

Land at Oak Road, Wrexham Planning, Design and Access Statement

Conrad (Wrexham) Limited

October 2018

LICHFIELDS



LICHFIELDS

Lichfields is the pre-eminent planning and development consultancy in the UK

We've been helping create great places
for over 50 years.

lichfields.uk

© 2018 Nathaniel Lichfield & Partners Ltd, trading as Lichfields. All Rights Reserved. Registered in England, no. 2778116. 14 Regent's Wharf, All Saints Street, London N1 9RL
Formatted for double sided printing.
Plans based upon Ordnance Survey mapping with the permission of Her Majesty's Stationery Office.
© Crown Copyright reserved. Licence number AL50684A
42227/01/MW/MWI
16574780v3

Contents

1.0	Introduction	1
	Report Structure	1
	Pre-application Advice	2
2.0	Background to the Application	3
	The Role of Flexible Power Generation Plants	3
	Applicant	4
3.0	Site and Surroundings	5
	Introduction	5
	Planning History	5
	Site Location and Surrounding Area	5
4.0	Proposed Development	6
	Introduction	6
	Development Proposals	6
	Ecological Mitigation	6
	Flood Risk & Drainage	7
	Security	7
	Employment Creation	7
5.0	Design and Access	8
	Introduction	8
	Use	8
	Amount	8
	Layout	8
	Scale	8
	Appearance	8
	Landscaping	9
	Access	9
6.0	Planning Policy Context	10
	Introduction	10
	Development Plan	10
	Material Considerations	11

7.0	Key Planning Considerations	13
	Demand and Necessity for Reserve Power Facilities	13
	Principle of Development	15
	Impact on Amenity	17
	Impact on Highways and Access	18
	Summary	18
8.0	Summary and Conclusion	19

Appendices

Appendix 1: Pre-application Advice from Wrexham Council (Reference: ENQ/2018/0156)

1.0 Introduction

- 1.1 This Planning, Design and Access Statement has been prepared by Lichfields on behalf of Conrad (Wrexham) Limited. It accompanies an application for the construction of flexible gas-fired power plant, on land to the north of Oak Road, Wrexham.
- 1.2 The proposed flexible power plant is an essential facility in the provision of a secure and consistent energy supply, designed to generate electricity at short notice to fill an ‘energy gap’ within the local electricity network. This will be most commonly required at times when renewable energy sources fail to generate sufficient electricity, or alternatively during short periods of exceptional demand for energy.

Report Structure

- 1.3 This document assesses the planning considerations associated with the application proposal and considers the development in the context of national and local planning policy and guidance. It also incorporates a statement to describe the issues of design and access relevant to these proposals.
- 1.4 This Statement should be read in conjunction with the following plans and drawings submitted with the planning application:
- 1 Site location Plan [drawing ref. WXM-SLP-01]
 - 2 Existing Site Plan [drawing ref. WXM-ESP-01]
 - 3 Site Plan [drawing ref. WXM-PSP-01]
 - 4 Gas Kiosk [drawing ref. GEN-SP-01];
 - 5 DNO Building [drawing ref. GEN-SP-02];
 - 6 Oil Tank [drawing ref. GEN-SP-03];
 - 7 Cooling Radiator [drawing ref. GEN-SP-04]
 - 8 Client Building [drawing ref. GEN-SP-05];
 - 9 Gate and Fencing [drawing ref. GEN-SP-06];
 - 10 Canopy [drawing ref. GEN-SP-07];
 - 11 Transformer [drawing ref. GEN-SP-08];
 - 12 Amenity Cabin [drawing ref. GEN-SP-09];
 - 13 CCTV [drawing ref. GEN-SP-10]; and,
 - 14 Access Visibility Splays [drawing ref. P18108-001].
- 1.5 This Statement should be read in conjunction with the following documents that have been submitted with the planning application:
- 1 Completed Application Form and Certificates;
 - 2 Cover Letter to Wrexham Council;
 - 3 Drawings Package;
 - 4 Noise Impact Assessment;
 - 5 Ecological Appraisal; and,
 - 6 Dispersion Modelling Assessment.

1.6 This document is structured as follows:

- Section 2.0 explains the background to the application, including the important role that flexible power generation development provides in supporting the UK's energy network;
- Section 3.0 provides a description of the application site and its surroundings;
- Section 4.0 describes the proposed development;
- Section 5.0 sets out a design and access statement;
- Section 6.0 describes the planning policy context;
- Section 7.0 examines the key planning considerations relevant to these proposals; and,
- Section 8.0 summarises the report and draws overall conclusions.

Pre-application Advice

1.7 Pre-application advice was sought from Wrexham County Borough Council (reference: ENQ/2018/0156) and received on the 1st October 2018. The response is included as Appendix 1 to this Statement.

