

Overview

Project Details

- Fluid Tank Farm Replacement
- Total Capital Investment \$8.1M (\$4M 2026, \$4.1M 2027)
- Desford BCP UK
- Project Timeline (Study completed Q2,25 / Install; Placed in Service Q4,27)

Why

Current tanks & infrastructure are 50+ years old and have a history of failure becoming impossible to maintain or improve. A replacement tank farm to include all bulk materials, sprinkler water, and potable water would fill compliance gaps, significantly reduce demonstrated environmental risk, improve equipment up time, Satisfy outstanding FM recommendations, reduce safety risk to process incorporating engineering controls, reduce carbon emissions & costs on deliveries.

Recommendation to Approve

Rob Walker – Operations East Director
Karen Atkin – BR East Director

Alignment

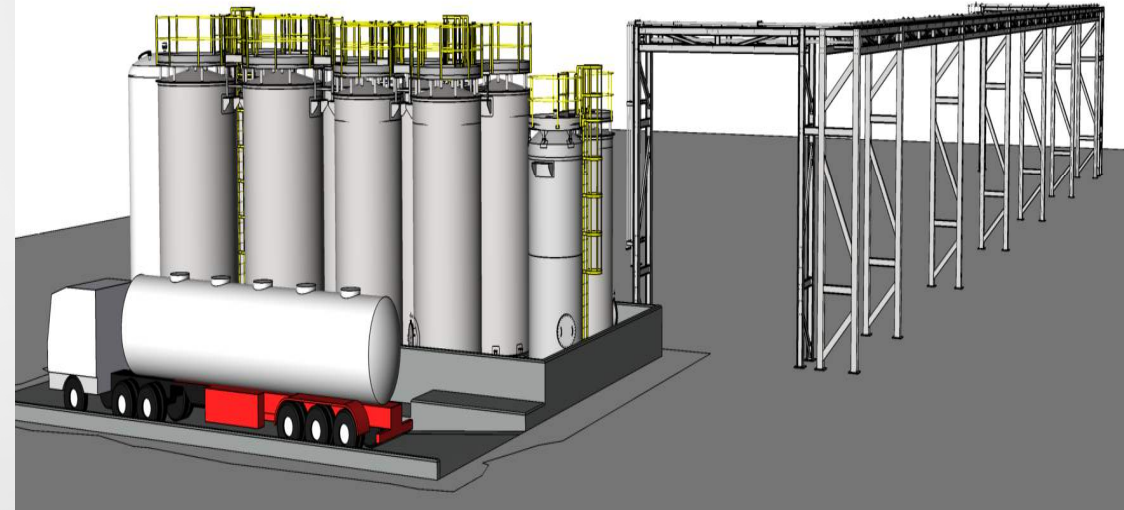
- Fill compliance gaps in current infrastructure
- Resiliency of bulk fluid delivery to production machines for the facility.
- Sustainability Benefit for Carbon Emission Goals
- Reduced Cost of fluid deliveries
- Satisfy FM Global recommendations

Benefit

- Potential fuel cost reduction per Annum : -\$260500.00
- Sustainability Benefit for 2030 Commitments
- Reduced Carbon Emissions
- Resiliency for Facility production

Contents

Proposed agenda and slides



Tank Farm Current State

Hydraulic Oil
Transmission Oil
Deisel
Engine Oil

Glycol
Ad Blue

Potable Water

Screen Wash

- Bunds not compliant to current regs- C736
 - Tanks showing rust and wear
 - Environmental risk – Deisel leak 2015
 - Underground pipework- Access, Inspection and maintainability
 - Environmental spill can incur unlimited fines / prosecution
 - Delivery process risk controlled by admin
 - Quality risk as some tanks impossible to clean
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- Tank 50+ years old & has signs of wear
 - Tank too large to get rate of changeover to align with Legionella RA
 - Internal ring main contains dead legs that cannot be removed – Legionella RA
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- Too close to building & stored in multiple locations
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Environmental risks



2015 Diesel release



Circa 90,000+It released to ground via cracked underground pipework.



Mitigation costs more than £1 Million and the leak was undetectable due to lack of infrastructure and logic. This creates a legal risk for the business.



Possibility of financial as well as criminal penalties



No bunded tanker station in place.

