

Abermorlais Solar Carports

Flood Consequences Assessment (FCA)

Document Control

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Introduction

This Flood Consequences Assessment (FCA) has been prepared to support a planning application for the installation of solar photovoltaic (PV) carports within the Abermorlais car park.

Site Information

The car park where the development is planned to take place is located to the north of the Civic Centre, Castle St, Merthyr Tydfil CF47 8AN.

Grid reference: SO 04710 06340

X (Easting), Y (Northing): 304710, 206340

The car park is shown in Figure 1 below.



Figure 1 Abermorlais Car Park

The Proposed Development

The proposed works comprise the installation of a canopy-mounted solar PV system over an existing hardstanding parking area. The works do not involve a change in land use and are limited to the addition of a lightweight, elevated structure supported on columns. A layout plan of the works with the three solar car ports shown in amber, and the electrical infrastructure consisting of a feeder pillar and inverter in green, shown in Figure 2 below.



Figure 2 - Solar Carport Layout

Flood Risk

A review of publicly available flood mapping has been undertaken using the Natural Resources Wales Flood Risk Map. This shows that the car park is located within Flood Zone 1 (low risk) as defined by the Natural Resources Wales Flood Map for Planning. This assessment has been prepared in accordance with Technical Advice Note 15 (TAN 15): Development, Flooding and Coastal Erosion.

The map has been annotated with a red line boundary to show the location of the car park where works will take place; see figure 3 below.

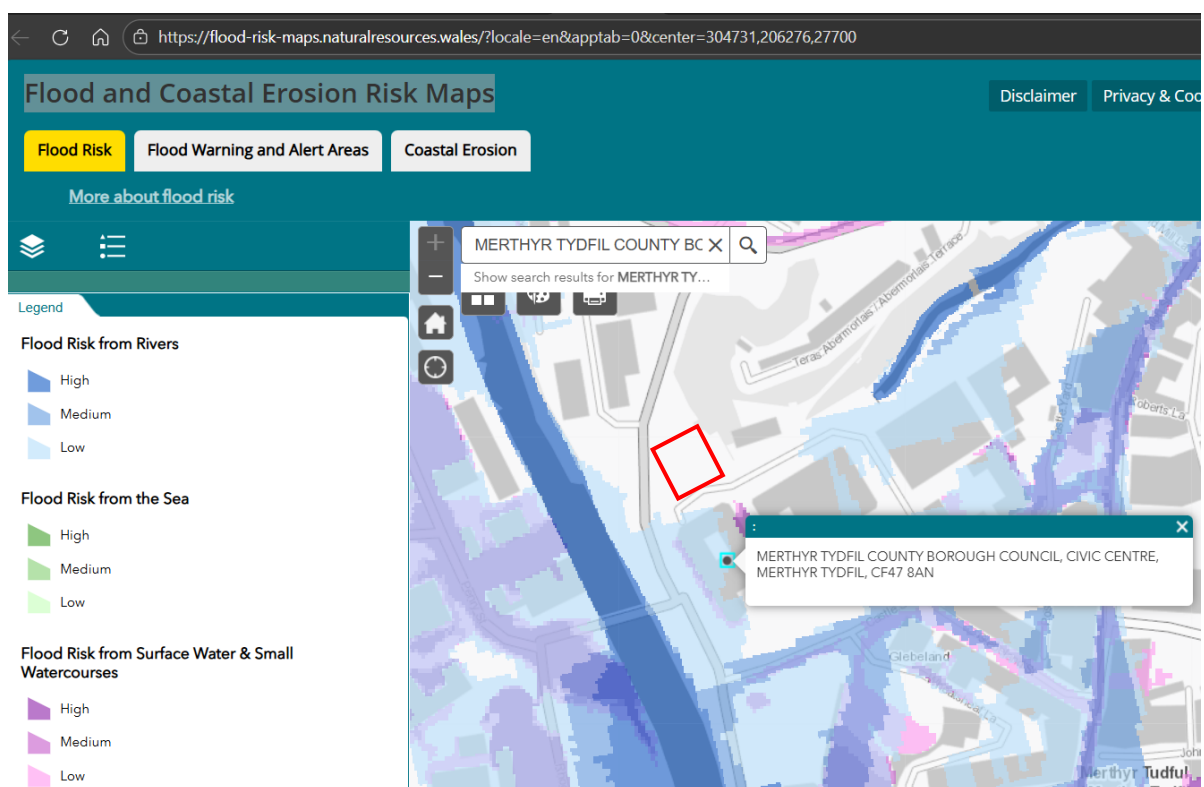


Figure 3 - NRW Flood and Coastal Erosion Risk Map

Assessment of Development Vulnerability and Flood Consequences

The proposed development involves the installation of a solar carport structure within an existing hard-surfaced car park. This project is classified as a low vulnerability use, with no habitable accommodation included.

The development will not result in any changes to ground levels or the displacement of floodwater. There is no alteration in land use vulnerability, and there will be no increase in impermeable area since the car park is already hard surfaced. Surface water runoff from the proposed development will be managed via a Sustainable Drainage System (SuDS), the details of which will be developed and approved separately through the SuDS Approval Body (SAB) process.

As can be seen in Figure 3, **the site lies within Flood Zone 1 and is not at risk of flooding**. The extent of the flood risk zones around the site do not pose any constraints to the proposed development.

In accordance with planning guidance, the potential impacts of climate change have been taken into account, and in the event of future extensive flooding due to climate change, the following has been considered:

- The proposed solar canopy structure will be elevated on columns, creating an open design that ensures flood flows and overland flows, if they occur, will not be obstructed.
- There will be no reduction in floodplain storage capacity.
- The electrical equipment for the development will be installed at a height of 0.5 meters above ground level to ensure it remains above flood levels, reducing any potential risk.

On this basis, the proposed development is considered appropriate with respect to flood consequences and is fully in accordance with national and local planning policy. The scheme will not increase flood risk elsewhere and incorporates suitable mitigation measures to ensure the development remains safe for its lifetime, including under future climate change scenarios.