

SOUTH GLOUCESTERSHIRE COUNCIL, DEPT of ENVIRONMENT AND COMMUNITY SERVICES  
**LEAD LOCAL FLOOD AUTHORITY (DRAINAGE) COMMENTS / OBSERVATIONS  
ON PLANNING APPLICATIONS**

**Planning application: PT18/6450/O**

Matters appertaining to the consultee comments below from the Lead Local Flood Authority (LLFA) must be directed to the Planning Case Officer in the first instance, including queries regarding the discharge of conditions.

Drainage and Flood Risk Management Team (Engineering Group - Street Care) has **no objection in principle to this application** subject to the following comments, advice and informatives.

**Received information:**

- **39209/4001 Flood Risk Assessment Rev G (23/01/2020)**
- **39209/4001/SK01 C Indicative Drainage Strategy**
- **16-10-SK11 A Landscape Sketch Scheme for the SuDS**
- **27982-9410 L Illustrative Masterplan**
- **27982-9101 L Constraints & Opportunities**
- **16-10-PL-201 E Illustrative Landscape Masterplan**

**FLOOD RISK**

The majority of the proposed development site is located in Flood Zone 1, with areas of the site closer to the Pickedmoor Brook falling within Flood Zones 3 and 2. A small part to the west of the development site falls within Tidal and Fluvial Flood Zone 3 and 2.

The latest comments from Environment Agency dated 19.03.2020, state that they have no objection to the proposed development subject to the inclusion of specific conditions in regards to finished floor levels.

**SURFACE WATER**

Surface Water Drainage Principles set out in **39209/4001 Flood Risk Assessment Rev G (23/01/2020)** are acceptable in principle:

- Surface water discharge restricted to Greenfield QBAR – 2.9 l/s/ha.
- On-site attenuation designed for 1in100 (1% AEP) storm event plus a 40% allowance for climate change.
- No surface water flooding in the 1in30 (33.3% AEP) storm event.
- Residential areas are to be no more than 65% impermeable.
- Retail and community hub are to be no more than 90% impermeable.

NOTE at this moment in time it is proposed to drain the whole site to the proposed attenuation basins and to the Pickedmoor Brook. However, if it is not possible to construct the surface water pipes to Sewers for Adoption standards, thinking

especially of the north east corner of the site, the surface water drainage strategy for this part of the site will need to be re-thought.

## **ATTENUATION BASINS**

The proposed attenuation is in the form of two attenuation basins in the west of the site. The extent of these basins, including any embankments and maintenance track, can be seen on **27982-9101 L Constraints & Opportunities** and **16-10-SK11 A Landscape Sketch Scheme for the SuDS**. **27982 9604 L Parameter Plan Green Infrastructure** shows the extent of water, but does not appear to include the embankments and maintenance track. The extent of the basins is not clear on **27982-9410 L Illustrative Masterplan** and **16-10-PL-201 E Illustrative Landscape Masterplan**.

NOTE the detailed drainage design of the attenuation basins will need to ensure that the basins fit in with the wider landscape, POS and PROW, including the wildlife pond. The space for the attenuation and conveyance features should not be at the expense of landscape, POS, and PROW.

NOTE the minimum freeboard allowance in South Gloucestershire is 300mm in accordance with **West of England Sustainable Drainage Developers Guide**.

## **ADOPTION, MANAGEMENT AND MAINTENANCE OF SUDS**

As of the 1<sup>st</sup> April Wessex Water is a potential SuDS Adopting Authority. If it is proposed for Wessex Water to adopt and maintain all the Surface Water Drainage Infrastructure, including SuDS, I recommend you consult with them at your earliest opportunity.

## **GROUND WATER**

From **39209/3501 Combined Phase 1 and Phase 2 Ground Condition Assessment** it is noted that groundwater was encountered in the Exploratory Hole Logs in March 2018. Groundwater levels will need to be monitored further inform the detailed drainage design of the surface water drainage infrastructure.

