

Your Ref: 15-02107

Our Ref: 70012202/CF/SR

26 February 2016

CONFIDENTIAL

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Dear Victoria,

**Subject: 15-02107: Re-location of Phoenix Gym Club, Land to the North of Longlea Fifield Road, Fifield, Maidenhead – Review of revised flood risk and drainage information**

Please find below a summary of our findings and recommendations following a review of the revised flood risk and drainage information submitted under Application Number 15-02107.

In preparation of this response we have reviewed the following documents:

- Flood Risk Assessment, January 2016, Hafren Water
- SuDS Design, January 2016, Playdell Smithyman
- M14.174(a).D.003A SUDs Layout - Direction of Water Flow - 1
- M14.174(a).D.004 SUDs Layout – Indicative details
- M14.174(a).D.001b – SUDS Layout
- Playdell Smithyman response to comments of WSP re Flood Risk
- Oakley Green, Fifield and District Community Association Ltd (OGAFCA) response to additional drainage information, 7 February 2016, OGAFCA
- Email correspondence from Kerrington dated 9 February 2016 responding to OGAFCA's response dated 7 February 2016

### **Development Proposals**

The proposed development comprises of the relocation of the Phoenix Gymnastics Club from a rented site at Water Oakley Farm to Land at Fifield Road, Fifield. The application site is rectangular in shape and located on the east side of Fifield Road. Currently the site has no access and is comprised of open fields. To the north, east and west of the site are more open fields. However, to the south of the site lies the small settlement of Fifield. The site abuts Longlea which is a nursing home. The new gymnastics club will include a new gym building, access, car parking and landscaping.

### **Site Setting**

The application site covers an area of 1.86 ha and is wholly located in Flood Zone 1. The western area of the site is indicated to be at low to high risk of surface water flooding.

The site is situated on bedrock of London Clay Formation - Clay, which is classified as Unproductive Strata. There are no superficial deposits overlying the bedrock within the red line boundary. The site is also indicated to be situated within Source Protection Zone 3.

## Planning Requirements

Due to the size of the application (>1ha) a Flood Risk Assessment is required for the site, in accordance with the National Planning Policy Framework (NPPF) and Flood Risk and Coastal Change Planning Practice Guidance (PPG).

The Town and Country Planning (Development Management Procedure) (England) Order 2015 identifies the Lead Local Flood Authority as a statutory consultee for major applications with surface water drainage. The same Order defines major applications to include *'the provision of a building or buildings where the floor space to be created by the development is 1,000 square metres or more; or development carried out on a site having an area of 1 hectare or more'*.

Consequently the applicant is also required to submit information to enable the Lead Local Flood Authority to determine that adequate provision for drainage of the development has been provided.

The Royal Borough of Windsor and Maidenhead (RBWM) requires the surface water drainage strategy to comply with the non-statutory technical standards for sustainable drainage (March 2015)<sup>1</sup>

## Previous Comments

The RBWM Flood Risk Manager has previously provided two sets of comments on the flood risk and drainage information submitted in support of this application; dated 30 July 2015 and 9 September 2015. The initial comments recommended that adequate provision be made for the disposal of surface water within the site and noted that the surface water drainage design was not in accordance with the non-statutory technical standards for sustainable drainage. The comments issued on the 9 September noted that no calculations had been provided for the surface water drainage system and highlighted that the attenuation ponds within the site are likely to become charged with groundwater, reducing the attenuation capacity.

In response to the RBWM Flood Risk Manager's comments and those from OGAFCA and residents of Fifield, the applicant revised the surface water drainage strategy to *"substantially increases the capacity of the SUDS by the introduction of an additional attenuation pool to the north east of the proposed development"*.

The revised SuDS solution notes that attenuation will be provided within the sub base of the car park and landscaping areas, ephemeral retention ponds and the additional wetland to the north east.

The revised SuDS solution proposes to infiltrate surface water runoff from the site to ground; however no infiltration rates or calculations are included in the note. Given that the Site is located above bedrock of London Clay, it is anticipated that infiltration to ground will not be practical at the Site.

The calculations submitted with the revised SuDS solution restrict discharge from the site to the Greenfield runoff rate for the 1 in 2 year event. These calculations do not tally with the proposed means of discharging to ground. If discharge to ground is not proposed, and surface water runoff will instead be discharged to the local watercourse, it should be stated why the 1 in 2 year Greenfield runoff rate has been used to restrict flows.

