

URBAN RESERVE – CARDIFF POWER

Planning Statement
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1.0 Introduction

Planning application for a small scale urban grid support/supply resilience facility

1. This Planning Statement (PS) has been prepared as part of a full planning application submitted by Urban Reserve Limited (part of Aggregated Micro Power Holdings Limited) (the 'Applicant') in respect of land off Cardiff Road, Reading. The proposed development, known as Cardiff Power, is for a small scale 4MW gas fired power station and is one of several similar AMP projects around the country referred to as Urban Reserve sites. These developments will generate electricity locally, helping release grid capacity and providing benefit to local business, developments and electric vehicle (EV) charging points. In other words, providing support to the grid within the area it is required.
2. The purpose of the PS is to provide further details of the objective of the proposal, the physical development involved and the consideration of the physical and other constraints of the site. It also considers this in the context of the relevant national and local planning policy and if appropriate sets out any considerations material to the determination of the application.
3. The PS is set out as follows;
 - Section 1.0 Introduction
 - Section 2.0 Site Location, Description and Recent Planning History
 - Section 3.0 Development Description
 - Section 4.0 Environmental Review
 - Section 5.0 Policy Review
 - Section 6.0 Conclusion
4. The planning application is accompanied by the following drawings which are appended to this statement at Appendix 01:
 - Drawing CAR-01 – Site Location Plan
 - Drawing CAR-02 – Proposed Site Layout Plan
 - Drawing CAR-03 – DNO/Customer Substation Plan & Elevations
 - Drawing CAR-04 – Gas Kiosk Plan & Elevations
 - Drawing CAR-05 – Engine Plan & Elevations
 - Drawing CAR-06 –Transformer – Elevations
 - Drawing CAR-07 – 2.4m High Palisade Fence Elevations
 - Drawing CAR-08 – 3.5m Solid Fence Elevations

2.0 Site Location, Description and Recent Planning History

2.1 Location

5. The application site is located on Cardiff road in a predominantly industrial and commercial area to the north-west of Reading city centre. The grid reference of the site is SU 70491 74108.
6. The mainline Bristol, Reading, London Railway line is located approximately 15m immediately to the south of the application site.
7. To the east and west are commercial business
8. The nearest residential properties are approximately 310m to the east (on Cardiff Road, approximately 360m to the south-west beyond the railway and over 750m to the North beyond the River Thames. All residential properties are screened from the proposed development by commercial and industrial buildings or by the railway infrastructure.
9. The site location is shown on drawing reference CAR-01 in Appendix 01.

2.2 Site Description

10. The application site (approximately 0.04ha) is currently unoccupied land which was last used for access to the railway for infrastructure improvements. It has become partially overgrown with some grass and shrubbery but is due to be cleared and reinstated with a gravel surface by the railway infrastructure improvement contractor. The site is surrounded to the north, east and west by commercial and light industrial units. To the immediate south is the mainline railway and other railway infrastructure.
11. Access to the site would be from Cardiff Road via the existing access. The site layout is illustrated on drawing CAR-02 in Appendix 01.

2.3 Recent Planning History

12. Reading Borough Council Online Planning portal does not hold any information on the site relating to previous Planning Applications. However, as noted in section 2.2 it was last used as an access route for railway infrastructure improvements and is due to be reinstated (gravel surfaced) shortly.

3.0 Development Description

13. Urban Reserve projects generate electricity close to and in urban areas where demand for electricity is high.
14. Whilst distributed energy has grown across the UK in the last ten years, urban areas have struggled to deliver new generating capacity. At the same time the need for electricity is increasing in our towns and cities.
15. Most new electricity generating capacity has come from solar photovoltaics (PV) and wind. However, urban areas have seen only modest growth in these technologies because of high land costs and planning concerns. A 1MW solar farm would require approximately 1.62ha of land. Whereas a 4MW Urban Reserve Module typically occupies less than 0.1ha in size.

3.1 Site Development and Proposed Equipment

16. The physical development on site would consist of:

- A fenced compound consisting of existing of solid fencing (providing additional acoustic screening) on the north, east and west boundaries and a new palisade fencing (2.4m) on the railway boundary (south);
- The compound would be accessed from Cardiff Road via a double gate in the aforementioned fencing at the existing site access point;
- The compound would contain:
 - two 2MW generators in '40ft' steel containers (approximately 12.2m long, 2.45m wide) with exhaust stacks (7m high from ground level) and ventilation/cooling equipment mounted on the roof. These are referred to as 'gensets';
 - A transformer (with bollard protection; and
 - Gas supply and sub-station connection points contained within a gas kiosk and DNO/customer substation (a '20ft' container) respectively. These are connected by underground gas pipeline and electricity cables, to the respective grids.

17. The site layout and elevations are contained in Appendix 01.

3.2 Key factors in selection of the Cardiff Power Site

Energy Security

18. Generating electricity locally reduces the energy lost when transporting electricity around the country and ensures that local networks are secured and protected against shortages.
19. Renewables like wind and solar generate electricity intermittently and cannot generate when the weather conditions are not favourable. Urban Reserve projects can fill a gap in supply by generating electricity when renewables cannot, supporting the local network and by doing so providing security of supply.

