Agenda Item No 5

Planning and Development Board

12 December 2016

Planning Applications

Report of the
Head of Development Control

1 **Subject**

1.1 Town and Country Planning Act 1990 – applications presented for determination.

2 **Purpose of Report**

2.1 This report presents for the Board decision, a number of planning, listed building, advertisement, proposals, together with proposals for the works to, or the felling of trees covered by a Preservation Order and other miscellaneous items.

2.2 Minerals and Waste applications are determined by the County Council. Developments by Government Bodies and Statutory Undertakers are also determined by others. The recommendations in these cases are consultation responses to those bodies.

2.3 The proposals presented for decision are set out in the index at the front of the attached report.

2.4 Significant Applications are presented first, followed in succession by General Development Applications; the Council's own development proposals; and finally Minerals and Waste Disposal Applications. .

3 **Implications**

3.1 Should there be any implications in respect of:

Finance; Crime and Disorder; Sustainability; Human Rights Act; or other relevant legislation, associated with a particular application then that issue will be covered either in the body of the report, or if raised at the meeting, in discussion.

4 **Site Visits**

4.1 Members are encouraged to view sites in advance of the Board Meeting. Most can be seen from public land. They should however not enter private land. If they would like to see the plans whilst on site, then they should always contact the Case Officer who will accompany them. Formal site visits can only be agreed by the Board and reasons for the request for such a visit need to be given.

4.2 Members are reminded of the "Planning Protocol for Members and Officers dealing with Planning Matters", in respect of Site Visits, whether they see a site alone, or as part of a Board visit.

5 Availability

5.1 The report is made available to press and public at least five working days before the meeting is held in accordance with statutory requirements. It is also possible to view the papers on the Council's web site: www.northwarks.gov.uk.

5.2 The next meeting at which planning applications will be considered following this meeting, is due to be held on Monday, 16 January 2017 at 6.30pm in the Council Chamber at the Council House.

6 Public Speaking

6.1 Information relating to public speaking at Planning and Development Board meetings can be found at: www.northwarks.gov.uk/downloads/file/4037/.

6.2 If you wish to speak at a meeting of the Planning and Development Board, you may either:

- e-mail democraticservices@northwarks.gov.uk;
- telephone (01827) 719222; or
- write to the Democratic Services Section, The Council House, South Street, Atherstone, Warwickshire, CV9 1DE enclosing a completed form.

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4	PAP/2016/0414	130	**Heart of England, Meriden Road, Fillongley** Change of use from agriculture/forestry to mixed use agriculture/forestry with D2 (assembly and leisure)	General
5	PAP/2016/0462	156	**Heart Of England, Meriden Road, Fillongley** Retrospective application for retention of illuminated signage	General

6	PAP/2016/0480	165	**Heart of England, Meriden Road, Fillongley** Retrospective application for retention of steel footbridge spanning between access driveway off Wall Hill Road and lawn on south side of old quarry pit (Warwickshire Logs 92) together with block paved sunken access ramp and timber decked pathway to restaurant entrance	General
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General Development Applications

(1) Application No: CON/2016/0007

Land at Hams Hall Distribution Park, Faraday Avenue, Coleshill, B46 1AL

Construction and operation of a Renewable Energy Centre (Use Class – sui generis) for the recovery of energy (heat and electricity) from non-hazardous residual waste using Advance Conversion Technology (gasification) with the associated plant and infrastructure, vehicular access and landscaping for

Bolton Kilbride

Introduction

This application submitted to the County Council as Waste Planning Authority was considered by the Board at its August meeting. It resolved that the Council objects to the proposal on the grounds of its scale, being out of keeping even on this estate and that there are concerns not yet answered about the level of emissions and thus the potential risk of pollution. It was also resolved that a meeting be arranged with County Officers.

Some amendments have now been made to the proposals and the County Council has invited the Borough Council to comment further.

The original report is attached at Appendix A.

The County Council has indicated that the matter will be referred to its Regulatory Board meeting on 6 January. In this knowledge, the Chairman and Vice-Chairmen met the County Officers dealing with the application on 18 November. As will be explained below there has been no substantial change in the nature of the application and as at the time of writing this report, the Environment Agency had no yet responded to the County Council on the potential of emissions.

Revisions

The revisions essentially are an extension of the site so as to include land to the north to accommodate a substation so that electricity can be connected to the grid and land to the south to enable revised access arrangements and additional landscaping. The revised site plan is at Appendix B.

There are no revisions to the scale, design or appearance of the plant.

The applicant has also provided additional background information concerning the two sources of the "feed" material for the plant – Refuse Derived Fuel ("RDF") which is the residual waste left over after all practical recycling has been undertaken from municipal waste and secondly, commercial and industrial waste. A Fact Sheet at Appendix C evidences that the sources of these waste streams would be local (a one hour drive time).

Observations

It is not considered that the Council should change its position as a consequence of these revisions. There has been no change to the scale of the proposal and as yet the Environment Agency has not responded to the County Council on the potential for emissions and thus the likelihood of whether it will or will not be prepared to issue an operating Permit.

Above all it is the scale of this proposal that is of concern. It is on the main approach into the existing estate and it will be one of the tallest buildings here. Members will recall that the proposal by Pro-Logis on the power station B site to the rear had heights of 19.5 metres, much lower than the 24 metres proposed here. The stack would be one of the tallest structures in the surrounding area. As a consequence, cumulatively this will have a substantial visual impact locally. Moreover although the site itself is not in the Green Belt, the dominating impact of the building and the stack will impact on the openness of the surrounding Green Belt.

There is also concern about the choice of site and whether alternatives have been fully explored.

Recommendation

That the Council maintains its **Objection** to the proposal on the grounds of its adverse visual impact locally; its harmful impact on the openness of the surrounding Green Belt, contrary to policies NW3 and NW12 of the Core Strategy 2014. The Council also requests that the County Council does not support the application without the full backing of the Environment Agency; the Council's Environmental Health Officer and the Warwickshire Public Health officers and until it is satisfied that alternative locations have been fully explored and dismissed on planning grounds.

BACKGROUND PAPERS

Local Government Act 1972 Section 100D, as substituted by the Local Government Act, 2000 Section 97

Planning Application No: CON/2016/0007

Background Paper No	Author	Nature of Background Paper	Date
1	Warwickshire County Council	Letter	31/10/16

Note: This list of background papers excludes published documents which may be referred to in the report, such as The Development Plan and Planning Policy Guidance Notes.

A background paper will include any item which the Planning Officer has relied upon in preparing the report and formulating his recommendation. This may include correspondence, reports and documents such as Environmental Impact Assessments or Traffic Impact Assessments.

APPENDIX A

General Development Applications

(#) Application No: CON/2016/0007

Construction and operation of a Renewable Energy Centre (Use Class sui generis) for the recovery of energy (heat and electricity) from non-hazardous residual waste using Advance Conversion Technology (gasification) with the associated plant and infrastructure, vehicular access and landscaping for

Rolton Kilbride

Introduction

This application has been submitted to the Warwickshire County Council as the Waste Planning Authority. It will determine the application. This Council has been invited to make representations such that they can be considered along with all others when the County Council takes its decision.

The Site

This is a presently vacant site of almost 2 hectares in area on the north side of Faraday Avenue just west of its junction with Canton Lane. It is within the Hams Hall Estate. There is the Airport Car Parking area immediately to the west; the vacant Power Station B site is to the north and other commercial buildings are to its east and south. It used to house a substantially sized electricity sub-station.

It is more particularly shown on the plan at Appendix A.

The Proposals

The proposal is for a renewable energy centre comprising a gasification plant handling up to 15,000 tonnes of waste/refuse derived fuel per annum, producing 14 megawatts of electricity – sufficient to power 26000 homes on a continual basis. It would comprise a large industrial building measuring around 70 by 80 metres, up to 26 metres in height with a flue stack of up to 52 metres together with a number of other associated structures – e.g. silos. All vehicular access would be from Faraday Avenue and amount to some 132 movements (66 in and 66 out) per day, seven days a week. The plant would be operational 24/7 but deliveries would be restricted to 0700 to 1900 hours on all weekdays apart from Christmas and Boxing Day and 0700 to 1400 on Saturdays. There would be no waste received on Sundays. Twenty operational staff would be employed on site over three shifts.

The building would be metal clad with bands of grey from dark to light from the base. The stack would be grey.

A proposed layout is attached at Appendix B together with likely elevations at Appendix C.

The planning application is accompanied by an Environmental Statement. There is a non-Technical Summary attached to the Statement and a copy of that is attached at Appendix D. This provides a useful summary of the potential impacts of the proposal as seen by the applicant together with a broad description of his case. There is also a useful summary of the proposal and particularly the processing of the waste to generate the electricity. This is attached at Appendix E. Members should note that the references in here to Figure numbers and to Appendices relate to the content of the Statement and not to this Board report. Also attached is a list of Frequently Asked Questions together with the applicant's answers – Appendix F.

The applicant has also undertaken pre-application public consultation. Around 1000 households were leafleted in April 2016 with a form to be completed and returned. Additionally there was an exhibition held at the Lea Marston Hotel in early May. 50 people attended this event and the main points of interest were air quality, noise, odour, visibility of the stack and HGV access. This reflected the issues resulting from the leaflet returns.

Development Plan

The Waste Core Strategy for Warwickshire 2013 - CS1 (Waste Management Capacity); CS2 (Spatial Waste Planning Strategy), CS3 (Strategy for locating large scale waste sites), CS6 (Proposals for other types of recovery), DM1 (Protection of the Natural and Built Environment), DM2 (Managing Health and Amenity Impacts), DM3 (Sustainable Transportation), DM4 (Design of new waste facilities) and DM6 (Flood Risk and Water Quality)

The North Warwickshire Core Strategy 2014 – NW1 (Sustainable Development); NW2 (Settlement Hierarchy), NW9 (Employment Sites), NW10 (Development Considerations), NW11 (Renewable Energy and Energy Efficiency) and NW12 (Quality of Development)

Saved Policies of the North Warwickshire Local Plan 2006 – ENV9 (Air Quality); ENV10 (Energy Generation) and ENV13 (Building Design)

Other Material Planning Considerations

The National Planning Policy Framework 2012 – (the "NPPF")

The National Planning Policy for Waste – (the "NPPW")

Waste Management Plan for England 2013

The National Planning Practice Guidance 2014

Overarching National Policy Statement for Energy 2011

National Policy Statement for Renewable Energy Infrastructure 2011

Warwickshire Municipal Waste Management Strategy 2013

Pre-Submission Site Allocations Plan (NWBC) – 2014

Observations

The site is within the Hams Hall Estate and is thus not in the Green Belt. It therefore benefits from an industrial lawful use. It also used to house a substantial electricity substation which adds weight to the "energy" related credentials of the application. Members will be aware that the Draft Site Allocations Plan of 2014 suggests that land to the north – at the former Power Station "B" site and in the Green Belt – could be used for an energy generation proposal if that were deemed in the national interest. Members should be aware that this proposal is not on that land and neither is this proposal of national interest. However the current proposal is clearly a renewable energy related one based on the re-use of waste and thus accords with the objectives of the NPPF, the NPPW and all other national energy related planning guidance as set out above. Moreover in general terms too this proposal aligns with the Warwickshire Waste Core Strategy in respect of preferred locations for large scale waste facilities. As a consequence it is concluded that as a matter of principle, this would be an appropriate site for this proposal.

It is considered that the Board should therefore concentrate on the potential impacts of the proposal.

In terms of highway impacts then clearly the County Council highway officers will offer their advice on highway matters as will Highways England. However as the site is directly connected to the strategic highway network and that the traffic generation here is not substantial it is expected that highway advice to the County Council as Waste Planning Authority will be one of no objection. Members will be aware that any alternative use of the site would involve the use of HGV traffic in any event and the generation associated with this proposal is really no different to that arising from other commercial activity. What may be of benefit with this proposal is that it is not a B8 distribution use and thus there are unlikely to be situations experienced throughout the estate of on-street parking because access is denied to a site. The waste delivered here is to "feed" a 24 hour operation. In these circumstances it is not considered that any highway impacts could be considered to be severe – the threshold in the NPPF for potential refusal.

It is accepted that there would be no adverse ecological or heritage impact on the site or indeed to the surrounding area. However the County Council should satisfy itself that there are no adverse impacts on the setting of local Churches and in nature conservation terms on the Nature Reserve to the east and the connecting water courses. This is very much an issue in respect of ensuring that all surface water disposal is properly dealt with on site before discharge.

Perhaps the two most significant impacts to be assessed are the amenity issues of potential pollution through air quality and the visual impact of the proposal. The former of these does have some resonance too with the impact on nature conservation interests as well as on the human population particularly to the east bearing in mind the general wind direction for the area.

The Environmental Health Officer notes the noise and air quality assessments in the Environmental Statement but still has concerns about the potential emissions from this type of operation. The Environment Agency would be the regulatory authority for this site should a planning permission be granted and it would have to issue the appropriate permit and monitor those emissions. At present therefore there should be a precautionary approach taken. The County Council would be advised to engage with that Agency as quickly as possible.

Notwithstanding this matter, the proposed building would be very big even without the stack. It would be the tallest building on the estate by far with a prominent location being at the main entrance and on the main through road. Its mass and size would also be prominent over a wide distance – it not being able to be contained by the surrounding buildings. In these circumstances there is a clear case here for an objection to be lodged. Whilst the setting is wholly commercial in appearance and the character of the area is one of large sheds, this proposal goes beyond what is presently experienced and could not be said to integrate into its setting.

Whilst the energy credentials of the proposal are of weight here, the visual impact would be severe and permanent.

Recommendation

That the County Council be advised that this Council objects to this proposal on the grounds of its scale being out of keeping even on this estate and that there are concerns not yet answered about the level of emissions and thus the potential risk of pollution.

BACKGROUND PAPERS

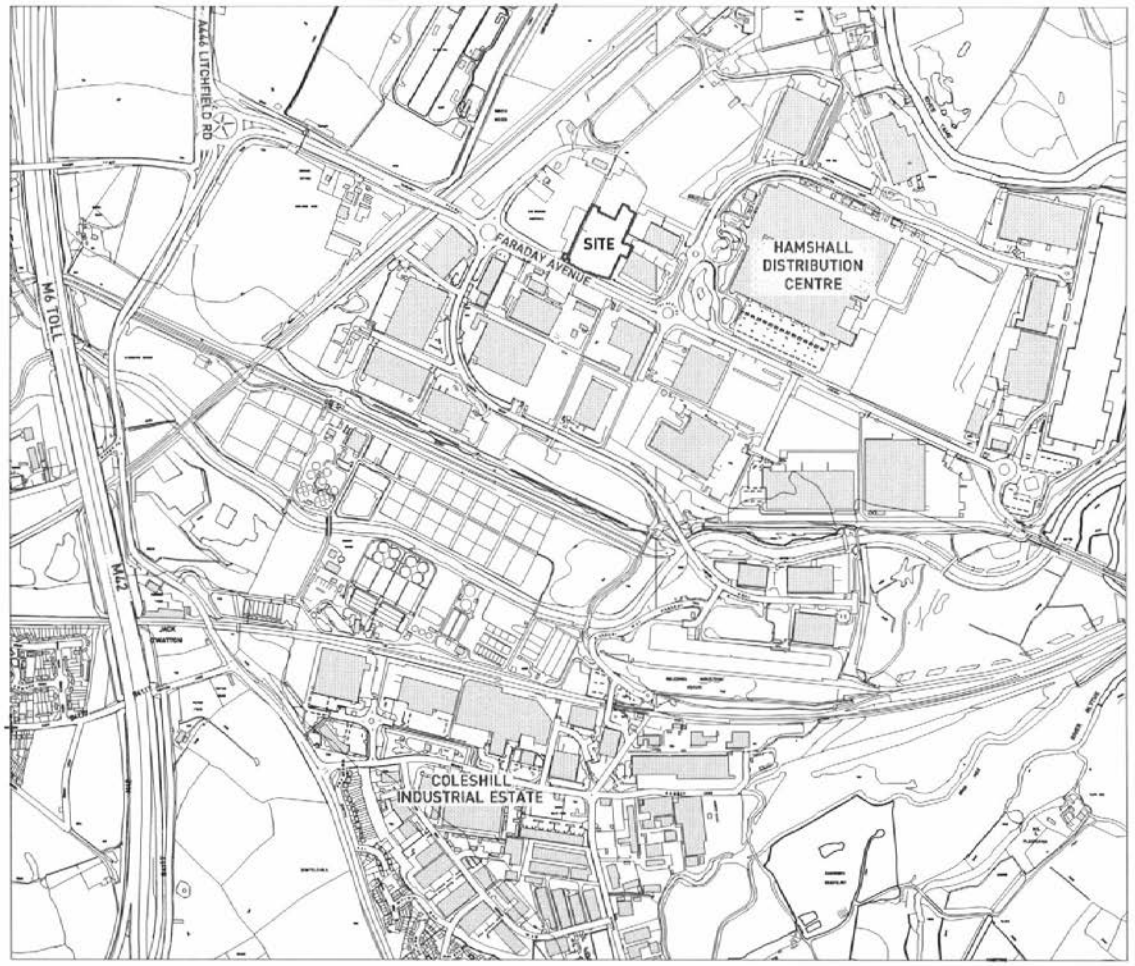
Local Government Act 1972 Section 100D, as substituted by the Local Government Act, 2000 Section 97

Planning Application No: CON/2016/0007

Background Paper No	Author	Nature of Background Paper	Date
1	WCC	Letter	14/6/16
2	Environmental Health Officer	Consultation	12/7/16

Note: This list of background papers excludes published documents which may be referred to in the report, such as The Development Plan and Planning Policy Guidance Notes.

A background paper will include any item which the Planning Officer has relied upon in preparing the report and formulating his recommendation. This may include correspondence, reports and documents such as Environmental Impact Assessments or Traffic Impact Assessments.



