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# The Bailiwick Eelgrass Exploration Project, 2019

## Desk-based Assessment Report

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## **1. INTRODUCTION**

### 1.1 BACKGROUND

*Zostera* species (common or dwarf eelgrass) is regarded as a priority habitat forming species throughout the EU, UK and Channel Islands. Currently, there is little ecological knowledge of *Zostera* species in terms of its overall location and ecology within the Bailiwick of Guernsey.

This project aims to increase knowledge on the presence, location and ecology of *Zostera* species across the Bailiwick of Guernsey and, to promote awareness of this habitat to relevant stakeholders, appropriate bodies and the public. The project will comprise of an eelgrass desk-based assessment, training, public/stakeholder engagement activities and field-based surveys across the Bailiwick. This report details the desk-based assessment.

The aim of the desk-based assessment is to review past records of *Zostera* species within the Bailiwick of Guernsey. This is to provide recommendations for developing future field-based surveys (i.e. past records reporting *Zostera* species presence sites which need verification and/or new sites which need ground-truthing) and potential research, for the long term.

This report details the desk-based assessment and includes:

- Methodology;
- Results;
- Recommendations.

## **2. METHODOLOGY**

### 2.1 DESK-BASED ASSESSMENT

The assessment comprised of reviewing past records and (primary and secondary) sources of information relevant to *Zostera* species. This included reviewing (qualitative and quantitative) surveys conducted by Seasearch, independent academic studies, NGO monitoring projects, general presence/location information and anecdotal records. The information was analysed in terms of:

- Presence;
- Location;
- Extent/distribution, and;
- Ecological information.

Records of *Zostera* species with geographic locations were then plotted in ESRI'S ArcGIS 10.5 mapping software, to examine their presence across the Bailiwick.

### 3. RESULTS

Available data sources documented both *Zostera* species (*Z. noltei* and *Z. marina*), within the Bailiwick. Data sources were primarily held by the Guernsey Biological Records Centre (GBRC). In total, the GBRC information documented 351 *Zostera* species records from 1887 – 2019. Collectively, GBRC records with geographical information suggest that the *Zostera* genus was abundant across the Bailiwick (see Figure 3.1.).

