each was chosen because it embodied the ambition to use design innovation to extract the maximum value from modest funding. Together, the projects represent architecture, IT, sustainability, recycling, reuse of existing structure, economic materials, inspirational forms, landscape, signage, transport and mechanical infrastructure.

The projects were filmed, and the people involved interviewed, in early April 2011. The final 13-minute movie, which includes concept sketches as well as footage of the completed projects, was first screened at the Association of University Directors of Estates' conference at the University of York on 19 April 2011. The film was produced and presented by Rod McAllister with William Pine, an independent filmmaker. It can now been seen on You Tube, **www.youtube.com** by searching for '**Small budget BIG IMPACT!**'

The projects included in the film are:

– Bournemouth University's Jurassic House

– London South Bank University's Centre for Efficient and Renewable Energy in Buildings

– The School of Oriental and African Studies' Students' Union

– The University of Kent's Marlowe Foyer

– The London School of Economics' Public Realm Improvements

– The Royal Veterinary College's Lightwell Café

– The University of Birmingham's Steam Bridge

– The University of Southampton's Uni-Link Transport Interchange

Film sponsored by

SHEPPARDROBSON

NEW LAB

Inorganic Chemistry Research Labs

client **University of Glasgow**

architect **Aedas Architects**

net cost* **£918,800** area **391 m²**

reclaimed space

intervention in Listed building

design for specialist scientific research

* net construction cost excluding fees and VAT

Two new floors of research labs and support accommodation have been formed within the shell of a redundant lecture theatre in this Grade A Listed building.

The chemistry building was purpose built in 1937 with many innovative features that made it a cutting edge facility at the time. But the building needed upgrading to respond to evolving spatial and technical requirements in chemical research. The user research group were previously operating in cramped and outdated space that was inhibiting their ability to expand. To attract researchers of the highest calibre they needed to provide the best quality working environment both functionally and aesthetically.

Research into the building's history led to the reinstating of a lost rooflight, which significantly enhances the quality of the new highly serviced research lab space.

An open-plan layout allows researchers to interact freely, while integrated small lab/office space allows easy checking of scientific facts. The lower floor instrument rooms are separated from a conference room by glazing, showcasing the technology present in this chemical nano-science lab.

Photos: Keith Hunter Photography

Photo: Howard Griffin

SHOP WINDOW

Marlowe Foyer, Kent School of Architecture

client **University of Kent**

architect **meld architecture llp**

net cost **£280,000 (inc furniture)** area **197 m²**

'shop window' for departments

enhanced accessibility

connects with wider campus

This project began as a brief set for the University's MArch students to look at ways of enhancing the area of campus in and around the Marlowe Building, home to the schools of architecture and anthropology. Fourth year student Pier-Luigi del Renzio's proposal identified the opportunity for their foyer space to open out and connect with a wider university community, recognising the potential of the school's prominent siting on campus.

Introducing full-height sliding doors (in a gold anodised finish) that are set back behind the existing concrete structure allows more light into the space and creates a colonnade distinguishing the more public areas of the building. Other features of the design include: coloured niches in a timber slatted wall for display; replacing steps to the entrance with an access ramp across the length of the foyer; and a new kitchen servery.

The architects and Pier-Luigi also designed the furniture which, when turned on end or side, can be used as display boards with tables incorporating coloured steel strips for non-drawing-damaging magnet 'pin up'.

SOCIAL LEARNING

International and Postgraduate Student Centre

client **Queen's University Belfast**

architect **Bradley McClure Architects Ltd**

net cost **£899,000** area **1,909 m²**

reuse of existing structure

promotes social learning

improved energy use

A new centre specifically for international and postgraduate students was designed around an existing campus building, which was stripped back to its structural core. This student-orientated facility needed to be welcoming and to evoke a sense of 'being received', particularly for international students. Within the building, postgraduate students are also provided with their own study and social space with high-quality finishes and bespoke furnishings, including desks in American Walnut.

The existing three-storey building was restructured into open yet defined spaces with clearly identifiable functions. The ground floor houses a wide spectrum of facilities including an inviting reception area with a generous social space, administration areas, and private seminar and meeting rooms. Spaces for administration and support staff and formal postgraduate teaching space are provided at first-floor level, while the top floor has been reserved for postgraduates. Here, half the space is dedicated to learning and the other to social interaction and public presentation.

Control of the acoustics and energy efficency of the building were important aspects of the design for this project. Air conditioning, for instance, was designed out of the scheme by the application of a 'free cooling' strategy.

REDEFINED CAMPUS

Stratford Campus Landscape Redevelopment

client **University of East London**

architect **Richard Murphy Architect**

net cost **£178,500** area **4,350 m²**

green heart to campus

secure collegiate environment

accessible level access

This masterplan study provided a strategy for the relocation of various teaching faculties as the University rationalised its estate from three campuses to two (at their new Docklands and historic Stratford sites).

