

Meaford Energy Centre Development Consent Order
for the construction, operation and maintenance of a
Combined Cycle Gas Turbine Power Station

Local Impact Report

Prepared jointly by;



**Stafford Borough
Council**



**Staffordshire County
Council**

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**MEAFORD ENERGY CENTRE
(COMBINED CYCLE GAS TURBINE POWER STATION)**

LOCAL IMPACT REPORT

1.0 PURPOSE OF THE REPORT

- 1.1 This report is prepared jointly by Staffordshire County Council and Stafford Borough Council. It provides an evaluation of the local impacts of the Meaford Energy Centre Development Consent Order for the construction, operation and maintenance of a Combined Cycle Gas Turbine Power Station.
- 1.2 The report has been prepared in accordance with the Planning Inspectorate Advice Note on Local Impact Reports.

2.0 SITE DESCRIPTION AND SURROUNDINGS

- 2.1 The Meaford Energy Centre proposal is located substantially within the wider Meaford Business Park, which benefits from outline planning permission but is yet to be built out.
- 2.2 The Meaford Business Park site is set within low-lying land forming the Trent Valley, which runs in a north-south direction. The Meaford Business Park lies between the River Trent to the west and the Trent and Mersey Canal to the east. Further to the east, the West Coast Main railway line runs generally parallel with the canal, whilst the A34 dual carriageway runs in a north / south direction on higher land further to the west of the River Trent.
- 2.3 Access to Meaford Business Park is currently gained via a temporary diversion route from the A34 through Barlaston and Meaford Road to the north. The main entrance into the Meaford Business Park site is from its northwest corner from Meaford Road, which is known as the Northern Access Road.
- 2.4 The diversion route is a consequence of Staffordshire County Council undertaking highway improvement works to form a new southern access into the Meaford Business Park site. The works include forming a new roundabout at the junction of the A34/Meaford Road, improvements to Meaford Road up to a new four arm roundabout at the junction of Meaford Road / Washdale Lane. A 350m long northern arm off the new Meaford Road / Washdale Lane roundabout would then form the new southern access into the Meaford Business Park site. These highways works are scheduled to be substantially complete by June 2016.

3.0 DETAILS OF THE PROPOSAL

- 3.1 The scheme put forward by Meaford Energy Limited is for a Combined Cycle Gas Turbine power station fuelled by natural gas, which would have a generating capacity of up to 299 megawatts of electrical output.
- 3.2 The proposed development is located on the site of the former Meaford coal-fired power station, which was decommissioned in 1990 and demolished in 1996. The former power station site is around 48ha in size and now forms the Meaford Business Park site.
- 3.3 The Meaford Energy Centre will only take up a portion of the overall business park allowing for the completion of the remainder of the site in accordance with the planning permission.
- 3.4 The proposal is described in detail in the Environmental Statement, although paragraphs 3.5 to 3.8 below provide a brief outline.
- 3.5 The power station complex would be located within the southern portion of the Meaford Business Park site. The proposed gas connection would be located on the western side of the West Coast Main railway line, with the gas connection pipeline running underground within the Meaford Energy Centre site and then above ground over the canal and the railway line bridges.
- 3.6 Electrical output from the power station would be exported to the adjacent Barlaston sub-station via underground cables.
- 3.7 The Environmental Statement explains that, whilst the final power station configuration is not known at this stage, it will be contained within the design parameters set out in the draft Development Consent Order being based on the 'Rochdale envelope' principle, which allows for a degree of flexibility in the final form and design of the proposed development.
- 3.8 An overall construction period of 36 months is anticipated. The construction works will be managed through a Construction and Environmental Management Plan to be agreed with the County and Borough Councils.

4.0 RELEVANT PLANNING HISTORY

4.1 The following planning applications are considered to be relevant material considerations:-

98/35897/OUT Outline planning permission with all matters reserved was originally granted in May 2007 for the erection of B1, B2 and B8 buildings, sports facilities, roadways and a new roundabout on the site.

This proposal forms the wider Meaford Business Park site.

Condition 2 restricted the floor space to 10,000 square metres of B1 use, 40,000 square metres of B2 use and 60,000 square metres of B8 use. A total of 110,000 square metres of floor space being limited within the buildings and not to exceed 96,500 square metres of footprint within 34.1 hectares of the site.

Condition 11 also required the southern access to be served by roundabout with access onto Meaford Road near to Wash Dale Lane

08/10097/REM Reserved matters application to outline permission 98/35897/OUT was then approved in July 2008 for the construction of the roundabout and access road at the southern end of the site (known as Phase 1) at the junction of Washdale Lane and Meaford Road. The proposal also included a balancing pond and associated landscaping. (This proposal was not implemented)

08/09601/FUL Application to vary conditions 3, 6, 7, 12, 16, 17, 19 and 20 of outline permission 35897 to enable the site to be developed on a phased basis was then approved in March 2008.

08/10757/DCON Application to discharge condition 18 on outline permission 98/35897OUT which related to ground contamination was approved in June 2010.

09/12663/FUL Application to vary condition 22 to outline permission 98/35897OUT which related to external lighting was approved in December 2009.

10/13609/EXT Extension of time application to outline permission 98/35897/OUT was approved in July 2010 and extended the time period for the submission of reserved matters to July 2015.

14/21379/EXTO Extension of time application to outline permission 98/35897/OUT, as previously extended under planning approval 10/13609/EXT, was then approved in May 2015. This permission extends the time period for the submission of reserved matters to May 2022.

The Unilateral Undertaking secures the approved floor space and footprints set out in condition 6 which repeats the requirements of condition 2 to outline permission 98/35897/OUT.

This condition is considered to be particularly relevant as it includes the footprints of buildings both within the Meaford Business Park and Meaford Energy Centre sites.

S.14/07 Staffordshire County Council planning permission for the construction of a new access, together with associated highway improvements including a new roundabout, footpath/cycleway, lighting and landscaping at Meaford Road, Stone. Approved 16 January 2015. Works have commenced.

15/22560/REM Reserved matters application to outline permission 14/21379/EXTO (appearance, landscaping, layout and scale) for Units 1 and 2. This application is currently pending consideration.

15/22557/REM Reserved matters application to outline planning permission 14/21379/EXTO (layout, scale, appearance and landscaping) for the development of an estate spine road and associated drainage. This application is currently pending consideration.

4.2 Copies of the relevant officer report, decision notice, legal agreement and plans (not to scale) for all applications, except 08/10757/DCON as this documentation is not available, are attached as Appendix 1.

POLICY FRAMEWORK

5.1 National Planning Policy Framework

5.1.1 The National Planning Policy Framework (NPPF) was introduced in March 2012 and sets out the Government's planning policies.

5.1.2 Paragraph 3 points out that the Framework does not contain specific policies for Nationally Significant Infrastructure Projects, as these are determined in accordance with the decision-making framework set out in the Planning Act 2008 and relevant National Policy Statements for major infrastructure. The paragraph goes on to advise however, that in determining such projects other matters that are considered both important and relevant can also be taken into account, and this includes the NPPF.

5.1.3 The presumption in favour of sustainable development lies at the heart of the NPPF, and Paragraph 14 advises that this should be seen as a golden thread running through both plan-making and decision-taking. Paragraph 7 identifies three dimensions to sustainable development:- economic, social and environmental.

5.2.4 In turn, Paragraph 17 sets out 12 core planning principles, which are considered in more detail in later paragraphs of the NPPF. The following core principles are considered to be relevant to this proposal:-

To proactively drive and support sustainable economic development

5.1.5 Section 1 seeks to deliver sustainable development and securing economic growth through the planning system, whereby local planning authorities need to set out a clear economic vision and strategy for their area.

Protecting Green Belts around urban areas

5.1.6 Paragraph 89 allows for the complete redevelopment of previously developed sites, whether redundant or in continuing use (excluding temporary buildings), providing this would not have a greater impact on the openness of the Green Belt and the purpose of including land within it than the existing development.

Secure high quality design

5.1.7 Paragraph 56 states that the Government attaches great importance to the design of the built environment and that good design is a key aspect of sustainable development. This is further reinforced at Paragraph 67, as this advises that applications should not be refused for buildings or infrastructure that promote high levels of sustainability because of concerns about incompatibility with an existing townscape, if those concerns have been mitigated by good design.

Support the transition to a low carbon future

- 5.1.8 Paragraph 93 recognises the role the planning system plays in helping to, amongst other things, securing reductions in greenhouse gas emissions and supporting the delivery of renewable and low carbon energy and associated infrastructure, and sees this as central to the economic, social and environmental dimensions of sustainable development

Contribute to conserving and enhancing the natural environment and reducing pollution

- 5.1.9 Paragraph 109 seeks to contribute to and enhance the natural and local environment through a commitment to halt the overall decline in biodiversity, with measures including preventing development from being or contributing to an unacceptable risk of pollution, together with remediating and mitigating contaminated and other land.
- 5.2.10 Paragraph 118 then sets out a number of principles in the aim to conserve and enhance biodiversity, whilst paragraphs 123 and 125 look at avoiding impacts from noise and light pollution.

