

DATED 10 November 2015

NOTTINGHAMSHIRE COUNTY COUNCIL

-and-

HARWORTH ESTATES INVESTMENTS LIMITED

- and -

BILSTHORPE WASTE LIMITED

**AGREEMENT AND
PLANNING OBLIGATION**

Under Section 106

Town and Country Planning act 1990

Relating to land at Bilsthorpe Business Park, off Eakring Road, Bilsthorpe, Nottinghamshire

WALKER MORRIS

King's Court
12 King Street
LEEDS
LS1 2HL

Tel: 0113 2832500

Fax: 0113 2459412

Ref: CAS/PEE.195-1

THIS AGREEMENT is made the 10th day of November

2015

BETWEEN: -

- (1) **NOTTINGHAMSHIRE COUNTY COUNCIL** of County Hall, Loughborough Road, West Bridgford, Nottingham, NG2 7QP ("**County**") of the first part; and
- (2) **HARWORTH ESTATES INVESTMENTS LIMITED** (Company No. 7532134) whose registered office is situate at AMP Technology Centre, Advanced Manufacturing Park, Brunel Way, Catcliffe, Rotherham S60 5WG ("**Owner**") of the second part; and
- (3) **BILSTHORPE WASTE LIMITED** (Company No. 07705693) whose registered office is situate c/o Harworth Estates Property Group Limited of AMP Technology Centre, Advanced Manufacturing Park, Brunel Way, Catcliffe, Rotherham S60 5WG ("**Developer**") of the third part

together "**the Parties**" and reference to "**Party**" shall be construed accordingly.

1 DEFINITIONS AND INTERPRETATION

1.1 In this Agreement the following words and phrases have the following meanings unless the context otherwise demands: -

"1990 Act"	means the Town and Country Planning Act 1990 as amended;
"Agreement"	means this Deed of Agreement;
"Appeal"	means the call-in appeal (PINS Reference No. APP/L3055/V/14/3001886) in relation to the Secretary's of State's decision to call-in the Application under his powers in Section 77 of the 1990 Act;
"Application"	means the planning application validated by the County on 29 November 2013 and given reference 3/13/01767/CMW (County reference ES/2950) for the grant of planning permission for the proposed development of the Bilsthorpe Energy Centre (BEC) to manage unprocessed and pre-treated waste materials through the construction and operation of a Plasma Gasification Facility, Materials

Recovery Facility and Energy Generation Infrastructure together with supporting infrastructure;

"Commencement of Development"

means the date upon which the Development shall commence by the carrying out on the Land pursuant to the Planning Permission of a material operation as specified in Section 56 of the 1990 Act **Save That** the term "*material operation*" shall not include operations in connection with any work of or associated with demolition site clearance remediation works environmental investigation site and soil surveys erection of contractors work compound erection of site office erection of fencing to site boundary laying of any access road or service media and reference to "**Commence Development**" shall be construed accordingly;

"Development"

means the development of the Land in accordance with the Planning Permission together with any Section 73 Permission;

"Employee Travel Information Pack"

means the information pack to be provided to each employee of the Development which shall include information on public transport, walkways and cycleways in Bilsthorpe which provide access to the Land;

"Energy Centre"

means the part of the Development consisting of the energy centre to manage unprocessed and pre-treated waste materials;

"First Occupation"

means the first Occupation of the Development excluding all subsequent occupation;

"Heritage Interpretation Scheme Contribution"

means the sum of £16,000.00 (sixteen thousand pounds) Index Linked to be paid to the County by the Owner and applied by the County towards the provision of a scheme to draw attention, raise awareness and improve intellectual access to the heritage asset of the identified vistas across the 18th century historic parkland setting of Rufford Abbey by undertaking an interpretation scheme (such as erecting

interpretation boards, providing a web based information document, or an alternative scheme which may be agreed with the County) and provide for 10 years future maintenance of the interpretation scheme, the need for which is required in order to assist mitigating impacts of the Development;

"HGV"

means a mechanically propelled road vehicle that is: -

1. of a construction primarily suited for the carriage of goods or burden of any kind; and
2. designed or adapted to have a maximum weight exceeding 7,500 kilograms when in normal use and travelling on a road laden;

"HGV Routing Strategy"

means a strategy relating the routing of HGV's between the Land and the surrounding highway network that is to be agreed as part of the Travel Plan and as is indicatively shown at Figure TP6 of the Travel Plan subject to any variations that may be agreed between the Owner and the County from time to time;

"Index"

means the All Items Retail Price Index published by the Office for National Statistics contained in the Monthly Digest of Statistics (or contained in any official publication substituted therefore) or such other index as may from time to time be published in substitution therefore;

"Index Figure"

means the Index for the month preceding the date upon which the Heritage Interpretation Scheme Contribution is paid;

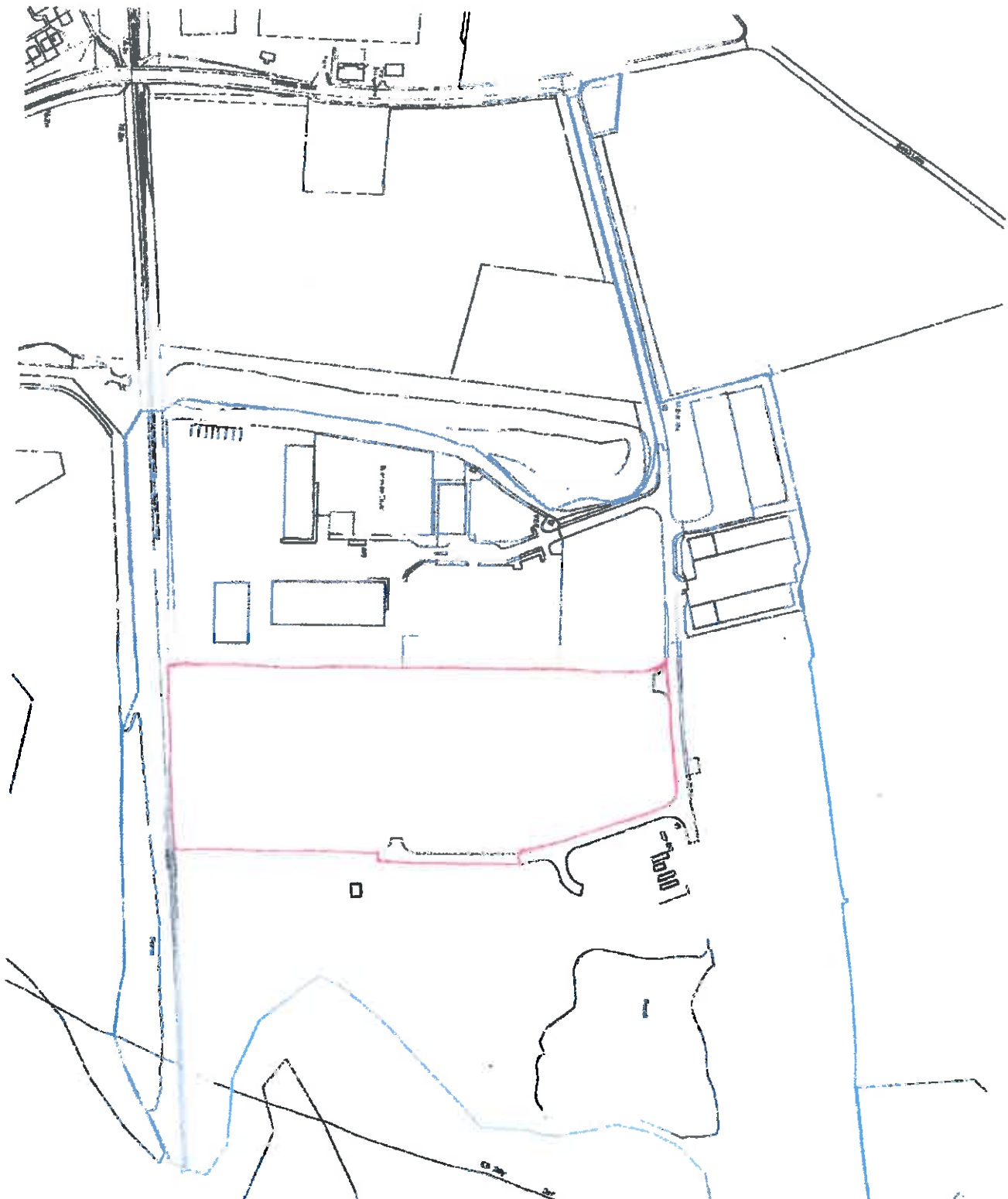
"Index Linked"

means each payment has been adjusted upwards only by applying thereto the percentage change in the Index from the date hereof to the Index Figure;

"Interest"

means interest 4% above base rate of Barclays Bank from time to time;

"Land"	means all that land at Bilsthorpe Business Park, off Eakring Road, Bilsthorpe, Nottinghamshire shown for identification purposes only edged red on Plan 1;
"Occupation"	means occupation for the purposes permitted by the Planning Permission but not including occupation by personnel engaged in the construction, fitting out or decoration or occupation for marketing or display or occupation in relation to security operations and reference to "Occupied" and "Occupy" shall be construed accordingly;
"Planning Obligations"	means the planning obligations to be observed and performed by the Owner as set out in this Agreement;
"Plan 1"	means the plan marked 'Plan 1' annexed to this Agreement;
"Plan 2"	means the plan marked 'Plan 2' annexed to this Agreement;
"Planning Obligations"	means the obligations, conditions and stipulations set out in the First Schedule and reference to "Planning Obligation" shall be construed accordingly;
"Planning Permission"	means a planning permission granted pursuant to the Appeal;
"Secretary of State"	means the Secretary of State within the Department for Communities and Local Government or any substitute or any Inspector appointed by him;
"Section 73 Permission"	means a planning permission granted by the County pursuant to section 73 of the 1990 Act which modifies deletes or replaces any condition attached to the Planning Permission;
"Statutory Undertaker"	means any company corporation board or authority at the date of this Agreement authorised by statute to carry on an undertaking for the supply of telephone and television communications electricity gas water or drainage and any authorised successor to any such undertaking;



Blithorpe Energy Centre
 The plan shows the layout of the site and the location of the buildings and other structures.
 It is a site plan for the Blithorpe Energy Centre.