At the Stratford Campus a primary issue was security. Although the existing buildings featured controlled access, the campus itself was effectively open and bisected by a public road across the site. To address security and also give the campus a better sense of place, the masterplan stopped-up the public through road and created a series of perimeter courtyard developments. These define and reinforce the campus boundary while introducing within it a series of memorable, connected external spaces.

A new campus-wide main entrance is still security controlled but gives access directly into a new `green' heart to the campus, from where many of the new teaching facilities are visible and accessible. This new landscaped area, developed in collaboration with Craft Pegg landscape architects, retains existing trees within a simple combination of open lawn and circulation space in gravel, where students can relax in a secure collegiate environment. A second formal landscaped court was developed to define spaces between new and existing facilities.

Materials, which include resin gravel, natural stone and facing brick for paving and walls, were selected for their lifecycle durability and low maintenance requirements.

Photo: Craig Auty

Photo: David Morris

TECHNOLOGY TEST BED

Centre for Efficient and Renewable Energy in Buildings

client **South Bank University**

architect **Shepheard Epstein Hunter**

net cost **£976,500** area **80 m²**

facilities for teaching and research

testbed for emerging technologies

building as teaching resource

Photos: Peter Durant

The Centre is a dedicated facility for research and development of sustainable and environmentally friendly technologies specifically for urban buildings.

Built within the roof plant area of a new university building, the centre demonstrates diverse renewable energy technologies, monitors real carbon savings and enables practising engineers to understand which solutions are most appropriate to particular situations. Teaching resources include real-time data displays from remote wind turbines as well as the Centre's own technologies, including solar fibre optics, ground source heat pumps, solar hot water, photovoltaics and phase change materials.

Building services are on view throughout the centre, with all equipment in the plant room clearly labelled, air handling units on show through glass flooring and interactive displays of the building management system. 'Plug and play' facilities in the plant room enable emerging technologies to be trialled, demonstrated and tested.

Designing and building the facility presented a particular set of challenges – not least being that the Centre is an extension to the top of a building that wasn't yet built. Programming, access and loading constraints led to the choice of a cross-laminated timber structure, which was craned into position in two days. The external envelope achieves very low U-values down to 0.12 W/Cm^2. Wherever possible recycled and/or low

embodied energy materials were specified, including recycled glass, plastics and rubber, sheep's wool insulation, high recycled content carpet, solvent free paint, and furniture made from recycled car parts.

Amos Goldreich Photography

POINT OF ARRIVAL

Uni-Link Transport Interchange

client **University of Southampton**

architect **Feilden Clegg Bradley Studios**

net cost **£998,000** area **3,700 m²**

improved gateway to University

integration with city transport networks

local landmark

A transport interchange at the heart of the Highfield Campus at the University of Southampton has been dramatically improved in an exemplar joint venture between the University, Southampton City Council, and Go South Coast, the operator of the Uni-Link bus service. The project has allowed for the expansion of a successful bus network, which provides services across the city as well linking the University's campuses.

A 48m-long timber canopy, crafted out of larch with a folded geometric soffit, now shelters three bus stands, while a kiosk provides a café and bus drivers' rest area. The project introduced a new one-way access route, and provided extensive hard and soft landscaping of public areas as well as providing real-time bus information. The canopy can be lit at night and forms a local landmark befitting of the main arrival point at the University.

This modestly scaled intervention has created a dramatic improvement in facilities for Uni-Link staff and passengers – pedestrian safety, orientation and arrival at the university, accessibility, and landscaping are all enhanced.

Reversing the direction of buses entering the site has significantly improved passenger safety. It also provides passengers with a view of the central square and 'front door' of the campus, orienting visitors as they arrive.

CAFÉ AND NURSERY

University Nursery

client **University of Warwick**

architect **MJP Architects**

net cost **£1m** area **720 m²**

social focus with dual use

design for flexibility

Green Belt setting

A café and a nursery for 80 children are united in a new pavilion on Warwick University's campus, forming a social focus for nearby student and staff residences.

The building is set where well-used footpaths meet to enliven the campus and encourage passers-by to drop in. It is designed as a light, low pavilion nestling into its site, which is next to a lake and within the Green Belt. The café and nursery open to gardens with views of the lake and surrounding landscape.

The nursery is designed to support the University's approach to child care: strong links are made between the 'home bases' and gardens, while a central 'street' provides a shared focus.

The flexible internal arrangement of the building allows the nursery to expand into the café for activities such as an After School Club, while the café can be used independently for private parties.

