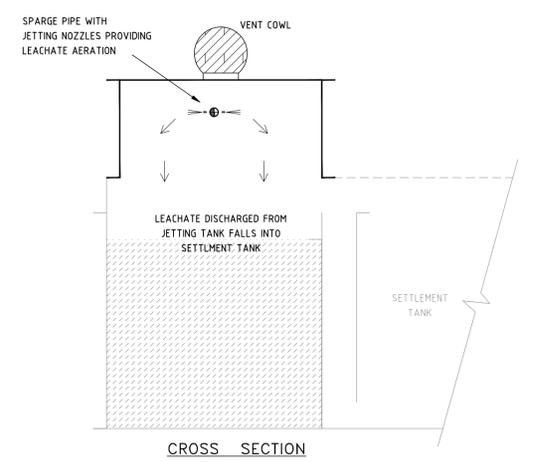
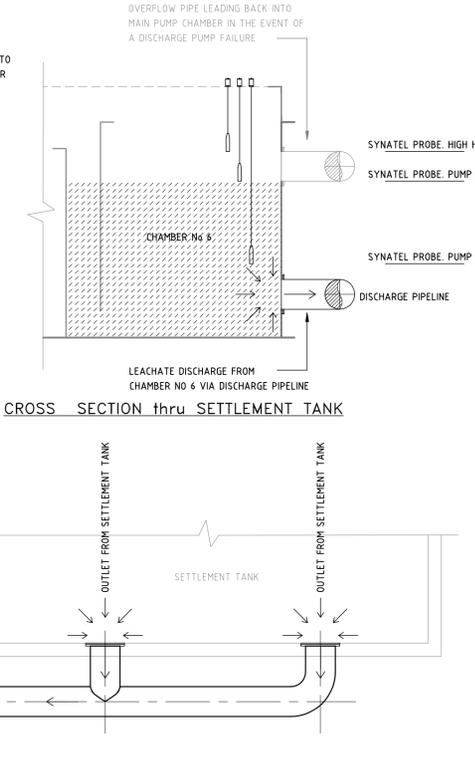
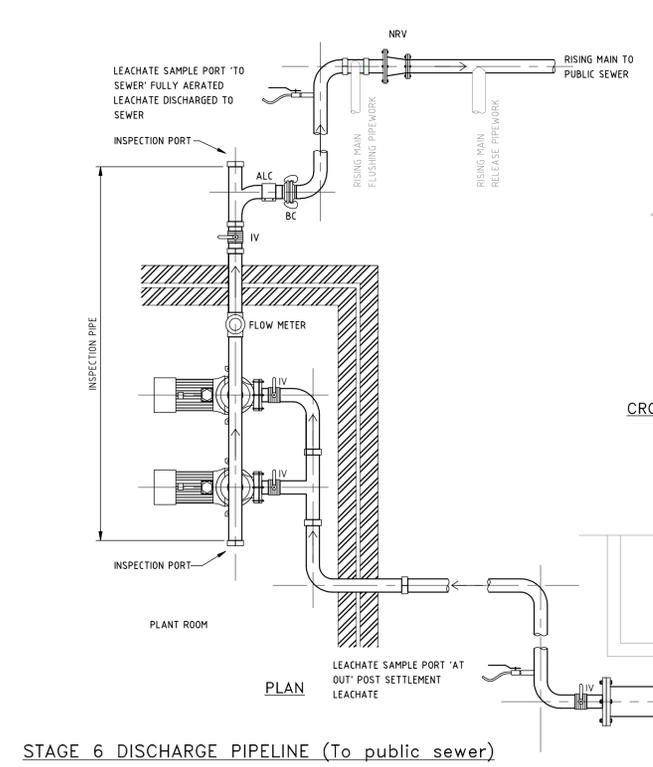


