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Lead Local Flood Authority Response in respect of 22/00227/OUT - Erection of an up-to 70-bedroom care home (Class C2), together with associated infrastructure, parking and access at Land Adjacent Common Hill Manor Northwick Road Bevere Worcester

Statutory obligations

These comments represent those of Worcestershire County Council as the Lead Local Flood Authority (as determined by the Flood and Water Management Act 2010) and are officer comments only.

The LLFA have reviewed the submitted information relating to surface water drainage only; South Worcestershire Land Drainage Partnership will provide comments in relation to flood risk.

Introduction

The application is for a care home and associated infrastructure on 0.78ha of predeveloped greenfield land. The proposed impermeable roof area is 0.19ha and the drive and parking areas are 0.12ha. Surface water runoff rates will increase post development.

Drainage hierarchy

Discharging surface water from the site has been considered in accordance with the drainage hierarchy. Infiltration SuDS are deemed to be unfeasible due to the impermeable nature of the underlying geology, however the site is partially overlain with the Power House Terrace Deposits (sand and gravel) and the soil is described as freely draining (Landis.org.uk). There is a likelihood infiltration SuDS would be feasible at this site, infiltration testing at the BRE 365 standard will need to be conducted to confirm this. If infiltration testing is found favourable, this should be the method for discharging surface water, this can be conditioned.

Current proposals are to discharge surface water to an existing pond at the south of the site which flows into an open watercourse west of the site, flowing to the River Severn. If soakaways are found to be unfeasible then this discharge method is acceptable.

Calculations

The proposed discharge rate for the site is 5l/s, this is justified as being the lowest practicable rate. Using the IH124 method, I have calculated the greenfield runoff rate (Qbar) at 2l/s. The greenfield rate is achievable and reasonable to be expected from a new development on greenfield land, 5l/s would be increasing surface water runoff

rates post development and is not acceptable as stated in the Non-Statutory Technical Standards for SuDS and the South Worcestershire Development Plan 29.

The proposed surface water storage required for the impermeable roof area up to the 1:100-year return period (1% AEP) +40% climate change is 100m^3. Although preliminary calculations have not been provided to confirm this, I have calculated this to be a true estimation. The driveway and parking area is proposed to be permeably surfaced with storage provided in the voided subbase, this may be acceptable with a robust post developed maintenance plan. I have calculated the estimated storage at 55m^3, this can be adequately accommodated onsite in other SuDS if need be.

SuDS and drainage network

At this outline stage storage will be provided by a below ground attenuation tank, receiving flows from the roof via pipework. Above ground storage has not been proposed due to site constraints being insufficient space and the sloping topography unable to facilitate a pond. This proposal is disappointing as above ground SuDS are preferred by the LLFA to facilitate the natural hydrological cycle which is more sustainable and adheres to the SuDS objectives.

The site is currently greenfield with a pond and watercourse to the south of the site of which finer details have not been provided. The maximum storage required at this site is circa 155m^3 which is a relatively small volume for a site this size and for a major planning application. Although the topography does decline from the east to the west by 5m, the proposed site of the attenuation tank falls by circa 1-2m. I believe an above ground attenuation SuD could be achieved on this site towards the south, potentially incorporated into the existing pond and should be further investigated in detailed design stages. An appropriately designed storage pond would enhance amenity and biodiversity value which would be beneficial to the residents of the care home. Water features in the natural environment have been proven to be beneficial for mental health.

Water treatment

A water treatment appraisal in accordance with the simple index approach will need to be submitted in further plans.

Maintenance

SuDS maintenance details are satisfactory in principle. A detailed maintenance plan including a schedule for all drainage assets, who will provide the maintenance and how the maintenance of drainage assets in private ownership will be communicated to private landowners, will need to be submitted in further plans.

Exceedance flows

Exceedance details are acceptable in principle. An exceedance flow route drawing, demonstrating site wide flows will not be directed to properties or private land and will be directed to roads and areas of POS will need to be submitted in further plans.

Construction phase

As the construction is taking place within the vicinity of an open watercourse, a detailed construction phase plan will need to be submitted for approval by the Local Planning Authority.

Conditions

The proposed drainage strategy for this application is generally acceptable at this outline stage. Though please be aware the current discharge rate of 5l/s is not acceptable and will need to be restricted to greenfield rates in accordance with the current drainage standards and guidance, this can be conditioned. Further investigation into the feasibility of above ground attenuation storage will need to conducted and further justified if not proposed in detailed designs, this can be conditioned. I recommend the following conditions:

No works or development shall take place until a construction surface water management plan has been submitted to and approved in writing by the Local Planning Authority. The plan shall include how surface water will be managed during the construction phase, including site clearance, soil stripping and pond amendments. The plan shall include drawings of any temporary drainage systems, a timeline of construction and measures to mitigate the risk of pollution (including silt) of the water environment and offsite flood risk. The plan shall detail how the approved permanent surface water drainage system shall be remediated during the construction phase. The approved construction surface water management plan shall be implemented as soon as works start on site thereafter maintained during the full duration of the construction phase.

No works in connection with site drainage shall commence until a scheme for a surface water drainage strategy for the proposed development has been submitted to, and approved in writing by the Local Planning Authority. The scheme shall include details of surface water drainage measures, including for hardstanding areas, and shall conform with the non-statutory technical standards for SuDS (Defra 2015) and the Flood Risk Assessment (LE19066 – NW-LE-GEN-XX-RP-CE-FRA01-P2). If possible infiltration techniques are to be used and the plan shall include the details and results of field percolation tests. The scheme should include detailed design drawings for surface water drainage including drainage assets. Above ground attenuation SuDS should be prioritised and justified if not proposed and include run off treatment proposals for surface water drainage. Where the scheme includes communal surface water drainage assets proposals for dealing with the

future maintenance of these assets should be included. The scheme should include proposals for informing future occupiers of the arrangements for maintenance of communal surface water drainage assets. The approved surface water drainage scheme shall be implemented prior to the first use of the development and thereafter maintained in accordance with the agreed scheme.

Please include the following informative comments:

The applicant should be aware that polluting the nearby watercourse, for instance by allowing the discharge of sediment rich runoff from the construction site, might constitute an environmental offence. The applicant is expected to fully assess the risks from all pollution sources and pathways and take sufficient precautionary measures to mitigate these risks for this development.

Please note that any proposals to alter existing, or construct new, culverts or carry out works in or on an ordinary watercourse will need Land Drainage Consent under s.23; Land Drainage Act 1991 from SWLDP. Such consent will need to be granted prior to works commencing on site as consent cannot be granted retrospectively. Failure to comply may result in enforcement action being taken by the Lead Local Flood Authority, Worcestershire County Council, under the Act. SWLDP may also exercise powers to require works for maintaining flow of a watercourse where appropriate under s.25 of the Act where the proper flow of water is impeded.

Jason Trueman
For the Lead Local Flood Authority