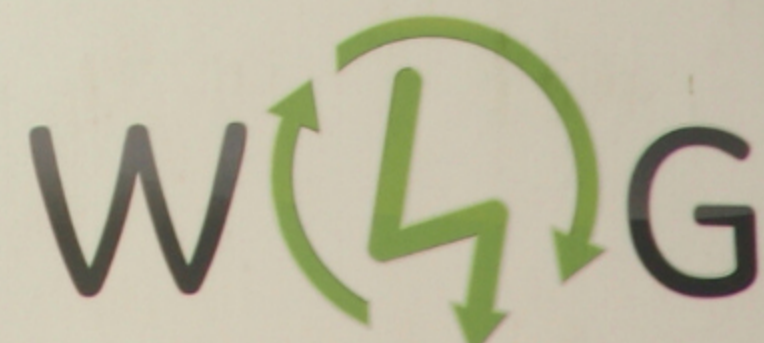




# WASTE 4 GENERATION

THE SOLUTION FOR FUTURE GENERATIONS



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# Welcome



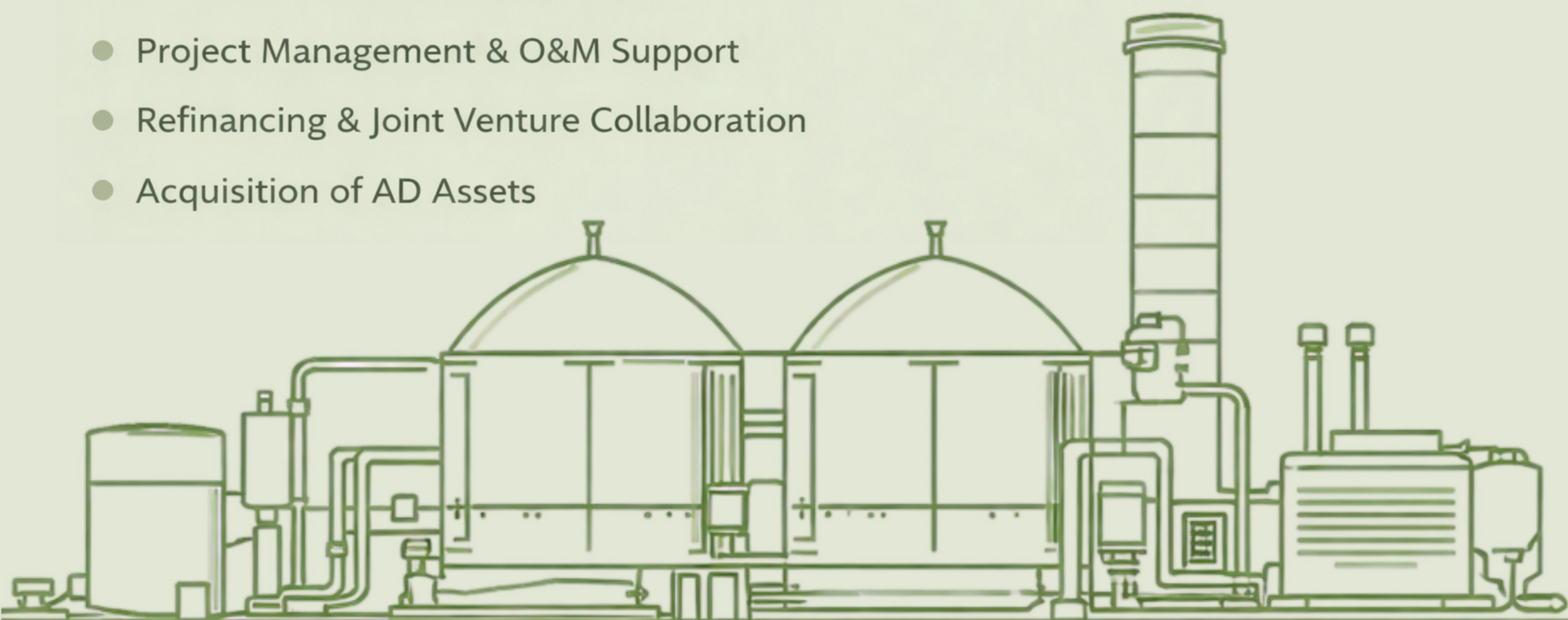
At Waste 4 Generation, we provide high-quality feedstocks, comprehensive operational support, management, and site optimisation services to anaerobic digestion plants across the UK.

