

From: Katherine Parkin <katherine.parkin@gravesham.gov.uk>
Sent: 24 July 2023 13:32:56 UTC+01:00
To: "Katherine Parkin" <katherine.parkin@gravesham.gov.uk>
Subject: FW: 20230355 and 20230356 Hevercourt Residential Home
Attachments: 539121-100 E- Drainage Layout.pdf, BRE 365.pdf, 539121 FEH 1-30 1-100 1-100 + 40%.pdf, pollution Prevention.pdf
Importance: High

From: Joe Martin <jmartin@mka-architects.co.uk>
Sent: Monday, July 24, 2023 9:16 AM
To: Katherine Parkin <katherine.parkin@gravesham.gov.uk>
Subject: RE: 20230355 and 20230356 Hevercourt Residential Home
Importance: High

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Dear Katherine,

The drainage Engineers have now provided their response which is as follows and as attached:-

"Please find attached documentation and revised drawings for the following point raised by the LLFA

□ *'For construction' drainage layout drawings, annotated with pipe numbers, manhole cover and invert levels and key drainage features (such as attenuation devices, flow controls, soakaway locations etc.). General arrangement drawings of key drainage features or structures should also be provided.*

I have added pipe number to the revised drawings, all the other required information is provided on the revised drawings 539121-100 rev E

□ *Information to support any key design inputs (e.g. greenfield and / or brownfield run-off rate calculations, existing and / or proposed impermeable area plan, ground investigation logs and infiltration test results (where applicable) and phasing plans (where applicable)). Section 3.02 of the report highlights that infiltration tests have been carried out to BRE 365. We would ask for the results of this to be provided.*

Greenfield run-off is irrelevant as the discharge is to ground and the development does not have a run-off. BRE 365 calculation attached.

□ *Final full network calculations and model details to demonstrate the drainage system's operation and performance for the critical duration 1 year, 30 year, 100 year storm intensities + climate change allowances. We note that the hydraulic calculations in the report use rainfall model FSR data with an M5-60 value of 20.00mm. At this stage, we would expect to see the drainage system modelled using 2013 FeH rainfall data in any appropriate modelling or*

simulation software. Where 2013 FeH data is not available, 26.25mm should be manually input for the M5-60 value, as per the requirements of our latest drainage and planning policy statement (November 2019).

Calculation provided using FEH 13

As part of the hydraulic analysis, we would also seek for the latest Environment Agency climate change analysis to be used (10th May 2022). As part of this update, revisions have been made to the 'Peak Rainfall Intensity Allowances' that are used in applying climate change percentages to new drainage schemes. The LLFA would now seek the 'upper end' allowance is designed for both the 30 (3.3%) and 100 (1%) year storm scenarios.

Climate change allowance see FEH calculations

□ Where there is any exceedance of the drainage network above the 30 year event, an exceedance plan should be provided illustrating where exceedance occurs and the extent and depth of flooding. Exceedance must be controlled within the site boundary.

No exceedance for the 1:30 year . minor flooding during the 1:100+49% cc

□ A description of the measures included within the drainage scheme to manage the quality of surface water runoff so that the receiving surface waters and / or groundwater are adequately protected against pollution. This should be in adherence to the Ciria SuDs manual 2015 part E section 26 in regards to required pollution treatments.

Attached pollution prevent measures in accordance with Ciria SUD's Manual 2015"

I hope this is sufficient to resolve the matter. Thank you.

Kind regards,

Joe Martin B Arch, BA Hons, ARB, RIBA
Director



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