

Our ref: PEF/DP/28725
Your ref: P/117/17/Doc

16 January 2018

BY EMAIL: paul.cann@arun.gov.uk & POST

Mr P Cann
Arun District Council
Arun Civic Centre
Maltravers Road
LITTLEHAMPTON
West Sussex
BN17 5LF

Dear Mr Cann

**Drainage at Seffer Farm, Paghham
Planning Consultation on P/117/17/Doc**

Further to our meeting at site on Friday 12 January 2018, please find enclosed herewith the following design drawings and documents as requested:

- Barfoots Reservoir Level Management Statement dated 12 January 2018.
- Development Proposals and Drainage Strategy Statement from the C.E.P Flood Risk Assessment dated July 2016.
- Fullflow Syphonic Roof Drainage drawing E7096 – TO1 – Rev 1.
- Drawing 28725 – 100. P5 – General Arrangement
- Drawing 28725 – 101. P3 – Drainage G.A
- Drawing 28725 – 102. P3 – Surfacing
- Drawing 28725 – 103. P5 – Sections
- Drawing 28725 – 104. P5 – Sections
- Drawing 28725 – 109. P2 – Storm Drainage to Outfall
- Drawing 28725 – 110. P1 – Process Drainage
- Drawing 28725 – 200. P1 – Existing Surfacing
- Drawing 28725 – 300. P1 – Surface Water Catchments
- Drawing 28725 – 400. P1 – Lagoon and Wetland Locations
- Standard Details
- Drawing 1603 – 017 - 02 – Water Treatment Plant

I respond to the comments made in your email dated 07 November 2017, as follows (using numbers as in your email): -

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Partners: Jon Lord, BEng (Hons)
Gary Vincent, Carpenter, BSc (Hons) Eng MICE, FHEM, MIM, MIO
Ian Sheppard, BEng (Hons) Eng MSc, MICE

Associates: Neil Graham, BEng MSc, MICE
Neil Sturges, BEng (Hons) Eng MSc, MICE

Consultants: Peter Willmott, CEng, FCBT, FHEM
Jonathan Rains, BSc (Eng) MICE
Laurence Jupp, BSc (Hons) Eng MSc, MICE

Archibald Shaw LLP uses the word 'Partner' to refer to a Member of the LLP

Also at Newbury

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Mr P Cann
Arun District Council

**Drainage at Selter Farm, Pagham
Planning Consultation on P/117/17/Doc**

- 1) The drainage strategy for the development is enclosed as an extract from CEP's report. It remains the strategy to discharge loading yard and roof waters to the nearby existing reservoir. The proposed access road will discharge into new local ditches which communicate with local existing ditches.
- 2) Roof water will drain through a syphonic drainage system to the nearby reservoir. See Fullflow drawing E7096 - TO1 - Rev 1. A drawdown facility will be provided to ensure the syphon can be adequately maintained. The loading yard surface water will discharge through a full retention interceptor and packaged pump station to the reservoir. See drawing 109.P2. Process water will be pumped up to the new welland area for treatment.
- 3) Full technical details are given on our site specific drawings and standard details. Note that details for the fork lift wash area are yet to be developed.
- 4) Please see the Barfoots Reservoir Level Management Statement for capacities of the local reservoirs. Using figures given in C.E.P's Flood Risk Assessment which gives a 125mm rise in reservoir/lagoon 1 for an increase of 15,440m² in roof/paved area, we anticipate a level rise of approximately 115mm in lagoon 1 for the 13,960m² roof/paved area now shown on our drawing 300. Note that the new access road now does not discharge into lagoon No. 1.
- 5) The surface water pumping station and connecting drainage which serves the loading yard has been designed to accommodate a 1:100 year + 40% storm event which produces peak flows of 220 litres per second. See drawing 109, P2.
- 6) Drainage details to serve the paved area to the north of the new packhouse are still to be developed. These details will be progressed after full design drawings are received from Fullflow Limited. Pipe clashes with the new syphonic system need to be avoided.
- 7) The new access road drains to new ditches as shown on drawing 300 P1. The new ditch on the east side of the site replaces an existing ditch. This ditch finally discharges into Pagham Rife. The new ditch on the south side of the site also replaces an existing ditch. This ditch also finally discharges into Pagham Rife.
- 8) The new stone dressed car park will act as a permeable pavement in a similar manner to the existing gravel car park. See drawing 103, P5 for construction details.
- 9) No soil infiltration testing has been undertaken at the site. Only the extended car park will act as a permeable pavement. With an anticipated soil infiltration rate in the order of 1×10^{-6} m/s, the 300mm construction new car park should readily drain without flooding. Note that groundwater has been found at the site at a depth of 700mm below ground level.

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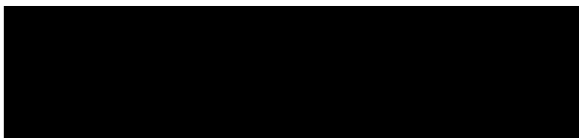
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Arun District Council

**Drainage at Setter Farm, Pagham
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- 10) Land drainage consent is now being dealt with under planning. Full construction details are shown on the site specific drawings and standard details. The perforated pipes within the infilled ditches will provide additional storage and will aid site drainage. The existing 300mm culvert to the south east of the new car park does appear to have a backfall. This may be a surveying anomaly, or may require replacement. Further on site investigation is required.
- 11) The existing pipes/culverts to the south west corner of the site drain across the Barfoots site to discharge into the Pagham Rife.
- 12) Drawing 1603 - 017 - 02 gives preliminary details of the water treatment plant. After installation and testing recycled water from the treatment plant will discharge back to the existing reservoir network.

We hope this information will enable the outstanding planning conditions on surface water drainage matters to be resolved. Should you have further questions we would be pleased to assist.

Yours sincerely



Philip Faulkner EngTech MICE
for ARCHIBALD SHAW

Enc

cc: Vince Carpenter, Archibald Shaw – by email only: vince@archibaldshaw.co.uk
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