## **ON SITE DITCHES**

Appendix A of the Flood Risk Assessment – **Figure 4 - On Site Ditches** dated 16.12.2019 shows the Pickedmoor Brook to be a non-critical ditch. This is the most southern “ditch” indicated on the plan as non-critical with PROW access points near both ends. It will not be appropriate to infill this “ditch”.

NOTE no ditch should be infilled until Reserved Matters consent has been granted for the land it is on.

## **RECOMMENDED CONDITIONS**

### ➤ **Surface Water Drainage Masterplan**

Site wide Surface Water Drainage Masterplan to be submitted with the first Reserved Matters application for areas that drain to the Pickedmoor Brook. Details of a surface water drainage masterplan shall be submitted to, and agreed in writing by, the Local Planning Authority. The masterplan shall be in accordance with the 39209/4001

Flood Risk Assessment Revision G (prepared by Peter Brett Associates LLP dated 23 January 2020) and include details of impermeable areas draining to surface water infrastructure, the size and location of the attenuation structures, and the phasing of surface water drainage infrastructure including source control measures. The development shall be implemented in accordance with the approved scheme.

➤ **Detailed Drainage Design of Attenuation Basins including required Groundwater Monitoring**

No development shall take place on land draining to the Pickedmoor Brook until the detailed design of the Attenuation Basins indicated on 39209/4001/SK01 C Indicative Drainage Strategy has been submitted to and approved in writing by the local planning authority. This should include the results and a review of groundwater investigation in the location of the proposed attenuation basins. The Groundwater monitoring should be carried out for 6 months. It is preferred that the monitoring takes place from October to March. However the monitoring should include at least three winter months. It may be possible to reduce the monitoring period if there is sufficient rainfall in the first 3 months of monitoring, but this would require written agreement from the local planning authority. All works undertaken must be in accordance with the agreed design and timetable.

➤ **Detailed Surface Water Drainage Design for each Plot / Phase / Parcel**

No development shall take place on land to which reserved matters relate until the detailed drainage design for each plot, phase or parcel of land, incorporating sustainable drainage principles, have been submitted to and approved by the local planning authority. The scheme shall subsequently be implemented in accordance with the approved details before the plot or parcel first occupied.

➤ **Management and Maintenance Scheme for the Surface Water Infrastructure and Land Drainage Features on site**

No development approved by this permission shall be occupied or brought into use until a scheme identifying the future ownership, operational and maintenance arrangements of the surface water drainage system and land drainage features over the lifetime of the scheme has been submitted to and approved in writing by the Local Planning Authority. The approved drainage works shall be completed and maintained in accordance with agreed details.

➤ **As-Built drawings of the surface water drainage infrastructure**

Prior to occupation of any building on site as built drawings and surveys shall be submitted to the Local Planning Authority for written approval to show compliance with the design of an 'as built/volume check survey' of the SUDS drainage scheme must be submitted to and formally approved in writing by the local planning authority prior to the first occupation of any buildings on site.

## ***Informatives***

**Land Drainage Consent:** The application involves **works, and/or structures to, in or affecting** an ordinary watercourse/ditch. These works may require formal consent from South Gloucestershire Council. Application forms and guidance can be obtained by emailing [LeadLocalFloodAuthority@southglos.gov.uk](mailto:LeadLocalFloodAuthority@southglos.gov.uk)

**Public sewer location:** The proximity of a public foul water sewer may affect the layout of the development. Refer the application to Wessex Water for determination.

Note: Private sewers were transferred to the water and sewerage company (Wessex Water PLC) on 1 October 2011 and are now of public sewer status. Maintenance of these sewers are now the responsibility of Wessex Water and will therefore be subject to **'building over'** or **'building in close proximity to'** restrictions. The applicant or agent is recommended to discuss this matter with Wessex Water PLC.

**Michaela Baker**

***Drainage and Flood Risk Management Team – (Engineering Group, Street Care)***

**LeadLocalFloodAuthority@southglos.gov.uk**

**27<sup>th</sup> March 2020**