Current Compliance gaps

- **Legacy asset installed circa 50+ Years ago. Regulations and requirements have since changed**
DSEAR, compliance and zoning not to current standards with no OEM's to reference
No design standard for the installation- Documentation or FDS not archived or present..
- **Not inline with current standards :-**
C736 Containment systems for the prevention of pollution
R164 Design of containment systems for the prevention of water pollution from industrial incidents 1997
HSG 176 The storage of flammable liquids- Note- ICA's worked to maintain safe working environment currently but is costly and labour intensive
- **Tank designs do not allow safe access for inspection maintenance & cleaning-**
Involves confined space, WAH and COSHH controls to be heavily utilised to maintain current layout.
Limited spill mediation for pump sets (Bunding)
- **Limited/no spill mediation for tanker spillage (Bunding)**

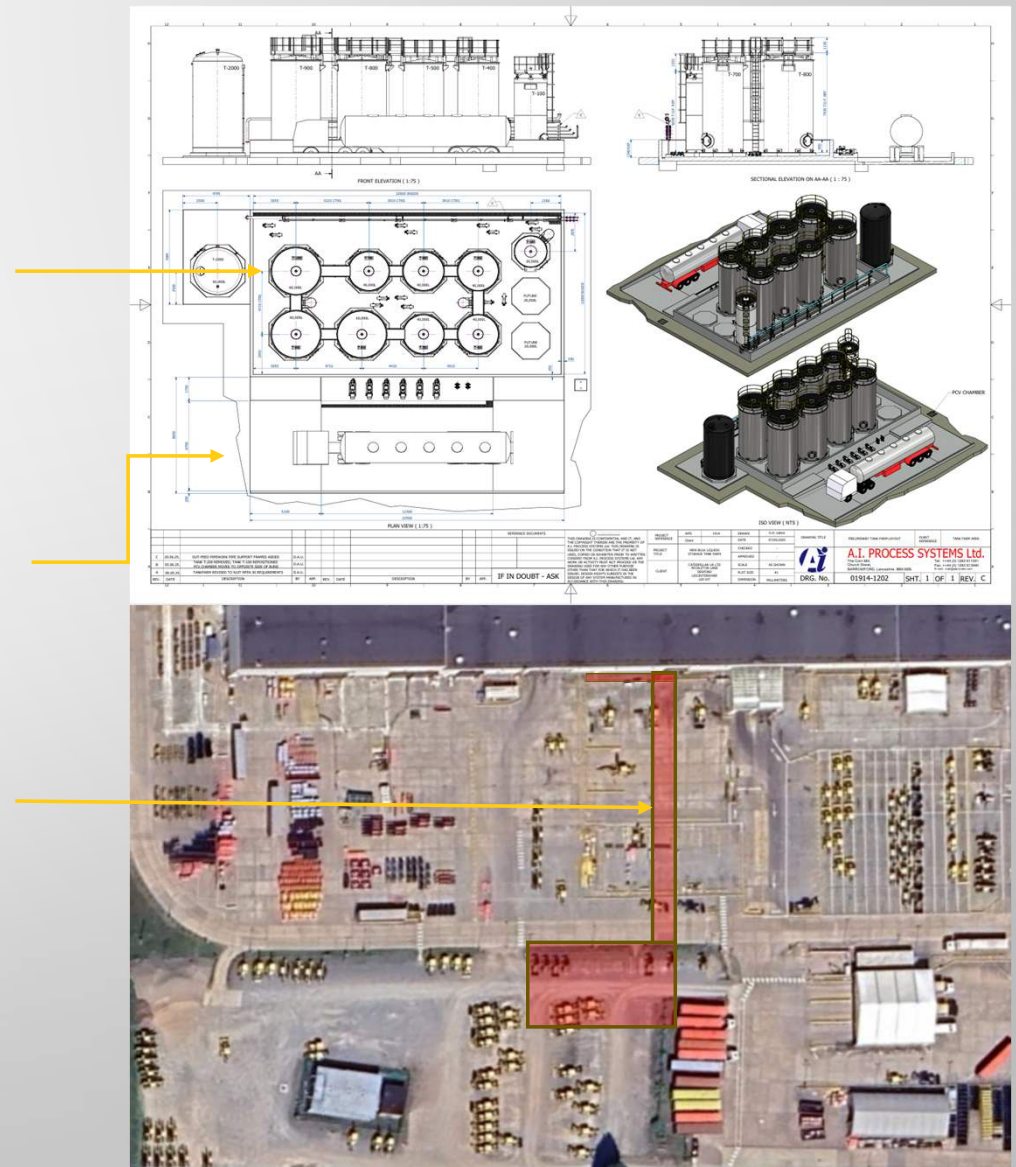


Current State Business Risk

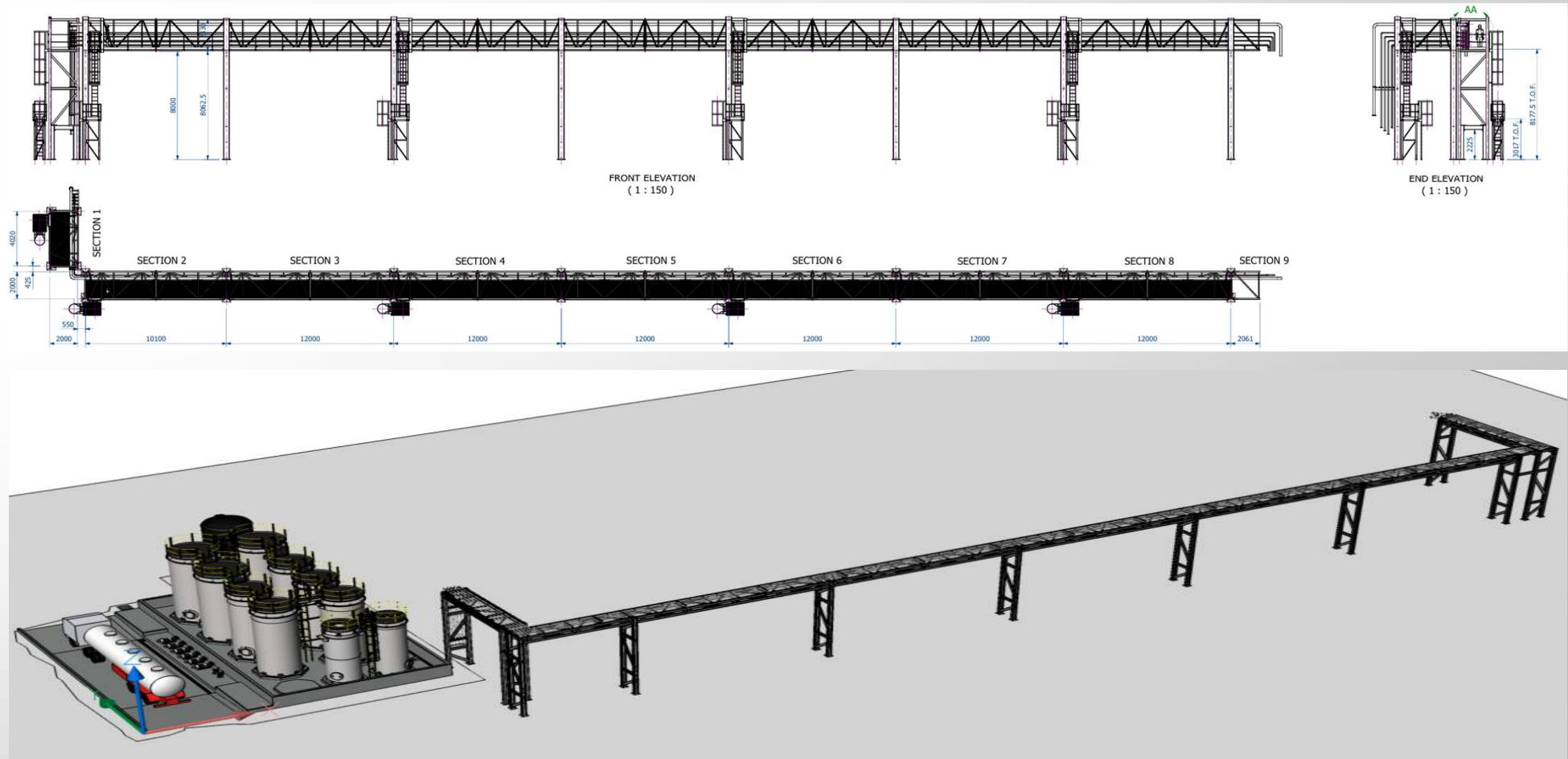
- Tank capacities give little resilience for delayed or missed delivery's
- Continued build volume growth (extra shifts on multiple product lines) may become unsupportable due to low tank volumes
- Aged/obsolete equipment has resulted on reduced reliability of fluid delivery
- Possible Quality issues degraded corroded pipe work and tanks may result in contaminated fluids. No engineered controls, reliance on operatives gives possibility of wrong product being delivered to tank (2024 product shipping hold transmission oil in hydraulic tank)

