Section I Existing Environment & Impact of the Activity Attachments

Attachment I.1.Assessment of atmospheric emissions

Not applicable. Site is closed.

No emissions to atmosphere are predicted during the End use, Maintenance and Aftercare phase.

Attachment I.2. Assessment of surface water discharges on Receiving Surface Water

The existing landfill was capped with a permanent low permeability clay liner in conjunction with a willow and reed plantation and constructed wetland installed in 2014-2015.

The primary treatment option for the extracted leachate is to the willow plantation. Leachate is pumped to the willow plantation before discharged to surface water. If treated leachate levels are unacceptably elevated, the leachate is treated further by circulating via the willow plantation and /or constructed wetlands before discharging to surface water.

The two discharge outlets from the Willow plantation (SW8 and SW10) are being monitored by ammonia analysers and flowmeters and recorded on the SCADA system. When any sample reaches set limit (3 mg/l ammonia), a motorised valve will shut and divert flow via gravity into the nearest pumping station chamber (No1 or 2) for recirculation. This scenario continue until sample has reached acceptable limits. All values are recorded, alarmed and trended on the SCADA system.

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SW9 and SW11 are the two discharge outlets from the ICW. The proposed emission limit values (ELVs) are provided in Table I below.

Table I Proposed Emission Limit Values

Parameter	Limit
pH	6-9
BOD	20 mg/l
Suspended Solids	30 mg/l
Orthophosphate	2 mg/l
Total Ammonia (as N)	3 mg/l

An assimilative capacity has been completed and is provided in Appendix B3. Assimilative capacity was calculated to measure the receiving water body's ability to assimilate the Pollutants based on the proposed emission limit values. The assessment when taking the Q95 low flow statistics into consideration is conservative in nature given that during low flow conditions it is unlikely that there will be a discharge from the leachate management system. Therefore an estimated maximum discharge flow of 136m3/sec has been calculated (using the rainfall and evapotranspiration data available for Malin Head and has been assessed using the Q30 mean flows in the Finn as a more appropriate flow statistic. When this flow is considered the mass balance assessment indicates that there would be an imperceptible increase in concentrations that would not be detectable, i.e. less than the limit of detection for many laboratories.

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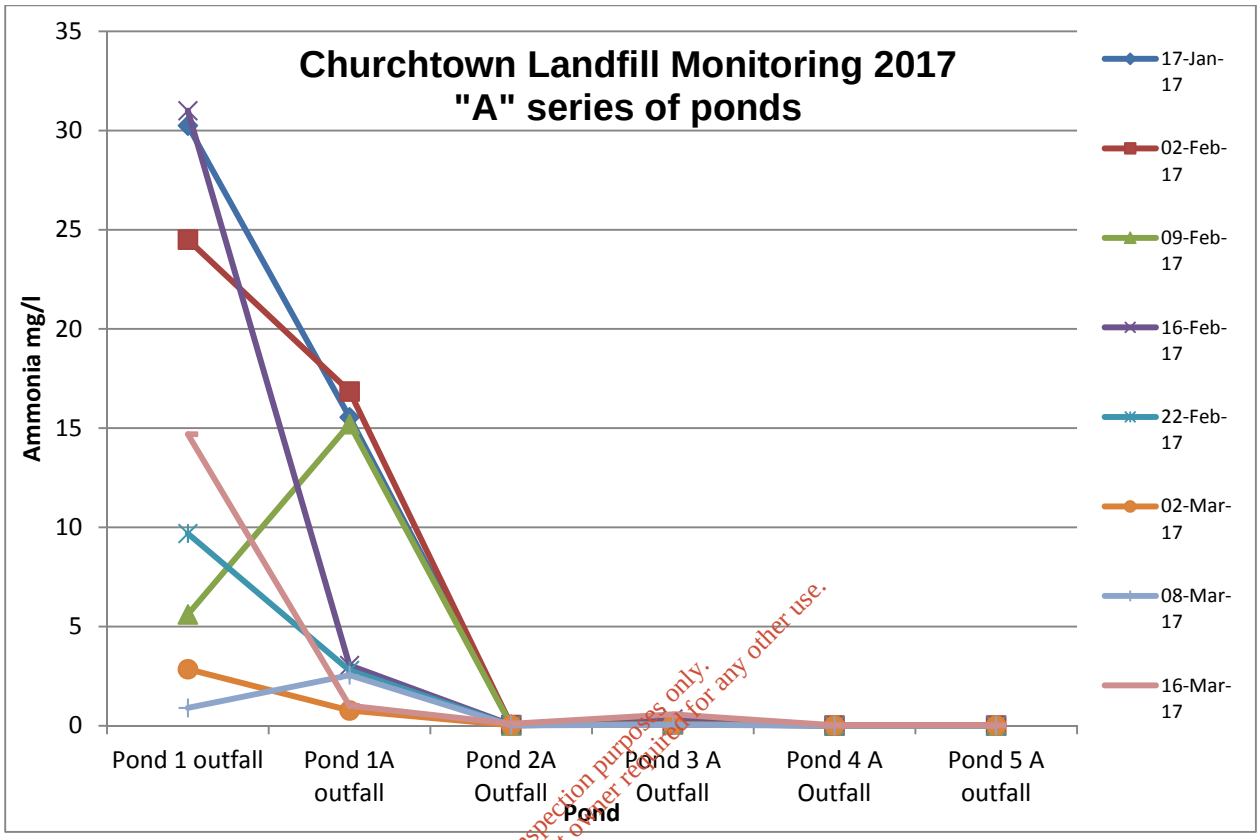
Existing monitoring of SW9 and SW11 (the two discharge outlets from the ICW) for ammonia for 2017 are shown in Graphs I1 and I2 below. Ammonia concentrations are below the proposed ELV in Pond 5A and 5B.



