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Our ref: SV/2013/107260/CS-05/IS1

Your ref: CBC LP EiP

Date: 20 February 2019

Dear Mr Rowley

CHELtenham LOCAL PLAN- LEVEL 2 STRATEGIC FLOOD RISK ASSESSMENT REVIEW. ENVIRONMENT AGENCY EXAMINATION UPDATE STATEMENT.

We wish to make the following comments having reviewed the Level 2 Strategic Flood Risk Assessment (L2 SFRA), version 2, dated 7 February 2019:

Background

We have raised concern with the evidence base for the Local Plan (LP) to date. Our concern related to the lack of a comprehensive L2 SFRA and an incomplete understanding as to whether the receiving sewage treatment works could cope with the proposed development in the LP.

Our position was most recently set out in our Statement of Common Ground with you on 23 November 2018. We met on 3 January 2019 and agreed the scope of the SFRA work and discussed how best to address the foul drainage evidence base. We received the final L2 SFRA on 7 February. We have reviewed the assessment and wish to make the below comments.

Level 2 Strategic Flood Risk Assessment

Site E4- Land off Chelt Lane

This site was shown to be in Flood Zones 2 and 3 (medium and high risk zones respectively) on our Flood Map for Planning. This is an indicative data set and not sufficient for the purposes of allocating strategic development. The latest L2 SFRA has now examined the site using detailed hydraulic modelling of the River Chelt. This has included the latest climate change allowances: the 35% and 70%. The L2 SFRA concludes that the majority of the site is shown to be at direct risk of flooding during the lifetime of the development and the River Chelt flood defences would be exceeded.

Your council needs to be satisfied that the Sequential Test has been applied and passed. The Sequential Test ensures that a sequential approach is followed to steer new development to areas with the lowest probability of flooding. The flood zones as refined in the SFRA for the area provide the basis for applying the Test. The aim is to

steer new development to Flood Zone 1 (areas with a low probability of river or sea flooding).

Where there are no reasonably available sites in Flood Zone 1, local planning authorities in their decision making should take into account the flood risk vulnerability of land uses and consider reasonably available sites in Flood Zone 2 (areas with a medium probability of river or sea flooding), applying the Exception Test if required. Only where there are no reasonably available sites in Flood Zones 1 or 2 should the suitability of sites in Flood Zone 3 (areas with a high probability of river or sea flooding) be considered, taking into account the flood risk vulnerability of land uses and applying the Exception Test if required.

We would guide the Council towards the flow diagram in Diagram 2 of the NPPG which sets out how the ST should be applied when allocating development for local plan preparation (ref: Paragraph: 020 Reference ID: 7-020-20140306). The proposed use is classed as 'less vulnerable' and is only appropriate in Flood Zone 3 having passed the Sequential Test.

Even if the ST is applied and passed, it should be recognised that the form and scale of any development brought forward at this location will be heavily constrained. This should include no loss in flood plain storage and wherever possible a net betterment. This may have an impact on site viability and the quantum of development brought forward for site E4.

We recommend that policy EM3 includes additional wording to ensure that any development brought forward for site E4 should:

- Provide at minimum an 8 metre buffer from the top of bank of the River Chelt;
- Provide river corridor enhancements that help to protect and enhance the biodiversity and river setting at this location;
- Not result in a net loss in flood plain storage or adversely impact out of bank flows, with opportunities explored to provide flood risk betterment;
- Provide financial contributions to the flood warning service, maintenance and future improvements of the adjacent River Chelt flood alleviation scheme; and
- All finished floor levels should be set 600mm above the 1 in 100 year level, including an appropriate allowance for climate change.

Site MD4- Royal Wells and Municipal Offices

This site was shown to be in Flood Zones 2 and 3 on our Flood Map for Planning. This is an indicative data set and not sufficient for the purposes of allocating strategic development. The latest L2 SFRA has now examined the site using detailed hydraulic modelling of the River Chelt. This has included the latest climate change allowances: the 35% and 70%. The L2 SFRA concludes that the some of the site is shown to be at direct risk of flooding during the lifetime of the development and the River Chelt flood defences would be exceeded.

Your council needs to be satisfied that the Sequential Test has been applied and passed. As the proposals comprise residential development in part, the Exception Test (ET) is required to be applied and passed. Application of the ET for plan

preparation is set out in Diagram 3 within the NPPG: Paragraph: 028 Reference ID: 7-028-20140306.

The ET is a method to demonstrate and help ensure that flood risk to people and property will be managed satisfactorily, while allowing necessary development to go ahead in situations where suitable sites at lower risk of flooding are not available.

Essentially, the 2 parts to the Test require proposed development to show that it will provide wider sustainability benefits to the community that outweigh flood risk, and that it will be safe for its lifetime, without increasing flood risk elsewhere and where possible reduce flood risk overall. Wider safety issues need to be considered as part of the plan preparation.

Flood warnings and evacuation are likely to be key for this allocation and need to be considered in the design and layout of planned developments that are brought forward. In considering an allocation in a Local Plan a level 2 Strategic Flood Risk Assessment should inform consideration of the second part of the Exception Test. Safe access and egress to future uses at this allocation will likely rely on flood warnings and evacuation management plans.

Even if the ST and ET are applied and passed, it should be recognised that the form and scale of any development brought forward at this location will be constrained by flood risk. As such we recommend that site MD4 includes additional wording to ensure that any development brought forward should:

- Not locate any *new* development within 8 metres of the culverted River Chelt;
- Not result in a net loss in flood plain storage or adversely impact out of bank flows, with opportunities explored to provide flood risk betterment;
- Provide financial contributions to the flood warning service, maintenance and future improvements of the adjacent River Chelt flood alleviation scheme;
- Ensure new finished floor levels be set 600mm above the 1 in 100 year level, including an appropriate allowance for climate change; and
- Not allow self-contained basement dwellings.