2.0 **Background to the Application**

The Role of Flexible Power Generation Plants

- 2.1 National Grid [NG] owns and operates the national electricity network and part of its role is to ensure that the electricity supply system meets local energy demands. Much of the conventional power generation infrastructure provides a certainty of electricity supply; however, with the changing energy mix, including an increasing reliance on intermittent wind and solar photovoltaic generation, a larger degree of the country's electricity generation capability is reliant on the prevailing weather.
- 2.2 NG has estimated that for every 8kW of wind power added to the grid, 1kW of demand response/back-up energy, generated by facilities such as the proposed flexible power development, is required. Traditional power stations are generally not designed to meet short term demand and fail to deliver the flexibility that is provided by the reserve power facilities. It is for these reasons that NG predicts a much greater dependence on sources of reserve power from smaller embedded generating units in the future.
- 2.3 Also known as a 'peaking' plant, the purpose of these flexible power plants is to generate electricity at short notice to fill an 'energy gap' within the local electricity network. Typically, this will be required at times when alternative methods of energy generation from renewable sources fail to generate sufficient electricity, or when there is a short period of exceptional demand for energy that cannot be met through traditional 'frontline' sources. In such cases, NG considers flexible power generation as the 'last line of defence' to prevent serious fluctuations and blackouts.
- 2.4 NG has therefore identified flexible power installations as an important part of its strategy to ensure that it can continue to balance the electricity network and provide greater resilience to deal with unforeseen events. Indeed, NG predicts that there will be a need to double operating reserve capacity, including flexible power development, from around the current 4GW output to at least 8GW and possible higher in the period up to 2020 (NG 'Operating the Electricity Transmission Networks in 2020', 2011).
- 2.5 The flexible power plant will operate within the Capacity Market [CM]; established as part of the Government's Electricity Market Reform [EMR] package. This seeks to attract £110 billion of investment needed to replace and upgrade the UK's electricity infrastructure. The EMR was introduced by the Energy Act 2013 and adopted in June 2014. It is considered the 'biggest-ever' shake up of the UK's energy sector and is primarily designed to:
- Decarbonise electricity generation;
 - Keep the lights on; and
 - Minimise the cost of electricity to consumers.
- 2.6 More recently the National Infrastructure Commission [NIC] produced a report entitled 'Smart Power' (March 2016), examining how the market can better respond to the energy supply and demand needs of a modern Britain.
- 2.7 The central finding of the report is that the development of 'smart power' is based around three principles: interconnection, storage, and demand flexibility, is key to helping the country meet its carbon targets, save consumer's money, and secure the supply of energy for many decades to come.

- 2.8 This notion of ‘smart power’ presented in NIC’s report is particularly relevant to the development of flexible power plant. The less centralised nature of the modern energy market and increasing reliance on renewable energy means that new ways to efficiently manage the network are required. Flexible power plants are ideal for facilitating this efficient delivery. The report states:

“As we switch to a more intermittent and less flexible low carbon generation mix, demand for these services [fossil fuel plants or hydro power stations] is expected to multiply by up to ten times... while effective deployment of storage technologies can significantly reduce the need for generating capacity to meet peak demand, it is not the case, particularly in the near term, that storage will eliminate the need for flexible forms of electricity generation (including gas-fired plants) entirely. In particular, it will be necessary to ensure that there is sufficient capacity to provide security of supply when there is little wind or sunshine for a prolonged period” (Pages 22 and 43).

- 2.9 In this context, it is clear that the ability to generate electricity at short-notice in response to local demand is more important than ever before and flexible power developments have an important role to assist in meeting this need.

Applicant

- 2.10 The applicant is Conrad Energy (Developments) Limited [Conrad]. Conrad is an independent power producer focused on highly flexible small-scale embedded peaking generation in the UK at the 11kV level together with storage facilities at the 11kV level and above.
- 2.11 Conrad installs flexible gas engine power plants and battery storage facilities generally up to a maximum of 20MW dependent on available grid capacity. Conrad is focussed on two main sectors, gas ‘peaking’ and energy storage.
- 2.12 Peaking Power is the generation of electricity at the 11kV distribution level typically during the house of 4-7pm when the power distribution network in the UK is typically under the most pressure. Significant benefits are available for relieving the pressure on the National Grid transmission network by generating locally.
- 2.13 Energy storage is an emerging sector but one which has great potential to assist National Grid to balance the UK’s power network both in terms of generation and demand and frequency services. Conrad aims to be one of the biggest participants in this sector in the UK by being a prime mover in this market and securing land, storage assets and frequency response service contracts with NG.

3.0 Site and Surroundings

Introduction

- 3.1 The application site comprises land to the north of Oak Road, part of Wrexham Industrial Estate. A site location plan [WXM-SLP-01RevB] accompanies this application.

Planning History

- 3.2 There are no planning applications relevant to the application site.
- 3.3 There are a number of planning applications within the vicinity of the application site that relate to the wider Wrexham Industrial Estate and associated uses.

Site Location and Surrounding Area

- 3.4 The application site is located to the north of Oak Road, Wrexham. It is situated within Wrexham Industrial Estate approximately 5km to the east of Wrexham.
- 3.5 The application site is bound:
- To the north by existing building associated with Wrexham Industrial Estate;
 - To the east by Bryn Lane beyond which are existing buildings associated with the industrial estate;
 - To the south by Oak Road, beyond which is woodland; and
 - To the west by Abbey Road, beyond which are existing buildings associated with the industrial estate.
- 3.6 The application site is approximately 0.35 hectares and comprises semi-improved grassland, tall ruderal vegetation, scattered trees and scrubland. The application site is roughly triangular in shape and located in the corner of Oak road and Abbey Road. There are no buildings within the application site.
- 3.7 An overhead line intersects the application site in a north to south direction and is located towards the east of the application site. A single pylon is located within the application site.
- 3.8 The application site is not located within or adjacent to a conservation area. There are no designated, non-designated heritage assets or listed buildings on or adjacent to the application site. Natural Resource Wales identifies no surface water flood risk across the application site. There are no statutory protected sites within 1km of the site boundary.
- 3.9 The application site will be accessed via Oak Road to the south. It is in a highly accessible location with Oak Road providing access to the wider strategic road network.

