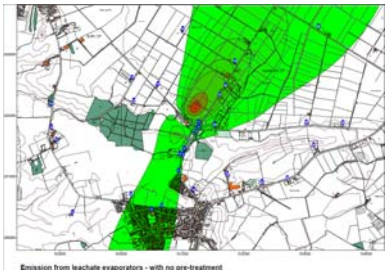
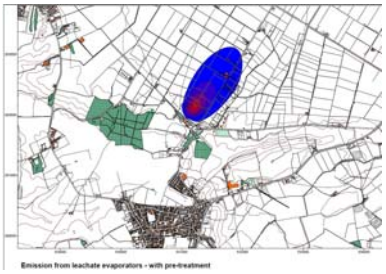
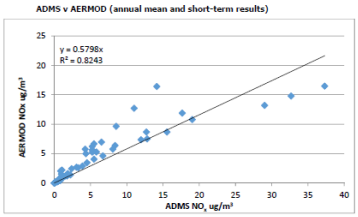
Biomass & Evaporation Plant

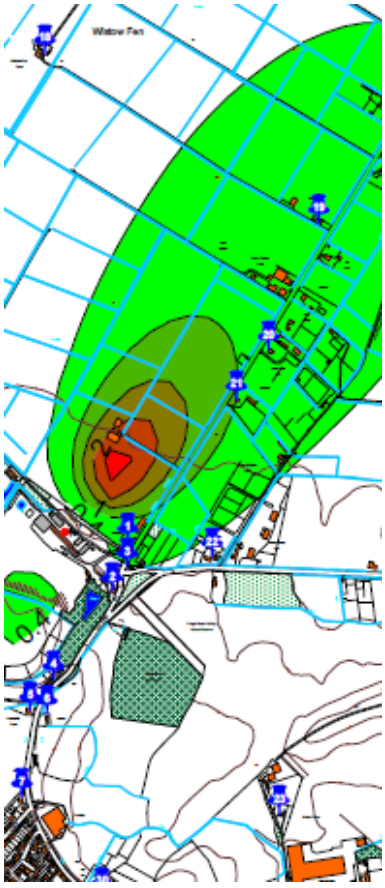




Sycamore Planning sought planning permission for a waste wood fuelled combined heat and power (CHP) plant and wastewater treatment plant (WwTP) in Warboys, Huntingdon. The WwTP was designed to evaporate non-hazardous landfill and compost leachates. The initial design proposed that the release from the evaporators would be discharged from six separate stacks each at a height of 12m above local ground level. Airshed advised that the design should be amended so that all emissions would be released from a single 17m high stack. Caulmert, Environmental Consultants, appointed The Airshed to conduct an air quality impact assessment (AQIA) to advise on the significance of the atmospheric emissions from the proposed installation. The nearest human receptors were ~225m from the process, where environmental impacts were of minor adverse significance. The assessment found that the impacts from ammonia released from the evaporation process could significantly affect the nearest designated ecological site, at Warboys and Wistow Woods, a SSSI approximately 500m to the west of the proposed release.



The airborne concentrations and deposition of pollutants were predicted using ADMS 5.2, and five years of hourly sequential meteorological data. The assessment considered the effects of these emissions on sensitive receptors in terms of Environmental Assessment Levels (EALs) for assessing human exposure, and Critical Levels and Critical Loads for assessing ecological impacts. Two Scenarios were assessed:



Scenario 1 – considered emissions from the evaporators, based on pessimistic assumptions about wastewater composition and where the releases from the evaporators were combined into a single stack; and

Scenario 2 - as Scenario 1 but where the levels of sulphides, ammonia and odorous compounds were controlled by pre-treating the wastewater and where the releases from the evaporators were combined into a single stack.

The predicted impacts from the evaporators and the biomass plant were unlikely to have significant adverse impacts on human health, even without mitigation. Odour impacts from the evaporation process were predicted to be negligible, subject to the satisfactory implementation of the proposed wastewater pre-treatment process. Combining the emissions into a single stack and increasing the stack height to 17m was predicted to reduce the worst case predicted ground level concentration at the SSSI by >60%.

The predicted process contribution of ammonia and acid gases from the proposed installation (CHP and WwTP combined) was insignificant at the SSSI, being less than 1% of the Critical Level/Load, so that no further assessment was required for either of these impacts. Natural England advised that an *in-combination assessment* of Nitrogen deposition was required. This considered other potential sources within 10 km of the proposed installation, including ammonia emissions from two poultry farms. The predicted in-combination impacts of Nitrogen deposition (from the agricultural sources in the study area along with the CHP and WwTP) was <5%, which Natural England considered to be insignificant.

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