

TUS Technological University of the Shannon: Midlands Midwest Ollscoil Teicneolaíochta na Sionainne: Lár Tíre Iarthar Láir

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Dámh an Innealtóireacht agus an Timpeallacht Thógtha Faculty of Engineering and the Built Environment

> Department of the Built Environment Report of External Validation Panel

External Validation Visit, 28th April 2025

for the

# Higher Diploma in Engineering in the Energy Renovation of Traditional Buildings

## Embedded Awards:

Certificate in Engineering in Methods of Energy Renovation for Traditional Buildings

Certificate in Engineering in the Appraisal of Traditional Buildings

Certificate in Engineering in the Management of Traditional Buildings

Part-Time/Blended Mode: 1.5 Year Level 8 Higher Diploma

## **1.0 INTRODUCTION**

This report outlines in summary form the proceedings and findings of the External Validation Panel visit for the proposed:

## Higher Diploma in Engineering in the Energy Renovation of Traditional Buildings

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held on the 28th of April 2025. The external validation visit was undertaken in accordance with TUS Academic Regulations for the development of taught programmes. An external validation panel makes an independent impartial judgement on a programme proposal.

## 2.0 GENERAL INFORMATION

#### 2.1 Higher Education Provider

Provider	Technological University of the Shannon: Midlands Midwest
Faculty	Faculty of Engineering and the Built Environment
Department	Built Environment
Date of Visit	28 <sup>th</sup> April 2025

## 2.2 **Programmes Evaluated**

Programme Title	Higher Diploma in Engineering in the Energy Renovation of Traditional Building <b>s</b>
Award Title	Higher Diploma in Engineering
NFQ Level	Level 8

ECTS Credits	60 ECTS
Delivery Mode	Online/Blended
Proposed Starting Date	September 2025
Contact	Dr. Pat Gill/Mr Seamus Hoyne

Programme Title	Certificate in Engineering in Methods of Energy Renovation for Traditional Buildings
Award Title	Certificate in Engineering in Methods of Energy Renovation for Traditional Buildings
NFQ Level	Level 8
ECTS Credits	20
Award Class	Special Purpose Award
Delivery Mode	Online
Proposed Starting Date	September 2025
Contact	Dr. Pat Gill/Mr Seamus Hoyne

Programme Title	Certificate in Engineering in the Appraisal of Traditional Buildings
Award Title	Certificate in Engineering in the Appraisal of Traditional Buildings
NFQ Level	Level 8
ECTS Credits	20
Award Class	Special Purpose Award
Delivery Mode	Online
Proposed Starting Date	September 2025
Contact	Dr. Pat Gill/Mr Seamus Hoyne

Programme Title	Certificate in Engineering in the Management of Traditional Buildings
Award Title	Certificate in Engineering in the Management of Traditional Buildings
NFQ Level	Level 8
ECTS Credits	20
Award Class	Special Purpose Award
Delivery Mode	Online
Proposed Starting Date	September 2025
Contact	Dr. Pat Gill/Mr Seamus Hoyne

# 2.3 External Validation Panel of Expert Assessors

Name	Affiliation
Mr. John Vickery	Formerly IT Tallaght (Chairperson)
Dr. John Scahill	ATU
Mr. Colm Tynan	SETU
Mr. John O'Shea	Codema
Mr. Pat Barry	Jaguar Landrover
Ms. Geraldine Daly	Student Representative

Secretary to Panel: Dr. Sarah O'Toole – Tertiary Education Manager Ms. Claire Frawley– Quality Officer TUS

## 2.4 TU STAFF

Name	Affiliation
Dr. Maria Kyne	Dean of Faculty of Engineering and the
	Built Environment

Dr. Pat Gill	Head of Department of the Built Environment
Mr Seamus Hoyne	Dean of Flexible Learning
Dr Órlaith Borthwick	Head of Flexible Learning
Programme Team: Gearoid Carvil, Barry Goode, Seamus Hoyne, Brendan Lyons	

Cathal McNicholas, Elisabeth O'Brien, Edel O'Grady, Paul Vesey

## 3.0 FINDINGS AND RECOMMENDATIONS OF EXTERNAL VALIDATION PANEL

#### 3.1 Main Findings

The External Validation Panel of Assessors recommends approval of the proposed programmes subject to a change of award stem discipline to Science as follows:

