

The Refurbishment Project Award is presented to the building project that most effectively demonstrates outstanding design and refurbishment to achieve high levels of user satisfaction and comfort and outstanding measured building performance, energy efficiency and reduced carbon emissions.

Entries should be for projects completed during the period **1 April 2011 to 30 September 2012**. Entries may be submitted by any or all members (together) of the project team. This allows for a full year of data on the actual performance of the building.

Please complete the entry form below. The headings reflect the judging criteria and the judges will be looking for you to provide the relevant information under each heading.

Project Details

Project name

As you wish the project to be referred to throughout the competition.

Green Refurbishment of Hollywood House

Project Address

Hollywood House, Church Street East, Woking, Surrey GU21 6HJ

Organisations

Please provide the names of all organisations that you would like to be credited in your entry. Please ensure that the company names you list are accurate as we will be reproducing these on screen and in print. It is essential that you have the consent of all those named below to include them.

Building Services Engineer:	MGDM
Building Owner:	M&G Real Estate
Building Occupier:	Skanska
Project Manager:	Click here to enter text.
Quantity Surveyor:	Click here to enter text.
Brief Consultant:	Click here to enter text.
Architect:	Click here to enter text.
Interior Designer:	Click here to enter text.
Mechanical / Electrical Engineer:	Skanska Rashleigh Weatherfoil
Contractor:	Skanska Rashliegh Weatherfoil
Investment / Property Company:	M&G Real Estate
Developer:	Click here to enter text.

Entry Details

Summary

Please provide a synopsis of the project and its building performance, low carbon and energy efficiency objectives.

Hollywood House is a very special and unique project. Negotiation of the UK's first Green Lease and Memorandum of Understanding developed a ground-breaking, collaborative and importantly, win-win relationship between landlord, M&G Real Estate, and tenant, Skanska. The project runs far deeper than a green refurbishment - Hollywood House offers a leading example to pave the future of green refurbishment, vital where 80% of buildings standing today will still be in use in 2050.

To date, the 1980's office building has been immensely improved; 55% reduction in carbon, 45% reduction in energy and 55% saving on water use have been achieved within this £3.2m commercial refurbishment. Skanska and M&G Real Estate are passionate about this success, producing case studies for the Building Better Partnership, UK Green Building Council and World Green Building Council. Awarded the highest LEED score in the UK at the time (96), the Skanska occupied floors of Hollywood House offer an impressive model for future green innovation and collaboration.

Please see attached documents for photos of the interior and exterior of the building.

Please outline how your entry meets each of the entry criteria – judges will be looking for information in each of the sections when assessing the entries:

Any documents, charts or photos can be referenced and included in your supporting documents.

One year's evidence of measured building performance and energy use data, ideally including a DEC and an entry on the Carbon Buzz site.

The DEC shows a reduction from G177 to C54. 2012 consumption:

- Electrical – 330,369kWh (with 17,426kWh from the PV's installed at the end of this period)
- Heating – 487,237kWh (450,319 from local Woking energy centre; 35,952kWh of gas; 966kWh solar hot water)

For comparison, 2008 consumption:

- Electrical – 1,295,081 kWh
- Heating – 574,431kWh

Special challenges, objectives or constraints and the design solutions adopted.

The objective:

- To transform Hollywood House from a relatively inefficient, high operating cost 1980's office building to a green retrofitted, future-proof, efficient space.

The challenge:

- Cultivate the complex relationship between landlord and tenant to get a green go ahead.
- To justify and overcome the commercial barriers to increasing capital spend as part of green investment.
- To develop a space which can both meet Skanska's green ambitions and secure a long term, cost-effective tenancy for the landlord.