A
 1st floor plan
 1st floor plan
 1st floor plan

Blithorpe Energy Centre
 Red Line Plan

Blithorpe Energy Centre
 Red Line Plan

architects

Client	Blithorpe Energy Centre
Architect	architects
Date	2012
Version	1.0
Project	Blithorpe Energy Centre
Sheet	1 of 1

882
 1/2000

Bilsthorpe, Nottinghamshire

ENERGY CENTRE

WADER MITIGATION PLAN

KEY



Mitigation area



BEC boundary



Inundated scrape



Deeper areas of scrape

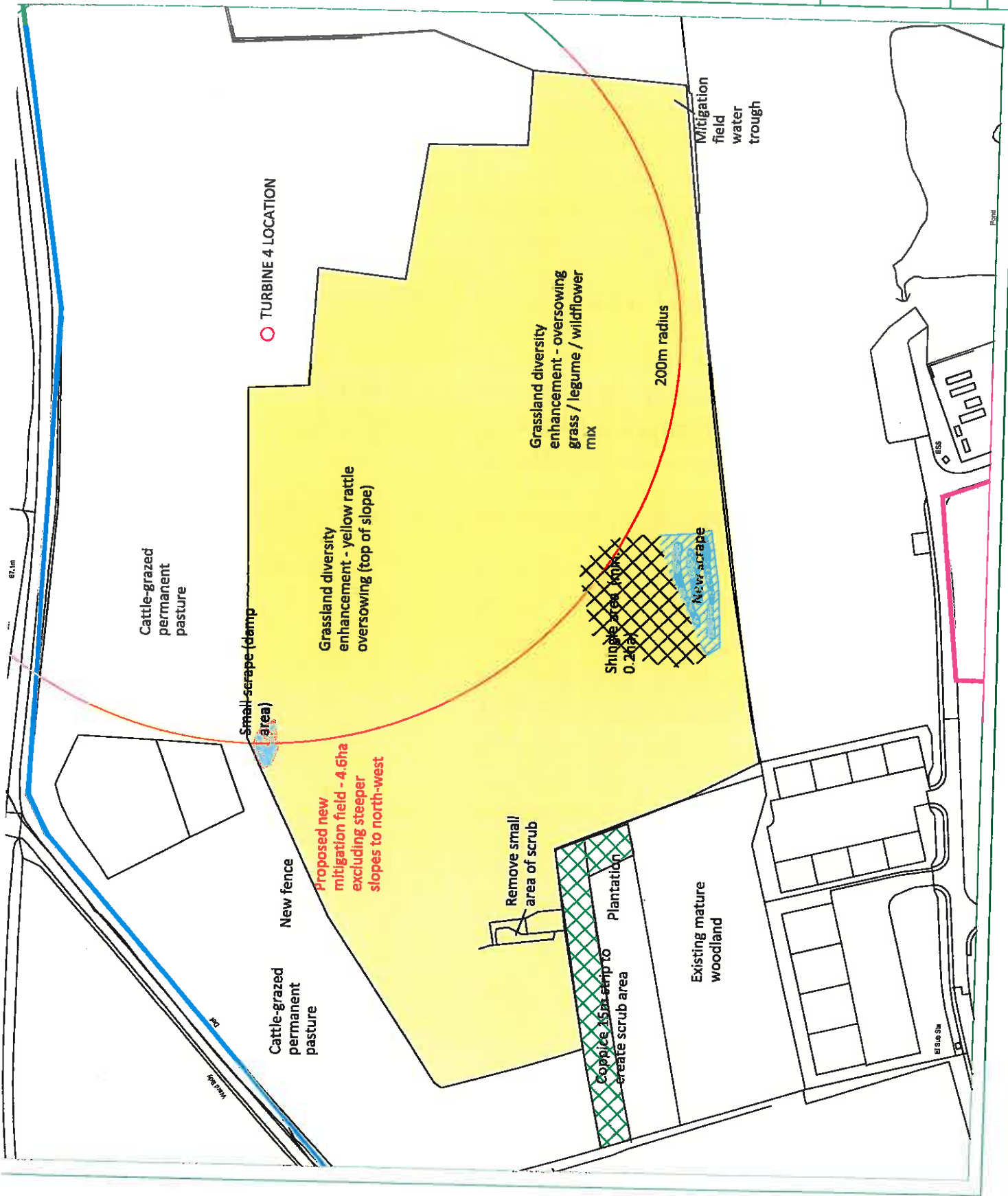
SR *SR*

argus ecology

The Greenhouse, Greencroft Industrial Park,
Anfield Plain, Co. Durham, DH9 7XN

Figure.1: Mitigation proposals

Version 3.0, 15/09/2015



"Travel Plan"

means the Interim Travel Plan dated 9 August 2013 prepared by Axis in accordance with the DfT guidance 'The Essential Guide to Travel Planning' and 'Good Practice Guidelines: Delivering Travel Plans through the Planning Process' attached as the Third Schedule to be implemented by the Owner in accordance with paragraph 3 of the First Schedule being the objectives and initiatives to be undertaken to manage and monitor the delivery of sustainable travel to and from the Development to include, inter alia, the HGV Routing Strategy and amended as necessary by prior written agreement with the County;

"Travel Plan Commencement Date"

means the date that the Development is first Occupied;

"Travel Plan Co-ordinator"

means a travel plan co-ordinator or travel plan co-ordinators to be appointed by the Owner and approved in writing by the County in relation to the Travel Plan;

"Wader Mitigation Area"

means the areas shown shaded yellow on Plan 2;

"Wader Mitigation Plan"

means the wader mitigation plan dated 15 September 2015 prepared by Argus Ecology attached as the Fourth Schedule to be implemented by the Owner in accordance with paragraph 2 of the First Schedule being the objectives and initiatives to be undertaken to monitor and address likely adverse effects on ground nesting waders within the Wader Mitigation Area as a consequence of the Development;

"Working Day"

means any day except Saturday Sunday or a bank holiday and reference to "Working Days" shall be construed accordingly.

1.2 Clause headings and contents list are for reference only and shall not affect the construction of this Agreement.

1.3 The Schedules and Plans shall be incorporated into and form part of this Agreement.

- 1.4 Where more than one person is included in the expressions "the County" and "the Owner" and "the Developer" agreements and obligations expressed to be made or assumed by such party are made or assumed and are to be construed as made or assumed by all such persons jointly and each of them severally.
- 1.5 Any covenant by the Owner and or the Developer not to do any act or thing shall be deemed to include a covenant not to cause permit or suffer the doing of that act or thing.
- 1.6 The masculine and the feminine and neuter gender include each of the other genders and the singular includes the plural and vice versa.
- 1.7 A reference to an Act of Parliament refers to the Act and shall include any modification, extension or re-enactment of that Act for the time being in force and shall include all instruments, orders, plans regulations, permissions and directions for the time being made, issued or given under that Act or deriving validity from it.
- 1.8 A reference to a clause sub-clause schedule paragraph or recital (or any part of them) shall (unless the context otherwise requires) be references to a clause sub-clause schedule paragraph or recital contained in this Agreement.
- 1.9 Unless this Agreement states otherwise, any reference to any legislation (whether specifically named or not) includes any modification, extension, amendment or re-enactment of that legislation for the time being in force and all instruments, orders, notices, regulations, directions, byelaws, permissions and plans for the time being made, issued or given under that legislation or deriving validity from it.
- 2 RECITALS**
- 2.1 The County is a local planning authority for the purposes of Part 3 of the 1990 Act and is the highway authority for the area within which the Land is situated and is the authority by whom the obligations created in the First Schedule are enforceable.
- 2.2 The Owner is freehold owner of the Land and the Wader Mitigation Area registered with HM Land Registry under title registration numbers NT346242 (which title also includes land that is not the subject of the Application) and NT419911.
- 2.3 The Owner hereby confirms that in the case of the Wader Mitigation Area, it will not be inhibited from performing obligations herein notwithstanding that the other land referred to under title registration number NT346242 is not bound by this Agreement.

- 2.4 The Developer has an interest in the Land by way of an agreement to acquire a leasehold interest and rights thereover contained in an option for lease dated 14 August 2011 as varied on 5 December 2012 and 9 January 2014 and made between the Owner and the Developer.
- 2.5 The Application was submitted to the County on behalf of the Developer for planning permission for the Development.
- 2.6 On 18 November 2014 the County's Planning and Licensing Committee resolved to grant conditional planning consent for the Development subject to the completion of this Agreement and conditions.
- 2.7 By letter dated 19 December 2014 the County was notified that the Secretary of State had decided to call-in the Application.
- 2.8 The Parties are prepared to enter into this Agreement on the terms and conditions set out below.
- 2.9 The Owner by entering into this Agreement does so to create planning obligations in respect of the Land in favour of the County pursuant to Section 106 of the 1990 Act and to be bound by and observe and perform the covenants agreements conditions and stipulations hereinafter contained on the terms of this Agreement.

3 OPERATIVE PROVISIONS

- 3.1 This Agreement is a planning obligation made in pursuance of Section 106 of the 1990 Act as substituted by Section 12 of the Planning and Compensation Act 1991 and to the extent that the covenants in this Agreement are not made under Section 106 of the 1990 Act they are made under Section 111 of the Local Government Act 1972 and Section 1 of the Localism Act 2011 and all other powers so enabling.
- 3.2 Subject to Clause 3.4 the Owner covenants with the County with the intent that the covenants in the First Schedule shall attach to the Land and each and every part of it and bind its successors in title to it.
- 3.3 The County covenants with the Owner to comply with its obligations in the First Schedule (as applicable) and the Second Schedule.
- 3.4 The Planning Obligations shall not become effective until: -
- 3.4.1 The Planning Permission has been granted by the Secretary of State; and

3.4.2 Except where otherwise stated in this Agreement the Commencement of Development.

3.5 In this Agreement the expressions "the Owner" and "the Developer " shall where the context so admits be deemed to include their respective successors in title and assigns and the expression "the County" shall include its respective successor authority.

3.6 The Planning Obligations restrictions covenants limitations and obligations in this Agreement relate to and are binding in their entirety upon the Owner and their successors in title and assigns and their interest in the Land and save as otherwise provided shall bind and run with the Land and each and every part of it and subject to clause 3.14 may be enforced against the Owner and where applicable its successors in title by the County as if such persons had been an original covenanting Party in respect of the interest or estate for the time being held by them in the Development.

