

**From:** Karen Beare [REDACTED]  
**Sent:** 04 May 2019 22:08  
**To:** Thuair, Charles [REDACTED]  
**Cc:** Bob Warnock [REDACTED]; Harley Atkinson [REDACTED]; Kathy Lambie [REDACTED]; John Kennedy [REDACTED]; Steve Barber [REDACTED]; Susan Rose [REDACTED]; Michael Hammerson [REDACTED]; Nicola Mayhew [REDACTED]; Vicki Harding [REDACTED]  
**Subject:** Re: 2019/0704/P - SUDS and drainage - 53 Fitzroy Park - Condition 13

Charles

We note that an additional technical note was provided by PJCE and uploaded onto the Council's portal last Monday on 29/4/19. We examine here the report itself and more importantly the impact on trees on site given approaching 70% of the site is proposed to be either hard landscaping, built form footprint or SUDs.

This undated report by PJCE addresses the critical mistake in their earlier submission: that there is NO current connection to the pond in No55 FP and there should not be any connection in the future. However the consequence is that there are now only two options: infiltration or pumping to the sewer.

The latter is a non-starter as it is not acceptable to pump rainfall directly to the sewer that has historically fed the pond in No55 and in turn the Bird Sanctuary Pond.

So the ONLY solution is to design a drainage strategy to 100% infiltration.

Turning to the size of the site (1283m<sup>2</sup>) the problem PJCE face in designing a scheme that is 100% infiltration is the extent of the area needing draining (roof print & hard landscaping) totals 610m<sup>2</sup> = 47.5% of the site which has relatively low infiltration rates.

We are told the SUDs will be designed using the lowest obtained f value, assuming of course a trial pit was actually done in the correct area... It would be perverse if only 1 out of 10 Trial Pits were to be relied on to design a detention basin area of almost 120m<sup>2</sup>, but in fact that is exactly what has happened. This is also true of Catchment 3 where TP5 is the only trial pit in the correct location..

Only TP3 is anywhere near this extensive SUDs for Catchment 2. In fact, when you overlay the site investigation with the proposed solution it is almost outside the footprint of the proposed detention basin!

We also note the infiltration rates at TP3 are recorded as follows for two tests at each location:

TP3: Test One: **3.79E-05 m/sec**

TP3: Test Two: **1.81E-05 m/sec**

The first observation is that TP3 has a significant anomaly in the results between the two tests and given the significance of its location should have been re-tested.

The second observation is that in the narrative we are told the actual bioretention location for Catchment 2 is equal to  $8.21 \times 10^{-6}$  m/s - which is quite different to the actual results for TP3.

It would appear the drainage design does not take account of the real values in the actual location of the SUDs, which as shown above suggest much slower rates of infiltration than being suggested.

However this is not the total story.

Because the area to be drained is so excessive, some 600m<sup>2</sup>, PJCE have had to split the catchment into 3, namely 1-the car park, 2.-the main roofs and 3-the rear patio. They have had to design a 120m<sup>2</sup> (120mx1m) bioretention basin with attenuation/infiltration tank PLUS an additional detention basin for high intensity rainfall events to cope with Catchment 2 alone. Please note the Trial Pits are only 0.3m deep.

The consequence is that an **ADDITIONAL** footprint of at least 120m<sup>2</sup> for Catchment 2 and a further footprint for Catchment 3 that has NOT been quantified but is estimated to be the same again, needs to be added to the hard landscaping m<sup>2</sup> on site, because of course, you cannot plant trees or larger shrubs where SUDs are located.

The reality of this development scheme is as follows:

Site size: 1283m<sup>2</sup>.

Hard landscaping and dwelling footprint: 610m<sup>2</sup>

SUDS Catchments 2 & 3: 240m<sup>2</sup>

**A TOTAL DEVELOPMENT FOOTPRINT OF 66% OF THE SITE vs 23% PREVIOUSLY.**

**This is simply untenable for a site, adjacent to Hampstead Heath in Private Open Space, to have such a high development “footprint” of almost 70%, as none of it can support replacement tree planting.**

**So a site, that was previously thickly wooded will be reduced to a site that has two-thirds lawn, pavement and built form. With a few flower beds to the side. And 5 mature trees (the only ones still standing) to the front, that themselves will be impacted by grade level changes, so unlikely to survive.**

Two final points.

