



*'In order to minimise contamination risk of process or surface water, all liquid chemicals stored on-site for the Installation will be kept inside bunded areas with whichever is the greater of 110% of stored capacity or 25% of the total capacity of the storage containers. Spillage and leakage will be contained in chemical unloading and storage areas.'*

Furthermore, with regard to the AD tanks we can confirm that all of the AD process tanks will be located within a bund which has capacity for whichever is the greater of 110% of stored capacity or 25% of the total capacity of the AD process tanks. In addition, it should be noted that if there was a failure of the AD bund:

- any leaks from the bund would be contained by the concrete hardstanding for the site and all liquids would be collected in the site drainage systems;
- the site drainage systems can be isolated to prevent any uncontrolled release into the Upper Lagoon; and
- the Upper Lagoon is lined with low permeability in-situ London Clay. Therefore, even if an uncontrolled release was to enter the Upper Lagoon, this would be contained within the Lagoon and would not contaminate the local ground/groundwater.

Any uncontrolled release of potentially polluting materials will be managed in accordance with the installation's emergency spill response procedures.

**(4) Please explain where polluted runoff leaving the site would enter. Will polluted runoff be discharged into the adjacent Upper Lagoon?**

As explained above, all surface water run-off from the site will be discharged to the Upper Lagoon.

As explained in the Environmental Risk Assessment submitted with the EP application (Annex 4), the following controls are in place:

Containment of chemicals during unloading activities (tanker):

*'Deliveries will be from road vehicles and off-loaded via mobile plant. Potential leaks/spills will be prevented by experienced mobile equipment operators undertaking unloading activities. Unloading activities will only be undertaken in areas of hard standing with contained drainage. Chemical containers will be stored within suitably designed secondary containment.'*

Containment of chemicals unloading from delivery vehicles (IBC's, FIBC's, drums)

*'Deliveries will be from road vehicles and off-loaded via mobile plant. Potential leaks/spills will be prevented by experienced mobile equipment operators undertaking unloading activities. Unloading activities will only be undertaken in areas of hard standing with contained drainage. Chemical containers will be stored within suitably designed secondary containment.'*

In addition, whilst this was not considered in the Environmental Risk Assessment, if there was a complete failure of the delivery tanker whilst travelling through the site, the drainage system could be isolated to prevent the chemicals being released into the Upper Lagoon and contain the spill in the site drainage system. The chemicals spill would then be managed in accordance with the installation's emergency spill response procedures.

**(5) Please confirm whether or not the Upper Lagoon is lined with low permeability in-situ London Clay.**

As stated in section 1.3.7.3 of the Supporting Information:

*'In accordance with the site planning permission Upper Lagoon will be constructed below surrounding ground levels and within areas of previous quarry working. The side slopes of Upper Lagoon will be constructed largely within in-situ London Clay (Permeability <10-10 m/s) and backfilled Boulder Clay. The slopes will be shaped to a maximum gradient of 1V:3H. Upper Lagoon will be constructed wholly within in-situ London Clay, constructed at a gradient of 1V:3H.'*

*Prior to filling the Upper Lagoon the side slopes will be proof rolled to seal the clay subgrade.'*

**(6) Please confirm whether or not the Upper Lagoon is entirely within the London Clay, and not the surrounding sand and gravel.**

The Upper Lagoon will be located within the London Clay. All sand and gravel in and around the Upper Lagoon has been excavated and removed by the former quarrying operations. Boulder Clay has been used to backfill the former quarry workings.

We trust that the information contained in this memo is acceptable for the Groundwater & Contaminated Land Team. If they require any additional information please advise.

Yours sincerely  
FICHTNER Consulting Engineers Limited



**James Sturman**  
Head of Environment



**Stephen Othen**  
Technical Director

Appendix A - Secondary Containment Areas