Our mission is to maximise the performance, reliability, and commercial value of anaerobic digestion assets while providing our customers with the highest quality feedstock and exceptional value for money.

Through technical expertise, operational excellence, laboratory precision, and commercial insight, we deliver innovative, data-driven solutions that enhance biological stability, increase biogas yields, optimise plant efficiency, and unlock sustainable financial returns for operators, investors, and strategic partners.

We support plant operators, asset managers, and investors through:

- Operational Management & Optimisation
- Feedstock Supply & Quality Assurance
- Technical & Laboratory Services
- Wastewater Treatment Solutions
- Project Management & O&M Support
- Refinancing & Joint Venture Collaboration
- Acquisition of AD Assets



# Feedstock Supply

From sourcing to delivery, we manage:

- Supply contracts
- Haulage scheduling
- Logistics coordination
- Quality assurance

All feedstocks are thoroughly analysed prior to delivery to ensure:

- Consistent quality.
- No inhibition - checks for ammonium, sulphate, chloride.
- Minimal ash, grit and plastic contamination.

## Feedstock Blending & Optimisation

We specialise in the testing, blending, and optimisation of a wide range of feedstocks, tailored to meet client-specific performance parameters.

We design feedstock combinations to:

- Maximise methane yield
- Reduce antagonistic inhibition
- Improve digestion stability
- Meet specific plant performance requirements
- Trace nutrients added - Selenium & Cobalt are added as standard.



Package	COD Range (g/L)	Biomethane Yield (m <sup>3</sup> /tonne)
Gold	250-300 g/L	90m <sup>3</sup>
Silver	200-250 g/L	75m <sup>3</sup>
Bronze	150-200 g/L	60m <sup>3</sup>
Bespoke blends available on request		

## EWC Code Expansion

We manage the expansion of EWC codes on-site permits to increase revenue streams and unlock additional feedstock opportunities.

# Technical Services

At Waste 4 Generation, we deliver end-to-end technical support to maximise feedstock quality, digester efficiency, and overall plant performance. Our approach combines rigorous laboratory testing, expert data interpretation, and practical operational insight to ensure reliable and optimised anaerobic digestion outcomes.

Our fully equipped on-site laboratory operates advanced analytical techniques, including high-resolution BMP testing conducted by qualified professionals. This allows us to provide accurate, cost-effective analysis and actionable biological recommendations. In addition, we support wastewater process assessment using our own wastewater treatment facility, offering truly integrated technical services

## Our Technical Services

- Comprehensive feedstock testing and characterisation
- Advanced BMP (Biochemical Methane Potential) testing
- Cost-effective laboratory analysis compared to external providers
- Acid profiling and biological performance assessment - (External analysis)
- Detailed biological reports with practical technical recommendations
- Full digester sweep to assess efficiency and operational health
- Lab technician cover and specialist technical support
- Wastewater process testing and analysis at our dedicated treatment facility
- Collaboration with BPC Instruments to provide technical solutions for any biological issues



Lab Services	Parameters tested
Feedstock Analysis	pH, COD, Chloride, Ammonium, Sulphate, Dry Matter, BMP, Inhibition*
Digester Sweep	pH, Dry matter, Trace element analysis, Inhibition*
Acid Profiling	VFA's*, FOS-TAC
Waste Water Analysis	pH, COD, Chloride, Sulphate, Ammonium, Dry Matter, Copper, Zinc

\* = Test performed by external laboratory partner



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# Our Services



## Wastewater Treatment Capability

Waste 4 Generation operates its own Wastewater Treatment Plant with the capacity to process difficult-to-treat waste streams.