It is also noted from the plans provided show that the SuDS features located in the west of the site, adjacent to Fifield Road, lie within an area of low, medium and high risk of surface water flooding associated with a flow route through the site. It is not clear if or how this has been accounted for in the design.

A Flood Risk Assessment (FRA) was not submitted with the application previously. A FRA must be submitted for the application which assesses flood risk from all sources, detailing suitable mitigation where appropriate, and detailing how the risk of surface water flooding shown to affect the western area of the site will be managed without impacting on neighbouring properties or the function of the proposed drainage arrangements.

## Revised Information

A Flood Risk Assessment (FRA) has been submitted with the application, which serves to assess flood risk to the site.

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<sup>1</sup> Non-statutory technical standards for sustainable drainage systems, 2015, DEFRA  
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The FRA states that the overall surface water flood risk to the site is 'very low', despite the western area of the site shown to be at 'low' to 'high' risk. This assessment is based on the two ditches either side of Fifield Road. The eastern bank of the eastern ditch provides a 400mm freeboard, which the FRA states will serve to prevent surface waters from entering the western part of the site. The FRA states that surface water flooding in the locality of the site would therefore, be restricted to Fifield Road itself, with waters flowing downslope to the north. The FRA also states that there is a small ditch along the southern boundary, which it notes will restrict surface water flows that may enter from off-site to the south.

It cannot be assumed that these ditches are excluded from the Environment Agency Risk of Flooding from Surface Water mapping. Nor can it be assumed that the ditches would deal with the volume of surface water runoff generated during a 'medium' or 'high' risk event within the vicinity of the site and hydraulic modelling would be required to demonstrate this. Detail must be provided on how the risk of surface water flooding shown to affect the western area of the site will be managed without impacting on neighbouring properties or the function of the proposed drainage arrangements.

The surface water drainage strategy states that runoff will be discharged to ground; however infiltration tests have not been undertaken for the site. It is recognised that the intention is to direct runoff eastwards, where clays give way to sand and gravel; however evidence is not provided within the FRA to demonstrate that this scheme is viable. If discharge to ground is not viable for the site, surface water runoff will need to be directed to the surrounding ditches. If this is the case, the high surface water flood risk will need to be considered.

It is also noted from the plans provided that the SuDS features located in the west of the site, adjacent to Fifield Road, lie within an area of 'low', 'medium' and 'high' risk of surface water flooding associated with a flow route through the site. The surface water drainage strategy states that it is assumed that run-off from external source areas will not enter the site. Given that there is insufficient evidence submitted with the FRA to support the change in surface water flood risk for parts of the site from 'high' to 'very low', it cannot be assumed that surface water from offsite will not flow onsite and will not impact on the SuDS features in this area.

The flood risk associated with the new access over the existing drainage ditch will need to be assessed to demonstrate that flows within the ditch will not be restricted. This assessment needs to be submitted in support of the planning application in order to demonstrate that the proposed development will not increase flood risk.

### **Additional Information Required**

In order to remove this objection it is recommended that the following information is submitted with the planning application:

- An assessment of the surface water flood risk to the western area of the site, with details of suitable mitigation where appropriate.
- Results of intrusive ground investigations demonstrating seasonal variation in the depth of the groundwater table, infiltration rates determined in accordance with BRE Digest 365 and areas of ground contamination, including Made Ground.
- Evidence to show that the drainage scheme has been designed to account for the areas of low, medium and high risk of surface water flooding associated with a flow route through the west of the site.
- If discharge to ground is proved not to be viable, demonstration that discharge to a surface water body is viable including evidence demonstrating that the RBWM agree in principal to the plans.
- If discharge to a surface water body is proved not to be viable, demonstration that discharge to the main sewer network is viable including evidence demonstrating that the sewerage undertaker agrees in principal to receiving additional surface water contributions to its network.
- Demonstration that the new site access over the existing drainage ditch will not restrict flows in the ditch.
- Details of the maintenance and / or adoption proposals / agreements for the development covering every aspect of the proposed drainage system.

If you have any queries or would like to discuss any of the points raised please do not hesitate to contact me.

Yours sincerely,

Stephen Riley  
Associate Director

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