

THE CHICHESTER SOCIETY



From the Chairman Richard Childs

Mr Simon Roe
Senior Permitting Officer, Water Quality Team
Permitting and Support Centre
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10 March 2016

Dear Mr Roe

**EA consultation on environmental permit application ref EPR/SB3338AD/A001
Proposed Albion Water Wastewater Treatment Works at Chichester, West Sussex.
West of Chichester (Whitehouse Farm) Housing Development**

The Chichester Society has concerns about this planned wastewater installation by Albion Water for developers Linden Homes and Miller Homes (hereafter Linden-Miller Homes) at Whitehouse Farm, Chichester, West Sussex. This site is also known in the Chichester Local Plan as the West of Chichester Strategic Development Location.

1. Albion Water and Linden-Miller Homes are private businesses and not statutory undertakings. It is in the nature of private businesses that they have ups and downs; some flourish over a long period, some fail, and some do well for a time before circumstances change. This installation is intended to last into the indefinite future, and to prevent major contamination must continue to work at full efficiency throughout.

The Society would like to see some form of bond or insurance entered into by Albion and/or Linden-Miller Homes to provide backup in a worst case scenario; or perhaps a statement by Southern Water that if Albion and/or Linden-Miller Homes were no longer able to operate the proposed wastewater plant for any reason, Southern Water as a statutory authority would be prepared to take over its operation instead.

2. A different form of emergency may arise if the wastewater plant were to be disabled in some way, perhaps by power failure or by contamination ("If it can go wrong, it will go wrong!"). It is suggested in the report that the holding area used for attenuation should be capable of holding 12 hours' worth of treated effluent. The Society thinks that this should be a minimum of 24 hours' worth, to allow time for any contingency plans to be put into operation.

As the Harbour is little more than 1km away, then going by the current rate of flow, any escape of untreated water could reach there in well under an hour. The Society would like to see any contingency plans for dealing with large quantities of untreated or partially treated wastewater to be clearly specified, so that there is no scrambling around to cope at the last moment.

3. From reading the technical summary, it is obvious that the question of nitrogen discharge to Chichester Harbour is of major concern, while levels of phosphate and coliforms are also considered. Shellfish figure largely in the Technical Summary, but the Harbour is also a major recreational area and hence a major contributor to the local economy. The Fishbourne Channel is already at some risk; there have been instances reported where Southern Water, at its Apuldram plant, has been unable to prevent excess nitrogen escaping into the Harbour.

The Society would therefore like to see the most stringent possible levels of nitrogen and other pollutant discharge being specified in any license to operate; methods by which this might be achieved are set out in the Technical Report. Similar considerations apply to bacterial discharges but these should be more easily and routinely catered for by the proposed UV treatment.

It should be made explicit that any breach of pollution limits would result in an appropriate fine being levied.

4. In the application, a set of run-off rates is given in Table 7 together with return periods, apparently based on a study from 1975. We think that these understate the likelihood of high flows in the Chalk Stream.

There is a suspicion that the warming of the climate is producing more extreme rainfall events, and this is borne out by recent experience in this area. The June 2010 rainfall event produced a flow recorded at Fishbourne meadows of 0.47 m³/s (470 l/s) but much of the actual run-off was unable to get through the culvert and flooded parts of the neighbouring Parklands estate.

Working from first principles, the 100mm of rainfall widely reported from this event in a period of about 12 hours applied to the specified catchment of 98.6Ha translates to a run-off of 2.3 m³/s (2300 l/s). A proportion would have been absorbed, and will continue to be so with the proposed sustainable drainage systems, but it is a characteristic of high-intensity rainfall events that only the initial part of the downpour is absorbed; after the first 20mm or so of rain, there is 100% run-off! So it is reasonable to assume that this storm produced a run-off comparable with, but probably in excess of the 1 in 100 year discharge quoted of 1153 l/s.

There was another intense rainfall event in December 2013. The rainfall totals were lower – 60-75mm were reported in this area – but this being a winter event when the ground was already saturated, the discharge was again probably comparable to the 1 in 100 year figure.

It is of course possible to have two '1 in 100 year events' back to back, but current extreme rainfall events, based on experience and predictions of climate change, do appear to have a return period closer to 5 or 10 years, rather than 100 years. We think that Albion Water ought to plan for more frequent high rainfall totals than are suggested in the application and state how they propose to cope with them. Should there be a condition imposed on Linden-Miller

Homes as developers to provide particularly high-specification sustainable drainage as a mitigating measure?

To conclude: the Chichester Society believes the present design proposal for an on-site wastewater works at the Whitehouse Farm (West of Chichester) housing development is inherently vulnerable to extreme-weather events. These are no longer rare once-in-a-century occurrences but increasingly common in the UK, and worldwide. Repercussions for Chichester Harbour and its wildlife would be disastrous.

The Chichester Society asks the Environment Agency to insist that designs for this wastewater plant are substantially enhanced as a condition of granting a permit to Albion Water. We also ask the Environment Agency to require an 'exit strategy' be legally agreed and confirmed between all parties: should Albion Water and/or its successors cease trading, operation of the wastewater plant at Whitehouse Farm must be transferred to a substantial utility organisation such as Southern Water and/or its successors. This condition is an essential assurance for the well-being of future generations in this part of Chichester.

Yours sincerely

RJ Childs
Chairman
Chichester Society