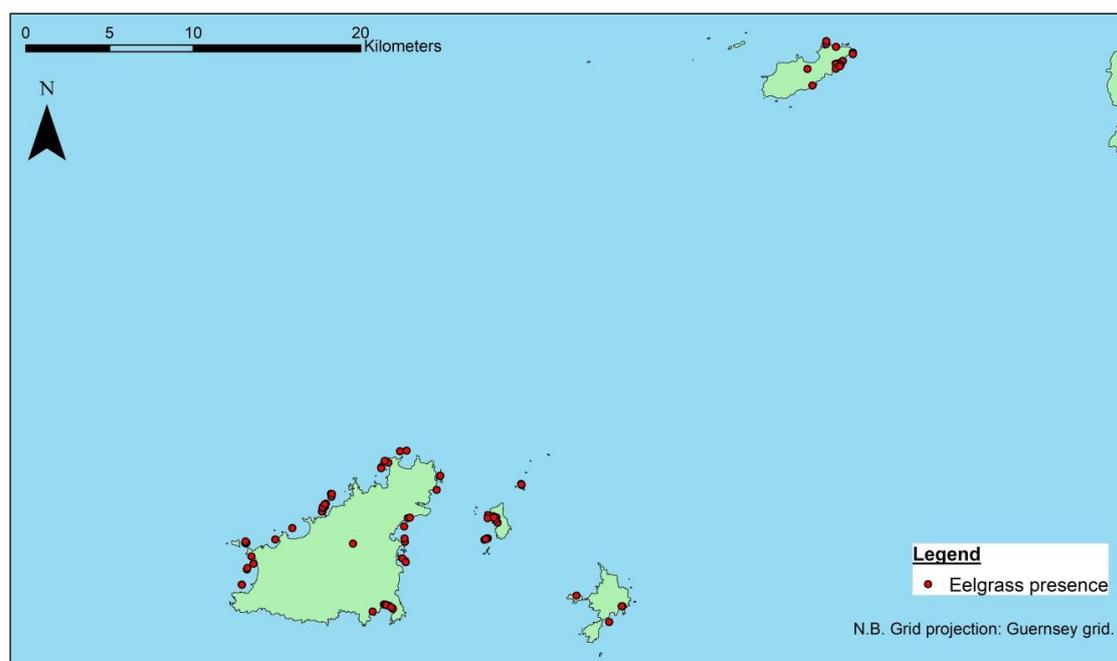


Figure 3.1. Locations of *Zostera* species across the Bailiwick of Guernsey, based on GBRC records with geographical information (1887-2019).

A large proportion of the *Zostera* species records held by the GBRC were qualitative, past records. This included sightings from the public and also anecdotal secondary sources, such as information derived from historical Channel Islands ecology books. In general, these records only provided basic species information, including presence, date recorded and location.

Quantitative records from GBRC included records from Seasearch (undertaken by local and visiting recorders) and the Alderney Wildlife Trust (AWT), which ranged from 2008 - present. These records provided more in-depth information, such as presence, location and ecological records (such as associated substrate types and species), with little information regarding *Zostera* species' extent/distribution.

Interestingly, both the qualitative and quantitative GBRC records indicate that the common eelgrass species, *Z. marina* is found frequently throughout the Bailiwick, whilst the dwarf eelgrass species, *Z. noltei* only to be recorded on Herm and Jethou.

A small number of quantitative records were also held by independent organisations, such as the Porcupine Marine Natural History Society (information available via the UK National Biodiversity Network (NBN)), commercial developers and academic bodies. These organisations held additional records of *Zostera* species from 1994 – 2017. This information primarily consisted of presence and location information for sites within the Bailiwick, with few examining extent and ecology.

To summarise, quantitative evidence (which has been verified) from both the GBRC and other data sources show the presence of the *Zostera* genus to be abundant across the Bailiwick (see Figure 3.2).

