Permitting Decisions- Bespoke Permit

We have decided to grant the permit for Wexham Road Datacentre (Building A and B) operated by Yondr Group Limited. The operator informed us in writing of a change of site name from LON1XO to Wexham Road Datacentre (Building A and B).

The permit number is EPR/NP3829SP

The application is for the operation of standby electricity generating combustion plant at a data centre in an industrial, commercial and residential area of Slough, approximately 1km north-east of Slough town centre at national grid reference SU 98768 80317.

The combustion plant comprises:

- 52 diesel fired Rolls Royce mtu 20V4000 DS3300 generators operating as standby back-up generators each with a thermal input of 5.67 MWth.

- The combined net rated thermal input of all diesel back-up generators on site is 295 MWth (52 x 5.67 MWth standby generators).

The default generator specification as a minimum for new plant to minimise the impacts of emissions to air oxides of nitrogen (NOx) is 2g TA-Luft (or equivalent standard) or an equivalent NOx emission concentration of 2000 mg/m3. The operator has confirmed that the 52 generators to be used at the data centre are emissions optimised 2g-TA Luft or US EPA tier 2 or equivalent.

Operation of the data centre combustion plant will be regulated as a Section 1.1 Part A (1) (a) activity under the Environmental Permitting (England and Wales) Regulations (EPR) 2016 for the burning of any fuel in an appliance with a rated thermal input of 50 or more megawatts (MW). The thermal input of the data centre is 295 MWth.

The generators will supply emergency power to the data centre in the event of National Grid failure. In non-emergency scenarios, they will be operated only for testing and maintenance purposes to an agreed schedule. They will not provide any electricity themselves to the National Grid and all electricity generated will be used within the data centre.

We consider in reaching that decision we have taken into account all relevant considerations and legal requirements and that the permit will ensure that the appropriate level of environmental protection is provided.

Purpose of this document

This decision document provides a record of the decision-making process. It:

- summarises the decision making process in the decision considerations section to show how the main relevant factors have been taken into account
- highlights key issues in the determination
- shows how we have considered the consultation responses

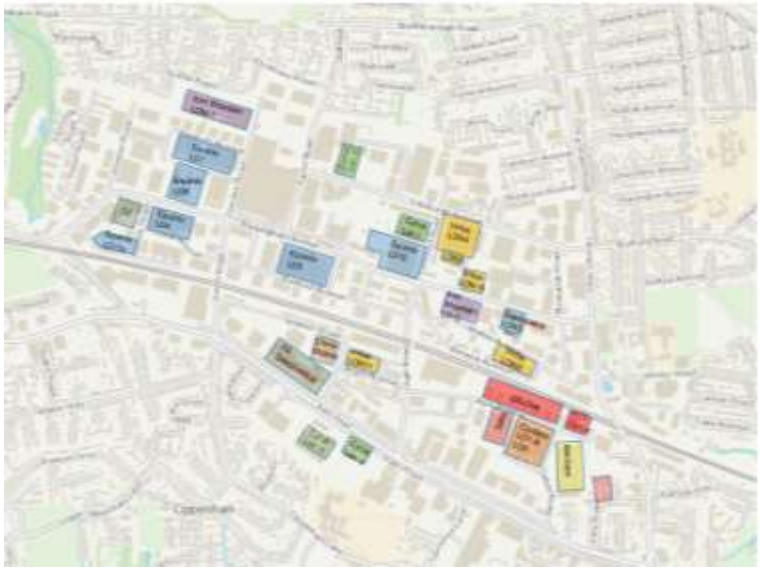
Unless the decision document specifies otherwise we have accepted the operator's proposals.

Read the permitting decisions in conjunction with the environmental permit.

Key issues of the decision

Nature of the site

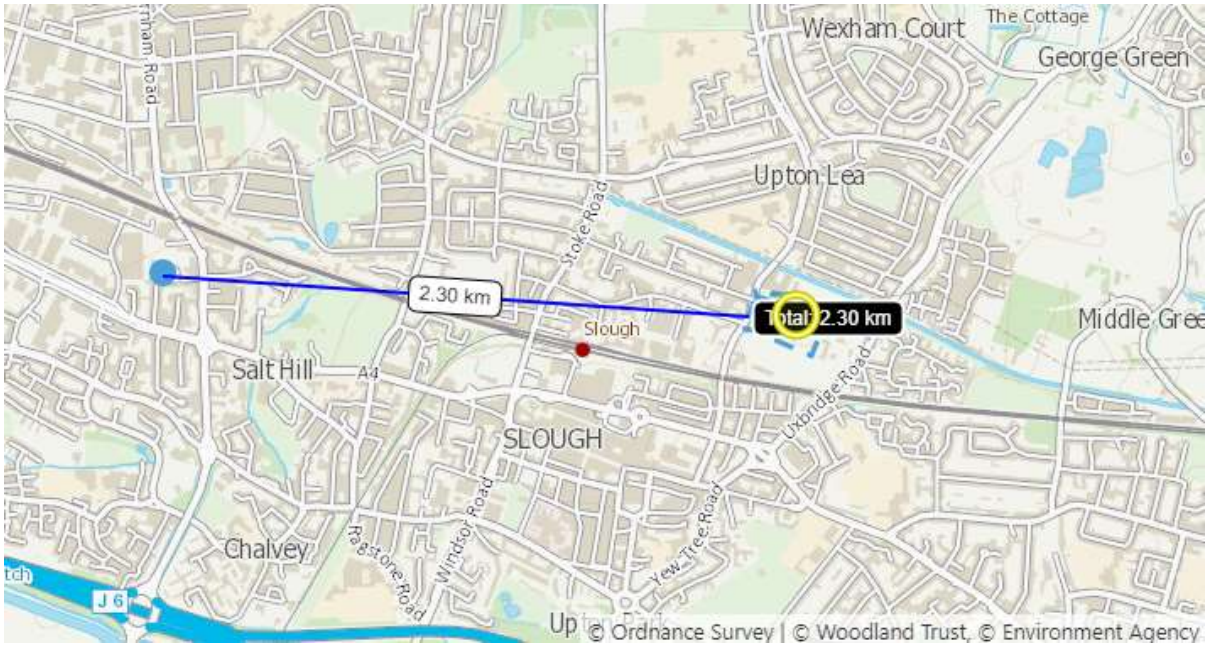
The operator applied to permit Wexham Road Datacentre (Building A and B) in Slough. There are currently a significant number of data centres located in one place in the Slough area and as of August 2022 there were 26 data centres all located in the same area as shown below.



