

Judith Williams

From: Sharon Holman
Sent: 07 November 2014 09:16
To: planning_admin
Subject: P/2014/0598 - Coresnewydd Road

Civ – flood report

From: Peter D Jones
Sent: 06 November 2014 16:52
To: David Williams; Sharon Holman
Cc: Steve Bayley; David Hesketh; Andrew Ford; Andrew McLaughlin
Subject: FW: Western Gateway

Dave / Sharon

Please find attached Atkin's response to the concerns raised by NRW.

If you require anything further then please let me know.

Regards

peter

Peter Jones
Engineer / Peiriannydd

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 Housing, Public Protection and Environment Department.
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From: Johnson, Tony [<mailto:tony.johnson@atkinsglobal.com>]
Sent: 06 November 2014 16:42
To: Andrew Ford
Cc: Peter D Jones
Subject: RE: Western Gateway

Andy, Peter,

Below are the extracts taken from NRW's latest correspondence which I have responded to on each point.

Figures 4-3 and 4-4 compare the impact of the development on flood levels. Both scenarios (0.1% return probability and 0.1% probability with a blockage of the culvert) indicate a slight increase in flood level on the adjacent Brother site. The FCA suggests that this increase is an artefact of the modelling – as a result of the limitations posed by model grid resolution. As we have not been able to assess the FCA in detail, we are not in a position to confirm nor challenge the consultant's suggestion. – This issue has been discussed with NRW both verbally and in a written response which I have detailed here - The accuracy of the 2d flood envelope is based on the resolution of the underlying DTM. The flood envelope is there subject to 'pixelation' when processed. We have checked the water elevations in this area and the small portion of the red polygon that is outside the green boundary line is actually below ground level but TUFLOW has mapped the whole pixel as being 'wet'. This is a limitation of the modelling software..

It should be noted, however, that any increase in flood level on 3rd party land would be contrary to TAN15's principal of no increase in flooding elsewhere. Ideally, this aspect should be explored in more detail to confirm whether or not there is any 3rd party detriment and if necessary, put forward mitigation measures.

Should your Authority be minded to grant permission despite the above concerns, we would recommend the following planning conditions:

Condition: The capacity of the existing culvert beneath the link road must be maintained at its pre-development capacity.

Reason: To ensure that flood risk to third parties is not increased.

Condition: The elevation of the spine road must be set at the level proposed in the FCA (Atkins – Final, October 2014).

Reason: To ensure that flood risk to third parties is not increased. Culvert blockage – The risk of blockage of this structure is considered to be very low. There are no proposals to change the arrangement of the culvert therefore there will be no increase in the likelihood of culvert blockage as part of the spine road development proposals. It has also been demonstrated from hydraulic modelling undertaken as part of the WAST development that the consequences of flooding to 3rd party land WITHOUT the spine road develop are very similar. The risk of structure blockage and its consequences can be effectively managed through implementation of a maintenance regime developed for the culvert and approach channel.

It is important to note that, in the 0.1% probability flood event, the spine road is predicted to flood. This will therefore restrict access to the office development site during the extreme flood event – we would suggest that you discuss this with your Emergency Planners / Emergency Services. It is unclear from the information provided whether this aspect of the development complies with the requirements of A1.15 of TAN15 – you may wish to require further clarification from the developer.

- flood depths across the spine road during a Q1000+cc event are in the region of 0.01m- 0.015m. This shallow flow condition would allow any emergency vehicle to access the development site.

We would also strongly advise that a planning condition should be placed on the office development requiring submission of a surface water design which limits discharge rates to the greenfield rate. This should make use of SuDS techniques. We would also suggest that you discuss surface water matters with your drainage department: we are aware of flooding of the existing housing estate off Lower Berse Rd, despite this not being in any flood outline – your drainage department may hold more information on this matter.

Tony Johnson BSc (Hons) MCIWEM C.WEM
Senior Scientist, Rivers and Coastal, Water & Environment

ATKINS

From: Andrew Ford [<mailto:Andrew.Ford@wrexham.gov.uk>]
Sent: 06 November 2014 15:53
To: Johnson, Tony
Cc: Peter D Jones
Subject: Western Gateway

Tony,
Our Planners are ready to provide the draft decision. Will you be in a position to submit the requested information this afternoon?

Thanks,

Andrew Ford
Engineer / Peiriannydd

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