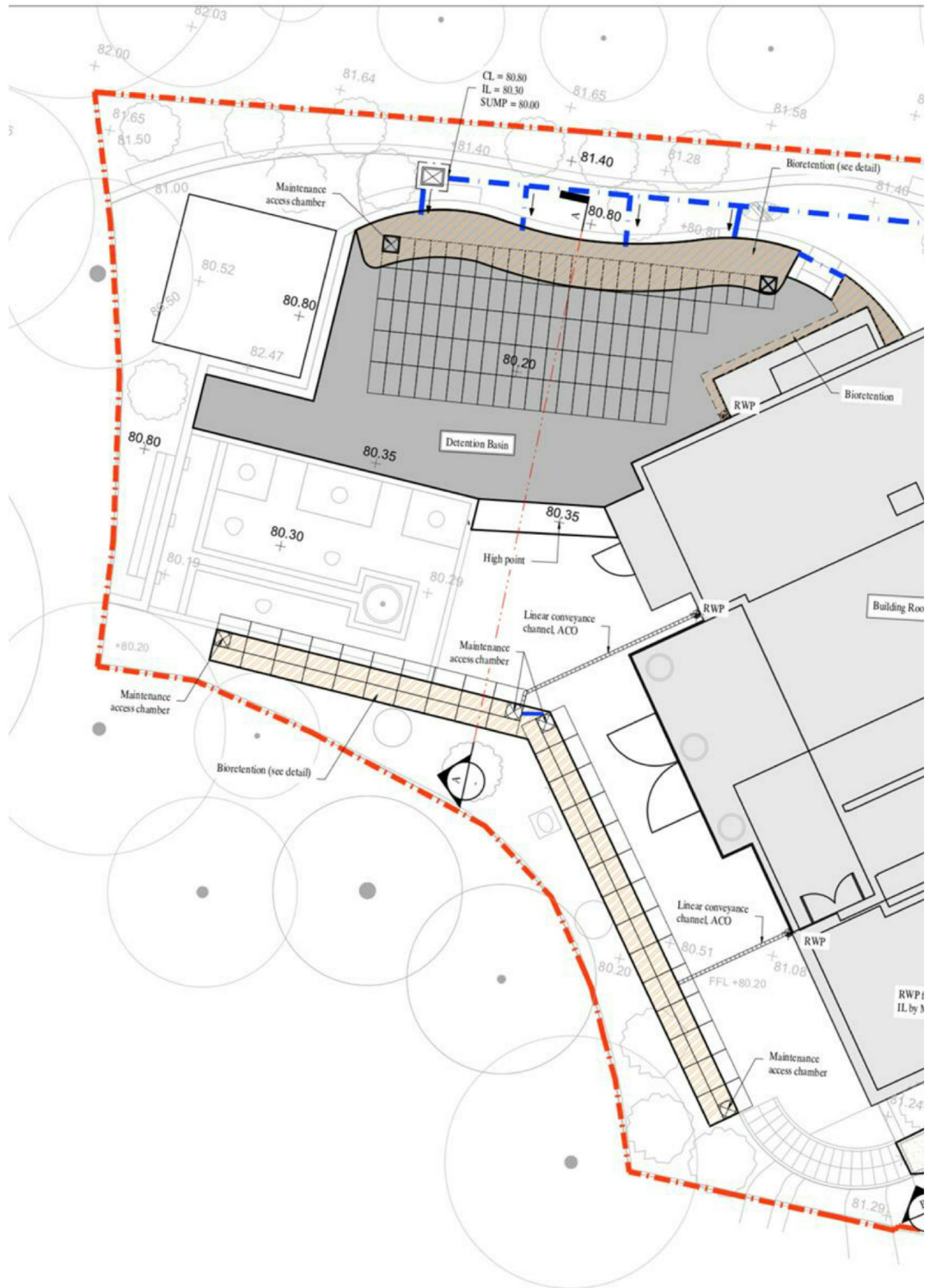
1. PJCE have once again failed to take account of existing basement and SUDs at No51. It is vital modelling is undertaken to ensure the very large Catchment 2 SUDs does not impact the SUDS along the boundary, directly upstream, for No51's basement.