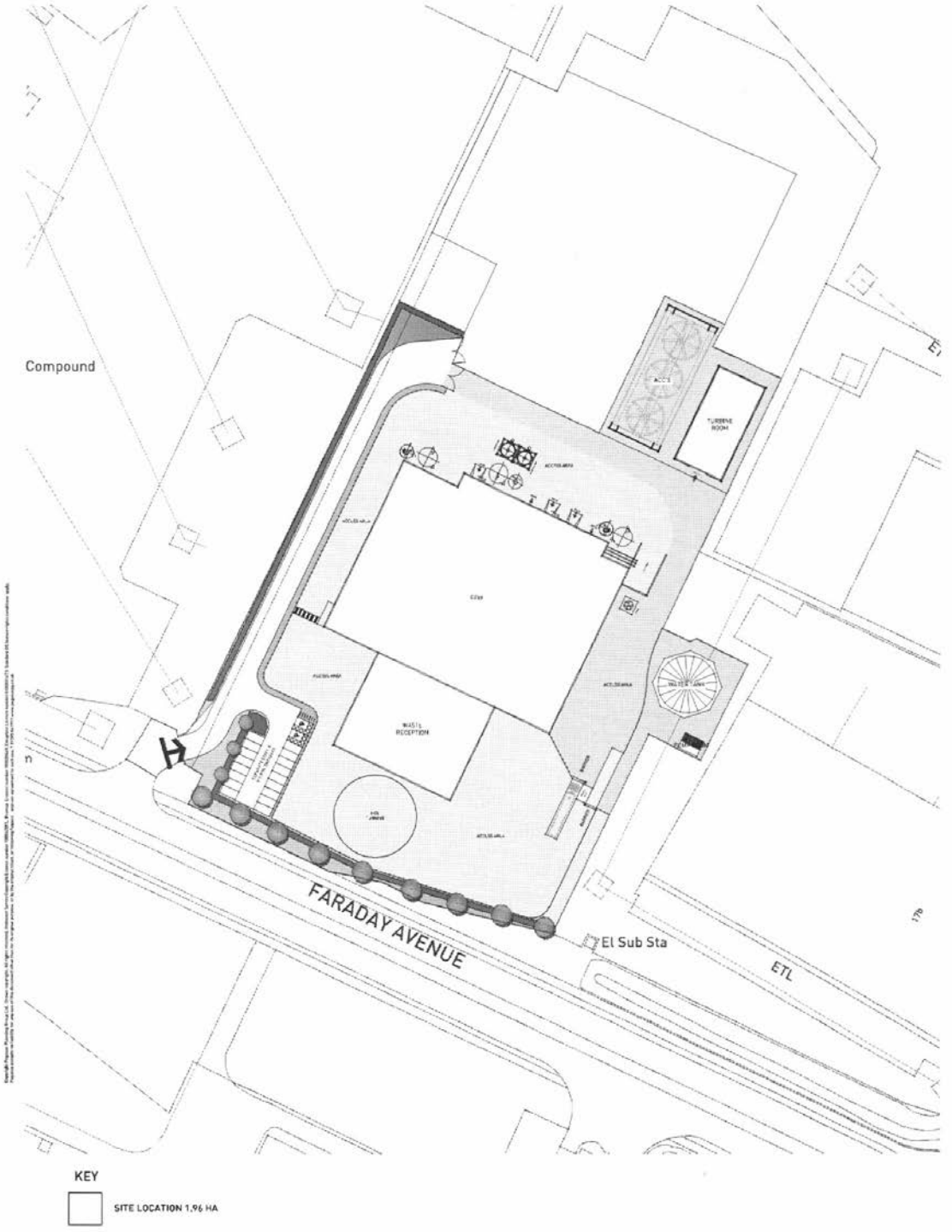
HAMS HALL, FARADAY AVENUE - **SITE LOCATION PLAN**

Pegasus Design

PLANNING | DESIGN | ENVIRONMENT | ECONOMICS | www.pegasuspg.co.uk | TEAM/DRAWN BY: MCC/AS/OW | APPROVED BY: AS | DATE: 27/01/16 | SCALE 1:10000 @ A3 | DRWG: K.0173_03 SHEET NO: _ REV: A | CLIENT: ROLTON KILBRIDE |

APPENDIX D

APPENDIX B



HAMS HALL, FARADAY AVENUE - **SITE LAYOUT**

APPENDIX C

FIGURE 3.2

Elevations

DRWG No: K0173_11 REV: -

Date: 25/05/2016 @ A3

Scale: 1:750

APPENDIX D

RENEWABLE ENERGY CENTRE

LAND OFF FARADAY AVENUE, HAMS HALL DISTRIBUTION PARK,

COLESHILL, WARWICKSHIRE

ENVIRONMENTAL STATEMENT | NON TECHNICAL SUMMARY

MAY 2016 | K.0173_21

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PREFACE

This document forms the Non-Technical Summary (NTS) of the Environmental Statement (ES) that accompanies a planning application submitted by Rolton Kilbride (the Applicant) who is seeking to obtain planning permission for a proposed Renewable Energy Centre (REC) to generate power and heat for local commercial energy users located within the Hams Hall Distribution Centre, off Faraday Avenue, Coleshill (the Application Site).

The Application site is located within the administrative area of Warwickshire County Council (WCC). The REC is known as Hams Hall Energy and referred to as the Proposed Development.

The ES comprises studies on each of the aspects of the environment identified as likely to be significantly affected by the Proposed Development, which are supported with technical appendices where appropriate. The ES is structured as follows:

- Volume 1: Comprises the written statement and graphic material in the form of figures, drawings and photomontages, which is the main volume of the ES
- Volume 2: Contains the Technical Appendices to the main volume of the ES

Additional documentation that will be submitted with the planning application includes:

- Planning Statement
- Design and Access Statement
- Application Forms
- Technical Drawings
- Statement of Community Involvement
- Environmental Statement

The ES and associated documents will be available for viewing during normal business hours at Warwickshire County Council Offices at the following location:

Warwickshire County Council
Shire Hall
Market Place
Warwick
CV34 4SA

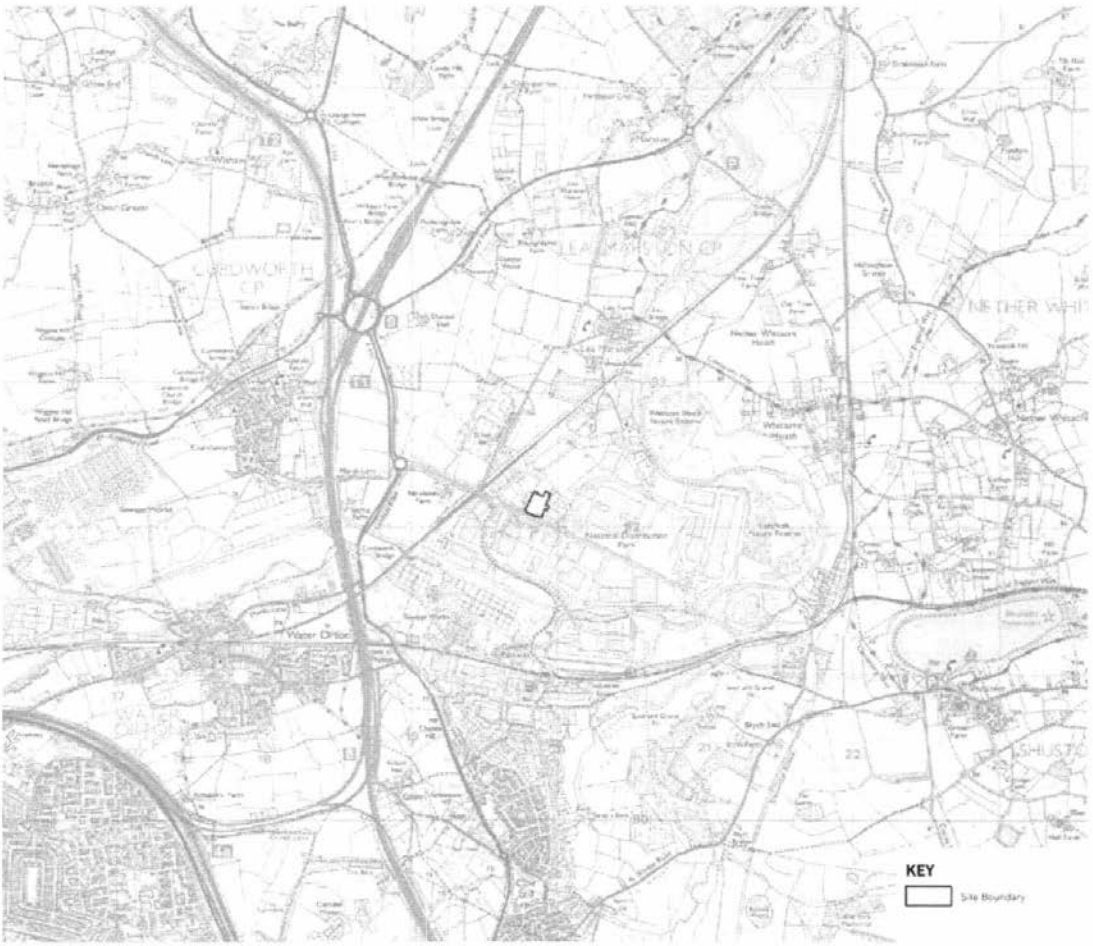
The ES may be purchased in Volumes, the costs for which are set out below:

- Non-Technical Summary – Free of charge
- Volume 1: Main Volume and Figures - £150
- Volume 2: Technical Appendices - £150

Copies of all documents can be obtained on CD for £15. For copies of any of the above please contact Pegasus Group at the following address:

Pegasus Group
Pegasus House
Querns Business Centre
Whitworth Road
Cirencester
Gloucestershire
GL7 1RT

Tel: 01285 641717
Fax: 01285 642348



SITE CONTEXT PLAN

INTRODUCTION

Background

The Proposed Development comprises a Renewable Energy Centre with associated access, a gatehouse, car and cycle parking and an office.

The Renewable Energy Centre (REC) will employ an Advanced Conversion Technology (ACT) – a form of gasification process to generate power and heat from Refuse Derived Fuel (RDF) together with other pretreated wastes. RDF is a product which is pre-treated then shredded, dehydrated and / or compressed from municipal solid waste and industrial and commercial waste and when heated to very high temperatures breaks down to provide a gas which is utilised in a boiler to create steam which drives a steam turbine to produce electricity and heat. It is a clean, modern and hi-tech approach to producing energy, with a proven track record.

The Proposed Development would generate up to 14.5 megawatts (MW) gross of electricity - the equivalent of powering over 26,000 homes on a continual basis. The plant is capable of accepting 150,000 tonnes of waste per annum which would otherwise go to landfill.

The Applicant and EIA Project Team

Rolton Kilbride is a privately owned developer of Renewable Energy Centres. Rolton Kilbride is also working with a set of highly specialised technology partners and advisers who have extensive experience in the field of energy generation, gasification and the use of modern environmental technology.

The ES has been co-ordinated and managed by Pegasus Group. The consultants who have contributed to the preparation of the ES are as follows:

- Air Quality – Air Quality Consultants
- Landscape and Visual – Pegasus Group
- Traffic and Transport – Curtins
- Hydrology and Flood Risk – PFA Consulting
- Hydrogeology and Ground Conditions – Rolton Group
- Noise – LFAcoustics
- Ecology and Nature Conservation – Avian Ecology
- Archaeology and Cultural Heritage – Pegasus Group
- Socio Economics – Pegasus Group

EIA Process

The Town and Country Planning (Environmental Impact Assessment) Regulations 2011 require that a proposed development which falls within the description of a 'Schedule 2 Development' within the meaning of the Regulations, will require an Environmental Impact Assessment (EIA) where the development is likely to have significant effects on the environment by virtue of such factors as its nature, size or location (Regulation 2).

Under the EIA Regulations Scoping is not a mandatory requirement, but the Applicant has engaged in pre-application consultation with Warwickshire County Council (WCC) as the waste planning authority with responsibility for determining planning applications for waste-related development.

The aim of the Scoping process is to identify key environmental issues at an early stage, to determine which elements of the Proposed Development are likely to cause significant environmental effects and to identify issues that can be 'scoped out' of the assessments.

Under the EIA Regulations, proposals which fall within the scope of Schedule 2 development, an EIA is discretionary. This EIA has been produced however, in recognition of the strategic significance of the development and the expected local interest in the proposals. The EIA and this ES have been undertaken and prepared with due regard to the criteria of Schedule 4 of the Regulations. The ES includes an assessment of the predicted effects of the Proposed Development, focussing, as required by the EIA Regulations, on those effects that have the potential to be significant. The content of the ES, as well as the overall approach to the EIA, has also been designed to reflect other requirements of the EIA Regulations as well as widely recognised good practice in EIA.

CONSULTATION & SCHEME BENEFITS

Public Consultation

Public consultation was a fundamental and integral process of the planning application. A well thought out strategy to engage with local stakeholders was carefully delivered from the outset and comprised a press release; local councillor's briefings; a leaflet drop and invitation to a public exhibition where members of the design team, as well as technology providers, air quality, noise, landscape and transport consultants were on hand to answer any queries.

The Applicant has consulted a number of statutory consultees during the course of the Environmental Impact Assessment Scoping procedure who are aware of the proposals and have provided formal advice.

The Applicant has also engaged in a pre-application consultation process with WCC prior to the submission of the planning application. The advice received was broadly supportive of the proposals in principle, including guidance setting out the planning policy context that an application would be judged against and an indication of the documentation necessary to support an application.

The full details of the public consultation strategy and feedback from the events are included within the Statement of Community Consultation which is a separate report submitted with the planning application documentation.

Scheme Benefits

The benefits of the REC include:

- Proven technology with outstanding operational and environmental performance and very low emissions;
- Conversion of non-recyclable, non-hazardous waste into renewable energy, displacing landfill and fossil fuels;
- Reducing greenhouse gas emissions;
- Job creation across a variety of skills and levels of expertise with employment opportunities for local people;
- Transforming an allocated vacant plot within an existing industrial site and enhancing with landscape planting;
- Production of lower cost renewable energy potentially for local businesses with connections to local energy users via underground cable;
- Clear progression in the transition to a low-carbon economy with grid carbon offset; and
- Compliance with Government policy and the Industrial Emissions Directive (IED) to provide sustainable renewable energy production close to use.

SITE CONTEXT AND LOCATION

Site Context

The site is located within the Hams Hall Distribution Centre, off Faraday Avenue, Coleshill, Warwickshire. Faraday Avenue is located to the east of the M42 at Junction 9 and is accessed via the A446 Lichfield Road.

The site is a vacant plot measuring approximately 1.96ha and is was previously developed as part of the wider Hams Hall Power Station and more latterly as a substantial electrical sub-station.

The site is currently used for the open storage of vehicles. The site is identified within the North Warwickshire Proposals Map as falling within an 'Existing Industrial Estate'.

The site is surrounded by various forms of development but largely commercial and industrial uses as the site forms part of the wider Hams Hall Distribution Centre complex. To the east and south along Faraday Avenue are commercial warehouses and industrial complexes serving a variety of uses, the closest of which are the BMW Plant to the east and DHL Exel Supply Centre to the south.

To the immediate west of the site boundary is an electricity sub station and large overhead pylons which link north west towards Hams Lane and south to Coleshill. The plot to the west of the site is a car storage compound. To the north of the site the land is formed by designated Green Belt land containing large areas of hardstanding and small linear belts of trees.

The closest settlements are Lea Marston located 1.3km to the north and accessed via Hams Lane, Whitacre Heath 1.9km to the east beyond the River Tame, Grimstock Hill and Coleshill 2.1km to the south beyond the bulk of the Hams Hall Distribution Centre and Curdworth 1.9km to the west beyond the M42 motorway. The settlements of Water Orton to the south west and Shustoke to the south east are located approximately 2km and 3km away respectively.

Historical Uses of the Site

The earliest historical maps date from 1840s and show the site to be located within enclosed fields labelled High Heath. The 1887 First Edition Ordnance Survey mapping shades the area of Hams Hall park, as extant at that date. This indicates that the Site was located within an agricultural field and area of copse, Gravel Pit Covert, immediately west of the park's western extent.

Hams Hall house was dismantled in the 1920s and reconstructed near Cirencester, in advance of the construction of Hams Hall Power Station.

Hams Hall Power Station was constructed in three main phases, between 1927-9, 1949 and 1958. Power Station structures, comprising an electricity sub-station, are visible within the Site on 1930s aerial photographs. However, this was replaced during the 1958 building phase; a substation with a different layout is visible on aerial photographs of 1959. The substation is first mapped on the 1955 Ordnance Survey mapping. This remained extant until 2011, when it was largely demolished.

Ecological Considerations

The Application Site comprises a single body of land formed by gravel surfacing and hard standing and surrounded by brick walls and electric fencing. There are no trees or hedgerows within the site nor any water bodies with occasional ruderal plants evident around the site margins.

The nearest statutory designated site to the Application Site is the Whitacre Heath Site of Special Scientific Interest (SSSI) situated c. 730m north east. The site supports wetland breeding birds on a former gravel extraction lake.

The River Blythe SSSI lies c.1.6km to the south east of the Application Site and supports lowland river plants and damp meadows along its length with areas of invertebrate habitat.

There are no other statutory designations within 2km of the Application Site boundary. There are twelve non-statutory designated sites within 1km of the Application Site of which four are of county importance. The closest of these is the verge at Hams Lane (Local Wildlife Site) designated for hedgerow ponds, wet ditches and woodland and grassland verge which is located c.110m to the west of the Site.

Landscape and Heritage Considerations

The Application Site is not subject to any statutory or non-statutory landscape designations, nor are there any within a 5km area surrounding the site.

The nearest Listed Building is the Grade II Church of St John the Baptist which lies approximately 780m to the north east of the site, to the south of the village of Lea Marston. There are a number of other Listed buildings within the surrounding area comprising dwellings, churches and bridges.

The closest Scheduled Monument to the site is the Water Orton Bridge (Grade II and II*) approximately 2.5km to the south west of the site, beyond the M42 motorway.

Existing Flood Risk

The Environment Agency's Flood Map shows the site lies entirely within Flood Zone 1, which indicates the land assessed as having less than 1 in 1,000 annual probability of river or sea flooding (<0.1%). The Strategic Flood Risk Assessment contains no records of historic flooding from watercourses in the vicinity of the application site.

The Environment Agency's Risk of Flooding from Surface Water Map shows the majority of the site lies in an area with a 'very low' risk of surface water flooding. There is a strip of 'low' risk area running along the site's eastern boundary. This is associated with overland flows within the site being held back by a concrete wall running along the boundary.

LANDSCAPE DESIGNATIONS PLAN

ALTERNATIVES, SITE SELECTION & FEASIBILITY

Schedule 4, part 1, paragraph 2 of the Town and Country Planning (Environmental Impact Assessment) Regulations 2011 requires that "an outline of the main alternatives studied by the applicant and an indication of the main reasons for this choice, taking into account the environmental effects" are included within the ES.

