

From: Michael Eastham <Michael.Eastham@arun.gov.uk>
Sent: 06 October 2020 15:49
To: Planning.Responses <Planning.Responses@arun.gov.uk>
Subject: A/110/20/RES

Please upload onto Ocella the email trail below which is a consultation response from the **Lead Local Flood Authority** to **A/110/20/RES** – Land South of Water Lane, Angmering.

Thanks,

Michael

Michael Eastham
Principal Planning Officer,
Planning Department

T: 01903 737772
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From: Ray Drabble [REDACTED]
Sent: 06 October 2020 15:40
To: Katie Herr [REDACTED] Michael Eastham <Michael.Eastham@arun.gov.uk>
Cc: Kevin Macknay [REDACTED]
Subject: RE: A/109/20/RES and A/110/20/RES

Mike,

Update on the LLFA's input to the Land South of Water Lane Development.

The LLFA has drafted its Flood Risk Assessment for the Angmering Flood Alleviation Scheme. This has yet to be independently reviewed by Laura Gibbons (Adur Worthing Councils) and by the EA to whom copies have been sent. Copies of the FRA together with the Technical Modelling Report for the scheme have been sent to BDW homes to support their detailed design of a culverted embankment for the development site.

The FRA will form an addendum to their existing FRA for the access road.

If you have any further queries please don't hesitate to get in touch.

Kind regards

Ray Drabble

Flood Risk Engineer (Sustainable Drainage)
Economy, Infrastructure and Environment
Highways and Transport
West Sussex County Council

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From: Katie Herr [REDACTED]
Sent: 06 October 2020 15:35
To: Ray Drabble
Cc: Kevin Macknay
Subject: RE: A/109/20/RES and A/110/20/RES

Hi Ray,

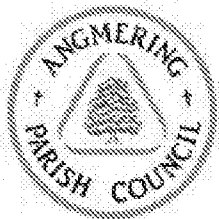
Thank you very much for the update. Would it be possible for the below response to be sent to Michael Eastham for inclusion on the application for the bridge?

Kind Regards

Katie

Katie Herr
Clerk to Angmering Parish Council

Angmering Parish Council
The Corner House
The Square
Angmering
West Sussex BN16 4EA



From: Ray Drabble [REDACTED]
Sent: 06 October 2020 15:12
To: Katie Herr [REDACTED]
Cc: Kevin Macknay [REDACTED]
Subject: RE: A/109/20/RES and A/110/20/RES

Katie,

Apologies for the delay in responding and thank you for APC's submission.

The outline modelling for the Angmering FAS has now been completed and supplied to BDW and to the EA. This is to support a change to the design for the road access to Land South of Water Lane from a free standing bridge over the Black Ditch to a culverted embankment to which it is planned in due course to construct a weir that would allow flood attenuation storage upstream; one of a number of storm water attenuation areas planned for the scheme.

If you or your members have any further questions or queries I would be happy to try and answer them.

Kind regards

Ray Drabble
Flood Risk Engineer (Sustainable Drainage)
Economy, Infrastructure and Environment
Highways and Transport
West Sussex County Council

[REDACTED]

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From: Katie Herr [REDACTED]
Sent: 30 September 2020 17:00
To: Ray Drabble
Subject: FW: A/109/20/RES and A/110/20/RES

Hi Ray,

With the permission of the Chari of Angmering Parish Council – I forward you our most recent correspondence on the development South of Water Lane.

Kind Regards

Katie

Katie Herr
Clerk to Angmering Parish Council

www.angmeringparishcouncil.gov.uk



Angmering Parish Council
The Corner House
The Square
Angmering
West Sussex BN16 4EA

From: Katie Herr
Sent: 30 September 2020 11:55
To: 'Michael Eastham' <Michael.Eastham@arun.gov.uk>

Subject: A/109/20/RES and A/110/20/RES

Hi Michael,

Please see the below representation and attached information.

Please add both documents to the above applications on the portal.

We would welcome any feedback.

Kind Regards

Katie

Failure to meet Arun Local Plan Policy W DM2 Flood Risk

Following your engineer Laura Gibbon's response to B/DWH dated 22 September 2020, Angmering Parish Council would like to add to their representations.