Grid Capacity in Urban Areas

20. Growing demand for electricity in urban areas has put pressure upon grid management and grid balancing. This has led to significant reductions in grid capacity margins which in turn is impacting businesses and the deployment of new EV charging points which need new grid capacity to grow.
21. Urban Reserve projects generate electricity locally helping release grid capacity and provide a socialised benefit to local business, developments and EV charging points.

Generation and Demand Dominated Areas

22. Electricity generated by Urban Reserve Projects connect to the local 11kV HV network. These networks are either Generation Dominated – where more electricity is generated locally than the local area requires, or Demand Dominated – where more electricity is consumed than the local area generates.

23. AMP only develop Urban Reserve Projects in demand dominated areas. This means that the electricity generated will be consumed locally and not exported elsewhere. This ensures that the local area benefits directly from the project.

Availability of Land

24. Urban Reserve projects typically require between 0.05- 0.5ha of suitable land. In this case the site area is approximately 0.04ha.
25. For these projects to be financially viable the cost of acquiring the site has to be relatively small. Therefore, economically these projects are unable to utilise land that has alternative uses, such as employment or residential development. Sites are chosen because for whatever reason they have little alternative land use or value.
26. In the case of Cardiff Power, the proposed site is a small vacant area adjacent to existing industrial and commercial operations.

Proximity to Grid

27. Urban Reserve sites must be near the 11kV primary substations that they serve. The distance is determined by economic and technical constraints on the local distribution network. Working with Distribution Network Operators (DNOs) Urban Reserve projects typically must be between 200-500m from the substation. In the case of the Cardiff Power site the electrical connection is located on Cardiff Road (subject to confirmation by Scottish and Southern Energy Networks) approximately 10m away.

Proximity to Natural Gas Medium Main

28. Proximity to a natural gas main is vital for an Urban Reserve project. The local gas main must have enough capacity to provide gas into the project, and not be too far away. Working with the Gas Network Operators (GNOs) Urban Reserve projects are typically between 200-500m from a suitable gas main. In the case of the Cardiff Power site the gas main is located in Cardiff Road approximately 20m away subject to confirmation from Southern Gas Networks .

Power Purchase Agreements and Provision of Heat

29. The principal objective of Urban Reserve Projects is to export electricity to the local network. However, heat is also produced in the process. Once built, subject to commercial agreement, Urban Reserve projects can provide both power and heat to local companies at a significant discount from traditional suppliers thereby supporting local business(es). This gives businesses competitive advantage and should support the long-term viability of jobs in the local economy.
30. At the Cardiff Power development there are potential users within the surrounding Industrial Estate and the wider area.

4.0 Environmental Review

- 31 The following table considers the potential for environmental impacts from the construction and operation of this development.

Aspect	Comment
Noise	The nearest residential properties are 310m (east) on Cardiff Road but screened by industrial and commercial development. The location within an industrial estate is not considered to be a concern given the nature of work at surrounding premises and also that the generators are housed in acoustically insulated containers within a compound with solid fencing on the boundaries (east and west) with adjacent commercial developments and facing Cardiff Road.
Landscape	The location on Cardiff road is generally considered not to be a concern given that it will be screened from the west, north and east by existing industrial and commercial development. Viewed from the south (railway infrastructure area) it will be also be in keeping with the industrial nature of the area.
Ecology	The application site is an existing developed area with no significant demolition or site clearance required other than a small amount of pioneering species revegetating the site. In any event the site is due to be reinstated to a gravelled area following the cessation of its use as an access as noted in section 2.2. The site itself is considered very low risk given its current condition and its surroundings. The site is adjacent to a Local Nature Reserve and within an SSSI impact zone (nearest SSSI located 6.5km west of the site).
Land Quality	As the application site is an existing developed area and minimal ground breaking is required, there are no anticipated land quality issues.
Cultural Heritage	The site and its immediate surroundings are an existing developed area. The development involves minimal sub-surface construction work. No sub-surface archaeological concerns are therefore anticipated. Given the location within an Industrial Estate and the small-scale nature of the development, it is not envisaged that there will be any wider heritage issues from this proposal.
Surface Water Management	The proposed development is an existing developed area shown as 'low risk' on the EA database. However, the site is located on the edge of Flood Zone 2 and despite the 'low risk' EA database rating a Flood Risk Assessment will be carried out. An interim FRA is included at Appendix 2. This concludes that protection for vulnerable elements of the proposed development will need to be designed into the installed equipment.