3.7 If the terms of any conveyance transfer or other disposal (including any contract thereof) cannot be agreed by the Owner and the County and / or any dispute or difference arises between the parties as to their respective rights duties or obligations under this Agreement or as to the failure of the County to give or confirm its consent agreement or approval where required under this Agreement or as to any other matter or thing arising out of or connected with the subject matter of this Agreement or any failure to agree upon any matter it shall be dealt with as follows: -

3.7.1 in the case of any legal requirements how contributions payable under this Agreement are to be spent the same may be referred to an independent Solicitor experienced mediator or arbitrator of at least fifteen years standing who shall be appointed in default of agreement between the Owner and the County as the case may be by the President of the Law Society or his deputy to be decided as provided below;

3.7.2 in the case of any matter relating to the Travel Plan the same may be referred to a highway and transportation engineer of at least fifteen years standing who shall be nominated in default of agreement between the Owner and the County by the President for the time being of The Chartered Institution of Highways & Transportation or his / her deputy to be decided as provided below;

3.7.3 in the case of any matter relating to the Wader Mitigation Plan the same may be referred to an independent ecologist and / or an independent chartered surveyor of at least fifteen years standing who shall be nominated in default of agreement between

the Owner and the County by the President for the time being of the British Ecological Society and / or the President for the time being of the Royal Institution of Chartered Surveyors as the case may be or his / her deputy to be decided as provided below; and

3.7.4 any matter referred to an independent solicitor or civil engineer or highway and transportation engineer or independent ecologist or independent chartered surveyor in accordance with the foregoing provisions shall be decided by such person as an expert not as an arbitrator and such independent person ("Expert") shall consider the written submissions of the parties and his determination shall be made in writing and in each case be final and binding on such parties and the costs of such determination shall be paid as the expert shall direct.

3.8 Save where a Section 73 Permission has been granted which remains extant if the Planning Permission shall expire before the Commencement of Development or shall at any time be modified (without the consent of the Owner) or revoked this Agreement shall terminate and cease to have effect save for clause 3.15 which shall remain in effect, and the County shall on written request from the Owner remove any entry relating to this Agreement from the Register of Local Land Charges in such circumstances and where the requirements of clause 3.15 have been satisfied.

3.9 Nothing in this Agreement shall prohibit or limit the right to develop any part of the Land in accordance with a planning permission (other than the Planning Permission and any Section 73 Permission) granted after the date of this Agreement.

3.10 Except where expressly stated to the contrary where under this Agreement any approval consent certificate direction authority agreement action or expression of satisfaction is required to be given or reached or taken by any Party or any response is requested any such approval consent certificate direction authority agreement action or expression of satisfaction or response shall not be unreasonable or unreasonably withheld or delayed provided that nothing in this Agreement shall prejudice or affect the rights powers duties and obligations of the County in the exercise of their statutory functions and the rights powers duties and obligations of the County under private or public statutes byelaws orders and regulations may be as fully and effectively exercised as if they were not parties to this Agreement.

3.11 The obligations hereby created shall be registrable as a Local Land Charge by the appropriate Local Land Charges Authority.

- 3.12 No person who is not a party to this Agreement may enforce any terms hereof pursuant to the Contracts (Right of Third Parties) Act 1999 provided that this clause shall not affect any right of action of any person to whom this Agreement has been lawfully assigned or becomes vested in law.
- 3.13 The Owner agrees that all payments to be made pursuant to the obligations set out in this Agreement shall at the date at which payment is made be Index Linked from the date of this Agreement until the date of payment.
- 3.14 No party shall be bound by the terms of this Agreement or be liable for any breach of covenant contained in this Agreement: -
- 3.14.1 occurring after he or it has parted with his or its interest in the Land or the part in respect of which such breach occurs (but without prejudice to liability for any subsisting breach of covenant prior to parting with such interest);
 - 3.14.2 in respect of any part or parts of the Land in respect of any period during which it or they shall no longer have an interest in such part or parts of the Land;
 - 3.14.3 unless they hold an interest in the part of the Land in respect of which such breach occurs or held such an interest at the date of the breach; and
 - 3.14.4 if it is a Statutory Undertaker which has an interest in any part of the Land for the purposes of its undertaking.
- 3.15 The Developer shall pay to the County on completion of this Agreement the reasonable legal costs of the County incurred in the negotiation, preparation and execution of this Agreement.
- 3.16 The Owner will give the County immediate written notice of any change of ownership of any of its interests in the Land if applicable occurring before all the obligations under this Agreement have been discharged such notice to give details of the transferee's or lessees (as the case may be) full name and registered office (if a company or usual address if not) together with the area of the Land or Unit of occupation purchased by reference to a plan.
- 3.17 All notices served under or in connection with this Agreement shall be deemed to have been properly served if sent by recorded delivery to the principal address or registered office (as appropriate) of the relevant Party.

- 3.18 Any payments made under this Agreement shall not be liable to VAT and for the avoidance of doubt all consideration given in accordance with the terms of this Agreement shall be inclusive of any value added tax properly payable (if applicable).
- 3.19 This Agreement is governed by and interpreted in accordance with the law of England and Wales and the parties submit to the non-exclusive jurisdiction of the courts of England and Wales.
- 3.20 The Parties to this Agreement have given due consideration to the requirements of Regulation 122 of the Community Infrastructure Levy Regulations 2010 (SI 2010 No. 948) and agree that the Planning Obligations it contains are: -
- 3.20.1 necessary to make the Development acceptable in planning terms;
- 3.20.2 directly and fairly related to the Development; and
- 3.20.3 fairly and reasonably related in scale and kind to the Development.
- 3.21 Any unexpended capital that is committed to a scheme that has been commenced or committed by contract in accordance with this Agreement will not be returned if committed prior to the expiry of the period for spending referred to in the First Schedule.
- 3.22 If the Secretary of State in his decision letter concludes that any of the Planning Obligations set out in the Agreement (or relevant part of a Planning Obligation) are incompatible with any one of the tests for planning obligations set out at Regulation 122 of the Community Infrastructure Levy Regulations 2010 (as amended) and accordingly expressly states in his decision letter that he attaches no weight to that Planning Obligation in determining the Appeal then the relevant Planning Obligation(s) (or part of the Planning Obligation(s) as appropriate) shall from the date of the decision letter immediately cease to have effect and the Owners shall be under no obligation to comply with that Planning Obligation (or the relevant part of the Planning Obligation as appropriate).

IN WITNESS whereof the parties hereto have executed this Agreement as a Deed the day and year first before written

FIRST SCHEDULE

("Owner's Planning Obligations")

The Owner covenants with the County as follows: -

1. ECOLOGICAL OFF-SETTING

- 1.1 To implement the Wader Mitigation Plan by the Commencement of Development.
- 1.2 Not to Commence Development until written confirmation has been received from the County that the Wader Mitigation Plan has been implemented so as to provide off-set habitat which adequately addresses any likely adverse effects on ground nesting waders as a consequence of the Development in accordance with the Wader Mitigation Plan subject to any variations that may be agreed between the Owner and the County from time to time.

2. HERITAGE INTERPRETATION SCHEME

- 2.1 Prior to the Occupation of the Energy Centre to pay the Heritage Interpretation Scheme Contribution to the County and not to Occupy the Energy Centre until the Heritage Interpretation Scheme Contribution has been paid to the County.

3. TRAVEL PLAN

- 3.1 To use best endeavours to implement and thereafter comply with the terms of the Travel Plan prior to Occupation of the Development in respect of those parts of the Travel Plan that are capable of being implemented prior to such Occupation and at all times during the period when the Development is Occupied in respect of the remainder of the Travel Plan **PROVIDED THAT** any failure on the part of the Owner to comply with this provision which is due to acts, events or other circumstances beyond the reasonable control of the Owner shall not constitute a breach of this Agreement.
- 3.2 Prior to the Travel Plan Commencement Date the Owner shall appoint a nominated Travel Plan Co-ordinator(s) in accordance with the provisions of the Travel Plan and notify the details of the Travel Plan Co-ordinator(s) to the County prior to the Travel Plan Commencement Date.
- 3.3 The Owner shall provide an Employee Travel Information Pack to all employees of the Development. This shall be provided to any new employees, together with all other employment policies at the time the individual's employment commences. The Owner shall review the Travel Plan on the first anniversary of the Travel Plan Commencement Date and

on each subsequent anniversary of the Travel Plan Commencement Date for an initial period of five years and such additional period as may reasonably be required by the County and shall submit the results of such review to the County.

- 3.4 Following discussions with the County, the Owner shall have incorporated any reasonable recommendations made by the County in relation to each annual review. The Owner may not vary the Travel Plan without the prior written approval of the County.

SECOND SCHEDULE

("County's Covenants")

The County hereby covenants with the Owner: -

Heritage Interpretation Scheme

- 1 To issue a receipt on request for the Heritage Interpretation Scheme Contribution.
- 2 Upon receipt to place the sum referred to in paragraph 1 of this Schedule in an interest bearing account or in separate accounts as the County shall in its discretion decide.
- 3 To apply the Heritage Interpretation Scheme Contribution towards the purposes specified in this Agreement the need for which directly arises from the Development and not to apply the Heritage Interpretation Scheme Contribution for any other purposes and the County shall (on the reasonable request of the payee or the payee's nominee) provide evidence that the monies have been so applied.
- 4 That in the event the Heritage Interpretation Scheme Contribution or any part or parts thereof is not expended or committed within ten years of the date of their receipt by the County then the sum or sums not expended plus interest accrued will be repaid to the Owner or its nominee.

Discharge of Obligations

- 5 At the written request of the Owner the County shall provide written confirmation to the Owner of the discharge of the obligations contained in the First Schedule when satisfied that such obligations have been performed.

