

TEMPORARY SEWAGE PUMP-OUT INSTALLATIONS

INSTRUCTIONS FOR USE OF DEEMED TO COMPLY DRAWINGS FOR TEMPORARY PUMP-OUT (TPO) INSTALLATIONS :

- 1) THE DRAWINGS MUST BE READ IN CONJUNCTION WITH THE 'INTERIM OPERATING PLAN - GUIDELINES FOR TEMPORARY PUMP OUT SYSTEMS'
- 2) TEMPORARY SEWAGE PUMP OUT INSTALLATIONS ARE INTENDED FOR SHORT TERM USE ONLY WITH A MAXIMUM SERVICE LIFE OF 5 YEARS.
- 3) THE DESIGN IS BASED ON USE OF MODULAR PRECAST CONCRETE COMPONENTS ALLOWING ASSEMBLY TO SUIT A VARIETY OF APPLICATIONS. THE DRAWINGS PROVIDE DEEMED TO COMPLY (DTC) SOLUTIONS FOR VARIOUS COMPONENTS OF TPO INSTALLATIONS INCLUDING STORAGE TANKS, VENTILATION, PIPEWORK, SITE FACILITIES AND POWER, CONTROL AND TELEMETRY.

SUPPLIERS OF PRECAST COMPONENTS ARE ENCOURAGED TO SUBMIT DETAILS OF THEIR PRODUCT FOR ASSESSMENT AND LISTING IN THE DRAWINGS.
- 4) TEMPORARY SEWAGE PUMP OUTS MAY CONSIST OF SINGLE OR MULTIPLE TANK INSTALLATIONS, UP TO A MAXIMUM OF 3. THE TEMPORARY PUMP OUT INSTALLATION MUST SERVE RESIDENTIAL CATCHMENTS ONLY, UP TO A MAXIMUM OF 600 EP.
- 5) THE DRAWINGS ALONE DO NOT CONSTITUTE A COMPLETE DESIGN PACKAGE. THE SCOPE OF DTC DRAWINGS DOES NOT INCLUDE OTHER COMPONENTS INCLUDING, BUT NOT LIMITED TO EARTHWORKS, ACCESS, SECURITY, DRAINAGE, BUILDINGS.
- 6) THE USER IS REQUIRED TO SUPPLEMENT THE DTC DRAWINGS WITH A SITE SPECIFIC DESIGN CONSISTING OF:

i) SITE LAYOUT PLAN AND CROSS SECTIONS FULLY DESCRIBING THE LOCATION, LEVEL AND RELATIONSHIP BETWEEN EACH OF THE VARIOUS COMPONENTS

ii) INTERIM OPERATING PLAN

iii) SITE SPECIFIC SAFETY IN DESIGN ASSESSMENT

iv) SITE SPECIFIC RISK ASSESSMENT. THIS DESIGN IS ONLY SUITABLE FOR LOW RISK TPO INSTALLATIONS

v) ADDITIONAL DETAILS AS NECESSARY TO ENSURE THE DESIGN IS FIT FOR PURPOSE

USE OF STANDARD DESIGN COMPONENTS MAY INTRODUCE UNINTENDED SAFETY RISKS FOR THEIR APPLICATION. THE USER MUST ADDRESS SAFETY RISKS THROUGH A SITE SPECIFIC ASSESSMENT.
- 7) DRGS DTC/6314 AND DTC/6315 ARE PROVIDED AS GENERIC LAYOUTS TO GUIDE SITE SPECIFIC APPLICATION. THEY ARE NOT FOR CONSTRUCTION AND MUST NOT BE REFERRED TO ON THE SITE SPECIFIC DRAWINGS.
- 8) COMPONENTS NOMINATED IN THE SITE SPECIFIC DESIGN MUST BE BASED ON CONSIDERATION OF LIMITATIONS NOMINATED IN THE DTC DRAWINGS AND THE FOLLOWING INFORMATION:

i) INVERT LEVEL OF SEWERS ENTERING THE FIRST STORAGE TANK

ii) EXISTING AND PROPOSED GROUND LEVELS AND SURFACE PROFILE AT THE TPO SITE

iii) OVERFLOW LEVEL

iv) GEOTECHNICAL INFORMATION TO THE FOUNDATION DEPTH OF EACH STRUCTURE
- 9) EARTHWORKS MUST BE PROVIDED TO RAISE THE FINISHED SURFACE LEVEL TO SUIT STRUCTURE HEIGHTS AND PROVIDE A 1000 mm WIDE LEVEL WORKING AREA AROUND EACH STRUCTURE. DETAILS OF EARTHWORKS MUST BE SPECIFIED BY THE USER IN THE SITE SPECIFIC DESIGN.
- 10) ARRANGEMENT OF STORAGE TANKS

i) THE GENERAL ARRANGEMENT OF STORAGE TANKS IS SHOWN ON DTC/6316 AND MUST COMPRISE A MINIMUM OF:

- ROOF SLAB

- TOP SHAFT RING

- BASE SHAFT RING

- BASE SLAB

ii) PRECAST SHAFT RINGS ARE AVAILABLE IN NOMINAL INTERNAL DIAMETERS OF 2.4, 3.0 AND 3.6m, AND HAVE A SET HEIGHT OF 1.8m. THIS MAY RESULT IN THE ACTUAL DEPTH OF THE STORAGE TANKS BEING GREATER THAN THE MINIMUM DEPTH REQUIRED.