Aspect	Comment
	Therefore, a stage 2 FRA has been commissioned to establish the criteria for this protection.
Traffic & Transport	Traffic generation during construction and operation of the proposed development will be minimal. The application site is currently readily accessible from the highway (Cow Lane to the west and Cardiff road to the north). Construction is anticipated to last for approximately three months. A total of 30 vehicle movements are expected for deliveries to the site during this period; therefore, the site will generate a total of 10 HGV / LGV movements per month, plus a small number of trips to and from the site by construction workers. Consequently, the volume of trips generated by the site during the construction period will be negligible. During the operational stage, it is anticipated that there will be occasional visits to the site during normal business hours for operations and maintenance activities. This will likely be conducted in LGV's, vans and cars, ordinarily 1-2 visits per week. Very occasionally, HGV's might be required for moving equipment items during the operating period but most maintenance will be performed in situ on site and such events would be exceptional (once every 5 or 10 years). The additional road traffic to and on the industrial estate roads as a result of the development is not expected to be discernible.
Air Quality	The Environmental Permitting Regulations (England and Wales) were amended in 2018 to implement the requirements of the 'Medium Combustion Plant' (MCP) Directive and additional controls on 'Specified Generators'. 'Medium Combustion Plant' (MCPs) are defined as combustion plant with a thermal input rating between 1MWth and 50MWth. As the plant is 4MW output, it will fall within this category. 'Specified Generators' are those MCPs that generate electricity for >50hrs per annum (incl. testing) or export electricity to the grid. As the plant will generate electricity for more than 50hrs per annum it will also fall within this category. As such the site will need an environmental permit for MCPs and a Specified Generator to be able to operate. The plant will have low emissions (<95mg/Nm³ of oxides of nitrogen (at 273.15K, 101.3kPa, correction for water vapour and at a standardised 15% oxygen content)) and insignificant concentrations of other pollutants. This combined with measures as necessary to reduce ground level concentrations of nitrogen dioxide at receptor locations will ensure air quality standards are maintained within the specified limits.

Aspect	Comment
	An air quality emissions risk assessment has been undertaken; comprising of a screening assessment against Environment Agency (EA) criteria for significance. The assessment resulted in emissions being identified as an issue which cannot be screened out as insignificant and as such, detailed dispersion modelling will be carried out during the Permit application process. Details of the screening assessment are summarised in section 4.1 below. During its determination of the application for the Permit, the EA will assess risks associated with emissions to air from the plant. Environmental permits for Specified Generators require that the air quality standards must not be breached. They also contain Emission Limit Values (ELVs) that must be complied with. In this case, the standard ELV will be the <95mg/Nm3 of oxides of nitrogen mentioned above. The EA will assess during the course of its determination whether these conditions will be complied with and only issue an environmental permit where no significant impact to human health will occur. Once the Permit is issued, AMP will undertake periodic monitoring of emissions from the plant to demonstrate compliance, keep records of operating hours and report to the EA.

4.1 Air Quality Screening Summary

- 32 The Environment Agencies 'Specified Generator Tranche B Screening Tool' was used to understand whether the proposed development would require a complex assessment of the air quality risk posed in order to gain a permit to operate the generators, or if air quality could be deemed insignificant and therefore screened out of further assessment.
- 33 The Screening tool takes into account various details about the proposed development including generator emissions, operational hours and nearby receptors. In addition to this, background air quality is considered as some receptors are more sensitive than others due to their location and vulnerability to potential cumulative effects.
- 34 The following table shows the inputs to the Environment Agencies 'Specified Generator Tranche B Screening Tool'

Air Quality Modelling and Assessment Unit (AQMAU) SPECIFIED GENERATOR TRANCHE B SCREENING TOOL

Version 1.0



STEP 1: GENERAL SITE INFORMATION

Applicant name AMP-Cardiff Power

USER NOTES:

Please enter the name that will appear on the environmental permit.

Specified generator usage type category
(Select from the drop-down list) CHP

USER NOTES:

CHP - Combined heat and power plant typically used to provide mid-merit or base load electricity and therefore assumed to operate up to 8760 hours per year.
Peaking - Peaking plant are used to provide power during grid peak demand periods and are assumed to operate between 501 and 1500 hours per year.
Balancing - Balancing plant are considered to operate between 51 and 500 hours per year and are typically used to provide balancing power reserve to the grid.

Is it a mixed Tranche A and B Specified Generator site?
(Select yes or no) No

USER NOTES:

Select yes, if there are any Tranche A generators on the Specified Generator site. If there are, then all Tranche A generators must comply with the Tranche B generator requirements.
Select no, if there are no Tranche A generators on the Specified Generator site.

Specified generators aggregated rated thermal input 10 MW

USER NOTES:

This is the total aggregated thermal input of all generators on the Specified Generator site. It should include Tranche A and B generators for mixed sites.
CHPs - Screening distances for up to 25 MWth aggregated plant have been calculated.
Peaking and balancing plant - Screening distances for up to 50 MWth aggregated plant have been calculated.

Operational hours per year 8760 hours
If 'Peaking' or 'Balancing', is rolling average flexibility required?
(Select yes or no) No

USER NOTES:

Enter the number of operational hours per year.
Select yes, if rolling average flexibility is required for the peaking or balancing plant. These are: rolling averages over a period of 3 years for new plant operating no more than 500 hours per year; and 5 years for existing plant operating no more than 500 hours per year or plant operating between 501 and 1500 hours per year.
Otherwise select no.

