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Structures & Infrastructure

19.01.2021

Officer's Name: Sujeenthan Jeevarangan

Officer's Title: LLFA Planning Engineer

Date: 7th January 2021

Dear Sujeenthan,

Application no: 20/03353/OUT

Location: Land West of Cotefield Business Park Oxford Road Bodicote

Following your letter dated 7th of January 2020, we respond to your queries below.

Query 1: The application must supply more details on the proposal. As the site lies within Groundwater Vulnerability Zone and includes parking spaces, water quality assessment must be carried out. The water quality assessment must be in accordance with Section 4 and Section 26 of SuDS Manual. Proposed development must meet local standards, L19, "At least one surface feature should be deployed within the drainage system for water quality purposes, or more features for runoff which may contain higher levels of pollutants in accordance with the CIRIA SuDS Manual C753. Only if surface features are demonstrated as not viable, then approved proprietary engineered pollution control features such as vortex separators, serviceable/ replaceable filter screens, or pollution interceptors may be used"

Response: The new surface water drainage proposals are shown on the drainage strategy drawings. The surface water from the roofs goes through the RWP and then goes to the surface water pipe network. These drains in turn discharge to the sub-base of the car park area via a water distribution chamber. All the flow is infiltrate into the ground using the sub-base of the car park area.

The permeable surface will remove the soils and provide a water treatment to the surface water. See below print screen of the treatment capacity of the permeable sub-base. We conclude that the proposed SuDS train provides a good treatment of surface water.

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Quick Design : Infiltration Systems

Micro Drainage

Variables

Rainfall and Runoff

FSR Rainfall

Return Period (years) 2

Region England and Wales

Map

M5-60 (mm) 19.600

Ratio R 0.406

Infiltration Structure

Porous Car Park

Infiltration Coefficient Base (m/hr) 0.18309

Safety Factor 2.0

Porosity 0.30

With Outflow

Maximum Discharge (l/s) 0.0

Analyse OK Cancel Help

Enter Area between 0.000 and 999.999

Quick Design : Infiltration Systems

Micro Drainage

Pollution

All pollutant removal percentages are taken from table 3.7, of Cria C609.

	Pollution Removal (%)	
	Low	High
Total Suspended Solids	60	95
Hydrocarbons	70	90
Total Phosphorous	50	80
Total Nitrogen	65	80
Faecal Coli		
Heavy Metals	60	95

Analyse OK Cancel Help

Enter Area between 0.000 and 999.999

Query 2: The drawing provided needs to be clearer and more detailed. It needs to show the water quality treatment measures, where proposed infiltrations systems are and exact location of trial pits. Each item should be easy to identify and clearly stated in the drawing key.

Response: See enclosed updated drainage layout showing the location of the soakaways, the sub-base of the car park and the details of the drainage system.



Query 3: Parts of the site are surcharging for 1 in 1 year storm. This will need to be addressed in detailed design. Furthermore, the strategy provided must adhere to latest, local and national guidance. A detailed surface water management strategy must be submitted in accordance with the Local Standards and Guidance for Surface Water Drainage on Major Development in Oxfordshire

Response: The site is surcharging because all the structures used in the development are shallow. However the water depth is very small. The drainage strategy submitted is based on the guidelines given by the council.

Yours sincerely

Argemiro Rivera

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Associate Director