SLOUGH DATACENTERS
August 2022

Operator	Address	Size
Equinix LD4	2 Buckingham Avenue	66
Equinix LD5	8 Buckingham Avenue	121
Equinix LD6	352 Buckingham Avenue	52
Equinix LD7	1 Banbury Avenue	109
Equinix LD10	13 Liverpool Road	71
Equinix LD11	756 Henley Road	96
NTT GDC EMEA Cyrion	665 – 670 Ajax Avenue	35
CyrusOne London i	12 Liverpool Road	32
CyrusOne London iii	700 Stirling Road	58
CyrusOne London iv	225b Bath Road	100
CyrusOne London V	225c Bath Road	100
Cyxtera LO1 & LO5	628 – 635 Ajax Avenue	88
Virtus Lon4	14 Liverpool Road, Slough	60*
Virtus Lon3	Liverpool Road	60*
Virtus Lon9	470-474 Mallon Avenue	132
Virtus Lon10	Buckingham Avenue	60*
Virtus Lon11	Ipswich Road	89
Iron Mountain LON-1	724-729 Dundee Road	
Iron Mountain Amazon LON-2	110 Buckingham Avenue	151
GB-One	Ajax Avenue	186
Backspace LON3	115 Buckingham Avenue	
China Mobile	536 Ipswich Road	
Barclays Datacentre	572 Galvin Road	
O2 Telephonica	260 Bath Road	
O2	354 Buckingham Avenue	
UCB	Ajax Avenue	
Total		1,686

If the National Grid was to fail in this area, then the majority of the data centres connected to the same grid would go offline and their back-up diesel generators would be put into action. However, this particular data centre is located 2.3km East of this cluster of data centres. Therefore, the in-combination effect is not of concern. No abatement systems have been applied and we are satisfied that this data centre is far enough away from the existing data centres for the engines not to require abatement at this stage. However, the data centre may need to prepare to have abatement fitted (SCR) in the future.



Best Available Techniques (BAT) Assessment – Emergency Power Provision on Site

Technology

The operator carried out a BAT assessment of the viable technologies capable of providing emergency power at the data centre.

They considered the following technologies:

- Combined Cycle Gas Turbines (CCGT)
- Open Cycle Gas Turbines (OCGT)
- Aero Derivative Gas Turbines
- Gas Engines
- Diesel Engines

They compared these technologies against the following considerations:

- Start-up time
- Reliability
- Independence of off-system services
- Causing the least environmental impact

The operator demonstrated there were significant reasons for not selecting CCGT, OCGT, Aero Derivative Gas Turbines and Gas Engines.

CCGTs - have lengthy start up times and size limitations; the efficiency of steam cycles being relatively low at small capacity and the overall system complexity being more appropriate to larger size installations.

OCGTs - have high capital investment, operating and maintenance costs and lower thermal efficiencies than can be achieved by CCGTs and gas engines.

Aero Derivative Gas Turbines - can achieve short start-up times; however, they suffer from relatively low efficiencies compared to engines.

Gas Engines - have higher thermal efficiencies than diesel engines and OCGTs. They have short start up times and are thus more suitable for the provision of emergency/ standby power. However, under standby conditions, higher emissions are produced, including NOx, sulphur dioxide (SO2) and Particulate Matter as soot. Gas engines benefit from lower NOx emissions than diesel engines and can utilise gas delivered by the national gas grid, avoiding the additional transport and fuel storage issues associated with diesel systems.

Diesel Engines - have short start up times and good independent performance reliability due to the on-site storage of diesel fuel in sufficient quantities, which can be managed and controlled by the facility, with the option for fuel oil to be sourced from more than one supplier for delivery to the site. Diesel engines do have a large number of moving parts which can be subject to failure and require regular ongoing maintenance to ensure reliability, however these moving parts can be readily obtained and replaced and are typically included as part of the service agreement with the generator vendor. When compared to gas engines, diesel engines produce polluting emissions to air, most notably NOx and particulate matter, which can impact local air quality if operated for prolonged periods of time.

Fuel

The operator further justified the choice of low sulphur diesel over gas as a fuel for the engines because it allowed the required level of resilience at the data centres. The storage of sufficient gas on-site as a fuel source was not possible due to restraints on available space. Additionally, there were increased health and safety risks associated with such storage. There would be a reliance on an off-site supply of gas, which would have to be provided to the site via a pipeline operated and maintained by a third party. Should this supply of gas be interrupted there would be no emergency back-up generation for the site, and as such would not meet the resilience requirements of the facilities.

From the options considered, the operator therefore demonstrated that low sulphur diesel engines were BAT to provide emergency/ standby power for the data centre on the basis that:

- Proven technology for providing reliable power supply.
- These engines provide a fast response speed to the required load; as stated previously, fast start-up of standby generators for data centre is fundamental as an almost instantaneous supply of electricity is required in the event of power loss to the site.
- Diesel engines have low maintenance costs and replacement parts are readily available.

- The need for a reliable supply of fuel (diesel) is essential to ensure reliance, the on-site storage of sufficient quantities of diesel fuel provides the required level of independent performance reliability.

- Space requirements.

Based on this assessment and the fact that diesel generators are presently a commonly used technology for standby generators in data centres Emergency backup diesel engines on installations: best available techniques (BAT) - GOV.UK (www.gov.uk) we accept that low sulphur diesel fired generators can be considered BAT.

Managing emissions

Point Source Emissions to Air

The operator has taken measures to minimise emissions from the diesel generators both in emergency and test/ maintenance operation.

The Data Centre FAQ Headline Approach v21 specifies the BAT emissions specification for new diesel-fired reciprocating engines as 2g TA-Luft (or equivalent standard). This is the European standard that we have concluded that we will use to infer what BAT is for site.

The operator has confirmed that the 52 generators that will be operated at the data centre will be Rolls Royce mtu 20V4000 DS3300 engines, and that these engines will conform to emissions standards 'TA-luft 2g' or Tier II USEPA.

The Data Centre FAQ v21 states that Tier II USEPA is the minimum appropriate for new generators, as such the Rolls Royce mtu 20V4000 DS3300 are considered to be compliant to deliver NOx releases of no greater than 2,000 mg/m3.

Aqueous Releases from Site

The data centre has separate foul and surface water drainage systems.

Point Source Emissions to Foul Sewer

The operator has confirmed that the installation will be connected to the public foul sewerage network operated by Thames Water Limited. The operator has confirmed that all discharges to foul sewer will comprise of sanitary foul water (sinks, toilets, cleaning water, etc.); operation of the data centre will not result in the generation of trade effluent.

There are no discharges to foul sewer within the gantry areas where the generators and day tanks are located.

Point Source Emissions to Surface Water

The operator has confirmed that the Installation will be connected to the public surface water drainage/ sewer network operated by Thames Water Limited.

The surface water drainage system at the data centre will accept surface water runoff from the area where the back-up generators, the fuel receiver station and the fuel road tanker off-loading area will be located, along with runoff from the building roof area and other hard surfaced areas of the wider site. Surface water runoff collected will drain via an oil interceptor (9,600 litre capacity Class 1 full retention interceptor).

Following the interceptor, the surface water runoff will drain into the existing surface water drainage system serving the wider site area. The surface water point source discharge point into this connection is referenced as SW-1 on the Plan in Schedule 7 of the permit. The surface water

then discharges into the public surface water sewer system operated by Thames Water Limited, the connection for which is in Uxbridge Road. The surface water drainage ultimately discharges to the culverted Datchet Brook which is located along the eastern boundary of the site along the base of the embankment of Uxbridge Road and then into the River Thames.