Existing or new medium combustion plant generators?
(Select from drop-down list) New
Emission Limit Value (273 K, dry and 15% O₂)
(Automatically selected) 95 mg/Nm³

USER NOTES:

Generators with rated thermal input greater than 1 MW and less than 50 MW are medium combustion plant. Those that operate more than 500 hours per year will be required to comply with MCPD ELVs, those that operate up to 500 hours must comply with the SG ELV.
Existing - MCPs operating before 20 December 2018 and more than 500 hours (MCPD ELV 190 mg/Nm³).
New - MCPs operating after 20 December 2018 and more than 500 hours (MCPD ELV 95 mg/Nm³).
Other - MCPs operating up to 500 hours per year, or generators with individual rated thermal inputs less than 1 MW (SG ELV 190 mg/Nm³).

Do the generators have secondary abatement fitted?
(Select yes or no) No

USER NOTES:

Select yes, if secondary abatement is used to reduce emissions from generators on the specified generator site.
Select no, if no secondary abatement is fitted.

Attainable emission concentration (273 K, dry and 15% O₂)
Screening Emission Limit Value (273 K, dry and 15% O₂)
(Automatically selected) 95 mg/Nm³

USER NOTES:

Enter the emission concentration that all the generators on the site can achieve.
If it is a mixed Tranche A and B site, it should be no more than the Specified Generator ELV of 190 mg/Nm³.
A lower Emission Limit Value can be set and screened against if it can be achieved.
The lowest Emission Limit Value possible is 35 mg/Nm³, which can be achieved when secondary abatement is fitted.
If left blank the screening Emission Limit Value will be set automatically.

STEP 2: RELEASE INFORMATION

Stack height 7 m

USER NOTES:

The stack height is the height of the top of the stack above ground level of the release point. If there are multiple generator stacks then the lowest stack should be entered.

Is there one or more buildings within 5L and with heights more than 40% of the stack height?
(Select yes or no) Yes

USER NOTES:

If yes, all buildings that could affect dispersion must be combined into a single effective combined block. Buildings that can affect dispersion must be both:
• Within 5L of the stack, where L is the lowest of either the height of the building, or the maximum projected width (for example, the opposing corners of a roof). Typically, L will be the building height unless the building is a tower.
• Have a height that is more than 40% of the stack height.
Select no, only if there are no buildings that satisfy the above criteria.

Height of tallest building within 5L 7 m
Length (or length of combined block for multiple buildings) 30 m
Width (or width of combined block for multiple buildings) 30 m

USER NOTES:

Enter height of tallest building that can affect dispersion.
Enter the length and width of the building or the combined block building.
If there are no buildings that could affect dispersion then leave blank.

Maximum downwash cavity length 22 m
Are there any receptors within the downwash cavity length from the nearest edge/side of the building?
(Select yes or no) No

USER NOTES:

There are very high uncertainties when predicting impacts in the cavity region of buildings that cause downwash.
Select yes, if there are any sensitive receptors within the calculated downwash cavity length from any side or corner of the inputted building.
Otherwise, select no.

STEP 3: STUDY AREA SETTING AND BACKGROUND CONCENTRATIONS

Sensitive receptor setting (Select from drop-down list)	Urban	USER NOTES: The study area should be defined based on a 1 km buffer zone around the site. Rural - Rural settings are locations in the open countryside, agricultural areas, villages and small towns. Suburban - Suburban settings are mixed-use or residential areas on the outskirts of a city or large town. Industrial - Industrial settings are locations where industry is the main land use and makes a contribution to the pollution burden. Urban - Urban settings are considered to be locations in the main areas of a city or large town.
Sensitive receptors near an A road or motorway network? (Select yes or no)	Yes	
Sensitive receptors within an AQMA declared for NO₂? (Select yes or no)	Yes	
Baseline background NO₂ concentration	32.0 $\mu\text{g}/\text{m}^3$	
		USER NOTES: Receptors near roads have elevated background NO ₂ concentrations. Select yes, if there is an A road (main road) or motorway within 50 m of receptors in the study area. Otherwise, select no.
		USER NOTES: If there are receptors within an Air Quality Management Area (AQMA), then there is likely to be little or no headroom. Current AQMAs can be found at the following link https://uk-air.defra.gov.uk/aqma/maps . Select yes, if the receptor is within an AQMA declared for nitrogen dioxide (NO ₂). Otherwise select no.
		USER NOTES: Enter the assumed baseline background concentration for the study area. The Local Authority can give baseline background concentrations for the study area from their local air quality management responsibilities. The baseline background should not be a roadside or kerbside concentration.