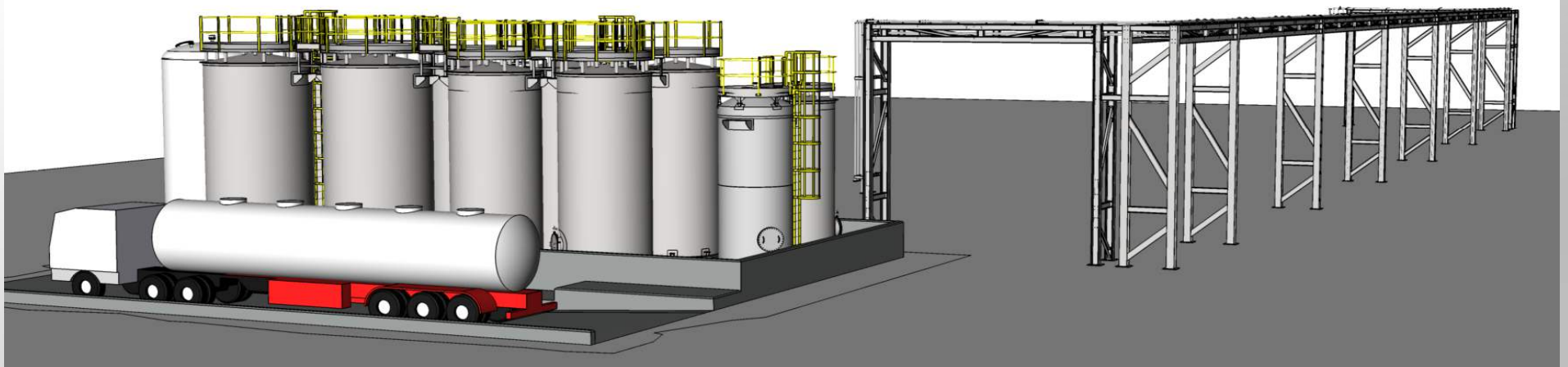
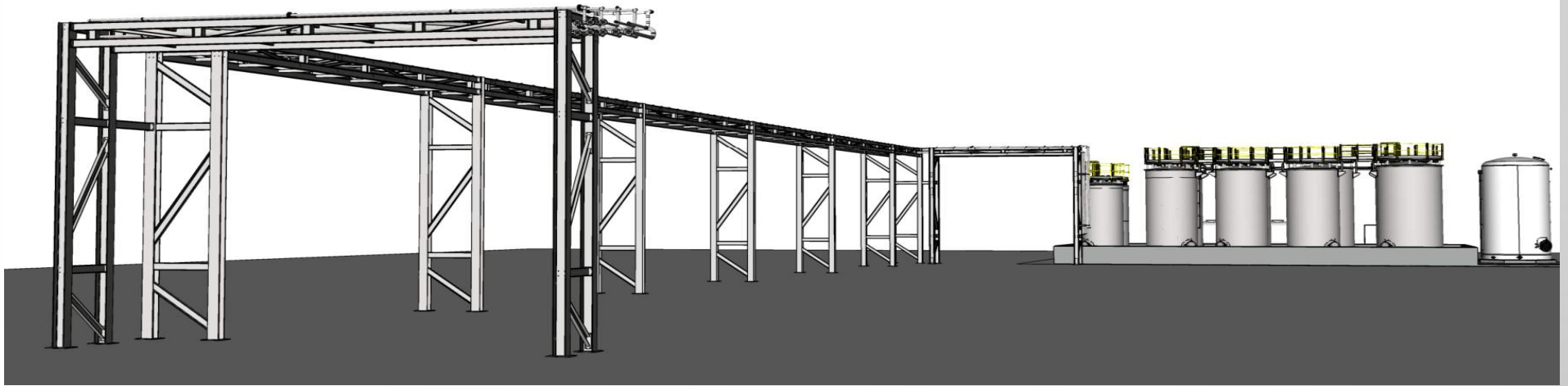
Tank Farm Solution

