

Vale of Glamorgan

Deposit Replacement Local Development Plan

Public Consultation

Local resident RLDP consultation feedback based on review of RLDP information and supporting documents as hosted on RLDP website <https://valeofglamorgan.oc2.uk/>

Site : HG1 KS1 North West Barry (Weycock Cross)

Objection

Topic: **KS1: Flood Risk and Sustainable Drainage**

Ref: NWB_RLDP_JVN_007

Submitted by: [REDACTED]

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HG1 KS1: Flood Risk and Sustainable Drainage

Ref: NWB_RLDP_JVN_007

I object to the proposed allocation of land at Weycock Cross, Barry (HG1 KS1) on the grounds that the developer's own *Preliminary Drainage Strategy* (Persimmon, May 2025) demonstrates unresolved, significant, and in some cases unquantified flood-risk and drainage constraints. These issues fundamentally undermine the site's suitability for residential development and render the allocation unsound.

1. Surface-Water Flood Risk Remains Unresolved Due to Missing Critical Data

Although the site lies within Flood Zone 1, the drainage report confirms that:

- NRW mapping shows local watercourse flooding within the developable area
- parts of the site are already at risk of surface-water flooding
- NRW's detailed Product 6 dataset is unavailable, meaning there is *no numerical assessment* of flood depth, velocity, or hazard rating

Without Product 6 data, it is impossible to determine:

- whether proposed site levels will displace water onto adjacent land
- whether attenuation features are correctly sized
- whether safe access/egress can be maintained during a flood

In the absence of this essential dataset, no defensible flood-risk assessment can be completed. Allocation of the site is therefore premature and **contrary to PPW requirements** for evidence-based flood-risk management.

2. Major Discrepancies Between NRW Flood Maps and Surveyed Ground Levels

The drainage report acknowledges discrepancies of up to 2.5 metres between the site's topographical survey and NRW's flood-model outputs. This level of variance is extreme; flood models typically operate within tolerances of 0.10–0.25 m, not 2m or more.

Such discrepancies imply that:

- flooding may be more extensive than shown
- the proposed development platform may not be safe
- modelled flood outlines may be fundamentally inaccurate

A site with such substantial mapping errors should not progress to allocation without full resolution.

3. Outfall Capacity of the Central Watercourse Is Unknown

The strategy proposes discharging all surface water into the on-site watercourse at a controlled rate of 70.4 litres per second (l/s). However:

- no hydraulic modelling has been undertaken
- the downstream culvert has not been surveyed
- no evidence demonstrates that the open channel or culvert can accommodate 70.4 l/s, let alone exceedance flows during extreme rainfall

If the watercourse lacks capacity, the consequences include:

- increased flood risk to existing homes
- uncontrolled exceedance flows affecting sensitive ecological receptors
- flooding of new homes

Allocating a site before verifying outfall capacity is unsafe and contrary to PPW drainage principles.

4. Soil Conditions Make Infiltration SuDS Unviable

Soilscapes data and the drainage strategy confirm that the site is comprised of soil that is:

- slowly permeable
- seasonally wet
- loamy and clay based
- exhibits impeded drainage

As a result, infiltration rates are **unlikely to meet BRE365 standards**. Consequently:

- 100% of surface-water runoff must be attenuated and discharged to the watercourse
- this places substantial pressure on a constrained ditch and culvert system
- reliance on a **single** outfall is **high-risk** and **contrary** to SuDS hierarchy best practice

5. Extremely Large Attenuation Volumes Required

The drainage strategy calculates that the 100-year + 40% climate-change event requires:

- Attenuation volume: 9,580.7 m³ (approximately 4 Olympic-sized swimming pools)
- Storage basin footprint: 8,926 m² (approximately the size of a football pitch)
- Base dimensions: 163.6 m × 54.5 m
- Design depth: up to 1.14 m for the 200-year event

Such extensive attenuation demonstrates:

- the land naturally produces high runoff
- the site is hydrologically sensitive
- the developable area would require substantial re-engineering

Planning for this level of intervention strongly indicates that the land is inherently unsuitable for residential development.

6. Overland Flow from Adjacent Farmland Already Enters the Site

The drainage report confirms that runoff from neighbouring land flows onto the development area. This means the drainage design must intercept and reroute:

- external overland flows
- internal site runoff

Any miscalculation in levels, flow direction, or attenuation capacity could:

- redirect water toward existing housing
- increase on-site flood risk
- cause contaminated exceedance flows to migrate toward sensitive receptors, including the adjacent Ancient Semi-Natural Woodland (ASNW)

This represents a major unmanaged risk.

7. Foul Drainage Solutions Are Unconfirmed and Require Major Off-Site Works

All foul-drainage options presented are speculative and dependent on:

- pumping stations and rising mains up to 650 metres in length
- third-party land agreements
- potential network upgrades
- confirmation of capacity from Welsh Water

Even if surface-water issues were resolved (which they are not), foul-drainage uncertainty introduces further risk, delay, and potential undeliverability.

8. Critical Elements of the Flood-Risk Strategy Remain “To Be Confirmed”

Key missing assessments include:

- downstream culvert surveys
- watercourse capacity modelling
- BRE365 infiltration testing
- full SAB pre-application review
- NRW Product 6 flood-hazard data
- confirmation of foul-drainage capacity from Welsh Water

A site cannot be allocated when its fundamental drainage viability remains unproven.

9. The Developer's Own Evidence Demonstrates Fundamental Unsuitability

The drainage report confirms:

- flood mapping is unreliable
- flood-risk data is missing
- outfall capacity is untested
- infiltration is unlikely
- over 9,580 m³ of attenuation is required
- a discharge rate of 70.4 l/s must be imposed on an unmodelled watercourse
- overland flows enter the site from surrounding farmland
- foul drainage has no confirmed solution

These issues are significant, unresolved, and cannot be conditioned away or deferred to later stages.

Conclusion

The site presents fundamental and unresolved flood-risk and drainage constraints. The evidence demonstrates that the site is not hydrologically suitable for residential development. It should therefore not be allocated within the RLDP