

From: Laura Gibbons <Laura.Gibbons@arun.gov.uk>

Sent: 11 June 2019 15:09

To: 'aquacallidus' [REDACTED]

Cc: Simon Davis <Simon.Davis@arun.gov.uk>

Subject: RE: Metis site, Hook lane. westergate

Andy,

We wish you to follow the hierarchy for sustainable drainage and use infiltration where it is demonstrated it will work in the winter. Therefore you need to do shallow infiltration testing in the winter and submit details after this point.

Our requirements for winter groundwater monitoring and infiltration testing above ground water are long standing.

Thanks,

Laura Gibbons, MEng, GMICE
Engineer (Drainage & Coastal)

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From: aquacallidus [REDACTED]

Sent: 10 June 2019 09:17

To: Laura Gibbons

Subject: RE: Metis site, Hook lane. westergate

Laura

I have attached the 10 year illustrative calculations which meet 24 hour half drain time for areas <1,000m² due to FOS 3 but at >1,000m² don't work as FOS is 5. The way the site is broken into catchments note would exceed 1,000m² so 10 year 24 half drain time would be met, and the storage volume provides for 1%AEP +40%CC underground but would take slightly longer to drain.

The applicant needs to build out this year and the site predates the new ADC drainage policies. There are 3 options:

- a. Use the ponds as per the original strategy you have commented upon

- b. Use infiltration as per current calculations (excepting winter permeability value)
- c. Build (b) but with overflow through petrol interceptor to the pond

I will give you a call

Kind regards

Andy Traves



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From: Laura Gibbons <Laura.Gibbons@arun.gov.uk>

Sent: 10 June 2019 08:56

To: aquacallidus [REDACTED]

Subject: RE: Metis site, Hook lane. westergate

Hi Andy,

Thanks for supplying the information. The principle of using plot soakaways and soakaways in public open space to drain the road is acceptable. I note that half drain times are not good, can you achieve 24 hour half drain time for lesser events?

We will require testing to be completed in the winter at 0.6mbgl to ensure that using soakaways is still feasible.

Kind Regards,

Laura Gibbons, MEng, GMICE
Engineer (Drainage & Coastal)

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From: aquacallidus [REDACTED]
Sent: 30 May 2019 14:06
To: Laura Gibbons
Subject: Metis site, Hook lane. westergate

Laura

Theses are the test results we discussed this morning of some $3.8 \times 10^{-6} \text{ m/s}$ (+/-2).

The GWL monitoring showed GWL up to some 0.6m bgl and site soils would be used on site to achieve further cover to make this 0.8mb(new)gl allowing 0.4 storage with 0.4m cover. I have been in discussion with the developer's contractor about the results and an arrangement of 1 S/A per plot in general plus a linear S/A on the POS behind the kerb to drain the road are what is practicable along the lines of the cyan highlight to the attached.

I have attached a couple of illustrative sheets for 100m² at FOS3 and 1000m² at FOS5 bit based on f(ave)

We would appreciate your thoughts before we prepare a revised strategy. The contractor also has his design engineer stood ready but I have stood then down for the moment whilst we agree a revised strategy with you.

n..b. It is not practicable to drain the house across the road as the utility corridor comes up along the road and communication pipes would clash with the utilities. The site offices and storage yard etc will be on the POS as the site is built out so S/A have been sited to the perimeter of this area and not under the centre to avoid compromising the drainage structure through the construction period.

Kind regards