The interceptor will be fitted with an automatic closure device which will activate on detection of diesel; this device will be activated by its integral detection mechanism. The system will also be fitted with a wired interface to the building's Building Management System (BMS). An audible alarm system for oil levels will be also installed which will connect to the data centre BMS. In the event of an unplanned release of diesel, the closure device will automatically isolate the interceptor preventing the discharge of diesel contaminated surface water runoff to the wider surface water sewer and the alarm will notify key data centre staff of the issue, via the BMS.

The interceptor will be emptied at least annually and subject to regular inspection and integrity testing.

Procedures will be developed and included within the site's environmental management system (EMS) for the management of surface water runoff and for the management and maintenance of the interceptor; relevant staff will be suitably trained in these procedures.

Point Source Emissions to Groundwater

The operator has confirmed that there will be no point source emissions to groundwater from the Installation.

As the operator has confirmed that no process effluent or contaminated emissions would be discharged from the site to sewer or surface water drainage, we accept that Application Form B6 and consultation with our water quality specialists is not needed.

Point Source Emissions to Land

The operator has confirmed that there will be no point source emissions to land from the Installation.

Air Quality

For combustion applications, we normally require the operator to submit a full air dispersion model as part of their application. Air dispersion modelling enables the process contribution (PC) to be predicted at any environmental receptor that might be impacted by the plant.

Once short term (ST) and long term (LT) PCs have been calculated in this way, they are compared with Environmental Standards (ES). ES are described in our web guide 'Air emissions risk assessment for your environmental permit'.

Our web guide sets out the relevant ES as:

- Ambient Air Directive Limit Values
- Ambient Air Directive and 4th Daughter Directive Target Values
- UK Air Quality Strategy Objectives
- Environmental Assessment Levels

Where an Ambient Air Directive (AAD) Limit Value exists, the relevant standard is the AAD Limit Value. Where an AAD Limit Value does not exist, AAD target values, UK Air Quality Strategy (AQS) Objectives or Environmental Assessment Levels (EALs) are used. Our web guide sets out EALs which have been derived to provide a similar level of protection to Human Health and the Environment as the AAD limit values, AAD target and AQS objectives. In a very small number of

cases, e.g., for emissions of lead, the AQS objective is more stringent that the AAD value. In such cases, we use the AQS objective for our assessment.

AAD target values, AQS objectives and EALs do not have the same legal status as AAD limit values, and there is no explicit requirement to impose stricter conditions than BAT in order to comply with them. However, they are a standard for harm and any significant contribution to a breach is likely to be unacceptable.

PCs are screened out as Insignificant if:

- The long-term PC is less than 1% of the relevant ES; and
- The short-term PC is less than 10% of the relevant ES.

The long term 1% PC insignificance threshold is based on the judgements that:

- It is unlikely that an emission at this level will make a significant contribution to air quality;
- The threshold provides a substantial safety margin to protect health and the environment.

The short term 10% PC insignificance threshold is based on the judgements that:

- Spatial and temporal conditions mean that short term process contributions are transient and limited in comparison with long term process contributions;
- The threshold provides a substantial safety margin to protect health and the environment.

Where an emission is screened out in this way, we would normally consider that the operator's proposals for the prevention and control of the emission to be BAT. That is because if the impact of the emission is already insignificant, it follows that any further reduction in this emission will also be insignificant.

However, where an emission cannot be screened out as insignificant, it does not mean it will necessarily be significant.

For those pollutants which do not screen out as insignificant, we determine whether exceedances of the relevant ES are likely. This is done through detailed audit and review of the operator's air dispersion modelling taking background concentrations (Process Contribution + Background concentration = Predicted Environmental Concentration (PEC)) and modelling uncertainties into account. Where an exceedance of an AAD limit value is identified, we may require the operator to go beyond what would normally be considered BAT for the Installation or we may refuse the application if the operator is unable to provide suitable proposals. Whether or not exceedances are considered likely, the application is subject to the requirement to operate in accordance with BAT.

This is not the end of the risk assessment, because we also take into account local factors (for example, particularly sensitive receptors nearby such as a SSSIs, SACs or SPAs). These additional factors may also lead us to include more stringent conditions than BAT.

If, as a result of reviewing of the risk assessment and taking account of any additional techniques that could be applied to limit emissions, we consider that emissions would cause significant pollution, we would refuse the Application.

Operator's assessment of potential impact on air quality:

The operator submitted an Air Emissions Risk Assessment which considered the potential impacts of the principal pollutants of concern with respect to emissions to air from low sulphur diesel oil generators. The principal pollutants of concern are nitrogen dioxide (NO2) on human health and nitrogen oxides (NOx) and nutrient and acid nitrogen deposition on ecological receptors within the defined screening distances.

They considered 32 human health receptors including residential properties, schools, colleges and care centres and 2 Air Quality Management Areas (AQMAs).

They considered the following protected European sites:

- Burnham Beeches (Special Area of Conservation (SAC))
- Windsor Forest & Great Park (SAC)
- South West London Waterbodies (Special Protection Areas(SPA))
- South West London Waterbodies (Ramsar Site)

They considered the following protected UK sites:

- Black Park (Site of Special Scientific Interest (SSSI)) – not included within our habitats screening.
- Stoke Common (SSSI) – not included within our habitats screening.

and the following local sites:

Local Nature Reserves (LNR):

- Herschel Park

Local Wildlife Sites (LWS):

- Railway Triangle (off Stranraer Gardens)
- Upton Court Park Wetland

The data centre is not situated in an Air Quality Management Area (AQMA), but there are AQMAs within 2km of the site. The closest AQMA is Slough AQMA No. 4. This is located 370m south of the data centre.

The operator has considered the following testing scenarios (confirmed via email dated 15th and 25th September 2023) and emergency scenario (presented in 4.3.1 of their Air Quality Assessment (AQA)):

Monthly testing: Monthly testing for a duration of 15 minutes. One generator is being tested onload sequentially (one-at-a-time) while offload testing may be undertaken on another generator. The maximum number of generators being tested at any one time shall be two (one onload and one offload). This onload/offload testing will not total more than 3 hours per generator per year.

6 monthly testing: 6 monthly (biannual) testing for a duration of 6 hours with the maximum number of generators being tested at any one time being 2 (one generator onload and one generator offload). This onload/offload testing will not total more than 12 hours per generator per year.

Emergency: All generators operating concurrently for a maximum duration of 92 hours at 100% load, plus 15 hours of routing testing (totalling 107 hours).

We note that the operator has modelled an emergency scenario of 107 hours; however, our standard emergency scenario is 72 hours (hence we have conducted sensitivity to this).

The operator modelled the above three scenarios as Standalone Operations (i.e. Buildings A and B Only) and In-Combination Operations (i.e. Buildings A, B and Future Phase Building C).

They made the following assumptions regarding the maintenance and operational scenarios to ensure a conservative assessment was undertaken:

- To provide a conservative assessment of annual mean NO2 concentrations, a modelled baseline concentration (without generators) was used as the background value based on results of the Environment Statement in the ES AQ document (Chapter12).

