



*EA Application – Primary & Secondary Containment Assessment*

The upgrades to a permitted installation at Waste4Generation Corby, with the additional plant and equipment requiring additional bunding to be added to the warehouse, suitable for the tanks which are being installed.

The overall site bunding was assessed as well as the proposed additions, and the overall risk to the local receptors from a breach of the secondary containment was found to be low, including the additional volumes to be potentially held onsite. As part of the installation requirements, the bunding was assessed against CIRIA 736 standards.

**Summary of Primary Containment:**

*Reactors 1 - 5:*

Reactors 1 – 5	
Capacity	60 m <sup>3</sup> each
Construction	Stainless Steel
Pressure Tested	Yes

Made from stainless steel, all reactors were emptied and inspected in 2022 prior to recommissioning. Pressure & liquid test completed prior to operation. The reactors have a maximum operating capacity sufficiently in excess of normal operating conditions. Daily physical checks & scheduled pressure testing ensure the integrity of the reactors. Rotating of the reactors allows for scheduled cleaning, maintenance, and inspection.

All the reactors are in very good condition and fit for purpose.

*Reactor 6:*

Reactor 6 (R6)	
Capacity	60 m <sup>3</sup>
Construction	Mild Steel with bitumen paint internal sealing



Pressure Tested	Yes (although no longer a pressurised vessel)
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R6 is a mild steel fabrication with bitumen paint internal sealing. The tank was fully cleaned out and inspected prior to being converted into a feedstock storage tank in 2022. The reactor is no longer a pressurised vessel. Daily physical checks & scheduled pressure testing ensure the integrity of the reactor. The tank is regularly fully emptied, washed out and inspected to prevent the build up of sediment and prevents any residual waste from stagnating, potentially creating odours (see Cleaning Procedures).

Reactor 6 (R6) is in a very good condition and fit for purpose.

*Reception Tank 2 (RT2):*

Reception Tank 2 (RT2)	
Capacity	75 m <sup>3</sup>
Construction	Mild steel construction which is double banded
Pressure Tested	Non - pressurised vessel

Daily physical checks & scheduled pressure test to ensure the integrity of the reactor. The tank is regularly fully emptied and washed out and inspected to prevent the build up of sediment and prevents any residual waste from stagnating, potential creating odours (see Cleaning Procedures).

RT2 is structurally sound and in a good condition. The internal bund requires additional access points to facilitate efficient cleaning. A re-paint is required to improve aesthetics. Hinges on inspection hatches to be added for ease of operation.

*Break Tanks:*

Break Tanks	
Capacity	DAF 1 Break Tank 3m <sup>3</sup> DAF 2 Break Tank 3m <sup>3</sup>



	DAF 3 Break Tank 10 m <sup>3</sup>
Construction	Polypropylene
Pressure Tested	Hydrotested 1.5 sg

The DAF break tanks are cleaned out weekly & inspected daily (see Cleaning Procedures). Easy to keep clean & maintain to check the tanks integrity. These are chemically resistant and ideal for liquid storage.

*Main Balance and ABP tank Storage Tanks:*

Main Balance Tank & ABP Storage Tank	
Capacity	Main Balance Tank - 50 m <sup>3</sup> ABP Tank – 50 m <sup>3</sup>
Construction	Glass fused to Steel (GFS), also known as Glass – Lined – Steel (GLS)
Pressure Tested	Hydrotested

Glass-Fused-to-Steel (GFS), also known as Glass-Lined-Steel (GLS) is the ultimate tank & silo solution, utilising a proven product with significant benefits to customers, consultants and contractors over other types of tanks and silo construction.

Glass-Fused-to-Steel gives significant benefits over other tank and silo systems. Two materials are fused together to achieve the best of both materials: with the strength and flexibility of steel with the corrosion resistance of glass. Applied to both interior and exterior surfaces, Glass-Fused-to-Steel can provide many years of trouble-free service, in harsh environments.

These tanks are inspected daily, with an annual full inspected and service/repair by Reliant (specialist contractor). Upgrades include repair to current cover on MBT plus installation of a new cover on ABP tank.