Other Eon owned and managed sites were considered early in the feasibility process, however, the principal reason for the selection of the site was its location within an allocated site in an industrial area with good access to the primary route network and in close proximity to energy intensive industrial customers.

The design of the Proposed Development has been informed by an iterative process with alternative layouts and elevations considered throughout the process. The Design and Access Statement illustrates layout options of the site prior to the final option taken forward. The drawings demonstrate constraints and opportunities associated with the location and orientation of the REC, vehicular movement and access as well as landscaping proposals.

A series of basic architectural massing techniques were undertaken to help understand how the buildings would best relate to one another and the character of the surrounding area. Due to the initial design of incorporating a STOR facility to the north of the REC building, this allowed the REC to sit forwards within the site to relate to the existing industrial and commercial development either side.

Following the basic massing exercise the functional and operational requirements of the building were explored. By creating a single central energy plant unit that is served by the ancillary buildings located to the peripheral edges this allowed for vehicular circulation around the building to all facades.

A series of elevation option alternatives were explored and considered throughout the iterative design process and are illustrated within the Design and Access Statement. The colour palette of the cladding to the main buildings was proposed as a neutral grey-green colour and represented in bands becoming increasingly pale towards the top of the building. The introduction of the banding has helped to reduce the perceived massing of the building.

Site Identification and Feasibility

The Hams Hall Energy site was identified to provide the opportunity for power to be supplied to any interested local businesses as well as the opportunity to supply heat in the form of steam and / or hot water if required; and in view of the need for new waste infrastructure within the Warwickshire County Council area with the plant saving approximately 150,000 tonnes of waste going to landfill annually.

The site at Hams Hall was chosen having established:

- Its availability and its size which was suitable for a 150,000 tonnes facility;
- Its proximity to energy intensive industrial consumers. It is intended that the proposal may be able to offer low cost secure energy to one or more neighbouring businesses, assisting in securing the future of those companies and their employees;
- Its access within the existing industrial estate which immediately joins the primary route network of the M42 and M6 without the need to go through residential areas.

Cumulative Considerations

Schedule 4, part 1, paragraph 4 of the Town and Country Planning (Environmental Impact Assessment) Regulations 2011 requires that a description of the likely significant effects of the development on the environment should cover cumulative effects.

Assessment of cumulative effects with other developments which are either operational, under construction / consented or the subject of a full planning application has been considered. During the pre-application process WCC's advice was that there were no schemes that were currently in the planning system that should be assessed as part of this application. A potential development to the north of the site was mentioned however there is no formal application for the site at this time and consequently no cumulative assessment has been undertaken.

DEVELOPMENT PROPOSALS

The Proposed Development comprises a 3-line Renewable Energy Centre with associated vehicular access.

The Renewable Energy Centre (REC) will employ an Advanced Conversion Technology (ACT) (gasification) a process which is supported by Government and is part of a number of renewable technologies being deployed in the UK. ACT / Gasification is a process to generate power and heat from Refuse Derived Fuel (RDF) together with other pre-treated wastes. RDF is a product which is pre-treated then shredded, dehydrated and / or compressed from municipal solid waste and industrial and commercial waste and when heated to very high temperatures breaks down to provide a gas which is utilised in a boiler to create steam which drives a steam turbine to produce electricity and heat. It is a clean, modern and hi-tech approach to producing energy, with a proven track record.

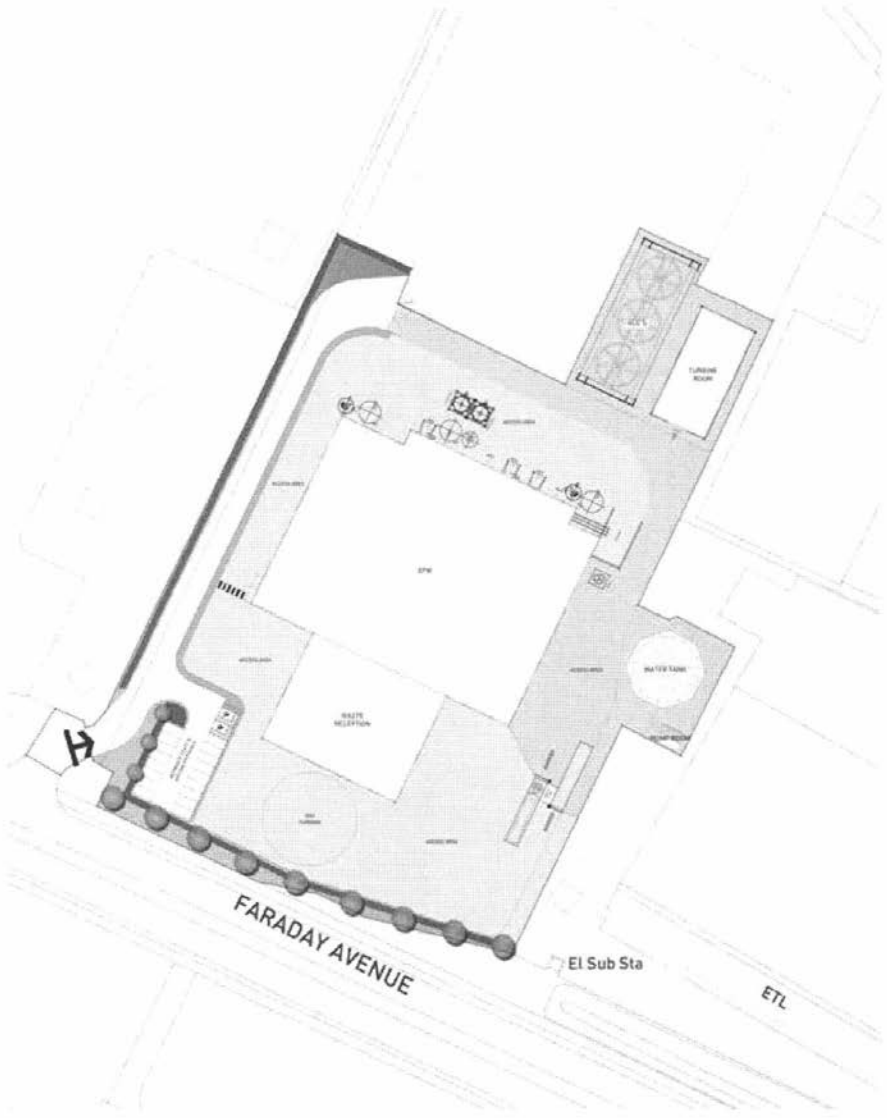
The development will have the capacity to process up to approximately 150,000 tonnes of waste per annum. As well as the RDF the feed stock will include using non-recyclable residual commercial and industrial waste (CIW) together with an element of municipal solid waste (MSW) i.e. residual waste where all the practicable recycling has been completed. Initial research has indicated that this material would comprise waste from across the wider Warwickshire area. The plant will not accept hazardous or clinical waste.

The power produced from this facility will have a capacity of 14.5MW/hr gross of electricity. The gasification technology employed at Hams Hall Energy Centre will involve a two-stage system, which initially gasifies the waste to produce synthetic gas. This gas is then transferred to a second stage where it is combusted in a high efficiency boiler to produce steam which drives a steam turbine to produce electricity. The process allows for efficient control of emissions and improved performance generally as an energy solution.

Gasification is classed as an Advanced Conversion Technology (ACT) as the biomass element of waste qualifies for Contract for Difference (CFD). CFDs provide long-term price stabilisation for low carbon plants, allowing investment to come forward at a lower cost of capital and therefore at a lower cost to consumers but enables advanced renewable technology to be developed.

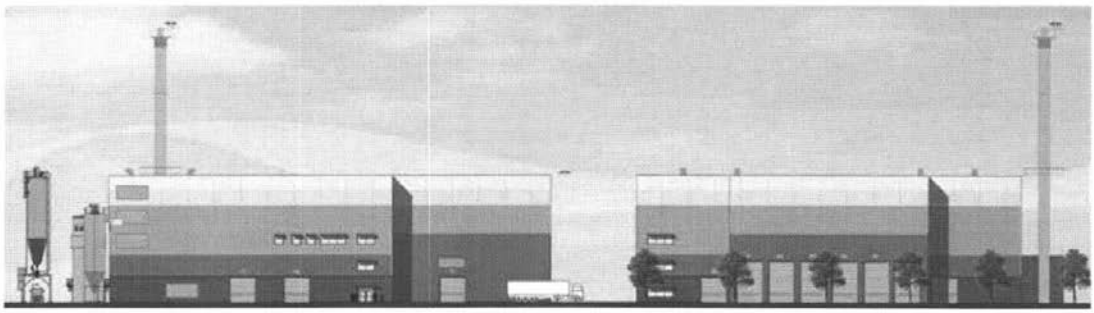
The proposed REC is made up of the following principal elements:

- **A main building –** this will house the majority of the process plant and will have a number of silos to the rear and a flue stack to the east of the building, all waste material will be unloaded inside the building. At its highest point, the main body of the building will be 24m high and 87.96m long x 72.7m wide with a floor area of 5725m2. The flue stack contains a walk around platform for continual air quality monitoring access and consists of a metal framework. The stack will have a height of 52m and a diameter of 2.8m;
- **Waste Reception Bunker (located in main building) -** Wastes are deposited into an 8m deep waste bunker within the building, with a capacity of 820m3 where shredding and separating takes place to prepare the fuel for the gasification process, and any ferrous material is taken out which will be removed for recycling;



LAYOUT PLAN

- **Prepared Fuel Storage Bunker –** the prepared fuel will be deposited in storage bunker within the building (which has 4 days of waste storage thus complying with fire regulations and stopping build-up of heat from waste gasses), which has a capacity of c6,000m3.
- **Turbine Room –** this will be a smaller separate building 15.6m high, with a base of 30m x 15m located at the most northern part of the site. A short section of pipe line will connect the main building and the turbine generator building;
- **Air cooled condenser fans –** have a height of 23.4m with a footprint of 39.62m x 15.76m;
- **Bottom Ash bunker –** the bottom ash is stored in a bunker measuring 10m x 12m x 5m with a capacity of 600m3. This material is inert and can be reused as an aggregate or used for an engineering material in landfill. It complies with current European legislation;
- **Fly Ash Silo –** the fly ash silo framework stores the residue from the flue gas cleaning system and measures 10.5m x 5.15m and 19.5m high. The ash is removed in a safe manner by attaching an umbilical hose to a tanker and can be either reused /recovered or disposed of at licensed landfills. The handling, storage, treatment and reuse/disposal of this material is highly regulated;
- **Fire Water Tank -** a fire water tank would be included to the south of REC building. The tank has a 17m diameter and a height of 6.75m with a 1 million litre capacity;
- **Pump Room –** the pump house is next to the fire water tank and has a height of 3.2m with a footprint of 6.09m x 4.59m; and



SIDE ELEVATION

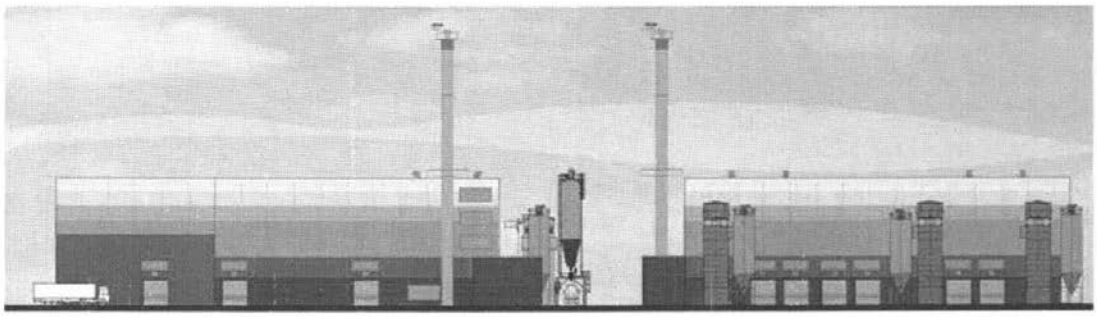
FRONT ELEVATION

Technical / Control room and Workshop – will be located within the east side of the main building.

In addition, the external site areas will include:

- Two weighbridges (both in and out) with an office measuring 4.85m x 3m x 2.95m high;
- Site entrance and circulation roads;
- 18 car parking spaces plus 2 disabled bays;
- Provision for 14 cycling spaces

The industrial warehouse building has a height of 17.1m to ridge, width of 44.70m and length of 51.96m. The building footprint measures 2,322m2 and the floor area measures 2,671m2. Surrounding the industrial warehouse building are 17 car parking spaces plus 2 disabled spaces. There will be a minimum of 12 secure cycling spaces. To the south of the industrial warehouse unit is an HGV turning area and an office. There will be a 2m high paladin boundary fence as well as security and lighting.



SIDE ELEVATION

REAR ELEVATION

Process Description

The plant employs a two stage system that first gasifies (heats) the waste to produce a synthetic gas which is then transferred to a second stage where it is oxidised. Changing the waste to a gas fuel, means the combustion environment can be finely controlled, dioxins thoroughly destroyed and Nitrogen Oxides (NOx) emissions minimised which can achieve emissions levels that are compliant with the Industrial Emissions Directive (IED) (Directive 2010/75/EU of the European Parliament and the Council on industrial emissions).

The key stages of the process are as follows:

- Waste Reception Hall
- Fuel bunker and transport system;
- Thermal conversion;
- Heat recovery steam generator
- Energy utilisation system;
- Flue gas cleaning system; and
- Control and monitoring system.

TYPICAL PLANT AND PROCESS EQUIPMENT OF A RENEWABLE ENERGY CENTRE

Operating Hours

The REC will operate continuously; 24 hours a day, 7 days per week. Operational staff would be required to operate the Plant on a 3 shift pattern (each of 8 hours). During weekdays the facility will be open for deliveries between the hours of 0700 and 1900 and between the hours of 0700 and 1400 on Saturdays. There will be no waste received on Sundays. It is expected that HGVs importing and exporting materials from the site will do so evenly throughout the 12 hour period and there is unlikely to be a peak in movements associated with these operations.

Grid Connection

The Applicant has held discussions with Western Power Distribution (the responsible DNO) and an application has been submitted. Once this has been returned a point of connection can be assessed.

Design Approach

Many industrial sites are designed with a typical 'form follows function' approach. From the outset it was deemed important that the external appearance of the plant should be appropriate for the area.

In terms of architectural detailing and materials, both follow a similar palette and consist of mainly a coloured cladding system.

Due to the REC plant building being a large mass, it was important to use a smooth lightweight architectural cladding system that would achieve the functional needs, as well as aesthetic ones too. A simple palette of materials was proposed consisting of a neutral grey-green colour and represented in bands becoming increasingly pale towards the top of the building. The aim of the introduction of the banding is to reduce the perceived massing of the building. The stack will be faced in a muted grey metal which will sit and almost blend into the typical overcast skyline of the UK. External equipment will be faced in a grey coated metal to blend into the colour palette of the main plant.

A tree belt was integrated on the southern boundary to screen visible elements and enhance the visual environment.

CONSTRUCTION AND ENVIRONMENTAL MANAGEMENT

Construction Duration

Subject to the grant of planning permission, it is anticipated that the construction of the proposed REC would commence in 2017. Construction on site would last for 24 months, after which there would be a commissioning period. Furthermore, construction would normally take place during the hours of 0700 to 1800 (Monday to Friday) and 0800 to 1300 (Saturday). No construction would take place on Sundays or bank holidays.

Environmental Management Plans

A Construction Environmental Management Plan will be prepared and adopted and will include sections on: noise, vibration, air quality, water quality, surface quality (prevention of contamination of ground surface), site transportation and traffic management, visual intrusion and waste management. The appointed contractor will also be required to register with the Considerate Construction Scheme.

A Site Waste Management Plan will be prepared and all relevant contractors will be required to seek to minimise waste arising at source and, where such waste generation is unavoidable, to maximise its recycling and reuse potential. Recycling of materials will primarily take place off-site where noise and dust are more easily managed.

Consents

In addition to planning permission, other consents will be required to enable the Proposed Development to proceed. Of particular importance to this development is the need for an Environmental Permit from the Environment Agency that will control all operations associated with the plant based upon various risk assessments. Information presented in this ES will be used in the preparation of the Permit.

AIR QUALITY

Introduction

The potential effects of the proposed REC on local air quality have been assessed following discussions with Warwickshire Borough Council. The assessment considered the potential effects human health, ecology and amenity arising from the construction and operation of the plant.

The operational impacts of the Proposed Development on air quality, odour and bioaerosol conditions for local receptors and additional traffic have also been assessed.

Air quality impacts have been assessed quantitatively using dispersion modelling. Bioaerosol impacts have been assessed qualitatively based upon the levels expected to be generated and the likelihood of their being emitted from the REC.

Baseline Conditions

North Warwickshire Council has investigated air quality within its area as part of its responsibilities under the LAQM regime. In March 2001 an AQMA was declared for exceedences of the annual mean nitrogen dioxide objective that covered an area of Coleshill bounded by Stonebridge Road, Coleshilll Heath Road, the M42 Motorway, M6 Motorway and junction 4 of the M6. This AQMA was revoked on 1st February 2013, when it was identified that the objective was no longer being exceeded at relevant locations; there are currently no AQMAs in the borough.

North Warwickshire Council operated one automatic monitoring station within its area, located approximately 5 km south of the Proposed Development; however this site was decommissioned in 2012. The Council also operates a number of nitrogen dioxide monitoring sites using diffusion tubes prepared and analysed by Gradko International Ltd (using the 20% TEA in water method). These include one deployed in a rural background area in Kingsbury, one on Farthing Lane in Curdworth, one at Water Orton and one in Gilson. Data for these sites have been provided by North Warwickshire Council.

The odour risk assessment has demonstrated that the odour effects for most local receptors will be negligible, although there is a risk of slight adverse effects at two locations. However, the odour assessment is founded on conservative assumptions, and the overall impact of the Proposed Development is judged to be insignificant.

The qualitative bioaerosol assessment has demonstrated that the Proposed Development will have an insignificant effect on local receptors.

The impacts of road traffic generated by the Proposed Development have been screened out as insignificant, as the predicted volumes of traffic generated by the Proposed Development, including HGVs, are below the screening criteria required for a detailed assessment.