4.0 Proposed Development

Introduction

4.1 The planning application seeks permission for:

“The construction of a Flexible Power Generation Plant up to 9.9MW with associated works and infrastructure”

4.2 The development will consist of 6 generators, 6 radiators and 6 transformers along with 2 gas kiosks, 2 clean and waste oil tanks, 2 client buildings, 2 DNO buildings and an amenity building. An ecological mitigation area is proposed within the application site. Palisade fencing is proposed around the perimeter of the application site. Internal palisade fencing will be used to separate the two main areas and the ecology mitigation area.

4.3 The proposed development will comprise up to 6 gas turbine driven electricity generating sets that together generate a total of 9.9MW. The proposed engines will be gas-fired, with a mains supply. No gas will be stored on the application site itself.

Development Proposals

4.4 A proposed Site Plan [WXM-PSP-01] provides details on the layout of the proposed development.

4.5 The gas generators and associated equipment will be positioned in two main areas within the application site; to the west and to the east. Four of the generators, radiators and transformers will be aligned in parallel from west to east and situated in the western part of the application site. A DNO building, Client HV, Gas Kiosk, Waste and Clean Oil containers and an Amenity Cabin are located along the western and southern perimeters of the application site in the western area.

4.6 Two further generators, radiators and transformers will be located on the eastern side of the application and aligned in a largely north to south direction. A DNO building, Client HV, Gas Kiosk and waste and clean oil containers are located in the south-eastern corner of the application site.

4.7 Parking for the proposed development will only be required intermittently and no full-time parking provision is necessary.

4.8 Full details of these proposals are shown in the package of drawings submitted with the application.

Ecological Mitigation

4.9 An extended Phase 1 Habitat Survey was undertaken on 1st October 2018. The recommendations of the habitat survey resulted in the creation of an ecological mitigation area is within the centre of the application site.

4.10 The ecological area will comprise the retained habitats of value, as determined by the Ecological Appraisal submitted in support of this application. Approximately 950m² of habitat will be retained and improved on the application site. Three hibernacula will be constructed within the mitigation area; within the existing retained vegetation at a size of 2m wide by 1m tall.

Flood Risk & Drainage

- 4.11 The application site is located in Flood Zone A, at the lowest risk of flooding and where development should be located.
- 4.12 No additional foul water treatment will be required.

Security

- 4.13 The proposed development will be secured by means of a palisade security fence 2.4m. It is also proposed to install three surveillance cameras along the southern perimeter of the application site and one in the north-eastern corner to enable the application site to be monitored remotely.

Employment Creation

- 4.14 During the approximate 6 month construction period it is anticipated that 5 workers will be employed at the site. The plant will be remotely operated once installed, and will be subject to periodical servicing and maintenance.
- 4.15 The nature of the development as a flexible power generation facility does not require regular employment at the site. However, maintenance of the facility will create additional long-term employment capacity, and will support employment for highly skilled engineers during its operational lifespan. These jobs will be sourced locally where possible.

5.0 **Design and Access**

Introduction

- 5.1 This section of the report provides a statement describing the issues of design and access for the proposed development, considering the matters of use, amount, layout, scale, appearance, landscaping and access.

Use

- 5.2 The proposed use would be for a 9.9MW flexible power generation plant consisting of up to six gas generators, six cooling radiators, six transformers, two gas kiosks, two DNO buildings, 2 Client Buildings, two waste and clean oil tanks and an Amenity Cabin.
- 5.3 In the context of the existing and established industrial uses within the industrial estate, this proposed use is congruous to its context.

Amount

- 5.4 The application site (0.35 ha) encompasses an area capable of accommodating the six generators and ancillary equipment and installations.

Layout

- 5.5 A proposed Site Plan [WXM-PSP-01] provides details on the layout of the proposed development.
- 5.6 The gas generators and associated equipment will be positioned in two main areas within the application site; to the west and to the east. Four of the generators, radiators and transformers will be aligned in parallel from west to east and situated in the western part of the application site. A DNO building, Client HV, Gas Kiosk, Waste and Clean Oil and an Amenity Cabin are located along the western and southern perimeters of the application site.
- 5.7 Two further generators, radiators and transformers will be located on the eastern side of the application with aligned in a north to south direction. A DNO building, Client HV, Gas Kiosk and waste and clean Oil are located in the south-eastern section of the application site.
- 5.8 The proposed location has been carefully selected to allow for the inclusion of an ecological mitigation area and to ensure no conflict with the existing pylon on the application site.
- 5.9 The application site will be closed with palisade fencing for security. Internal palisade fencing will be used to separate the two main areas and the ecology mitigation area.

Scale

- 5.10 The maximum proposed height of the gas generators, with the associated exhaust flue, extends to 10m, which represents the maximal height of any of the proposed installations and apparatus. The DNO buildings will extend to a height of 2.3m, the client unit 2.75m and the gas kiosks 2.4m. The scale of the proposed development will reflect the existing range of heights and massing in proximity to the application site, as part of the existing industrial estate.

Appearance

- 5.11 Each engine generator set will sit in its own containment cell, side-by-side and will have an associated cooler unit outside of the building. The units housing the generators and control

kiosk will be steel engine containers of a shipping style. A gravel base with pier foundations will support the generator containers. The application site will also incorporate other ancillary infrastructure, such as gas kiosks, DNO buildings, radiators, client HV, amenity building and clean and waste oil tanks. The gas kiosks will also be of an industrial style.

- 5.12 The proposed development will be enclosed by traditional galvanised palisade fencing.

