ACEI ASSOCIATION OF CONSULTING ENGINEERS OF IRELAND

ACEI Design Excellence Awards 2017
Nomination Form

Category (1) Mechanical & Electrical (M & E) Project
Category (2) Innovation Project (all disciplines)
Category (3) Overseas Project (all disciplines)

Company Details

Contact Name: **Damien Conaty**

Firm: **J.V Tierney & Co.**

Address: **The Tannery,**
53-56 Cork Street, Dublin 8.
Tel: 01 4214900
Email: dconaty@jvtierney.ie

Categories/Groups:

Project Category: M & E ☒ **Innovation** ☐ **Overseas** ☐

Project Group:
Small project (under €2.5m) ☐ **Medium project** (€2.5m - €10m) ☐ **Large project** (over €10m) ☒

Project Information:

Name of Project: **Eolas Building**

Location: **Maynooth University, Co. Kildare.**

Commencement date: July 2013 **Completion Date: July 2015**

Client: **Maynooth University, CPD Office.**

Contact: Mr. David Carr Tel: 01 708 6000

Design Team:

Architect Coady Architects.

Contact Anne Fletcher Email: afletcher@coady.ie Tel: 01 497 6766

Contractor Tracey Brothers

Contact Email: peter.daly@traceybros.com Tel: (028) 6632 3471

Authorisation to contact above: Yes ☒ **No** ☐

Project Details:

(1) Provide a brief outline of the project (Max 200 words):

The 8000sq. m Eolas Building at Maynooth University provides a state of the art Information Communications Technology facility for a number of different University departments and Institutes including undergraduate, postgraduate & research user as well as a Business incubation centre for start-up companies.

The Eolas building links to the existing Biosciences and Electronic engineering building through a new enclosed bridge at second floor level.

The building accommodates the Department of the Computer Science, Maynooth University Computer Department and the research institutes including IVI (The Innovation Value Institute), Hamilton Institute and Callan Institute.

Eolas provides increased, purpose built space for undergraduate teaching and research; and serves as a place for communal thinking, networking, sharing and mentoring. Eolas has the capacity to accommodate 575 University staff, researchers and MaynoothWorks (Business Incubation Centre) tenants and can teach 350 students in labs and lecture rooms at any one time.

(2) Provide a statement regarding why this project might be considered award winning: (Max 300 words):

Eolas is a landmark and bespoke building located in the heart of the North campus of Maynooth University. Eolas is the largest standalone building to be constructed on the Maynooth University campus demonstrating the University's desire to consolidate building projects and provide bigger flagship buildings on its campus.

The Eolas Building is clad in a bespoke perforated metal filigree cladding. The perforations are based on an abstract Binary pattern and of 'punch cards' used in 20th century data processing reflecting the character of the research and teachings within.

The building services solution delivered a number of low energy design and smart technology systems which include:

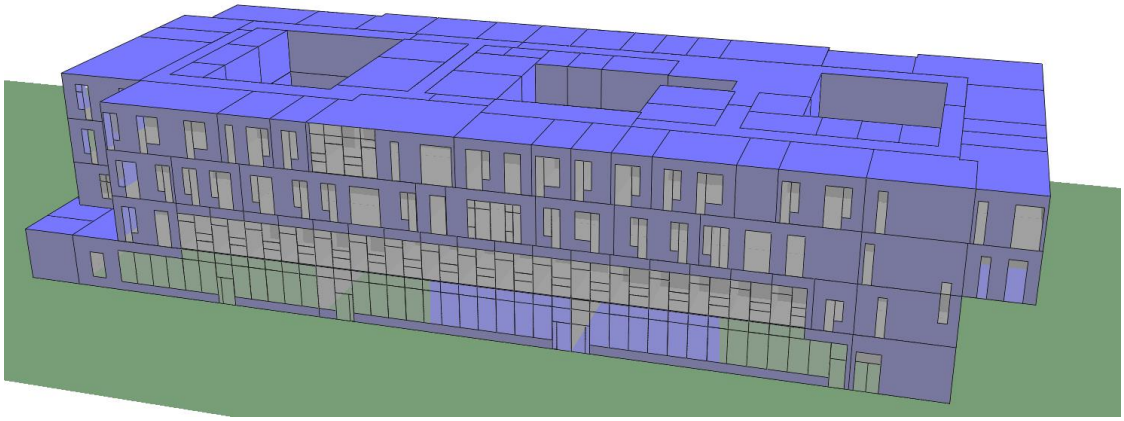
- Mixed mode ventilation which maximises the use of natural ventilation.
- High efficiency Plant.
- Underfloor Heating Systems in the Atriums.
- Building Energy Management system.
- DALI lighting control system with presence, absence and daylight harvesting controls which minimises the building lighting energy consumption.
- Facade management natural ventilation automatic window control system.
- Emergency Lighting DALI Automatic Testing System.
- Thermal mass cooling by the use of night ventilation, circulating cool outside air within the building.
- LED Feature lighting Installations.
- A wireless access control system integrated with other university services including cashless vending, canteen facilities and the library.
- State of the art IT and Wifi Network installation and infrastructure.
- High tech Audio Visual systems.

