

Cherwell District Council
Planning & Development Services
Bodicote House White Post Road
Bodicote
Banbury
OX15 4AA

Our ref: WA/2021/129266/01-L01
Your ref: 21/02286/F
Date: 13 September 2021

Dear Sir/Madam

Construction of a coffee unit with drive-thru facility and indoor seating with associated access, car parking, landscaping and servicing parking

Land North West of Launton Road roundabout adjoining Skimmingdish Lane, Caversfield

Thank you for consulting us on the above application on 09 August 2021. Please accept my apologies for the delay in responding.

Environment Agency position

The development site is at risk of flooding and in the absence of an acceptable Flood Risk Assessment (FRA) we **object** to this application and recommend that planning permission is refused.

Reason

The submitted FRA does not comply with the requirements for site-specific flood risk assessments, as set out in paragraphs 30 to 32 of the Flood Risk and Coastal Change section of the planning practice guidance. The FRA does not therefore adequately assess the flood risks posed by the development and the development as proposed will increase the risk of flooding. In particular, the FRA fails to:

- Provide appropriate mitigation for the loss of flood storage to ensure the development does not increase the risk of flooding to the site and the surrounding area.

The application is contrary to paragraph 163 of the National Planning Policy Framework and Local Plan Policy ESD6

Overcoming our objection

To overcome our objection, the applicant should amend the proposal and submit a revised FRA which addresses the points highlighted above.

If this cannot be achieved, we are likely to maintain our objection. Please re-consult us on any revised FRA submitted and we'll respond within 21 days of receiving it.

In this instance, the applicant proposes to provide flood storage compensation for the loss of flood storage as a result of the development through the use of storage tanks in combination with some lowering of ground levels. The detail presented within the FRA is insufficient for the following reasons:

- Proposes a method of compensation storage in tanks which is inappropriate to the storage size required;
- Fails to demonstrate that storage tanks can be adequately maintained (free of silt and debris) and thus fulfil the flood storage requirement over the lifetime of the development;
- Fails to demonstrate on a level for level basis that sufficient compensation storage has been provided;
- Fails to provide sufficient information comparing existing and proposed levels across the site to demonstrate where flood storage is lost;
- Fails to provide details of the ground lowering required to provide the 11.3m³ compensation storage element within the higher ground to the east of the development as mentioned in Section 4.3 of the FRA.

Our letter reference ENVPAC/1/THM/00288, WA/2019/127024/07-L01 dated 21st July 2020, as presented in Appendix F of the Flood Risk Assessment (FRA) states:

'As stated in previous correspondence, the underground tank approach is not something we would normally accept. An engineering solution such as this raises maintenance issues and is unlikely to operate as effectively as other approaches in maintaining the existing flood mechanisms.'

For example, if the tank was to fill with silt and/or not be maintained properly then it would stop acting as effective storage.'

However, given that the flood volumes the tank is mitigating for is not huge we are willing to consider it as a solution but we need to see much more detail of how it will function before we can sign it off as acceptable'

At that time the assessment of the compensation storage required for the tank system was 30m³. We note that that requirement has now more than doubled to 66m³. We consider tanks to be inappropriate for this size of compensation storage. We would prefer a void undercroft to the proposed building/development and we urge the applicant to re-consider the proposed design.

The underground tank approach is not something we would normally accept. In cases such as this, where there is limited space to provide land level adjustment to provide the necessary level for level flood storage compensation volumes, we would normally only considered an open void beneath the building appropriate so long as it met our criteria and was acceptable to the local planning authority.

If the development can be arranged such that the tanked storage required is much smaller, more akin to what was previously proposed, then we could consider it further. However, the applicant needs to demonstrate that it can be easily inspected to determine if silt is present in the tanks and accessed to allow any silt accumulation to be removed such that the tanks can be adequately maintained to provide effective flood

storage over the lifetime of the development. The present details within the FRA are insufficient, they do not show any access for maintenance/inspection to the tanks or any method of removing silt accumulation from the tanks.

Details have not been provided of the ground lowering proposed outside the 1% Annual Exceedance Probability (AEP) flood outline, including a 35% allowance for climate change, to provide the 11.3m³ element of floodplain compensation storage to the east of the development, as described in Section 4.3 of the FRA. This has not therefore been demonstrated to be achievable.

The FRA has not presented calculations to demonstrate, on a level for level basis, that the flood storage lost to the development is mitigated by the flood compensation proposed. Level for level compensation is the matching of volumes lost to the floodplain, through increases in built footprint, with new floodplain volume by reducing ground levels or in this case also providing tanks. Please note for reducing ground levels to be achievable it requires land on the edge of the floodplain and above the 1% climate change extent to be available. A comparison of ground levels (topographical survey) with modelled flood levels will show land which may be available above this level.