THIRD SCHEDULE
("Travel Plan")

1391-01-TP01(RevB)

9 August 2013

**Bilsthorpe Energy Centre
Bilsthorpe Business Park, Nottinghamshire**

Interim Travel Plan

For



Peel Environmental Management UK Ltd & Bilsthorpe Waste Ltd



**AXIS
Camellia House
76 Water Lane
Wilmslow
SK9 5BB**

Tel: 0844 8700 007

www.axisped.co.uk

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APPENDICES

Appendix TP1	Schedule of TPC Duties / Action Plan
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1.0 INTRODUCTION & OBJECTIVES

1.1 Introduction

1.1.1 This Interim Travel Plan has been prepared by AXIS on behalf of Peel Environmental Management UK Ltd (PEL) & Bilsthorpe Waste Limited to support the development and operation of Travel Plan measures at the proposed Bilsthorpe Energy Centre (BEC), Bilsthorpe Business Park, Nottinghamshire.

1.1.2 This document represents a framework for the development, implementation and operation of travel planning initiatives to encourage / maximise travel by alternative travel modes to the private car and, where practical, to minimise private car journeys. At this pre-planning stage, the Travel Plan has been prepared on an interim basis, with the final formal Travel Plan to be prepared following the undertaking of a detailed staff travel survey exercise, which will inform the final selection of the package of travel initiatives to be included.

1.1.3 The document has been prepared in accordance with Department for Transport (DfT) guidance 'The Essential Guide to Travel Planning' and 'Good Practice Guidelines: Delivering Travel Plans through the Planning Process'.

1.2 Site Location & Description of Development Proposals

1.2.1 The application site for the BEC scheme falls within the administrative area of Nottinghamshire County Council, which acts as both planning authority for mineral & waste land uses across the County and local highway authority. The site is located within the Bilsthorpe Business Park Development Area on the site of the former Bilsthorpe Colliery.

1.2.2 The location of the BEC application site is illustrated in **Figure TP1** to this report. This plan identifies the strategic location of the site in relation to the surrounding settlements of Bilsthorpe, Eakring and Rainworth and local road connections to the more strategic A-road routes of the A614 and A617.

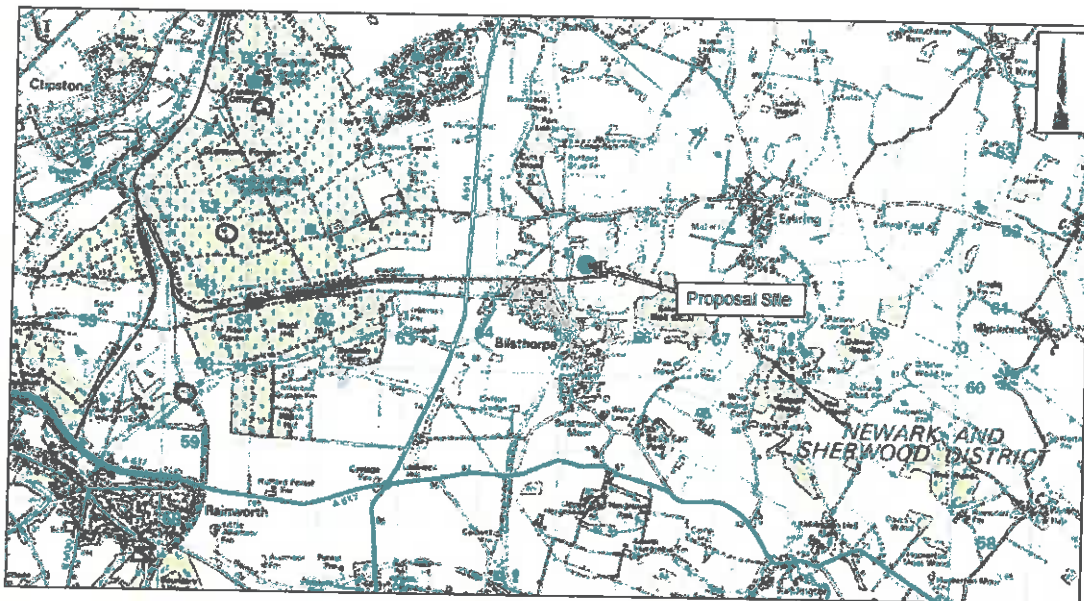


Figure TP1 – Site Location: Strategic Context

- 1.2.3 The proposal scheme seeks the development of an oxygen assisted plasma gasification technology to produce electricity from commercial / industrial waste & municipal waste from Nottinghamshire and surrounding areas. It is anticipated that the scheme could export up to 10.2 Mega Watts of low carbon electricity. The scheme would also include for a 'front end' Materials Recycling Facility (MRF) to allow for the pre-treatment sorting of input waste and the extraction of recyclable materials for bulking and onward shipment for processing.
- 1.2.4 It is proposed that the facility would be road served with both input and output material movements being undertaken using standard heavy goods vehicles (HGV's). On average the facility could be expected to generate of the order of 57 HGV arrivals and 57 HGV departures over a typical weekday, with HGV movements limited to the core time period 07:00-19:00.
- 1.2.5 It is envisaged that the site would employ up to 46 staff members in total, however, shift working would mean that this maximum number of staff would not be present on-site at the same time.
- 1.3 **General Travel Plan Objectives & Guidelines**
- 1.3.1 Travel planning is a general term associated with the development of a package of measures and initiatives aimed at promoting more sustainable travel choices and reducing reliance on the private car. Travel Plans are tailored to the requirements of individual sites and involve the development of a set of mechanisms and targets that together enable organisations to reduce the impact of their travel and transport on the local environment. A Travel Plan is often referred to as a 'living document' in that it is designed to be flexible and dynamic, enabling it to change in line with the needs of the company, its staff and business circumstances.

- 1.3.2 Travel Plans can be developed either specifically to address issues associated with individual buildings or sites, or to form part of a wider strategy involving Local Authority initiatives and other surrounding developments. This plan concentrates on those measures that can be developed specifically at the BEC site, however, the plan framework is designed to integrate with initiatives in neighbouring development areas or adjacent businesses where practical, with the principle aims of the Travel Plan to address the following two key areas:

Commuter travel to / from the BEC facility, with a view to providing measures to assist in making travel to the site more viable by alternative modes to the private car.

Management of HGV travel to ensure that BEC related traffic is restricted to appropriate route corridors and does not generate a detrimental impact on known local congestion points.

- 1.3.3 PEL is committed to promoting sustainable transport solutions where appropriate and practical. It is within this context that this plan is produced. Any reduction in vehicle trips achievable at the BEC site should therefore be viewed against trip demand levels associated with the operation of the site under existing planning allocations or with no Travel Plan initiatives in place.
- 1.3.4 It should be noted that, due to the location and nature of the BEC development, there are perhaps only relatively limited opportunities to encourage substantial demand for alternative travel options to the private car (see Section 2 to this report) when compared, for example, to a town centre or more urban based site. In addition, the site will operate a staff shift system which will require staff arrival / departure times outside of the traditional core weekday day time travel period. These operating hours may have a limiting effect on the opportunity to use certain travel modes such as public transport or walking. On this basis this document has been prepared to reflect the principle objectives of travel planning guidance but cannot be expected to deliver the full scope of Travel Plan requirements associated with a typical large employment site (see paragraphs below).

National Guidance

- 1.3.5 Recent Central Government and Local Authority planning policy statements have formalised guidance for the production of Travel Plans to support development schemes. The National Planning Policy Framework (NPPF) identifies the benefits of implementing Travel Plans for new business and developments, along with the sustainable objectives that can be achieved (paras 35 & 36). Such objectives include reducing overall car usage (particularly single occupancy journeys) and the promotion of walking, cycling and public transport as real alternatives to the private car. NPPF identifies a requirement that a Travel Plan be produced for those new development proposals that could generate a significant demand for travel.
- 1.3.6 DfT best practice guidance document "Good Practice Guide: Delivering Travel Plans through the Planning Process" updates previous Central Government guidance into a

single main approach to Travel Plans. This guidance identifies that, where practical, a plan should address the following four key issues:

- Travel Plan Objectives;
- Outcomes of the Travel Plan
- Targets to guide the Travel Plan
- Indicators to monitor the Travel Plan.

1.3.7 For best results, the DfT guidance suggests that the initial focus should be on establishing the outcomes required from a Travel Plan and working from this, develop a range of measures at the site that can then be identified and agreed as the best way of achieving site specific objectives. Measures are likely to include both 'carrots' and 'sticks' in order to encourage changes in travel behavior.

1.3.8 Given that the BEC facility is not anticipated to generate substantive levels of staffing demand, it is not considered that the transportation impacts of staff / visitor traffic movements will be significant. Notwithstanding this, targets will still need to be developed for the Travel Plan to reflect core sustainable transport objectives and to contribute to addressing key local issues such as air quality management, highway safety and congestion. Travel Plan targets and performance will therefore be continually monitored and reviewed as part of the plan across the life of the development.

Local Guidance

1.3.9 Nottinghamshire County Council (NCC) has drafted guidance for the preparation of Travel Plans by employer organisations and developers. This document, "Guidance for the Preparation of Travel Plans in support of Planning Applications" and supporting website information identifies a range of benefits and advantages of pursuing a Travel Plan to support the operation of an employment site. This Interim Travel Plan to the core principles set out in the NCC guidance.

1.4 Choosing the Correct Travel Plan Approach

1.4.1 Travel Plan guidance recognises that the development of full Travel Plan requirements may not be appropriate / possible for all circumstances and therefore sets out the following range of Travel Plan options to meet the circumstances relevant to an individual company / business use:

- Full Travel Plan;
- Interim Travel Plan;
- Framework Travel Plan (Mixed Use Sites);
- Travel Plan Statement (Smaller developments);
- Area Wide Travel Plan.

1.4.2 It is considered that in the case of the proposed BEC site, the most appropriate Travel Plan approach at this stage of the planning process would be the preparation of an Interim Travel Plan. Such an approach would cover all substantive parts of the full plan, however, some aspects would remain provisional until further details of the

development are available (e.g.: staff travel survey, final shift patterns, etc). The draft Interim Plan would then be finalised and implemented to coincide with the site being brought into full use.

1.4.3 To help satisfy the general objectives identified within local good practice guidance and the principles of the DfT approach, four distinct areas for action have been identified within this Travel Plan:

- On-site physical travel infrastructure and sustainable site design.
- Operational measures to encourage sustainable travel patterns for staff members and visitors to the site.
- Operational measures to manage the impact of site related HGV operation.
- Monitoring of the implementation and operation of travel plan initiatives and reference to appropriate travel targets.