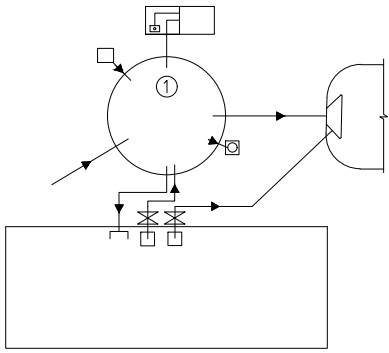
iii) AN INTERMEDIATE 1.8m HIGH SHAFT RING MUST BE PROVIDED BETWEEN THE BASE AND TOP SHAFT RINGS WHERE REQUIRED TO PROVIDE INCREASED STORAGE VOLUME. THE MAXIMUM NUMBER OF PRECAST SHAFT RINGS FOR EACH STORAGE TANK MUST BE 3.

- 11) PRECAST SHAFT RINGS PENETRATIONS

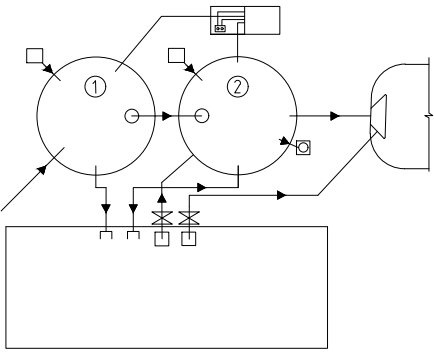
i) PENETRATIONS OF PRECAST SHAFT RINGS FOR PIPE CONNECTIONS MUST BE CORED ON SITE. DIMENSIONS AND TREATMENT OF CORED PENETRATIONS ARE SPECIFIED ON DTC/6312. LOCATIONS OF ALL PENETRATIONS MUST BE SPECIFIED BY THE USER, SUBJECT TO LIMITATIONS SHOWN ON DTC/6316, DTC/6317 AND DTC/6318.
- 12) FLOTATION OF STRUCTURES BELOW GROUND

i) THE STORAGE TANKS HAVE BEEN DESIGNED TO RESIST BUOYANCY FORCES DUE TO EXTERNAL GROUNDWATER, BY ENGAGING THE SURROUNDING SOIL THROUGH THE OVERSIZED BASE SLAB (FOR STRUCTURES IN 'OTHER THAN ROCK' STRATA). THE DESIGN BUOYANCY FORCE IS BASED ON THE GROUNDWATER LEVEL LOCATED AT FSL.

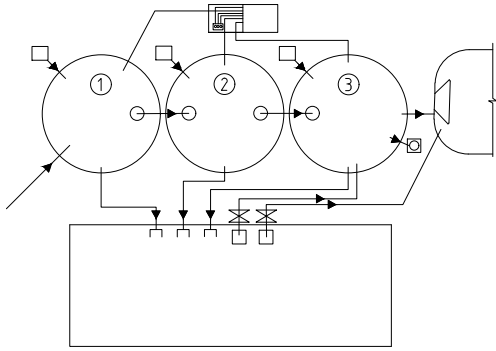
ii) THE BASE SLAB DESIGN PROVIDED ON DTC/6306 IS BASED ON THE WET WELL BEING CONSTRUCTED USING AN OPEN EXCAVATION AND THE BACKFILL MATERIAL USED TO RESIST FLOTATION. IF SHORING IS USED TO SUPPORT THE EXCAVATION, SHORING MUST NOT BE PERMANENT.



SINGLE TANK ARRANGEMENT
NTS



DOUBLE TANK ARRANGEMENT
NTS



TRIPLE TANK ARRANGEMENT
NTS

SINGLE TANK DESIGN:

