Mark Perry
Shropshire Council - Northern Office
[Sent via email]

Your Ref: 23/02170/FUL
EA Ref: SV/2023/111725/01-L01
Our Ref: SN/RG/BMW2025
Contact: Robin.Green@BWBconsulting.com

Date: 16 August 2023

Dear Mark

FORMATION OF LINK ROAD WITH FOOTWAY AND CYCLEWAY PROVISION BETWEEN THE ELLESMERE BUSINESS PARK ROUNDABOUT ON THE A495 AND CANAL WAY, INCLUDING ASSOCIATED MODIFICATION TO THE ELLESMERE BUSINESS PARK ROUNDABOUT, RECONTOURING AND EARTHWORKS THROUGHOUT THE SITE AND FORMATION OF FLOOD COMPENSATION AREAS

LAND BETWEEN THE A495 BUSINESS PARK ROUNDABOUT AND CANAL WAY, ELLESMERETHE

I am writing to you in regard to the Environment Agency's letter of the 17th July 2023 which raises a number of comments relating to this planning application. This response has been prepared to answer comments raised by the Environment Agency in relation to flood risk, it is understood that other topics will be addressed under separate cover.

For ease of reference, each point raised by the Environment Agency that necessitates a response is quoted below with our response provided afterwards.

> ***"Site History:*** *We understand that the principle of development across this site has already been established, with an outline consent 14/04047/OUT (for a mixed-use development consisting of a new link road, residential housing, a hotel, boating marina, leisure complex, pub/restaurant, holiday cabins and touring caravans with associated infrastructure and access) granted in December 2016. We provided comment at the outline stage and acknowledged that there could be benefit from both a flood risk and ecological perspective from re-establishing open watercourse along the Tetchill Brook but advised that it would be essential to maintain and replicate existing flood storage and flood mechanisms. We also provided further comment on subsequent Reserved Matters Applications (19/00187/REM and 19/05445/REM) which we understand to have either been withdrawn or refused".*

Please note, the comments from the Environment Agency on these three previous applications were positive and followed a pre-application consultation phase where the key flood

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management principles of the development were discussed and agreed. As the Environment Agency have outlined, the principles of the development were previously agreed, this included: the daylighting and diversion of the Tetchill Brook within the site, and a floodplain compensation solution focused on preserving the existing floodplain storage volume (a volumetric approach). The latest application is consistent with this previously agreed approach.

> ***"Action:** Given the scale and significance of the site for strategic development and the length of time that has passed since the original model was reviewed, we would like to review the current modelling and ask that the model is provided".*

We are happy to share a copy of the model. A hyperlink to download the files will be shared alongside this letter.

> ***"Flood Storage Compensation and Flood Risk Betterment:** We note that the 1% Annual Exceedance Probability (AEP) plus a lower central 2080's climate change allowance of 33% has been used to represent the design flood level when considering floodplain compensation. The FRA calculates that, as existing, the site provides for 39090m³ of water storage during a flood event. Following reprofiling of the site and the diversion of the Tetchill Brook, it is proposed that land either side of the Brook be set at 86.1m AOD and be utilised as a flood storage area. Post development the FRA calculates that 41175m³ is provided for, resulting in an increase in on-site floodplain storage of 2085m³.*
>
> ***Action:** We welcome the overall gain in flood storage but would expect the calculations for such to be clearly demonstrated in tabular form. The FRA should illustrate floodplain storage gain and loss in m³, broken down by bands of 200-250mm to clearly evidence that post development the existing flooding regime is replicated or bettered. A flood compensation scheme should demonstrate level for level, volume for volume storage up to the 1 in 100 year plus climate change design flood level".*

A volumetric floodplain compensation solution has been proposed in accordance with the previously agreed parameters. This returns a slightly greater volume beneath the design flood level than in the existing conditions. On the Tetchill Brook there is a restricted inflow to the site from the upstream culvert, and a restricted outflow from the site through the downstream culvert. Therefore, the floodplain on the Tetchill Brook is not significantly influenced by conveyance through the site, instead it is the total volume beneath the design flood level that is critical. If the available volume beneath the design flood level is recreated, then the specific elevation breakdown of where the volume is delivered is not an important factor – this is shown in the hydraulic model analysis. Please note this is the same approach as was previously agreed.

> *"We welcome the daylighting of a large section of the Tetchill Brook and encourage the transition to a more natural channel. But note the proposal for three new culvert installations to enable the link road crossing in the east and west of the site and to*

reconnect the existing off-site culvert leading to the Newnes Brook. We advocate the use of clear span bridges in lieu of culverts as these pose a smaller risk in terms of blockages and conveyance.

***Action**: We recommend the applicant fully explore whether the use of clear span bridges could be accommodated".*

The proposed downstream culvert on the Tetchill Brook is required to help control flows leaving the site, a clear span structure would not offer the same degree of control and could result in downstream detriment. The required length of this structure would also not be suitable for a clear span structure.

The other two culverts associated with the link road have been shown to not be conveyance critical, i.e.; there are more restrictive structures located downstream of each, and the hydraulic assessment has shown that they do not detrimentally affect flood risk as culverts. These two proposed structures are also located immediately downstream of more restrictive existing structures which is where a potential blockage would more likely form.

"It is unclear from the submitted detail whether simply daylighting the watercourse along its current route would by itself provide flood risk betterment or whether it is necessary to divert the watercourse as proposed to achieve this. We would encourage further assessment of this.

***Action**: We encourage an additional modelled baseline scenario of the design flood level which considers the option of daylighting the Tetchill Brook along its current route. This will illustrate if there is flood risk betterment associated with daylighting the watercourse, and allowing it to follow the natural floodplain, particularly in respect of downstream flood levels".*

The Tetchill Brook is heavily modified in this location, the 'natural' floodplain and the original course of the watercourses were lost when the canal was built, and the watercourse was culverted (1794 to early 1800s). To deliver the proposed development and the link road it is necessary to divert the Tetchill Brook within the site. Due to the depth of the culvert (over 3m in the west of the site) the land take to batters would eat into the development area considerably if the watercourse were retained on its current course. A diversion is also in line with the previously agreed approach. Also, the proposed approach will allow the new open channel watercourse to be built offline and completed before it is activated, and the culvert is removed.

***"Flood Management Plan**: In the event of a blockage of the downstream culvert we note the availability of an overland flow route. While this is a sensible inclusion, there are off-site impacts as a result of such a blockage. It is therefore important that the culvert is kept clear and risk minimised and we would expect the inclusion of a maintenance schedule within the flood management plan".*

The FRA makes recommendations for the consideration of a debris screen on the culvert inlet, and regular inspection and maintenance of the watercourse.

> "**Opportunity**: We note the inclusion of the additional parcel of land (site 2) to the western side of the site to enable the connection of the link road to the existing business park roundabout. This may now present opportunities for further flood risk betterment in respect of the Newness Brook.
>
> **Action**: we recommend this be fully explored as part of this application".

To confirm, the original application did include a parcel of land to the west of the Newnes Brook to facilitate the link road, the latest application just includes a larger parcel of land in this location. The Newnes Brook floodplain in this location is very minor, as it is throttled by the A495 culvert. Therefore, this is no meaningful betterment that could be designed into the scheme at this location. The proposals in this location preserve the floodplain in its current condition.

I trust that this adds to the background and context of the proposed approach and will allow the Environment Agency to remove their objection.

Yours sincerely

Robin Green
Associate Director

cc: Emma Millband Environment Agency