MEMORANDUM

From: Chief Officer, Environment & Technical

To: Chief Officer, Economy and Planning

FAO: Jenni Perkins

Your Reference: P/2025/0337

Our Reference: SAB/PRE/2025/0301

Date: 17/06/2024

TOWN AND COUNTRY PLANNING ACT 1990

PROPOSAL:
Demolition of two double classroom buildings and replacement with a new 4 classroom block for infants/new nursery (phase 1). Construction of new 4 block classroom for juniors (phase 2)

LOCATION:
Ysgol I.D. Hoosen, Heol Caradoc, Rhosllanerchrugog, Wrexham

We refer to your consultation as per the email dated 22/05/2025 in respect of the above. This response is provided on behalf of the Lead Local Flood Authority (LLFA) and includes comments based on the SuDS Approving Body (SAB) statutory function which it delivers.

It should be noted that the development as outlined above would be classified as highly vulnerable under TAN 15. As such, given the flood zone status outlined below and issues identified in the SAB application, the LLFA Team would like to **OBJECT** to this development.

Lead Local Flood Authority (LLFA)
The LLFA, as established under the Flood and Water Management Act 2010, is the responsible risk management authority for surface water, ordinary watercourse and groundwater flooding.

Flood Zone Status
The LLFA Teams notes that the proposed development sits in Flood Zone 3 for surface water, or pluvial, flooding. The extent of this flood zone area is shown in Figure 1. The development proposes an extension to an existing school site. The LLFA notes that this would be classed as highly vulnerable development under TAN 15 and allocation for such development, even as a part of redevelopment, should be avoided in this flood zone.

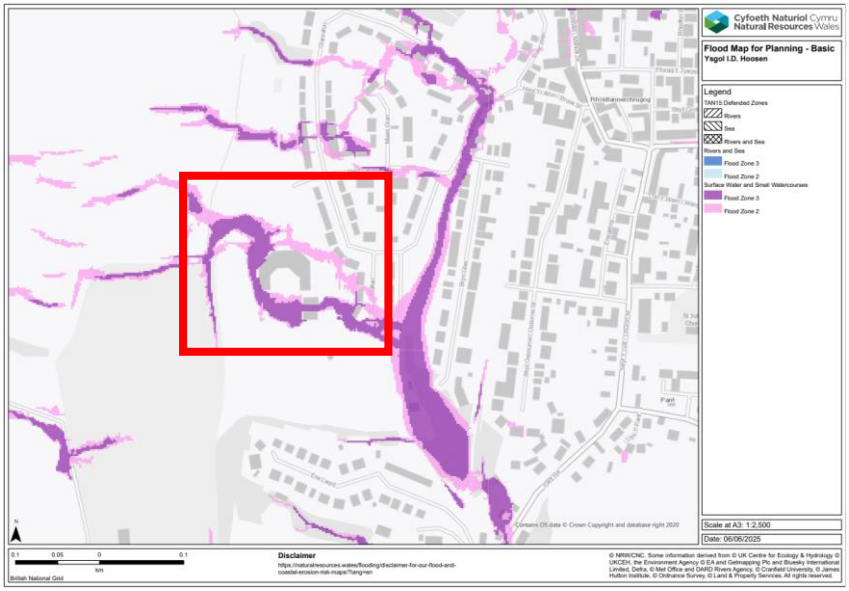


Figure 1: The pluvial flood risk present on the proposed development site in the wider context of flood risk in the area. The map is derived from the NRW Development Advice Map (DAM).