Landscaping

- 5.13 The proposals incorporate the retention of landscape features new and enhanced planting to complement the proposed ecological mitigation area.

- 5.14 The application site is located within an existing industrial site and the overall appearance of the application site and wider context reflects the practicalities of this use.

Access

- 5.15 Access to the application site will be from the south via Oak Road. Deliveries to and from the application site will be made through this access point.

- 5.16 There is no requirement for fuel deliveries to the application site, and only infrequent visits from service vehicles are expected. It is estimated this would consist of one vehicle movement per week on average. Low operational hours of the plant mean that major servicing is required approximately every five years.

6.0 **Planning Policy Context**

Introduction

6.1 This section of the report details the planning policy context for the application, describing the Development Plan policies relevant to the consideration of the proposal, as well as providing an account of the national policy guidance and other documents that represent relevant material considerations.

6.2 The policy ‘framework’ is then used as the basis for identifying a range of key planning policy considerations across the various policy documents against which this application should be assessed, to enable robust conclusions to be drawn on its appropriateness.

Development Plan

6.3 Section 70(2) of the 1990 Act and Section 38(6) of the Planning and Compulsory Purchase Act 2004 states that planning applications are to be determined in accordance with the Development Plan unless material considerations indicate otherwise.

6.4 The Statutory Development Plan comprises Wrexham Unitary Development Plan [UDP] (adopted February 2005).

6.5 As the UDP was adopted for the plan period 1996-2011, and is now time expired. However, as the emerging Wrexham Local Development Plan [LDP2] is yet to be formally adopted, the UDP will remain the Development Plan for the determination of this application. The LDP2, once adopted, will cover the period 2013-2028. The Council have just consulted on the Deposit Plan and are submitting the Plan in November 2018 for examination.

6.6 Material considerations for this application include Planning Policy Wales [PPW] (Edition 9, November 2016) and Technical Guidance Notes [TANs], which set out the Welsh Government’s national policies and principles on different aspects of planning.

Wrexham Unitary Development Plan (2005)

6.7 The following policies are considered to be relevant to the proposals set out in this application:

- Policy PS1: Strategic Policy Relating to Location of Development
- Policy PS2: Strategic Policy relating to Environmental Quality
- Policy PS12: Renewable Energy
- Policy GDP1: General Development Principles
- Policy EC4: Trees, Woodland and Hedgerows
- Policy T8: Parking

Supplementary Planning Guidance

6.8 The following LPG [LPG] Notes are considered relevant to the proposals:

- LPG 16: Parking Standards (2011)
- LPG29: Employment Development and Nature Conservation (2009)

Material Considerations

Planning Policy Wales and Technical Advice Notes

- 6.9 Planning Policy Wales sets out the land use planning policies of the Welsh Government. It constitutes a material consideration for planning applications and its central aim is to promote and provide a framework for sustainable development within Wales. The planning system provides for a presumption in favour of sustainable development to ensure that social, economic and environmental issues are balanced and integrated, at the same time, through plan-making and decision-taking [§4.2.2].
- 6.10 The Welsh Government is currently preparing a revised version of the PPW (Edition 10) which takes account of the Well-Being and Future Generations Act. A consultation on the draft PPW Edition 10 was undertaken February / May 2018.
- 6.11 The guidance provided by the PPW is supplemented by a series of TANs. Together, the PPW and TANs set out the Welsh Government's national policies and principles on different aspects of planning and sustainable development.
- 6.12 The Planning Act (2008) sets out the threshold for Nationally Significant Infrastructure Projects [NSIP], including energy generation. The proposed development for this site does not qualify as an NSIP as it is not an off-shore generating station and its capacity is not greater than 50 MW. The capacity of the proposed plant will be approximately 9.9 MW, which is considerably below the NSIP threshold, though is classified as being of 'Local Authority Wide' scale by PPW.
- 6.13 PPW [§12.1.1] recognises that adequate and efficient infrastructure, including services such as electricity, are 'crucial for the economic, social, and environmental sustainability of all parts of Wales.'
- 6.14 The PPW lends general support for initiatives to support low carbon and decentralised energy networks. In determining planning applications, the PPW directs local authorities to recognise the responsibility on all communities to contribute to energy generation from renewable or low carbon sources. It also states that local authorities should facilitate the delivery of new and more sustainable forms of energy provision at all scales [§4.5.7]. Furthermore, the PPW [§12.9.7] outlines the potential for the development of renewable and low carbon energy development within urban/industrial brownfield sites.
- 6.15 The PPW [§12.8.2] states that planning policy at all levels should 'facilitate delivery of both the ambition set out in Energy Wales: A Low Carbon Transition and UK and European targets on renewable energy'. The Welsh Government is committed to using the planning system to:
- 1 Optimise renewable energy generation;
 - 2 Optimise low carbon energy generation; and
 - 3 Recognise that the benefits of renewable energy are part of the overall commitment to tackle climate change by reducing greenhouse gas emissions as well as increasing energy security [§12.8.8].
- 6.16 The PPW [§12.8.6] further details the Welsh Government's aim to secure an appropriate mix of energy provision for Wales, which maximises benefits to our economy and communities, whilst minimising potential environmental and social impacts. Developers will need to be sensitive to local circumstances, including siting in relation to local landform, proximity to dwellings and other planning considerations [§12.8.14]. Developments should also 'seek to avoid, or where possible, minimise adverse impacts through careful consideration of location, scale, design and other measures' [§12.10.3].
-

