
Post-Occupancy Report – The Millennium City Building

University of Wolverhampton
January 2005

1.0 Introduction

The Millennium City Building was the first project in the £26million University of Wolverhampton 'New Horizons' Phase 1 Masterplan. It was undertaken to provide a home for the School of Humanities, Languages and Social Sciences (HLSS) and the Department of Psychology in a landmark £20million building. The 'MC Building' incorporates substantial general-purpose teaching space, a large lecture theatre, Specialist Psychology facilities, the campus restaurant and an exhibition area. Planning for the building started in 1998, construction was completed by July 2002, occupation took place in October 2002 and the building was officially opened by Rt Hon Gordon Brown MP, Chancellor of the Exchequer, in March 2003.

1.1 The Report

In writing this report, the format and methodology of the Higher Education Design Quality Forum (HEDQF) was followed. The forums were Chaired by Eleanor Magennis, Resident Architect at the University of Strathclyde, Glasgow and a HEDQF endorsed Post-Occupation Evaluation Facilitator.

1.2 Project Context

The need for a building and a University Masterplan became apparent in 1998 during a conversation between John Rushforth of HEFCE and the Vice-Chancellor, John Brooks. It was noted that much of the University estate was building category 'C' and 'D'. At this time, a space planning exercise was undertaken by Bond Bryan Architects which demonstrated low space efficiency. There was also a feeling that there were too many University sites and that students were being forced to travel far more than deemed necessary. It was thus important for each campus to be evaluated and synergies between schools and locations to be reviewed and it was finally concluded that it was best to close Dudley Campus and bring HLSS to City Campus, Wolverhampton. HEFCE agreed that this was a suitable way forward. The previous MC Building had an estimated 40% usage. An Options Appraisal exercise was undertaken where a number of sensitivities were balanced and this showed that, if the status quo was maintained, preserving the existing MC Building would cause financial hardship to the University. The decision was taken by University Executive to demolish the existing MC Building and to construct a new, much more suitable and efficient building, and planning commenced.

1.3 The Forums

A series of forums were convened to inform this report. The prescription of the HEDQF was followed and the forums took place throughout the day, on Tuesday 17th September 2004, in the Council Room, MA Building, City Campus South. These forums were:

- Context and Design
- Construction and Cost
- Space and Management

- Environment and Sustainability

All principal members of the Design, Construction and 'Client User' teams were present or represented. All the data and documentation that informed this report is available from the University's Project Office. Key points are in bold type and the report concludes with general recommendations.

1.4 The Project Team

The Project Architect was RMJM Ltd, the Project Manager was Francis Graves Ltd and the Building Contractor was HBG Construction. Kevin Lloyd, Arthur Adair and Barry Addison represented these firms respectively. The University appointed its own Capital Projects Manager, Anthony Turner, towards the end phase of the project but before that point Dick Bailey, the Director of Estates, represented the University. At the start of the undertaking, the University convened a 'Core Team' steering group comprising of key personnel, assisted by the new Project Office, which oversaw the Masterplan, including the Millennium City Building development.

2.0 Summary

The project definitions outlined the intended benefits of the facility.

The Millennium City Building

The Vision for the Millennium City Building was outlined in the University of Wolverhampton Masterplan document, March 2002. This stated:

"The New Millennium City Building

- A new base for the School of Humanities, Languages and Social Sciences
- Specialist centre for Psychology research and teaching

The new 'MC' building will be ready in 2002 and will create over 10,000m² of purpose-built space. It will mark the skyline with a clear symbol that Wolverhampton is a great centre of learning.

The building will provide:

- Flexible, fully-equipped teaching space
- 300 seat multi-media lecture theatre
- Social learning space, including coffee bar, internet access and group learning area
- Exhibition space, providing a quality venue for local, regional and student exhibitions
- Food court-style catering facilities"

3.0 Briefing

The Masterplan was based on a vision articulated by the Vice-Chancellor and this was later written-up and accepted by the University Executive Committee. It was evident that a HLSS/Psychology building was required and that professional advisors would be required to develop a Masterplan. A subsequent OJEC process was undertaken and Chesterton's Ltd was chosen as Consultant Surveyors, RMJM was appointed as Consultant Architects and DL&E as consultant Quantity Surveyors.

