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Our Ref: TS/BSO/E4462/16603

13th March 2017

Strategic Development
Arun District Council
First Floor
Arun Civic Centre
Maltravers Road
Littlehampton
BN17 5LF

For the attention of Ms Lucy Harding

Dear Lucy

Proposed Development at Land East of Hook Lane, Westergate (AL/107/16/RES)

Further to your email of the 28th February 2017, we have enclosed the updated drainage strategy layout, including supporting hydraulic calculations as well as the SuDS and Drainage Maintenance Report to be implemented on the completed scheme.

The final drainage presented is a result of the consultation carried out with your Drainage Officers as well as the outcomes of an independent peer review undertaken by a firm of Consulting Civil Engineers as nominated by Arun District Council.

For ease of reference, we have provided a list of supporting documents issued to date, as well as a brief summary of the surface and foul water drainage strategies for this development.

- Hook Lane Drainage Strategy & SuDS Statement (RCP, TRS/BSO/E4462/16108)
- Technical Note – Additional Supporting Information (RCP, BSO/E4462/16363)
- Technical Note – Review of additional investigation (RCP, BSO/E4462/16524)
- BSO-E4462-031D – SW Drainage Strategy
- BSO-E4462-032B - Typical SuDS Cross Section
- BSO-E4462-033D – Typical SuDS Construction Details
- RCP Surface Water calculations (dated 12/01/2017)
- SuDS Maintenance Manual – (BSO/E4462/16108)- which contains a full set of calculations

Architectural and Civil Engineering
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Rogers Cory Partnership Limited
The Old School, Old School Road
Hook, Hampshire, RG27 9NJ

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Registered office & business address as above



In summary the surface water drainage strategy for the site includes various Sustainable Drainage Systems which include the following:

- Permeable paving in the car parking bays;
- Attenuation basins;
- An extensive network of roadside swales and ditches;
- Below ground cellular storage tanks

The rainfall run-off from the new roofs and hardstanding areas (which includes the roads) will drain into the new below ground piped network via the roadside swales, permeable paving, gullies and direct piped connections.

The majority of the site's drainage is then conveyed via the below ground piped network to a series of attenuation basins and below ground storage tanks which temporarily hold back and store the water during peak storm events to the greenfield run-off rates (pre-development run-off rates) before being released into the existing drainage ditch which runs along the eastern boundary of the site. Due to the shallow depth of this ditch, a surface water pumping system has been included within the drainage strategy.

The drainage system as well as the pumping station has been designed with large resilience in case of a potential failure of the pumps. Not only will the pumping station be installed with a dual pump arrangement, which allows for a backup pump should one of the pumps fail, but the pumping station will be regularly maintained with minimum of twice yearly visits for inspections. In addition to this, the pumps are installed with a telemetry system which will send a call out to the Maintenance Engineers to attend immediately within the same day in the event of a failure. The onsite drainage system is designed with a considerable amount of storage which will contain any surface water run-off from the site, in the event of a pump failure for up to 24 hours during a peak storm event.

Overall the proposed onsite surface water drainage strategy provides a significant amount of SuDS measures to temporarily store run-off from the site and the calculations provided on drawing BSO-E4462-031D demonstrate that additional volume provided is more than what would be required to meet National Planning Policy.

The north eastern portion of the site, drains to a series of swales and a smaller basin before discharging to the existing ditch north of the site. The run-off from this part of the site is also restricted to the Greenfield run-off rates.

The foul drainage onsite has been design to be adopted by Southern Water and a new foul water pumping station is proposed in the south eastern corner of the site. Consultation with Southern Water has been carried out to determine what off-site works are needed to accommodate the additional foul drainage from this development. Barratt Developments will continue to work closely with Southern Water to implement these measures.

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Should you require any further information or have any queries regarding the above, please do not hesitate to contact us.

Yours sincerely

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Engineering Director

Cc: Aaron Wright – Barratt David Wilson

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