- To provide a conservative assessment of predicted environmental concentration (PEC), the baseline annual mean NO2 and PM10 data from the traffic modelling assessment, completed as part of the Environmental Statement air quality assessment (ES AQ document), was adopted as the baseline data.

- To provide a conservative assessment of PEC the process contributions (PC) from the data centre generators modelled in this study was combined with the modelled concentrations taken from the ES AQ document, inclusive of Defra background, baseline traffic emissions, in addition to traffic contributions associated with the proposed development included in the planning application.

- The emergency operations of 92 hours are considered highly unlikely to occur, especially in consecutive years and thus the impacts are thought to be conservative.

- The results presented for each pollutant and scenarios represent the maxima from modelling with five separate years of meteorological data.

Their conclusions were:

Impact of NO2 on Human Health Receptors

Most likely routine maintenance/ testing during

- **Annual Mean (Standalone scenario) -** The PC is below 1% of the annual mean objective at all modelled receptors, except for one receptor (R2), where the PC is 1.4% of the objective. However, the PEC at R2 (26.4 µg/m3) is below the objective (40µg/m3). The PEC at all receptors do not exceed the annual mean NO2 objective of 40µg/m3.

- **Annual Mean (In-combination scenario) -** PC concentrations at 10 of the 34 modelled receptors exceed the 1% criterion, but the PEC remains below the objective at all receptors. The PC at each of the remaining 24 modelled receptors is below 1% of the objective.

- **1-hour mean** - Statistical analysis using hypergeometric distribution was undertaken for the 15 hours of testing and maintenance operations. For the ‘Standalone’ and ‘In-combination’ scenarios, the probability of exceeding the NO2 1-hour mean air quality objective is less than 0.01% at all modelled receptors.

Worst case electrical grid outage of 92 hours

- **Annual mean** - In both the 'Standalone' and 'In-combination' scenarios, the maximum PC is above 1% of the objective (40µg/m3), being exceeded at 20 and 21 of the modelled receptors, respectively. However, the PEC at each of the modelled receptors does not exceed the annual mean NO2 objective of 40µg/m3 in either operating scenario.

- **Annual mean** - Impacts are dominated by the theoretical emergency operations, with impacts from the testing operations representing <0.6µg/m3 at all modelled receptors. Furthermore, the emergency operations are considered highly unlikely to occur, especially in consecutive years and thus the impacts are conservative.

- **1-hour mean** - Statistical analysis using hypergeometric distribution was undertaken for the total 107 hours of operations. For the 'Standalone' and 'In-combination' scenarios, the probability of exceeding the NO2 1-hour mean air quality objective is less than 0.01% at all modelled receptors.

Impact of other Pollutant Concentrations on Human Health Receptors

The impacts of PM10, SO2 and CO were modelled.

Most likely routine maintenance/ testing during standalone operations

The results demonstrate that the PC at all receptors is modelled to be below 1% of respective air quality objectives. Similarly, the PEC at each modelled receptor, and for each pollutant, does not exceed the relevant objective.

Worst case electrical grid outage of 92 hours during standalone

The results demonstrate that the PC at all receptors is below 1% of the respective objectives except for 24-hour mean SO2 concentrations and 8-hour rolling-average CO concentrations, where exceedances of the 1% criterion are predicted. However, all PECs do not exceed the relevant objectives.

Impacts on Ecological Receptors

Most likely routine maintenance/ testing

- **Annual mean** - The results of the dispersion modelling show that there is a negligible impact on annual mean NOx concentrations, nitrogen deposition, and acid deposition during testing operations, applicable to both the 'Standalone' and 'In-combination' scenarios. Therefore, the focus of the assessment on annual mean concentrations and deposition rates is on the outputs of the emergency operations scenarios.

- **Daily mean** - As testing is undertaken for a duration significantly lower than the daily averaging period, the impacts associated with the 15-hour routine testing and maintenance schedule on Daily Mean NOx concentrations for both the 'Standalone' and 'In-combination' scenarios will be insignificant.

Worst case electrical grid outage of 92 hours

- **Annual mean** - The annual mean NOx results demonstrate that impacts remain below 1% of the critical level at all European designated sites and SSSIs in the 'Standalone' and 'In-combination' scenarios. The 1% criterion is exceeded at one local designated site (Herschel Park LNR) in the 'Standalone' scenario and at three local sites (Herschel Park LNR, Railway Triable LWS, and Upton Court Park Wetland LWS) in the 'In-combination'

scenario. However, the maximum PC (1.8% of the critical level at Herschel Park LNR) is substantially below the respective criterion for local designated sites (i.e.<100% of critical level threshold).

- **Daily mean** - The daily mean NOx concentrations are predicted to exceed 1% of the daily assessment level at the European sites and SSSIs during the 'Standalone' and 'In-combination' scenarios (insignificance is assessed against 10% for daily NOx not 1%). However, none of these receptors are predicted to exceed the assessment level of 200µg/m3. The PEC at each European site was modelled to be below 70% of the assessment level except for 3 days (Black Park SSSI) across all five modelled years (2017-2021), based on continuous operation in the 'In-combination' scenario, with a maximum PEC equating to 74% of the assessment level. The hypergeometric distribution analysis has demonstrated that the probability of exceedance, based on emergency operations, is 0%. As such, the impact of generator emissions on daily mean NOx concentrations at European sites and SSSIs is insignificant.

- **Daily mean** - With respect to local ecological sites, the daily mean NOx concentrations are predicted to exceed the assessment level at all three sites in the worst modelled meteorological year (2018) in both the 'Standalone' and 'In-combination' scenarios. Furthermore, the probability of exceedance at each local site is greater than 10% (standalone) and 30% (in-combination), respectively. However, given the small number of exceedance days (<7% of days per annum), the conservative approach to modelling (continuous operation at 100% load and low likelihood of emergency operations occurring), the relatively low sensitivity of these local sites to changes in air pollution, the impacts of emissions from the generators on this pollutant and average period are considered to be insignificant.

- **Annual mean** - The annual nitrogen deposition and acid deposition impacts for 'Worst-Case' operation in the 'Standalone' scenario and 'In-combination' scenario are modelled to be negligible at all receptors. The nitrogen deposition PC at receptor E7 (Herschel Park LNR) equates to 1.1% of the critical load. However, Herschel Park LNR does not have a critical load assigned to it and was conservatively assessed based on the critical load equivalent to Burnham Beeches SAC. Given that the emergency operations are considered highly unlikely to occur, especially in consecutive years, the predicted PC is considered to represent an insignificant impact.

Overall

The operator confirms that all modelled impacts at human and ecological receptors are predicted to be insignificant within the context of the respective assessment criteria, under the 'Most-Likely' and 'Worst-Case' operations, within both the 'Standalone' and 'In-combination' scenarios. Although the probability of exceedance of the daily mean NOx assessment level is greater than 10% (standalone) and 30% (in-combination) at local ecological sites within the study area, the impact is considered to be insignificant due to a combination of the small number of exceedance days, the conservative approach to modelling (continuous operation at 100% load, low likelihood of emergency operations occurring), and the relatively low sensitivity to changes in air pollution at these local sites.