There were many revisions to the brief prior to it being accepted.

At this time, the Director of Estates was nearing retirement. On his suggestion, the Services were grouped together under a 'Director of Facilities' and the Project Office was established to assist in developing the Masterplan and enhancing the 'New Horizons' projects, including progressing the brief for the MC Building.

External Parameters

The site of the original MC building was chosen as demolition would provide the only viable available space on City Campus South. It was also agreed that it was also a very good position in the city for the future building to make a 'statement'. As the Project Architect, Kevin Lloyd from RMJM stated, the site was good but placed environmental constraints, such as limited space and a compact construction area. The budget was supported by external funding and thus had a very strict ceiling which could not be surpassed.

Developing the Brief

After deciding that a new build was essential, the University moved onto developing proposals which included such facilities as a Lecture Theatre, teaching rooms, an exhibition area and a refectory. All these facilities were initially included in a proposed floor plan, which had the building at a 45-degree angle to its eventual location. This was developed for 6-8 weeks, and as part of the process, this was discussed at length with Wolverhampton City Council (previously Wolverhampton Metropolitan Borough Council prior to City Status) who was extremely enthusiastic about the project. Further influence developed when CABI became involved, on the invitation of the Wolverhampton Planners. According to the Project Architect, this involvement proved problematic. CABI were proposing a more consultation-based strategy which slowed down the programme for four months as two members of the CABI committee wished to further evaluate the site. A three-way consultation process started between the Project Architect, the University and Wolverhampton Planners supported by CABI. As this consultation process progressed, the 45° proposal became increasingly unpopular. Kevin Lloyd considered working with CABI to be a very positive process which drove the Architects and University to significantly re-consider the design. On this consultancy, rotating the building by 45° to its ultimate position actually resolved many existing problems and unlocked many opportunities.

The main conflict with CABI was that they considered it as a 'Gateway' to the University and wished to have a major entrance on the front into the campus. For security reasons, the Architects and University felt that this was not feasible. It was suggested that CABI were maybe not close enough to the project and the University to understand the reasons why this proposal was so unviable and unattractive. It was felt that their advice, had it come at the start of the development, would have been more appreciated. As their opinion was received at the later stage, the benefits were tempered by a negative effect on the programme.

As the proposal became further developed a variety of requirements and priorities became evident. The Architects and members of University Senior Management felt that a 'statement' and a strong visual impact were essential. However, the Estates Department saw a sturdy, useable building as being paramount. Through the Post-Occupancy Forums, it became clear that, although there were constraints on the site and strict limitations on the budget, it was still possible to reconcile all these requirements satisfactorily.

As the Masterplan was being progressed, the University developed its own set of space norms based on those of HEFCE and these were used on all subsequent projects. These norms could not be used for non-standard space, such as the catering area, where space was judged on projected usage. As the MC Building project proceeded, other facilities such as more extensive staff changing areas were value-engineered out of the proposal as they were not deemed as being essential for the campus. Kevin Lloyd stated that he found the space norms very useful in planning and could test whether the space allowances proposed would be suitable.

Project Management

An interview process was undertaken with potential consultants and the panel comprised of members of Executive, Core Team and the Estates Department. There was no designated internal Project Manager until the first floor of the frame was constructed and up until that point Dick Bailey, the Estates Director, had undertaken the role. The University appointed an external Project Manager from the start. Chestertons were appointed initially, but the University parted company with the firm and appointed Francis Graves Ltd. At the later stages, Anthony Turner stated that he undertook much of the overall Project Management himself, as the external Project Manager was not pro-active. In the project, Francis Graves did act as a Project Administrator.

At this time, to expedite Building Projects, the 'Core Team' was set up in the University and was essentially a cross-section steering group for all estates matters. This was a direct result of the MC Building Project and was agreed as being an extremely positive development.

Recommendation: To set up a 'Core Team' to streamline the University committee procedure and ensure key decisions can be made timely and effectively. (Or similar high-level steering group.)

Financial Management

The finance available was determined originally by DL&E. The Budget was based on a contribution from HEFCE and the Governors agreed a project cost in the first instance.

