

06/08/2026 RE: CAS-309786-W7X1 - 11 Coverack Road, Newport, NP19 0DS: Natural Resource Wales Position

1. Introduction

This addendum has been prepared by Aegaea on behalf of the applicant in response to the consultation response received from Natural Resources Wales (NRW) dated 23 June 2026 (NRW reference CAS-309786-W7X1; LPA reference 26/0390) regarding the proposed conversion of 11 Coverack Road, Newport (NP19 0DS) from a 3-bedroom dwellinghouse (C3) to a 4-bedroom House in Multiple Occupation (HMO) (C4).

NRW advised that the Flood Consequences Assessment (FCA) submitted in support of the application (Aegaea, ref AEG9849_NP19_Newport_01, dated January 2026) was incomplete, and recommended that an updated FCA be requested which includes:

- assessment of the 0.1% AEP event plus climate change allowance, in line with current Welsh Government guidance on climate change allowances for planning purposes;
- breach assessment for both the 0.5% AEP + CC and 0.1% AEP + CC events; and
- predicted flood depths compared to finished floor level (FFL) to establish the flood risk for all modelling scenarios.

This addendum should be read alongside the original FCA (referenced: AEG9849_NP19_Newport_01) and provides the additional assessment requested by NRW, together with a revised assessment of frequency thresholds (Figure 5 of TAN15) and tolerable conditions in an extreme flood event (Figure 6 of TAN15).

2. Assessment of the 0.1% AEP (1 in 1000 Year) Event including Climate Change

The original FCA (Section 4, Climate Change Scenarios) set out the methodology used to extend the Newport hydraulic model's climate change outputs, which are provided up to the 2121 epoch, to the full 100-year lifetime of the development (2126). The same methodology is applied below to derive the 0.1% AEP (1 in 1000 year) + CC design flood level for 2126, which was not included in the original FCA.

The base year for the Newport model (v8) was updated to 2021, with climate change values set at 75 years (2096) and 100 years (2121). To account for climate change, the FCDPAG3 guidance was used, which adds 0.76m to sea levels for 2096 and 1.12m for 2121. Part way through this model update, a new set of extreme sea level guidance was published, UKCP18 (draft FCERM climate change guidance, 2021). For consistency, the FCDPAG3 guidance was retained within the model, but any further updates should use the current guidance (UKCP18).

The UKCP18 dataset projects to 2100. To calculate epochs beyond 2100, the average incremental increase from the last five years of the dataset for the site location (2094 to 2099) under RCP8.5 is applied, multiplied by the required number of years after 2100.

Applying the site-specific Newport rate of 0.013m/year for the five years between the 2121 model epoch and the 2126 development lifetime gives an additional allowance of 0.065m, consistent with the approach already adopted for the 0.5% AEP + CC event in the original FCA (where the 2121 modelled level of 7.61m AOD was extended to a 2126 design level of 7.68m AOD). Applying the same 0.065m allowance to the modelled 0.1% AEP + CC (2121) level of 8.83m AOD gives a derived 0.1% AEP + CC (2126) design flood level, summarised in Table 1.

Table 1: Derivation of the 0.1% AEP + CC (2126) design flood level

Scenario	Model Epoch	Flood Level (m AOD)
0.1% AEP (1 in 1000 year) + CC - modelled	2121	8.83
Additional allowance (5 years @ 0.013m/yr)	2121-2126	+0.065
0.1% AEP (1 in 1000 year) + CC - derived	2126	8.90

On this basis, the 0.1% AEP (1 in 1000 year) + CC design flood level for the 2126 development lifetime is 8.90m AOD.

3. Overtopping, Breach and Blockage Assessment

The site is located within a TAN15 Defended Zone, and an assessment of breach risk is therefore required. The current Newport hydraulic model (P5, 2022), on which the original FCA's tidal flood risk assessment is based, does not include breach analysis.

The older Wentlooge and Caldicot (2016) model outputs include flood depth grids for a number of breach scenarios, including an allowance for climate change. Review of these outputs indicates that the site remains unaffected in the majority of the modelled breach scenarios. 'Breach 4' has the most significant impact on the site location and therefore has been considered the most appropriate breach location to assess the breach scenario flood risk at the site.

