


# MEMORANDUM / COFNOD

The Vale of Glamorgan Council  
The Alps, Wenvoe, CF5 6AA

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17 JUN 2016	BRO MORGANNWG
Regeneration and Planning	

To / I:	Jane Croft
Dept / Adran:	Planning
Date / Dyddiad:	14/06/2016
Your Ref / Eich Cyf:	P/DC/LC/JC/2016/00305/R G3

From / Oddi Wrth:	Operational Manager Highways and Engineering
My Ref / Cyf:	HE/SP/CRM/L5/1
Tel / Ffôn:	029 20673277
Fax / Ffacs:	029 20673114

Subject / Testyn: **Planning Application No. 2016/00305/RG3 Land Adj A4226, Five Mile Lane, Barry**

**Proposal: On line improvements to the existing A4226 between Waycock Cross Roundabout in Barry and the lay-by to the north of the Welsh Hawking Centre, and an off line new road provision to the east of the existing A4226 which will reconnect to the existing A4226 just to the South of Blackland Farm**

Areas of this proposed development site lie within DAM zones B and C indicating there is a risk of fluvial flooding to the site. A designated main river also flows through the site, along with a number of smaller ordinary watercourses. Therefore, NRW should be consulted on this application. NRW maps indicate that there is a low to medium risk of flooding to various locations within the proposed development area. There are known flooding issues in the vicinity of the proposed development site, especially Llancafarn village. Therefore, the effects of any increased flows within this watercourse must be critically considered.

A comprehensive Flood Consequence Assessment has been submitted with this application which demonstrates the potential sources of flooding to the development, and an outline of the proposed watercourse works and surface water drainage strategy. The FCA splits the drainage of the proposed development into two sections: Sycamore Cross and the proposed new road.

#### Sycamore Cross:

The proposed works in this area will increase impermeable areas by 650 m<sup>2</sup>. It is not proposed to increase the existing drainage network in this location due to the negligible increase in surface area. It is unknown where the existing drainage network discharges too, with the possibilities being Nant Llancafarn, River Waycock or nearby ponds.

Due to the potential for water from this point to reach an area with a known flood risk, further information is required with regards to the existing drainage system at this location. The outlet of the system should be identified, and assurances should be made that there is capacity both within the system, and downstream of the system to accept an increase of flow.

#### Proposed New Road

Surface water management for the proposed new road will comprise of a new drainage system. Geological records for the area and infiltration tests indicate that the soil type would not provide sufficient infiltration rates for the use of infiltration as the sole method of surface water disposal.

Therefore, a drainage strategy of road edge filter drains, ditches and attenuation basins have been produced to discharge of surface water into the nearby watercourses at Greenfield runoff rate. Each attenuation basin is served by a specific 'network' and the Greenfield runoff rates, and the appropriate storage volumes required for these areas, have been calculated. The results are submitted within the FCA. Surface flow wetland areas will provide a system of filtration prior to water entering the attenuation basins and the watercourses.

The highway will be designed to a 1 in 30 year standard of rainfall event, with any exceedance flows up to the 1 in 100 year design event plus 30% for climate changed managed within a number of attenuation basins along the length of the highway, to avoid causing detriment to surrounding areas. All attenuation basins will be placed within areas classified as DAM Zone A to avoid the reduction in functional flood plain space in DAM Zones B and C. Exceedance flows from the attenuation basins will fall away from the proposed highway, although these have not been shown in plan form. Consideration should be given to the provision of scour/erosion protection measures at the point of overtopping on the attenuation basins.

A design scheme for the highway to serve for the 1 in 30 year design event has not yet been submitted with this application.

Location plans of the proposed attenuation basins have been submitted with this application, along with the proposed network area contributing to that attenuation basin. No plans have been submitted with detailed design drawings of the attenuation basins themselves.

Prior to work commencing on site, a comprehensive drainage plan shall be submitted to and approved by the LPA. The plan should detail the proposed drainage system along with details on pond size, depth, bank slope, headwall details and landscaping details in accordance with the SuDS Manual. Hydraulic calculations for proposed system should be submitted demonstrating the efficiency of the system up to the design standard.

It is important to ensure that flood risk in the surrounding areas is not exacerbated by the addition of surface water from the proposed new highway. Networks 4a and 4b (and network 1 eventually feeds to this point also) discharge water to the River Waycock. This is constrained by Structure B1190 at Cuckoo Mill where the river regularly floods across the highway. Network 2 feeds to the Ford Brook which is constrained by Structure B1189 at Ford Farm and also regularly floods across the highway. Both Network 2 and 3 feed to the Ford Brook and are constrained by Structure B1164 which regularly floods across the highway too. Therefore, consideration needs to be given to the volume of water which will reach these locations, and the detriment that flows above the 1 in 100 year design event plus 30% for climate change would have on these locations. Details should be submitted that indicate that the applicant has considered the potential for detriment to these areas for events above the 1 in 100 year design standard.

Exceedance flow routes should also be submitted and approved by the LPA prior to work commencing on site. Exceedance flows, should a breach of the attenuation pond occur, should not cause a detrimental effect on surrounding properties and highways.

The FCA details the Council will be maintaining the system after completion; however no SuDS management plan has been submitted with this application. A SuDS management plan should be submitted with this application detailing the strategy that will be followed to facilitate the optimal functionality and performance of the SuDS scheme throughout its lifetime.

No Construction Environmental Management Plan has so far been submitted with this application. Details should be submitted with regard to the risks to the adjacent watercourses from all pollution sources, including silt, during construction phases and the measures put in place to mitigate this risk.

**Conditions:**

Given the above, no development shall commence on site until a detailed scheme for the surface water drainage of the site will be dealt with has been submitted to and approved in writing by the Local Planning Authority. Details shall include technical details for the proposed attenuation basins and proposals for the 1 in 30 year drainage system within the highway, along with details of the drainage system at Sycamore Cross. Any calculation for onsite attenuation or discharge should also be included. The scheme shall provide an appropriate level of runoff treatment and will follow the principles identified within the Flood Consequence Assessment. The approved scheme must be implemented prior to first use of the proposed and as built drawings should be submitted to the LPA. This is to ensure that effective drainage facilities are provided for the proposed development and that flood risk is not increased elsewhere.

No works or development shall take place until a SuDS management plan which includes details on future management responsibilities for the site and its drainage assets has been submitted and approved in writing by the Local Planning Authority. This plan shall detail the strategy that will be followed to facilitate the optimal functionality and performance of the SuDS scheme throughout its lifetime. The management plan shall be implemented in full accordance with the agreed terms and conditions in perpetuity.

Development shall not commence until a construction environmental management plan for the protection of the adjacent watercourses from pollution during the course of construction has been submitted to and approved in writing by the local planning authority. The statement shall assess the risks from all pollution sources and pathways (including silt, cement and concrete, oils and chemicals, herbicides, aggregates, contaminated land and waste materials) and describe how these risks will be mitigated for this development. Development shall be carried out in accordance with the approved details.

**Advisory:**

Any works to watercourses, including ditches and streams where defined by the Land Drainage Act 1991, require Land Drainage Consent by the relevant drainage body (Lead Local Flood Authority – Vale of Glamorgan Council). Works include permanent and temporary works, including temporary crossings during construction phases.



C. R. Moon  
for Operational Manager Highways and Engineering  
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