- 6.17 Other key statements of the PPW which are relevant to the proposed development site include the following:
- 1 Local planning authorities should take a strategic approach to flood risk and consider the catchment as a whole. They should ensure that new development is not exposed unnecessarily to flooding [§13.2.4] (additional guidance is provided here by TAN 15: Development and Flood Risk)
 - 2 The planning system should guide development to lessen the risk from natural or human-made hazards, including risk from land instability and land contamination. It is for the developer to ensure that the land is suitable for the development proposed, as a planning authority does not have a duty of care to landowners [§13.5.1].
 - 3 Where significant contamination issues arise, the local planning authority will require evidence of a detailed investigation and risk assessment prior to the determination of the application to enable beneficial use of land. Where acceptable remedial measures can overcome such contamination, planning permission may be granted subject to conditions specifying the necessary measures. If contamination cannot be overcome satisfactorily, the authority may refuse planning permission [§13.7.2].
- 6.18 Additional TANs of relevance to this application include:
- 1 TAN 5 (Nature Conservation and Planning)
 - 2 TAN 8 (Planning for Renewable Energy)
 - 3 TAN 11 (Noise)
 - 4 TAN 12 (Design)
 - 5 TAN 18 (Transport)
 - 6 TAN 23 (Economic Development)

7.0 Key Planning Considerations

7.1 From a review of the application site, pre-application response and the nature of the proposed development, the key planning issues arising are:

- Demand and Necessity for Reserve Power Facilities;
- Principle of Development;
- Environmental Impact; and
- Impact on Highways and Access.

7.2 Each of these issues is considered in the context of the proposed development below.

Demand and Necessity for Reserve Power Facilities

7.3 Reserve power facilities continue to play an important role in providing a back-up source of energy to intermittent renewables by contributing to the UK's energy mix and security of supply and supporting the transition to low carbon electricity generation.

7.4 The Government's position on energy generation is established within the NPS EN-1, and this is considered to represent a material consideration in the assessment of this application. Relevant extracts from the NPS confirming support for this type of development include:

"Fossil fuel power stations play a vital role in providing reliable electricity supplies: they can be operated flexibly in response to changes in supply and demand, and provide diversity in our energy mix. They will continue to play an important role in our energy mix as the UK makes the transition to a low carbon economy" (Paragraph 3.6.1);

"Some of new conventional generating capacity needed is likely to come from new fossil fuel generating capacity in order to maintain security of supply, and to provide flexible back-up for intermittent renewable energy from wind" (Paragraph 3.6.3);

"A number of fossil fuel generating stations will have to close by the end of 2015. Although this capacity may be replaced by new nuclear development and renewable generating capacity in due course, it is clear that there must be some fossil fuel generating capacity to provide back-up for when generating capacity is low and to help with the transition to low carbon electricity generation" (Paragraph 3.6.8); and

"Although our reliance on fossil fuels will fall, the transition will take some time, and gas will continue to play an important part of the UK's fuel mix for many years to come" (Paragraph 3.8.1).

7.5 The PPW is equally supportive, and confirms that planning should, *inter alia*:

- 1 Proactively support sustainable economic development to deliver the homes, business and industrial units, infrastructure and thriving local places that Wales needs;
- 2 Facilitate the delivery of new and more sustainable forms of energy provision at all scales;
- 3 Aim to secure an appropriate mix of energy provision for Wales, which maximises benefits to our economy and communities, whilst minimising potential environmental and social impacts;
- 4 Support the transition to a low carbon future in a changing climate and encourage the reuse of existing resources;
- 5 Identify opportunities where development can draw its energy supply from decentralised,

renewable or low carbon energy supply systems; and,

- 6 Encourage the effective use of land by reusing land that has been previously developed, particularly within urban/industrial sites.

7.6 There is also a national need to maintain and ensure future energy security given years of underinvestment and the transition to a low carbon economy. On 23 June 2014 the government updated its policy on Maintaining UK Energy Security. The Electricity Market Reform (EMR), first published as a White Paper in July 2011, is designed to deliver low carbon energy and reliable supplies that the UK needs, while minimising costs to consumers.

7.7 EMR will deliver the greener energy and reliable supplies that the country needs, while minimising costs for consumers in the long term. It will transform the UK electricity sector to one in which low-carbon generation can compete with conventional, fossil-fuel generation – ensuring we build a cleaner, more sustainable energy mix.

7.8 EMR is designed to:

- 1 Decarbonise electricity generation;
- 2 Keep the lights on; and
- 3 Minimise the cost of electricity to consumers.

7.9 EMR sets out two fundamental mechanisms that provide incentives for the investment required in our energy infrastructure:

- 1 Contracts for Difference [CFD], provides long-term price stabilisation to low carbon plant, allowing investment to come forward at a lower cost of capital and therefore at a lower cost to consumers; and
- 2 The Capacity Market [CM], provides a regular retainer payment to reliable forms of capacity (both demand and supply side), in return for such capacity being available when the system is tight.

7.10 CM will enhance the security of electricity supply by ensuring that sufficient reliable capacity is in place to meet demand. It works by offering all capacity providers (new and existing power stations, electricity storage and capacity provided by demand side response) a steady, predictable revenue stream on which they can base their future investments.

7.11 In return for this revenue (capacity payments) the facilities must deliver energy when needed to keep the lights on, or face penalties. The cost to consumers for this capacity will be minimised due to the competitive nature of the auction process which will set the level of capacity payments.

7.12 It is this role that the proposed development will fulfil in providing security of supply to the local and national network.