These issues will be explored in detail in the remaining sections of this document.

2.0 AVAILABLE SUSTAINABLE TRANSPORT CONNECTIONS

2.1 Context

- 2.1.1 Whilst spatially well related to the anticipated main areas of waste arisings, the BEC proposal site is located away from major centres of population. Given this locational characteristic and the proposed shift patterns worked by many operational staff, opportunities for staff and visitor access to the site via sustainable travel modes such as walking, cycling and public transport are anticipated to be relatively modest. Notwithstanding this, however, the site would still be operated by a limited number of staff who would travel to / from the site on a daily basis, some of whom could potentially be based in nearby settlements such as Bilsthorpe village. The availability of practical alternative travel modes to the site would therefore improve site accessibility and assist in managing car traffic demand to minimum levels, especially when viewed in combination with operational Travel Plan measures at the proposal (see section 3.4 to this report).

2.2 Walking & Cycling Connections

- 2.2.1 Institution of Highways and Transport (IHT) guidance document 'Providing for Journeys on Foot' suggests that the maximum walking distance threshold for regular work related journeys is 2km. **Figure TP2** to this report demonstrates that the BEC proposal site is typically located outside of a 2km walk distance of most local centres of population, except for the immediate settlement of Bilsthorpe village.

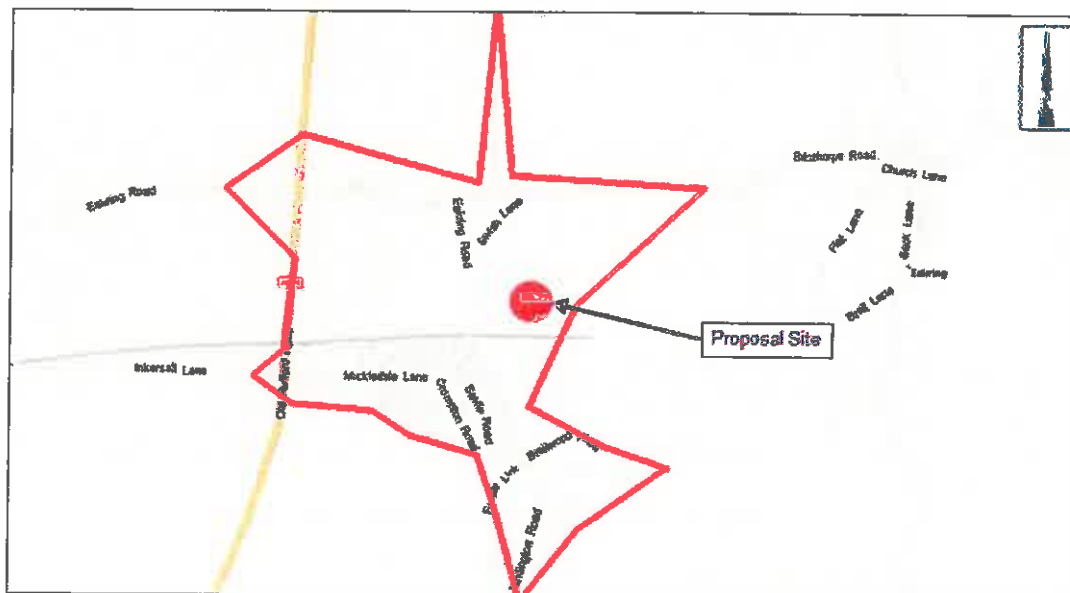


Figure TP2 – 2km Walk Catchment from the BEC Site

- 2.2.2 It is therefore not anticipated that walking trips would likely represent a practical travel mode for the majority of staff / visitor trip movements. Notwithstanding this, dedicated footway connections are available along the main Bilsthorpe Business Park site

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Figure TP3 – 5km Cycle Catchment from the BEC Site

2.3 Public Transport Opportunities

- 2.3.1 IHT guidance document 'Planning for Public Transport in Developments' recommends that the maximum distance to a bus stop from new development should be 400m – roughly equating to a five minute walk. A bus stop is located on Eakring Road on the northern side of the site access junction on the Bilsthorpe side of the carriageway, which is served by a footway connection from the site access road / Eakring Road. It

is considered that this bus stop falls within a 400m walk distance from the BEC site and therefore represents an appropriate local public transport connection to the site.

2.3.2 The Eakring Road bus stop comprises a flag post and timetable case. No formal bus stop 'flag post' is provided on the northbound carriageway and no footway is available on the northbound side of Eakring Road.

2.3.3 Local bus routes serving the Eakring Road bus stops are illustrated in Figure TP4 to this report with route details summarised in the table below.

Local Bus Routes Serving the Immediate Local Bus Stops to the Bilsthorpe Business Park on Eakring Road

Route No.	Route Description	Mon-Fri Day	Mon-Fri Eve	Sat / Sun
27X	Mansfield – Rainworth – Bilsthorpe - Eakring	1 bus	-	-
28B	Mansfield – Rainworth – Bilsthorpe - Eakring	Hourly	1 bus	Hrly Sat / 2hr Sun
31	Bilsthorpe – Eakring - Ollerton	1 bus Mon Fri*	3 buses	-

*3 additional bus services on Tuesdays & Thursdays

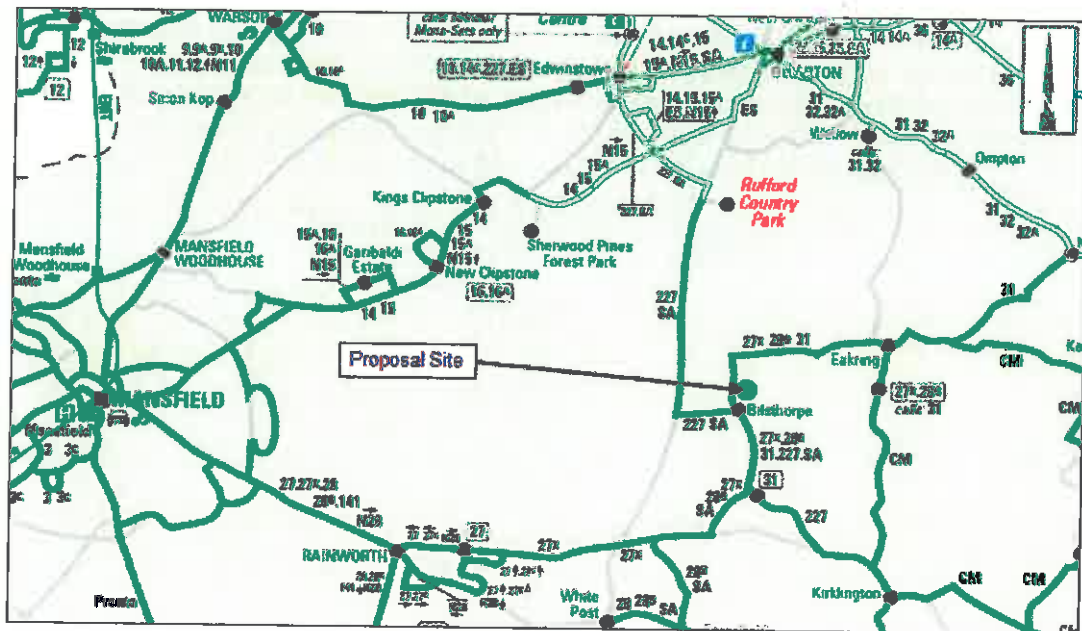


Figure TP4 – Local Bus Connections

2.3.4 Review of the above information identifies that the Bilsthorpe Business Park site is served by an hourly service providing links to Eakring, Rainworth and Mansfield. An additional hourly service linking to Nottingham & Ollerton is available from bus stops on nearby Mickledale Lane, approximately 700m – 750m walk from the centre of the BEC proposal site. Summary details of this additional service and other bus links available from the stops on Mickledale Lane are set out in the table below.

***Additional Bus Services Available From Stops Within Bilthorpe Village
 (Mickledale Lane)***

Route No.	Route Description	Mon-Fri Day	Mon-Fri Eve	Sat / Sun
227	Newark – Southwell – Bilthorpe - Edwinstowe	1 bus (Wed / Fri)		
SA	Nottingham – Farnfield – Bilthorpe - Ollerton	1 - 2 hrs	2 post 7pm	1 / 2 hrs Sat / 4 buses Sun

2.4 Summary

- 2.4.1 In summary, it is considered that the site location offers a reasonable level of sustainable transport accessibility given the nature of the proposed BEC scheme, the low number of staff members anticipated to be employed at the site and the shift patterns to be operated by some of these employees. Ultimately the site is accessible by walk and cycle to immediate local villages and offers day-time access to hourly bus connections to Mansfield and Rainworth, with other connections to Nottingham & Ollerton available within a further walk distance.
- 2.4.2 Ultimately the derivation of travel targets for commuter / visitor travel to / from the BEC site will need to recognise the limited nature of immediate sustainable travel connections, which will restrict the opportunity for mode shift. Final identified targets will need to be appropriate for the site's local circumstances (see section 6.2 to this Travel Plan).

3.0 IMPLEMENTATION OF THE TRAVEL PLAN – KEY ACTION FRAMEWORK

3.1 Overview

3.1.1 The development and implementation of a Travel Plan for the BEC site will be undertaken over a number of key stages. These stages are described in the remaining sections of this document and cover the identification of base travel trends to the site, through the implementation of Travel Plan measures / initiatives, to the monitoring of the effects of the Plan post the opening of the site.

3.1.2 The identified key stages for the development of an effective plan for the application site are as follows:

- A. Plan Administration through the selection and appointment of the Travel Plan Co-ordinator;
- B. Formulation and agreement of the Travel Plan measures;
- C. Assessment of travel behaviour and monitoring of the effectiveness of the final Travel Plan via feedback and review of Travel Plan operation.

3.1.3 **Figure TP5** to this report identifies the key intermediate stages with respect to the implementation programme for the Travel Plan. Detailed commitments necessary to promote the successful delivery of the Travel Plan at the BEC site are identified and highlighted through the remainder of this document via **bold / underlined** text.