Therefore, it is considered that the overall impact of the proposed development on air quality is not significant.

These modelled electrical outages are most probably worst case as the operator stated in their Supporting Document that, 'The electricity supply arrangements for the site shall be dual redundant 132kV connections, with each supply sized and rated to provide the full site supply requirements if required due to a fault or loss of the other supply. This provides security and reliability to the incoming connections. In normal scenario, each connection will provide 50% of

the supply, however each supply will automatically take 100% of the load in a fault or loss of supply event.'

The operator also carried out further research into National Grid outages in England and stated in their BAT Assessment that, 'The overall reliability of supply for the National Grid Electricity Transmission (NGET) System during 2019 – 2020 was 99.99997%.'

Environment Agency review of operator's assessment of potential impact on air quality

We have carried out our own audit by means of detailed check modelling and sensitivity analysis on the air quality and habitats assessments presented by the operator which included:

- Analysis and evaluation of uncertainties in the operator's representation of scenarios and buildings.
- Including additional receptor locations along Hazelmere Road and elevated receptors at height to account for the locations of exposure at the new residential development to the south of the site.
- Our own calculation of number of exceedance hours and probability of these exceedances coinciding with worst meteorological conditions for the emergency scenario.
- Our own lower NOx to NO2 conversion ratio of 15% for human health receptors within 150 m of combustion sources.
- Predictions have been assessed against the 1-hour CO and NO EALs, and NO2 AEGLs.
- We assessed a 72-hour emergency scenario.

As a result of our checks, for the testing scenarios, we found that although we do not necessarily agree with the operator's numerical predictions:

- We agree that some LT NO2 PCs are not insignificant. We found that the LT PCs for NO2 are not insignificant for some of the new residential receptors to the south of the site, i.e., PCs are above 1%. When considering backgrounds, PECs are below the ES.
- We agree that likelihood of exceedance of the ST NO2 ES at sensitive human receptor locations is highly unlikely (less than 1%, using statistical methods (hypergeometric distribution). We note that as testing is for 15 hours per year, it is not possible for the ST NO2 ES to be exceeded at sensitive human receptor locations more than the 18 times allowed per year.
- The maximum LT and ST NO PCs are insignificant (i.e., below 1% and 10%, respectively).
- There is no predicted exceedance of the NO2 AEGLs at the modelled sensitive human health receptor locations.

As a result of our checks for a 72-hour emergency scenario, we found that although we do not necessarily agree with the operator's numerical predictions:

- We agree that some LT NO2 PCs are not insignificant. We found that the LT PCs for NO2 are not insignificant for receptor locations on Hazelmere Road and the new residential receptors i.e., PCs are above 1%. When considering backgrounds, PECs are below the ES.
- As a result of our checks for a 72-hour (as required by us) and 107-hour emergency (i.e., the duration assessed by the operator) scenario, we found that we do not agree that the likelihood of exceedance of the ST NO2 ES is highly unlikely, i.e., less than 1% using statistical methods (hypergeometric distribution). We found the likelihood of exceedance could be much higher at receptor locations associated with high uncertainty within the building cavity and wake region.
- The maximum LT NO PCs are insignificant (i.e., below 1%). The maximum ST NO PCs are not insignificant (i.e., above 10%) but PECs do not exceed the ES.

- There is possible exceedance of the NO2 10-minute AEGL-1 at the some of the new residential development receptor locations during the 72-hour emergency scenario. There are no other predicted exceedances of the NO2 AEGLs for the 72-hour emergency scenario at sensitive human health receptor locations.

We note that the highest reported PCs for human health are located at the nearest sensitive receptors approximately 100-200 m from the generators, presented as R2 (Hazelmere Road) and PR1 to PR10 (new residential development). The proximity of these sensitive receptors to the emission sources and nearby buildings introduces a high degree of uncertainty, due to the more turbulent flow regimes created under these circumstances.

As a result of our checks, for the testing and 72-hour emergency scenarios at ecological receptors, we found that although we do not necessarily agree with the operator's numerical predictions:

- We agree that the annual NOx PC is below 1% of the critical level for all SSSI, SAC, SPA and Ramsar sites and below 100% for all the local nature sites.
- For the 72-hour emergency scenario, there are some exceedances the daily critical level of 75 µg/m3at some habitat sites, potentially exceeding the daily critical level of 200 µg/m3 (the area is likely to be AOT40 ozone compliant8) at some LWSs. For the 72-hour emergency scenario, we cannot rule out an exceedance of the daily NOx critical level.
- The nutrient nitrogen and acid deposition PCs are below 1% of the critical load for all SSSI, SAC, SPA and Ramsar sites and below 100% for all the local nature sites and therefore, insignificant.

In summary the operator concludes that no significant effects are likely at human health and ecological receptors.

- As a result of our checks and sensitivity analysis, we found that we do not necessarily agree with the operator's numerical predictions for human health, but we do agree with their conclusions for the testing scenarios. For the emergency scenario, we do not agree that the likelihood of exceedance of the short-term NO2 ES is highly unlikely, i.e., less than 1%. We found the likelihood could be much higher at receptor locations associated with high uncertainty within the building cavity and wake region. However, there should be no exceedance provided that the risk of power outage remains low.

- We also found possible exceedance of the NO2 10-minute AEGL-1 at some of the new residential development receptor locations for the emergency scenario.

- For ecological sites, we do not necessarily agree with the operator's numerical predictions, but we do agree with their conclusions, although we cannot rule out an exceedance of the daily NOx critical level at some local nature sites during the 72-hour emergency outage scenario if power outage is prolonged.

- However, we note the conservative aspects of the assessment approach taken by the operator as they state emergency operations are highly unlikely to occur and note the overall reliability of supply during 2019 – 2020 was 99.99997%. Therefore, the likelihood of a 72-hour power outage is low, which would deem exceedances unlikely.

We, therefore, agree that the operators' conclusions from the human health assessment and the assessment of ecological receptors can be used for permit determination.

Protection against Power Outage and Minimisation of Generator Operation

The largest risk of gaseous emissions from the site occurring which could impact human health or ecological receptors would be if the diesel generators had to operate for any significant period of time following a National Grid failure.

To address this scenario and minimise emissions, the operator:

- Has designed the data centre with a generator installation which shall deliver N resilience with the system design being distributed redundant to create a n+1 resilience. The associated control systems; all ancillary electrical supplies; the local fuel storage for each generator and associated power and control systems are to be of an N configuration. The generator starting system shall be of a 2N design.

- Has designed the data centre so that the generators will be configured for resilience with one redundant unit per four, i.e each group of four generators will be able to tolerate a single generator failure and retain support to its load. This can be expressed 6(n+1) where N=3.

- Has designed the data centre with a separate facilities block which is supported by two generators, each of which could support the full load in the event of failure to the other, N+N configuration.

- Has developed multiple electrical feed connections. The electricity supply arrangements for the site include dual redundant 132kV connections, with each supply sized and rated to provide the full site supply requirements if required due to a fault or loss of the other supply. In normal scenario, each connection will provide 50% of the supply, however each supply will automatically take 100% of the load in a fault or loss of supply event.