Our wastewater services include:

- Wastewater testing and analysis
- Waste water assessment for suitability for treatment discharge at our facility
- Providing quotations for collection and treatment.
- Providing competitive disposal and haulage costs.
- Integrated technical and treatment support

This capability allows us to offer truly end-to-end waste and AD support services.

## Operational Services

We provide structured operational management to improve plant performance, reduce downtime, and maximise ROI.

- Specialist consultancy services tailored to site-specific requirements
- O&M Assistance
- Operator and Maintenance cover

Including:

- Project management
- Process optimisation
- Operational training

## Commercial & Strategic Support

We have successfully collaborated with multiple Joint Venture partners and offer structured partnership opportunities for plant optimisation and growth.

We can also assist in asset refinance and general performance reporting for third-party lenders.

## Lab Technician Cover & Specialist Support

Our dedicated laboratory team can assist in the following areas:

- Temporary laboratory cover
- Ongoing technical consultancy
- Lab training packages
- Troubleshooting and fault finding of the digester biology
- Review of acceptance procedures
- Review of lab testing procedures

# Case Study 1

A 5MW anaerobic digestion site based in Northern England, utilising predominantly food waste.

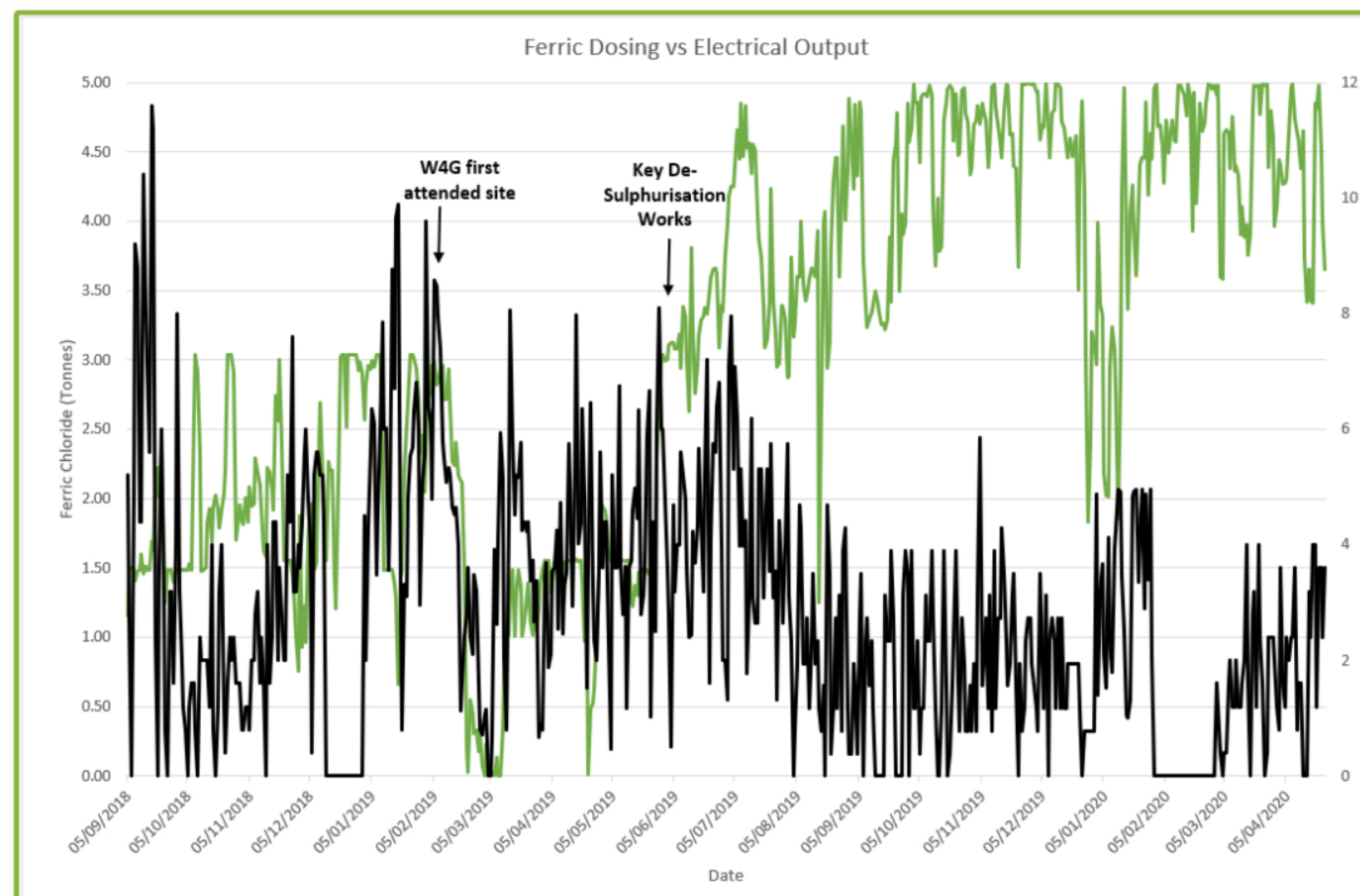
Originally we were brought in due to the high consumable usage and costs, in addition to the plant struggling to thrive and achieve production targets.

