

# Salcombe Seagrass Survey

2014



**Devon & Severn Inshore Fisheries and Conservation Authority**

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## 1. Introduction

Salcombe Estuary is a SSSI.

### 1.1 Objectives

- Gain a greater understanding of the distribution, spatial extent and condition of seagrass beds within the main part of Salcombe Estuary.
- GIS mapping on the extent and locations of seagrass in the Salcombe Estuary, with the production of charts showing these areas.
- Gather information on the condition and density of the beds
- Input into the Mobile Fishing Permit Byelaw to ensure that the management of scallop fishery which takes within the estuary from 15<sup>th</sup> December to 15<sup>th</sup> March each year is adequate to protect the seagrass beds.

## 2. Methodology

An underwater camera with integrated LED lights was towed from the vessel. The camera was housed in a cradle to help weigh it down; the cradle also had fins attached to create smoother flying through the water column. An umbilical cable ran back from the camera to a surface monitor, to allow the footage to be viewed in real time. It was also recorded for future analysis.

Transects were carried out across known seagrass beds within the Torbay area. Each transect was approximately 50m apart, and followed the natural path in which the vessel drifted according to the tide/wind. This was done to ensure the vessel would be travelling slow enough to get a clear image.

Along each transect data was recorded either every minute (approximately) or whenever the substrate or habitat changed, whichever came first. At each point the following information was recorded:

- Transect number
- Coordinates
- Substrate
- Habitat
- Seagrass density
- Depth
- Time

All information was recorded on a standard survey form (Annex 1). Transects continued until the edge of the seagrass bed was found.

The data was then plotted using MapInfo GIS software to show the route of each transect, the density of seagrass along each transect, and the extent of each bed.

## 3. Results

The areas of each seagrass bed are summarised in the table below, and shown in Figures 1 and 2. Figure 1 shows the seagrass density changes across each bed, while Figure 2 shows a proposed 50m buffer areas around each bed which could be used for management purposes.

<b>Bed</b>	<b>2012 Area (ha)</b>	<b>2012 Max. Depth (m)</b>	<b>2014 Area (ha)</b>	<b>2014 Max Depth (m)</b>
Salcombe x	n/a	n/a	9.6993	6.7

