

# **Blaenau Gwent Level 2 Strategic Flood Consequence Assessment (SFCA) for Tredegar Business Park (2025)**

## **Executive Summary**

Blaenau Gwent County Borough Council commissioned Wallingford HydroSolutions Ltd (WHS) to undertake a **Level 2 Strategic Flood Consequence Assessment (SFCA)** for **Candidate Site T025 – Land at Tredegar Business Park**, following its identification in the 2023 Level 1 SFCA as a site requiring more detailed analysis due to the presence of flood risk zones within the allocation boundary.

This Level 2 assessment provides an enhanced understanding of flood risk based on newly developed detailed hydraulic modelling of the Sirhowy River, updated flood mapping, and a comprehensive review of all potential flooding mechanisms affecting the site.

## **Key Findings**

### **1. Fluvial Flood Risk – *Significantly Lower Than Previously Mapped***

- Although national Flood Map for Planning (FMfP) data previously placed the site in Flood Zones 2 and 3, new WHS hydraulic modelling shows the Sirhowy River remains fully in-bank for all events up to 0.1% AEP + climate change.
- Updated modelling places the entire site effectively in Flood Zone 1, indicating very low fluvial risk.
- No formal flood defences exist nearby, but none are required given the updated risk profile.

### **2. Surface Water Flooding – *Localised & Manageable***

- Surface water risk is present, mainly in the southern part of the site, driven by runoff from higher ground to the north and west.
- The extent is limited and should not prevent development, although more detailed assessment is needed at planning stage.

### **3. Groundwater Flooding – *Moderate Potential***

- Underlying mudstone/sandstone formations and variable restored soils indicate moderate groundwater emergence risk.
- Additional site investigation is recommended to confirm infiltration viability for drainage design.

### **4. Reservoir Flooding – *Low Probability Event***

- The site is within the theoretical breach extent of two upstream reservoirs.
- Reservoir failures are extremely rare due to strict statutory inspection and maintenance regimes.

### **5. Historical Flooding**

- No historical flooding is recorded at the site.

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## Development Implications

### Suitability for Allocation

- The site is suitable for new employment development (B1/B2/B8 uses) and complies with TAN15 by steering development toward areas of minimal flood risk (Flood Zone 1).

### Requirements for Planning-Stage FCA

A site-specific Flood Consequence Assessment should:

1. Assess detailed surface water risk and drainage pathways.
2. Develop a SuDS strategy consistent with SAB standards.
3. Conduct geotechnical testing to confirm infiltration capacity.
4. Consider attenuated discharge; gravity connection to the Sirhowy River is feasible.

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## Overall Conclusion

The Level 2 SFRA confirms that previous national flood mapping greatly overstated flood risk at Site T025. Based on updated detailed modelling, the site lies fully within **Flood Zone 1** for fluvial risk, with only limited surface water and moderate groundwater risks that can be mitigated through standard planning measures.

**The site is appropriate for allocation for employment uses within the Replacement Local Development Plan (RLDP).**