- To provide a fully bunded bulk fluid tank farm.
1 x 20,00lt copolymer tank.
5 x 40,00lt stainless steel tanks.
1 x 60,000lt copolymer tank.
3 x 60,000lt Stainless steel tanks.
- Sunken tanker unload area including, engineered in spill containment controls with full tanker capacity.
- External above ground pipework & pipe bridge with inspection & maintenance access. Factory internal delivery pipework to each fluid fill booth
- 552,000lt Fire sprinkler tank and pumphouse including primary & backup pump system

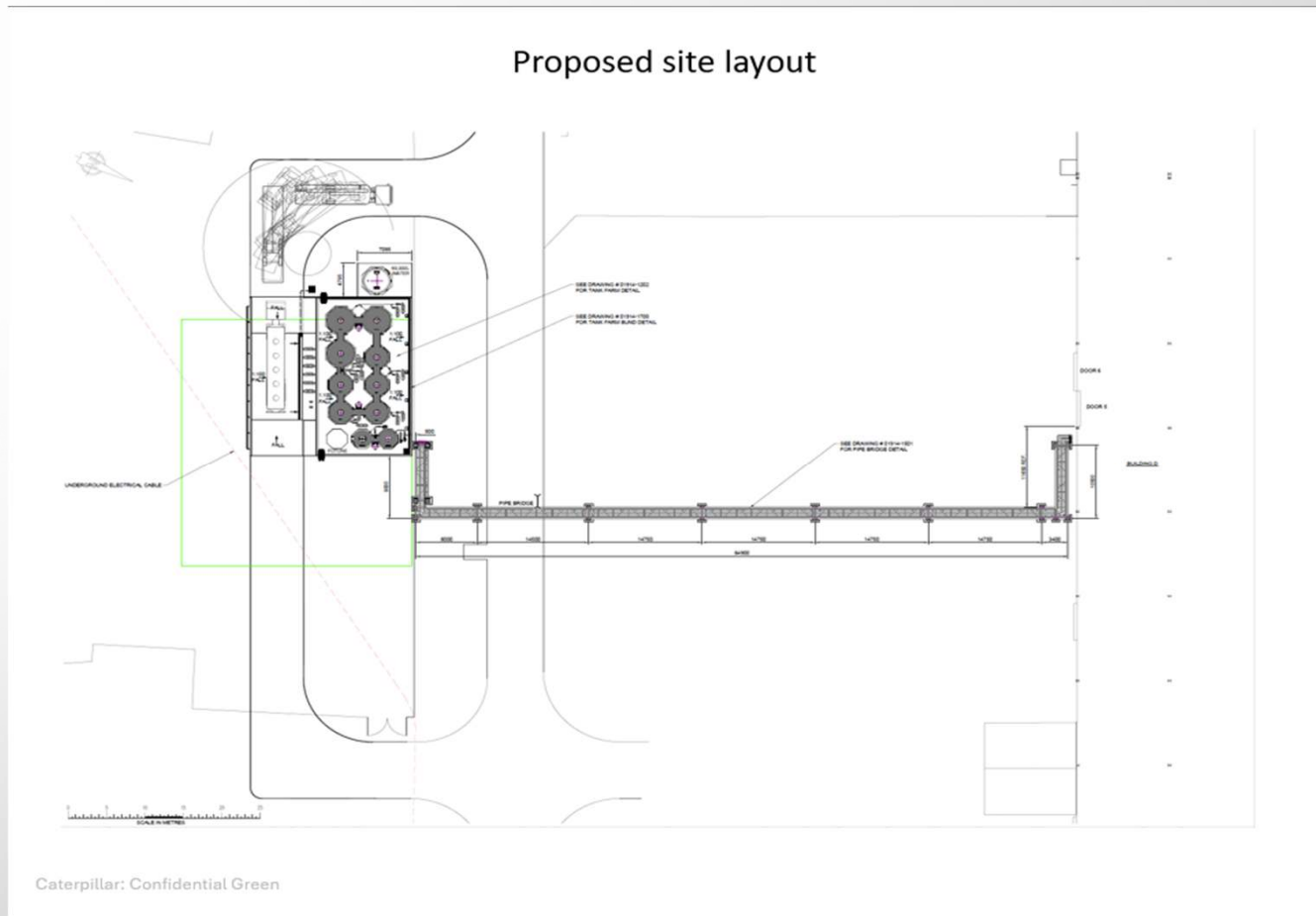


Tank Bridge design & visuals





Tank farm & access road





April 2026

Governance and focus

Process, safety & Redundancy/ Carbon Reduction

- Process steps for delivery will be via a UI (HMI User Interface) with confirmation or prompts

1 Pre-check

2 product selection

3 destination tank display

4 Quantity input

5 Initiation – etc

- Functional safety included in steps of process
- Once initiated the process is automatic, monitored and controlled by the PLC with prompts for the post delivery procedure.
- System integration into other site systems (I.e. BMS/Fire system)

Emissions:

- **Bulk product delivery:** Transmission oil, Hydraulic oil, Engine oil & Glycol are all delivered ex Belgium in 18000lt road tankers with 680 miles per return journey totalling an average of 19720 miles per month, Current state.

