2. Non-Technical Summary

This application is for varying the current Environmental Permit to add thickening and anaerobic digestion (AD) of mixed indigenous sludge from the site and imported sewage sludges, followed by dewatering and cake storage at the Southport Wastewater Treatment Works (WwTW). The works are operated by United Utilities Water Limited (UUW).

Southport WwTWs permit EPR/XP3337QR currently permits the operation of the Combined Heat and Power (CHP) plant as a Schedule 25B specified generator, as per Table S1.1 of the permit.

This variation is for re-designation of the facility to an installation undertaking treatment of sewage sludge for recovery, including anaerobic digestion of sewage sludge, under Section 5.4 A(1)(b)(i). The waste treated consists of sludges imported from other WwTWs and indigenous sludges produced from Southport WwTW (on-site) from treatment of the urban wastewater flow.

Additional associated activities include:

- Sludge screening;
- Macerators (x 2);
- Sludge dewatering/thickening by both GBTs (x 3) and centrifuge (x 1);
- Storage and combustion of biogas in CHP and dual fuel boiler;
- Flaring of excess biogas;
- Siloxane removal from the biogas;
- Raw material storage;
- Disposal of process liquors;
- Storage of digestate cake; and
- Odour abatement.

The additional permitted activities require a change to the current permit boundary and a new layout and emissions point plan for the site. The activities already authorised under the permit remain operational.

There are no emissions to land or water. Point source emissions to air are from the installation's two odour control units (from the import break tank and the mixing and balancing tank (MBT)), the CHP engine (existing emission point at SD36899 20620 referred to in the current permit), the flare stack, the boiler stack, anaerobic digestion tanks pressure vacuum relief valves (PVRV) and the gas storage bag PVRV. Point source emissions to sewer are filtrate from the GBTs, centrate from the centrifuges, biogas condensate and surface water drainage, which are all discharged into the WwTW flow to full biological treatment.