Encourage the effective use of land by reusing land that has been previously developed land, provided that it is not of high environmental value

- 5.1.11 Paragraph 111 encourages the effective use of land by re-using previously developed land providing this is not of high environmental value.

Conserve heritage assets in a manner appropriate to their significance

- 5.1.12 Paragraph 129 requires local planning authorities to identify and assess the particular significance of any heritage asset that may be affected by a proposal including the setting of the asset. Paragraph 132 also advises that when considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to the asset's conservation. The more important the asset, the greater the weight should be.

Actively manage patterns of growth to make the fullest possible use of public transport

- 5.1.13 Paragraphs 29 and 30 seek to reduce the need to travel and to encourage more sustainable modes of transport.

5.2 The Plan for Stafford Borough 2011 – 2031

- 5.2.1 The Plan for Stafford Borough was adopted on 19 June 2014 and comprises the Development Plan for Stafford Borough within which the proposal is located. The Plan for Stafford Borough sets out the strategy for the delivery of sustainable

development over the plan period and includes strategic development locations for housing and employment.

5.2.2 In terms of development plan policy, the Meaford Business Park site represents a brownfield site, which is identified as a major developed site within the North Staffordshire Green Belt. The Trent and Mersey Canal Conservation Area also runs along the site's eastern boundary.

5.2.3 The following policies are considered relevant to this proposal:-

Spatial principle 1 (SP1) - presumption in favour of sustainable development

5.2.4 In terms of the strategic delivery of sustainable development across the Borough, SP1 reflects the presumption in favour of sustainable development contained within the NPPF.

Spatial Principle 2 (SP2) – Stafford borough housing & employment requirements

5.2.5 In addition to housing SP2 sets out the provision for approximately 8 hectares of employment land per year.

Spatial Principle 5 (SP5) – Stafford Borough employment growth distribution

5.2.6 SP5 sets out the annual targets for the distribution of employment land identified in SP2 as listed below:-

Stafford 56%
Stone 12%
Rest of Borough Area 32%

The Meaford Business Park and Meaford Energy Centre sites are located within the 'Rest of Borough Area'.

Spatial Principle 7 (SP7) – Supporting the location of new development

5.2.7 SP7 seeks to deliver development or activities of a scale and nature appropriate to secure the sustainability of each settlement. Criterion (i) in particular allows for development in other locations and in the green belt where this is consistent with national policies and Policy E5.

Policy E1 – Local Economy

5.2.8 Policy E1 seeks to support and sustain the local economy by, amongst other things, safeguarding an adequate supply and variety of land and buildings as set out in SP5.

Policy E5 - Major Developed Sites in the Green Belt

- 5.2.9 Policy E5 allows for complete redevelopment, where this is supported for employment purposes, providing this is consistent with SP7 and which would not have a greater impact on the openness of the Green Belt and the purpose of including land within it than the existing development.

Policy N1 - Design

- 5.2.10 Policy N1 sets out criteria for design quality under four general headings: 'use', 'form', 'space' and 'movement'. The relevant design criteria relevant to this proposal are considered to be those relating to 'use' and 'form'.
- 5.2.11 When considering 'use,' provision (a) looks at the scale, nature and surroundings of major applications, and that these are comprehensively master planned. The Meaford Energy Centre scheme is substantially located within the wider Meaford Business Park site, which is yet to be built out.
- 5.2.12 When considering the 'form' of the proposal, the policy requires at provision (d) that consideration is given to sustainable construction and energy conservation techniques in accordance with Policy N2. In turn, criterion (g) and (f) give regard to biodiversity and landscape features, and that design takes account of local character, context including heritage assets, historic views and sight lines, and density. Amenity criteria are also considered in provision (e) with regards to noise and light implications and the amenity of adjacent uses, including residential properties.

Policy N2 – Climate Change

- 5.2.13 In seeking to mitigate against the impact of climate change, Policy N2 requires proposals to take particular account of the need to ensure that they are protected from and do not worsen flooding.

Policy N3 – Low Carbon Sources & Renewable Energy

- 5.2.14 Relevant provisions relate to residential amenity, the significance of heritage assets and their setting, and effects on the surrounding landscape, which essentially repeat the provisions in Policy N1.
- 5.2.15 Additionally, the policy requires that such proposals are accompanied by decommissioning conditions and the ability to ensure restoration of the site following the cessation of energy production.

Policy N4 - The Natural Environment & Green Infrastructure

- 5.2.16 The relevant parts of this policy relate to the protection and enhancement of the natural environment.

- 5.2.17 Provision (a) refers in particular to the Staffordshire Biodiversity Action Plan to increase and enhance biodiversity in general, as well as geological conservation and geodiversity through the management of networks. In turn, provision (b) looks at the conservation and enhancement of water courses including canal systems.
- 5.2.18 Criterion (c) also provides that ancient woodland and ancient or veteran trees are protected, whilst criterion (f) seeks mitigation, compensation measures or appropriate site management regimes for unavoidable impacts on the natural environment.

Policy N5 - Sites of European, National & Local Nature Conservation Importance

- 5.2.19 Policy N5 identifies a hierarchy of designated nature conservation sites and measures to afford adequate protection and enhancement of such sites.

Policy N8 - Landscape Character

- 5.2.20 Policy N8 requires development proposals to be informed by, and be sympathetic to, landscape character and quality, which is demonstrated through local site specific assessments in the context of the Staffordshire Landscape Character Assessment, together with Historic Landscape Characterisation Assessment and the Historic Environment Character Assessment.
- 5.2.21 Developments should therefore demonstrate under provisions (a) to (d) that proposals with landscape and visual implications take account of elements of the landscape that contribute to the local distinctiveness of the area, including heritage assets, cultural character and biodiversity. Furthermore, the setting and views of or from heritage assets are identified, together with locally distinctive patterns of landscape elements, such as woodland, streams, hedgerows, trees and field boundaries.

Policy N9 – Historic Environment

- 5.2.22 For proposals that would affect the significance of a heritage asset, Policy N9 requires sufficient information to be provided for the impact to be assessed. Furthermore, any potential harm to the significance of a heritage asset, including its setting, will require clear justification and which take account of factors including density of development; scale, form, massing of buildings and structures; materials; significant landscape features together with views and vistas; and archaeological remains.

Policy T1 - Transport

- 5.2.23 Policy T1 seeks to achieve a sustainable transport system through measures that principally include reducing the need to travel by private car in urban areas, requiring new development to produce Transport Assessments and Travel Plans,

working with the Highway Authorities to improve highway safety, and reducing the need to travel through providing a balanced mix of land uses.

5.3 Staffordshire and Stoke-on-Trent Joint Waste Local Plan 2010 – 2026

5.3.1 Policy 1: Waste as a resource

- 1.1: General Principles
- 1.2 Make better use of waste associated with non-waste related development
- 1.3 Construction, demolition and excavation waste
- 1.4 Use of waste for landscaping, screening, engineering purposes or for the improvement of agricultural or forestry land

5.3.2 Policy 4: Sustainable design and protection and improvement of environmental quality

5.3.3 Copies of the Plan for Stafford Borough and the Staffordshire and Stoke-on-Trent Joint Waste Local Plan are attached as Appendices 2 and 3.

6.0 ASSESSMENT OF PROSPECTIVE IMPACTS OF THE PROJECT

6.1 Socio-economic

- 6.1.1 The Meaford Energy Centre proposal is located on Meaford Business Park, a significant brownfield employment site to the north of Stone, on the site of the former coal fired Meaford Power Station.
- 6.1.2 Outline planning permission for the use of the site for a mix of business uses (B1, B2 and B8) was first approved in May 2007 under the Stafford Borough Council planning application reference 98/35897/OUT. Planning permission was subsequently renewed under planning application references 10/13609/EXT and 14/21379/EXTO to provide an extension of time, as the development of the business park had not been brought forward, largely as a result of underlying market conditions and as a consequence of the significant off site infrastructure works required in accessing the site.
- 6.1.3 The total quantum of employment floorspace approved under these planning permissions amounts to a maximum of 110,000 square metres within buildings which have a collective footprint of less than 96,500 square metres and within an area not to exceed 34.1 hectares of the site.

(The Stoke-on-Trent and Staffordshire City Deal and Growth Deal “Powerhouse Central” –City Deal for Stoke-on-Trent and Staffordshire¹)

- 6.1.4 During 2012 and 2013, the Stoke-on-Trent and Staffordshire Local Enterprise Partnership, in conjunction with Staffordshire County Council and Stoke-on-Trent City Council, began negotiations with Government to enter into a “City Deal.”
- 6.1.5 Signed in March 2014 the City Deal is built around a flagship proposal for the UK’s first at-scale, low carbon, heat network system and contains four connected strands: delivering a new and local approach to energy production; providing local and incoming businesses with support to develop the next generation of products and materials; developing local sites for new businesses or existing businesses to expand into, along with a strengthened local planning and development context; and bringing employers and education together to ensure residents have the skills and training that they and our businesses need to drive the economy forward.

