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Planning Department, Civic Centre
Newport, South Wales
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For the attention of: Jacob Cooke, Case Officer

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Dear Mr Cooke,

Land at Greenmoor Nurseries (Greenmoor Farm) – Flood Consequences Assessment: Response to NRW Flood Risk Comments

We write in connection with the above planning application to respond to the flood risk concerns raised by Natural Resources Wales (NRW) in their letter dated 30 March 2026 (reference CAS-295617-V9Q6). Our reply focuses exclusively on the Flood Risk matters raised by NRW.

We note that NRW's representation requests further information to demonstrate that the consequences of flooding are acceptable. Below, we address each of NRW's points in the order of their headings, drawing on the findings of the updated Flood Consequences Assessment (FCA) (JBA Consulting, March 2026) and relevant national policy (TAN15, 2025 update, and Planning Policy Wales).

Before responding in detail, we wish to emphasise two important points of context: (1) The site lies within a **TAN15 Defended Zone** for coastal flooding, benefitting from an existing maintained tidal embankment along the Severn Estuary that provides a 1 in 200 year (0.5% AEP) standard of protection (plus climate change) to the Wentlooge Levels. (2) The proposal is for **Redevelopment** on previously developed (brownfield) land.

National policy explicitly acknowledges that many established communities are located in flood-risk areas and *"must be allowed to adapt, change, and regenerate"* in awareness of increasing flood risks (Technical Advice Note 15 (TAN15) paragraph 8.3). Accordingly, as clarified in Appendix 2 of the recently released TAN15 FAQ's, the principal of the proposed development is established, provided that the proposals do not overly intensify the use, reduce the area ability to absorb flood water, or increase flooding elsewhere.

Furthermore, for Redevelopment proposals in at-risk areas, TAN15 Section 11.8 permits a more flexible application of the usual flood risk thresholds, with a greater focus on ensuring that the development's flood consequences can be acceptably managed (including through flood resilience measures and emergency planning) rather than rigid compliance with design criteria that may not be fully achievable on a pre-existing site. We believe the Greenmoor Farm scheme exemplifies this policy approach: it will enable an existing rural business



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to continue and adapt on a protected site, while improving the site's flood safety through mitigation measures. With this context in mind, our point-by-point responses are as follows:

Frequency Thresholds

Design Flood Event & Climate Allowances: NRW's letter notes that, by treating an extreme breach scenario as the "design event" (per TAN15 para 10.26), the 0.5% Annual Exceedance Probability (AEP) tidal flood with climate change (breach scenario) would result in a peak flood level of approximately 6.41 mAOD at the site, leading to ~0.25 m of flooding inside the proposed dwelling (Finished Floor Level (FFL) is 6.14 mAOD). We stress that under normal conditions (i.e. a 0.5% AEP tidal event plus climate change), the proposed dwelling is predicted to remain completely flood-free.

Figure 5 of TAN15 (Dec 2025) sets out minimum frequency thresholds for development to be flood-free. However, nowhere does Figure 5 or TAN15's supporting text (paras 11.7–11.8) require using the "Upper End" (95th percentile) climate scenario for this test. In fact, the Welsh Government's FCA Climate Change Allowances Guidance (March 2026) clearly states: *"Development proposals should be assessed against the relevant regional **Upper Central** allowance to inform design levels. The FCA will need to demonstrate the development can comply with the frequency thresholds set out in TAN15. An assessment should also be made against the **Upper** allowance to inform mitigation measures, access and egress routes and emergency evacuation plans."*

In line with this guidance, our FCA evaluated the Upper Central (70th percentile) climate change scenario to determine design flood risk compliance and separately considered the Upper End (95th percentile) scenario to inform resilience and emergency planning.

Compliance as Redevelopment: Under the Upper Central allowance, the proposed dwelling meets the TAN15 Figure 5 frequency threshold: it will be flood-free during the 0.5% AEP tidal event including 100 years of sea level rise. Assuming a breach in the NRW flood defences, in this Design Event, the property is predicted to flood internally to ~0.25m.

This satisfies the intent of TAN15 for a redevelopment site in a defended coastal location. It is acknowledged that parts of the wider site (e.g. external ground areas) would not be flood-free in these events, due to practical constraints on regrading a previously developed site. However, as TAN15 paragraph 11.8 makes clear, the Figure 5 thresholds *"may be applied with more flexibility for redevelopment... where the thresholds are a guide. If they cannot reasonably be met, the planning authority should seek the views of the relevant risk management authorities on the resilience measures proposed"*.

The FCA (Section 6) details the suite of resilience measures incorporated into the scheme – including raised floor levels, use of a two-storey design for refuge, and recommended flood emergency planning – which ensure the development

can appropriately manage the residual risks. We also note that NRW has itself acknowledged the application of this flexibility in practice. Notably, in a recent major residential redevelopment in Cardiff (ref. 25/02066/FUL), NRW did not object despite ground-floor flood depths well above the usual Figure 5 and 6 guidelines, explicitly because it was a redevelopment and appropriate mitigation (e.g. flood-resilient construction and evacuation measures) was proposed.