2. Since the site has been cleared of all but 5 trees last month, during rainfall events, a sharp increase in surface run off has been observed discharging from the site, to the pond in No55 and then overflowing across Millfield Lane to the Heath. This is a cause for great concern as uncontrolled surface run-off risks contamination of both the pond in No55 at the Bird Sanctuary Pond.

It is therefore with regret FPRA are not able to withdraw their objection to the discharge of this condition 13. FPRA with the support of Alan Baxter Associates did flag these issues to the previous Applicant and the Council prior to determination, so these issues should not be news to anyone. We would therefore urge the Council to require further proposals that are more reliable, and appropriate for the setting and designation of the site.

Kind Regards  
Karen Beare  
Chair FPRA





On 21 Mar 2019, at 01:28, Karen Beare [REDACTED] wrote:

Charles

FPRA has the following concerns regarding the discharge of Condition 13 of planning permission 2018/2104/P:

On page 1 of the report, it is stated the existing site is sloping towards an existing pond and the new development will discharge to the existing pond and infiltrate water into the ground using the same principles as would occur naturally in the environment. Yet on page 2, it is confirmed the "Made Ground" has not yet been tested for infiltration potential so this initial statement is meaningless.

Furthermore, this report wrongly assumes the perched water table is entirely infiltrated surface water. Groundwater is discounted, yet on adjacent neighbouring sites there are numerous groundwater springs fed by ground water travelling through the upstream Claygate Beds and Bagshot Sands. Indeed the pond in No55 is spring fed itself, a fact confirmed by the current owner in 2008.

As part of the site description, the historic pond in neighbouring No55 Fitzroy Park, which is the cause of great ecological concern for stakeholders and the City, is given no more than a mention as simply a potential container for high rainfall "exceedance events" should any rainfall event prove to be too much for their drainage design. There is no mention of the sensitive nature of the pond in No55 and how it sits within the established Highgate chain feeding the Bird Sanctuary Pond downstream. Any change in the flows into this pond will have a knock-on effect on the wetland habitats in Bird Sanctuary.

Nor is there any mention of the impact of cumulative development of the site with an extensive basement and SUDs directly next door and upstream at 51FP. In fact the SUDs at No51 lie directly parallel to the SUDs proposed at No53, but have not been considered or assessed given their close proximity. Nor has the basement directly upstream at 1 Fitzroy Close been considered or assessed. Both should be factored into any modelling of such drainage solutions as is required by Camden Basement Policy.

It also appears the proposed swales and retarding/detention basins do not cross reference with arboricultural report. I am sure Tom Little will confirm it is impossible for mature trees, planted to replace those removed and to act as a screen for No51 (as is proposed), to grow successfully in either swales or detention basins.

It is also very disappointing, that after so much time has passed, infiltration test results are not available, so this entire SUDs scheme, at this late stage, is based entirely on assumption and not fact. Other assumptions include the site being flat when it is in reality steeply sloped.



The report states "Detailed modelling would be completed at a later stage once the infiltration potential is confirmed and individual components can be tested" and "when the infiltration test results become available it will be possible to design and model the entire drainage system in full, including intermediate control structures."

We had understood the purpose of this Condition 13 was for the Applicant to provide reliable details and calculations based on fact so that stakeholders can comment on the final drainage design. It begs the question when exactly is "a later stage" proposed and how the Council will be able to exercise control over the drainage scheme once this Condition is discharged on vague assumptions.

Finally, drawing L2368 –SK-C-007-SUDs shows a rainwater overflow connection to neighbours manhole and to the pond if infiltration rates are very poor. This would have a detrimental impact on the local water regime. This drawing also shows where Swales and detention (infiltration) basins are to be site exactly where replacement trees are intended to be planted, which is clearly not tenable.

As a matter of courtesy, I have copied in Bob Warnock given this potential impact on the Heath downstream.

Kind regards  
Karen  
Chair FPRA

<Horton Highgate Chains copy.pdf>

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