¹ See link to published Stoke-on-Trent and Staffordshire City Deal:
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/289615/Stoke-on-Trent_and_Staffordshire_City_Deal.pdf

- 6.1.6 For most businesses, energy accounts for a small proportion of total costs – less than 3% on average for the UK manufacturing sector. However, the local economy features a high proportion of heavy energy users, from the ceramics sector to advanced manufacturing business. For these energy-intensive businesses, energy accounts for up to 35% of overall business costs. The average price of energy purchased by manufacturing businesses rose by 46% between 2007 and 2012. The City Deal will address this challenge, through a proposal that will begin the development of the UK’s first at-scale integrated energy system, providing a solid foundation for continued economic growth and prosperity. Providing the right sites and infrastructure for business growth is essential to the delivery of Stoke-on-Trent and Staffordshire’s Local Enterprise Partnership Strategic Economic Plan. Despite strong demand for employment site locations from businesses seeking to grow in Stoke-on-Trent and Staffordshire, there remain a number of obstacles which inhibit development.
- 6.1.7 A number of strategic employment locations were prioritised locally, supported by the City Deal, based on their ability to potentially offer energy and support business growth in key sectors, of which several were identified to be delivered through the Growth Deal. These sites and projects will potentially support energy generation and bring wider benefits of maintaining and growing jobs in the UK, allowing local businesses to expand and increase job numbers, and encouraging Foreign Direct Investment.
- 6.1.8 During the negotiation phase of the Stoke-on-Trent and Staffordshire Growth Deal, details of the proposals for the Meaford Energy Centre started to emerge, and provided a strong fit to the policy and strategy aims of both the City Deal and the Strategic Economic Plan for Stoke-on-Trent and Staffordshire.
- 6.1.9 As such, the promotion of the Meaford employment site was included as a priority project in the Stoke-on-Trent and Staffordshire Growth Deal. (*Stoke-on-Trent and Staffordshire Growth Deal*²). Alongside several other successful projects, funding identified to bring forward the infrastructure works required to open up the Meaford employment site for development was announced in the Stoke-on-Trent and Staffordshire Growth Deal announcement on 7th July 2014.
- 6.1.10 A total of £4.2m of Growth Deal funding has been allocated to these works alongside a private contribution from the site’s owners and developers, St. Modwen Properties plc., and will consist broadly of the following infrastructure improvements:
- Provision of a new three arm roundabout at the junction of the A34 Stoke Road and Meaford Road

² See link to Stoke-on-Trent and Staffordshire Growth Deal
<https://www.gov.uk/government/publications/stoke-on-trent-and-staffordshire-growth-deal>

- Provision of a new four arm roundabout at the southern end of the proposed development site serving Meaford Road (North), site access, Rookery Lane and Meaford Road (South)
- Construction of approximately 350m of site access road to the development including a footway and cycleway, with the associated drainage and lighting to the first development plot
- Improvements to Meaford Road between the two roundabouts, including the provision of a 3.5m wide footway and cycleway with associated lighting and kerbing to both sides of the carriageway
- Realignment to a section of Meaford Road adjacent to St. Vincent Mews to improve the visibility for the local community
- Diversion of relevant utilities associated with the delivery of these infrastructure works, and accommodation for the provision of utilities associated with the new business park development where agreed with the site developer

6.1.11 The development, design and delivery of these works has been managed by Staffordshire County Council on behalf of the Local Enterprise Partnership. Throughout the information supplied alongside the submission application for the Meaford Energy Centre, these works have been termed as the “SCC Highways Works”. The planning application for these works was approved by Staffordshire County Council’s planning committee in January 2015 under planning application reference S.14.07.

6.1.12 During the design and development phases of these infrastructure works, Staffordshire County Council has liaised closely with the Meaford Energy Centre project team to ensure that the works were compatible with the planned construction and operation of the Meaford Energy Centre.

Employment land context

6.1.13 As identified above, the Meaford Business Park employment site extends over an area of approximately 34.1 hectares and benefits from outline planning consent for up to 110,000 square metres of employment uses.

6.1.14 The detailed footprint and layout of the proposed Meaford Energy Centre are still to be confirmed. However, within the Environmental Statement submitted as part of the application process, it has been estimated that the proposed Meaford Energy Centre could use approximately 10% of the land area and floor space of the consented business park use when it has been fully built out and estate roads and other highways improvements are in place³.

³ See Meaford Energy Centre application document reference 6.2.6 – paragraph 6.95 onwards

- 6.1.15 Using recognised employment densities information published in the Homes and Communities Agency's Employment Densities guide⁴, it has been estimated that the total employment generation potential of the business park with the Meaford Energy Centre in place would be approximately 2,300 jobs, (with 30 of these jobs being provided by the energy centre itself).
- 6.1.16 Although the application for the Meaford Energy Centre is likely to result in a small decrease in the net usable employment land on the site, and a consequent reduction in the potential job creation on site, this is balanced by the fact that jobs at the proposed Meaford Energy Centre are likely to be highly skilled and secure jobs, within a sector for which there is identified considerable future demand.
- 6.1.17 The co-location of the proposed Meaford Energy Centre as part of the wider development of the business park could provide an opportunity for private electrical supply to adjoining occupiers of the business park, as well as the potential for Combined Heat and Power through a district heating scheme. It is recognised that the location of the proposed energy centre in an area of the site which is constrained by existing electrical supply infrastructure means that this part of the site does not have the same flexibility as other locations within the business park.

Other socio-economic factors

- 6.1.18 The Socio Economic chapter of the Environmental Statement (document reference 6.2.6) recognises that the Meaford Energy Centre could provide direct employment when operational in the order of 30 FTE jobs. In addition, there would likely be indirect employment creation, which is predicted to amount to 13 FTEs locally, 29 sub-regionally and 45 FTEs regionally.
- 6.1.19 The potential benefits of this direct and indirect job creation have been estimated to provide for additional Gross Value Added (GVA) of between £0.63m and £2.2m annually, which, alongside the job creation identified above, could lead to a permanent minor beneficial impact.
- 6.1.20 Table 6.12 of the Socio Economic Chapter of the Environmental Statement identifies the situation for local unemployed people in the context of likely job creation and recognises that this may lead to some need for local retraining, although as the study area has a high proportion of residents with managerial and professional qualifications there are some potential opportunities for skills matching within the local area.

⁴ See website link <https://www.gov.uk/government/publications/employment-densities-guide>

- 6.1.21 While the study area, similar to the rest of Staffordshire, has a fairly low rate of unemployment (as measured by claimant unemployment), the geographical location of the scheme and connectivity of the site will provide for further employment opportunities for residents of the North Staffordshire conurbation, where more persistent pockets of unemployment and worklessness exist.
- 6.1.22 Alongside the employment and other socio-economic factors of the scheme during operation, the Meaford Energy Centre is estimated to have a construction value which is upwards of £230m. The enhanced opportunities for local construction are discussed within the Environmental Statement, and provisions are made within the draft Development Consent Order to ensure that these opportunities are made available on a structured basis.

6.2 Transport and Traffic

- 6.2.1 The transport implications of the scheme put forward by Meaford Energy Limited for a Development Consent Order for a gas-fired electricity generating power station have two distinct phases for transport impact. These are construction and operation. Once the power station is operational there will be fewer traffic movements compared to what could be expected from an industrial unit associated with the permitted development on the wider business park. The main impacts for transport and traffic are related to the construction of the power station, where there will be high levels of construction-related traffic and some associated abnormal loads that will have a negative impact on the local road network, albeit on a temporary basis.
- 6.2.2 The traffic and transport impacts are described in detail with the Environmental Statement and there is little further that can be added here without repetition. From a local highway perspective it will be important to manage the construction traffic appropriately through the Construction Traffic Management Plan. As part of our assessment of transport impacts for the County Highway works, we are aware of local sensitivities to increased traffic movements or routing of large vehicles north of Barlaston via Barlaston Old Road to its junction with the A5035, in Stoke-on-Trent. It will be important, therefore, for the Construction Traffic Management Plan to ensure that routing of construction vehicles avoids this area.

6.3 Air Quality

- 6.3.1 The addition of releases of pollutants to the local air can only be detrimental, however the magnitude of the impact is demonstrated to be insignificant.
- 6.3.2 The localised impact of the power station emissions will not result in a breach of the European Union air quality standards locally or regionally as conditions of the

permit issued and monitored by the Environment Agency limit releases to an acceptable standard.

- 6.3.3 Emissions of construction dust and traffic pollutants will have a temporary detrimental effect on the local atmosphere within approximately 1km but when simple mitigation measures are taken these impacts will be insignificant.

Power Station Emissions

- 6.3.4 The power station will operate with the benefit of an environmental permit issued by the Environment Agency. The permit will strictly control emissions to air from the site. It has been demonstrated that the stack emissions from the scheme will not lead to any exceedance of statutory air quality criteria at sensitive receptors where there is relevant exposure. Total concentrations (including the background contribution) of nitrogen dioxide, carbon monoxide and particulate matter will continue to be below their respective Air Quality Standard objectives at locations of sensitive receptors for human health. The effect of scheme stack emissions is considered, in line with EPUK guidance, to be insignificant. Ecological effects of oxides of nitrogen concentrations and nitrogen deposition rates at statutory and non-statutory (Sites of Special Scientific Interest) sites are insignificant, with negligible increments to existing deposition rates at European and national sites of importance. Local nature reserves are similarly considered to be not significantly impacted.

