## MULTI-OBJECTIVE OPTIMISATION OF OFFSHORE WIND FARM SITE LOCATIONS AND BOUNDARIES IN THE ENGLISH CHANNEL

by

## **Zachary Smith**

Thesis submitted to University of Plymouth in partial fulfilment of the requirements for the degree of

MSc Artificial Intelligence

University of Plymouth Faculty of Science & Engineering

September 2022

#### Masters Dissertation licence:

This material has been deposited in the Plymouth University Learning & Teaching repository under the terms of the student contract between the students and the Faculty of Science & Engineering.

The material may be used for internal use only to support learning and teaching.

Materials will not be published outside of the University and any breaches of this licence will be dealt with following the appropriate University policies.

## Copyright Statement:

This copy of the thesis has been supplied on condition that anyone who consults it is understood to recognise that its copyright rests with the author and that no quotation from the thesis and no information derived from it may be published without the author's prior written consent.

## Acknowledgements:

The author would like to thank their family, partner and friends for their support whilst completing this thesis.

Special thanks also to Dr. David Walker, for supervising the project.

The author would like to acknowledge the National Oceanic and Atmospheric Administration (U.S. Department of Commerce) and ADMIRALTY Maritime Data Solutions (U.K. Hydrographic Office) for providing openaccess to the wind velocity potential and bathymetric datasets (respectively) which enabled this project.

## Graphical Abstract

Multi-objective optimisation of offshore wind farm (OWF) site locations and boundaries in the English Channel

Zachary Smith

## Highlights

Multi-objective optimisation of offshore wind farm (OWF) site locations and boundaries in the English Channel

Zachary Smith

- Research highlight 1
- Research highlight 2

# Multi-objective optimisation of offshore wind farm (OWF) site locations and boundaries in the English Channel

## Zachary Smith

<sup>a</sup>University of Plymouth, Plymouth, PL4, Devon, England

### Abstract

Some text

Keywords: Evolutionary Computing, Multi-objective Optimisation, Power and Energy, Process Optimisation

1.

#### References