- Has designed the power distribution on site to be safe, reliable, redundant, robust, efficient and have in-built redundancy.

- Has designed the data centre with two separate supply connections to the site. Therefore, in the event of a loss of supply from a single source, 50% of the site is still on the alternative source, while the remaining 50% is on back-up emergency generators temporarily until the site's own distribution system can be rearranged to resume supply from the available source. This arrangement stays in place until the failed source has restored supply, at which point power returns to the two supply sources.

- Maintains and undertakes a regular and robust infrastructure inspection, preventative maintenance and testing programme involving both their staff and various specialist vendors.

- Uses an integrated Building Management System (BMS) and an Electrical Power Monitoring System (PMS): these are additional control tools which are used to monitor physical assets and equipment status and performance. The BMS/ PMS presents real time and historical data, providing valuable performance metrics such as running time, output functions etc., ensuring that the data centre assets and plant are functioning correctly. Alarms are set up in the BMS/ PMS to alert the Operations and Environmental teams of any issues with systems and equipment.

- Maintains robust site security systems such as security fencing to restrict access and will have secure access arrangements to minimise the risk of any form of unauthorised access that could affect operation and cause the need for the generators to be operated. The data centre will also be manned 24 hours a day by security personnel.

Containment and Prevention of Pollution to Ground, Surface water and Groundwater

Fuel Storage, Distribution and Containment

The operator has demonstrated that there are robust systems in place for the containment of fuel.

Diesel will be stored at the data centre in day (belly) tanks which are integral to the individual generator.

Fuel storage - There are 26-day tanks per building (2 x buildings) on site each containing 21,747 litres of diesel, mounted below each generator allowing for 24 hours of storage for each generator set. Therefore, there is a total of 1,130,844 litres of diesel (52 generators @ 21,747 litres = 1,130,844 litres) in the day tanks.

Each building (2 x buildings) has a receiver tank.

Fuel storage - There are 2 receiver tanks on site and each receiver tank has approximately 1,500 litres capacity. Therefore, there is a total of 3,000 litres of diesel (2 tanks @ 1,500 litres = 3,000 litres) stored in the receiver tanks.

	Building A		Building B	
No. of Diesel Generators	26No.	24No. 2400kW (N=18) Data Hall 2No. 2400kW (N=1) Facility	26No.	24No. 2400kW (N=18) Data Hall 2No. 2400kW (N=1) Facility
Generator break tank capacity	21,747L Brimful and 16,551L Useable		21,747L Brimful and 16,551L Useable	
Receiver Tank PLC (Fuel System)	1No. 1,500 litres		1No. 1,500 litres	

The operator confirms that a maximum volume of 1,133,844 litres of diesel can be stored at the site, although the normal working maximum volume will be just under 860,000 litres.

Containment Protection - Generator Day Tanks (Belly Tanks)

The fuel storage for the two Data Halls (Buildings A & B) consists of 52 x 21,747 litre generator belly tanks (26 tanks per building). A double skinned bulk fuel storage tank shall be provided per generator set, mounted to the underside of the enclosure and shall be new, unused and shall not be galvanised. The tanks shall be sized to store a minimum of 24 hours fuel storage (21,747 litres brim-full and 16,551 litres useable).

The day tanks will have the following protection measures to ensure no loss of containment:

- Each fabricated steel fuel tank is double skinned.
- Fuel tanks will comply with the Oil Storage Regulations - The Control of Pollution (Oil Storage) (England) Regulations 2001.
- The generator belly tanks are designed to British Standard BS799 Part 5 2010 (Oil Burning Equipment Carbon Steel Oil Storage Tanks) and have 110% containment.
- Each tank with pipework is within the bunded generator canopies - The tanks are designed and constructed to BS 799 Part 5 Type: J which is the British standard for fuel tank construction, this is also in line with CIRIA REP R 163 Construction of bunds for oil storage tanks.
- Fuel tanks are painted/ coated to minimise corrosion.
- Pipework is single skinned and will conform to UK and European Standards.

- The installation will comply with the Environment Protection Act 1990, and relevant UK standards ENS90, etc. and BS EN 12285 for fabricated steel tanks.

- Leak detection - A sensor will set off an alarm on the generator control panel, relevant tank control panel and at the master control panels.

- Operator monitored fuel level - The fill operator can monitor the fuel level in the selected belly tank as it is being filled and can cease the fill operation when the required fuel level has been reached.

- HiHi float - If the operator fails to cease the fill operation the tank would fill until the belly tanks HiHi float switch is activated which would cease the fill operation with a warning light/ sounder at the fill cabinet.

- Overfill prevention - An overfill prevention valve is fitted to each fill line on each belly tank as a final measure to prevent overfilling the belly tanks.

- The areas around the day tanks will be hard surfaced to minimise the risk of percolation of any unplanned diesel releases to the underlying soil and groundwater.

- The perimeters of the two back-up generator compounds will have louvre screening along with Armco galvanised steel vehicle barriers to minimise the risk of vehicular damage to the back-up generator container units within these compounds.

- There will be routine daily inspections and maintenance will be carried out by a suitably qualified member of staff and subcontractors.

Containment Protection - Bulk tank fuel polishing

Each belly tank is maintained by an automatic fuel polishing system with an integrated pump and filter assembly mounted within the generator canopy. The fuel polisher consists of a 10micron filter and water separator. The fuel is extracted from the belly tank and fed through the filter/separator unit by an electrical pump designed to pump 50l/min.

The bulk tank fuel polishing will have the following protection measures to ensure no loss of containment:

- Leak detection - Should the leak detection float switches detect a leak, the fuel polisher will cease operation and report a leak alarm on the generator control panel.

- Pressure monitor - A pressure transducer monitors the flow of liquid from the pump and can signal a blocked polisher filter when the pressure rises above a pre-described level. This will cease operation and declare a blocked filter alarm.

- Level gauge and Low/Low alarm - Should the bulk tank level be too low indicated by the Low/Low alarm, the polisher will not operate to prevent air being drawn into the pipework.

The fuel polishing system also has a number of fault alarms to prevent events leading to loss of containment.

Containment Protection - Fuel Transfer Pump and Receiver Tank

The fuel storage for the two Data Halls (Buildings A & B) consists of 2 x 1,500 litre receiver tanks (1 per building).