The building is formed of three volumes, prefabricated for speed of construction, clearly expressed internally and externally through form and colour. A generous flat roof sails over the building providing shelter for outside play and for the café terrace.

FACULTY ENTRANCE

Entrance, reception, art shop, gallery and informal learning space

client **Kingston University**

architect **Hawkins\Brown**

net cost **£440,000** area **620 m²**

refit of 1960s building

multi-functional space

maximises natural light

This new main entrance to the Faculty of Art, Design and Architecture also provides reception space, a gallery and informal learning space. The new spaces are located on the ground floor of a 1960s tower block, which despite being positioned in the heart of the campus was previously split into a number of small rooms and a fire escape corridor.

The architects worked closely with the University's property team and the Faculty to develop a brief enabling the strip-out and fit-out to be carried out during the summer recess.

The design approach was to open out the space, removing all partition walls to provide clear views of the river to the south. Levels of natural daylight were dramatically increased, providing an ideal environment for the gallery.

A 10m-long reception desk, which also acts as a counter to the art shop, was clad in plexwood, a sustainable material sourced with the help of the Faculty's Materials Lab. Screens to the gallery can be reconfigured to provide flexible display space.

On the south side of the space informal learning space is created by the provision of loose furniture and Wi-Fi. Glazed sliding/folding screens can be pulled together to create a more private area when required. These areas are all located next to the restaurant and café facility and connect with the riverside through French doors.

A signage system for the newly-refurbished entrance space and gallery was developed in collaboration with 3rd year graphic design students at the Faculty.

PLANNING AHEAD

Arrivals Square

client **University of Bath**

landscape architect **Hyder Consulting (UK)**

engineer **IMA Transport Planning**

net cost **£700,000** area **1.5 ha**

planning for future use

improved accessibility

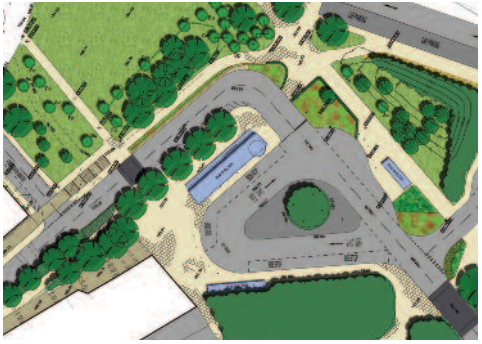
responsive to important landscape setting

A landscape design scheme to substantially enhance the external realm within Arrivals Square, the eastern gateway to the University's campus. Potential overcrowding of the area had been identified due to a combination of factors including more frequent buses, the construction of a new building nearby for use by 600 students, and recent enhancements to an adjacent area. The project's aim was to reduce these future use conflicts, while contributing to an attractive campus environment close to an Area of Outstanding Natural Beauty and the World Heritage Site of Bath City.

The scheme includes an improved public transport terminus, new multi-level pedestrian accesses, better facilities for cyclists, and significant upgrading of the campus landscape. The hard and soft landscape elements were designed to complement the existing campus environment, while also introducing contemporary design features. The incorporation of native tree species and local stone walling are particular responses to the character of the wider context. New specimen trees, ornamental shrubs and hedges, herbaceous borders and climbers were introduced to compensate for the necessary removal of some areas of soft estate.

As a result of the project, conditions for buses and passengers are upgraded, traffic-free through routes are available to pedestrians, and accessibility has been improved for those with disabilities.

Photo: Mark Cartwright



Hyder Consulting

Photos: Peter Durant

STUDENT WELFARE

Drysdale Building

client **City University**

architect **Shepheard Epstein Hunter**

net cost **£530,000** area **1,388 m²**

new hub space

promotes student services

improved space utilisation

This project transformed a dowdy circulation area in an existing building into a lively central hub for students to use as social space, somewhere to work between lectures, and a place to seek assistance and advice.

The scheme improves space utilisation by creating new teaching and learning space as well as relocating a number of departments. Circulation, accessibility and environmental conditions in working areas are also improved. New facilities include open plan breakout space with Wi-Fi connections; offices for appeals and complaints, and facilities for careers, health and counselling services.

Grouping the student facilities in one area has improved student awareness of the services available to them, enhancing their university experience.

The new spaces are bright and airy and the breakout areas are popular with students. High-quality finishes follow the University's specifications but include some distinctive material elements that are used to define zones within open plan areas. Office spaces link into the University's improved HVAC system, which uses efficient chilled water cooling systems, reducing energy usage.