Once the project was running DL&E became the appointed cost-consultants and checking of the cost controls were the responsibility of the Project Team, which reported ultimately to the Core Team. A financial report was submitted monthly to the University's Executive Committee. This was considered a good and useful practice, which was continued.

There was a comprehensive 'Value Engineering' exercise undertaken during the project. RMJM appeared frustrated as they had to reduce building costs down to a set level, even though they disagreed with the cost estimates, whilst still having to achieve the high level of quality demanded by the University. It was deemed not as a cost-cutting exercise but a significant 'value engineering' exercise. Those present considered that the exercise added considerable value to the eventual building. This was most evident in the extra floor that was added which enabled removal of another portion of the building. This reduced fire-prevention measures required and started considerations on other major savings and rationalisations.

The build-cost was under budget but the overall project budget was met as the provisional sums (Catering etc) were underestimated. The Estates Department noted potential problems due to large provisional sums and an inadequate schedule of rates. These theoretical problems did not materialise, but this was deemed as a result of good fortune and not design. The recommendation from the University's Professional Team was to factor-out provisional sums where possible, although it was recognised that, in practice this was not always possible.

4.0 Design and Construction

4.1 Architects

RMJM was appointed as Consultant Architect and moved on to become the Project Architect without a formal interview process. The University did speak to previous HE clients of RMJM, including University of Westminster and Caledonia University, Glasgow, as well as undertaking visits. Andy Stewart also met with their energy managers. These interviews and visits demonstrated that RMJM could realise the vision of the University.

Local, smaller firms were not considered as it was felt that such companies could not achieve the results required. This was mainly due to a perceived lack of resources and inexperience with such large-scale projects. Property Services did recognise that smaller local firms could have inherent benefits, such as an existing relationship through repeat-business, but ultimately realised that larger 'big name' firms would be more appropriate.

4.2 Contractor

A matrix of criteria was drawn up. DL&E managed the tender process. OJEC processes were followed and between the two methods, a shortlist of interview candidates was drawn-up. Experience of education buildings and proven experience of design-and-build contracts were paramount, with cost also being an important factor. Design awards and published achievements were not specifically addressed in the matrix, but proven quality in previous projects was a significant factor.

There were a few issues with the structural design which caused a problem. The fact that the steel provision was insufficient was initially realised by the Contractors. A second check confirmed that the steel had indeed been under-specified and the issues of culpability and recompense duly arose. Although this was a purely contractual issue, the University became involved and those present agreed that this was inappropriate and it hindered good working relationships.

It was conjectured that the success of a project depended greatly on the key people in the Professional Team working well together. RMJM focussed heavily on actual key personnel during the contractor interviews, to the benefit of the project.

5.0 Building Management

5.1 Occupation

Jayne Daley, a member of Campus Operations, was temporarily situated in the MC during and after occupation and acted as a 'point of contact' for questions and issues. The move, and the way that the occupation was handled, was deemed as a success.

Recommendation: A member of staff to be appointed to oversee the occupation and to act as a single point-of-contact for all occupation-related issues.

Those present recommended that events were not arranged before a project was finished. The City Ball was held in the refectory/hospitality suite area but the building was not completed and although there were no major problems, it did cause significant inconvenience and undue pressure on all staff involved.

Recommendation: For events not to be arranged prior to completion of projects.

The decant was planned and managed by Pete McGloin, the University Change Manager and Kevin Morgan, the Planning Officer.

Because the handover took place later than planned, the equipment could not be tested before use. Fortunately, Catering did not require significant amounts of equipment to be moved.

6.0 Staff Users

Positive Feedback

The feedback from University Staff had been distinctly positive. Positive feedback had been received, throughout the University and was mirrored by the staff present in the Post-Occupation Forums.

Developing the brief

The main conflict with CABE was that they considered it as a 'Gateway' to the University and wished to have a major entrance on the front into the campus. For security reasons, the Architects and University felt that this was not feasible. It was suggested that CABE were maybe not close enough to the project and the University to understand this the reasons why this proposal was so unviable and unattractive. It was felt that their advice, had it come at the start of the development, would have been more appreciated. As the advice was received at the later stage, the benefits were tempered by a negative effect on the programme and this disappointment was conveyed by the University staff present in forums.