The Construction and Preparation Phase

- 6.3.5 Air pollutants (dust) will be regulated in accordance with agreed and enforceable protocols. Mitigation methods are simple and easily evidenced.
- 6.3.6 There will be no significant cumulative effects due to the additional traffic introduced by the Meaford Business Park during construction and operation. Pollutant concentrations will remain below Air Quality Standard objectives and cumulative effects of scheme traffic will be negligible.

6.4 Noise and Vibration

- 6.4.1 Stafford Borough Council is aware of potential noise and health impacts, which may need to be addressed as part of this development. In particular, from online research it is noted that a Combined Cycle Gas Turbine can emit significant noise, for example:

Gas Turbines can emit high noise levels associated with the air inlet and flue gas exhaust. Strong pure tonal components have been associated with inlet while the exhaust results in high levels of low frequency noise.

Heat Recovery Steam Generator(s) (HRSGs) steam venting during HRSG start up and blow downs. It is noted that it is not possible to completely abate noise from such high temperature/high volume sources.

Steam Turbines together with auxiliary plant can be a source of noise.

Gas Release vented to the atmosphere

Transformers normally have fans on the generator and other large transformers are provided for cooling purposes. The transformers themselves may emit noise at multiples of the power line frequency (50Hz).

6.4.2 The Technical Need Note, recognises that the plant may not operate constantly, which could result in periods of start-up and shut-down. Additionally, certain aspects of the development are likely to have either a directionality (i.e. noise that is emitted in a particular direction) or tonality (i.e. is particularly noticeable or irritable) at high and/or low frequencies. The acoustic information supplied in Chapter 9: "Noise and Vibration" of the Environmental Statement only goes some way to identifying this, i.e. only gives basic Sound Power Levels of typical equipment (see Table 9.1). Without detailed specifications of the plant and equipment it is difficult to fully calculate the effects of such noise, and the solutions required may include the use of all or some of the following:

- a) Silencers on exhaust systems;
- b) Acoustic absorption treatments to inner surfaces of buildings enclosing high noise machinery, e.g. turbines, generators, etc. to reduce the reverberant noise levels;
- c) Acoustic insulation of buildings to provide, where possible, R_w and transmission of noise through building structures;
- d) Positive preventative maintenance;
- e) Vibration isolation of machinery;
- f) Acoustic barriers;
- g) Use of restricted hours;
- h) Routing of vehicles to an agreed designated traffic route to reduce disturbance; and
- i) Use of pre-fabrication where possible to minimize on-site construction disturbance.

In view of this and without detailed information, Stafford Borough Council would need to agree a detailed noise management plan covering all aspects of the development before operation.

6.4.3 Stafford Borough Council supports the use of BS5228 for measuring and defining the effects of construction noise. A monitoring plan for the site, preferably at or close to Noise Sensitive Receptors, particularly during the 36-month construction period, is suggested. Consideration of live noise, dust, vibration data with pre-triggers alerts 24/7 and self-restricted working hours for noisy activities have been used on other similar sized construction sites.

6.4.4 Regarding the working hours during the construction phase, there are significant differences between the draft Development Consent Order and the Environmental Statement. Stafford Borough Council would recommend the following hours condition:

Construction work for the authorised development must not take place outside the hours of

(a) 07:00 to 18:00 on Monday to Friday, excluding public holidays; and,

(b) 07:00 to 13:00 on Saturdays

except with the prior written approval of the relevant planning authority.

6.4.5 Houses located at the southern end of the proposed site, at the former Meaford Hall site (e.g. St Vincent Mews and Admiral Views) and at Meaford Farm (see figure 1) are also likely to suffer from noise and dust associated with increased traffic movements, particularly during the construction phase. Stafford Borough Council would also like to see that the transport plan recommendations in Chapter 7 "Traffic and Transport," and the restriction in hours detailed in 6.4.4 above, are implemented.

6.4.6 During the operational phase, particular negative effects may be noticed by Barlaston Golf Club and the adjacent public house (see Figure 1 for location). It is noted that the positioning of the club and pub are very close to the new development and may potentially suffer from the effects of significant noise levels and a loss of amenity. Little protection is recommended in the Environmental Statement due to the lack of residents and "transitory nature" of visitors. Additional acoustic and amenity protections are likely, and appropriate compensation may need to be provided to these businesses. Stafford Borough Council would support the developer protecting the interests of the club and pub, and to sustain the businesses during the construction and operation of the development.

6.4.7 In line with 6.4.3 above, an online noise and complaints management system should be published on the website to ensure that members of the community have the opportunity to see and report any non-conformity to any agreed noise standards.

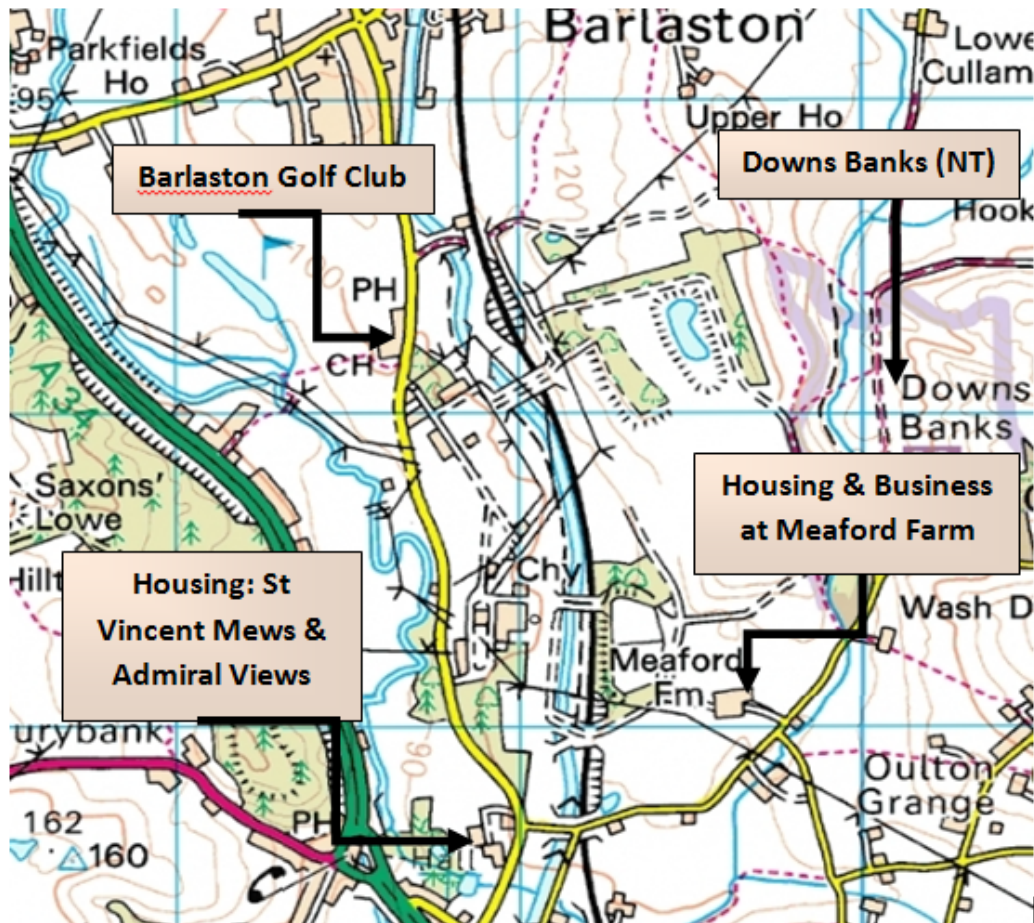


Figure 1 - Map of local area

6.5 Ground Conditions (Land Contamination)

Site History

6.5.1 The site history referred to in the Environmental Statement has been produced with the input of Stafford Borough Council, and represents a full and accurate review of the records relating to the site.

6.5.2 Prior to the development of Meaford 'A' and 'B' coal-fired power stations on the Meaford Business Park site, the land was agricultural land with an old canal and old quarry present to the south and south-east respectively. The West Coast Main Line

(London to Manchester) and the Trent & Mersey Canal, adjacent to the eastern site boundary, were constructed in the late 1800s. Construction of the first part of the power station (Meaford 'A') in the northern part of the site boundary began in the mid-1940s and was completed by 1948. Development of the second part of the power station (Meaford 'B') to the south of Meaford 'A' commenced in 1951 and was completed in 1957. The old canal to the south and the old quarry to the south-east were infilled in the late 1940's to the late 1950's. The construction of Meaford 'A' and 'B' included several buildings, pipelines, overhead services, five cooling towers, railway sidings, a crane, chimneys, boilers and alternators. Meaford 'A' ceased operation in 1974 and was demolished by 1982. Meaford 'B' ceased operations in 1990 and most of the buildings and cooling towers had been demolished by the late 1990's. The railway sidings within the site boundary area had been dismantled and only a few buildings remained to the north-west along with two electricity substations, some disused pipelines and overhead services.

