

St Athan FCA

Flood Consequence Assessment
Appendix B- NRW Correspondence

Welsh Government

10 March 2017

Quality information

Prepared by

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Checked by

Approved by

Revision History

Revision	Revision date	Details	Authorized	Name	Position

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1. Climate Change and Blockage Correspondence

From: Wicks, Richard [<mailto:Richard.Wicks@cyfoethnaturiolcymru.gov.uk>]

Sent: 02 December 2016 10:14

To: Taylor, Adam F (Cardiff, UK)

Cc: Davies, Wyn

Subject: St Athan Relief Road

Dear Adam,

Further to our meeting yesterday I was given some action points which I cover below:

1. Blockage guide attached – Due to the sensitivity of the area to flood risk we would like to see the consequences of a medium and high risk of culvert blockage checked and reported in the FCA together with how that risk can be satisfactorily managed the percentage blockage is given in the document.
2. Hydraulic modelling relative to TAN 15 guide attached.
3. Advice on Climate change to use – Post 1st December 2016, NRW recommend that the Central Estimate/Change Factor (as presented in the WG climate change guidance) for the relevant geographic area is used in any assessment of flood risk and consequences. The WG guidance also recommends that an assessment of risk using the upper end estimate is undertaken to help inform mitigation measures and where appropriate, to ensure the long term resilience of the development. Application of the upper end estimate is therefore desirable but optional. For this project which can be considered a major infrastructure project and should thus seriously consider its long term resilience and sustainability we would recommend you apply the upper end estimates as part of an assessment, based on the merits of the development and flood risk. However, our advice on acceptability will be based on the assessment demonstrating that the development can comply with Planning Policy Wales Technical Advice Note 15 requirements with the appropriate central estimate/change factor climate change allowance applied.
4. The NRW contact to discuss fish passage and environmental matters is Michael.clyde@cyfoethnaturiolcymru.gov.uk (Sustainable Fisheries Project Manager) and sally.curran-parry@cyfoethnaturiolcymru.gov.uk (Technical Officer Biodiversity)
5. I would also take this opportunity to confirm that my advice to you on this project is purely on Flood Risk and there will be many other considerations that you should consult NRW on via the planning process or directly to NRW at swplanning@cyfoethnaturiolcymru.gov.uk

Regards

Richard Wicks BSc (Hons) CEng MICE

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Ein diben yw sicrhau bod adnoddau naturiol Cymru yn cael eu cynnal, eu gwella a'u defnyddio yn gynaliadwy, yn awr ac yn y dyfodol.

Our purpose is to ensure that the natural resources of Wales are sustainably maintained, enhanced and used, now and in the future.

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2.1 Meeting Minutes

Project	St. Athan Northern Access Road
Subject	Meeting to discuss the FCA produced for the NAR prior to issue to NRW
Meeting No.	004
Date	16 February 2017
Venue	Natural Resources Wales offices, Cross Hands
Attendees	Wyn Davies, Natural Resources Wales (WD) Richard Wicks, Natural Resources Wales (RW) Clive Moon, Vale of Glamorgan Council (CM) Adam Taylor, AECOM (AT) Mark Davin, AECOM (MD)
Apologies	Laurence Aaron, Welsh Government (LA), Rhys Mander, AECOM (RM)
Distribution	As above
Prepared by	Mark Davin / Adam Taylor

ITEM	DESCRIPTION	ACTION
1.	Introduction	
1.1.	MD provided an introduction to the meeting, during which it was explained that to support the planning application for the Northern Access Road at St. Athan, the hydraulic modelling for the pluvial and fluvial elements is ready to be submitted to NRW for review. MD brought to the meeting an external hard drive with both pluvial and fluvial hydraulic models (inc. individual reports) to enable NRW to undertake the technical review of the information, methodology, results and associated data.	