In terms of emissions from the facility's stack, the assessment has demonstrated that there will be an insignificant change to concentrations at all local sensitive receptor locations, for all pollutants, and all averaging periods. For nitrogen dioxide, impacts are predicted to be negligible at all of the worst-case locations assessed.

Mitigation and Enhancement

The construction works have the potential to create dust. During construction it will therefore be necessary to apply a package of mitigation measures to minimise dust emission. These control measures are industry standards for construction and are well proven. With these measures in place, it is expected that any residual effects will be 'not significant'. However, the guidance recognises that, even with a rigorous dust management plan in place, it is not possible to guarantee that the dust mitigation measures will be effective all of the time, for instance under adverse weather conditions. The local community may therefore experience occasional, short-term dust annoyance. The scale of this would not normally be considered sufficient to change the conclusion that the effects will be 'not significant'.

The plant will operate using pollution abatement measures which must meet the industry sector best available techniques and perform to the expected levels. These are techniques with a history of reliably meeting performance requirements to ensure compliance with set regulatory emission limits. It is expected that with mitigation measures already designed into the proposal it will effectively control releases to air such that the significance of effects is reduced to Negligible for all activities considered. It is not considered that any further mitigation measures will be necessary.

Conclusion

The assessment has demonstrated that the Proposed Development will not have a significant impact on dust and PM10 levels during construction, provided that the recommended mitigation is applied. Similarly, odour and bioaerosol emissions will be kept to a sufficiently low level that the local effects will be insignificant.

The overall operational air quality impacts of the development are judged to be 'not significant'. This judgement takes account of the uncertainties in future predictions of road traffic emissions, and the worst-case assumptions applied in the dispersion modelling assessment.

LANDSCAPE AND VISUAL

Introduction

The landscape and visual impact assessment has assessed the likely effects of the Proposed Development on landscape character, landscape features and elements within and in the immediate vicinity of the Proposed Development, and on local visual amenity. The assessment has been undertaken with regard to best practice and the Guidelines for Landscape and Visual Impact Assessment, 3rd Edition (2013), as published by the Institute of Environmental Management & Assessment (IEMA) and the Landscape Institute.

Baseline Conditions

The Application Site is not subject to any statutory or non-statutory landscape designation.

The Application Site falls within the Hams Hall Distribution Park, an industrial area located either side of Faraday Avenue. It is currently owned by the National Grid and contained once a large scale substation infrastructure, associated with the Hams Hall coal-fired power station, demolished in the 1990s. The majority of this infrastructure, except for the pylons, have been recently removed. Electricity pylons are the most visible element within and adjacent to the Application Site. They connect with a small scale substation, which is the only remaining part of the once more extensive infrastructure, and is located near its north eastern corner. Relatively tall lighting columns with flood lights are located in the plot adjacent to the north.

The south eastern and south western perimeter of the Application Site, and along Faraday Avenue, is secured by an approximately 2.4m high solid concrete wall, which restricts views in. The access gate and the fence to the left of it is a palisade fencing and allows for restricted views into and across the Application Site. This boundary is further secured by additional barbed wire fencing atop the wall and palisade fencing giving it a strong industrial and unsettled character. Palisade fencing continues along the north western boundary. A low earth bund follows the southern perimeter of the Application Site, sloping from its south eastern corner and meeting the ground levels near the access gate.

The surface is partially tarmacked with some loose rubble / gravel and being gradually colonised by pioneer species, mostly grass. Part of the Application Site is used as a car park. There are no notable areas of shrub or tree vegetation. Mature trees are however present outside and adjacent to the boundaries of the Application Site. There are no obvious or notable water features within or adjacent to the Application Site.

Topographically, the Application Site appears level with little change to the contours across the site. Its south eastern corner is located at approximately 79.22m Above Ordnance Datum (AOD) with the contours rising to approximately 81m AOD in the south western corner, near the existing access gate. The north eastern boundary is located slightly lower and between 79.80m to 78.60m AOD.

Views in and out are restricted by the perimeter wall and tree vegetation in the adjacent plots. Large scale and relatively tall industrial buildings, located to the east restrict views further. The Application Site feels isolated with no inter-visibility except for views of Faraday Avenue, through the access gate.

There are no Public Rights of Way (PRoWs) within or adjacent to the Application Site. A public highway, which is located to the north west leads to a car park and has a restricted access.

Likely Significant Effects

The assessment has only identified two significant effects arising from the Proposed Development, those being the effect on visual amenity as experienced from the footpath which passes close to the south-west and south-east boundaries of the Application Site. Although significant, the context provided by the surrounding industrial landscape means that these effects are not considered to be materially unacceptable.

Surrounding Area

The surrounding area is industrial in character, with relatively tall units and of large footprints. Hams Hall Distribution Park stretches north of the Application Site with the railway line limiting its north western extent. Areas of hard standing and built form continue further north towards the southern outskirts of Lea Marston and St. John the Baptist Church.

Built form within the Hams Hall Distribution Park is of large scale and footprint. Each plot is generally well screened by managed hedgerows and belt of trees with upper parts of the buildings often visible above and amongst the tree canopies. Faraday Avenue is particularly characterised by a strong presence of trees and hedgerows. DHL buildings, located at the junction of Edison Road and Faraday Avenue are more visible due to limited tree cover along this section of Edison Road. Views of other buildings along Faraday Avenue vary. Views of buildings of Uni Per, on the southern side of Faraday Avenue, are glimpsed and restricted gained only through the access gate. The buildings in the plot adjacent east are visible over the surrounding tree vegetation due to their height and colour. Other buildings along the eastern section of Faraday Avenue are more visible with less tree cover. In terms of the prevailing form, a simple flat roof rectangular shaped buildings are the most characteristic for this road.

The Hams Hall Distribution Park is wedged between a railway line corridor to the north west and north, with the River Tame corridor and various small waterbodies enclosing it to the north east and east, and continuing south and to the west effectively encircling it. Further south the railway line with the Coleshill Train Station characterises the area with various business premises continuing south along Station Road and forming the northern outskirts of Grimstock Hill. The settlement of Coleshill lies further south.

Internal roads connect the individual units to Faraday Avenue, which in turn link to the M42 via the A446. The industrial area stretches further south towards Coleshill and this part is known as Coleshill Industrial Estate. The River Tame separates this area from the open countryside and small settlements of Lea Marston to the north (approximately 0.9km to the north), Whitacre Heath (approximately 1.5km to the north east), and Hoggrill's End (approximately 2.6km to the east). Shustoke Reservoir is located between Hoggrill's End and Shustoke, and provides recreational opportunities. A number of waterbodies, associated with the past extraction works in the area, are located along the river and to the north of the Application Site. Settlements in the northern and eastern part of the study area are connected by minor roads and the landscape, broadly speaking, is rural in character.

This contrasts with the landscape in the western part of the study area, which is characterised by large scale settlements, major highways and other elements of

infrastructure. The M42, M6, and M6 Toll separate the Birmingham conurbation from the open countryside with some small pockets of agricultural land located between the motorways and the urban edge. The industrial area around the Application Site and Coleshill form a large pocket of townscape and connect, in their character, to the urban environment around Birmingham. This includes the area around the Birmingham Airport and the industrial area stretching from Water Orton to the Birmingham city centre.

Likely Significant Effects

The assessment has not identified any significant landscape effects which would arise as a result of the Proposed Development, when considered in isolation. All identified visual receptors and the majority of the selected viewpoints have been assessed as subject to not significant visual effects. Receptors at only one identified location, at Viewpoint 7, have been assessed as experiencing significant visual effects due to proximity and inter-visibility with the Proposed Development.

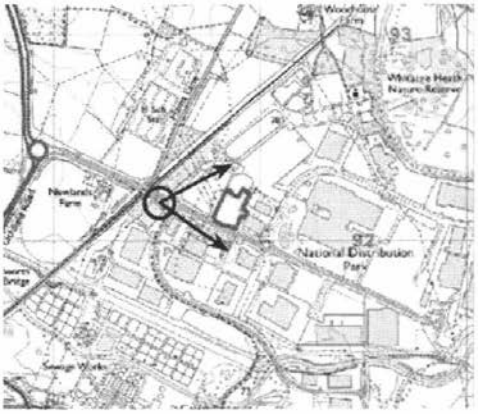
Mitigation and Enhancement

Mitigation measures (such as design evolution of the proposed built form, and gradation in colours of different parts of the Proposed Development to minimise the perceived massing of the buildings) have been incorporated into the design of the Proposed Developed as part of the iterative design process. The colour palette has been selected to make the Proposed Development more recessive in views thus having a lesser degree of effects upon the perception of the local landscape / townscape, and visual amenity. The measures are therefore an integral part of the development and no further additional mitigation is considered necessary from a landscape and visual perspective.

Conclusion

The nature of the Proposed Development, together with the context provided by the land uses surrounding the Application Site, would mean that the Proposed Development is considered to be appropriate to the setting and townscape character of the site and the Hams Hall Distribution Park. The introduction of the Proposed Development would not result in any significant effects on local landscape or townscape features or elements, or the character of the landscape / townscape within and around it.

Effects upon visual amenity would also be generally not significant with only one location assessed as subject to significant visual effects. Such higher degree of effects reflects close proximity and relatively open views towards the Proposed Development.



PHOTOMONTAGE FROM VIEWPOINT 7
FOOTPATH ALONG FARADAY AVENUE


Existing view


Photomontage view


BEKO


BEKO

TRAFFIC AND TRANSPORTATION

Introduction

The traffic and transport assessment has considered the environmental impacts of traffic to include pedestrian amenity, highway safety and driver delay in the context of the relative change in traffic flows.

Baseline Conditions

The application site lies approximately 1.65 kilometres to the south-east of Junction 9 of the M42 Motorway, as well as connections to the M6 Toll Road. The site is located within an established industrial area and is bound to the east by industrial units and to the south by Faraday Avenue, which provides direct access to the site. The western edge of the site is bound by airport parking business, while the application site abuts undeveloped brownfield land to the north.

In a wider context, the site is located on the north edge of Coleshill and is strategically positioned to provide easy access to key transport links including the M42 and M6. Such access is reflective of the industrialised nature of the locality and ensures that the site is easily accessible for larger commercial vehicles.

The application site is accessed off Faraday Avenue via a priority T-junction arrangement, with a left-in/left-out access. Access to the site is currently gated and the associated junction has an entry radius of 15 metres and an exit radius of 7 metres. This is considered to be sufficient to accommodate the turning requirements of large goods vehicles.

On site observations have noted the presence of on-street parking within the vicinity of the site access, which is also indicated by the erosion of the adjacent grass verge. In terms of geometry, visibility at the junction is achievable over a distance in excess of 100 metres in either direction from a 2.4 metre setback distance. This is commensurate with the likely approach speeds of vehicles.

Likely Significant Effects

Operational phase impacts have been determined with reference to the trip generation calculations contained within the submitted Transport Assessment which accompanies the Environmental Statement. The operational phase of the project is, at worst, categorised as Negligible.

Construction phase impacts could be generated from the arrival and departure of construction workers and associated HGV traffic. Whilst impacts can be significantly reduced with appropriate mitigation, the construction phase impacts would be, at worst, categorised as 'Negligible'. This is considered to be acceptable, particularly in light of the temporary nature of this phase of development.

Cumulative impacts during construction could arise alongside the construction of adjoining schemes. However, schemes are either already operational and are included within the baseline assessment or there is limited information from which to gauge the associated impacts and to undertake a comprehensive cumulative assessment. Notwithstanding, an arbitrary quadrupling of construction traffic flows assumed for the Proposed Development will only yield an acceptable 'Moderate Adverse' impact.

Mitigation and Enhancement

Given the application site's current land use and the resulting impact of the Proposed Development, it is considered that the surrounding highway network is of a suitable standard and will not require further mitigation to accommodate movements associated with the operational phase.

For the construction phase it is proposed that a Construction Traffic Management Plan (CTMP) would be prepared and submitted to the Local Planning Authority prior to the commencement of on-site works. The purpose of the CTMP would be so that appropriate environmental management practices are followed during the construction (and demolition) phase of the project.

For the operational phase an Outline Travel Plan has been prepared to promote the use of sustainable travel amongst future staff visitors.

Conclusion

In view of the above, it is the conclusion of this Chapter of the ES that the Proposed Development can be accommodated without any unacceptable detriment to the environmental effects of traffic. Furthermore, it is noted that the inclusion of mitigation measures at both construction and operational phases would reduce the effects and impacts of the development further, providing confidence in the conclusion of this assessment.

HYDROLOGY AND FLOOD RISK

Introduction

An assessment has been undertaken of the likely significant effects that the Proposed Development would have on the water environment. The effect of the Proposed Development on local flood risk and water quality of nearby watercourses has been assessed and mitigation measures proposed. The hydrology and flood risk assessment is supported by a detailed Flood Risk Assessment which has been submitted with the planning application documents.

Baseline Conditions

The Application Site is currently in brownfield use and consists of cleared and consolidated land, surrounded by the Car Storage Compound to the west and some of industrial plots to the east. A number of National Grid Areas are present in the immediate vicinity of the site.

The Topographical Survey indicates that the site is effectively flat with site levels ranging between 80m and 79.16m Above Ordnance Datum (AOD), falling from the south west to the south east of the site.

The Environment Agency's Flood Map shows the site lies entirely within Flood Zone 1, which indicates the land assessed as having less than 1 in 1,000 annual probability of river or sea flooding (<0.1%) and is the lowest rating used by the Environment Agency. The Strategic Flood Risk Assessment contains no records of historic flooding from watercourses in the vicinity of the application site. The risk of other forms of flooding affecting the development site has been assessed as low.

Likely Significant Effects

The construction of the Proposed Development will temporarily disrupt the onsite surface water drainage network. Potentially polluting activities and accidental spillages and leakages may occur during the construction and operation of the Proposed Development which could have an effect on local water quality.

Mitigation and Enhancement

Good site management, adequate contingency planning and application of pollution prevention principles and best practice construction techniques will reduce the risk of a significant water pollution event occurring. The surface water drainage system will incorporate stormwater storage and will be discharged at a reduced flow into an onsite ditch. The system will provide a degree of flood risk betterment during these storm events.

The surface water drainage system will incorporate specific measures to intercept oil and silt and other pollutants from the site and relevant plant will be designed to minimise pollution risk (e.g. bunded).

Conclusion

Adopting best practice construction site management and provision of a suitably designed surface water drainage system incorporating pollution control and stormwater storage minimises the effect of the Proposed Development on local flood risk and water quality in nearby watercourses.

HYDROGEOLOGY AND GROUND CONDITIONS

Introduction

A qualitative assessment of the effects of the proposed development arising from likely ground conditions has been completed. The assessment has considered the extent and methods of foundation construction, the anticipated degree of disturbance of the ground, the final form of the development, and the relevant national policies for contaminated land assessment and management.

Baseline Conditions

The baseline ground conditions at the site have been assessed by a Phase 1 Desktop Study.

Likely Significant Effects

Prior to mitigation, a number of likely significant effects have been identified relating to the risk of the effects of contaminated land on construction workers, end users and controlled waters.

Mitigation and Enhancement

The following mitigation measures have been recommended:

Undertake a Detailed Unexploded Ordnance Threat and Risk Assessment prior to carrying out intrusive site investigation works (and development).

Undertake a Phase 2 Geo-environmental Ground Investigation prior to development to provide an assessment of the ground conditions on the application site with respect to geotechnical properties and any potential contamination (including hazardous gases) in the underlying soils and/or groundwater.

Application of appropriate measures during the construction phase to protect construction workers, site neighbours and the environment more generally, from exposure to any contaminated material which may be encountered (e.g. dust control measures, containment of soil and groundwater arising from works in the ground, use of appropriate PPE).

If piling through the Secondary A aquifer is required as part of the development, a Report on Piling and Risks to Groundwater should be completed to the satisfaction of the Environment Agency (EA). The piling technique should be chosen to mitigate risks to controlled waters.

The safe stockpiling, containment and testing of material displaying visual or olfactory evidence of contamination during the construction works. Based on the results of subsequent testing, the stockpiled soils should be re-used, treated or disposed of off-site.

A 'clean' and inert soil cover layer should be placed over in-situ soils in areas of new landscaping. The cover soils should be validated prior to placement.

Building slabs and membranes should be designed to mitigate the Characteristic Gas Situation classification for the site; ground gas monitoring should be undertaken to classify the gas regime, as described within BS 8485 and C665.

The concrete used within the proposed development should be designed in accordance with the concrete classification for the site (assessed using BRE Special Digest 1).

The local water supply company should be consulted regarding the pipe material and backfill specification of potable water supply pipes.

Operation on sealed hard standing would ensure any oils/ lubricants or wastes are not able to penetrate into the underlying natural ground and controlled waters.

Develop systems in line with the plant/facility Environmental Permit to ensure all potential contamination issues associated with the operation of the facility would have been satisfactorily controlled.

Conclusion

Following the implementation of the recommended mitigation measures the residual effect of the proposed development with respect to all receptors is assessed to be Neutral, as either ground contamination sources or transport pathways to receptors will have been removed.

NOISE AND VIBRATION

Introduction

A noise assessment has been carried out for the Proposed Development. The assessment has taken account of potential effects during the construction and operation of the Proposed Development, upon surrounding residential receptors. It has considered factors such as piling during construction and additional traffic movements once the site became operational.

Baseline Conditions

The Application Site is located within the existing industrial / commercial area within Hams Hall.

The closest residential receptors are located to the north east of the application site, approximately 500 metres from the northern site boundary. There is a single property located adjacent to the former Hams Hall site boundary, with two further properties further east, adjacent to the church.

Other dwellings are located beyond 1km from the site within Lea Marston and given the distance from the site, these properties have not been considered further within this assessment.

In order to ascertain the existing noise environment at noise sensitive receptors surrounding the Application Site and to inform the design of the Proposed Development, a noise monitoring exercise was carried out between 15 – 21 March 2016. The survey comprised an unattended noise survey, carried out at one location within the land adjacent to the closest dwelling, with simultaneous sample noise measurements taken adjacent to the church.

The monitoring positions were chosen to enable the typical background noise levels to be determined at the potentially most affected dwellings.

Likely Significant Effects

The Proposed Development is located some distance from the surrounding noise sensitive receptors. An assessment of the noise levels associated with the construction of the Proposed Development indicates that noise associated with the works would result in a **negligible** effect.