- 6.5.3 The area surrounding the site boundary has remained largely unchanged since the late 1800's, with the exception of works associated with the Meaford 'A' and 'B' power stations and the expansion of the residential areas of Barlaston, Meaford and Stone. Earthworks and a large pit are shown on historical maps within 250m to the east/north-east of the site boundary during the development of the Meaford 'A' power station from the late 1940's. These are shown as sludge beds until the late 1970's to early 1980's when they are shown as disused sludge pits and a disused tip (for the deposition of industrial/commercial waste). This area is understood to be Pulverised Fuel Ash (PFA) lagoons installed during the construction of the power stations to which ash generated during operation was taken and deposited. Evidence from ground investigation report indicates that the PFA, and also asbestos from the cooling towers, was tipped into a discrete area adjacent to the cooling towers.

Potential Sources of Contamination

- 6.5.4 The Environmental Statement has accurately identified all of the likely sources of land contamination, local human and environmental receptors and pathways.
- Coal and PFA deposits from the operation of the Meaford 'A' and 'B' Power Stations and Made Ground generated during their construction; and
 - Spillages of fuels and chemicals resulting from the maintenance, operation and demolition of the former power stations within the Order Limits, in particular the former fuel storage tank in the south western part of the Meaford Energy Centre site identified in previous site investigations.
 - Buried asbestos containing materials (ACM's) in the asbestos disposal area;

- Made Ground associated with infilling of the old quarry and the canal; and
- PFA lagoons (also previously licensed landfills).

Potential Receptors to Contamination

6.5.5 These have been identified as:

- Human: Current tenants (users of the bowling green and workshop) are within the site boundary; users of the Trent and Mersey Canal and towpath, future site users, construction workers, users of the golf course and residents within 500m of the site boundary;
- Controlled waters: groundwater (underlying Secondary 'A' Aquifers);
- Controlled waters: surface waters River Trent (including the tributary that crosses the access track), Trent and Mersey Canal, on-site ponds and drainage ditches.

6.5.6 The Principal Aquifer of the Bromsgrove Sandstone Formation is not taken forward as a receptor as it is considered very unlikely that the above sources of contamination would migrate 550m to the south through the Halesowen Formation when the dominant groundwater gradient is towards the west.

Geology

6.5.7 British Geological Survey (BGS) maps indicate that the site boundary is generally underlain by Glacial Till, which rests on the Halesowen Formation (mudstone, siltstone and sandstone). The Glacial Till is overlain by River Terrace Deposits in the west (following the route of the River Trent). The geological map records the presence of Made Ground deposits across most of the central part of the site boundary, which includes the Scheme power station complex. The area approximately 550m to the south of the site boundary is identified by BGS maps as being underlain by the Bromsgrove Sandstone Formation, which is pebbly sandstone of Triassic age. The Bromsgrove Sandstone Formation is overlain by River Terrace Deposits.

Hydrogeology

6.5.8 The Halesowen Formation, the River Terrace Deposits and the Alluvium are designated as Secondary 'A' Aquifers. Secondary 'A' Aquifers have permeable layers that are capable of supporting water supplies at a local rather than strategic level and can form an important source of base flow to rivers.

6.5.9 The Bromsgrove Sandstone Group present to the south of the site is designated as a Principal Aquifer. Principal Aquifers are capable of providing a high level of water, supporting water supply and/or base flow to rivers. Glacial till at the site is designated as Unproductive Strata. Ground investigations at the site encountered perched water within the Made Ground, shallow groundwater within the superficial deposits and groundwater within the Halesowen Formation. The overall direction of groundwater flow for all three water bodies was recorded as westerly towards the River Trent.

Risk During Development

6.5.10 Without any form of mitigation the contaminants on site have the potential to be released during construction, risk ratings would increase for human health and controlled waters from a low contamination risk to a moderate risk level.

6.5.11 Mitigation measures are therefore required to reduce the potential effects of contamination to human health and controlled water receptors during construction.

Mitigation

6.5.12 During construction, mitigation measures for the scheme include but are not limited to:

- Implementation of appropriate dust suppression measures to prevent migration of contaminated dust;
- Remediation if necessary, likely to take the form of limited hotspot removal;
- An asbestos risk assessment and management plan;
- Health and safety risk assessments, method statements and appropriate personal protective equipment (PPE) for the protection of construction workers when working in contaminated areas;
- Working methods during construction to ensure that surface water cannot run-off from the works or any stockpiles into adjacent surface watercourses in accordance with Pollution Prevention Guideline, working at construction and demolition sites (PPG6) 16;
- Piling risk assessment as per the Environment Agency guidance note 17 and implementation of piling techniques deemed appropriate; and
- Development of a methodology to address what remedial actions will be undertaken and how such actions will be validated and recorded if unsuspected contamination is encountered during the works.

Benefits of remediation

- 6.5.13 Once construction is complete, regeneration of the brownfield site will be complete and environmental risks that are currently a potential risk will be remediated. Minor beneficial effects are anticipated to human, surface water and groundwater receptors during operation. These beneficial effects are associated with the removal of contaminated material during the construction phase, the placement of hardstanding and a formalised drainage system, thereby reducing the risks to humans, groundwater and surface waters.

6.6 Flooding and Drainage

- 6.6.1 The Drainage Strategy document in the Environmental Statement covers matters pertaining to flooding and drainage. In relation to the County Council role as Lead Local Flood Authority, we are content with the conclusions and recommendations in sections 8.1 and 8.2.

- 6.6.2 There is an inaccuracy in the drainage strategy within section 6.7, which has occurred due to Government changing the Flood and Water Management Act in relation to SuDS and adoption thereof. Section 6.7.2 states “The retention pond will be offered for adoption to Staffordshire County Council, who is anticipated to become the SuDS Approval Body (SAB)”. Since this is no longer the case, alternative arrangements for the ongoing management and maintenance of the SuDS will be required, e.g. the establishment of a management company.

6.7 Waste and Minerals

- 6.7.1 The Minerals & Waste Policy officer supports the approach of the applicant in relation to the management of construction and operational waste, and considers the approach to be in keeping with the waste hierarchy of ‘prevention, preparing for re-use, recycling, other recovery, and disposal’ (refer to 6.2.15 Volume 2: Environmental Statement - Chapter 15: Waste). Table 15.2 of the Waste Chapter sets out how previous comments on the scope of the environmental impact assessment have been taken into account.

- 6.7.2 The project is likely to generate a sizeable amount of waste, and accurate assessment of waste quantities and waste types remains uncertain until detailed designs of the proposal are produced. Based on an initial assessment using existing information about ground conditions (refer to Chapter 13), the likely impact of waste arisings on existing waste management capacity has been made. The proposed reuse/recycling of wastes within the site should acceptably reduce residual wastes requiring off site treatment/disposal but there will be a need for a

site waste management plan to review waste arisings, particularly the amount of contaminated wastes. Should there be any surplus excavated material, we suggest that opportunities for local disposal should be investigated, including the possibility of using the material in the restoration of former quarries. The Council supports the intent of the applicant to give consideration to the waste likely to arise at the end of the Meaford Energy Centre's life and there should be a requirement for waste to be considered as part of a decommissioning plan for the site.

- 6.7.3 With regard to the impact on mineral resources, the Council supports the mitigation measures outlined in Table 17.1: Mitigation Summary to re-use excavated concrete onsite to develop the site platform for future development and to use non-primary materials instead of primary materials wherever possible. The site is located within a Mineral Consultation Area for sand and gravel, and there may be opportunities to use underlying sand and gravel in this area before construction or re-profiling where excavated material occurs. We would request to be consulted on this matter when more information becomes available.

6.8 Landscape and Visual

- 6.8.1 The Meaford Energy Centre will have impacts on landscape character, plus visual impacts on properties, local road and rights of way users. The National Planning Policy Framework requires that development should respond to local character and history, and reflect the identity of local surroundings and protect and enhance the quality of the environment, recognising the intrinsic character and beauty of the countryside. There is also a requirement to minimise the impact of light pollution.
- 6.8.2 A number of Policies in the Plan for Stafford Borough contain material relevant to landscape and sympathetic design, such as Policy N1 (high quality of design) and Policy N4 (protection, enhancement and improvement of the natural environment). In particular, Policy N8 Landscape Character requires that new development should be informed by, and be sympathetic to, landscape character and quality, and reinforce and respect local character through design and layout. There is a requirement that development proposals with landscape and visual implications should demonstrate that they protect, conserve and, where appropriate, enhance elements of the landscape that contribute to the local distinctiveness and the setting and views of or from heritage assets, including conservation areas.

Baseline situation

- 6.8.3 The application site falls within the character type Coalfield Farmlands in the Potteries and Churnet Valley. The Staffordshire Landscape Character Assessment 'Planning for Landscape Change' (2000) describes this as an intact lowland pastoral

landscape characterised by well-trimmed hedges, hedgerow oaks and small winding lanes. It is noted that the flat or very gently undulating landform results in limited views, and hedgerow trees often visually coalesce to foreshorten views. Urban influences have fragmented the landscape and led to local deterioration of the landscape. In the area around the site, woodland cover is quite extensive. In places steeper landform allows more extensive views across the landscape.