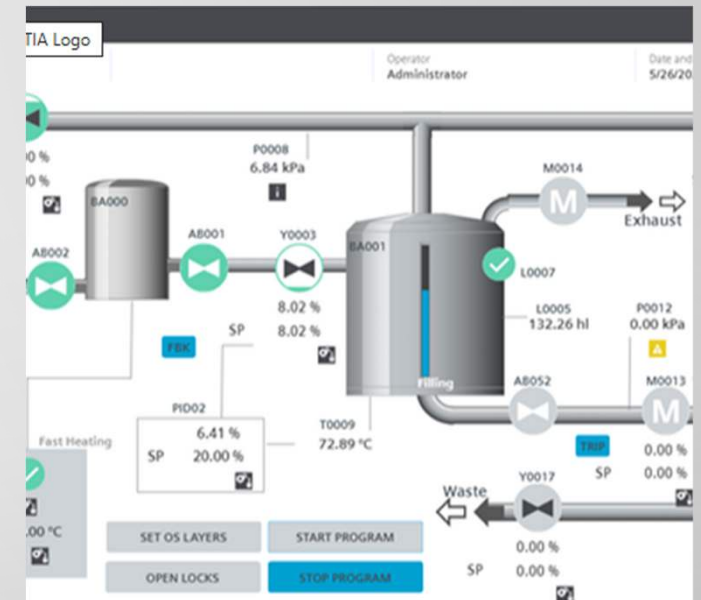
CO2 generation per month = 47575 kg

.9lt per mile consumption 2.4kg per mile CO2

- **New tank farm with higher tank volumes allows the use of larger tankers 36000lt reducing the delivery miles by 45-50% equating too a reduction of around 34-35%, New state.**

CO2 generation per month = 31750 kg

1.2lt per mile 3.2kg per mile CO2



Safety & Redundancy

Process steps so far



HAZID- Completed a survey to identify any fire, explosion, environmental & human factor risks/hazards.



HAZOP- workshop with SME & Caterpillar maintenance completed to identify deviations from normal process & operating conditions that could occur and any potential consequences of these deviations.



Highlighted possible issues and agreed safeguards, alarms, procedural & engineering changes to mitigate safety & process risks.



FM Global have been engaged and agreed with the design & process controls.



Redundancy for breakdown & maintenance are embedded in the design to allowed delivery of all fluids to the factory in the event of a failure or the need to complete reactive/scheduled maintenance of equipment, with the duplication of parts & equipment wherever possible for interchangeability & reduced spares list of mainly off the shelf parts.

Maintenance, monitoring & quality

Sustainability

Early engagement with the maintenance team has allowed & helped us to produce a design to include:-

Readily available off the shelf spares.

Dedicated sampling points.

Safe access for inspections, repairs & PPM's

Dedicated training for maintenance operatives & operators.

Full drawing packs.

OEM's

Duty & Standby pump sets

Aux manual machine fill points.

Fluid Tank Farm Summery

- Capitol Investment. \$8.1M
- Project Type. Replacement / Regulation / sustainability
- Current state / Risk
- Tank & pipe work circa 50 years old, beyond design life production / environmental impact
- None compliance C736,DESAR FM Global HSG176
- Insufficient resilience & capacity for possible future demand
- Reliance on administrative controls, high safety & quality risk
- Future state / Key Benefits
- Improved safety / engineered controls, reduced human error through embedded controls , FM approved design
- Environmental protection / Spill & leak prevention
- Resilience / Increased storage capacity, redundancy for production continuity
- Sustainability / 33-35% CO2 reduction, \$260k annual cost reduction from optimized deliveries
- Quality & Maintenance / Cleanable tanks, designed maintenance access with continued production via twin pump sets, interchangeable parts, dedicated sampling points

Questions?

