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Liv Rickman

From: Planning (Isles of Scilly)
Subject: FW: Weekly Planning List
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From: Stephen Swabey <Stephen.Swabey@scilly.gov.uk>
Sent: 30 January 2023 18:03
To: Planning (Isles of Scilly) <planning@scilly.gov.uk>
Subject: RE: Weekly Planning List

Liv

I've had a look through the Flood Risk Assessment for the proposed IoS Steamship development (P-22-085) and have a few comments that may be similar to comments of the Environment Agency.

The application deals with surface water flooding by suggesting that tidal locking leads to surface flooding and this risk can be dealt with. However, no surface water currently can be discharged from the area behind flood defences until the outlet point is lower than the trapped water level (this is tidal locking in Hugh Town). If Hugh Town stormwater drainage systems contain no backflow preventers, the stormwater is added to tidal flooding that occurs from the sea up through the stormwater drains. If backflow preventers are present, stormwater is retained behind any coastal defences and is added to water volumes that overtop any sea defences or undefended frontages.

I suggest the applicant is asked to justify with analysis and calculations their assumption that the 'small drainage area' and the 'existing drainage networks... will dispose of surface water runoff from the site area', given the likely tidal locking may prevent this.

In addition, the likelihood of surface water flooding occurring in central Hugh Town during a storm event is likely to be increased, because of the storm. The joint probability of stormwater flooding *together* with tidal flooding may be a higher risk than just tidal flooding alone. Lack of observations of previous surface water flooding in written material is not sufficient evidence to demonstrate that it does not occur to a degree that may increase flood risk at the site.

A first principles identification of the catchment area contributing stormwater to the area around the site, together with the likely volume of stormwater present during a design event, given the area of buildings and structures that cannot be occupied by stormwater on much of the land in central Hugh Town, and the additional flooding that this may result in is likely to provide a more robust understanding of whether this is an additional flood risk for the site.

Given the depth of flooding that is assessed in the FRA, it may not be appropriate to rely on warning systems to ensure safety for residents in the proposed ground floor flat. I suggest it would be more appropriate to avoid any new residential occupation where future flood risk could have significant consequences for life and property.

If residential development is allowed at ground floor level, additional measures that would be useful to reduce the impact of coastal and stormwater flooding might be:

- 1) Backflow preventers on foul sewers to prevent flooding that is able to occupy the sewer system from causing sewage contamination within the building
- 2) Backflow preventers on stormwater sewers to prevent the stormwater system from causing stormwater flooding within the building through excessive hydraulic head within the mains stormwater drainage system
- 3) All electrical connections to the mains electricity supply should enter the building above the design flood level and electrical meters should be placed above design flood levels
- 4) Telephone connections should enter the building above the design flood level

- 5) No openings or open piercings in the outer wall of the buildings (such as air vents) should be permitted below the design flood level unless fitted with a backflow preventing device that allows the piercing/opening to operate as normal when no flood is present, but prevents ingress of floodwater during the design flood event. All piercings must be made waterproof to a standard that copes with a static water head equivalent to the design flood level at that point. All such openings must be maintained in perpetuity.
- 6) An escape route from flooding should be identified for occupants of the ground floor residence, because they cannot escape on site by going upstairs – there is no upper floor in that property.

These measures should also be considered for the non-residential part of this development, to reduce losses during floods.

Stephen

Stephen Swabey (Project Director, Climate Adaptation Scilly)