Graphs I1 A series ponds

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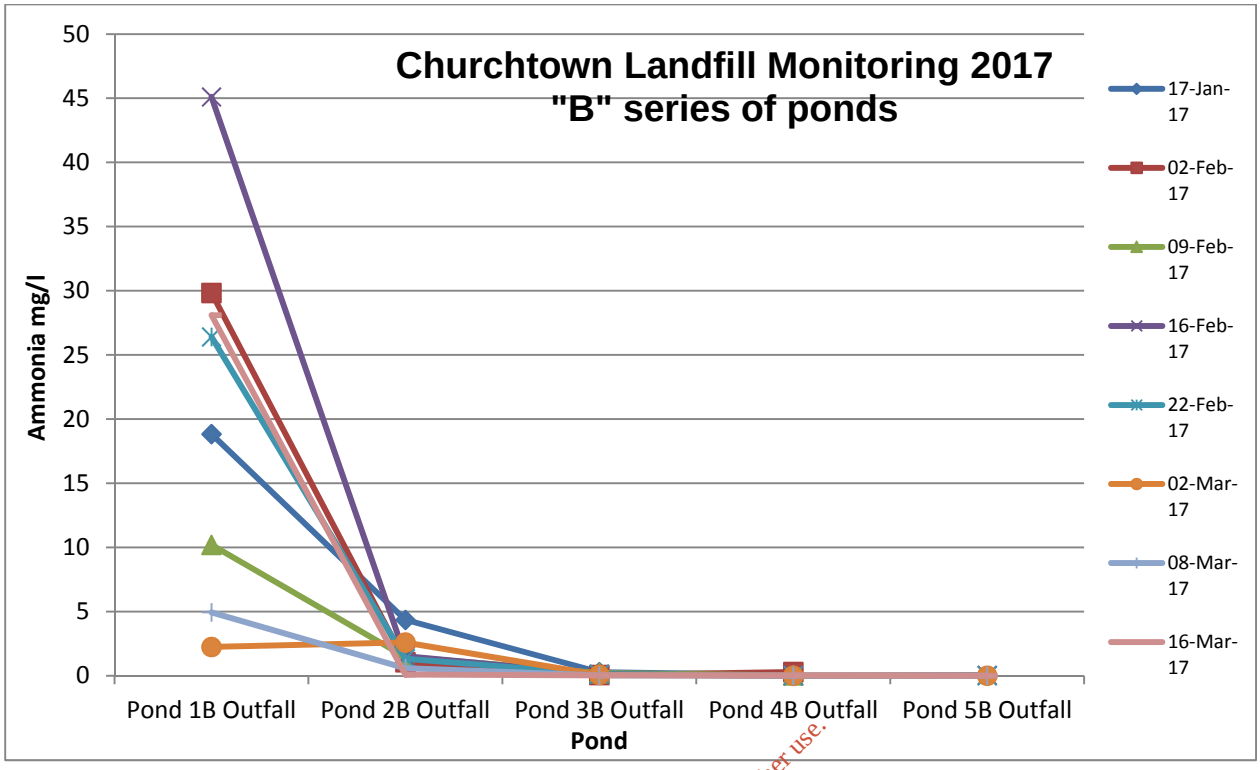

Graphs I2 B series ponds

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Attachment I.3. Assessment of Impact on receiving sewer

Not Applicable

Attachment I.4 Assessment of Impact of Groundwater and on soils

Not applicable. Site is closed.

Attachment I.5 Ground and/or Groundwater Contamination

Not applicable. Site is closed.

Attachment I.6 Noise Impact

Not applicable. Site is closed.

Attachment I.7 Assessment of Ecological Impacts & Mitigation Measures

Not applicable. Site is closed.

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