

Mr Tom Wood
Atkins Ltd.
Water & Environment
Woodcote Grove Ashley Road
Epsom
Surrey
KT18 5BW

Our ref: HA/2010/110546/01-L01
Your ref: Dunsbury Hill
Date: 31 August 2010

Dear Mr Wood

PROPOSED EMPLOYMENT DEVELOPMENT INCLUDING A HOTEL DUNSBURY HILL FARM

Following on from our recent meeting on the 17th August regarding the above proposed development I am now able to provide you with our written notes of what we discussed. I have also included general requirements of what will need to be considered when forming a planning application.

We are keen to help ensure that new development is as sustainable as possible and therefore appreciate the opportunity to comment on development proposals at this early stage.

Ecology

We would welcome further engagement with regards to the restoration of the Hermitage stream which crosses the proposed site. Restoration of the stream is an intrinsic part of the plan for development of the site, this has been recognised in Havant Borough Councils forthcoming Local Development Framework and is in keeping with both PPS1 and PPS9.

We will also require further details of the proposal to bridge over the Hermitage stream. Including justification and assessment of potential impacts.

In addition we would welcome proposals for enhancements of existing habitats and habitat creation, particularly in line with local and UK Biodiversity Action Plans (BAP). This could be achieved in the design of the buffer for Park Lane Stream along with other suitable location within the site. Involving the retaining and enhancement of wetland habitat, including wet woodland and ponds which are both BAP habitat types.

Generally, the Environment Agency is interested in all wetland habitats and species. We would request that the following are taken into consideration when forming an application:

- Detailed, up-to-date ecological surveys (habitats and species) of the development

Environment Agency
Guildbourne House Chatsworth Road, Worthing, West Sussex, BN11 1LD.
Customer services line: 08708 506 506
Email: enquiries@environment-agency.gov.uk
www.environment-agency.gov.uk

Cont/d..

site, undertaken at an appropriate time of year by a suitably qualified ecologist. The surveys should identify all habitats which are present on and adjacent to the site. These surveys should identify less obvious habitats such as wet grassland, marsh and bog vegetation communities and give clear indication of locations of ponds/ditches. We would expect to see justification for any loss of wetland habitats and would require compensation which results in an overall net gain.

- Full details of impacts (construction and operational) on water and wetland habitats on site and within the surrounding area, including potential impacts on the existing hydrology. In particular consideration will need to be given to how the adjacent river corridors (Hermitage Stream and Park Lane Stream to the east) may be impacted by potential development and how this could be minimised or sufficiently mitigated for.
- The extent to which it is possible to avoid or mitigate against adverse effects, and any limitations of mitigation, including methods statements demonstrating how impacts will be minimised, and details of proposed post-development management and monitoring.
- We would expect details of green infrastructure which will be retained and delivered through development of the site. We would encourage retaining and enhancing green corridors and creation of green networks throughout the site and from the site to the wider landscape. As this application is in the early stages of the planning process we expect to see more unique use of space, this could include the provision of green roofs which provide multifunctional benefits including enhancing biodiversity, providing sustainable drainage and creating a pleasant environment. It is recommended that existing nature conservation features, within the proposed development site be retained, including mature trees, hedgerows, watercourses and other features are incorporated into site design and protected from change.
- We would also require full details of future site management of retained and created habitats, for the benefit of biodiversity.

If you have any further assistance, please do not hesitate to contact me. Adam Cave (Fisheries and Biodiversity) 01903 832325 or adam.cave@environment-agency.gov.uk

Flood Risk

The site indicated for potential development is greater than 1 hectare and lies within Flood Zone 1. Paragraph E9 of Planning Policy Statement 25 (PPS25): Development and Flood Risk requires applicants for planning permission to submit a Flood Risk Assessment (FRA) when development of this scale is proposed.

The FRA should consider the site's vulnerability to flooding from all sources and include a sustainable drainage strategy to assess and mitigate the effect of development on surface water run-off.