Recommendation: For all external consultants to become involved in projects at the first possible opportunity.

Post-occupation uses

The MC Building, along with the Harrison Learning Centre extension, was used in publicity material, including the University Prospectus. Wolverhampton City Council, RMJM and HBG also used the Millennium City Building in promotional material.

The City's Annual Ball was held in the Millennium City Building.

Issues / Opportunities missed

Representatives of the Facilities Department felt that there had been significant opportunities lost by not developing novel solution for the mechanical and electrical

services. The most significant oversight stated was that CHP (Combined Heat & Power) was not used in the development.

Successes and recommendations

Far less vandalism problems were reported in MC than in similar University buildings and this was put down to students feeling proud of the facility. The Social Learning Area still had the same PC's, flat-screens and accessories as were installed on completion.

Those present at the forums agreed that the internal planning process was very good; utilising expertise the core group and user groups. Clear lines of responsibility were very effective, especially as they were not constrained by over-complicated committee structures. Strong direction from the University Senior Management on occupation assisted the planning process further.

Consultation with CABE was a positive thing, but had its drawbacks.

Anthony Turner stated that the project was relatively straightforward due to a clear brief which never significantly altered and a determination from the University to keep to the brief throughout. The brief was clear and comprehensive and time was well spent developing it, and staying focussed on it.

A few important lessons had been learnt; specifically, the integrated nature of the team required. IT Services were involved, but the Project Team failed to notice that the active-systems had not been specified. Problems and alterations with teaching walls meant that the University subsequently requests input for the furniture people and AV specialists at the earliest possible opportunity.

Susan Warrender explained that the design of the Catering area was significantly flexible and allowed regular alteration.

It was felt that HLSS students were attracted by the City location of the main building. The Psychology Department were pleased with the improved facilities, decent sound-attenuation and improved heating. Ultimately, it was felt by the Psychology Department that they had been 'listened to'.

Conflicting demands

Conflicting demands became evident when the academic users became involved and the Director of Estates brought together a 'user group'. Roy Newton explained there were also smaller dedicated groups of users who worked with the service departments (IT services and Facilities). All requirements, conclusions and decisions from these groups were monitored and signed-off by Core Team. Anthony Turner noted that there were problems due to conflicting demands, but no more than would be expected from any similar project.

Conflicting demands arose due to the proposal to move away from cellular offices towards shared-office spaces; a proposal not welcomed by many members of staff. However, through space analysis being consistently applied, combined with decisive instructions from the Vice-Chancellor, the shift from cellular offices was achieved. In this project and all following building and refurbishment projects, the University used

a very approximate norm of 10% cellular offices amongst staff; usually for Deans and Senior Management.

Problems with interviewing students were raised as an objection to shared-offices. This was resolved by providing separate interview rooms which, although it may not have pleased staff, anticipated operational difficulties and subsequent objections.

Lifts

From the onset of occupation, it became evident that the lifts could not cope with the volume of traffic. Sarah Ricketts explained that a similar specification to other lifts within the University had been used but that, due to the massive usage, this was not sufficient. As a result, higher-specification machinery was retrospectively fitted.

Exhibition Area

The Exhibition Space was deemed as being distinctly underused; being used for only a few art shows, open-days and exams. The area had originally been discussed with, and signed-off by, the Dean of the School of Art and Design. However, on completion, the School stated that they could not use the area. At the time of the Post-Occupancy Review Forums, usage of the area had still not been satisfactorily resolved and although discussions were ongoing as to how best this facility could be utilised, the area was not considered as a success.

7.0 Recommendations

1. To set up a 'Core Team' to streamline the University committee procedure and ensure key decisions can be made timely and effectively. (Or similar high-level steering group.)
2. A member of staff to be appointed to oversee the occupation and to act as a single point-of-contact for all occupation-related issues.
3. For events not to be arranged prior to completion of projects.
4. For all external consultants to become involved in projects at the first possible opportunity.

Eleanor Magennis
Marek Hammond