Noise levels associated with the operation of the Proposed Development are anticipated to be low and below a level which would result in any significant adverse noise impacts, with noise associated with the operation resulting in a **negligible** effect at surrounding properties.

There would be regular deliveries made to the site throughout the day. The small numbers of additional vehicles would result in no noticeable change in road traffic noise levels on roads surrounding the Proposed Development, with a **negligible** effect identified.

Mitigation and Enhancement

No additional noise mitigation measures have been identified in addition to those which would be incorporated as standard into the design of the Proposed Development.

Conclusion

In summary, the construction and operation of the Proposed Development would not give rise to any adverse noise impacts at surrounding properties.

ECOLOGY AND NATURE CONSERVATION

Introduction

The ecological assessment compiles information from a desk study and Extended Phase I habitat survey, enabling the determination of the likely ecological effects of the Proposed Development. The assessment establishes the likely presence of protected or notable species, identifies statutory designated sites for nature conservation in the vicinity of the Proposed Development and evaluates the overall conservation status of the Application Site.

The potential effects on identified ecological receptors including designated sites and protected and notable species is assessed in line with current guidance, and appropriate mitigation and enhancement measures are described.

Baseline Conditions

An Extended Phase 1 habitat survey was undertaken on the Application Site in February 2016. The survey recorded habitats within the Application Site and aimed to establish the presence or potential presence of protected and notable species.

Statutory designated sites were identified within a 5km radius of the Application Site (extended to 20km for SPAs and Ramsars) using the Multi Agency Geographic Information for the Countryside (MAGIC) website, along with the Joint Nature Conservation Committee (JNCC) and Natural England (NE) websites. WBRC (Warwickshire Biodiversity Record Centre and EcoRecord (the Ecological Database for Birmingham and the Black Country) provided records of protected and notable species, locally designated sites and habitats within a 2km radius of the approximate centre of the Application Site.

The Application Site comprised an area of gravel hardstanding, bounded by concrete perimeter walls and was in use as an industrial storage area. Opportunities for wildlife were therefore extremely limited, although semi-natural habitats are present in the wider landscape.

No evidence of protected or notable species was identified during the Phase 1 habitat survey. The hardstanding land was considered unsuitable for protected and notable species, although nearby land may provide some foraging interest for bats. The presence of a mammal path indicated the potential movement of badger or foxes across the Application Site. The potential for black redstart to be present in the local area is possible as there is suitable derelict land to the north. The Application Site in its current state is however not suitable for nesting birds.

The overall importance of the Application Site habitats and to protected and notable species is assessed to be very low, with local features of greater biodiversity interest adjacent to the Site being retained as part of the Proposed Development.

Likely Significant Effects

No significant effects are anticipated on statutory or non-statutory designed sites or habitats.

No significant effects are anticipated on protected species.

Mitigation and Enhancement

- Mitigation and enhancement measures will include the following:
- Pollution prevention and control measures employed during construction;
- Appropriate lighting design to avoid light spill onto adjacent habitats; and
- A pre-construction badger survey.

Conclusion

The Proposed Development will have **no significant** residual effects on Ecology or Nature Conservation.

ARCHAEOLOGY AND CULTURAL HERITAGE

Introduction

The archaeology and cultural heritage assessment has considered the likely significant effects of the Proposed Development that has used a combination of desk based research and on site investigation.

Baseline Conditions

The Site is located on an area of Second River Terrace gravels. Areas of River Terrace gravels were favoured locations for prehistoric activity. However, none is recorded in the immediate vicinity of the Site. Cropmarks c. 650m north-west of the Site are potentially of prehistoric origin, although a modern origin has also been suggested. The desk-based assessment has not identified any evidence to indicate significant activity focused within the Site. And previously present below-ground archaeological remains are likely to have been removed by the two-phases of sub-station construction in the earlier and mid-20th century respectively.

The western boundary of Hams Hall park, as mapped on the First Edition Ordnance Survey, crossed eastern area of the Site. Extant park features within and in the immediate vicinity of the Site were removed in the 20th century. No park features of heritage interest remain within the Site.

An earlier 20th-century sub-station is visible extending into the Site area on 1930s aerial photographs. This was replaced in the late 1950s, with a new sub-station with a different footprint. The late 1950s sub-station was largely dismantled, within the last 10 years. The boundary wall, which defines the parcel of land within which the Site is situated, is on the same alignment at the late 1950s sub-station boundary wall. The boundary wall associated with the late 1950s phase of construction at Hams Hall Power station is not considered to be a heritage asset.

The closest designated heritage assets are the Grade II Listed Church of St John the Baptist and associated Grade II Listed Cross c. 650m north-east of the Site. These are **designated heritage assets of less than the highest significance.**

Likely Significant Effects

The Proposed Development will not result in physical impacts on any identified heritage assets.

A Settings Assessment with regards to designated heritage assets is included as part of the Environmental Statement submitted with this application. The Proposed Development will not result in any adverse significant effects on designated heritage assets.

Mitigation and Enhancement

In the absence of any evidence for significant, focused activity within the Application Site prior to the establishment of the power station and given the disturbance associated with the two-phases of sub-station construction, it is considered that the current assessment provides a proportionate level of information regarding the potential below-ground archaeological resource, as required by paragraph 128 of NPPF, sufficient to determine the planning application, and no subsequent mitigation works are proposed.

Conclusions

The assessment has not identified evidence for focused, significant activity within the site prior to the establishment of the power station in the earlier 20th-century. This chapter, in conjunction with Appendix 12.1, provides a proportionate level of detail (as required by Paragraph 128 of NPPF) regarding the archaeological resource, sufficient to determine an application for development.

The proposed development will not result in any adverse impacts on the significance of designated heritage assets as a result of alteration to setting. As such it will be in keeping with the requirements of the Planning (Listed Building and Conservation Areas) Act 1990, NPPF, and Local Planning Policy pertaining to the setting of designated heritage assets.

SOCIO-ECONOMICS

Introduction

The socio-economic assessment considers effects of the Proposed Development during both the construction and operational phases. This assessment considers the provision of the following aspects of the Proposed Development:

- The provision of circa 20 jobs in the operational phase; and
- The offer of competitively priced sustainable energy to local businesses.

The Application Site is within North Warwickshire and lies within the Ward of Curdworth. Some information is only available for the Lower Super Output Area (LSOA), North Warwickshire 004B or Middle Level Super Output Area (MSOA) North Warwickshire 004 and these are used in these instances. The assessment considers the appropriate area/s in regard to different issues.

Baseline Conditions

The 2011 Census identified 62,014 residents in North Warwickshire, of whom 3,195 lived within Curdworth Ward. The Census indicates that the population of the Ward is on average much older with a mean age of 45.4 years as compared to 41.7 years across the Borough or 39.3 years across the nation.

The latest Mid-Year Population Estimates identified that the population of North Warwickshire had increased to 62,468 in 2014. The 2012 subnational population projections then project a further increase of circa 1,032 persons from 2014 to 2019 (when the plant is expected to become operational).

The 2012 subnational population projections identify the factors that make up the projected population change. Within North Warwickshire, 100% of the growth arises from net migration.

Likely Significant Effects

The key socio-economic effects of the Proposed Development can be summarised as follows:

- Provision of circa 100 to 130 additional jobs during the construction phase in the construction sector;
- Provision of 20 jobs during the operational phase;
- The jobs will include elementary jobs during both the operational and construction phases which responds to the type of jobs being sought by the unemployed in Curdworth Ward currently;
- •Investment in construction, operation and maintenance all of which will provide for indirect effects including generating work for local tradesmen;
- Additional £2.3M GVA per annum for the local economy including an increase of the local disposable income (for employees of the facility and tradesmen) which will have induced effects on local economy;
- The provision of lower priced sustainable energy for local businesses, reducing business costs which may be used to expand or enhance businesses (including new jobs and/or increased wages); and
- Potential minimal increases in commuting flows.

Mitigation and Enhancement

No mitigation has been identified in socio-economic terms given the lack and/or scale of any negative effects associated with the Proposed Development.

Conclusion

Overall the Proposed Development is considered to provide for minor effects and will contribute to addressing the economic needs of the area.

SUMMARY

The technical chapters which have made up the Environmental statement and assess the REC at Hams Hall Energy demonstrate that there are no overriding environmental constraints or planning policies which would preclude the development of the Application Site.

The Planning Statement which forms a separate part of the planning application demonstrates significant weight for both Planning Policy and Waste Policy which demonstrates the need for and benefits of the scheme. The Proposed Development is in accord with the relevant policies of the Development Plan and other material planning considerations including the principle of sustainable development.

The proposal has also been shown to be in compliance with national strategic level planning policies contained within the National Planning Policy Framework and the National Planning Policy for Waste, and guidance set out in the Waste Management Plan for England and both EN-1 and EN-3. These documents are significant material considerations in the planning process and indicate this proposal is acceptable.

The above considerations demonstrate that upon considering the significant benefits associated with the scheme against the relatively benign impacts, the proposal, on balance, falls well within the scope of acceptability as the benefits would indeed outweigh any limited harm.

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APPENDIX E

3 DEVELOPMENT PROPOSALS

3.1 Background

3.1.1 The Proposed Development comprises a 3-line Renewable Energy Centre with associated vehicular access.

3.1.2 The Renewable Energy Centre (REC) will employ an Advanced Conversion Technology (ACT) (gasification) a process which is supported by Government and is part of a number of renewable technologies being deployed in the UK. ACT / Gasification is a process to generate power and heat from Refuse Derived Fuel (RDF) together with other pre-treated wastes. RDF is a product which is pre-treated then shredded, dehydrated and / or compressed from municipal solid waste and industrial and commercial waste and when heated to very high temperatures breaks down to provide a gas which is utilised in a boiler to create steam which drives a steam turbine to produce electricity and heat. It is a clean, modern and hi-tech approach to producing energy, with a proven track record.

3.1.3 The development will have the capacity to process up to approximately 150,000 tonnes of waste per annum. As well as the RDF the feed stock will include using non-recyclable residual commercial and industrial waste (CIW) together with an element of municipal solid waste (MSW) i.e. residual waste where all the practicable recycling has been completed. Initial research has indicated that this material would comprise waste from across the wider Warwickshire area. The plant will not accept hazardous or clinical waste.

3.1.4 The power produced from this facility will have a capacity of 14.5MW/hr gross of electricity. The gasification technology employed at Hams Hall Energy Centre will involve a two-stage system, which initially gasifies the waste to produce synthetic gas. This gas is then transferred to a second stage where it is combusted in a high efficiency boiler to produce steam which drives a steam turbine to produce electricity. The process allows for efficient control of emissions and improved performance generally as an energy solution.

3.1.5 Gasification is classed as an Advanced Conversion Technology (ACT) as the biomass element of waste qualifies for Contract for Difference (CFD). CFDs provide long-term price stabilisation for low carbon plants, allowing investment to come forward at a lower cost of capital and therefore at a lower cost to consumers but enables advanced renewable technology to be developed.

3.2 Site Layout

3.2.1 The proposed site layout is illustrated on **Figure 3.1**. The REC will be constructed within the centre of the site with access and egress at Faraday Avenue to the south.

3.2.2 The REC is made up of the following principal elements:

- **A main building** – this will house the majority of the process plant and will have a number of silos to the rear and a flue stack to the east of the building, all waste material will be unloaded inside the building. At its highest point, the main body of the building will be 24m high and 87.96m long x 72.7m wide with a floor area of 5725m^{2,} see REC elevations illustrated on **Figure 3.2**. The flue stack contains a walk around platform for continual air quality monitoring access and consists of a metal framework. The stack will have a height of 52m and a diameter of 2.8m;

- **Waste Reception Bunker (located in main building)** - Wastes are deposited into an 8m deep waste bunker within the building, with a capacity of 820m^3 where shredding and separating takes place to prepare the fuel for the gasification process, and any ferrous material is taken out which will be removed for recycling;

- **Prepared Fuel Storage Bunker** – the prepared fuel will be deposited in storage bunker within the building (which has 4 days of waste storage thus complying with fire regulations and stopping build-up of heat from waste gasses), which has a capacity of c6,000m^3.

- **Turbine Room** – this will be a smaller separate building 15.6m high, with a base of 30m x 15m located at the most northern part of the site. A short section of pipe line will connect the main building and the turbine generator building;

- **Air cooled condenser fans** – have a height of 23.4m with a footprint of 39.62m x 15.76m;

- **Bottom Ash bunker** – the bottom ash is stored in a bunker measuring 10m x 12m x 5m with a capacity of 600m^3. This material is inert and can be reused as an aggregate or used for an engineering material in landfill. It complies with current European legislation;

- **Fly Ash Silo** – the fly ash silo framework stores the residue from the flue gas cleaning system and measures 10.5m x 5.15m and 19.5m high. The ash is removed in a safe manner by attaching an umbilical hose to a tanker and can be either reused /recovered or disposed of at licensed landfills. The handling, storage, treatment and reuse/disposal of this material is highly regulated;

- **Fire Water Tank** - a fire water tank would be included to the south of REC building. The tank has a 17m diameter and a height of 6.75m with a 1 million litre capacity;

- **Pump Room** – the pump house is next to the fire water tank and has a height of 3.2m with a footprint of 6.09m x 4.59m; and

- **Technical / Control room and Workshop** – will be located within the east side of the main building.

3.2.3 In addition, the external site areas will include:

- Two weighbridges (both in and out) with an office measuring 4.85m x 3m x 2.95m high;
- Site entrance and circulation roads;
- 18 car parking spaces plus 2 disabled bays;
- Provision for 14 cycling spaces.

3.3 Process Description

3.3.1 The key stages of the REC process are described below.

3.3.2 The plant employs a two stage system that first gasifies (heats) the waste to produce a synthetic gas which is then transferred to a second stage where it is oxidised. Changing the waste to a gas fuel, means the combustion environment can be finely controlled, very low dioxins emissions and Nitrogen Oxides (NOx) emissions minimised which can achieve emissions levels that are compliant with Industrial Emissions Directive (IED) (Directive 2010/75/EU of the European Parliament and the Council on industrial emissions). Key Stages:

Waste Reception

3.3.3 Once accepted in to the site, vehicles delivering residual waste would draw up to and reverse into the Waste Reception Hall to the front of the main building. Once the vehicle is inside the Waste Reception Hall the fast acting doors will close; the Waste Reception Hall operates under negative pressure to draw in and contain odours with the air then fed into the ACT processing plant (gasification plant) so that it is 'cleaned' as part of the overall emissions control process before being released through the flue stack.

Fuel Bunker and Transport System

3.3.4 The residual waste is unloaded within the Waste Reception Hall. The residual waste in RDF form is unloaded directly by crane into the Fuel Bunker. However, all other residual wastes would first be deposited into the waste bunker before being transferred by crane into the shredder and then passed across a magnet whereupon any ferrous material will be removed. The recovered metals will be collected in a skip within the main building which will be periodically collected and sent for recycling. The prepared fuel is then stored in a bunker prior to entering the gasification process.

3.3.5 The overhead fuel crane will operate on a pre-programmed cycle and move around the fuel bunker to mix the residual waste to create a more homogeneous mixture. The crane will then deliver residual waste automatically to the fuel hopper to the ACT unit.

Thermal Conversion

3.3.6 The thermal conversion will take place in two stages. Firstly gasification of the fuel will be carried out in the gasification unit creating the synthetic gas. From this, the gas passes to the High-temperature Oxidation Unit where there is a complete combustion of Carbon Monoxide (CO), Total Organic Carbon (TOC) with a final production of a flue gas with low NOx content. The ash is discharged from the gasification unit at the end and taken for offsite disposal.

Heat Recovery Steam Generator (HRSG)

3.3.7 The HRSG that recovers the energy from the flue gas is connected to the high temperature oxidation unit that combines smoke-tube and water-tube boilers operated to control the outlet flue-gas temperature.

Energy Utilisation System

3.3.8 The boilers will deliver saturated or superheated steam to an energy utilisation system. The system will consist of a turbine with generator and an air cooled vacuum condenser with condensate pumps. Generated electricity will be connected to the Power

Company's distribution network. Condensate from the air-cooled condenser will be directed to the feed water tank of the boiler system by condensate pumps.

3.3.9 If required the turbine can be fitted with a suitable extraction point to enable steam, at the appropriate pressure, to be taken from the turbine for use by adjacent consumers.

Flue Gas Cleaning System

3.3.10 Having been generated in the dual stage gasification process and passed through the HRSG, the flue gas will enter a gas cleaning system. This will comprise a bag house filter, a storage silo for lime and activated carbon and a filter dust silo. In simple terms the lime and activated carbon will be injected at the inlet of the bag house filter and this will adsorb contaminants in the flue gas. The contaminants are in turn filtered out and disposed of off-site, with only clean gases discharged to the atmosphere.

Control and Monitoring System

3.3.11 The plant will be equipped with a control and monitoring system that will provide automatic control of the process during normal operating conditions and gives the opportunity for staff to monitor the different process sections. Of particular importance will be the logging of process details, including emissions.

3.4 Material Delivery and Despatch

3.4.1 On arrival, waste vehicles will report to the weighbridge where waste documentation, waste carrier certificates and transfer notes will be checked to ensure compliance with the Duty of Care Regulations and the sites Environmental Permit. Vehicles containing any non-conforming waste will be quarantined and managed in accordance with the site's Permit. The quantity of waste the vehicles carry will then be assessed by passing them over the weighbridge.

3.4.2 It is anticipated that feedstock from the wider area would fulfil the requirement to operate the REC. This is however subject to available local contracts and is currently under review.

3.4.3 The waste will be split into three types; Tier 1 from the major waste companies which would account for approximately 60% of the waste entering the plant; Tier 2 would consist of waste from local operators and would account for 30% waste and Tier 3 where 10% of the waste would come from spot market. Economic and contractual obligations will play a large factor in the distance waste is travelled to the site hence by this nature waste will not be transported over long distances. Although waste from Tier 1 would be transported from major waste organisations it would still arrive from the wider M42 / M6 corridor area. The tiers represent different size operators as opposed to the distance the waste is brought into the site from, therefore, the distance will be self-limiting owing to transport cost.

3.4.4 It is anticipated that waste will be delivered to the site via refuse collection vehicles (RCVs) which will typically be 18 – 22 tonne vehicle (gross weight), or in large articulated

bulk haulage vehicles from nearby waste transfer stations under a Duty of Care Waste Transfer Note.

3.4.5 The REC is expected to generate up to 88 heavy goods vehicles (HGVs) trips per day, (44 In and 44 Out) , plus trips associated with 20 staff.