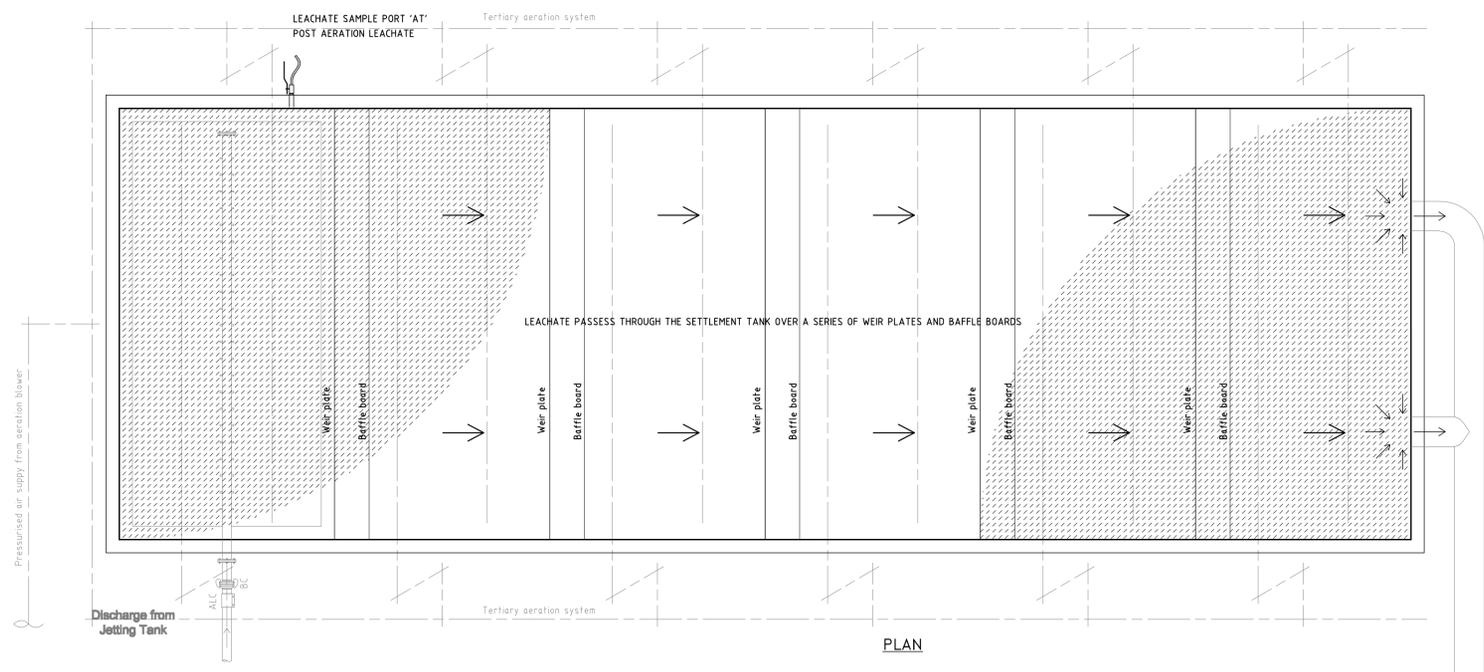
- STAGE 4 JETTING TANK**
- DISCHARGE FROM SPARGE TANK INTO JETTING TANK VIA SPARGE PIPE AND 100 NOZZLES (THIS PROVIDES SECONDARY LEACHATE AERATION)
  - THE JETTING TANK IS OPEN AT THE BOTTOM AND MOUNTED DIRECTLY ABOVE THE SETTLEMENT TANK, ALLOWING LEACHATE TO CASCADE DIRECTLY INTO THE SETTLEMENT TANK BELOW



