

Your Ref: 16/02637

Our Ref: 70012202/RS/SR

07 October 2016

CONFIDENTIAL

Victoria Gibson  
Royal Borough of Windsor and Maidenhead  
Town Hall  
St Ives Road  
Maidenhead  
SL6 1RF

Mountbatten House  
Basing View  
Basingstoke  
Hampshire RG21 4HJ

Tel: +0 (0) 1256 318800  
Fax: +0 (0) 1256 318700

[www.wsp-pb.com](http://www.wsp-pb.com)

Dear Victoria

**Subject: 16/02637 Land to the North of Longlea, Fifield Road, Fifield, Maidenhead - Review of additional details supplied in support of application for details reserved by Condition 6 (Sustainable Drainage Solution)**

WSP | Parsons Brinckerhoff (WSP | Parsons Brinckerhoff) undertook a review of the information submitted under planning Application Number 16/02637 and issued a response letter dated 27<sup>th</sup> September 2016.

This review relates to additional information submitted on the 28<sup>th</sup> September to support planning Application Number 16/02637.

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

→ 2246587 – Drainage Statement – New Phoenix Gymnastics Club, Fifield Road, Maidenhead, Berkshire, SL6 2PG.

This application relates to information submitted to discharge Condition 6 (Sustainable Drainage Solution) of planning consent 15/02107.

Condition 6 of planning consent 15/02107 states:

*Prior to the commencement of development hereby permitted, details of a sustainable drainage system to be installed to dispose of surface water within the site shall be submitted to and approved in writing by the Local Planning Authority. The development shall proceed only in accordance with the approved details and the measures approved shall remain in place thereafter and maintained to the satisfaction of the Local Planning Authority.*

In our letter of the 28<sup>th</sup> September 2016, WSP | Parsons Brinckerhoff noted three areas of concern with regards to the information submitted at that time; details of the status of these concerns in light of our review of this most recently submitted information are as follows:

**WSP | Parsons Brinckerhoff concern from 2<sup>nd</sup> September 2016 letter:**

*No calculations have been supplied to support the performance of the proposed drainage system over the lifetime of the development. These should verify that the proposed drainage system is appropriately sized to deal with the runoff from the development for all events up to the 1 in 100 year event with an allowance for climate change (considering a 30% increase in rainfall intensity).*

**Position following review of latest submitted information**

Calculations have been supplied with the Drainage Statement that show the performance of the drainage system for all events up to the 1 in 100 year event with an allowance for climate change. However there are inconsistencies between the calculations and the Below Ground Drainage Layout (Drawing 6667769-DWG-SBU-C-100), and there are aspects of the proposed drainage system that lead to concerns regarding its performance. Therefore it cannot be verified that the surface water drainage system is adequately sized to deal with all events up to the 1 in 100 year event with an allowance for climate change.

The Network Design Table for Storm within the WinDes Calculations appendix to the Drainage Statement indicates that the diameter of pipe number 2.000 is 400mm however the Below Ground Drainage Layout (Drawing 6667769-DWG-SBU-C-100) indicates that this pipe has a diameter of 150mm.

The proposed orifice manhole flow control has an orifice diameter of 0.055m (55mm). This orifice size is smaller than accepted best practice. Sewers for Adoption 7<sup>th</sup> edition (Section C7.2) requires a minimum fixed orifice diameter of 100mm to ensure blockage does not pose a risk. It is possible to use vortex flow controls to provide flow control where an orifice diameter of less than 100mm would be required. Justification should be provided to prove that the orifice diameter does not pose a risk of blockage and therefore a risk that the performance of the drainage system could be compromised.

The Storage Structures for Storm table within the WinDes Calculations appendix to the Drainage Statement indicates that a total of 1,520m<sup>2</sup> of porous paving will be constructed as part of the network. However the permeable paving parking bays shown on the Below Ground Drainage Layout (Drawing 6667769-DWG-SBU-C-100) totals approximately 1,170m<sup>2</sup>. It may be the case that the larger number within the Micro Drainage results includes the reinforced grass area, however this is not clear from the information supplied.

The Storage Structures for Storm table indicates a tank or pond manhole 15.4m<sup>2</sup> in area is located at the orifice plate flow control chamber (S2.1). It is not clear how this storage could be provided at this location and therefore suggests that the Micro Drainage network may incorporate storage that is not shown on the Below Ground Drainage Layout (Drawing 6667769-DWG-SBU-C-100).

#### **Concern remains**

#### ***WSP | Parsons Brinckerhoff concern from 2<sup>nd</sup> September 2016 letter:***

*The outfall of the drainage system is to a ditch on the western side of the site. The risk of flooding from surface water mapping shows that this ditch is inundated in a 1 in 30 year surface water flooding event and therefore it is likely that during the design event of the surface water drainage system (1 in 100 year rainfall event with a 30% allowance for climate change) the outfall to the ditch would be surcharged. No assessment has been made to assess the performance of the system in the instance that the outfall to the ditch is surcharged and the implications of this for drainage if the site and flood risk to neighbouring property.*

#### ***Position following review of latest submitted information***

The Drainage Statement states in Section 6.3 that a surcharged outfall scenario has been reviewed and that no out-of-network flooding occurs. However there is no information to indicate whether the simulation results provided in the Micro Drainage calculations incorporate a surcharged outfall or not. No information is provided to indicate the surcharged outfall conditions that have been applied to the network and the justification for this.

The supplied drainage statement does not include any cross-sections to indicate the proposed form of construction for the key features of the drainage system including the proposed permeable paving, swales, reinforced grass and outfall to the existing ditch.

#### **Concern remains**

#### ***WSP | Parsons Brinckerhoff concern from 2<sup>nd</sup> September 2016 letter:***

*No evidence has been provided of correspondence with the Royal Borough of Windsor and Maidenhead regarding permission to discharge surface water runoff from the site to the ditch (an ordinary watercourse) on the western boundary.*

#### ***Position following review of latest submitted information***

No further evidence regarding correspondence with the Royal Borough of Windsor and Maidenhead regarding permission to discharge surface water runoff from the site to the ditch (an ordinary watercourse) on the western boundary has been supplied.

#### **Concern remains**

### Additional Information Required

The following additional information is required to enable planning condition 6 to be considered further:

- Full revised design calculations for the proposed drainage system to prove that it is adequately sized to deal with all events up to and including the 1:100 year event with including allowance for climate change that correspond to the drainage layout drawing;
- Confirmation of where the storage indicated within the Micro Drainage network results is to be provided across the proposed development site. Specifically this should include the permeable paving storage;
- Full details of the proposed components of the drainage system that clearly refers to the design calculations including a General Arrangement drawing, cross sections and details of key components;
- Details of an assessment of the performance of the drainage system under surcharged outfall conditions; and,
- Evidence of correspondence with RBWM regarding permission to discharge surface water runoff from the site to the ditch / ordinary watercourse on the western boundary.

If you have any queries or would like to discuss any of the points raised please don't hesitate to contact me.

Yours sincerely,

Stevens, Richard  
PP for Stephen Riley  
2016.10.06 17:09:01  
+01'00'

Stephen Riley  
Associate Director

DDI: +44 (0)1256 318 588