APC have continually raised concerns about the risk of flooding from development north and south of Water Lane and support Arun Engineer's suggestion (A/109/20/RES) to explore a culverted embankment option as part of the wider Angmering Flood Alleviation Scheme (FAS).

We would expect the replacement of the proposed bridge by a culverted embankment to require the submission of new hydraulic modelling data and a Flood Risk Analysis (FRA). However, since this has not been decided yet, we wanted to make our position perfectly clear on what we believe to be serious deficiencies in the hydraulic modelling data used for the bridge (A/109/20/RES), roundabout (A/110/20/RES) and the A/99/17/OUT FRA.

It is our view that neither application provides convincing evidence that flood risk to others will not be increased.

A/109/20/RES and A/110/20/RES not only split the development site covered by A/99/17/OUT in two, but do not share the same underlying hydraulic modelling data. This is despite the fact that fluvial and surface water behaviour across the entire site is interlinked, and the impact of the encroachment of a roundabout and bridge onto the Black Ditch catchment (floodplain) will ultimately dictate the overall site layout and drainage strategy.

- **A/109/20/RES** site layout and drainage strategy is based on the A/99/17/OUT FRA, which used old EA 2010 hydraulic modelling results and EA Product 4 Historic Flood Data, which comes with the following caveat: *"Please note that our records are not comprehensive. We would therefore advise that you make further enquiries locally with specific reference to flooding at this location.*

Currently the Environment Agency can only supply flood risk data relating to the chance of flooding from rivers or the sea. However you should be aware that in recent years, there has been an increase in flood damage caused by surface water flooding or drainage systems that have been overwhelmed."

- **A/110/20/RES:** Edenvale Young Associates (EVA) Modelling Report is competent in its execution as far as it goes, but Appendix A Hydrology (Technical Note) regards historic local flood data as *"not relevant to this study"*, so it appears no attempt was made to identify information from observed historic flood events to calibrate the model or do a "reality check" on predicted Climate Change levels.

The 2018 EVA modelling Technical Note was used to 'prove' no adverse effect from encroachment into the Black Ditch catchment from the roundabout, and then again in 2020 by Stantec to do the same for the bridge. It achieved its aims in both respects.

The Black Ditch catchment in the north of the site acts as a flood plain and is a key component in managing flood risk along the 2.6km watercourse covered by EVA and the EA Angmering Flood Alleviation Scheme (FAS). However, neither report believes it is important enough to validate its Climate Change predictions against the observed and well documented recent flooding events in Angmering in 2002 and 2012.

An EA requirement is that hydraulic modelling should be repeatable and that *"Calibration, verification and performance testing should be carried out to understand the model performance with observed flows, observed rainfall, and forecast rainfall"*. Regular winter water levels and recorded flood events show Angmering to be at risk from a 1 in 5 to 1 in 10 year flood event. This further highlights our concerns about the integrity of the FRA, which predicts the catchment has a 1000 year (0.1 Annual Exceedance Probability) of flood risk.

If real data for the catchment is available including date and timed photographs then it must be relevant, and according to the EA's **"Requirements for completing computer river modelling for Flood Risk Assessments Guidance for Developers"**, the model should have been calibrated against these observed events. Such local information exists, was made available to Arun, WSCC LFFA and the EA and is provided in the attached document.

The EA consultation response says *"the EA are satisfied that based on the flood modelling there will be no significant flood storage loss"*. However, there is no evidence that the EVA flood modelling has been calibrated to take into account the storage available when measured against the regularly observed normal winter water levels in the Black Ditch catchment. See Appendix C in the attached document.

Also, what impact does that "small flood storage loss" from the roundabout and bridge have on the catchment areas north and south of Water Lane, when the model is used to replicate the water levels observed following heavy rainfall on 5 March this year as it enters the Weavers Hill culvert? Photographic evidence of this event can be seen in the attached document and was sent to the WSCC LLFA.

For the reasons stated above, we believe the modelling data to be incomplete.

Kind Regards

Angmering Parish Council


www.angmeringparishcouncil.gov.uk



Angmering Parish Council

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