In this instance, due to the relatively narrow band of flood levels for a range of annual probabilities, the applicant should consider the floodplain storage lost and gained in vertical level increments of 0.1m between the lowest existing ground level and the 1% AEP (1 in 100 year) flood level, including an appropriate allowance for climate change. Where tanks are proposed as providing compensation storage, within the level for level calculation, their volume is effective in the level increment in which they start to fill. For the mitigation to be successful it should be demonstrated that there is no net loss of floodplain storage in any 0.1m level increment. Advice on our requirements is provided below together with those for voids beneath buildings.

We note also that the Drainage Strategy incorrectly states that the site lies in Flood Zone 1.

Floodplain Compensation

The flood storage lost to the increased building footprint or raised ground levels could be mitigated by the provision of compensation storage. Such mitigation could take the form of level for level floodplain compensation storage (preferable) or an undercroft (void) under the proposed building. Both have to meet specific Environment Agency requirements to be acceptable:

Level for Level Floodplain Compensation Storage (Preferable)

Level for level compensation is the matching of volumes lost from the floodplain due to increases in built footprint or raised ground levels, with new floodplain volume by reducing ground levels elsewhere. Analysis should be presented in the FRA as a table showing the volumes lost to the development in approximately 100mm increments of level and the volumes gained by the mitigation proposed in the same level increments. It should be demonstrated that there is no loss of floodplain volume in any increment of level, and preferably a net gain (see attached diagram).

Please note for this to be achievable, it requires land on the edge of the floodplain and above the 1% AEP, including an appropriate allowance for climate change, flood extent.

The FRA should consider whether level for level compensation is possible and if not explain why and detail how any associated risks from the chosen form of mitigation can

be minimised.

Undercroft (To be used only when level for level floodplain compensation storage has been demonstrated not to be possible)

If the applicant proposes voids under the building to mitigate the loss of floodplain storage, the design of the voids should adhere to the following guidance:

If voids under the dwelling are proposed, they should extend from the ground level, with the underside of the void (soffit) at or above the 1% annual probability (1 in 100 year) flood level with a 35% allowance for climate change. There should be a 1 metre wide void opening in every 5 metre length of wall on all sides of the building. Void openings should extend vertically from existing ground level to at least the 1% annual probability (1 in 100 year) flood level with a 35% allowance for climate change. The void should be open and maintained as such in perpetuity. If the void openings are a security risk, then vertical steel bars placed at 100mm centres can be installed. Louvres or slats, as an alternative to bars, are not permitted over the openings due to the increased risk of debris blockage.

The LPA must also be satisfied that they can enforce a condition to maintain the voids as designed and that an adequate maintenance plan is in place to ensure the voids remain open for the life time of the development.

Advice to Planning Authority/applicant

Sequential test

In accordance with the National Planning Policy Framework (paragraph 158), development should not be permitted if there are reasonably available sites appropriate for the proposed development in areas with a lower probability of flooding.

It is for the local planning authority to determine if the sequential test has to be applied and whether or not there are other sites available at lower flood risk. Our flood risk standing advice reminds you of this and provides advice on how to apply the test.

Car parking

This development has been proposed within an area identified as being at risk of flooding, and includes the provision of car parking. The applicant should be aware that vehicles can start to float in flood depths of less than 60cm – less if it is fast-flowing. The applicant must satisfy themselves that any relevant building will be constructed in such a way that vehicles floating or displaced as a result of flooding, would not jeopardise its structural stability.

In addition, the applicant should ensure that any sensitive infrastructure such as gas and water pipes or electrical cabling are located and designed to withstand the potential impacts of floating or displaced vehicles.

Safety

The following issues are not within our direct remit or expertise, but nevertheless are important considerations for managing flood risk for this development. Prior to deciding this application we recommend that consideration is given to the issues below. Where necessary, the advice of relevant experts should be sought.

- Adequacy of rescue or evacuation arrangements
- Details and adequacy of an emergency plan
- Details and adequacy of flood proofing and other building level resistance and resilience measures
- Details and calculations relating to the structural stability of buildings during a flood

- Whether insurance can be gained or not
- Provision of an adequate means of surface water disposal such that flood risk on and off-site isn't increased

Closing comments

If you are minded to approve the application contrary to our objection, please contact us to explain why material considerations outweigh our objection. This will allow us to make further representations. Should our objection be removed, it is likely we will recommend the inclusion of a condition/conditions on any subsequent approval.

Should you require any additional information, or wish to discuss these matters further, please do not hesitate to contact me on the number below.

Yours faithfully

Miss Sarah Green
Sustainable Places - Planning Advisor

Direct dial 0208 474 9253

Direct e-mail planning_THM@environment-agency.gov.uk