*Reception Tank 1 (RT1):*

Reception Tank 1 (RT1)	
Capacity	30 m <sup>3</sup>
Construction	Fibre glass with an internal glass lining.
Pressure Tested	Hydrotested

RT 1 was emptied & inspected prior to recommissioning of the site in 2023. The tank is emptied & checked daily, where every 6 months the tank is fully emptied, cleaned & inspected. The design and construction of this tank makes it ideal for accepting waste streams over a wide range of pH's prior to processing (subject to pre-acceptance & waste classification).

The tank is in good condition and fit for purpose.

*Feedstock Storage Tanks:*

Feedstock Storage Tanks	
Capacity	Gold Tank - 54 m <sup>3</sup> Grey Tank - 54 m <sup>3</sup> White Tank - 46 m <sup>3</sup>
Construction	Mild Steel
Pressure Tested	Tanks purchased in 2022, fully cleaned, inspected & hydrotested.

These tanks typically contain waste of a neutral pH, typically pH 6 – 7, which are emptied and inspected daily. The upgrade works onsite are to include additional overflows and sump. The bund wall is to have an additional internal concrete wall to comply with BAT and meet CIRIA 736 requirements. The tanks are in very good condition both structurally and aesthetically.

*Fuel tank:*

Fuel Tank	
Capacity	2,500 litres
Construction	Mild Steel Double Bunded
Pressure Tested	Hydrotested

This tank is topped up and inspected monthly. Tank in good condition.

*Hot Water Tanks:*

Hot Water Tanks	
Capacity	3 m <sup>3</sup>
Construction	Glass re-enforced plastic (GRP)
Pressure Tested	Hydrotested

The tanks are topped up and inspected weekly. Tanks are in good condition.

*Caustic Storage Tank:*

Sodium Hydroxide (Caustic) Storage Tank	
Capacity	10 m <sup>3</sup>
Construction	Polypropylene
Pressure Tested	Hydrotested 1.5 sg

This tank is inspected daily. The fabrication and design ensure that the tank is easy to be kept clean and maintained, to check the tanks integrity. The tank is chemically resistant, ideal for liquid chemical storage. The tank is in very good condition.

*Polishing & Complex Waste Processing Tanks:*

Polishing & Complex Waste Processing Tanks	
Capacity	Complex Waste - 2 x 1 m <sup>3</sup> Complex Waste - 2 x 7 m <sup>3</sup> Polishing Tanks – 3 x 7 m <sup>3</sup> Polishing Tanks – 1 x 10 m <sup>3</sup>
Construction	See below
Pressure Tested	Hydrotested

Construction: The scrubber will be manufactured in black coloured non-toxic, non-tainting (WRc approved) heat stabilised, chemical resistant Copolymer Polypropylene material. The material complies with EU Statutory Instrument 1992 No: 3145 for direct contact with food, EC Directives 90/128/EEC, 85/572/EEC & 82/711/EEC, with all monomers used listed in Section A. It also gives a non-chip, non-craze surface even under impact conditions. Fabrication techniques include microprocessor controlled heated tool butt fusion welding on the main shell welds (producing virtually seamless joints) with extrusion welding and hot gas welding techniques used for the bases & tops producing very strong, high-quality welds. For use with contents of SG1.2 max at 40°C at liquid head plus 80 mbarg.

This tank is emptied, cleaned, and inspected weekly to ensure effluent compliance. Tanks are in very good condition.

*Tank Farm Storage Tanks:*

Tank Farm Storage Tanks	
Capacity	9 x 30 m <sup>3</sup> double banded storage tanks
Construction	Polypropylene
Pressure Tested	Hydrotested 1.5 sg

