

TECHNICAL NOTE

Job Name: SGR1 Land
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Prepared By: APLR
Subject: **PBA response to CDC planning consultation comments**

This Technical Note has been produced by PBA to respond to the comments provided by Cherwell District Council, in respect to the outline planning application for the development known as the SGR1 Land.

This Technical note covers the following disciplines; Sustainability, Water and Flood Risk

Sustainability

CDC

There is also a requirement to consider the proposal against how the development could be adaptable to future climate change. This includes being designed to incorporate best practice on tackling overheating, maximising daylight, consideration of the orientation of dwellings, the use of materials with low embodied carbon, meeting fabric energy efficiency standards, including water neutrality measures and incorporating SUDs and landscape to contribute to an urban cooling effect. The application is accompanied by a Sustainability Statement and Water Cycle Study. These set out a number of options regarding how the development could be designed to achieve the overall policy objectives around sustainability and climate change adaptation. There is however limited commitment at this stage to particular measures or features of the development to adapt to climate change. Whilst there are matters that could be incorporated at the detailed design stage, it would be helpful for greater certainty to be provided now (particularly as a number of these matters will overlap in respect of how zero carbon can be achieved).

PBA response

As the development is apply for outline planning consent, the features within the homes or those which require detailed design are not known at this stage and therefore commitment to these cannot be determined. Further details of these features will be provided at the reserved matters stage once the designs of the dwellings are known.

External features which overlap with the energy performance are covered below.

Water

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At NW Bicester, there is an aspiration towards the achievement of water neutrality as set out within the NW Bicester SPD and the PPS for Eco Towns given it is known that Bicester is within an area of water stress. These documents and Policy Bicester 1 also require the development to be ambitious in terms of water efficiency and to improve water quality. The application is accompanied by a Water Cycle Strategy as required by Policy and water efficiency measures are also covered in the Sustainability Statement. It is noted that there is a commitment to meeting the higher water efficiency standard of 110 l/p/d and I would intend to condition that this standard is achieved. It is also noted that the use of a SUDS system can contribute towards improved water quality. However, this does not demonstrate how the site will contribute towards the aspiration for water neutrality for the NW Bicester site as the measures do not go beyond standards requirements for new development. Further details are sought on how water consumption can be further reduced. For example, on Elmsbrook, 80 l/p/d has been achieved by the inclusion of rainwater harvesting.

PBA response

The potential options available to reduce potable water consumption below 110 litres are constrained by various factors. It may be possible to reduce the consumption further through the use of flow restrictors and the installation of low capacity appliances, but this will only be possible to a certain degree before problems occur. For example, it is not good practice to reduce WC volumes below 4 litres for a full flush as lower volumes may not be sufficient to deal with solid waste leading to blockages. Showers with less than 8 litres per minute (which is the flow rate that Thames Water provided flow-restrictors allow) are often installed with shallow shower trays and traps, however if the flow rate is reduced further this diminishes the usability of the shower. Homeowners are also likely to remove the flow restrictors which leads to the shower traps overflowing and flooding the bathrooms.

The other potential option to reduce the potable water use would be rainwater or greywater harvesting systems. It is noted that within the Elmsbrook development each house is provided with a rainwater harvesting tank in the gardens, however with average rainfall of only 650mm per annum it remains to be seen whether this will result in substantial water savings particularly given the cost of installing, connecting and maintaining the system – some of which will be borne by the future home-owner.

Greywater harvesting systems reuse water collected from baths and showers within WC's. The proposed fittings will have low water volumes or capacities therefore the amount of water collected or capable of being reused will be minimal, this coupled with the cost of installing (typically a whole house systems will cost £5000 to £7000 installed) and maintaining (typically £150 per annum) dual water systems (mains and greywater) reduces the overall sustainability of this as an option.

Flood Risk/Drainage

CDC



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The application is accompanied by a flood risk assessment as required by Planning Policy. This demonstrates that built development would be situated within flood zone 1 and therefore in an area at lower risk of flooding. Part of the site does however sit within flood zones 2/3. The Environment Agency have objected to the application advising that the FRA does not comply with the requirements set out in the Planning Practice Guidance to the NPPF and does not therefore provide a suitable basis for an assessment to be made of the flood risk arising from the proposed development. It is understood that the proposed development is in flood zone 1, however although there is no detailed modelling of the site, the JFlow model is an indication that there would be flooding on the site boundary. A greater explanation of the flood risk on the site is required in order to establish the level of flood risk in relation to the proposed built development. The Environment Agency seek an FRA which covers the deficiencies identified and which demonstrates that the development will not increase flood risk elsewhere and where possible reduces flood risk overall. The response advises that specifically, the FRA will need to demonstrate that the developed area of the site is not at risk of flooding, including an allowance for climate change.

The Landscape Officer has commented upon the engineered balancing pond which is seen as an unnatural feature in the landscape setting. Whilst I am aware this is not for approval at this stage, I would agree that any SUDs features will be required to be properly designed so as to be a natural feature, provide interest and amenity and be safe within an area of open space.

PBA response

We have reviewed the EA and Cherwell District Council planning comments and think that the only way to overcome them is for the client to agree to accept planning conditions committing to the following.

- The use of rainwater harvesting
- Undertake a detailed assessment of the site's ability to utilise infiltration drainage techniques as part of the geotechnical investigation at the detailed design stage, and
- If following completion of the detailed geotechnical investigation the detention basin is still required, develop a detention basin layout and planting scheme that naturalises its appearance and enhances the detention basins water quality and amenity benefits.

An updated FRA has been provided, with detail following the issue of JFlow modelling data from the EA. This model identifies that the development platform is within Flood Zone 1.



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