Despite the above, the LLFA recognises that this is an extension to an existing school site and that it would be difficlut to locate the proposal elsewhere and outside of flood the flood zone. It is noted under TAN 15 that highly vulnerable developments should only be permitted in flood zones within certain tolerable limits. In the case of this development, the tolerable flood depth would be a maximum of 600 mm in the 0.1% annual exceedance probability (AEP). Whilst the LLFA accepts that an attempt at modelling these scenarios has been made in the Flood Conseqeunce Assesssment (FCA), it appears that the modelling has been carried out on the existing site topogarphy and not on that which is proposed in the post-development scenario presented by the application. It is noted that the flood depths in the 0.1% AEP scenario do exceed 600 mm in the location of the extension which would be beyond the tolerable limit. Whilst it is suggested that rasing ground level would be sufificient to remove this flooding from the prpopsed exetensions to the existing building, it is unclear from the information submitted to planning as to where this water would be allowed to pond instead and if this would pose an offsite flood risk. It is also noted that the on-site flood velocities have not been included in the FCA. The LLFA would request this information as a matter of urgency to determine if the proposals are within tolerable limites and if they have a negative impact on existing properties elsewhere.

It is noted that the development sits in Flood Zone 1 for fluvial flooding from rivers and sea. Development in this flood zone would be of no concern if pluvial flood risk was not present. As no fluvial flooding affects the site, it is not located within a TAN 15 defended zone.

Flood Alleviation Proposals

It is the understanding of the LLFA Team that the development site does benefit from existing flood defences. However, details of the workings of this system have not been provided within the Flood Consequence Assessment (FCA), nor has any information regarding the current condition of these assets. Given that the presence of flood defences does not permit development, the LLFA would like to request that an assessment of the current condition of this system is provided. In addition, as per TAN 15, we would request that an assessment of the impact and consequences of a flood exceedance scenario is also made in the FCA. The latter is of particular concern given the sharp topographical drop located to the east of the development site towards an existing residential property.

Further to the above, it is noted by the LLFA that flood mitigation is proposed for the new development. It is understood by the LLFA that these proposals include raising the ground levels on which the proposed development will sit. This would then channel the flood water around the development site through a proposed swale. It is understood from information provided during the

SuDS Approving Body (SAB) application that this water would then be channelled through the existing flood alleviation system via a weir system to an existing manhole. The LLFA does not feel that sufficient information has been provided to support this scenario as any exceedance flow would likely be directed towards existing residential properties. Whilst these properties are already at risk of flooding according to the NRW Development Advice Map, it is unclear if any flood mitigation proposal would increase the depth or velocity of flooding offsite.

Access During Flood Events

In addition to the above comments, the LLFA would ask the LPA to consider offsite flooding which affects access to the proposed development within its determination. During normal conditions, access to the proposed development is along Brook Street and up Heol Caradoc. However, Brook Street is prone to frequent flooding after heavy rainfall over periods of a few hours or thunderstorm events to a level where road closures are required. As such, an unofficial evacuation route via a car park off Bonc Wen is in place as demonstrated in Figure 2.



Figure 2: An illustration showing the normal vehicular route to Ysgol I.D. Hoosen and that taken when flooding prevents vehicular movements through Brook Street. The photographs illustrate flooding on both routes in the most recent flood event affecting the community on Wednesday 16th October 2024.

It is noted by the LLFA that this emergency access route to the school also suffers from flooding in more extreme rainfall events. Figure 2 shows images from the most flood event on 16th October 2024 which illustrates how impassable both routes towards the school can become during a high intensity rainfall event. It should be noted that pedestrian access during such flood events to the development would become difficult due to the flow velocities of the water from the overtopping of the Afon Goch tributary culvert on to Glanrafon. Pedestrian access to the development via Brook Street during such flood events is also not encouraged due to the depth of the flood water. The LLFA are aware that the flood scenarios is Figure 2 can cause combined sewerage systems to be overwhelmed and so the flood water is also likely to be contaminated.

In addition, the LLFA has concerns that the increased traffic movements proposed by the development would exacerbate flooding issues through the movement of vehicles creating bow waves entering flooded properties. The LLFA would like to refer to LPA to the comments made by the Local Highways Authority (LHA) in regards to the suitability of this emergency access route in relation to road safety, pedestrian access and access for emergency vehicles.

In regards to the issues raised by this section, the LLFA would like to request that an emergency evacuation route is included in the Flood Consequence Assessment (FCA) given the Flood Zone classification of this development. We note that no flood warnings are available for this location so the LLFA feels that the triggers for preventing harm the users of the proposed development is quite key to the application.

