

# Glasgow Recycling & Renewable Energy Centre

**Client:** Viridor

**Location:** Glasgow

**Start Date:** April 2021

**Outline Scope:**

- Super Heater Bundle Removal & Replacement
- Economiser & Smoke Tube Boiler Over-haul & Inspections
- Additional works - hot ball Scroll shaft repair (Build-up of weld metal), Furnace Scrapper bar replacement & transfer screw pipework repair & replacement



**Client Overview**

The Glasgow Recycling and Renewable Energy Centre (GRREC) Operated by Viridor at Polmadie on the south side of Glasgow:

- Handles 200,000 tonnes of council green bin residual waste every year
- Works in combination with city wide blue, brown and purple bin recycling
- Diverts 90% of green bin residual waste away from landfill, saving millions of pounds
- Releases recyclable resources from household waste
- Produces enough energy to power the equivalent of 26,496 households and heat the equivalent of some 8,000 homes
- Delivers a saving to Glasgow of 90,000 tonnes of CO<sup>2</sup> every year
- Regenerated the existing Glasgow City Council waste facility at Polmadie, on the South side of the city

**Project Scope**

The Extraction, Transportation, Cleaning and Inspection of the boiler Evaporator and Super Heater tube bundles. With the Superheater bundles extracted the walls of the pass at the bundles berth were to be cleaned and inspected & thickness checks were also carried out to gather data for later inspections. Initial Visual Inspection revealed that large areas of refractory material had collapsed onto the top bundles, preventing withdrawal until such time as most of the debris could be removed & new refractory installed. Once the bundles had been withdrawn & all areas had been inspected cleaned (and necessary repairs completed) the tube bundles were transported back into position and reinserted into the boiler ready for pressure testing.

In line with the agreed Scope of Work, Cleaning & Inspection was also carried out to the Economiser and Smoke Tube Boilers. Emergent work was also carried out in the form of erosion repairs to Super heaters and, an Economiser Tube leak discovered during Hydrostatic testing that was repaired throughout the night.

**Our Results**

PJD were able to successfully complete all of the work scope & additional works on Unit 3 outage 2 days ahead of schedule with no safety or quality issues. With the quality of the works carried out, the unit was able to come back on load with the highest recorded outputs & efficiency to date. PJD where able to manage both Unit 1 & 2 outages simultaneously while utilising a night shift and additional labour resource we also achieved to hand back permits earlier than planned return to service dates.

**Key Performance Indicators**

PJD Successfully completed all planned & emergent works before the scheduled completion date within budget, the works carried out had a major impact on the performance & efficiency of all three lines. All works carried out was to a very high quality standard with a zero repair rate. PJD also completed the project with a perfect health & Safety record with no recorded accidents or incidents during the entire shutdown.