Our solution:

- A detailed life cycle costing model was used to assess and justify the increased capital spend of the proposed green interventions. This revealed the project payback period to be 9/10 years and enabled the landlord to secure the building value through signing Skanska on a 10 year lease – an important gain in a difficult commercial market.
- The use of the Building Better Partnerships Green Lease format provided a standard framework from which the landlord and tenant could work from to agree long term performance targets and unlock green initiatives. For example, the Feed in Tariff part of the PV installation will provide payback for the system within the 10 year tenancy period after which the tariff and electricity from the PV's will return to the landlord.

Design Solutions:

- Removal of inefficient gas boilers provided space for rain water harvesting to offset toilet flush
- Roof was not compatible for PV cells, so a specially designed prefabricated frame was produced to enable 140m² of PV to be installed. The tenant gains with green energy, the landlord gains with long term financial benefits from the feed in tariff.

Specific elements of excellence and innovation in terms of design, equipment or application including lighting, heating, and cooling, façade or public health services.

Innovation runs deep in the Hollywood House green re-fit. The project's foundations are based on a unique collaboration between landlord and tenant, bringing both parties together for the first time to achieve high environmental goals as part of the green Memorandum of Understanding.

The project design phase was exceptionally innovative. Both landlord and tenant recognized the important opportunity to install a 140m² photovoltaic array on the roof to provide 20kWh of electricity. To overcome restricted roof space, a specially designed prefabricated support frame was supplied to hold the array in place (see photo in supporting documents).

Innovation is also exemplified by the holistic thinking surrounding the refit. For example, not only does Hollywood House embrace renewable energy – becoming the first commercial building to tap into Woking's district heating centre to enable 32% saving in carbon with solar thermal water – but the removal of inefficient gas boilers has provided invaluable space for rainwater harvesting devices to off

set toilet flush. And innovation doesn't stop there – connection to the Central Heating Plant (CHP) acts as a catalyst to investigate other opportunities.

Furthermore, Hollywood House goes beyond existing good practice. Piloting new technology, such as phase change ceiling tiles to help regulate internal temperature, means that green innovation can continue to be improved and incorporated in the future.

Finally, innovation extends outside the office environment. Electric car charging points support Skanska's current car fleet greening, and specified car-share parking space encourage sustainability for employees (see photo in supporting document).

Specific energy efficiency aspects of the project, such as energy metering, monitoring and targeting, use of recycled/recyclable materials and other low carbon features.

Energy:

- All white goods in kitchen areas are energy star rated, providing enhanced performance and reduced energy bills (see photo in supporting document)
- Installation of highly efficient DALI controlled lighting has reduced lighting loads and improved working conditions
- Improved Building Management System controls and proximity sensing – 40 energy meters measure and monitor electricity, heat and water throughout the building. This data is displayed around the building to show occupants the buildings performance and allow 'tweaks' to be made for optimal performance (see photo in supporting document).
- The Display Energy Certificate rating has improved from G to C representing a 45% reduction in energy consumption, saving £65,000 in total energy costs based on a 2008 baseline.
- Energy performance certificate has improved from F to C rating.

Materials:

- Wherever possible, existing furniture was recycled for the new office, contributing to the 95% recycle rate for the total project.
- Highly sustainable materials, were employed during re-fit. For example, the kitchen units, furniture and shelving were made from bamboo – a material favoured by environmentalists for its rapid growth rate and durability (see photo in supporting documents).
- The majority of existing floor tiles were recycled into plastic products, whilst replacement tiles contain 70% recycled content.
- Waste has been minimized at all levels; from 7 recycling waste streams for occupants to the replacement of plastic cups with ceramic mugs.

Carbon:

- Hollywood House is connected to the local energy centre's district heating mains via a combined heating and power plant (CHP) based on CIBSE benchmark TM46. Through this alone, a carbon reduction of 11% has been achieved.
- A solar thermal water plant on the roof has reduced emissions by 1.955kg (see photo in supporting documents).
- In total, carbon has been reduced by 55%

Evidence of costs and expected savings associated with these measures and anticipated payback periods.

