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Reference: C12906-LT-001
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Dear Mr Uncle

Re: 6/2019/3024MAJ – 29 Broadwater Road, Welwyn Garden City, AL7 3BQ

Further to our telephone conversation please consider this letter an update to accompany our drainage design drawing, C12885-ZZ-XX-X-0001 and Drainage Strategy Statement. Furthermore, I have addressed your concerns from the letter dated 20.01.20 that you sent to Mr Robinson. Please find attached the following documents.

- Greenfield runoff calculation for 1:100 year storm
- Greenfield volume calculation for 1:100 year, 6 hour storm
- Thames Water Pre-Development Enquiry – Confirmation of capacity
- Detailed attenuation calculation showing half drain time
- Surface water network calculation (2.0 l/s discharge)
- Revised drainage strategy document
- Revised drainage layout C12885-ZZ-XX-C-0001
- A rainwater harvesting tank, which has been designed by another consultancy, is included.

In response to your suggestion of utilising a permeable pavement system, we have included a relatively small area of permeable sub-base, localised only to accept discharge from the car park surface. The car park will remain dry as it is underground, thus a nominal rate of 0.2l/s has been used to size the sub-base.

We have not included a tanked sub-base system for the roof run-off as the volume required and depth of adjacent foundations were too great. Furthermore, the CIRIA SuDS manual advises that roof run-off is relatively low risk in terms of pollution hazard and therefore does not need to be part of the pollution management train, however, we propose to mitigate this risk further as the process's below outline.

- Hydrocarbon Sponges (upstream of the proposed catch-pit to reduce any pollution hazard from roof run-off)
- Intensive Green Roof

The inclusion of an intensive green roof, as specified by the landscape architect on drawing 19515.200, which I have included, further enhances the SUDS treatment process. Through a variety of physical, biological and chemical treatment processes, within the soil and root uptake zone, green roofs can reduce pollutants entrained within groundwater. This system provides the second process of treatment.

Further to this, the green roof also encourages biodiversity ensuring that it complies with BREEAM ecological requirements.

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In the event of a greater than 1:100 year storm event all runoff directed as shown on drawing C12885-ZZ-XX-C-0002, which is included.

Please contact me directly if you require any further information.

Yours sincerely,

Christopher Collins
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