SuDS Approving Body (SAB)

It is noted that this development will be subject to Schedule 3 of the Flood and Water Management Act 2010 as enacted by the Welsh Government on 7th January 2019. As such, the drainage for the development will require approval from the SAB team before construction can commence to ensure compliance with the Statutory National Statutory Standards for Sustainable Drainage Systems. Whilst the approval of the SAB is independent of the planning process, we ask that the below comments are taken into consideration as a part of this application.

An overview of the application in relation to the statutory standards is included below. We note that these comments has been made in consideration of the pre-application SAB advice allocated the reference SAB/PRE/2025/0301.

Standard 1: Surface Water Runoff Destination

In order to comply with the Statutory Standards for Sustainable Drainage Systems, the development must work through the different priority levels of the discharge hierarchy as follows:

1. Surface water runoff is collected for use.
2. Surface water runoff is infiltrated to ground.
3. Surface water runoff is discharged to a surface water body.
4. Surface water runoff is discharged to a surface water sewer, highway drain or another drainage system.
5. Surface water runoff is discharged to a combined sewer.

The SAB is satisfied that the development cannot achieve substantial water reuse and that infiltration is not a viable method of surface water management on this development site due to the presence of made ground. Therefore, the SAB accepts that the development proposes to discharge its surface water through an existing drainage system which discharges to the Afon Goch. However, it should be noted that this watercourse presents a significant downstream flood risk to properties and highway infrastructure on B5097 Pant Hill, Rhosllannerchrugog as shown in Figure 3. In part, this is due to a reduced capacity culvert located under the old railways line off Lower Mountain Road. The LLFA Team has evidence of this flooding in 2005, 2012, and 2016. Of these, both the 2005 and 2016 events led to internal flooding to properties.

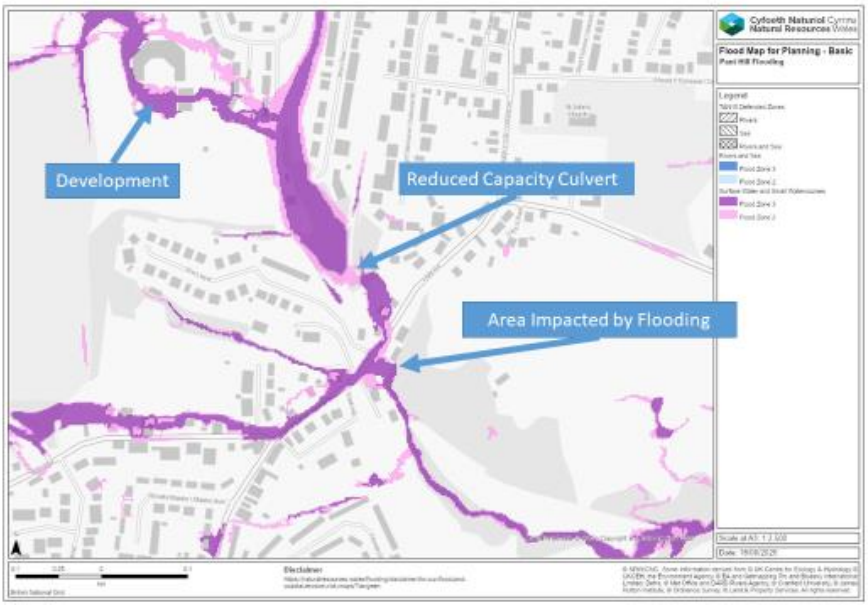


Figure 3: An overview of the offsite flood risk associated with the Afon Goch. The proposed development is located to the top left of the image.

In a situation where the receiving water is of such a flood risk, the SAB would usually suggest that the developer moves down the discharge priority highway. However, all surface water sewers in the area currently discharge to the same water body and the combined sewerage system becomes overwhelmed in high rainfall events. Consequently, the SAB is not satisfied based on the pre-application advice alone that this development can be suitably drained without causing additional flood risk.