STEP 4: RECEPTORS

Distance to nearest non-roadside Human Health Receptor	300	m	USER NOTES: Enter the shortest distance from any generator stack to the nearest receptor where there is <u>relevant public exposure</u> . Non-roadside receptors are those where there is public exposure beyond 15 m of any road or street. Roadside receptors are those where there is public exposure within 15 m of a busy road or junction (10,000 vehicles/day or more), or a congested narrow streets (5,000 vehicles/day). Higher backgrounds are automatically assumed for these receptors. Select yes, if there is relevant public exposure within 15 m of a busy road and enter the distance to the nearest roadside receptor. Otherwise, select no and enter no distance. Examples of public exposure are given in the 'Guidance on dispersion modelling for oxides of nitrogen assessment from specified generators'.
Are there any human health receptors where there is roadside public exposure?	Yes		
Distance to nearest roadside Human Health Receptor	375	m	
Are there any SACs, SPAs, Ramsar sites or SSSIs within 3.5 km?	No		USER NOTES: Select yes, if there is a SAC (Special Area of Conservation), SPA (Special Protection Area), Ramsar site or SSSI (Site of Special Scientific Interest) within 3.5 km (3500 m). If yes, enter the distance in meters from any generator stack to the nearest habitat site. Otherwise, select no and enter no distance.
Distance to nearest SAC, SPA, Ramsar site or SSSI		m	

STEP 5: ENVIRONMENTAL RISK

Run tool		Reset data	
Non-roadside human health screening distance is:	400	m	
Roadside human health screening distance is:	400	m	
Screening result:	Screens in for human health. Complex bespoke application required.		

- 35 The result is that further assessment and dispersion modelling is required for a Complex Bespoke Permit application.

4.2 Conclusion

- 36 The review has identified that there are two environmental aspects, flood risk and air quality, that required further consideration.
- 37 An interim FRA has been undertaken that has identified what needs to be addressed in this regard and a stage 2 FRA is underway. Ideally the results will be submitted prior to determination to avoid the need to condition this requirement.

- 38 An Air Quality Screening exercise has been undertaken that has confirmed that a complex bespoke permit is required by the EA and consequently further assessment and dispersion modelling is being undertaken. Ideally the results will be submitted prior to determination of this application to avoid the need to condition this requirement.

5.0 Planning Policy Review

- 39 Section 70(2) of the Town and Country Planning Act 1990 and Section 38(6) of the Planning and Compulsory Purchase Act 2004 require that planning decisions be made in accordance with the adopted development plan unless material considerations indicate otherwise.

5.1 National Policy

- 40 The National Planning Policy Framework (NPPF) (update July 2018) seeks to achieve sustainable development and sets three overarching interdependent objectives for the planning system of: building a strong, responsive and competitive economy; supporting strong, vibrant communities; and contributing to protecting and enhancing the natural, built and historic environment (para 8). At the heart of the NPPF is a presumption in favour of sustainable development, which requires that development proposals are approved without delay where they accord with an up-to-date development plan and where there is no relevant or up-to-date development plan policies they accord with the policies of the NPPF (para 11).

- 41 The NPPF provides that development plans should include strategic policies making sufficient provision for *inter alia* infrastructure for energy (including heat) (para 20).

- 42 Paragraph 148 highlights the need to support energy development that contributes to security and stability of supply:

“The planning system should support the transition to a low carbon future in a changing climate, taking full account of flood risk and coastal change. It should help to: shape places in ways that contribute to radical reductions in greenhouse gas emissions, minimise vulnerability and improve resilience; encourage the reuse of existing resources, including the conversion of existing buildings; and support renewable and low carbon energy and associated infrastructure.”

- 43 Paragraph 154 sets out the requirements for determining energy applications:

“When determining planning applications for renewable and low carbon development, local planning authorities should:

a) not require applicants to demonstrate the overall need for renewable or low carbon energy, and recognise that even small-scale projects provide a valuable contribution to cutting greenhouse gas emissions; and

b) approve the application if its impacts are (or can be made) acceptable. Once suitable areas for renewable and low carbon energy have been identified in plans, local planning authorities should expect subsequent applications for commercial scale projects outside these areas to demonstrate that the proposed location meets the criteria used in identifying suitable areas.”

- 44 The National Policy Statement for Energy (EN-1) (July 2011) seeks to promote resilience in the supply of energy and identifies at paragraph 2.2.20 (Security of Energy Supplies) that:

It is critical that the UK continues to have secure and reliable supplies of electricity as we make the transition to a low carbon economy. To manage the risks to achieving security of supply we need

sufficient electricity capacity ... to meet demand at all times. Demand for (electricity) must be simultaneously and continuously met by its supply. This requires a safety margin of spare capacity to accommodate unforeseen fluctuations in supply or demand.

- 45 Construction of reserve power / standby generation capacity such as Urban Reserve sites contribute to a safety margin which helps lower the risks associated with an unstable supply and ultimately makes the system more resilient in dealing with unexpected events. The policy recognises that the lower the risk of supply interruption the more this helps to protect business and consumers against such physical interruptions impacting on essential services, as well as protecting vulnerable households from rising and volatile prices (Paragraph 3.3.3).
- 46 Urban Reserve Projects also support the development of other forms of low carbon and renewable energy plants. A recent planning appeal decision in Bolsover (APP/R1010/W/17/3172633) concluded that gas standby generation (as associated infrastructure for renewable energy generation) constitutes “development required for the exploitation of sources of renewable energy”.

5.2 Development Plan

46. The development plan for the proposed development comprises:
- Reading Local Plan (comprised of the following);
 - The Reading Borough Local Development Framework: Core Strategy;
 - Reading Central Area Action Plan (including proposals maps and appendices);
 - Sites and Detailed Policies;
 - Proposals Map; and
 - The Central and Eastern Berkshire Minerals and Waste Plan.
47. The Central and Eastern Berkshire Minerals and Waste Plan are not considered relevant to the proposed development.
48. The proposed development is located outwith the boundary of the ‘Reading Central Area Action Plan’ and so this document is not considered.