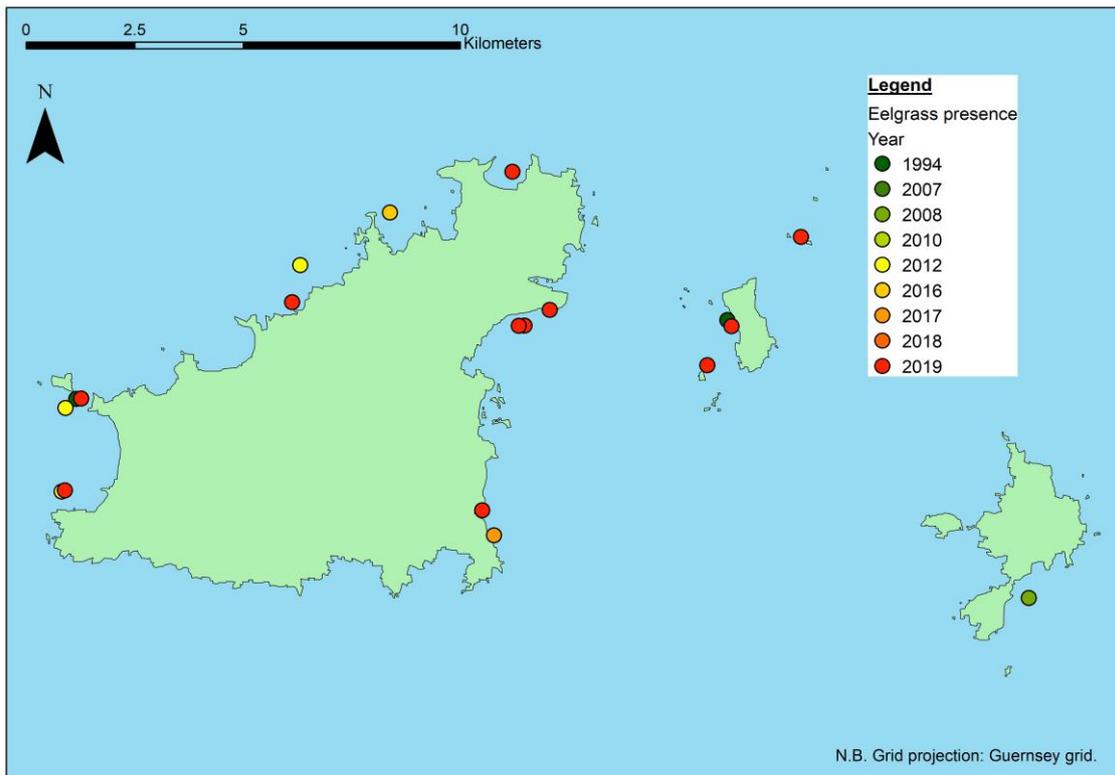
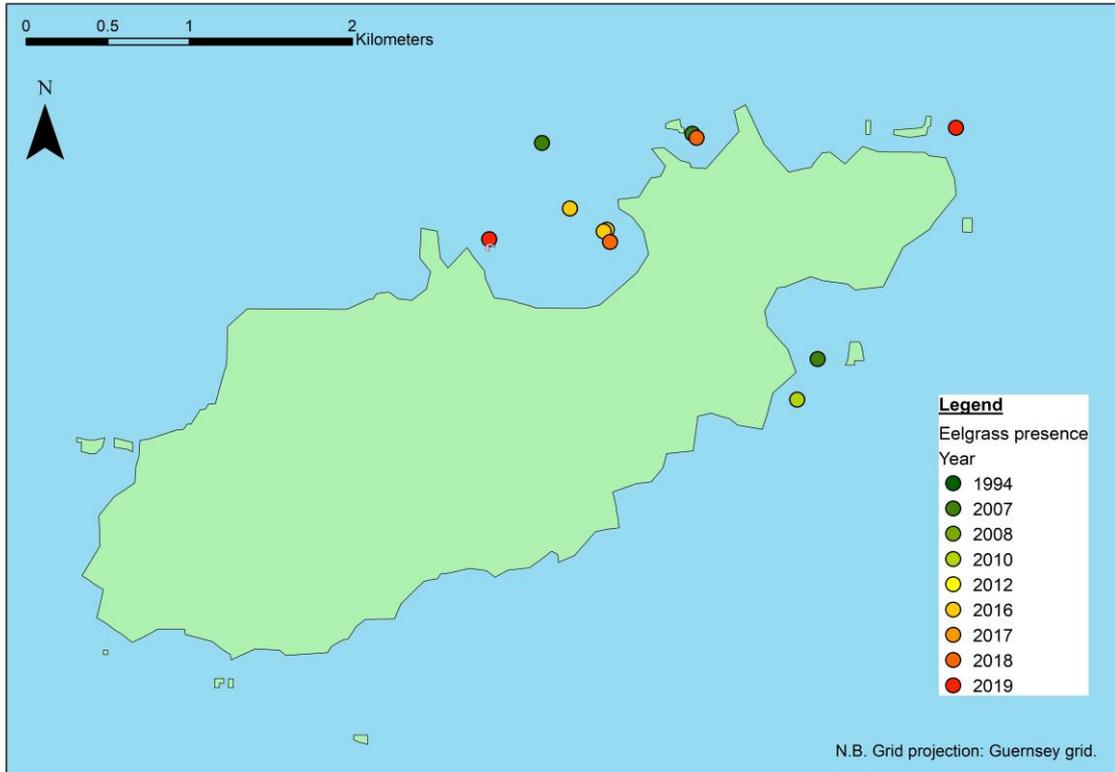


Figure 3.2. Locations of *Zostera* genus quantitative information from the GBRC and other data sources within the Bailiwick (1994-2019).