Floor Level & Climate Change Adaptation: In this Greenmoor Farm proposal, the new dwelling's finished floor has been raised significantly above the existing ground level (to 6.14 mAOD) specifically to minimise flood risk on-site. By elevating the habitable floor and developing in a defended location, the scheme will increase the site's resilience to climate change impacts over the long term, directly supporting the key objectives of TAN15 (e.g. paras 2.5, 10.4, 13.1 emphasise climate adaptation) and Planning Policy Wales (PPW) in enabling at-risk sites to adapt safely and sustainably.

Tolerable Conditions

Compliance with Figure 6 Conditions: NRW's letter observes that in the 0.1% AEP (1 in 1000 year) plus climate change extreme scenario with a defence breach, flood depths on the site could reach approximately 0.95 m in the lowest spot (a small topographic depression to the west of the development area) and up to 0.49 m (49 cm) inside the dwelling. It should be noted that 0.49 m of internal flooding is within the indicative tolerable depth for extreme events in Figure 6 of TAN15, which considers 600 mm of flooding to be the typical upper limit of acceptability for highly vulnerable uses (residential) in the 0.1% AEP + CC event. In other words, the proposed **dwelling itself will meet TAN15's tolerable conditions**, even during an extremely rare breach flood.

The only exceedance of Figure 6 guidance is the localised external depth (0.95 m) at part of the adjacent external ground area; this is a consequence of a localised depression in the existing site topography and would not affect the safety of the dwelling's occupants, who would be on an upper floor if such a rare event ever occurred. The maximum water level across the site during this scenario is 6.62 mAOD, and the typical flood depth within the redevelopment boundary ranges between 0.75-0.80 m, and.

Flexibility for Redevelopment – TAN15 para 11.8: As with the frequency thresholds, NRW's comments on tolerable flood conditions do not acknowledge the flexibility allowed for redevelopment sites. We reiterate Welsh Government's published TAN15 FAQs (March 2026), which clarifies: *"In some instances, subject to site-specific circumstances, the local planning authority may consider that some flexibility to tolerable conditions is appropriate and should seek the views of the relevant risk management authorities to help it reach a decision. Decisions on allocating and approving development must be on the basis that the risk of flooding is acceptable."*

The implication of this is that minor exceedances of Figure 6 guidelines can be accepted in a redevelopment context – particularly where, as here, the scheme brings clear betterment in terms of reducing overall risk (through higher floor

levels and other measures) and where the residual risks are judged **acceptable and manageable**. We consider the predicted flood depths and velocities in the extreme, residual (breach) scenario remains within a safe and tolerable range for this type of development. Indeed, even under the worst-case modelled event (the 0.1% AEP with Upper climate allowance and multiple breaches), the internal flood depth is kept below 0.5 m, which is lower than in many other approved redevelopments in Wales. The dwelling's two-storey configuration, bunded/raised floor, and proposed evacuation plan together ensure that **occupants would be protected** from harm in such an event.

Increase in Flood Risk Elsewhere

No Third-Party Detriment: We welcome NRW's acknowledgement that, per the FCA, *"the proposal will not increase flooding elsewhere"*.

Climate Change

Approach to Climate Allowances: NRW recommends assessing the 1% AEP + 70% climate change (CC) breach scenario to ensure appropriate futureproofing. We wish to clarify that the 1% AEP (one in 100 year) event is not the governing design flood for tidal flood risk in TAN15 – for coastal sites. The relevant design standard is the **0.5% (1 in 200 year) event plus climate change scenario** (TAN15, Figure 5 and Section 10). The FCA has already considered a range of climate change scenarios for the site in detail. Specifically, we assessed:

- The 0.5% AEP (1 in 200) + CC event with the Upper Central (70th percentile) allowance for sea level rise, which is the appropriate basis for design frequency threshold compliance.
- The 0.1% AEP (1 in 1000) + CC event with the Upper Central allowance, to represent an extreme scenario and provide a robust test of the development's performance. This effectively simulates a slightly more severe event than a 0.5% + Upper allowance.
- The Breach scenarios for both the 0.5% + CC and 0.1% + CC events (Upper Central), as discussed elsewhere in this letter.
- Upper End (95th percentile) climate change impacts were also considered. The FCA (Table 5-1) shows that the difference in predicted peak tide levels between the 0.5% AEP Upper End scenario and the 0.1% AEP Upper Central scenario is within the region of only 0.01–0.03 m (i.e. a few centimetres). In other words, the **0.1% (1 in 1000) event with central allowance effectively provides results for the 0.5% event with the upper-end allowance**. On this basis, carrying out an entirely new breach simulation for "1% + 70% CC" would be disproportionate and is unlikely to yield any meaningfully different outcome.