The receiver tanks will have the following protection measures to ensure no loss of containment:

- Fuel tanks will comply with the Oil Storage Regulations - The Control of Pollution (Oil Storage) (England) Regulations 2001.
- Each fabricated steel diesel receiver tank will be designed to provide 110% containment.
- Each tank is double skinned.
- Pipework is double skinned.
- Each tank is bunded.
- Fuel tanks and pipework will conform to UK and European Standards - The tanks are designed and constructed to BS 799 Part 5 Type: J which is the British standard for fuel tank construction, this is also in line with CIRIA REP R 163 Construction of bunds for oil storage tanks.
- Tanks are painted/ coated to minimise corrosion.
- Installation to comply with the Environment Protection Act 1990, and relevant UK standards ENS590, etc. and BS EN 12285 for fabricated steel tanks.
- Each tank is connected to one of the 2 fill points (1 per building) via double skinned pipework.
- Pump monitoring with alarms to monitor transfer of fuel from the fuel fill tankers to receiver tank.
- Fill cabinets.
- Operator monitored fuel level.
- Float switches and alarms - Each tank has multiple float switches that indicate the receiver tanks fuel level of LoLo, 40% full, 60% full, 80% full and HiHi. If the fuel level was to continue increasing above the 80% float switch then the HiHi float switch would activate and cease the fill operation with a warning light / sounder at the fill cabinet.
- Leak detection - float switches are provided within the outer skins to detect any inner skin leaks or over-filling to send alarms to the generator control panel and the fill point control panels. Leak detect float switches are also fitted in the receiver tank pump cabinets. If any spillage is detected in this location an alarm shall sound at the fill point cabinet to alert the fill operator who should cease filling.
- Each tank has a fuel gauge.
- The fuel receiver tanks will sit on a structural concrete slab and any spills will be diverted to the surface water network which has an environmental closure valve (supplied by Darcy Spillcare) which will activate in contact with glycol and fuel.

Fuel Fill Station

Each building is provided with its own independent fill point cabinets each which shall supply all 26 belly tanks via pipe in pipe up to their connections to the motorised valves located on each belly tank.

The fuel fill station will have the following protection measures to ensure no loss of containment:

- Overfill protection - the valves connect to individual overfill protection valves and are located within the bunded generator canopies providing an n+1 system. The overfill prevention valves prevent the tanks from being filled beyond their brim-full value of 21,747 litres.

- Each fuel fill cabinet shall consist of a manual isolation valve (complete with drip tray), non-return valve and fuel fill control panel which shall display the current fuel level of all belly tanks and both receiver tanks.

- Operator monitored fuel level.

- An individual fuel refilling bay has been designed which is lowered and lined with an impermeable liner (see Figure provided as Appendix A in document 'Application Bespoke RFI Response Letter 2 supplied with application). Surface water/ fuel collected within this area diverts through an oil interceptor with an automatic closure valve in the event of a spill.

Tertiary Containment

Tertiary containment includes:

- All bunds and surfacing will be subject to regular inspections and maintenance throughout the life of the installation. The bunds containing the receiver tanks will be checked for rainwater accumulation daily and emptied where necessary.

- Contoured hardstanding of the area where the back-up generators, the receiver station and the fuel road tanker off-loading area will be located.

- Raised kerbing along the western site perimeter with an entrance ramp.

- On-site interceptor - should fuel enter the local on-site surface water drainage system it would be captured by the alarmed interceptor (9,600 litre capacity Class 1 full retention) which will have an automatic shut off device that will activate on detection of diesel in the interceptor preventing the release of diesel to soakaway.

- Spillage procedures.

Noise

Noise is not a significant aspect of data centre permitting (noting that it is only the standby generators and associated diesel supply systems that are permitted – not the operation of the data centre itself). The site will only run the generators regularly as part of the testing regimes described earlier, occurring during daytime hours. Overnight operation of the generators will only occur in an emergency situation. As this is a new installation it is not possible to consider the likelihood of overnight operation by examining the frequency of historical outages, but the potential for prolonged power outages in the area is considered to be low.

We have reviewed the requirement for a Noise Impact Assessment using our qualitative noise screening criteria. Based on the nature of the installation and its location, the limited hours of operation and the proposed noise mitigation measures, we anticipate that the risk of noise impacts will not be significant.

Consequently, the assessment confirmed that a Noise Impact Assessment and Noise Management Plan are not required. If a Noise Impact Assessment was required, then the operator would need to submit a Noise Impact Assessment based on The Environmental Permitting (England and Wales) Regulations 2016. However, we have included our standard noise condition in the permit, which allows us to ask for a Noise Management Plan if we become aware of noise-related problems on site.

Permit Conditions

The Permit condition 2.3.3 limits emergency operation to 500 hours/ annum.

Table S1.2 incorporates the maintenance and testing regime, which is less than 50 hours/ generator.

Emission limit values (ELVs) to air are not applicable.

Emergency operation includes those unplanned hours required to come off grid to make emergency repair of electrical infrastructure associated but occurring only within the data centre itself. The Environment Agency expects planned testing and generator operations to be organised to minimise occasions and durations (subject to client requirements).

Each individual standby generator that is a new Medium Combustion Plant (MCP) is required to have stack monitoring for carbon monoxide (CO) and NOx, refer to monitoring section below.

Table S1.1 of the permit prevents any electricity produced at the installation from being exported to the National Grid.

Table S1.2 incorporates operational and management procedures reflecting the outcomes of the air quality modelling by minimising the duration of testing, the duration and frequency of whole site tests and planning off-grid maintenance days and most importantly times/ days to avoid adding to any high ambient pollutant background levels.

The permit application has assessed and provided evidence of the reliability of the local electricity grid distribution allowing us to judge that the realistic likelihood of the plant needing to operate for prolonged periods in an emergency mode is very low.

Tables S4.2 and S4.3 require annual reporting of standby engine maintenance run and any electrical outages (planned or grid failures regardless of duration) require both immediate notification to the Environment Agency and annual reporting.

Table S2.1 restricts the fuel to ultra-low sulphur gas oil or equivalent substitute as agreed in writing with the Environment Agency.

Decision considerations

Confidential information

A claim for commercial or industrial confidentiality has not been made.

The decision was taken in accordance with our guidance on confidentiality.

Identifying confidential information

We have not identified information provided as part of the application that we consider to be confidential.

The decision was taken in accordance with our guidance on confidentiality.

Consultation

The consultation requirements were identified in accordance with the Environmental Permitting (England and Wales) Regulations (2016) and our public participation statement.

The application was publicised on the GOV.UK website.

We consulted the following organisations:

- Local Authority - Planning Department
- Local Authority - Environmental Health Department
- Health and Safety Executive
- Sewerage Authority
- Director of Public Health & UK Health Security Agency (HSA) (formerly Public Health England (PHE))
- Canal & River Trust

The comments and our responses are summarised in the consultation responses section.

Operator

We are satisfied that the applicant (now the operator) is the person who will have control over the operation of the facility after the grant of the permit. The decision was taken in accordance with our guidance on legal operator for environmental permits.

The regulated facility

We considered the extent and nature of the facility at the site in accordance with RGN2 'Understanding the meaning of regulated facility', Appendix 2 of RGN2 'Defining the scope of the installation' and Appendix 1 of RGN 2 'Interpretation of Schedule 1'.

The extent of the facility is defined in the site plan and in the permit. The activities are defined in table S1.1 of the permit.

See key issues for more discussion on the nature of the site.

The site

The operator has provided plans which we consider to be satisfactory.

These show the extent of the site of the facility including the discharge points.

The plan is included in the permit.

