



Driving campus regeneration through effective project management

The strategy behind delivering a challenging
refurbishment at the University of Leicester



Summary

Breathing new life into historic buildings on a busy, working university campus is not without its challenges – delivering a successful regeneration project requires a bespoke approach and understanding of both the sector and the unique aspects of working on what are often protected buildings.

As well as the obvious practical considerations involved when working on an historic building and the need to ensure student and staff facilities remain operational, a range of stakeholders with differing interests must be sympathetically managed.

The Engineering Building at the [University of Leicester](#) is one of the most iconic and architecturally important buildings of its era, designed by Gowan and Stirling. A case study examines this challenging £20 million renovation project, highlighting a number of innovative solutions put in place to ensure the scheme was a success.

This paper reveals how important the role of effective project management is in delivering schemes at historic and often iconic buildings within a higher education institution.

It takes a closer look at the unique challenges facing universities in managing the refurbishment of its historic and often protected stock and the mechanisms that can help resolve potential issues along the way.

Contents

Summary	2
Introduction.....	3
Unique challenges of historic buildings.....	4
Managing risk.....	5
Delivering a successful project	6
Case study – University of Leicester.....	7,8,9
Discover Pulse	10





Introduction

The higher education sector is more competitive than ever before as universities attempt to attract the highest calibre of students, staff and researchers from across the globe. In practical terms, that means providing the very highest quality teaching and learning environments and social infrastructure that students expect.

Balancing that with the need to maintain and preserve beautiful, historic buildings on campus is a real challenge. They provide character and charm, which is hugely attractive to many potential students, as well as play an important part in our history.

A combination of numerous stakeholders and potentially difficult construction conditions call for innovative and effective project management to ensure the smooth running of a project – and ultimately the delivery of high quality facilities suitable for the student population.

The Engineering Building at the [University of Leicester](#) is often described as one of the most iconic buildings of its generation – and one of the most protected in the UK. A seemingly simple brief to replace its glass roof and façade and improve the environment inside with upgraded M&E (mechanical and electrical) performance posed a series of practical challenges as well as those created by the presence of multiple stakeholders.

This case study will examine the approach taken to delivering this project and how risks were managed throughout to ensure the successful completion of this unusual renovation. We will look at the techniques employed in delivering a project of this nature and examine the importance of effective project management.

We will examine how to effectively engage with and manage multiple stakeholders as well as the importance of understanding the legacy risk associated with working on historic buildings.

Finally, you will see how Pulse Associates' holistic approach has delivered a successful result on a challenging project within the higher education sector.





Managing the unexpected

One thing that we can be certain of when looking to take on a renovation or extension project at an historic building, particularly one located within a bustling university campus, is that unexpected issues will present challenges to the team.

How those risks and challenges are managed will play a pivotal role in the success of the project.

By implementing a robust Project Execution Plan (PEP) with a master programme, as well as a rigorous change control procedure throughout, potential problems can be foreseen and planned for.

However, it is when unexpected issues arise that a project manager is worth their weight in gold. No matter how carefully planned, projects involving historic buildings can throw up surprises along the way.

Finding solutions

When developing the brief for what will be a difficult project, with numerous hurdles to be overcome, it can be easy to write it off as unachievable; this is particularly so amid a backdrop of multiple stakeholders and the need to keep an important part of a campus operational.

By employing a project manager, you have an expert on hand to find solutions when potential problems arise. Rather than getting bogged down in the issues, which can be easy to get sucked in to, a project manager will use their expertise to be able to cut through the noise and devise appropriate solutions.

They will also be able to ensure that all stakeholders' points of view are heard and any comprises communicated effectively.

In bringing the team together to deliver a collaborative solution, issues that could seem insurmountable are overcome and a successful project completed – and ultimately, historic buildings preserved for future generations.



Managing risk: Procurement

Taking a traditional approach to procurement may not be an option for universities looking to take on renovation or refurbishment projects or extensions involving historic buildings.

For contractors, a combination of difficult technical aspects of delivery as well as the heritage risks associated with an historic or listed building create nervousness. The project may also require a bespoke installation solution, which adds additional legacy risk.