- The Green Retrofit cost £3.2m in total, with green interventions comprising 10% of this.
- Life Cycle Costing has shown the green interventions to payback within 9 years – within Skanska's 10 year lease - based on conservative energy price inflation of 4.5%.
- Predicted energy reductions of 45% have been exceeded, resulting in a reduction of operating costs from £27m/2 to £14m/2.
- The power shut installed to switch off all monitors and chargers overnight has reduced night time energy consumption by 7% saving nearly £2500 in electricity costs.
- The achieved 45% reduction in energy consumption represents £65,000 saving in total energy costs based on a 2008 building baseline.
- In addition, the project has protected the landlord from potential future Minimum Energy Performance Standards legislation, and potential exemption from Carbon Reduction Commitments.

Description of commissioning, handover and soft landings processes, and how they contributed to achieving the designer's intended building performance.

A soft landing approach, as agreed in the green Memorandum of Understanding, ensures project teams can remain involved after practical completion to identify energy wastage and help the occupants gain full control over the building environmental systems.

Part of this approach is a process of continual improvement:

- The project team continually monitors consumption trends and operational performance.
- Training has also been given to both the landlord, M&G Real Estate, and tenant, Skanska covering building systems, design concepts and operational principles.

These two methods combined allow the mechanical, electrical and plumbing facilities to be fine tuned to reach optimal performance and help to realize the full green potential and efficiency a retrofit promises.

Evidence of collaboration between members of the project team that has contributed to improved performance.

The revolutionary collaboration between landlord and tenant, as part of the UK's first Green Lease and Memorandum of Understanding, is what has led to the outstanding success of the Hollywood House Green Retrofit.

Both M&G Real Estate and Skanska have attended workshops and site visits together. In addition, both sides have developed case studies to identify specific benefits and improve the overall delivery of the project. For example, Skanska was able to design and manufacture a specially prefabricated frame to install the PV array on the buildings roof, enabling the landlord to receive long term gains from the electricity feed in tariff scheme.

Regular communication between both parties has allowed learning to be disseminated and the project to be delivered on time and within budget. As a result, project outcome has been exemplary, with Skanska gaining an efficient work space with low operating costs in keeping with the companies green aspirations and M&G Real Estate able to secure the buildings value with a long term lease.

Evidence of any BREEAM or LEED assessment, or other third party evaluations.

- BREEAM rated Very Good on the Skanska occupied floors of the building.
- LEED Platinum score of 96 – the highest ever in the UK at the time (on the Skanska occupied floors of the building).
- Building energy savings externally verified under IMPVP
- A Post Occupancy Evaluation has been commissioned to learn from the project and inform future development

Further Information

Please provide any further information, evidence or references that you would like to include in your entry.

The successful refurbishment of Hollywood House has achieved much more than significant energy savings.

The project had a Time Lost Accident Rate of zero achieved with several safety inductions and training sessions to engage individuals from both Skanska and M&G Real Estate.

Work with M&G Real Estate, UK Building Council, World Green Building Council and Woking Borough Council has ensured this market leading refurbishment model is used as an example to demonstrate a successful greening project in a commercial situation.

Importantly, Hollywood House has inspired further green action:

- The creation of an Energy Performance Contract Market Offering where Skanska provide the initial funding for energy interventions which is recouped on a pay as you save basis from the client
- M&G Real Estate are looking into further opportunities to develop a green property portfolio

- Skanska has taken the Hollywood House model to 'green' their head office in Maple Cross.

The Green Retrofit of Hollywood House really is a model for the future!

Supporting Documents Check List

Entries should include supporting documents or evidence to supplement this written part of the submission. All supporting documents should be culminated into one PDF document for upload.

- DEC
- BREEAM Certificate
- LEED Certificate
- CarbonBuzz entry (please provide the link): Due to technical problems the CarbonBuzz entry will be submitted separately from this application, no later than Friday 20th September.
- Other (please specify): photos of interior and exterior of Hollywood House, bamboo kitchen and energy rated white goods, BMS, electric car charging point, PV on roof and solar hot water.