(3) Provide further details of the project such as: design elements / procedures; complexities involved; innovation aspects; site management and supervision; health & safety issues; project cost controls and any other relevant information (Max 500 words):

J.V. Tierney & Co. received a comprehensive brief from Maynooth University for the Eolas building and this formed the basis of our design brief and allowed us to compile the Building Services Report, M&E concept design proposals and cost plan for the project.

As part of the design procedure the Design Team had regular meetings with the client and the various stakeholders to review and discuss the design brief to ensure that the design team members understood all elements of the brief and that they were incorporated into all elements of the detailed M&E design.

An IES thermal model of the building was built to determine the heating and cooling loads, thermal comfort study including the achievement of detailed ventilation parameters, thermal comfort study, natural daylight study and the predicted BER.



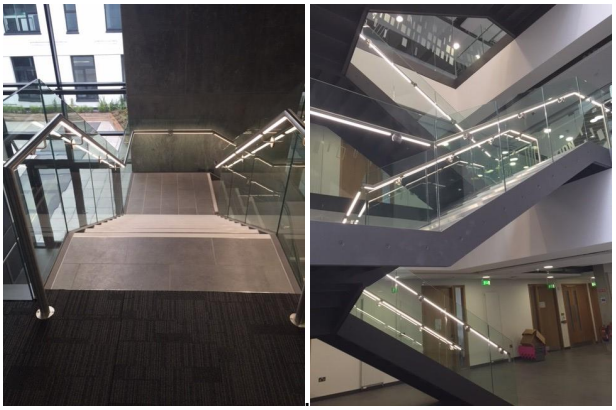
The MaynoothWorks Laboratories were highly serviced and complex with dedicated Mechanical ventilation Air handling units, fume cupboards, bio safety cabinets, lab gas installation (compressed air, nitrogen, natural gas, oxygen), gas monitoring and oxygen depletion systems, emergency shower and eyewash station, energy monitoring and general service power and IT services.

The anechoic chamber and Faraday cage room installation design brief was complex and included the design of a specialist room lighting system, in line filters on all incoming electrical and ICT services and also sound attenuation on the ventilation services.

There were dedicated biweekly client, site and M&E workshop meetings on site throughout the project construction. The Design Team and Main Contractor embraced the BCAR duties despite having no obligation to do so as the project commenced prior to the introduction of BCAR.

There were a number of innovative aspects to the project which included the bespoke metal cladding, LED feature lighting installation and low energy design and smart technology solutions.

There were also a number of specialist innovative LED feature lighting installations throughout the building which included the installation of general and emergency handrail LED lighting installation power via central battery unit.



There were a number of complexities on the project which included the construction of an enclosed bridge link at second floor level linking Eolas to the adjacent Bioscience and Electronic Engineering building.

The Main Contractor had a very good site structure and management team on the project which included a full time M&E coordinator on site. The full time M&E coordinator liaised on a daily basis with the domestic M&E Contractors and J.V. Tierney & Co. in respect of the M&E installation, coordination and programme.

The Mechanical Contractor acted as the lead M&E services coordinator producing fully coordinated M&E drawings and sections. There were also weekly site inspections by all members of the Design Team and these inspections were used to inform the Main Contractor and all other disciplines of any quality issues on site.

As part of the Design process all designers completed design risk assessments which were utilised to determine areas of risk which enabled them to be designed out where possible. A key decision made by the Design Team was to include a 1.1m high parapet at roof level meaning the roof space and all M&E plant are easily accessible without the need to harness's or specialist training.

Another key decision made by the Design Team was to install a raised services gantry at roof level to house all the Mechanical plant ensuring to protect the roof structure membrane.

The Eolas building was completed on time and on budget predominantly down to the good working relationship between the client, Design Team members and Main Contractor. The budget and programme were closely monitored throughout the construction phase with regular Client, Design Team and Main Contractor meetings on site.

Entries should highlight where possible the particular influence or benefit the project engineering design has on society and the wider environment.

Please confirm by electronic or written signature that:

ACEI Design Excellence Awards 2017

(a) The supplied text may be used in any marketing material issued in connection with the awards.

(b) Agreement has been received from the client and other stakeholders that the project can be inspected by the adjudicator and provide contact details as requested above for the relevant person to be contacted in this regard.

Signed: 

Firm: J.V. Tierney & Co.

Entry details:

Note: Applicants are encouraged to review the Awards Regulations and Procedures before submitting nominations.

Send the completed entry form and supporting photos / images altogether in **one PDF document** (one pdf document per project nomination) by email to: info@acei.ie with a subject line:
ACEI Design Awards 2017.

Note: Closing date for receipt of nomination forms: **17:00, Monday 16th January 2017**

Enquiries: ACEI office info@acei.ie 01 6425588