3.4.6 Vehicular access to the REC will utilise existing access to the south west of the site leading from Faraday Avenue and Junction 9 of the M42 motorway.

3.4.7 Upon entering the site all vehicles will be directed north to circle around the back of the site to the manned office / gatehouse at the eastern side of the building. Two barriers here control access to the building. Staff and visitors will be directed towards the car park located immediately on the site's south western boundary. Users will exit the site via the same route.

3.4.8 A separate barrier system will be provided for HGV movements, with separate barriers provided for vehicles entering and exiting the site. A weighbridge will be located in front of each barrier which will be located either side of a security office. Further details are provided within **Chapter 7 Traffic and Transport**.

3.5 Grid Connection

3.5.1 The Applicant has held discussions with Western Power Distribution (the responsible DNO) and an application has been submitted. Once this has been returned a point of connection can be assessed.

3.6 Surface Water Management

3.6.1 A sustainable drainage strategy, involving the implementation of SuDS, is proposed for managing the disposal of surface water runoff from the proposed development on the site. It is considered that the use of infiltration devices for site drainage is not appropriate for the site due to impermeable soils.

3.6.2 Proposals comprise a pipe system and a tank in order to attenuate surface water runoff and, as the brownfield runoff rates are unknown, it is proposed to restrict runoff to greenfield rates. It is proposed that the surface water from the designed network will discharge to the existing off-site public sewer located approximately 100m to the south east of the site.

3.6.3 A preliminary surface water drainage strategy is shown on the Indicative Surface Water Drainage Strategy Plan, Drawing No. K116/03, within **Appendix 8.1** Flood Risk Assessment.

3.6.4 The proposed drainage strategy would ensure that surface water arising from the developed site would be managed in a sustainable manner to mimic the surface water flows arising from the site prior to the proposed development, while reducing the flood risk to the site itself and elsewhere, taking climate change into account.

3.7 Design Approach (building materials and colour)

3.7.1 Many industrial sites are designed with a typical 'form follows function' approach. From the outset it was deemed important that the external appearance of the plant should be appropriate for the area.

3.7.2 In terms of architectural detailing and materials, both follow a similar palette and consist of mainly a coloured cladding system.

3.7.3 Due to the REC plant building being a large mass, it was important to use a smooth lightweight architectural cladding system that would achieve the functional needs, as well as aesthetic ones too. A simple palette of materials was proposed consisting of a neutral grey-green colour and represented in bands becoming increasingly pale towards the top of the building. The aim of the introduction of the banding is to reduce the perceived massing of the building. The stack will be faced in a muted grey metal which will sit and almost blend into the typical overcast skyline of the UK. External equipment will be faced in a grey coated metal to blend into the colour palette of the main plant.

3.7.4 A tree belt was integrated on the southern boundary to screen visible elements and enhance the visual environment.

3.8 Construction Duration

3.8.1 Subject to the grant of planning permission, it is anticipated that the construction of the proposed REC would commence in 2017. Construction on site is expected to last for 24 months, after which there would be a commissioning period. Furthermore, construction would normally take place during the hours of 0700 to 1800 (Monday to Friday) and 0800 to 1300 (Saturday). No construction would take place on Sundays or bank holidays.

3.9 Operating Hours

3.9.1 The REC will operate continuously; 24 hours a day, 7 days per week. Operational staff would be required to operate the Plant on a 3 shift pattern (each of 8 hours). During weekdays the facility will be open for deliveries between the hours of 07:00 and 19:00 and between the hours of 07:00 and 14:00 on Saturdays. There will be no waste received on Sundays. It is expected that HGVs importing and exporting materials from the site will do so evenly throughout the 12 hour period and there is unlikely to be a peak in movements associated with these operations.

3.9.2 Maintenance of the REC would take place twice yearly which would necessitate the ceasing of operations for a two week period in the summer and a week during the winter period. These times would be programmed to coincide with the manufacturer's shutdown periods. Across the resultant 49 weeks of scheduled operation, ad-hoc maintenance and other generation drop-out periods associated with grid-synchronisation and the processing of non-homogenous Refuse Derived Fuel may result in the need for short-term shut-downs. The availability is therefore expected to be approximately 90% (i.e. 44 weeks per annum).

3.9.3 The facility is expected to be available to receive deliveries of waste on weekdays and on Saturday mornings. The Plant will operate during Bank Holidays but shall not receive waste deliveries. This is facilitated by the on-site waste storage inside the building which has been designed to ensure sufficient capacity to continue operations without delivery for up to four days.

3.10 Construction and Environmental Management

3.10.1 Environmental control measures will be imposed to minimise adverse environmental effects during construction and the assessments presented in this ES have been undertaken on the basis that these measures will be implemented. A Construction Environmental Management Plan will be prepared and adopted and will include sections on: noise, vibration, air quality, water quality, surface quality (prevention of contamination of ground surface), site transportation and traffic management, visual intrusion and waste management. The appointed contractor will also be required to register with the Considerate Construction Scheme.

3.10.2 Lorries will be fully sheeted over and pass through a wheel washing installations (hose down area) prior to departure.

3.10.3 Waste will be generated during all stages of the construction works. A Site Waste Management Plan will be prepared and all relevant contractors will be required to seek to minimise waste arising at source and, where such waste generation is unavoidable, to maximise its recycling and reuse potential. Recycling of materials will primarily take place off-site where noise and dust are more easily managed.

3.10.4 All construction activities, which have the potential to generate significant amounts of noise and/or vibration and will be undertaken during daytime periods (see **Chapter 10 Noise** for further information relating to construction noise).

3.11 Scheme Benefits

3.11.1 The benefits of the REC include:

- Proven technology with outstanding operational and environmental performance and very low emissions;
- Conversion of pre-treated waste into renewable energy, displacing landfill and fossil fuels;
- Reducing greenhouse gas emissions;
- Job creation across a variety of skills and levels of expertise with employment opportunities for local people;
- Transforming an allocated vacant plot within an existing industrial site and enhancing with landscape planting;
- Production of lower cost renewable energy with the potential to create connections to local energy businesses/end-users via underground cable;
- Clear progression in the transition to a low-carbon economy with grid carbon offset; and
- Compliance with Government policy and the Industrial Emissions Directive (IED) to provide sustainable, renewable energy production close to use.

3.12 Employment

3.12.1 The proposed REC will create a number of job opportunities during the construction phase of the development and once operational this will provide up to 20 employment opportunities, which will comprise of 18 FTE's directly employed on site with a further seven people providing services from local specialist businesses. Jobs will be across a

variety of skills and levels of expertise and there will be employment opportunities for local people.

3.12.2 There will be a number of job opportunities created by the proposed industrial warehouse to the front of the site.

3.13 Consents

3.13.1 In addition to planning permission, other consents will be required to enable the Proposed Development to proceed. Of particular importance to this development is the need for an Environmental Permit from the Environment Agency that will control all operations associated with the plant based upon various risk assessments. Information presented in this ES will be used in the preparation of the Permit.

APPENDIX F

ROLTON KILBRIDE
POWERING THE FUTURE™

Rolton Kilbride – development of UK gasification projects

FREQUENTLY ASKED QUESTIONS

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CONTENT

1. The Applicant

Who is Rolton Kilbride?
Rolton Kilbride is a privately owned developer of Renewable Energy Centres. Rolton Kilbride is also working with a set of highly specialised technology partners and advisers who have extensive experience in the field of energy generation, gasification and the use of modern environmental technology.

What experience has Rolton Kilbride got in energy generation?
The senior management team have successful, established track records in infrastructure and energy, having worked in this field over many years. They have significant experience in developing Energy from Waste plants, Anaerobic Digestion plants, large scale solar and wind installations.

2. The Proposal

What is being proposed?
The proposal to be submitted to Warwickshire County Council is for the construction and operation of a Renewable Energy Centre (REC). The facility will recover energy non hazardous residual waste in the form of heat and electricity. The proposal includes a gasification plant with equipment for energy recovery, the necessary associated infrastructure, and distribution, new vehicular access and appropriate landscaping.

Why do we need this development?
There is a need to generate renewable energy in the UK, and to produce electrical power and heat at the same time. A facility operating in this manner is known as a Combined Heat and Power (CHP) plant, which is widely recognised as being one of the most efficient methods of generating energy. CHP developments are being strongly encouraged by Government to increase energy efficiency in the UK.

There is also a need to deal efficiently with the residual waste that remains after recycling efforts have taken place, which is not practical to reprocess into new products. The best way to deal with this residual material is to recover energy from it, through a facility such as the one proposed in this application.

What is RDF or SRF?
Refuse Derived Fuel (RDF) or Solid Recovered Fuel (SRF) is produced from the residual left over waste after extensive recycling has taken place. In this case, the waste comes from two sources: municipal solid waste (MSW), which comes from households and municipal facilities, and non-hazardous commercial and industrial (C&I) waste (such as packaging materials). The recycling systems used beforehand include kerbside collections for specific materials, other segregated collection systems and 'bring to' centres, mechanical separation plants and also some biological processing to reduce organic content. As a result, the national recycling rate for MSW was 44.9% in 2014 (DEFRA), which shows the levels currently being achieved in the UK.

What is the difference between RDF and SRF?
There is no real difference between the terms Refuse Derived Fuel (RDF) and Solid Recovered Fuel (SRF), except that SRF has to meet specific technical criteria (such as particle size and moisture levels) in order to meet certain European quality standards. RDF is more generic in nature. Both SRF and RDF are extensively used in Europe and the UK for energy generation in industrial applications, such as cement kilns. They are also used in dedicated energy recovery facilities, such as gasification plants. RDF and SRF are both waste derived fuels.

In this application, the fuel for the facility is referred to as RDF for simplicity.

Why can't all waste be recycled?
It is simply not practical or possible to do so in our modern society, although it's worth noting that the UK has made massive strides from being one of the worst recyclers in Europe in 1991 (at only 6% with virtually everything else being sent to landfill) to being amongst the best today, when like for like comparisons are made. For example, whilst the UK is at 44.9%, Germany is at 43%, the Netherlands at 52% and Denmark at 58%.

Examples of materials that cannot be recycled are plastic films like the ones that cover ready meals, some types of textiles, many laminated materials (such as certain types of crisp packets), disposable nappies, paper and card contaminated with food.

Which other countries burn RDF and SRF to generate energy?
Almost all countries in the EU use RDF and SRF to generate energy. They have been active in using this fuel in combined heat and power plants to provide energy for local communities for many years prior to the UK beginning to develop such facilities.

For example, Sweden has 32 such facilities, Denmark 27, Germany 81, Switzerland 30 and Austria 13 (see http://www.cewep.eu/information/data/studies/m_1459). All these countries have a strong and well-deserved reputation for environmental security and the achievement of high operating standards. The UK is now beginning to match this type of efficient facility.

What about climate change?
The REC will be equipped with modern technology that maximises environmental efficiency and effective use of the RDF. This will recover energy in the form of electricity and heat (as steam or very hot water).

Over 50% of the RDF is biomass or organic material; in other words, food or plant based material and degradable carbon such as paper, cardboard, natural fibres and wood. As a result, energy generated from it is classed as renewable and carbon-neutral energy. The proportion of biomass will vary according to the where the waste has come from and the processes used to produce it.

When burnt, fossil fuels such as oil, gas and coal all release much larger quantities of carbon dioxide (CO_2) than RDF. Being able to use RDF instead of these fuels is known as 'offsetting' and is recognised as being a effective way to reduce the impact on the environment through climate change.

Are there any local customers for the heat?

The site is set in Hams Hall Distribution Park, an industrialised area providing considerable potential for the export of heat from the REC.

The site is in close proximity to a number of high-energy industrial users for the potential off-take of energy (heat and electricity) as well as a nearby electricity sub station. Rolton Kilbride is currently in on-going discussions with the national distribution network and local business users for the export of electricity and/or heat via a private connection.

At this stage, potential consumers generally view the REC as a simple utility provider, so not unreasonably, they are reluctant to commit to serious discussions for the supply of heat and power until planning consent is secured and the development is likely to proceed. As a result, these discussions have to remain commercially confidential.

How long will it take to build?
The facility will take roughly 24 months to construct, with an additional 6 months commissioning and testing at the end of that period.

How much energy will be generated?
The proposed facility is capable of generating 14.5 MW/hr of electricity plus around 1.5 MW/hr of heat. This may decrease as the amount of heat exported to any local user increases, depending on the temperature and quantity of heat that is required. Both the electricity and heat can benefit local consumers.

Who will operate the facility?
Rolton Kilbride will not operate the plant. Instead, the facility will be operated under contract by an experienced company with an established track record of operating similar energy generating plants using waste fuels such as RDF. Due to the number of similar facilities now operating in the EU and worldwide, there is no shortage of such companies and interest in the operating contract. The storage warehouse may be operated by the same, or a different, contractor.

How many people will it employ?
The facility will employ 20 full time operators, maintenance technicians, engineers and managers. Experience indicates that these people are most likely to be recruited and live locally to the facility. Full specialist training is provided and the potential to include apprenticeships is being explored, too.

3. The Site

Where is the plant application sited?
The site is on available land at the Hams Hall Distribution Centre, off Faraday Avenue in Coleshill, Warwickshire B46 1AQ.

What was the former use of the site?
The site was previously part of the Hams Hall power station and has more recently been part of a substantial electrical sub-station. It is currently being used for vehicle storage.

Why has the Hams Hall site been selected?

The site at Hams Hall is located in an industrial area and large enough to accommodate the proposed Renewable Energy Centre. This is in line with the Waste Core Strategy (2013), which makes provision for locations for energy from waste facilities on non-allocated sites that are within industrial land, previously developed or close to key settlements. The Strategy sets out that strategic waste facilities should be sited close (within 5km) of the urban centres of Nuneaton, Rugby, Bedworth, Coventry, Kenilworth, Warwick/Leamington and Stratford, **or** close to Atherstone, Coleshill or Southam, if it can be demonstrated that there are significant transport, operational or environmental benefits. In this case, waste can be treated close to its origins, avoiding unnecessary transportation, and its position close to main roads and motorways means that that associated traffic will not need to run close to or through residential areas. Hams Hall is also close to industrial and commercial companies with potential to become customers for the heat or energy.

Have any other alternative sites been considered?

No as the application site is appropriately located within an industrial area, is relatively remote from residential properties. It is in an area that is not environmentally sensitive, with no statutory protected nature conservation or heritage sites within or in close proximity to the site. A belt of trees will help screen the facility from view, alongside other industrial units, railway line, the River Tame and the road network including the M42. The site's proximity to the road network is one of the main reasons for selection as well as the neighbouring industrial units, which could potentially be recipients of the generated heat and/or electricity.

What do local planning policies say about the selected site?

The site is compliant with the Waste Core Strategy, which makes provisions for non-allocated (or new) sites for waste treatment provided they are for energy from waste, and set in industrial areas close to key settlements. Coleshill is a key settlement and with excellent transport links, industrial processes nearby and in an industrial location, the site fulfils key planning requirements.

Who is responsible for granting planning permission?

Warwickshire County Council is the responsible Local Authority. Once the planning application has been submitted, the Council will consult with statutory consultees to seek their views on the proposed development. Members of the public will also have an opportunity to contact the Council to state their views. The Case Officer will consider the details of the planning application and how it complies with the policies of the statutory development plan, and other considerations including the views of the statutory consultees and members of the public. The Council will then prepare a report to inform the planning committee of the details of the application and make a recommendation as to whether the proposals should be granted planning permission or not, and state the reasons why.

What size would it be?

The Renewable Energy Centre main building will be approximately 88m long and 73m wide, with the highest point of the roof 24m above ground level. The Turbine Hall will measure approximately 30m long by 15m wide x 15.6m high and a Gatehouse 5m long x 3m wide x 3m high. There will be other structures and plant, which will generally be located adjacent to the main building. The flue stack will measure 52m high.

The plans (www.hamshallenergy.co.uk) show the relative sizes. There will be other buildings on site, but these will be smaller by comparison.

The size of the buildings is set into context against other buildings in the location.

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What will the facility look like?
See the plans on the website at (www.hamshallenergy.co.uk)

4. The Technology

How does a gasification facility work?
Gasification describes the process by which material (RDF in this instance) is converted into a synthetic gas (and ash) by using an external heat source in a low oxygen environment. The process is similar to that used for making town gas from coal, which has been done for decades. The syngas is combusted in a high efficiency boiler and the heat generated is used to raise steam for a turbine, where electricity is generated. In addition, a proportion of the heat generated can be supplied for use in external applications, either as steam or very hot water. Heat is recirculated from the gas combustion process to heat up the incoming RDF to create more syngas so only a small amount of fossil fuel (usually natural gas) is required to kick-start the process. Gasification is classed as an Advanced Conversion Technology (ACT).

Where else is this technology used?
Gasification technology has been used for over 100 years, and it was the basis of town gasworks using coal before being replaced by North Sea gas. The technology has also been used with various types of waste for some decades. Its application to mixed wastes, such as RDF, is more recent, although many commercial scale plants have been constructed in the last 20 years.

There are numerous working gasification plants successfully using RDF, particularly in Scandinavia and Japan. The technology proposed for this application has a successful track record of dealing with RDF.

There are a number of similar gasification plants being built in the UK at present, for example in Milton Keynes, Derby, Hull and Levenseat in Scotland.

What are the benefits of gasification?
Gasification is a highly efficient process with very low emissions. It is a naturally low Nitrogen Oxide (NOx) process - NOx is one of the main road traffic pollutants. Gasification plants may also be more adaptable and flexible in the long term to be converted to an even higher efficiency energy conversion process, where the synthetic gas is burnt in an internal combustion engine.

Isn't this just an incinerator?
No. Incineration purely on its own is classified as a waste disposal technology on the waste hierarchy, whereas gasification with an efficient energy recovery system is a **recovery** process, which means energy is recovered for use. In addition, waste incineration works as open combustion in an oxygen rich environment; whereas gasification creates a synthetic gas in the absence of oxygen.

When incineration plants are equipped with energy recovery equipment, the term 'energy from waste' or EfW plant is usually used; this is sometimes also applied to gasification plants with energy recovery systems.

Could the plant explode?

No. The gasification plant works slightly below atmospheric pressure the whole time, because large fans pull air through the system constantly. There is nothing inside the plant to cause an explosion and there is no pressure to release.