Key Achievements:

- Maximum production achieved on a regular basis - including through COVID-19 disruptions
- Implementation of new acceptance procedures and feeding/loading schedules
- Achieved optimum biological conditions and health within the digesters
- Optimisation of consumables, reducing operational costs and process issues

These results were achieved by resolving the following issues

- Eliminating undesirable feedstocks
- Reviewing design Issues & site procedures
- Optimising loading and feeding rates
- Identifying Inhibitors in digesters



Averages	Prod. Output (Mwh)	% of maximum	Ferric Dosing (T)	% change
Pre W4G	2.04	41%	3.4	-
During remedial works	1.56	31%	3.8	+11.76%
After De-sulphurisation works	4.18	84%	2.18	-42.64%

For more information on case studies, please see our website

## Case Study 2

A 5MW (effectively 3.5MW) anaerobic digestion site in the North of England, which due to a number of factors had been effectively 'moth-balled', operating on only a handful of tanker per week with and producing electrical outputs of less than 10% of targeted levels.

Upon investigation by W4G, the digesters were found to be highly contaminated with debris, rocks and indigestible feedstock. W4G's services were engaged with the aim of getting the plant's processes and biology back on track with a minimal budget in order to avoid a likely site closure.

Initial Investigation

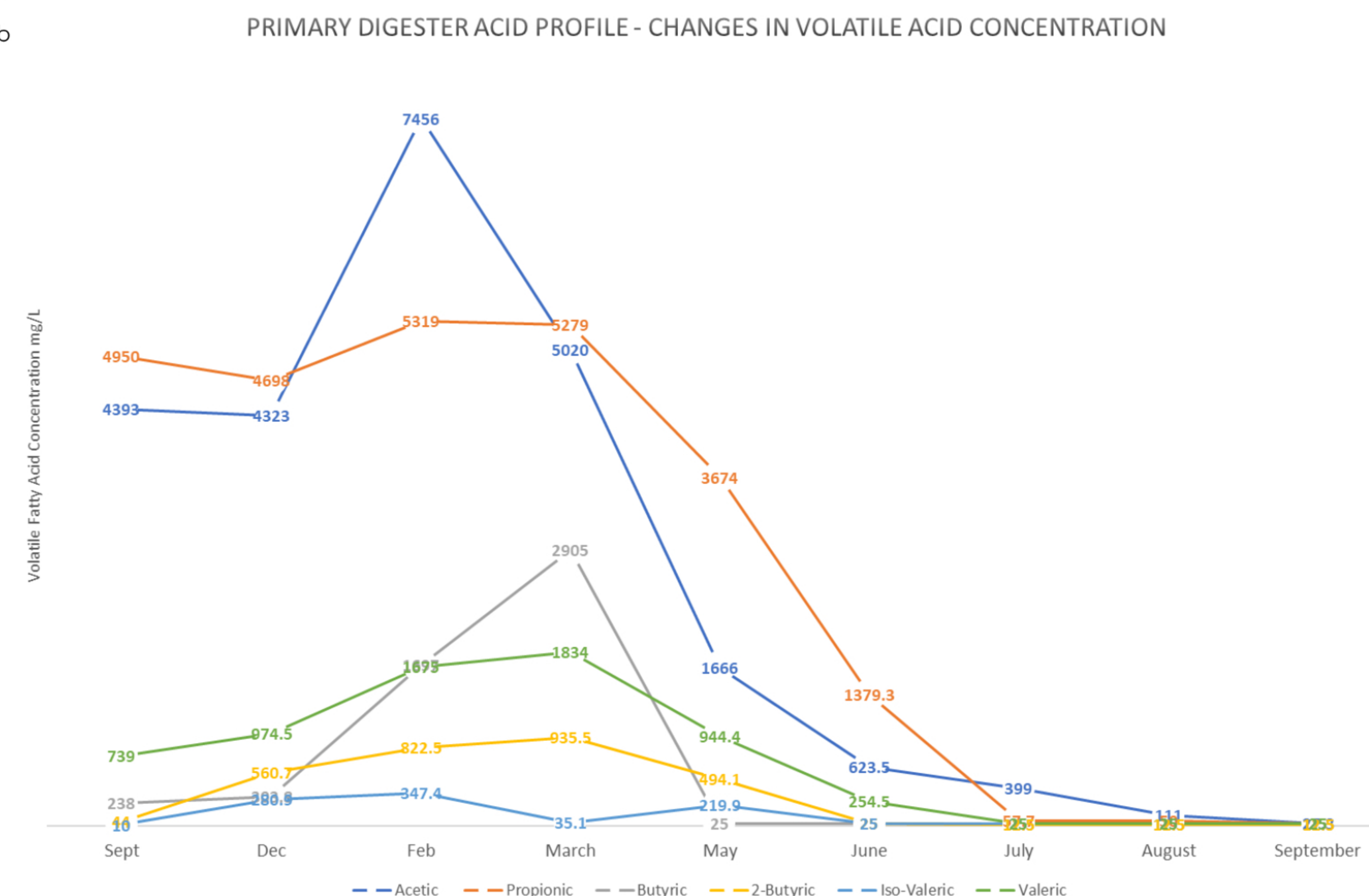
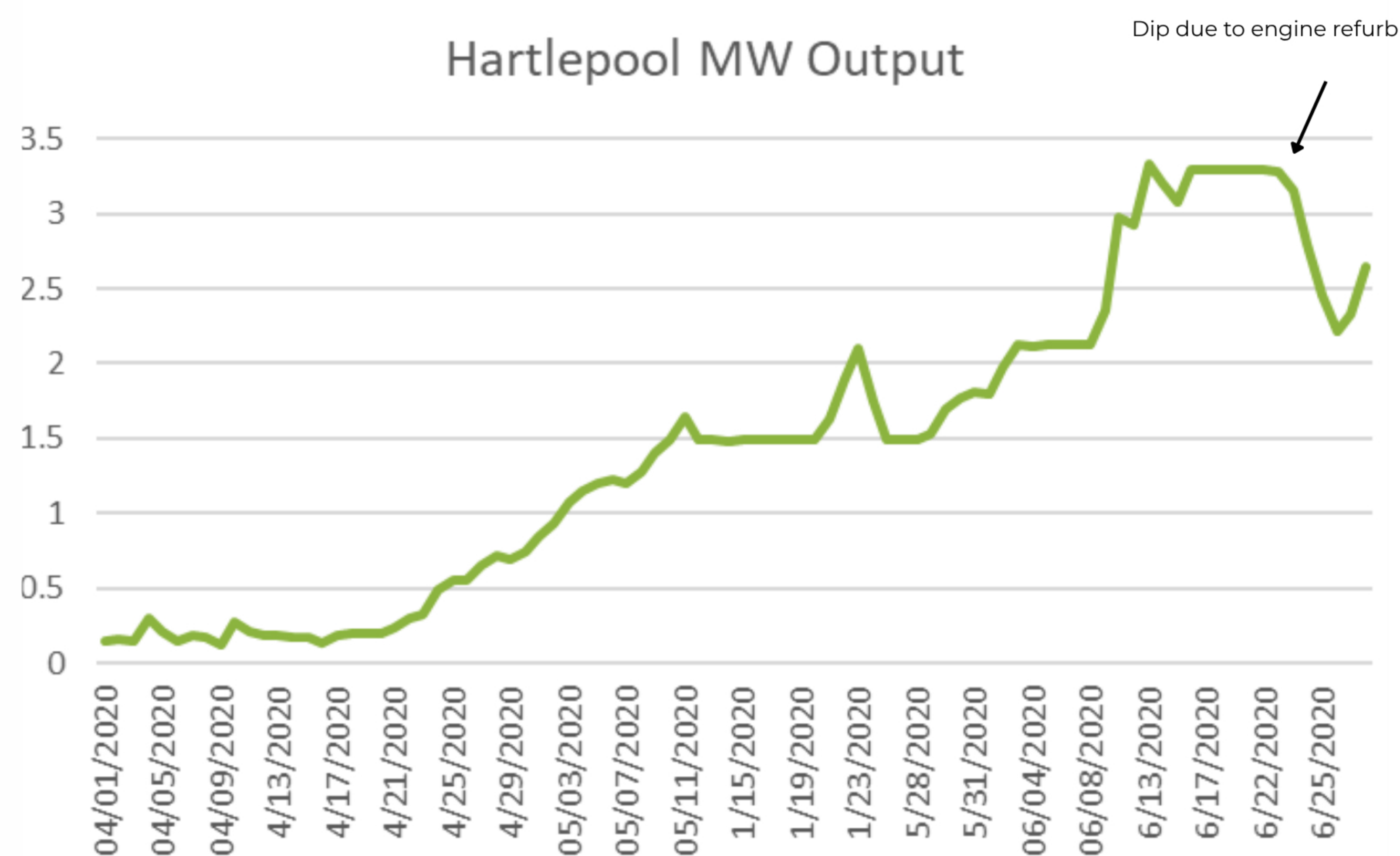
Phase 1 - External de-grit

