



*The Cam Valley Forum is an unincorporated association, registered with HMRC as a charity.*  
[info@camvalleyforum.uk](mailto:info@camvalleyforum.uk)  
<https://camvalleyforum.uk>

Dr Alan Woods (Hon Secretary)  
[aw@awassocs.co.uk](mailto:aw@awassocs.co.uk)

### **Cam Valley Forum response to proposal to relocate Cambridge Waste Water Treatment Plant**

#### **How would you describe your interest in the proposed CWWTP Relocation project?**

**Response:** Local Interest Group

#### **Which site area or areas are you commenting on?**

**Response:** Our comments relate to all three sites.

#### **4) What things relating to this site or sites are most important to you?**

**Response:** Water quality is our principal concern but the other areas all need due consideration.

#### **Which site area do you think is the most suitable for the relocation project?**

**Response:** None of these. The existing treatment works at Milton is effective and has spare capacity, has recently been upgraded, and is being vacated only to enable redevelopment. Many of our members question the wisdom of moving the works given the impact on the Green Belt, on farmland, and on local communities, all of which are united in their opposition. If the move cannot be avoided, opportunities must be seized to improve water quality, create new habitats and support net zero carbon aims.

#### **What is your opinion of our proposal to relocate and build a new modern, carbon-efficient waste water treatment plant, to enable the regeneration of NE Cambridge?**

**Response:** Very negative.

#### **Are there any other factors that you think we should have considered in the site selection process or that should be considered in making our final site selection?**

**Response:** The River Cam was the major sewer for the whole of Cambridge town prior to the nineteenth century. Centuries of anthropogenic eutrophication have caused great losses from our river's natural flora and fauna. There have been stepwise improvements in river water quality (particularly since the EU Water Framework Directive was initiated 20 years ago), but nutrients and other pollutants from WWTPs remain a concern alongside diffuse pollution from agriculture and built-up areas. Treated effluent provides all, or nearly all, the summer flows in many streams. Untreated effluent from combined sewer overflows is also a major concern. Anglian Water has been reluctant to accept responsibility for some pollution incidents (e.g. admitting culpability for a fish kill incident in 2013 only after the Cambridge Fish Preservation and Angling Society took the company to Court).

The current proposals appear to ignore any opportunity to improve further the quality of the treated effluent discharged to the River Cam. We have heard suggestions that, by discharging into the same body of water, Anglian Water is seeking to avoid any requirement for a more demanding discharge consent. This would be completely unacceptable. The latest Water Framework Directive assessment rated this water body as of 'Moderate' quality only, and 'Poor' for phosphate derived from wastewater treatment, even though phosphate is stripped from effluent at Milton as it serves more than 10,000 people (see <https://environment.data.gov.uk/catchment-planning/WaterBody/GB105033042750>). If action to further reduce phosphate levels in the treated effluent is feasible, this should be reflected in a revised discharge consent and in the design of the new plant.

The Cam Valley Forum is working with Water Resources East to find solutions to the problem of low flows in Chalk streams caused by groundwater abstraction from the Chalk aquifer. One option would be for the water suppliers to relocate their abstraction points from their current boreholes to surface water abstraction points lower down the catchment. Reducing borehole abstraction would enable the Chalk streams to flow naturally, throughout the year, every year, whatever the weather.

Possible surface water abstraction points have yet to be identified. Ideally they should be upstream of the discharge points for all WWTPs in the catchment but this may not be possible, as one or more storage reservoirs are likely to be required together with treatment works. The best option may well be to abstract water downstream of Cambridge and to store and treat it there. Hence it will be important to improve the quality of the effluent from Cambridge WWTP to minimise the need for subsequent purification when the water is abstracted for drinking water supplies.

The new WWTP should accordingly treat effluent to drinking water standards, as done at the Langford Recycling Scheme operated by Essex & Suffolk Water since 2003. This site purifies up to 40 megalitres per day of treated sewage effluent that would otherwise be discharged to the sea. The water is then released into the River Chelmer and abstracted, stored and treated downstream to feed public supplies. The new Cambridge WWTP should similarly remove heavy metals, pesticides and endocrine disruptors from the effluent and disinfect it using ultra-violet irradiation. Microplastics should also be removed. The discharge consent for the WWTP should be amended to reflect these higher standards.

The requirement to install extra treatment facilities to achieve this objective should be a key consideration in selecting the preferred site. We are concerned that Anglian Water is seeking to reduce substantially the area of land required for the WWTP. The chosen site should be large enough to meet all current and future needs, including those required to apply advanced treatment technologies to much larger future volumes of wastewater as the local population grows.

It also follows that there should be no future provision for a Combined Sewer Overflow at this treatment works. There should never be any occasion when the treatment works is overwhelmed by the volume of wastewater entering it during times of heavy and/or prolonged rain, so that untreated wastewater is discharged to the river. This should also be reflected in the future discharge consent.

In addition to the use of technological treatment processes, Anglian Water should also consider further improving the quality of the effluent through the use of reed beds for natural remediation. The proposed sites are likely to be too small to include reedbeds so they should instead be created off-site; the treated effluent should be piped to them and pass through them before it is discharged to the river. Cambridge WWTP currently treats 1,300 litres of effluent per second, or 112 megalitres per day. If 1 hectare of reedbed is needed to treat 1 megalitre of effluent, at least 112 hectares of new reedbed would be needed. Larger areas to be used for potential reedbeds should be identified to meet future needs as the local population grows.

Extensive new reedbeds in the river corridor would make an important contribution to the National Trust's [Wicken Fen Vision](#) to create a diverse landscape between Cambridge and Wicken over some 53,000 hectares by 2099. As well as helping to improve water quality, such reedbeds would bring immense amenity, conservation and recreational benefits to the lower Cam Valley.

New reedbeds could also provide significant carbon benefits, in particular by offsetting local losses of carbon from peat soils used for intensive agriculture. A 2017 [report](#) for DEFRA stated that '*Conservation managed lowland fens appear to be among the most effective carbon sinks per unit area in England and Wales, whereas lowland peats under intensive arable agriculture in England are probably the UK's largest land-use derived source of carbon dioxide emissions*' (see Evans et al (2017) *Final report on project SP1210: Lowland peatland systems in England and Wales – evaluating greenhouse gas fluxes and carbon balances*). Work on capturing carbon at the [Great Fen project](#) is also relevant. Such investments could help Anglian Water secure its 2016 target to become carbon neutral by 2050 and its 2019 commitment, with other water companies in England, to achieve net zero carbon emissions for the sector by 2030.

Anglian Water should also seek all opportunities to improve biodiversity on the selected site. Any existing habitats of high quality should be safeguarded, including any colonies of plant species that are locally rare. Alan Leslie's *Flora of Cambridgeshire* (2019) provides many examples of relevant species.

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