5.2.1 Reading Local Plan

Site Allocation

- 49 The ‘Reading Borough Local Development Framework: Core Strategy’ (Core Strategy) was adopted in January 2008 and altered in January 2015. The ‘key diagram’ in the Core Strategy shows that the proposed development is located within an area allocated as an ‘Employment Area’. The Core Strategy states that these designated ‘Employment Areas’ are “characterised typically by poor environmental quality. In many cases, premises are in need of renewal to provide more up to date, efficient and flexible space”.
- 50 The interactive Proposals Map shows that the proposed development is located within an Air Quality Management Area, located within the boundary of Flood Zone 2, within a designated Core Employment Area and also within the Settlement Boundary.

Relevant Local Plan Policies

- 51 The following policies from the Local Plan are considered relevant to the proposed development.

Policy CS1: Sustainable Construction and Design

“Proposals for new development, including the construction of new buildings and the redevelopment and refurbishment of existing building stock, will be acceptable where the design of buildings and site layouts use energy, water, minerals, materials and other natural resources appropriately, efficiently and with care and take account of the effects of climate change.

To meet these requirements:

- All new housing is required to meet the most up to date Eco-Homes ‘Very Good’ as a minimum standard, and all new commercial developments are required to meet the most up to date BREEAM ‘Very Good’ as a minimum standard;*
- On larger developments of more than 10 dwellings or 1,000 m2 of floorspace, ensure that 50% of the provision meets the most up to date Eco-Homes and BREEAM ‘Excellent’ standards;*
- All new developments maximise the use of energy efficiency and energy conservation measures in their design, layout and orientation to reduce overall energy demand;*
- All developments of more than 10 dwellings or 1000m2 floorspace incorporate on-site generation of energy from renewable sources and energy efficient design measures (including the use of CHP where appropriate) to off-set at least 20% of predicted carbon dioxide emissions from the estimated energy usage of the completed and occupied development;*
- All developments reduce mains water use and demonstrate that water conservation measures are incorporated so that predicted per capita consumption does not exceed the appropriate levels set out in the Code for Sustainable Homes or BREEAM Standards;*
- Developments incorporate sustainable urban drainage facilities and techniques as part of the layout of a development as appropriate and as advised by the Environment Agency, including minimising the size of impermeable areas so that peak run-off and annual water run-off is reduced where possible and in any case is no greater than the original conditions of the site. Particular care will be needed in areas of flood risk where different solutions may be required.”*

Policy CS6: Settlement Boundary

“No development will be permitted outside the settlement boundary as defined on the Proposals Map.”

52. The proposed development is located within the settlement boundary as defined on the Proposals Map.

Policy CS7: Design and Public Realm

“All development must be of high design quality that maintains and enhances the character and appearance of the area of Reading in which it is located. The various components of development form, including:

- Layout: urban structure and urban grain;*
- Landscape;*
- Density and mix;*
- Scale: height and massing; and*
- Architectural detail and materials.*

will be assessed to ensure that the development proposed makes a positive contribution to the following urban design objectives:

- *Character - a place with its own identity and sense of place;*
- *Continuity and enclosure;*
- *Quality of the public realm;*
- *Ease of movement and permeability;*
- *Legibility - clear image and easy to understand;*
- *Adaptability – capable of adaptation over time;*
- *Diversity – meets a wide range of needs.*

Developments will also be assessed to ensure that they:

- *Respond positively to their local context and create or reinforce local character and distinctiveness, including protecting and enhancing the historic environment of the Borough and providing value to the public realm;*
- *Create safe and accessible environments where crime and disorder or fear of crime does not undermine quality of life or community cohesion;*
- *Address the needs of all in society and are accessible, usable and easy to understand by them; and*
- *Are visually attractive as a result of good high quality built forms and spaces, the inclusion of public art and appropriate materials and landscaping.*

Applications for major and minor developments should be accompanied by a design and access statement that deal with all the above matters."

53. The proposed development is located within a designated 'Employment Area', which the Core Strategy states are "characterised typically by poor environmental quality. In many cases, premises are in need of renewal to provide more up to date, efficient and flexible space". The proposed development will bring back into use a derelict piece of brownfield land, in keeping with the industrial nature of the area. Once operational the proposed development would have the potential to support the occupation of nearby developments (including their associated employment) through the provision of electricity and heat.

Policy CS9: Infrastructure, Services, Resources and Amenities

"Proposals for development will not be permitted unless the local planning authority is satisfied that infrastructure, services, resources, amenities or other assets lost or impacted upon as a result of the development or made necessary by the development will be provided or re-provided at the appropriate time, in order to ensure that the development is both sustainable and contributes to the proper planning of an area in accordance with relevant planning policies. Such contributions may be pooled, in order to allow necessary infrastructure to be secured in a fair and equitable way.

