

NRW Permit - EPR/BB3599CW – Annual Report 2021

Introduction

Vantage Data Centers powers, cools, protects and connects the technology of the world's well-known hyperscalers, cloud providers and large enterprises. Developing and operating across markets in North America, Asia and Europe, Vantage has evolved data center design in innovative ways to deliver dramatic gains in reliability, efficiency and sustainability in flexible environments that can scale as quickly as the market demands.

The CWL 11 site is located upon the old LG site in Newport and has been operating successfully for over 10 years. It is a 750,000 sq. Ft, single framed building and is deemed the largest data center building in Europe.

The Permit EPR/BB3599CW was duly made on 22 April 2020 and issued to Next Generation Data Ltd and since 07 January 2021, the company has changed its name to Vantage Data Centers.

The Permit EPR/BB3599CW permits the following activities:

Table S1.1 activities		
Activity listed in Schedule 1 of the EP Regulations	Description of specified activity	Limits of specified activity
Section 1.1 A(1) (a) : Burning any fuel in an appliance with a rated thermal input of 50 megawatts or more	Operation of emergency standby generators burning diesel solely for the purpose of providing electricity to the installation in the event of a failure of supply from the National Grid comprising: 10 x 1.97 MWth 29 x 1.457 MWth 18 x 1.311 MWth 5 x 3.226 MWth 15 x 2.987 MWth standby generators with a total thermal input of 146.486 MWth 77 standby generators A1-A77. Also testing and maintenance operations	From receipt of raw materials to combustion of fuel and release of exhaust gases to atmosphere. Distribution of emergency standby electrical power to the data centre Electricity produced at the installation shall not be used to provide commercial services to the National Grid or Distribution Network Operator. The hours of operation for the testing of the stand-by diesel generators shall be restricted to 0900 to 1700 Monday to Friday and at no times on weekends or Bank or Public Holidays. No more than one cell shall be tested at a time and there shall be no overlapping of testing scenarios. Only one black building test (one cell tested) per day.
Directly Associated Activity		
Directly associated activity	Fuel storage - Fuel tanks provide generators with diesel fuel for the above schedule 1 activity	From receipt of diesel to despatch for use in emergency standby generators. All fuel storage tanks must be stored on hardstanding.
Directly associated activity	Surface water drainage system servicing area in which schedule 1 activity takes place	Input to site drainage system until discharged into wider business park drainage system.

In accordance with the permit conditions listed within Section 4.2.2, an annual report is required to be submitted:

A report or reports on the performance of the activities over the previous year shall be submitted to Natural Resources Wales by 31 January (or other date agreed in writing by Natural Resources Wales) each year. The report(s) shall include as a minimum

- (a) a review of the results of the monitoring and assessment carried out in accordance with the permit including an interpretive review of that data; and
- (b) the performance parameters set out in schedule 4 table S4.2, using the forms specified in table S4.3, of that schedule.

This document forms that report.

Monitoring

As stated within the Permit tables S3.1 and S3.2 there are no requirements for monitoring emissions and there is therefore no monitoring data to review.

Performance reporting

As outlined with Permit table S4.2 we have submitted the Annual report for the operational hours run and fuel usage in line with the permit requirements and using the reporting forms as stated in S4.3 of the Permit.

As reported previously the GF1 & GF2 generators accounts for time in 3-minute segments and we had to convert the time to be consistent with our approach.

For this reporting year we had two emergency scenarios:

- 20 July 2021 – Equipment failure within the GF14 plantroom causing the generator to run. This incident was deemed C3 level breach of permit.
- 31 October 2021 – A power dip on the National Grid within the Newport area.

Improvements

In accordance with the Permit table S1.3 we had various improvement conditions which we had to complete:

IC4 – The operator to produce a report outlining the maintenance and operating regime following the first year of permit operation. This report was submitted to the NRW on 12 July 2021.

In addition, we have decided to make some enhancements on site:

- Installing leak detection within the fuel pipe work systems which is interfaced to our SCADA system from an alarm prospective.
- Modified the GF1 and GF2 fuel pipe work, removing the single points of failure.
- Installed a remote filling points for the GF14 installation to reduce any future pollution instances.
- Our specialist supply chain have been instructed to install a weather station, interfaced with our SCADA system, as per the AQMP protocols and risk criteria, which in the event of emergency operation will provide an alarm if the protocols have been breached.

Environmental Incidents

We have had no reports of spillages, leaks, or incidents on site.

We have undertaken spillage training with our Facilities and Security teams.

Notifications and Compliance Assessment Reports

Please find the significant notifications and Compliance Assessment Reports listed below, to maintain the permit:

- 11/01/2021 - Part C0.5 Administrative variation of a standard bespoke permit - Company name change.
- Email 19/01/2021 – To close IC3.
- Email 13/01/2021 – Email change of company name.
- Email 29/01/2021 – Submission of the annual report (in line with Permit Table S4.2 requirements).
- Email 03/02/2021 - Responding to further information relating to the AQMP IC2.
- Email 10/02/2021 – Agreement on the GF1 & GF2 TX maintenance.
- Email – 08/03/2021 – Agreement on Break Fix Repairs email requests

- Email 04/03/2021 – Request for an annual report (as per condition 4.2.2 of the Permit) to be submitted.
- Email 08/03/2021 – GF1 & GF2 permission to run on Generators for essential maintenance on the transformers.
- 12/03/2021 – Submission of the 2020 Annual report.
- Email 18/03/2021 – Request to undertake a repair on 22nd March 2021 on GF24 Gen Set 9.
- IC4 12/07/2021 – Submission of IC4.
- Schedule 5 21/07/2021 – Email notification for the GF14 incident.
- CAR 02/09/2021 – Issued following site visit on 25 August 2021.
- 06/09/2021 – New Permit application submitted.
- Schedule 5 01/11/2021 – Email notification for the Grid Blip.
- Email 11/11/2021 – Response to query regarding the AQMP.
- CAR 17/12/2021 – Issued following the Power Blip on 01 Nov 2021.
- Email 19/12/2021 – Email regarding change of Fuel to HVO.

Complaints

We have had no complaints issued to the Vantage DC service desk.

Site audits

On 18/19 January 2022 we had a two-day ISO 14001 certification audit undertaken by a BSI environment specialist at the Newport facility. We were issued one minor observation; overall, it was a successful audit. The outstanding actions have been raised internally and tracked as part of our continuous improvement cycle to address and close out the action.

Conclusion

The pandemic is still challenging, we have experienced two schedule 5 notifiable incidents. Atkins Ltd as our specialist consultants continue to support us through

managing they permit and this will continue in to 2022. A new permit application was sent to the NRW on 06/09/2021 for another 125 generators to be added to the Permit.



Glenn Kitchen
Principle of Facilities
28 January 2022