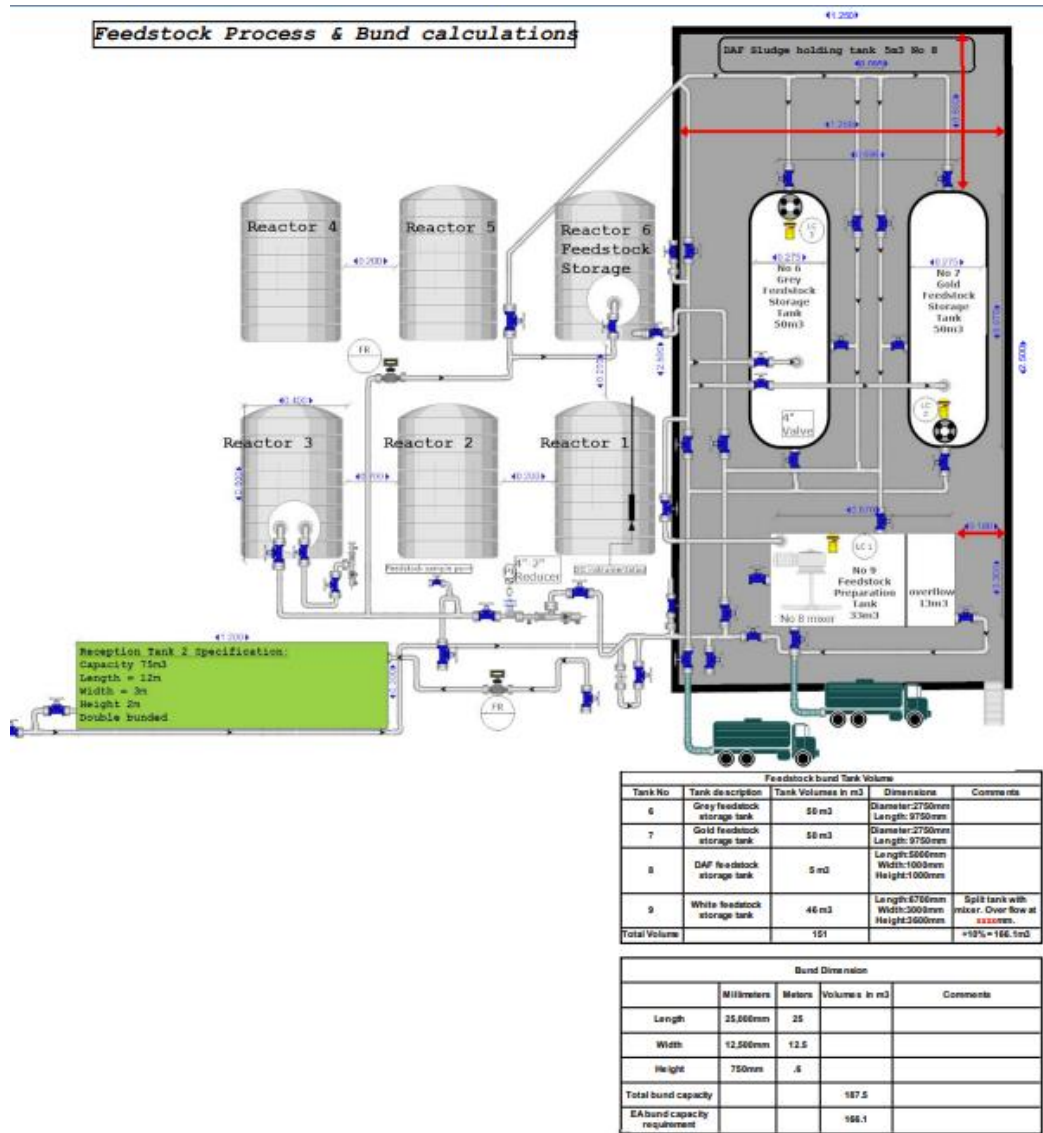
These tanks are to be inspected daily. The design and fabrication mean that they are easy to keep clean and maintain, to check the tanks integrity. The fabrication is chemically resistant,



The bunds are in good condition (and assessed withing the external containment assessment). Upgrade works to be completed & scheduled include the installation of additional sumps & pumps to assist with rainwater and wash-down collection. The paint on the bund floor is to be refreshed and the bund wall itself with chemically resistant bitumen paint. The bund has been hydrotested to hold regulatory capacity.

**Feedstock Bund Area:**

The bunds are constructed from re-enforced concrete pilings below a concrete base sealed with an epoxy chemical resin & bitumen paint. The wall is of a block and brick construction with a concrete reinforcing wall inserted between the blocks. With an epoxy chemical resin & bitumen paint seal.