Photos: Nigel Stead, LSE

URBAN PRESENCE

Public Realm Improvements

client **London School of Economics**

design **LSE Estates Division** signage **FWD**

net cost **£277,873** campus area **c. 2.7 ha**

cleaning and greening historic fabric

prioritising pedestrians

signage and wayfinding

LSE is situated in a densely populated area of central London and has very little external space within its main campus. In the summer of 2010 the School embarked on an ambitious plan to improve the public realm within the heart of the campus. The aims were to highlight the beauty of the School's existing historic buildings; to create an oasis of green within a wholly urban environment; and to provide a pedestrian and cycle-friendly route through which to access and enjoy the campus.

The stone cleaning of significant buildings provided a facelift to the gateway to the campus, creating a lighter and more spacious feel. Window boxes were then introduced to buildings along Houghton Street, 'greening' this key route with natural colour as well as addressing diminishing biodiversity.

Portugal Street, an important pedestrian intersection at the heart of the campus, was improved with measures to unclutter the streetscape, limit vehicular use and expand the pavement area.

This urban improvement scheme has revitalised the main gateways into campus and enhanced LSE's reputation by improving its civic presence. Part of the scheme included further additions to the School's public art collection such as the striking 'Blue Rain' light installation.

RECEPTION

The Welcome Project

client **University of Westminster**

architect **Rivington Street Studio**

concept interior designer **Holmes Wood**

net cost **£950,000** area **392 m²**

intervention in Listed building

improved accessibility and navigation

showcase for University

This initiative improved the entrance hall and front of house facilities at the University's 1911 Grade II Listed Regent Street campus.

Students and visitors are now welcomed by a vibrant and attractive interior, and the University is able to showcase its presence and project its identity to the outside world.

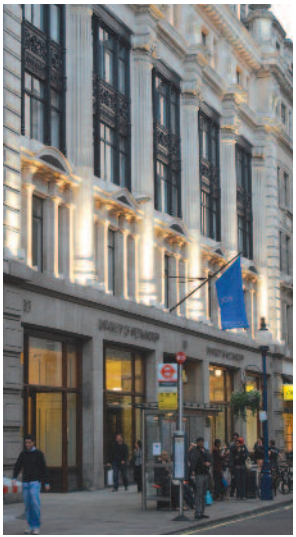
For the first time, full disabled access into the building has been provided and important accessible onward routes are now established. Internal navigation has also been clarified through the application of new wayfinding signage.

A flexible ground floor layout is designed to accommodate the changing needs of the University and enables the space to function as an events facility as well as social learning space and reception area.

The project included refurbishment of historic fabric including plaster cornicing, marble wall panelling and terrazzo flooring. These features are now highlighted by contemporary lighting and offset by a sharp, white Corian reception desk and hand-made leather armchairs and ottomans.

The new gallery/café is a cool white space with a glowing lightbox over a Corian servery. The gallery showcases art and media work and is open to the public. The mood of this space can be varied by changing the colour and intensity of illumination.

Photo: Marcus Tate



RECLAIMED SPACE

Lightwell Café

client **Royal Veterinary College**

architect **ArchitecturePLB**

net cost **£958,000** area **450 m²**

reclaimed space

improved circulation and legibility

promotes social learning

The challenge here was how to meet 21st century requirements for education and research within a 20th century building. By reconfiguring a 1930s building this scheme maximised investment by delivering extra accommodation at the heart of the campus without the need for demolition and replacement of any existing buildings.

An underused courtyard was enclosed by a new ETFE roof and refurbished to transform a redundant space into a vibrant social learning environment. Students and staff can now meet in an atmosphere more akin to a city square than an academic institution. The aesthetic approach and budget constraints determined a 'light-touch' conversion with a palette of self-finished materials, to produce a thermally-enclosed atrium that still retains the feel, light and acoustics of an outdoor environment.

A striking timber 'pod' at the centre of the courtyard is accessed from both first and second floors, and provides a semi-public reading room.

The space has opened up the College both physically and socially, improving circulation throughout the building and encouraging interaction between academic groups working on different floors. It has dramatically improved wayfinding and legibility, making the whole building more pleasant and enjoyable for everyone to use.

Photo: Tim Soar

SHOW CASE

Bennett Building Foyer

client **University of Leicester**

architect **Shepheard Epstein Hunter**

net cost **£235,000** area **233 m²**

showcase for departments

communicating to potential students

improved entrance sequence

An under-exploited entrance area has been transformed into a bright welcoming space that advertises the degree subjects housed in the building – geography and geology. Promoting the faculties, particularly with potential students at open days, was a key objective. The scheme has also created an active frontage to the building, which faces on to a lively square.

The project provides open areas for waiting, a clear and simple entrance sequence targeted particularly at new users, and areas for bold and informative displays of images and objects. Mechanical and electrical services and signage were also rationalised.

