

38 Llanstephan Ward, The Green Policy Unit

38.1 Area Description

The Llanstephan Green Policy Unit is comprised lower part of Llanstephan. This is a small coastal community and the area referred to as the Green is the street nearest the estuary.

To the rear is the playing fields and to the front a grassed area “the Green” with a raised embankment that acts as a coastal defence. There is a sand dunes system between this and the beach.

To the north is the main river and to the east is a minor watercourse “Nant Jack”, both of which have potential to cause flooding of the Green.

These give rise to flood risk from multiple sources i.e. from Surface Water, Ordinary Watercourse Main River and Tidal.

38.2 Why is this area a Flood Risk Policy Unit?

The uFMfSW (EA, 2013) highlight this area to be at risk of flooding. These surface water flood maps are useful in highlighting the flood risk from small watercourses.

The area of the Green is in a shallow depression and water that flows here cannot escape other than infiltration or via the drainage system. The surface water drainage system outfalls to the beach and this has caused problems. The sand on the beach is mobile and levels in the vicinity have varied by something in the region of 2m in recent years. In 2014 the outfall became buried and needed to be excavated on a regular basis. Over pumping was also required to prevent extensive flooding.

In 2015 a scheme was implemented to manage the drainage of the Green and involved the construction of a 2-chamber sump and different level outfalls. The chamber incorporates a non-return valve to prevent tidal backflow through the drainage system. The sump chamber has been designed so that it can be converted to a pumping station if required.

38.3 Flooding Events

Flooding of highways and gardens occurred at Glan y Mor in 2002, 2003, 2008 and 2010. Since the installation of the new inlet structure and upgrade works to the culvert we have not recorded any flooding at this location.

Flooding in December 2013 and Jan 2014 at Stratford Cottages. Wider flooding was only prevented by over pumping and regular excavation of the outfall on the beach.

38.4 Flood Defence Capital Works undertaken by CCC

- New Trash Screen and Inlet at rear of Glan y Mor
- New Culvert and outfall from Glan y Mor to stream
- New Outfall system at the Green comprising long outfall to the river and a shorter outfall to middle of the beach.

The Chamber on the Green incorporates a non-return valve. The chamber has been designed to accommodate a pump should the beach levels rise to similar levels experienced in 2014 compromising the drainage systems capacity to discharge by gravity.

38.5 Flood Defence Assets

Trash Screen at Glan y Mor	Culvert from Trash Screen at Glan y Mor To Outfall	Chamber and outfall system at the Green
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38.6 Routine Works and Maintenance

Area	Works Undertaken	When
Glan y Mor Culvert	CCTV	2019
Glan y Mor Trash Screen	Debris Management	Monthly
	T98 Inspection	Annually
Chamber at Green	T98 inspection	Annually

38.7 Proposed Future Works

Installation of pumps to chamber on the Green (dependant on beach levels).

38.8 Flood Risk

38.8.1 Map 1: Total Properties

Map 1 over the page displays data on the total number of properties at risk of flooding. Total properties can include dwellings, garages, commercial premises, industrial premises and similar structures.