Analysis of the modelled 0.5% AEP + CC (2115) 'Breach 4' event shows that the site may be affected by flooding. The flood level is relatively uniform across the site for this event, with a flood level of 7.99m AOD, which incorporates 1.06m of sea level rise up to 2116 within the Wentlooge and Caldicot model.

Using the same site-specific Newport rate applied in Section 2 above, an additional allowance of 0.013m/year is applied for the ten years between 2116 and the 2126 development lifetime, giving an additional allowance of 0.13m. Applying this allowance to the modelled 2116 'Breach 4' level of 7.99m AOD gives a derived 0.5% AEP + CC breach level of 8.12m AOD for 2126, as summarised in Table 2.

Table 2: Derivation of the 0.5% AEP + CC breach levels (2126)

Scenario	Model Epoch	Flood Level (m AOD)
0.5% AEP (1 in 200 year) + CC Breach 4 - modelled (Wentlooge and Caldicot, 2016)	2116	7.99
Additional allowance (10 years @ 0.013m/yr)	2116-2126	+0.13
0.5% AEP + CC Breach 4 - derived	2126	8.12

No dedicated breach modelling is available, in either the current Newport model or the Wentlooge and Caldicot (2016) model, for the 0.1% AEP + CC breach scenario specifically requested by NRW.

4. Frequency Thresholds - Flood-Free Development (Figure 5)

The proposed HMO is classified as Highly Vulnerable development in accordance with TAN15. For Highly Vulnerable development other than emergency services, Figure 5 of TAN15 requires the development to be flood-free in the 0.5% AEP (1 in 200 year) + CC event for flooding from the sea.

As set out in the original FCA, the estimated ground floor FFL of the existing building is approximately 7.51m AOD. Against the 0.5% AEP + CC (2126) design flood level of 7.68m AOD, this would result in shallow flooding of approximately 170mm at ground floor level, which does not satisfy the Figure 5 flood-free requirement, as identified by NRW.

To achieve compliance with Figure 5, it is proposed that the ground floor FFL be raised to a minimum of **7.68m AOD**, matching the 0.5% AEP + CC (2126) design flood level. On this basis, the ground floor of the proposed development would be flood-free in the 0.5% AEP + CC event, as required by Figure 5 for Highly Vulnerable development.

Table 3 summarises the predicted flood depths against both the existing and revised FFL for all modelled scenarios, in response to NRW's request for predicted flood depths to be compared to FFL for all modelling scenarios.

Table 3: Predicted flood depths against existing and revised FFL

Scenario	Flood Level (m AOD)	Depth at existing FFL (7.51m AOD)	Depth at revised FFL (7.68m AOD)
1 in 200 year (present day, defended)	Unaffected	N/A	N/A
1 in 1000 year (present day, defended)	Unaffected	N/A	N/A
0.5% AEP + CC (2126)	7.68	170mm	0mm
0.1% AEP + CC (2126)	8.90	1390mm	1220mm
0.5% AEP + CC Breach (2126)	8.12	610mm	440mm

The site remains unaffected in the present-day defended 0.5% AEP and 0.1% AEP events. With the FFL raised to 7.68m AOD, the ground floor is flood-free in the 0.5% AEP + CC (2126) event, in accordance with Figure 5. These are considered against the Figure 6 tolerable conditions test in Section 5 below, consistent with the TAN15 approach that the 0.1% event represents an extreme event against which tolerability, rather than flood-freedom, is assessed.

5. Tolerable Conditions in an Extreme Flood Event (Figure 6)

Paragraph 11.9 of TAN15 states:

"During extreme flood events there is recognition that it may not be possible to keep all development flood-free. In these circumstances it is imperative that flooding does not endanger life, therefore it needs to be demonstrated that conditions within the development during an extreme event will be tolerable."

Figure 6 of TAN15 sets a maximum tolerable flood depth of 600mm and a maximum tolerable flood velocity of 0.15m/s for Highly Vulnerable development, assessed against the 0.1% AEP extreme flood event including climate change.

At the revised FFL of 7.68m AOD, the 0.1% AEP + CC (2126) event results in a predicted internal flood depth of approximately **1.22m (1220mm)**, and site-wide modelled flood velocities during this event range between **0.24m/s and 0.69m/s**. Both the predicted depth and velocity exceed the Figure 6 thresholds for Highly Vulnerable development.