As such, the balance of risk is often disproportionate, which can often inflate costs to the point where a project would become unviable using a traditional procurement route. This is particularly challenging against a backdrop of strict university governance regulations.

Pulse Associates is experienced in working alongside organisations in developing a bespoke approach to procurement when a standard route isn't practicable.

Managing risk: Stakeholders

Unlike many schemes, the renovation, refurbishment or extension of an historic building presents a unique challenge in terms of the number of stakeholders involved.

Protected or listed buildings may also be of interest to heritage groups and other local stakeholders rather than simply an organisation, contractor and supply chain.

Input may be required from organisations such as Heritage England or civic societies, which come with a different agenda and priorities to those organisations looking to bring schemes forward.

Projects within the higher education sector often include multiple internal stakeholders too, adding to their complexity.

Being able to effectively engage with and understand the differing requirements of all these different groups is essential in ensuring the success of such a project.

Balancing the needs of numerous organisations as well as overseeing the delivery of a scheme on time and on budget is where a good project manager is vital.





How to deliver a successful project in three simple steps

Once a project brief and budget has been decided, it's time to look ahead to how to manage it in practice. For many, project management is considered a dark art, but the success of a project can depend on it. Even for experienced project managers, as we have detailed within this paper, challenges are posed throughout a project involving an historic building.

Step One: Resource, resource, resource

It might seem obvious, but sufficient resource is a key element to ensuring a project is a success. Exactly what this looks like in practice will depend on the particular project; it could be a project manager spending time each week within the client team to help bring a challenging scheme forwards, or additional inhouse resource being drafted in.

In our experience, this is particularly true when approaching a challenging scheme such as the Engineering Building at the [University of Leicester](#) where a bespoke approach is required.

Step Two: Be prepared

As we have discussed throughout this paper, projects involving historic and/or listed buildings present a number of unique challenges. While some of those can be predicted, there will inevitably be those which can't.

Adopting a collaborative approach right from the outset allows you to create a really positive team environment in which everyone involved 'buys in' to making the scheme a success.

By anticipating potential issues through strong project management and the application of a robust risk register as well as working as a collective to ensure any problems are handled effectively will make even the most challenging projects easier to deliver.

Step Three: Trust the experts

When undertaking a project with the challenges associated with an historic or listed building, it is really important to trust the industry experts.

As project managers, for instance, our expertise lies in working alongside our clients and other stakeholders to deliver effective solutions to see a project through from conception to completion.

Particularly where there are many different voices, putting your faith in those people who live and breathe construction projects every day is essential.

At Pulse Associates, we are experts in delivering complex and challenging schemes within the higher education sector and have the expertise to deliver great results.



Case study: UoL



Case study: University of Leicester

The Engineering Building at the University of Leicester, one of a handful of university buildings in the UK designed by Gowan and Stirling, is highly acclaimed.

The building has been held up as the number one representation of post-war buildings in England by Elain Harwood who authored England's Post-War Listed Buildings. It was also included in a *Daily Telegraph* list of the top 30 most famous structures in the UK, alongside the likes of Hadrian's Wall and Stonehenge.

Constructed in the 1960's, the building features an impressive glass roof and vertical glazed panel which was in need of renovation.

Such is its historical importance, all parties involved in its renovation were required to sign a pledge showing their commitment to working in partnership and maintaining its status.

The brief seemed simple: change the existing roof and façade and improve the internal environment through upgraded, modern M&E performance. But the reality was far from simple.

This paper has discussed the challenges associated with the presence of multiple stakeholders – and that was absolutely the case here. Heritage England called for an exact replica, which technically proved impossible.

We have also discussed procurement: in this case, a traditional design and build route simply could not stack up financially and compliance was extremely challenging.





A bespoke procurement solution

Pulse Associates became involved in the Engineering Building after a number of false starts. While it was evident the University needed to take action, there was no clear route to market.

Under traditional methods, the project became unviable, so we had to think again. We worked alongside the University and its construction partner Lendlease to develop a more equitable route to market.