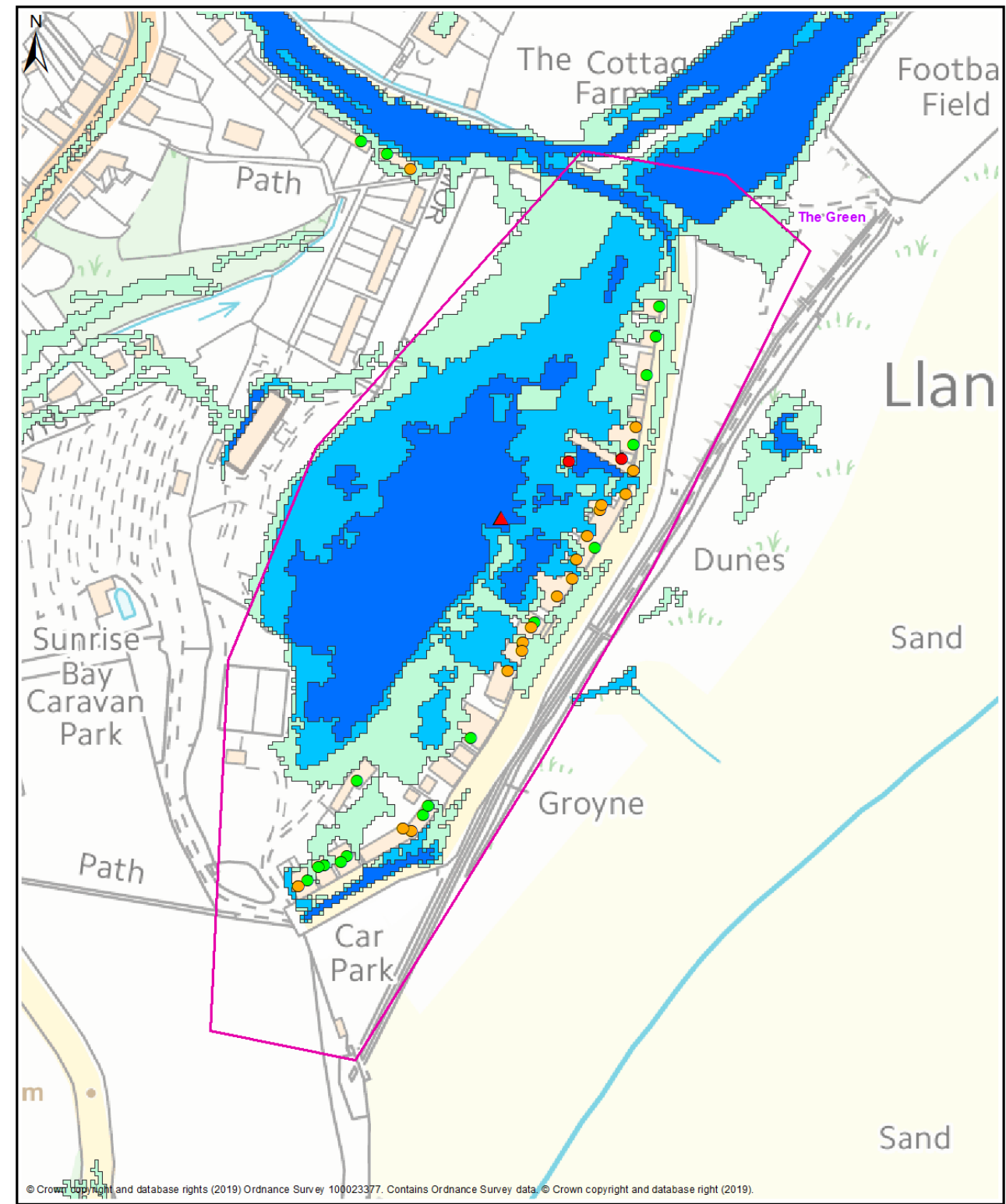