- 1) PROVIDE A BUNDED HARDSTAND AREA SIZED TO SUIT THE LARGEST VEHICLE LIKELY TO SERVICE THE ASSET.
- 2) PROVIDE THE BUNDED HARDSTAND AREA WITH TWO DRAINS. ONE TO THE TANK AND ONE TO THE OVERFLOW DISCHARGE POINT. EACH DRAIN MUST HAVE A VALVE AND SIGNAGE TO DESCRIBE THE OPERATION OF THE VALVES.
- 3) PROVIDE SUCTION PIPEWORK FOR THE TANK ALLOWING THE TANK TO BE EMPTIED BY TANKER FROM THE BUNDED AREA.
- 4) PROVIDE AN OVERFLOW PIPE FROM THE TANK TO A HEADWALL THAT LEADS TO A WATERCOURSE OR DRAIN.
- 5) TO ENSURE FUNCTIONALITY OF THE OVERFLOW AND ODOUR CONTROL SYSTEMS, DESIGN THE INVERT OF THE OVERFLOW PIPE AND THE INVERT OF THE PIPE TO THE ODOUR CONTROL UNIT ABOVE THE TOP WATER LEVEL FOR THE ASSET.
- 6) DESIGN THE TOP WATER LEVEL TO PREVENT INTERNAL AND EXTERNAL FLOODING OF UPSTREAM PROPERTIES.
- 7) PROVIDE AN ODOUR CONTROL UNIT WITH PIPEWORK CONNECTING TO THE TANK.
- 8) PROVIDE POWER BY MEANS OF A SOLAR PANEL ARRANGEMENT, UNLESS THERE IS AN EXISTING POWER SUPPLY IN THE AREA. THE USER MUST PROVIDE DETAILS FOR USE OF EXISTING POWER SUPPLY.
- 9) PROVIDE 3 FLOAT SWITCHES IN THE TANK.
- 10) PROVIDE AN ALARM BEACON MOUNTED ON THE ELECTRICAL KIOSK SLAB TO INDICATE WHEN THE LOW LEVEL HAS BEEN REACHED AND PUMP-OUT IS REQUIRED .
- 11) LOCATE ALL COMPONENTS, WITH THE EXCEPTION OF THE TANKER CONNECTION POINTS AND THE VALVES ON THE DRAINAGE PIPEWORK, WITHIN A FENCED COMPOUND.

MULTIPLE TANK DESIGN:

- 1) DESIGN THE INVERT LEVEL OF THE INCOMING SEWER TO ENTER THE FIRST TANK AS CLOSE AS IS PRACTICABLE TO THE INVERT OF THE TANK.
- 2) THE TANK RECEIVING THE INCOMING SEWER IS REFERRED TO AS TANK 1, SUBSEQUENT TANKS ARE TO BE NUMBERED AS PER THE ORDER IN WHICH THEY FILL.
- 3) PROVIDE A BUNDED HARDSTAND AREA SIZED TO SUIT THE LARGEST VEHICLE LIKELY TO SERVICE THE ASSET.
- 4) PROVIDE THE BUNDED HARDSTAND AREA WITH TWO DRAINS. ONE TO THE TANK AND ONE TO THE HEADWALL. EACH DRAIN MUST HAVE A VALVE AND SIGNAGE TO DESCRIBE THE OPERATION OF THE VALVES.
- 5) PROVIDE SEPARATE SUCTION PIPEWORK FOR EACH TANK, ALLOWING THE TANK TO BE EMPTIED BY TANKER FROM THE BUNDED AREA.
- 6) PROVIDE AN OVERFLOW PIPE FROM THE LAST TANK IN THE SERIES TO A HEADWALL LOCATED ON A DRAIN THAT LEADS TO A WATERCOURSE.
- 7) TO ENSURE FUNCTIONALITY OF THE OVERFLOW AND ODOUR CONTROL SYSTEMS, DESIGN THE INVERT OF THE OVERFLOW PIPE AND THE INVERT OF THE PIPE TO THE ODOUR CONTROL UNIT ABOVE THE TOP WATER LEVEL FOR THE ASSET.
- 8) DESIGN THE TOP WATER LEVEL TO PREVENT INTERNAL AND EXTERNAL FLOODING OF UPSTREAM PROPERTIES.
- 9) PROVIDE AN ODOUR CONTROL UNIT WITH PIPEWORK CONNECTING TO THE LAST TANK IN THE SERIES OF TANKS. THE ODOUR CONTROL UNIT IS TO BE LOCATED WITHIN THE COMPOUND BUT IS NOT TO BE LOCATED ON THE ROOF OF THE TANK.
- 10) PROVIDE POWER BY MEANS OF A SOLAR PANEL ARRANGEMENT, UNLESS THERE IS AN EXISTING POWER SUPPLY IN THE AREA. THE USER MUST PROVIDE DETAILS FOR USE OF EXISTING POWER SUPPLY.
- 11) PROVIDE 3 FLOAT SWITCHES IN EACH TANK.
- 12) PROVIDE AN ALARM BEACON MOUNTED ON THE ELECTRICAL KIOSK SLAB TO INDICATE WHEN THE LOW LEVEL HAS BEEN REACHED AND PUMP-OUT IS REQUIRED.
- 13) PROVIDE INTERCONNECTING PIPEWORK DRAINING FROM TANK 1 TO TANK 2 AND TANK 2 TO TANK 3 (FOR TRIPLE TANK ARRANGEMENT).
- 14) LOCATE ALL COMPONENTS, WITH THE EXCEPTION OF THE TANKER CONNECTION POINTS AND THE VALVES ON THE DRAINAGE PIPEWORK, WITHIN A FENCED COMPOUND.