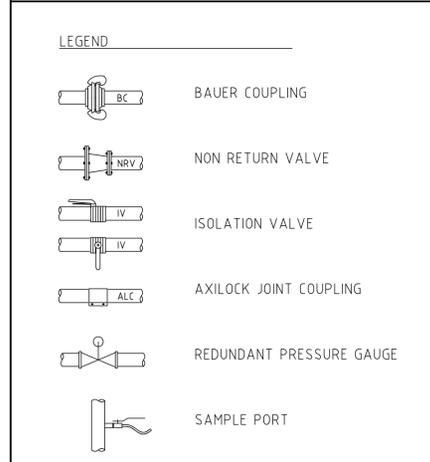
STAGE 4 JETTING TANK SECTION



- SYNATEL PROBES CONTROL THE OPERATION OF THE DISCHARGE PUMPS.
- CENTRIFUGAL PUMPS ALTERNATE AS DUTY AND STANDBY, CONTROLLED BY THE ON, AND OFF PROBES.
- THE HIGH HIGH PROBE SERVES TO PROTECT THE ENTIRE AERATION SYSTEM FROM OVERFLOWING THROUGH A DUAL FUNCTION:
- TO ENGAGE BOTH CENTRIFUGAL PUMPS SIMULTANEOUSLY IN THE EVENT OF A BUILD UP OF LEACHATE IN THE SETTLEMENT TANK
  - ISOLATE THE MAIN SUBMERSIBLE PUMP IN THE PUMP CHAMBER, THEREBY STOPPING ALL FLOW THROUGH THE ENTIRE AERATION SYSTEM.
- STAGE 6 DISCHARGE TO SEWER**
- DISCHARGE FROM THE SETTLEMENT TANK VIA 2 NO CENTRIFUGAL PUMPS INTO THE PUBLIC SEWER.
  - DISCHARGE PUMPS CONTROLLED BY SYNATEL PROBES LOATED IN CHAMBER 6 OF THE SETTLEMENT TANK
  - FLOW METER LOCATED IN PIPELINE TO MONITOR AND RECORD THE VOLUME AND RATE OF DISCHARGE TO PUBLIC SEWER (TO COMPLY WITH THE TRADE EFFLUENT DISCHARGE CONSENT).
  - PIPELINE INCLUDES INSPECTION PORTS AND A LENGTH OF PIPE TO ENABLE A VISUAL INSPECTION OF THE PIPE INTERIOR. (ANY BUILD UP A SILT COULD IMPACT UPON THE EFFECTIVENESS OF THE FLOW METER). THE INSPECTION PORTS PROVIDE ACCESS TO THE PIPELENGTH FOR CLEANING.
  - THE DISCHARGE PIPELINE CONSISTS OF A RISING MAIN TO THE SITE BOUNDARY AND A GRAVITY DRAIN LEADING ACROSS ADJACENT LAND AND INTO THE PUBLIC SEWER LOCATED IN DOWNHAM WALK, APPROX. 1 MILE AWAY.



- STAGE 5 SETTLEMENT TANK**
- DISCHARGE FROM THE JETTING TANK FALLS INTO CHAMBER NO 1 OF THE SETTLEMENT TANK.
  - LEACHATE IS DISPLACED FROM CHAMBER NO 1 INTO SUCCESSIVE CHAMBERS WITH EACH CYCLE OF LEACHATE DISCHARGED VIA THE JETTING TANK.
  - THE SETTLEMENT TANK IS DIVIDED INTO 6 COMPARTMENTS, EACH WITH A WEIR PLATE AND BAFFLED BOARD TO PREVENT THE FLOW OF LEACHATE SHORT CUTTING ACROSS THE TANK.
  - THE SETTLEMENT TANK ALLOWS SEDIMENT TO SETTLE OUT OF THE LEACHATE.
  - THE CHAMBER NO 6 IS FITTED WITH AN OVERFLOW PIPE FEEDING DIRECTLY BACK INTO THE MAIN PUMP CHAMBER, AND A DISCHARGE PIPELINE.
  - DISCHARGE FROM CHAMBER NO 6 IS CONTROLLED BY 3 NO SYNTEL PROBES.
  - EACH CHAMBER ALSO CONTAINS A SERIES OF AERATION DOMES PROVIDING TERTIARY AERATION WHEN CALLED UPON.



Rev.	Amendment	Date
Site BILLINGE FORMER LANDFILL SITE		
Title AERATION PROCESS STAGES: 4. JETTING TANK 5. SETTLEMENT TANK 6. DISCHARGE TO SEWER		
<p>Merseyside Waste Disposal Authority 7th Floor No 1 Mann Island Liverpool L3 1PB</p>		
A1	Drg. No. MWDA.510-350-009	Rev.
Drawn ASB	Scale N.T.S	Date MARCH 2019

