

## **NEES Demonstration Project, Cloyne – Overview of Evaluation**

The Natural Energy Efficiency and Sustainability (NEES) project is funded by the Northern Periphery Programme. As part of the project, a demonstration project is being used to test six of the 'NEES best practices'. The project involves refurbishing an existing Parnell cottage at a rural location outside Cloyne, County Cork, and building a new extension. The six best practices are:

1. Timber frame construction
2. Hempcrete external insulation
3. Cellulose insulation
4. Triple glazed wooden windows
5. Green (sedum) roofs
6. Gravel reed bed for wastewater treatment

This report evaluates the building as a whole and the above best practices. A mass analysis of the NEES specification and a comparable conventional design as well as a building energy rating (BER) assessment form the basis of the evaluation. The evaluation metrics are mass, energy, carbon and cost over the life cycle of building, but the report also considers biodiversity, human health, ease of construction and maintenance.