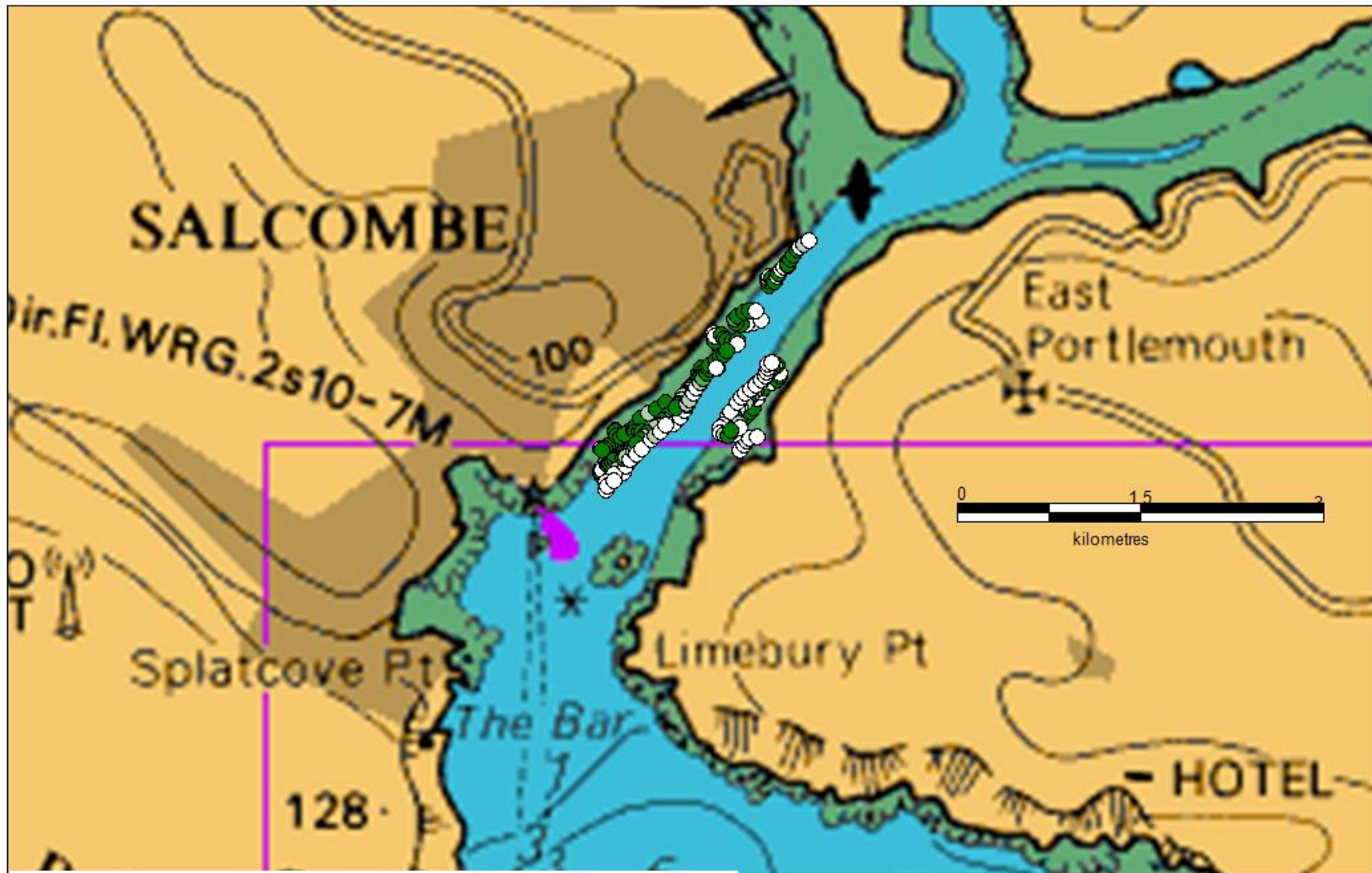


Fig. 1 Variation in seagrass density in beds within the Salcombe Estuary



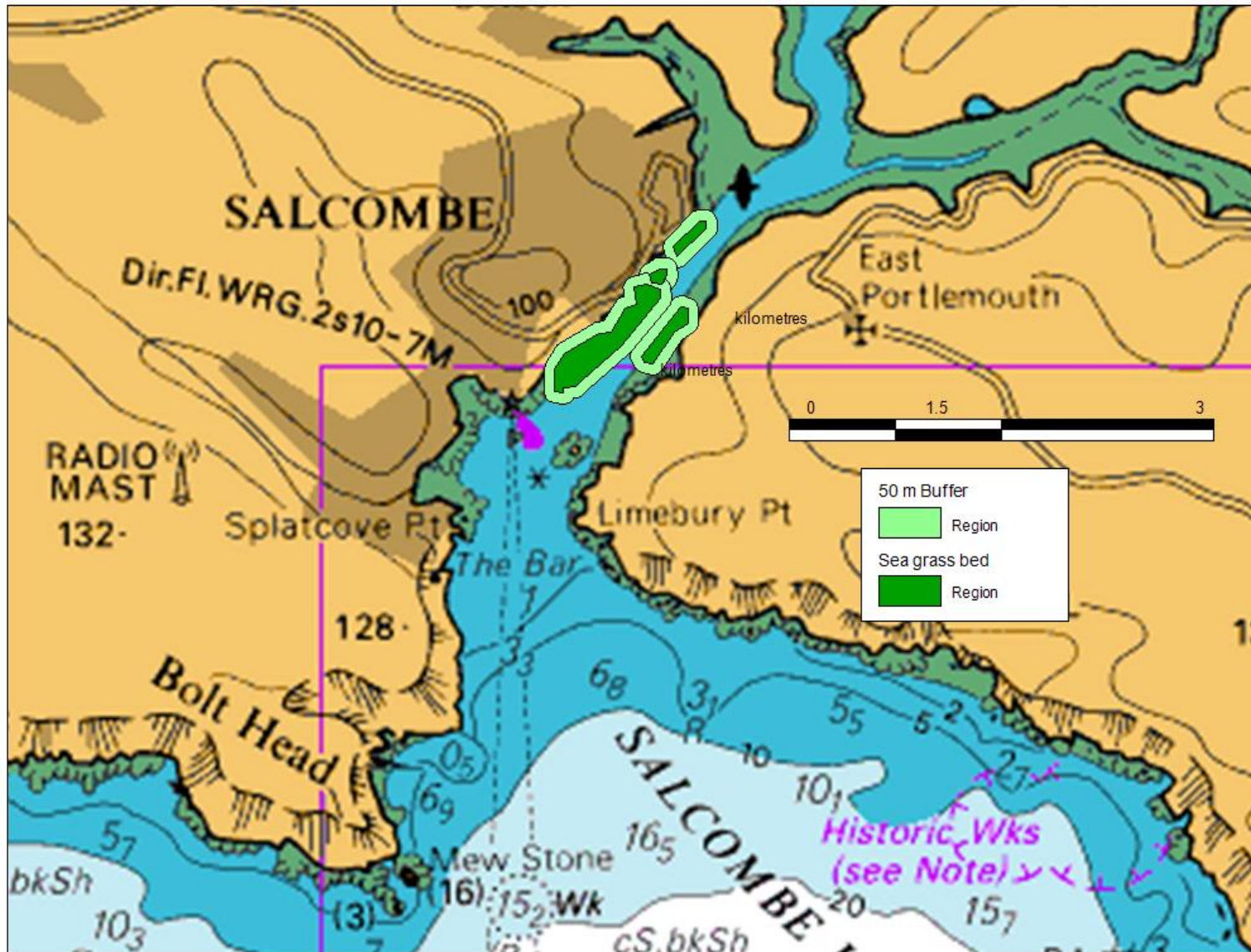


Fig. 2 Area of seagrass beds, with 50m buffer zone

#### **4. Recommendations**

It is recommended that this survey is repeated regularly, ideally annually, to monitor the condition and size of the seagrass beds over time. Any changes to the health of the beds could then be identified using this study as a baseline.

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#### **5. References**