Phase 2 - Commissioning

Phase 3 - Ramp-up and operations procedures implemented

Steady & continued Increases in Production

The increase in electrical production steadily increased following the de-gritting and re-seeding program, we were then able to effectively ramp production in both a stable and healthy manner.



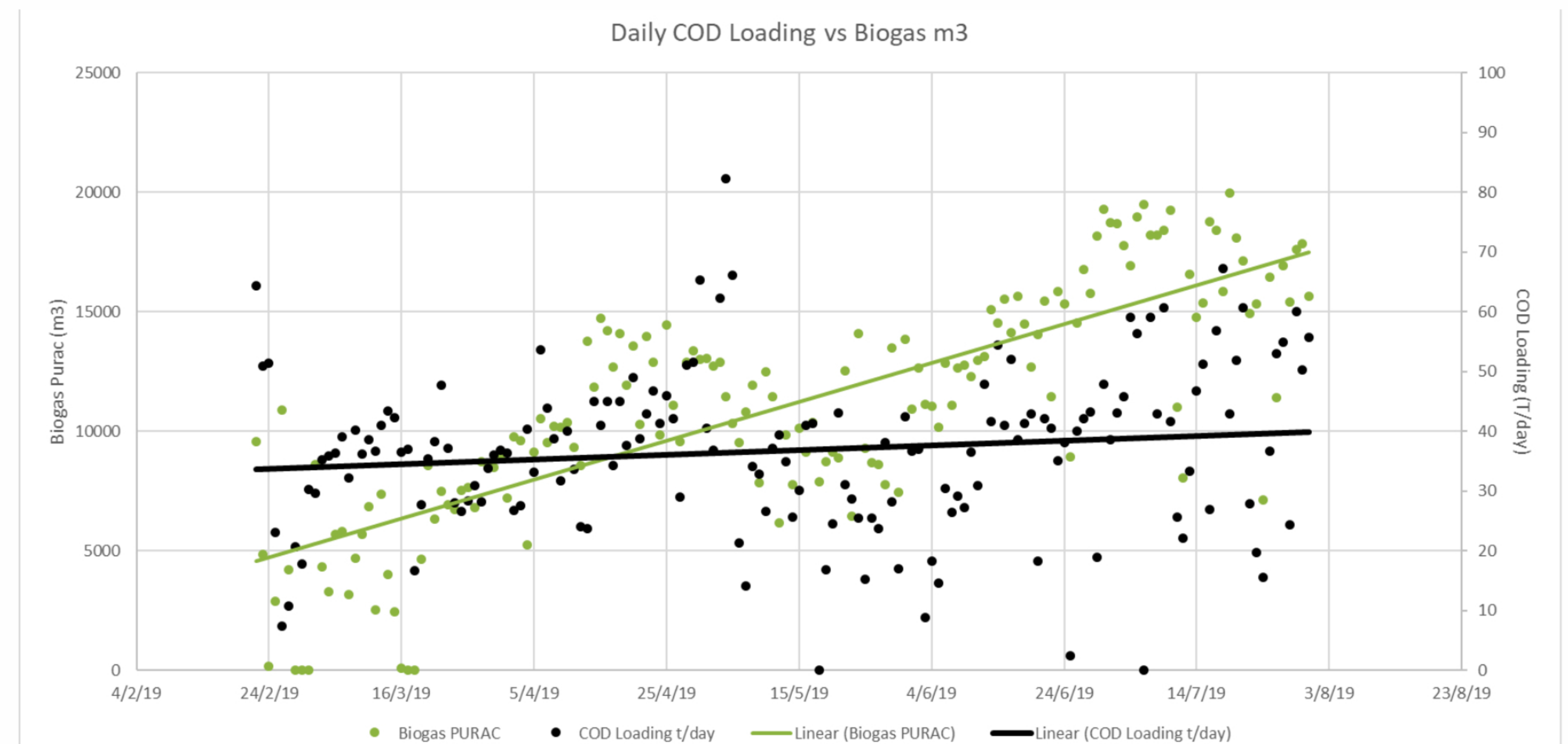
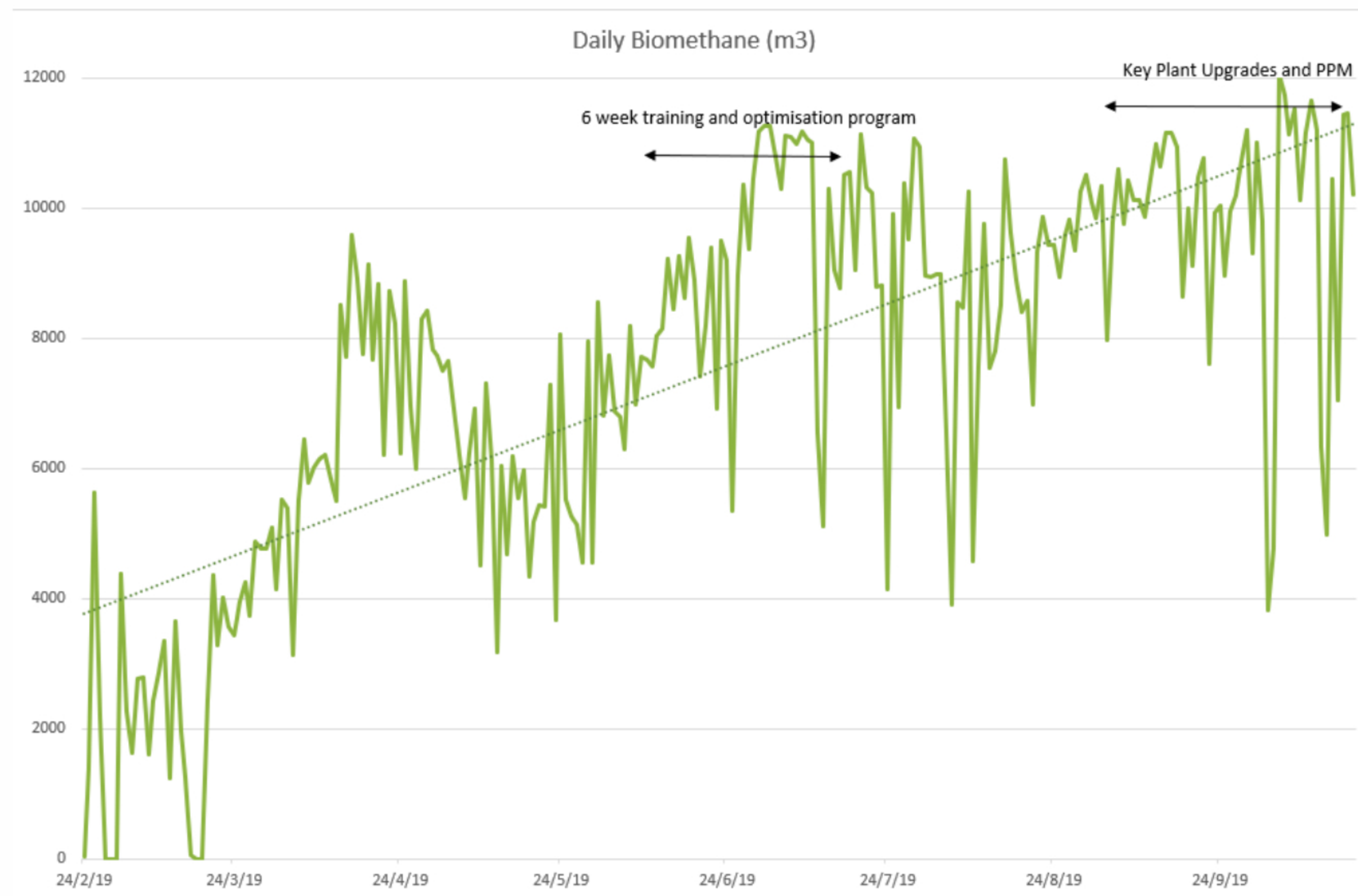
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# Case Study 3

