

## BANNERS GATE

CIVIL, STRUCTURAL & ARCHITECTURAL DESIGN SERVICES

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Our Ref: 09068/RGW

15 October 2010

Environment Agency  
Rivers House  
East Quay  
Bridgwater  
Somerset  
TA6 4YS

**For the attention of Mr A. Reading**

Dear Sirs

**Land off Withies Park (formerly Cautletts Close), Midsomer Norton  
Flood Risk Assessment**

Thank you for your letter of 11 August 2010. We address the issues raised as follows:

1. Please find attached copies of our calculations showing the effect of a submerged outfall in the unlikely event that a 1 in 100 year return period (plus 30% for climate change) storm occurs when the River Somer is already flooded to 95.4maOD. Our calculations indicate that the additional storage volume required can be accommodated in the pond between normal top water level and the ground level at the lowest point between the pond and the river and by utilising spare capacity in the upper part of the culvert system. The pond as shown in our preliminary drainage layout drawing 09068/PDL-B has a base area of 104.1 square metres with side slopes of 1 in 3. The capacity of the pond when filled to a depth of 1.0m (normal top water level) is approximately 150.7 cubic metres rising to 233.6 cubic metres when filled to the lowest ground level between the ponds and the river.
2. We have made arrangements for the designers of the access road bridge (Jubb Consulting Engineers of Plymouth) to submit to you directly all relevant drawings together with a brief explanation of the design criteria employed.
3. With regard to the matter of the provision of addition sustainable drainage methods we had reached the view that due to soil conditions infiltration strips would not be an effective method of surface water disposal and that swales would not be appropriate in this development due to unsuitable ground conditions and problems associated with the maintenance of swales in private areas during

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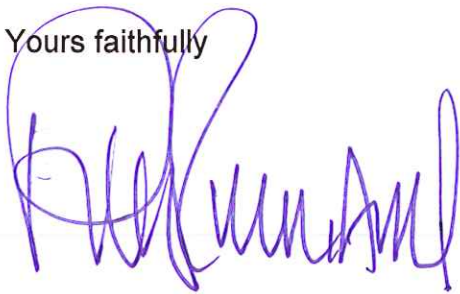
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the long term. Although you will not allow the potential storage volume of porous paved areas to be counted towards the overall storage volume our client is prepared to introduce porous paving wherever practical within the development in order attenuate flow and to improve water quality by filtration and the ingestion of hydrocarbons before surface water is discharged to the watercourse. Please find attached (a) an amended copy of our preliminary drainage layout showing possible areas of porous paving within the development and (b) a copy of our addendum to the flood risk assessment amended to include the provision of porous paving construction wherever practical. Although only items 17.10 and 18.10 we include all items from 17.6 to 18.17 to allow you to substitute the text into the flood risk assessment if you so wish.

We trust that the above information will enable to grant technical approval to our proposals but should you require any additional information please do not hesitate to contact us.

Yours faithfully



**Roger Williams BA CIWEM CWEM CEnv**  
For and on Behalf of  
Banners Gate Ltd

Copies:       D. Archer – Pad Design  
                  T. Blythe – David Wilson Homes