Consultation with building users focused on using their research in geography and geology to create an identity for themselves through displays within the foyer. These include rock excavated from the bed of a lake in the Lake District, a drill head taken from an oil drilling site in Texas, and satellite imagery.

Selective use of strong colour emphasises specific planes to bring out the underlying qualities of the building. Flexible lighting design with dimmable fittings allow users to lower the main lighting and highlight the displays for evening events.

Head of Geography Heiko Balzter said: 'The refurbishment has transformed the Bennett Building [...] Visitors at UCAS and Open days will leave with the best impression.'

Photos: Peter Durant

MEZZANINE

Student Activity Centre, Imperial College Union

client **Imperial College London**

architect **Swanke Hayden Connell Architects**

net cost **£550,000** area **460 m²**

reclaimed space

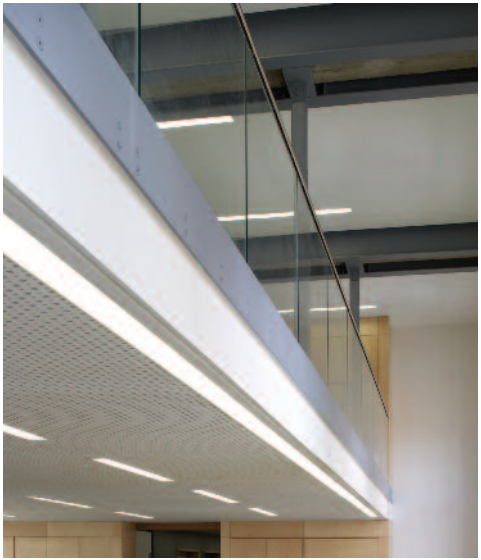
flexible office space

intervention in historic building

This second phase of a major refurbishment and restack to a 3,500m² Victorian building has provided high-quality facilities and services to the administration and conference departments of the Students' Union. The Union facilitates one of the largest student activities programmes in the UK, providing over 300 student clubs and societies and playing an important role in enhancing the student experience.

The key element of this project was to transform a double-height, redundant gym space into a suite of offices for administration staff and to insert a new suspended mezzanine floor to house an open access Student Activities Centre. This combines space for IT facilities, a meeting room, Advice Centre, breakout meeting facilities and reception. The flexible administration space includes a mix of cellular offices, hot-desking space and open plan areas and was designed to allow for future growth.

The newly inserted hanging mezzanine bridge is supported by new steels, which wrap around the existing exposed concrete beams so as not to add any extra load within this period building. A considered palette of materials ensures the new spaces sit sensitively adjacent to the exposed and stripped back features of the old building.



Photos: Hufton + Crow

Photos: David Barbour of DRB Photography

FOYER SPACE

Tait Building

client **City University**

architect **Rivington Street Studio**

net cost **£352,540** area **780 m²**

multi-functional space

maximises natural light

enhanced circulation

This modest but transformational project has transformed a poor-quality under-used space into a vibrant focus for students and University functions. The scheme addressed a drab first-floor circulation route serving the University's principal lecture theatre, where an internal foyer was bounded by anonymous offices serving the School of Engineering and Mathematical Sciences.

Re-planning the layout allowed the existing perimeter offices to be removed in order to enlarge the foyer and open it up to natural light. The circulation route through the space is maintained and leads to a new open office area with glazed screens that ensure views in and out and allow daylight to penetrate into the circulation routes.

The foyer is zoned to reflect its multi-functional nature: fixed seating along the window wall provides a social learning area while moveable seating in the central zone allows the space to readily adapt to support functions in the adjacent lecture theatre. Linear light fittings recessed into the ceiling mark the main circulation route while bulkheads to the perimeter areas conceal existing services. Circular acoustic panels are suspended from the central ceiling, which is also emphasised by uplighting.

A parquet floor has been refurbished, with an area for loose furniture defined by stain colour that subtly delineates the route to the lecture theatre.

Existing mechanical systems were reused but energy savings are still achieved with a combination of new energy efficient lighting and significantly improved daylighting.

STEAMPIPE BRIDGE

CHP Services Bridge

client **University of Birmingham**

architect **MJP Architects**

cost **£750,000** area **120 m²**

campus-wide energy strategy

University landmark

maintenance-free cladding

A 60m-long bridge clad in elegant stainless steel panels is a key element in a major project to extend the University's Combined Heat and Power network across a busy railway and canal. The CHP network is essential to the University's sustainable energy strategy. The bridge encloses steam mains and provides safe access for maintenance above the railway.

The bridge is located in a prominent position at the entrance to the campus and is the first thing that you see when leaving the station. Its striking tubular design with sinuous ventilation slots provides a landmark for the University.