6.8.4 In this area, the Trent Valley has extensive urban fringe influences, including modern urban expansion, busy roads and rail lines, and numerous pylons that connect to Barlaston sub station. The pylons, whilst being detracting elements, are to some extent visually permeable. Woodland cover and landform locally help to reduce and contain the urbanising influence.

6.8.5 The Staffordshire Landscape Character Assessment identifies Landscape Restoration as the landscape policy objective, which indicates a low quality landscape. The potential value of woodland planting to increase screening of the urban edge and mitigation for urbanising developments is high.

6.8.6 The site lies between the settlements of Stone and Barlaston on the valley floor. This allows views towards the site from more elevated locations in the surrounding landscape. Woodland in the vicinity of the site provides intermittent site screening.

Landscape and Visual Effects

6.8.7 The proposed Power Station Complex would result in detrimental landscape and visual effects. The height and built mass of the proposed development is such that effects could not be fully mitigated.

Landscape character

6.8.8 The Landscape and Visual Impact Assessment concludes that changes in landscape character would have a limited detrimental effect on the landscape that would not be significant.

6.8.9 It should be noted that the wooded character of the Trent Valley in this area buffers against the urban influences and reinforces the rural character of the surrounding landscape. The Landscape and Visual Impact Assessment estimates the site boundary vegetation of the site as 15 – 20m high. Observations confirm that this height is variable, and in places alongside the Trent and Mersey Canal the vegetation is only around 5 metres high. A number of elements of the proposed development would rise above this; the two stacks, potentially rising to 50 metres;

the heat recovery steam generator buildings (35m high) and the gas turbine building (60m x 45m x 25m high) and the air cooled condenser building (48m x 48m x 26m). These large scale industrial features would be visible in the landscape, and a significant intrusion in the valley. It will reduce the buffering of urban development that currently exists and have a local detrimental effect on the landscape character of the area.

Visual effects

- 6.8.10 In general the extent of views across the study area are limited by the intervening field boundary vegetation, buildings, the undulating landform and mature vegetation along the country lanes and transport corridors. There are limited views of the site from Stone, Meaford and Barlaston.
- 6.8.11 Of the visual receptors assessed as experiencing significant detrimental effects, the main groups include recreational users of the Trent and Mersey Canal, residences on the A34 and recreational users of Downs Bank/Right of Way Stone Rural 46. Sections demonstrate that for users of the Trent and Mersey Canal and towpath the lower building elevations would benefit from some screening by existing vegetation, but the upper elevations of the proposed development will not be fully screened. The relatively low lying position of the site means that from the more elevated viewpoints such as properties on the A34 and Right of Way Stone Rural 46 at Downs Bank, there would be direct views of a greater proportion of the building elevations.

Mitigation measures

- 6.8.12 The rationale for the southern location of the Complex is partly given as due to the resulting lesser visual effects. This does not appear to be supported by the photomontage in Appendix 10.3 Annex 2 Figure 9. Paragraph 10.21 of Volume 2 Chapter 10 states that the landscape and visual assessment has been made based on a finished floor level of 99m AOD but it is likely that the finished level would be lower. Overall landscape and visual effects would be reduced by reducing site levels.
- 6.8.13 Chapter 4, paragraph 4.8.1 of the Environmental Statement cites the proposal to manage existing woodland and undertake new planting in a 10 metre wide buffer strip adjacent to the Trent and Mersey Canal 'to protect the historic character of the Conservation Area and visual amenity of recreation users and to contain views along the Trent and Mersey Canal corridor', as required by Policy N 4 of the Plan for Stafford Borough This will need to deliver rapid effect and incorporate planting of a

combination of large stature trees ultimately achieving 20 metres in height and variety of canopy heights, to filter views at all levels. Larger stature trees will attain a canopy spread of more than 5 – 10 metres when semi-mature, increasing with maturity, therefore the adequacy and efficacy of a 10 metre wide buffer strip is questioned. In order to be effective the integrity of the buffer would need to be protected and managed for the lifetime of the development. Overhead transmission lines within the buffer zone were noted during the Accompanied Site Inspection. These will have easements that will be subject to maintenance of vegetation by the statutory undertaker beyond the control of the applicant. This may affect the level of screening and visual mitigation that can be achieved.

- 6.8.14 The Section showing the Sight Line from the Towpath to the Power Station Complex suggests that woodland planting proposed adjacent to the Energy Centre is unlikely to provide visual mitigation beyond the confines of the proposed Meaford Business Park due to the inward facing slope of the planted area.
- 6.8.15 The Design and Access Statement and Landscape and Visual Impact Assessment make commitment to reduce the bulk of built structures through colour tonal options for facades and other design features to minimise landscape and visual effects. Selection of colours and pattern used on the facades would need to be informed by the range of views available, which include those where the development would be set against a backcloth of woodland and those where the upper elevations would be seen against sky.

6.9 Ecology and Trees

- 6.9.1 The Meaford Energy Centre proposal is located within an area of previously-developed or 'brownfield' land occupied formerly by two coal-fired power stations. This site - the Meaford Business Park - has outline planning consent from Stafford Borough Council for employment uses reference 98/35897/OUT, subsequently extended by 10/13609/EXT and 14/21379/EXTO. The principle of development of the site is therefore established, but no details relating to layout, landscaping and ecological mitigation were approved for the Meaford Energy Centre or the site as a whole, under those consents. 14/21379/EXTO does not appear to have been informed by an ecological survey and assessment of the site. In the absence of a comprehensive ecological mitigation plan for the entirety of the Meaford Business Park, it is difficult to conclude, at this time, the extent to which the ecological mitigation proposed for the Meaford Energy Centre will provide adequate compensation for biodiversity losses beyond the "built out" elements of the proposal.

- 6.9.2 Chapter 11 of the Environmental Statement accurately summarises the legislative and policy context in regard of biodiversity including impact assessment, mitigation and enhancement. Surveys were carried out in accordance with published guidelines and best practice.

Impacts on designated sites, protected species, habitats and species of principal importance

- 6.9.3 There are no likely direct impacts identified on statutory or non-statutory designated sites except that the Trent and Mersey Canal Biodiversity Alert site is immediately adjacent to the Order Area. Potential construction impacts on this site and on bats, badgers and breeding birds should be prevented through the implementation of a Construction Environmental Management Plan (see comments below). Potential operational impacts on protected species using the canal corridor to the east of the Order Area can be mitigated by landscape planting, should this be increased to create a more robust buffer.

- 6.9.4 It is a common misconception that brownfield land is not important for biodiversity. The Phase 1 Habitat survey (Environment Statement sections 11.124 - 11.147) and invertebrate survey (Environmental Statement Appendix 11.1) demonstrate that this is not the case. The surveys indicate that, notwithstanding section 11.224 of the Environmental Statement, at least some parts of the Order Area are likely to represent the habitat of principal importance: Open Mosaic Habitats on Previously Developed Land. These habitats, rare in Staffordshire as the Environmental Statement states, will be lost to development within the Order Area. Three butterfly species of principal importance characteristic of such open habitats were recorded in the Order Area, along with an assemblage of rare and scarce invertebrates, meaning that the Environmental Statement considers these habitats to be of County importance. The Natural Environment and Rural Communities Act section 40 requires public bodies to consider the conservation of such habitats and species in the exercise of their functions. The cumulative impact of loss of these habitats due to wider site development needs to be considered and mitigation designed accordingly.

Proposed mitigation

- 6.9.5 Consultation was carried out with Stafford Borough Council and Staffordshire County Council ecologists by the consultant preparing the landscape scheme, and

the scheme shown on Drawing 5105324-MEA-DRG-081 Document Ref. 2.7.2. Illustrative Landscape within the MEC Site, agreed as appropriate. Within the constraints of this area allocated for landscaping, the scheme provides some mitigation for loss of the open habitats of invertebrate interest. The area proposed for is, however, small in comparison with the areas of habitat to be lost. Investigation of the potential for further mitigation within the Order Area is recommended. The following potential areas could be assessed:

- Section 4.19 of the Environmental Statement notes that site construction and maintenance Laydown Area 5a would be landscaped once construction of the Scheme is complete. This is not shown on Drawing 5105324-MEA-DRG-081 Document Ref. 2.7.2. Illustrative Landscape Within MEC Site and could be designed to support further habitats similar to those shown within the landscape plan for Laydown Area 5b.
- It is not clear from the Environmental Statement whether a permanent easement required to be maintained for the Gas Connection corridor. If this is the case there is potential for creation and maintenance of open habitats that would further provide for the invertebrate assemblage.
- Landscaping associated with the site access road, area 4, also has the potential to provide further mitigation. Road verges could be finished with low fertility sub-soil and seeded with a flowering lawn seed mix to create a low growing open grassland habitat with butterfly food plants. This would be simple to manage through a conventional mowing regime and would provide an attractive contribution to site landscaping.