#### 4. RECOMMENDATIONS

From the results, a number of recommendations are provided with the intention of supporting the aim and objectives of the Bailiwick Eelgrass Exploration Project. These are detailed below:

**R1.** Encourage the recording of quantitative *Zostera* species information across the Bailiwick primarily through Seasearch surveys (snorkel or dive method).

**R2.** For sites/surveys where Seasearch survey methods may not be applicable (i.e. upper shore regions for dwarf eelgrass/ intertidal zone) encourage the recording of quantitative *Zostera* genus information such as:

- Recorder;
- Confidence of record;
- Date/time;
- Photograph/video;
- Presence;
- Species type (i.e. dwarf/common species);
- Location;
- Boundary/extent (to produce accurate extent information via GIS applications);
- Other key habitat information: associated species/substrates/depth details.

The information could be shared via social media and/or through the Guernsey Seasearch group (including their FaceBook page and google drive mapping facilities), but it should be passed onto the GBRC.

**R3.** Educate the public and relevant stakeholders on the importance of eelgrass and encourage any qualitative *Zostera* species recordings to be passed onto the GBRC.

**R4.** Encourage engagement activities through Seasearch training courses, eelgrass workshops, local press/radio and social media. These should be undertaken during spring/early summer.

**R5.** For 2020, consider supporting additional surveys/academic projects which examine the extent, health and ecology of *Zostera* species within the Bailiwick, particularly within Ramsar Sites and/or locally important reserves.

**R6.** For 2020, consider exploring sites where anecdotal records suggest the presence of eelgrass, which have not yet surveyed through Seasearch/other survey works (see Figure 4.1).

**R7.** For 2020, consider encouraging the recording of dwarf eelgrass, *Zostera noltei*, as records are limited. This could include a social media competition linked with the GBRC.

**R8.** Develop links with other appropriate stakeholders and academic bodies to encourage further research/outreach projects associated with *Zostera* species.

