From: Dominic Kacinskas [redacted]
Sent: 24 November 2021 15:12
To: Nora-Andreea Constantinescu
Cc: ~~Alex Cotterill; Amin Taha; 'Paul Downie'; 'Eleonora Regni'; Steve Webb~~
Subject: 317 Finchley Road_condition 18

Follow Up Flag: Follow up
Flag Status: Flagged

Dear Nora,

Please see below response to condition 18.

Kind Regards,
Dominic

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From: Guy Parker-Dennison [redacted]
Sent: 23 November 2021 18:24
[redacted]
Subject: RE: Finchley Replies Given to Pre-Commencement

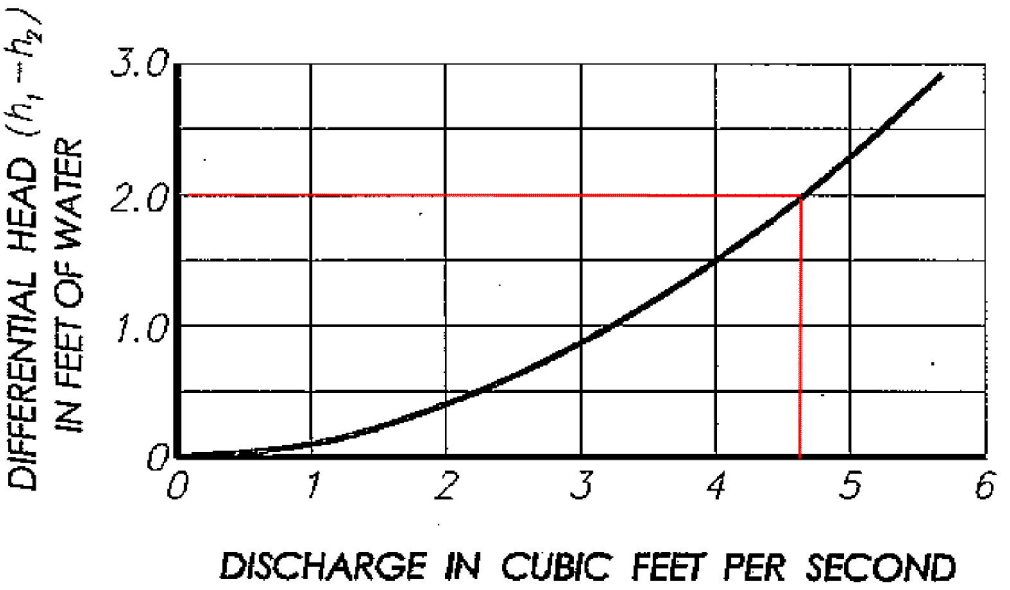
Hi All,

Please find attached the required latest microdrainage calculations showing all rainfall events up to the 1 in 100 year event plus climate change (we actually calculated it up to 40%) as well along with the latest external works drawing. At the time of the report in 2016 it was widely accepted that 5l/s was the minimum allowable flowrate to address the

blockage risk and is the minimum recommended on the UK SuDS tool website by HR Wallingford (see HRW UKSuDS Runoff Report. This is also less than half the flowrate for the 1 in 100 year existing flowrate.

The issue we have with this site is because of spatial constraints and the existing levels on site the attenuation the only available space to locate a attenuation tank is either under neath the lower basement or at the rear of the development which is at a level significantly lower than the existing connection into the Thames Water Sewer which requires the need for the surface water to be pumped up to street level and means the pump would act as the flow control as there is no space to put a attenuation tank and flow control and tank at the front of the building so the flowrate from the pump is set as 5l/s.

In a normal gravity system where the flow control is a orifice plate or hydrobrake there is a corelation between the flowrate and the head of water in the attenuation tank as shown in the graph below with the maximum flowrate in this case 5l/s would be achieved when the water level was at the top of the tank.



So this means for lower rainfall events the water level wouldn't reach the top of the tank as the volume of water running off the site would be less so as a result the maximum flowrate leaving the site for the 1 in 1 year and the 1 in 30 year would be less than 5l/s. However because in this situation the flow control is a pump which pumps out at a constant flowrate we are unable to mimic this effect.

If alternatively we were to set the flowrate at 50% of the 1 in 1 year at 3.44l/s it would have resulted in a larger tank which we would have struggled to fit in with the site constraints and the offset constraints imposed by national rail and would have posed a bigger flood risk to the building. The proposed pump flowrate of 5l/s is less than 50% of the 1 in 100 year flowrate from the existing site and is significantly lower than the existing 1 in 1 year and 1 in 30 year event flowrates.

Kind Regards

Guy Parker-Dennison