6.9.6 Policy N4 in the adopted Plan for Stafford Borough provides for protection of green infrastructure including canals and states: “The Borough’s natural environment will be protected, enhanced and improved by:... b. Conservation and enhancement of water courses and their settings for their landscape character, biodiversity and recreational value, particularly for the Borough's extensive rivers and extensive canal system....”. Aerial photograph study and the Phase 1 Habitat Plan Figure 11.1 shows that the strip of woodland along the eastern edge of the Order Area adjacent to the Trent and Mersey Canal is very narrow and not fully continuous and would not, without supplementary planting, perform an adequate buffer function to the canal to prevent protected species disturbance and maintain foraging capacity. Drawing 5105324-MEA-DRG-081 Document Ref. 2.7.2 Illustrative Landscape within MEC Site shows proposed woodland retention and supplementary planting. Environmental Statement section 4.8.1 indicates a 10 metre band of woodland. No reference is made in the Environmental Statement of the presence of power lines within this buffer strip and the rights that the utility provider has to cut back trees and shrubs which may fundamentally compromise

the proposed screening function and mean that impacts on species using the canal may not be mitigated as proposed in the Environmental Statement.

- 6.9.7 Chapter 4 of the Environmental Statement section 4.85 includes a construction programme. This does not include landscaping. In order to achieve ecological and landscape mitigation landscape works will need to be clearly programmed into the overall plan. Mitigation planting and woodland management on the eastern side of the Order Area should be initiated early in the scheme to provide the screening function indicated by the Environmental Statement as required. Further landscaping should be programmed as soon as Areas 5a and 5b are no longer required for construction.
- 6.9.8 The Environmental Statement Chapter 1 specifies the substrate for the butterfly bank within the landscape scheme. Further specification will be required in regard of other habitat mitigation proposed to be delivered through this scheme such as low fertility soils/substrate for proposed open flower-rich grassland and wildflower meadow.
- 6.9.9 Environmental Statement section 11.289 states that a long term landscape management plan would be implemented to manage the replacement habitats, including those features which are specifically aimed at providing ecological mitigation, to include annual monitoring with set criteria, and that this will be secured by way of a Requirement in the Order. This provision will be important to secure effective mitigation. It is recommended that Requirement 9 specifies that the long-term management plan would be required for the lifetime of the development. Outside of the Development Consent Order context, it is recommended that the Local Planning Authority requires a landscape scheme for the overall PEIR site that takes account of ecological mitigation. Section 11.312 of the Environmental Statement states: "If the Meaford Business Park also provides a suitable mitigation plan for the loss of habitats within the PEIR boundary, as would be required through the planning process, any significant impacts could be mitigated." Section 11.316 Points out that the Meaford Business Park site has been assessed as being of County importance in terms of the invertebrate assemblage, which reflects its diverse mosaic of habitats. A similar mitigation programme to that proposed for the Meaford Energy Centre is suggested for the overall Meaford Business Park to mitigate cumulative impacts.

Proposed Tree Removals

6.9.10 The assessment methodology of the Arboricultural Impact Assessment is satisfactory in relation to level of detail supplied to Atkins to allow the assessment to be undertaken.

6.9.11 However the Impact Assessment has been understandably left rather vague in relation to retained tree impacts by the proposal, as certain construction methodologies / specific layout proposals are yet to be finalised. These include, but are not exclusively to, the following areas;

- Installation of the above ground Gas Main.
- Installation of outfall pipes into the River Trent

Therefore, these aspects of the scheme will have to be dealt with through a detailed Arboricultural Method Statement, which will need to be submitted later in the process to minimise the detrimental impact on the retained trees. This will include the requirement for 'on site' arboricultural monitoring through all aspects of the scheme. This aspect can be addressed within the proposed Draft Order 3.1 (Construction and Environmental Management Plan – page 32, item d).

Tree Mitigation

6.9.12 Environmental Statement Chapter 4, Paragraph 4.8.1 and Chapter 17 state that a 10m buffer strip will be retained and reinforced, adjacent to the Trent and Mersey Canal corridor. Careful management of this buffer strip will be required to enable the effective growth of semi-mature trees and associated understorey planting in this location. It will be important to achieve the effectiveness of this planting as part of the landscape management strategy of the scheme, including its relationship to the forthcoming landscape management strategy of the wider Meaford Business Park development. It appears that power line presence and utility provider rights may compromise ability to implement appropriate planting and management of this buffer strip.

6.9.13 The species proposed within Chapter 17 (pages 17-26) in relation to the reinforcing of the woodland areas is satisfactory. However this aspect of the scheme will require a detailed landscaping scheme to be submitted via condition as illustrated in 3.1 Draft Order (Provision of and implementation and maintenance landscaping - item g).

6.10 Historic Environment and Archaeology

Additional Information

- 6.10.1 The Environmental Statement does not include copies of the statutory list descriptions and adopted Conservation Area Appraisals. These are included in Appendices 4 and 5.

Previous Considerations

- 6.10.2 Previous applications for the site for employment uses, 98/35897/OUT, 10/13609/EXT and 14/21379/EXTO were not informed by Heritage Statements, but it is noted that matters such as design and landscaping were to be agreed through the submission of reserved matters. It is noted that no 'Reserved Matters' application has as yet been approved for the rest of the Meaford Business Park site.

Impacts on Designated Heritage Assets

- 6.10.3 The application site crosses the Trent and Mersey Canal Conservation Area at Malkin's Bridge, but otherwise there are no designated heritage assets within the application site. Built heritage considerations relate principally to the 'setting' of a number of grade II* and grade II buildings, the Trent and Mersey Canal Conservation Area and the Meaford Conservation Area. Designated sites have been identified in the Environmental Statement within a 1.5km radius of the site.

- 6.10.3 The findings of the Environmental Statement Chapter 12: Historic Environment are broadly supported, with some exceptions:

Meaford Hall (grade II), Nursery House (grade II*) and former stables to Meaford Hall (grade II)*

- 6.10.4 The special architectural and historical interest of the listed buildings are described in the statutory lists and the Meaford Conservation Area Appraisal. The Hall faces west across its grounds with the 'Nursery House' to the south and former service buildings including the now converted stables, to the rear to its east.

- 6.10.5 Although of three storeys, Meaford Hall is set low and faces away from the proposed Meaford Energy Centre site, which due to the orientation of the building would be out of the line of direct sight of most of the views from its window. The setting of a listed building, however, goes beyond 'views from' and should include the impact of the development on significant views 'of' the asset. The taller structures of the proposed Meaford Energy Centre site could form an incongruous backdrop to the Jacobean style historic mansion house as viewed from the southwest within its grounds. Although there is an intervening band of mature trees which would screen the majority of structures from view.

- 6.10.6 The assessment of the impact on the Hall, Nursery House, and former Stables is considered to be heavily reliant on bands of mature trees, which are outside of the application area, and are by nature variable in their cover over the seasons.

Trent and Mersey Canal Conservation Area

- 6.10.7 The Trent and Mersey Canal Conservation Area Appraisal was adopted in August 2014 by Stafford Borough Council. This post-dates 6.2.12 of the Environmental Statement, where data sources were accessed in May 2014 (6.2.12 paragraph 12.36). The appraisal identifies the significance of the canal as an area of special historic character and appearance. It is an early narrow canal engineered by James Brindley, “the father of English Canals”, completed in 1777, as part of his vision for the ‘Grand Cross’, a national network of navigations. It follows the natural contours of the landscape with hardly any embankments or cuttings, changes in level being negotiated by simple pound locks or series of locks. It has a wealth of single-span brick road and accommodation bridges, many of which are original to the canal and are listed buildings, as are the locks.

- 6.10.8 The setting of the conservation area varies along its length, passing through urban areas, as at Stone and Barlaston, adjacent to some more modern housing developments and sites of modern industrial character, as well as significant stretches within open countryside. The Appraisal states at paragraph 6.14 “Between Barlaston and Meaford, the setting is predominantly rural, and the course of the canal and towpath is punctuated by a series of bridges”. And at paragraph 6.21 “Approaching Meaford, a sense of enclosure is created by the hedgerows and trees to the west of the canal and a low dry stone wall to the east. Views west encompass fields and mature trees.” This is true of the setting of the Canal adjacent to the application site, where the west of the canal is bounded by a belt of trees of varying density and maturity. Views along the canal are largely confined by the belt of trees to the west and embankment of the railway to the east to enclosed views drawn along its length from one bridge to the next.

- 6.10.9 Although there are limited views from the canal, structures of the proposed power station, particularly the stacks, would be likely to be visible above the tree-line and in filtered views in some locations. This would entail some intrusion of modern structures into long views.

Turnover Bridge No.100 (grade II listed):

- 6.10.10 An attractive and distinctive roving bridge. Of red brick with elliptical arch, stone saddleback copings; its swept parapets and stone-setted ramps curve gracefully to

allow the towpath to cross from one side of the canal to the other. It is still very much in use by walkers and canal users, and the Meaford Energy Centre site would lie about 200m to its west. Views of the Meaford Energy Centre structures would be quite apparent on crossing the bridge east to west, as well as in close views of the bridge from the southeast.