Site condition report

The operator has provided a description of the condition of the site, which we consider is satisfactory. The decision was taken in accordance with our guidance on site condition reports and baseline reporting under the Industrial Emissions Directive.

Nature conservation, landscape, heritage and protected species and habitat designations

We have checked the location of the application to assess if it is within the screening distances we consider relevant for impacts on nature conservation, landscape, heritage and protected species and habitat designations. The application is within our screening distances for these designations.

We have assessed the application and its potential to affect sites of nature conservation, landscape, heritage and protected species and habitat designations identified in the nature conservation screening report as part of the permitting process.

We consider that the application will not affect any site of nature conservation, landscape and heritage, and/or protected species or habitats identified.

We have not consulted Natural England.

The decision was taken in accordance with our guidance.

Environmental risk

We have reviewed the operator's assessment of the environmental risk from the facility.

The operator’s risk assessment is satisfactory.

General operating techniques

We have reviewed the techniques used by the operator and compared these with the relevant guidance notes and we consider them to represent appropriate techniques for the facility.

The operating techniques that the operator must use are specified in table S1.2 in the environmental permit.

Operating techniques for emissions that screen out as insignificant

Emissions of oxides of nitrogen, carbon monoxide, sulphur dioxide and particulate matter have been screened out as insignificant, and so we agree that the operator’s proposed techniques are Best Available Techniques (BAT) for the installation.

We consider that the emission limits included in the installation permit reflect the BAT for the sector.

National Air Pollution Control Programme

We have considered the National Air Pollution Control Programme as required by the National Emissions Ceilings Regulations 2018. By setting emission limit values in line with technical guidance we are minimising emissions to air. This will aid the delivery of national air quality targets. We do not consider that we need to include any additional conditions in this permit.

Raw materials/ fuels

We have specified limits and controls on the use of fuel.

Pre-operational conditions

Based on the information in the application, we consider that we need to include pre-operational conditions. The following pre-operational conditions have been included in the permit:

1 - which requires the operator to carry out and submit a review of the design, method of construction and integrity of all bunds surrounding above ground tanks. The review shall be carried out by a qualified structural engineer and will compare existing bunds against the standards set out in Section 2.2.5 of the Sector Guidance Note S5.06 and CIRIA Report 736 Containment systems for the prevention of pollution Secondary, tertiary and other measures for industrial and commercial premises 2014 (ISBN: 978-0-86017-740-1). This review should be submitted 4 weeks before operation commences. We have included this pre-operational condition to satisfy ourselves that the fuel tank bunding is fit for purpose.

Improvement programme

Based on the information in the application, we consider that we need to include an improvement programme. The following improvement conditions (ICs) have been included in the permit:

IC1 which requires the operator to produce an Air Quality Management Plan (AQMP) following our template in conjunction with the Local Authority outlining measures to be taken in the event of a National Grid failure.

IC2 which requires the operator to submit a monitoring plan for approval by the Environment Agency detailing their proposal for the implementation of the flue gas monitoring requirements specified in Table S3.1, in line with web guide ‘Monitoring stack emissions: low risk MCPs and specified generators’ Published 16 February 2021 (formerly known as TGN M5).

Emission Limits

We have decided that emission limits are not required in the permit (Permit Conditions above).

Monitoring

We have decided that monitoring should be carried out for the parameters listed in the permit, using the methods detailed and to the frequencies specified. In particular:

We have specified monitoring of emissions of CO from emission points A1 to A52 (new MCP), with a minimum frequency of once every 1500 hours of operation or every five years (whichever comes first). This monitoring has been included in the permit in order to comply with the requirements of Medium Combustion Plant Directive (MCPD), which specifies the minimum requirements for monitoring of CO emissions, regardless of the reduced operating hours of the plant.

We have also specified monitoring of emissions of NOx from emission points A1 to A52 (new MCP), with the same frequency specified for the monitoring of CO emissions. In setting out this requirement, we have applied our regulatory discretion, as we consider that this limited monitoring, to happen in concurrence with the CO monitoring, is proportionate to the risk associated with the emissions of NOx from the installation.

Taking into account the limited hours of operation of the engines operating at the installation, and the fact that we are not setting emission limits for NOx and CO, we consider this monitoring can

be carried out in line with web guide ‘Monitoring stack emissions: low risk MCPs and specified generators’ Published 16 February 2021 (formerly known as TGN M5).

We have set an improvement condition (IC2) requesting the operator to submit a monitoring plan for approval by the Environment Agency detailing the operator’s proposal for the implementation of the flue gas monitoring requirements specified in the permit. The improvement condition is applicable to all data centre permits which include new MCP, unless the application includes a monitoring proposal that already meets the requirements of table S3.1.

We have set a requirement for the first monitoring to happen within 4 months of the issue date of the permit or the date when each new medium combustion plant is first put into operation, whichever is later.

Reporting

We have specified reporting in the permit to ensure the site is operated to the standards specified in the Operating Techniques including the reporting of emissions to air.

We have specified reporting to ensure the operator notifies us of any operation of the stand-by generators in emergency mode in response to national grid power outage.

Management System

We are not aware of any reason to consider that the operator will not have the management system to enable it to comply with the permit conditions.

The decision was taken in accordance with the guidance on operator competence and how to develop a management system for environmental permits.

Previous performance

We have assessed operator competence. There is no known reason to consider the operator will not comply with the permit conditions.

We have checked our systems to ensure that all relevant convictions have been declared.

No relevant convictions were found. The operator satisfies the criteria in our guidance on operator competence.

Financial competence

There is no known reason to consider that the operator will not be financially able to comply with the permit conditions.

Growth duty

We have considered our duty to have regard to the desirability of promoting economic growth set out in section 108(1) of the Deregulation Act 2015 and the guidance issued under section 110 of that Act in deciding whether to grant this permit.

Paragraph 1.3 of the guidance says:

“The primary role of regulators, in delivering regulation, is to achieve the regulatory outcomes for which they are responsible. For a number of regulators, these regulatory outcomes include an explicit reference to development or growth. The growth duty establishes economic growth as a

factor that all specified regulators should have regard to, alongside the delivery of the protections set out in the relevant legislation."

We have addressed the legislative requirements and environmental standards to be set for this operation in the body of the decision document above. The guidance is clear at paragraph 1.5 that the growth duty does not legitimise non-compliance and its purpose is not to achieve or pursue economic growth at the expense of necessary protections.

We consider the requirements and standards we have set in this permit are reasonable and necessary to avoid a risk of an unacceptable level of pollution. This also promotes growth amongst legitimate operators because the standards applied to the operator are consistent across businesses in this sector and have been set to achieve the required legislative standards.

Consultation Responses

The following summarises the responses to consultation with other organisations, our notice on GOV.UK for the public and the way in which we have considered these in the determination process.

Responses from organisations listed in the consultation section:

Response received from UK HSA.

Brief summary of issues raised: No issues raised.

UKHSA has no significant concerns regarding the risk to the health of the local population from the installation. This response is based on the assumption that the permit holder shall take all appropriate measures to prevent or control pollution, in accordance with the relevant sector guidance and industry best practice.

Summary of actions taken: None.