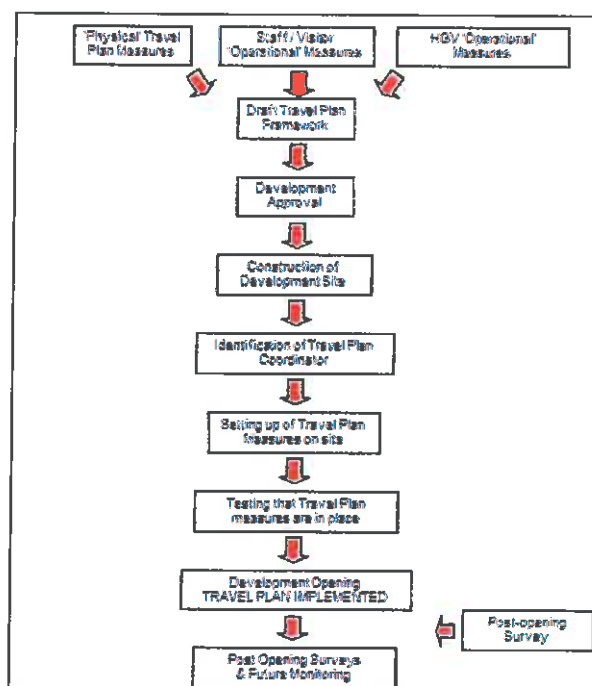


Figure TP5 – Travel Plan Implementation Strategy

4.0 PLAN ADMINISTRATION

4.1 Introduction

4.1.1 The administration of the Travel Plan for the BEC site will be the responsibility of the proposed site operator.

4.1.2 **Management and development of the plan process will be achieved through the identification of a suitable person to undertake the role of Travel Plan Co-ordinator (TPC) as part of their duties.** The TPC will provide an important role in the delivery of a successful plan throughout the lifetime of the development scheme. General experience in the operation of workplace travel plans suggests that in order to ensure successful implementation and allocation of resources, the role of TPC should be adopted by a suitable senior member of staff. In the case of the BEC facility. **It is proposed that the site manager will adopt the position of TPC for the site.**

4.1.3 The TPC is an essential role and will act as the focus / driving force for the development of plan measures and day to day operation. Once appointed, the TPC will act as the main contact for the plan and will be responsible for implementing plan measures, involving new staff, maintaining a database, monitoring the effects of implementation and acting on results of the review process. The range of duties and responsibilities for the TPC is set out in the sections below.

4.2 Duties and Responsibilities of the Travel Plan Co-ordinator

4.2.1 The TPC will act as the main liaison between staff, site management and the NCC Travel Plan Team with respect to Travel Plan matters. The TPC will act as the first point of contact for staff and other external organisations in all matters regarding employee travel and the management of physical travel facilities within the site boundary.

4.2.2 Key roles and responsibilities of the TPC will be as follows:

- Managing the development and implementation of the plan;
- Setting up and maintaining a car sharing database;
- Liaising with public transport operators and the NCC Travel Plan Officer to ensure up-to-date public transport / general sustainable travel information is available at the site;
- Ensuring that all staff are aware of the opportunities for public transport / bike purchase salary schemes and managing applications;
- Managing the 'emergency ride home' scheme for staff;
- Co-ordinating future monitoring exercises and providing a regular review of progress to the NCC Travel Plan Officer.

4.2.3 **The TPC role will be formally designated three months before the BEC facility becomes fully operational, so as to ensure that the Travel Plan can have maximum exposure from 'day one'.**

4.2.4 The TPC will be able to delegate some duties to other suitable nominated staff, as required, but will retain overall responsibilities for all matters relating to the operation of the plan. An example schedule of duties is provided in **Appendix TP1** to this framework document. This schedule effectively represents an 'Action Plan' for the development and implementation of the Travel Plan.

4.2.5 Management buy-in will be essential if the TPC is to effectively carry out their role. The site management will need to be fully supportive of the Travel Plan and provide the TPC with the resources and time needed to ensure that the Travel Plan has the driving force necessary to make it a success.

4.3 **Key Travel Plan Administration Tasks**

4.3.1 As part of the on-going operation of the plan the following key administrative tasks will need to be undertaken by the TPC:

- Informing of the Local Planning Authority and NCC Travel Plan Team of the contact details of the TPC at the inception of the plan. Updating of this information should the TPC role be transferred to an alternative staff member within the lifetime of the Plan;
- Developing a 'key contacts' file of appropriate personnel at other organisations such as the Local Planning Authority, Local Highway Authority, Public Transport Operators, etc.
- Making new staff aware of the existence of the Travel Plan as part of employee induction procedures;
- Maintaining a Travel Plan noticeboard at the site to include up-to-date travel information, timetables, maps and details of travel initiatives such as National Bike Week, Walk to Work Week, etc.

4.3.2 It will be the responsibility of the TPC to undertake the review and monitoring of the Travel Plan by organising and carrying out regular travel surveys and analysing results. This monitoring and review element is an important part of the Travel Plan process, as it determines whether the Travel Plan is successfully meeting targets and informs any changes to the Travel Plan. Full details of the proposed monitoring and review schedule for the BEC development can be found in sections 6.3 & 6.4 to this document.

4.3.3 Appropriate budget will be made available to the TPC to maintain and manage Travel Plan initiatives and to undertake relevant monitoring surveys and reporting.

5.0 FORMULATION & IMPLEMENTATION OF THE TRAVEL PLAN

5.1 Overview

5.1.1 The following section of this Travel Plan document outlines those measures to be promoted and implemented at the BEC site to maximise demand for sustainable travel use and to manage development related HGV operation over the immediate highway network. For ease of reference, these measures have been broken down into the following three areas:

- On-site physical travel plan measures.
- Operational travel plan measures to encourage sustainable staff / visitor travel.
- Operational travel plan measures to manage the impact of site related HGV operation.

5.2 On-site 'Physical' Travel Plan Measures

5.2.1 The site masterplan for the BEC scheme identifies a number of key 'physical' transport measures that will be provided as part of the delivery of the development proposals. These measures will be demonstrated as being available prior to the full operation of the scheme and related relate to general transport facilities that will be delivered across the site. Details of the key 'physical' measures to be secured on site are summarised below.

- Provision of appropriate levels of secure cycle parking (based on local highway authority requirements) and associated signage within the curtilage of the development area;
- Provision of suitable changing, showering and locker facilities within development buildings to encourage staff and visitor use of walking and cycling;
- Provision of a staff mess area / food preparation area to encourage staff to stay on-site at break times, thereby reducing travel demand;
- Provision of suitable space for bus / coach parking on site to allow for the potential for large education group travel to the of the site;
- Car parking area sized to reflect the anticipated staffing requirements and shift patterns.
- Provision of dedicated pedestrian routes within the curtilage of the development site, including a dedicated walk / cycle link to connect with the main Bilthorpe Business Park spine road;
- Provision of a Travel Plan Noticeboard at the site.

5.3 'Operational' Travel Plan Measures to Encourage Sustainable Staff / Visitor Travel

5.3.1 In addition to the basic physical transport facilities at the BEC site, the management of staff / visitor travel will also help meet plan objectives. The management of travel issues will be achieved through the development of a package of 'operational' Travel Plan measures, which will complement the physical travel infrastructure provided on site and will ultimately be tailored to the staff and visitor user demands, via reference to the results of Travel Plan surveys and through discussions with local travel providers.

5.3.2 In the absence of baseline travel survey data for future staff members at the BEC site, practical assumptions have been made about the most suitable operational measures to support the development. This package of measures has been identified via reference to the general location of the BEC site, the existing transport connections available within the immediate catchment and the nature of staff travel demand and operational practice anticipated to be pursued.

5.3.3 'Operational' plan measures to be implemented by the TPC to coincide with the first day of operation of the-site and will include:

- **Liaison with NCC public transport officers and local public transport operators to ensure up to date public transport information is available for display on the Travel Plan Noticeboards.**
- **Promotion of suitable travel campaigns to encourage the use of sustainable transport options** - via the promotion of literature and events. Example information includes details on walking initiatives e.g.: "walk your way to health" (www.whi.org.uk), cycling and national cycle week (www.sustrans.org.uk, www.bikeweek.org.uk) and national lift share day (www.liftshare.org/nlsd.asp). A table of events to be pursued at the application site will be defined.
- **Offering of an interest free cycle loan system to staff via the DfT Cycle to Work loan scheme.** This scheme allows for businesses to purchase new cycles and cycle equipment for staff and reclaim the VAT on this purchase. Staff can then effectively repay the costs of the purchase through a suitable 'salary sacrifice' agreement.
- **Free fluorescent clothing to be made available on request to all regular staff cyclists / pedestrians.**
- **Encouraging staff involvement in a car sharing scheme.** Employees will be encouraged to car share with other staff members via a staff matching scheme operated by the site TPC. Alternatively staff will be encouraged to investigate other car sharing options (where practical, dependent on staff shift times) including national car share websites such as www.liftshare.com or www.nationalcarshare.co.uk and local Nottinghamshire based car sharing scheme 'Nottingshare' (<https://nottingham.liftshare.com>).

- **Liaison with the NCC Travel Plan Officer and other travel plan operators within the local area (including the NCC Highway Depart TPC)** to investigate joint ventures economies of scale and the potential to provide personalised travel plans for permanent staff.
- **Development of a guaranteed 'ride home' scheme** for one-off late night / early morning working or in personal emergency situations for those staff who choose to take part in the plan and therefore leave their cars at home. Reasonable staff costs under this 'ride home' scheme will be reimbursed by the BEC site management, with claims being managed and reviewed by the site TPC.
- **Ensuring that all new staff at the application site are fully appraised of the Travel Plan as part of formal staff induction procedures.**

5.4 **Operational Travel Plan Measures to Manage the Impact of Site Related Traffic Movements**

5.4.1 It is recognised that without appropriate management the BEC development could result in a transport related impact on local settlements and network congestion hot-spots. Discussions with local highway authority officers have identified two key development traffic operational issues appropriate for control as part of any Travel Plan to support the BEC scheme, viz:

- Implementation of a Local HGV Routing Strategy;
- Restricting development HGV movements to stated delivery windows.