The curved, laser cut, Grade 316 stainless steel cladding has been designed for extended life with zero cleaning and maintenance. The steel is 2k finished to achieve a surface roughness of less than 0.5 micrometres – meaning it has very small crevices, which don't attract dirt.

SPACE TO EXPERIMENT

Inspace

client **The University of Edinburgh**

architect **Reiach and Hall Architects**

net cost **£495,653** area **300 m²**

shop window for department

community engagement

promotes cross-disciplinary experimentation

Inspace is a progressive exhibition facility, functioning as laboratory, forum and social destination space for the Department of Infomatics. It provides a venue for experiments ranging from steerable robotic projectors and spherical interactive displays to dance-based interactive art.

Located within a new-build development, it offers a rich mix of buildings, public realm and newly formed streetscapes and also provides a prominent shop window for the Department. It was designed as a 'white cube' environment and incorporates the extensive technology required to run audio, projection, dynamic/static and wireless/hard-wired computer-interfaced interactive works.

Stretched ceilings constructed in non-toxic, recyclable PVC provide a homogenous lit sky behind which cables, fixing brackets, sensors and structure are hidden. 'Pufferfish' projection spheres, backlit blinds and white wall and floor surfaces provide the potential for all-round experimentation.

Inspace has established itself as a hugely popular venue among sectors of the University, arts and broader communities. Uncluttered surfaces, and lots of projectors mean that the space can be re-dressed in numerous ways, at very low cost.

Photos: Inspace

REPLANNED DEPARTMENT

Livingstone Tower

client **University of Strathclyde**

architect **Sheppard Robson**

net cost **£357,000** area **813 m²**

maximises natural light

flexible teaching space

improved user comfort

A redesign of internal spaces for a Department of Mathematics and Statistics located in a 1960s tower building.

The architects first gained an in-depth understanding of the Department's culture, aims and objectives through stakeholder engagement and analysis of the existing teaching, work and social spaces.

Subsequent design proposals were based on the key principles of maximising natural daylight and views (and therefore reducing energy consumption), optimising teaching space flexibility (and therefore future proofing) and ensuring user comfort through control of heating, cooling and natural ventilation.

The result is a range of spaces of different sizes, functions and qualities that allow occupants to work and teach in varying ways. Large teaching spaces can accommodate cross-departmental activities but are also sub-dividable through the use of folding partitions (with a high decibel rating to achieve adequate acoustic sound insulation). The use of internal glazed screens allows borrowed light to reach inner spaces, thus reducing the need for artificial lighting.

All spaces were upgraded to current standards including Disability Discrimination Act requirements such as induction loops, signage and increased door widths.

A building-wide colour scheme was also created as part of the project to give identity to the building as a whole and to aid wayfinding through the 15-storey tower.

FLEXIBLE FOYER

Keats Café

client **New Hunt's House, King's College London**

design **Wagstaff Interiors Group**

management **Ecovert FM**

net cost **£180,000** area **350 m²**

user consultation

improved environmental performance

social and working space

The brief for this refurbishment of an existing café was to develop the space to engage better with both students and visitors and to create a more flexible working and breakout area.

Users of the building were consulted, and the design solution concentrated on delivering as many of their requirements as possible.

The result was to open up the once closed café to create a more flexible space incorporating the main reception and foyer area. Different styles of seating encourage a variety of working styles: a bar area provides single diners with laptops a perfect place to sit, while the hub and booth sections create group working environments and social space. Data points and charging sockets are plentiful.

Moving the reception desk to a more central location in the space allows it to be seen from both entrances to the College. Other changes included rethinking the café's menu and moving existing fire escapes to achieve a larger kitchen area while maximising the capacity of the dining area (seating increased from 36 to 46).

Extending the facility with modular soft seating units and coffee tables allows the café to flow into the foyer area, creating a vibrant social space and meeting point for the campus as a whole.

Environmental considerations were important, with a revised LED lighting grid set on movement and heat sensors to reduce running costs.

GARDEN LANDSCAPE

External Improvements

client **Swansea University**

architect **Stride Treglown (landscape team)**

net cost **£800,000** area **3,650 m²**

improved accessibility

promoting historic assets

local materials and sub-contractors

Singleton Abbey is a Grade II Listed building situated on the Singleton Campus of Swansea University. Despite the fact that the Abbey is a significant asset for the University, the landscape of the spaces surrounding it was uninspiring with hard surface tarmac dressing predominant. As a result, potentially valuable spaces like the terrace and garden were underused. The University asked the architects to propose improvements as part of a review of its stewardship of its historic assets.

The landscape design strategy has combined a traditional formal layout (based on historic photographs) with the use of modern surface materials to rejuvenate the area while remaining sensitive to the historic Abbey. The project included the recreation of a garden terrace, with gravel bonded pathways defining herbaceous planted beds, as well as restoration work to existing walls and copings, and the resurrection of water features and a sundial.