Is this technology the same as plasma gasification technology?
No. Plasma gasification uses a very high temperature plasma 'torch' to achieve the conversion process, whereas normal gasification technology uses recycled heat from the combustion of the gas in order to create the syngas. This is one reason why the process can be so efficient.

How efficient is the process?
Gasification is a very efficient method of converting waste fuel into electricity, which can be made even more efficient by also utilising the heat generated by the facility in the local area. The more heat the facility exports, the higher the overall efficiency achieved. The efficiency of the facility will therefore increase over time, as a heat export network is developed, established and expanded.

What is the 'R1' efficiency measure that is sometimes talked about?
The term 'R1 Energy Efficiency Formula', as defined by the EU Waste Framework Directive (WFD) can be used to qualify an incinerator as a 'recovery operation'; however this measure is intended to be applied to incinerators which are dedicated to municipal waste, not RDF as this facility is proposing. In the past, it has most commonly been used by plants on the continent that wish to import waste from other countries in the EU.

The recently revised Waste Framework Directive (WFD) now specifies that incineration facilities dedicated to the processing of municipal solid waste can only be classified as R1 where its energy efficiency is equal to or above an R1 score of 0.65 or above for installations granted a permit after 31st December 2008.

The proposals to be submitted to Warwickshire County Council will not use municipal waste exclusively, but will utilise RDF originating from a number of sources, all of which have already been subject to intensive recycling systems.

It is also important to note that R1 classification is not a requirement to obtain planning consent for a gasification facility. Even so, Rolton Kilbride is confident that the proposals can obtain R1 status during the operational phase, as the facility is designed and intended to be capable of exporting heat to local consumers.

Further information can be found at the following Environment Agency website:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/361544/LIT_5754.pdf

What about the ash left over after gasification – is that harmful?
No. The bottom ash from the gasification process is an inert or inactive material that remains at the end of the cycle and represents around 17% of the intake tonnage. This ash can be recycled in a variety of ways, to comply with the Environment Agency operating permit requirements. Examples of reuse include as a secondary aggregate replacement material, as a sub-base for roads and as material for temporary road construction on landfill sites. As with the rest of the process, the recycling of ash is strictly regulated and the system is audited on a regular basis.

What else is left as a residue from the process?
There is a small amount of APCR (air pollution control residue), which is sometimes called fly ash. APCR is typically a mixture of ash, carbon and lime (or bicarbonate). It is classed as a hazardous

waste because of its high alkaline content from the spent lime, which is used as part of the filtering and cleaning process to remove acid gases. In the past it was disposed of at a hazardous waste landfill but nowadays it may undergo further processing such as washing or stabilisation before being sent to a non-hazardous landfill. It is a small volume of material from the process.

However, landfilling of APCR will be discontinued as new regulations come into effect. Many chemical treatment companies have anticipated this situation, with new facilities being opened which are now capable of achieving 'end of waste' status for the washed and cleaned aggregates contained in the APCR.

There is an amount of ferrous and non-ferrous metal, which can be extracted from the ash or by the mechanical treatment facility (MTF) that will be on site, and sent for reprocessing by a scrap merchant.

5. The Facility and Health

Is the facility safe?
Yes. The facility must adhere to the strict emission limits set out in the Industrial Emissions Directive (IED), which was published in 2010 to combine and replace seven existing EU Directives governing pollution control. Its aim is to achieve significant environmental and public health benefits by reducing emissions across the European Union Member States. If a facility cannot comply with these limits, it will be shut down by the Environment Agency.

The emission limits set in the IED are recognised to be below those considered to be harmful to human health, as they are very low and in some cases close to background levels. They were only decided upon after extensive consultation, taking into account the most up to date scientific health and environmental research.

Who monitors the facility?
The facility must have a valid environmental permit from the Environment Agency to operate. Without it, the plant is not permitted to function. This will be the subject of a separate application and consultation process, which is yet to take place. We'll inform you when the environmental permit application is ready to be submitted.

More information can be obtained from the Environment Agency website:
https://www.gov.uk/guidance/waste-environmental-permits

Many environmental permits have already been issued by the Environment Agency under the IED; there are 26 energy from waste plants already operating in the UK, and many other similar facilities – you can see a list of them here:
https://www.gov.uk/government/collections/industrial-emissions-directive-ied-environmental-permits-issued

What about the chimney stack?
The chimney stack will be 52m high and 2.8m wide at the base.

How has the height of the chimney stack been decided?

The height of the chimney stack has been set after using a special computerised model (known as a stack height dispersion model). It takes into account the local background air quality levels. This makes sure that the emissions from it are dispersed safely to comply with the strict regulations governing air quality. They are dispersed through the atmosphere at high level to avoid the remote possibility of any concentration at ground level.

How have the health risks of the facility been assessed?
The current levels of pollution in the area were taken into account, together with meteorological data for the last five years, which gives information on wind direction and speed. Even allowing for the facility operating at full capacity, and assuming that it releases the maximum level of emissions allowed under the IED, the overall levels in the area would still be below permissible air quality standards.

The air quality assessment has also taken into account other activities around the site which could combine with the facility's own processes to affect the air quality, as well as other potential developments. Even combined with other industrial activities, the air quality will not be compromised as a result of the facility.

In practice, emissions from the facility will be below the IED limits, as the facility operating systems are designed with a significant safety margin. In addition, the facility is unlikely to operate at full capacity for the whole of the time, so the overall level of emissions will be lower than predicted by the computer model.

The assumptions used in the model are the 'worst case' scenario, and the results from this model are used to assess the health risks of the small amount of pollutants from the facility. This showed that the risk from the emissions from the proposal is well below the acceptable UK risk levels, so well below the already stringent safety levels.

Who will monitor the facility for safety and compliance?
Before the facility can operate, it will need to apply and gain an Environmental Permit (EP) from the Environment Agency (EA), which continues to monitor and enforce the safety standards for the lifetime of the facility. This will contain strict environmental and operating conditions, and the EA will only grant the EP if it is sure that local people and the environment will not be harmed.

The EA carries out regular checks on the facility, some of them unannounced. It also has the power to shut the facility down if it believes it is not being operated correctly.

All emissions from the chimney stack will be continually monitored to ensure they comply with the emissions levels set within the IED, and all emissions data will be collected as part of the conditions of the Environmental Permit.

The system is monitored continuously. If the emission levels start to rise, it will be detected by the continuous emissions monitoring system and the facility control system will automatically make adjustments to the plant to reduce them again. In the unlikely event this does not work, the plant will automatically shut down. This safeguarding system is built into the plant, and is a compulsory feature of the control process.

What about starting up and shutting down?
The plant must operate under the same strict permit rules, even when starting up and shutting down. For instance, a minimum temperature (850°C) must be maintained in some parts of the system in order to ensure that pollutants are fully destroyed, and that others are not formed. This is

achieved by the use of independent oil-fired burners, which must be available at all times. If these burners are not available and on standby, then the plant is not allowed to operate.

What comes out of the chimney stack?
The main constituents are water vapour, carbon dioxide, nitrogen and oxygen, with small trace elements of pollutants. These are well below the levels set in the IED and therefore have a negligible effect on human health, as verified by Public Health England, the body in charge of public health in England. A specific air quality assessment for the Hams Hall facility has been carried out as part of the Environmental Impact Assessment. The assessment concluded that the predicted emissions to air from the proposed 52m high flue stack would be insignificant in terms of their potential effects on human health and the assessed nature conservation sites. Furthermore, the emissions from the flue stack would be continuously monitored under the terms of the Environmental Permit. In the event that there is a potential breach of the IED limits, then essential actions can be undertaken or the facility shut down. The assessment must confirm that the emissions do not pose an unacceptable threat to environment or the local community. If the assessment can't do this, then the facility can not and will not be granted planning consent.

It's also important to remember that the energy from waste facility will not be the only source of air pollutants in the local area. Cars, central heating and fires, such as barbeques or woodburners, all contribute. People may worry when they hear talk of emissions of mercury or carbon monoxide. These pollutants are already present in the ambient air, although they are generally at very low concentrations that will have no adverse impact on human health. Although these compounds may be present in very small amounts in the waste gases emitted from the chimney, they will be at such low concentrations that they will not significantly increase the concentrations already present in the ambient air.

What about dioxins and furans?
Dioxins and furans can be produced whenever something is burned, such as cigarettes, barbeques, garden bonfires, industrial furnaces or accidental fires.

The burning or gasification of residual waste in an energy from waste (EfW) plant makes only a very small contribution to existing background levels of dioxins in our environment. Data demonstrates that implementation of stringent regulations for EfW facilities in the EU have resulted in over a 99% reduction in dioxin emissions compared to emissions in 1990; see the following link for supporting information:
http://www.esauk.org/energy_recovery/EfW_Health_Review_January_2012_FINAL.pdf.

This means that both incineration and gasification are no longer a significant source of emissions to air of dioxins and furans, contributing only 2.5% of UK emissions. More significant sources include accidental fires and open burning of waste, the iron and steel manufacturing industry, and crematoria.

According to the UK Institution of Mechanical Engineers "*The dioxin emission limit value required by IED from an EfW plant is a concentration in the chimney of 0.1 ng/m³ (one billionth of a gram per cubic metre at ambient temperature and pressure). This is an equivalent concentration to one third of a sugar lump dissolved evenly in Loch Ness*".

Is it true that people living near such facilities have a higher chance of developing cancer?
There is no scientific peer reviewed evidence to support this claim. No study into the health of communities living near EfW facilities has been able to demonstrate a conclusive link between

emissions from an EfW facility and adverse effects on public health. A 2004 UK Government report which considered 23 reputable studies and 4 review papers into the patterns of disease around EfW facilities concluded that the risk of cancer caused by living near an EfW facility is so remote that it is too low to measure; see the following report for more information:
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69391/pb9052a-health-report-040325.pdf

What studies have been done into the impact of energy from waste on human health and the environment? Where can I find out more information?
A number of scientific reports have been produced in recent years looking into the health effects of modern energy from waste facilities. Some good examples of non-biased studies are:

AEA's review of research into health effects of Energy from Waste facilities undertaken on behalf of the Environmental Services Association concludes that:

"While there is always some uncertainty in the findings of health studies, it is concluded that well-designed EfW facilities as currently operated in the UK are most unlikely to have any significant or detectable effects on cancer incidence, the incidence of adverse birth outcomes (including infant mortality), or the incidence of respiratory disease."
http://www.esauk.org/energy_recovery/EfW_Health_Review_January_2012_FINAL.pdf

The Health Protection Agency (the forerunner to Public Health England) review of research undertaken to examine the suggested links between emissions from municipal waste incinerators and effects on health concludes that:

"While it is not possible to rule out adverse health effects from modern, well-regulated municipal waste incinerators with complete certainty, any potential damage to the health of those living close-by is likely to be very small, if detectable. This view is based on detailed assessments of the effects of air pollutants on health and on the fact that modern and well managed municipal waste incinerators make only a very small contribution to local concentrations of air pollutants. The Committee on Carcinogenicity of Chemicals in Food, Consumer Products and the Environment has reviewed recent data and has concluded that there is no need to change its previous advice, namely that any potential risk of cancer due to residency near to municipal waste incinerators is exceedingly low and probably not measurable by the most modern techniques. Since any possible health effects are likely to be very small, if detectable, studies of public health around modern, well managed municipal waste Incinerators are not recommended."
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/384592/The_impact_on_health_emissions_to_air_from_municipal_waste_incinerators.pdf

A study published by scientists from King's College London, Imperial College and the National Physical Laboratory found a minuscule contribution to airborne levels of trace metals and particulate matter from EfW plant. Dr Mark Bloomfield commented on the study as follows:

"At four of the six sites around which the study was based, no contribution could be detected. At two of the six sites, metal ratios consistent with municipal waste incinerator emissions were detected 0.2% and 0.1% of the time. The contribution from the incinerator was no more than about 0.5% of ambient levels, and generally much lower than this. While this was entirely to be expected, it is useful

to have confirmation using UK data that uses up to date techniques. The fact that the analysis technique was able to detect a slight contribution (which may have been due to the waste incinerator emissions) is reassuring. If there had been a more significant contribution, this technique would have been able to pick it up."
http://ac.els-cdn.com/S1352231015300753/1-s2.0-S1352231015300753-main.pdf?_tid=c06af516-2eb3-11e5-bb36-00000aab0f6b&acdnat=1437378706_c24ab50baf10556cc9e188aec9a4bd5e

Defra has also produced document entitle "Energy from waste – A guide to the debate", which aims to provide a starting point for discussions about the role energy from waste might have in managing waste:
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/284612/pb14130-energy-waste-201402.pdf

What about very fine particles (nano particles)?
The emissions limit for particles covers particles of all sizes, including 'nano-particles', and the emissions of particles from the stack will be continuously monitored. The air quality assessment takes a worst-case approach, assuming the entire particulate emission first to be PM10 (particles with a diameter of less than 10 microns – so including nano-particles), then also assuming the entire particulate emission to be PM2.5 (particles with a diameter of less than 2.5 microns– also including nano-particles), which are generally considered to be the most dangerous particles. In both cases, emissions from the plant will increase local concentrations by less than 1% of the legal limits, an amount deemed "insignificant" by the Environment Agency.

In contrast, 50-60% of ambient air particles and 90% of road vehicle emissions are in the PM2.5 range; nearly all the particles emitted from diesel engines, for example, are less than 1 micron in size.

Will there be a visible plume?
Sometimes a plume may be visible from the stack. However, it is not smoke – it is condensed water vapour. However, for the vast majority of the time nothing at all will be seen, as the condensed water is not visible except on very cold days.

6. The Environment

What impact will this facility have on the environment?
The facility will not be granted planning consent unless it can be demonstrated that it will not have a significant impact to the environment. It is the responsibility of the applicant for any facility to demonstrate this to the satisfaction of the Local Planning Authority, which consults a number of other organisations (such as the Environment Agency) to ask for their opinion on the application.

The accepted method for an applicant to illustrate the effects of any facility is to perform an Environmental Impact Assessment.

What is an Environmental Impact Assessment (EIA)?
An Environmental Impact Assessment (EIA) is the process that assesses the potential effects on the environment of a proposed development or project. If the likely effects are unacceptable, measures

in design or other mitigation can be put in place to reduce or avoid those effects. If this is not possible, then the development will not be allowed to proceed.

The potential environmental effects are systematically studied and include visual impact, traffic, air quality, noise, dust, odour, the effect on human health and flood risk to the site (amongst others).

Who does the EIA and how do you ensure it is independent?
The EIA is prepared by professional technical specialists, who are subject to the professional and ethical standards of their relevant industry body. The EIA is then peer reviewed by other environmental advisors who are a corporate member of IEMA (The Institute of Environmental Management and Assessment).

The findings of the EIA are reviewed by the relevant technical specialists within the Local Planning Authority and also subject to comment by the statutory consultees (i.e. Natural England, Historic England, Highways England, etc.). It is also open to public scrutiny.

What about the visual impact? Would the plant be visible from miles away?
The visual impact of the proposed facility is being evaluated as part of the Environmental Impact Assessment, and it will accompany the planning application when this is submitted. Part of the assessment process is intended to gauge and minimise the overall visual impact, by adapting the design of the building to the surroundings. A belt of trees to the south of the site will help to screen the facility from view, alongside other industrial units, railway line, the River Tame and the road network including the M42.

How much traffic will there be? How many heavy good vehicles will be coming and going?
It is anticipated that RDF will be delivered to the site via a combination of residual waste collection vehicles (RCVs) that will typically be 18 to 22 tonnes (gross weight) or articulated bulk haulage vehicles from nearby RDF transfer stations. The REC is expected to generate up to 88 heavy goods vehicle (HGVs) movements per day, which is the equivalent of 38 deliveries per day to site. In addition there would be about 7 deliveries and collections of processing materials and residues per day. There would also be car journeys associated with approximately 20 staff working in a three-shift pattern.

What measures are being taken to avoid creating traffic jams or more congestion?
Traffic analysis showed the numbers of vehicles servicing the REC and the warehouse would not have a significant impact on the road network, and would be unlikely to increase the risk of accidents. Recognising that traffic is a serious concern for many people, the proposals have taken into account both construction and operational traffic and put forward mitigation measures, such as a Construction Traffic Management Plan. Once the facility is operational, a Travel Plan for staff and visitors will be in place to minimize the number of vehicle movements. HGV deliveries are expected to be spread evenly throughout the 12 hour period and there is unlikely to be a peak in movements. However, if necessary, deliveries may be pre-booked into the plant prior and scheduled to avoid busy times during the morning and evening.

What are the proposed routes to and from the facility? Can delivery vehicles take short cuts?
The actual routes have yet to be agreed. However, vehicles will use the public highway using the key transport links such as the M42 to deliver. Given the site is in an established industrial area, the roads nearby have been designed to cater for HGV movements, so that short cuts are discouraged. The site is located close to the strategic road network and accessible along Faraday Avenue and the

A446, which are both dual carriageways and are also the most direct route to the M42 and M6, so it is unlikely vehicles would opt to use local roads as shortcuts.

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Has rail been considered for bringing in the RDF?
No, as this is is not a practical or economically viable option, given there needs to be waste loading facilities where the waste arises. Since the waste may come from several different sources, this is not cost effective. Finally, the waste may arise from different places as contracts change, so building rail infrastructure is no guarantee that it can be used in the future. The feasibility may be reviewed once contracts for waste are in place, assuming planning permission is granted.

What are the delivery and collection hours proposed for the facility?
Monday to Fridays – 7am to 7pm
Saturday – 7am to 2pm
Sundays – None

What about the other traffic on the road?
Other traffic on the road has been considered as part of the traffic assessment. It was concluded that deliveries and other vehicles travelling to and from this facility would not interfere or impact on other road users.

Does the EIA take into account proposed new developments too?
During the pre-application process, Warwickshire County Call indicated that there were no new schemes currently in the planning system that needed to be assessed as part of the planning application. However, the traffic analysis looked at the potential for a growth in traffic and still concluded that the traffic to and from the facility would not impact on the normal flow of traffic around the road network.

More traffic means more diesel fumes. What will be done to ensure that the air quality is not affected by the facility?
The results of the Air Quality Assessment, based on predicted traffic generated from the proposed development and other nearby development such has indicated that air quality would not be significantly adversely affected as it represents only a minor increase to the overall traffic in the local area.

The impact of additional traffic resulting from facility has been considered and is not significant so that its impact on the surrounding air quality is negligible.