The local planning authority will require planning obligations entered into by agreement or other means to secure the replacement and enhancement of additional physical and social infrastructure, services, resources, amenities or other assets. A Supplementary Planning Document will be prepared that will detail:

- *The scale and form of obligation;*
- *The financial contribution sought;*

- *The role of pooled payments;*
- *Maintenance payments; and*
- *Charges for preparing agreements.”*

54. The proposed development is relatively small in scale and would not have a significant negative effect on local infrastructure, services, resources or amenities. The proposed development would enhance the local energy infrastructure through the provision of electricity and heat.

Policy CS10: Location of Employment Development

“Major office development will take place in the centre of Reading and along the A33 corridor. Office development will also take place in the other centres in the network set out in Policy CS 26, but should be of an appropriate scale to those centres.

Other major employment uses, including industrial and storage and distribution will be located in the A33 corridor or in the Core Employment Areas.

The site of the former Reading stadium and waste facilities at Southside is suitable for employment development which builds on the improvements in accessibility planned for this corridor. This should contribute to the range of employment facilities available in Reading and the environmental improvement of the A33 corridor. Development should be of an amount and type which does not have a detrimental impact on the regeneration and development of the centre of Reading.”

55. The proposed development is located within a designated ‘Employment Area’. The surrounding buildings are mainly light industrial, offices and warehouses and the proposed development would be in keeping with this kind of industrial building type and use. The proposed development would enhance local energy infrastructure and potentially support employment through encouraging further development in the surrounding area.

Policy CS11: Use of Employment Land for Alternative Uses

“Within the Core Employment Areas, the overall level of employment land should be maintained. Proposals that would result in a loss of such land will not be permitted.

In other areas, the following criteria will be considered when assessing proposals which would result in a loss of employment land:

- (i) *Is access by a choice of means of transport, including access to the strategic road network, poor, and likely to remain poor?*
- (ii) *Is the continued use of the site for employment, including the potential for redevelopment for employment uses, viable?*
- (iii) *Is there a surplus of a similar size and type of accommodation in Reading?*
- (iv) *Would continued employment use of the site detrimentally affect the amenity and character of a residential area?*
- (v) *Is the need for alternative uses stronger than the need for the retention of employment land?*
- (vi) *Would the proposal result in a piecemeal loss of employment land where there is potential for a more comprehensive scheme?”*

56. The proposed development is located on a small piece of vacant land which appears to be an awkward size for office or warehouse space. The proposed development may also potentially encourage and enable increased development nearby.

Policy CS13: Impact of Employment Development

“Employment development should provide mitigation measures in line with its impacts on the demand for housing (including affordable housing), labour and skills, and on the transport network.”

57. Due to the small scale nature of the proposed development, it is not expected to have any significant impact on housing demand, nor put any significant pressure on labour skills or the transport network.

Policy CS34: Pollution and Water Resources

“Development will only be permitted where it would not be damaging to the environment through air, land, noise or light pollution; where it would preserve or ideally enhance ground and surface water quality; and where existing water resources, sewerage and wastewater treatment infrastructure are adequate to support the proposed development.

Proposals for development that are sensitive to the effects of air, noise or light pollution will only be permitted in areas where they will not be subject to high levels of such pollution, unless adequate mitigation measures are provided to minimise the impact of such pollution.

Development will be permitted on land affected by contamination where it can be demonstrated, to the satisfaction of the LPA, that the contamination can be satisfactorily remediated so that it is suitable for the proposed end use.”

58. The proposed development is not expected to have any negative consequences on water resources. The proposed development includes noise reduction measures, specifically a fence surrounding the generators. The operation of generators of this type in this manner is administered by the permitting system. An appropriate permit will be obtained prior to operation of the facility.

Policy CS35: Flooding

“Planning permission will not be permitted for development in an area identified as being at high risk of flooding, where development would reduce the capacity of the flood plain to store floodwater, impede the flow of floodwater or in any way increase the risks to life and property arising from flooding.”

59. The proposed development is located on the edge of Flood Zone 2 and is deemed to have a low risk of flooding. A Flood Risk Assessment will be undertaken to further inform the level of flood risk at this site.

Policy DM3: Infrastructure Planning

“Proposals for development will make appropriate provision for the following infrastructure, services, resources and amenities. Such provision will be secured through planning obligations and/or the Community Infrastructure Levy as relevant.

In determining appropriate provision or contributions, the highest priority will be given to the following:

- *Transport infrastructure including major cross boundary or sub-regional infrastructure projects;*
- *Open space, green infrastructure and other measures to improve or enhance biodiversity;*
- *Education including cross boundary facilities;*
- *Economic development services and infrastructure, including employment, skills and training development initiatives and childcare provision.*

Where relevant a high priority will also be given to the appropriate provision of the following:

- *Energy infrastructure, including decentralised energy projects;*

- *Health provision; and*
- *Police Service infrastructure.*

Other measures, as follows, may also be considered, where a specific need is identified and justified:

- *Community facilities;*
- *Leisure and cultural infrastructure, including public art, library and archive services;*
- *Reading Central Area infrastructure and amenities, including public realm and street care enhancements;*
- *Environmental improvements outside the Central Area, such as within local centres, including off site street tree and other tree planting;*
- *Measures to tackle poor air quality or for on-going air quality monitoring; and*
- *Flood mitigation and prevention measures.*

Developers are required to contribute towards the ongoing local authority costs of monitoring the implementation and payment of planning contributions."