Enhanced accessibility and inclusion is achieved through incorporating tactile paving, raised planter bed edgings, wide paths and lighting that responded to the various paving surfaces and patterns.

All surface water from the garden is directed through gaps in planter bed edgings to underground soakaways to avoid discharge into a storm-water system.

Local sub-contractors were employed to undertake landscape works, stone repairs and steelwork. Tree and shrub plants were supplied from a Welsh nursery, and planting was completed in seasonal phases to maximise the chance of their successful establishment.

Photos: Paul Highnam

RECLAD BUILDING

Refurbishment of Department of Architecture,

client **Queen's University Belfast**

architect **Todd Architects**

net cost **£750,000** area **1,020 m²**

improved environmental performance

enhanced user comfort

provides identity for department

The brief from the University was to work within a restricted budget to refurbish and rebrand a neglected 1980s building. A key project aim was to significantly enhance the building's energy performance and in so doing reduce overall running costs.

The architect focused on upgrading the external envelope for the benefit of the building users and to signal the re-branding of the building as the Department of Architecture.

The entire envelope was wrapped in insulation and then clad in a rainscreen system. The coloured flat panels in three tones of green are arranged in a tessellated pattern, with 'slot' lights introduced into one elevation to give night-time presence to the building. The original fenestration pattern was retained with new punch hole windows installed in existing openings.

New opening lights were incorporated into existing roof glazing to create natural stack effect ventilation and combat the problem of overheating in summer. These are linked to the BMS with optional over-rides for further user control.

Internally, the basic arrangement of open plan studios and cellular support spaces was retained with the addition of identifiable 'crit' spaces. Sliding/folding screens were added within the ground floor lecture space to further increase spatial flexibility.

Environmental conditions have been substantially improved with measures such as fixed blinds to the roof glazing and low energy suspended light fittings with up-lighting of the exposed slabs.

COURTYARD LANDSCAPE

College Courtyard

client **City University London**

designer **Churchman Landscape Architects**

net cost **£72,329** area **411 m²**

improved biodiversity

urban campus environment

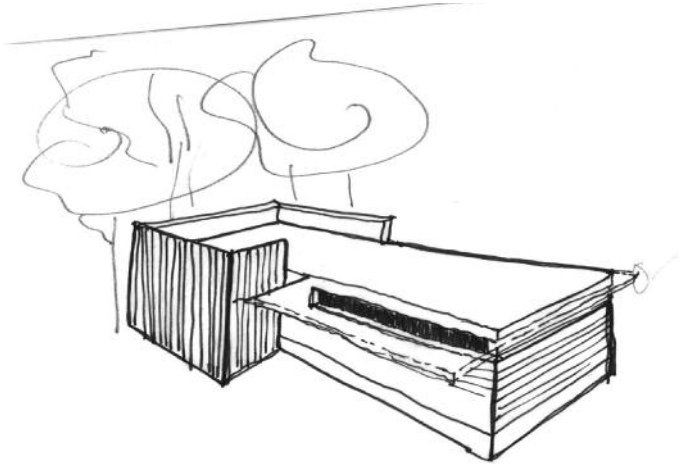
greening a hard landscape

The College Courtyard project is the first stage in City University's programme to reinvigorate its empty courtyard spaces. The aim is to transform an inner city campus that lacks dedicated outdoor areas by creating inspiring external spaces for students and staff while at the same time introducing habitat opportunities to improve biodiversity.

The courtyard is a hard space dominated by the surrounding facades and is also overlooked from the floors above. The scheme has transformed the ground level with features including living and mirrored walls, sculptural seating and a suspended deck with islands of bamboo. The landscaping not only creates restful spaces to sit but also provides a visual composition as the viewer moves up through the building.

A living wall planted with aromatic herbs and mirror walls are employed in playful juxtaposition, bringing light and life without compromising circulation. The performance space roof has been planted with a mosaic of woodland perennials and rock plants, which offer visual interest from above, abundant seasonal variation, and a habitat for invertebrates.

The project has already had a positive impact on the University's population. The fast delivery (site operations lasted just four weeks) and radical transformation of the courtyard by simple and bold interventions has even provoked a good response on Twitter as momentum gathers for further transformation of the campus spaces.



DATA CENTRE

Jurassic House

client **Bournemouth University**

architect **Nightingale Associates**

net cost **£518,455** area **141 m²**

long-term IT strategy

dedicated server building

in built future data capacity

This new facility to house the University's IT infrastructure is predicted to provide 10 to 15 years of future capacity.