Malkins Bridge (No.101)

- 6.10.11 Malkins Bridge (No.101) is an unlisted structure within the Trent and Mersey Canal Conservation Area. It appears to be a mid-19th century accommodation bridge, but has been substantially rebuilt with patchy redbrick repairs, a deformed arch, replacement and partially lost blue brick parapet with stone coping. It is in a neglected and poor condition, currently disused and surrounded by vegetation. It is proposed that the pipeline passes over the bridge. From drawing no. 108 it appears the pipeline would be visible from closer views at towpath level. Partially embedding the pipeline in the bridge structure could reduce its visibility, or a slight increase in the parapet could be considered, given the bridge is unlisted and has been subject to many alterations already. Otherwise, the pipeline could have a recessive colour and finish to minimise its appearance in more distant views. The proposed repairs and reinstatement to the bridge itself would enhance its appearance and contribution to the character of the Trent and Mersey Canal Conservation Area. However, the proposed 2.5m security fencing would have a modern industrial character in views along the historic canal, which it is considered would counter this benefit and have a negative impact on the visual appearance of the Trent and Mersey Canal Conservation Area. Although drawing no. 080 implies no significant removal of trees in this area, there is no indication of any supplementary screening to the fence.

Meaford Conservation Area

- 6.10.12 The history and architecture of Meaford are identified in the Conservation Area document produced by Stafford Borough Council in 1987. Significant views were identified at this time as being westwards from within the grounds of Meaford Hall, i.e. away from the application site, although the potential impact on views of the frontage of the Hall and impermanent nature of tree screening is identified above.

Mitigation (As described in Chapters 4 and 10 of the Environmental Statement)

- 6.10.13 An enhanced 10m woodland strip (Environmental Statement 4.8.1) would partially mitigate the harm to the significance of the Trent and Mersey Canal Conservation Area. However, it would be unlikely to totally obscure views of the taller elements of the Meaford Energy Centre, particularly given the seasonal character of

woodland and variation in heights. It would be particularly unlikely to mitigate the impact on views crossing Turnover Bridge (grade II) east to west, where elevated views are gained.

6.10.14 Repairs to the parapet and coping stones on Malkin's Bridge no.101 are welcomed, although full details of the extent and nature of repairs are lacking, e.g. brick, stone and mortar type; extent of repairs to existing brick joints.

6.10.15 The proposed security fencing adjacent to Malkin's Bridge no.101 is considered to be out of character with the historic materials and detail of the Trent and Mersey Canal Conservation Area. Further mitigation is considered necessary, either to secure amendments to the design of the railings, or to ensure they are sufficiently screened from view from the towpath and canal.

Development Consent Order Requirements

6.10.16 Requirements relevant to heritage assets are covered by Requirement 3 (detailed design), Requirement 4 (provision implementation and maintenance of landscaping), and Requirement 16 (Bridge plinths). As described above, it is considered that provision should be made to secure further details of the repairs to Malkin's Bridge. The finish of the pipeline is covered by Requirement 3, and the design of the fencing to either side of Malkin's Bridge is covered by Requirement 8 (Fencing and other means of enclosure). Additional screening would be incorporated under the Landscaping Scheme.

Archaeology

6.10.17 The construction of the Meaford Energy Centre and associated secondary works will have an impact upon the historic environment of the area. There are no designated heritage assets which will be directly impacted by the scheme as proposed although a number of designated heritage assets will be affected. No undesignated heritage assets are recorded on the Staffordshire Historic Environment Record (HER) for the site, although there does remain the potential for previously unrecorded archaeological remains to be present within the area of the scheme. Heritage assets can be subdivided into three general categories (below ground archaeology (including earthworks remains), historic landscape character and the built heritage). Below ground archaeology and historic landscape character will be considered in the following sections.

Below Ground Archaeological Remains

6.10.18 While there is limited evidence for archaeological activity in the Meaford site and the surrounding area this more likely reflects a lack of fieldwork rather than a lack

of past activity. Indeed, ongoing work along the Rivers Trent, Dove and Tame are revealing considerable evidence for late prehistoric activity including ceremonial complexes, burial sites and relatively heavily farmed landscapes. Similarly, recent work on the Norton Rail Realignment scheme has revealed evidence for early medieval activity within the narrow valley of the Meece Brook. This evidence points to heightened levels of exploitation and activity with Staffordshire's river valleys and suggests a heightened potential for similar activity in the wider Meaford area.

- 6.10.19 The Desk-Based Assessment prepared in support of the Environmental Statement correctly identifies a series of past impacts across the site. Principal among these have been the construction of the Meaford 'A' and 'B' Power Stations and their associated infrastructure. The Assessment suggests that these extensive impacts are likely to have completely removed archaeological remains in the area of the proposed scheme; this view is not contested. Elsewhere the potential for survival of archaeological remains is present although these areas lie outside the area to be affected by the proposed scheme.
- 6.10.20 Iron Age hillforts were often positioned to dominate landscapes and this is likely to have been a primary reason for the positioning of the multi-vallate hillfort at Bury Bank, Meaford. This Scheduled Monument is now heavily screened to the north, east and south and views across the Trent to the east are at least partially constrained by dense woodland. This situation may change depending upon the felling and replanting regime within the woodland. The remaining designated archaeological heritage assets are considered to be sufficiently distant that the proposed scheme will not directly impact them or their setting.

Historic Landscape Character

- 6.10.21 The proposed scheme lies within the valley of the River Trent, an area dominated by a series of eighteenth and nineteenth century water meadows systems. These systems do survive albeit in a substantially denuded form to the west of the proposed scheme. Small landscape parks are recorded on the northern and southern boundaries of the scheme although neither are recorded on the Historic England Register of Parks and Gardens of Special Historic Interest. The Staffordshire Historic Landscape Characterisation Project records the presence of a series of 18th and 19th century planned enclosure in the landscape surrounding the scheme, however considerable boundary loss during the latter half of the 20th Century has considerably denuded the integrity of the historic landscape.
- 6.10.22 The assertion that existing planting flanking the Trent and Mersey Canal will be 'safeguarded and managed as part of the scheme' and the proposal to enhance this screen planting (Environmental Statement, Volume 2: Landscape and Visual Effects (s.10.58)) is to be supported.

6.11 Public Rights of Way

6.11.1 The proposed development site does not have any direct impact on the public rights of way network. Chapter 10 of the Environmental Impact Assessment focuses on the effects of the scheme on the Landscape and the associated Visual Effects on a number of public rights of way in the vicinity of the site. In addition to those paths listed in the Environmental Statement there will be slight visual impacts arising from the scheme on Footpaths No's 1 and 35 in Barlaston.

The path's mentioned in the ES are:

- Public Footpath No 36 Stone Rural
- Public Footpath No 45 Stone Rural
- Public Footpath No 46 Stone Rural
- Public Footpath No 32 Barlaston

6.11.2 Whilst we do not keep records of path usage (with over 8,000 individual routes and limited resources, this is not possible). We do respond to complaints and enquiries and keep a database about these reports. Outlined below are some of the issues which we have been made aware of on each path below along with any anecdotal evidence we are aware of.

6.11.3 Public Footpath No 36 Stone Rural – Although we do not have any usage data we believe this route is well used and we have had at least 6 enquiries about the condition of the footpath since 2007. The enquiries have been in regard to broken stiles, livestock, fallen trees and vegetation growth. The route is predominantly rural in nature and is the main off road route between Tittensor and Meaford, passing through the attractive woodland of Tittensor Chase. The route also carries the long distance promoted walk the Two Saints Way which is a 92 mile pilgrimage route running between the cathedral cities of Chester and Lichfield, large parts of which cross Staffordshire.

6.11.4 Public Footpath No 45 Stone Rural – We have not had any reports of any problems on this route since the establishment of the current Public Right of Way management system in 2006. The route is rural in its nature, crossing farmland for the majority of its length. It is also the primary off road walking route between the village of Oulton and the popular recreation area of Down's Banks which is managed by the National Trust.

6.11.5 Public Footpath No 46 Stone Rural – This is the main access into Down's Banks from the south and we also believe this route to be very well used. In 2013 the County Council provided the National Trust with two kissing gates to improve accessibility for path users along the footpath within the site.

- 6.11.6 Public Footpath No 32 Barlaston – This appears to be the closest public right of way to the application site and it links the A34 with Meaford Road. The path runs along the access driveway to the Golf and Country Club and was last inspected in 2012 and no significant problems were identified.
- 6.11.7 Each of the above routes run through a predominantly rural environment, albeit one already affected by road and rail. None of the paths will be directly affected by the Meaford Energy Centre proposals, although there is likely to be some visual impact resulting from the development. This is recognised within the Landscape and Visual Impact Assessment of the Environmental Statement, which also acknowledges that some screening will be possible due to landform and vegetation. The greatest impact from the development is likely to be on users of the Trent and Mersey Canal towpath, which runs adjacent to the application site. The County Council does not have any responsibility for the towpath, so are unable to comment further on the proposed effects of the development on towpath users.