60. Due to its relatively small size and its location, the proposed development would not have a significant negative effect on transport infrastructure, open space, education or economic development. The nature of the proposed development means that it would support and improve the local energy infrastructure.

Policy DM19: Air Quality

"Development should have regard to the need to improve air quality and reduce the effects of poor air quality.

i. Development that would detrimentally affect air quality will not be permitted unless the effect is to be mitigated. The following criteria should be taken into account:

- *Whether the proposal, including when combined with the cumulative effect of other developments already permitted, would significantly reduce air quality;*
- *Whether the development is within, or accessed via, an Air Quality Management Area; and*
- *Whether it can be demonstrated that a local reduction in air quality would be offset by an overall improvement in air quality, for instance through reduction in the need to travel.*

ii. Where a development would introduce sensitive uses (such as residential, schools and nurseries, hospitals, care facilities) into, or intensify such uses within, an Air Quality Management Area, detrimental effects on that use will be mitigated. Mitigation measures should be detailed in any planning application.

iii. Where required, planning obligations will be used to secure contributions to measures to tackle poor air quality or for air quality monitoring."

61. The proposed development is located within an Air Quality Management Area. The operation of generators of this type in this manner is administrated by the permitting system. An appropriate permit will be obtained prior to operation of the facility. Section 4.1 details the Screening that has been undertaken on Air Quality and the further assessment and dispersion modelling that will be undertaken as part of the application for an EA Permit.

Policy SA11: Settlement Boundary

"The Settlement Boundary of Reading is defined on the Proposals Map."

62. The proposed development is located within the settlement boundary of Reading as defined on the Proposals Map.

Policy SA12: Core Employment Areas

“The following areas, as shown on the Proposals Map, are defined as Core Employment Areas:

- SA12a: Green Park
- SA12b: Reading International Business Park
- SA12c: South of Basingstoke Road
- SA12d: Bennet Road
- SA12e: North of Basingstoke Road
- SA12f: Elgar Road
- SA12g: Richfield Avenue
- SA12h: Portman Road
- SA12i: Wigmore Lane
- SA12j: Bridgewater Close
- SA12k: Sterling Way
- SA12l: Marcus Close
- SA12m: Paddock Road”

63. The proposed development is located within the Core Employment Area SA12g: Richfield Avenue. The proposed development is located on a small piece of vacant land which appears to be an awkward size for office or warehouse space. The proposed development may also potentially encourage and enable increased development nearby.

5.3 Material Considerations

5.3.1 Supplementary Guidance

64. Supplementary Planning Documents (SPD) provide additional guidance on detailed issues linked to policies in the Development Plan; they do not form part of the Development Plan but are used in the determination of planning applications.
65. Reading Borough Council has produced 18 SPDs. None of the SPDs are considered relevant to the proposed development due to its nature, location and scale.

5.3.2 Emerging Policy

66. Reading Borough Council submitted the new Local Plan to the Secretary of State on the 29th of March 2018. A process of public examination is now underway prior to the new Local Plan being adopted. Once adopted it will replace the ‘Core Strategy’, ‘Reading Central Area Action Plan and Sites’ and ‘Detailed Policies Document’.
67. The Pre-Submission Draft Local Plan Proposals Map shows the proposed development remaining in a Core Employment Area.

6.0 Conclusion

68. The proposed development is for a small scale 4MW gas fired power station consisting of two 2MW generators and ancillary infrastructure; and is one of several similar projects around the country referred to as Urban Reserve sites. These developments generate electricity and heat locally, helping release grid capacity and providing benefit to local business, developments and electric vehicle (EV) charging points. In other words, providing support to the grid within the area it is required.
69. The design and layout of the development has addressed a range of technical matters and been reviewed against a series of environmental considerations. It has also been considered against local and national policies including the recently revised NPPF.
70. The review has concluded that the environmental impacts associated with this small-scale development can be addressed by appropriate placement of vulnerable equipment above flood levels, will be addressed by the EA Permit process (and conditioned appropriately) or are temporary and minimal particularly when viewed in the context of improved security of power supply contributing to the delivery of the social and economic benefits in the area around Cardiff road.
71. Reading Borough Council is therefore respectfully requested to approve this Planning Application accordingly.

APPENDIX 01

Application Drawings

- Drawing CAR-01 – Site Location Plan
- Drawing CAR-02 – Proposed Site Layout Plan
- Drawing CAR-03 – DNO/Customer Substation Plan & Elevations
- Drawing CAR-04 – Gas Kiosk Plan & Elevations
- Drawing CAR-05 – Engine Plan & Elevations
- Drawing CAR-06 –Transformer – Elevations
- Drawing CAR-07 – 2.4m High Palisade Fence Elevations
- Drawing CAR-08 – 3.5m Solid Fence Elevations

APPENDIX 02

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