As well as technical challenges, the building's historic status meant additional risk. Not only that, but a legacy risk was also present as a result of the bespoke solution which was making contractors nervous.

We suggested a different approach; breaking the works down into trade packages, each of which were procured directly. This meant that the University was about to continue to leverage the expertise of Lendlease, which set up a live site above an operational building through the use of tension netting and crash barriers, but also transfer performance risk down to individual contractors, satisfying internal governance requirements.



Clever project management

We knew from the start that this would be a challenging project that would require significant resource. Our approach to ensuring the University received this was to place Pulse Associates director, Ian Carey into the in-house estates team two days a week.



In doing so, we added real value to a challenging project and were able to take advantage of an improved knowledge of internal resource and possible issues to bring the project forwards more effectively.

We were able to identify nervousness and risk throughout the project and work alongside the University and other stakeholders to find and deliver an appropriate solution. For example, concerns were raised by the University senior team around the Holyrood* Inquiry

We undertook a comprehensive review of its recommendations and applied its conclusions to the logic of the Engineering Building – and all of the risks associated with Construction Management were captured in a risk register, which was reviewed monthly.

We also implemented a PEP and instigated a rigorous change control procedure both pre and post contract, and developed a project budget linked to the risk register that could cope with the challenges faced.

* Holyrood is the Scottish Parliament which was also procured via the Construction Management route





The results

Engaging with each of the stakeholders was an essential part of the success of this project. We worked hard to work in collaboration with everyone involved in the project and understand their perspective.

Throughout the programme, we undertook a series of well-timed interactions to make sure that each stakeholder was kept informed and their views considered, allowing for the successful progression of this difficult project.

We are hugely experienced in working with our clients and their stakeholders and understand how important it is to build honest and trusting relationships with them, which was a priority given the challenges we faced along the way.

We knew that compromises would need to be made – the University would have to compromise on its perfect position on transferring risk, the local planning authority wouldn't be able to see a solution before the project started and technical advisors would need to compromise on 'perfection' thanks to programme and cost restrictions.

In developing honest relationships with each of the stakeholders, we were able to manage expectations and ultimately deliver a building which serves multiple purposes – retaining its historical features while creating an environment in which students and staff are happy.

At the outset, no-one knew quite how challenging this project would be to resolve technically and to deliver. At times, challenges seemed unsurmountable.

For example, we hadn't planned for the tolerances in the steel once the roof was removed – or for the cradle on the roof of the main tower of the building coming loose in high winds.

However, by working in collaboration, and through the use of proactive and efficient project management the team was able to deliver a sympathetic renovation of a hugely important building.

The result is an award-winning project that everyone involved in can be hugely proud of – and that the University will enjoy for many years to come.



Steve Holgate, Director of Projects & Planning at the University of Leicester, said: "The Engineering Building is an important part of our campus and getting this project right was essential. We knew that it wasn't going to be easy, but by adopting a collaborative approach we were able to see this challenging project through to a successful outcome of which we can all be very proud."



Discover great project management with Pulse

Within this paper, we have highlighted just how important good project management is when it comes to delivering a project involving an historic building on a busy university campus.

Open communication and expertise in devising and implementing sometimes totally bespoke solutions are vital and can potentially mean the difference between success and failure.

Pulse Associates can programme, co-ordinate, direct and control the activities of your project team and those contractors appointed on your behalf, ensuring that your specific project criteria are achieved.

Our people are honest, diplomatic, commercial and creative and recognise that every single member of a project team plays an important role in its success.

We have extensive expertise in the higher education sector and understand how to advise you through the sometimes complicated development process. Our services can also be accessed via the Pagabo framework as well as the Crown Commercial Service Framework, ensuring ease of procurement.

To find out more about us and how we can help you, please visit www.pulseassociates.co.uk or give us a call on 0115 784 4790. Join the conversation on Twitter [@pulseassociates](https://twitter.com/pulseassociates) or email [Ian Carey](mailto:ian.carey@pulseassociates.co.uk).



Crown
Commercial
Service

PULSE ASSOCIATES
Your Goals, Our Solutions

PAGABO