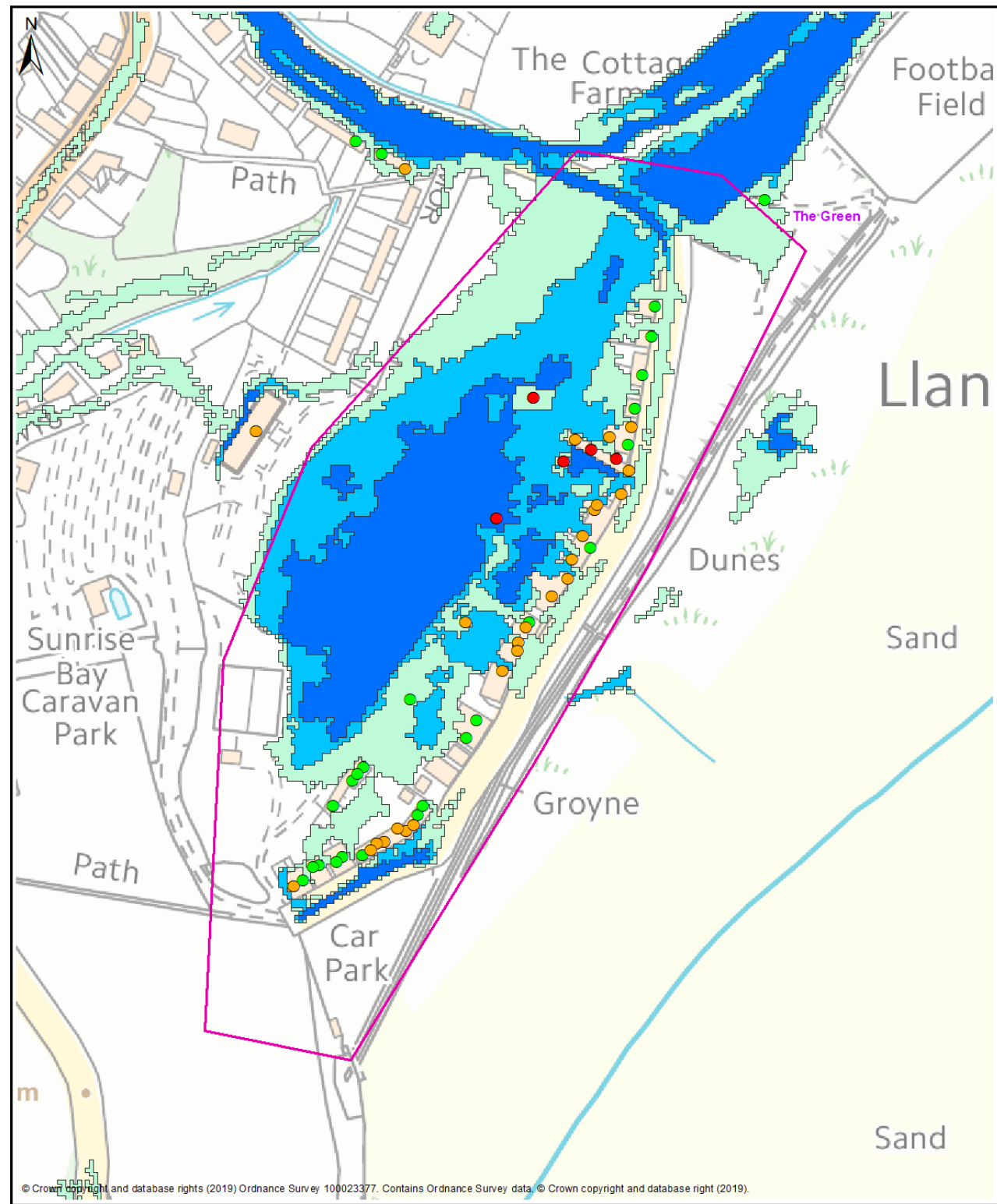
38.8.2 Map 2: Dwellings and Services