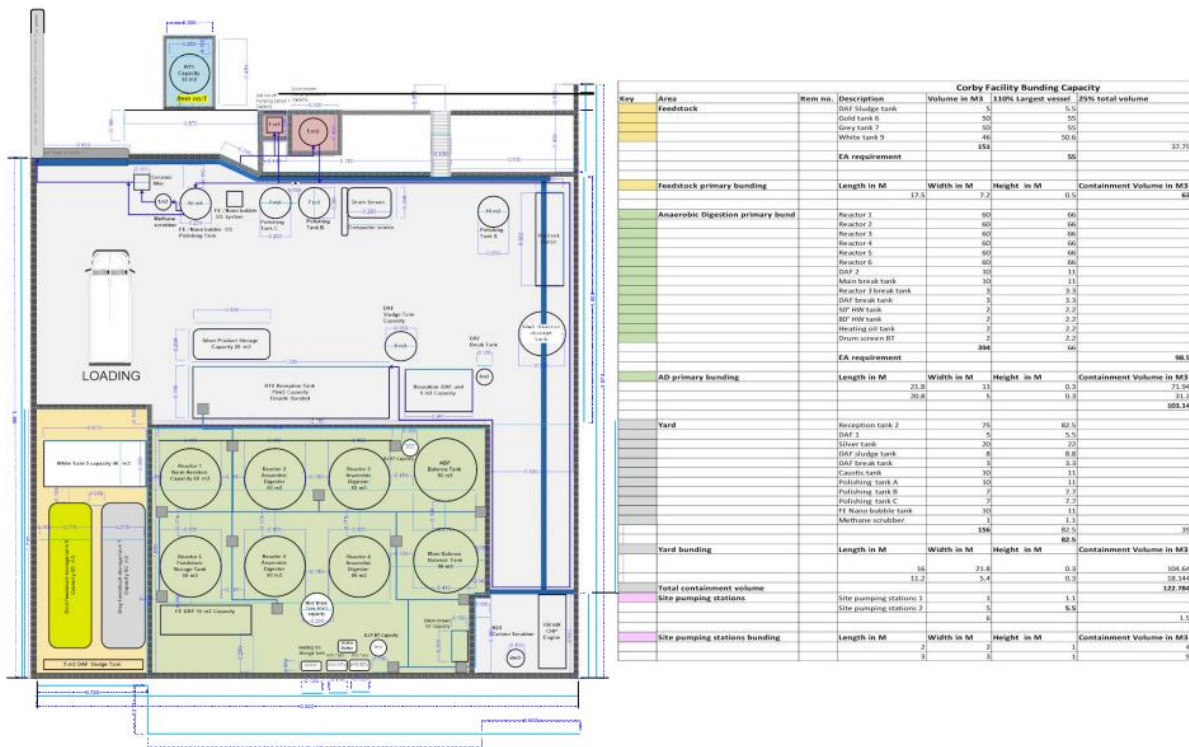




In upgrading the bunding to achieve BAT & minimise risks as assessed within the containment & CIRIA 736 assessment, there will be an additional concrete insert placed within the bund. There will be an additional sump and overflow added as per included drawings & schematics.

*Yard Bund Area:*

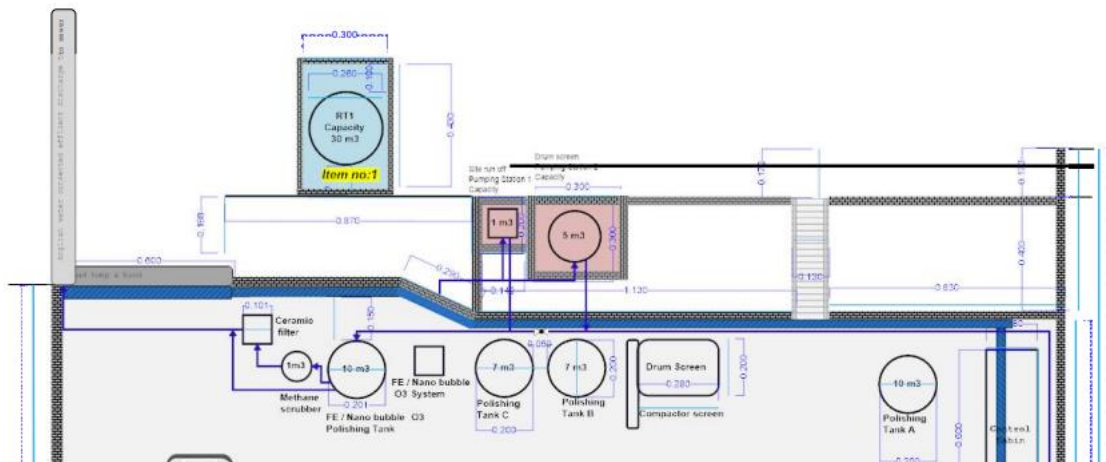
**Waste4Generation Ltd Bunding & Drainage Diagram**