A site based on the west coast of Ireland, and utilising biogas to biomethane conversion. The site required a great deal of retro-fitting of equipment after the original suppliers closed prior to commission. The site had additional management requirements including rainfall capture, digestate remove & process. issues.

The initial analysis of the site found the digesters to be highly inhibited. As you can see from the graph, over the time we worked onsite, we only increased the loading onto site slowly, they were already feeding high COD into the digesters, however they were not seeing the expected production from that COD. By reducing the inhibition within the system, we were able to realise the true gas potential of the COD being fed.

During our time on site, we were able to both significantly increase production but also steer the plant through key works on site, including works to the PURAC unit which directly affect the potential production capacity the site had. By effectively planning and managing such down-time events, we were able to optimise our outputs where possible, as well as resources such as consumables and feedstocks.



Trend Averages	W4G Start	W4G End	Increase
Biogas Produced m3	5110	16360	220%
COD Loading (T/day)	33.89	44.35	31%

For more information on case studies, please see our website

## Case Study 4

A 5.5MW anaerobic digestion site based in Southwest England, utilising predominantly food waste. Waste4Generation was invited to assist in management of the site due to significant production setbacks and lack of operational structure.

### Operational Issues identified

- Digester Gas bag tear
- PAS - false active and re-heat issues
- Digestate discharge - blocked due to struvite buildup.
- H<sub>2</sub>S Management issues
- lack of Technical analysis and training
- Excessive foaming and crusting issues
- Grit build up within tanks and digesters.
- WAMITAB cover

### Key achievements:

- 30% Increase in total biogas
- 111% Increase in total methane gas injection
- 29% increase in revenue
- 75% reduction in heating times
- 9% Electrical Increase
- 23% Reduction in feedstock Costs
- 17% Reduction in chemical consumables use.