7.13 Given this supportive national policy context, and the role that flexible power facilities perform in enhancing the security of electricity supply to the local and national network it is considered that there is a strong need for this form of development.

7.14 The role of flexible power generating plants in meeting the UK's energy requirements was recognised by an Inspector in an appeal decision at Hilcote in Bolsover District Council¹. This appeal considered proposals for a 14mW flexible power generation plant outside of a settlement boundary in the open countryside.

¹ Appeal Ref. APP/R1010/W/17/3172633

7.15 In particular the Inspector noted that the plant:

“...forms part of the renewable energy infrastructure being developed to meet the UK’s obligations under the EU Renewable Energy Directive, because renewable sources are supplies that are dependent on the time of day and weather conditions” [§8]

7.16 In addition, with relevance to the role of flexible power generation plants for supporting renewable energy and low carbon energy networks, the Inspector states:

“...[the appeal proposal] is required to provide greater capacity and flexibility in the energy generation network [and] the proposed generators could be described as ‘associated infrastructure’ that would support the move towards low carbon energy supplied increasingly by renewable energy developments” [§8]

7.17 Also, Energy Wales: A Low Carbon Transition (March 2014), states that gas will be a key transitional fuel because greenhouse gas emissions from gas are significantly less than coal subject to the method of extraction. Gas is a flexible, responsive and reliable source of energy which can play a key role in the transition to a low carbon energy system.

7.18 At a local level, there are no specific policies relating to flexible power generation, though Policy PS12 (Renewable Energy) states that there will be a presumption in favour of renewable energy schemes provided that the wider environmental benefits are not outweighed by detrimental impacts on the landscape, public safety and the local environment. The proposed energy facility is not technically renewable energy, though its ability to meet energy shortfalls and instantly support renewable sources ensures its function as a sustainable initiative to align with Policy PS12.

Principle of Development

7.19 The application site falls within an established settlement in a predominantly commercial area within Wrexham Industrial Estate. Policy GDP1 outlines the general requirements for development. Considerations relevant to the application are considered below:

- 1 Ensure that the built development in its scale, design and layout, and in its use of materials and landscaping, accords with the character of the site and makes a positive contribution to the appearance of the nearby locality.

The proposed development will complement the industrial character and nature of the surrounding area, and subsequently accords with TAN 12 relating to design. Retention of important landscape features as part of the ecological mitigation area are shown on the Site Plan. The Design and Access section (5.0) further outlines the appropriateness of the design to the surrounding area.

- 2 Ensure the safety and amenity of the public and safeguard the environment from the adverse effects of pollution... and associated noise, odour or vibration arising from development.

The Noise Impact Assessment (outlined in detail below) identifies that the proposed development will not have an adverse impact on the amenity of nearby sensitive receptors. The Dispersion Modelling Assessment identifies that impacts upon sensitive receptors in respect of air quality were deemed not significant.

- 3 Safeguard sites and areas of nature conservation and wildlife interest, and to provide new habitats where there is an unavoidable loss of existing habitats and areas of wildlife interest.

As identified in the ecology assessment, the proposed development will result in the loss of widespread and common habitat and will have minimal impact on protected species. Mitigation is provided onsite to off-set habitat losses as a result of the proposed development. Where possible existing habits within the application site have been retained.

- 7.20 Wrexham Industrial Estate is subject to its own Local Planning Guidance Note; LPG 29. This note advises developers on the key ecological issues that need to be addressed on the industrial estate. It emphasises the following:
- 1 The need for an ecological assessment.
An ecological assessment has been submitted as part of this planning application.
 - 2 The protection of habitats that are found in preference to mitigation or off-site compensation.
The ecological assessment identified that the habits found on site were not high value. Areas with higher value are retained, where possible, as part of the development proposals. Additional on-site mitigation has been proposed to off-set the loss of habitats to be removed.
 - 3 The protection of the developable area of a site from colonisation by species.
The ecological assessment identified that the application site is unlikely to support protected species given that it is not connected to the wider ecologically valuable area.
- 7.21 As shown above, the proposed development accords with Policy GDP1 and LPG29.
- 7.22 It is considered that the proposals falls within the objectives regarding economic development set out in the PPW [§7.1, §7.2 and §7.4] and TAN 23. The PPW outlines the Welsh Government's commitment to securing economic growth in order to create jobs and prosperity, and to meet the challenges of global competition and of a low carbon future. The proposed facility assists in meeting these challenges by ensuring a security of energy supply whilst supporting the transition towards a low carbon economy.
- 7.23 The generation plant would also play a critical role in supporting wider economic growth by providing a flexible form of electricity generation which will supply existing businesses and infrastructure in the area at times when there are changes in the demand for energy. It is therefore compliant with PPW [§7.1, §7.2 and §7.4] and TAN 23, which is clear that local planning authorities should plan to meet the development needs of business and support an economy fit for the 21st century.
- 7.24 Whilst it cannot be guaranteed that the energy generated at the facility will be of direct benefit to the surrounding employment area, the plant will become operational during times where energy demand exceeds supply and will support the local electricity network. If such flexible power facilities were not available, energy shortages and electricity cuts are more likely to be experienced, which would affect business operations in the immediate area.
- 7.25 It is also important to ascertain whether the proposed development will significantly impact the potential of the site as an area of traditional employment. It is envisaged that construction of the site will generate employment for 5 workers. Maintenance of the facility will also create additional long-term employment capacity, and will support employment for highly skilled engineers during its operational lifespan. These jobs will be sourced locally where possible.
- 7.26 The site is currently undeveloped and the proposed development provides an opportunity to effectively utilise this area of land within the wider industrial estate, whilst also providing essential supporting infrastructure needed to support the National Grid, and subsequently accords with Policy PS1, GDP1 and PS12.