The yard bund is in a functional condition and provides additional containment should the bunding around the reactors or feedstock tanks be overcome and contains any spillages within the yard. There are repairs required to the damaged drainage and to the speed hump, which are due to be completed imminently. The bund height is to be increased at the access point, with any bund repairs completed and repainted with bitumen paint.

**Reception Tank 1 (RT1) Bund:**

The bunds are constructed from concrete base sealed with an epoxy chemical resin & bitumen paint. The wall is of a block and brick construction with an epoxy chemical resin & bitumen paint seal.

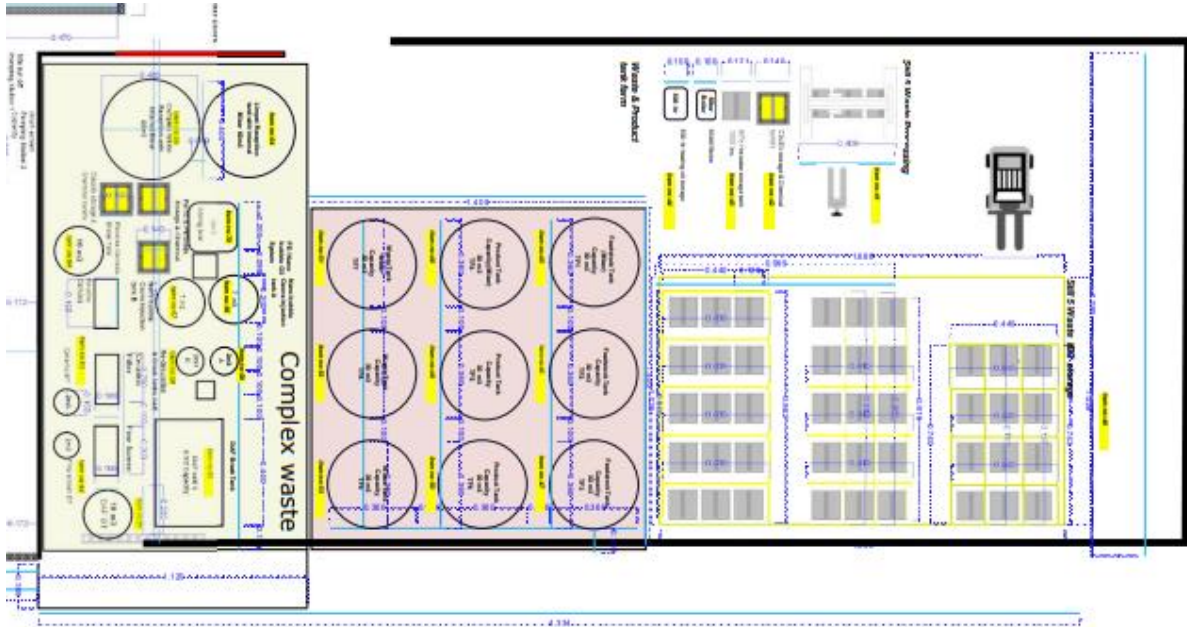


The upgrades to the RT1 reception area include additional storage capacity of the RT1 bund as per drawings. The bund is to be re-painted with bitumen paint. There is also a high alarm float switch to be added to the bund. The bund is in good working condition.

**Pumping Stations (as also shown above):**

As part of the upgrades, additional capacity will be installed within these bunds to increase storage capacity as per drawings. This bund is to be re-painted with bitumen paint. There is also a high alarm float switch to be added to the bund. Bund is in good working order.

*Tank Farm:*



The tank farm installation and associated bunding is to be installed as per the drawings, BAT requirements and CIRIA 736 compliance.