



## EPA-FUNDED PHD OPPORTUNITIES

“FEN Conservation, restoration and Ecosystem Services (FENCES)”

### Background

The research project, FENCES, will provide a framework by which the ecosystem services (ES) of fens in Ireland can be rigorously evaluated in parallel to the development of effective restoration guidelines for those fens deemed to be at risk from water quality and/or quantity pressures. The main focus will be on carrying out field research on a range of different fen ecosystems across an ecological gradient of different states of degradation to gather hydrological and biogeochemical data which can be used to investigate the water, nutrient and carbon budgets. The project will be completed over a 48-month timeframe.

Three PhD students will be recruited in this project focusing on the following areas: **(i) fen hydrology, (ii) nutrient cycling and (iii) carbon budget**. The three PhD students will carry out the main field work (setting up the monitoring instrumentation, downloading dataloggers, collection and analysis of water samples, measurement of greenhouse gases, quantifying water balances etc.) on seven fen sites ranging from relatively pristine calcareous fen systems to damaged site and those under restoration. The data from the fieldwork studies, as well as simulations from numerical models that will be developed in parallel, will then be used to produce robust restoration guidelines to help policy makers make decisions regarding site selection for restoration and the practical feasibility of the restoration works. In addition, the project aims to establish the criteria for the provision of Ecosystem Services (i.e., the conditions allowing ecosystem services to be provided) on Irish fens.

### Requirements

Applicants should have a good primary degree (First or Second Class Honours) or M.Sc. in an appropriate discipline (Civil/Environmental Engineering, Environmental Science, Hydrology etc.). Candidates with a background / expertise in hydrology, greenhouse gas monitoring and/or environmental molecular biology are desirable. Evidence (scanned document) of a full driving licence is required. Applications without this will not be considered.

### Award

The students will be based in Trinity College Dublin will work under the supervision of Profs. Laurence Gill, Patrick Morrissey, Muhammad Ali and Matthew Saunders. The Fellowships will start as soon as possible after the most suitable candidates are selected – ideally for a start date on April 1<sup>st</sup> 2024.

The fellowship has a duration of 4 years and provides a stipend of €25,000 in addition to €5750 per annum which will used to pay EU University fees.

### Further Information/Application Procedure

Prof. Laurence Gill, Civil Engineering, Trinity College Dublin  
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**Closing date:** 24<sup>th</sup> January 2025