

Flood Consequence Assessment.

Proposal: Change of user from former air conditioning workshop/store/office to first floor residential unit with ancillary garage to remain on the ground floor.

Location: Temperature House, Hazelwood Row, Cwmavon, Port Talbot.

Applicant: Mr Robert Phillips

Introduction:

The proposal is to change the user of the first floor of existing property to form a flat. The ground floor will remain as a garage with storage for bins.

Site Location:

The application property is Temperature House, Hazelwood Row, Cwmavon, Port Talbot .

EA Flood Maps:

Based on Environment Agency extreme flood outline, equal to or greater than 0.1% (river, tidal or coastal) C. Used to indicate that flooding issues should be considered as an integral part of decision making by the application of the justification test including assessment of consequences. Areas of the floodplain which are developed and served by significant infrastructure, including flood defence.

Assessment of Flood Risk – Potential Flood Depths and Duration.

The potential flood depth of the River Afan and flood duration are fundamentally as a result of the design storm, the peak flow in a river and whether this exceeds the channel capacity spilling out onto the surrounding flood plain. In the absence of anecdotal evidence of flooding, hydraulic modelling is the best practice for calculating this risk and can be done for floods of varying magnitudes using the latest industry standard techniques.

For the purpose of this report, for such a minor development a broad assessment has been made on the basis of the EA Flood Maps. The indicative flood maps provide a tool to assess broadly the flood depths/velocities on water following exceeding of the main river channel. In this case it has been assessed that water would leave the channel and pond in a low area to south the application site.

The flood extent map provided by the EA is partly derived using detailed topography from LIDAR survey data. Whereas this is not a detailed topographical survey, the information suggests that the trend is for flood water to the south of the application site, with its outward limit for the 1% (AEP) limited by the topography. Based upon the extent of the flood mapping and a general overview of the topography following a site walk over, it is assessed

that the anticipated flood depths of relevance to the site (0.1% AEP) would be separated from the River Afan by the several hundred yards. TAN 15.6. The floor level of the garage is also approximately 5 metres above the River Afan. Justifying the location of development

Much urban development in Wales has taken place alongside rivers and in the coastal plain. It is therefore inevitable, despite the overall aim to avoid flood risk areas, that some existing development will be vulnerable to flooding and fall within zone C. Some flexibility is necessary to enable the risks of flooding to be addressed whilst recognising the negative economic and social consequences if policy were to preclude investment in existing urban areas, and the benefits of reusing previously developed land. Further development in such areas, whilst possibly benefiting from some protection, will not be free from risk and could in some cases exacerbate the consequences of a flood event for existing development and therefore a balanced judgement is required. All other new development should only be permitted within zones C1 and C2 if determined by the planning authority to be justified in that location. There is no historic record of flooding in the area.

It is considered that the proposed first floor flat is suitable in this case.

Access and Evacuation: New developments are required to provide safe access and exit during a flood and the measures by which this will be achieved needs to be shown in an FCA. Safe access and exit are required to enable the evacuation of people from the development, provide emergency services with access to the development during a flood and enable flood defence authorities to carry out necessary duties during the period of flood. A safe access or exit route is a route that is safe for use by the occupiers without the intervention of the emergency services or others. Safe routes should be defined both inside and beyond the boundary of the site. A route can only be completely safe in flood risk terms if it is dry at all times. Guidance for safe access can be found in Defra publications such as "R&D Outputs FRA guidance for new developments Phase FD2320/TR2".

It is therefore reasonable to assume that there would be a period time between the onsets of flooding allowing the residents of the first floor dwelling to move any vehicle from the parking areas. In order to allow adequate time for evacuation the applicant will ensure that his telephone number is registered with the Free service provided by the EA – Flood Warnings Direct by calling 0845 988 1188. Flood Risk Resilience and Mitigation: