

**Millbrook Power Project**  
**Preliminary Environmental Information Report (2017) – Appendices**  
**Volume B**  
**Scoping Opinion and Response**

On behalf of **Millbrook Power Ltd**



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## **Contents – Volume B – Request for Scoping Opinion and Scoping Response**

### **1.2 – Scoping Opinion and Response**

## **Request for Scoping Opinion**

# MILLBROOK POWER PROJECT

## Environmental Impact Assessment Scoping Report

June 2014



## **Table of Contents**

Glossary .....	v
1 Introduction.....	1
1.1 Overview.....	1
1.2 Need for and Benefits of the Project .....	2
1.3 The Applicant.....	3
1.4 The Consenting Regime and EIA Process .....	4
1.5 Purpose of the Scoping Report .....	5
1.6 Content of the Scoping Report .....	5
2 Regulatory and Policy Background .....	7
2.1 Introduction.....	7
2.2 European Union (EU).....	7
2.3 Overview of Decision Making under the Planning Act 2008 and Policy Context .....	8
2.4 National Policy Statements .....	8
2.5 National Planning Practice Guidance (NPPG).....	8
2.6 National Planning Policy Framework for England (NPPF) – 2012 .....	9
2.7 Local Planning Policy.....	9
2.8 Other Relevant Policy and Guidance .....	10
3 Project Description.....	11
3.1 Project Site .....	11
3.2 Description of the Project.....	13
3.3 Power Generation Plant.....	13
3.4 Gas Connection .....	18
3.5 Electrical Connection .....	19
3.6 Project Site Selection/Design Evolution .....	20
4 Scope and Structure of the EIA.....	23
4.1 Introduction.....	23
4.2 Overall ES Structure .....	23
4.3 Cumulative Assessment.....	25
5 Detailed Description of ES Impact Sections .....	27
5.1 Introduction.....	27
5.2 Significance Criteria.....	27
5.3 Air Quality.....	29
5.4 Noise and Vibration.....	34

## Millbrook Environmental Impact Assessment Scoping Report

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5.5	Ecology .....	37
5.6	Water Quality and Resources .....	42
5.7	Geology, Ground Conditions and Agriculture .....	45
5.8	Landscape and Visual Impact .....	48
5.9	Traffic, Transport and Access .....	53
5.10	Cultural Heritage and Archaeology .....	55
5.11	Socio-Economics .....	59
6	Summary and Conclusions .....	63
	Appendix 1: Ecological Appraisal .....	65



## Glossary

Above Ground Installation (AGI)	The Above Ground Installation incorporates the minimum offtake connection (MOC) facility, which would be owned by National Grid, and a Pipeline Inspection Gauge (PIG) Trap Facility (PTF), owned by Millbrook Power Limited. It forms part of the Gas Connection and is located within the Gas Connection Opportunity Area.
Above Ordnance Datum (AOD)	Ordnance Datum is the vertical datum used by Ordnance Survey as the basis for deriving height of ground level on maps. Topography may be described using the level in comparison to 'above' ordnance datum.
Access Road	The proposed purpose built access road from Green Lane to the Generating Equipment Site. It is located within the Power Generation Plant Site.
agriculture	<p>Section 336(1) of the Town and Country Planning Act 1990 defines agriculture as including:</p> <ul style="list-style-type: none"> <li>• Horticulture, fruit growing, seed growing, dairy farming;</li> <li>• The breeding and keeping of livestock (including any creature kept for the production of food, wool, skins or fur, or for the purpose of its use in the farming of land);</li> <li>• The use of land as grazing land, meadow land, osier land, market gardens and nursery grounds; and</li> <li>• The use of land for woodlands where that use is ancillary to the farming of land for other agricultural purposes.</li> </ul>
Agricultural Land Classification (ALC)	The ALC provides a method for assessing the quality of farmland to enable informed choices to be made about its future use within the planning system.
air pollutants	Amounts of foreign and/or natural substances occurring in the atmosphere that may result in adverse effects on humans, animals, vegetation and/or materials.
Air Quality Management Area (AQMA)	A defined area by virtue of Section 82(3) of the Environment Act 1995, where it appears that the air quality objectives prescribed under the UK Air Quality Strategy will not be achieved. In these areas, a Local Authority must designate Air Quality Management Areas, within which an Action Plan can be proposed to secure

## Millbrook Environmental Impact Assessment Scoping Report

	improvements in air quality so that prescribed air quality objectives can be achieved.
Air Quality Sensitive Receptors	People, property or designated sites for nature conservation that may be at risk from exposure to air pollutants that could potentially arise as a result of the Project.
amenity	The preferable features of a location which contribute to its overall character and the enjoyment of residents or visitors.
Applicant	Millbrook Power Limited.
aquiclude	An impermeable body of rock or stratum of sediment that acts as a barrier to the flow of groundwater.
Area of Outstanding Natural Beauty (AONB)	An area designated by Natural England as such under the National Parks and Access to the Countryside Act 1949 by virtue of being a precious landscape whose distinctive character and natural beauty are so outstanding that it is in the nation's interest to safeguard them.
Archaeological Desk Based Assessment	An assessment of the known or potential archaeological resource within a specified area or site on land, inter-tidal zone or underwater. It consists of a collation of existing written, graphic, photographic and electronic information in order to identify the likely character, extent, quality and worth of the known or potential archaeological resource in a local, regional, national or international context as appropriate.
archaeological interest	Heritage assets with archaeological interest are the primary source of evidence about the substance and evolution of places, and of the people and cultures that made them.
Balance of Plant	All infrastructure required to support the Gas Turbine Generators within the Generating Equipment Site and includes: stacks, electrical banking compound, water tanks; administration/workshop/control building and gas receiving station.
baseline	Environmental conditions at specific periods of time, present on, or near a site, against which future changes may be measured or predicted.
biodiversity	Abbreviated form of 'biological diversity' referring to variability among living organisms from all sources including, terrestrial, marine and other aquatic ecosystems and the ecological

## Millbrook Environmental Impact Assessment Scoping Report

	complexes of which they are part.
Biodiversity Action Plan (BAP)	Plans which set specific, measurable, achievable, realistic and time bound conservation targets for species and habitats. The UK BAP is the UK Government's response to the Convention on Biological Diversity (CBD) signed in 1992. More information is available at <a href="http://www.ukbap.org.uk">www.ukbap.org.uk</a> .
British Standards (BS)	The display of a British Standard number shows that the manufacturer claims to have made the produce in accordance with British Standard. A standard is a published document that contains a technical specification or other precise criteria designed to be used consistently as a rule or definition. Standards are designed for voluntary use and do not impose any regulations. However, laws and regulations may refer to certain standards and make compliance with them compulsory. Sometimes BS will be accompanied by the letters EN and/or ISO. These mean that the standard was developed as a European (EN) or International (ISO) standard and then adopted by the UK as a British Standard.
Carbon Monoxide (CO)	A colourless, odourless and tasteless gas that is produced from the partial oxidation of carbon containing compounds.
Combined Cycle Gas Turbine (CCGT)	Gas plant technology system comprising Gas Turbine(s) fuelled by natural gas, a Heat Recovery Steam Generator(s) utilising heat from the Gas Turbine exhaust gases, and a steam turbine plant with associated condensing system.
Combined Heat and Power (CHP)	A cogeneration power station capable of supplying power to the National Grid and also heat to local heat users (such as industry or leisure) through a direct connection to waste heat/steam produced as part of the combustion process.
Conceptual Site Model (CSM)	The objective of constructing a Conceptual Site Model is to record all the potential pollutant linkages between the source of contamination and the receptors, i.e. the reasonably possible ways in which the receptors may experience exposure and consequent adverse effects.
Conservation Area	An area of special environmental or historical importance that is protected from changes by law by statutory designation.
Construction Environmental	Strategic document setting out best practice

## Millbrook Environmental Impact Assessment Scoping Report

Management Plan (CEMP)	methods to minimise environmental impacts (including dust) during construction.
consultation	Procedures for assessing public, landowner and statutory consultee opinion about a plan or major development proposal including seeking the views of affected neighbours or others with an interest in the Project or affected land.
contamination	Where land has been affected by contamination, it may present a risk to humans, ecosystems, water quality and property.
County Wildlife Site (CWS)	County Wildlife Sites known nationally as Local Sites, are considered to be of value for wildlife in a county context. While they do not receive statutory protection, they are given some protection through the planning system.
cropmarks	A mark that is produced by the effect of underlying archaeological or geological features influencing the growth of a particular crop.
Cultural Heritage	The legacy of physical artefacts and intangible attributes of a group or society inherited from past generations, maintained in the present and bestowed for the benefit of future generations. Cultural heritage includes both physical culture (such as buildings, monuments, landscapes, books, works of art and artefacts) as well as intangible culture (such as folklore, traditions, language and knowledge).
Cumulative effects	The summation of effects that result from changes caused by a development in conjunction with other reasonably foreseeable development that is either consented but not yet constructed or is in the process of seeking consent.
Desk Based Assessment (DBA)	Research based primarily on database, report and internet data gathering methods.
Development Consent Order (DCO)	A Development Consent Order (DCO) is made by the Secretary of State (SoS) pursuant to the Planning Act 2008 (PA 2008) to authorise a Nationally Significant Infrastructure Project (NSIP).
Development Consent Order Application (DCO Application)	The Application for a DCO made to the SoS under section 37 of the PA 2008 in respect of the Project, required pursuant to section 31 of the PA 2008 because the Project constitutes an NSIP under section 14(1)(a) and section 15 PA 2008 by virtue of being an onshore generating station in England or Wales of 50 MW capacity or more.

## Millbrook Environmental Impact Assessment Scoping Report

Development Plan Documents (DPD)	Development plan documents (DPD) include the core strategy, allocations, proposals map and action area plans for an area.
dust	Fine particles of solid materials capable of being re-suspended in air and settling only slowly under the influence of gravity where it may cause nuisance.
Electrical Connection	The new electrical connection to export power from the Generating Equipment to the National Grid Electricity Transmission System (NETS) for distribution to homes and businesses. It includes a new substation, two new electrical circuits (either in the form of an underground cable or overhead line) and up to two sealing end compounds (SECs) to connect the substation to the Generating Equipment and the existing 400 kV network. The Electrical Connection is located within the Electrical Connection Opportunity Area.
Electrical Connection Opportunity Area	The area being investigated for the location of the Electrical Connection.
emission	A material that is expelled or released to the environment. Usually applied to gaseous or odorous discharges to the atmosphere.
Environmental Impact Assessment (EIA)	A systematic means of assessing a development project's likely significant environmental effects undertaken in accordance with the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009.
Environmental Statement (ES)	Statutory report summarising the findings of an environmental impact assessment.
features (landscape feature or element)	A component part of the landscape (e.g. hedgerow, wood, stream)
findspot	Location of individual or groups of archaeological artefacts.
Flood Risk Assessment (FRA)	A desk based study which considers the contributing factors and predicts / quantifies the risk of flooding to and from a proposed development and also identifies a water level in the event of flooding.
Flood Zone	An area identified, through modelling, that is at risk of flooding from rivers or the sea, to varying levels of magnitude and frequency. There are four classifications for flood zones as defined in the National Planning Policy Framework (NPPF):



## Millbrook Environmental Impact Assessment Scoping Report

	<ul style="list-style-type: none"> <li>• Zone 1: Low probability (less than 1 in 1000 annual probability of river or sea flooding in any year);</li> <li>• Zone 2: Medium probability (between 1 in 100 and 1 in 1000 annual probability of river flooding or between 1 in 200 and 1 in 1000 annual probability of sea flooding in any year);</li> <li>• Zone 3a: High probability (1 in 100 or greater annual probability of river flooding in any year or 1 in 200 or greater annual probability of sea flooding in any given year); and</li> <li>• Zone 3b: High probability (functional flood plain. Essentially the 1 in 20 or greater annual probability of flooding in any given year).</li> </ul>
Gas Connection	A new underground gas Pipeline connection and Above Ground Installation (AGI) to bring natural gas to the Generating Equipment from the Gas National Transmission System (NTS). The Gas Connection is located within the Gas Connection Opportunity Area.
Gas Connection Opportunity Area	The area being investigated for specific route corridor options for the Gas Connection.
Gas Turbine Generators	Between one and five Simple Cycle Gas Turbine (SCGT) generators (as proposed in the Power Generation Plant) which utilise the combustion of gas and air to generate hot gases that are routed across turbine blades, which generate rotational forces that turn an electrical generator. The exhaust gases are discharged directly to the stack without providing heat for a secondary steam cycle. Each Gas Turbine Generator may constitute one or two gas turbines venting to a single stack. The Gas Turbine Generators form part of the Generating Equipment and are located within the Generating Equipment Site.
Generating Equipment	Gas Turbine Generators and balance of plant which are located on the Generating Equipment Site.
Generating Equipment Site	The site where the Generating Equipment is located.
groundwater	Water occurring in the ground which can be reasonably attributed to relatively geologically recent recharge and which can be reasonably considered to be wholesome (potable) unless it has been contaminated (altered) by anthropogenic activity.

## Millbrook Environmental Impact Assessment Scoping Report

habitat	The environment in which populations or individual species live or grow.
Heavy Goods Vehicle (HGV)	A mechanically propelled road vehicle that is of a construction primarily suited for the carriage of goods or burden of any kind and designed or adapted to have a maximum weight exceeding 3,500 kilograms when in normal use and travelling on a road laden.
Hectare (ha)	A unit of area (10,000 m <sup>2</sup> / 2.471 acres).
heritage asset	A building, monument, site, place, area or landscape identified as having a degree of significance meriting consideration in planning decisions, because of its heritage interest. Heritage assets include designated heritage assets identified by the local planning authority (including local listing).
historic environment	All aspects of the environment resulting from the interaction between people and places through time including all surviving physical remains of past human activity, whether visible, buried or submerged, and landscaped and planted or managed flora. Those elements of the historic environment that hold significance are called heritage assets.
Historic Environment Record (HER)	The repository for all archaeological and historical information relating to a county or district.
hydrology	The movement, and distribution of water throughout the earth.
impact	A physical or measurable change to the environment attributable to the Project.
kilometre (km)	Measurement of distance (1000 metres).
kilovolt (kV)	Measurement of the amount of electric potential energy.
landscape assessment	An umbrella term for description, classification and analysis of the landscape.
landscape character	The distinct and recognisable pattern of elements that occurs consistently in a particular type of landscape, and how this is perceived by people. It reflects particular combinations of geology, landform, soils, vegetation, land use and human settlement.
landscape effects	Change in the elements, characteristics, character and qualities of the landscape as a result of development. These effects can be

## Millbrook Environmental Impact Assessment Scoping Report

	positive or negative.	
Laydown Area	The area required during construction for storing materials and equipment. It is located within the Power Generation Plant Site.	
Listed Building	<p>The Secretary of State compiles a list of buildings of special architectural or historic interest for the guidance of local planning authorities in the exercise of their planning functions under the Planning (Listed Buildings and Conservation Areas) Act 1990 and the Town and Country Planning Act 1990. Buildings are graded as follows:</p> <ul style="list-style-type: none"> <li>• Grade I – Buildings of exceptional interest;</li> <li>• Grade II* - Particularly important buildings of more than special interest; and</li> <li>• Grade II – Buildings of special interest.</li> </ul>	
Low Level Restoration Scheme (LLRS)	The LLRS for Rookery South Pit (assuming no additional proposed developments prior to its completion) aims to restore the pit base to low intensity agricultural land, with a ditch system draining water to a large attenuation pond and pit stabilisation works.	
Local Nature Reserve (LNR)	A site of importance for wildlife, geology, education or public enjoyment. Some are also nationally important Sites of Special Scientific Interest. Local Nature Reserves must be controlled by the local authority through ownership, lease or agreement with the owner.	
Local Plan	A detailed district or borough-wide land-use plan, prepared and adopted by a local planning authority, which is part of the statutory development plan. Consists of a written statement which sets out the local planning authority's development control policies and proposals for land use and transport over a period of about 10 years and an Ordnance Survey-based proposals map. This document may be relevant and important in the Secretary of State's decision making process as to whether or not to make a Development Consent Order for a project.	
magnitude	A combination of the scale, extent and duration of an effect.	
metre (m)	Measurement of length.	
Millbrook Power Limited (MPL)	A special purpose vehicle which has been established by Watt Power Limited (WPL) to develop the Project.	
	<p>Doc Ref: Orbis P1078/04/01 Rev 10</p> <p>Page No: xii</p>	



## Millbrook Environmental Impact Assessment Scoping Report

mitigation measures	Actions proposed to prevent, reduce and where possible offset significant adverse effects arising from the whole or specific elements of a development.
millimetre (mm)	Measurement of size.
Minimum Offtake Connection (MOC)	A connection that offtakes gas directly from the National Transmission System. The MOC forms part of the AGI and therefore the Gas Connection. It is located within the Gas Connection Opportunity Area.
National Grid Electricity Transmission System (NETS)	A high-voltage electric power transmission network connecting power stations and major substations and ensuring that electricity generated anywhere in England, Scotland and Wales can be used to satisfy demand elsewhere.
National Park	A national park is an area statutorily designated for its special landscape rich in character and distinctiveness, wildlife history and heritage.
National Policy Statement (NPS)	Overarching policy designated under the PA 2008 concerning the planning and consenting of NSIPs in the UK.
National Transmission System (NTS)	A network of gas pipelines throughout the United Kingdom that supply gas to large industrial customers from natural gas terminals situated on the coast, and also gas distribution companies which lead indirectly to homes.
Nationally Significant Infrastructure Project (NSIP)	The Project constitutes a Nationally Significant Infrastructure Project (NSIP) by virtue of s.14(1)(a) and s.15 of the PA 2008 which include within the definition of a NSIP any onshore generating station in England or Wales of 50 MW capacity or more.
Nitrous Oxides (NO <sub>x</sub> )	Gases produced during combustion, including nitric oxide (NO) and nitrogen dioxide (NO <sub>2</sub> ).
noise	<p>Noise defined as unwanted sound, is measured in units of decibels, dB. The range of audible sounds is from 0 dB to 140 dB. Two equal sources of sound, if added together will result in an increase in level of 3 dB i.e 50 dB + 50 dB = 53 dB. Increases in continuous sound are perceived in the following manner:</p> <ul style="list-style-type: none"> <li>• 1 dB increase – barely perceptible</li> <li>• 3 dB increase – just noticeable</li> <li>• 10 dB increase – perceived as twice as loud</li> </ul>

## Millbrook Environmental Impact Assessment Scoping Report

Noise Sensitive Receptor (NSR)	Principally houses (existing or for which planning consent is being sought / has been given) and any building used for long-term residential purposes (such as a nursing home).
Non-Technical Summary (NTS)	A report which briefly describes the main points discussed in the Environmental Statement in a clear manner, without the use of technical jargon and phraseology.
particulate matter	Solid particles or liquid droplets suspended or carried in the air.
peaking plant	Peaking plants are operated when there is a Stress Event.
Phase 1 Habitat Survey	An ecological survey technique that provides a standardised system to record vegetation and wildlife habitats. It enables a basic assessment of habitat type and its potential importance for nature conservation.
photomontage	A type of visualisation or illustration that is based on photographs and that simulates the likely appearance of a proposed development in the photographic view. Photomontages are used as illustrations of the professional judgement of a landscape professional as to the significance of the effect of a project on landscape and visual receptors.
PIG Trap Facility (PFT)	PIG traps allow PIGs to be inserted into and removed from a pipeline which is to undergo a “pigging” programme and which is likely to be under pressure. The PFT forms part of the AGI and therefore the Gas Connection. It is located within the Gas Connection Opportunity Area.
Pipeline Inspection Gauge (PIG)	Means a device to perform various maintenance operations on a pipeline.
Pipeline	The new underground gas pipeline connection proposed as part of the Gas Connection which is located within the Gas Connection Opportunity Area.
Planning Act 2008 (PA 2008)	UK legislation which passes responsibility for examining development consent order applications for NSIPs to the Planning Inspectorate, who will examine applications and make recommendations for a decision by the relevant Secretary of State (the Secretary of State for Energy and Climate Change in the case of energy NSIP applications).

## Millbrook Environmental Impact Assessment Scoping Report

Preliminary Environmental Information Report (PEIR)	The report that provides information referred to in Part 1 of Schedule 4 of the EIA Regulations (information for inclusion in Environmental Statements) which has been compiled by the Applicant; and is reasonably required to assess the environmental effects of the development (and of any associated development).
Power Generation Plant	A SCGT gas fired 'peaking' power generating plant capable of providing up to 299 MW comprising: the Generating Equipment; Access Road; and temporary Laydown Area. It will be located within the Power Generation Plant Site.
Power Generation Plant Site	The site in which the Power Generation Plant will be located.
Project	The Power Generation Plant, Electrical Connection and Gas Connection located on the Project Site.
Project Site	The entire area covered by or required in order to deliver the Project.
Public Right of Way (PROW)	A right of passage by the public over the surface of the land without impediment. Public Rights of Way include public footpaths, bridleways and byways open to all traffic as well as Restricted Byways.
receptor	A component of the natural, created or built environment such as a human being, water, air, a building, or a plant that has the potential to be affected by the Project.
Reciprocating Gas Engine (RGE)	An engine that employs the expansion of hot gases to push a piston within a cylinder, converting the linear movement of the piston into the rotating movement of a crankshaft to generate power.
Registered Historic Parks and Gardens	A register of historic parks and gardens held by English Heritage for parks and gardens of particular historic importance.
residual effects	Those effects of a development that remain following the implementation of mitigation measures.
Restricted Byways	Rights of way along which it is legal to travel by any mode (including on foot, bicycle, horse-drawn carriage etc.) but excluding 'mechanically propelled vehicles'.
Rochdale Envelope	The Rochdale Envelope allows for a project to

## Millbrook Environmental Impact Assessment Scoping Report

	evolve over a number of years, within clearly defined parameters. The EIA takes account of the need for such evolution within those parameters, and reflects the likely significant effects of such a flexible project in the ES.
Scheduled Monument	A building included in the Schedule of Monuments compiled under Section 1 of the Ancient Monuments, and Archaeological Area Act 1979. Scheduled Monuments have statutory protection under this Act (Section 2) and an application for Scheduled Monument Consent must be made to the Secretary of State for Culture, Media and Sport if work to a Scheduled Monument is proposed.
scoping	An exercise undertaken pursuant to regulation 8 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 to determine the topics to be addressed within the Environmental Statement.
screening	Consideration as to whether an environmental impact assessment is required for a project.
Secretary of State (SoS)	The decision maker for a NSIP application and head of a government department.
Simple Cycle Gas Turbine (SCGT)	Gas plant technology system comprising Gas Turbine(s) fuelled by natural gas. The hot exhaust gases are routed directly to the stack without passing through a secondary steam turbine. The generating technology used for the Power Generation Plant.
Site of Special Scientific Interest (SSSI)	A site statutorily notified under the Wildlife and Countryside Act 1981 (as amended) as being of special nature conservation or geological interest. SSSIs include wildlife habitats, geological features and landforms.
Special Area of Conservation (SAC)	Areas of protected habitats and species as defined in the European Union's Habitats Directive (92/43/EEC).
Special Protection Area (SPA)	Sites classified in accordance with Article 4 of the EC Birds Directive (79/409/EEC) which came into force in April 1979. They are classified for rare and vulnerable birds (as listed on Annex 1 of the Directive), and for regularly occurring migratory species.
Special Purpose Vehicle (SPV)	A legal entity created to fulfil the specific purpose of developing projects.

## Millbrook Environmental Impact Assessment Scoping Report

species	A group of interbreeding organisms that seldom or never interbreed with individuals in other such groups, under natural conditions; most species are made up of subspecies or populations.
stress event	A surge in demand for electricity associated with a particular event (e.g. where many people across the country boil kettles following the end of a popular television programme) or where there is a sudden drop in power being generated from plants which are constantly operational (e.g. a sudden outage).
Sustainable Drainage System (SuDS)	Sustainable management practices designed to control the rate and quality of surface water runoff into receiving waters, e.g. the use of swales and wetlands as buffers, as opposed to conventional drainage practices.
topography	The natural or artificial features, level and surface form of the ground surface.
Transport Assessment (TA)	A quantitative assessment of the transport effects of construction and operational phases of the Project.
United Kingdom (UK)	The territory of the United Kingdom.
visual amenity	The value of a particular area or view in terms of what is seen.
visual effect	Change in the appearance of the landscape from available viewpoints as a result of development.
Watt Power Limited (WPL)	Watt Power Limited was established to develop flexible gas fired generation assets to support the UK Government's drive to a low carbon economy. WPL has set up Millbrook Power Limited, a Special Purpose Vehicle to develop the Project.
Zone of Theoretical Visibility (ZTV)	Areas from which a specified element of a development may be visible.



## 1 Introduction

### 1.1 Overview

1.1.1 This document is the Environmental Impact Assessment (EIA) Scoping Report for the Millbrook Power Project (hereafter referred to as the 'Project') which sets out the proposed scope and content of the EIA to support the Development Consent Order (DCO) Application and the method by which it is intended to be carried out. The report has been prepared by Orbis Energy Limited on behalf of Millbrook Power Limited (MPL).

1.1.2 The Project as shown on Figure 1 would comprise:

- A new **Power Generation Plant** in the form of a Simple Cycle Gas Turbine (SCGT) gas fired peaking power generating station fuelled by natural gas and capable of providing an electrical capacity of up to 299 Megawatts (MW) comprising:
  - The **Generating Equipment** including the Gas Turbine Generators and balance of plant, which are located within the **Generating Equipment Site**;
  - A new purpose built **Access Road** from Green Lane to the Generating Equipment Site; and
  - During construction a temporary construction compound (the **Laydown Area**).
- A new **Gas Connection** to bring natural gas to the Generating Equipment from the National Transmission System (NTS) which is located within the **Gas Connection Opportunity Area**; and
- A new **Electrical Connection** to export power from the Generating Equipment to the National Grid Electricity Transmission System (NETS) for distribution to homes and businesses which is located within the **Gas Connection Opportunity Area**.

1.1.3 The Generating Equipment, Access Road and Laydown Area are together known as the **Power Generation Plant**, and are located within the **Power Generation Plant Site**.

1.1.4 The Power Generation Plant, Gas Connection, and Electrical Connection, are all integral to the generation of electricity and together are referred to as the '**Project**'. The land upon which the Project would be developed, or which would be required in order to facilitate the development of the Project, is referred to as the '**Project Site**'. The Project is described in more detail in Section 3, including the options currently under consideration for the Gas Connection and Electrical Connection.

1.1.5 The Project would be situated between Bedford and Milton Keynes in Central Bedfordshire and Bedford Borough Council. The approximately centre of the Project Site lies at grid reference 501373, 240734.

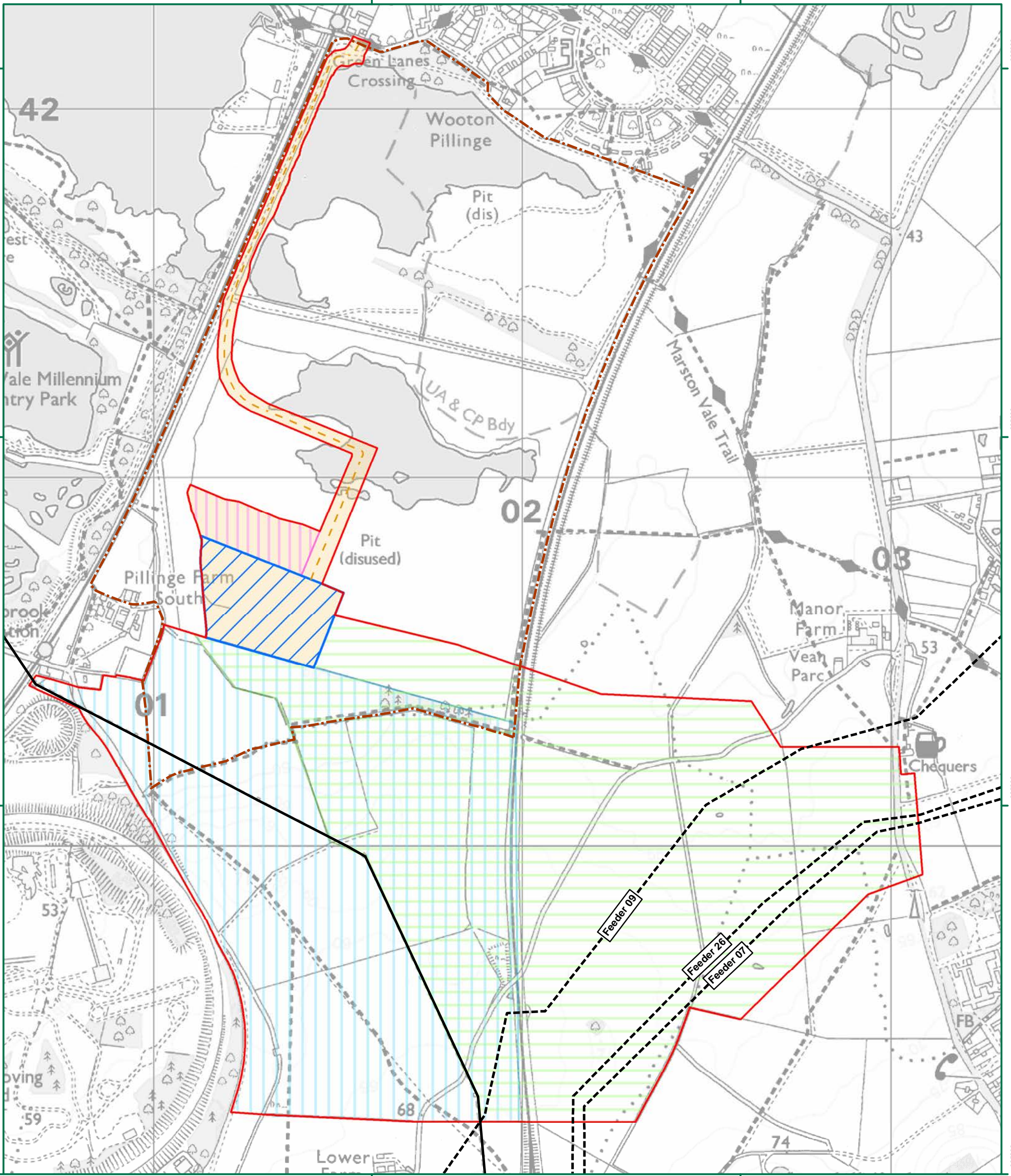
- 1.1.6 The Power Generation Plant Site is located primarily on land within former clay pits known as 'The Rookery', with the Gas and Electrical Connections extending from The Rookery into the surrounding agricultural land.
- 1.1.7 The Rookery, which is comprised of the Rookery North and Rookery South Pits, is currently the subject of an ongoing Low Level Restoration Scheme (LLRS) by the landowner. The Generating Equipment Site and part of the Gas and Electrical Connections would be located within Rookery South Pit. The LLRS aims to restore the currently disused Rookery South Pit and provide a more formal surface water management plan for both Rookery North and Rookery South Pits. Once restored, Rookery South Pit will be approximately 15 m below the surrounding ground level in the vicinity of the Generating Equipment Site.
- 1.1.8 The LLRS for Rookery South Pit (assuming no additional proposed developments prior to its completion) will comprise:
- The re-profiling of the base of the pit involving the extraction of soils and clays from the permitted extraction area on the southern side of Rookery South with regrading of the base of the pit;
  - Implementation of surface water drainage measures and construction of an attenuation pond in order to facilitate a managed surface water drainage strategy;
  - A landscape strategy to include planting on the site boundary and the margins of the attenuation pond; and
  - Provision of buttresses to the southern, eastern and northern slopes to ensure the long-term stability of those slopes, and regrading through excavation.
- 1.1.9 To facilitate the proposed LLRS works, extraction of clay from a currently un-worked area situated directly to the south of Rookery South Pit, will be undertaken. This area covers approximately 25 ha and forms part of the existing minerals extraction consent boundary, but has not historically been subject to excavation works. Deposits won from this area will provide material for use in the restoration, re-profiling and buttressing work to Rookery South Pit together with the implementation of a landscape and ecology strategy, which will integrate with ecological mitigation works and strategic landscape planting in Rookery North Pit<sup>1</sup>.

## 1.2 Need for and Benefits of the Project

- 1.2.1 There is considerable national need for this type of development, acknowledged at all levels of Government policy. National planning policy supports the need for new electricity infrastructure due to the current ageing and inevitable closure of older coal fired power plants and the likely increase in demand for electricity over the coming decades.

<sup>1</sup> Peter Brett Associates LLP (March 2011) Rookery Pit – Low Level Restoration Scheme Detailed Phasing Strategy. Discharge of Condition 3 of Planning Permission BC/CM/2000/8 Scheme for phasing and timescale at Rookery Pit, Stewartby, Bedfordshire



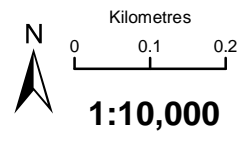


- Proposed Draft DCO Site Boundary
- Access Road
- Generating Equipment Site
- Laydown Area (temporary)
- Power Generation Plant Site
- Electrical Connection Opportunity Area
- Gas Connection Opportunity Area
- Existing 400kV Overhead Line
- Existing NTS Pipeline
- The Extent of the Rookery LLRS

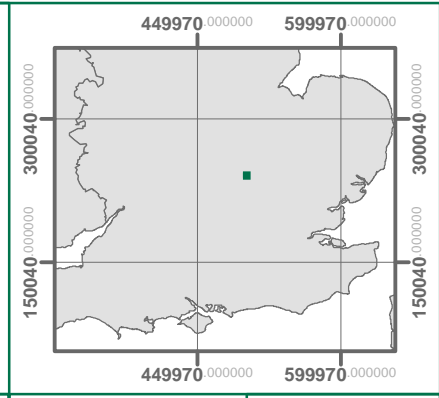
**Data Sources**  
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**Figure 1:  
Project Site Plan**



**Geodetic Information**  
 Projection: Transverse\_Mercator  
 Spheroid: Airy\_1830  
 Datum: D\_OSGB\_1936



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- 1.2.2 The overarching National Policy Statement for Energy (NPS EN-1)<sup>2</sup> states that ‘gas will continue to play an important role in the electricity sector – providing vital flexibility to support an increasing amount of low-carbon generation and to maintain security of supply’ (paragraph 3.6.2).
- 1.2.3 Gas is a reliable fuel source. It is acknowledged by Government as being essential to a low-carbon economy and to underpin the country’s energy security. In addition, gas peaking plants such as the Project provide back-up to power generation from renewable sources, particularly wind power, which is an increasingly prevalent but intermittent energy source. Modern gas fired power plants are among the most efficient and cleanest forms of electricity power generation.
- 1.2.4 At present, thermal peaking capacity in the UK is relatively small due to the nature of the electricity generation mix on the NETS. There is therefore a clear and significant requirement for further capacity to meet the projected need for reactive/flexible generation. A dedicated gas fired peaking plant such as the Project could allow for the rapid provision of reserve capacity to the NETS, thus playing a role in meeting the energy requirements of the UK going forward.

### 1.3 The Applicant

- 1.3.1 The Project Applicant is Millbrook Power Limited (MPL). MPL is an energy development company established for the Project by Watt Power Limited (WPL).
- 1.3.2 WPL has been established to develop flexible gas fired generation assets to support the UK Government’s drive to a low carbon economy. Stag Energy provides the resources through a management services agreement with WPL. Stag Energy was founded in 2002 and the company draws on a depth of experience within a team that has created and delivered over 10,000 MW of power generation and related infrastructure projects across the globe, of which 2,500 MW was delivered in the UK.
- 1.3.3 WPL currently has two other 299 MW projects being brought forward through the planning process. They are Progress Power Ltd at Eye Airfield in Suffolk ([www.progresspower.co.uk](http://www.progresspower.co.uk)) and Hirwaun Power Ltd at Hirwaun in South Wales ([www.hirwaunpower.co.uk](http://www.hirwaunpower.co.uk)). Both projects are now in the pre-examination phase following acceptance of the DCO Applications by the Planning Inspectorate.
- 1.3.4 Similarly, Stag Energy provides resources to the Gateway Storage Company Ltd, which is developing an offshore salt cavern gas storage facility in the East Irish Sea. The project has been consented by the UK Government, the Marine Management Organisation and the local planning authority (Barrow-in-Furness Borough Council, Cumbria). Further information on the project is available at [www.gatewaystorage.co.uk](http://www.gatewaystorage.co.uk).

<sup>2</sup> Department of Energy and Climate Change (July 2011) Overarching National Policy Statement for Energy (EN-1)

- 1.3.5 WPL is committed to the development of assets to support the UK Government's drive to a low carbon economy. MPL recognises the need to balance commercial issues with the environmental benefits and concerns of energy projects and believes this can be responsibly delivered at a local level. The Project and supporting infrastructure will be designed and developed to high quality, safety and environmental standards.
- 1.3.6 Further information on the companies referred to above is provided at <http://www.millbrookpower.co.uk> or <http://www.wattpowerltd.co.uk>.

### 1.4 The Consenting Regime and EIA Process

#### The Planning Act 2008

- 1.4.1 In England and Wales, an onshore electricity generating station is considered to be a Nationally Significant Infrastructure Project (NSIP) under the Planning Act 2008 (PA 2008) if its generating capacity is more than 50 MW. As the proposed Power Generation Plant would have a generating capacity of at least 50 MW, and up to 299 MW, it would be classified as an NSIP under Section 14(1)(a) and Section 15(2) of the PA 2008. Under Section 31 of the PA 2008, development consent is required for development that is or forms part of a NSIP and therefore a DCO Application will be made to the Secretary of State (SoS).

#### Requirement for an EIA and Notification under Regulation 6(1)(b)

- 1.4.2 The Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (the EIA Regulations)<sup>3</sup> and regulation 5(2)(a) of The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 impose procedural requirements, in particular, on the carrying out of EIA in relation to certain DCO Applications. All development in Schedule 1 (Schedule 1 development) requires an EIA to be carried out. Development in Schedule 2 (Schedule 2 development) requires an EIA to be carried out if the project is likely to have significant effects on the environment.
- 1.4.3 The Project has been identified as a Schedule 1 Development and therefore the Applicant intends to carry out an EIA for the Project in accordance with the EIA Regulations. The findings of the EIA will be summarised in an Environmental Statement (ES) which along with the Scoping Opinion will be submitted alongside the DCO Application.

#### Consultation Strategy

- 1.4.4 A consultation strategy will be implemented in accordance with Sections 42, 47 and 48 of PA 2008<sup>4</sup> and its associated secondary legislation which will allow the local community, statutory consultees and interested parties, including persons with an interest in any land that is affected by the DCO Application, to comment on and input into the planning and development process. All representations made during the consultation process will be considered carefully and MPL will have regard to all relevant responses prior

<sup>3</sup> The Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 No. 2263

<sup>4</sup> The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

to submission of the DCO Application. The outputs generated from the formal statutory consultation will be summarised in a consultation report, submitted alongside the DCO Application.

- 1.4.5 A Statement of Community Consultation (SoCC) will be agreed with Central Bedfordshire and Bedford Borough Councils before being published. The SoCC will set out how MPL intends to consult with the local community in accordance with Section 47 of the PA 2008 throughout the preparation of the DCO Application.
- 1.4.6 MPL has already commenced some preliminary discussions with various departments of Central Bedfordshire Council and Bedford Borough Council, and, where relevant, the outcome of these consultations has informed this report.

### 1.5 Purpose of the Scoping Report

- 1.5.1 This Scoping Report represents MPL's formal notification to the SoS under regulation 6(1)(b) of the EIA Regulations. The report sets out the proposed scope and content of the EIA to support the DCO Application and the method by which it is intended to be carried out.
- 1.5.2 On behalf of the SoS, the Planning Inspectorate (PINS) is requested to acknowledge the regulation 6 notification and confirm that the Project is an EIA development in accordance with regulation 4(2)(a) of the EIA Regulations. In addition, PINS is requested to provide a Scoping Opinion on the possible significant environmental effects of all elements of the Project, the proposed methodologies to assess the impacts, and the proposed structure of the Environmental Statement (ES) (as presented in Sections 4 and 5 of this report).
- 1.5.3 PINS and other consultees are also invited to highlight any additional issues that they believe should be addressed within the EIA, and to identify any sources of information that may be of interest to MPL and the EIA team.

### 1.6 Content of the Scoping Report

- 1.6.1 The Scoping Report is set out as follows:
- Chapter 1 introduces the Project and the Applicant and outlines the consenting regime, the need for and benefits of the Project and the consultation strategy;
  - Chapter 2 provides a brief description of the planning policy background and regulatory framework in which the Scoping Report has been prepared;
  - Chapter 3 provides a more detailed description of the Project and the Project Site and surrounding area;
  - Chapter 4 provides a high level overview of the proposed scope of the EIA; and

## Millbrook Environmental Impact Assessment Scoping Report

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- Chapter 5 describes the content and assessment methodology of each of the impact sections in detail; and
- Chapter 6 provides a summary and conclusion of the report.

## 2 Regulatory and Policy Background

### 2.1 Introduction

2.1.1 This chapter summarises the main regulatory and policy framework that is relevant to the Project at international, national and local levels.

2.1.2 A comprehensive review of potentially relevant policy and evidence will be undertaken during the pre-application process. A detailed description of the planning policy background and its relevance to the Project will be provided in the Planning Statement, which will be produced as a separate document to support the DCO Application. A summary of the impacts of the Project on relevant and important planning policy will be discussed more fully within the Preliminary Environmental Information Report (PEIR), ES and other documents submitted for examination in support of the DCO Application.

### 2.2 European Union (EU)

2.2.1 The EU Directives of particular relevance to the Project with respect to environmental requirements are listed below:

- Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment (the EIA Directive)<sup>5</sup>;
- Directive 2003/35/EC of 26 May 2003 providing for public participation in respect of the drawing up of certain plans and programmes relating to the environment and amending with regard to public participation and access to justice Council Directives 85/337/EEC and 96/61/EC (the Public Participation Directive)<sup>6</sup>;
- Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control) (the Industrial Emissions Directive (IED))<sup>7</sup>;
- Directive 1992/43/EEC of 21 May 1992 on the Conservation of natural habitats and of wild fauna and flora (the Habitats Directive)<sup>8</sup>;
- Directive 2009/147/EC of 30 November 2009 on the conservation of wild birds (the Birds Directive)<sup>9</sup>; and
- Directive 2008/50/EC of 21 May 2008 on ambient air quality and cleaner air for Europe (the Ambient Air Quality Directive)<sup>10</sup>.

<sup>5</sup> European Council Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment (the EIA Directive)

<sup>6</sup> European Council Directive 2003/35/EC of 26 May 2003 providing for public participation in respect of the drawing up of certain plans and programmes relating to the environment and amending with regard to public participation and access to justice Council Directives 85/337/EEC and 96/61/EC (the Public Participation Directive)

<sup>7</sup> European Council Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control) (the Industrial Emissions Directive (IED))

<sup>8</sup> Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora (Habitats Directive)

<sup>9</sup> Council Directive 79/409/EEC on the Conservation of Wild Birds (Birds Directive)

<sup>10</sup> Council Directive 2008/50/EC on the ambient air quality and cleaner air for Europe (the Ambient Air Quality Directive)

## 2.3 Overview of Decision Making under the Planning Act 2008 and Policy Context

- 2.3.1 The Project is categorised as a NSIP and will be examined by PINS with the decision on the DCO Application made by the SoS under the regime established by the PA 2008 as described in Chapter 1.
- 2.3.2 As set out in NPS EN-1 (Overarching National Policy Statement for Energy), 'this NPS, when combined with the relevant technology-specific energy NPS, provides the primary basis for decisions' (Paragraph 1.1.1). The decision-maker 'should start with a presumption in favour of granting consent to applications for energy NSIPs' (paragraph 4.1.2) and on the basis that the urgent national need for such projects is settled.
- 2.3.3 Decisions must also be taken by the SoS having regard to the local impact reports and any other matters which the SoS 'thinks are both important and relevant to its decision' (Section 104 of the PA 2008), which may include the National Planning Policy Framework (NPPF), Development Plan Documents (DPD) or other documents in the Local Development Framework (LDF).

## 2.4 National Policy Statements

- 2.4.1 PA 2008 required new policy to inform decisions on NSIPs in England and Wales. Policy for such infrastructure is set out in National Policy Statements (NPS). Those that are potentially relevant to the consideration of the DCO Application are:
- The Overarching National Policy Statement for Energy (NPS EN-1);
  - The National Policy Statement for Fossil Fuel Electricity Generating Infrastructure (NPS EN-2)<sup>11</sup>;
  - NPS EN-4 National Policy Statement for Gas Supply Infrastructure and Gas and Oil Pipelines<sup>12</sup>; and
  - NPS EN-5 National Policy Statement for Electricity Networks Infrastructure<sup>13</sup>.

## 2.5 National Planning Practice Guidance (NPPG)<sup>14</sup>

- 2.5.1 In September 2013 the government launched the National Planning Practice Guidance (NPPG) website which brings together all planning guidance for England in one place. It has been designed to support the NPPF. It is therefore considered that the NPPG may be a matter of importance and relevance, which the SoS may take into account under Section 104(2)(d) PA 2008.

<sup>11</sup> Department of Energy and Climate Change (July 2011) National Policy Statement for Fossil Fuel Electricity Generating Infrastructure (EN-2)

<sup>12</sup> Department of Energy and Climate Change (July 2011) National Policy Statement for Gas Supply Infrastructure and Gas and Oil Pipeline (EN4)

<sup>13</sup> Department of Energy and Climate Change (July 2011) National Policy Statement for Electricity Networks Infrastructure

<sup>14</sup> <http://planningguidance.planningportal.gov.uk>



### 2.6 National Planning Policy Framework for England (NPPF) – 2012<sup>15</sup>

- 2.6.1 The NPPF sets out the Government's planning policies for England and how these are expected to be applied. In the context of an NSIP, the NPPF notes at paragraph 3 that the NPPF may be considered as being important and relevant in the context of decision making for an NSIP.
- 2.6.2 The NPPF sets sustainable development at the core of its guidelines. Policies set in paragraphs 18-219, taken as a whole constitute the Government's view of what sustainable development in England means in practice for the planning system. The NPPF focuses its interpretation of sustainable development into three dimensions: economic, social and environmental.
- 2.6.3 A set of 12 'core planning principles' are also set out in the NPPF. Paragraph 17 states that planning should 'support the transition to a low carbon future in a changing climate, taking full account of flood risk and coastal change, and encourage the reuse of existing resources, including conversion of existing buildings, and encourage the use of renewable resources (for example, by the development of renewable energy).'

### 2.7 Local Planning Policy

#### Central Bedfordshire Core Strategy and Development Management Policies (Adopted November 2009)<sup>16</sup>

- 2.7.1 The Central Bedfordshire Core Strategy and Development Management Policies was adopted in November 2009. The document is the key DPD and provides the 'long term vision and the direction for future development in the district over the period 2001 – 2026'.
- 2.7.2 The Project Site is located within the Northern Marston Vale Strategic Area, which is allocated for significant housing, employment and regeneration uses. Policy CS1 Development Strategy is considered relevant to this report.

#### Central Bedfordshire Development Strategy<sup>17</sup>

- 2.7.3 The Development Strategy for Central Bedfordshire is currently being developed and will become, once adopted potentially in 2015, the planning policy document for the whole of Central Bedfordshire. It will set out the overarching spatial strategy and development principles for the area together with more detailed policies to help determine planning applications. The strategy will address similar issues to those in the Core Strategy and Development Management Policies, but will also consider the allocation of strategic development sites.

#### Local Development Documents of Bedford Borough

- 2.7.4 The Local Development Documents of Bedford, adopted in April 2008, sets out the spatial strategy for the Borough. The adopted policies form the basis

<sup>15</sup> Department of Communities and Local Government (March 2012) National Planning Policy Framework

<sup>16</sup> Central Bedfordshire Council (November 2009) Core Strategy and Development Management Policies

<sup>17</sup> [www.centralbedfordshire.gov.uk](http://www.centralbedfordshire.gov.uk)

for decision making when planning applications are submitted to the council. The Core Strategy and Rural Issues Plan Development Plan Document<sup>18</sup> sets out the long term spatial vision for Bedford Borough to 2021.

2.7.5 The following key policies are relevant to the Project:

- Policy CP2 – Sustainable Development Principles;
- Policy CP21 – Designing in Quality;
- Policy CP23 – Heritage;
- Policy CP25 – Landscape Protection and Enhancement; and
- Policy CP25 – Biodiversity.

## 2.8 Other Relevant Policy and Guidance

2.8.1 The following are considered to be potentially relevant policy and guidance in considering the potential impacts and effects of the Project:

- The Electricity Market Reform (2012)<sup>19</sup>;
- The Energy Act (2013)<sup>20</sup>;
- Natural Environment White Paper (2012)<sup>21</sup>;
- Biodiversity 2020: A strategy for England's wildlife and ecosystem services (2011)<sup>22</sup>;
- The UK Climate Change Risk Assessment (CCRA) (2012)<sup>23</sup>;
- Gas Generation Strategy (2012)<sup>24</sup>;
- National Infrastructure Plan (2013)<sup>25</sup>; and
- Annual Energy Statement (2013)<sup>26</sup>.

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<sup>18</sup> Bedford Borough Council (April 2008) The Core Strategy and Rural Issues Plan Development Plan Document

<sup>19</sup> Department of Energy and Climate Change (May 2012) Electricity Market Reform: Policy Overview

<sup>20</sup> Energy Act (December 2013)

<sup>21</sup> Department for Environment, Food and Rural Affairs (2012) Natural Environment White Paper

<sup>22</sup> Department for Environment, Food and Rural Affairs (2011) Biodiversity 2020: A strategy for England's wildlife and ecosystem services

<sup>23</sup> Department for Environment, Food and Rural Affairs (January 2012) UK Climate Change Risk Assessment: Government Report

<sup>24</sup> Department of Energy and Climate Change (December 2012) Gas Generation Strategy

<sup>25</sup> HM Treasury (December 2013) National Infrastructure Plan 2013

<sup>26</sup> Department of Energy and Climate Change (October 2013) Annual Energy Statement 2013

### 3 Project Description

#### 3.1 Project Site

- 3.1.1 The Power Generation Plant Site and part of the Gas and Electrical Connections would be situated on land within former clay pits known as 'The Rookery' and designated as Rookery Clay Pits County Wildlife Site (CWS). The Rookery is situated in the Marston Vale between Milton Keynes and Bedford, approximately 3 km north of Ampthill, a local market town, and 7 km south west of Bedford in Central Bedfordshire and Bedford Borough. The Gas and Electrical Connections would be located within the Opportunity Areas identified on Figure 1 and would extend out from The Rookery into farmland to the south and/or east of The Rookery.
- 3.1.2 The Rookery comprises two large former clay pits, Rookery North and Rookery South Pits, separated by an east-west spine of unexcavated clay. The Generating Equipment Site, Laydown Area and parts of the Access Road and Gas and Electrical Connections would be located within Rookery South Pit which is approximately 95 ha and is bound by steep clay banks that are varied in nature and substrate. The pit base currently includes a range of wetland habitats, including open water, reed beds, pools and bare inundated clay with ephemeral water bodies. The land that remains at the original ground level, approximately 42 m above ordnance datum (AOD) around the periphery of The Rookery South Pit is predominantly bare ground that has been cleared of vegetation.
- 3.1.3 The Rookery is currently the subject of an ongoing LLRS by the landowner as described in Chapter 1. Once restored, Rookery South Pit will be approximately 15 m below the surrounding ground level in the vicinity of the Generating Equipment Site and Laydown Area.
- 3.1.4 A five year option agreement, which is extendable to seven under certain conditions, has been signed between MPL and the landowner of Rookery Pit. Included in the agreement is the option to purchase between 4 and 8 ha of land for the Generating Equipment Site, lease 4 ha of land for use as a temporary Laydown Area during construction, and install any necessary connection infrastructure as far as their land ownership extends.
- 3.1.5 Road access to the Power Generation Plant Site is currently from the north near Stewartby via the A421, Bedford Road and Green Lane, as shown on Figure 2. There is a junction on Green Lane leading to an access track on the previously unexcavated land on the western side of Rookery North Pit which extends southwards into Rookery South Pit and the Generating Equipment Site. The Gas and Electrical Connections would either be primarily accessed from Junction 13 of the M1 via the A507, Sandhill Close, Houghton Lane, Millbrook Road and the B530 Ampthill Road or from Bedford Road, via Woburn Road, Manor Road, B530 Ampthill Road and Millbrook Road depending on their locations.
- 3.1.6 There are overhead power lines that run west to east south of Rookery South Pit. Furthermore, a number of existing public footpaths are located in

and around the Project Site, linking it to the wider Marston Vale. However, there is limited public access to Rookery South Pit itself.

- 3.1.7 The Mill Brook watercourse flows in a northerly direction along the western flank of Rookery South Pit whilst a tributary watercourse, passing to the south of Rookery South Pit within the Project Site, joins Mill Brook in the vicinity of South Pilling Farm as shown on Figure 3.

### Surrounding Area

- 3.1.8 The Rookery, and therefore the Power Generation Plant Site and part of the Gas and Electrical Connections, are located within part of a wider dynamic landscape that has experienced significant change and will continue to do so for the foreseeable future. Substantial areas of land around Stewartby, including The Rookery, have been previously worked for clay that was used in Stewartby Brickworks until it closed in 2008. To the north of The Rookery there remains some buildings associated with the former Stewartby Brickworks, including the chimneys. Following clay extraction, the sites have been restored (to varying levels of completion) by different means (including the disposal of waste) and to different uses, including water based recreation and commercial uses.
- 3.1.9 Furthermore, significant regeneration and development is allocated for the Northern Marston Vale Growth Area, in which the Project Site is located, as referred to in Paragraph 2.7.2. This will result in further change within the landscape, not least represented by substantial residential and employment development such as in the nearby settlements of Marston Moretaine and Stewartby.
- 3.1.10 The Gas and Electrical Connection Opportunity Areas, outside of Rookery South Pit, are located in a less dynamic landscape set within a mostly undeveloped agricultural landscape which includes areas of woodland, native hedgerows and a number of water-bodies such as ditches.
- 3.1.11 Nearby roads include the A421 which is approximately 2 km to the west and the B530 which lies to the east of the Project Site, as shown on Figure 3. The A421 connects directly to Junction 13 of the M1 Motorway which is approximately 5.6 km to the south east of the Project Site. Furthermore the Midland Mainline Railway and Marston Vale Line border the Power Generation Plant Site to the east and west respectively.
- 3.1.12 The closest residential dwelling to the Project Site is South Pilling Farm, located approximately 90 m to the west. South Pilling Farm is separated from the Project Site by a small deciduous woodland. To the north of Green Lane and The Rookery, lies Stewartby. Other neighbouring residential areas include: Houghton Conquest approximately 1.5 km to the east; Marston Moretaine approximately 1.2 km to the west; and Millbrook approximately 400 m to the south as shown on Figures 2 and 3.
- 3.1.13 To the west of the Project Site is Marston Vale Millennium Country Park, as shown on Figure 3, which provides habitat conservation opportunities, indoor and outdoor community amenities and a wind turbine. There is also a Forest Centre within the Marston Vale Millennium Country Park located just to the

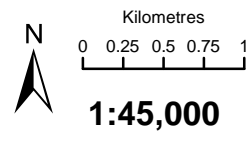


- |  |                             |
|--|-----------------------------|
| Project Site                           | <b>Features Of Interest</b> |
| Power Generation Plant Site            | Railway                     |
| Electrical Connection Opportunity Area | Water Resource              |
| Gas Connection Opportunity Area        | <b>Roads</b>                |
| 5km Study Area Around the Project Site | Broadmead Road              |
| 1km Study Area Around the Project Site | Churchill Close             |
|  | Green Lane                  |
|  | Millbrook Road              |
|  | School Lane                 |
|  | The Crescent                |

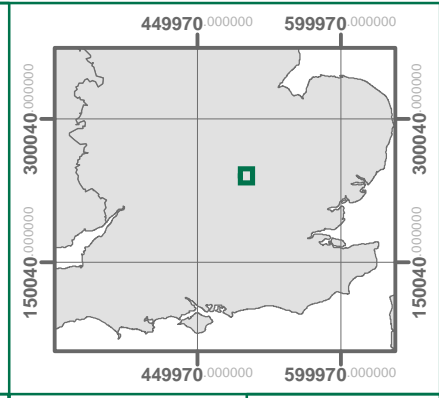
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**Figure 2:  
Features of Interest**



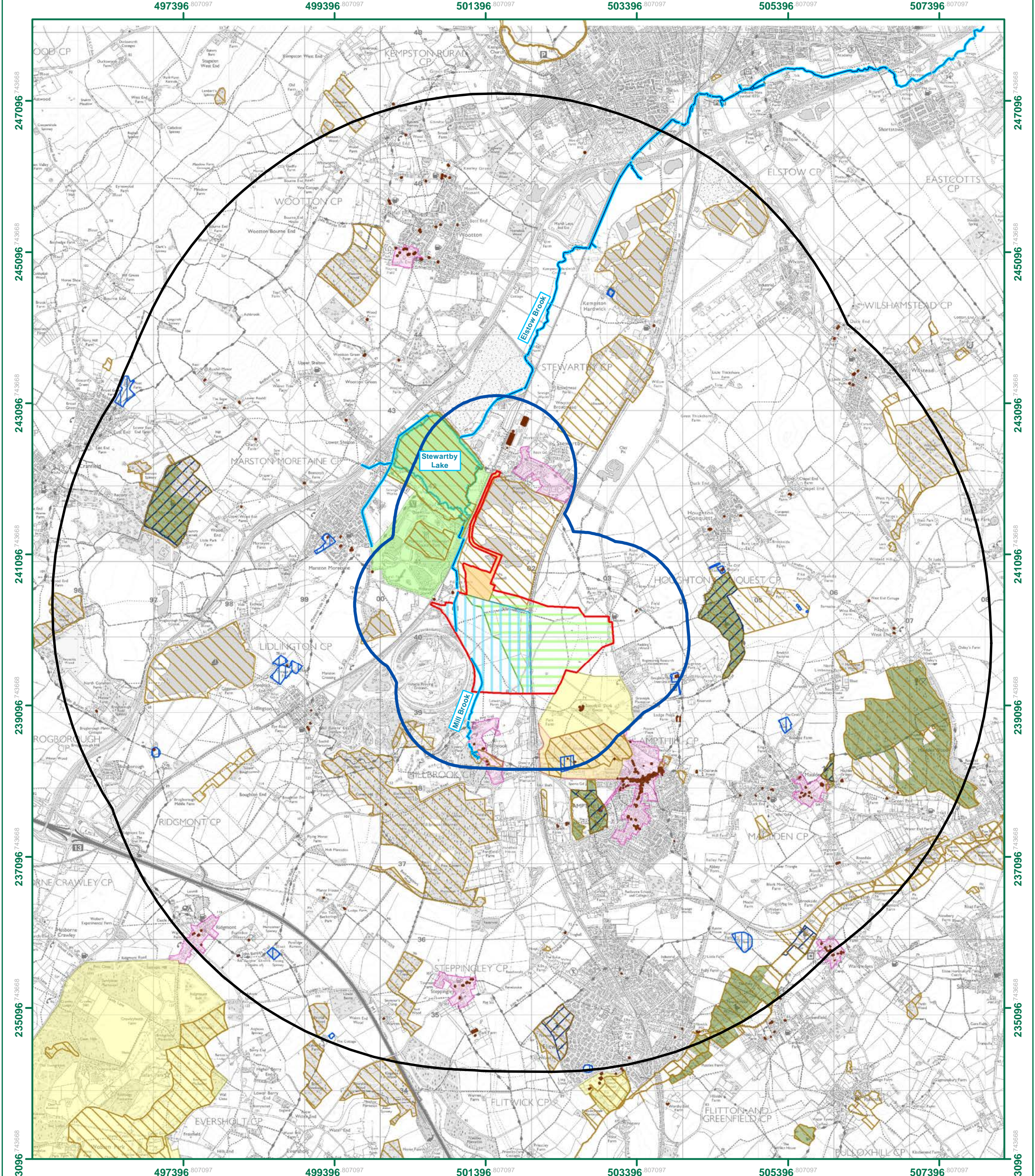
**Geodetic Information**  
 Projection: Transverse\_Mercator  
 Spheroid: Airy\_1830  
 Datum: D\_OSGB\_1936



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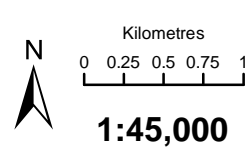


- Project Site
  - Power Generation Plant Site
  - Electrical Connection Opportunity Area
  - Gas Connection Opportunity Area
  - 5km Study Area Around the Project Site
  - 1km Study Area Around the Project Site
- Water Resources**
- Waterbodies
- Ecology**
- Local Nature Reserve
  - County Wildlife Site
  - Site of Special Scientific Interest
- Cultural Heritage**
- Listed Building
  - Scheduled Monument
  - Conservation Area
  - Registered Park or Garden
  - Country Park

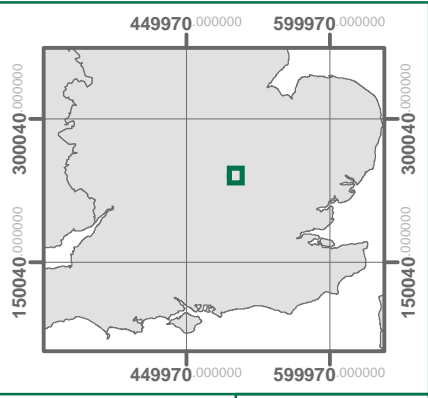
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**Figure 3:  
 Indicative Environmentally  
 Sensitive Receptors**



**Geodetic Information**  
 Projection: Transverse\_Mercator  
 Spheroid: Airy\_1830  
 Datum: D\_OSGB\_1936



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south of Stewartby Lake which provides the focal point for the indoor and outdoor community amenities<sup>27</sup>. Millbrook Proving Ground, a vehicle testing ground, is located to the west of the Gas and Electrical Connection Opportunity Areas.

### 3.2 Description of the Project

- 3.2.1 The elements of the Project are described below. The description is based on a 'Rochdale Envelope' approach (i.e. a single project with a range of parameters). The scope of the topic assessments has been described in Chapter 5 based on the parameters provided below. Assessing a worst case realistic configuration from within the parameters enables an assessment of the 'worst case' likely significant environmental effects within each topic assessment. Each technical chapter within the PEIR and ES will identify which parameters represent the 'worst case' for that topic. It is acknowledged that the parameters may be refined during the design process for the Project and following consultation. If this occurs the modified parameters will be described and taken into account within the PEIR and ES as appropriate.

### 3.3 Power Generation Plant

- 3.3.1 The Power Generation Plant would be designed as a peaking plant fired by natural gas supplied by a new underground gas pipeline connecting the Power Generation Plant to the existing National Transmission System (NTS). It would have a capacity of up to 299 MW (enough to power the equivalent of 400,000 homes).
- 3.3.2 As a peaking plant, the Generating Equipment would operate for up to 1,500 hours per year. Peaking plants are required to operate when there is a 'stress event'. This occurs when there is a surge in demand for electricity associated with a particular event (e.g. where many people across the country boil kettles following the end of a popular television programme) or where there is a sudden drop in power being generated from plants which are constantly operational (e.g. a sudden outage). Peaking plants also help to 'balance out' the grid at other times of peak electricity demand and help to support the grid at times when other technologies (e.g. renewable energy sources, such as wind and solar farms) cannot generate electricity due to their intermittent operation and reliance on weather conditions.
- 3.3.3 Given these parameters, it has been determined that a Simple Cycle Gas Turbine (SCGT) plant is the preferred and most appropriate technology choice for the Project.

#### SCGT Plant

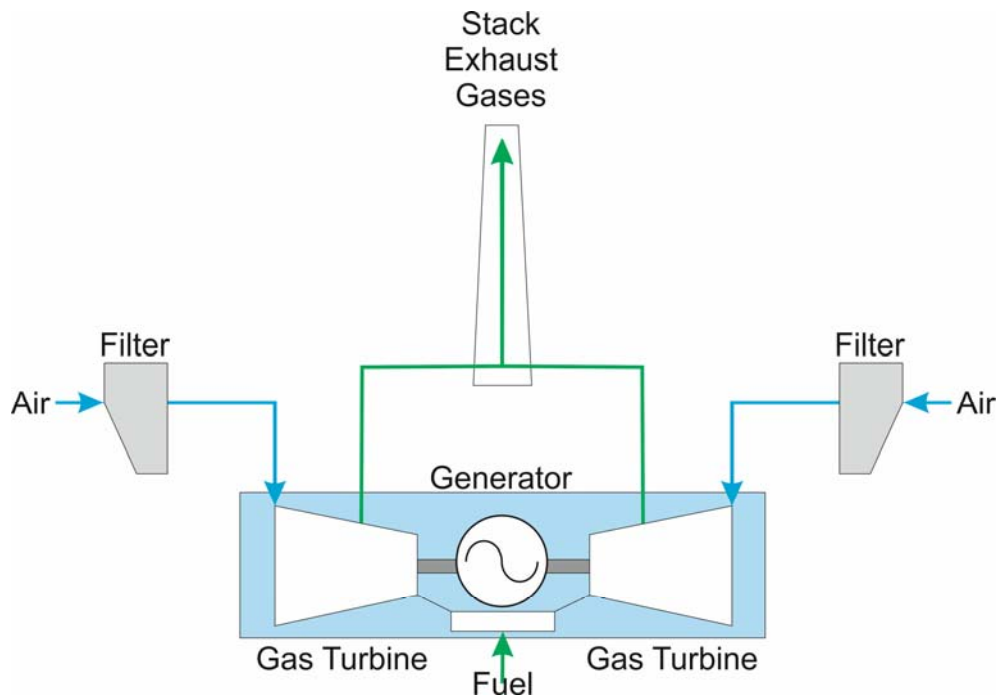
- 3.3.4 There are several options of SCGT plant available to generate up to 299 MW. SCGT plants often use aero-derivative gas turbines (i.e. turbines derived from aeronautical applications), primarily because of their suitability for frequent start-ups, flexibility, high efficiency and high-availability

<sup>27</sup> [Marstonvale.org/millennium-country-park/](http://Marstonvale.org/millennium-country-park/)

maintenance techniques. For the aero-derivative case, MPL envisages using three, four or five individual aero-derivative gas turbine generators to achieve 299 MW.

- 3.3.5 However, 'industrial' type gas turbines can also be used which are typically larger and often more suited to longer operational hours. They offer similar efficiency but less fast loading flexibility. Industrial gas turbines differ from aeronautical designs in that the casings, rotors and blading are of heavier construction. For the industrial gas turbine case, it is anticipated that one or two individual industrial gas turbine generators will be used to achieve 299 MW.
- 3.3.6 The main equipment in a SCGT is a Gas Turbine Generator, comprising the following components:
- Inlet air filter;
  - Air compressor;
  - Combustion chamber;
  - Power turbine(s); and
  - Exhaust silencer.
- 3.3.7 Air, on entering the gas turbines, would be compressed and natural gas injected into the air. The natural gas would then burn in the combustion chamber producing hot, high pressure gases. The gas would then expand across the blades of the gas turbine driving the electrical generators to produce electricity.
- 3.3.8 The waste gases and heat produced from this process would then be released to the atmosphere via between one and five stacks (chimneys). The stack(s) will contain equipment which will reduce emissions released to the atmosphere.
- 3.3.9 A stack height sensitivity study will be undertaken for the Project to determine the minimum stack height for the Gas Turbine Generators, required for adequate dispersion of emissions and to meet legislative air quality targets. This height would apply to all technology choices, as discussed above, and would not be dependent on the number of units present at the Generating Equipment Site.
- 3.3.10 The DCO Application will therefore be flexible enough using the Rochdale Envelope approach to allow MPL to achieve a 299 MW project by building between one to five Gas Turbine Generators, with up to five exhaust gas flue stacks.
- 3.3.11 Figure 4 shows a simple schematic of SCGT operation.

**Figure 4: Schematic of SCGT Operation**



### Laydown Area

- 3.3.12 A temporary Laydown Area for the storage of plant and equipment during construction would be provided adjacent to the Generating Equipment Site. It is not proposed that land would be required for a permanent maintenance/separate laydown area during operation.

### Access Road

- 3.3.13 A new purpose built Access Road would be constructed within the Power Generation Plant Site from Green Lane to the Generating Equipment Site. The 1.7 km long Access Road would be constructed from tarmac bordered by concrete curb. It is anticipated to be single lane with passing places at regular intervals to allow vehicles to pass each other.
- 3.3.14 The route of the Access Road from Green Lane would follow the existing track which borders the lake within Rookery North Pit. On reaching Rookery South Pit, the Access Road would use the access ramp (built as part of the LLRS as described below) to enter into the pit and cross through the base of the pit until it reaches the Generating Equipment Site along the alignment shown on Figure 1.

### Dimensions

- 3.3.15 The maximum area for the Generating Equipment Site would be in the order of 8 ha. The Generating Equipment may be sited in a number of locations within the wider Generating Equipment Site depending on its final design. The Generating Equipment Site may also be reduced in size during the design process with any changes acknowledged in the PEIR and/or ES.
- 3.3.16 Table 3.1 provides indicative dimensions for the main plant items which would be present within the Generating Equipment Site.

**Table 3.1: Indicative Details of Main Plant Items**

Plant Item	Indicative Dimensions (m)
Stack (dimensions)	Up to 60 m (height) from the base of Rookery South Pit and up to 45 m (height) from the ground level surrounding Rookery South Pit and up to 10 m (diameter).
Stack (number)	Up to 5 stacks
Gas turbine (plant dimensions)	Up to 90 m (length) x up to 150 m (width) x up to 20 m (height).
Electrical banking compound	Up to 60 m (width) x up to 60 m (width) x up to 10 m (height)
Water tanks	Up to 24 m (diameter) x up to 15 m (height) for each tank. Maximum of 2 tanks.
Administration/ workshop/ control building	Up to 50 m (length) x up to 20 m (width) x up to 6 m (height)
Gas receiving station	Up to 50 m (width) x up to 50 m (length) x up to 3 m (height)

### Construction, Operational and Decommissioning Timescales

3.3.17 Construction and commissioning of the Project would take approximately 22 months. The main works associated with the construction phase would be excavation and site levelling for new foundations, potential piling (if required) and the laying of the Gas and Electrical Connections. No requirements for demolition or remediation have been identified at this stage.

3.3.18 It is assumed that as a minimum, the following components of the LLRS will be complete prior to construction of the Project commencing:

- Topsoil stripping and stockpiling of material from the remaining southern permitted extraction area on the southern side of Rookery South Pit to enable the extraction of clay for use in the proposed restoration works;
- Formation of a noise screening bund from stripped topsoil and subsoil along the western edge of the works adjacent to Pilling Farm;

- Redirection of existing surface water ditches and provision of an upper carrier ditch around the southern perimeter of the southern permitted excavation area;
- Excavation of clay from the southern permitted extraction area to provide material for the proposed restoration works and buttressing works, including provision of a new access ramp from the extraction area into the base of the pit;
- Construction of a new access ramp in the north west corner of Rookery South Pit;
- Construction of a landscaped platform graded so drainage falls across the entire base of Rookery South Pit, utilising material won from either regarding of the base of the pit or from the southern permitted extraction area, to enable gravity drainage to occur in the base of the pit;
- Construction of surface water interceptor channels collecting to a single attenuation pond located at the north western corner of Rookery South Pit. The surface water interceptor channels and attenuation pond will include habitat mitigation and ecological enhancement measures;
- Provision of a pumping station to enable external discharge of collected waters from the attenuation pond to an existing ditch/culvert discharge to Stewartby Lake;
- Buttressing of the pit edge slopes to the south (part), east and north (part) to provide a slope stabilisation solution for the existing slopes; and
- Redirection of existing surface water ditches and provision of an upper carrier ditch around the southern perimeter of the southern excavation area.<sup>28</sup>

3.3.19 The Power Generation Plant would be designed to have an operational life of 25 years, after which time it would be decommissioned or re-powered depending on the nature of the electricity market and energy mix at the time. For the purposes of the EIA, it would be assumed that the Power Generation Plant would be decommissioned following the end of its operational life.

3.3.20 Decommissioning would comprise the removal of all Power Generation Plant items and restoration of the Project Site to a similar condition compared to before the construction of the Project. This process would also take approximately 22 months. It is likely that some underground structures, including the Gas and Electrical Connections (if an underground Electrical Connection is implemented) may be capped and left in situ to avoid any adverse environmental impacts associated with their removal. Due regard would be paid to all best practice guidelines and legislation on

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<sup>28</sup> Peter Brett Associates (April 2009) Rookery Pit – Low Level Restoration Scheme Engineering Statement.

decommissioning of projects, which are relevant at the time of the decommissioning activities. Where possible, items of plant would be recycled or reused.

### Carbon Capture Readiness (CCR) and Carbon Capture and Storage (CCS)

- 3.3.21 At up to 299 MW, the Project would be below the threshold set out in Directive 2009/31/EC<sup>29</sup> and National Policy Statement EN-1 and EN-2 for when operators of combustion plants are required to have assessed the feasibility of: a storage site, transport facilities and economic considerations of the capture of carbon dioxide (CO<sub>2</sub>) produced as a result of the combustion process. Therefore it is not considered necessary to assess the viability of CO<sub>2</sub> capture or include it further in this report.

### 3.4 Gas Connection

- 3.4.1 The Gas Connection would be in the form of a new underground gas pipeline connection (the Pipeline) and above ground installation (AGI) and is required to connect the Generating Equipment to the existing high pressure NTS in order to provide a reliable supply of fuel.

#### Gas Connection Opportunity Area

- 3.4.2 A Gas Connection Feasibility Study was undertaken in March 2014 in order to define and evaluate the options available for connecting the Generating Equipment to a suitable source of fuel gas. This identified NTS Feeders 7, 9 and 26 as possible connection points. The location of these Feeders in relation to Project Site is shown on Figure 1.
- 3.4.3 At present, investigations to identify specific route corridor options to the Feeders are still ongoing. It is anticipated that the Gas Connection would be situated within the Gas Connection Opportunity Area to the south and east of the Generating Equipment Site, as shown on Figure 1. The Gas Connection Opportunity Area outside of Rookery South Pit comprises large flat to gently rolling arable fields bounded by hedgerows and drainage ditches. It extends south to just beyond Millbrook Road and to the east beyond the Midland Mainline Railway to the B530 Ampthill Road between Chequers Public House and the Engineering Research Establishment close to Reddings Wood.
- 3.4.4 All potential routes for the Gas Connection will be selected with due regard to relevant factors including environmental, planning, safety, engineering and constructability. Further details of the specific routes being considered will be provided to consultees when they are available and the route selected will be assessed in the PEIR and ES submitted for the DCO Application.

<sup>29</sup> Directive 2009/31/EC of the European Parliament and of the Council of 23 April 2009 on the geological storage of carbon dioxide and amending Council Directive 85/337/EEC, European Parliament and Council Directives 2000/60/EC, 2001/80/EC, 2004/35/EC, 2006/12/EC, 2008/1/EC and Regulation (EC) No 1013/2006

### Connection to the NTS

- 3.4.5 Connection of the Pipeline to an NTS feeder would require two Above Ground Installations (AGIs) to be installed which will include: a Minimum Offtake Connection (MOC) facility, which would be owned by National Grid Company (NGC), and a PIG Trap Facility (PTF) which will be owned by MPL (together, referred to as the 'Above Ground Installation' or 'AGI').
- 3.4.6 The MOC (approximately 40 x 30 m) would contain:
- Remotely operable valve (ROV);
  - Control and instrumentation kiosk; and
  - Electrical supply kiosk.
- 3.4.7 The PTF (approximately 40 x 30 m) would contain:
- PIG launching facility;
  - Emergency control valve;
  - Isolation valve;
  - Control and instrumentation kiosk; and
  - Electrical supply kiosk.
- 3.4.8 Termination of the Gas Connection would be at a PTF on the Generating Equipment Site. This facility would be situated within the Gas Receiving Station and would contain the following equipment:
- PIG receiving facility;
  - Isolation valves, metering, heating, filtering, compression and pressure regulation equipment;
  - Electricity supply kiosk; and
  - Control and instrumentation kiosks.

### 3.5 Electrical Connection

- 3.5.1 The Electrical Connection will comprise all the necessary elements to enable power to be exported from the Generating Equipment to the NETS, such as a new substation and two new electrical circuits (either in the form of an underground cable or overhead line).
- 3.5.2 A grid connection assessment was undertaken in March 2014 in order to define and evaluate the options available for connecting the Generating Equipment to the NETS. The most suitable point of connection would be a new substation to be located either on the Generating Equipment Site or adjacent to the line of the existing National Grid double circuit 400 kV line (forming part of the NETS) which runs from Sundun to Grendon. The 400kV

line is located approximately 320 m southwest of the Generating Equipment Site as shown on Figure 1.

- 3.5.3 Should an underground export cable option be progressed between the substation and NETS, then up to two new sealing end compounds (SECs) would also be required. These would be constructed at the point where the underground cable emerges to facilitate its connection into the NETS. It is possible that one, both or neither of the SEC(s) or substation will be required depending on the configuration of the Electrical Connection.

### Electrical Connection Opportunity Area (Underground or Overhead)

- 3.5.4 Specific route corridor options for the Electrical Connection have not been identified at present, and options are being investigated within an area referred to as the Electrical Connection Opportunity Area to the south of the Generating Equipment Site as shown on Figure 1.
- 3.5.5 This area outside of Rookery South Pit comprises gently rolling arable farm land, with a number of hedgerows and drainage ditches defining the field boundaries. The nearest residential dwelling is South Pilling Farm, 90 m to the north-west of the Electrical Connection Opportunity Area. Millbrook Road passes through the south-eastern corner of the Electrical Connection Opportunity Area. There are also two public rights of way passing through the area.
- 3.5.6 Specific connection options will be explored and further refined to a single Electrical Connection option prior to submission of the DCO Application. Due regard will be paid to relevant factors including environmental, planning and feasibility. Further details of the options being considered will be provided to consultees when they are available and the selected option will be assessed in the PEIR and ES that will be submitted in support of the DCO Application.

## 3.6 Project Site Selection/Design Evolution

- 3.6.1 The choice of site for the development of the Power Generation Plant has been carefully considered with various sites and a number of relevant factors looked at during this process in accordance with paragraph 4.4.1 of NPS EN-1 and NPS EN-2. Key factors included in the selection of the Power Generation Plant Site are:

- It is within an area identified as being potentially suitable for energy infrastructure;
- It is in close proximity to a suitable Electrical Connection point;
- It is in close proximity to a suitable Gas Connection point;
- It is in an industrial setting away from population centres;
- It has a well-developed road network and access to the Project Site; and



- There is more than adequate space to develop the Power Generation Plant.
- 3.6.2 The final choice of Gas and Electrical Connection options would be selected following further consultation and a more thorough assessment of constraints and environmental impacts.
- 3.6.3 In terms of design evolution of the Project, the following technology options were originally considered for the 299 MW Power Generation Plant: SCGT plant: Combined Cycle Gas Turbine (CCGT) plant; and Reciprocating Gas Engines (RGE) plant.
- 3.6.4 SCGT is considered to be the most suitable technology choice for generating up to 299 MW as a peaking plant at the Project Site based on the following environmental, technical and feasibility considerations:
- Visual impact: SCGT plants require shorter stack(s) compared to CCGT plant and therefore are less visually intrusive in views from the surrounding environment;
  - Water resources: the water requirement of a SCGT plant is significantly lower than for CCGT plants;
  - Noise and available space: noise levels from a SCGT plant would typically be lower than for an RGE plant. A larger number of RGE units would be required at the Generating Equipment Site to generate up to 299 MW. Spatially this may not be possible;
  - Financial: based on the anticipated electricity market, it is essential that the Power Generation Plant of the size proposed will be particularly cost effective, as it will be called upon to operate flexibly to balance out the National Grid and meet changing demands of customers. SCGT plants are better suited to this type of operational regime; and
  - Start up times: SCGT plants are able to start up and shut down much quicker than similar sized CCGT plants and are, therefore, better suited to meeting variable demands.
- 3.6.5 The potential for using Combined Heat and Power (CHP) opportunities with these technologies was also considered. However it is not considered to be technically or economically feasible with a SCGT peaking power station because the profile for the generation of electrical energy from the station cannot be guaranteed to coincide with the required heat demand profile of any potential consumer.
- 3.6.6 A more detailed appraisal of the Project Site selection process and design evolution will be set out in the PEIR and ES.



## 4 Scope and Structure of the EIA

### 4.1 Introduction

- 4.1.1 This Chapter describes the proposed scope and structure for the EIA that will be undertaken to support the DCO Application in accordance with the EIA Regulations. The key output of the EIA process is ultimately the ES, which sets out the likely significant environmental effects of the Project. The ES will enable PINS, consultees and the SoS to understand the anticipated environmental impacts and effects of the Project.
- 4.1.2 To allow for a precautionary approach, the assessments in the ES will be based on a realistic worst case scenario specific to each topic area based on the Rochdale Envelope parameters as described in Chapter 3.

### 4.2 Overall ES Structure

- 4.2.1 Table 4.1 sets out the proposed structure of the ES. A number of supporting documents will also be submitted to the SoS as part of the DCO Application. These are summarised in Table 4.2.

**Table 4.1: Proposed ES Structure**

Chapter	Description
Introduction	Providing: <ul style="list-style-type: none"> <li>• A brief introduction to the Applicant;</li> <li>• A high level description of the Project;</li> <li>• A description of the consenting regime; and</li> <li>• A description of the purpose and structure of the ES.</li> </ul>
Project Description	Detailed description of the Project and how the different elements (i.e. Power Generation Plant, Gas and Electrical Connections) are interconnected/interrelated.  Outline of the proposed construction methods and indicative programme, including working hours etc.
Site Description	Description of the current and future site settings and surroundings of the Project Site. This section will also provide details on the LLRS elements and their phasing in relation to the baseline scenario.

## Millbrook Environmental Impact Assessment Scoping Report

Chapter	Description
Project Development and Alternatives	<p>To include an account of:</p> <ul style="list-style-type: none"> <li>• Project Site Selection;</li> <li>• Alternative technology options for the Power Generation Plant;</li> <li>• Alternative layout/design options for the Power Generation Plant; and</li> <li>• Assessment of alternatives for the Gas and Electrical Connection route corridors.</li> </ul>
EIA Assessment Methodology	Detailing the assessment methodology that the EIA has followed.
ES – Main Impact Sections	<p>The following chapters will present the results of the EIA that has been undertaken:</p> <ul style="list-style-type: none"> <li>• Air Quality;</li> <li>• Noise and Vibration;</li> <li>• Ecology;</li> <li>• Water Quality and Resources;</li> <li>• Geology, Ground Conditions and Agriculture;</li> <li>• Landscape and Visual;</li> <li>• Traffic, Transport and Access;</li> <li>• Cultural Heritage and Archaeology; and</li> <li>• Socio-Economics.</li> </ul> <p>The planning policy context and results of the indirect, secondary and cumulative impact assessment of the Project will be provided within each chapter listed above.</p>
Conclusion	This chapter will present the conclusions of the residual effects of the Project as well as indirect, secondary and cumulative impact assessment of the Project.
ES Volume 2	Containing technical appendices.
ES Volume 3	Containing all figures associated with the ES.
Non-Technical Summary	Providing a summary of the main findings of the ES in easy to understand, non-technical language.

**Table 4.2: Anticipated Supporting Environmental Documents to the DCO Application**

Document Name	Description
Design and Access Statement	Provides details on the main access and egress routes to the Project Site and the design process and philosophy that have been followed in developing the Project.
Flood Risk Assessment	Providing details on the risk to the Project Site from flooding and risks elsewhere that could be caused by the Project.
Planning Statement	Describing the planning policy background and demonstrating that the Project is in compliance with the relevant NPSs and other relevant and important considerations.
Consultation Report	Consolidating and reporting on all consultations that have taken place throughout the Project, and how issues raised have been addressed.
No Significant Effects Report or Habitat Regulations Assessment Report	Depending on the potential for impacts on designated European sites, a Habitat Regulations Assessment or a No Significant Effects Report may be required, subject to consultation with Central Bedfordshire and Bedford Borough Councils, Natural England and PINS. This will draw on the Ecology chapter of the ES (described in Section 5.5 below).

### 4.3 Cumulative Assessment

4.3.1 In accordance with the EIA Regulations, the EIA will take into account other developments in the vicinity of the Project Site and will consider the cumulative impacts associated with these developments in-conjunction with the Project. Developments considered within the cumulative assessment include those that are:

- In the process of being built;
- Permitted application(s) but not yet implemented;
- Submitted application(s) not yet determined;
- Projects on the National Infrastructure’s programme of projects;
- Projects identified in the relevant development plan (and emerging development plans – with appropriate weight being given as they move closer to adoption) recognising that information on the relevant proposals will be limited; and

- Projects identified in other plans and programmes (as appropriate) which set the framework for future development consents/approvals, where such development is reasonably likely to come forward.
- 4.3.2 At present, it is anticipated that the following developments will be considered as part of the cumulative assessment:
- The Proposed Rookery South (Resource Recovery Facility) to be developed to the north of the Generating Equipment Site;
  - The Rookery Low Level Restoration Scheme within Rookery South and Rookery North Pits excluding works that are necessary to the Project (see paragraph 3.3.18);
  - Integrated Waste Management Operations at Rookery South, Bedfordshire ;
  - Brogborough Wind Energy Project at Brogborough Landfill Site ;
  - Land at Moreteyne Farm at Wood End in Marston Moretaine;
  - Land at Warrant Farm on Flitwick Road in Ampthill;
  - Land East and West of Broadmead Road, Stewartby under construction; and
  - The new settlement at Wixams .
- 4.3.3 Furthermore consideration will also be given to the following allocated land areas designated by Bedford Borough Council<sup>30</sup> due to their proximity to the Project Site:
- Policy AD3 Land at Hall End Road in Wootton;
  - Policy AD13 Marston Vale Innovation Park Phase 2 in Wootton;
  - Policy H13 Land at Rousbury Road in Stewartby;
  - Policy H11 Land South of Field Road in Wootton; and
  - Policy H12 Land North of Fields Road in Wootton adjacent to Policy H11.
- 4.3.4 In addition during the EIA other developments may be identified if more information becomes publically available, such as the East West Rail Project and the Bedford and Milton Keynes Waterway in the vicinity of the Generating Equipment Site.
- 4.3.5 Any views on the inclusion of any particular cumulative schemes will be welcome as part of the Scoping Opinion.

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<sup>30</sup> [www.bedford.gov.uk](http://www.bedford.gov.uk)

## 5 Detailed Description of ES Impact Sections

### 5.1 Introduction

5.1.1 This chapter provides a description of the proposed EIA. It addresses each proposed ES technical chapter and describes the current understanding of the baseline conditions and assessment methodology for each discipline that will determine the likely significant environmental effects of the Project. Potential mitigation measures have also been identified where appropriate, although these will be set out in detail in the ES. Consultees are invited to comment on the methodologies within their scoping responses.

5.1.2 Although the sections below deal with the Project as a whole, it is anticipated that the ES technical chapters will be sub-divided allowing the assessment of effects during the construction, operation and decommissioning phases, description of mitigation measures and residual effects to be addressed separately for the Power Generation Plant, Gas Connection and Electrical Connections as well as together for the overall Project. Cumulative effects will be assessed for the Project as a whole.

5.1.3 The sections described are set out in the following list:

- Air Quality (5.3);
- Noise and Vibration (5.4);
- Ecology (5.5);
- Water Quality and Resources (5.6);
- Geology, Ground Conditions and Agriculture (5.7);
- Landscape and Visual (5.8);
- Traffic, Transport and Access (5.9);
- Cultural Heritage and Archaeology (5.10); and
- Socio-Economics (5.11).

### 5.2 Significance Criteria

5.2.1 The significance of environmental effects resulting from the construction, operation and decommissioning of the Project will generally be categorised using a series of matrices. These will be developed to describe the sensitivity of receptors and resources which have the potential to be impacted by the Project and the magnitude of any impacts that are likely to arise. The sensitivity of receptors and resources and magnitude of impact will be cross-referenced to give an overall significance of effect for any potential impact. Where it is not possible to quantify impacts, qualitative assessments will be carried out, based on available knowledge and professional judgement.

- 5.2.2 In order to provide a consistent approach and enable comparison of impacts upon different environmental receptors, the assessments will generally follow the structure and use the terminology outlined below in Tables 5.1 to 5.3. However for some sections, significance criteria may need to differ depending on the assessment methodology used. Each technical chapter of the ES will clearly identify and explain any specific criteria used as well as defining what constitutes a significant impact and/or effect.
- 5.2.3 Potential mitigation measures described in the ES will include embedded mitigation through design/standard control measures (which will be used to produce an initial assessment of impact) and any further specific mitigation required (which will be taken into account to produce an assessment of residual impacts).

**Table 5.1: Determining Receptor Sensitivity**

Sensitivity	Example
Very High	Internationally or European designated site (e.g. Ramsar, Special Area of Conservation (SAC), Special Protection Area (SPA), World Heritage Site)
High	Nationally designated site (e.g. Site of Special Scientific Interest (SSSI), designated landscape, National Parks, Principal Aquifers)
Medium	Regionally designated ecology, heritage sites, secondary aquifers, minor watercourses
Low (or lower)	Locally designated ecology, heritage sites, areas of hardstanding, brownfield land, industrial site
Negligible	No sensitivity to change

**Table 5.2: Determining Magnitude of Impact**

Magnitude		Example
Major	Adverse	A permanent or long term adverse impact on the integrity and value of an environmental attribute or receptor
	Beneficial	Large scale or major improvement of resource quality; extensive restoration or enhancement; major improvement of attribute quality
Moderate	Adverse	An adverse impact on the integrity and/or value of an environmental attribute or receptor, but recovery is possible in the medium term and no permanent impacts are predicted
	Beneficial	Benefit to, or addition of, key characteristics,



Magnitude		Example
		features, or elements or improvement of attribute quality
Minor	Adverse	An adverse impact on the value of an environmental attribute or receptor, but recovery is expected in the short term and there would be no impact on its integrity
	Beneficial	Minor benefit to, or addition of key characteristics, features or elements; some beneficial impact on attribute or a reduction in the risk of a negative impact occurring
Negligible	Adverse	Very minor loss
	Beneficial	Very minor benefit
No change		No change would be perceptible, either positive or negative

**Table 5.3: Determining Significance of Effect**

		Magnitude of Impact				
		No Change	Negligible	Minor	Moderate	Major
Receptor Sensitivity	Very High	Neutral	Slight	Moderate	Large	Very Large
	High	Neutral	Slight	Moderate	Large	Large
	Medium	Neutral	Slight	Slight	Moderate	Large
	Low	Neutral	Slight	Slight	Slight	Moderate
	Negligible	Neutral	Neutral	Neutral	Neutral	Neutral

### 5.3 Air Quality

#### Introduction

5.3.1 The air quality assessment will consider potentially significant air quality impacts and effects caused by the construction, operation and decommissioning of the Project on sensitive human and ecological receptors in and around the vicinity of the Project Site. Potential effects could include those that result from dust during construction and decommissioning and stack emissions during operation of the Gas Turbine Generators.

#### Baseline

5.3.2 Existing ambient air quality and baseline conditions will be reviewed using available air quality data and the most recent local authority publications

published in accordance with their duties under the Environment Act 1995<sup>31</sup>. The assessment will include particular consideration of: designated Air Quality Management Areas (AQMAs); any relevant previous studies undertaken in the area; the location of sensitive receptors (including designated ecological sites); and other significant sources of emissions.

- 5.3.3 The nearest AQMA is within Bedford approximately 10 km northeast of the Project Site<sup>32</sup>. The AQMA, declared primarily on the basis of traffic related NO<sub>2</sub>, covers an area of the town centre including High Street and Prebend Street.
- 5.3.4 Brogborough land fill gas fired power station is located approximately 3.7 km west of the Project Site and is potentially considered a source of emissions. Further consultation will be sought with Central Bedfordshire and Bedford Borough Councils and the Environment Agency to determine a definitive list of significant emission sources in the area to consider as part of the air quality assessment.
- 5.3.5 The existing air quality concentrations at sensitive ecologically designated sites will be obtained from DEFRA<sup>33</sup>. The existing acid and nutrient nitrogen deposition rates will be obtained from the UK Air Pollution Information System (UK APIS).<sup>34</sup>
- 5.3.6 Statutory ecologically designated sites within 10 km of the Project Site include:
- Kings Wood and Glebe Meadows, Houghton Conquest Site of Special Scientific Interest (SSSI) and Local Nature Reserve (LNR);
  - Smithcombe, Sharpenhoe and Sundon Hills SSSI;
  - Coopers Hill, Bedfordshire SSSI and LNR;
  - Marston Thrift SSSI and LNR;
  - Maulden Wood and Pennyfather's Hill SSSI;
  - Maulden Church Meadow SSSI and LNR;
  - Maulden Heath SSSI;
  - Flitwick Moor SSSI;
  - Pulloxhill Marsh SSSI; and
  - Biddenham Pit SSSI.
- 5.3.7 Non-statutory ecological sites within 2 km of the Project Site include:
- Rookery Clay Pit County Wildlife Site (CWS);

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<sup>31</sup> Environment Act 1995

<sup>32</sup> UK Air Quality Information Archive (2010) [www.airquality.co.uk](http://www.airquality.co.uk)

<sup>33</sup> <http://uk-air.defra.gov.uk/>

<sup>34</sup> <http://www.apis.ac.uk/>

- Millbrook Pillinge Pit CWS;
- Millbrook Warren CWS;
- Brogborough Lake CWS;
- Coronation Pit CWS;
- King's Wood, Houghton Conquest CWS;
- Stewartby Lake CWS;
- Lidlington Pit CWS;
- Heydon Hill CWS;
- Ampthill Park CWS;
- Millbrook CWS;
- Ampthill Tunnel CWS; and
- Cooper's Hill CWS.

5.3.8 Residential receptors within 1 km of the Project Site include those within the nearby settlements of Stewartby, Millbrook, Marston Moretaine, Ampthill and How End. In addition there are also farmsteads outside of the settlements including but not exclusive to:

- South Pillinge Farm;
- Church Farm and Church Farm Cottages;
- Lower Farm;
- Ossory Farm;
- Park Farm;
- Manor Farm;
- Manor Farm Cottages;
- Road Farm;
- How End Farm;
- Ampthill Park House;
- Field Farm; and
- Houghton Park Residential care home.

### Assessment

- 5.3.9 The assessment methodology will be agreed in consultation with the Environmental Health Officer (EHO) at Central Bedfordshire and Bedford Borough Councils and the Environment Agency.
- 5.3.10 The emissions of dust during the construction and decommissioning phases of the Project will be assessed in accordance with 'Guidance on the Assessment of the Impacts of Construction on Air Quality and the Determination of their Significance' (IAQM, 2012)<sup>35</sup> and the Department for Transport 'Design Manual for Roads and Bridges (DMRB) Volume 11 Section 3, Part 1: Air Quality' and the associated DMRB Screening Method, developed by the Highways Agency<sup>36</sup>. The significance of the potential impacts identified will be determined based on the sensitivity of the receptors within the potential zones of influence outlined in the IAQM Guidance.
- 5.3.11 The air quality assessment for the operational phase of the Power Generation Plant will follow the Environment Agency documents 'Horizontal Guidance Note H1 – Annex (f): Air Emissions'<sup>37</sup> and the Environment Agency Air Quality Modelling and Assessment Unit (AQMAU) 'Air dispersion modelling report requirements (for detailed air dispersion modelling)'<sup>38</sup>. The conversion of NO<sub>x</sub> to NO<sub>2</sub>, as applicable for the protection of human health under the UK Air Quality Standards Regulations 2010<sup>39</sup>, will adopt the approach outlined in the AQMAU Guidance Note 'Conversion Ratios for NO<sub>x</sub> and NO<sub>2</sub>' (2006)<sup>40</sup>.
- 5.3.12 As a peaking plant, the operation of the Generating Equipment will be limited through the permitting regime to 1500 hours per annum. The assessment will, therefore, be based on the operation of the Generating Equipment, at full load, for 1500 hours per annum.
- 5.3.13 The atmospheric emissions from the operation of the Generating Equipment will be quantified by obtaining information from relevant plant suppliers. Where two or more suppliers are being considered, a realistic worst case scenario will be used to ensure flexibility. However, only plant that meet national emissions limits will be considered.
- 5.3.14 The atmospheric dispersion modelling will be performed using the Cambridge Environmental Research Consultants (CERC) Air Dispersion Modelling Software (ADMS 5.0). An air dispersion model will be set up that considers the effects of terrain and buildings (as appropriate to the location of the Generating Equipment), together with the most recent available meteorological data covering a consecutive five year period (e.g. 2009 to 2014, inclusive) in accordance with current guidance.

<sup>35</sup> IAQM (2012) Guidance on the Assessment of the Impacts of Construction on Air Quality and the Determination of their Significance

<sup>36</sup> Highways Agency (various dates) Design Manual for Roads and Bridges (DMRB) Volume 11.

<sup>37</sup> Environment Agency (December 2011) Horizontal Guidance Note H1 – Annex (f): Air Emissions

<sup>38</sup> Environment Agency Air Quality Modelling and Assessment Unit (undated) Air dispersion modelling report requirements (for detailed air dispersion modelling)

<sup>39</sup> The Air Quality Standards Regulations 2010

<sup>40</sup> Environment Agency Air Quality Modelling and Assessment Unit (2006) Guidance Note 'Conversion Ratios for NO<sub>x</sub> and NO<sub>2</sub>'

- 5.3.15 The modelling assessment will estimate the mass concentration of NO<sub>x</sub> and CO at sensitive receptors using the emission limits as specified in Part 2 of Annex V to the IED. Initial screening runs will be undertaken to determine an acceptable stack height for the stack(s) suitable for adequate dispersion based on predicted maximum short term and long term ground level concentrations. Detailed atmospheric dispersion modelling will then be undertaken on the basis of the selected stack height.
- 5.3.16 The results of the detailed dispersion modelling will be presented as isopleths, and compared with background levels and relevant standards and guidelines (i.e. Air Quality Standards Regulations 2010). Direct comparison will be made between the long-term and short-term process contribution from the Generating Equipment, the predicted environmental concentrations of relevant substances (i.e. process contribution plus background levels) and the limits and objectives within the relevant Air Quality Standards Regulations 2010. Where appropriate, the significance of the potential impact will be determined using the criteria set out in the 'Development Control: Planning for Air Quality' (EPUK, 2010) in conjunction with the Environment Agency Horizontal Guidance Note H1 – Annex (f).
- 5.3.17 The abatement of emissions will be discussed in relation to the application of Best Available Techniques (BAT), in accordance with the Environment Agency Sector Guidance Note for Combustion Activities (EPR 1.01)<sup>41</sup> and the UK's position with regards to the on-going review of the EU IPPC Reference Document on BAT for Large Combustion Plants<sup>42</sup>. Should additional mitigation prove to be necessary, the severity of impact, frequency of emission and the resultant environmental risk associated with any residual impact will be examined.
- 5.3.18 Changes in air quality levels for NO<sub>x</sub> will also be assessed with respect to ecology for the European and nationally designated sites within 10 km of the Project Site (including, but not necessarily limited to, those identified above). The non-statutory habitat sites within 2 km of the Project Site will also be considered. An assessment of the increased deposition of both nutrient nitrogen and acid due to nitrogen will also be carried out at the statutory (both EU and UK) designated ecological sites in accordance with the methodologies described in the Environment Agency AQMAU 'AQTAG06 Technical Guidance on detailed modelling approach for an appropriate assessment for emissions to air'<sup>43</sup>.
- 5.3.19 It is considered that there would not be any noticeable odours associated with the operation of the Generating Equipment at or beyond the boundary of the Generating Equipment Site and therefore it is not considered necessary to undertake a detailed assessment of odour.

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<sup>41</sup> Environment Agency (March 2009) How to comply with your environment permit. Additional guidance for Combustion Activities (EPR 1.01)

<sup>42</sup> European Commission (July 2006) Integrated Pollution Prevention and Control, Reference Document on Best Available Techniques for Large Combustion Plants

<sup>43</sup> Environment Agency AQMAU (October 2011) AQTAG06 Technical guidance on detailed modelling approach for an appropriate assessment for emissions to air

5.3.20 The operation of the Gas and Electrical Connections would not produce any significant emissions and therefore these elements of the assessment during operation have been scoped out.

#### **Mitigation Measures**

5.3.21 An outline Construction Environmental Management Plan (CEMP) will be drafted and appended to the ES which will set out best practice methods of limiting dust on site during construction and decommissioning.

5.3.22 During operation, the Generating Equipment would operate as a peaking plant, with operations limited to 1,500 hours per year. This operating limit will be set out in the site permit and will not be exceeded. In addition, embedded mitigation measures will include: incorporating stack(s) of sufficient height to achieve adequate dispersal of pollutants; and using flue gas cleaning equipment if required to ensure that all emissions are within concentrations permitted by legislation and guidance.

5.3.23 The need or otherwise for further, project specific mitigation measures will be addressed within the ES chapter.

### **5.4 Noise and Vibration**

#### **Introduction**

5.4.1 In accordance with Section 5.11 of NPS EN-1, a noise and vibration assessment for the Project will consider potentially significant noise and vibration impacts and effects caused by the construction, operation and decommissioning of the Project on Noise Sensitive Receptors (NSRs) in and around the vicinity of the Project Site.

#### **Baseline**

5.4.2 The greatest sources of noise at present in the vicinity of the Project Site are the trains travelling along the Midland Mainline Railway and Marston Vale Line and occasional noise associated with vehicles using the Millbrook Proving Ground. Other noise sources in the area are associated with agricultural practices and vehicles on the surrounding roads especially in and surrounding the Gas and Electrical Connection Opportunity Areas.

5.4.3 The closest NSRs within 1 km of the Project Site include those within the nearby settlements of Stewartby, Millbrook, Marston Moretaine, and Ampthill, How End. In addition there are also farmsteads outside of the settlements including but not exclusive to:

- South Pillinge Farm;
- Church Farm and Church Farm Cottages;
- Lower Farm;
- Ossory Farm;
- Park Farm;

- Manor Farm;
- Manor Farm Cottages;
- Road Farm;
- How End Farm;
- Ampthill Park House;
- Field Farm; and
- Houghton Park Residential care home.

### Assessment

- 5.4.4 The assessment methodology will be agreed with the EHOs at Central Bedfordshire and Bedford Borough Councils.
- 5.4.5 Construction and decommissioning noise and vibration assessments of the Project will be undertaken following guidance in British Standard (BS) 5228<sup>44</sup>. The assessment will be undertaken as a desk study and will involve:
- Identification of construction and decommissioning activities that produce significant noise and vibration;
  - Identification of NSRs within 100 m of construction and decommissioning activities; and
  - Prediction of noise and vibration using the methodology contained within BS5228.
- 5.4.6 The exact construction and decommissioning methodologies are unlikely to be defined until the construction contractor is appointed, which is likely to be after the submission of the DCO Application. However, in the absence of this data, an outline construction programme will be developed based on knowledge and experience of other similar developments. Additionally, the typical make up of construction equipment at each stage of the Project programme will be ascertained in the same way. For ground improvement works (e.g. piling) the noise and vibration assessment will pay due regard to the ground conditions at the Generating Equipment Site. Where uncertainties exist, realistic worst case assumptions will be used.
- 5.4.7 The quantification of impacts shall be undertaken by comparison with agreed project criteria or limits either from previous schemes and relevant guidance and standards such as BS5228, BS6472<sup>45</sup> and BS7385<sup>46</sup>, or local legislative requirements. The desk study shall outline suitable measures for the mitigation of construction and decommissioning impacts, and an assessment of residual impacts and effects.

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<sup>44</sup> British Standards Institute (2009) BS 5228-1: Code of practice for noise and vibration control on construction and open sites

<sup>45</sup> British Standards Institute (2008) BS 6472: Part 1 Guide to human exposure to vibration in buildings

<sup>46</sup> British Standards Institute (1993) BS 7385: Part 2 Evaluation and measurement for vibration in buildings. Guide to damage levels from groundborne vibration

- 5.4.8 Operational noise for the Power Generation Plant will be assessed using the methodology from a combination of: BS4142<sup>47</sup>; BS8233<sup>48</sup>; and WHO Guidelines for Community Noise<sup>49</sup>. The likelihood of complaints about noise from industrial developments will be predicted using the following criteria from BS4142:
- When subtracting the background level from the rating level, the greater the difference, the greater the likelihood of complaints;
  - A difference of around +10 dB or more indicates that complaints are likely;
  - A difference of around +5 dB is of marginal significance; and
  - If the rating level is more than 10 dB below the measured background noise level then this is a positive indication that complaints are unlikely.
- 5.4.9 The guidance contained in BS8233 will also be used to assess the effects on indoor ambient noise levels in living rooms and bedrooms of NSRs when they are unoccupied.
- 5.4.10 The WHO Guidelines for Community Noise provides health-based guidance on suitable noise levels intended to avoid or minimise community annoyance by noise. The guidance provides guideline noise levels for both indoor and outdoor areas.
- 5.4.11 It is proposed that the study area for the noise assessment of operational effects shall be defined as the region within 1 km of the Project Site. All sensitive receptors, such as residential properties, hospitals, schools, etc. within the study area shall be identified in the assessment.
- 5.4.12 A Baseline Noise Survey will then be undertaken in the vicinity of the Project Site to establish the current baseline noise levels. The locations for the Baseline Noise Survey (i.e. locations of the nearest NSRs) will be agreed in advance with the EHOs.
- 5.4.13 Following baseline noise measurements, a noise model will be produced using Cadna software (3-dimensional noise propagation software) which will model the measured baseline levels at NSRs, together with sound power levels of proposed plant (obtained from relevant suppliers). Where sound power levels for proposed plant are not available, suitable data will be substituted, although a realistic worst case scenario would always be considered. The noise model will highlight the main noise sources and the associated noise levels at the NSR locations. Contour plots will also be produced clearly showing noise levels at the Power Generation Plant Site, NSRs and surrounding areas.

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<sup>47</sup> British Standards Institute (1997) BS 4142: 1997 Method of Rating Industrial Noise Affecting Mixed Residential and Industrial Areas

<sup>48</sup> British Standards Institute (2014) BS 8233:2014 Guidance on Sound Insulation and Noise Reduction for Buildings

<sup>49</sup> World Health Organisation (1999) Guidelines for Community Noise



- 5.4.14 If the model shows that there is potential for a significant effect to be experienced at any of the NSRs, the level of required noise mitigation would be specified, and measures that could be used to achieve this level of mitigation will be incorporated into the model, to provide a 'with mitigation' scenario.
- 5.4.15 The ES section will be compiled using the Institute of Acoustics (IoA) / Institute for Environmental Management (IEMA) draft document 'Guidelines for Noise Impact Assessment'<sup>50</sup>.
- 5.4.16 The operation of the Gas Connection is not anticipated to cause any increase in background noise and therefore this element has been scoped out of the assessment.
- 5.4.17 Operational noise from the Electrical Connection has been scoped out as there would be no significant effects associated with the potential for a low level electrical hum emanating from an overhead line, if one is required. If a substation and up to two SECs are required, any low level electrical hum associated with the infrastructure will not be perceptible at the NSRs and therefore this has also been scoped out of the assessment.

### Potential Mitigation Measures

- 5.4.18 An outline CEMP will be drafted and appended to the ES which will set out best practice methods of limiting noise and vibration on site during construction and decommissioning.
- 5.4.19 During operation, mitigation measures could include the use of silencers on the loudest plant items within the Generating Equipment.

## 5.5 Ecology

### Introduction

- 5.5.1 An ecology assessment will consider potentially significant impacts and effects caused by the construction, operation and decommissioning of the Project on ecological resources and receptors in and around the vicinity of the Project Site.

### Baseline

- 5.5.2 The Power Generation Plant Site and parts of the Gas and Electrical Connection Opportunity Areas within The Rookery, comprises bare earth and a mixture of improved grassland with areas of dense continuous scrub, tall ruderal vegetation and running water (ditches). The habitats have the potential to support bats, badgers, water voles, brown hare, harvest mice, nesting birds, reptiles, amphibians (including great crested newts) and a range of invertebrates.
- 5.5.3 Outside of Rookery South Pit, the Gas and Electrical Connection Opportunity Areas cross through a mixture of intensively managed arable land and improved grassland. Other habitats present in both areas include: semi-

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<sup>50</sup> IEMA/IOA Working Party (2002) Consultation Draft Guidelines for Noise Impact Assessment

natural broadleaved woodland, plantation broadleaved and mixed woodland, standing water, running water (ditches), dense continuous scrub, tall ruderal vegetation, semi-improved grassland and species poor hedgerows. The habitats have the potential to support roosting, foraging and commuting bats, badgers, water voles, otter, brown hare, harvest mice, nesting birds, reptiles, amphibians (including great crested newts) and invertebrates.

5.5.4 A desk based assessment (DBA) and Extended Phase 1 Habitat Survey was undertaken at the Project Site in February 2014 (see Appendix A). The purpose of the assessment and survey were to:

- Identify the main habitats present at the Project Site;
- Identify the sensitive ecological receptors (e.g. statutory designated sites) in the vicinity of the Project Site;
- Assess the potential of the Project Site to support protected species; and
- Provide recommendations for further assessment works (e.g. Phase 2 Protected Species Surveys).

5.5.5 The following statutory protected SSSIs (for nature conservation) and LNRs are located within a 5 km radius of the Project Site as shown on Figure 3:

- Kings Wood and Glebe Meadows, Houghton Conquest SSSI and LNR;
- Coopers Hill SSSI, LNR and CWS;
- Marston Thrift LNR;
- Maulden Church Meadow SSSI and LNR;
- Maulden Heath SSSI;
- Maulden Wood and Pennyfather's Hills SSSI;
- Flitwick Moor SSSI;
- Flitwick Wood LNR; and
- Flitton Moor LNR.

5.5.6 The following CWSs are located within 2 km radius of the Project Site as shown on Figure 3:

- Rookery Clay Pit County Wildlife Site (CWS);
- Millbrook Pillinge Pit CWS;
- Millbrook Warren CWS;
- Brogborough Lake CWS;

- Coronation Pit CWS;
- King's Wood, Houghton Conquest CWS;
- Stewartby Lake CWS;
- Lidlington Pit CWS;
- Heydon Hill CWS;
- Ampthill Park CWS;
- Millbrook CWS;
- Ampthill Tunnel CWS; and
- Cooper's Hill CWS.

### Assessment

5.5.7 In accordance with NPS EN-1 (paragraph 5.3.3) the Ecological Impact Assessment (EclA) will provide an assessment of any potentially significant effects on internationally, nationally and locally designated sites of ecological or geological conservation importance, on protected species and on habitats and other species identified as being of principal importance for the conservation of biodiversity. Furthermore opportunities will be taken, where practicable, to conserve and enhance biodiversity and geological conservation interests. NPS EN-1 also requires that lighting effects will be considered on sensitive ecological receptors.

5.5.8 Based on the results of the extended Phase 1 Habitat Survey, the following Phase 2 protected species surveys are currently being carried out on and surrounding the Project Site.

#### *Bats*

5.5.9 A ground level tree assessment is being carried out on trees and parcels of woodland that would be potentially directly affected. In addition external and internal building inspection surveys are being carried out on buildings to be affected.

5.5.10 If signs of roosting bats or features with the potential to be used by roosting bats are identified during the inspection surveys, dusk emergence/dawn re-entry surveys will be carried out. These further surveys (if required) will be undertaken in accordance with current best practice guidance (Hundt, 2012<sup>51</sup>) when bats are most active (i.e. between mid-May and August inclusive). The surveys will determine the bat species present on the Project Site as well as the spatial distribution and relative activity levels of the species. Line transects will be conducted in spring, summer and autumn with a static bat detector also placed on each transect.

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<sup>51</sup> Hundt, L (2012) Bat Surveys: Good Practice Guidelines, 2<sup>nd</sup> Edition. Bat Conservation Trust

### *Badger*

- 5.5.11 All potential habitats within the Project Site are being surveyed to search for and record characteristic signs of badger activity, including: setts, latrine pits, foraging holes, badger hair and paw prints following best practice guidance (Neal and Cheesman, 1996<sup>52</sup>). Potential habitat includes areas of woodland, scrub and hedgerows.

### *Water vole*

- 5.5.12 Water voles are being surveyed using standard methodologies for water vole (Strachan et al, 2011<sup>53</sup>). Signs that water voles may be present will be indicated by the presence of feeding remains, characteristic grass lawns, burrows, runs, footprints, latrines and droppings.

### *Breeding birds*

- 5.5.13 The breeding bird survey has been designed to follow standard guidance as set out by Bibby et al (2000)<sup>54</sup> and Gilbert et al (1998)<sup>55</sup>. The survey comprises three visits, between March to July (with April, May and June being the key months for survey). One dusk survey visit to cover crepuscular species such as barn owl is also being undertaken.

- 5.5.14 Furthermore where access allows, the farm buildings at Lower Farm and South Pilling Farm, and mature trees on site are being surveyed for the presence of roosting/nesting barn owls following standard guidance (Barn Owl Conservation Trust, 2012<sup>56</sup>).

### *Great Crested Newts*

- 5.5.15 Preliminary pond surveys (Habitat Suitability Assessment) indicated that there are a number of ponds within 250 m of the Project Site which are potentially suitable for great crested newts. An additional four to six surveys are being undertaken between mid-March to mid-June to establish presence/absence and to estimate population size if great crested newts are found during the surveys. More detail on the methodology is provided in Appendix 1.

- 5.5.16 The LLRS includes a translocation programme currently being undertaken within The Rookery. Therefore it is assumed that all Great Crested Newts from the Project Site within The Rookery will have been cleared of great crested newts prior to construction and are not being surveyed further.

### *Reptiles*

- 5.5.17 A reptile survey is being carried out on the Project Site to establish the presence/absence of reptiles, the species present and the approximate

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<sup>52</sup> Neal, E and Cheeseman, C (1996) Badgers. T & AD Poyser Natural History Ltd. London.

<sup>53</sup> Strachan, R, Moorhouse, T and Gelling, M (2011) Watervole Conservation Handbook. Third Edition. Wildlife Conservation Unit

<sup>54</sup> Bibby C, J et al (2000) Bird Census Techniques. Ecoscope, BTO RSPB and Birdlife International

<sup>55</sup> Gilbert et al (2012) Bird Monitoring Methods. RSPB

<sup>56</sup> Barn Owl Conservation Trust (2012) Barn Owl Conservation Handbook: A Comprehensive Guide for Ecologists, Surveyors, Land Managers and Ornithologists. Pelagic Publishing.

population size. The survey uses artificial refuges (e.g. roofing felt and tin) to aid in the detection of reptiles and assessment of their distribution and abundance, following good practice guidance set out in the Herpetofauna Worker's Manual (Gent & Gibson, 2003<sup>57</sup>) and Reptile Survey Guidance (Froglife, 1999<sup>58</sup>).

### *Invertebrates*

- 5.5.18 In order to determine the assemblage of aquatic invertebrates present on site, the flowing ditches and ponds will be surveyed if a Water Framework Directive Report is required.
- 5.5.19 Kick-sampling for aquatic invertebrates will be undertaken at selected locations along ditches or streams. Furthermore the water chemistry status will be determined for watercourses by extracting a single water sample at three locations within as well as upstream and downstream of the Project Site. Samples will be dispatched to a UKAS accredited laboratory for subsequent analysis.
- 5.5.20 The national pond monitoring survey protocol will be adhered for surveying ponds which involves timed netting and searches for invertebrates in summer (but may also cover spring and autumn).
- 5.5.21 Terrestrial invertebrate surveys will target Lepidoptera (moths and butterflies) in accordance with standard guidance developed by the UK Butterfly Monitoring Scheme and Coleoptera (beetles) in accordance with Natural England (ISIS) protocol (Drake et al, 2007<sup>59</sup>).

### **Assessment**

- 5.5.22 Following the completion of the surveys, reports will be produced, detailing the extent to which the species are present, the likely impacts that the elements of the Project would have on the species and habitats and the potential mitigation measures that could be employed to reduce impacts to an acceptable level.
- 5.5.23 The EclA will be undertaken in accordance with relevant guidance including the Guidelines for Ecological Impact Assessment (Institute of Ecology and Environmental Management (IEEM), 2006)<sup>60</sup>. The potential effects will also be assessed against and informed by national and local planning guidance including NPPF and National and Local Biodiversity Action Plans. Consultation will be undertaken with Natural England, Environment Agency, Central Bedfordshire Council, Bedford Borough Council to identify any particular issues of concern.

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<sup>57</sup> Gent, A.H. & Gibson, S.D. (2003). Herpetofauna Workers' Manual. JNCC, Peterborough.

<sup>58</sup> Froglife (1999). Reptile survey: an introduction to planning, conducting and interpreting surveys for snake and lizard conservation. Froglife Advice Sheet 10. Froglife, Halesowen.

<sup>59</sup> Drake, C. M., Lott, D. A., Alexander, K. N. A. & Webb, J. (2007). Surveying terrestrial and freshwater invertebrates for conservation evaluation. Natural England Research Report NERR005. Natural England, Peterborough

<sup>60</sup> Institute of Ecology and Environmental Management (IEEM) (June 2006) Guidelines for Ecological Impact Assessment in the United Kingdom

### **Habitats Regulation Assessment**

- 5.5.24 The Conservation of Habitats and Species Regulations 2010 (as amended)<sup>61</sup> require an assessment to be made as to whether the Project, either alone or in combination with other plans or projects could have a likely significant effect on European sites including SPAs, SACs and Ramsar Sites.
- 5.5.25 Consultation with Natural England, PINS and Central Bedfordshire and Bedford Borough Councils will determine the requirement for a screening exercise, in accordance with the Conservation of Habitats and Species Regulations 2010 (as amended)<sup>62</sup>. The screening exercise will identify any likely impacts of the Project upon a European Site, either alone or in combination with other plans and projects, and consider whether the impacts are likely to be significant.
- 5.5.26 If screening concludes there may be likely significant effects on the special features for which the European site(s) are classified or designated then a report will be provided with the DCO Application showing the European site(s) that may be affected together with sufficient information to enable the decision maker to make an appropriate assessment, if required. If screening concludes there is no likely significant effect on a European Site sufficient information will be provided with the DCO Application in the form of a “No Significant Effects Report” to allow the Competent Authority to assess and review the information and make its own determination that there are no likely effects and be satisfied there is no residual effect.

### **Potential Mitigation Measures**

- 5.5.27 An outline CEMP will be drafted and appended to the ES which will set out best practice methods of limiting effects on ecology and biodiversity during construction and decommissioning. If necessary, further, specific mitigation measures will include the consideration of new habitat provision to suitably replace any habitat areas which would be permanently lost through development of the Project.

## **5.6 Water Quality and Resources**

### **Introduction**

- 5.6.1 An assessment on the effects on water quality and resources will consider all of the potentially significant impacts and effects caused by the construction, operation and decommissioning of the Project.
- 5.6.2 The chapter will also provide a summary of the main issues and risks posed to and from flooding identified during the Flood Risk Assessment which will be submitted as a separate document as part of the DCO Application. The FRA will take the form of a qualitative assessment based on existing Environment Agency data and consultation with the Environment Agency and Lead Local Flood Authority (LLFA). Additionally, potential impacts on hydrogeology will be assessed as part of the chapter describing geology,

<sup>61</sup> Conservation of Habitats and Species Regulations 2010 (as amended)

<sup>62</sup> Conservation of Habitats and Species Regulations 2010 (as amended)

ground conditions and agriculture (outlined in Section 5.7 of this Scoping Report).

- 5.6.3 At present, it is assumed that during operation the Power Generation Plant will utilise air cooling, substantially reducing water intake.

### Baseline

- 5.6.4 The ordinary water courses within and surrounding the Project Site are shown on Figure 2. Elstow Brook flows in a north-easterly direction to the west of the Project Site, into Stewartby Lake. It then exits Stewartby Lake on its northern shoreline and flows to the north of Stewartby. There are also smaller streams, brooks, ditches and field drains that are within or close to the perimeter of the Rookery South Pit. These include Mill Brook which flows westwards along the southern side of Rookery South Pit, before turning northwards to follow along the western side of the pit. Mill Brook then passes westwards beneath the Marston Vale Line on the western side of the Power Generation Plant Site before ultimately flowing into Stewartby Lake. There are also ponds and lakes present in both Rookery North Pit and Rookery South Pit close to the Access Road. The Project Site is all within Flood Zone 1.
- 5.6.5 The streams, ponds and ditches within the Gas and Electrical Connection Opportunity Areas will be carefully considered during the process of identifying the Gas and Electrical Connection Route Corridors. The design process will aim to minimise crossings or interactions with water bodies where practical.
- 5.6.6 Historical and current maps will be studied to identify abstraction points and licences in the area as well as the course of any former watercourses which may have been underground or culverted in the past.

### Assessment

- 5.6.7 In accordance with NPS EN-1 the assessment will account for the existing status of, and impacts of the Project on water quality, water resources and physical characteristics of the water environment including any potential eutrophication impacts. The assessment will be undertaken using a risk based approach to determine the level of potential impacts by using a Source-Pathway-Receptor model to identify which receptors could realistically be impacted by a given action. This will include any sources of pollution that have the potential to impact on surface water bodies.
- 5.6.8 All aspects of supply, demand and disposal of water and process effluents will be addressed for the construction, operational and decommissioning phases. Furthermore the disposal of surface water drainage and the process effluents will be discussed with a view to maximising the opportunities for water recovery and re-use as far as is practicable.
- 5.6.9 Potential discharge locations for site surface waters and process waste waters will be identified and a site drainage plan, which may incorporate a sustainable drainage system (SuDS), will be discussed at a high level.

- 5.6.10 There are not anticipated to be any significant impacts on key water bodies resulting from the Project. The majority of watercourses are a significant distance from the Project Site and therefore will not be directly impacted during construction or decommissioning. It is also not anticipated that water will be directly abstracted or discharged to or from any of these sources during construction, operation or decommissioning of the Power Generation Plant.
- 5.6.11 Where projects are away from, or unlikely to interact with any water courses, it is likely that a Water Framework Directive (WFD) Report will be scoped out. However, if the Environment Agency does require the inclusion of a WFD Report, it would form an Appendix to the ES.
- 5.6.12 During construction of the Gas Connection and the Electrical Connection (in the form of an underground cable), best practice working methods will be utilised at all water crossings to ensure that there are no adverse impacts on flow or drainage and that no contamination is allowed to enter the water bodies. Effects during operation and decommissioning are unlikely to occur and therefore have been scoped out.
- 5.6.13 If an overhead line is used for the Electrical Connection, there will be no need for any permanent water crossings or interaction with water bodies of any kind. However any temporary water crossings required during construction will be assessed.

### Potential Mitigation Measures

- 5.6.14 Mitigation measures will be designed in accordance with BS6031<sup>63</sup>, BS8004<sup>64</sup>, as CIRIA C649<sup>65</sup> and C648<sup>66</sup>. An outline CEMP will be drafted and appended to the ES which will set out best practice methods of limiting impacts on water quality and resources during construction and decommissioning. Measures would include: siting stockpiles a minimum distance from watercourses to avoid pollution runoff; and adhering to best practice working guidelines to avoid spillages near watercourses.
- 5.6.15 Where the Gas Connection and Electrical Connection (in the form of an underground cable or construction vehicles during installation of overhead lines) would cross a water body, various crossing techniques would be considered. These may include trenchless techniques such as horizontal directional drilling, particularly for larger water bodies, or temporary bunding and over-pumping where flows are lower.
- 5.6.16 Additionally, during construction, operation and decommissioning, silt traps and oil interceptors would be placed in drains on site. No untreated surface or waste waters would be allowed to drain into water bodies during construction, operation or decommissioning. SuDS would be used if found to be required.

<sup>63</sup> British Standard Institute (2009) BS 6031:2009 Code of Practice for Earthworks

<sup>64</sup> British Standard Institute (1986) BS 8004: 1986 Code of Practice for Foundations

<sup>65</sup> CIRIA (2006) C649 Control of water pollution from linear construction projects Site Guide

<sup>66</sup> CIRIA (2006) C648 Control of water pollution from linear construction projects Technical Guidance



- 5.6.17 During all phases of the Project all aqueous process effluents would be discharged via the plant drainage systems in accordance with Environment Agency limits. The use of biocides would be optimised to ensure that the least amount possible is required.
- 5.6.18 All oil and chemical storage tanks and areas where drums are stored would be surrounded by an impermeable bund sized to contain 110% of capacity. In addition multiple tanks or drums would be within bunds sized to contain the greater of 110% of the capacity of the largest tank or 25% of the total tank's contents.
- 5.6.19 During operation, the Environment Agency would set limits on the quality of water that is discharged from the Power Generation Plant under an Environmental Permit. The need, or otherwise for further, specific mitigation measures will be determined through the EIA process.

## 5.7 Geology, Ground Conditions and Agriculture

### Introduction

- 5.7.1 An assessment on the effects on geology, ground conditions and agriculture will consider potentially significant impacts and effects caused by the construction, operation and decommissioning of the Project. It will also detail the baseline conditions in terms of ground and groundwater contamination and the risks posed to human health particularly in relation to future site users.

### Baseline

- 5.7.2 The Power Generation Plant Site and part of the Gas and Electrical Connection Opportunity Areas are located on the site of a former clay extraction pit where the remains of the former conveyor line still exist in part on site, mainly evidenced by concrete plinths along the former route, but also as a conveyor bridge crossing over the railway line to the west of the Power Generation Plant Site, close to Green Lane.
- 5.7.3 Partial backfilling of Rookery South Pit has been recorded including deposition of non-hazardous liquid organic wastes from a variety of industrial sources. The waste was reportedly mixed with the Callow deposits and pumped, as sludge, into the south eastern quarter of the Rookery North Pit and the north eastern quarter of Rookery South Pit.
- 5.7.4 Additional fill to the base of Rookery South Pit has also been historically undertaken by placement of variable thicknesses (generally from 1 m to 4 m) of Callow Clay Fill across the base of the pit. These naturally occurring deposits were unsuitable for the brick making process and were cast back into the pit along with brick fragments and other overburden deposits.
- 5.7.5 Further filling to the base and sides of the Rookery South Pit is also occurring as part of the LLRS. Fill deposits are being sourced from the Oxford Clay Formation to the south of the existing pit and are being placed in the base of the pit in order to achieve falls across the base and facilitate a surface water attenuation scheme. Engineered fill is also being placed

against the northern, eastern and southern sides of the pit, in areas where the current slope gradients require additional buttressing works in order to ensure that long-term stability can be maintained.

- 5.7.6 The geology underlying the Project Site is composed of valley gravel overlying Oxford Clay Formation, Kellaways Formation and Great Oolite Group. This has led to water bearing strata present below the Project Site within the Blisworth Limestone formation and to a lesser extent the Kellaways Sand and Cornbrash Formation. However the permeability of the overlying Oxford Clay Formation is very low and these deposits therefore effectively act as an impermeable aquiclude, confining the groundwater bodies within the underlying strata.
- 5.7.7 Outside of Rookery South Pit, the Gas and Electrical Connection Opportunity Areas are located within agricultural fields classified as Grade 3 (good to moderate quality agricultural land)<sup>67</sup>, where there is unlikely to be any significant contamination.

### Assessment

- 5.7.8 The assessment will be underpinned by the DEFRA/EA publication Contaminated Land Report 11, 2004, 'Model Procedures for the Management of Land Contamination'<sup>68</sup> and associated subsequent guidance.
- 5.7.9 The assessment approach will be undertaken with a clear understanding of the following:
- Previous land uses through a review of historical maps;
  - Underlying ground conditions through a review of BGS maps, and a review of previous site investigations (where available); and
  - Existing physical baseline conditions through a site walkover survey and review of a Landmark Envirocheck Report or equivalent.
- 5.7.10 The Landmark Envirocheck Report (or equivalent) will identify groundwater vulnerability, sites designated for geological importance, details of any previous pollution events, details of landfills, waste management sites and Control of Major Accident Hazards (COMAH) sites within the Project Site and surrounding area.
- 5.7.11 A conceptual site model approach will be used to assess the risks posed by contaminants to sensitive receptors using a source, pathway receptor model, based on the following:
- Source – potential source of contamination;

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<sup>67</sup> Department for Environment Food and Rural Affairs (1988) Agricultural Land Classification of England. Archive.defra.gov.uk

<sup>68</sup> Department for Environment Food and Rural Affairs and Environment Agency (2004) Contaminated Land Report 11, 2004, "Model Procedures for the Management of Land Contamination"

- Pathway – means by which contamination can reach and impact upon a receptor; and
  - Receptor – that which may be adversely affected by the presence of contamination.
- 5.7.12 Desk studies will identify potential environmental and geotechnical liabilities associated with the Project, including an assessment of potential impacts of previous uses of the Project Site and surrounding area. This will enable the identification of any potential environmental and geotechnical risks, and the design of a focussed and cost efficient intrusive investigation (if required).
- 5.7.13 In undertaking the desk study, all available information on the Project Site and surrounding area will be reviewed to establish local ground conditions and environmental settings. Furthermore, consultation will be held with Central Bedfordshire and Bedford Borough Councils and the Environment Agency to obtain any other environmental records available for the Project Site and to further refine the assessment methodology.
- 5.7.14 A site walkover will be undertaken of the Project Site and immediate surrounding areas. This will help ensure all potential source, pathway and receptor linkages for potential contamination issues have been identified.
- 5.7.15 Based on the findings of the desk studies, site walkovers and preliminary risk assessment, recommendations will be provided for any further intrusive investigation work required to satisfy current standards and guidance and fill any data gaps identified to fully inform the assessments of environmental and geotechnical risks or liabilities.
- 5.7.16 Using the information obtained, suitable remediation strategies will be developed to render the Project Site ready for development. These will include estimates of the types and volumes of waste material that will need to be removed from the Project Site prior to development.
- 5.7.17 Additionally, an assessment will be made of the amount of agricultural land, if any, that may become sterilised by the Gas and Electrical Connections. Should an overhead Electrical Connection be considered, the same methodology will be used, although it is considered likely that the potential impact on geology, ground conditions and agriculture would be significantly less than for a buried connection.

### Potential Mitigation Measures

- 5.7.18 An outline CEMP will be drafted and appended to the ES which will set out best practice methods of limiting impacts during construction and decommissioning. Embedded mitigation measures would include adherence to good practice guidelines and could potentially involve the following:
- Any additional soil materials that are to be imported to the Project Site would be required to have certification of their chemical concentrations to ensure that contaminative materials are not being introduced to the area;

- In order to further limit disturbance, the site access tracks would be constructed first to allow movement of vehicles around the Project Site on areas of soft-standing;
- Any vegetation, topsoil and subsoil would be removed to expose a suitable sub-grade. Any soils, sub-soils or aggregate suitable for reuse would be stockpiled on impermeable liners;
- Soils which are to be reused onsite would be tested for contamination and geotechnical suitability. This would form part of a site waste management strategy which would be drafted prior to construction and would focus on the re-use, recycling and reduction of waste spoil;
- Surface water, perched waters or groundwater from dewatering operations would not be discharged to surface water bodies, foul or surface water drains without the appropriate consents from the local water or sewage company and/or the Environment Agency. The disposal of this effluent would be the responsibility of the contractor. If necessary, this water would be tanked off-site for disposal at a suitable facility;
- All foundations would be appropriately specified to resist chemical attack from soils or groundwater; and
- Foundations and underground pipelines would also be designed so as not to present a preferential pathway for contaminant migration, if present at the Project Site.

5.7.19 Further, specific mitigation measures could include, for example, remediation of the Power Generation Plant Site, removal of contamination hotspots or further site characterisation and will be determined during the EIA.

## 5.8 Landscape and Visual Impact

### Introduction

5.8.1 A landscape and visual impact assessment will consider potentially significant impacts and effects caused by construction, operation and decommissioning of the Project. The assessment will establish:

- A clear understanding of the Project Site and its wider landscape setting, identifying the landscape character, resources, value and sensitivity to development;
- An assessment of the composition, character and aesthetic value of views from visual receptors including occupiers of residential properties and people using amenity landscapes, and the sensitivity of views;
- The nature of the different development scenarios and mitigation measures; and

- The likely significant direct and indirect effects of the Project on the landscape resource (i.e. landscape elements and character) and on visual receptors.

### Baseline

- 5.8.2 The Power Generation Plant Site and part of the Gas and Electrical Connection Opportunity Areas are located within The Rookery as described in Chapter 3. Rookery North Pit is dominated by a lake. Rookery South Pit is currently a landscape in a state of transition due to the ongoing LLRS. The wetland areas within the base of the pit are currently being drained and the pit is being extended, with the soil won used to stabilise and re-profile the existing pit sides.
- 5.8.3 The legacy of clay extraction and brick making is reinforced by the former Stewartby brickworks including the cluster of four approximately 50 to 70 m tall chimneys adjoining the pit to the north of Green Lane, remnants of the original conveyor system and discarded brick piles. In addition to the north of The Rookery lies the model village of Stewartby which was built in the 1920s for the workers of The London Brick Company who worked at the nearby brickworks.
- 5.8.4 To the south and east, the Gas and Electrical Connection Opportunity Areas extend into an area characterised by gently rolling large, open fields, with hedgerow boundaries interspersed with tree groups, and crossed by existing electricity pylons. The Midland Mainline and Marston Vale Line form strong linear boundaries to the eastern and western edges of The Rookery. There is also a newly erected wind turbine to the west within the Marston Vale Millennium Country Park, which is 85 m in height to the hub and 125 m to the blade tip.
- 5.8.5 Residential receptors within 1 km of the Project Site include those within the nearby settlements of Stewartby, Millbrook, Marston Moretaine, and Ampthill, How End. In addition there are also isolated properties and farmsteads outside of the settlements including but not exclusive to:
- South Pillinge Farm;
  - Church Farm and Church Farm Cottages;
  - Lower Farm;
  - Ossory Farm;
  - Park Farm;
  - Manor Farm;
  - Manor Farm Cottages;
  - Road Farm;
  - How End Farm;

- Amptill Park House;
- Field Farm; and
- Houghton Park Residential care home.

### Assessment

5.8.6 The assessment will be carried out in accordance to NPS EN-1 using methodology set out in the Guidelines for Landscape and Visual Impact Assessment (Landscape Institute and Institute of Environmental Management and Assessment, 3rd Edition, 2013)<sup>69</sup>. It will include:

- A desk review of all relevant documents and landscape planning policy and guidance;
- A field survey to assess baseline landscape character and visual amenity;
- A description of the key features associated with the Project that have the potential to alter the characteristics of the landscape and visual baseline;
- Appropriate generic and site specific mitigation that is reasonable and possible;
- Assessment of the predicted significance of residual effects on the landscape resource / character and visual amenity and compliance with landscape policy; and
- An assessment of cumulative impacts arising from the Project, in combination with other proposed large scale industrial developments in the locality.

5.8.7 Initially, a Zone of Theoretical Visibility (ZTV) plan will be generated for the Power Generation Plant using specialist software. The ZTV will show a maximum theoretical visibility of the Power Generational Plant and any overhead line towers, should an overhead Electrical Connection be pursued across the surrounding area. The ZTV will be based solely on topography and the proposed height of the plant envelope, and any overhead line towers. No allowance will be made for intervening screening vegetation or buildings, although in practice this tends to have a substantial mitigating effect.

5.8.8 A review of all relevant landscape planning policy will be undertaken. Particular attention will be paid to popular tourist spots and viewpoints, and Public Rights of Way. The nearest Area of Outstanding Natural Beauty is the Chilterns, which is remote from the Project Site and visually separated from the Project Site by an intervening Greensand Ridge and therefore has been scoped out of the assessment.

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<sup>69</sup> Landscape Institute and Institute of Environmental Management and Assessment, (2013) Guidelines for Landscape and Visual Impact Assessment, 3rd Edition

- 5.8.9 The Project will be discussed in detail including dimensions of the larger buildings, the stack heights, and any other ancillary infrastructure that may have an impact on the landscape.
- 5.8.10 To assist in the impact assessment, a site visit will be made by a qualified Chartered Landscape Architect, who will assess the study area in detail. Additionally, and following consultation with relevant stakeholders, a selection of photomontages will be taken from key sensitive viewpoints (e.g. residential receptors, designated ecological sites, cultural heritage assets and key rights of way). Suggested viewpoint locations for photomontages for consultation are:
- View south west from Stewartby Way, Stewartby;
  - View south east from Marston Vale Forest Centre;
  - View north from Sandhill Close, Millbrook;
  - View north west from Katherine’s Cross, Ampthill Park;
  - View north west from steps to rear elevation, Houghton House;
  - View north west from track in front of cottages, Houghton House;
  - View north from track in front of Ampthill Park House;
  - View north west from Marston Vale Trail where it crosses B530 Bedford Street by Laurel Wood north of Ampthill;
  - View west from footpath in front of Chequers Public House;
  - View south west from the rear of the Common Room, Stewartby;
  - View south from the rear of the Village Hall, Stewartby;
  - View east from the rear of St Mary’s Church, Marston Moretaine; and
  - View south from the village green, Stewartby.
- 5.8.11 Photomontages will be produced with reference to ‘Photography and photomontage in landscape and visual impact assessment Landscape Institute Advice Note 01/11’<sup>70</sup>. The photomontages will show a representation of how the Project would be viewed within the landscape and will be used to illustrate the potential impact of the Project.
- 5.8.12 Given that the majority of the Gas Connection would be underground, the landscape and visual impact assessment for this element of the work will focus solely on the impact of the AGI and the impacts and effects that will result from the construction phase.

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<sup>70</sup> Landscape Institute (2011) Photography and photomontage in landscape and visual impact assessment Landscape Institute Advice Note 01/11

- 5.8.13 As for the Gas Connection, if the underground Electrical Connection is carried forward, then the LVIA for this element of the work will focus solely on the impacts resulting from the presence of the substation and SEC(s) if required and the impacts and effects that would result from the construction phase.
- 5.8.14 If an overhead line is taken forward, the assessment will follow the standard LVIA methodology as described above, but will make reference to the Holford and Horlock Rules where appropriate.

### Potential Mitigation Measures

- 5.8.15 An outline CEMP will be drafted and appended to the ES which will set out best practice methods of limiting impacts during construction and decommissioning. Embedded mitigation measures would include the careful consideration of siting stockpiles and cranes to avoid detrimental impacts on the visual amenity of closest receptors.
- 5.8.16 During operation, the main embedded mitigation measures would be the careful siting and arrangement of the: Power Generation Plant; AGI for the Gas Connection; and an overhead line, substation and SEC(s) for the Electrical Connection, if required. The final architectural design of the buildings and upstanding structures would be carefully considered to provide a high standard of visual amenity, given practical and economic constraints.
- 5.8.17 Further, detailed mitigation measures could include the consideration for onsite or off-site planting to screen views of the Power Generation Plant.
- 5.8.18 Due regard will be paid to NPS EN-1, EN-2, and EN-5 and the guidance they provide on 'good design' in relation to the Gas and Electrical Connections and include (to the extent relevant in the case of an underground connection for the Gas and Electrical Connection):
- Avoid altogether, if possible, the major areas of highest amenity value, by planning the general route of the line in the first place, even if total mileage is somewhat increased in consequence;
  - Avoid smaller areas of high amenity value or scientific interest by deviation, provided this can be done without using too many angle towers, i.e. the bigger structures which are used when lines change direction;
  - Other things being equal, choose the most direct line, with no sharp changes of direction and thus with fewer angle towers;
  - Choose tree and hill backgrounds in preference to sky backgrounds wherever possible. Where a line has to cross a ridge, secure this opaque background as long as possible, cross obliquely when a dip in the ridge provides an opportunity. Where it does not, cross directly, preferably between belts of trees;



- Prefer moderately open valleys with woods where the apparent height of towers will be reduced, and views of the line will be broken by trees;
- Where country is flat and sparsely planted, keep the high voltage lines as far as possible independent of smaller lines, converging routes, distribution poles and other masts, wires and cables, so as to avoid a concentration of lines or ‘wirescape’; and
- Approach urban areas through industrial zones, where they exist; and when pleasant residential and recreational land intervenes between the approach line and the substation, carefully assess the comparative costs of going underground.

### 5.9 Traffic, Transport and Access

#### Introduction

- 5.9.1 An assessment on the effects on traffic, transport and access will consider potentially significant impacts and effects caused by the construction, operation and decommissioning of the Project.
- 5.9.2 The main impacts of the Project on traffic, transport and access would occur during construction and decommissioning resulting from the movement of vehicles for the transport of personnel, equipment and materials to and from the Project Site. The transport of abnormal loads, which may lead to delays and cause inconvenience to other road users, would be timed following consultation with the relevant authorities to minimise disruption to the other road users.
- 5.9.3 Normal activities during operation would result in fewer traffic movements and would be associated with personnel required for operation and maintenance of the Project. As such, during operation no significant increase in traffic in the area of the Project Site is expected, and no effect on local traffic patterns and infrastructure would therefore be anticipated.

#### Baseline

- 5.9.4 It is likely that access to the Power Generation Plant Site would be from Junction 13 of the M1 via the A421, Bedford Road, Green Lane. The location of the roads are shown on Figures 1 and 2.
- 5.9.5 Two options are being considered in regards to accessing the Gas and Electrical Connection Opportunity Areas. The first option is from Junction 13 of the M1 via the A507, Sandhill Close, Houghton Lane, Millbrook Road and the B530 Ampthill Road. The second option is from Bedford Road, via Woburn Road, Manor Road, B530 Ampthill Road and Millbrook Road. The chosen route will be confirmed and described in the detail in the ES.

### Assessment

- 5.9.6 The assessment will be undertaken in accordance with the 'Guidance on Transport Assessment' published by the Department for Transport<sup>71</sup> and will assess the likely significant impacts of the Project on the local road network.
- 5.9.7 Comparisons between existing traffic flows and estimates of likely traffic flows on potentially affected roads will be made to help establish whether significant effects are likely. This will take into account: the sensitivity of receptors and resources likely to be affected; any potential for disruption to local routes; and any changes in the composition of traffic. If considered necessary, traffic surveys will be undertaken which will further quantify the number of vehicle movements on the existing road network in the vicinity of the Project Site.
- 5.9.8 The majority of the proposed access routes are 'main roads' that do not have pavements for pedestrian use. Nonetheless, the traffic assessment will also take full account of the potential impact on pedestrians, and will ensure that pedestrians and other road users (cyclists) are not cut off from amenity areas as a result of the works.
- 5.9.9 The assessment will consider the following: access and construction routes and the types of vehicles used; local highway and rail networks; existing traffic flows; current traffic generation; road traffic accident information; predicted traffic trends; local highway improvements and planned works; and, potential receptors. The full appraisal will be presented (if appropriate) in a Transport Assessment which will be accompanied by a draft Construction Traffic Management Plan.
- 5.9.10 Discussions will be held with the Highways Agency, Bedford Council and Central Bedfordshire Council to identify any existing issues relating to traffic in the area. Information will also be sought on future development projects in the area that could give rise to a significant cumulative impact when considered in conjunction with the Project.

### Potential Mitigation Measures

- 5.9.11 An outline CEMP will be drafted and appended to the ES which will set out best practice methods of limiting impacts during construction and decommissioning. Opportunities for reducing traffic movements will be explored, such as car share schemes or shift working (i.e. not all construction traffic arriving at site at once).
- 5.9.12 Details of the proposed measures to improve access by public transport, walking and cycling will be provided for the operational phase.

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<sup>71</sup> Department for Transport (March 2007) Guidance on Transport Assessment

### 5.10 Cultural Heritage and Archaeology

#### Introduction

5.10.1 An assessment on the effects on cultural heritage and archaeological assets will consider potentially significant impacts and effects caused by the construction, operation and decommissioning of the Project.

#### Baseline

5.10.2 The Power Generation Plant Site and part of the Gas and Electrical Connection Opportunity Areas are located within The Rookery. Within Rookery South Pit, as a result of the former excavation of the pits associated with the Brickworks and the subsequent LLRS earth moving activities there is likely to be limited potential for archaeology within the Power Generation Plant Site or Gas and Electrical Connection Opportunity Areas where they lie within The Rookery.

5.10.3 In contrast the Gas and Electrical Connection Opportunity Areas beyond Rookery South Pit are located primarily within agricultural land where there remains the potential for impacts on the buried archaeological resource, as it is likely that these parts of the Gas and Electrical Connections would be constructed in previously un-developed agricultural land.

5.10.4 The following cultural heritage assets are located within 5 km of the Project Site:

- Houghton House: a 17<sup>th</sup> century mansion and associated courtyard and formal garden remains Scheduled Monument;
- Amptill Castle: a medieval magnate's residence Scheduled Monument;
- Pump and sign post in Market Place, Amptill Scheduled Monument;
- Moated site, three fishponds, two trackways and field system at Moat Farm, Cranfield Scheduled Monument;
- Moated site at Wakes End Scheduled Monument;
- Moated site at Ruxox Farm, north east of Flitwick Scheduled Monument;
- Moated site and two fishponds at the Rectory, Houghton Conquest Scheduled Monument;
- Moat Farm moated enclosure and associated settlement earthworks, Marston Moretaine Scheduled Monument;
- Long Barrow 350m south east of Bury Farm Scheduled Monument;
- Bowl Barrow 500m southeast of Bury Farm Scheduled Monument;
- Kempston Hardwick moated site Scheduled Monument;

## Millbrook Environmental Impact Assessment Scoping Report

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- Medieval village and moated sites at Thrupp End Scheduled Monument;
- Bolebec Farm moated enclosure, associated platforms and enclosures, Maulden Scheduled Monument;
- All Saint's Church, Segenhoe Scheduled Monument;
- Ringwork at The Round House, Brogborough Park Farm Scheduled Monument;
- Malting Spinney medieval moat, associated outer enclosure and cultivation earthworks, Ridgmont Scheduled Monument;
- The Mount: a motte and bailey castle Scheduled Monument;
- The De Grey Mausoleum Scheduled Monument;
- The De Grey Mausoleum adjoining Church of Saint John The Baptist Grade I Listed Building;
- Church of Saint John The Baptist Grade I Listed Building;
- 101 Dunstable Street, Ampthill Grade I Listed Building;
- Church of All Saints, Houghton Conquest Grade I listed Building;
- Church and Church Tower of St Mary the Virgin, Marston Moretaine Grade I Listed Buildings;
- Parish Church of St Andrew, Ampthill Grade I Listed Building;
- Ruins of Houghton House, Houghton Park Grade I Listed Building;
- Segenhoe Manor, Ridgmont Grade II\* Listed Building;
- Old Church of All Saints, Ridgmont Grade II\* Listed Building;
- Parish Church of All Saints, Wilstead Grade II\* Listed Building;
- Avenue House, 20 Church Street, Ampthill Grade II\* Listed Building;
- 34 Church Street (Dynevour House), Ampthill Grade II\* Listed Building;
- 37 Church Street, Ampthill Grade II\* Listed Building;
- Park House, Ampthill Park Grade II\* Listed Building;
- Moat Farmhouse, Marston Moretaine Grade II\* Listed Building;
- Church of St Michael, Millbrook Grade II\* Listed Building;
- Ampthill Park Grade II Registered Park and Garden;
- Ampthill Conservation Area;

- Millbrook Conservation Area;
- Steppingley Conservation Area;
- Maulden Conservation Area;
- Wootton Conservation Area;
- Ridgemont Conservation Area;
- Flitton Conservation Area; and
- Stewartby Conservation Area.

5.10.5 In addition there are 219 Grade II Listed Buildings within 5 km of the Project Site. They include South Pilling Farmhouse, which is located approximately 90 m to the west of the Project Site. There are also 49 records for undesignated cultural heritage assets within 5 km. These include standing buildings, earthworks, parks and areas of ancient woodland, sites of structures known only from documentary sources, sub-surface archaeological remains, sites recorded only as cropmarks and isolated findspots.

### Assessment

5.10.6 In accordance with NPS EN-1, the objectives of this assessment are to:

- Describe the survival and extent of any archaeological features that may be disturbed by the construction, operation and decommissioning of the Project;
- Provide an assessment of the importance of these assets;
- Assess the likely scale of any impacts on the cultural heritage and archaeological resource posed by the construction, operation and decommissioning of the Project;
- Outline suitable mitigation measures to prevent, reduce and where possible offset any significant adverse effects; and
- Provide an assessment of any residual effects remaining after mitigation.

5.10.7 Initially, a Desk Based Assessment (DBA) will be undertaken, and will include the following detailed searches:

- The National Heritage List for England contains an archive for the historic environment of England and hosts an online search facility;
- Historic Mapping;
- Conservation Areas and Historic Landscape Characterisation; and
- Historic Environment Records (HER).

- 5.10.8 The DBA will be undertaken in accordance with 'Standard and Guidance for Archaeological Assessments' (Institute for Archaeologists, 2011)<sup>72</sup>.
- 5.10.9 It is proposed that initially, searches are limited to 1 km from the Project Site for HER entries for archaeology as the Project will potentially impact archaeology within the development footprint and the immediate surroundings. The 1 km Study Area provides the opportunity to better understand the context of any archaeology present within the development footprint.
- 5.10.10 As part of the DBA, a site inspection will be undertaken of the Project Site to identify any previously unknown archaeological features and their condition. During the site inspection a detailed photographic record will be maintained and an assessment of the setting of the cultural heritage assets will be undertaken.
- 5.10.11 In order to gather baseline cultural heritage setting data for inclusion in the DBA, and to undertake an assessment of the potential impacts that the Project may have on the setting of any above ground remains, selected cultural heritage assets will be visited. This will follow an initial study making reference to the results of desk-based research, and the ZTV - including searches of the records listed above. Assets will be visited where this initial study indicates potential for significant impacts. Both the asset and its surrounding area will be visited to identify locations that might be relevant to the asset's setting.
- 5.10.12 For the purposes of the setting study, the following cultural heritage assets will be considered:
- Scheduled Ancient Monuments;
  - Listed Buildings;
  - Registered Parks and Gardens;
  - Registered Battlefields;
  - World Heritage Sites; and
  - Any other non-scheduled building which is considered to be important in terms of cultural heritage and archaeological significance.
- 5.10.13 It is proposed that the search area for these cultural heritage assets will be limited to 5 km from the Project Site, as significant impacts on setting are unlikely to occur beyond 5 km. However, should significant impacts be identified at 5 km, then the search area will be expanded accordingly.
- 5.10.14 The following factors are also considered to be relevant when assessing impacts upon setting:
- Visual dominance;

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<sup>72</sup> Institute for Archaeologists (2011) Standard and Guidance for Archaeological Assessments

- Scale;
- Intervisibility;
- Vistas and sight lines;
- Movement and light; and
- Unaltered settings.

5.10.15 The DBA will form the baseline data for the Cultural Heritage and Archaeology chapter of the ES. The ES will discuss the nature and location of all cultural heritage and archaeological sites within the study area. Further to this, the ES will provide an assessment of the significance of any impacts to the cultural heritage and archaeology sites.

5.10.16 At this stage, no intrusive investigations are proposed for cultural heritage or archaeological purposes, although this will be confirmed (or otherwise) based on the findings of the DBA, and in consultation with the English Heritage, Central Bedfordshire Council and Bedford Borough Council. Should intrusive investigations be necessary, their scope will be agreed with the Planning Archaeologist through a Written Scheme of Investigation (WSI).

### Potential Mitigation Measures

5.10.17 Prior to construction, the nature and extent of archaeology present at the Project Site and surrounding areas will be established. However, should any archaeological remains be found during construction, work will be halted and advice sought from the Planning Archaeologist. Where necessary, recommendations will be made for a mitigation strategy to preserve in-situ or if not practicable to preserve by record any significant archaeological assets. The ES will also include a mitigation strategy for any significant impacts to listed buildings and other above – ground assets.

5.10.18 During operation, there may be an opportunity to provide screen planting, should the Project give rise to any adverse impacts on above ground heritage assets.

## 5.11 Socio-Economics

### Introduction

5.11.1 An assessment on the effects on socio-economics resulting from the Project will be undertaken and reported in the ES. This will consider potentially significant impacts and effects caused by the construction, operation and decommissioning of the Project on socio-economic resources and receptors in and around the vicinity of the Project Site.

5.11.2 At its peak, the construction and decommissioning phases are expected to employ between 150 and 250 personnel. Subject to procurement rules, it is anticipated that as much as possible of these workforces would be recruited locally.

- 5.11.3 Operation of the Generating Equipment would require up to 15 full time staff over the lifetime of the Project working in shifts, which means that less than 15 people will be on site at any one time during normal operations. In addition there would be further indirect jobs for contracted engineering staff during regular maintenance shutdowns and maintenance of the Gas and Electrical Connections.
- 5.11.4 The total capital cost of the Project is anticipated to be in the order of £200 million. Up to approximately 35% of this will be construction, civil and fabrication work which would be open to tender from companies in the area.
- 5.11.5 During construction and decommissioning, workers from outside of the local area would require places to stay, and regular sustenance, delivering benefits to local businesses and services. In addition the Project would also represent an additional income source to the local economy during the operational phase in terms of local employment and the use of local services and suppliers.

### Baseline

- 5.11.6 The Rookery and surrounding area has a long history in industry relating to the extraction of clay and the production of bricks while to the south of The Rookery the area has a long history of agriculture.
- 5.11.7 The unitary authority of Central Bedfordshire was formed on 1<sup>st</sup> April 2009. It was created from the merger of Bedfordshire County Council and Mid Bedfordshire and South Bedfordshire District Councils. The population in 2011 was 254,381<sup>73</sup>. The population in the unitary authority of Bedford Borough in 2011 was 157,479<sup>74</sup>
- 5.11.8 In 2011 55% of the total population of Central Bedfordshire and 52% in Bedford Borough were in employment compared to 51% for the rest of Great Britain<sup>75</sup>. The key sources of employment in 2011 were<sup>76</sup>:
- Wholesale and retail trade; repair of motor vehicles and motor cycles -17% in Central Bedfordshire and Bedford Borough;
  - Education - 11% in Central Bedfordshire and Bedford Borough;
  - Manufacturing - 10% in Central Bedfordshire and 8% in Bedford Borough;
  - Construction - 10% in Central Bedfordshire and 8% in Bedford Borough; and
  - Human health - 10% in Central Bedfordshire and 12% in Bedford Borough.

<sup>73</sup> <http://www.neighbourhood.statistics.gov.uk> Key figures for 2011 Census: Key Statistics.

<sup>74</sup> <http://www.neighbourhood.statistics.gov.uk> Population Density, 2011 (QS102EW)

<sup>75</sup> <http://www.neighbourhood.statistics.gov.uk> Economic Activity, 2011 (KS601EW)

<sup>76</sup> <http://www.neighbourhood.statistics.gov.uk> Industry, 2001 (KS605EW)



5.11.9 There are several visitor or tourist attractions within Central Bedfordshire and Bedford Borough including: Center Parcs – Woburn Forest; Dunstable Downs; Wardown Park Museum; Woburn Abbey; Woburn Safari Park and Whipsnade Zoo. The nearest attraction is Marston Vale Millennium Country Park approximately 50 m to the west of the Project Site.

### **Assessment Methodology**

5.11.10 In accordance with NPS EN-1 paragraph 5.12.3 the assessment will consider all relevant socio-economic impacts such as tourism, influxes of workers, and cumulative impacts.

5.11.11 There is currently no established EIA methodology for the assessment of socio-economic impacts. To assess the socio-economic impacts the 'Guidelines and Principles for Social Impact Assessment' (May 1994) produced by the Interorganizational Committee on Guidelines and Principles for Social Impact Assessment<sup>77</sup> will be used.

5.11.12 The study area will extend to cover the immediate area of Central Bedfordshire and Bedford Borough and the wider area of eastern England, in order to assess the likely effects that may be experienced within the local community.

5.11.13 The methodology for the socio-economic impact assessment will be based on the collection of a wide range of data and information from published materials, plus consultation with the local authority and key stakeholders. Key information to be consulted will include:

- Population characteristics (population dynamics);
- Community and institutional structures (employment, training, skills and qualifications, economic investment, business development and equal opportunities);
- Individual and family changes (perceptions of risk, attitudes towards the Project, social well-being); and
- Community resources (security, access to local amenities and Public Rights of Way (PRoWs)).

### **Potential Project Enhancements**

5.11.14 During construction, operation and decommissioning an effort will be made to use local goods and services wherever possible.

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<sup>77</sup> Interorganizational Committee on Guidelines and Principles for Social Impact Assessment (May 1994) Guidelines and Principles for Social Impact Assessment



## 6 Summary and Conclusions

6.1.1 This report sets out the proposed scope and content of the EIA to support the DCO Application for the development of a Power Generation Plant with a capacity of up to 299 MW with its associated Gas and Electrical Connections in Central Bedfordshire and Bedford Borough. It has been prepared in order to support a request for a Scoping Opinion from the SoS under regulation 8 of the EIA Regulations.

6.1.2 The following topics have been scoped into the assessment:

- Air Quality;
- Noise and Vibration;
- Ecology;
- Water Quality and Resources;
- Geology, Ground Conditions and Agriculture;
- Landscape and Visual;
- Traffic, Transport and Access;
- Cultural Heritage and Archaeology; and
- Socio-Economics.

6.1.3 In view of the above, and on behalf of the SoS, PINS is requested to provide a Scoping Opinion on the possible significant environmental effects of all elements of the Project, the proposed methodologies to assess the impacts, and the proposed structure of the ES.

6.1.4 PINS and other consultees are also invited to highlight any additional issues that they believe should be addressed within the EIA, and to identify any sources of information that may be of interest to MPL and the EIA team.



## Appendix 1: Ecological Appraisal



**Millbrook Power Project,  
Bedfordshire**  
Ecological Appraisal





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## Contents

1	Summary .....	2
2	Introduction .....	4
3	Methods .....	5
4	Results and Interpretation .....	7
5	Recommendations.....	18
6	References .....	23
7	Appendix 1: Figures.....	25
8	Appendix 2: Relevant Desk Study Results.....	26
9	Appendix 3: Target Notes.....	39
10	Appendix 4: Summaries of Relevant Legislation, Policy and Other Instruments.....	44
11	Appendix 5: Habitat Suitability Index (HSI) Assessment Results .....	49
12	Appendix 6: Photographs .....	52
	Addendum – Ecological Walkover Report.....	54



# 1 Summary

- 1.1 Millbrook Power Limited (MPL) is promoting a new thermal generating station (hereafter referred to as the 'Power Generation Plant') on land within the Rookery Clay Pit County Wildlife Site (CWS) between Bedford and Amptill in Central Bedfordshire, England (approximately grid reference 501373, 240734).
- 1.2 The Power Generation Plant would operate as a Simple Cycle Gas Turbine (SCGT) peaking plant and would be designed to provide an electrical output of up to 299 Megawatts (MW). It would be fuelled by natural gas, supplied by a new underground gas pipeline connecting the thermal generating station to the existing National Transmission System (NTS).
- 1.3 The Survey Site (Figures 1a, 1b) for the Project covers an area of approximately 162ha of farmland and the southern extent of the Rookery Clay Pit CWS, a disused clay extraction pit (Rookery Clay Pit) within the Marston Vale in Bedfordshire. The closest settlements to the Survey Site are Stewartby to the north, Marston Moretaine to the west and Millbrook to the south. The Survey Site predominantly comprises farmland (arable and improved grassland) but also includes woodland parcels, native hedgerows and a number of water-bodies. The north of the Survey Site encroaches into the Rookery Clay Pit CWS.
- 1.4 BSG Ecology has been appointed to undertake preliminary ecology survey work for the Survey Site, which includes a desk study and Extended Phase 1 Habitat survey. This preliminary ecological assessment will inform the subsequent need for further, targeted surveys of protected and otherwise notable species and habitats.
- 1.5 The desk study undertaken in support of this assessment identified the presence of seven nationally designated Sites of Special Scientific Interest (SSSI) within a 5km radius of the Survey Site. The closest of these is Cooper's Hill SSSI located approximately 550m to the south-east of the south-eastern corner of the Survey Site. This site is designated for its extensive heathland situated on acidic soil. In addition to this there are two Local Nature Reserves (LNRs) within a 5km radius of the Survey Site. The closest of these is Flitwick Wood LNR located approximately 3.3km to the south of the Survey Site. This site comprises an area of ancient woodland supporting a diverse botanical assemblage.
- 1.6 A total of 12 non-statutory designated CWSs are present within a 2km radius of the Survey Site. The closest of these is Rookery Clay Pit CWS, which covers a proportion of the northern extremity of the Survey Site. The pit consists of three large pools with sparse ephemeral/short perennial vegetation and rank neutral grassland in the north-western corner.
- 1.7 The desk study also highlighted the presence of a number of protected species and species of conservation importance within a 2km radius of the Survey Site. These included invertebrates, amphibians, reptiles, nesting birds, bats, badgers, water voles, hedgehogs, brown hare and harvest mice. All of these species groups may be associated with the habitats found on site.
- 1.8 The extended Phase 1 habitat survey found the Survey Site to predominantly comprise intensively managed arable land and improved grassland. Other habitats present included semi-natural broadleaved woodland, plantation broadleaved and mixed woodland, standing water, running water (ditches), dense continuous scrub, tall ruderal vegetation, semi-improved grassland and species-poor hedgerows. The habitats present on site have the potential to support roosting, foraging and commuting bats, foraging and sheltering badgers, water voles, brown hare, harvest mice, nesting birds, foraging and sheltering reptiles, breeding amphibians (including great crested newts) and amphibians in their terrestrial phase, and (especially to the periphery) a diverse range of invertebrates.
- 1.9 Further consultation is required with the local Statutory Consultees in order to assess the possible impacts that the Project could have upon statutory and non-statutory designated sites present in the local area, and to agree the exact scope of further survey work. Notwithstanding this, a series of recommendations are made, based on likely requirement for surveys of protected and otherwise notable species that may be affected by the Project.

- 1.10 It is recommended that target notes and the Phase 1 Habitat map are updated in the summer of 2014 (June - July) in order to gain a comprehensive botanical species list and allow accurate characterisation of the habitats present.
- 1.11 Further survey for the following species - species groups has been recommended in order to obtain a robust ecological baseline for the Project Site upon which the impacts of the Project can be assessed:
- Bats – Ground level tree assessment and external building inspections (of buildings that could be affected directly or indirectly by the Project) to search for the potential for and evidence of roosting bats. Subsequent dusk emergence / dawn return to roost surveys should roosting potential or evidence be found. Bat activity transect surveys should also be undertaken to establish the usage of the Survey Site by bats and the relative levels of activity throughout the Survey Site.
  - Badgers – Further detailed investigation of woodlands and hedgerows to search for signs of badger activity and active badger setts.
  - Water voles – A search for signs of water vole activity including burrows, latrines and feeding remains within the ditch network and water-bodies present on site;
  - Birds – A breeding bird survey to determine the assemblage of birds nesting on site in order to establish which areas are of most importance to nesting birds. An inspection of the buildings (with the potential to be impacted by the Project) present to search for signs of nesting and roosting barn owls.
  - Great crested newts – A survey of all water-bodies on site and within a 250m radius of the Survey Site to determine the presence/absence of this species and the population size present.
  - Reptiles – A survey of all suitable habitat (unmanaged field margins, dense scrub and tall ruderal vegetation) to determine the species present and population size.
  - Invertebrates – Aquatic and terrestrial invertebrate surveys to determine the assemblage of scarce and notable species present and to determine which areas of the Survey Site are of most importance to these species. If any watercourses are to be lost or should a Water Framework Directive compliance assessment be required, aquatic invertebrate surveys may also be necessary to determine ecological quality.

## 2 Introduction

### Site Description

- 2.1 The Phase 1 Habitat Survey Site (hereafter referred to as the 'Survey Site'), in which the Project would be located, comprises approximately 162 ha of farmland and the southern extent of the Rookery Clay Pit County Wildlife Site (CWS) within the Marston Vale in Bedfordshire. The Survey Site is centred at National Grid Reference 501373, 240734. The nearest towns/villages are Stewartby to the north, Marston Moretaine to the west and Millbrook to the south.
- 2.2 The Survey Site is dominated by arable land and improved grassland for the majority of its extent and encroaches into Rookery Pit which is part of the Rookery Clay Pit CWS in the north of the Survey Site. Some ecologically valuable habitats are present including parcels of semi-natural broadleaved woodland, native hedgerows and a number of water-bodies. The Survey Site is bordered by railway lines on its eastern and western boundaries with arable land present to the east. The Survey Site boundary is shown on Figure 1. Photographs of the Survey Site are found in Appendix 1.

### Description of Project

- 2.3 MPL is promoting a new thermal generating station (hereafter referred to as the Power Generation Plant) within the southern half of the Rookery Clay Pit CWS. The Power Generation Plant would operate as a Simple Cycle Gas Turbine (SCGT) peaking plant and would be designed to provide an electrical output of up to 299 Megawatts (MW). It would be fuelled by natural gas, supplied by a new underground gas pipeline connecting the thermal generating station to the existing National Transmission System (NTS). The Electrical and Gas Connection routes will extend south from the base of the pit, from the Power Generation Plant, into the adjacent arable farmland area close to the north of the village of Millbrook.
- 2.4 BSG Ecology has been appointed as the ecological consultant to undertake a preliminary ecology survey, which includes a desk study and Extended Phase 1 Habitat Survey. This preliminary ecological survey will inform the subsequent need for further, targeted surveys of protected and otherwise notable species and habitats. These baseline surveys will be included in an appendix to an ecology chapter of an Environmental Statement, which is presently intended for submission, as an integral part of the Development Consent Order (DCO) application.

### Aims of Study

- 2.5 BSG Ecology was commissioned to undertake an ecological appraisal of the Survey Site within which the Project would be located, comprising a desk study, an extended Phase 1 habitat survey and a Habitat Suitability Index (HSI) assessment of nearby water-bodies (within a 250m radius of the Survey Site where access allows). The main aims of this report is to:
- a. Present the findings of the desk study and site surveys;
  - b. Assess the potential for the Survey Site to support protected or otherwise notable species;
  - c. Set out the legislative and/or policy protection afforded to any habitats present or any species potentially associated with the Survey Site; and
  - d. Provide recommendations for any further surveys to inform a subsequent ecology baseline chapter.

### 3 Methods

#### Desk Study

- 3.1 Existing ecological information for the Survey Site and its surrounding area was requested from the Bedfordshire and Luton Biodiversity Recording and Monitoring Centre (BRMC). Information on statutory designated sites were requested covering the Survey Site and land up to 5km from the Survey Site boundary, and information regarding non-statutory designated sites, protected species and species of conservation importance were requested covering the Survey Site and land up to 2km from the Survey Site boundary. In this case, species of conservation importance were defined as species listed in accordance with Section 41 of the Natural Environment and Rural Communities (NERC) Act. In addition, on-line resources including the Multi Agency Geographic Information for the Countryside (MAGIC, [www.magic.gov.uk](http://www.magic.gov.uk)) website and aerial photography of the area were also reviewed.
- 3.2 This information was supplemented by previous survey and mitigation work undertaken by BSG Ecology on The Rookery Clay Pit CWS including land within and immediately north of the Survey Site (PBA, 2009; BSG Ecology, 2013).

#### Field Survey

- 3.3 The field survey was undertaken by Stephen Foot MCIEEM and Dr Jessica Frame MCIEEM on 25<sup>th</sup> February 2014. Habitats within the Survey Site were identified and described following standard Joint Nature Conservation Committee (JNCC) Phase 1 habitat survey methodology as detailed in the Phase 1 Habitat Survey Handbook (JNCC, 2010). This uses a system of codes to describe different habitat types based on the dominant vegetation present, which are recorded through the preparation of habitat maps and target notes. All plant names in this report follow *The New Flora of British Isles* (Stace, 2010).
- 3.4 The survey was extended to give particular consideration to the potential of the habitats present to support protected species or species of conservation importance which were recorded as incidental information as part of the target notes.
- 3.5 It should be noted that species lists derived from the target notes are not necessarily an exhaustive inventory of all species occurring at a site. They are intended to illustrate the character of habitats present, general species richness of a particular area, and draw attention to any species that may be considered uncommon or unusual.
- 3.6 Weather conditions on the day were overcast and showery. This did not impede the survey.

#### Habitat Suitability Index (HSI) Assessment for Great Crested Newts

- 3.7 During the field survey a HSI assessment of all ponds / water-bodies within a 250m radius of the Survey Site (where access was possible) was undertaken. A 250m search radius was favoured over 500m based on a number of factors. Firstly, there are many suitable water-bodies in the surrounding landscape (up to 250m from the Survey Site) yet very few beyond this, therefore suggesting a lack of connectivity between such ponds (clustering) and limited associated dispersal of great crested newts into the wider landscape. Secondly, ponds between 250m to 500m from the site are primarily located at the Vehicle Proving Ground, which are surrounded by good terrestrial habitat and therefore it is unlikely that great crested newts would be drawn onto the Survey Site to use terrestrial features. Thirdly, there is a wealth of extensive existing knowledge of great crested newt populations in the local area (to the north of the Survey Site in particular) so there is no contextual requirement to gather more detail than necessary concerning likely population status of great crested newts in the vicinity of the Survey Site.
- 3.8 Information on the physical features and characteristics of each pond were collected in order to allow a great crested newt HSI score to be derived for each pond by applying the scoring system developed by Oldham *et al.* in 2000 and updated by the Herpetological Conservation Trust in 2008 (HCT, 2008). The Suitability Index is calculated by allocating scores to features associated with each pond; these include size, quality of surrounding habitat and presence of fish. These scores are then used to calculate the overall HSI for each pond as a number between 0 and 1, with 0



being the least suitable and 1 being the most suitable. The HSI score allows each pond to be placed in one of five pre-defined categories defining its suitability for great crested newts as follows:

- <0.5 = poor
- 0.5 – 0.59 = below average
- 0.6 – 0.69 = average
- 0.7 – 0.79 = good
- >0.8 = excellent

#### **Limitations to Methods**

- 3.9 Although records secured through the desk study and supplied by third parties provide useful background information for initial ecological assessment, they often comprise individual records supplied by members of the public or are the result of *ad hoc* surveys. The data trawl information can therefore help to inform the likelihood of a particular species being present in the area, but should not be relied upon to definitively determine presence or absence of individual species.
- 3.10 The site visit was undertaken at a sub-optimal time of year for a survey of this type (February, 2014). However, given the location and overall land use across and adjacent to the Survey Site, there is no concern with regard to rare habitats or species. Sufficient vegetation, basal rosettes, dead flowering parts and leaves were present to identify most of the species present with some confidence. In addition, a robust assessment of the Survey Site's potential to support protected species could also be made. Therefore, it is considered that the timing of this survey in this instance is not a significant constraint with regard to the findings of this assessment. It will also be possible to update the target notes for Extended Phase 1 Habitat survey, as appropriate, as other surveys are conducted during more seasonal times of the year.



## 4 Results and Interpretation

4.1 In this section the results of the desk study and fieldwork are brought together. The implications of these results are then considered.

### Designated Sites

#### *Statutory Designated Sites*

4.2 There are seven nationally designated Site of Special Scientific Interest (SSSI) located within 5km of the Survey Site boundary. The closest of these is Cooper's Hill SSSI, (grid reference: TL028376) which covers an area of 18.06ha and is located approximately 550m to the south-east of the Survey Site. This site is designated for its extensive heathland situated on acidic soil. The site also contains springs that form wet flushes supporting rich marsh plant communities. A small acidic mire (a rare habitat in Bedfordshire) is also present. The site supports a diverse invertebrate fauna.

4.3 In addition to this there are also two Local Nature Reserves (LNRs) within a 5km radius of the Survey Site. The closest of these is Flitwick Wood LNR located approximately 3.3km to the south of the Survey Site. This site comprises an area of ancient woodland supporting a diverse botanical assemblage. The remaining statutory designated sites present within a 5km radius of the Survey Site are outlined in Table 1 in Appendix 2. The locations of these statutory designated sites are shown on Figure 1a and 1b (produced and provided by the BRMC).

#### *Non-statutory Designated Sites*

4.4 A total of 12 non-statutory designated County Wildlife Sites (CWSs) are present within a 2km radius of the Survey Site. The closest of these is Rookery Clay Pit CWS, which covers a proportion of the northern extremity of the Survey Site. The pit consists of three large pools with sparse ephemeral/short perennial vegetation and rank neutral grassland in the north-western corner. Small patches of marsh vegetation are also present throughout the site. A broadleaved plantation is present in the centre of the Rookery Clay Pit CWS.

4.5 A single Roadside Nature Reserve (RNR) is also present. Marston Bypass RNR is located approximately 2km to the west of the Survey Site and consists of a road verge sown with wildflower seeds. The remaining sites are described in Table 2 in Appendix 2 with their locations shown in Figure 1b (produced and provided by the BRMC).

### Habitats

4.6 The following Phase 1 habitat types were recorded within the Survey Site during the survey:

- Semi-natural broadleaved woodland;
- Plantation broadleaved woodland;
- Plantation mixed woodland;
- Scattered broadleaved trees;
- Dense continuous scrub;
- Tall ruderal vegetation;
- Tall ruderal vegetation, semi-improved grassland and scattered scrub mosaic;
- Standing water;
- Running water;
- Arable;
- Semi-improved neutral grassland;
- Improved grassland;

- Amenity grassland;
- Species-poor hedgerow;
- Species-poor hedgerow with trees;
- Species-poor defunct hedgerow;
- Buildings; and
- Hard-standing.

4.7 The distribution of these habitats is shown on Figure 1 with summary descriptions given below. Dominant or characteristic flora is described together with notes on the relative abundance of floral species within the context of each habitat parcel. Target notes (TNs) referred to in the text below and on Figures 2a and 2b are provided in Appendix 3 with photographs provided in Appendix 6.

#### **Semi-natural broadleaved woodland**

- 4.8 Three parcels of semi-natural broadleaved woodland were identified during the field survey. The first of these borders the rail corridor adjacent to the southern boundary of the Survey Site (see TN1 on Figure 2b). The canopy layer of this woodland parcel is dominated by pedunculate oak *Quercus robur* and poplar *Populus* sp. The shrub layer is relatively dense and supports abundant elder *Sambucus nigra* and hawthorn *Crataegus monogyna* with the ground flora supporting frequent ivy *Hedera helix* and lords and ladies *Arum maculatum* with occasional common nettle *Urtica dioica*.
- 4.9 The second parcel lies to the east of South Pilling Farm on the western boundary of the Survey Site and extends south adjacent to the main road leading into Millbrook (see TN5 and TN6 on Figure 2a). This woodland is young / semi-mature in age and the canopy layer of this woodland consists of abundant poplar with occasional Lombardy poplar *Populus nigra* “italica” on the western edge. Ash *Fraxinus excelsior*, Norway maple *Acer platanoides*, silver birch *Betula pendula* and rare young pedunculate oak are also present within the canopy layer with occasional crack willow *Salix fragilis* adjacent to the ditch on the eastern boundary of this woodland parcel. The shrub layer is dense and includes frequent hawthorn with occasional field maple *Acer campestre*. The ground flora of this woodland parcel contains occasional cow parsley *Anthriscus sylvestris*, common nettle, lords and ladies and cleavers *Galium aparine*.
- 4.10 A third parcel lies in the west of the Survey Site and consists of young and semi-mature pedunculate oak with frequent ash. Elder and hawthorn dominate the shrub layer with occasional lords and ladies and common nettle present in the ground flora. These areas of woodland do display some characteristics of the Habitat of Principal Importance “Lowland mixed deciduous woodland”; however, given their age and general structure (e.g. the presence of planted poplar), it is unlikely that these woodlands can be classified as this priority habitat type. Despite this, these woodland parcels do have intrinsic value and provide habitat for a range of species.

#### **Plantation Broadleaved Woodland**

- 4.11 There are three parcels of plantation broadleaved woodland on site. The first of these is located in the north-western corner of the Survey Site adjacent to the Rookery Clay Pit CWS (see TN18 on Figure 2a). This semi-mature plantation woodland supports frequent alder *Alnus glutinosa* and silver birch with occasional pedunculate oak in the canopy layer with occasional hazel and hawthorn present in the shrub layer. The ground flora within this parcel is sparse (owing to the dense canopy layer) and is limited to occasional common nettle and lords and ladies.
- 4.12 The second parcel lies on the western boundary in the southern half of the Survey Site. This young woodland parcel contains ash and pedunculate oak in the canopy layer with elder and hawthorn scrub present in the shrub layer. Common nettle and lords and ladies are present within the ground layer of this parcel.
- 4.13 A third smaller parcel of young woodland lies in the southern half of the Survey Site adjacent to the improved grassland fields (see TN4 on Figure 2b). This small wooded copse supports occasional poplar, hazel and hawthorn. The ground layer is limited to occasional lords and ladies.

**Plantation mixed woodland**

- 4.14 A young mixed plantation is present in the centre of the Survey Site (bisecting half of the Survey Site from east to west) (see TN8 on Figure 2b and Photograph 8 in Appendix 6). The canopy layer of this plantation supports frequent Scot's pine *Pinus sylvestris* with pedunculate oak, hazel and field maple and occasional beech, silver birch, hawthorn and guelder rose *Viburnum opulus*. The young age of this woodland means that the canopy layer is not too dense, letting in abundant light allowing semi-improved grassland to dominate the ground layer. Species present include tall fescue *Festuca arundinacea*, false oat-grass *Arrhenatherum elatius* and red fescue *Festuca rubra*. Small patches of bramble *Rubus fruticosus* agg. are also present amongst the sward.
- 4.15 A second, more sparsely planted and younger mixed woodland parcel is present on the western Survey Site boundary (see TN10 on Figure 2b). This woodland parcel has a similar vegetative composition to the woodland parcel described above.

**Scattered broadleaved trees**

- 4.16 A small area in the south-east of the Survey Site to the south-east of Lower Farm comprises mature, or potentially veteran, pedunculate oak trees. This area could not be accessed at the time of survey; however, it was possible to see from adjacent areas that these mature trees had dead wood in the canopy and splits and cracks in the trunk/branches.
- 4.17 A line of scattered planted trees also borders the eastern boundary of South Pilling Farm in the west of the Survey Site. Planted trees present include Lombardy poplar *Populus nigra italica*, crack willow *Salix fragilis* and pedunculate oak (see TN20 on Figure 2a).

**Dense continuous scrub**

- 4.18 Dense bramble scrub lines the north-western boundary of the Survey Site adjacent to the ditch and the semi-natural broadleaved woodland. In addition to bramble, occasional cow parsley, willowherb (likely *Epilobium hirsutum*) and hogweed *Heracleum sphondylium* is also present.
- 4.19 An established/mature area of hawthorn and elder scrub is present on the eastern boundary of the Survey Site adjacent to the rail corridor (see TN14 on Figure 2b). This parcel of scrub is very dense; however, despite this the ground flora is relatively well established and includes frequent ground ivy *Glechoma hederacea*, cow parsley, common nettle and lords and ladies. This parcel thins at its western extent and gives way to sparsely planted ash with a semi-improved grassland ground layer (see TN16 on Figure 1 and Photograph 5 in Appendix 6).

**Tall ruderal vegetation**

- 4.20 An area of tall ruderal vegetation is present on the western boundary of the Survey Site and extends east along a species-poor hedgerow and woodland parcel (see TN12 on Figure 2b and Photograph 11 in Appendix 6). This area supports occasional willowherb, hogweed *Heracleum sphondylium* and common nettle, with bramble and common nettle also present. Young ash saplings are also interspersed within this area. This area gives way to a crop plant (likely millet) used for bird/pheasant cover (see TN13 on Figure 2b). Native species amongst this millet include red dead nettle *Lamium purpureum* and common field speedwell *Veronica persica*.
- 4.21 Tall ruderal vegetation is also present in the south of the Survey Site, adjacent to a public footpath and the rail corridor (see TN2 on Figure 2b). This habitat parcel was dominated by common nettle with occasional lords and ladies, bramble and grasses, including common bent *Agrostis capillaris* and tall fescue.

**Tall ruderal vegetation, semi-improved grassland and scattered scrub mosaic**

- 4.22 The proposed access track in the north-west of the Survey Site follows an existing bare soil track (see TN21 on Figure 1). The edges of this soil track support a mosaic of rabbit grazed semi-improved grassland, tall ruderal vegetation and scattered hawthorn and bramble scrub. Young silver birch trees are present along the lake in the north of the Survey Site. Identification of forbs and herbs in the south of this proposed track was difficult at the time of this survey as it is understood from the landowner that this area is regularly sprayed with herbicide in order to keep vegetation under control in areas previously cleared of great crested newts.

**Standing water**

- 4.23 Seven water-bodies are present on site (Ponds D, E, G, H, I and J). Water-body J was inaccessible at the time of survey. Each of these water-bodies is described in Appendix 5 along with other water-bodies present within a 250m radius of the Survey Site.

**Running water**

- 4.24 A network of wet and dry ditches is present in the northern half of the Survey Site. At the time of survey these ranged between 20cm to 50cm in depth, and had a fast flow, potentially due to recent heavy rainfall (see TN19 on Figure 2a and Photograph 4 in Appendix 6). Aquatic and marginal macrophytes were relatively limited with the majority of these ditches likely to become dry in summer / early autumn. The watercourse on the eastern Survey Site boundary supported some patches of fool's watercress *Apium nodiflorum*. Marginal vegetation was restricted to small patches of pond sedge *Carex riparia* adjacent to hawthorn and elder scrub on the eastern site boundary (see TN15 on Figure 2b). Slower sections of this ditch network had become dominated by common duckweed *Lemna minor*. The ditch on the western boundary also supported small patches of fool's watercress (see TN9 on Figure 1).

**Arable**

- 4.25 The majority of the Survey Site consists of arable land. At the time of survey only one of the fields was planted with a crop, this being a species of cabbage *Brassica* sp. The remaining arable fields were ploughed in preparation for sowing later in the year.

**Improved grassland**

- 4.26 Several fields in the north of the Survey Site comprised a grass ley dominated by perennial ryegrass *Lolium perenne*; rare instances of read dead nettle and bristly ox-tongue *Helminthotheca echioides* were present amongst the sward (see Photograph 3 in Appendix 6).
- 4.27 The fields in the south of the Survey Site were also improved grassland and were intensively grazed by sheep, horses and alpaca (see TN3 on Figure 2b and Photograph 1 in Appendix 6). These fields were dominated by perennial ryegrass with occasional common bent and Yorkshire fog *Holcus lanatus*. Forbs and herbs are limited within the sward with only creeping buttercup *Ranunculus repens* present.

**Semi-improved neutral grassland**

- 4.28 Small pockets of semi-improved grassland were identified in the south of the Survey Site and along the field margins/hedgerow bases across the Survey Site. Strips of semi-improved grassland are also present along the rail corridor. These unmanaged margins range between 0.5m and 1m in width. False-oat grass, perennial ryegrass and common bent dominate the sward with occasional creeping buttercup, bramble and common nettle.

**Amenity grassland**

- 4.29 Small amenity grassland lawns are present within the gardens of Lower Farm. These lawns are also dominated by perennial ryegrass with occasional creeping buttercup, daisy *Bellis perennis* and white clover *Trifolium repens*.

**Species-poor hedgerow**

- 4.30 The majority of hedgerows on site are intensively managed (approximately 2m in height and 1m in width) and dominated by hawthorn with occasional dog rose *Rosa canina*, bramble and ivy (see Photograph 7 on Figure 1). Ground flora associated with these hedgerows is limited to common nettle, ivy and lords and ladies.
- 4.31 A small number of hedgerows are unmanaged and are up to 3m in height (see TN7 on Figure 2b). These have a similar vegetative composition though wild privet and field maple were recorded in hedgerows in the south and east of the Survey Site. All native hedgerows on site are classified as Habitats of Principal Importance.

### **Buildings**

- 4.32 There are a number of farm buildings associated with Lower House Farm and Ossory Farm within the boundary of the Survey Site. It was not possible to gain access to these buildings at the time of survey.

### **Other habitats**

- 4.33 Other habitats of limited ecological significance within the Survey Site included hard-standing (roads, pedestrian access and car-parking areas) associated with Lower Farm and fences present throughout the Survey Site.
- 4.34 The south-western corner of the Rookery Clay Pit CWS (in the northern extremity of the Survey Site) has been recently cleared of vegetation and re-graded. It now consists of bare clay soil (see Photograph 2 in Appendix 6).
- 4.35 No invasive, non-native species listed on Schedule 9, Part II of the Wildlife and Countryside Act 1981 (as amended) were recorded during the survey.

### **Protected Species and Species of Conservation Importance**

- 4.36 Records of 213 protected species and species of conservation importance (species of principal importance) from within a 2km search area were supplied by BRMC. The results of the desk study are summarised in Table 3 in Appendix 2. Please note that records dated pre-2003 have been excluded as over 10 years has now passed, making this data less relevant. In addition to this, where a species has been recorded multiple times, only the most recent and closest record to the Survey Site has been included.
- 4.37 This section presents evidence of protected species or species of conservation importance identified during the survey. Where relevant, it also evaluates the potential for the Survey Site to support species of principal importance identified within the desk study area (see Table 3 Appendix 2) and summarises previous survey work undertaken at The Rookery Clay Pit CWS by BSG Ecology in 2008 and 2009. As appropriate, the relevant legislation and policy for each species or species group is also briefly summarised below with detailed legislation and policy information presented in Appendix 4.

### **Bats**

- 4.38 In 2008, BSG Ecology undertook activity surveys, building and tree inspections surveys and dusk emergence/dawn return to roost surveys for bats at The Rookery Clay Pit CWS and the surrounding area (PBA, 2009). The activity surveys recorded an assemblage of eight species of bat foraging and/or commuting within and around the northern half of the Rookery Clay Pit CWS. These species included common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus* and Nathusius' pipistrelle *Pipistrellus nathusii*; noctule *Nyctalus noctula*; serotine *Eptesicus serotinus*; barbastelle *Barbastella barbastellus*; Leisler's bats *Nyctalus leisleri* and a *Myotis* spp. Buildings at South Pillinge Farm were also assessed to determine the presence/absence of roosting bats.
- 4.39 Of the 20 buildings that were surveyed, five were found to contain evidence of the presence of bats. The farmhouse was found to support a brown long eared *Plecotus auritus* roost in the loft. A small number of bats were seen during the survey, and droppings were found that were thought to be from this species only (PBA, 2008).
- 4.40 The desk study also provided records of nine species of bats from within a 2km radius of the Survey Site. The closest of these were a noctule bat found on a tree 150m to the west of the Survey Site in 2012 and a Daubenton's bat *Myotis daubentonii* from 300m to the west in 2009.
- 4.41 A number of mature trees are present within hedgerows on the periphery of the Survey Site with a number of mature oaks also present in the south of the Survey Site. Some of these trees had features (cracks in the bark, splits in the trunk/branches and rot holes and woodpecker holes) that have the potential to provide roosting opportunities for bats. In addition to this, the buildings at Lower Farm are also likely to provide roosting opportunities for bats.

- 4.42 The arable and improved grassland habitats covering the majority of the Survey Site are considered to provide limited foraging opportunities for bats; however, the hedgerows, woodland and ditches are likely to provide a suitable commuting and foraging resource for bats in the wider landscape.
- 4.43 The presence of bats on site is a material consideration in the planning process, as both bats and their roosts are afforded protection under the Conservation of Species and Habitats Regulations 2010 (as amended) and the Wildlife and Countryside Act 1981 (as amended). In broad terms these pieces of legislation jointly mean that the animals themselves are protected against killing, injury, taking (capture) and disturbance. In addition, their places of shelter are protected against damage, destruction and obstruction. Several species of bat (including the brown long-eared bat) are also classified as Species of Principal Importance (SPIs) in England, drawn up on a list in response to the requirements of Section 41 of the Natural Environment and Rural Communities Act, 2006 (see Appendix 4).

#### **Badger**

- 4.44 BSG Ecology undertook dedicated badger surveys in September 2008 (PBA, 2009). These surveys identified the presence of badger latrines within The Rookery Clay Pit CWS; however, no signs of badger setts were identified.
- 4.45 A foraging badger was also note within scrub between the northern and southern halves of the Rookery Clay Pit CWS approximately 500m to the east of the proposed access track, during great crested newt surveys of Rookery North Pit in 2013 (BSG Ecology, 2013). Woodland copses, scrub and hedgerows are preferred locations for setts as they allow badgers to emerge from the setts inconspicuously and young cubs to play near the sett entrances without being visible to potential predators and people (Neal & Cheeseman, 1996). The badger's preferred food source is the earthworm *Lumbricus terrestris* and therefore they predominantly forage on areas of grassland and pasture. Badgers are omnivorous and they supplement their diet with carrion and fruits from hedgerows, trees and shrubs (Neal & Cheeseman, 1995; Roper, 2010). A badger sett comprising 5-6 well-used entrances was identified during this survey within a small woodland copse approximately 190m to the east of the Survey Site boundary (grid reference: TL022395). The semi-natural broadleaved woodland, plantation broadleaved woodland, plantation mixed woodland, dense scrub, tall ruderal vegetation and established/unmanaged hedgerows have the potential to provide suitable sett building habitat and optimal foraging habitat for badgers. The improved grassland, grass ley and arable habitats are likely to provide moderate quality foraging habitat for this species.
- 4.46 The possible presence of badgers on site is a material consideration as both badgers and their setts are protected under the Protection of Badgers Act 1992 making the intentional or reckless destruction, damage or obstruction of a badger sett an offence (see Appendix 4).

#### **Brown hare**

- 4.47 Three brown hare *Lepus europaeus* were recorded on site during the field survey. This species is common and widespread in the UK where they are most common in arable areas where cereal growing predominates. Survival of leverets (their young) is higher in mixed agricultural areas than in cereal monocultures. In mixed farming, brown hares prefer cattle-grazed pasture and fallow for both feeding and resting. The species typically avoids sheep pasture, except in winter, and they prefer fields supporting strips of uncultivated land (Harris & Yalden, 2008). Hares typically select lying-up sites in habitats where there is minimal disturbance from livestock. Given the lack of livestock in the northern half of the Survey Site, it is considered that these arable areas are of higher value to this species.
- 4.48 The brown hare is classified as an SPI and therefore the potential presence of this species on site is a material consideration in the planning process (see Appendix 4).

#### **Hedgehog**

- 4.49 The closest record of a hedgehog *Erinaceus europaeus* provided in the results of the desk study was approximately 190m to the west of the Survey Site. Hedgehogs are found in most lowland habitats but have a preference for grassland in close proximity to woodland, scrub or hedgerows (Harris & Yalden, 2008). This species predated upon slugs, snails, insects and amphibians. The



woodland, hedgerows, dense scrub and tall ruderal vegetation on site have the potential to provide foraging and sheltering habitat for this species.

- 4.50 The hedgehog is classified as an SPI and therefore the potential presence of this species on site is a material consideration in the planning process (see Appendix 4).

#### **Harvest mouse**

- 4.51 The harvest mouse *Micromys minutus* favours areas of tall, dense grassy vegetation with breeding nests often constructed in cereal crops, long grass, reed beds, rushes and bramble patches (Harris & Yalden, 2008). Some of the denser marginal vegetation adjacent to the proposed access track, the field margins and within the understorey of the plantation mixed woodland in the centre of the Survey Site has the potential to support this species. This species was identified in the north of the Survey Site during clearance of the arable/ruderal habitats in autumn 2012 as part of the great crested newt licence works.

- 4.52 This species is classified as an SPI in England and as such its presence on site would be a material consideration in making a planning determination (see Appendix 4).

#### **Otter**

- 4.53 During surveys undertaken in 2008 a single otter *Lutra lutra* print was recorded on a clay bank in the south-east of the Rookery Clay Pit CWS (PBA, 2009). No other evidence of otter activity was recorded during the survey. The large water-body in the north of the Rookery Clay Pit CWS (adjacent to the proposed access) supports a healthy fish population and it is likely that otters regularly use this water-body and the adjacent Stewartby Lake CWS as a foraging resource. However, it is considered that there is limited connectivity with the habitat in the south of the Survey Site. There are also few foraging opportunities to the south and the Survey Site supports generally intensively managed habitats with few places that otters could use as resting sites. For these reasons it is considered that this species is unlikely to be present on site and so will not be considered further in this assessment.

#### **Water vole**

- 4.54 The survey carried out by BSG Ecology in October 2008 identified the presence of a water vole *Arvicola amphibius* latrine, a large feeding cache and several runs (PBA, 2009). These signs were found on the northern fringe of the largest waterbody in the Rookery Clay Pit CWS and provide direct evidence of water voles using the Survey Site. No signs of water vole activity were found during a subsequent survey carried out in May 2009 (PBA, 2009). During this survey, areas of vegetation were located that had been disturbed by wildfowl, in particular geese, and deer. There were also frequent signs of fox activity and possible signs of mink presence. The closest most recent record of this species in the desk study was from 1.5km to the north of the site in 2012.

- 4.55 This species is usually found within 2m of the water's edge, along the densely vegetated banks of ditches, river, streams and marshes where it feeds on grasses, reeds and sedges (Harris & Yalden, 2008; Strachan *et al.*, 2011). The ditch network in the northern and western part of the Survey Site has some potential to be used by water voles.

- 4.56 Water voles and their breeding and resting habitats receive protection under the Wildlife and Countryside Act, 1981 (as amended). Water voles are also classified as a Species of Principal Importance in England (see Appendix 4 for further information).

#### **Breeding birds**

- 4.57 A total of 26 species of bird were incidentally recorded on site during the extended Phase 1 habitat survey (see Table 1 for a list of these species).

**Table 1: Birds recorded on site during extended Phase 1 Habitat Survey**

Common name	Scientific Name	Status
Blackbird	<i>Turdus merula</i>	Green
Blue tit	<i>Cyanistes caeruleus</i>	Green

Common name	Scientific Name	Status
Brambling	<i>Fringilla montifringilla</i>	Sch 1, Green
Bullfinch	<i>Pyrrhula pyrrhula</i>	SPI, Amber
Buzzard	<i>Buteo buteo</i>	Green
Carrion crow	<i>Corvus corone</i>	Green
Chaffinch	<i>Fringilla coelebs</i>	Green
Collared dove	<i>Streptopelia decaocto</i>	Green
Common gull	<i>Larus canus</i>	Green
Great tit	<i>Parus major</i>	Green
Great spotted woodpecker	<i>Dendrocopus major</i>	Green
Kestrel	<i>Falco tinnunculus</i>	Amber
Lapwing	<i>Vanellus vanellus</i>	Red
Magpie	<i>Pica pica</i>	Green
Mallard	<i>Anas platyrhynchos</i>	Green
Meadow pipit	<i>Anthus pratensis</i>	Amber
Mistle thrush	<i>Turdus viscivorus</i>	Amber
Moorhen	<i>Gallinula chloropus</i>	Green
Pied wagtail	<i>Motacilla alba</i>	Green
Red kite	<i>Milvus milvus</i>	Sch 1, Amber
Redwing	<i>Turdus iliacus</i>	Sch 1, Red
Robin	<i>Erithacus rubecula</i>	Green
Skylark	<i>Alauda arvensis</i>	SPI, Red
Song thrush	<i>Turdus philomelos</i>	SPI, Red
Starling	<i>Sturnus vulgaris</i>	SPI, Red
Wood pigeon	<i>Columba palumbus</i>	Green

\*= Sch1 – Birds receiving protection under Schedule 1 of the Wildlife and Countryside Act, 1981 (as amended), SPI – Species of Principal Importance and BoCC - Bird of Conservation Concern (Red, Amber and Green - Red is the highest conservation priority, with species needing urgent action. Amber is the next most critical group, followed by green [RSPB, 2013]).

- 4.58 The woodland parcels, species-poor hedgerows and associated trees and improved grassland/arable land are likely to provide good quality nesting habitat for these and other common species of breeding birds.
- 4.59 The potential for the Survey Site to support birds is a material consideration, as all wild birds, their nests and eggs receive protection under the Wildlife and Countryside Act 1981 (as amended) in respect of intentional killing and injury or damage and destruction of active nests (see Appendix 4).

#### Schedule 1 Bird Species

- 4.60 Records of 31 species of Schedule 1 birds have been recorded from within a 2km radius of the Survey Site (see italicised birds in Table 3 in Appendix 2). These species receive additional protection under Schedule 1 of the Wildlife and Countryside Act, 1981 (as amended) which prohibits disturbance of individuals or their dependent young at or near an active nest site (see Appendix 4). Of these 31 species the following 11 species have potential to be associated with the Survey Site as suitable nesting habitat is present:
- Barn owl *Tyto alba* – This species tends to forage upon tussocky grassland with a good litter layer providing habitat for their preferred prey species (field voles) (Barn Owl Trust, 2012). The

semi-improved grassland and tall ruderal vegetation mosaic on the periphery of the Survey Site is therefore considered to provide some foraging habitat for barn owls. In addition, it is possible that some of the outbuildings associated with Lower Farm could support this species.

- Bittern *Botaurus stellari* – Bitterns have been recorded within the reedbed in the lake in the north of the Rookery Clay Pit CWS (adjacent to the proposed access track). The dense reedbed on the periphery of the lake in the north of the Rookery Clay Pit CWS (adjacent to the proposed access track) continues to provide suitable nesting and foraging habitat for this species.
- Bearded tit *Panurus biarmicus* – The bearded tit is found almost exclusively within dense reedbeds (Holden & Cleeves, 2002). The dense reedbed on the periphery of the lake in north of the Rookery Clay Pit CWS (adjacent to the proposed access track) provides suitable nesting and foraging habitat for this species.
- Cetti's warbler *Cettia cetti* – This species nests in dense scrub and reedbed habitats (Holden & Cleeves, 2002). This species was recorded within reed habitat adjacent to the proposed access track in January 2014.
- Firecrest *Regulus ignicapillus* – This species breeds in very small numbers in the south-east of England (80-250 breeding males) (RSPB, 2013). Despite being a rare British breeding species, the conifers and semi-natural broadleaved woodland on site is considered to offer limited potential nesting and foraging habitat for firecrest.
- Garganey *Anas querquedula* – This species of duck nests in dense vegetation including reedbed. Suitable nesting habitat for this species is therefore also present within the dense reedbed on the periphery of the lake in north of the Rookery Clay Pit CWS.
- Hobby *Falco subbuteo* – This species has been observed foraging over the water-bodies within the Rookery Clay Pit CWS during great crested newt translocation works in 2011 and 2013. The mature trees in the semi-natural broadleaved and plantation woodland present on site have some potential to be used as nesting habitat for this spring/summer migrant.
- Little-ringed plover *Charadrius dubius* – This species breeds on man-made habitats close to fresh water. Sand and gravel quarries are regularly used as breeding sites (Holden & Cleeves, 2002). This species was recorded nesting on site in 2011 and 2013 upon clay habitats adjacent to the water-bodies in the Rookery Clay Pit CWS. Accordingly, there remains suitable habitat for this species to the north of the Survey Site.
- Mediterranean gull *Larus melanocephalus* – This species is known to breed near inland lakes and wetlands (Holden & Cleeves, 2002). The waterbodies in the Rookery Clay Pit CWS provide suitable nesting habitat for this species.
- Marsh harrier *Circus aeruginosus* – This species nests in dense reedbed and has been recorded foraging over the reedbed present in the northern and south-eastern areas of the Rookery Clay Pit CWS in 2011 and 2013.
- Red kite *Milvus milvus* – This species was recorded circling above the Survey Site during the field survey. The mature trees in the semi-natural broadleaved woodland and plantation woodland present on site have potential to be used as nesting habitat for this species.

#### Birds of Conservation Importance

- 4.61 A number of bird Species of Principal Importance (SPI's) were shown to be present within 2km of the site in the results of the desk study (see Table 2 in Appendix 2). Of the species recorded in the desk study and on site during the field survey dunnock *Prunella modularis*, house sparrow *Passer domesticus*, starling *Sturnus vulgaris*, reed bunting *Emberiza schoeniculus*, skylark *Alauda arvensis*, song thrush *Turdus philomelos*, bullfinch *Pyrrhula pyrrhula*, yellowhammer *Emberiza citrinella*, cuckoo *Cuculus canorus* and yellow wagtail *Motacilla flava flavissima* could potentially nest on site as suitable habitat is present for these species. The presence of these species is a

material consideration in the planning process; however, these species receive no specific legal protection over and above the general protection given to all birds by the Wildlife and Countryside Act, 1981 (as amended).

#### **Great crested newt**

- 4.62 Surveys for great crested newt *Triturus cristatus* were undertaken in and around the Rookery Clay Pit CWS in 2008 (PBA, 2009). The presence of a large population of great crested newts was subsequently confirmed during these surveys. Trapping and translocation of newts has since taken place under a mitigation licence issued by Natural England in 2011. This has affected the southern half of the Rookery Clay Pit CWS incorporating the southern portion of the proposed access track and a proportion of the arable land in the north of the Survey Site, and has yielded a total of 5,513 great crested newts to date, which were subsequently moved to receptor areas in the north of the Rookery Clay Pit CWS (400m east of the proposed access track) and a receptor area named Stewartby Way 2 (SW2) to the east of the rail corridor. At the present time, the translocation programme is continuing in the south of the Rookery Clay Pit CWS and is expected to be completed in the summer of 2014.
- 4.63 An examination of on-line aerial photography prior to the site visit identified a total of 14 ponds within 250m of the boundary of the Survey Site. The results of the HSI assessment for these 14 ponds (including their overall great crested newt suitability class) are given in full within Table 1 in Appendix 5. Of the ponds surveyed, one (Pond M) was classified as having excellent suitability, three (Ponds A, I and K) were classified as having good suitability, one pond was classified as having average suitability (Pond H), three ponds were assigned below average suitability (Pond C, Pond E and Pond L) and two ponds were assigned poor suitability (Ponds G and N) to support great crested newts. Three ponds (Ponds B, D and F) were dry or not present at the time of survey and are therefore considered unsuitable to support breeding great crested newts. It was not possible to access Pond J at the time of the survey. The locations and HSI scores attributed to these ponds are shown on Figure 3. A full description of each of the ponds is also included in Appendix 5.
- 4.64 Great crested newts spend a proportion of the year in aquatic habitats where they breed. The remainder of the year is spent foraging and sheltering in terrestrial habitats including woodland, scrub and rough grassland (Inns, 2009). The Survey Site supports at least four water-bodies that could be used by great crested newts as breeding habitat (Ponds E, H, I and L). The majority of the Survey Site does not support suitable terrestrial habitat for this species, being intensively managed/grazed grassland and arable land offering limited sheltering opportunities. However, it is likely that the hedgerows on the field boundaries, patches of tall ruderal vegetation and scrub and woodland would be used as a sheltering, foraging and dispersal resource for great crested newts if present. The rail ballast and rubble habitats in the north of the Survey Site adjacent to the rail corridor and the proposed access track are also considered to provide suitable sheltering and over-wintering habitat for this species.
- 4.65 Great crested newt is listed as European Protected Species (EPS) under Schedule 2 of The Conservation of Habitats and Species Regulations 2010 (as amended). It is also protected under the Wildlife and Countryside Act 1981 (as amended). In summary, these pieces of legislation combined make it an offence to disturb, capture, injure or kill a great crested newt or damage or destroy its habitat. The great crested newt is also identified as an SPI (see Appendix 4).

#### **Common toad**

- 4.66 Common toads *Bufo bufo* spend a larger portion of their time in terrestrial habitats (dense vegetation and beneath rocks and logs) than common frogs *Rana temporaria* (Inns, 2009). Common toads shelter during the day within dense scrub or beneath stones and fallen logs, and emerge at night to forage on slugs and other invertebrates. The closest record of a common toad in the desk study was 1.9km to the west of the Survey Site. However, large numbers of toads were recorded within The Rookery Clay Pit CWS during the translocation of great crested newts to the northern half of the Rookery Clay Pit CWS and SW2 (BSG Ecology, 2013). The hedgerows, ruderal vegetation, scrub and woodlands are likely to provide foraging and sheltering habitat for this species, particularly given the presence of suitable water-bodies on site and in the surrounding landscape. Common toads are classified as an SPI (see Appendix 4).

### Reptiles

- 4.67 A low population of grass snakes *Natrix natrix* and a medium population of common lizards *Zootoca vivipara* were translocated during the clearance works associated with the southern half of the Rookery Clay Pit CWS. These were subsequently moved to suitable habitats within the north of the Rookery Clay Pit CWS.
- 4.68 Reptiles prefer a mosaic of habitats with a varied vegetation structure providing conditions suitable for both sheltering and foraging (Edgar *et al.*, 2010). The Survey Site predominantly consists of intensively grazed/managed improved grassland and arable land offering limited sheltering or foraging habitat for reptiles. However, the field margins (particularly in the north of the Survey Site), semi-improved grassland within the plantation mixed woodland and peripheral scrub and ruderal habitats are likely to provide suitable habitat for these species.
- 4.69 All species of common reptile are protected from killing and injury under the Wildlife and Countryside Act, 1981 (as amended). Reptiles are also classified as SPIs (see Appendix 4).

### Invertebrates

- 4.70 An invertebrate scoping survey followed by nine site visits to collect invertebrates was undertaken by BSG Ecology during the summer of 2008 (PBA, 2009). This suite of surveys identified 483 species of invertebrates within Rookery Clay Pit CWS, some of which were of conservation importance. Three species were classified as SPIs; the small heath *Coenonympha pamphilus*, shaded broad-bar moth *Scotopteryx chenopodiata* and cinnabar moth *Tyria jacobaeae*. A total of 44 of the species recorded were classified as Red Data book or nationally scarce species.

### Aquatic Invertebrates

- 4.71 No aquatic invertebrates were provided in the results of the desk study. However, it is possible that scarce or notable species are present in the ditch network in the north of the site or within water-bodies present on site.

### Terrestrial Invertebrates

- 4.72 The desk study results provided records of four species of butterfly. These included the small heath, dingy skipper *Erynnis tages*, the wall *Lasiommata megera* and the grizzled skipper *Pyrgus malvae*. All four of these species were recorded within The Rookery Clay Pit CWS, principally on the bank tops where forb and herb species are more prevalent.
- 4.73 In addition, records of 34 species of moth were provided in the results of the desk study. The majority of these species were either recorded on site or within a 200m radius of the Survey Site. These species are generally common and widespread in the south and east of England and feed on a range of shrubs, trees and herbaceous plants. It is possible that these species are present on or utilise certain parts of the Survey Site (especially the more naturally vegetated peripheral areas) given the vegetation present (UK Moth website, 2013). These species of butterfly and moth are all classified as SPI's<sup>1</sup>. The presence of these species on a site may be a material consideration in the planning process (see Appendix 4).

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<sup>1</sup> Please note that the cinnabar moth is not listed as an SPI for its conservation importance.



## 5 Recommendations

- 5.1 It is assumed that direct impacts will potentially occur across the Survey Site during construction, operation and decommissioning of the Power Generation Plant in the Rookery Clay Pit CWS and associated electrical and gas infrastructure to the south. Indirect impacts will need to be considered beyond this, within the 'zone of influence' that will vary dependent on the receptor (e.g. habitat, protected species, designated site) concerned. The recommendations presented below are based on this understanding of potential impacts and the corresponding requirement to confirm presence / absence, and where present, the distribution and abundance of protected and otherwise notable species, or coverage of habitats that may occur within the Project Site and a zone of influence surrounding it.

### Statutory Designated Sites

- 5.2 There are no statutory designated sites of international ecological importance (SPA or SAC) within 5km of the Project Site.
- 5.3 Consultation with the Statutory Consultees and Natural England will determine the requirement for a screening exercise (under the Habitat Regulations) that considers the proximity of potentially sensitive ecological receptors (notably Natura 2000 sites, but potentially extended to SSSIs) within a search area that may extend to or beyond a 5km radius of the Project Site, and whether these could be affected by NO<sub>x</sub>, NO<sub>2</sub> and CO emissions as well as nitrogen and acid deposition.
- 5.4 The requirement for further surveys or desk based investigation will be determined following review of the scoping opinion (and consultation) with the Statutory Consultees on this matter.

### Non-statutory Designated Sites

- 5.5 The proposed access track runs inside the western boundary of the Rookery Pit CWS. The interest features of this site include the water-bodies and mosaic of ephemeral/short perennial vegetation, rank neutral grassland and marsh vegetation. The access track currently comprises bare ground (used as a temporary access track), scattered scrub and ephemeral vegetation. Direct effects on the interest features of this CWS are therefore predicted to be limited. However, this will need to be fully discussed with the Statutory Consultees, including consideration of potential indirect effects.

### Habitats

- 5.6 The habitats present within the Survey Site but outside of the Rookery Clay Pit CWS are generally common and widespread and intensively managed (improved grassland and arable land). The native hedgerows present throughout the Survey Site are Habitats of Principal Importance (HPIs). The extended Phase 1 habitat survey was undertaken at a sub-optimal time of year, and so did not allow a robust assessment of the botanical species present to be conducted. It is therefore recommended that target notes and the Phase 1 Habitat map are updated in the summer (June - July) in order to gain a comprehensive species list and allow accurate characterisation of the habitats present. This will allow a more robust assessment of possible impacts on habitats and botanical species to be completed.

### Protected Species and Species of Conservation Importance

#### Bats

- 5.7 It is important that the use of the Survey Site by bats is fully understood in order to accurately determine any possible adverse impact that the Project may have on this species group. The following surveys are recommended in order to ascertain this:

#### Ground Level Tree Assessment and External and Internal Building Inspection Surveys

- 5.8 The Survey Site contains a number of trees and some parcels of woodland. It is recommended that trees within the Survey Site (that are to be affected by the Project) are inspected for signs/features with the potential to support roosting bats. In line with the Bat Conservation Trust guidance (Hundt,

2012) this survey should be conducted between February and April, when trees are not in leaf, although, in practice, this survey can be undertaken year round.

- 5.9 All buildings to be directly or indirectly affected by the Project (if any) should be inspected for signs of roosting bats and features with the potential to support roosting bats.
- 5.10 If signs of roosting bats or features with the potential to be used by roosting bats are identified during these inspection surveys, further surveys in the form of dusk emergence/ dawn re-entry surveys may be required. The level of survey effort required will depend on the potential that the building or tree has been assigned in these initial inspection surveys. These further surveys (if required) should be undertaken in accordance with current best practice guidance (Hundt, 2012) when bats are most active (i.e. between mid-May and August inclusive).

#### **Bat Activity Surveys and Automated Static Detector Surveys**

- 5.11 It is advised that activity surveys are undertaken in order to determine the species of bats present on the Survey Site as well as the spatial distribution and relative activity levels of these species. This will include assessment of seasonal and nocturnal patterns of behaviour, and the extent to which activity changes over time. In accordance with Hundt (2012) for a large site of low to moderate suitability, two line transects should be conducted in spring, summer and autumn. These transects should commence a quarter of an hour before sunset and continue for 2 to 3 hours after sunset. Automated surveys using static bat detectors should also be undertaken at two locations (one location per transect route). In line with the current best practice guidance these detectors should be left *in-situ* for three consecutive nights per season i.e. spring, summer and autumn.

#### **Badger**

- 5.12 The Survey Site has the potential to provide foraging and sheltering habitat for badgers (a legally protected species). Badgers are also known to be present in the wider landscape following an appraisal of the desk study results and the field survey. It is therefore recommended that all potential habitats within the Survey Site are surveyed to search for and record characteristic signs of badger activity, including: setts, latrine pits, foraging holes, badger hair and paw prints following best practice guidance (Neal and Cheesman, 1996). Potential habitat includes areas of woodland, scrub and hedgerows. It is recommended that these surveys are undertaken between February and May or October to November, when badger activity is high and vegetation cover is low. However, in practice, this survey can be undertaken all year round.

#### **Water vole**

- 5.13 Water voles have been recorded in the Marston Vale. Approximately 3,000m of ditch exists across the Survey Site along with a number of smaller water-bodies/ponds, which should be surveyed for field signs indicating the presence water voles (a legally protected species, see Appendix 4). These surveys will conform to standard methodologies for water vole (Strachan *et al.*, 2011) and will be carried out when this species is likely to be active. Signs of water vole presence are indicated by the presence of feeding remains, characteristic grass lawns, burrows, runs, footprints, latrines and droppings. This survey can be undertaken all year round but March to early May and September to October is optimal, when bankside vegetation is at its least dense and these animals are highly active.

#### **Other mammals**

- 5.14 The desk study and previous survey work has highlighted the presence of a number of mammals classified as SPIs (brown hare, hedgehog and harvest mouse). Additional incidental evidence of these species will be recorded during targeted survey effort for other species to be undertaken on site.

#### **Breeding birds**

- 5.15 Much of the land within and adjoining the Survey Site is managed as arable farmland, with pasture further south. As such, farmland birds (occurring both within the Survey Site and a buffer of up to 50m) would be the main target of the survey. The other main area of bird interest is the large water-body present in the northern half of the Rookery Clay Pit CWS adjacent to the proposed access track. This lake is known to support a number of Schedule 1 bird species and species of



conservation importance (SPIs). The breeding bird survey will follow standard guidance as set out by Bibby *et al.* (2000) and Gilbert *et al.* (1998). This type of survey would likely comprise three visits to the Survey Site, spread over the period March to July (with April, May and June being the key months for survey). One dusk survey visit to cover crepuscular species such as barn owl should also be undertaken.

#### **Barn owls**

- 5.16 It is recommended that where access allows, the farm buildings at Lower Farm and South Pillinge Farm, and mature trees on site are surveyed for the presence of roosting/nesting barn owls. Signs to be searched for include: nest debris, barn owl pellets, white splashes from barn owl droppings and live or dead barn owls themselves (Barn Owl Trust, 2012). Barn owl roost inspections can be conducted all year round.

#### **Great crested newt**

- 5.17 A large size-class population of great crested newts exist within The Rookery Clay Pit CWS (BSG Ecology, 2013). The newts within the southern half of the Rookery Clay Pit CWS are presently being translocated to a receptor area in the northern half of the CWS and to the east of this in SW2.

- 5.18 Given that sufficient information exists on the great crested newts population of The Rookery Clay Pits CWS, no further survey of this population is likely to be required (this will need to be verified in consultation with the LPA ecologist). However, following the results of the HSI survey 10 suitable ponds exist outside of The Rookery Clay Pit CWS, and a baseline survey of these will be required. It is recommended that all ponds assessed as being below average or above in the HSI assessment (i.e. Ponds A, C, E, H, I, K, L and M– see Table 1 in Appendix 5) and Pond J where access was not secured for this survey, are re-surveyed in order to determine the current status of great crested newts within the Survey Site. All ponds identified are within 250m of the Survey Site. It is appropriate to justify selecting ponds at this distance (rather than up to 500m), which is as follows:

- 5.19 Section 5.4 of the Great Crested Newt Mitigation Guidelines (English Nature, 2001) recommends that:

*“For a common situation, where a plot of land containing a pond is proposed for development, the pond itself should be surveyed, and other ponds up to 500m away should also be checked, if it is thought likely that great crested newt populations centred on these ponds would be affected by changes to the plot.”*

- 5.20 English Nature guidance (2001) is further developed in the great crested newt Method Statement which states that:

*‘The decision on whether to survey depends primarily on how likely it is that the development would affect newts using those ponds. For developments resulting in permanent or temporary habitat loss at distances over 250m from the nearest pond, carefully consider whether a survey is appropriate... normally appropriate only when all of the following conditions are met:*

1. *maps, aerial photos, walk-over surveys or other data indicate that the pond(s) has potential to support a large great crested newt population,*
2. *the footprint contains particularly favourable habitat, especially if it constitutes the majority available locally,*
3. *the development would have a substantial negative effect on that habitat, and*
4. *there is an absence of dispersal barriers.’*

- 5.21 This second piece of guidance, which supersedes the first, specifies that all four conditions should be met for surveys to be required of ponds beyond 250m of the Survey Site boundary. In this case, condition 1 is met as a large population of great crested newts exists to the north of the Survey Site (The Rookery Clay Pit CWS). However, the Survey Site comprises mostly arable and improved grassland that is of low value for great crested newts, so condition 2 cannot be met. Conditions 3

and 4 are consequently irrelevant, and it is possible to prescribe surveys of ponds within 250m (not 250m – 500m).

- 5.22 Following the Great Crested Newt Mitigation Guidelines (English Nature, 2001), four survey visits should be undertaken at each pond (where access allows) to determine presence or absence. Two further visits (i.e. six in total) are then to be completed at ponds found to contain great crested newts, to enable a population size class to be estimated. The surveys normally consist of bottle trapping, torch searches, egg searches and netting. These surveys should be carried out from mid-March to mid-June, with at least half of the visits between mid-April and mid-May.

### **Reptiles**

- 5.23 Grass snakes and common (viviparous) lizards have been recorded adjacent to the Survey Site within The Rookery Clay Pit CWS, and are likely to be present within the Survey Site (PBA, 2009; BSG Ecology, 2013). Where field boundary margins, grassland and scrub within the Survey Site have the potential to support reptiles, a survey will be conducted in order to determine their presence/likely absence.
- 5.24 This further survey will entail installing a number of artificial refugia (squares of roofing felt or tin) in areas of suitable habitat, including scattered scrub, tall ruderal vegetation and coarse grassland, at a minimum density of 5-10 per hectare. These refugia will then be checked on a minimum of seven occasions during the optimal period, which is between April and September, during suitable weather conditions to allow an estimate of population size to be made. The refugia will be left in-situ for a minimum of two weeks prior to the first survey visit to allow the refugia to “bed down” in accordance with the Herpetofauna Worker’s Manual (JNCC, 2003) and Reptile Survey Guidance (Froglife, 1999).

### **Invertebrates**

#### **Aquatic Invertebrates**

- 5.25 In order to determine the assemblage of aquatic invertebrates present on site, it is recommended that the following protocol be followed:

#### **Survey of watercourses (flowing ditches)**

- 5.26 On the assumption that watercourses will be affected by the Project, it may be appropriate to undertake an assessment of water quality, compliant with the Water Framework Directive (WFD). One of the main aims of the WFD is to prevent deterioration in the status of aquatic ecosystems, protect them and improve the ecological condition of waters. The requirement for such an assessment would be driven in consultation with the Environment Agency. Should such an assessment be required, it may be appropriate to assess the ecological quality and surface water chemistry of watercourses to be affected.
- 5.27 To determine ecological quality, kick-sampling for aquatic invertebrates should be undertaken at selected locations along the ditch / stream, and the Biological Monitoring Working Party (BMWP) score applied to inform an assessment of water quality and species present. This survey is best undertaken in spring and in the autumn in swift flowing waters, or in summer in stationary ditches or those with a slow flow. All macro-invertebrates should be identified to species level in order to determine the presence of any scarce or nationally notable species.
- 5.28 To determine water chemistry status a single water sample should be extracted at three locations; within the Survey Site and upstream and downstream of this. Samples should be dispatched to a UKAS accredited laboratory for subsequent analysis, to cover a standard range of parameters including: Biological Dissolved Oxygen, total suspended solids, nutrient composition (e.g. nitrite as nitrogen, total oxidised nitrogen, total ammoniacal nitrogen, total phosphorus), hardness, calcium, alkalinity, conductivity and pH.
- 5.29 The condition of the watercourse can subsequently be analysed by recording and comparing the aggregated number of taxa, and average score per taxon from the sampling points along the watercourse within, upstream and downstream from the site. The statistical model (River Invertebrate Classification Tool - RICT) developed for WFD classification would be used to calculate the Ecological Quality Ratio (EQR) that compares observed with expected results for a

watercourse of the same type. The EQR is then used to identify the Biological Status of the watercourse which is separated into five bands (Bad to High) required by the WFD.

### Survey of waterbodies (ponds)

- 5.30 The National Pond Monitoring Survey protocol should be adhered to which follows the standard method for the survey of ponds for aquatic invertebrates (and flora), developed by the Freshwater Habitats Trust (formerly Pond Conservation/Pond Action), which can be adapted for determination of Priority Ponds. This survey involves timed netting and searches for invertebrates in summer (but may also cover spring and autumn). All macro-invertebrates are identified to species level in order to determine the presence of any scarce or nationally notable species. Predictive System for Multimetrics (PSYM) application developed by the Freshwater Habitats Trust is used to assess the overall condition of the pond in terms of its ecological quality. This survey protocol is a standard requirement to inform whether a pond meets the criteria as being a habitat of principal importance, based on its aquatic invertebrate assemblage. It can also be used to establish whether any species of principal importance, nationally scarce, Red Data Book or WCA Schedule 5 species are present.

### Terrestrial Invertebrates

- 5.31 The desk study and previous survey work have revealed a large number of moth and butterfly (Lepidoptera) records, of SPIs. Suitable habitats for these species exist within the Survey Site and adjacent to it, with woodland and woodland edge being a prominent feature that may be used by a range of Lepidoptera. Terrestrial invertebrate survey is therefore proposed that targets Lepidoptera.
- 5.32 A further survey is also appropriate that targets another important group of invertebrates; beetles (Coleoptera). Whilst not featuring in the desk study, the phase 1 habitat survey uncovered a suitable range of habitats (woodland, mature / veteran trees, hedgerows and ditch banks) in which this group of invertebrates may be strongly represented, especially in the wooded habitats, both within and adjoining the Survey Site.
- 5.33 Survey of Lepidoptera should involve two night-time moth surveys to be undertaken in late spring and mid-summer. Trapping using Skinner moth traps fitted with mercury vapour bulbs is most suitable in terms of attracting an extensive and variable moth fauna. Lights should be switched on at dusk and remain lit until dawn the following day. The traps should be checked periodically throughout the night to log any new arrivals. Any species hard to identify from external markings alone, and those requiring further confirmation, should be retained and dissected if necessary to ascertain their identity with the use of a stereoscopic microscope.
- 5.34 Allied with this, a butterfly transect walk of the Survey Site should be conducted. As with the moths, two of these should be undertaken, in late spring and mid-summer. This transect will be undertaken in accordance with standard guidance developed by the UK Butterfly Monitoring Scheme.
- 5.35 For beetles, a method should be developed that follows Natural England (ISIS) protocol (Drake *et al.*, 2007) to sample beetle assemblages directed at woodland habitats, via hand searches, sweep netting and pitfall trapping. To align with the Lepidoptera surveys, this can be undertaken in late spring and mid-summer. Subsequent laboratory identification will be required for many of the specimens collected.
- 5.36 Analysis of the results should use the ISIS protocol to determine whether any broad or specialist assemblage types present of Lepidoptera and / or Coleoptera. Consideration should also be given to any rare, scarce or nationally threatened species present, including SPIs.



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### Websites

MAGIC: [www.magic.gov.uk](http://www.magic.gov.uk)

RSPB website: [www.rspb.org.uk](http://www.rspb.org.uk)

UK Butterflies Website: <http://www.ukbutterflies.co.uk/index.php>,

UK Moths Website: <http://ukmoths.org.uk/>,

## 7 Appendix 1: Figures

(overleaf)

Figure 1a: Statutory Designated Sites within a 5km radius of the Site.

Figure 1b: Statutory and Non-statutory Designated Sites within a 2km radius of the Site

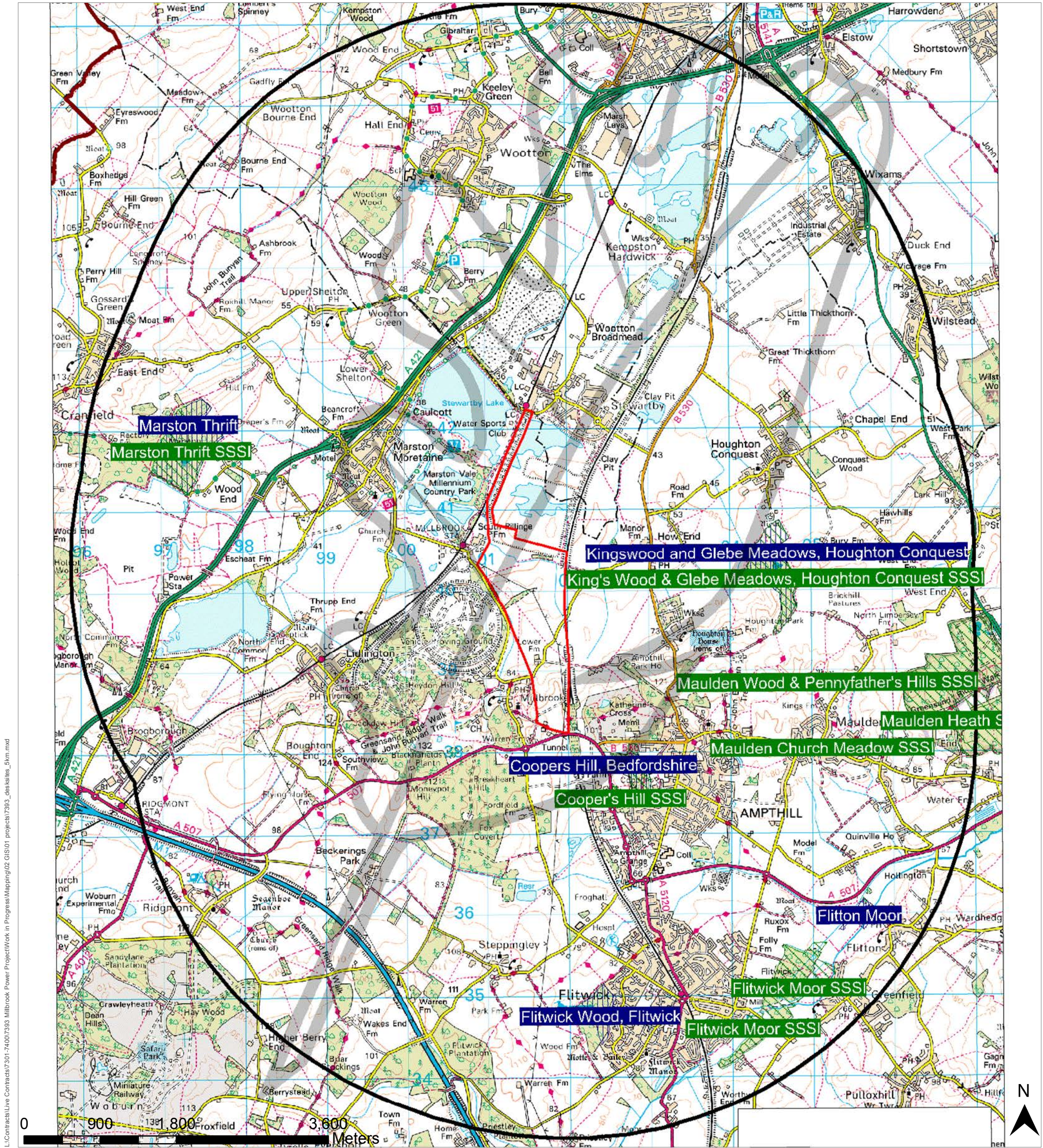
Figure 2a: Extended Phase 1 Habitat Survey Results (North)

Figure 2b: Extended Phase 1 Habitat Survey Results (South)

Figure 3: Habitat Suitability Index (HSI) Assessment Results





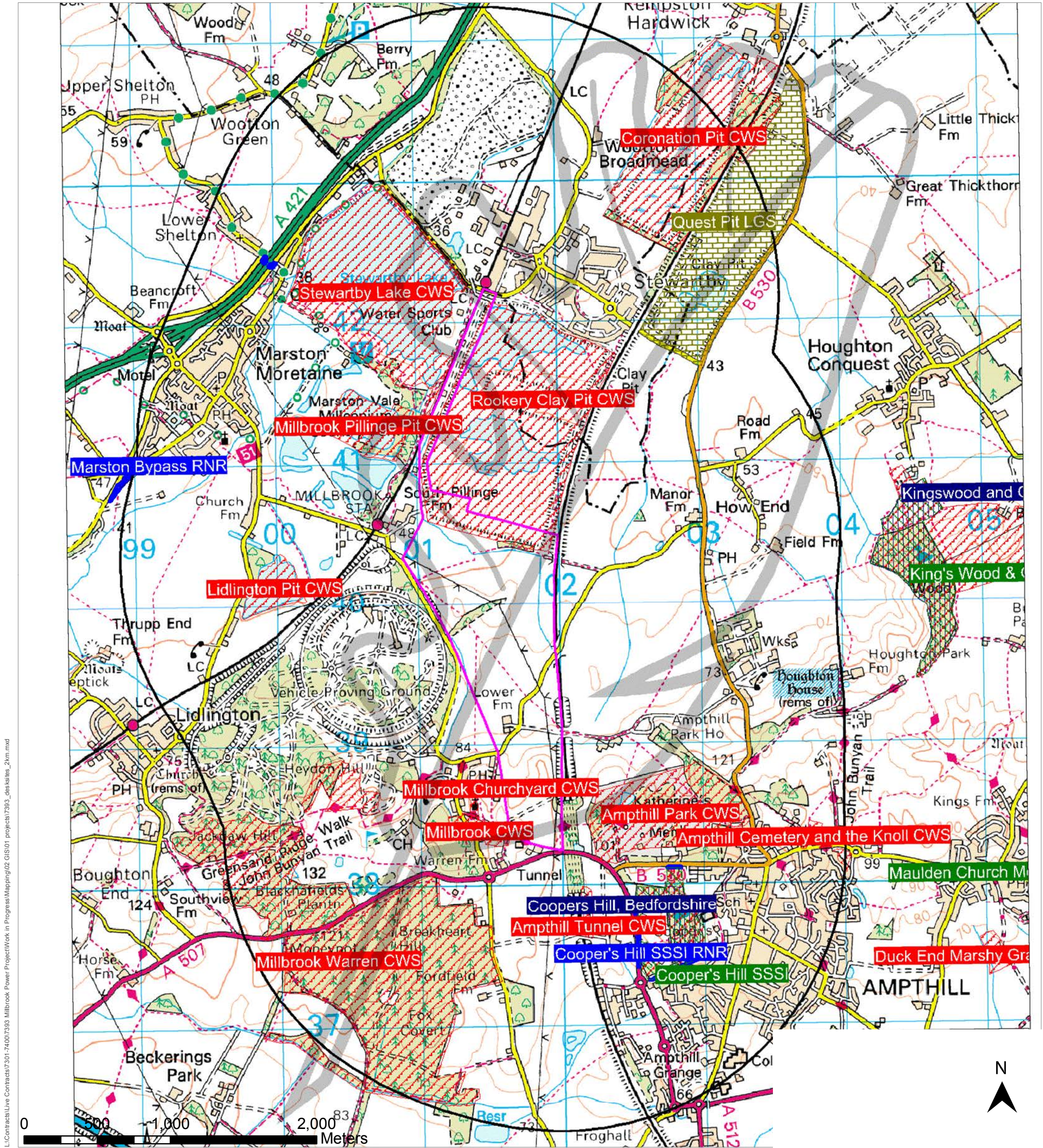


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LEGEND

- Survey boundary
- 5km search area
- Site of special scientific interest
- Local nature reserve
- County boundary





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JOB REF: 7393.00

PROJECT TITLE  
MILLBROOK POWER PROJECT

DRAWING TITLE  
Figure 1b: Statutory and non-statutory designated sites within 2km of site

DATE: 06.03.14      CHECKED: SF      SCALE: 1:25,256  
DRAWN: COH      APPROVED: JF      STATUS: FINAL

LEGEND

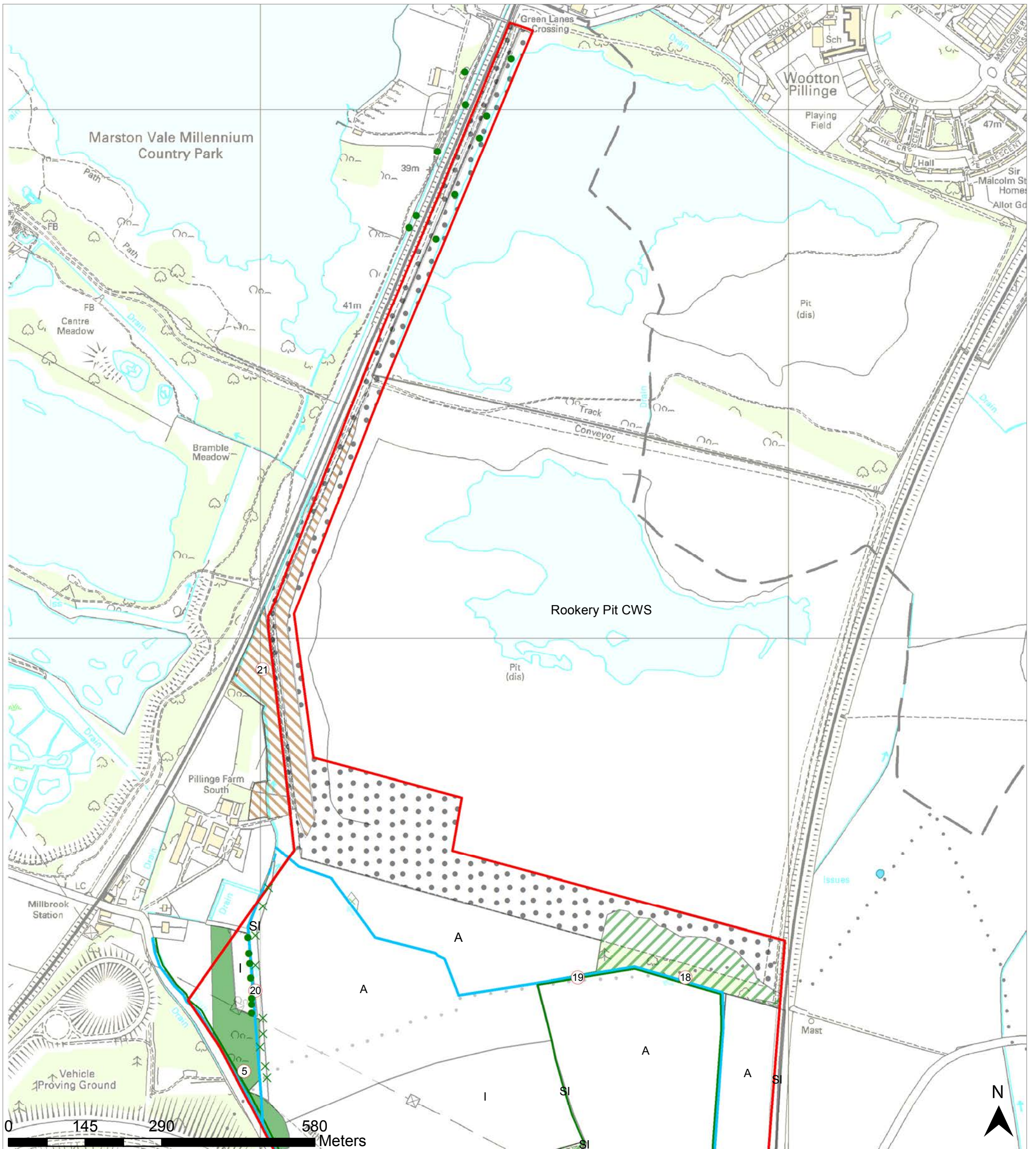
- Survey boundary
- 5km search area
- County boundary
- Site of special scientific interest
- Local nature reserve
- County wildlife site
- Roadside nature reserve
- Local geological site

Map produced by Bedfordshire and Luton Biodiversity Recording and Monitoring Centre

Natural England Data are © Crown Copyright reserved (2014)


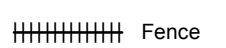



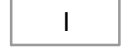
















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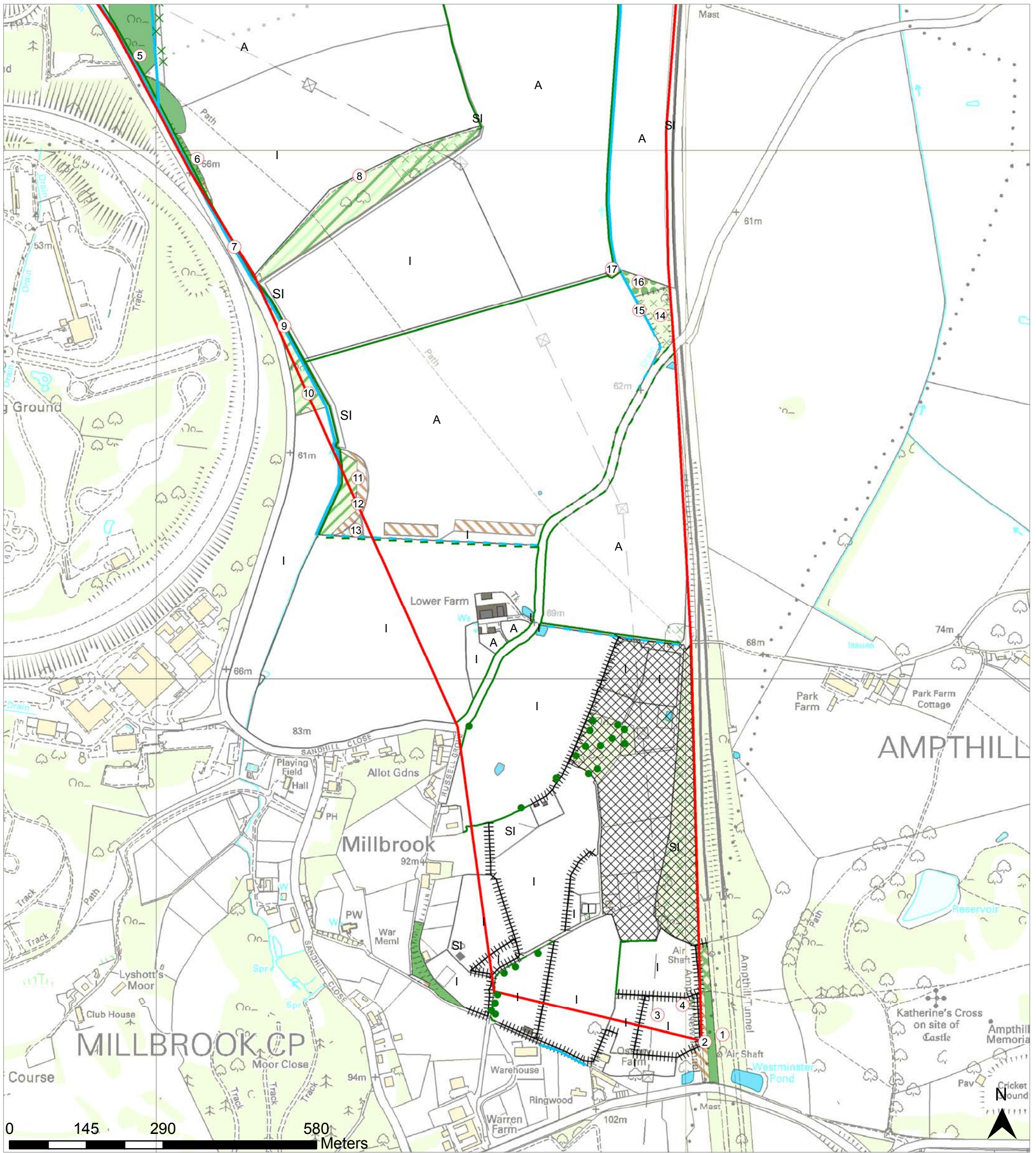
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LEGEND

- |   |                   |   |                                   |   |                             |
|---|-------------------|---|-----------------------------------|---|-----------------------------|
|  | Survey boundary   |  | Dry ditch                         |  | Scattered broadleaved trees |
|  | No access or view |  | Broadleaved semi-natural woodland |  | Improved grassland          |
|  | Target note       |  | Broadleaved plantation woodland   |  | Semi-improved grassland     |
|  | Broadleaved tree  |  | Coniferous plantation woodland    |  | Tall ruderals               |
|  | Scattered scrub   |  | Scattered scrub                   |  | Open water                  |
|  | Running Water     |  | Dense/continuous scrub            |  | Arable                      |
|  | Intact hedgerow   |  | Building                          |  | Bare ground                 |
|  | Defunct hedgerow  |   |                                   |   |                             |



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JOB REF: 7393.00

PROJECT TITLE  
MILLBROOK POWER PROJECT

DRAWING TITLE  
Figure 2b: Extended Phase 1 Survey (South)

DATE: 05.03.14      CHECKED: SF      SCALE: 1:7,000  
DRAWN: COH      APPROVED: JF      STATUS: FINAL

LEGEND

- Survey boundary
- No access or view
- Target note
- Broadleaved tree
- Running Water
- Intact hedgerow
- Defunct hedgerow

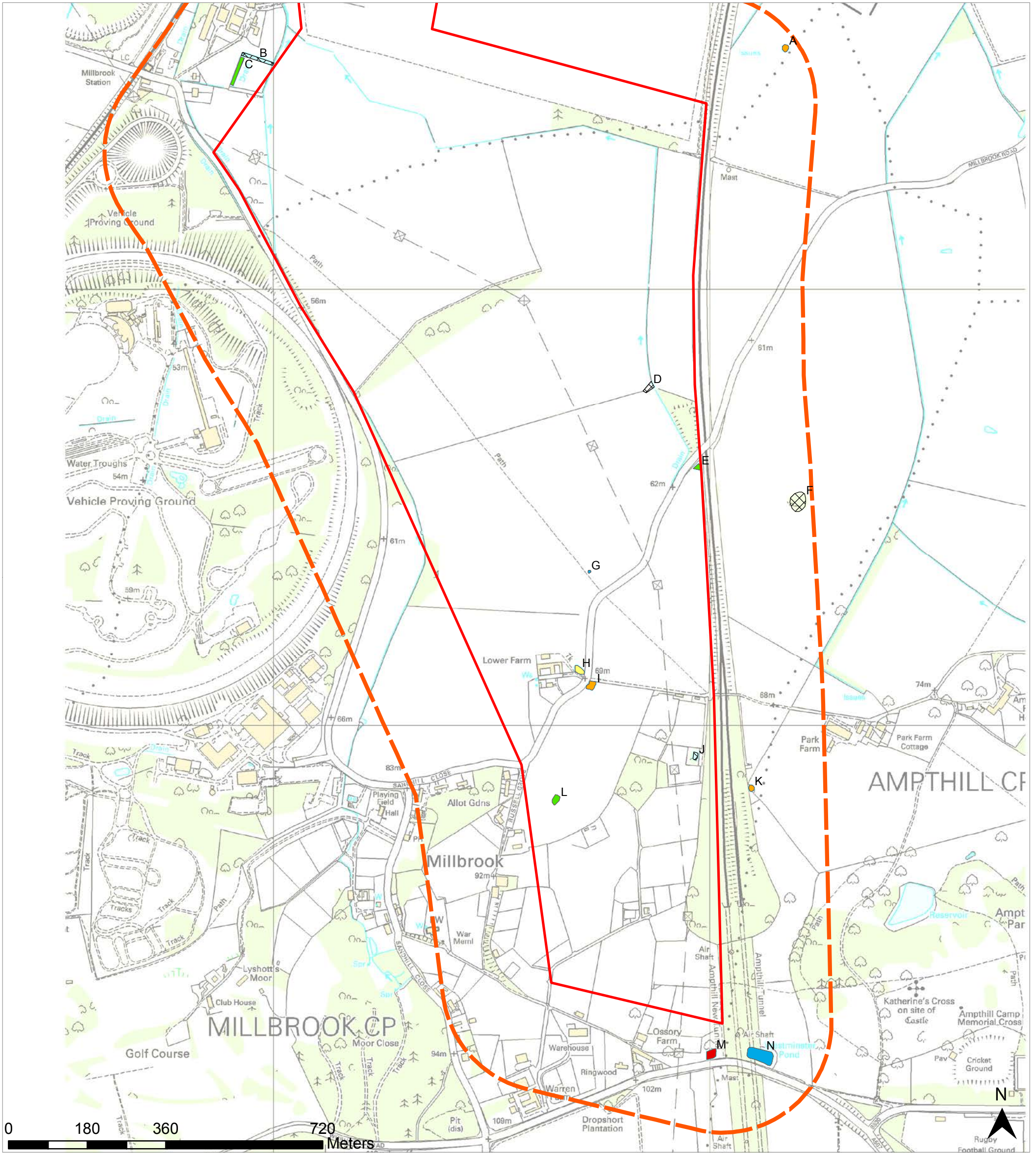
- Fence
- Dry ditch
- Broadleaved semi-natural woodland
- Broadleaved plantation woodland
- Coniferous plantation woodland
- Mixed plantation woodland
- Dense/continuous scrub

- Scattered scrub
- Scattered broadleaved trees
- I Improved grassland
- SI Semi-improved grassland
- Tall ruderals
- Open water
- A Arable
- Building





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JOB REF: 7393.00

PROJECT TITLE  
MILLBROOK POWER PROJECT

DRAWING TITLE  
Figure 3:  
Great crested newt HSI assessment results

DATE: 05.03.14      CHECKED: SF      SCALE: 1:8,500  
DRAWN: COH      APPROVED: JF      STATUS: FINAL

**LEGEND**

Survey boundary

250m buffer of survey boundary

**Suitability to support great crested newts**

Excellent

Good

Average

Below average

Poor

No access or not present



## 8 Appendix 2: Relevant Desk Study Results

**Table 1: Statutory Designated Sites within 5km of Site Boundary**

Site Name	Area (ha)	Grid ref.	Description
Cooper's Hill SSSI, LNR, CWS, RNR	18.06	TL028376	This site lies approximately 550m to the south east of the Survey Site. Cooper's Hill consists of extensive heathland situated on acidic soil. Springs are present and form wet flushes supporting rich marsh plant communities. A small acidic mire (a rare habitat type in Bedfordshire is also present). Two areas of woodland have developed on the marshy areas adding to the biodiversity value of the site. The site supports a diverse invertebrate fauna.
Kingswood & Glebe Meadows, Houghton Conquest SSSI, LNR	36.10	TL045403	This site is located approximately 2.3km to the east of the Survey Site. Kingswood consists of comprises an ash/maple woodland, and represents a habitat which has become increasingly scarce in Bedfordshire. The wood is characteristic of ancient semi-natural woodland supporting a rich flora. Glebe Meadows border the woodland to the north and consist of species-rich unimproved grassland managed for hay and grazing. Small ponds supporting amphibians are also present on the site.
Marston Thrift SSSI, LNR, CWS	37.41	SP973417	This site is located 3.7km to the west of the Survey Site. Marston Thrift comprises ash/maple ancient, semi-natural woodland formerly managed as coppice-with standards. The ground flora is diverse and varied with damp woodland rides also present. The site is important for butterflies with purple hairstreak present. The western meadow consists of short acidic grassland.
Maulden Wood and Pennyfather's Hills SSSI	148.77	TL170390	This site lies approximately 4.1km to the east and consists of a large block of mixed deciduous and coniferous woodland supporting a very rich invertebrate fauna. Maulden Wood is an ancient woodland site with Pennyfather's Hills consisting of former heathland habitat within plantations of Scot's pine. The wood has a diverse breeding bird and fungi population. Several ponds are also present on site.
Maulden Heath SSSI	7.56	TL070386 TL068384	Maulden Heath SSSI is located 4.4km to the east. The site consists of lowland acidic grassland supporting a rich herb community. Areas of scrub and bracken are also present throughout the site.
Maulden Church Meadow SSSI	4.14	TL059382	This site is located approximately 4.4km to the east and comprises unimproved pasture supporting neutral grassland communities. Acid grassland communities are also present in the south of the site. Three ponds are also present on this site and the site is known to support a rich invertebrate fauna.

Site Name	Area (ha)	Grid ref.	Description
Flitwick Moor SSSI, CWS	59.78	TL045350	Flitwick Moor is located approximately 3.6km to the south-east of the Survey Site and is a remnant of eutrophic mire renowned for its flora and invertebrate fauna. A number of draining channels bisect the moor where two woodland types have also developed. Flitwick Moor is also important for mosses and liverworts, fungi, invertebrates and breeding birds.
Flitwick Wood LNR, CWS	14.4	TL023348	Flitwick Wood LNR is located approximately 3.3km to the south of the Survey Site. This site consists of an area of ancient woodland supporting a diverse botanical assemblage.
Flitton Moor LNR	6.7	TL056360	This site is located 4.2km to the south east of the Survey Site and consists of fen, moor, grassland and woodland habitats.

SSSI = Site of Special Scientific Interest, LNR = Local Nature Reserve, CWS = County Wildlife Site, RNR = Roadside Nature Reserve

**Table 2: Non-statutory Designated Sites within 2km of Site Boundary**

Site Name	Area (ha)	Grid ref.	Description
Rookery Clay Pit CWS	153.1	TL017413	This CWS covers the northern portion of land within the Survey Site. The pit consists of three large pools with sparse ephemeral/short perennial vegetation and rank neutral grassland in the north-western corner. Small patches of marsh vegetation are also present throughout the site. A broadleaved plantation is present in the centre of the site.
Stewartby Lake CWS	111.1	TL005425	This CWS lies adjacent to the north-west of the Survey Site. This site includes a large steep-sided lake supporting typical marshland communities on its periphery. The clay areas in the south-west of the support an MG1 grassland community that includes species associated with calcareous soils. A survey in 2004 found the grassland to most closely resemble a CG7d community (Fragaria-Erigeron sub-community) with affinities to MG5 grassland. There are marshy areas interspersed within the grassland along with small ponds and ditches. The northeast side of the lake mostly consists of dense hawthorn scrub with a regularly mown path through it. The site supports a diverse assemblage of breeding and overwintering birds.
Millbrook Pillinge Pit CWS	19.5	TL006412	This CWS is also located adjacent to the north-west of the Survey Site and comprises a water-filled Oxford Clay pit bordered by a margin of neutral grassland (MG1) and scattered scrub. An area of dense scrub is present on the eastern side of the site. A number of small, scrub-covered islands are present in the lake and there are also stands of S13 lesser reedmace swamp habitat of CWS status present on site.

Site Name	Area (ha)	Grid ref.	Description
Millbrook Churchyard CWS	0.57	TL013385	This churchyard lies adjacent to the south-west of the Survey Site and consists of semi-improved acid grassland (U1 and MG5 communities).  The site supports three acid grassland indicators, eight neutral and neutral/calcareous indicators (meeting the CWS threshold of eight), two strong neutral and neutral/calcareous indicators and one strong calcareous grassland indicator. The site therefore meets CWS criteria for both neutral and acid grassland recognition.
Millbrook CWS	4.9	TL013384	This CWS is also located adjacent to the south-west of the Survey Site and south of Millbrook Churchyard CWS and consists of acidic and marshy grassland habitats. Broadleaved woodland is also present on site.
Amphill Park CWS	50.5	TL027385	This site is located approximately 160m to the east of the Survey Site. This site consists of a large area of unimproved acidic grassland, semi-improved acidic grassland and marshy grassland with scattered trees and scrub, dense scrub and some open water (three fish-stocked ponds); and Laurel Wood (mature semi-natural broadleaved woodland).
Amphill Tunnel CWS	2.2	TL021377	This CWS is located approximately 540m to the south-east of the Survey Site and contains unimproved neutral and acid grassland. The northern end of the site contains scrub with mature oaks present on the eastern site boundary. It contains good examples of neutral grassland and greensand grassland. Common lizards are present on this site.
Millbrook Warren CWS	202.2	TL001375	This site lies approximately 580m to the south-west of the Survey Site and consists of ancient woodland and mature plantation woodland.
Heydon Hill CWS	11.8	TL004387	This site is located approximately 980m to the west of the Survey Site and comprises a single block of semi-natural broadleaved (ancient) woodland and two fields of acidic grassland adjacent to east.
Lidlington Pit CWS	10.5	TL001401	This site lies approximately 820m from the west of the Survey Site and comprises a large flooded clay pit with peripheral neutral grassland and swamp habitats.
Coronation Pit CWS	95.4	TL030433	Coronation Pit CWS is located approximately 1.1km to the north-east of the Survey Site. The site is a large disused brick pit with a large lake over 33ha in area located in the south of the site. Areas of broadleaved woodland, dense scrub and rank neutral grassland are also present on this site.
Amphill Cemetery and the Knoll CWS	2.4	TL037383, TL040381	This site lies approximately 1.1km to the east of the Survey Site and comprises semi-improved neutral and acid grassland with scattered trees and shrubs.

Site Name	Area (ha)	Grid ref.	Description
Marston Bypass RNR	0.7	SP989410	This site is located approximately 2km to the west of the Survey Site and consists of a road verge sowed with wildflower seeds.

**Table 3: Summary of Records of Protected Species and Species of Conservation Importance. Provided by BLBRMC and based on BSG Ecology's knowledge and previous work on the Rookery Pit CWS**

Common Name	Scientific Name	Date	Grid Ref.	Location and Distance from Site
Small heath	<i>Coenonympha pamphilus</i>	2012	TL015407	On site (within Rookery Clay Pit CWS).
Dingy skipper	<i>Erynnis tages</i>	2011	TL020408	On site (within Rookery Clay Pit CWS).
Wall	<i>Lasiommata megera</i>	2010	TL020408	On site (within Rookery Clay Pit CWS).
Grizzled skipper	<i>Pyrgus malvae</i>	2012	TL015407	On site (within Rookery Clay Pit CWS).
Knotgrass	<i>Acronicta rumicis</i>	2009	TL0238	In Ampthill Park CWS approximately 160m to the east of the Survey Site.
Grey dagger	<i>Acronicta psi</i>	2010	TL0238	In Ampthill Park CWS approximately 160m to the east of the Survey Site.
Beaded chestnut	<i>Acronicta rumicis</i>	2009	TL0238	In Ampthill Park CWS approximately 160m to the east of the Survey Site.
Mouse moth	<i>Amphipyra tragopoginis</i>	2010	TL035370	Approximately 1.9km to the south-east of the Survey Site.
Large nutmeg	<i>Apamea anceps</i>	2010	TL032379	Approximately 1.2km to the south-east of the Survey Site.
Dusky brocade	<i>Apamea remissa</i>	2009	TL0238	In Ampthill Park CWS approximately 160m to the east of the Survey Site.
Garden tiger	<i>Arctia caja</i>	2007	TL0142	In Stewartby Lake CWS adjacent to the north-west of the Survey Site.
Centre-barred sallow	<i>Atethmia centrigo</i>	2004	TL038380	Approximately 1.7km to the east of the Survey Site.
Dark brocade	<i>Blepharita adusta</i>	2009	TL0238	In Ampthill Park CWS approximately 160m to the east of the Survey Site.
Mottled rustic	<i>Caradrina morpheus</i>	2010	TL0238	In Ampthill Park CWS approximately 160m to the east of the Survey Site.
Small square-spot	<i>Diarsia rubi</i>	2009	TL0238	In Ampthill Park CWS approximately 160m to the east of the Survey Site.
Small phoenix	<i>Ecliptopera silaceata</i>	2012	TL0040	Adjacent to the west of the Survey Site.

Common Name	Scientific Name	Date	Grid Ref.	Location and Distance from Site
September thorn	<i>Ennomos erosaria</i>	2005	TL038380	Approximately 1.7km to the east of the Survey Site.
Spinach	<i>Eulithis mellinata</i>	2005	TL038380	Approximately 1.7km to the east of the Survey Site.
White-line dart	<i>Euxoa tritici</i>	2010	TL0238	In Ampthill Park CWS approximately 160m to the east of the Survey Site.
Small emerald	<i>Hemistola chrysoprasaria</i>	2006	TL038380	Approximately 1.7km to the east of the Survey Site.
Ghost moth	<i>Hepialus humuli</i>	2009	TL0041	Adjacent to the west of the Survey Site.
Rustic	<i>Hoplodrina blanda</i>	2010	TL035370	Approximately 1.9km to the south-east of the Survey Site.
Rosy rustic	<i>Hydraecia micacea</i>	2010	TL032379	Approximately 1.2km to the south-east of the Survey Site.
Brindled beauty	<i>Lycia hirtaria</i>	2010	TL032379	Approximately 1.2km to the south-east of the Survey Site.
Lackey	<i>Malacosoma neustria</i>	2010	TL0140	On site (Rookery Clay Pit CWS)
Dot moth	<i>Melanchra persicariae</i>	2010	TL0238	In Ampthill Park CWS approximately 160m to the east of the Survey Site.
Broom moth	<i>Melanchra pisi</i>	2009	TL0041	Adjacent to the west of the Survey Site.
Shoulder-striped wainscot	<i>Mythimna comma</i>	2011	TL0238	In Ampthill Park CWS approximately 160m to the east of the Survey Site.
Hore-hound long-horn	<i>Nemophora fasciella</i>	2009	TL0238	In Ampthill Park CWS approximately 160m to the east of the Survey Site.
Shaded broad-bar	<i>Scotopteryx chenopodiata</i>	2009	TL0240	On site (Rookery Clay Pit CWS)
White ermine	<i>Spilosoma lubricipeda</i>	2009	TL0041	Adjacent to the west of the Survey Site.
Buff Ermine	<i>Spilosoma luteum</i>	2011	TL0238	In Ampthill Park CWS approximately 160m to the east of the Survey Site.
Hedge rustic	<i>Tholera cespitis</i>	2006	TL0238	In Ampthill Park CWS approximately 160m to the east of the Survey Site.
Feathered gothic	<i>Tholera decimalis</i>	2006	TL0238	In Ampthill Park CWS approximately 160m to the east of the Survey Site.
Blood-vein	<i>Timandra comae</i>	2008	TL0140	On site (Rookery Clay Pit CWS)
Cinnabar	<i>Tyria jacobaeae</i>	2009	TL0140	On site (Rookery Clay Pit CWS)
Oak hook-tip	<i>Watsonalla binaria</i>	2010	TL0238	In Ampthill Park CWS approximately 160m to the east of the Survey Site.

Common Name	Scientific Name	Date	Grid Ref.	Location and Distance from Site
Sallow	<i>Xanthia icteritia</i>	2006	TL0238	In Ampthill Park CWS approximately 160m to the east of the Survey Site.
Common toad	<i>Bufo bufo</i>	2013	TL0140	On site (Rookery Clay Pit CWS)*
Great crested newt	<i>Triturus cristatus</i>	2013	TL0140	On site (Rookery Clay Pit CWS)*
Grass snake	<i>Natrix natrix</i>	2013	TL0140	On site (Rookery Clay Pit CWS)*
Common lizard	<i>Zootoca vivipara</i>	2013	TL0140	On site (Rookery Clay Pit CWS)*
Sparrowhawk	<i>Accipiter nisus</i>	2013	TL0140	On site (Rookery Clay Pit CWS)*
Common sandpiper	<i>Actitis hypoleucos</i>	2006	TL015407	On site (Rookery Clay Pit CWS)
Skylark	<i>Alauda arvensis</i>	2013	TL0140	On site (Rookery Clay Pit CWS)*
Kingfisher	<i>Alcedo atthis</i>	2013	TL0140	On site (Rookery Clay Pit CWS)*
Pintail	<i>Anas acuta</i>	2013	TL0140	On site (Rookery Clay Pit CWS)*
Shoveller	<i>Anas clypeata</i>	2013	TL0140	On site (Rookery Clay Pit CWS)*
Teal	<i>Anas cracca</i>	2013	TL0140	On site (Rookery Clay Pit CWS)*
Wigeon	<i>Anas penelope</i>	2013	TL0140	On site (Rookery Clay Pit CWS)*
Mallard	<i>Anas platyrhynchos</i>	2013	TL0140	On site (Rookery Clay Pit CWS)*
Garganey	<i>Anas querquedula</i>	2008	TL0141	On site (Rookery Clay Pit CWS)
Gadwall	<i>Anas strepera</i>	2013	TL0140	On site (Rookery Clay Pit CWS)*
Greylag goose	<i>Anser anser</i>	2008	TL0141	On site (Rookery Clay Pit CWS)
Meadow pipit	<i>Anthus pratensis</i>	2013	TL0140	On site (Rookery Clay Pit CWS)*
Tree pipit	<i>Anthus trivialis</i>	2006	TL0140	On site (Rookery Clay Pit CWS)
Swift	<i>Apus apus</i>	2013	TL0140	On site (Rookery Clay Pit CWS)*
Grey heron	<i>Ardea cinerea</i>	2013	TL0140	On site (Rookery Clay Pit CWS)*
Turnstone	<i>Arenaria interpres</i>	2008	TL0142	On site (Rookery Clay Pit CWS)
Short-eared owl	<i>Asio flammeus</i>	2008	TL0041	Adjacent to the west of the Survey Site.
Long-eared owl	<i>Asio otus</i>	2008	TL0041	Adjacent to the west of the Survey Site.



Common Name	Scientific Name	Date	Grid Ref.	Location and Distance from Site
Little owl	<i>Athene noctua</i>	2004	TL008425	Stewartby Lake CWS adjacent to the west of the Survey Site.
Pochard	<i>Aythya ferina</i>	2013	TL0140	On site (Rookery Clay Pit CWS)*
Tufted duck	<i>Aythya fuligula</i>	2013	TL0140	On site (Rookery Clay Pit CWS)*
Greater scaup	<i>Aythya marila</i>	2007	TL0042	Stewartby Lake CWS adjacent to the west of the Survey Site.
Ferruginous duck	<i>Aythya nyroca</i>	2003	TL0042	Stewartby Lake CWS adjacent to the west of the Survey Site.
Waxwing	<i>Bombycilla garrulus</i>	2005	TL008425	Stewartby Lake CWS adjacent to the west of the Survey Site.
Bittern	<i>Botaurus stellaris</i>	2013	TL0140	On site (Rookery Clay Pit CWS)*
Barnacle goose	<i>Branta leucopsis</i>	2007	TL0042	Stewartby Lake CWS adjacent to the west of the Survey Site.
Goldeneye	<i>Bucephala clangula</i>	2008	TL0042	Stewartby Lake CWS adjacent to the west of the Survey Site.
Buzzard	<i>Buteo buteo</i>	2013	TL0140	On site (Rookery Clay Pit CWS)*
Sanderling	<i>Calidris alba</i>	2005	TL0140	On site (Rookery Clay Pit CWS)
Dunlin	<i>Calidris alpina</i>	2006	TL0140	On site (Rookery Clay Pit CWS)
Knot	<i>Calidris canutus</i>	2006	TL0140	On site (Rookery Clay Pit CWS)
Curlew sandpiper	<i>Calidris ferruginea</i>	2003	TL0041	Adjacent to the west of the Survey Site.
Little stint	<i>Calidris minuta</i>	2006	TL027430	Coronation Pit CWS, 1.1km to the north-east of the Survey Site.
Lesser redpoll	<i>Carduelis cabaret</i>	2005	TL0042	Stewartby Lake CWS adjacent to the west of the Survey Site.
Linnet	<i>Carduelis cannabina</i>	2005	TL0041	Adjacent to the west of the Survey Site.
Goldfinch	<i>Carduelis carduelis</i>	2014	TL0140	On site (Rookery Clay Pit CWS)*
Greenfinch	<i>Carduelis chloris</i>	2008	TL0141	On site (Rookery Clay Pit CWS)
Common redpoll	<i>Carduelis flammea</i>	2005	TL026385	In Ampthill Park CWS approximately 160m to the east of the Survey Site.
Siskin	<i>Carduelis spinus</i>	2013	TL0140	On site (Rookery Clay Pit CWS)*
Tree creeper	<i>Certhia familiaris</i>	2007	SP9938	Approximately 580m to the south-west of the Survey Site.
Cetti's warbler	<i>Cettia cetti</i>	2014	TL0140	On site (Rookery Clay Pit CWS)*
Little ringed plover	<i>Charadrius dubius</i>	2013	TL0140	On site (Rookery Clay Pit CWS)*

Common Name	Scientific Name	Date	Grid Ref.	Location and Distance from Site
Ringed plover	<i>Charadrius hiaticula</i>	2008	TL0141	On site (Rookery Clay Pit CWS)
<i>Black tern</i>	<i>Chlidonias niger</i>	2008	TL0141	On site (Rookery Clay Pit CWS)
Black-headed gull	<i>Chroicocephalus ridibundus</i>	2013	TL0140	On site (Rookery Clay Pit CWS)*
<i>Marsh harrier</i>	<i>Circus aeruginosus</i>	2014	TL0141	On site (Rookery Clay Pit CWS)*
<i>Hen harrier</i>	<i>Circus cyaneus</i>	2008	TL0142	On site (Rookery Clay Pit CWS)
Hawfinch	<i>Coccothraustes coccothraustes</i>	2005	TL0042	Stewartby Lake CWS adjacent to the west of the Survey Site.
Stock dove	<i>Columba oenas</i>	2008	TL0141	On site (Rookery Clay Pit CWS)
Raven	<i>Corvus corax</i>	2008	TL015407	On site (within Rookery Clay Pit).
<i>Quail</i>	<i>Coturnix coturnix</i>	2006	TL0041	Adjacent to the west of the Survey Site.
Cuckoo	<i>Cuculus canorus</i>	2013	TL0140	On site (Rookery Clay Pit CWS)*
<i>Whooper swan</i>	<i>Cygnus columbianus</i>	2005	TL015407	On site (within Rookery Clay Pit).
Mute swan	<i>Cygnus olor</i>	2014	TL0140	On site (Rookery Clay Pit CWS)
House martin	<i>Delchion urbicum</i>	2013	TL0140	On site (Rookery Clay Pit CWS)*
Great spotter woodpecker	<i>Dendrocopus major</i>	2013	TL0140	On site (Rookery Clay Pit CWS)*
Lesser spotted woodpecker	<i>Dendrocopus minor</i>	2007	TL029381	In Ampthill Park CWS approximately 160m to the east of the Survey Site.
Little egret	<i>Egretta garzetta</i>	2013	TL0140	On site (Rookery Clay Pit CWS)*
Corn bunting	<i>Emberiza calandra</i>	2004	TL0042	Stewartby Lake CWS adjacent to the west of the Survey Site.
Yellowhammer	<i>Emberiza citronella</i>	2008	TL015407	On site (within Rookery Clay Pit).
Reed bunting	<i>Emberiza schoeniclus</i>	2013	TL0140	On site (Rookery Clay Pit CWS)*
<i>Merlin</i>	<i>Falco columbarius</i>	2014	TL0140	On site (Rookery Clay Pit CWS)*
<i>Hobby</i>	<i>Falco subbuteo</i>	2013	TL0140	On site (Rookery Clay Pit CWS)*
Kestrel	<i>Falco tinnunculus</i>	2014	TL0140	On site (Rookery Clay Pit CWS)*
Red-footed falcon	<i>Falco vespertinus</i>	2012	TL0140	On site (Rookery Clay Pit CWS)
Pied flycatcher	<i>Motacilla alba</i>	2003	TL0041	Adjacent to the west of the Survey Site.

Common Name	Scientific Name	Date	Grid Ref.	Location and Distance from Site
Brambling	<i>Fringilla montifringilla</i>	2006	TL0042	Stewartby Lake CWS adjacent to the west of the Survey Site.
Fulmar	<i>Fulmarus glacialis</i>	2008	TL0042	Stewartby Lake CWS adjacent to the west of the Survey Site.
Snipe	<i>Gallinago gallinago</i>	2014	TL0140	On site (Rookery Clay Pit CWS)*
Moorhen	<i>Gallinula chloropus</i>	2014	TL0140	On site (Rookery Clay Pit CWS)*
Black-throated diver	<i>Gavia arctica</i>	2007	TL0042	Stewartby Lake CWS adjacent to the west of the Survey Site.
Great northern diver	<i>Gavia immer</i>	2006	TL004417	Adjacent to the west of the Survey Site.
Oystercatcher	<i>Haemotopus ostralegus</i>	2013	TL0140	On site (Rookery Clay Pit CWS)*
Swallow	<i>Hirundo rustica</i>	2013	TL0140	On site (Rookery Clay Pit CWS)*
Little gull	<i>Hydrocoloeus minutus</i>	2008	TL0041	Adjacent to the west of the Survey Site.
Caspian tern	<i>Hydroprogne caspia</i>	2007	TL0041	Adjacent to the west of the Survey Site.
Great grey shrike	<i>Lanius excubitor</i>	2003	TL008425	Stewartby Lake CWS adjacent to the west of the Survey Site.
Herring gull	<i>Larus argentatus</i>	2013	TL0140	On site (Rookery Clay Pit CWS)*
Common gull	<i>Larus canus</i>	2013	TL0140	On site (Rookery Clay Pit CWS)*
Lesser black-backed gull	<i>Larus fuscus</i>	2013	TL0140	On site (Rookery Clay Pit CWS)*
Iceland gull	<i>Larus glaucooides</i>	2007	TL0042	Stewartby Lake CWS adjacent to the west of the Survey Site.
Glaucous gull	<i>Larus hyperboreus</i>	2007	TL0042	Stewartby Lake CWS adjacent to the west of the Survey Site.
Great black-backed gull	<i>Larus marinus</i>	2004	TL015407	On site (within Rookery Clay Pit).
Mediterranean gull	<i>Larus melanocephalus</i>	2007	TL015407	On site (within Rookery Clay Pit).
Yellow-legged gull	<i>Larus michahellis</i>	2007	TL0042	Stewartby Lake CWS adjacent to the west of the Survey Site.
Bar-tailed godwit	<i>Limosa lapponica</i>	2004	TL008425	Stewartby Lake CWS adjacent to the west of the Survey Site.
Black-tailed godwit	<i>Limosa limosa</i>	2006	TL015407	On site (within Rookery Clay Pit).
Grasshopper warbler	<i>Locustella naevia</i>	2013	TL0140	On site (Rookery Clay Pit CWS)*
Nightingale	<i>Luscinia megarhynchos</i>	2005	TL008425	Stewartby Lake CWS adjacent to the west of the Survey Site.

Common Name	Scientific Name	Date	Grid Ref.	Location and Distance from Site
<i>Common scoter</i>	<i>Melanitta nigra</i>	2004	TL008425	Stewartby Lake CWS adjacent to the west of the Survey Site.
Smew	<i>Mergellus albellus</i>	2005	TL004417	Adjacent to the west of the Survey Site.
Goodsander	<i>Mergus merganser</i>	2003	TL004417	Adjacent to the west of the Survey Site.
<i>Red kite</i>	<i>Milvus milvus</i>	2014	TL0140	On site (Rookery Clay Pit CWS)*
Gannet	<i>Morus bassanus</i>	2004	TL008425	Stewartby Lake CWS adjacent to the west of the Survey Site.
Pied wagtail	<i>Motacilla alba</i>	2013	TL0140	On site (Rookery Clay Pit CWS)*
Grey wagtail	<i>Motacilla cinerea</i>	2013	TL0140	On site (Rookery Clay Pit CWS)*
Yellow wagtail	<i>Motacilla flava flavissima</i>	2013	TL0140	On site (Rookery Clay Pit CWS)*
Spotted flycatcher	<i>Muscicapa striata</i>	2006	TL004417	Adjacent to the west of the Survey Site
Red crested pochard	<i>Netta rufina</i>	2006	TL004417	Adjacent to the west of the Survey Site
Curlew	<i>Numenius arquata</i>	2005	TL015407	On site (within Rookery Clay Pit).
<i>Whimbrel</i>	<i>Numenius phaeopus</i>	2008	TL0141	On site (Rookery Clay Pit CWS)
Wheatear	<i>Oenanthe oenanthe</i>	2013	TL0140	On site (Rookery Clay Pit CWS)*
Osprey	<i>Pandion haliaetus</i>	2006	TL015407	On site (within Rookery Clay Pit).
<i>Bearded tit</i>	<i>Panurus biarmicus</i>	2004	TL004417	Adjacent to the west of the Survey Site.
Tree sparrow	<i>Passer montanus</i>	2003	TL004417	Adjacent to the west of the Survey Site.
House sparrow	<i>Passer domesticus</i>	2008	TL0141	On site (Rookery Clay Pit CWS)
Grey partridge	<i>Perdix perdix</i>	2007	TL0141	On site (Rookery Clay Pit CWS)
Coal tit	<i>Pariparus ater</i>	2013	TL0140	On site (Rookery Clay Pit CWS)*
Shag	<i>Phalacrocorax aristotelis</i>	2005	TL008425	Stewartby Lake CWS adjacent to the west of the Survey Site.
Cormorant	<i>Phalacrocorax carbo</i>	2014	TL0140	On site (Rookery Clay Pit CWS)*
Grey phalope	<i>Phalaropus fulicarius</i>	2007	TL0042	Stewartby Lake CWS adjacent to the west of the Survey Site.
<i>Ruff</i>	<i>Philomachus pugnax</i>	2005	TL015407	On site (within Rookery Clay Pit).

Common Name	Scientific Name	Date	Grid Ref.	Location and Distance from Site
<i>Black redstart</i>	<i>Phoenicurus ochruros</i>	2003	TL03	Within 2km of the Survey Site.
Redstart	<i>Phoenicurus phoenicurus</i>	2006	TL015407	On site (within Rookery Clay Pit).
Willow warbler	<i>Phylloscopus trochilus</i>	2013	TL0140	On site (Rookery Clay Pit CWS)*
Green woodpecker	<i>Picus viridis</i>	2013	TL0140	On site (Rookery Clay Pit CWS)*
<i>Snow bunting</i>	<i>Plectrophenax nivalis</i>	2007	TL0142	On site (Rookery Clay Pit CWS)
Golden plover	<i>Pluvialis apricaria</i>	2005	TL015407	On site (within Rookery Clay Pit).
Grey plover	<i>Pluvialis squatarola</i>	2007	TL0042	Stewartby Lake CWS adjacent to the west of the Survey Site.
<i>Slavonian grebe</i>	<i>Podiceps auritus</i>	2004	TL008425	Stewartby Lake CWS adjacent to the west of the Survey Site.
Great crested grebe	<i>Podiceps cristatus</i>	2013	TL0140	On site (Rookery Clay Pit CWS)*
<i>Black-necked grebe</i>	<i>Podiceps nigricollis</i>	2006	TL008425	Stewartby Lake CWS adjacent to the west of the Survey Site.
Marsh tit	<i>Poecile palustris</i>	2006	TL008425	Stewartby Lake CWS adjacent to the west of the Survey Site.
Dunnock	<i>Prunella modularis</i>	2013	TL0140	On site (Rookery Clay Pit CWS)*
Bullfinch	<i>Pyrrhula pyrrhula</i>	2013	TL0140	On site (Rookery Clay Pit CWS)*
Water rail	<i>Rallus aquaticus</i>	2005	TL008425	Stewartby Lake CWS adjacent to the west of the Survey Site.
<i>Avocet</i>	<i>Recurvirostra avosetta</i>	2004	TL015407	On site (within Rookery Clay Pit).
<i>Firecrest</i>	<i>Regulus ignicapilla</i>	2004	TL008425	Stewartby Lake CWS adjacent to the west of the Survey Site.
Goldcrest	<i>Regulus regulus</i>	2006	TL008425	Stewartby Lake CWS adjacent to the west of the Survey Site.
Sand martin	<i>Riparia riparia</i>	2013	TL0140	On site (Rookery Clay Pit CWS)*
Kittiwake	<i>Rissa tridactyla</i>	2004	TL008425	Stewartby Lake CWS adjacent to the west of the Survey Site.
Whinchat	<i>Saxicola rubetra</i>	2006	TL015407	On site (within Rookery Clay Pit).
Stonechat	<i>Saxicola torquata</i>	2005	TL026385	In Ampthill Park CWS approximately 160m to the east of the Survey Site.

Common Name	Scientific Name	Date	Grid Ref.	Location and Distance from Site
Woodcock	<i>Scolopax rusticola</i>	2014	TL0140	On site (Rookery Clay Pit CWS)*
Nuthatch	<i>Sitta europaea</i>	2007	SP9938	Approximately 580m to the south-west of the Survey Site
Common tern	<i>Sterna hirundo</i>	2014	TL0140	On site (Rookery Clay Pit CWS)*
Arctic tern	<i>Sterna paradisaea</i>	2006	TL008425	Stewartby Lake CWS adjacent to the west of the Survey Site.
Sandwich tern	<i>Sterna sandvicensis</i>	2008	TL0042	Stewartby Lake CWS adjacent to the west of the Survey Site.
Little tern	<i>Sternula albifrons</i>	2005	TL015407	On site (within Rookery Clay Pit).
Turtle dove	<i>Streptopelia turtur</i>	2012	TL0140	On site (Rookery Clay Pit CWS)*
Tawny owl	<i>Strix aluco</i>	2005	TL008425	Stewartby Lake CWS adjacent to the west of the Survey Site.
Starling	<i>Sturnus vulgaris</i>	2013	TL0140	On site (Rookery Clay Pit CWS)*
Whitethroat	<i>Sylvia communis</i>	2013	TL0140	On site (Rookery Clay Pit CWS)*
Little grebe	<i>Tachybaptus ruficollis</i>	2013	TL0140	On site (Rookery Clay Pit CWS)*
Shelduck	<i>Tadorna tadorna</i>	2006	TL015407	On site (within Rookery Clay Pit CWS).
Spotted redshank	<i>Tringa erythropus</i>	2005	TL015407	On site (within Rookery Clay Pit CWS).
Wood sandpiper	<i>Tringa glareola</i>	2004	TL015407	On site (within Rookery Clay Pit CWS).
Greenshank	<i>Tringa nebularia</i>	2005	TL015407	On site (within Rookery Clay Pit CWS).
Green sandpiper	<i>Tringa ochropus</i>	2005	TL015407	On site (within Rookery Clay Pit CWS).
Redshank	<i>Tringa totanus</i>	2005	TL015407	On site (within Rookery Clay Pit CWS).
Redwing	<i>Turdus iliacus</i>	2014	TL0140	On site (Rookery Clay Pit CWS)*
Song thrush	<i>Turdus philomelos</i>	2008	TL0141	On site (Rookery Clay Pit CWS)
Fieldfare	<i>Turdus pilaris</i>	2014	TL0140	On site (Rookery Clay Pit CWS)*
Ring ouzel	<i>Turdus torquatus</i>	2008	TL0042	Stewartby Lake CWS adjacent to the west of the Survey Site.
Mistle thrush	<i>Turdus viscivorus</i>	2013	TL0140	On site (Rookery Clay Pit CWS)*

Common Name	Scientific Name	Date	Grid Ref.	Location and Distance from Site
Barn owl	<i>Tyto alba</i>	2006	TL004417	Adjacent to the west of the Survey Site
Lapwing	<i>Vanellus vanellus</i>	2014	TL0140	On site (Rookery Clay Pit CWS)*
Water vole	<i>Arvicola amphibius</i>	2012	TL019437	Approximately 1.5km to the north of the Survey Site.
Otter	<i>Lutra lutra</i>	2010	TL011415	Approximately 80m to the west of the Survey Site.
Badger	<i>Meles meles</i>	2013	TL0140	On site (Rookery Clay Pit CWS)*
Barbastelle bat	<i>Barbastella barbastellus</i>	2013	TL031384	Approximately 1km to the east of the Survey Site.
Natterer's bat	<i>Myotis nattereri</i>	2013	TL031384	Approximately 1km to the east of the Survey Site.
Noctule bat (Tree roost)	<i>Nyctalus noctula</i>	2012	TL015384	Approximately 150m to the west of the Survey Site.
Bat from the genus <i>Myotis</i>	<i>Myotis sp.</i>	2008	TL031386	Approximately 1km to the east of the Survey Site.
Daubenton's bat	<i>Myotis daubentonii</i>	2009	TL006407	Approximately 300m to the west of the Survey Site.
Common pipistrelle	<i>Pipistrellus Pipistrellus</i>	2009	TL020426	Approximately 600m to the north of the Survey Site.
Soprano pipistrelle	<i>Pipistrellus pygmaeus</i>	2009	TL031383	Approximately 1km to the east of the Survey Site.
Brown long-eared bat	<i>Plecotus auritus</i>	2013	TL031384	Approximately 1km to the east of the Survey Site.
Serotine bat	<i>Eptesicus serotinus</i>	2008	TL024381	Approximately 400m to the south-east of the Survey Site.
Harvest mouse	<i>Microtus minutus</i>	2012	TL0140	On site (Rookery Clay Pit CWS)*
Brown hare	<i>Lepus europaeus</i>	2014	TL0140	On site (Rookery Clay Pit CWS)*
Hedgehog	<i>Erinaceus europaeus</i>	2005	TL017382	Approximately 190m to the west of the Survey Site

\* = Species incidentally recorded during great crested newt survey and translocation works undertaken at the Rookery Pit between 2011 and 2014.





## 9 Appendix 3: Target Notes

### Target Note 1

The rail embankment on the southern boundary of the Survey Site supports a parcel of mature-semi-mature semi-natural broadleaved woodland. This area has the potential to be used by badgers for sett building, as possible terrestrial habitat for great crested newts as possible roosting, foraging and commuting habitat for bats and as nesting habitat for birds.

Scientific Name	Common Name	DAFOR (Frequency)
<b>Trees/shrubs</b>		
Poplar sp.	<i>Populus sp.</i>	A
Hawthorn	<i>Crataegus monogyna</i>	A
Elder	<i>Sambucus nigra</i>	A
Pedunculate oak	<i>Quercus robur</i>	O
<b>Herbs</b>		
Lords and Ladies	<i>Arum maculatum</i>	F
Ivy	<i>Hedera helix</i>	F
Common nettle	<i>Urtica dioica</i>	F

### Target Note 2

A mosaic of tall ruderal vegetation and poor semi-improved grassland borders the footpath in the south-eastern corner of the Survey Site. This habitat has the potential to provide foraging and sheltering habitat for reptiles.

Scientific Name	Common Name	DAFOR (Frequency)
<b>Grasses/Sedges/Rushes</b>		
Tall fescue	<i>Festuca arundinacea</i>	O
False oat-grass	<i>Arrhenatherum elatius</i>	O
Common bent	<i>Agrostis capillaris</i>	O
<b>Herbs</b>		
Common nettle	<i>Urtica dioica</i>	D
Lords and ladies	<i>Arum maculatum</i>	O
Cleavers	<i>Galium aparine</i>	O
Bramble	<i>Rubus fruticosus</i> agg.	O

### Target Note 3

The majority of the south of the Survey Site consists of intensively managed/grazed improved grassland pasture. This pasture has limited species diversity being dominated by perennial ryegrass *Lolium perenne* with frequent Yorkshire fog *Holcus lanatus* and occasional common bent. Forbs and herbs are sparse amongst the sward with only creeping buttercup *Ranunculus repens* present.

### Target Note 4

A small parcel of young, plantation broadleaved woodland located in the south-eastern corner of the Survey Site. This area is likely to provide nesting habitat for birds and has the potential to provide foraging and sheltering habitat for badgers and foraging and commuting habitat for bats.

Scientific Name	Common Name	DAFOR (Frequency)
<b>Trees/shrubs</b>		
Poplar sp.	<i>Populus sp.</i>	A
Hawthorn	<i>Crataegus monogyna</i>	A
Hazel	<i>Corylus avellana</i>	O
<b>Herbs</b>		
Lords and Ladies	<i>Arum maculatum</i>	F

**Target Note 5**

A semi-mature copse of semi-natural broadleaved woodland is located on the western boundary of the Survey Site to the south of South Pilling Farm. This area of woodland has the potential to be used as sheltering habitat by badgers, foraging, commuting and roosting habitat for bats and as nesting habitat by birds.

Scientific Name	Common Name	DAFOR (Frequency)
<b>Trees/shrubs</b>		
Ash	<i>Fraxinus excelsior</i>	F
Poplar sp.	<i>Populus sp.</i>	F
Norway maple	<i>Acer platanoides</i>	O
Field maple	<i>Acer campestre</i>	O
Beech	<i>Fagus sylvatica</i>	O
Scot's pine	<i>Pinus sylvestris</i>	O
Silver birch	<i>Betula pendula</i>	O
Hawthorn	<i>Crataegus monogyna</i>	O
Bedunculate oak	<i>Quercus robur</i>	O
<b>Herbs</b>		
Lords and Ladies	<i>Arum maculatum</i>	F
Common nettle	<i>Urtica dioica</i>	O

**Target Note 6**

This woodland parcel continues south along the western boundary of the Survey Site where it borders the road. This area is likely to be used as a foraging and commuting resource by bats present in the wider landscape.

**Target Note 7**

This woodland eventually narrows to form a species-poor hedgerow approximately 3m in height. This hedgerow is dominated by hawthorn with occasional dog rose *Rosa canina*. Lords and ladies and common nettle are present in the ground flora associated with this feature.

**Target Note 8**

An area of young plantation mixed woodland is present in the centre of the Survey Site and bisects the Survey Site from east to west. This area is likely to provide nesting habitat for birds and the dense grassland ground layer has the potential to provide sheltering and foraging habitat for reptiles. The trees are young.

Scientific Name	Common Name	DAFOR (Frequency)
<b>Trees/shrubs</b>		
Pedunculate oak	<i>Quercus robur</i>	F
Scots pine	<i>Pinus sylvestris</i>	F
Hazel	<i>Corylus avellana</i>	F
Field maple	<i>Acer campestre</i>	O
Neech	<i>Fagus sylvatica</i>	O
Guelder rose	<i>Viburnum opulus</i>	O
Silver birch	<i>Betula pendula</i>	O
Hawthorn	<i>Crataegus monogyna</i>	O
<b>Grasses/Sedges/Rushes</b>		
Tall fescue	<i>Festuca arundinacea</i>	O
False oat-grass	<i>Arrhenatherum elatius</i>	O
Red fescue	<i>Festuca rubra</i>	O
<b>Herbs</b>		
Bramble	<i>Rubus fruticosus</i> agg.	O
Common nettle	<i>Urtica dioica</i>	O

**Note 9**

A wet ditch comprising open areas with limited macrophyte cover, including fool's water cress *Apium nodiflorum*. This ditch has some potential to support water voles.

**Target Note 10**

A sparsely planted area of mixed plantation woodland. The low intensity planting has allowed areas of semi-improved grassland to mature providing possible habitat for reptiles. The vegetative composition of this area is similar to that described in Target Note 8 above.

**Target Note 11**

A parcel of semi-natural broadleaved woodland. This woodland parcel has the potential to provide foraging habitat for badgers and nesting habitat for birds.

Scientific Name	Common Name	DAFOR (Frequency)
<b>Trees/shrubs</b>		
Pedunculate oak	<i>Quercus robur</i>	F
Ash	<i>Fraxinus excelsior</i>	F
Elder	<i>Sambucus nigra</i>	F
Hawthorn	<i>Crataegus monogyna</i>	O
<b>Herbs</b>		
Lords and ladies	<i>Arum maculatum</i>	O
Common nettle	<i>Urtica dioica</i>	O

**Target Note 12**

An area of tall ruderal vegetation, approximately 5m in width, forms a buffer between this woodland parcel and the adjacent arable field. This area supports frequent common nettle *Urtica dioica*, willowherb (likely *Epilobium hirsutum*), hogweed *Heracleum sphondylium* and cow parsley *Anthriscus sylvestris*. This area becomes increasingly dominated by bramble *Rubus fruticosus* agg. and a number of very young ash *Fraxinus excelsior* tree saplings further to the south. This habitat mosaic is considered to have good potential to support reptiles (common lizard in particular).

**Target Note 13**

An arable crop (likely millet) that has been left uncut in order to provide cover for game birds (e.g. pheasants and partridges). A small number of herbs and forbs associated with arable habitat are present within this area including red dead nettle *Lamium purpureum* and common field speedwell *Veronica persica*.

**Target Note 14**

An area of mature, dense scrub dominated by elder *Sambucus nigra* and hawthorn *Crataegus monogyna*. Ground flora associated with this parcel included lords and ladies *Arum maculatum*, common nettle *Urtica dioica* and occasional ground ivy *Glechoma herderacea* and cleavers *Galium aparine*. This area is likely to be used by badgers as sheltering/sett building habitat.

**Target Note 15**

A shallow wet ditch. It is likely that this ditch is only holding water at present as a result of the recent heavy rain. There is very limited vegetation growth within the ditch and as a result it is considered to have limited potential to support water voles.

**Target Note 16**

The scrub described in TN14 above thins at its western extent to become dominated by semi-mature ash trees. The ground flora is dominated by semi-improved grassland considered to provide some limited habitat for reptiles.

**Target Note 17**

Pond D. This pond was dry at the time of survey and is dominated by ruderal vegetation including willowherb *Epilobium sp.* and common nettle *Urtica dioica*.

**Target Note 18**

A parcel of plantation broadleaved woodland located on the south-eastern corner of the Rookery Clay Pit CWS. This habitat parcel provides high quality nesting habitat for birds.

Scientific Name	Common Name	DAFOR (Frequency)
<b>Trees/shrubs</b>		
Alder	<i>Alnus glutinosa</i>	A
Silver birch	<i>Betula pendula</i>	F
Pedunculate oak	<i>Quercus robur</i>	F
Ash	<i>Fraxinus excelsior</i>	O
Hazel	<i>Corylus avellana</i>	O
Hawthorn	<i>Crataegus monogyna</i>	O
<b>Herbs</b>		
Lords and ladies	<i>Arum maculatum</i>	O
Common nettle	<i>Urtica dioica</i>	O

**Target Note 19**

A wet ditch supporting high water levels, potentially due to recent heavy rainfall. This ditch supports a number of ruderal species including creeping thistle *Cirsium arvense* and willowherb *Epilobium* sp. This ditch is likely to dry out annually.

**Target Note 20**

The ditch adjacent to South Pilling Farm is lined with a number of planted trees that may be used as a commuting feature by bats. These include Lombardy poplar *Populus nigra italica*, crack willow *Salix fragilis* and hawthorn *Crataegus monogyna*.

**Target Note 21**

The access track in the north of the Survey Site consists of a mosaic of bare ground (soil), rubble (rail ballast) tall ruderal vegetation, rabbit grazed grassland and scattered hawthorn *Crataegus monogyna* and bramble *Rubus fruticosus* agg. scrub. This area has the potential to provide foraging and sheltering habitats for great crested newts and reptiles.



## 10 Appendix 4: Summaries of Relevant Legislation, Policy and Other Instruments

10.1 This section briefly summarises the relevant legislation, policy and related issues that are mentioned in the main text of the report. The following text does not constitute legal advice.

### National Planning Policy Framework

10.2 The government published the National Planning Policy Framework (NPPF) on 27<sup>th</sup> March 2012. The NPPF states that, “*the planning system should contribute to and enhance the natural and local environment by:*

- e. Protecting and enhancing valued landscapes, geological conservation interests and soils;*
- f. Recognising the wider benefits of ecosystem services;*
- g. Minimising impacts on biodiversity and providing net gains in biodiversity, where possible contributing to the Government’s commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;*
- h. Preventing both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, air, water or noise pollution or land instability; and*
- i. Remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.”*

### Planning – land allocation and policies

10.3 The NPPF indicates that ‘*in preparing plans to meet development needs, the aim should be to minimise pollution and other adverse effects on the local and natural environment. Plans should allocate land with the least environmental or amenity value, where consistent with other policies in this Framework.*’

10.4 In paragraph 111, the NPPF refers to brownfield land as follows: ‘*planning policies and decisions should encourage the effective use of land by re-using land that has been previously developed (brownfield land), provided that it is not of high environmental value.*’

10.5 Local planning authorities are advised in paragraph 113 to ‘*set criteria-based policies against which proposals for any development on or affecting protected wildlife or geodiversity sites or landscape areas will be judged. Distinctions should be made between the hierarchy of international, national and locally designated sites so that protection is commensurate with their status and gives appropriate weight to their importance and the contribution that they make to wider ecological networks.*’

10.6 Local planning authorities are advised further to ‘*set out a strategic approach in their Local Plans, planning positively for the creation, protection, enhancement and management of networks of biodiversity and green infrastructure...*’

10.7 The NPPF also states that, “*to minimise impacts on biodiversity and geodiversity, planning policies should:*

- a. Plan for biodiversity at a landscape-scale across local authority boundaries;*
- b. Identify and map components of the local ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity, wildlife corridors and stepping stones that connect them and areas identified by local partnerships for habitat restoration or creation;*
- c. Promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species populations, linked to national and local targets; and identify suitable indicators for monitoring biodiversity in the plan;*
- d. Aim to prevent harm to geological conservation interests; and*

- e. *Where Nature Improvement Areas are identified in Local Plans, consider specifying the types of development that may be appropriate in these Areas.*

### **Planning applications and biodiversity**

- 10.8 *“When determining planning applications, local planning authorities should aim to conserve and enhance biodiversity by applying the following principles:*
- a. *If significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;*
  - b. *Proposed development on land within or outside a Site of Special Scientific Interest likely to have an adverse effect on a Site of Special Scientific Interest (either individually or in combination with other developments) should not normally be permitted. Where an adverse effect on the site’s notified special interest features is likely, an exception should only be made where the benefits of the development, at this site clearly outweigh both the impacts that it is likely to have on the features of the site that make it of special scientific interest and any broader impacts on the national network of Sites of Special Scientific Interest;*
  - c. *Development proposals where the primary objective is to conserve or enhance biodiversity should be permitted;*
  - d. *Opportunities to incorporate biodiversity in and around developments should be encouraged;*
- 10.9 In paragraph 125 the NPPF stipulates that *‘by encouraging good design, planning policies and decisions should limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.’*
- 10.10 The Government Circular 06/2005 remains valid and Paragraph 99 provides guidance stating *“It is essential that the presence or otherwise of protected species, and the extent that they may be affected by the proposed development, is established before the planning permission is granted, otherwise all relevant material considerations may not have been addressed in making the decision”*.

### **Species and Habitats of Principal Importance**

- 10.11 The NPPF (paragraph 117) indicates that local authorities should take measures to *“promote the preservation, restoration and re-creation of priority habitats, ecological networks and the protection and recovery of priority species”* linking to national and local targets through local planning policies. Priority species are those species shown on the England Biodiversity List published by the Secretary of State in accordance with Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006. Planning authorities have a duty under Section 40 of the NERC Act to have regard to priority species and habitats in exercising their functions including development control and planning.

### **The Central Bedfordshire Borough Council Core Strategy**

- 10.12 The Core Strategy was adopted in 2009 and supersedes the mid Bedfordshire Local Plan. The relevant planning policy in relation to ecology and biodiversity within this document is Policy CS18.

### **Policy CS16 – Landscape and Woodland**

- 10.13 This policy states that, *“The Council will:*
- *Protect, conserve and enhance the Chilterns Area of Outstanding Natural Beauty;*
  - *Conserve and enhance the varied countryside character and local distinctiveness in accordance with the findings of the Mid Bedfordshire Landscape Character Assessment;*
  - *Resist development where it will have an adverse effect on important landscape features or highly sensitive landscapes;*
  - *Require development to enhance landscapes of lesser quality in accordance with the Landscape Character Assessment;*



- Continue to support the creation of the Forest of Marston Vale recognising the need to regenerate the environmentally damaged landscape through woodland creation to achieve the target of 30% woodland cover in the Forest area by 2030;
- Conserve woodlands including ancient and semi-natural woodland, hedgerows and veteran trees; and
- Promote an increase in tree cover outside of the Forest of Marston Vale, where it would not threaten other valuable habitats”.

### **Policy CS18: Biodiversity and Geological Conservation**

10.14 This policy states that, “The Council will:

- Support the designation, management, and protection of biodiversity and geology including national designations (SSSI’s), locally important County Wildlife Sites (CWS’s) and Regionally Important Geological and Geomorphological Sites (RIGGS); as well as those local priority habitats and species identified in the Local Biodiversity Action Plan.
- Support the maintenance and enhancement of habitats, identify opportunities to create buffer zones and restore and repair fragmented and isolated habitats to form biodiversity networks.

10.15 Development that would fragment or prejudice the biodiversity network will not be permitted.

### **European Legislation and National Legislation**

#### **European protected species –Great crested newts, Bats and Otters**

10.16 The Conservation of Habitats and Species Regulations 2010 (as amended) consolidates the various amendments that have been made to the Regulations. The original (1994) Regulations transposed the EC Habitats Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (Council Directive 92/43/EEC) into national law.

10.17 “European protected species” (EPS) are those which are present on Schedule 2 of the Conservation of Habitats and Species Regulations 2010. They are subject to the provisions of Regulation 41 of those Regulations. All EPS are also protected under the Wildlife and Countryside Act 1981 (as amended). Taken together, these pieces of legislation make it an offence to:

- Intentionally or deliberately capture, injure or kill any wild animal included amongst these species
- Possess or control any live or dead specimens or any part of, or anything derived from a these species
- deliberately disturb wild animals of any such species
- deliberately take or destroy the eggs of such an animal, or
- intentionally, deliberately or recklessly damage or destroy a breeding site or resting place of such an animal, or obstruct access to such a place

10.18 For the purposes of paragraph (c), disturbance of animals includes in particular any disturbance which is likely—

- to impair their ability—
  - to survive, to breed or reproduce, or to rear or nurture their young, or
  - in the case of animals of a hibernating or migratory species, to hibernate or migrate; or
- to affect significantly the local distribution or abundance of the species to which they belong.

10.19 Although the law provides strict protection to these species, it also allows this protection to be set aside (derogation) through the issuing of licences. The licences in England are currently

determined by Natural England (NE) for development works. In accordance with the requirements of the Regulations (2010), a licence can only be issued where the following requirements are satisfied:

- c. The proposal is necessary *'to preserve public health or public safety or other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment'*
- d. *'There is no satisfactory alternative'*
- e. The proposals *'will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range'*.

### **Breeding birds**

- 10.20 All nesting birds are protected under the Wildlife and Countryside Act 1981 (as amended) which makes it an offence to intentionally kill, injure or take any wild bird or take, damage or destroy its nest whilst in use or being built, or take or destroy its eggs.

### **Schedule 1 Bird Species**

- 10.21 Bird species listed on Schedule 1 of the WCA (e.g. barn owl and black redstart) receive additional protection from disturbance at or near an occupied nest site. Schedule 1 of the Act makes it an offence to intentionally or recklessly disturb this species while it is building a nest or is in, on or near a nest containing eggs or young. It also makes it an offence to intentionally or recklessly disturb dependent young of this species.

### **Common Reptiles**

- 10.22 The common, widespread species of reptile (slow worm, grass snake, adder and common lizard) are protected through Sections 9(1) and 9(5) of the Wildlife and Countryside Act 1981 as amended by the Countryside and Rights of Way Act 2000, making it an offence to:
- Intentionally or recklessly kill or injure any reptile; or
  - Sell, offer for sale, possess or transport for the purchase of sale or publish advertisements to buy or sell any reptile.
- 10.23 Reptiles across the UK have undergone significant declines in recent years and all species of reptile within the UK are now included on the list of species of principal importance prepared in response to Section 41 of the Natural Environment and Rural Communities (NERC) Act, 2006. This legislation placed a duty on the Secretary of State to publish, review and revise lists of living organisms in England that are of principal importance for the purpose of conserving biodiversity. The NERC Act also required the Secretary of State to take, and promote the taking of, steps to further the conservation of the listed organism.

### **Badgers**

- 10.24 Badgers are protected under the Protection of Badgers Act 1992. This makes it an offence to wilfully kill, injure, take, possess or cruelly ill-treat a badger, or to attempt to do so; or to intentionally or recklessly interfere with a sett. Sett interference includes disturbing badgers whilst they are occupying a sett, as well as damaging or destroying a sett or obstructing access to it. A licence can be granted by Natural England to permit works that would otherwise result in an offence (e.g. to allow sett closure where activities close by may otherwise result in disturbance or damage to the sett).

### **Water Voles**

- 10.25 The water vole and its habitats are protected by the Wildlife and Countryside Act 1981 (as amended). This makes it an offence to intentionally or recklessly:
- Kill, injure or take water voles;
  - Possess or control live or dead water voles;

- Damage, destroy or obstruct access to any shelter or place which water voles uses for shelter or protection; or
- Disturb water voles while they are using such a place.

## 11 Appendix 5: Habitat Suitability Index (HSI) Assessment Results

Table 1: Results of Great Crested Newt HSI Assessment

ID	SI Scores (Oldham <i>et al</i> , 2000)											Suitability Class	Grid Ref
	Location	Area	Permanence	Water Quality	Shading	Water fowl	Fish	Density	Terrestrial Habitat	Macrophyte Cover	HSI Score		
A	1	0.6	0.5	0.67	1	1	1	0.84	0.33	0.6	0.71	Good	TL021405
This water-body covers an area of approximately 310 m <sup>2</sup> and ranged between 50cm and 1m in depth. Vegetation in this pond consisted of bulrush <i>Typha latifolia</i> with occasional common reed <i>Phragmites australis</i> . This pond is located 208m to the north-east of the Survey Site within an arable field offering limited sheltering opportunities for newts in its immediate surrounding area apart from a narrow margin of unmanaged semi-improved grassland.													
B	-	-	-	-	-	-	-	-	-	-	-	-	TL009405
Pond not present (dry) at the time of survey													
C	1	0.4	0.5	0.67	0.3	0.67	0.67	1	0.67	0.3	0.57	Below average	TL009405
This pond lies approximately 50m outside of the western boundary of the Survey Site within the grounds of South Pillinge Farm. This pond ranges from 30-50cm in depth and is heavily shaded hazel, alder and willow trees. It is possible that great crested newts could use the fallen leaves from these trees as egg laying material. This waterbody is surrounded by grazed improved grassland.													
D	-	-	-	-	-	-	-	-	-	-	-	-	TL018397
Pond not present (dry) at the time of survey (see Photograph 10 in Appendix 6).													
E	1	0.1	0.1	0.33	1	1	1	0.84	0.67	0.85	0.52	Below average	TL019395
This water-body is located on the western boundary of the Survey Site adjacent to the road and rail line. This pond is fed by two outflows from nearby drainage ditches and was shallow at the time of survey. It is likely that this pond dries on an annual basis however, it did support dense mats of fool's watercress <i>Apium nodiflorum</i> that could be used as egg-laying material. The pond is surrounded by dense scrub considered to provide a suitable terrestrial habitat for newts.													
F	-	-	-	-	-	-	-	-	-	-	-	-	TL022395
Pond not present (dry) at the time of survey													
G	1	0.05	0.1	0.33	1	1	1	0.95	0.33	0.3	0.42	Poor	TL017393







ID	SI Scores (Oldham <i>et al</i> , 2000)											Suitability Class	Grid Ref
	Location	Area	Permanence	Water Quality	Shading	Water fowl	Fish	Density	Terrestrial Habitat	Macrophyte Cover	HSI Score		
	This water-body lies within an arable field in the east of the Survey Site. This shallow pond is a small depression in the soil that supports a few grasses and some algae. It is likely that this pond dried annually.												
H	1	0.5	0.9	0.33	0.3	1	0.67	0.95	0.67	0.4	0.61	Average	TL017391
	A waterbody adjacent to Lower Farm in the south of the Survey Site. This water-body covers an area of approximately 250m <sup>2</sup> and is between 50cm and 1m in depth and supports small stands of bulrush. This pond is surrounded by scrub and scattered planted trees offering some potential sheltering habitat for newts. An inflow brings water into this waterbody from the adjacent road.												
I	1	0.8	1	0.67	0.8	1	0.67	1	0.67	0.3	0.75	Good	TL017393
	This water-body lies on the opposite side of the road to Pond H described above. This waterbody covers an area of approximately 400m <sup>2</sup> and is also between 50cm and 1m in depth. Patches of duckweed <i>Lemna minor</i> are present on this waterbody with no other aquatic macrophytes present. This waterbody is bordered by a ditch, and access track and a road.												
J	-	-	-	-	-	-	-	-	-	-	-	-	TL019389
	No access at the time of survey												
K	1	0.3	0.5	0.67	0.4	1	1	0.95	1	0.9	0.71	Good	TL020388
	This water-body lies approximately 72m to the east of the Survey Site with the rail corridor separating this pond from the Survey Site. This pond was relatively shallow and is likely to periodically dry. However, it supported dense mats of fool's watercress and was surrounded by a small woodland copse likely to provide high quality terrestrial habitat for great crested newts (see Photograph 9 in Appendix 6).												
L	1	0.1	1	0.33	0.4	1	1	1	1	0.4	0.59	Below average	TL016388
	This water-body lies in an improved grassland field in the centre of the Survey Site and covers an area of approximately 150-200m <sup>2</sup> and is approximately 50 cm to 1 m in depth (see Photograph 6, Appendix 6). Ruderal vegetation and scrub (3 m in width) surrounds this pond offering some potential sheltering habitat to newts. Common duckweed was present on the pond and it is likely that run off from the surrounding field feeds into the pond possibly adversely affecting water quality.												
M	1	0.8	1	0.67	1	0.67	0.67	1	1	0.5	0.81	Excellent	TL020382
	A water-body covering an area of approximately 300m <sup>2</sup> which is located approximately 56m to the south of the Survey Site. This pond supported pond sedge <i>Carex riparia</i> and hard rush <i>Juncus inflexus</i> and is surrounded by improved grassland, scrub and woodland.												
N	1	0.85	0.9	0.67	1	0.01	0.01	1	1	0.4	0.34	Poor	TL021382







ID	SI Scores (Oldham <i>et al</i> , 2000)											Suitability Class	Grid Ref	
	Location	Area	Permanence	Water Quality	Shading	Water fowl	Fish	Density	Terrestrial Habitat	Macrophyte Cover	HSI Score			
<p>This pond lies approximately 80m to the south-east of the Survey Site and comprises a stocked fishing lake over 1m in depth supporting few aquatic macrophytes (see Photograph 12 in Appendix 6).</p>														

## 12 Appendix 6: Photographs

12.1 This section includes a selection of photographs taken during the extended Phase habitat survey.

**Table 1: Photographs of the Site**

	
<p><b>Photograph 1:</b> The majority of the south of the Survey Site consists of intensively managed improved grassland.</p>	<p><b>Photograph 2:</b> The southern half of Rookery Clay Pit CWS has been re-graded and now supports limited habitats of ecological value.</p>
	
<p><b>Photograph 3:</b> Improved grass ley in the north of the Survey Site. The tree shelter belt has potential to be used by nesting birds and commuting bats with the peripheral grassland, scrub and ruderal habitats to be used by reptiles.</p>	<p><b>Photograph 4:</b> The ditch network in the north of the Survey Site has the potential to support water voles and a number of aquatic invertebrates.</p>
	
<p><b>Photograph 5:</b> The western extent of the dense</p>	<p><b>Photograph 6:</b> Pond L within an improved</p>

<p>scrub in the north-east of the Survey Site.</p>	<p>grassland field in the centre of the Survey Site.</p>
	
<p><b>Photograph 7:</b> The majority of hedgerows on site are species-poor and heavily managed. The margins have some potential to be used by reptiles.</p>	<p><b>Photograph 8:</b> The plantation mixed woodland in the north/centre of the Survey Site. The grassland understorey has some potential to provide foraging and sheltering habitat for reptiles.</p>
	
<p><b>Photograph 9:</b> Pond K outside of the Survey Site boundary to the east. This pond has good suitability to support great crested newts.</p>	<p><b>Photograph 10:</b> Pond D in the north-east of the Survey Site. This pond was dry at the time of survey.</p>
	
<p><b>Photograph 11:</b> A mosaic of scrub and ruderal vegetation in the north of the Survey Site considered to provide foraging and sheltering habitat for reptiles.</p>	<p><b>Photograph 12:</b> Pond N outside of the Survey Site boundary to the south is heavily stocked with fish including a Wel's catfish <i>Silurus glanis</i> and is therefore classified as having poor suitability to support great crested newts.</p>



## **Addendum – Ecological Walkover Report**

## **Addendum to Millbrook Power Project Ecological Appraisal; Ecological Walkover Report**

### **Introduction**

This addendum report supplements the Millbrook Power Project Ecological Appraisal Report. An Ecological Walkover Survey has been undertaken following adjustments to the extent of the Survey Site for the Project. This has now been extended to include a large, triangular-shaped parcel of land to the east of the original Survey Site (east of the Marston Vale railway line), that accommodates two Gas Connection Route Corridor options. This 'Eastern Area' is located largely between Millbrook Road the B530 and the railway corridor (Marston Vale Line). The habitats across this area will be accurately mapped during the Phase 2 (targeted) ecological surveys that are programmed to commence in April 2014. However, the Ecological Walkover Report was conducted to inform the potential requirement for targeted ecological surveys across this area, and also to inform the scoping report.

### **Methods**

An ecological walkover survey of the Eastern Area, comprising the two Gas Connection Route Corridor options, was carried out on 27 March 2014 by John Baker MCIEEM. Although a complete extended Phase 1 habitat survey was not carried out in this instance, notes were made on the habitats present across this area and their suitability to support protected species to obtain a baseline of the conditions at this time and to ascertain what further surveys, if any, would be necessary. In order to assess the area's potential to support great crested newts, six ponds were identified prior to the site visit. These were then subject to survey on the day, to gather the necessary information to carry out a Habitat Suitability Index (HSI) assessment. This is a measure of a given water-bodies suitability to support great crested newt, although local information and professional judgement would ultimately be used to scope a pond in or out from further surveys.

### **Site Description and Habitats**

The area surveyed is dominated by intensively managed arable land, separated by hedgerows under regular maintenance and in the main, associated with a ditch or drain. The field margins, which abut hedgerow bases and ditch banks, vary in width, from narrow (1 m wide), through to fairly wide (6 m) in some parts of the Eastern Area. The margins are generally composed of rough grassland with a mix of tall ruderal species.

The hedgerows primarily comprise hawthorn, although field maple, willow, ash, blackthorn, dog rose and bramble are also present in some sections. The hedgerow ground flora is generally species poor with no evidence (at this time of the year) of any woodland plants.

A main ditch running north through the centre of the Eastern Area held a small amount of water with a steady flow at the time of the survey, with minor ditches feeding into this, most of which were dry. A ditch to the east of the area surveyed (parallel to the B530) has recently been re-profiled and dredged mechanically and essentially consists of bare soil on the banks.

To the south of the Eastern Area is a linear plantation belt, that borders the main ditch running north through the survey area. This plantation belt is well-established but recent, comprising species such as oak, ash, sycamore, hazel and pine. Some of the hazel along the eastern side of the plantation has been recently coppiced, although overall the woodland supports little understorey (other than limited bramble scrub along part of its western boundary) and a sparse ground flora.

Six ponds of varying size and nature are present within or close to the Eastern Area. These have been assigned a reference number (see Addendum Figure 1). Ponds 3, 5 and 6 were medium-sized water-bodies within an arable field, surrounded by some retained, uncultivated rough grassland margins, although poorly connected to suitable habitat further afield. Pond 2 is a recently dug water-body within a rough grassland and young plantation woodland area. Pond 1 is a small but deep pond which is

heavily shaded with some rough grassland and ruderal margins on its banks. Pond 4 is the largest water-body examined, with a narrow band of established woodland on its southern and eastern sides.

### **Potential for protected species and species of conservation importance**

*Bats.* Very few established trees are present within hedgerows within the Eastern Area, and those that are present are fairly young and therefore of limited value to roosting bats. Roosting bats are therefore unlikely to be a consideration in any development affecting the Eastern Area. The hedgerows and ditches that are present may be of value to foraging and commuting bats. However, since the majority of work likely to take place in the Eastern Area will be temporary and along a relatively narrow corridor, it is unlikely to be detrimental to bats and is therefore unlikely to trigger the need for any bat activity surveys.

*Badger.* The Eastern Area has a similar range of habitats to those identified in the Ecology Appraisal Report. This includes hedgerow and ditch banks that may provide foraging and sheltering habitat for badgers as well as opportunities for sett building. It is therefore advised that the badger survey recommended in the Ecology Appraisal Report is extended to include the Eastern Area.

*Water Vole.* No signs of water vole were noted during this initial visit, although a formal survey was not carried out. Approximately 1,200 m of ditch exists across the Eastern Area together with a number of smaller water-bodies/ponds. The ditches that hold water and support good vegetation along their banks have the potential to support water vole. In common with the recommendations of the Ecology Appraisal Report, these should be surveyed for field signs indicating the presence water voles.

*Otters.* Otters may opportunistically use the ditches for commuting and dispersal to and from other habitats in the wider area and for occasional foraging. Occasional use by this species of the ponds connected to ditch systems may also occur. Accordingly, whilst survey for water vole is undertaken, this should also be mindful of the potential presence of otter and therefore look for evidence of this species as well.

*Breeding Birds.* Much of the land within and adjoining the Eastern Area is managed as arable farmland, but with boundary features (and other features) of interest to birds, such as ponds, ditches, hedgerows and plantation woodland. These habitats are likely to support a range of typical farmland birds, and as such, farmland birds (occurring both within the Eastern Area and a buffer of up to 50 m) would be the main target of a breeding bird survey. The survey should also include a dusk visit to cover crepuscular species such as barn owl.

*Great Crested Newt.* All ponds were subject to a HSI assessment. The results of the HSI assessment are presented in Table 1 below, which should be viewed alongside Addendum Figure 1 (Pond Locations).

**Table 1 HSI Assessment Results**

<b>Pond Ref.</b>	<b>Geog Location</b>	<b>Pond Area (m2)</b>	<b>Pond permanence</b>	<b>Water Quality</b>	<b>Pond Shading</b>	<b>No. of waterfowl</b>	<b>Occurrence of fish</b>	<b>Pond density</b>	<b>Proportion of newt friendly habitat around pond within 250m – Any Barriers?</b>	<b>Macrophyte content (est % total of emergent and submerged macrphytes)</b>	<b>HSI score</b>	<b>Score</b>
1	1	0.4	0.9	0.33	0.3	1	1	0.8	0.67	0.33	0.67	<b>Average</b>
2	1	0.05	0.5	0.33	0.8	1	1	0.8	0.33	0.9	0.56	<b>Below average</b>
3	1	0.2	1	0.67	1	0.67	1	0.8	0.33	0.8	0.77	<b>Good</b>
4	1	0.9	0.9	0.33	0.8	0.67	0.67	0.8	0.33	0.3	0.8	<b>Excellent</b>
5	1	0.2	1	0.67	0.6	1	1	0.8	0.33	0.55	0.8	<b>Excellent</b>
6	1	0.4	1	0.67	1	1	1	0.9	0.33	0.5	0.93	<b>Excellent</b>

As can be seen from Table 1 above, and given the local context, none of these ponds can realistically be scoped out from further survey for great crested newts since all ponds (with the exception of Pond 2) had an 'Average' score or better, and all are within 250 m of the Eastern Area. Consistent with the recommendations of the Ecology Appraisal Report, these ponds should be surveyed during the current survey season (mid-March to mid-June) to determine presence/absence in these ponds and to assess the size of the population.

Three further pools in the form of short, shallow sections of ditch with stationary water were present along the Millbrook Road. These held small amounts of water (maximum depth of 1") and are likely to dry regularly so do not need to be considered further.

*Reptiles.* Field margins, including hedge and ditch banks are generally vegetated with rough grassland and tall ruderal vegetation. Patchy scrub is also present, especially close to the plantation belt. These habitats may support reptiles. Accordingly, the reptile survey recommended in the Ecology Appraisal Report should be extended to include the Eastern Area, in order to determine their presence/likely absence of reptiles.

*Other Species.* In terms of Species of Principal Importance discussed in the Ecology Appraisal Report, the following bullet points consider these further:

- two brown hare were noted in fields in the Eastern Area;
- hedgehogs may be present along field margins, in hedgerows and denser areas of the plantation woodland; and
- harvest mice may also potentially use the field margins and the areas of winter cereals in the arable fields, once the crop has become more established.

Additional incidental evidence of these species will be recorded during targeted survey effort for other species to be undertaken in the Eastern Area.

With the exception of a narrow plantation belt, woodland and woodland edge habitats are virtually absent in the Eastern Area. As such it is not appropriate to survey the site for the range of invertebrates identified during the desk study in the Ecology Appraisal Report. The ponds within the Eastern Area may support important assemblages of aquatic invertebrates. However the requirement to undertake detailed survey of these (as described for ponds west of the railway line in the Ecology Appraisal Report) would be dictated by the proximity of impacts affecting these ponds either directly or indirectly.



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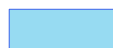

JOB REF: 7393.00

PROJECT TITLE  
MILLBROOK POWER PROJECT

DRAWING TITLE  
Addendum figure 1: Pond locations  
(gas connection route corridor, east of site)

DATE: 03.04.14	CHECKED: SF	SCALE: 1:5,000
DRAWN: COH	APPROVED: JF	STATUS: FINAL

LEGEND

-  Pond
-  Further water bodies

## Scoping Response





# SCOPING OPINION

## Proposed Millbrook Power Project



July 2014





# CONTENTS

## EXECUTIVE SUMMARY

<b>1.0 INTRODUCTION.....</b>	<b>1</b>
<b>2.0 THE PROPOSED DEVELOPMENT .....</b>	<b>4</b>
<b>3.0 EIA APPROACH AND TOPIC AREAS .....</b>	<b>15</b>
<b>4.0 OTHER INFORMATION .....</b>	<b>30</b>

## APPENDIX 1 – LIST OF CONSULTEES

## APPENDIX 2 – RESPONDENTS TO CONSULTATION AND COPIES OF REPLIES

## APPENDIX 3 – PRESENTATION OF THE ENVIRONMENTAL STATEMENT





## EXECUTIVE SUMMARY

This is the Scoping Opinion ('the Opinion') provided by the Secretary of State ('SoS') in respect of the content of the Environmental Statement for the Millbrook Power Project ('the Project') at 'The Rookery', near Stewartby, Bedfordshire. The proposal is for a new power generation plant in the form of a Simple Cycle Gas Turbine (SCGT) gas fired peaking power generating station fuelled by natural gas and capable of providing an electrical capacity of up to 299 megawatts (MW).

This report sets out the Secretary of State's opinion on the basis of the information provided in the report by Millbrook Power Limited ('the applicant') entitled 'Millbrook Power Project Environmental Impact Assessment Scoping Report - June 2014' ('the Scoping Report'). This Opinion can only reflect the proposals as currently described by the applicant.

The Secretary of State has consulted on the Scoping Report and the responses received have been taken into account in adopting this Opinion. The Secretary of State is not satisfied that the topic areas identified in the Scoping Report encompass those matters identified in Schedule 4, Part 1, paragraph 19 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (as amended) ('the EIA Regulations'). The Secretary of State recommends that the environmental statement should also cover potential impacts caused by the removal and disposal of waste, and by electric and magnetic fields associated with electricity transmission.

The Secretary of State draws attention both to the general points and those made in respect of each of the specialist topic areas in this Opinion. The main potential issues identified are:

- Air quality
- Noise and vibration
- Ecology
- Water quality and resources
- Geology, ground conditions and land use
- Landscape and visual
- Traffic and transport
- Cultural heritage and archaeology

Matters are not scoped out unless specifically addressed and justified by the applicant, and confirmed as being scoped out by the Secretary of State.

The Secretary of State notes the potential need to carry out an assessment under the Habitats Regulations<sup>1</sup>.

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<sup>1</sup> The Conservation of Habitats and Species Regulations 2010 (as amended)



# 1.0 INTRODUCTION

## Background

- 1.1 On 20 June 2014 the SoS received a scoping report submitted by Millbrook Power Limited under Regulation 8 of the EIA Regulations in order to request a scoping opinion for the proposed Millbrook Power Project. This Opinion is adopted in response to this request and should be read in conjunction with the applicant's Scoping Report.
- 1.2 The applicant has formally provided notification under Regulation 6(1) (b) of the EIA Regulations that it proposes to provide an ES in respect of the proposed development. Therefore, in accordance with Regulation 4(2) (a) of the EIA Regulations, the proposed development is determined to be EIA development.
- 1.3 The EIA Regulations enable an applicant, before making an application for an order granting development consent, to ask the SoS to state in writing their formal opinion (a 'scoping opinion') on the information to be provided in the environmental statement (ES).
- 1.4 Before adopting a scoping opinion the SoS must take into account:
  - (a) the specific characteristics of the particular development;
  - (b) the specific characteristics of the development of the type concerned; and
  - (c) environmental features likely to be affected by the development'.

*(EIA Regulation 8 (9))*
- 1.5 This Opinion sets out what information the SoS considers should be included in the ES for the proposed development. The Opinion has taken account of:
  - i the EIA Regulations
  - ii the nature and scale of the proposed development
  - iii the nature of the receiving environment, and
  - iv current best practice in the preparation of environmental statements.
- 1.6 The SoS has also taken account of the responses received from the statutory consultees (see Appendix 2 of this Opinion). The matters addressed by the applicant have been carefully considered and use has been made of professional judgement and experience in order to adopt this Opinion. It should be noted that when it

comes to consider the ES, the SoS will take account of relevant legislation and guidelines (as appropriate). The SoS will not be precluded from requiring additional information if it is considered necessary in connection with the ES submitted with that application when considering the application for a development consent order (DCO).

- 1.7 This Opinion should not be construed as implying that the SoS agrees with the information or comments provided by the applicant in their request for an opinion from the SoS. In particular, comments from the SoS in this Opinion are without prejudice to any decision taken by the SoS (on submission of the application) that any development identified by the applicant is necessarily to be treated as part of a nationally significant infrastructure project (NSIP), or associated development, or development that does not require development consent.
- 1.8 Regulation 8(3) of the EIA Regulations states that a request for a scoping opinion must include:
- (a) 'a plan sufficient to identify the land;
  - (b) a brief description of the nature and purpose of the development and of its possible effects on the environment; and
  - (c) such other information or representations as the person making the request may wish to provide or make'.
- (EIA Regulation 8 (3))*
- 1.9 The SoS considers that this has been provided in the applicant's Scoping Report.

## The Secretary of State's Consultation

- 1.10 The SoS has a duty under Regulation 8(6) of the EIA Regulations to consult widely before adopting a scoping opinion. A full list of the bodies consulted for the purposes of this scoping opinion is provided at Appendix 1. The list has been compiled by the SoS under their duty to notify the consultees in accordance with Regulation 9(1)(a). The applicant should note that whilst the SoS's list can inform their consultation, it should not be relied upon for that purpose.
- 1.11 The list of respondents who replied within the statutory timeframe and whose comments have been taken into account in the preparation of this Opinion is provided at Appendix 2 along with copies of their comments, to which the applicant should refer in undertaking the EIA.
- 1.12 The ES submitted by the applicant should demonstrate consideration of the points raised by the consultation bodies. It is



recommended that a table is provided in the ES summarising the scoping responses from the consultation bodies and how they are, or are not, addressed in the ES.

- 1.13 Any consultation responses received after the statutory deadline for receipt of comments will not be taken into account in this Opinion. Late responses will be forwarded to the applicant and will be made available on the Planning Inspectorate's website. The applicant should also give due consideration to those comments in carrying out the EIA.

## Structure of the Document

- 1.14 This Opinion is structured as follows:

Section 1 Introduction  
Section 2 The proposed development  
Section 3 EIA approach and topic areas  
Section 4 Other information

This Opinion is accompanied by the following Appendices:

Appendix 1 List of consultees  
Appendix 2 Respondents to consultation and copies of replies  
Appendix 3 Presentation of the environmental statement

## 2.0 THE PROPOSED DEVELOPMENT

### Introduction

- 2.1 The following is a summary of the information on the proposed development and its site and surroundings prepared by the applicant and included in their Scoping Report. The information has not been verified and it has been assumed that the information provided reflects the existing knowledge of the proposed development and the potential receptors/resources.

### The Applicant's Information

#### Overview of the proposed development

- 2.2 The proposed Millbrook Power Project comprises a new power generation plant in the form of a simple cycle gas turbine (SCGT) gas fired peaking power generating station, fuelled by natural gas and capable of providing an electrical capacity of up to 299MW.
- 2.3 Section 1.1.2 of the Scoping Report identifies the following principal components of the proposed development:
- generating equipment including gas turbine generators which would be located within the generating equipment site;
  - a new purpose built access Road;
  - a temporary construction compound (the laydown area),
  - a new gas connection to bring natural gas to the generating equipment from the National Transmission System (NTS); and
  - a new electrical connection to export power from the generating equipment to the National Grid Electricity Transmission System (NETS).

#### Description of the site and surrounding area

##### *The Application Site*

- 2.4 The generating equipment, access road and laydown area are described in the Scoping Report as forming the 'Power Generation Plant' and as being located within the 'Power Generation Plant Site'. The new gas and electrical connections are described respectively as located within the 'Gas Connection Opportunity Area' and the 'Electrical Connection Opportunity Area'. The project site encompasses the power generation plant site and both Opportunity Areas.
- 2.5 The power generation plant site and part of the gas and electrical connections would be situated on land within former clay pits

known as 'The Rookery' and designated as Rookery Clay Pits County Wildlife Site (CWS).

- 2.6 The Rookery is situated in the Marston Vale between Milton Keynes and Bedford, approximately 3 km north of Ampthill, and 7 km south west of Bedford. The gas and electrical connections would be located within the Opportunity Areas (identified on Figure 1 of the Scoping Report) and would extend out from The Rookery into farmland to the south and/or east.
- 2.7 The Rookery comprises two large former clay pits, Rookery North and Rookery South Pits, separated by an east-west spine of unexcavated clay. The generating equipment site, laydown area and parts of the access road and gas and electrical connections would be located within Rookery South Pit which is approximately 95ha and is bound by steep clay banks. The pit base includes a range of wetland habitats, including open water, reed beds, pools and bare inundated clay with ephemeral water bodies. The remaining land at the original ground level around the periphery of Rookery South Pit, approximately 42m above ordnance datum (AOD), is predominantly bare ground that has been cleared of vegetation.
- 2.8 The Rookery is currently the subject of an ongoing Low Level Restoration Scheme (LLRS) by the landowner. Once restored, Rookery South Pit will be approximately 15m below the surrounding ground level in the vicinity of the generating equipment site and laydown area.
- 2.9 Road access to the power generation plant site is currently from the north near Stewartby via the A421, Bedford Road and Green Lane (Figure 1 of the Scoping Report refers). A junction on Green Lane leads to an access track on land on the western side of Rookery North Pit which extends southwards into Rookery South Pit and the generating equipment site. Depending on their selected locations, the gas and electrical connections would either be primarily accessed from Junction 13 of the M1 (to the south west of the project site) via the A507, Sandhill Close, Houghton Lane, Millbrook Road and the B530 Ampthill Road, or from Bedford Road, via Woburn Road, Manor Road, B530 Ampthill Road and Millbrook Road.
- 2.10 There are overhead power lines that run west to east south of Rookery South Pit.
- 2.11 A number of existing public footpaths are located in and around the project site, linking it to the wider Marston Vale. There is limited public access to Rookery South Pit itself.
- 2.12 A watercourse, the Mill Brook, flows in a northerly direction along the western side of Rookery South Pit whilst a tributary watercourse passes to the south of Rookery South Pit within the

project site, joining Mill Brook in the vicinity of South Pillinge Farm (Figure 2 of the Scoping Report).

### *The Surrounding Area*

- 2.13 Significant areas of land around Stewartby, including The Rookery, have previously been worked for clay that was used in Stewartby Brickworks until it closed in 2008. To the north of The Rookery, buildings associated with the former Stewartby Brickworks, including the chimneys, remain. The sites have been restored and are in different uses, including water based recreation and commercial. The area to the south and east of the project site is made up of large open fields, hedgerows, and groups of trees and is crossed by electricity pylons.
- 2.14 The parts of the gas and electrical connection Opportunity Areas within the project site that lie outside of Rookery South Pit are located within a mostly undeveloped agricultural landscape (within fields classified as Grade 3) which includes areas of woodland, native hedgerows and a number of water-bodies such as ditches.
- 2.15 Watercourses within and surrounding the project site are shown on Figure 2. They include Elstow Brook to the west of the site, and Stewartby Lake, which is within 2km of the site. Mill Brook crosses the site. There are smaller streams, brooks and ditches near the perimeter of Rookery South Pit, and ponds and lakes in both Rookery North Pit and Rookery South Pit close to the access road. The project site is entirely within Flood Zone 1.
- 2.16 Nearby roads include the A421 which is approximately 2 km to the west and the B530 which lies to the east of the Proposed development Site (Figure 2 of the Scoping Report refers). The A421 connects directly to Junction 13 of the M1 Motorway which is approximately 5.6 km to the south west of the project site. The Midland Mainline railway and Marston Vale line border the power generation plant site to the east and west respectively.
- 2.17 The site is within the Northern Marston Vale Growth Area, which is allocated in Central Bedfordshire Council's Core Strategy for regeneration and development. Neighbouring residential areas include: Stewartby to the north of Green Lane and The Rookery; Houghton Conquest approximately 1.5 km to the east; Marston Moretaine approximately 1.2 km to the west; and Millbrook approximately 400 m to the south (Figures 2 and 3 of the Scoping Report refer). The Houghton Park residential care home is within 1km of the project site. A vehicle testing ground is located to the west of the gas and electrical connection Opportunity Areas.
- 2.18 Marston Vale Millennium Country Park is 50m to the west of the project site and provides habitat conservation opportunities, indoor and outdoor community amenities, a wind turbine and a Forest Centre.

- 2.19 Section 5.5.5 of the Scoping Report identifies the presence of 6 Sites of Special Scientific Interest (SSSI) within a 5km radius of the survey site, including Cooper's Hill SSSI approximately 550m to the south-east of the south-eastern corner of the survey site. There are also 3 Local Nature Reserves (LNRs) within a 5 km radius of the project site, the closest of which is Flitwick Wood LNR approximately 3.3km to the south of the site. There are also 13 Country Wildlife Sites (CWS) within 2km of the project site, the closest of which is Rookery Clay Pit CWS, within which the site is located.
- 2.20 Section 5.10.4 of the Scoping Report identifies cultural heritage assets within 5km of the project site, including scheduled monuments, listed buildings, the Amptill Park Grade II Registered Park and Garden, and eight conservation areas. Section 5.10.5 notes there are 219 Grade II listed buildings within 5km of the project site, including the closest dwelling, South Pillinge Farmhouse, located approximately 90m to the west, and 49 records of undesignated cultural heritage assets within 5km.

### Description of the proposed development

- 2.21 The proposed power generation plant would be designed as a peaking plant, fired by natural gas supplied by a new underground gas pipeline, connecting the power generation plant to the existing electricity NTS by either an underground cable or an overhead line. It would have a capacity of up to 299MW. The locations of the elements on the project site are yet to be determined.
- 2.22 As a peaking plant, the generating equipment would operate for up to 1,500 hours per year when there is a 'stress event' (i.e. when there is a surge in demand for electricity associated with a particular event) or where there is a sudden drop in power being generated from plants which are constantly operational (e.g. a sudden outage).
- 2.23 Section 3.3.4 of the Scoping Report describes the SCGT gas turbine options capable of generating up to 299MW under consideration by the applicant. These are aero-derivative gas turbines or 'industrial' type gas turbines. The applicant anticipates that 3 – 5 aero-derivative turbines or 1 – 2 industrial turbines would be required to generate 299MW.
- 2.24 The Scoping Report sets out that the main equipment in a SCGT is a gas turbine generator, which comprises the following components:
- inlet air filter;
  - air compressor;
  - combustion chamber;
  - power turbine(s); and

- exhaust silencer.
- 2.25 Sections 3.3.7 – 3.3.8 of the Scoping Report provide operational details of a SCGT plant and refer to Figure 4, a diagram of SCGT operation.
- 2.26 The gas connection would be in the form of a new underground gas pipeline connection ('the Pipeline') and above ground installation (AGI) and is required to connect the generating equipment to the existing high pressure NTS in order to provide a reliable supply of fuel.
- 2.27 Sections 3.4.2 – 3.4.4 identify the NTS feeder possible connection points. Identification of specific route corridor options is still ongoing but it is anticipated that the gas connection would be situated within the gas connection Opportunity Area to the south and east of the generating equipment site (Figure 1 of the Scoping Report refers).
- 2.28 Connection of the pipeline to an NTS feeder would require two AGIs to be installed which will include: a Minimum Offtake Connection (MOC) facility, and a PIG Trap Facility (PTF).
- 2.29 The electrical connection will enable power to be exported from the generating equipment to the NETS, and will comprise a new substation and two new electrical circuits either in the form of an underground cable or overhead line.
- 2.30 Section 3.5.2 of the Scoping Report identifies the most suitable point of connection as a new substation to be located either on the generating equipment site or adjacent to the line of the existing National Grid double circuit 400 kV line which runs from Sundon to Grendon.
- 2.31 If an underground export cable option between the substation and NETS is selected, up to two new sealing end compounds (SECs) would also be required, constructed at the point where the underground cable emerges to facilitate its connection into the NETS. It is possible that one, both or neither of the SEC(s) or substation will be required depending on the selected option for the electrical connection.

### Proposed access

- 2.32 A new purpose built access road 1.7km long would be constructed within the power generation plant site from Green Lane to the generating equipment site.

## Construction

- 2.33 A temporary laydown area for the storage of plant and equipment during construction would be provided adjacent to the generating equipment Site, as shown in Figure 1 of the Scoping Report.
- 2.34 Section 3.3.18 of the Scoping Report states that construction and commissioning of the proposed development would take approximately 22 months. The main works associated with the construction phase would be excavation and site levelling for new foundations, potential piling (if required) and the laying of the gas and electrical connections. No requirements for demolition or remediation have been identified at this stage.
- 2.35 Prior to the construction of the proposed development commencing, it is anticipated the following components of the Rookery LLRS will be complete:
- topsoil stripping and stockpiling of material from the remaining southern permitted extraction area on the southern side of Rookery South Pit to enable the extraction of clay for use in the proposed restoration works;
  - formation of a noise screening bund from stripped topsoil and subsoil along the western edge of the works adjacent to Pillinge Farm;
  - redirection of existing surface water ditches and provision of an upper carrier ditch around the southern perimeter of the southern permitted excavation area;
  - excavation of clay from the southern permitted extraction area to provide material for the proposed restoration works and buttressing works, including provision of a new access ramp from the extraction area into the base of the pit;
  - construction of a new access ramp in the north west corner of Rookery South Pit;
  - construction of a landscaped platform graded so that drainage falls across the entire base of Rookery South Pit, utilising material won from either regrading of the base of the pit or from the southern permitted extraction area, to enable gravity drainage to occur in the base of the pit;
  - construction of surface water interceptor channels collecting to a single attenuation pond located at the north western corner of Rookery South Pit. The surface water interceptor channels and attenuation pond will include habitat mitigation and ecological enhancement measures;
  - provision of a pumping station to enable external discharge of collected waters from the attenuation pond to an existing ditch/culvert discharge to Stewartby Lake;

- buttressing of the pit edge slopes to the south (part), east and north (part) to provide a slope stabilisation solution for the existing slopes; and
- redirection of existing surface water ditches and provision of an upper carrier ditch around the southern perimeter of the southern excavation area.

## Operation and Maintenance

- 2.36 The power generation plant would have an operational life of 25 years, after which it would be decommissioned or re-powered. For the purpose of the EIA, the Scoping Report has assumed that it will be decommissioned.
- 2.37 Operation of the generating equipment would require up to 15 full time staff over the lifetime of the proposed development working in shifts, so less than 15 people will be on site at any one time during normal operations. Contracted engineering staff would undertake regular maintenance shutdowns and maintenance of the gas and electrical connections.

## Decommissioning

- 2.38 Section 3.3.20 of the Scoping Report states that decommissioning would involve the removal of all power generation plant items and restoration of the project site to a similar, pre-construction condition. This process is also likely to take approximately 22 months.

## The Secretary of State's Comments

### Description of the application site and surrounding area

- 2.39 In addition to detailed baseline information to be provided within topic specific chapters of the ES, the SoS would expect the ES to include a section that summarises the site and surroundings. This would identify the context of the proposed development, any relevant designations, and sensitive receptors. This section should identify land that could be directly or indirectly affected by the proposed development and any associated auxiliary facilities, landscaping areas and potential off site mitigation or compensation schemes.
- 2.40 The power generation plant application site and the surrounding area are clearly described within the Scoping Report and it is expected that a comprehensive description would also be provided within the ES.
- 2.41 The power generation plant will require a new underground gas pipeline connection and AGI to connect the generating equipment to the existing high pressure NTS to provide fuel. The SoS notes that the ES will include details of the route selected.



- 2.42 The SoS notes that it is anticipated that some elements of the Rookery LLRS would be complete by the time construction would be expected to begin. The SoS would expect to see a description of the stage that the LLRS had reached at the time of the DCO submission, and a clear explanation of what the ultimate base level of the site proposed for the power generation plant within Rookery South Pit will be in metres AOD (mAOD). The ES should also give consideration to any implications of future works.
- 2.43 The project site plan at Figure 1 does not name the surrounding roads and it is not possible to see them on Figure 3 due to the plan scale. Figure 3 is a useful plan but does not identify environmentally sensitive features such as public rights of way (PROWs). It would be helpful to include relevant plans in each topic section of the ES that identify the study area and receptors, and ensure that the title of identified features reflects that used in the text, eg South Pilling Farm is identified as Pilling Farm South on Figure 2.

### Description of the proposed development

- 2.44 The applicant should ensure that the description of the proposed development that is being applied for is as accurate and firm as possible as this will form the basis of the environmental impact assessment. It is understood that at this stage in the evolution of the scheme the description of the proposals and even the location of the site may not be confirmed. The applicant should be aware however, that the description of the development in the ES must be sufficiently certain to meet the requirements of paragraph 17 of Schedule 4 Part 1 of the EIA Regulations, and there should therefore be more certainty by the time the ES is submitted with the DCO.
- 2.45 In the event that a draft DCO is submitted, the applicant should clearly define what elements of the proposed development are integral to the NSIP, and what elements are 'associated development' under the Planning Act 2008 (PA 2008) or an ancillary matter.
- 2.46 Any proposed works and/or infrastructure required as associated development, or as an ancillary matter, (whether on or off-site) should be considered as part of an integrated approach to environmental assessment.
- 2.47 The SoS recommends that the ES should include a clear description of all aspects of the proposed development, at the construction, operation and decommissioning stages, and include:
- land use requirements, including the area of the offshore elements
  - site preparation

- construction processes and methods
  - transport routes
  - operational requirements including the main characteristics of the production process and the nature and quantity of materials used, as well as waste arisings and their disposal
  - maintenance activities including any potential environmental or navigation impacts, and
  - emissions - water, air and soil pollution, noise, vibration, light, heat, radiation.
- 2.48 The Scoping Report does not contain a location plan or a layout plan, indicative or otherwise. Although Figures 2 and 3 show the location of the proposed development in the wider area the scale makes it difficult to discern features in the area other than those represented in the keys. The ES should contain plans that clearly identify the proposed development's location in the wider area, and that indicate the position of the main elements of the proposed development on the site.
- 2.49 The SoS notes that Table 3.1 of the Scoping Report provides indicative dimensions for the main plant items, but that AOD levels are not defined and that the height of the stacks is defined in terms of 'ground level surrounding Rookery South Pit'. For the purposes of the ES, the heights of the elements of the development will need to be defined in minimum/maximum mAOD.
- 2.50 Figure 4 does not reflect the same elements of a gas turbine generator as identified in paragraph 3.3.6. Diagrams and figures in the ES should reflect the text so that it is easy to read across between them.
- 2.51 Section 3.4 of the Scoping Report provides information on the gas connection Opportunity Area. It would be useful to include in the ES diagrams of elements that will be required, such as the MOC and PTF.
- 2.52 The environmental effects of all wastes to be processed and removed from the site should be addressed. The ES will need to identify and describe the control processes and mitigation procedures for storing and transporting waste off site. All waste types should be quantified and classified.

## Alternatives

- 2.53 The ES requires that the applicant provide 'An outline of the main alternatives studied by the applicant and an indication of the main reasons for the applicant's choice, taking into account the environmental effects' (See Appendix 3).

- 2.54 The SoS notes that a number of site locations and technology options were considered by the applicant, and is pleased to note that a detailed appraisal will be included in the ES.

### Flexibility

- 2.55 The SoS notes the comments in the Scoping Report that the detailed design of the power generation plant is still being developed and that the draft description of development contains a number of variables, including the type of turbine, the location on the site of the generating equipment, the routes for the gas and electrical connections, and the configuration of the electrical connection. The SoS welcomes that the proposals are to be firmed up during the pre-application stage but encourages the description to be as accurate and firm as possible so that its environmental impacts can be more accurately assessed.
- 2.56 The SoS notes the applicant's intention where the details of the scheme cannot be defined precisely for the EIA to assess the likely worst case scenario. The SoS welcomes the reference to Planning Inspectorate Advice Note 9 'Using the 'Rochdale Envelope' but also directs attention to the 'Flexibility' section in Appendix 3 of this Opinion which provides additional details on the recommended approach.
- 2.57 It should be noted that if the proposed development changes substantially during the EIA process, prior to application submission, the applicant may wish to consider the need to request a new scoping opinion.

### Grid connection

- 2.58 The SoS notes that the proposed routes for the gas and electricity connections, the configuration of the electricity connection, and the location and number of related elements, such as substations, are still to be determined. All options included in the proposed development DCO application must be fully assessed in the ES and plans provided to reflect each option.

### Proposed access

- 2.59 The SoS considers that information regarding site access routes for construction traffic and any vehicles carrying abnormal indivisible loads (AIL) should be clearly identified and assessed within the ES, including any alterations required to the existing road network to accommodate any AIL. The ES should also identify whether any alterations to the existing road network would be retained or reinstated, and assess the potential effects arising.

## Construction

- 2.60 The SoS considers that information on construction including: phasing of programme; construction methods and activities associated with each phase; siting of construction compounds (including on and off site); lighting equipment/requirements; and number, movements and parking of construction vehicles (both HGVs and staff) should be clearly indicated in the ES.

## Operation and maintenance

- 2.61 Information on the operation and maintenance of the proposed development should be included in the ES and should cover but not be limited to such matters as: the number of full/part-time jobs; the operational hours and if appropriate, shift patterns; the number and types of vehicle movements generated during the operational stage.

## Decommissioning

- 2.62 The SoS welcomes the consideration of decommissioning. Whilst it is acknowledged that information on the decommissioning strategy may not be fully developed at this early stage, the purpose of such a long term assessment is to enable the decommissioning of the works to be taken into account in the design and use of materials so that structures can be taken down with the minimum of disruption. The SoS advises that as much detail as possible on the proposed approach, including the process and methods of decommissioning, is provided within the ES to ensure that the long term assessment can consider the impacts of decommissioning for each element of the proposed scheme.

## 3.0 EIA APPROACH AND TOPIC AREAS

### Introduction

- 3.1 This section contains the SoS's specific comments on the approach to the ES and topic areas as set out in the Scoping Report. General advice on the presentation of an ES is provided at Appendix 3 of this Opinion and should be read in conjunction with this Section.
- 3.2 Applicants are advised that the scope of the DCO application should be clearly addressed and assessed consistently within the ES.

### Environmental Statement (ES) - approach

- 3.3 The information provided in the Scoping Report sets out the proposed approach to the preparation of the ES. Whilst early engagement on the scope of the ES is to be welcomed, the SoS notes that the level of information provided at this stage is not always sufficient to allow for detailed comments from either the SoS or the consultees.
- 3.4 The SoS would suggest that the applicant ensures that appropriate consultation is undertaken with the relevant consultees in order to agree wherever possible the timing and relevance of survey work as well as the methodologies to be used. The SoS notes and welcomes the intention to finalise the scope of investigations in conjunction with ongoing stakeholder liaison and consultation with the relevant regulatory authorities and their advisors.
- 3.5 The extent of the study area is not set out for each topic in the Scoping Report. The SoS recommends that the physical scope of the study areas should be identified under all the environmental topics and should be sufficiently robust in order to undertake the assessment. The extent of the study areas should be on the basis of recognised professional guidance, whenever such guidance is available. The study areas should also be agreed with the relevant consultees and, where this is not possible, this should be stated clearly in the ES and a reasoned justification given. The scope should also cover the breadth of the topic area and the temporal scope, and these aspects should be described and justified.
- 3.6 The SoS notes that the proposed development includes gas and electrical connections and refers the applicant to the comments of The Health and Safety Executive, Public Health England, National Grid, and ES Pipelines in relation to safety issues and other points, including the locations of existing infrastructure, to be taken into consideration in deciding on the preferred configurations and routes.

- 3.7 The SoS notes that a number of existing wayleaves and/or easements are in place that could be affected by the proposed access routes and the proposed electricity and gas connections, and recommends that the design of the proposed development and assessments in the ES take account of these.
- 3.8 The SoS notes the information in Section 4.2 and 4.3 of the Scoping Report on the assessment of potential cumulative effects, and developments that will be included in the assessment, and welcomes the applicant's intention to include an assessment of cumulative impacts in each ES topic chapter and in the Conclusions chapter.
- 3.9 The SoS notes that there may be ongoing works on and around the project site in connection with the LLRS. The SoS recommends that consideration is given to including in the cumulative impacts assessment potential further changes to the land that result from the LLRS subsequent to establishing the baselines for the topic assessments.
- 3.10 The SoS notes the applicant's references to the possible inclusion of the East West Rail Project and the Bedford and Milton Keynes Waterway in the cumulative impacts assessment for this proposed development. The applicant's attention is drawn to the comments made about these proposals by Luton Borough Council and the Canal and River Trust, respectively, contained in Appendix 2 of this Opinion. The SoS recommends that the applicant considers whether these proposals are at such a stage that they should be included in the cumulative impact assessment. Further information on the scope of cumulative impacts which should be included in the ES is provided at Appendix 3 to this Opinion.

### Matters to be scoped out

- 3.11 The applicant has identified in the relevant sections of the Scoping Report the matters proposed to be 'scoped out'. These include:
- potential odour impacts during the operational phase;
  - emissions to air from the gas and electrical connections during the operational phase;
  - noise and vibration impacts from the gas and electrical connections (if an overhead line is constructed) during the operational phase;
  - noise impacts from the electrical infrastructure that may be required, ie substation and up to two SECs, during the operational phase;
  - impacts on water quality and resources during operation and decommissioning of the gas and electricity connections;

landscape and visual impacts on the nearest AONB (the Chilterns) to the project site;

- 3.12 Matters cannot be scoped out unless specifically addressed and justified by the applicant, and confirmed as being scoped out by the SoS.
- 3.13 Decisions to scope out impacts should be fully explained and justified in the ES. At this stage, the SoS agrees that the following matters can be scoped out of the EIA during the operational phase: potential odour impacts; emissions to air from the gas and electrical connections; noise and vibration impacts from the gas connections; and impacts on water quality and resources of the gas and electricity connections.
- 3.14 It is not explicitly stated in the Scoping Report whether the proposed electricity connection will be 132kV or 400kV, although it is indicated that it will connect to a 400kV network. In the event that the connection will be 400kV the SoS does not agree that noise impacts from the electrical connections can be scoped out, as insufficient information has been provided by the applicant at this time to justify such an approach.
- 3.15 The SoS does not agree that noise impacts from the electrical infrastructure that may be required can be scoped out during the operational phase as insufficient information has been provided by the applicant at this time to justify such an approach.
- 3.16 The SoS does not agree that impacts on water quality and resources during the decommissioning of the gas and electricity connections can be scoped out as insufficient information has been provided at this time by the applicant to justify such an approach. Paragraph 5.6.12 of the Scoping Report refers to construction of the gas and electricity connections and states that effects during operation and decommissioning are unlikely to occur. However, other sections of the Report suggest that it is not yet known whether the connections will be left in situ or removed following decommissioning of the proposed development. In the event that the connections might be removed, the SoS does not agree that effects during decommissioning can be scoped out. If the preferred option has not been decided by the time the DCO application is submitted, identification and an assessment of potential impacts on water resources during the decommissioning phase in relation to the connections should be included in the ES.
- 3.17 The SoS does not agree that landscape and visual impacts on the Chilterns AONB can be scoped out as insufficient information has been provided by the applicant at this time to justify such an approach.
- 3.18 Whilst the SoS has not agreed within this Opinion to scope out certain topics or matters on the basis of the information available

at this time, this does not prevent the applicant from subsequently agreeing with the relevant consultees to scope matters out of the ES, where further evidence has been provided to justify this approach. This approach should be explained fully in the ES.

- 3.19 In order to demonstrate that topics have not simply been overlooked, where topics are scoped out prior to submission of the DCO application, the ES should still explain the reasoning and justify the approach taken.

## National Policy Statements (NPSs)

- 3.20 Sector-specific NPSs are produced by the relevant Government Departments and set out national policy for nationally significant infrastructure projects (NSIPs). They provide the framework within which the Examining Authority will make their recommendations to the Secretary of State and include the Government's objectives for the development of NSIPs.
- 3.21 The NPSs relevant to the proposed development, i.e. EN-1, EN-2, EN-4 and EN-5, set out both the generic and technology-specific impacts that should be considered in the EIA for the proposed development. When undertaking the EIA, the applicant must have regard to both the generic and technology-specific impacts and identify how these impacts have been assessed in the ES.
- 3.22 The Secretary of State must have regard to any matter that the Secretary of State thinks is important and relevant to the Secretary of State's decision. This could include a draft NPS if the relevant NPS has not been formally designated.

## Environmental Statement - Structure

- 3.23 Section 4.2 of the Scoping Report sets out the proposed structure of the ES on which the applicant seeks the opinion of the SoS.
- 3.24 The SoS notes from Section 4.2, Table 4.1 that the EIA for the proposed development would cover topics under the following headings:
- Air Quality
  - Noise and vibration
  - Ecology
  - Water quality and resources
  - Geology, ground conditions and agriculture
  - Landscape and visual
  - Traffic, transport and access
  - Cultural heritage and archaeology



- Socio-economics

3.25 The SoS recommends that the ES should also cover potential impacts caused by the removal and disposal of waste; and as a result of the electric and magnetic fields generated by the proposed development.

## Topic Areas

### Air Quality (**see Scoping Report Section 5.3**)

- 3.26 This section does not include a definition of what constitutes a significant effect, however the SoS notes that paragraph 5.5.2 of Section 5.2 (Significance Criteria) states that each ES technical chapter will include such a definition.
- 3.27 Air quality and dust levels should be considered not only on site but also off site, including along access roads and traffic routes, and local footpaths and other PROWs, especially during the construction phase.
- 3.28 The extent of the study area should be described and the reasons for selecting it provided.
- 3.29 The SoS notes that the nearest Air Quality Management Area (AQMA) is approximately 10km from the project site. Any AQMAs that fall within the selected study area should be identified by name and their location should be shown on a plan either included in the ES or cross-referenced from the SoS. The SoS considers that adverse changes to air quality should be assessed in relation to compliance with European air quality limit values and AQMAs.
- 3.30 Paragraph 5.3.6 identifies statutory ecologically designated sites within 10km of the project site but does not include any European sites, although there are references in this chapter to the need to consider European sites within 10km of the project site. Flitwick Wood LNR and Flitton Moor LNR are not mentioned in this context, although these LNRs are identified in paragraph 5.5.5 of the Ecology section as within 5km of the project site. The SoS recommends that reasoned justification should be provided within the ES for the inclusion/exclusion of the assessment of air quality impacts on ecologically designated sites.
- 3.31 Scoping Report Figure 3 shows environmentally sensitive receptors within a 5km area of the project site but does not include receptors for all topics, e.g. PROWs are not shown. Each topic chapter should include a plan that identifies relevant sensitive receptors, by name where applicable, within the selected study area for that topic.
- 3.32 The SoS notes that this section identifies residential receptors within 1km of the project site. The assessment should take

account of air emissions from the proposed development and emissions related to vehicular movements associated with the proposed development, particularly during the construction phase. Consideration should be given to whether a 1km study area is sufficient to identify all potentially significant impacts, such as those related to emissions from construction vehicles, and the SoS recommends that this is determined in consultation with the relevant local Councils.

- 3.33 The SoS welcomes the applicant's intention to agree the assessment methodology for this topic with the relevant Council Officers and the Environment Agency (EA). The applicant's attention is drawn to the comments made by Luton Borough Council, contained in Appendix 2 of this Opinion, in relation to factors that should be included in the modelling.
- 3.34 The SoS is pleased to note that the stack height will be based on the predicted maximum short term and long term ground level NO<sub>x</sub> concentrations, and that the detailed dispersion modelling will then be undertaken according to that stack height. The SoS recommends that dispersion modelling considers a range of possibilities and seeks to ensure that the 'worst case' scenario is assessed, for example the 'worst case' may occur as a short term impact. The implications of stack height and dispersion of emissions will need to be clearly explained in the ES.
- 3.35 Consideration should be given to monitoring dust complaints during all phases of the proposed development.
- 3.36 The applicant is referred to the comments of Public Health England in Appendix 2 of this Opinion, particularly in relation to establishing the baseline for assessment purposes.
- 3.37 This ES topic chapter should cross-refer to the ES Ecology chapter, bearing in mind that there is the need to consider potential effects due to an increase in airborne pollution including fugitive dust emissions, especially during site preparation, demolition and construction.

#### Noise and Vibration (see Scoping Report Section 5.4)

- 3.38 Paragraph 5.4.2 identifies sources of noise in the vicinity of the project site. These should be identified on a plan contained in the ES.
- 3.39 The SoS notes that the proposed development layout has not been finalised at this stage and recommends that consideration should be given to minimising the impacts of noise on sensitive receptors where possible by appropriate siting and orientation of the various elements of the proposed development.

- 3.40 The SoS welcomes the applicant's intention to agree the assessment methodology and the locations for the baseline noise survey with the relevant Council Environmental Health Officers, and draws attention to comments received from Bedford Borough Council and Central Bedfordshire Council, contained in Appendix 2 in this respect.
- 3.41 Paragraph 5.4.5 states that noise sensitive receptors within 100m of construction and decommissioning activities will be identified, although paragraph 5.4.11 proposes that the study area for this topic will be an area within 1km of the project site, so the extent of the study area is unclear. The study area must be clearly and consistently defined in the ES and the reasons for selecting it explained. The applicant's attention is drawn to the comments made by Bedford Borough Council, contained in Appendix 2 of this Opinion, in relation to the identification of receptors. Consideration should be given to whether the proposed study area is sufficient to identify potentially significant impacts on all relevant receptors. The noise and vibration assessments should take account of traffic movements along access routes to the site, especially during the construction phase.
- 3.42 All activities that could generate noise and vibration impacts at all phases of the proposed development should be fully identified, e.g. such as piling, vehicle movements on and off site, and assessed in the ES. Information should be provided in the ES on the types of vehicles and plant to be used during the construction phase and their potential effects.
- 3.43 Impacts of noise on people should be specifically addressed in the ES, and particularly any potential noise disturbance at night and other unsocial hours such as weekends and public holidays.
- 3.44 Consideration should be given to monitoring noise complaints during construction and when the development is operational.
- 3.45 The results from the noise and vibration assessments should also provide information to inform the ecological assessments, and this chapter should cross-refer to other chapters such as the ES Ecology chapter.

#### Ecology (see Scoping Report Section 5.5)

- 3.46 The SoS recommends that the project should address fully the needs of protecting and enhancing biodiversity. The assessment should cover habitats, species and processes within the sites and surroundings. The SoS notes the recommendations in the Extended Phase 1 Habitats Survey for further surveys either on the project site or in the nearby area for the following species: bats; badgers; water voles; breeding birds; great crested newts (GCNs); reptiles; and terrestrial and aquatic invertebrates.

- 3.47 Paragraph 5.5.4 states that a desk based assessment and Habitat Survey were undertaken in February 2014. The SoS notes that Appendix 1 (Ecological Appraisal) of the Scoping Report includes an addendum to the Ecological Appraisal, which sets out the results of an ecological walkover survey carried out in March 2014 following adjustments to the extent of the survey site for the proposed development. The ES should clearly identify the total extent of the surveyed area and reference all the relevant reports. The SoS recommends that ecological surveys should be thorough, up to date and take account of other developments proposed in the vicinity.
- 3.48 This section does not identify the extent of the study areas that were used for all of the species identified. Paragraph 5.5.5 identifies six SSSIs within 5km of the project site but Appendix 1 identifies seven SSSIs. The applicant should ensure that study areas are clearly defined for each species and habitat, and that information on features within those study areas is consistent throughout the ES and any documents to which it refers.
- 3.49 The SoS notes the assumption in the Scoping Report that all GCNs will have been translocated from the project site as part of the current LLRS, and that therefore no further surveys of the project site will be required. The stage that the LLRS has reached at the time of the application submission should be clearly explained in the ES, and relevant information in relation to protected species and habitats should be provided.
- 3.50 In relation to aquatic invertebrates, the SoS notes that it is stated that the ditches and ponds on site will be surveyed if a Water Framework Directive Report (WFD Report) is required. However, the Habitat Survey recommends that aquatic surveys are undertaken to determine the assemblage of aquatic invertebrates present on site, and that surveys may **also** be necessary to determine ecological quality if any watercourses are lost or in order to comply with the WFD. The applicant must satisfy themselves that all necessary surveys have been undertaken prior to submission of the DCO application, and that all species and habitats that may be affected have been identified.
- 3.51 The SoS notes that no European sites have been identified at this stage, but welcomes the applicant's intention to consult NE and relevant local Councils in order to establish the extent of the relevant study area and the potential need for a screening exercise and provision of information to inform an appropriate assessment under the Habitats Regulations. The location of any European sites which may be affected by the proposed development should be clearly indicated on a plan accompanying the ES. The Applicant is referred to the information on the Habitats Regulations in Section 4 of this Scoping Opinion.

- 3.52 The ecological assessments should take account of potential impacts of noise, vibration and air quality (including dust) on ecological receptors, and cross reference should be made to relevant specialist reports, and to information in other ES topic chapters as appropriate.
- 3.53 The SoS highlights the need to consider cumulative and combined impacts, and advises this is particularly relevant in assessing the impacts on ecological interests.
- 3.54 The SoS notes that the project site and surrounding area includes some woodland. The applicant is referred to the comments of the Forestry Commission in Appendix 2 of this Opinion, particularly in relation to the potential need to obtain consent for planting and/or felling of trees, and to longer-term management of any compensatory plantings.

### Water Quality and Resources (**see Scoping Report Section 5.6**)

- 3.55 The SoS welcomes the intention to provide a Flood Risk Assessment (FRA) in consultation with the EA and Lead Local Flood Authority. The FRA should form an appendix to the ES (and cross-referenced from other application documents as necessary) rather than being provided as a standalone application document.
- 3.56 The SoS notes that the applicant assumes at this stage that air cooling will be utilised for the proposed development rather than water cooling. If the preferred option has not been determined at the time the DCO application is submitted, either both options should be assessed in the ES, or the worst case scenario identified and assessed.
- 3.57 Paragraph 5.6.10 states that no significant impacts are anticipated on key waterbodies and that the majority of watercourses are a significant distance from the project site. However, other paragraphs in the Report, and Figures 2 and 3, indicate that part of Mill Brook is within the site boundary. The applicant should ensure that the assessment of impacts on water resources identifies and considers all watercourses that may be affected, including Mill Brook. The applicant's attention is drawn to the comments made by the Canal and River Trust, contained in Appendix 2 of this Opinion, about the Bedford and Milton Keynes Waterway Park, and advises that consideration should be given to including that proposed development in the cumulative impacts assessment.
- 3.58 Paragraph 5.6.10 states that it is not anticipated that water will be directly abstracted or discharged from any of the identified water sources during any of the phases of the development. However, paragraph 5.6.19 states that discharges from the proposed development during operation would be controlled by an Environmental Permit, so it is unclear whether discharges to

watercourses will occur, and if so, which watercourses would be affected. It should be made clear in the ES whether the proposed development includes any discharges to water, and if so, impacts should be robustly assessed. If the position is not known at the time of the DCO application the worst case scenario should be indicated and assessed.

- 3.59 Paragraph 5.6.15 notes that in relation to the electricity and gas connections various techniques may be used to cross waterbodies where necessary. All crossing locations should be identified in the ES, and all potential techniques identified and assessed.
- 3.60 The applicant's attention is drawn to the comments of Network Rail, contained in Appendix 2 of this Opinion, in relation to the potential impacts of surface water drainage on railway infrastructure and the possible requirement for easements.
- 3.61 Groundwater is the potential pathway for discharge of liquids to surface and coastal waters. The SoS considers that the impacts of climate change, in terms of increased run-off and rises in sea level, should be taken into account in the ES.
- 3.62 This topic chapter makes reference to potential impacts on hydrogeology being assessed in the Geology, Ground Conditions and Agriculture ES chapter. These chapters should be cross-referenced and inter-relationships considered as appropriate.
- 3.63 The applicant is referred to the comments of Public Health England in Appendix 2 of this Opinion, particularly in relation to establishing the baseline for assessment purposes.

### **Geology, Ground Conditions and Agriculture (see Scoping Report Section 5.7)**

- 3.64 The SoS notes that some filling of Rookery South Pit will take place as part of the LLRS. The ES should fully set out the works and the stage that they have reached, and ensure that any changes to the land that have taken place are reflected in the baseline description for this topic. Potential further changes to the land that result from the LLRS following the establishment of the baseline may need to be taken into account in the assessment of cumulative impacts.
- 3.65 It is stated in paragraph 5.7.6 that there are water bearing strata below the project site. The ES should identify by name and provide an assessment of features which may be affected by the proposed development such as aquifers.
- 3.66 The SoS welcomes the applicant's intention to consult the local Councils and EA in order to obtain relevant information and refine the assessment methodology.

- 3.67 The study area for this topic is not identified in this section. It should be clearly defined and justified in the ES.
- 3.68 This ES chapter should be cross-referenced with the Water Quality and Resources chapter, and inter-relationships assessed as appropriate.
- 3.69 The applicant is referred to the comments of Public Health England in Appendix 2 of this Opinion, particularly in relation to any potential for historical contamination of the project site, and to the comments of Central Bedfordshire Council in relation to potential cumulative impacts.

### Landscape and Visual Impact (see Scoping Report Section 5.8)

- 3.70 It is stated in this section that the Rookery South Pit is being extended, which suggests that the Pit is still being worked, although it is understood by the SoS that extraction will take place as part of the LLRS. The SoS recommends that the terminology used to describe the LLRS works is used consistently throughout the ES in order to provide clarity about the nature of the works at the Pit.
- 3.71 The landscape and visual cumulative impacts assessment should include not just other proposed large industrial developments in the area, but also other types of development that could contribute to a cumulative effect. The SoS recommends that the wind turbine in the Marston Vale Millennium Country Park is included in the assessment of potential cumulative effects of this proposed development, and that consideration should be given to the potential for a further turbine at Stewartby landfill site, as highlighted in the response of Central Bedfordshire Council
- 3.72 The study area for this topic is not identified in this section, although reference is made to residential receptors within 1km of the project site. Bearing in mind that the proposed development includes 1- 5 stacks of up to 60m in height, the applicant should consider whether a 1km study area is sufficient to identify all those residential receptors that may be affected and the likely significant visual impacts. The applicant is referred to the comments of Luton Borough Council, contained in Appendix 2 of this Opinion, in relation to potential views of the stacks.
- 3.73 Reference is made in this section to a Zone of Theoretical Visibility (ZTV) plan. The SoS advises that the ES should describe the ZTV model used, and provide information on the area covered, the timing of any survey work, and the methodology used. The SoS welcomes the intention to provide photomontages, and recommends that the locations of viewpoints are agreed with the relevant local authorities.

- 3.74 The SoS notes that the nearest AONB to the project site has been scoped out of the assessment on the basis that it is remote from the site and visually separated, although the distance between it and the site has not been specified. Fuller information on the location of the AONB, and visibility of the development from the AONB, taking account of maximum heights of structures proposed, should be provided in the ES.
- 3.75 Figure 3 of the Scoping Report shows environmentally sensitive receptors within 5km of the project site, and identifies a Country Park but does not identify any PROWs. The ES should include a plan that identifies all the landscape and visual receptors within the selected study area.
- 3.76 The SoS notes that the landscape and visual assessment of potential impacts of the gas and electricity connections will focus on the AGIs, substation and SEC(s) (if required) during the construction phase. If these structures are to be removed as part of the decommissioning of the proposed development, impacts during that phase should also be considered.
- 3.77 The proposed development includes large structures including stacks up to 60m in height on the site. The SoS recommends that careful consideration is given to the form, siting, and use of materials and colours in relation to minimising potential adverse visual impacts of large structures.
- 3.78 The assessment should include consideration of any visible plumes which may be emitted from the stacks and which may additionally draw attention to the proposed development. Night time lighting effects, including those which may result from the need to provide any air navigation warning lights, should also be assessed.
- 3.79 Consideration should be given to whether any proposed landscape and visual mitigation measures could affect ecological interests. This ES chapter should consider inter-relationships with ecological matters as appropriate and cross refer to the ES Ecology chapter.

#### Traffic, Transport and Access (see Scoping Report Section 5.9)

- 3.80 The ES should include information relating to transport for all phases of the proposed development such as estimates of traffic movements and vehicle types, including relating to abnormal loads, and access and delivery routes. The applicant is referred to the comments of Luton Borough Council, contained in Appendix 2 of this Opinion, in relation to traffic movements during the operational phase, and to comments made by Network Rail with regards to the existing level crossing on Stewartby Green Lane. The SoS notes that information will be contained in a Transport Assessment, if considered appropriate, accompanied by a draft Construction Traffic Management Plan. The SoS recommends that these documents are included in the ES as appendices.



- 3.81 The removal of waste from the site for all phases of the proposed development should be considered and assessed in terms of the likely transport routes, the number of journeys and the type of vehicles required. Consideration should be given to including an assessment of potential cumulative effects with other projects in the area, e.g. the LLRS, that have the potential to generate a high number of vehicle movements, with particular regard to HGV movements.
- 3.82 The Scoping Report refers to the roads likely to be used for access to the project site as being shown on Figures 1 and 2. They are identified by colour on Figure 2 but not identified in any way on Figure 1. The ES should include a plan on which access routes are clearly identifiable.
- 3.83 The SoS welcomes the development of the assessment of transport impacts in association with the local highways authorities and the Highways Agency (HA). The SoS would expect on-going discussions and agreement, where possible, with such bodies.
- 3.84 The SoS notes that opportunities for reducing traffic movements will be investigated, and suggests mitigation measures such as implementing a travel plan and sourcing materials so as to minimise transport could be considered.
- 3.85 The SoS recommends that the ES should take account of the location of footpaths and PROWs in the area, including bridleways and byways, and clearly set out potential impacts as a result of access routes and traffic movements.
- 3.86 The applicant is referred to the comments of the Highways Agency in Appendix 2 of this Opinion, in relation to assessment of potential access routes, abnormal loads, and construction management and travel plans.
- 3.87 This topic should be cross-referred to the air quality topic chapter in the ES, particularly in relation to traffic emissions.

#### Cultural Heritage and Archaeology (see Scoping Report Section 5.10)

- 3.88 The SoS notes that conservation areas are identified by name on the list of cultural heritage assets in paragraph 5.10.4, but not included in the list in paragraph 5.10.12 of types of assets that will be considered in the assessment. The SoS would expect the potential impacts on conservation areas to be identified and assessed as part of the EIA.
- 3.89 The SoS welcomes the applicant's intention to consult the local Councils and English Heritage in relation to the archaeology and cultural heritage assessment.

- 3.90 Paragraph 5.10.2 states that the potential for archaeological remains within Rookery South Pit is like to be limited, as a result of former works and activities related to the LLRS. However, the SoS notes that the proposed development involves some working of previously unworked areas on the project site, and recommends that consideration is given to whether further assessment of the project site is required, in consultation with relevant Council officers.
- 3.91 The SoS expects to see a comprehensive assessment in the ES of potential impacts of the proposed development on the setting of cultural heritage assets in the area. The applicant is referred to comments made by English Heritage and CBC on this point.
- 3.92 Cross reference from this chapter of the ES should be made to other chapters as appropriate, such the Landscape and Visual chapter.

#### Socio-economics (see Scoping Report Section 5.11)

- 3.93 The SoS recommends that the types of jobs generated should be considered in the context of the available workforce in the area. This applies equally to the construction and operational stages.
- 3.94 The SoS recommends that the assessment criteria should be locationally-specific, and consider the potential significance of the impacts of the proposed development within the local and regional context.
- 3.95 The SoS draws the applicant's attention to the comments of Ampthill Town Council in Appendix 2 of this Opinion in relation to recreational facilities in the area, and recommends that consideration is given to potential impacts of the proposed development on recreational interests.

#### Waste (not identified in the Scoping Report)

- 3.96 Although waste has not been identified as a discrete topic there are several references to it in the Scoping Report, and the SoS notes and welcomes the applicant's intention to produce a site waste management strategy prior to construction which would focus on the re-use, recycling and reduction of waste and spoil.
- 3.97 The ES should describe the types of waste generated by the project at all stages and describe the method/s of removing it, including identifying potential transport routes. The applicant is referred to the comments of Public Health England in Appendix 2 of this Opinion in relation to the disposal of waste.
- 3.98 Waste should either be addressed in specific ES chapters as appropriate, eg Traffic, Transport and Access, or consideration given to including a discrete chapter on waste.

## Electric and Magnetic Fields (not identified in the Scoping Report)

- 3.99 The SoS notes that this proposed development includes a new electricity connection, with the configuration and route still to be determined. The applicant is referred to the comments of Public Health England in Appendix 2 of this Opinion in relation to potential impacts on human health caused by electric and magnetic fields. The SoS recommends that the ES includes an assessment of such impacts, and identifies mitigation measures as necessary, and suggests that this could be included in a Health Impact Assessment if one is undertaken.

## 4.0 OTHER INFORMATION

- 4.1 This section does not form part of the SoS's Opinion as to the information to be provided in the environmental statement. However, it does respond to other issues that the SoS has identified which may help to inform the preparation of the application for the DCO.

### Habitats Regulations Assessment (HRA)

- 4.2 The SoS notes that no information has been provided at this stage on the location of European sites but that some may be located close to the project. It is the applicant's responsibility to provide sufficient information to the Competent Authority (CA) to enable them to carry out a HRA if required. The applicant should note that the CA is the SoS.
- 4.3 The applicant's attention is drawn to The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (as amended) (The APFP Regulations) and the need to include information identifying European sites to which the Habitats Regulations apply, Ramsar sites or potential SPAs, which may be affected by a proposal. The submitted information should be sufficient for the competent authority to make an appropriate assessment (AA) of the implications for the site if required by Regulation 61(1) of the Habitats Regulations.
- 4.4 The report to be submitted under Regulation 5(2)(g) of the APFP Regulations with the application must deal with two issues: the first is to enable a formal assessment by the CA of whether there is a likely significant effect; and the second, should it be required, is to enable the carrying out of an AA by the CA.
- 4.5 When considering aspects of the environment likely to be affected by the project; including flora, fauna, soil, water, air and the inter-relationship between these, consideration should be given to the designated sites in the vicinity of the project.
- 4.6 Further information with regard to the HRA process is contained within Planning Inspectorate's Advice Note 10 available on the National Infrastructure pages on the Planning Portal website.

### Evidence Plans

- 4.7 An evidence plan is a formal mechanism to agree upfront what information the applicant needs to supply to the Planning Inspectorate as part of a DCO application. An evidence plan will help to ensure compliance with the Habitats Regulations. It will be particularly relevant to NSIPs where impacts may be complex, large volumes of evidence may be needed, or there are a number of uncertainties. It will also help applicants meet the requirement

to provide sufficient information (as explained in Advice Note 10) in their application, so the Examining Authority can recommend to the Secretary of State whether or not to accept the application for examination and whether an appropriate assessment is required.

- 4.8 Any applicant of a proposed NSIP in England, or England and Wales, can request an evidence plan. A request for an evidence plan should be made at the start of the pre-application stage (eg, after notifying the Planning Inspectorate on an informal basis) by contacting the Major Infrastructure and Environment Unit (MIEU) in Defra (MIEU@defra.gsi.gov.uk).

## Sites of Special Scientific Interest (SSSIs)

- 4.9 The Secretary of State notes that a number of SSSIs are located close to or within the project. Where there may be potential impacts on the SSSIs, the SoS has duties under sections 28(G) and 28(I) of the Wildlife and Countryside Act 1981 (as amended) (the W&C Act). These are set out below for information.

- 4.10 Under s28(G), the SoS has a general duty ‘... to take reasonable steps, consistent with the proper exercise of the authority’s functions, to further the conservation and enhancement of the flora, fauna or geological or physiographical features by reason of which the site is of special scientific interest’.

- 4.11 Under s28(I), the SoS must notify the relevant nature conservation body (NCB), JNCC/NE/NRW in this case, before authorising the carrying out of operations likely to damage the special interest features of a SSSI. Under these circumstances 28 days must elapse before deciding whether to grant consent, and the SoS must take account of any advice received from the NCB, including advice on attaching conditions to the consent. The NCB will be notified during the examination period.

- 4.12 If applicants consider it likely that notification may be necessary under s28(I), they are advised to resolve any issues with the NCB before the DCO application is submitted to the SoS. If, following assessment by applicants, it is considered that operations affecting the SSSI will not lead to damage of the special interest features, applicants should make this clear in the ES. The application documents submitted in accordance with Regulation 5(2)(I) could also provide this information. Applicants should seek to agree with the NCB the DCO requirements which will provide protection for the SSSI before the DCO application is submitted.

## European Protected Species (EPS)

- 4.13 Applicants should be aware that the decision maker under the Planning Act 2008 (PA 2008) has, as the CA, a duty to engage with the Habitats Directive. Where a potential risk to an EPS is identified, and before making a decision to grant development

consent, the CA must, amongst other things, address the derogation tests<sup>2</sup> in Regulation 53 of the Habitats Regulations. Therefore the applicant may wish to provide information which will assist the decision maker to meet this duty.

- 4.14 If an applicant has concluded that an EPS licence is required the ExA will need to understand whether there is any impediment to the licence being granted. The decision to apply for a licence or not will rest with the applicant as the person responsible for commissioning the proposed activity by taking into account the advice of their consultant ecologist.
- 4.15 Applicants are encouraged to consult with NE and, where required, to agree appropriate requirements to secure necessary mitigation. It would assist the examination if applicants could provide, with the application documents, confirmation from NE whether any issues have been identified which would prevent the EPS licence being granted.
- 4.16 Generally, NE are unable to grant an EPS licence in respect of any development until all the necessary consents required have been secured in order to proceed. For NSIPs, NE will assess a draft licence application in order to ensure that all the relevant issues have been addressed. Within 30 working days of receipt, NE will either issue 'a letter of no impediment' stating that it is satisfied, insofar as it can make a judgement, that the proposals presented comply with the regulations or will issue a letter outlining why NE consider the proposals do not meet licensing requirements and what further information is required before a 'letter of no impediment' can be issued. The applicant is responsible for ensure draft licence applications are satisfactory for the purposes of informing formal pre-application assessment by NE.
- 4.17 Ecological conditions on the site may change over time. It will be the applicant's responsibility to ensure information is satisfactory for the purposes of informing the assessment of no detriment to the maintenance of favourable conservation status (FCS) of the population of EPS affected by the proposals<sup>3</sup>. Applicants are advised that current conservation status of populations may or may not be favourable. Demonstration of no detriment to favourable populations may require further survey and/or submission of revised short or long term mitigation or compensation proposals. In England the focus concerns the provision of up to date survey information which is then made available to NE (along with any resulting amendments to the draft

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<sup>2</sup> Key case law re need to consider Article 16 of the Habitats Directive: Woolley vs East Cheshire County Council 2009 and Morge v Hampshire County Council 2010.

<sup>3</sup> Key case law in respect of the application of the FCS test at a site level: Hafod Quarry Land Tribunal (Mersey Waste (Holdings) Limited v Wrexham County Borough Council) 2012, and Court of Appeal 2012.

licence application). This approach will help to ensure no delay in issuing the licence should the DCO application be successful. Applicants with projects in England or English waters can find further information on Natural England's protected species licensing procedures in relation to NSIPs by clicking on the following link:

[http://www.naturalengland.org.uk/Images/wml-g36\\_tcm6-28566.pdf](http://www.naturalengland.org.uk/Images/wml-g36_tcm6-28566.pdf)

- 4.18 In England or English Waters, assistance may be obtained from the Consents Service Unit. The Unit works with applicants to coordinate key non-planning consents associated with nationally significant infrastructure projects. The Unit's remit includes EPS licences. The service is free of charge and entirely voluntary. Further information is available from the following link:

<http://infrastructure.planningportal.gov.uk/legislation-and-advice/consents-service-unit/>

## Health Impact Assessment

- 4.19 The SoS considers that it is a matter for the applicant to decide whether or not to submit a stand-alone Health Impact Assessment (HIA). However, the applicant should have regard to the responses received from the relevant consultees regarding health, and in particular to the comments from the Health and Safety Executive, Public Health England, and National Grid in relation to electric and magnetic fields and electrical and gas safety issues (see Appendix 2).
- 4.20 The methodology for the HIA, if prepared, should be agreed with the relevant statutory consultees and take into account mitigation measures for acute risks.

## Other regulatory regimes

- 4.21 The SoS recommends that the applicant should state clearly what regulatory areas are addressed in the ES and that the applicant should ensure that all relevant authorisations, licences, permits and consents that are necessary to enable operations to proceed are described in the ES. Also it should be clear that any likely significant effects of the project which may be regulated by other statutory regimes have been properly taken into account in the ES.
- 4.22 It will not necessarily follow that the granting of consent under one regime will ensure consent under another regime. For those consents not capable of being included in an application for consent under the PA 2008, the SoS will require a level of assurance or comfort from the relevant regulatory authorities that the proposal is acceptable and likely to be approved, before they

make a recommendation or decision on an application. The applicant is encouraged to make early contact with other regulators. Information from the applicant about progress in obtaining other permits, licences or consents, including any confirmation that there is no obvious reason why these will not subsequently be granted, will be helpful in supporting an application for development consent to the SoS.

## Transboundary Impacts

- 4.23 The SoS has noted that the applicant has not indicated whether the project is likely to have significant impacts on another European Economic Area (EEA) State.
- 4.24 Regulation 24 of the EIA Regulations, which *inter alia* require the SoS to publicise a DCO application if the SoS is of the view that the proposal is likely to have significant effects on the environment of another EEA state and where relevant to consult with the EEA state affected. The SoS considers that where Regulation 24 applies, this is likely to have implications for the examination of a DCO application.
- 4.25 The SoS recommends that the ES should identify whether the project has the potential for significant transboundary impacts and if so, what these are and which EEA States would be affected.



## Scoping Opinion for Millbrook Power Project

# **APPENDIX 1**

## **List of Consultees**

## Scoping Opinion for Millbrook Power Project

## APPENDIX 1

### BODIES FORMALLY CONSULTED DURING THE SCOPING EXERCISE

<b>CONSULTEE</b>	<b>ORGANISATION</b>
<b>SCHEDULE 1</b>	
The Health and Safety Executive	Health and Safety Executive
The National Health Service Commissioning Board	NHS England
The relevant clinical commissioning group	Bedfordshire Clinical Commissioning Group
Natural England	Natural England
The Historic Buildings and Monuments Commission for England	English Heritage English Heritage - East of England
The Relevant Fire and Rescue Authority	Bedfordshire Fire and Rescue Service
The Relevant Police and Crime Commissioner	Office of the Police and Crime Commissioner for Bedfordshire
The Relevant Parish Council(s) or Relevant Community Council	Stewartby Parish Council Houghton Conquest Parish Council Amphill Town Council Millbrook Parish Meeting Marston Moreteyne Parish Council

The Environment Agency	The Environment Agency The Environment Agency - Central Area Office
The relevant AONB Conservation Boards	Chilterns Conservation Board
The Civil Aviation Authority	Civil Aviation Authority
The Highways Agency	The Highways Agency - East
The Relevant Highways Authority	Bedford Borough Council Central Bedfordshire Council
The Coal Authority	The Coal Authority
The Canal and River Trust	The Canal and River Trust
Public Health England, an executive agency to the Department of Health	Public Health England
The Crown Estate Commissioners	The Crown Estate
The Forestry Commission	Forestry Commission
The Secretary of State for Defence	Ministry of Defence

### **RELEVANT STATUTORY UNDERTAKERS**

#### **Health Bodies (s.16 of the Acquisition of Land Act (ALA) 1981)**

The National Health Service Commissioning Board (England only)	NHS England
The relevant clinical commissioning group (England only)	Bedfordshire Clinical Commissioning Group
Local Area Team (England only)	Hertfordshire and the South Midlands Area Team
NHS Trust (England only)	Bedford Hospital NHS Trust South Essex Partnership University NHS Foundation Trust

Ambulance Trusts	East of England Ambulance Service
<b>Relevant Statutory Undertakers (s.8 ALA 1981)</b>	
Railway	Network Rail Infrastructure Ltd Highways Agency Historical Railways Estate
Water Transport	The Canal and River Trust
Canal Or Inland Navigation Authorities	Bedford & Milton Keynes Waterway Trust
Civil Aviation Authority	Civil Aviation Authority
Licence Holder (Chapter 1 Of Part 1 Of Transport Act 2000)	NATS En-Route (NERL) Safeguarding
Universal Service Provider	Royal Mail Group
Relevant Environment Agency	Environment Agency
Water and Sewage Undertakers	Anglian Water
Public Gas Transporter	Energetics Gas Limited ES Pipelines Ltd ESP Connections Ltd ESP Networks Ltd ESP Pipelines Ltd Fulcrum Pipelines Limited GTC Pipelines Limited Independent Pipelines Limited LNG Portable Pipeline Services Limited National Grid Gas Plc National Grid Plc

	<p>Quadrant Pipelines Limited</p> <p>SSE Pipelines Ltd</p> <p>Scotland Gas Networks Plc</p> <p>Southern Gas Networks Plc</p> <p>Wales and West Utilities Ltd</p>
<p>Electricity Distributors With CPO Powers</p>	<p>Energetics Electricity Limited</p> <p>ESP Electricity Limited</p> <p>Independent Power Networks Limited</p> <p>The Electricity Network Company Limited</p> <p>Eastern Power Networks Plc</p> <p>UK Power Networks Limited</p>
<p>Electricity Transmitters With CPO Powers</p>	<p>National Grid Electricity Transmission Plc</p> <p>National Grid Plc</p>

**LOCAL AUTHORITIES (SECTION 43)**

Local Authority

Bedford Borough Council

Central Bedfordshire  
CouncilHuntingdonshire District  
CouncilCambridgeshire County  
CouncilSouth Cambridgeshire  
District CouncilNorth Hertfordshire District  
Council

Luton Borough Council

Hertfordshire County  
CouncilSt Albans City & District  
Council

Dacorum Borough Council

Buckinghamshire County  
CouncilAylesbury Vale District  
Council

Milton Keynes Council

Wellingborough Borough  
CouncilNorthamptonshire County  
CouncilEast Northamptonshire  
Council



## **APPENDIX 2**

# **Respondents to Consultation and Copies of Replies**



## APPENDIX 2

### BODIES WHO REPLIED BY THE STATUTORY DEADLINE

Ampthill Town Council
Bedford Borough Council
Canal and River Trust
Central Bedfordshire Council
Civil Aviation Authority
Energetics UK
English Heritage
Environment Agency
ES Pipelines Limited
Forestry Commission
Fulcrum Pipelines Limited
GTC Pipelines Limited (on behalf of bodies * identified below)
Health and Safety Executive
Highways Agency
Independent Pipelines Limited *
Independent Power Networks Limited *
Luton Borough Council
National Grid
NATS
Natural England
Network Rail
North Hertfordshire District Council
Public Health England
Quadrant Pipelines Limited *
The Chilterns Conservation Board
The Coal Authority
The Electricity Network Company Limited *





## AMPTHILL TOWN COUNCIL

Tel: 01525 404355

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Email: [council@amphilltowncouncil.org.uk](mailto:council@amphilltowncouncil.org.uk)

Website: [www.amphilltowncouncil.org.uk](http://www.amphilltowncouncil.org.uk)



66 Dunstable Street  
Amphill  
Bedford  
MK45 2JS

Sent by email: [environmentalservices@infrastructure.gsi.gov.uk](mailto:environmentalservices@infrastructure.gsi.gov.uk)

17<sup>th</sup> July 2014

Alison L Down  
EIA & Land Rights Adviser  
On behalf of the Secretary of State

Dear Ms Down

### **Application by Millbrook Power Ltd for an Order Granting Development Consent for the Millbrook Power Project**

Amphill Town Council as a consultation body has the following comments to make in regard to the Millbrook Power Project:

#### **Cooper's Hill (SSSI)**

Cooper's Hill is a nature reserve owned by Amphill Town Council and managed by the Wildlife Trust. It is a site of special scientific interest and the best remaining example in Bedfordshire of the once more extensive heathland on the Greensand ridge. Where Amphill clay reaches the surface on the edge of the site, springs occur, supporting rich marsh plant communities. Within this small area are locally uncommon plant species (this is the only location for marsh violets in Bedfordshire) and a type of habitat very rare in the county. The adverse effect caused by emissions on Cooper's Hill is of concern to us. Sulphur di-oxide and Nitrogen Dioxide, both contributing to acid rain and hampering the growth of plants will have an adverse impact. There is also a health risk from dioxins via the food chain and this too is of concern to us, being a farming area.

We would need reassurance of how these emissions are to be monitored and procedures in the event of the monitoring system failing.

#### **Visual Quality**

- Sheer size of the building will dominate the skyline – most of which will be visible above the edge of Rookery Pit.
- The size of the plant will have a major impact on the visual quality of the landscape and will adversely impair the views from the Vale to the surrounding Greensand Ridge and the panoramic views from the ridge, especially those seen from Amphill Great Park a Grade II listed historic park and Houghton House ruins, a Grade I English Heritage site.
- The building and four chimneys will be seen very clearly from Katherine's Cross, which is surrounded by a Scheduled Ancient Monument area in Amphill Park and will not blend into the landscape.

- Local policy seeks to protect, conserve and enhance the County's scheduled ancient monuments, conservation areas, parks and gardens and their settings. The proposed EFW is contrary to these policies.
- The facility could attract additional industrial activity which would further alter the rural character of the Vale.

### **Biodiversity and Geological Conservation**

- The surrounding villages are all within a rural landscape populated by residents who wish to preserve their rural way of life.
- To situate the facility within Rookery Pit and in close proximity to the Marston Vale Millennium Country Park – a primary purpose of which is to re-forest the Marston Vale – would be a retrograde step ecologically and lead to significant habitat loss and ultimately the industrialisation of Rookery Pit.

### **Socio-Economic**

- We are not convinced that the proposed facility will enhance the local economy as only 15 full time jobs have been identified.
- There will be a detrimental effect on existing property prices which in turn will depress economic activity and undermine the ambition of local communities to develop as tourist destinations.

### **Amphill Park**

Amphill Town Council has just received a grant of £606,800 from the Heritage Lottery Fund (HLF) and the Big Lottery Fund for Amphill Great Park. The project aims to further investigate, restore and enhance the Park's landscape, historic and heritage features, whilst ensuring it meets the needs of its current and future visitors.

Amphill Great Park has a significant heritage and serves the people of the town and surrounding areas with a place for recreation and enjoyment. The grant will enable us to ensure that the park's landscape is enhanced and preserved for the pleasure of future generations. This grant is part of a wider investment of £34.5million of Lottery money to 13 parks across the UK.

This application by Millbrook Power Ltd for a power generation plant will have a detrimental effect on the restoration work we are carrying out in the Park on this major project.

### **Conclusion**

The whole of the Vale does not currently contain heavy industry and is a peaceful area of the countryside enjoyed by local people and visitors alike for its stunning views. The Forest of Marston Vale is one of 12 Community Forests throughout England working to improve the countryside around our towns and cities.

Amphill Town Council are of the opinion that the Secretary of State should conclude that this proposal is the wrong solution to dealing with energy in the proposed catchment area and in the wrong location.

Yours sincerely

Donna J Searle (Miss)  
Deputy Town Clerk

Direct Dial: XXXXXXXXXX

**From:** Michael Robinson [mailto:Michael.Robinson@bedford.gov.uk]  
**Sent:** 18 July 2014 15:42  
**To:** Environmental Services  
**Cc:** Iain Blackley; Paul Rowland (Planning)  
**Subject:** Your ref EN010068 Application by Millbrook Power Ltd for an Order Granting Development Consent for the Millbrook Power Project

**Bedford BC - OFFICIAL-Unsecure**

Dear Sirs,

Further to your letter dated 20<sup>th</sup> June 2014 concerning the above proposal Bedford Borough Council would like to comment that at this stage the scoping for the Environmental Statement appears reasonable but that the Bedford Borough Council will wish to be informed by the applicant's consultants of progress towards the final version of the ES, and will be happy to make available information that the council may have to assist in its comprehensive preparation before the submission of the planning application.

Initial comments from the council's Environmental Health Officer are as follows: -

#### **"Air Quality**

I have no objection to the proposals for the air quality assessment.

I would advise that the assessment makes use of the guidance held within the Environmental Protection UK guidance, Development Control: Planning for Air Quality.

#### **Noise**

With regards to the proposed noise assessment, I would like to emphasise that the noise from the operation of the plant should be assessed in line with BS4142.

BS8233 and the WHO guidance relate to anonymous noise sources, this is not an anonymous noise source and as such, in line with the guidance within BS8233, the assessment should be in line with BS4142.

I do not believe that the draft IEMA/IOA guidance should be used for determining significance. The guidance has been published in a number of draft forms and as such only gives possible examples of significance criteria as part of the consultation, rather than any firm criteria.

I am surprised that the noise contribution arising from electrical connections has been scoped out at this stage. Given the low frequency and highly tonal nature of noise associated with this, and the potential for a significant impact, even at low decibel levels, I would expect the noise to be assessed.

The proposed construction and decommissioning, noise and vibration assessment, should not limit itself to NSR's within 100m of construction activities, but should look at all NSR's that will be affected by the activities.

With regards to possible mitigation, the development is located very near to South Pillinge farm. Alternative locations within the pit should be considered."

I hope that these preliminary comments will assist in the preparation of the ES and I repeat the offer that the council will wish to assist and participate as far as it can in achieving a high quality Environmental Statement in conjunction with Central Bedfordshire Council within whose district the bulk of the development is located.

With kind regards,

**Michael Robinson**  
**Team Leader Major Applications**  
**Environment & Sustainable Communities**  
**Bedford Borough Council**  
4<sup>th</sup> Floor, Borough Hall, Cauldwell Street, Bedford, MK42 9AP  
01234 718538 (47538)  
Web [www.bedford.gov.uk](http://www.bedford.gov.uk)

Bedford Borough Council – Working with our partners to make the Borough a better place to live, work and visit. For up-to-date information on the Council follow us on Twitter: @bedfordtweets

From the 1<sup>st</sup> April 2014 Bedford Borough Council introduced a new planning advice service. From this date all general planning information will be available on our website [www.bedford.gov.uk/preapp](http://www.bedford.gov.uk/preapp) However, if your enquiry is site specific and/or the information is not available online, you will need to complete a request for advice on our new enquiry form and pay the appropriate fee. Full information of this new service can be found on our website as shown above.

*'Bedford Borough Council - Working with our partners to make the borough a better place to live, work and visit.'*

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**From:** Jane Hennell [mailto:Jane.Hennell@canalrivertrust.org.uk]  
**Sent:** 18 July 2014 12:28  
**To:** Environmental Services  
**Cc:** info@millbrookpower.co.uk  
**Subject:** Millbrook Power Ltd. Scoping

Thank you for consulting the Canal & River Trust with regard to EIA scoping for the DCO for the proposed Millbrook Power Development.

The Canal & River Trust (the Trust) is the guardian of 2,000 miles of historic waterways across England and Wales. We are among the largest charities in the UK, maintaining the nation's third largest collection of listed structures, as well as museums, archives, navigations and hundreds of important wildlife sites. Following the transfer of functions from British Waterways to the Trust in 2012, we are a statutory consultee in the development management process and are consulted on both local and neighbourhood plans as well as NSIPS.

The Trust do not own or maintain any canals in the area of the development site but we are a member of in the Bedford Milton Keynes Waterway Trust Partnership who seek to create a new stretch of waterway. The B&MK Waterway Trust was established in 1995 to promote the development of a broad waterway which will link the Grand Union Canal in Milton Keynes to the river Great Ouse in Bedford through a series of waterway parks. It will include pathways and green space designed to meet the needs of walkers, cyclists, fishermen, and those who simply like to stand and stare.

We fully support the work of the Bedford to Milton Keynes Waterway Trust who, with a range of other partners including Local Authorities and the Environment Agency, are seeking to promote a Waterway Park linking the River Ouse in Bedford with the Grand Union Canal in Milton Keynes. The proposal is strongly supported locally and the route of the proposed Waterway Park is safeguarded in the relevant Local Plans.

The Canal & River Trust note your that the proposed site is some distance from the safeguarded route of the Waterway Park, but because of its strategic nature Millbrook Power is likely to have wider implications for the Marston Vale. We wish to ensure that you are aware of the project and its safeguarded route to ensure that the project, or subsequent supporting work such as pipe lines, do not have an adverse impact on the proposal.

The Trust will in due course register our interest but if you feel it may be beneficial to meet at any time please do not hesitate to contact me. I understand that the Bedford & Milton Keynes Trust will also contact you and will wish to discuss possible opportunities for joint initiatives. If we are able to assist with this in any way we would welcome the opportunity to become involved.

Please ensure that I am listed as your contact within the Canal & River Trust, using the details below, rather than sending documents to our Head Office Milton Keynes.

Jane Hennell  
Area Planner South

The Canal & River Trust  
The Dock Office  
Commercial Road  
Gloucester  
GL1 2EB

Tel. 07747 897793

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The Canal & River Trust is a new charity entrusted with the care of 2,000 miles of waterways in England and Wales. Get involved, join us - Visit / Donate / Volunteer at [www.canalrivertrust.org.uk](http://www.canalrivertrust.org.uk)

Canal & River Trust is a charitable company limited by guarantee registered in England & Wales with company number 7807276 and charity number 1146792. Registered office address First Floor North, Station House, 500 Elder Gate, Milton Keynes MK9 1BB.

Elusen newydd yw Glandŵr Cymru sy'n gofalu am 2,000 o filltiroedd o ddyfrffyrdd yng Nghymru a Lloegr. Cymerwch ran, ymunwch â ni - Ewch i Rhoddion a Gwirfoddoli yn [www.glandwrcymru.org.uk](http://www.glandwrcymru.org.uk)

Mae Glandŵr Cymru yn gwmni cyfyngedig drwy warant a gofrestrwyd yng Nghymru a Lloegr gyda rhif cwmni 7807276 a rhif elusen gofrestredig 1146792. Swyddfa gofrestredig: First Floor North, Station House, 500 Elder Gate, Milton Keynes MK9 1BB.

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# Development Management

## Central Bedfordshire Council

Priory House, Monks Walk  
Chicksands, Shefford  
Bedfordshire SG17 5TQ  
www.centralbedfordshire.gov.uk



The Planning Inspectorate  
3/20 Eagle Wing  
Temple Quay House  
2 The Square  
Bristol  
BS1 6PN

**Contact** Lisa Newlands  
**Direct Dial** 0300 300 4185  
**Email** [planning@centralbedfordshire.gov.uk](mailto:planning@centralbedfordshire.gov.uk)  
**Your Ref**  
**Date** 15 July 2014

Dear Sir/Madam,

**Application No:** CB/14/02453/OAC  
**Location:** The Rookery Pit (south), Near Stewartby, Bedfordshire  
**Proposal:** Other Authority Consultation: EIA Scoping Report for The Millbrook Power Project (Gas Power Station)

I refer to your letter dated 20th June 2014 and registered on that date requesting comments on the Scoping Opinion for the Millbrook Power Project at Rookery Pit (South).

The Local Planning Authority has assessed the submitted Scoping report and makes the following comments with regard to the content of the proposed Environmental Statement. Submitted Scoping Report.

The Local Planning Authority generally agrees with the content of the submitted Scoping report but considers that internal consultees have identified further scope that should be included within the Environmental Assessment. These are listed below:

### CBC Ecological Officer

The Council's Ecologist has assessed the Scoping Report submitted and is satisfied that the suite of surveys proposed and the assumed baseline will adequately inform the EIA.

### CBC Archaeological Officer

The bulk of the proposed development is located within Rookery Pit (HER 6681), one of the clay pits that provided the raw material for Stewartby Brickworks during the 20th century. In the wider project site area there are a number of known archaeological sites and features. On the south western edge of the existing clay pit is an Iron Age and Roman settlement (HER 19806) and to the south of that is a ring ditch known from aerial photography (HER 16566), which on morphological grounds is likely to be the remains of a Bronze Age funerary monument. There are also other as yet uncharacterised cropmark features within this area (HER 4469 and HER 9077), some of these may represent land boundaries of unknown date but frequently such cropmarks have been shown to belong to later prehistoric and Roman settlements. On the eastern boundary of the site is a scatter of medieval pottery has been found possibly indicating occupation of that period (HER 15892). These are heritage assets with archaeological interest as defined by the *National Planning Policy Framework (NPPF)*. Archaeological survey and research in the wider Marston Vale has been limited. However, recent investigations in advance of housing development at Stewartby to the north, a road scheme on the northern edge of the Marston Vale and along the route of various pipelines to the south and east have started to identify a range of previously unidentified sites within the Vale dating from the prehistoric to medieval periods. These sites are often difficult to detect

remotely and can only be identified through intrusive investigation and suggest that the Vale contained a much more extensive settlement pattern than had previously been thought. Therefore, the wider project area has the potential to contain so far unidentified archaeological sites and features dating from the prehistoric period.

The proposed development site is also located within the setting of a number of Scheduled Monuments including amongst others Houghton House (HER 729 and SM 1013522) and Ampthill Castle (HER 810 and SM 10009630) in Greensand Ridge to the south, Thrupp End medieval settlement and moated sites (HER 31 and SM 1010364) to the west, The Rectory Moated site (HER 3236 and SM 1009588), Houghton Conquest to the east and Ampthill Park (HER 1369 and RPG 10000378). Under the terms of the *NPPF* these are designated heritage assets of the highest importance. Development within the setting of these designated heritage assets will have an impact on their significance.

The submitted *Scoping Report* rightly identifies cultural heritage and archaeology as one of the topic areas to be covered in the *Environmental Impact Assessment*. It notes that main development is in Rookery Pit and that excavation of the clay will have reduced its potential to contain archaeological remains (5.10.2). This is correct, however, the clay pit itself is of considerable industrial archaeological importance in its association with Stewartby Brickworks. The remains of the brick making industry in the Marston Vale are of national and regional importance. The *EIA* should deal with the impact of the proposal on the remains of the Rookery Pit clay pit. It should also be noted that the permitted southern extension of the clay pit, proposed for extraction in this scheme, contains the remains of an Iron Age and Roman settlement (HER 19806). The potential of the gas and electrical connections outside Rookery Pit to impact on buried archaeological remains is acknowledged. The potential of the development to affect the setting of designated heritage assets is identified and, from an archaeological perspective, the list of sites is comprehensive.

It is proposed that the baseline information for the *EIA* should be collected by means of a desk-based assessment, using the relevant Institute for Archaeologists' standards and guidance document as the basis for the assessment. This is an appropriate standard for a desk-based assessment. It is stated that no intrusive investigation is proposed at this stage (5.10.16). In the gas and electrical connection opportunity area any underground connections will impact on archaeological remains and affect the significance of the heritage assets with archaeological interest. Given the potential for this area to contain as yet unidentified archaeological remains the CBC Archaeological Officer considers that the collection of baseline information on archaeology for the gas and electrical connections should include an archaeological field evaluation comprising geophysical survey and trial trenching of the selected connection routes. The proposals for collecting baseline information on the setting of designated heritage assets seem reasonable. The *Environmental Statement* should contain sufficient visual information to be able to assess the impact on the setting of these assets including from the monuments and into them from a variety of locations, including view sites on the Greensand Ridge from the northern edge of the Marston Vale. The *EIA* should also deal with the cumulative impact of the various other developments in the surrounding area in relation to this proposal on archaeology and the historic environment. Mitigation of the impact of the proposed development on archaeology and the historic environment is dealt with in paragraphs 5.10.17 and 5.10.18. Although there are no specific mitigation proposals although number of options including the preservation of any important archaeological remains in situ, the investigation of others in advance of development and the use of screen planting to minimise the impact on the setting of designated assets. Though it is not possible to establish what an appropriate mitigation strategy might be until the baseline information has been established, this suite of options should provide a reasonable solution.

#### CBC Highways Officer - Development Control

In a highway context this proposal has the potential for major impact on the surrounding highway network. Nevertheless the CBC Highways Officer notes from the information

supplied that the highway issues will be considered and addressed within the Transport Assessment and Travel Plan which will form part of any future submission. This is considered acceptable.

### CBC Landscape Officer

The CBC Landscape Officer has considered the information submitted within the Scoping Report and states in terms of the assessment of cumulative impact - although mentioned in the landscape section, the wind turbine at the Millenium Country Park is not listed as one of the developments to be part of this study. This should be included. In addition to the turbines at Brogborough, there is the potential for a further turbine at Stewartby landfill site, within Bedfordshire Borough Council area.

In terms of viewpoints it would be helpful to have a viewpoint from the crest of Ampthill Hill as this provides an oblique viewpoint over the Vale.

The EIA would need to provide details of the landscape mitigation, including any proposed off site planting. (This has not been referred to within the report but should be fully considered as a mitigation method). Details of the acoustic screen for the above ground installations would be required. The colour palette would also be an important factor in terms of mitigation. Depending on the building structure, mitigation should also include techniques such as green roofs.

The Design and Access Statement would need to clarify the site selection process in terms of the proposal's position within Rookery Pit . The relationship with the Covanta RRF, including the strategic landscape planting and features such as waterbodies, would also require clarification.

### CBC Minerals and Waste

The CBC Minerals and Waste Officer has made the following comments on the Scoping Report submitted.

Section 2.7 of the EIA Scoping report deals with Local Planning Policy. This section makes no mention of the Minerals and Waste Local Plan: Strategic sites and Policies LDD which was adopted by Bedford borough, Central Bedfordshire and Luton borough councils in January 2014. It is part of the development plan for this authority. In the MWLP:SSP Rookery South is identified in Waste Strategic Policy WSP2 as one of four sites for waste recovery uses. It is also additionally identified as a site for the landfilling of non-hazardous waste. These strategic sites are locations where large scale recovery operations should take place and are defined as having a throughput of more than 75,000 tonnes per annum. The Strategic Site at Rookery south is identified on a plan on page 80 and on table 17 on pages 81-82 there is information set out about this site.

A copy of the MWLP:SSP can be found on the CBC website.

Rookery Pit south is already the location of the proposed Resource Recovery Facility (Covanta Energy Limited) for which a Development Consent Order was issued in February 2013. Whilst no progress has been made in discharging any pre-commencement conditions as the American parent company decided to withdraw from the UK shortly after the DCO was issued. However the consent runs for 5 years and so there is the potential for it to be implemented up to February 2018. The site of the Resource Recovery Facility is immediately to the north of that of the proposed power station in rookery Pit south and they would share the access road into the pit from Green Lane.

A screening opinion was undertaken on behalf of both CBC and BBC in 2013 which related to its use for both waste recovery and landfill purposes.

It is noted that paragraph 4.3.2 states that the cumulative impact will take into account the Covanta RRS, the low level restoration scheme for the Rookery pits and the waste management operations at Rookery pit south. Certainly the cumulative impact in terms of traffic could be significant and landscape and ecology too. However, it is not possible to comment further on this at this stage.

The CBC Minerals and Waste Officer is unclear whether the power station proposal might adversely impact on the use of the remainder of the pit for waste recovery purposes or for non hazardous waste landfill particularly with regard to the Electrical and Gas connection areas covering part of the pit.

### CBC Public Protection

The CBC Public Protection Officer has assessed the Scoping report submitted and has made the following comments on the content.

- Operational noise from fixed plant should be assessed using BS4142. I don't agree with the implication that BS8233 should be used as this standard concerns anonymous noise sources.
- Draft guidance should not be used (e.g. 'Guidelines on Noise Impact Assessment')
- Noise from the Electrical Connection should be included in any noise assessment and should not be scoped out prior to undertaking any baseline noise monitoring or not knowing what equipment will be selected.
- Careful consideration should be given to design, layout, orientation and site location in mitigating/managing any noise sources. One form of mitigation which was not mentioned in the Scoping report is that of distance from receptors. The site chosen for the power station is only 90m from South Pilling Farm even though there appears to be plenty of scope to resite the building at a more distant location.

The information given in terms of Air Quality look satisfactory.

### CBC Conservation Officer

Section 5.10 sets out how the effects on cultural heritage and archaeological assets will be carried out.

5.10.12 states how the study is to be set out when considering cultural heritage assets and the method is considered acceptable in principle.

The project site boundary abuts a collection of cultural heritage sites which have been marked on Figure 3.

Initial concerns will be the visual impact the proposed "stacks" will have on the surrounding areas. The proximity to the listed chimney stacks of the closed Stewartby Brickworks (LBC) will need consideration. The industrial heritage of the area has been recognised by the listing of these stacks and any impact on this will need to be considered.

### CBC Sustainable Growth Officer

The climate change risk has been widely recognised and the scoping document itself acknowledges this by listing the UK Climate Change Risk Assessment 2012 as one of the relevant planning and guidance documents. The EIA assessment should therefore cover synergistic and cumulative impacts of the Millbrook Power Station project and climate change on natural environment, particularly on water quality, water resources, ecology and air quality.

### Additional Case Officer Notes



In terms of the legislative and Planning Policy context this should include the emerging Development Strategy for Central Bedfordshire that is currently out to public consultation. This will be given greater material weight as the process continues. This is noted within the Scoping Report in Section 2.

The Minerals and Waste Local Plan: Strategic sites and Policies LDD which was adopted by Bedford Borough, Central Bedfordshire and Luton Borough Councils in January 2014 should be fully considered and referenced within the EIA, and they should form part of the Regulatory and Policy Background.

Yours faithfully,

**Lisa Newlands**  
**Principal Planning Officer**



## Case Administration

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**From:** Smailes Baggy <Baggy.Smailes@caa.co.uk>  
**Sent:** 23 June 2014 09:38  
**To:** Environmental Services  
**Subject:** FW: Millbrook Power Project Scoping Request  
**Attachments:** 140620\_EN010068\_Millbrook Power Project.pdf

Dear Sirs,

### Proposed Millbrook Power Project – Scoping Comment

Thank you for The Planning Inspectorate's recent correspondence relating to the subject development. The Inspectorate sought related Civil Aviation Authority (CAA) scoping comment; I trust the following is useful.

I note from the Scoping Report (SR) that the tallest associated structures are expected to be between 1 and 5 chimney stacks that would each have a height of up to 60metres (m). On that basis I believe the following (potential) issues are worthy of consideration:

- **Aerodromes.** In respect of any potential aerodrome related issue, I should highlight the need to check any safeguarding maps lodged with relevant planning authorities to identify any aerodrome specific safeguarding issues. To that effect, I note the close proximity of Cranfield Airport to the development site. Noting that aerodrome safeguarding responsibility rests in all cases with the relevant aerodrome operator / licensee, not the CAA, it is important that the related viewpoints of any relevant aerodrome license holders / operators is established and any concerns expressed appropriately mitigated.
- **Aviation Warning Lighting:**
  - In the UK, the need for aviation obstruction lighting on 'tall' structures depends in the first instance upon any particular structure's location in relationship to an aerodrome. If the structure constitutes an 'aerodrome obstruction' it is the aerodrome operator that with review the lighting requirement. For civil aerodromes, they will, in general terms, follow the requirements of CAP 168 - Licensing of Aerodromes. This document can be downloaded from the Civil Aviation CAA website at [www.caa.co.uk/docs/33/CAP168.PDF](http://www.caa.co.uk/docs/33/CAP168.PDF) - Chapter 4 (12.8) refers to obstacle lighting.
  - Away from aerodromes Article 219 of the UK Air Navigation Order applies. This Article requires that for en-route obstructions (ie away from aerodromes) lighting only becomes legally mandated for structures of a height of 150m or more. However, structures of lesser high might need aviation obstruction lighting if, by virtue of their location and nature, they are considered a significant navigational hazard.
  - Cranes, whether in situ temporarily or long term are captured by the points heighted above. Note that if a crane is located on top of another structure, it is the overall height (structure + crane) than is relevant.
  - In this case, given the assumed maximum height of 60m, Article 219 would not apply. In the event that there is no aerodrome issue I can advise that the CAA would not in isolation make any case for lighting.
- **Gas Venting and/or Flaring.** It is assumed that the facility is not intended to vent or flare gas either routinely or as an emergency procedure such as to cause a danger to overlying

aircraft. If that is not the case parties are invited to use myself as an appropriate point of contact for any further related discussion.

- Aviation Promulgation. There is a civil aviation requirement in the UK for all structures over 300 feet high to be charted on aviation maps. It follows that, at 60m (197ft) high, there is no en-route (ie non-aerodrome specific) civil aviation charting requirement. However, if crane usage in the construction phase involves heights of 300ft or more, the temporary structure will need to be appropriately notified. For temporary structures this notification can be achieved through the publication of a **Notice to Airmen (NOTAM)**. If needed by virtue of temporary use of cranes such that the 300ft threshold is breached a NOTAM can be arranged through the developer providing related details to the CAA's Airspace Utilisation Section ([ausops@caa.co.uk](mailto:ausops@caa.co.uk) / 0207 453 6599).
- Military Aviation. For completeness, the Ministry of Defence position in regards to the proposed development and military aviation activity should be established.
- I should also add that that due to the unique nature of associated operations in respect of operating altitudes and potentially unusual landing sites, it would also be sensible to establish the related viewpoint of local emergency services air support units.

I believe that any associated Environmental Statement / Development Consent Order (or equivalent / similar) would be expected to acknowledge and where applicable address the issues highlighted above and accordingly the scoping opinion should make related comment.

Whilst none of the above negates any aforementioned need to consult in line with Government requirements associated with the safeguarding of aerodromes and other technical sites (Government Circular 1/2003 refers), I hope this information matches your requirements. Please do not hesitate to get in touch if you require any further comment or needs clarification of any point.

**Mark Smailes**

Airspace Regulator  
Safety and Airspace Regulation Group  
Civil Aviation Authority  
CAA House  
45-59 Kingsway  
London WC2B 6TE

Tel: 0207 453 6545

---

**From:** Environmental Services [<mailto:EnvironmentalServices@infrastructure.gsi.gov.uk>]  
**Sent:** 20 June 2014 14:05  
**To:** [NSIP.applications@hse.gsi.gov.uk](mailto:NSIP.applications@hse.gsi.gov.uk)  
**Subject:** Millbrook Power Project Scoping Request

Please find attached correspondence about the Millbrook Power Project.

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## Case Administration

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**From:** Claire Ferguson <claire.ferguson@energetics-uk.com>  
**Sent:** 23 June 2014 12:48  
**To:** Environmental Services  
**Subject:** EN010068

Dear Sir/Madam,

Thank you for submitting your recent plant enquiry.

Based on the information provided, I can confirm that Energetics **does not** have any plant within the area(s) specified in your request.

Please be advised that it may take around 10 working days to process enquiries. In the unlikely event that you have been waiting longer than 10 working days, or require further assistance with outstanding enquiries, please call 01698 404945.

Please ensure all plant enquiries are sent to [plantenquiries@energetics-uk.com](mailto:plantenquiries@energetics-uk.com)

Regards

**Claire Ferguson**

Technical Clerical Team

Energetics Design & Build  
International House  
Stanley Boulevard  
Hamilton International Technology Park  
Glasgow  
G72 0BN

t: 01698 404979

f: 01698 404940

e: [claire.ferguson@energetics-uk.com](mailto:claire.ferguson@energetics-uk.com)

w: [www.energetics-uk.com](http://www.energetics-uk.com)

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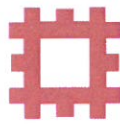
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ENGLISH HERITAGE  
EAST OF ENGLAND OFFICE

Alison L Down  
EIA & Land Rights Adviser  
The Planning Inspectorate  
3/20 Eagle Wing  
Temple Quay House  
2 The Square  
BRISTOL  
BS1 6PN

Telephone 01223 582710  
Fax 01223 582701

Your ref: EN010068

Date: 17 July 2014

Dear Ms Down

**Request for scoping opinion for a proposed development at Millbrook Bedfordshire.**

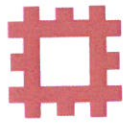
Thank you for your letter of 20<sup>th</sup> June 2014 identifying English Heritage as a statutory consultee in relation to the Planning Act 2008 (as amended) and the infrastructure Planning (Environmental Impact Assessment) regulations 2009 (as amended). Please find below our considerations in relation to the Scoping request and in light of the additional information provided by the applicant for the above case, which includes a site plan, and a scoping report (ORBIS 2014).

The developed comprises of a new gas fired power generation plant, and includes a new access road, temporary construction compound, gas import connection and power export connection. The plant would cover a maximum area of 8 ha, and includes buildings, the turbine hall (with a maximum height of 20m) and 5 chimney stacks of up to 60m in height.

**English Heritage Advice**

We recognise that there are a high number of nationally important designated heritage assets immediately adjacent to the development area which includes scheduled monuments, highly graded listed buildings, Conservation Areas as well as Registered Parks and Gardens. We would broadly support the approach taken the scoping report and the proposals made in the Cultural Heritage and Archaeology Chapter. The report appears to have correctly identified the critical designated heritage assets, and we agree that the applicant must consider the impact upon both designated and non-designated heritage assets, including the impact upon the setting of the heritage assets within the surrounding area. We agree that this would best be dealt with in a specific heritage chapter within the Environmental Statement. Please also note that Houghton House is in guardianship with English Heritage and

24 BROOKLANDS AVENUE, CAMBRIDGE, CB2 8BU  
Telephone 01223 582 700 Facsimile 01223 582 701  
[www.english-heritage.org.uk](http://www.english-heritage.org.uk)



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is open to the public at all reasonable times. Views from the site are considered part of its significance.

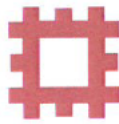
We can also confirm that there are no designated heritage assets within the development area. We also recognise that the project would be located on land within former clay pits known as The Rookery, which will have limited survival of archaeological remains. The development proposal does however include reprofiling of the clay pits, which requires extraction of material from previously unworked areas (see ORBIS 1.1.9: p2). These areas may have archaeological potential, and this is contrary to the statement provided in the Cultural Heritage and Archaeology Chapter (see ORBIS 5.10.2 p55). The archaeological potential of areas outside the former pits is however considered in 5.10.3 (*ibid*). Given the potential impacts, and the uncertainty we would recommend that further advice on the potential for the recovery of undesignated heritage assets within the development area as a whole, and on any requirement for mitigation, should be sought from the Central Bedfordshire Council's Archaeology Service.

It would also be necessary to assess the impact on these heritage assets within the policy tests established by the National Planning Policy Framework, in particular policies 135 and 139. The applicant should also provide sufficient information with in the Environment Statement to address the requirement of paragraph 128. We would also expect this to include any relevant assessments in relation to the setting of designated heritage assets as discussed in paragraphs 132 and 134 of the NPPF. We advise that all supporting technical information (desk-based assessments, evaluation and post-excavation reports *etc.*) are included as appendices. Where relevant, the cultural heritage should be cross-referenced to other chapters or technical appendices; for example noise, light, traffic and landscape.

In addition to established policy and guidance, *Planning Policy Statement 5: Planning for the Historic Environment Practice Guide*, which remains in use at the current time, may also be of use. English Heritage has also produced further guidance on setting entitled *The Setting of Heritage Assets*. Our guidance provides a thorough discussion of setting and methods for considering the impact of development on setting, such as the use of matrices.

Whilst standardised EIA matrices or are useful tools, we consider the analysis of setting (and the impact upon it) as a matter of qualitative and expert judgement which cannot be achieved solely by use of systematic matrices or scoring systems. English Heritage therefore recommends that these should be seen primarily as material supporting a clearly expressed and non-technical narrative argument within the cultural heritage chapter. The EIA should use the ideas of benefit, harm and loss (as described in NPPF) to set out 'what matters and why' in terms of the heritage assets' significance and setting, together with the effects of the development upon them.

24 BROOKLANDS AVENUE, CAMBRIDGE, CB2 8BU  
Telephone 01223 582 700 Facsimile 01223 582 701  
[www.english-heritage.org.uk](http://www.english-heritage.org.uk)



ENGLISH HERITAGE  
EAST OF ENGLAND OFFICE

English Heritage would be happy to provide further advice. Please do not hesitate to contact me should you wish to discuss further.

Yours sincerely

  
**Dr Will Fletcher**  
Inspector of Ancient Monuments  
e-mail: [will.fletcher@english-heritage.org.uk](mailto:will.fletcher@english-heritage.org.uk)

cc

Martin Oak

24 BROOKLANDS AVENUE, CAMBRIDGE, CB2 8BU  
Telephone 01223 582 700 Facsimile 01223 582 701  
[www.english-heritage.org.uk](http://www.english-heritage.org.uk)

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The Infrastructure Planning Commission  
Temple Quay House  
Temple Quay  
Bristol  
BS1 6PN

**Our ref:** AC/2014/121264/01-L01  
**Your ref:** EN010068  
**Date:** 15 July 2014

Dear Sir/Madam

**PLANNING ACT 2008 (AS AMENDED) AND THE INFRASTRUCTURE PLANNING  
(ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS 2009 (AS  
AMENDED) – REGULATIONS 8 AND 9  
APPLICATION BY MILLBROOK POWER LTD FOR AN ORDER GRANTING  
DEVELOPMENT CONSENT FOR THE MILLBROOK POWER PROJECT  
MILLBROOK, BEDFORDSHIRE**

Thank you for your letter regarding the above mentioned site, which was received on 20 June 2014. We have reviewed the Scoping Report and wish to make the following comments.

We are in agreement with the proposed outline and the information to be included within the Environmental Statement.

As has already been indicated to the Applicant, we recommend that our permitting team is contacted at the earliest opportunity, so that the Environmental Permit that will be required can be parallel tracked with the Development Consent Order process.

Should you wish to discuss this matter further please do not hesitate to contact me.

Yours faithfully

**Neville Benn**  
**Senior Planning Advisor**  
**Sustainable Places**  
Direct dial 01480 483996  
Direct e-mail [neville.benn@environment-agency.gov.uk](mailto:neville.benn@environment-agency.gov.uk)





## Case Administration

---

**From:** ES Pipelines <email@espipelines.com>  
**Sent:** 23 June 2014 10:24  
**To:** Environmental Services  
**Subject:** Plant Affected Notice from ES Pipelines  
**Attachments:** Guidelines when working in vicinity of gas apparatus up to 7barg MOP rev April 14.3.pdf; ESN010961.pdf; PPS7527.pdf; 9008512.pdf; 9008512-02.pdf

Alison Down  
The Planning Inspectorate

23 June 2014

Our Ref: PE126384  
Your Ref: Millbrook Power Project Scoping Request

### **Millbrook Power Project**

Dear Sir/Madam,

Further to your enquiry received on 23/06/2014, I can confirm that ES Pipelines Ltd may be affected by the proposed works in the area of Millbrook Power Project. ES Pipelines Ltd has a low pressure gas main serving the area in question (Reference **ESN010961/PPS7527/9008512**) at grid reference E504318, N246670 and security of supply is vitally important.

Project drawing as laid extracts for these sites are enclosed (not to scale) for your information which show the approximate location of the ES Pipelines Ltd gas network close to the area of interest off Millbrook Power Project.

As your plans for the proposed work develop you are required to keep ES Pipelines Ltd regularly updated about the extent and nature of your proposed works in order for us to fully establish whether any additional precautionary or diversionary works are necessary to protect our gas network.

Arrangements can be set in place so that one of our representatives can meet on site (date to be agreed) and we will be happy to discuss the impact of your proposals on the gas network once we have received the details.

A list of precautionary measures is attached for your information. This must be passed on to the appointed Contractors carrying out the work and any other associated parties.

ESP Are continually constructing new gas and electricity networks and this notification is valid for 90 days from the date of this letter. If your proposed works start after this period of time, please re-submit your enquiry.

If you wish to discuss the matter further please contact myself or the team on 01372 227560, alternatively you can email us at [PlantResponses@espipelines.com](mailto:PlantResponses@espipelines.com).

Yours faithfully,

Alan Slee  
Operations Manager

This email was scanned by the Government Secure Intranet anti-virus service supplied by Vodafone in partnership with Symantec. (CCTM Certificate Number 2009/09/0052.) In case of problems, please call your organisations IT Helpdesk.

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\*\*\*\*\*

Correspondents should note that all communications to Department for Communities and Local Government may be automatically logged, monitored and/or recorded for lawful purposes.

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**PRECAUTIONS TO BE TAKEN WHEN CARRYING OUT WORK IN THE VICINITY OF UNDERGROUND GAS PIPES**

**ADVICE TO SITE PERSONNEL**

**MANAGEMENT NOTE**

Please ensure that a copy of this note is read by your site management and to your site operatives.

Early consultation with ESP Utilities Group prior to excavation is recommended to obtain the location of plant and precautions to be taken when working nearby.

This Guidance Note should be read in conjunction with the Health and Safety Executive guidance HSG47 "Avoiding danger from underground services".

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**Introduction**

Damage to ESP Utilities Group's plant can result in uncontrolled gas escapes which may be dangerous. In addition these occurrences can cause expense, disruption of work and inconvenience to the public.

Various materials are used for gas mains and services. Cast Iron, Ductile Iron, Steel and Plastic pipes are the most widely found. Modern Plastic pipes are either bright yellow or orange in colour.

Cast Iron and Ductile Iron water pipes are very similar in appearance to Cast Iron and Ductile Iron gas pipes and if any Cast Iron or Ductile Iron pipe is uncovered, it should be treated as a gas pipe. ESP Utilities Group do not own any metallic gas pipes but their gas network infrastructures may be connected to Cast Iron, Ductile Iron or Steel pipes owned by Transco.

The following general precautions apply to Intermediate Pressure (2-7barg MOP), Medium Pressure (75mbarg-2barg MOP), Low Pressure (up to 75mbarg MOP) and other gas mains and services likely to be encountered in general site works and are referred to within this document as '**pipes**'.

**Locating Gas Pipes**

It should be assumed when working in urban and residential areas that gas mains and services are likely to be present. On request, ESP Utilities Group will give approximate locations of pipes derived from their records. The records do not normally show the position of service pipes but their probable line can be deducted from the gas meter position. ESP Utilities Group's staff will be pleased to assist in the location of gas plant and provide advice on any precautions that may be required. The records and advice are given in good faith but cannot be guaranteed until hand excavation has taken place. Proprietary pipe and cable locators are available although generally these will not locate plastic pipes.

**Safe working Practices**

**To achieve safe working conditions adjacent to gas plant the following must be observed:**

Observe any specific request made by ESP Utilities Group's staff.

Gas pipes must be located by hand digging before mechanical excavation. Once a gas pipe has been located, mechanical excavation must proceed **with care**. A mechanical excavator must not in any case be used within 0.5 metre of a gas pipe and greater safety distances may be advised by ESP Utilities Group depending on the mains maximum operating pressure (MOP).

Where heavy plant may have to cross the line of a gas pipe during construction work, the number of crossing points should be kept to a minimum. Crossing points should be clearly indicated and crossings at other places along the line of the pipe should be prevented.

Where the pipe is not adequately protected by an existing road, crossing points should be suitably reinforced with sleepers, steel plates or a specially constructed reinforced concrete raft as necessary. ESP Utilities Group staff will advise on the type of reinforcement necessary.

No explosives should be used within 30 metres of any gas pipe without prior consultation with ESP Utilities Group.

**ESP Utilities Group must be consulted prior to carrying out excavation work within 10 metres of any above ground gas installation.**

Where it is proposed to carry out piling or boring within 15 metres of any gas pipe, ESP Utilities Group should be consulted prior to the commencement of the works.

Access to gas plant must be maintained at all times during on site works.

### Proximity of Other Plant

A minimum clearance of 300 millimetres (mm) should be allowed between any plant being installed and an existing gas main to facilitate repair, whether the adjacent plant be parallel to or crossing the gas pipe. No apparatus should be laid over and along the line of a gas pipe irrespective of clearance.

No manhole or chambers shall be built over or around a gas pipe and no work should be carried out which results in a reduction of cover or protection over a pipe, without consultation with ESP Utilities Group.

### Support and Backfill

Where excavation of trenches adjacent to any pipe affects its support, the pipe must be supported to the satisfaction of ESP Utilities Group and must not be used as an anchor or support in any way. In some cases, it may be necessary to divert the gas pipe before work commences.

Where a trench is excavated crossing or parallel to the line of the gas pipe, the backfill should be adequately compacted, particularly beneath the pipe, to prevent any settlement which could subsequently cause damage to the pipe.

In special cases it may be necessary to provide permanent support to the gas pipe, before backfilling and reinstatement is carried out. Backfill material adjacent to gas plant must be selected fine material or sand, containing no stones, bricks or lumps of concrete, etc., placed to a minimum depth of 150mm around the pipes and well compacted by hand. No power compaction should take place until 300 mm of selected fine fill has been suitably compacted.

If the road construction is in close proximity to the top of the gas pipe, a "cushion" of selected fine material such as sand must be used to prevent the traffic shock being transmitted to the gas pipe. The road construction depth must not be reduced without permission from the local Highway Authority.

No concrete or other hard material must be placed or left under or adjacent to any Cast Iron pipe as this may cause fracture of the pipe at a later date.

Concrete backfill should not be used closer than 300 mm to the pipe.

### Damage to Coating

Where a gas pipe is coated with special wrapping and this is damaged, even to a minor extent ESP Utilities Group must be notified so that repairs can be made to prevent future corrosion and subsequent leakage.

### Welding or "Hot Works"

When welding or other "hot works" involving naked flames are to be carried out in close proximity to gas plant and the presence of gas is suspected, ESP Utilities Group must be contacted before work commences to check the atmosphere. Even when a gas free atmosphere exists care must be taken when carrying out hot works in close proximity to gas plant in order to ensure that no damage occurs.

Particular care must be taken to avoid damage by heat or naked flame to plastic gas pipes or to the protective coating on other gas pipes. **Leakage from Gas Mains or Services**

If damage or leakage is caused or an escape of gas is smelt or suspected the following action should be taken at once:

- ❖ Remove all personnel from the immediate vicinity of the escape;
- ❖ Contact Transco's National Gas Escape Call Centre, on: **0800 111 999**;
- ❖ Prevent any approach by the public, prohibit smoking, extinguish all naked flames or other source of ignition for at least 15 metres from the leakage;
- ❖ Assist gas personnel, Police or Fire Service as requested.

**REMEMBER – IF IN DOUBT, SEEK ADVICE FROM ESP UTILITIES GROUP.**

**ESP Utilities Group can be contacted at:**

**Office Address:** Hazeldean, Station Road, Leatherhead, Surrey, KT22 7AA

**Office Tel:** 01372 227560; **Fax:** 01372 377996





FPL REF: 9008512

it in view

63 PE

SE

T1 : 1.0m from kerb / kerb LINE OF SIGHT

12  
90 PE

25

BM 75.98m

4" SI

El Sub Sta

7

20

23

### AS LAID TEMPLATE

PROJECT REFERENCE: 4171581

DESIGNED BY: Hayley Barron

SITE ADDRESS:

25A  
HAMPDEN ROAD  
FLITWICK BEDFORD  
MK45 1HX

SCALE: 1:500 @ A3

MAP/GRID REF:

COMMENTS:

From existing 4" SI (main)  
(See variation / DR 8)  
has 56.0m x 63mm LPE main  
Cable Type: WPT 2 DampOR  
Cable Depth: 1.0m  
Cable Codes:  
503245 03+526

DRAWN BY: H. Barron

COMPANY: INTELLIPLAN

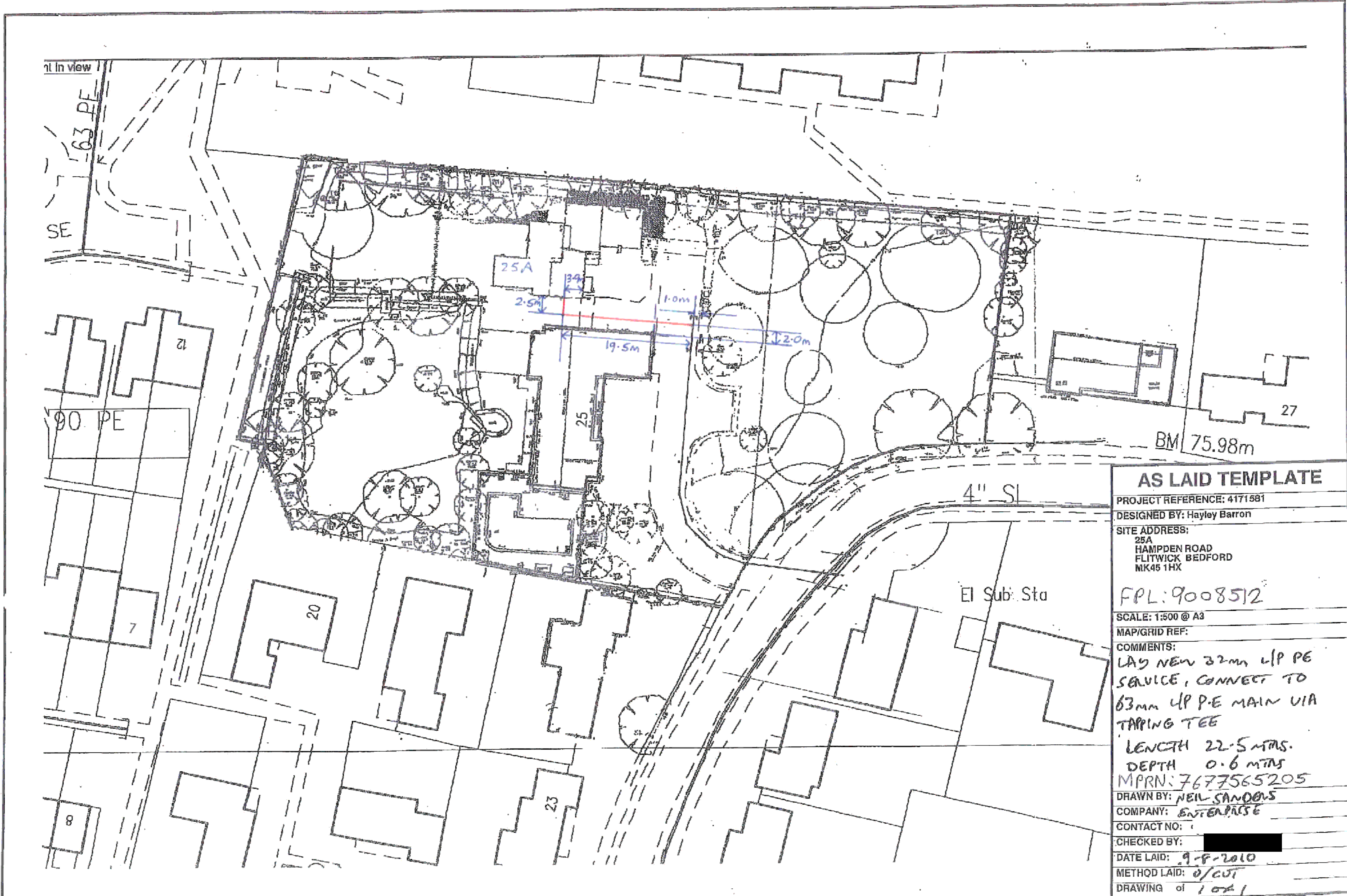
CONTACT NO:

CHECKED BY: [Redacted] 2/02/10

DATE LAID: 28. 7. 10

METHOD LAID: VC ORT

DRAWING 1 of 1



<b>AS LAID TEMPLATE</b>	
PROJECT REFERENCE:	4171581
DESIGNED BY:	Hayley Barron
SITE ADDRESS:	25A HAMPDEN ROAD FLITWICK BEDFORD MK45 1HX
	FPL: 9008512
SCALE:	1:500 @ A3
MAP/GRID REF:	
COMMENTS:	LAY NEW 32mm UP PE SERVICE, CONNECT TO 63mm UP PE MAIN VIA TAPPING TEE
	LENGTH 22.5 METRES.
	DEPTH 0.6 METRES
	MPRN: 7677565205
DRAWN BY:	NEIL SANDOZ
COMPANY:	ENTERPRISE
CONTACT NO:	
CHECKED BY:	
DATE LAID:	9-8-2010
METHOD LAID:	0/CUT
DRAWING OF:	1 OF 1

**Forest Services  
East & East Midlands  
Santon Downham  
Brandon  
Suffolk  
IP27 0TJ**

***By email only***

Attn: Alison Down  
Planning Inspectorate (National  
Infrastructure Directory)  
Temple Quay House  
Temple Quay,  
Bristol  
BS1 6PN

Tel 01842 815544  
Fax 01842 813932  
eandem@forestry.gsi.gov.uk

3<sup>rd</sup> July 2013

Area Director  
Steve Scott

Our Ref: Millbrook/03.07.14/01

Dear Ms Down,

**Application Millbrook Power Project – Scoping consultation**

The Forestry Commission as the Government Department with responsibility for trees and woodland have examined the Environmental Impact Scoping report. We are aware of the modest amount of woodland on site of some 2.4 ha, and there is woodland around the site. The scoping report as such only deals with what is there currently and we would be interested in any proposals in later stages to increase woodland coverage as part of any landscaping and screening.

Both planting and felling of trees could constitute “afforestation or deforestation” under the Environmental Impact Assessment (Forestry) (England and Wales) Regulations 1999 (Statutory Instrument No. 2228/1999) for which the Forestry Commission is the competent authority, and may therefore require consent from the Forestry Commissioners - a summary of the regulations is in the annex to this letter.

Government policy is seeking to increase woodland cover to some 2000ha per annum and we are aware of the ambition for the Forest of Marston Vale which is close to this therefore we hope that the developers will seek to avoid any deforestation. Should this be a requirement we would like to see compensatory new plantings in the ratio of at least 4:1 i.e. four trees planted to one removed, this precedent having been set in other planning applications.

While no felling is indicated so far we would remind developers that if planning consent is granted then this precludes the requirements for felling licences, however, until consent is given, trees cannot be felled without the issuing of a Felling Licence from the Forestry Commission.

Should any deforestation require compensatory plantings we would also like to suggest that proposers think about the long term management of any woodland created and consider ensuring an appropriate woodland management plan is in place should the project go ahead.

We can provide advice if required.

Yours sincerely

[REDACTED]

Corinne Meakins  
Local Partnership Advisor  
Cc Milbrook Power

Annex

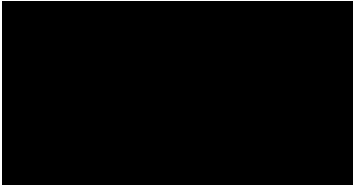
Forestry Authorities carrying out an EIA under the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999 (Statutory Instrument No. 293/1999) must **inform the Forestry Commission of the conclusions reached** in considering any afforestation or deforestation. (The context of guidance issued by the European Commission in 2008 is helpful in determining which regulations may apply. [http://ec.europa.eu/environment/eia/pdf/interpretation\\_eia.pdf](http://ec.europa.eu/environment/eia/pdf/interpretation_eia.pdf) )

In the light of this response the FC will then be in a position to determine whether or not consent from the Forestry Commissioners may be required. **In the event that the Commissioners' consent is required then the FC would have to consider the impact of the project as a whole i.e. including all the development.** Not just that arising from impact on any woodland. This arises from a judgement in 2007 by the High Court <http://www.bailii.org/cgi-bin/markup.cgi?doc=/ew/cases/EWHC/Admin/2007/1623.html&query=newbottle+and+wood&method=boolean>



If we can be of any assistance in clarifying any of the above please do not hesitate to contact me.

Yours sincerely



Steve Scott  
Area Director  
16<sup>th</sup> December 2013



---

**From:** Penlington, Graham [mailto:Graham.Penlington@fulcrum.co.uk] **On Behalf Of**  
&box\_FPLplantprotection\_conx,  
**Sent:** 27 June 2014 08:55  
**To:** Environmental Services  
**Subject:** RE: Millbrook Power Project Scoping Request

Thank you for asking Fulcrum Pipelines Limited to examine your consultation document for the above project.

We can confirm that Fulcrum Pipelines Limited have no comments to make on this scoping report. Please note that we are constantly adding to our underground assets and would strongly advise that you consult us again prior to undertaking any excavations.

Please note that other gas transporters may have plant in this locality which could be affected.

We will always make every effort to help you where we can, but Fulcrum Pipelines Limited will not be held responsible for any incident or accident arising from the use of the information associated with this search. The details provided are given in good faith, but no liability whatsoever can be accepted in respect thereof.

If you need any help or information simply contact Fulcrum on 0845 641 3060

To save you time, any future requests for information about our plant, can be emailed to  
[FPLplantprotection@fulcrum.co.uk](mailto:FPLplantprotection@fulcrum.co.uk)

GRAHAM PENLINGTON  
Process Assistant



Tel: 0845 641 3060  
Direct Dial: 01142 804 175

Email: [Graham.Penlington@fulcrum.co.uk](mailto:Graham.Penlington@fulcrum.co.uk)  
Web: [www.fulcrum.co.uk](http://www.fulcrum.co.uk)



## FULCRUM NEWS

### FULCRUM ENGINEER SCOOPS TOP GAS INDUSTRY AWARD

Fulcrum's Paul Leighton named as the UK gas industry's 2014 Engineer of The Year. [Learn more.](#)

### FULCRUM TOASTS SUCCESSFUL COMPLETION OF HISTORIC £7.6MILLION, 16 MILE GAS PIPELINE

16-mile link to Scotland's main gas network completed six-months ahead of schedule despite winter temperatures of-12°C. [Learn more.](#)



**From:** [Margaret.Ketteridge@gtc-uk.co.uk](mailto:Margaret.Ketteridge@gtc-uk.co.uk) [<mailto:Margaret.Ketteridge@gtc-uk.co.uk>]

**Sent:** 09 July 2014 14:00

**To:** Environmental Services

**Subject:** EN010068

Dear Sirs

With reference to the above I can confirm that the following have no comments to make at this moment in time.:-

Independent Pipelines Limited  
Quadrant Pipelines Limited  
GTC Pipelines Limited  
The Electricity Network Company  
Independent Power Networks Limited

Kind Regards

Maggie

Maggie Ketteridge  
*Engineering Support Officer*  
GTC  
Energy House  
Woolpit Business Park  
Woolpit  
Bury St Edmunds  
Suffolk, IP30 9UP  
Tel: 01359 245406  
Fax: 01359 243377  
E-mail: [margaret.ketteridge@gtc-uk.co.uk](mailto:margaret.ketteridge@gtc-uk.co.uk)  
Web: [www.gtc-uk.co.uk](http://www.gtc-uk.co.uk)

NOTE:

This E-Mail originates from GTC, Energy House, Woolpit Business Park, Woolpit, Bury St Edmunds, Suffolk, IP30 9UP

VAT Number: GB688 8971 40. Registered No: 029431.

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Thank you



HID Policy - Land Use Planning  
NSIP Consultations  
Building 5.S.2, Redgrave Court  
Merton Road, Bootle  
Merseyside, L20 7HS

Your ref: 140620\_EN010068  
Our ref: 4.2.1.4155

HSE email: [NSIP.applications@hse.gsi.gov.uk](mailto:NSIP.applications@hse.gsi.gov.uk)

FAO Alison Down  
The Planning Inspectorate  
3/20 Eagle Wing,  
Temple Quay House  
2 The Square, Bristol  
BS1 6PN

Dear Ms Down,

17 July 2014

**PROPOSED MILLBROOK POWER PROJECT (the project)  
PROPOSAL BY MILLBROOK POWER Ltd (the applicant)  
INFRASTRUCTURE PLANNING (ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS 2009 (as amended) – Regulations 8 and 9**

Thank you for your letter of 20 June 2014 regarding the information to be provided in an environmental statement relating to the above project. HSE does not comment on EIA Scoping Reports but the following information is likely to be useful to the applicant.

**HSE's land use planning advice**

Will the proposed development fall within any of HSE's consultation distances?

There is no encroachment of the proposed site of the power generation plant on the consultation zones (CZs) of hazardous installations or major accident hazard pipelines (MAHPs).

The proposed DCO site boundary will fall within the CZs of the following MAHPs:

- The inner, middle and outer CZs of the 7 Feeder Old Warden/Slapton MAHP operated by National Grid Gas PLC (HSE Ref: 7592 / TRANSCO Ref: 1846),
- The inner, middle and outer CZs of the 9 Feeder Huntingdon/Whitwell MAHP operated by National Grid Gas PLC (HSE Ref: 7594 / TRANSCO Ref: 1848),
- The inner, middle and outer CZs of the 26 Feeder Willington/Steppingley MAHP operated by National Grid Gas PLC (HSE Ref: 9945 / TRANSCO Ref: 2722),

The DCO site boundary contains the electrical and gas connection opportunity areas. Depending on the route chosen, the encroachment on CZs may be necessary in making the grid electrical connection. Encroachment on CZs will be necessary when making the gas connection to either the 7 Feeder Old Warden/Slapton, the 9 Feeder Huntingdon/Whitwell or the 26 Feeder Willington/Steppingley MAHPs. With reference to HSE's LUP policy and the encroachment on the existing MAHP CZs, we would not expect to be consulted on the grid electrical connection or the gas pipe laying and above ground installation (AGI) construction activities because they would not be relevant development types.

The proposed high-pressure gas supply pipeline to the power generation plant will be a MAHP requiring notification under the Pipelines Safety Regulations 1996 ( <http://www.hse.gov.uk/pipelines/notification.htm> ).

On receipt of the notification, HSE will set LUP consultation zones around the pipeline that may affect future development that introduces new populations along the pipeline route. HSE would be a statutory consultee on planning applications that fall within the CZs set for the new pipeline, and we would give our advice on such developments (either advise against or don't advise against) using the Planning Advice for Developments Near Hazardous Installations Information Package (PADHI+) methodology. Interested parties may wish to consider the potential to hinder future development in the area in the selection of the pipeline route.

### Explosives sites

The Millbrook Power Project scoping request does not impinge on the separation distances of any licensed explosive sites as there are none in the vicinity of the application, therefore HSE has no comment to make.

### **Electrical Safety**

The project involves connections to electrical power distribution systems and has an impact on the existing generation, transmission and distribution assets on the UK mainland. In the light of that, HSE offers the following comments:

As well as satisfying general health and safety legislation (i.e. the Health and Safety at Work etc Act 1974 and supporting regulations), the proposed design and future operations must comply with the Electricity at Work Regulations 1989 and the Electricity, Safety, Continuity and Quality Regulations 2002 as amended. Generators, distributors, their contractors and others have defined duties in order to protect members of the public from the dangers posed by the electrical equipment used. enforces the safety aspects of these regulations. If you have any doubts about the particular application of these regulations in terms of either the operation or construction of generators, substations, overhead lines or underground cables please contact Mr J C Steed, Principle Specialist Electrical Inspector, either at [john.steed@hse.gsi.gov.uk](mailto:john.steed@hse.gsi.gov.uk) or Rose Court GSW, 2 Southwark Bridge Road, London, SE1 9HS.

Please send any further electronic communication on this project directly to the HSE's designated e-mail account for NSIP applications. Alternatively, any hard copy correspondence should be sent to:

Miss Laura Evans  
NSIP Consultations  
5.S.2 Redgrave Court  
Merton Road  
Bootle  
Merseyside  
L20 7HS

Yours sincerely,



Laura Evans  
HID Policy - Land Use Planning



Our ref:  
Your ref: EN010068

Jenny Volp  
Asset Manager - Area 8

Alison Down  
EIA and Lands Rights Adviser

Woodlands  
Manton Lane  
Bedford MK41 7LW

via email:  
environmentalservices@infrastructure.gsi.gov.uk

Direct Line: 01234 796590

8 July 2014

Dear Ms Down

**SCOPING CONSULTATION ON APPLICATION BY MILLBROOK LTD FOR AN ORDER GRANTING DEVELOPMENT CONSENT FOR THE MILLBROOK POWER PROJECT**

Thank you for your letter of 20 June requesting comments from the Highways Agency regarding the scoping opinion for the Millbrook Power Application.

I have read the applicants Scoping report and in particular section 5.9 on Transport, I have a few comments which I have listed below:

1. I understand that there are currently 2 proposed access routes to the site – one being from Junction 13 of the M1. Both access routes need to be assessed in line with current guidance – you should be aware of DfT Circular 02/13 and the Highways Agency Planning Protocols. I would expect the transport assessment to fully assess the impact on the Strategic and Local Road network throughout construction, operation and decommissioning periods.
2. Any abnormal loads will need to be discussed and their route agreed either at the planning stage or shortly after to ensure that the impact on the road network is minimised
3. A construction management plan should be put in place to ensure that the impact on the road network is minimised – deliveries to the site should be out of peak periods.
4. I would also expect to see a travel plan for staff working at the site to be implemented to reduce the number of trips associated with the development.

I note that the applicant has mentioned that they will hold discussions with the Highways Agency – I would be grateful if you could pass my details on to them so that we may be involved in the preparation of the Transport assessment at an early stage.

Yours sincerely



Jenny Volp  
ADT - Area 8  
Email: [jenny.volp@highways.gsi.gov.uk](mailto:jenny.volp@highways.gsi.gov.uk)

**Contact:**

Wendy Rousell

**Direct line:**

546317

**Email:**

developmentcontrol@luton.gov.uk

**Our ref:**

WR/Millbrook

**Your ref:**

EN010068

[www.luton.gov.uk](http://www.luton.gov.uk)

Ms Alison Down  
EIA and Land Rights Advisor  
3/20 Eagle Wing  
Temple Quay House  
2 The Square  
Bristol BS1 6PN

17 July 2014

Dear Ms Down

**Planning Act 2008 (as amended) and The Infrastructure Planning  
(Environmental Impact Assessment) Regulations 2009 (as amended) –  
Regulations 8 and 9**

**Application by Millbrook Power Ltd for an Order Granting Development  
Consent for the Millbrook Power Project**

**Scoping consultation and notification of the applicant's contact details and  
duty to make available information to the applicant if requested**

I refer to your letter dated 20<sup>th</sup> June 2014 concerning the above scoping consultation.

I have considered the scoping report that has been posted on the National Infrastructure pages of the Planning Portal and in the context of Luton Borough Council, I am generally in agreement with the scoping and the methodology proposed.

There are, however, a couple of comments that I would like to bring to your attention. It is not clear from this document if the Millbrook Power proposal is in addition to or in place of one of the waste recovery proposals at Rookery Pits. I note that these will be included in the cumulative assessment as part of the proposal and it would be helpful for the final submission to include a plan indicating the location of the sites. I believe this will be of assistance to both Statutory/technical consultees and members of the public.

I note that an Air Quality Assessment will be submitted and that consultation on this would take place with EHO's from Bedford Borough and Central Bedfordshire Councils. Given that the stacks are indicated to be up to 60m in height, the modelling should include predications of the plume and rate of dispersal of NOx and any other particulates that may be identified.

In respect of impact on the highway, it is noted that the main access road is via Green Lane, Bedford Road and A421. However Para 5.9.2 of the Scoping Report makes it clear that most of the traffic that would use this route would be during construction. There is no indication of the number of people wanting to access the site during its operational phase. I would therefore expect the Transport Assessment to cover this in more detail.

The applicants may be interested to know that, as part of the proposals for the western section of the East West Rail scheme is that I understand that Network Rail and the Department for Transport (Rail section) are currently looking at alternative alignments for the Bedford to Bletchley section, one of which involves a proposal known as the Stewartby Chord that runs between the Marston Vale line and the Midland Main Line south of Stewartby via the higher ground between Rookery North and South pits; this will cross the access track near the bend. Luton Borough Council can provide further details of these proposals as can Central Beds Minerals and Waste team and the site owners, O&H. In this context it is also worth consulting with Network Rail at an early stage.

It is noted that the Scoping report does not refer to routes used by cyclists, walkers and equestrians around this area. It is understood that there is a growing network of such routes, which may be permissive rather than statutory routes, which should be taken into consideration.

In preparing the landscape assessment, it might also be worth considering views from Luton from the Warden Hills and from the A6 across Barton Le Clay. There are a number of high points in this area, where the impact of the proposed stacks may be relevant.

To date, other than the Scoping Report, I have not seen any details of the proposal and I trust that the applicant and the Planning Inspectorate will note this when preparing the Statement of Community Consultation.

I trust this information is of assistance. Please do not hesitate to contact me if you require any clarification on the points made.

Yours sincerely

A black rectangular redaction box covering the signature of Wendy Rousell.

Wendy Rousell  
Airport Planning Officer

Letter sent by email

The Planning Inspectorate  
3/20 Eagle Wing  
Temple Quay House  
2 The Square  
Bristol  
BS1 6PN

**Land and Development**  
Laura Kelly  
Town Planner  
Network Engineering  
Laura.kelly@nationalgrid.com  
Direct tel: +44 (0)1926 654686

www.nationalgrid.com

SUBMITTED VIA EMAIL TO:  
environmentalservices@infrastructure.gsi.gov.uk

27 June 2014

Your Ref: EN010068

Dear Sir/Madam,

**Planning Act 2008 (as amended) and The Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (as amended) – Regulations 8 and 9**

**Application by Millbrook Power Ltd for an Order Granting Development Consent for the Millbrook Power Project**

This is a joint response by National Grid Electricity Transmission plc (NGET) and National Grid Gas plc (NGG)

I refer to your letter dated 20<sup>th</sup> June 2014 regarding the above proposed application. Having reviewed the scoping report, I would like to make the following comments:

**National Grid Infrastructure within or in close proximity to the Proposed Order Limits**

**National Grid Electricity Transmission**

National Grid Electricity Transmission has a high voltage electricity overhead transmission lines which lie within or in close proximity to the proposed order limits. These lines form an essential part of the electricity transmission network in England and Wales and include the following:

- ZA 400kV Overhead Transmission Line – Grendon- Sundon

The following points should be taken into consideration:

- National Grid's Overhead Line/s is protected by a Deed of Easement/Wayleave Agreement which provides full right of access to retain, maintain, repair and inspect our asset
- Statutory electrical safety clearances must be maintained at all times. Any proposed buildings must not be closer than 5.3m to the lowest conductor. National Grid recommends

that no permanent structures are built directly beneath overhead lines. These distances are set out in EN 43 – 8 Technical Specification for “overhead line clearances Issue 3 (2004) available at:

[http://www.nationalgrid.com/uk/LandandDevelopment/DDC/devnearohl\\_final/appendixIII/applIII-part2](http://www.nationalgrid.com/uk/LandandDevelopment/DDC/devnearohl_final/appendixIII/applIII-part2)

- If any changes in ground levels are proposed either beneath or in close proximity to our existing overhead lines then this would serve to reduce the safety clearances for such overhead lines. Safe clearances for existing overhead lines must be maintained in all circumstances.
- Further guidance on development near electricity transmission overhead lines is available here: <http://www.nationalgrid.com/NR/rdonlyres/1E990EE5-D068-4DD6-8C9A-4D0B06A1BA79/31436/Developmentnearoverheadlines1.pdf>
- The relevant guidance in relation to working safely near to existing overhead lines is contained within the Health and Safety Executive’s ([www.hse.gov.uk](http://www.hse.gov.uk)) Guidance Note GS 6 “Avoidance of Danger from Overhead Electric Lines” and all relevant site staff should make sure that they are both aware of and understand this guidance.
- Plant, machinery, equipment, buildings or scaffolding should not encroach within 5.3 metres of any of our high voltage conductors when those conductors are under their worse conditions of maximum “sag” and “swing” and overhead line profile (maximum “sag” and “swing”) drawings should be obtained using the contact details above.
- If a landscaping scheme is proposed as part of the proposal, we request that only slow and low growing species of trees and shrubs are planted beneath and adjacent to the existing overhead line to reduce the risk of growth to a height which compromises statutory safety clearances.
- Drilling or excavation works should not be undertaken if they have the potential to disturb or adversely affect the foundations or “pillars of support” of any existing tower. These foundations always extend beyond the base area of the existing tower and foundation (“pillar of support”) drawings can be obtained using the contact details above
- Due to the scale, bulk and cost of the transmission equipment required to operate at 275kV or 400kV we only support proposals for the relocation of existing high voltage overhead lines where such proposals directly facilitate a major development or infrastructure project of national importance which has been identified as such by government.

To view the Development Near Lines Documents. Please use the link below:

[http://www.nationalgrid.com/uk/LandandDevelopment/SC/devnearohl\\_final/](http://www.nationalgrid.com/uk/LandandDevelopment/SC/devnearohl_final/)

To view the National Grid Policy's for our Sense of Place Document. Please use the link below:

<http://www.nationalgrid.com/uk/LandandDevelopment/DDC/>

## **National Grid Gas Transmission**

National Grid has three high pressure gas transmission pipelines located within or in close proximity to the proposed order limits. The high pressure gas pipeline located within this area is:

- FM09- Huntingdon- Steppingley
- FM26- Huntingdon- Steppingley
- FM07- Old Warden- Chalgrove

## **Specific Comments – Gas Infrastructure**

The following points should be taken into consideration:

- National Grid has a Deed of Grant of Easement for each pipeline, which prevents the erection of permanent / temporary buildings, or structures, change to existing ground levels, storage of materials etc.

Pipeline Crossings:

- Where existing roads cannot be used, construction traffic should ONLY cross the pipeline at previously agreed locations.
- The pipeline shall be protected, at the crossing points, by temporary rafts constructed at ground level. The third party shall review ground conditions, vehicle types and crossing frequencies to determine the type and construction of the raft required.
- The type of raft shall be agreed with National Grid prior to installation.
- No protective measures including the installation of concrete slab protection shall be installed over or near to the National Grid pipeline without the prior permission of National Grid.
- National Grid will need to agree the material, the dimensions and method of installation of the proposed protective measure.
- The method of installation shall be confirmed through the submission of a formal written method statement from the contractor to National Grid.
- Please be aware that written permission is required before any works commence within the National Grid easement strip.
- A National Grid representative shall monitor any works within close proximity to the pipeline to comply with National Grid specification T/SP/SSW22.
- A Deed of Consent is required for any crossing of the easement

## Cables Crossing:

- Cables may cross the pipeline at perpendicular angle to the pipeline i.e. 90 degrees.
- A National Grid representative shall supervise any cable crossing of a pipeline.
- Clearance must be at least 600mm above or below the pipeline.
- Impact protection slab should be laid between the cable and pipeline if cable crossing is above the pipeline.
- A Deed of Consent is required for any cable crossing the easement.
- Where a new service is to cross over the pipeline a clearance distance of 0.6 metres between the crown of the pipeline and underside of the service should be maintained. If this cannot be achieved the service shall cross below the pipeline with a clearance distance of 0.6 metres.

## General Notes on Pipeline Safety:

- You should be aware of the Health and Safety Executives guidance document HS(G) 47 "Avoiding Danger from Underground Services", and National Grid's specification for Safe Working in the Vicinity of National Grid High Pressure gas pipelines and associated installations - requirements for third parties T/SP/SSW22.
- National Grid will also need to ensure that our pipelines access is maintained during and after construction.
- Our pipelines are normally buried to a depth cover of 1.1 metres however; actual depth and position must be confirmed on site by trial hole investigation under the supervision of a National Grid representative. Ground cover above our pipelines should not be reduced or increased.
- If any excavations are planned within 3 metres of National Grid High Pressure Pipeline or, within 10 metres of an AGI (Above Ground Installation), or if any embankment or dredging works are proposed then the actual position and depth of the pipeline must be established on site in the presence of a National Grid representative. A safe working method agreed prior to any work taking place in order to minimise the risk of damage and ensure the final depth of cover does not affect the integrity of the pipeline.
- Excavation works may take place unsupervised no closer than 3 metres from the pipeline once the actual depth and position has been confirmed on site under the supervision of a National Grid representative. Similarly, excavation with hand held power tools is not permitted within 1.5 metres from our apparatus and the work is undertaken with NG supervision and guidance.

To view the SSW22 Document, please use the link below:

<http://www.nationalgrid.com/uk/LandandDevelopment/DDC/GasElectricNW/safeworking.htm>

To view the National Grid Policy's for our Sense of Place Document. Please use the link below:

<http://www.nationalgrid.com/uk/LandandDevelopment/DDC/>



To download a copy of the HSE Guidance HS(G)47, please use the following link:

<http://www.hse.gov.uk/pubns/books/hsg47.htm>

Further information in relation to National Grid's gas transmission pipelines can be accessed via the following internet link:

<http://www.nationalgrid.com/uk/LandandDevelopment/DDC/gastransmission/gaspipes/>

## **Further Advice**

**We would request that the potential impact of the proposed scheme on National Grid's existing assets as set out above is considered in any subsequent reports, including in the Environmental Statement, and as part of any subsequent application.**

**Where the promoter intends to acquire land, extinguish rights, or interfere with any of National Grid apparatus protective provisions will be required in a form acceptable to it to be included within the DCO.**

**Where any diversion of apparatus may be required to facilitate a scheme, National Grid is unable to give any certainty with the regard to diversions until such time as adequate conceptual design studies have been undertaken by National Grid. Further information relating to this can be obtained by contacting the email address below.**

**National Grid requests to be consulted at the earliest stages to ensure that the most appropriate protective provisions are included within the DCO application to safeguard the integrity of our apparatus and to remove the requirement for objection. All consultations should be sent to the following: [DCOConsultations@nationalgrid.com](mailto:DCOConsultations@nationalgrid.com) as well as by post to the following address:**

### **The Company Secretary**

**1-3 The Strand**

**London**

**WC2N 5EH**

In order to respond at the earliest opportunity National Grid will require the following:

- Draft DCO including the Book of Reference and relevant Land Plans
- Shape Files or CAD Files for the order limits

I hope the above information is useful. If you require any further information please do not hesitate to contact me.

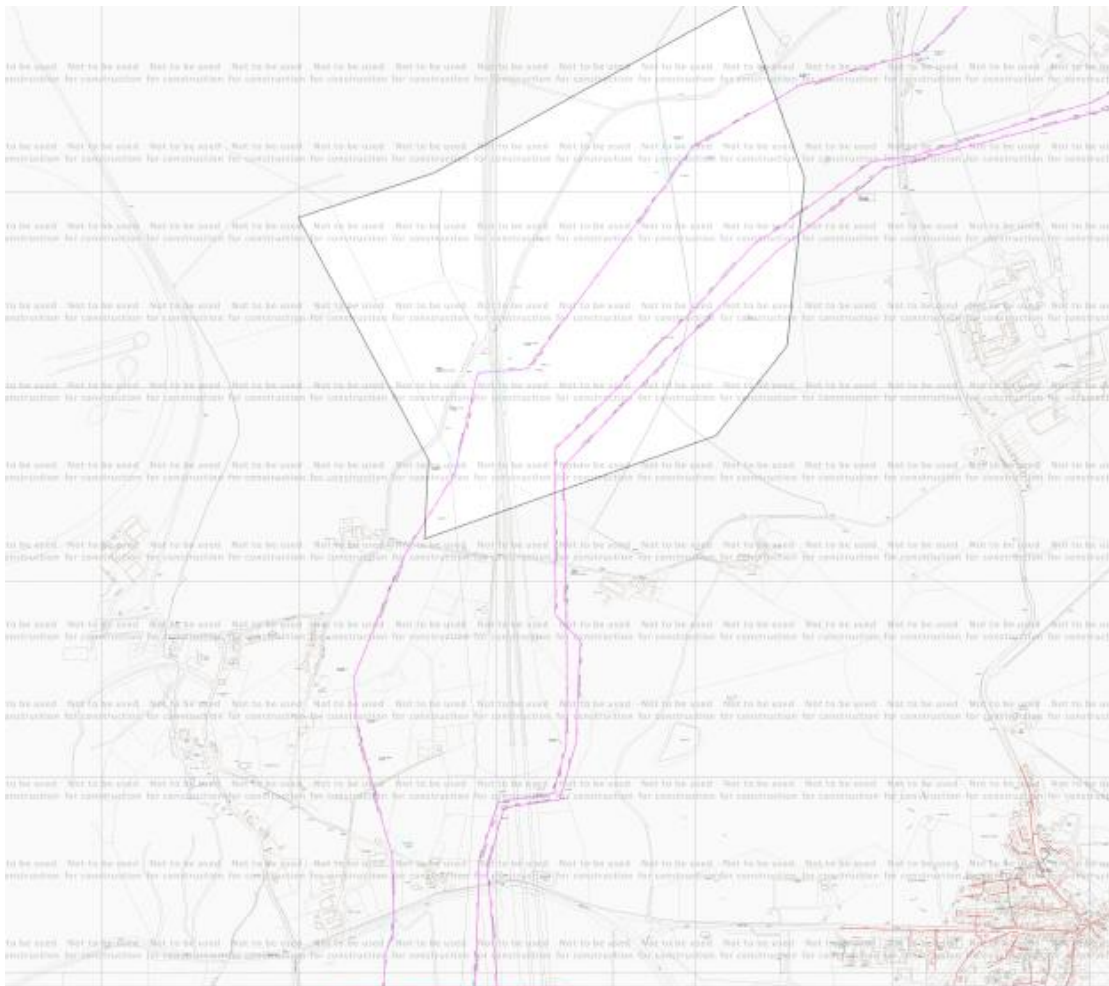
The information in this letter is provided notwithstanding any discussions taking place in relation to connections with electricity or gas customer services.

Yours sincerely

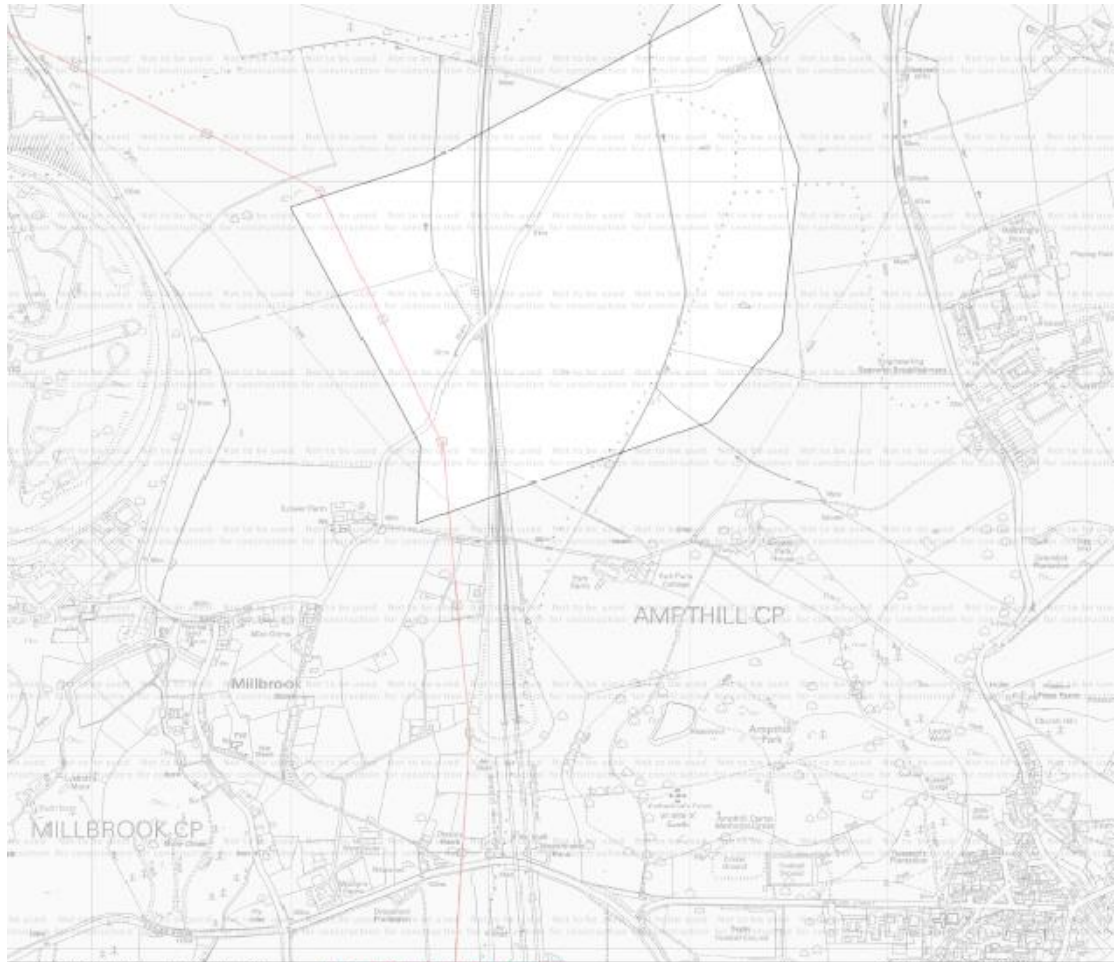



**Laura Kelly**  
**Town Planner, Land and Development**

(Submitted Electronically)



IA_TE_Z3_3FWP_018789	View extent: 2890m, 3670m	<b>National Grid objects to this application</b>	Map 1 of 2 (GAS)
ER: rebecca.flint	UP MARKS	This plan shows pipes owned by National Grid Gas plc in its role as a Licensed Gas Transporter (GTT). Gas pipes owned by other GTTs, or otherwise privately owned, may be present in this area. Information with regard to such pipes should be obtained from the relevant owners. The information shown on this plan is given without warranty, the accuracy thereof cannot be guaranteed. Service pipes, valves, siphons, stub connections, etc. are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by National Grid Gas plc or their agents, servants or contractors for any error or omission. Safe digging practices, in accordance with HSE/G47, must be used to verify and establish the actual position of mains, pipes, services and other apparatus on site before any mechanical plant is used. It is your responsibility to ensure that this information is provided to all persons (either direct labour or contractors) working for you on or near gas premises. The information included on this plan should not be referred to beyond a period of 28 days from the date	MAPS Plot Server Version 1.8.0
FE: 27/06/2014	UP MARKS		<b>nationalgrid</b>
FA DATE: 26/06/2014	UP MARKS		
Milnes Power Project (RF)	UP MARKS		Requested by: National Grid
* REF: TL0239	UP MARKS		This plan is reproduced from or based on the
ITRE: 502138, 239797	UP MARKS		



TR_24_2FW*_018789	View extent: 2800m, 2670m	<b>National Grid objects to this application</b>	<b>Map 2 of 2 (ELECTRIC)</b>
I: rebecca flint	Underground cables	This plan shows those cables owned by National Grid Electricity Transmission plc in its role as a Licensed Electricity	MAPS Plot Server Version 1.8.0
: 27/06/2014	Overhead lines	Transporter (ET). Electricity cables owned by other ETs, or otherwise privately owned, may be present in this area.	<b>nationalgrid</b>
DATE: 22/11/2013	 Approximate scale 1:10000 on A3 Colour Printout	Information with regard to such cables should be obtained from the relevant owners. The information shown on this plan is given without warranty, the accuracy thereof cannot be guaranteed. Ancillary equipment such as cooling systems and communication cables are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by National Grid Electricity Transmission plc or their agents, servants or contractors for any error or omission.	Requested by National Grid
Ibbex Power Project (RF)		Safe digging practices, in accordance with HSG147, must be used to verify and establish the actual position of cables and other apparatus on site before any mechanical plant is used. It is your responsibility to ensure that this information is provided to all persons (either direct labour or contractors) working for you on or near electricity apparatus. The information included on this plan should not be relied to beyond a period of 28 days from the date of issue.	This plan is reproduced from or based on the CG map by National Grid Electricity Transmission plc, with the sanction of the controller of HM
EP: TLD239			
RE: 502138, 239797			

## Case Administration

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**From:** ROSSI, Sacha <Sacha.Rossi@nats.co.uk>  
**Sent:** 24 June 2014 15:13  
**To:** Environmental Services  
**Cc:** NATS Safeguarding  
**Subject:** RE: Millbrook Power Project Scoping Request

Dear Sir/Madam,

NATS anticipates no impact from the proposal and has no comments to make.

Regards  
S. Rossi  
NATS Safeguarding Office

**Mr Sacha Rossi**  
ATC Systems Safeguarding Engineer

☎: 01489 444 205  
✉: [sacha.rossi@nats.co.uk](mailto:sacha.rossi@nats.co.uk)

NATS Safeguarding  
4000 Parkway,  
Whiteley, PO15 7FL

<http://www.nats.co.uk/windfarms>

---

**From:** Environmental Services [<mailto:EnvironmentalServices@infrastructure.gsi.gov.uk>]  
**Sent:** 20 June 2014 14:05  
**To:** [NSIP.applications@hse.gsi.gov.uk](mailto:NSIP.applications@hse.gsi.gov.uk)  
**Subject:** Millbrook Power Project Scoping Request

Please find attached correspondence about the Millbrook Power Project.

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\*\*\*\*\*

Correspondents should note that all communications to Department for Communities and Local Government may be automatically logged, monitored and/or recorded for lawful purposes.

\*\*\*\*\*

Date: 18 July 2014  
Our ref: 124328  
Your ref: EN010068



ALISON L DOWN  
EIA & Land Rights Adviser  
on behalf of the Secretary of State  
3/20 Eagle Wing  
Temple Quay House  
2 The Square  
Bristol, BS1 6PN

Customer Services  
Hornbeam House  
Crewe Business Park  
Electra Way  
Crewe  
Cheshire  
CW1 6GJ

T 0300 060 3900

**BY EMAIL ONLY**

Dear Alison

**Planning Act 2008 (as amended) and The Infrastructure Planning  
(Environmental Impact Assessment) Regulations 2009 (as amended) –  
Regulations 8 and 9  
Application by Millbrook Power Ltd for an Order Granting Development  
Consent for the Millbrook Power Project  
Scoping consultation and notification of the applicant's contact details and  
duty to make available information to the applicant if requested**

Thank you for your consultation about the scoping of the Environmental Impact Assessment (EIA).

Natural England is a non-departmental public body. Our statutory purpose is to ensure that the natural environment is conserved, enhanced, and managed for the benefit of present and future generations, thereby contributing to sustainable development.

Natural England is broadly satisfied with the approach to ecology detailed in the scoping report in respect of identification of potential effects and proposed assessment methodology, as pertaining to our remit. The approach is appropriate and compliant with current best practice (i.e. in line with the Institute of ecology and Environmental Management's (IEEEM) Guidelines for Ecological Impact Assessment in the UK).

For any queries relating to the specific advice in this letter only please contact **John Jackson** on **0300 060 1979**. For any new consultations, or to provide further information on this consultation please send your correspondences to [consultations@naturalengland.org.uk](mailto:consultations@naturalengland.org.uk).

Yours sincerely

**John Jackson**  
**Land Use Adviser**  
Norfolk & Suffolk Team  
0300 060 1979  
[John.Jackson@naturalengland.org.uk](mailto:John.Jackson@naturalengland.org.uk)





The Planning Inspectorate  
3/23 Wing  
Temple Quay House  
2 The Square  
BRISTOL  
BS1 6PN

Floor 3a  
George Stephenson House  
Toft Green  
York  
YO1 6JT

T 01904 389707

18<sup>th</sup> June 2014

**For the attention of Alison Down**

Dear Sir /Madam,

**Application by Millbrook Power Ltd for an Order Granting Development Consent for Millbrook Power Project**

Thank you for consulting Network Rail on the above proposed project.

Network Rail has been reviewing the information to date and at this stage it is not sufficiently detailed to fully assess potential impacts of the scheme on the railway and further information will be required to properly respond on the likely impacts of the proposed scheme.

It is likely however that the proposal will impact significantly on railway infrastructure. The Environmental Impact Assessment Scoping Report when discussing the traffic and transport does not take into account the proposals on the level crossing in the area, particularly Stewartby Green Lane. A risk assessment considering the increase in traffic over the level crossing will be required. Other material issues to be considered for the asset protection of the railway will be covered by appropriate Conditions, however one key element is how the surface water will be disposed of and whether this will affect railway infrastructure, especially any culverts. This should therefore be taken into account in the drainage strategy plan. Any requirement for the project to go either over or under the railway will be subject of an easement.

Network Rail will be seeking protection from the exercise of compulsory purchase powers over operational land either for permanent or temporary purposes. In addition, Network Rail will wish to agree protection for the railway during the course of the construction works and otherwise to protect our undertaking and land interests. Network Rail reserve the right to produce additional and further grounds of concern when further details of the application and its effect on Network Rail's land are available. In addition, any rights for power or other lines under, over or alongside the railway line will require appropriate asset protection measures deemed necessary by Network Rail to protect the operational railway and stations. We have standard



protective provisions which will need to be included in the DCO as a minimum and in addition, other agreements will need to be entered into with Network Rail. A number of legal and commercial agreements will need to be entered into, for example, [asset protection agreements, asset protections agreements, method statements, connection agreements, property agreements and all other relevant legal and commercial agreements]. This list is not exhaustive and will need to be reviewed once more details of the scheme are discussed between the parties.

Consideration should be given to ensure that the construction and subsequent maintenance can be carried out to any proposed buildings or structures without adversely affecting the safety of, or encroaching upon Network Rail's adjacent land. In addition security of the railway boundary will require to be maintained at all times. In any event you must contact Network Rail's Asset Protection Engineers as soon as possible in relation to this scheme on the following e-mail address [[AssetProtectionLNE@networkrail.co.uk](mailto:AssetProtectionLNE@networkrail.co.uk)]

Network Rail is prepared to discuss the inclusion of Network Rail land or rights over land subject to there being no impact on the operational railway, all regulatory and other required consents being in place and appropriate commercial and other terms having been agreed between the parties and approved by Network Rail's board."

Yours sincerely



Amanda Ashton  
Town Planning Technician LNE & EM

**From:** Carol Wilson [<mailto:Carol.Wilson@north-herts.gov.uk>]  
**Sent:** 09 July 2014 09:39  
**To:** Environmental Services  
**Subject:** Millbrook Power Project

Dear Sir/Madam

EN010068

Millbrook Power Project Scoping Request

North Hertfordshire District Council do not require to be consulted regarding the above proposal.  
Regards

Carol Wilson  
**Technical Support Officer**

Direct Dial: 01462 474822

North Hertfordshire District Council  
Council Offices  
Gernon Road  
Letchworth Garden City  
Hertfordshire  
SG6 3JF  
[carol.wilson@north-herts.gov.uk](mailto:carol.wilson@north-herts.gov.uk)  
[www.north-herts.gov.uk](http://www.north-herts.gov.uk)

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[www.gov.uk/phe](http://www.gov.uk/phe)

FAO: Alison Down  
The Planning Inspectorate  
3/20 Eagle Wing  
Temple Quay House  
2 The Square  
Bristol  
BS1 6PN

Your Ref: EN010068

Our Ref: 140620 339

17<sup>th</sup> July 2014

Dear Alison,

**Re: Millbrook Power Project – Scoping Consultation**

Thank you for including Public Health England (PHE) in the scoping consultation phase of the above application. Our response focuses on health protection issues relating to chemicals and radiation. Advice offered by PHE is impartial and independent.

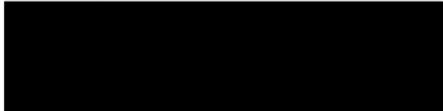
In order to ensure that public health is fully and comprehensively considered, the Environmental Statement (ES) should provide sufficient information to allow the potential impact of the development on public health to be fully assessed.

PHE has evaluated the submitted Environmental Impact Assessment Scoping Report (June 2014) alongside the request for a scoping opinion and can confirm that the proposed methodology for assessing possible impacts affecting human health appears acceptable. However, there is no mention of possible impacts on human health due to electric and magnetic fields (EMFs) produced by the electrical equipment and electrical connection system. The ES should include an assessment of possible risks to humans due to EMFs as well as mitigation measures if required.

In order to assist the promoter in the production of the subsequent ES we have included an appendix which outlines the generic considerations that PHE advises should be addressed by all promoters when they are preparing ESs for NSIPs.

PHE will provide further comments when the ES becomes available. Should the promoter or their agents wish to discuss our recommendations or to seek any specific advice prior to the submission of the ES, PHE would of course be pleased to assist.

Yours sincerely



Antonio Peña-Fernández  
Health Protection Scientist

[nsipconsultations@phe.gov.uk](mailto:nsipconsultations@phe.gov.uk)

*Please mark any correspondence for the attention of National Infrastructure Planning Administration.*

## Appendix: PHE recommendations regarding the scoping document

### General approach

The EIA should give consideration to best practice guidance such as the Government's Good Practice Guide for EIA<sup>1</sup>. It is important that the EIA identifies and assesses the potential public health impacts of the activities at, and emissions from, the installation. Assessment should consider the development, operational, and decommissioning phases.

The EIA Directive<sup>2</sup> requires that ESs include a description of the aspects of the environment likely to be significantly affected by the development, including "population". The EIA should provide sufficient information for PHE to fully assess the potential impact of the development on public health. **PHE will only consider information contained or referenced in a separate section of the ES summarising the impact of the proposed development on public health:** summarising risk assessments, proposed mitigation measures, and residual impacts. This section should summarise key information and conclusions relating to human health impacts contained in other sections of the application (e.g. in the separate sections dealing with: air quality, emissions to water, waste, contaminated land etc.) without undue duplication. Compliance with the requirements of National Policy Statements and relevant guidance and standards should be highlighted.

It is not PHE's role to undertake these assessments on behalf of promoters as this would conflict with PHE's role as an impartial and independent body.

Consideration of alternatives (including alternative sites, choice of process, and the phasing of construction) is widely regarded as good practice. Ideally, EIA should start at the stage of site and process selection, so that the environmental merits of practicable alternatives can be properly considered. Where this is undertaken, the main alternatives considered should be outlined in the ES<sup>3</sup>.

The following text covers a range of issues that PHE would expect to be addressed by the promoter. However this list is not exhaustive and the onus is on the promoter to ensure that the relevant public health issues are identified and addressed. PHE's advice and recommendations carry no statutory weight and constitute non-binding guidance.

### Receptors

The ES should clearly identify the development's location and the location and distance from the development of off-site human receptors that may be affected by emissions from, or activities at, the development. Off-site human receptors may include people living in residential premises; people working in commercial, and

<sup>1</sup> Environmental Impact Assessment: A guide to good practice and procedures - A consultation paper; 2006; Department for Communities and Local Government. Available from:

<http://www.communities.gov.uk/archived/publications/planningandbuilding/environmentalimpactassessment>

<sup>2</sup> Directive 85/337/EEC (as amended) on the assessment of the effects of certain public and private projects on the environment. Available from: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CONSLEG:1985L0337:20090625:EN:PDF>

<sup>3</sup> DCLG guidance, 1999 <http://www.communities.gov.uk/documents/planningandbuilding/pdf/155958.pdf>

industrial premises and people using transport infrastructure (such as roads and railways), recreational areas, and publicly-accessible land. Consideration should also be given to environmental receptors such as the surrounding land, watercourses, surface and groundwater, and drinking water supplies such as wells, boreholes and water abstraction points.

### **Impacts arising from construction and decommissioning**

Any assessment of impacts arising from emissions due to construction and decommissioning should consider potential impacts on all receptors and describe monitoring and mitigation during these phases. Construction and decommissioning will be associated with vehicle movements and cumulative impacts should be accounted for.

We would expect the promoter to follow best practice guidance during all phases from construction to decommissioning to ensure appropriate measures are in place to mitigate any potential impact on health from emissions (point source, fugitive and traffic-related). An effective Construction Environmental Management Plan (CEMP) (and Decommissioning Environmental Management Plan (DEMP)) will help provide reassurance that activities are well managed. The promoter should ensure that there are robust mechanisms in place to respond to any complaints of traffic-related pollution, during construction, operation, and decommissioning of the facility.

### **Emissions to air and water**

Significant impacts are unlikely to arise from installations which employ Best Available Techniques (BAT) and which meet regulatory requirements concerning emission limits and design parameters. However, PHE has a number of comments regarding emissions in order that the EIA provides a comprehensive assessment of potential impacts.

When considering a baseline (of existing environmental quality) and in the assessment and future monitoring of impacts these:

- should include appropriate screening assessments and detailed dispersion modelling where this is screened as necessary
- should encompass all pollutants which may be emitted by the installation in combination with all pollutants arising from associated development and transport, ideally these should be considered in a single holistic assessment
- should consider the construction, operational, and decommissioning phases
- should consider the typical operational emissions and emissions from start-up, shut-down, abnormal operation and accidents when assessing potential impacts and include an assessment of worst-case impacts
- should fully account for fugitive emissions



- should include appropriate estimates of background levels
- should identify cumulative and incremental impacts (i.e. assess cumulative impacts from multiple sources), including those arising from associated development, other existing and proposed development in the local area, and new vehicle movements associated with the proposed development; associated transport emissions should include consideration of non-road impacts (i.e. rail, sea, and air)
- should include consideration of local authority, Environment Agency, Defra national network, and any other local site-specific sources of monitoring data
- should compare predicted environmental concentrations to the applicable standard or guideline value for the affected medium (such as UK Air Quality Standards and Objectives and Environmental Assessment Levels)
  - If no standard or guideline value exists, the predicted exposure to humans should be estimated and compared to an appropriate health-based value (a Tolerable Daily Intake or equivalent). Further guidance is provided in Annex 1
  - This should consider all applicable routes of exposure e.g. include consideration of aspects such as the deposition of chemicals emitted to air and their uptake via ingestion
- should identify and consider impacts on residential areas and sensitive receptors (such as schools, nursing homes and healthcare facilities) in the area(s) which may be affected by emissions, this should include consideration of any new receptors arising from future development

Whilst screening of impacts using qualitative methodologies is common practice (e.g. for impacts arising from fugitive emissions such as dust), where it is possible to undertake a quantitative assessment of impacts then this should be undertaken.

PHE's view is that the EIA should appraise and describe the measures that will be used to control both point source and fugitive emissions and demonstrate that standards, guideline values or health-based values will not be exceeded due to emissions from the installation, as described above. This should include consideration of any emitted pollutants for which there are no set emission limits. When assessing the potential impact of a proposed installation on environmental quality, predicted environmental concentrations should be compared to the permitted concentrations in the affected media; this should include both standards for short and long-term exposure.

*Additional points specific to emissions to air*

When considering a baseline (of existing air quality) and in the assessment and future monitoring of impacts these:

- should include consideration of impacts on existing areas of poor air quality e.g. existing or proposed local authority Air Quality Management Areas (AQMAs)
- should include modelling using appropriate meteorological data (i.e. come from the nearest suitable meteorological station and include a range of years and worst case conditions)
- should include modelling taking into account local topography

*Additional points specific to emissions to water*

When considering a baseline (of existing water quality) and in the assessment and future monitoring of impacts these:

- should include assessment of potential impacts on human health and not focus solely on ecological impacts
- should identify and consider all routes by which emissions may lead to population exposure (e.g. surface watercourses; recreational waters; sewers; geological routes etc.)
- should assess the potential off-site effects of emissions to groundwater (e.g. on aquifers used for drinking water) and surface water (used for drinking water abstraction) in terms of the potential for population exposure
- should include consideration of potential impacts on recreational users (e.g. from fishing, canoeing etc) alongside assessment of potential exposure via drinking water

**Land quality**

We would expect the promoter to provide details of any hazardous contamination present on site (including ground gas) as part of the site condition report.

Emissions to and from the ground should be considered in terms of the previous history of the site and the potential of the site, once operational, to give rise to issues. Public health impacts associated with ground contamination and/or the migration of material off-site should be assessed<sup>4</sup> and the potential impact on nearby receptors and control and mitigation measures should be outlined.

Relevant areas outlined in the Government's Good Practice Guide for EIA include:

- effects associated with ground contamination that may already exist

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<sup>4</sup> Following the approach outlined in the section above dealing with emissions to air and water i.e. comparing predicted environmental concentrations to the applicable standard or guideline value for the affected medium (such as Soil Guideline Values)

- effects associated with the potential for polluting substances that are used (during construction / operation) to cause new ground contamination issues on a site, for example introducing / changing the source of contamination
- impacts associated with re-use of soils and waste soils, for example, re-use of site-sourced materials on-site or offsite, disposal of site-sourced materials offsite, importation of materials to the site, etc.

## **Waste**

The EIA should demonstrate compliance with the waste hierarchy (e.g. with respect to re-use, recycling or recovery and disposal).

For wastes arising from the installation the EIA should consider:

- the implications and wider environmental and public health impacts of different waste disposal options
- disposal route(s) and transport method(s) and how potential impacts on public health will be mitigated

## **Other aspects**

Within the EIA PHE would expect to see information about how the promoter would respond to accidents with potential off-site emissions e.g. flooding or fires, spills, leaks or releases off-site. Assessment of accidents should: identify all potential hazards in relation to construction, operation and decommissioning; include an assessment of the risks posed; and identify risk management measures and contingency actions that will be employed in the event of an accident in order to mitigate off-site effects.

The EIA should include consideration of the COMAH Regulations (Control of Major Accident Hazards) and the Major Accident Off-Site Emergency Plan (Management of Waste from Extractive Industries) (England and Wales) Regulations 2009: both in terms of their applicability to the installation itself, and the installation's potential to impact on, or be impacted by, any nearby installations themselves subject to the these Regulations.

There is evidence that, in some cases, perception of risk may have a greater impact on health than the hazard itself. A 2009 report<sup>5</sup>, jointly published by Liverpool John Moores University and PHE, examined health risk perception and environmental problems using a number of case studies. As a point to consider, the report suggested: "Estimation of community anxiety and stress should be included as part of every risk or impact assessment of proposed plans that involve a potential environmental hazard. This is true even when the physical health risks may be negligible." PHE supports the inclusion of this information within EIAs as good practice.

<sup>5</sup> Available from: <http://www.cph.org.uk/showPublication.aspx?pubid=538>

## **Electric and magnetic fields (EMF)**

There is a potential health impact associated with the electric and magnetic fields around substations and the connecting cables or lines. The following information provides a framework for considering the potential health impact.

In March 2004, the National Radiological Protection Board, NRPB (now part of PHE), published advice on limiting public exposure to electromagnetic fields. The advice was based on an extensive review of the science and a public consultation on its website, and recommended the adoption in the UK of the EMF exposure guidelines published by the International Commission on Non-ionizing Radiation Protection (ICNIRP):-

<http://www.hpa.org.uk/Publications/Radiation/NPRBArchive/DocumentsOfTheNRPB/Absd1502/>

The ICNIRP guidelines are based on the avoidance of known adverse effects of exposure to electromagnetic fields (EMF) at frequencies up to 300 GHz (gigahertz), which includes static magnetic fields and 50 Hz electric and magnetic fields associated with electricity transmission.

PHE notes the current Government policy is that the ICNIRP guidelines are implemented in line with the terms of the EU Council Recommendation on limiting exposure of the general public (1999/519/EC):

[http://www.dh.gov.uk/en/Publichealth/Healthprotection/DH\\_4089500](http://www.dh.gov.uk/en/Publichealth/Healthprotection/DH_4089500)

For static magnetic fields, the latest ICNIRP guidelines (2009) recommend that acute exposure of the general public should not exceed 400 mT (millitesla), for any part of the body, although the previously recommended value of 40 mT is the value used in the Council Recommendation. However, because of potential indirect adverse effects, ICNIRP recognises that practical policies need to be implemented to prevent inadvertent harmful exposure of people with implanted electronic medical devices and implants containing ferromagnetic materials, and injuries due to flying ferromagnetic objects, and these considerations can lead to much lower restrictions, such as 0.5 mT as advised by the International Electrotechnical Commission.

At 50 Hz, the known direct effects include those of induced currents in the body on the central nervous system (CNS) and indirect effects include the risk of painful spark discharge on contact with metal objects exposed to the field. The ICNIRP guidelines give reference levels for public exposure to 50 Hz electric and magnetic fields, and these are respectively  $5 \text{ kV m}^{-1}$  (kilovolts per metre) and  $100 \text{ }\mu\text{T}$  (microtesla). If people are not exposed to field strengths above these levels, direct effects on the CNS should be avoided and indirect effects such as the risk of painful spark discharge will be small. The reference levels are not in themselves limits but provide guidance for assessing compliance with the basic restrictions and reducing the risk of indirect effects. Further clarification on advice on exposure guidelines for 50 Hz electric and magnetic fields is provided in the following note on PHE website:

[http://www.hpa.org.uk/webw/HPAweb&HPAwebStandard/HPAweb\\_C/1195733805036](http://www.hpa.org.uk/webw/HPAweb&HPAwebStandard/HPAweb_C/1195733805036)

The Department of Energy and Climate Change has also published voluntary code of practices which set out key principles for complying with the ICNIRP guidelines for the industry.

[http://www.decc.gov.uk/en/content/cms/what\\_we\\_do/uk\\_supply/consents\\_planning/codes/codes.aspx](http://www.decc.gov.uk/en/content/cms/what_we_do/uk_supply/consents_planning/codes/codes.aspx)

There is concern about the possible effects of long-term exposure to electromagnetic fields, including possible carcinogenic effects at levels much lower than those given in the ICNIRP guidelines. In the NRPB advice issued in 2004, it was concluded that the studies that suggest health effects, including those concerning childhood leukaemia, could not be used to derive quantitative guidance on restricting exposure. However, the results of these studies represented uncertainty in the underlying evidence base, and taken together with people's concerns, provided a basis for providing an additional recommendation for Government to consider the need for further precautionary measures, particularly with respect to the exposure of children to power frequency magnetic fields.

The Stakeholder Advisory Group on ELF EMFs (SAGE) was then set up to take this recommendation forward, explore the implications for a precautionary approach to extremely low frequency electric and magnetic fields (ELF EMFs), and to make practical recommendations to Government. In the First Interim Assessment of the Group, consideration was given to mitigation options such as the 'corridor option' near power lines, and optimal phasing to reduce electric and magnetic fields. A Second Interim Assessment addresses electricity distribution systems up to 66 kV. The SAGE reports can be found at the following link:

<http://sagedialogue.org.uk/> (go to "Document Index" and Scroll to SAGE/Formal reports with recommendations)

The Agency has given advice to Health Ministers on the First Interim Assessment of SAGE regarding precautionary approaches to ELF EMFs and specifically regarding power lines and property, wiring and electrical equipment in homes:

[http://www.hpa.org.uk/webw/HPAweb&HPAwebStandard/HPAweb\\_C/1204276682532?p=1207897920036](http://www.hpa.org.uk/webw/HPAweb&HPAwebStandard/HPAweb_C/1204276682532?p=1207897920036)

The evidence to date suggests that in general there are no adverse effects on the health of the population of the UK caused by exposure to ELF EMFs below the guideline levels. The scientific evidence, as reviewed by PHE, supports the view that precautionary measures should address solely the possible association with childhood leukaemia and not other more speculative health effects. The measures should be proportionate in that overall benefits outweigh the fiscal and social costs, have a convincing evidence base to show that they will be successful in reducing exposure, and be effective in providing reassurance to the public.

The Government response to the SAGE report is given in the written Ministerial Statement by Gillian Merron, then Minister of State, Department of Health, published on 16<sup>th</sup> October 2009:

<http://www.publications.parliament.uk/pa/cm200809/cmhansrd/cm091016/wmstext/91016m0001.htm>

[http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH\\_107124](http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_107124)

PHE and Government responses to the Second Interim Assessment of SAGE are available at the following links:

[http://www.hpa.org.uk/Publications/Radiation/HPAResponseStatementsOnRadiationTopics/rpdadvice\\_sage2](http://www.hpa.org.uk/Publications/Radiation/HPAResponseStatementsOnRadiationTopics/rpdadvice_sage2)

[http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH\\_130703](http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_130703)

The above information provides a framework for considering the health impact associated with the proposed development, including the direct and indirect effects of the electric and magnetic fields as indicated above.

**Liaison with other stakeholders, comments should be sought from:**

- the local authority for matters relating to noise, odour, vermin and dust nuisance
- the local authority regarding any site investigation and subsequent construction (and remediation) proposals to ensure that the site could not be determined as 'contaminated land' under Part 2A of the Environmental Protection Act
- the local authority regarding any impacts on existing or proposed Air Quality Management Areas
- the Food Standards Agency for matters relating to the impact on human health of pollutants deposited on land used for growing food/ crops
- the Environment Agency for matters relating to flood risk and releases with the potential to impact on surface and groundwaters
- the Environment Agency for matters relating to waste characterisation and acceptance
- The Local Authority Director of Public Health at Suffolk County Council for matters relating to wider public health.

## **Environmental Permitting**

Amongst other permits and consents, the development will require an environmental permit from the Environment Agency to operate (under the Environmental Permitting (England and Wales) Regulations 2010). Therefore the installation will need to comply with the requirements of best available techniques (BAT). PHE is a consultee for bespoke environmental permit applications and will respond separately to any such consultation.

## Annex 1

### Human health risk assessment (chemical pollutants)

The points below are cross-cutting and should be considered when undertaking a human health risk assessment:

- The promoter should consider including Chemical Abstract Service (CAS) numbers alongside chemical names, where referenced in the ES
- Where available, the most recent United Kingdom standards for the appropriate media (e.g. air, water, and/or soil) and health-based guideline values should be used when quantifying the risk to human health from chemical pollutants. Where UK standards or guideline values are not available, those recommended by the European Union or World Health Organisation can be used
- When assessing the human health risk of a chemical emitted from a facility or operation, the background exposure to the chemical from other sources should be taken into account
- When quantitatively assessing the health risk of genotoxic and carcinogenic chemical pollutants PHE does not favour the use of mathematical models to extrapolate from high dose levels used in animal carcinogenicity studies to well below the observed region of a dose-response relationship. When only animal data are available, we recommend that the 'Margin of Exposure' (MOE) approach<sup>6</sup> is used

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<sup>6</sup> Benford D et al. 2010. Application of the margin of exposure approach to substances in food that are genotoxic and carcinogenic. Food Chem Toxicol 48 Suppl 1: S2-24



**The Chilterns  
Conservation Board**

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Chairman: Cllr Ian Reay  
Vice Chairman: Helen Tuffs  
Chief Officer: Steve Rodrick

24<sup>th</sup> June 2014

Alison Down  
The Planning Inspectorate  
3/20 Eagle Wing  
Temple Quay House  
2 The Square  
Bristol BS1 6PN

My Ref.: Plan apps/NSIPs/021-14 Millbrook Power 240614  
Your Ref: EN010068

**Sent by email only to:** [environmentalservices@infrastructure.gsi.gov.uk](mailto:environmentalservices@infrastructure.gsi.gov.uk)

Dear Madam,

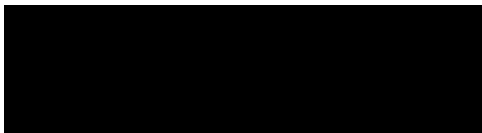
**Application by Millbrook Power Ltd. for an Order Granting Development Consent for the Millbrook Power Project**

Thank you for consulting the Chilterns Conservation Board in connection with the proposal detailed above.

The EIA Scoping Report has been examined and I write to tell you that the Chilterns Conservation Board has no comments to make on the proposal as currently presented.

We trust that the Board will be consulted should the details of the proposal change to any great extent.

Yours faithfully,



**Colin White MRTPI  
Planning Officer  
For and on behalf of the Chilterns Conservation Board**





200 Lichfield Lane  
Berry Hill  
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Tel: 01623 637 119 (Planning Enquiries)

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Ms Alison Down – EIA and Land Rights Adviser  
The Planning Inspectorate

**[By Email: [environmentalservices@infrastructure.gsi.gov.uk](mailto:environmentalservices@infrastructure.gsi.gov.uk)]**

Your Ref: EN010068

14 July 2014

Dear Ms Jones

**Planning Act 2008 (as amended) and The Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (as amended) – Regulations 8 and 9**

**Application by Millbrook Power Ltd for an Order Granting Development Consent for the Millbrook Power Project**

Thank you for your consultation letter of 20 June 2014 seeking the views of The Coal Authority on the EIA Scoping Opinion for the above proposal.

The Coal Authority is a non-departmental public body sponsored by the Department of Energy and Climate Change. As a statutory consultee, The Coal Authority has a duty to respond to planning applications and development plans in order to protect the public and the environment in mining areas.

The Coal Authority Response:

I have reviewed the proposals and confirm that the proposed EIA development is located outside of the defined coalfield. Accordingly, The Coal Authority has **no comments** to make regarding the information to be contained in the Environmental Statement that will accompany this proposal.

As this proposal lies outside of the defined coalfield, in accordance with Regulation 3 and Schedule 1 of the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 it will not be necessary for any further consultations to be undertaken with The Coal Authority on this Nationally Significant Infrastructure Project. This letter can

be used by the applicant as evidence for the legal and procedural consultation requirements.

Please do not hesitate to contact me if you would like to discuss this matter further.

Yours sincerely

*Mark Harrison*

**Mark E. N. Harrison** *B.A.(Hons), DipTP, LL.M, MInstLM, MRTPI*  
**Planning Liaison Manager**

Disclaimer

The above consultation response is provided by The Coal Authority as a Statutory Consultee and is based upon the latest available data and records held by The Coal Authority on the date of the response. The comments made are also based upon only the information provided to The Coal Authority by the Local Planning Authority and/or has been published on the Council's website for consultation purposes in relation to this specific planning application. The views and conclusions contained in this response may be subject to review and amendment by The Coal Authority if additional or new data/information (such as a revised Coal Mining Risk Assessment) is provided by the Local Planning Authority or the applicant for consultation purposes.

## **APPENDIX 3**

# **Presentation of the Environmental Statement**



## APPENDIX 3

### PRESENTATION OF THE ENVIRONMENTAL STATEMENT

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (SI 2264) (as amended) sets out the information which must be provided for an application for a development consent order (DCO) for nationally significant infrastructure under the Planning Act 2008. Where required, this includes an environmental statement. Applicants may also provide any other documents considered necessary to support the application. Information which is not environmental information need not be replicated or included in the ES.

An environmental statement (ES) is described under the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (SI 2263) (as amended) (the EIA Regulations) as a statement:

- a) 'that includes such of the information referred to in Part 1 of Schedule 4 as is reasonably required to assess the environmental effects of the development and of any associated development and which the applicant can, having regard in particular to current knowledge and methods of assessment, reasonably be required to compile; but
- b) that includes at least the information required in Part 2 of Schedule 4'.

*(EIA Regulations Regulation 2)*

The purpose of an ES is to ensure that the environmental effects of a project are fully considered, together with the economic or social benefits of the development, before the development consent application under the Planning Act 2008 is determined. The ES should be an aid to decision making.

The SoS advises that the ES should be laid out clearly with a minimum amount of technical terms and should provide a clear objective and realistic description of the likely significant impacts of the project. The information should be presented so as to be comprehensible to the specialist and non-specialist alike. The SoS recommends that the ES be concise with technical information placed in appendices.

### ES Indicative Contents

The SoS emphasises that the ES should be a 'stand-alone' document in line with best practice and case law. The EIA Regulations Schedule 4, Parts 1 and 2, set out the information for inclusion in environmental statements.

Schedule 4 Part 1 of the EIA Regulations states this information includes:

- '17. *Description of the development, including in particular—*

- (a) *a description of the physical characteristics of the whole development and the land-use requirements during the construction and operational phases;*
  - (b) *a description of the main characteristics of the production processes, for instance, nature and quantity of the materials used;*
  - (c) *an estimate, by type and quantity, of expected residues and emissions (water, air and soil pollution, noise, vibration, light, heat, radiation, etc) resulting from the operation of the proposed development.*
18. *An outline of the main alternatives studied by the applicant and an indication of the main reasons for the applicant's choice, taking into account the environmental effects.*
19. *A description of the aspects of the environment likely to be significantly affected by the development, including, in particular, population, fauna, flora, soil, water, air, climatic factors, material assets, including the architectural and archaeological heritage, landscape and the interrelationship between the above factors.*
20. *A description of the likely significant effects of the development on the environment, which should cover the direct effects and any indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative effects of the development, resulting from:*
- (a) *the existence of the development;*
  - (b) *the use of natural resources;*
  - (c) *the emission of pollutants, the creation of nuisances and the elimination of waste,*
- and the description by the applicant of the forecasting methods used to assess the effects on the environment.*
21. *A description of the measures envisaged to prevent, reduce and where possible offset any significant adverse effects on the environment.*
22. *A non-technical summary of the information provided under paragraphs 1 to 5 of this Part.*
23. *An indication of any difficulties (technical deficiencies or lack of know-how) encountered by the applicant in compiling the required information'.*

*EIA Regulations Schedule 4 Part 1*

The content of the ES must include as a minimum those matters set out in Schedule 4 Part 2 of the EIA Regulations. This includes the consideration of 'the main alternatives studied by the applicant' which the SoS recommends could be addressed as a separate chapter in the ES. Part 2 is included below for reference:



## Schedule 4 Part 2

- A description of the development comprising information on the site, design and size of the development
- A description of the measures envisaged in order to avoid, reduce and, if possible, remedy significant adverse effects
- The data required to identify and assess the main effects which the development is likely to have on the environment
- An outline of the main alternatives studied by the applicant and an indication of the main reasons for the applicant's choice, taking into account the environmental effects, and
- A non-technical summary of the information provided [*under the four paragraphs above*].

Traffic and transport is not specified as a topic for assessment under Schedule 4; although in line with good practice the SoS considers it is an important consideration *per se*, as well as being the source of further impacts in terms of air quality and noise and vibration.

## Balance

The SoS recommends that the ES should be balanced, with matters which give rise to a greater number or more significant impacts being given greater prominence. Where few or no impacts are identified, the technical section may be much shorter, with greater use of information in appendices as appropriate.

The SoS considers that the ES should not be a series of disparate reports and stresses the importance of considering inter-relationships between factors and cumulative impacts.

## Scheme Proposals

The scheme parameters will need to be clearly defined in the draft DCO and therefore in the accompanying ES which should support the application as described. The SoS is not able to entertain material changes to a project once an application is submitted. The SoS draws the attention of the applicant to the DCLG and the Planning Inspectorate's published advice on the preparation of a draft DCO and accompanying application documents.

## Flexibility

The SoS acknowledges that the EIA process is iterative, and therefore the proposals may change and evolve. For example, there may be changes to the scheme design in response to consultation. Such changes should be addressed in the ES. However, at the time of the application for a DCO, any proposed scheme parameters should not be so wide ranging as to represent effectively different schemes.

It is a matter for the applicant, in preparing an ES, to consider whether it is possible to assess robustly a range of impacts resulting from a large number of undecided parameters. The description of the project in the ES must not be so wide that it is insufficiently certain to comply with requirements of paragraph 17 of Schedule 4 Part 1 of the EIA Regulations.

The Rochdale Envelope principle (see *R v Rochdale MBC ex parte Tew (1999)* and *R v Rochdale MBC ex parte Milne (2000)*) is an accepted way of dealing with uncertainty in preparing development applications. The applicant's attention is drawn to the Planning Inspectorate's Advice Note 9 'Rochdale Envelope' which is available on the Advice Note's page of the National Infrastructure Planning website.

The applicant should make every attempt to narrow the range of options and explain clearly in the ES which elements of the scheme have yet to be finalised and provide the reasons. Where some flexibility is sought and the precise details are not known, the applicant should assess the maximum potential adverse impacts the project could have to ensure that the project as it may be constructed has been properly assessed.

The ES should be able to confirm that any changes to the development within any proposed parameters would not result in significant impacts not previously identified and assessed. The maximum and other dimensions of the project should be clearly described in the ES, with appropriate justification. It will also be important to consider choice of materials, colour and the form of the structures and of any buildings. Lighting proposals should also be described.

## Scope

The SoS recommends that the physical scope of the study areas should be identified under all the environmental topics and should be sufficiently robust in order to undertake the assessment. The extent of the study areas should be on the basis of recognised professional guidance, whenever such guidance is available. The study areas should also be agreed with the relevant consultees and local authorities and, where this is not possible, this should be stated clearly in the ES and a reasoned justification given. The scope should also cover the breadth of the topic area and the temporal scope, and these aspects should be described and justified.

### *Physical Scope*

In general the SoS recommends that the physical scope for the EIA should be determined in the light of:

- the nature of the proposal being considered
- the relevance in terms of the specialist topic
- the breadth of the topic

- the physical extent of any surveys or the study area, and
- the potential significant impacts.

The SoS recommends that the physical scope of the study areas should be identified for each of the environmental topics and should be sufficiently robust in order to undertake the assessment. This should include at least the whole of the application site, and include all offsite works. For certain topics, such as landscape and transport, the study area will need to be wider. The extent of the study areas should be on the basis of recognised professional guidance and best practice, whenever this is available, and determined by establishing the physical extent of the likely impacts. The study areas should also be agreed with the relevant consultees and, where this is not possible, this should be stated clearly in the ES and a reasoned justification given.

#### *Breadth of the Topic Area*

The ES should explain the range of matters to be considered under each topic and this may respond partly to the type of project being considered. If the range considered is drawn narrowly then a justification for the approach should be provided.

#### *Temporal Scope*

The assessment should consider:

- environmental impacts during construction works
- environmental impacts on completion/operation of the project
- where appropriate, environmental impacts a suitable number of years after completion of the project (for example, in order to allow for traffic growth or maturing of any landscape proposals), and
- environmental impacts during decommissioning.

In terms of decommissioning, the SoS acknowledges that the further into the future any assessment is made, the less reliance may be placed on the outcome. However, the purpose of such a long term assessment, as well as to enable the decommissioning of the works to be taken into account, is to encourage early consideration as to how structures can be taken down. The purpose of this is to seek to minimise disruption, to re-use materials and to restore the site or put it to a suitable new use. The SoS encourages consideration of such matters in the ES.

The SoS recommends that these matters should be set out clearly in the ES and that the suitable time period for the assessment should be agreed with the relevant statutory consultees.

The SoS recommends that throughout the ES a standard terminology for time periods should be defined, such that for example, 'short term' always refers to the same period of time.

## Baseline

The SoS recommends that the baseline should describe the position from which the impacts of the project are measured. The baseline should be chosen carefully and, whenever possible, be consistent between topics. The identification of a single baseline is to be welcomed in terms of the approach to the assessment, although it is recognised that this may not always be possible.

The SoS recommends that the baseline environment should be clearly explained in the ES, including any dates of surveys, and care should be taken to ensure that all the baseline data remains relevant and up to date.

For each of the environmental topics, the data source(s) for the baseline should be set out together with any survey work undertaken with the dates. The timing and scope of all surveys should be agreed with the relevant statutory bodies and appropriate consultees, wherever possible.

The baseline situation and the project should be described within the context of the site and any other proposals in the vicinity.

## Identification of Impacts and Method Statement

### *Legislation and Guidelines*

In terms of the EIA methodology, the SoS recommends that reference should be made to best practice and any standards, guidelines and legislation that have been used to inform the assessment. This should include guidelines prepared by relevant professional bodies.

In terms of other regulatory regimes, the SoS recommends that relevant legislation and all permit and licences required should be listed in the ES where relevant to each topic. This information should also be submitted with the application in accordance with the APFP Regulations.

In terms of assessing the impacts, the ES should approach all relevant planning and environmental policy – local, regional and national (and where appropriate international) – in a consistent manner.

### *Assessment of Effects and Impact Significance*

The EIA Regulations require the identification of the 'likely significant effects of the development on the environment' (Schedule 4 Part 1 paragraph 20).

As a matter of principle, the SoS applies the precautionary approach to follow the Court's<sup>4</sup> reasoning in judging 'significant effects'. In other words

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<sup>4</sup> See Landelijke Vereniging tot Behoud van de Waddenzee and Nederlandse Vereniging tot Bescherming van Vogels v Staatssecretaris van Landbouw (Waddenzee Case No C 127/02/2004)

'likely to affect' will be taken as meaning that there is a probability or risk that the project will have an effect, and not that a development will definitely have an effect.

The SoS considers it is imperative for the ES to define the meaning of 'significant' in the context of each of the specialist topics and for significant impacts to be clearly identified. The SoS recommends that the criteria should be set out fully and that the ES should set out clearly the interpretation of 'significant' in terms of each of the EIA topics. Quantitative criteria should be used where available. The SoS considers that this should also apply to the consideration of cumulative impacts and impact inter-relationships.

The SoS recognises that the way in which each element of the environment may be affected by the project can be approached in a number of ways. However it considers that it would be helpful, in terms of ease of understanding and in terms of clarity of presentation, to consider the impact assessment in a similar manner for each of the specialist topic areas. The SoS recommends that a common format should be applied where possible.

#### *Inter-relationships between environmental factors*

The inter-relationship between aspects of the environments likely to be significantly affected is a requirement of the EIA Regulations (see Schedule 4 Part 1 of the EIA Regulations). These occur where a number of separate impacts, e.g. noise and air quality, affect a single receptor such as fauna.

The SoS considers that the inter-relationships between factors must be assessed in order to address the environmental impacts of the proposal as a whole. This will help to ensure that the ES is not a series of separate reports collated into one document, but rather a comprehensive assessment drawing together the environmental impacts of the project. This is particularly important when considering impacts in terms of any permutations or parameters to the project.

#### *Cumulative Impacts*

The potential cumulative impacts with other major developments will need to be identified, as required by the Directive. The significance of such impacts should be shown to have been assessed against the baseline position (which would include built and operational development). In assessing cumulative impacts, other major development should be identified through consultation with the local planning authorities and other relevant authorities on the basis of those that are:

- projects that are under construction
- permitted application(s) not yet implemented
- submitted application(s) not yet determined
- all refusals subject to appeal procedures not yet determined

- projects on the National Infrastructure's programme of projects, and
- projects identified in the relevant development plan (and emerging development plans - with appropriate weight being given as they move closer to adoption) recognising that much information on any relevant proposals will be limited.

Details should be provided in the ES, including the types of development, location and key aspects that may affect the EIA and how these have been taken into account as part of the assessment.

The SoS recommends that offshore wind farms should also take account of any offshore licensed and consented activities in the area, for the purposes of assessing cumulative effects, through consultation with the relevant licensing/consenting bodies.

For the purposes of identifying any cumulative effects with other developments in the area, applicants should also consult consenting bodies in other EU states to assist in identifying those developments (see commentary on Transboundary Effects below).

#### *Related Development*

The ES should give equal prominence to any development which is related to the project to ensure that all the impacts of the proposal are assessed.

The SoS recommends that the applicant should distinguish between the project for which development consent will be sought and any other development. This distinction should be clear in the ES.

#### *Alternatives*

The ES must set out an outline of the main alternatives studied by the applicant and provide an indication of the main reasons for the applicant's choice, taking account of the environmental effect (Schedule 4 Part 1 paragraph 18).

Matters should be included, such as *inter alia* alternative design options and alternative mitigation measures. The justification for the final choice and evolution of the scheme development should be made clear. Where other sites have been considered, the reasons for the final choice should be addressed.

The SoS advises that the ES should give sufficient attention to the alternative forms and locations for the off-site proposals, where appropriate, and justify the needs and choices made in terms of the form of the development proposed and the sites chosen.

### *Mitigation Measures*

Mitigation measures may fall into certain categories namely: avoid; reduce; compensate or enhance (see Schedule 4 Part 1 paragraph 21); and should be identified as such in the specialist topics. Mitigation measures should not be developed in isolation as they may relate to more than one topic area. For each topic, the ES should set out any mitigation measures required to prevent, reduce and where possible offset any significant adverse effects, and to identify any residual effects with mitigation in place. Any proposed mitigation should be discussed and agreed with the relevant consultees.

The effectiveness of mitigation should be apparent. Only mitigation measures which are a firm commitment and can be shown to be deliverable should be taken into account as part of the assessment.

It would be helpful if the mitigation measures proposed could be cross referred to specific provisions and/or requirements proposed within the draft development consent order. This could be achieved by means of describing the mitigation measures proposed either in each of the specialist reports or collating these within a summary section on mitigation.

The SoS advises that it is considered best practice to outline in the ES, the structure of the environmental management and monitoring plan and safety procedures which will be adopted during construction and operation and may be adopted during decommissioning.

### *Cross References and Interactions*

The SoS recommends that all the specialist topics in the ES should cross reference their text to other relevant disciplines. Interactions between the specialist topics is essential to the production of a robust assessment, as the ES should not be a collection of separate specialist topics, but a comprehensive assessment of the environmental impacts of the proposal and how these impacts can be mitigated.

As set out in EIA Regulations Schedule 4 Part 1 paragraph 23, the ES should include an indication of any technical difficulties (technical deficiencies or lack of know-how) encountered by the applicant in compiling the required information.

### *Consultation*

The SoS recommends that any changes to the scheme design in response to consultation should be addressed in the ES.

It is recommended that the applicant provides preliminary environmental information (PEI) (this term is defined in the EIA Regulations under regulation 2 'Interpretation') to the local authorities.

Consultation with the local community should be carried out in accordance with the SoCC which will state how the applicant intends to consult on the

preliminary environmental information (PEI). This PEI could include results of detailed surveys and recommended mitigation actions. Where effective consultation is carried out in accordance with Section 47 of the Planning Act, this could usefully assist the applicant in the EIA process – for example the local community may be able to identify possible mitigation measures to address the impacts identified in the PEI. Attention is drawn to the duty upon applicants under Section 50 of the Planning Act to have regard to the guidance on pre-application consultation.

## Transboundary Effects

The SoS recommends that consideration should be given in the ES to any likely significant effects on the environment of another Member State of the European Economic Area. In particular, the SoS recommends consideration should be given to discharges to the air and water and to potential impacts on migratory species and to impacts on shipping and fishing areas.

The Applicant's attention is also drawn to the Planning Inspectorate's Advice Note 12 'Development with significant transboundary impacts consultation' which is available on the Advice Notes Page of the National Infrastructure Planning website

## Summary Tables

The SoS recommends that in order to assist the decision making process, the applicant may wish to consider the use of tables:

**Table X** to identify and collate the residual impacts after mitigation on the basis of specialist topics, inter-relationships and cumulative impacts.

**Table XX** to demonstrate how the assessment has taken account of this Opinion and other responses to consultation.

**Table XXX** to set out the mitigation measures proposed, as well as assisting the reader, the SoS considers that this would also enable the applicant to cross refer mitigation to specific provisions proposed to be included within the draft Development Consent Order.

**Table XXXX** to cross reference where details in the HRA (where one is provided) such as descriptions of sites and their locations, together with any mitigation or compensation measures, are to be found in the ES.

## Terminology and Glossary of Technical Terms

The SoS recommends that a common terminology should be adopted. This will help to ensure consistency and ease of understanding for the decision making process. For example, 'the site' should be defined and used only in



terms of this definition so as to avoid confusion with, for example, the wider site area or the surrounding site.

A glossary of technical terms should be included in the ES.

## Presentation

The ES should have all of its paragraphs numbered, as this makes referencing easier as well as accurate.

Appendices must be clearly referenced, again with all paragraphs numbered.

All figures and drawings, photographs and photomontages should be clearly referenced. Figures should clearly show the proposed site application boundary.

## Bibliography

A bibliography should be included in the ES. The author, date and publication title should be included for all references. All publications referred to within the technical reports should be included.

## Non Technical Summary

The EIA Regulations require a Non Technical Summary (EIA Regulations Schedule 4 Part 1 paragraph 22). This should be a summary of the assessment in simple language. It should be supported by appropriate figures, photographs and photomontages.