We emphasise that our approach accords with Welsh Government's guidance and the intent of TAN15: use the central (70th percentile) allowances to **design safe development**, and use higher-end (95th percentile) allowances to **plan adaptive measures**. The development already incorporates freeboard and resilience to account for uncertainty in future sea-level rise.

Breach / Overtopping

Breach Analysis (Residual Risk): We confirm that, in accordance with TAN15 (para 6.8 and 10.26) guidance for Defended Zone sites, the FCA included a detailed breach analysis of the coastal defences. Breach scenarios were modelled for both the 0.5% AEP + CC (2122) and 0.1% AEP + CC (2122) events, assuming a highly precautionary situation where eight separate sections of the tidal embankment fail simultaneously. This is an extremely unlikely worst-case scenario.

The results show that, under the 0.5% + CC breach event, the majority of the site would be inundated to a maximum depth of around 0.66 m (in the far western corner of the site), with water levels reaching ~6.39 mAOD at the dwelling (resulting in approximately 0.25 m of internal flooding of the ground floor). Under the extreme 0.1% + CC breach event, external flood depths could locally reach ~0.95 m adjacent to the proposed dwelling (noting this is associated with a localised depression in existing ground levels as previously outlined), and ~0.49 m internally at ground floor level. While these outcomes naturally exceed the idealised design thresholds for new developments, it bears repeating that this scenario constitutes an exceedingly low-probability, residual risk event. Even so, the predicted internal flood depths in the worst-case breach remain below TAN15's 600 mm tolerable depth guidance for residential use. This indicates that the dwelling would likely retain structural integrity and safe refuge conditions on the ground floor, and certainly on the first floor, during the peak of an extremely rare breach flood. The analysis therefore provides confidence that the development can withstand very severe events without catastrophic consequences.

Access / Egress

Safe Access in Design Conditions: NRW rightly notes that consideration of emergency access/egress in extreme floods is primarily a matter for the Local Planning Authority and emergency planners.

The FCA demonstrates that under the design flood (0.5% AEP + climate change, without breach), the site's access route will remain dry and safe. The property is served by an access track leading to St. Brides Road (B4239) to the south, and this route is not inundated in the 0.5% + CC event. Even in the 0.1% AEP + CC coastal flood (extreme but non-breach scenario), the modelling shows only shallow water (generally <0.3 m) along the access road. Such depths are below the 0.6 m threshold and would likely be passable by suitably sized, and emergency vehicles if evacuation were needed. It is also important to highlight that tidal flooding in this area is forecast well in advance (typically 1–2 days warning of severe coastal surges), allowing ample time for evacuation before conditions become severe. In practice, this means residents would not be caught unaware by an extreme flood; they would have clear warnings and sufficient time to either safely leave the area or prepare to shelter in place upstairs, as appropriate.

Flood Response Plan: As part of ensuring safe management of residual risk, the FCA explicitly recommends the preparation of a Flood Emergency/Response Plan for the development (see FCA p.26) to guide residents on what to do in an extreme flood scenario. This includes advice for occupants to sign up for NRW's Flood Warning Service and, if necessary, to temporarily refuge on the first floor of the house in the unlikely event of a sudden defence breach that makes immediate evacuation unsafe.

Summary and Conclusion

In summary, the proposed development complies with national policy guidance on flood risk for a redevelopment in a defended floodplain. The scheme will provide essential rural enterprise accommodation on a previously developed, protected site, enabling a local business to continue operating safely and sustainably.

We have demonstrated through detailed analysis that the new dwelling will be flood-free in the designated design flood event (0.5% AEP + climate change) and that even in extreme and highly unlikely flood scenarios, the predicted flooding consequences are within or very close to the tolerable limits set out in TAN15. The design has been optimised to reduce flood risk – notably by raising the floor level – and includes measures to ensure any residual risks (from theoretical defence failure scenarios) can be managed to keep residents safe.

We disagree with the assertion that the proposal “does not comply with TAN15” on flood risk grounds. Such a statement overlooks the crucial flexibility afforded to redevelopment projects and the fact that Figures 5 and 6 of TAN15 are intended as guidance for decision-makers in these contexts. The evidence in the FCA, supported by current Welsh Government guidance, indicates that the flood risks to and from this development can be acceptably managed in line with TAN15's requirements and the objectives of Planning Policy Wales.

We also note that NRW have not raised an objection in principle, instead advising that further information be provided. We trust that the detailed explanations above, alongside the comprehensive analysis already contained in the FCA, satisfactorily address NRW's comments. In particular, we have clarified the justification for our climate change approach, the negligible impact on third-party flood risk, and the ways in which the scheme meets the intent of TAN15's Acceptability Criteria through a combination of flood avoidance (siting and design) and mitigation measures.

We hope this additional information is helpful to you in determining the application. Please do not hesitate to contact us if you require any additional information or analysis.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'George Baker', written in a cursive style.

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For and on behalf of Jeremy Benn Associates Limited