## Higher Diploma in Science in the Energy Renovation of Traditional Buildings

#### Embedded Awards:

Certificate in Science in Methods of Energy Renovation for Traditional Buildings Certificate in Science in the Appraisal of Traditional Buildings Certificate in Science in the Management of Traditional Buildings

## Part-Time/Blended Mode: 1.5 Year Level 8 Higher Diploma

#### 3.2 Conditions

1) Change the title of the award stem from *Higher Diploma in Engineering* to *Higher Diploma in Science* to align with the content of the programme and the requisite standards of knowledge, skill and competencies of typical entry cohorts.

## 3.3 Recommendations

- 1) Include reference to the Common European Reference Framework (CEFR) for English language entry requirements. Amend references to IELTS entry requirement where relevant.
- 2) Ensure the application process clearly communicates the pathway for completing the three Certificates in the most appropriate order.
- 3) Review the programme document to ensure it references the most relevant and recent data throughout.
- 4) Review the specification of the programme learning outcomes (PLO's) to ensure there is a coherent set of PLO's that are written at a higher programme level (rather than multi-outcomes PLO's written at module learning outcome level).
- 5) In PLO1 change Define to Apply... the elements of project management necessary to define and complete a project in a specified timeframe

- 6) Review PLO6 and how the requirement to lead teams will be facilitated and assessed in the programme.
- 7) Review PLO 7 and the requirement to have a peer-reviewed journal published in the module.
- 8) Remove the reference to exemptions at a higher level within the documentation.
- 9) Consider setting up an alumni/student peer group to support graduates/students and fostering knowledge sharing.
- 10)Review the reading book lists to ensure the most recent and relevant version is listed, and that all books are available online.
- 11)Review the assessment schedule and the timeline for when the volume of assessments are due. Consider staggering these out more across the semester.
- 12)Site visits are an integral part of the programme and attendance is recommended by all learners. However, there should be no penalty applied to learners who are not able to attend due to other commitments.

## Module Specific Recommendations

- 13) Fundamentals In Energy Renovation Of Traditional Buildings
  - Remove the reference to Introduction to Waste Management under the Indicative Syllabus
  - Consider the timing of the MCQ to be delivered in week 6 instead of week 12 to allow for some formative feedback for students
- 14)Building Defects Detection and Analysis
  - Consider the practical implications for this module and how students who are not working in the specific field will have appropriate access to relevant examples of the building defects.
- 15) Traditional Building Regulation Energy Compliance
  - Expand on the Indicative Syllabus and update the programme document

16)Fundamentals In Bim Iso19650

- None

17)Energy and Carbon Assessment

- Update LO2 to remove reference to the specific use of Oneclick LCA
- Remove the reference to Group Projects and change Site Visits to Workshop under Assessment Strategy
- Include reference to construction products regulations and digital product passports.

18)Low Carbon Systems

- Review the Indicative Syllabus and update list of systems used and spellings in this section
- Review the 40% percentage allocated to the MCQ as this is high.

19)Performance Assessment Methods

- Consider referencing the use of Smart HCT Heat Transfer Coefficient throughout this module

20)Heritage Building Information Modelling And Facilities Management

- Review the wording for LO1 and LO2 in relation to understanding and ensure the learning outcomes will comply with Blooms Taxonomy.

21)Renovation Planning and Financing Strategies

- Review LO5 and how this is linked back to the Indicative Syllabus and ensure that the indicative syllabus covers the relevant material.
- Consider reference to grouping projects together and use of economies of scale and the use of energy service companies within the module.

22)Project Management

- None

23) Energy Renovation Project

- Consider revising the assessment report and submitting separate reports instead of one final report, increase the work count assigned.

#### 3.4 Commendations and Observations

The panel commend the team for the

- 1) Strategic initiative in relation to the DASBE project.
- 2) Development of this programme in relation to this national initiative on energy renovation of traditional buildings for the sector.
- 3) Different modes of programme delivery and embedded awards for the programme.
- 4) Proposed links with industry in the programme.
- 5) Their active and enthusiastic engagement with the panel.

John Vickey

Signature of Chairperson Date: 05/05/2025