



Frequently Asked Questions

About Cog Moors Treatment Works Upgrade

What is the Cog Moors Treatment Works?

Cog Moors is a wastewater treatment works, first opened in 1990 to treat wastewater for the residents of Dinas Powys, Sully, Penarth, Barry and the west of Cardiff. It is situated on the A4055 between Barry and Dinas Powys.

What are Welsh Water doing in Cog Moors?

Welsh Water is investing **over £50m** to install an Advanced Anaerobic Digestion (AAD) plant as part of our upgrade to the treatment works onsite.

Why are Welsh Water building an AAD at Cog Moors?

Welsh Water is one of the largest energy users in Wales, operating and maintaining a network of water mains, sewers, sewage treatment works and reservoirs. With an annual energy bill of £44 million, we have been looking at ways to generate electricity on our sites and lower our costs.

We are committed to generating 30% of our own energy needs by 2020 and by 2050 we aim to become an energy neutral business by further investing in AAD, solar, hydro, wind and other renewable technologies.

The Cog Moors AAD site will help Welsh Water meet its 100GWh production of electricity renewable energy target by 2020.

What does an AAD plant do?

An AAD plant is a combined heat and power facility which produces biogas from the anaerobic digestion of sewage sludge collected from waste in our sewage system in the area. The anaerobic digestion of the sewage creates biogas which is then used to create electricity which we will then use on site.

How Does It Work?

The biogas is created by the anaerobic digestion of sewage sludge which is then used in gas powered engines to generate electricity which will be used to power the plant. The left over sludge becomes a biosolid “cake” and is collected and used as a sustainable soil enhancer and environmentally friendly alternative to chemical fertilisers.

What's the benefit of the AAD plant for Welsh Water?

The new AAD plant will produce 2.028MWh of electricity a year which will power the AAD plant and enable us to make the Cog Moors wastewater treatment works self-sufficient and carbon neutral site. As a not for profit organisation, we will then be able to reinvest more in keeping customer bills low and upgrading our assets across our operating areas.

What is the benefit is the AAD plant for the general public?

The new AAD plant is a more efficient and environmentally friendly way to treat wastewater for our customers in the Vale of Glamorgan. The AAD plant will help Welsh Water manage the effects on climate change, reduce our running costs and carbon footprint and help lower your bills.

During Construction Phase

What is the construction timeline?

Work began onsite in September 2018 and we will complete the construction of the new AAD plant in September 2020. The AAD will become fully operational in December 2020.

What will Welsh Water do to support the community during construction?

Welsh Water will keep the local community informed by writing regular update newsletters to raise awareness of recent and future developments onsite. We will keep the local media informed of any milestones via press releases in the local press and social media updates. Welsh Water will also be attending various local events whilst the new AAD plant is being built to promote the scheme.

What has Welsh Water done to minimise environmental issues during construction?

We have planted a number of trees to replace potential dormice habitat that was removed to enable the construction of the plant. We have also relocated existing shrubbery that was removed to elsewhere on site.

When clearing the area for the construction of the new plant, a shallow stream was found to be flowing through the area which we redirected around the planned construction area protecting the wildlife that utilises it.

Will there be more vehicles coming onsite during construction?

At various points during the construction phase, vehicles will be coming to site to deliver construction materials. However, to minimise traffic during the main construction work, our delivery drivers have been instructed to use the main roads to the site and avoid the villages of Dinas Powys and Sully. We also aim to avoid deliveries during peak hours wherever possible.

The majority of the AAD plant will be built offsite and delivered in small sections at different stages to the site and then constructed onsite by our specialist contractors. The deliveries are

made during off peak hours to avoid road disruption. Since September 2019, most of the larger sections of the AAD plant have already been delivered and have been constructed onsite.

Project Timeline

August 2019

- Refurbishment of existing concrete digesters and installation of new digesters begins.

September 2019 – June 2020

- Delivery and installation AAD plant

July 2020

- Start the commissioning of the new AAD plant.

September 2020

- Complete the construction of the new AAD plant.

December 2020

- Complete the testing the new AAD plant. Once testing is complete the new AAD plant will be ready to create energy from the waste we process onsite.

Post Construction

Once operational, will there be more vehicles coming and going to Cog Moors site?

Once operational, there will be a minor increase in vehicles to site, though the effect on the roads around site will be of no impact compared to the traffic at present.

Will there be an increase in noise from the site once the plant is operational?

We don't anticipate an increase in noise from the site once the plant is operational. The site is designed to stay below a certain noise level to mitigate any effect to the community. During commissioning we will monitor noise to evaluate whether we need to any further noise mitigation in the future.

Will there be any environmental or health impact from air pollution from AAD?

An air quality report was published based on the new plant going in and it concluded that there would be no impact to human receptors or habitats around the site.

Will there be any visual impact from the development of the AAD?

The AAD plant will not be seen from the A4055 and we have made provision to plant trees and other measures to remove the visual impact of the AAD plant and stack for those overlooking the site. The Cog Moors Waste Treatment site is overlooked by only a small number of smallholdings and neighbouring farms. For these residences any visual view of the

works at present will remain, however the new plant will be the same height as the existing digesters on site.

What will happen to the Cog Moors Education Centre?

The Cog Moors Wastewater has played host to a Welsh Water Education Centre since 2003. Due to construction of the AAD plant, we have had to temporary close the education centre. For the duration of the AAD construction, local school children have visited our Cilfynydd Discovery Centre instead. The Cog Moors Education Centre will reopen again during the 2020 school term time, once work is completed onsite.

As part of the upgrade, Welsh Water will be visiting local primary schools to educate local children on our work and educate children on water.