- 7.27 In addition, the pre-application advice received from Wrexham Council confirmed that “the use of the land for the purpose of energy generation is considered acceptable in principle. The site falls within an established settlement and is located in a predominantly commercial area”.

Impact on Amenity

Biodiversity and Landscape

- 7.28 An Ecological Assessment was also prepared by REC to support this application. An Extended Phase 1 Habitat Survey was undertaken on the application site on the 1st October 2018. The assessment identified that the Wrexham Industrial Estate is an importance site at the European level for protected species including great crested newts and as such is the subject of specific policy requirement as part of LPG 29.
- 7.29 The assessment concluded that despite the application site having suitable habitats for protected species, given the poor connectivity as the application site is completely enclosed by roads and the industrial area, it is unlikely to support these species.
- 7.30 The assessment came to the following conclusions and recommendations regarding habitats and protected species, which have informed the development proposals:
- 1 Approximately 33% of the habitats on the application site should be retained.
 - 2 Tree and shrub removal works will be undertaken outside of the breeding bird season (March – September inclusive).
 - 3 Precautionary working methodologies should be undertaken in respect of reptiles.
 - 4 Removal of Japanese knotweed prior to commencement of works.
- 7.31 The following enhancement measures will be implemented within the retained ecological area to ensure that adequate mitigation is provided:
- The site currently contains habitat with varying structure suitable for reptiles and amphibians, however lacks suitable hibernation areas. Therefore, three hibernacula will be constructed within suitable areas to provide adequate overwintering spaces; and
 - A management plan will be implemented to retain the ecological value of the site long term focusing on reptiles/amphibians and breeding birds.
- 7.32 The issues outlined by the assessment do not present any significant barriers to the proposed development. However, mitigation measures have been incorporated into these proposals to address policy requirements. This ensures the development complies with Policy EC4 and LPG 29.

Noise

- 7.33 A Noise Impact Assessment was prepared by REC in support of this application. The assessment was undertaken to identify the noise impact of the associated engines upon existing noise-sensitive receptors in the vicinity of the application site.
- 7.34 A weekday and weekend Background Sound Survey was completed in a position deemed representative of the nearest sensitive receptors. The assessment considered daytime (07:00-23:00) which is when the site is most likely to be operated, and also night-time periods (23:00-07:00). In both instances a ‘worst case scenario’ situation was tested to understand the maximum impacts that could be anticipated.

- 7.35 The outcome of the Noise Impact Assessment indicates that the potential level of noise produced by the engines falls comfortably below the typical background sound levels at the closest receptors.
- 7.36 During the day-time and night-time period, it is predicted that the closest receptors on Bryn Lane will be subjected to noise levels below the lowest average measured background.
- 7.37 Furthermore, No Observed Adverse Effect Level (NOAEL) perceived as ‘noticeable and not intrusive’, would be achieved for all receptors in the vicinity in respect to the proposed extended operational hours resulting in the following observation:
- “Noise can be heard but does not cause any change in behaviour or attitude. Can slightly affect the acoustic character of the area but not such that there is a perceived change in the quality of life.”*
- 7.38 Accordingly, no mitigation measures are required. Overall, it is considered that the proposals accord with the relevant policies in the UDP.

Air Quality

- 7.39 A Dispersion Modelling Assessment, conducted by REC, provides further support to this application to quantify the impacts of atmospheric emissions produced by the plant in the vicinity of the site.
- 7.40 Dispersion modelling was undertaken to quantify pollutant concentrations, throughout the surrounding area to assess the potential for nearby sensitive receptors to be exposed to poor air quality. Predicted concentrations of pollutants were below the relevant Environmental Quality Standards at all sensitive locations representative of human exposure for all meteorological datasets modelled.
- 7.41 Nitrogen and acid gas deposition rates were also predicted at the relevant ecological sites. Impacts upon sensitive ecological designations as a result of emissions from the installation were deemed not significant at all designations.
- 7.42 Consequently, air quality issues are not considered a constraint to this development.

Impact on Highways and Access

- 7.43 The application site will be accessed from Oak Road to the south. The application site will be remotely operated, with periodic maintenance visits at a frequency of approximately once a week. With such low levels of movements, it is considered that the scheme will have a negligible impact upon the local highway network. The proposals are therefore considered to accord with Policy T8 and LPG 16.

Summary

- 7.44 Overall, the proposed development accords with the relevant policies contained within the Development Plan and national guidance with regards to the principle of the development, environmental impact and impact on highways.

8.0 **Summary and Conclusion**

- 8.1 This proposed flexible power generation facility will perform a vital role in ensuring a consistency in local electricity supply during times where renewable energy sources alone cannot meet demand or when there is a 'spike' in demand in the national grid.
- 8.2 Government recognises the importance of these types of energy power plants in providing reliable electricity supplies that can be operated flexibly to meet changes in supply and demand. These are seen as playing an integral role in supporting the UK's energy mix and the transition to a low carbon economy, and as the 'last line of defence' in preventing serious fluctuations and blackouts. The proposal would therefore meet a recognised national and local need for this type of development.
- 8.3 Following a thorough assessment of the application site, the proposals and the local planning context, it is concluded that:
- 1 There is clear national and local support for flexible power generating facilities, as part of a decentralised energy network and to provide infrastructure to transition to a low carbon energy network;
 - 2 The proposed generators will be located upon an under-utilised area of land within the exiting industrial area;
 - 3 The assessed noise levels will not exceed existing background levels during typical daytime hours of operation;
 - 4 The engines proposed will not exceed air quality or ground-level pollution targets or contribute to any existing areas of poor air quality;
 - 5 The design of the proposals is of an appropriate scale and appearance, with consideration to the ecological and landscape impacts through siting and the ecological mitigation area; and,
 - 6 Access arrangements will be via Oak Road and will provide suitable vehicular access to the site for the construction and operational phases of development.
- 8.4 The proposed development is considered to accord with the policies within the Development Plan, and is supported by material considerations in national policy and energy policy which recognise the role and importance of this type of development. This application should therefore be granted planning permission.