What noise can be expected?
The Noise Assessment shows that whilst some noise is to be expected, the industrial setting means that it is unlikely to impact on residential properties. The noise assessment found that the noise levels associated with the operation of the proposed REC would be below background levels at the nearest properties both during day and night periods., creating a negligible impact.

Will it be noisy during construction?

Noise will always be kept to a minimum but the industrial setting means that construction noise is unlikely to be heard over existing industrial processes by neighbouring communities. The application contains standard best practice measures to reduce noise and mitigate any adverse impacts.

What about odour?
The facility is very unlikely to cause any detectable odour issues. The Odour Risk Assessment concluded that the effects would be negligible. In two locations (off Church Lane), it was found that the effects would be slight, but only when the set of assumptions used were to model a worst-case assessment.

There will be no outside storage of material.

For the gasification plant, the RDF is unloaded within a closed reception hall, with fast acting roller shutter doors that are kept shut (except to let delivery vehicles in and out). The reception hall is maintained at a negative air pressure by use of air intake fans located within the hall itself. These fans channel the air through ductwork to the gasification chamber, where it is used to burn the synthetic gas, which has been generated as part of the process. As a result, any odours are destroyed within the gasification chamber.

Does the process extract water from or discharge water into waterways, such as the River Tame?
No. The gasification process does not take water from or discharge water into any waterways, as it is a closed system.

7. Local Community Benefits

How will the facility benefit the local community?
Managing waste (as RDF) locally will help to potentially reduce waste management and transport costs for the Local Authority, which will enable funds to be redirected to other services; the same factor will also potentially reduce the operating costs of local businesses, thus supporting their economic viability and potential growth.

Energy in the form of heat and/or electricity could be routed to nearby businesses, similarly reducing their operating costs and thus supporting their economic viability and potential growth.

The facility will reduce greenhouse gas emissions (when compared to fossil fuel energy generation) thus assisting in combating the effects of climate change and meeting European and national targets for renewable energy generation.

What jobs will be created - how will local people benefit?
There will be employment opportunities for up to 20 people for the REC, which will need a range of skills and lead to potential apprenticeship opportunities. In general, people will be recruited from the surrounding area, as it is important that the staff operating the facility live locally. There will also be indirect employment for local deliveries, maintenance and support.

What about construction phase employment opportunities?
There will be some local jobs created during the construction of the plant, which will largely be for the foundations, structures and building works. The gasification and associated process equipment comes mostly from specialist suppliers, and is pre-fabricated or manufactured remotely. It is brought to site and assembled by specialist teams familiar with the equipment. There will also be local supply chain opportunities for many supporting trades and functions, such as catering, accommodation, transportation, plant and equipment hire, maintenance, small fabrication services and other essential site support functions such as security and safety staff and other consultants. A 'meet the

buyer' event will be held by the selected construction company prior to site start, in order to maximise local employment and supply opportunities.

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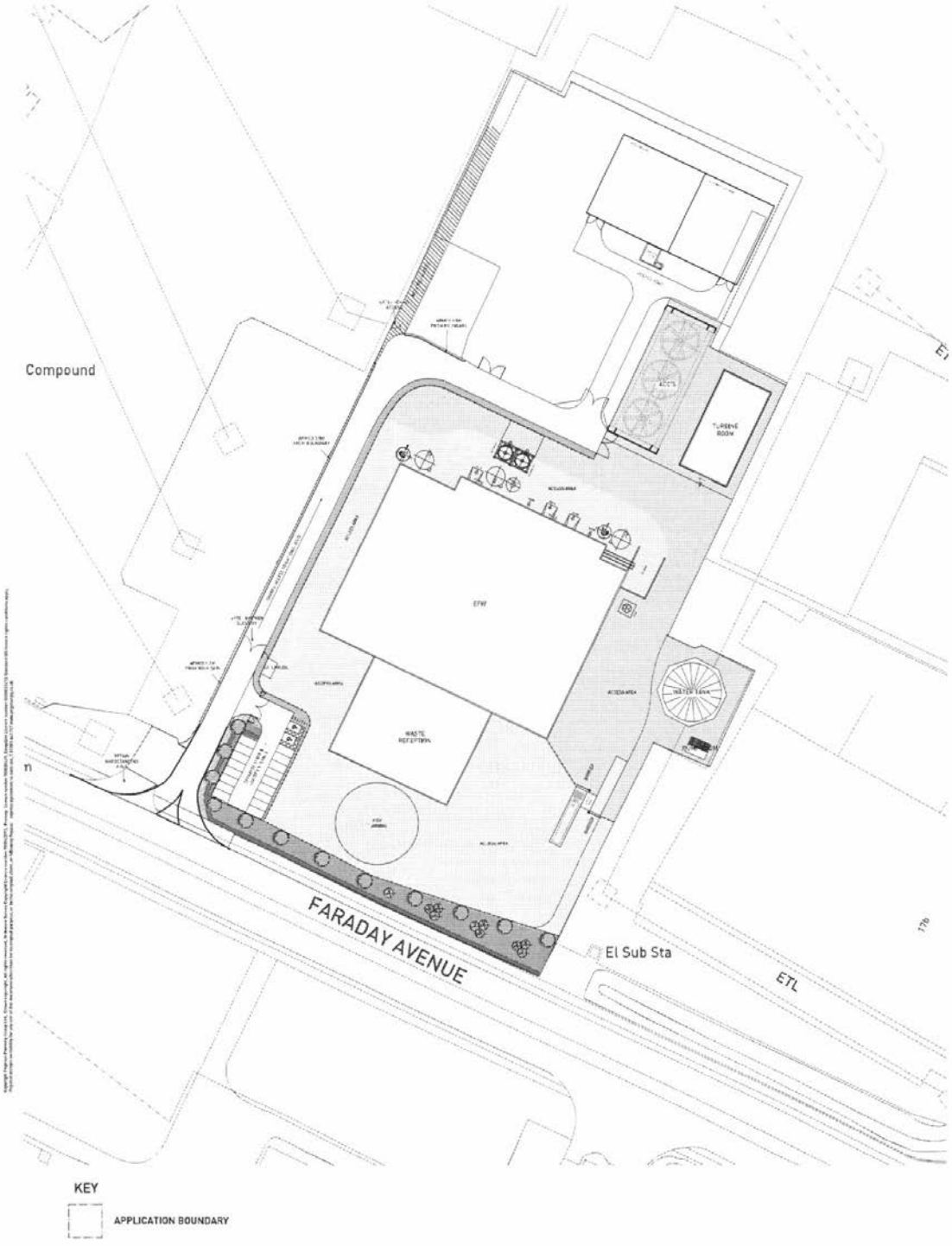
8. Planning and Public Consultation

How long will the planning process take?
The statutory consultation period is for 16 weeks, which starts once the application has been submitted to Warwickshire County Council, and accepted by the planning department as being complete and containing all relevant sections and data. The application is then put out for comment to a list of statutory consultees (such as the Environment Agency), as well as being made available for comment by other consultees and members of the public (it will be available online).

Where can I go for more information?
You can contact us on 01869 715090, email info@hamshallenergy.co.uk or visit www.hamshallenergy.co.uk

What if I disagree with the proposals?
Once the application has been submitted you can contact will have the opportunity to make representation to Warwickshire County Council's Planning Department, or contact the applicant directly – our details are above.

APPENDIX B



HAMS HALL, FARADAY AVENUE - **SITE LAYOUT**

APPENDIX C

Pegasus Group

PROPOSED RENEWABLE ENERGY CENTRE
HAMS HALL DISTRIBUTION PARK, COLESHILL, WARWICKSHIRE

SUMMARY OF POTENTIAL FEEDSTOCK

Introduction

1. This Summary of Potential Feedstock provides an overview of the anticipated source of waste feedstock to the proposed Renewable Energy Centre (REC) on land at Hams Hall Distribution Park, Coleshill, Warwickshire. It should be noted that (and as stated in the DEFRA Guidance[1]) the approach to delivering energy from waste facilities in the UK is predominantly market-led, such that a developer will only build a facility if it is economically viable, including factors such as there being sufficient waste feedstock to operate the facility; this serves to control the capacity of facilities being delivered.

2. The anticipated source of the waste feedstock is primarily from within Warwickshire, although the planning application seeks the flexibility to accept waste from beyond this catchment to ensure a continuous feedstock supply to meet operational needs. However, at this early stage in the development process it is not possible to be precise about the sources of waste, as waste providers are unwilling to enter into negotiations with a facility's developer prior to their securing the necessary consents and funding. In addition, waste contracts will become available/up for renewal at different times and for differing periods, such that the availability of waste contracts will change prior to the facility being operational. Accordingly, this Summary is based on an assessment of 'potential' waste feedstock based on initial desk based research undertaken on behalf of the developer to assess the operational and economic viability of the scheme.

3. The purpose of this Summary is to provide details of the potential sources of waste feedstock to the proposed REC in the context of applying the proximity principle at both the national and local level.

National Context

4. At the national level, the DEFRA WMPE[2] identified that the volume of Refuse Derived Fuel (RDF) (i.e. the residual waste left after all the practical recycling has been undertaken) exported from the UK has grown significantly, from zero in 2009 to nearly 900,000 tonnes in 2012. Similarly, the DEFRA Guidance references a 2011 European report that identified that even when taking into account the consented yet unbuilt capacity, there remains an estimated 7 million tonnes/annum (mtpa) capacity gap in residual waste treatment within Great Britain; furthermore, that the UK's ability to manage RDF is insufficient to meet the expansion in materials produced and passing out of Mechanical and Biological Treatment Plants (MBTs) which extract the recyclate.

5. More recently, the Environment Agency and Lets Recycle reported that UK exports of RDF to the continent are increasing, mostly due to a lack of viable options for processing domestically. The total exports of RDF were just under 1 million tonnes (mt) in 2012, whilst in 2013 this figure increased to 1.6 mt, in 2014 it was 2.5 mt, 2015 it was circa 3 mt and in 2016 the figure is forecast to be around 4 mt.

6. It is therefore clear that there is a significant and growing RDF feedstock nationally. It is also clear that the UK is failing to accord the underlying objectives of the Waste Framework Directive in applying the proximity principle at member state level.

7. Furthermore, as a consequence of the continued exportation of RDF abroad, the UK is

[1] Energy from Waste: A guide to the debate, Department for the Environment, Food and Rural Affairs (DEFRA), February 2014
[2] Waste Management Plan for England, Department for Environment, Food and Rural Affairs (DEFRA) December 2013

expending energy and costs in the transportation/shipment of waste and failing to make the best use of this waste as an energy resource which could not only support the UK meeting its renewable energy targets, but also reduce the reliance of fossil fuels and support national energy security; therefore, the continued exportation of RDF is clearly not in the interests of achieving the best economic and environmental outcome.

Local Context

8. At the local level, the Warwickshire Waste Core Strategy (WWCS)[3] identifies that between 35,000 to 50,000 tonnes per annum (tpa) of the County's residual waste is exported to an Energy from Waste (EfW) facility in Coventry, with a further 40,000 tpa of the County's residual waste to be exported to the proposed (now operational) EfW facility in Staffordshire. Therefore, Warwickshire County Council's existing waste management contracts provide for the export of waste from the County. Furthermore, in exporting this residual waste the County does not benefit from the energy (heat and/or power) that could be generated to support local homes and businesses.

9. In terms of the predicted waste arisings within the County, the WWCS identifies[4] that:

   - Municipal waste arisings are predicted to grow over the plan period, albeit, '*assuming*' that the aspirational rates for recycling stated are achieved, the residual municipal waste arisings are predicted to fall:
     - 2020/2021 – 288,464 tpa falling to 115,962 tpa at 60% recycling
     - 2027/2028 – 300,206 tpa falling to 99,068 tpa at 67% recycling

     The residual waste will need to be treated, i.e. through energy recovery, or disposed of to landfill; figures may be more if aspirational recycling rates are not achieved.

   - Commercial and Industrial (C&I) waste arisings are also predicted to grow over the plan period:
     - 2020/2021 – 636,792 tpa
     - 2027/2028 – 709,146 tpa

     This C&I waste will need to be either recycled, treated, i.e. through energy recovery or disposed of at landfill.

10. The Council's assessment of the waste management capacity gap notes a recycling /recovery capacity for municipal and C&I waste of 1,360,000 tpa; however, the quantum of residual C&I waste, i.e. excluding recycling and recovery activities is not stated. Notwithstanding, the proposed REC would only accept residual waste that cannot be economically and/or physically recycled. It should also be noted that the WWCS conclusion that no additional waste management facilities are required is set in the context of 'meeting' landfill diversion targets; however, these targets should be viewed as the minimum as the waste hierarchy places disposal to landfill is the least favourable option.

11. Therefore, based on figures generated by Warwickshire County Council there is a significant and growing waste feedstock generated from within the County, most notably from the C&I waste stream.

12. Given this local context, the applicant has undertaken an independent study of the potential feedstock within the locality of the proposed REC. The purpose of the applicant's study was to ensure that there would be sufficient residual waste feedstock for the continuous operation of the proposed REC to assess its operational and economic viability. A Feedstock Supply Study was carried out in January 2016 using up to date available information; whilst the contents of this report are commercially confidential, a summary of the approach and key findings is given below.

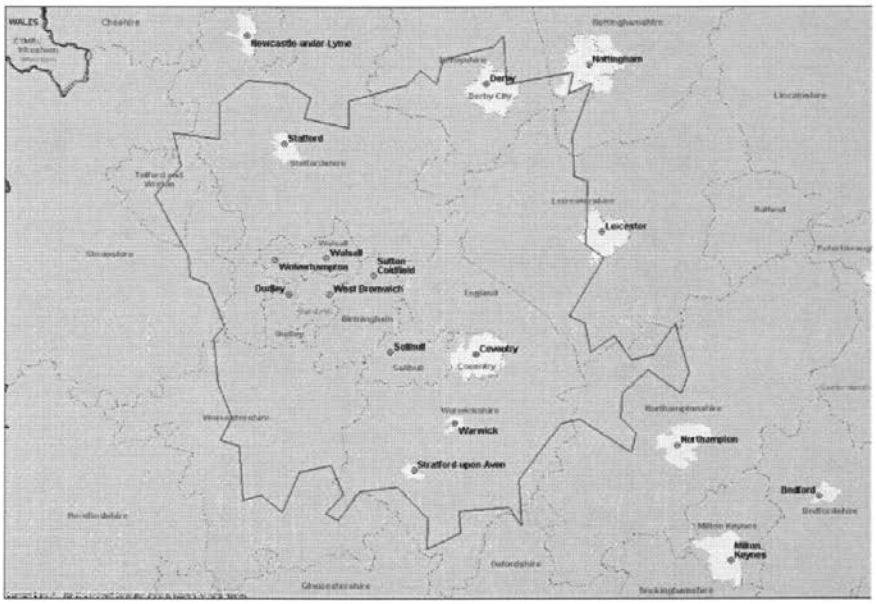
[3] Warwickshire Waste Core Strategy (2013-2028), adopted July 2013

[4] Information extrapolated for example years from Waste Core Strategy tables 4.2 and 4.5 respectively

13. The study focused on commercial and industrial waste arisings, being considered the most likely source of waste feedstock to the proposed REC. The study area extended beyond Warwickshire into neighbouring counties and districts as these may have sources of waste arisings closer to the proposed REC than those areas to the far south of Warwickshire, thereby reducing the distances over which waste is transported. This is particularly relevant to a developer as the greater distance waste travels, the greater transport costs, which in itself serves to support more locally sourced feedstock.

14. The study initially identified 7.25 mtpa of commercial and industrial waste arisings generated within Warwickshire and adjacent waste planning authorities. The figures were derived from a variety of local authority sources (i.e. Waste Local Plans/Core Strategies, ADAS Reports 2006 etc.) and represented varying baseline dates, definitions and time scales, and included adjacent authorities at distances for which waste transportation may be cost-limited and therefore this assessment was considered at best indicative. Nevertheless, it demonstrated that there was a significant volume of waste generated annually within a broadly defined area centred on Warwickshire.

15. Accordingly, a refined assessment was undertaken using information drawn from the Environment Agency, based on quarterly returns from waste management operators and focused on a study area defined by the 1-hour drive time from the proposed site.



16. The assessment identified total of 183 of waste management sites, operated by a total of 132 different waste management operators, within the 1-hour drive time of the proposed REC. Analysis of the quarterly returns identified circa 2.67 mtpa of waste is received by the waste management sites, of which circa 2 mtpa is disposed of within the area. Of this 2 mtpa, circa 26% is currently incinerated (of which approximately 50% is municipal waste), circa 17% is sent to landfill, circa 36% is recycled or recovered, circa 15% is transferred to other facilities, and circa 6% is unknown.

17. In summary, the study identified circa 1 mtpa of potentially suitable waste feedstock within the 1-hour drive time of the proposed REC, albeit some may be unsuitable materials for gasification. An assessment of potential competitors, comprising

operating and consented facilities, indicated many of these operators are contracted to treat municipal wastes and/or specific waste streams from outside the area, such that there remains sufficient residual suitable feedstock to the proposed REC.

Summary and Conclusions

18. The purpose of this Summary is to provide some clarity as to the potential sources of waste feedstock to the proposed REC. Notwithstanding this purpose, it is emphasised that there is nothing in legislation or the proximity principle that prevents waste planning authorities from accepting waste from outside their area; conversely, this may represent the best economic and/or environmental outcome, e.g. waste transported from within the 1-hour drive time.

19. At the national level there is a significant and increasing volume of waste/RDF is being exported to the continent for treatment, such that the UK is failing to accord the proximity principle at member state level. Furthermore, it was demonstrated that the continued exportation of RDF is not in the interests of achieving the best economic and environmental outcome, i.e. renewable energy targets, energy supply and security, reliance of fossil fuelled power and transport/shipment costs.

20. At the County level, analysis of Warwickshire County Council's data indicated that there is a significant and growing waste feedstock arising from within the County, most notably the commercial and industrial waste stream. It was also noted that WCC currently export their municipal waste to neighbouring Coventry and Staffordshire, and therefore do not benefit from the energy generated that could be used to support local homes and businesses.

21. Analysis of Environment Agency data from waste operators within the 1-hour drive time of the proposed REC identified circa 1 mtpa of potentially suitable waste feedstock.

22. In conclusion, it has been demonstrated that there is a significant volume of potentially suitable waste arisings not only nationally, but also generated within Warwickshire County and also the 1-hour drive time.

PB/AST/24 October 2016