Standard 2: Surface Water Runoff Hydraulic Control
Evidence provided to the SAB as a part of the pre-application advice and in the planning application suggests that the developer intends to discharge water at brownfield runoff rate. This is not accepted by the SAB as it does not comply with the Statutory Standards for Sustainable Drainage Systems. As per page 25 of the statutory guidance issued by the Welsh Ministers, previously developed sites should be reduced to the greenfield rates wherever possible. This is because the critical storm duration for the attenuation storage system will be much longer than that used to size the existing drainage on site. There is a risk that, by allowing development runoff rates to occur, receiving watercourse damage and flood risk could be made considerably worse. Thus, if the developer were to pursue the use of a brownfield runoff rate to size attenuation, a betterment of at least 30% would be required.

At this time, the SAB notes that the proposed betterment is only at 24%. If a betterment of 30% cannot be achieved, the development will not achieve SAB approval. However, the SAB does feel that the development should be restricted to greenfield runoff rate and this will be raised within the full SAB application.

Standard 3: Water Quality
The SAB is satisfied that this standard has been met.

Standard 4: Amenity
The SAB is satisfied that this standard has been met.

Standard 5: Biodiversity
The SAB is satisfied that this standard has been met.

Standard 6: Construction, Operation and Maintenance
The SAB is satisfied with the maintenance plan which has been provided as a part of the pre-application advice application. However, it is clear from conversations with the developer and the lack of information included regarding the existing flood alleviation structures that drainage maintenance has been lacking on the development. As a result, the SAB would like the maintenance plan for the new development to include the existing drainage assets on site.

Outstanding Issues on the Site

1. The LLFA notes that no assessment has been provided of the existing flood alleviation systems on the development site. As per TAN 15, the Flood Consequence Assessment (FCA) should assess the impact and consequences of any overtopping within this system. The LLFA also believes that this assessment should be extended to include the condition of these existing assets to determine if the continued use of them is appropriate as a part of the proposal.

2. The LLFA would like to request flood depth and flood velocity modelling for the post-development scenario. It is noted that the current modelling is based off the current site topography and makes assumptions about depths which are not proven.

3. The LLFA would like to request site plans showing the existing and proposed site levels related to ordnance datum as per the technical requirements for FCAs as per TAN 15. We believe that the assessment of any ground level alterations relative to the source of flooding and the anticipated water levels should be included in the FCA.

4. The LLFA would like to request information surrounding emergency access routes from the proposed development site to be included in the Flood Consequence Assessment (FCA).

5. The LLFA, acting within its role as a SAB, would request that the drainage design is amended to control the discharge to greenfield runoff rate. If justification can be provided as to why this is not possible, then the SAB will accept a brownfield runoff rate with a betterment of at least 30%. A smaller betterment will result in the development not obtaining SAB approval.

Conclusion

To conclude, the LLFA Team would like to **OBJECT** to this development. This decision has been made based on the information submitted to the LPA and that which we are privy to in our role as a SAB. Whilst this is an existing and operational site, the LLFA does not feel that the flood risk to the site has been adequately considered as illustrated by the missing components in the FCA as required by TAN 15. This point is exacerbated by the highly vulnerable categorisation of this development and the fact that access during times of high rainfall is compromised by existing flooding issues off site.

In addition to the above, the LLFA, in its role as a SAB, cannot be confident that surface water can be discharged to the existing surface water system serving the development site. This is because the condition of the existing drainage and flood alleviation assets are unknown. It is also the assumption of the LLFA that the assets already present on site have not been maintained and, as such, may pose a risk to existing property. The LLFA is also unable to support an application at brownfield runoff rate to an ordinary watercourse which poses significant risk to residential property without sufficient betterment and a justification as to why the system leaving the site cannot achieve greenfield runoff rate.

If you have any questions regarding the above, please do not hesitate to contact the team via flooding@wrexham.gov.uk.

Yours sincerely,
Cathryn Hughes
Technical Flood Risk Officer
Lead Local Flood Authority Team

On Behalf of:
Darren Williams, Chief Officer
Environment and Technical Department
Wrexham County Borough Council