The University's core systems and servers were previously housed in a server room built in the 1980s to house just a handful of machines. The room had become increasingly unfit for purpose, required constant maintenance and had reached full capacity with 300 servers.

After an in-depth study of various options the University decided on a purpose-built structure to house a new in-house data centre.

The form and detail of the building were kept very simple to reflect the nature of the building as a secure casing for the important machines within. Windows were unnecessary because the building is unoccupied, except for occasional visits by maintenance staff, and would also pose a security risk.

The building has two distinct elements: the server room and an adjacent space that houses cooling plant. These two elements are expressed externally in the form of contrastingly finished rectangular cuboids. The plant room is clad in ribbed steel composite panels that are run vertically to form a parapet. The server room has overhanging eaves and is finished in timber-effect high pressure laminate panels run horizontally.

A large brick plinth to the server room reflects the internal floor level, which was raised to allow ventilation and services access from below (it was decided not to set this service void below ground in case of flooding).

LEARNING RESOURCES

Penrhyn Road Campus

client **Kingston University**

architect **Pascall+Watson Architects**

net cost **£787,000** area **1,348 m²**

improved space utilisation and circulation

accessible archive space

maximises natural light

The overall aim of the project was to improve the student and staff experience within the Learning Resources Centre (LRC) and along the main ground floor corridor at Penrhyn Road, which is Kingston University's busiest campus. The proposition was to reshape and refurbish the heart of the campus to ease congestion and support a wide range of learning modes within the LRC.

Archives and Special Collections have been relocated to provide improved accommodation and enhanced access alongside the new learning café and refurbished group learning spaces. The design seeks to maximise efficiencies within the available constrained spaces by creating a flow of activities, introducing open plan arrangements and visual linkages. Even the specialist work of the archivist within the protected environment has been opened up to view through windows from the main campus corridor. A newly configured entrance provides for a mix of activities with a cluster of new helpdesks and consultation pods where staff offer individual support and advice in a warm and relaxed environment.

Pedestrian flow within the campus corridor was previously cramped while a low slung suspended ceiling concealed heavily congested service routing above. By removing a string of cellular offices additional space was gained for both the LRC and the corridor circulation. Services were rationalised in order to regain natural light from previously covered windows – creating a much higher, lighter volume.

BAR + ENTRANCE

Students' Union

client **School of Oriental and African Studies**

architect **QMP**

net cost **£958,500** area **625 m²**

culturally responsive spaces

recycling and reuse

consultation with students

The design of the Students' Union at SOAS is a contemporary response to the wishes and aspirations of students. Over 200 students were consulted in a spot survey in order to fulfil the social and cultural requirements of a full spectrum of nationalities. The spaces were configured to ensure that all cultures are able to use the social and relaxation spaces, as well as recreation and study areas.

A contemporary Art Deco ambience was created for the bar area, while an ad-hoc, eclectic style was applied to the surfacing. In addition to sustainable measures such as natural ventilation to support the mechanical system and low-energy lighting, the project incorporated recycled elements. A timber countertop and the stair treads of the previous 1970s bar were incorporated into the new design. Recycled granular rubber flooring was sourced by the students, and a communal laptop and phone charger powered by a bicycle found their way into the final scheme.

The larger elements of the project – the bar and the new 'floating' stair – are offset by a simple backdrop of painted rough concrete, which retains the scars of previous renovations.

Murals created over the years by SOAS students were protected and maintained during construction, and remain to this day as a memory of past generations.

LISTED REFURB

Electra House Refurbishment

client **London Metropolitan University**

project manager **Mace**

architect **Cartwright Pickard Architects**

net cost **£915,000** area **677 m²**

improved space utilisation

promotes interactive group learning

intervention in Listed building

Electra House is a Grade II Listed building by John Belcher Junior, a founder of the Edwardian Baroque style. In this project the University worked with Mace and the architect to refurbish the basement and fifth floor, which housed respectively an underused cafeteria and cellular teaching rooms and offices.

On the fifth floor, the refurbishment has created postgraduate teaching rooms for the business school. Structural openings in existing walls have created larger teaching rooms while respecting the original features. A breakout space with touchdown computer facilities and soft seating encourages collaborative working.

The vaulted basement has been refurbished to accentuate existing features while providing a state-of-the-art learning environment – each barrel vault is now host to a 'technobooth', comprising booth style tables and seating around a large screen to encourage collaborative and interactive group learning. Strategic structural breakthroughs were incorporated into the scheme to ensure visual connections and make the windowless area feel less enclosed. The artifical lighting scheme celebrates the vaulted ceiling to create a focus for the space.

Both areas are now very well used and have undoubtedly improved the learning, teaching and social experience of the staff and students studying and working within the building.

Cartwright Pickard Architects/Daniel Clements Photography

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