Map 2 below displays data on the residential properties and services at risk of flooding.

38.8.3 Map 3: Community at Risk Register (CaRR)

This is the most recent flood mapping from Welsh Government. This dataset depicts all properties at risk of pluvial (surface water) flooding in a storm event with a 1 in 100 probability.

	Number of specified units at risk of flooding		
	1 in 30 probability storm event	1 in 100 probability storm event	1 in 1000 probability storm event
Map 1 Total Properties	5	28	50
Map 2 Dwellings and Services	3	19	34
Map 3 CaRR	n/a	2 Pluvial 2 Fluvial 35 Tidal	n/a



Map 1 - All Properties

Legend

- Policy Unit
- uFMSW Q30 Surface Water Flood Outline 1 in 30 Probability Storm Event
- uFMSW Q100 Surface Water Flood Outline 1 in 100 Probability Storm Event
- uFMSW Q1000 Surface Water Flood Outline 1 in 1000 Probability Storm Event
- Q30 All Property Classes Flood Depth 150mm or Greater
- Q100 All Property Classes Flood Depth 150mm or Greater
- Q1000 All Property Classes Flood Depth 150mm or Greater

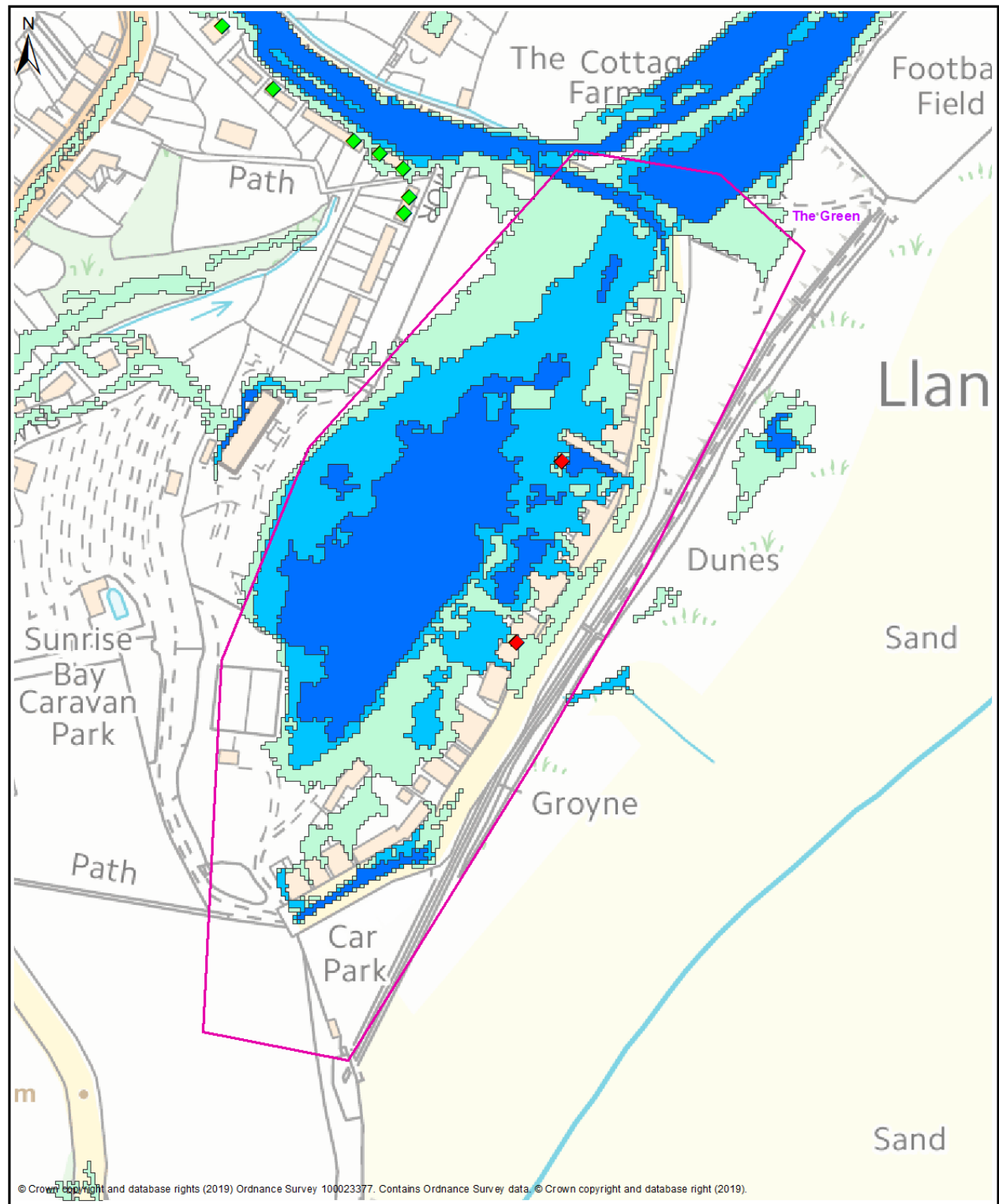
Map 2 - Dwellings and Services

Legend

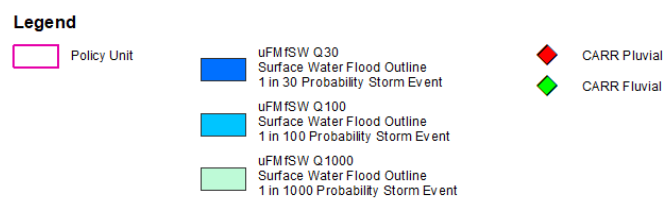
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- ▲ Q30- Dwellings Flood Depth 150mm or Greater
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- ▲ Q1000- Dwellings Flood Depth 150mm or Greater
- ▲ Q30- Services Flood Depth 150mm or Greater
- ▲ Q100- Services Flood Depth 150mm or Greater
- ▲ Q1000- Services Flood Depth 150mm or Greater

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Map 3 - Communities at Risk Register



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