5.4.2 Details of the operational measures proposed to address these points are set out below.

Local HGV Routing Strategy

5.4.3 **Operational HGV movements to / from the BEC site will be subject to a local routing strategy to restrict delivery / export traffic to appropriate route corridors.**

The details of this routing strategy have been developed through reference to existing local network HGV restrictions and liaison with NCC highways and reflect existing routing agreements associated with the Bilthorpe Business Park. The aim of the operational HGV strategy is to minimise HGV traffic impact on the immediate local settlement of Bilthorpe village and to avoid the potential for HGV traffic to access inappropriate local rural route corridors.

5.4.4 The proposed immediate local operational HGV routing strategy for typical day to day operation of the BEC facility is illustrated in **Figure TP6** to this Travel Plan document. **The site operator will encourage all HGV movements to / from the BEC site to adopt this routing strategy.**

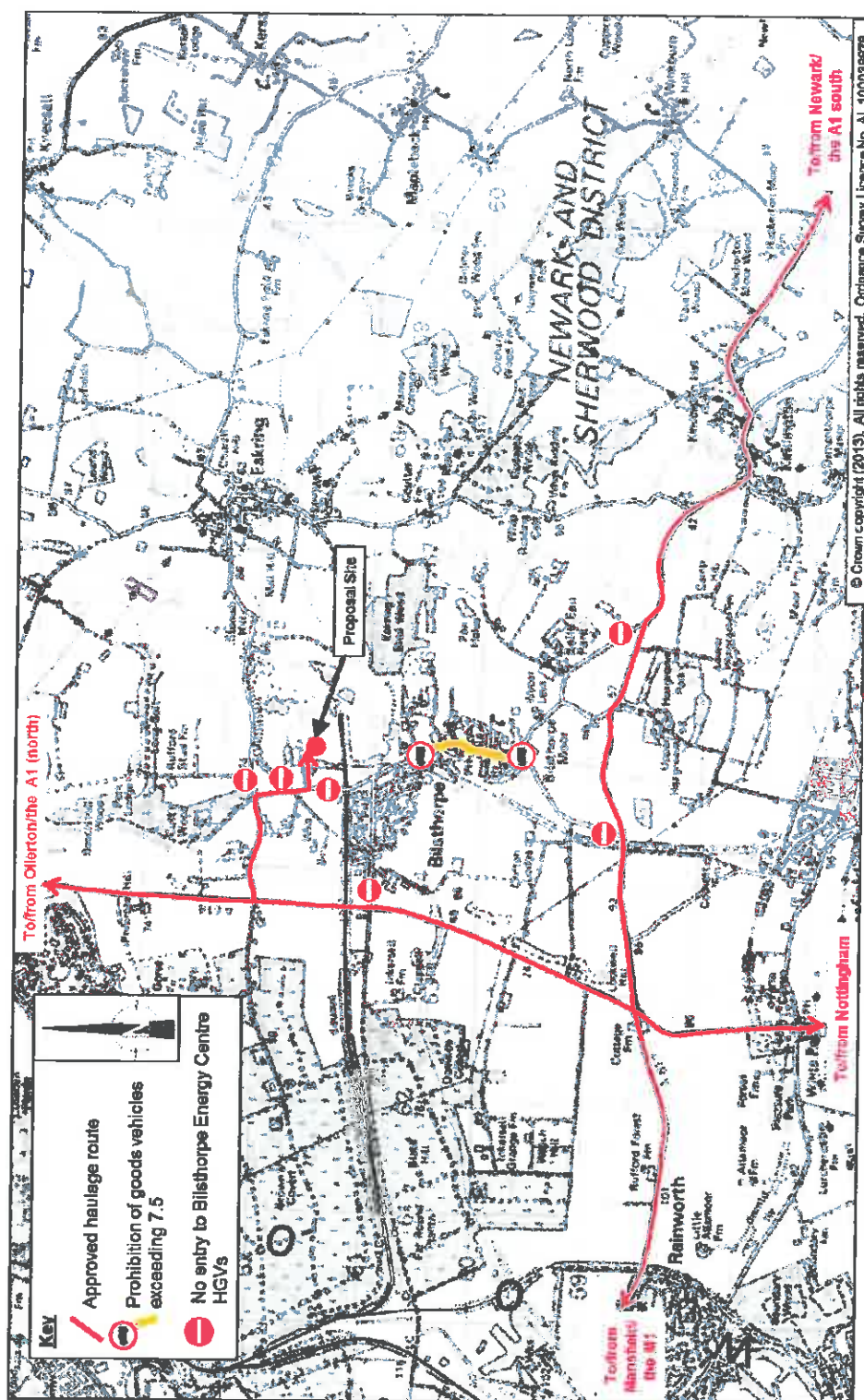


Figure TP6 – HGV Routing Strategy for BEC Operation

- 5.4.5 It is proposed that operation of the HGV routing strategy would be enforced by a range of monitoring / enforcement measures including:
- Driver information / training and provision of a copy of the appropriate local HGV routing plans to each driver before undertaking a journey to / from the BEC site;
 - Driver disciplinary procedures, including banning from site / dismissal should repeated flouting of the local routing strategy be identified ('three strikes and you are out' rule);
 - The BEC facility is likely to operate on an 'on-time' delivery system including a booking system for site users – this will allow greater opportunities to ensure the education of drivers and to identify any site users not respecting the routing strategy;
 - Community liaison and encouragement of local residents to report of incorrectly driven vehicles.

HGV Delivery Periods

- 5.4.6 Daily HGV demand to the BEC facility will be controlled and managed to ensure that site related operational HGV movements only take place within the following periods:
- Weekdays: 07:00 – 19:00;
 - Saturdays: 07:00 – 13:00.
- 5.4.7 No HGV movements to / from the site will be permitted on Sundays or Bank Holiday dates.
- 5.5 **Plan Implementation**
- 5.5.1 **All measures identified within sections 5.2 - 5.4 of this Travel Plan will be demonstrated to be in place at the date of the 'first day of operation' of the BEC site.**
- 5.5.2 PEL are committed to supporting the Travel Plan and will ensure suitable funds are allocated in order to deliver and manage plan measures - with the TPC responsible for expenditure and budget control. The Travel Plan budget will be utilised for promoting, encouraging and providing incentives for increasing sustainable travel. The funds can also be used to cover typical Travel Plan administration tasks such as the design and production of publicity material, guaranteed ride home fund, and production of site specific travel information.

6.0 IDENTIFYING TARGETS AND MONITORING PROGRESS

6.1 Overview

- 6.1.1 In order to gain an understanding of the progress / success of the BEC Travel Plan, it is important that the monitoring of travel trends at the site is undertaken at regular intervals, with a view to demonstrating that the Plan is meeting appropriate targets. Such targets will need to meet the 'SMART' objectives of being:

- Site specific in nature,
- Measurable,
- Achievable,
- Realistic and
- Time-bound.

- 6.1.2 Targets are ultimately the measurable goals which will help define whether the Travel Plan has met its overall objectives of reducing private car journeys and managing HGV operational impact.

6.2 Travel Plan Targets

- 6.2.1 The level of success that a Travel Plan can achieve is dependent upon the setting of achievable and realistic targets. In the case of the BEC development, targets will be defined to cover the following elements:

- Staff / Visitor travel modal split;
- Adherence to the local HGV routing strategy;
- Adherence to the daily HGV demand thresholds.

Staff Visitor Travel Mode Split

- 6.2.2 Staff / visitor travel mode use targets will ultimately be developed through reference to site specific travel survey information collected following the formal opening of the BEC facility. Such an approach reflects DfT good practice guidance for the setting of local targets in cases where no baseline travel information is available. Final targets will be discussed and agreed with the NCC Travel Plan Officer and will need to be cognisant of the generally restricted sustainable transport opportunities available in the local catchment to the BEC site – as identified in Section 2 to this report.

HGV Routing Strategy

- 6.2.4 The site manager will strive to ensure that all HGV trips to / from the BEC site will be undertaken in accordance with the agreed routing strategy. Any reported incidents of breaches of this routing strategy will be fully investigated, acted upon, and the results of these investigations reported to NCC and the BEC Community Liaison Committee.

6.3 Monitoring

- 6.3.1 Review of the operation of the Travel Plan and the progress towards key targets will be delivered via a package of monitoring tasks that will be undertaken in line with an agreed survey schedule. The following paragraphs identify the nature of the monitoring work to be undertaken with respect to the key target areas identified.

Staff Visitor Travel Mode Split

- 6.3.2 **Staff and visitor travel mode split will be monitored by travel questionnaire surveys undertaken every other year.** The results of these surveys will provide a clear numerical breakdown of the current travel to work patterns and also collect information on staff attitudes towards potential incentives to encourage staff to switch their travel choice to a more sustainable mode. The carrying out of a Travel Survey shortly after site opening will also provide a good starting point for engaging staff in the principles of Travel Planning and demonstrating the advantages that Travel Plans achieve.

- 6.3.3 **It is proposed that an initial travel survey will be undertaken at the BEC site within three months of the site becoming fully operational.** A travel survey will be included in the employee welcome pack provided to each staff member on induction and completed forms will be collected and reviewed by the site TPC within the first month of full employment.

- 6.3.4 It is anticipated that undertaking of regular travel survey exercises will help inform the following:

- The locations from which employees will be travelling to work
- How employees travel to work and why they choose that mode
- What measures would have the greatest impact
- Whether there are any essential car users
- Staff working hours and shift patterns
- Perceived barriers to changing travel to work modes.

- 6.3.5 The site TPC will subsequently analyse collected data and identify any patterns that indicate where opportunities for travel change can be pursued. The TPC will also update the travel mode split targets in line with the results of the Travel Survey exercise.

- 6.3.6 **Follow-up travel surveys will be carried out over the lifetime of the BEC facility,** in line with the proposed Travel Plan review procedure set out in section 6.4 to this report.

HGV Routing Strategy

- 6.3.7 **A log of any HGV operators / drivers reported as breaching the BEC HGV routing agreement will be maintained by the site TPC.** Reporting of any such recorded events and details of follow-up action will be presented to the Community Liaison Committee.

6.4 Travel Plan Review Procedure

6.4.1 Review of the operation of the BEC Travel Plan will be undertaken by the site TPC in discussion with the NCC Travel Plan officer, based on the results of the monitoring programme. This review will assess the progress of the Travel Plan with respect to targets and consider the take up / effectiveness of individual measures. The review will also identify areas within the Travel Plan that may require change or modification.