Paragraph 11.12 of TAN15 states:

“The above figures are tolerances below which new development may be acceptable. Each site, however, must be considered individually, and a judgement taken in the context of the circumstances which could prevail at that site.”

In the context of this site, the following factors are relevant to that judgement.

First, the modelled time to maximum velocity ($V_{\max}$) is 15.5 hours into the model run, and the modelled time to maximum flood level ($H_{\max}$) is 16.2 hours into the model run. Paragraph 11.13 of TAN15 advises that planning authorities should refer to relevant policies and actions identified in their Development Plan and by Risk Management Authorities in local contingency plans, and notes that this is of particular relevance to emergency access and evacuation requirements. On that basis, the relevant consideration at this site is the time available for occupants to evacuate rather than the precise timing of peak conditions: with more than 15 hours between the onset of the flood event and the occurrence of the most hazardous depths and velocities on site, and with advance notice available through NRW flood warnings ahead of that, occupants would have substantial time to be alerted to the developing flood risk and to evacuate to a place of safety, in accordance with the Flood Warning and Evacuation Plan and any relevant local contingency arrangements, well before the most hazardous conditions are reached.

Second, flooding at this location is tidal in nature and is inherently slow-onset and predictable in comparison with, for example, flash flooding from a watercourse. The site already benefits from formal flood defences providing a 1 in 200 year standard of protection, and the site is registered within the Usk Estuary at Maindee, North Liswerry and Spyttly Pill NRW flood warning area (see Section 5 of the original FCA), which would provide advance notice of a developing flood event well ahead of the 15-plus hour timeframe identified above.

Third, the first floor of the property, at an estimated level of approximately 10.21m AOD, remains available throughout the 0.1% AEP + CC event as a place of safety, providing approximately 1.3m of

clearance above the 8.90m AOD design flood level. A Flood Warning and Evacuation Plan (FWEP), as recommended in Section 5 of the original FCA, would direct occupants to remain at, or move to, first floor level in advance of a warned flood event, consistent with the danger-to-life objective of paragraph 11.9 of TAN15.

Taken together, while the predicted depth and velocity during the 0.1% AEP + CC (2126) event exceed the generic Figure 6 thresholds, the site-specific evacuation window, the slow-onset and forecastable nature of tidal flooding at this location, the availability of NRW flood warnings, and the continued availability of safe refuge at first floor level are considered, in the judgement permitted by paragraph 11.12 of TAN15, to reduce the danger to life to a level that would be tolerable, subject to implementation of a FWEP and the property-level resilience measures set out in Section 5 of the original FCA.

Finally, it is relevant that the existing dwelling and the proposed HMO are both classified as Highly Vulnerable development under TAN15; the change of use does not alter the vulnerability classification of the site and the proposal results in an increase in FFL (decrease in flood depth) as compared to the existing thereby providing a betterment.

On this basis, and notwithstanding the exceedance of the generic Figure 6 thresholds, it is considered that the consequences of the 0.1% AEP + CC extreme flood event can be demonstrated to be tolerable at this site, in accordance with the site-specific judgement contemplated by paragraph 11.12 of TAN15.

6. Conclusion

This addendum has provided the additional information requested by NRW in their consultation response dated 23 June 2026. The 0.1% AEP + CC (2126) design flood level has been derived as 8.90m AOD, using the same methodology already adopted in the original FCA to extend the Newport model's 2121 epoch outputs to the 2126 development lifetime. Breach levels of 8.12m AOD have been derived for the 0.5% AEP + CC event using the Wentlooge and Caldicot (2016) 'Breach 4' outputs, and adopted as a precautionary proxy for the 0.1% AEP + CC breach scenario in the absence of dedicated modelling. Predicted flood depths have been compared against both the existing and a revised FFL for all modelling scenarios.

To achieve compliance with the Figure 5 flood-free requirement for the 0.5% AEP + CC design event, it is recommended that the ground floor FFL be raised to a minimum of 7.68m AOD. Subject to this

revision, and to the implementation of a Flood Warning and Evacuation Plan and the property-level flood resilience measures recommended in the original FCA, it is considered that the consequences of flooding, including the extreme 0.1% AEP + CC event, can be safely managed over the lifetime of the development in accordance with TAN15.

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