Site HD8- Old Gloucester Rd

At the time of the L2 SFRA being produced, much of the site was shown to be in Flood Zone 2 (medium risk) on our Flood Map for Planning. This is an indicative data set and not sufficient for the purposes of allocating strategic development. The latest L2 SFRA has now assessed the site using more detailed modelling and shows that in the 1 in 100 year event, including climate change allowances of 35% and 70%, the flooding is confined to the river corridor.

Our Flood Map for Planning has recently been updated however and the site is now located in Flood Zone 1 (low risk). The original Flood Zone 2 delineation previously shown on our flood map for planning is related to an historic event, but may be defining other forms of flooding that do not originate from the watercourses upon the site. The Flood Map was challenged and after review has been revised.

Notwithstanding the above, we note the site enjoys extant permission (ref: 17/01411/OUT) and that the application was supported by a site specific flood risk assessment that informed the principle of development at this location.

Site HD7- Priors Farm

The site was shown to be in Flood Zone 1 (low risk) on our Flood Map for Planning. The latest L2 SFRA has now assessed the site using more detailed modelling and shows that in the 1 in 100 year event, including climate change allowances of 35% and 70%, the flooding is confined to within close proximity of the river corridor. We are satisfied that much of the site remains in Flood Zone 1.

The site benefits from the recently constructed Gloucestershire County Council Whaddon flood alleviation scheme, permitted under permission 17/00135/FUL. Indeed, it is partially located within the allocation site area itself. This comprises two upstream attenuation basins that protect downstream communities from surface water flood risk and flashy rainfall events; such as those experienced in 2007.

The Priors Farm attenuation basin was examined in the supporting Flood Risk Assessment for planning application 17/00135/FUL and the residual risk of a breach of this feature analysed. In the unlikely event of a breach occurring, the breach analysis shows that were the basin to fail, site HD7 would be at residual risk of reservoir flooding.

The NPPG states that:.. *‘the failure of a reservoir has the potential to cause catastrophic damage due to the sudden release of large volumes of water. The local planning authority will need to evaluate the potential damage to buildings or loss of life in the event of dam failure, compared to other risks, when considering development downstream of a reservoir..*

Your Council needs to be satisfied that the Sequential Test has been applied and passed for this site.

As the allocation benefits from the flood alleviation scheme we would recommend that policy wording is included to ensure development:

- Provides financial contributions to the flood warning service, maintenance and future improvements of the adjacent Whaddon flood alleviation scheme.
- Provides at minimum an 8 metre buffer from the top of bank of the Wyman’s Brook and its tributary to the North. River corridor enhancements should be delivered for this site that help to protect and enhance the biodiversity and river setting at this location

The above policy wording recommendation should be discussed in liaison with Gloucestershire County Council as it is their asset.

Site HD3- Bouncers Lane

The site is shown to be in Flood Zone 1 (low risk) on our Flood Map for Planning. The latest L2 SFRA has now assessed the site using more detailed modelling and shows that in the 1 in 100 year event, including climate change allowances of 35%

and 70%, the flooding is confined to within close proximity of the river corridor. We are satisfied that much of the site remains in Flood Zone 1.

Given the proximity to the adjacent tributary of the Wyman's Brook, a main river at this location, we would recommend that policy wording is included to ensure development:

- Provides at minimum an 8 metre buffer from the top of bank of the tributary to the Wyman's Brook. River corridor enhancements should be delivered for this site that help to protect and enhance the biodiversity and river setting at this location

Other sites

We are satisfied that all other sites are being brought forward in Flood Zone 1 and are at a low risk of fluvial flooding. These sites adhere to the guiding principles of the NPPF and NPPG.

Climate Change

Please note that UKCP18 projections were published in November 2018 and replace the UKCP09 projections. Research that is due to be published in 2019 may result in changes to climate change allowances moving forwards. Please find attached a briefing note to this end.

This does not impact on the L2 SFRA at this stage but we raise for completeness. We have not referenced the current climate change allowances in our policy wording recommendations as these may change in the near future.

Foul Drainage

Further to our concerns regards foul drainage, Severn Trent Water (STW) provided additional information and commentary in their email of 1 February 2019. We can confirm that this updated information addresses our concerns with the foul drainage evidence base as set out in our email dated 05 February 2019. The receiving works at Hayden has capacity well into AMP8 and can accommodate the allocations without posing a detrimental impact to the water environment.

STW have helpfully identified local infrastructure constraints for a number of the sites too. We would recommend that the sites that have been highlighted amber and red by STW should have site specific policy wording in the LP. This should include policy hooks to ensure the infrastructure is provided for prior to occupation to avoid local exceedance of the sewer networks. The plan might consider suitable phasing arrangements if and where necessary too.

Provided policy wording is secured in the LP for each site with amber and red classification, to ensure infrastructure provision is front loaded, our concerns are addressed.

Summary

Provided the above policy recommendations are secured in the LP during the examination we are satisfied that our concerns have been alleviated. You should also be satisfied that the ST and ET have been applied for those sites where we have highlighted this as a requirement.

The additional evidence base has addressed the soundness and legal compliance issues we have raised to date for those matters within our remit. If necessary, we would be happy to revise and update our statement of common ground with you.

I trust that the above is clear and of use but should you wish to discuss in further detail please do not hesitate to get in touch.

Yours sincerely,

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