ITEM	DESCRIPTION	ACTION
2.	FCA Results	
2.1.	<p>MD presented the results of the hydraulic modelling. The results detailed that during the 0.1% AEP event with 100% blockage on either Boverton Brook or Llanmaes Brook catchment, that the upstream storage areas remained below 10,000m³ and that there would be no detriment to the downstream hydrographs. The proposed solutions are a proof in concept that a solution is workable in these locations and that following approval from NRW and other parties, the final detailed design will then be concluded.</p>	
3.	Llanmaes FAS	
3.1.	<p>It was highlighted that following the initial data request of the proposed Llanmaes FAS, run by VoGC and prepared by Mott MacDonald, AECOM had received information on Tuesday 14th February. The initial data request was made in August 2016 and highlighted at subsequent meetings.</p>	
3.2.	<p>The information provided by Mott MacDonald was heavily caveated such that this information should not be used to support any design calculations.</p>	
3.3.	<p>MD advised that between the fluvial and pluvial representation of the watercourses, that the pluvial was by far the most conservative in terms of producing flood extents. As such, this method was the driving factor for determining a solution for this project. NRW, in November 2016, agreed that the design event should be the 1% AEP (+30% CC). To account for unknown discharges from the potential Llanmaes FAS VoGC scheme and absence of suitable design data, the AECOM scheme at the bisection of the Llanmaes Brook has been simulated and shown to be compliant under the higher estimation of climate change (1% AEP [+75%]).</p>	
3.4.	<p>RW raised concerns with using the higher estimation of climate change as being a suitable approach for determining flood risk associated with uncertainty around the Llanmaes FAS VoGC scheme. RW stated that NRW would not allow the Northern Access Road scheme to go through to planning without agreement as to how to represent the future hydrograph downstream of the urbanised region of Llanmaes. Although the AECOM scheme may be constructed prior to the VoGC scheme, NRW has a duty of care to ensure that neither scheme adversely impacts on the other. All present were in agreement.</p>	
3.5.	<p>RW was disappointed that VoGC had not been in a position to provide suitable data as agreed would happen during the initial inception meeting in August 2016. NRW and AECOM have endeavoured to progress the scheme due to its high importance to Welsh Government.</p>	

ITEM	DESCRIPTION	ACTION
4.	Actions to resolve issue of lack of data	
4.1.	RW stated that as a result of a lack of knowledge from the potential VoGC schemes impact with respect to the AECOM scheme, NRW would not be in a position to review the hydraulic model data for the Northern Access Road until one of the following three criteria had been agreed upon: <p style="margin-left: 40px;">1 – VoGC take control of risk associated with any additional flood storage requirement as a result of any future scheme beyond the construction of the Northern Access Road.</p> <p style="margin-left: 40px;">2 – AECOM provide VoGC with the allowable max design discharge downstream of the urbanised region of Llanmaes to support any future FAS design limits.</p> <p style="margin-left: 40px;">3 – VoGC to provide flow information to AECOM which is uncaveated, allowing it to be assessed, compared to the proposed Northern Access Road scheme and to subsequently be incorporated into the FCA.</p>	
4.2.	CM confirmed that VoGC remain committed to the AECOM scheme and will work together to find a solution to overcome the concern highlighted by RW.	
4.3.	VoGC will speak to Mott MacDonald on 16 th February and instruct for the issue of suitable data to allow the completion of the FCA. It was agreed during the meeting that this information should be provided to AECOM by close of business Monday 20 th February.	CM
4.4.	Due to pressing time constraints in terms of the planning application, AT advised that Criteria 2 (above) is the preferred option which will be actioned should the suitable data not be provided on the date indicated above. However, all parties are hopeful that the Mott MacDonald information provided will give assurance that the downstream flows as a result of the Llanmaes FAS will be lower than that allowed for in the AECOM scheme peak flow.	AT
5.	Conclusion	
5.1.	To conclude, RW requires a written document stating the agreement between all parties prior to progression of this project for review, approval and planning application submission.	
6.	Any Other Business	
6.1.	As minuted above.	
7.	Date of Next Meeting	
7.1.	Further meetings will be arranged as necessary.	