Appendix 1: Pre-application Advice from Wrexham Council (Reference: ENQ/2018/0156)

CONRAD ENERGY
SUITES D & E
WINDRUSH COURT
BLACKLANDS WAY
ABINGDON
OX14 1SY

Your Ref/Eich Cyf	ENQ/2018/0156
Our Ref/Ein Cyf	01 October 2018
Date/Dyddiad	Philip Forster
Ask for/Gofynner am	01978 298786
Direct Dial/Rhif Union	philip.forster@wrexham.gov.uk
E-mail/E-bost	

By email: james.ayres@conradenergy.co.uk

Dear Sir/Madam

INSTALLATION OF FLEXIBLE POWER PLANT
CORNER OF OAK ROAD AND ABBEY ROAD WREXHAM INDUSTRIAL ESTATE
WREXHAM

I refer to the enquiry received in relation to the above mentioned proposed development. Based on the information I have reviewed I have the following comments to make.

The use of the land for the purpose of energy generation is considered acceptable in principle. The site falls within an established settlement and is located in a predominantly commercial area.

The following planning policies in the adopted Wrexham Unitary Development Plan are relevant:

PS2 – Strategic policy relating to environmental quality
GDP1 – General Development Principles
EC4 – Trees, Woodland and Hedgerows
T8 – Parking

https://www.wrexham.gov.uk/english/planning_portal/plan_policy/wxm_udp.htm

Guidance is also contained in the following supplementary planning guidance:

LPG 16 – Parking Standards
LPG 29 – Employment Development and Nature Conservation

https://www.wrexham.gov.uk/english/planning_portal/lpg_notes/lpg_notes.htm

Officer view

As stated above, the council would have no objection to the principle of this proposal. The nature of this type of development has been accepted elsewhere in the County

Borough. The main issues for consideration in this instance are site specific, predominantly the habitat and amenity impact of the likely site clearance required.

I am aware that the site in question is reasonably overgrown. Wrexham Industrial Estate (WIE) is a known stronghold for protected species – specifically great crested newts at a European level and certain species of butterfly at a domestic level. As such, the WIE is the subject of specific policy requirements laid out in LPG 29. These require mitigation measures to be imposed with development proposals. A 50/50 split of development to mitigation is required as a starting point, however this is site dependent taking into consideration the condition of the site and the surrounding land from a habitat perspective.

In view of the layout plan provided, I do have concerns that there will be a limited opportunity to provide sufficient habitat. You are strongly advised at this stage to engage the services of an ecological consultant to look at the quality of the land, the neighbouring sites and the potential of providing on site mitigation or perhaps commuted contributions for off-site improvements if deemed acceptable.

The site appears accessible from Oak Road. Any planning application will need to demonstrate that visibility splays can be achieved from the site in accordance with Welsh Government standards. I have no reason to believe that the traffic generation from this proposal would be detrimental to highway safety.

Whilst the site is not located in a residential area, consideration should be given to amenity of the neighbouring occupiers by way of noise from any generating equipment. The council will expect a noise survey to be provided with any formal planning application.

In order to validate a planning application for the development mentioned, the council would expect to see the following with any submission:

- Planning application forms (either paper format or via www.planningportal.co.uk);
- Location plan (1:1250);
- Existing and proposed block plan (1:500);
- Plans of proposed plant and buildings;
- Ecological Report;
- Arboricultural Report;
- Noise Report; and
- Statutory planning fee.

The proposal may be subject to a planning obligation under Section 106 of the Town and Country Planning Act 1990 if off site mitigation and/or commuted sums are proposed.

In summary, the council are broadly supportive of the proposed development and understand the need and benefits of the proposal in the interests of national infrastructure. However, there are site specific constraints in this instance which will require further investigation prior to the submission of a formal planning application. These investigations may render the development proposal unacceptable on this site. I would be happy to comment further should such investigations be carried out.

Please note that the above is based on the information you have presented and any variance upon which may invalidate the response given. The views expressed are the opinions of an officer of the council. They do not commit the council to reach any particular decision should a formal application for planning permission be submitted. If you wish to discuss any of the above please do not hesitate to contact the officer named above.

Yours faithfully

A handwritten signature in black ink, appearing to be 'L. M. G.', written in a cursive style.

Head of Environment and Planning

Bristol
0117 403 1980
bristol@lichfields.uk

Cardiff
029 2043 5880
cardiff@lichfields.uk

Edinburgh
0131 285 0670
edinburgh@lichfields.uk

Leeds
0113 397 1397
leeds@lichfields.uk

London
020 7837 4477
london@lichfields.uk

Manchester
0161 837 6130
manchester@lichfields.uk

Newcastle
0191 261 5685
newcastle@lichfields.uk

Thames Valley
0118 334 1920
thamesvalley@lichfields.uk