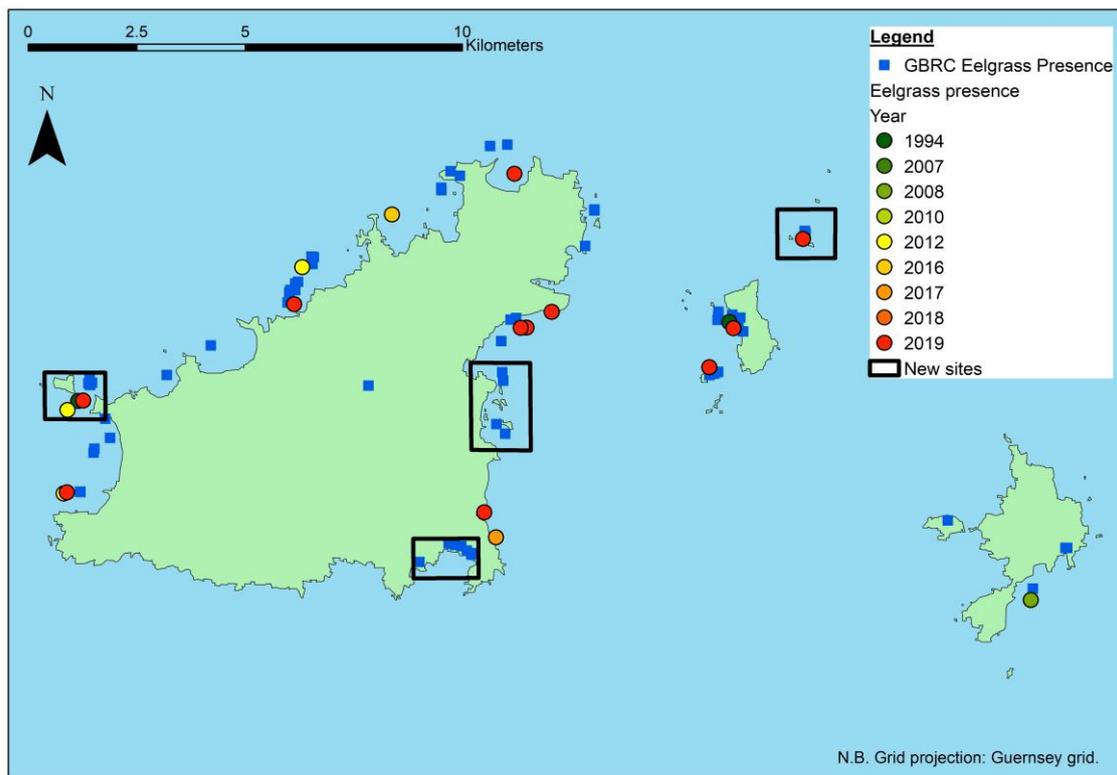
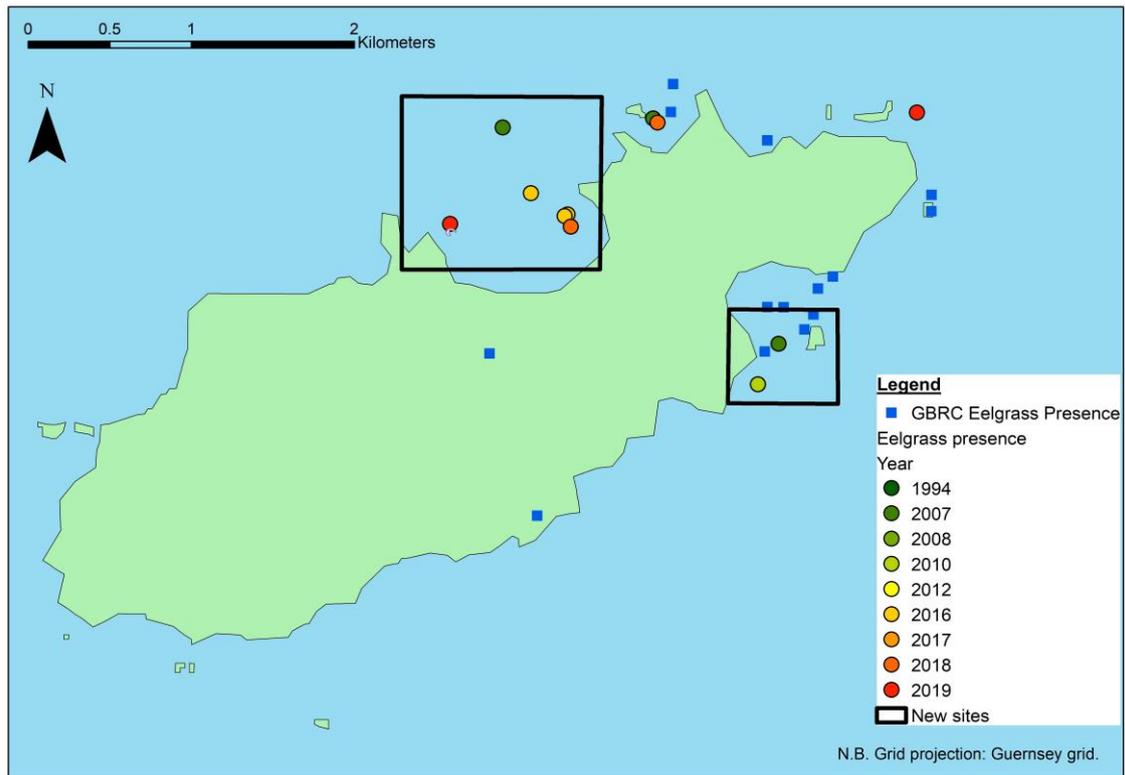


Figure 4.1. Location of potential *Zostera* genus surveys for 2020, based on GBRC information and other data sources, within the Bailiwick of Guernsey.

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