SuDS Design Criteria

We will expect to see that the surface water drainage scheme include SuDS elements with attenuation, storage and treatment capacities incorporated as detailed in the CIRIA SUDS Manual (C697). The scheme should be designed to meet the following criteria:

- The surface water drainage system must be designed to control runoff and prevent flooding of property in up to a 1 in 100 year storm event, plus an allowance for an increase in storm intensity with climate change in line with Table B.2 of PPS25;
- The surface water system should be designed so that up to the 1 in 30 year

storm event is contained within the system. Events up to the 1 in 100 year event (plus the allowance for climate change) should be stored safely on site, without property being flooded. This could be achieved by allowing car parks or landscaped areas to flood;

- The rate at which surface water is discharged from the site may vary with the severity of the storm event but should be no greater than the undeveloped rate of runoff for a given event;
- The drainage arrangement should also be such that the volumes of surface water leaving the site are no greater than that at pre-development. Long-term storage may be required to control any additional surface water volumes generated. Please refer to section 5.3 of the DEFRA/Environment Agency publication Preliminary Rainfall Runoff Management for Developments (W5-074/A/TR/1) for further information on the provision of long-term storage.

There may be an opportunity through the redevelopment of the site to improve the water quality of runoff from the A3. Additional SuDS features could potentially be provided to treat the runoff from the road as it passes through the site.

The final drainage strategy should incorporate a number of linked SuDS features (a management train approach, as described in CIRIA C697. The SuDS Manual) to provide water quality treatment of the surface water before it is discharged into the Hermitage Stream. The management train incorporates a hierarchy of techniques which should be used in SuDS selection:

1. **Source control:** attenuate and remove pollutants from runoff close to the source. Simple measures which can be used in high density sites include directing roof, driveway and footpath runoff over grassed areas, or promoting sheetflow through grassed areas. Green roofs, gravelled or porous car parking areas, roadside swales, filter strips, bioretention devices and filter drains.
2. **Site Controls:** These are runoff and treatment controls that serve areas of approx 2 to 5 ha. The most common forms are swales, extended detention, detention basins (some can take the form of sports pitches) which all have relatively low land take.
3. **Regional Controls:** Serve multi-hectare drainage areas greater than 5ha and can be incorporated into public open space. These include extended detention basins, retention ponds and stormwater wetlands. When source and site controls are used upstream, the size of the regional controls can be reduced, freeing additional land for other purposes.

So that sufficient land can be allocated for the inclusion of drainage features it is important that drainage requirements are considered at an early stage of the development.

Provision for long-term maintenance should be provided as part of any SuDS scheme submitted to the Local Planning Authority. Model legal agreements that provide a mechanism for SuDS maintenance can be accessed on the CIRIA web site at <http://www.ciria.org/suds/icop.htm>.

Works around the Hermitage Stream

Please note that under the terms of Section 109 of the Water Resources Act 1991, and the Southern Region Land Drainage and Sea Defence Byelaws, the prior written consent of the Environment Agency is required for any proposed works or structures, in, under, over or within 8 metres of the top of the bank of the Hermitage Stream, designated a 'main river'. Consent will only be issued if the works do not pose a flood risk to people and property, and do not conflict with the Environment Agency's other

duties.

The development offers the opportunity to restore the canalised section of the Hermitage Stream to a more natural form. We would be happy to discuss rehabilitation options with you further.

We will expect that any bridge crossing the Hermitage is of a clear-span construction with the abutments set back from the banks of the river. Bridges should be designed with a minimum afflux of 50mm in a 100 year flood event (including an allowance for climate change), and with a minimum freeboard of 600mm above the 1 in 100 year flood event (including the above allowance).

Water Quality

The Hermitage Stream Water Body catchment is currently not achieving "good status" under the Water Framework Directive and therefore any opportunities to enhance water quality should be taken. Equally any deterioration in water quality as a result of the development would be unacceptable. Therefore pollution prevention should be considered when forming the surface water drainage strategy and it should be ensured that there would be little risk of surface water contamination as a result of surface water management/run-off. This could be achieved through tertiary treatments and various SuDS techniques such as permeable paving in higher risk areas.

The waste water catchment is Budds Farm and the discharge from Budds Farm is limited in terms of nitrogen removal to below Best Available Technology limits to protect the integrity of Habitat Directive sites. Therefore although it has been estimated that this can accept the housing development proposed in the catchment, we would expect high water efficiency targets for the development to protect water resources and limit the impact of this development on Budds Farm WWTW.

Please note that the view expressed in this letter by the Environment Agency is a response to a pre application enquiry only and does not represent our final view in relation to any future planning application made in relation to this site. We reserve the right to change our position in relation to any such application.

You should seek your own expert advice in relation to technical matters relevant to any planning application before submission

I trust that the above comments are satisfactory but if you require any further information please contact me.

Yours sincerely

Miss Catherine McLeod
Planning Liaison Officer

Direct dial 01903 703858

Direct e-mail planning.southdowns@environment-agency.gov.uk