6.4.2 It may be necessary to review Travel Plan targets based on performance records, feedback from staff, changes in local transport provision and the experience of the site TPC in the take up / response of staff to Travel Plan initiatives.

6.4.3 To assist in the review process, the site TPC will prepare a Travel Plan Progress Note for submission to NCC and to be reported to the BEC Community Liaison Committee. This review document will be prepared every other year and will set out the following:

- The results of the most recent travel surveys and a comparison to site Travel Plan targets;
- The current position of the Travel Plan operational budget;
- The general effectiveness / take up of current initiatives within the Travel Plan;
- Those measures within the Travel Plan that are proposed to be continued into next year and those measures to be dropped;
- Details of any new travel initiatives to be provided at the BEC site within the forthcoming year.
- Setting out of an 'Action Plan' to address any failings to meet Travel Plan targets.

6.4.4 **An initial Travel Plan Progress Report and will be submitted to NCC with six months of full operation of the BEC facility and every other year thereafter.**

6.5 Mitigation / Enforcement


6.5.1 Should the review of the Travel Plan performance demonstrate a failure to meet the appropriate SMART targets identified in section 6.2 to this report, the following mitigation / enforcement measures would be investigated under each of the relevant key action areas:

- **Staff / Visitor Mode Split** – 'Re-booting' of the Travel Plan including further awareness campaign and investigation of any other practical measures that could be implemented at the BEC site.
- **Operational HGV Routing** – Improved driver education and the re-circulation of route plans and reinforcement of driver disciplinary procedures.

6.5.2 Details of the final mitigation measures to be pursued and the proposed implementation schedule for these measures will be set out within the Action Plan included within the Travel Plan Progress Note. **All mitigation measures will be demonstrated as being in place within one month of the written approval of NCC to the Action Plan.**

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APPENDICES

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APPENDIX TP1

APPENDIX TP1

BILSTHORPE ENERGY CENTRE BILSTHORPE BUSINESS PARK, NOTTINGHAMSHIRE SCHEDULE OF TPC DUTIES AND IMPLEMENTATION TIMESCALE

SETTING UP

Task	Implementation Date	Responsible	Comments	Completed?
Appoint TPC	3 months prior to full opening	Operator		
Provide TPC contact details to LPA and NLC Travel Plan Officer	3 months prior to full opening	TPC		
Set up Travel Plan working file	1 month prior to Travel Plan implementation	TPC	This will also be very useful when completing annual reports	
Delegate Travel Plan duties to other key staff where relevant	1 month prior to Travel Plan implementation	TPC		
Set up on-site car share scheme and / or investigate car share websites	1-2 weeks prior to Travel Plan implementation	TPC	Discuss with management which car sharing option to be promoted	
Contact LHA cycling officer	1-2 weeks prior to Travel Plan implementation	TPC	Obtain / prepare relevant cycle maps	
Contact LHA PT team / relevant public transport operators	1-2 weeks prior to Travel Plan implementation	TPC	Obtain relevant public transport timetables and maps	
Undertake initial staff survey exercise if possible	3 months prior to formal site opening	TPC	Prepare suitable questionnaire survey to review staff travel behaviour and views regarding travel plan initiatives	

LAUNCH

Task	Implementation Date	Responsible	Comments	Completed?
Circulate the Travel Plan objectives to all staff	Upon employment of staff	TPC		
Prepare Travel Plan Noticeboard	1-2 weeks prior to Travel Plan implementation	TPC	Contact NCC Travel Plan Team for posters and leaflets and search internet	
Launch car share / staff matching scheme	1-2 weeks prior to Travel Plan implementation	TPC	Undertake staff matching exercise	
Set up cycle loan scheme	1-2 weeks prior to Travel Plan implementation	TPC		
Set up guaranteed ride home scheme	1-2 weeks prior to Travel Plan implementation	TPC		

ON-GOING DUTIES

Task	Implementation Date	Responsib le	Comments	Completed?
Liaise with NCC Travel Plan Team where appropriate	As required	TPC		
Provide promotional Travel Data and health campaign information on display and keep up-to-date	Review every 3 months	TPC		
Promote and support national and local campaigns	Review annually	TPC		
Promote cycle training initiatives and interest free loan system	Review annually	TPC		
Check on-site cycle facilities and changing areas are maintained and fit for purpose	Formal review every 36 months	TPC	Undertake repairs / upgrades where appropriate	

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APPENDIX TP2

APPENDIX TP2

BILSTHORPE ENERGY CENTRE BILSTHORPE BUSINESS PARK, NOTTINGHAMSHIRE SCHEDULE OF TRAVEL PLAN MONITORING

2 YEARS POST TRAVEL PLAN IMPLEMENTATION

Task	Implementation Date	Responsib le	Comments	Completed?
Monitor staff travel patterns	2 years following Travel Plan implementation	TPC	Use the budget available for monitoring and updating the Travel Plan.	
Submit survey review report to NCC Travel Plan Team	2 years following Travel Plan implementation	TPC		
Undertake Travel Plan Audit and modify where appropriate	2 years following Travel Plan implementation	TPC	Use the budget available for monitoring. Submit Travel Plan Review Note to NCC	
Update Travel Plan Noticeboard to reflect progress towards targets and objectives	2 years following Travel Plan implementation	TPC		

4 YEARS POST TRAVEL PLAN IMPLEMENTATION

Task	Implementation Date	Responsib le	Comments	Completed?
Monitor staff travel patterns	4 years following Travel Plan implementation	TPC	Use the budget available for monitoring and updating the Travel Plan.	
Submit survey review report to NCC Travel Plan Team	4 years following Travel Plan implementation	TPC		
Undertake Travel Plan Audit and modify where appropriate	4 years following Travel Plan implementation	TPC	Use the budget available for monitoring. Submit Travel Plan Review Note to NCC	
Update Travel Plan Noticeboard to reflect progress towards targets and objectives	4 years following Travel Plan implementation	TPC		

6 YEARS POST TRAVEL PLAN IMPLEMENTATION

Task	Implementation Date	Responsib le	Comments	Completed?
Monitor staff travel patterns	6 years following Travel Plan implementation	TPC	Use the budget available for monitoring and updating the Travel Plan.	
Submit survey review report to NCC Travel Plan Team	6 years following Travel Plan implementation	TPC		
Undertake Travel Plan Audit and modify where appropriate	6 years following Travel Plan implementation	TPC	Use the budget available for monitoring. Submit Travel Plan Review Note to NCC	
Update Travel Plan Noticeboard to reflect progress towards targets and objectives	6 years following Travel Plan implementation	TPC		

NB. Further monitoring of travel patterns / demand should take place post YEAR 6 as part of the general operation of BEC Facility

FOURTH SCHEDULE
("Wader Mitigation Plan")



**Proposed Energy Centre
Bilsthorpe Business Park,
Nottinghamshire**

Wader mitigation plan

**Prepared for Peel Environmental Management
(UK) Ltd. and Bilsthorpe Waste Ltd**

Ref: 14-019/01-3

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Revised Version 3.0

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1 Introduction

This document provides a Wader Mitigation Plan to address likely adverse effects on ground-nesting waders as a consequence of the development of the Bilsthorpe Energy Centre, Bilsthorpe Business Park, Nottinghamshire.

The Mitigation Plan has been produced as part of a submission of additional information under Regulation 22 of the Town and Country Planning (Environmental Impact Assessment) Regulations 2011.

The Environmental Impact Assessment (EIA) of the Energy Centre predicted the displacement of one pair of little ringed plover (*Charadrius dubius*) and partial loss of foraging habitat for lapwing (*Vanellus vanellus*), up to five pairs of which will be displaced from another part of the former colliery site by a consented Solar Farm development.

The plan is designed to provide suitable near-site breeding habitat for little ringed plover and lapwing, in order to offset predicted impacts and help to achieve no net loss of biodiversity interest as a consequence of the Energy Centre development.

The total area proposed for inclusion in the mitigation is over 4.6ha of potentially suitable breeding wader habitat (*increased to 8.35ha of grassland habitat mitigation*).

Revised version – second Regulation 22 request

This revised version has been produced in response to a further Regulation 22 Request of 21st August 2014, and includes the following additional information:

- a plan to indicate those parts of the site where habitat incorporating areas of standing water would be created;
- an explanation of why the mitigation area is largely limited to an area outside a 200m zone around the nearest wind turbine;
- an indicative plan showing additional wet scrape areas;
- proposals to enhance the existing sward with a small number of nectar-rich species to increase invertebrate abundance and diversity (e.g. red clover, bird's-foot trefoil);
- additional coppicing along the eastern side of the plantation;

- a commitment to carry out annual breeding wader surveys, listed in the schedule of maintenance works in section 8.2; and
- consideration of how future development of land immediately to the south would affect the functioning of the area.

Revised version – third Regulation 22 submission

Following additional ecological survey work in 2015, it is necessary to revise the proposed Wader Mitigation Plan; it has also been revised to ensure better implementation of appropriate agricultural management of the mitigation area.

Breeding bird surveys in 2015 following implementation of the Solar Farm development found that lapwing had been displaced from the wider colliery site, with no records during the breeding season. Habitat quality within the proposed BEC site for little ringed plover had also declined due to increased vegetation cover, and there was only a single record of a possible breeding species.

The reduction in habitat quality for waders was accompanied by an increase in botanical diversity within the BEC site, as vegetation developed with characteristics of Open Mosaic Habitat on Previously Developed Land priority habitat. Based on the rapidity of natural succession, it was thought unlikely that this habitat would persist for long in the absence of any further disturbance of the BEC site.

The proposed mitigation area has recently been re-fenced, with the aim of providing a large enough that can be managed as a single grazing unit, and improves the openness of the landscape, an important factor for breeding lapwing. A single field of 8.35ha has now been created, and is supplied with a stock watering trough in the south-east corner. This provides opportunities for enhancement of the grassland habitat to create a more diverse sward, including areas within a 200m displacement distance of the wind turbines, while excluding areas on the northern and western slopes which had previously not been considered suitable for breeding waders. Management will still aim to provide suitable management which may attract breeding lapwing in the future; while it would be very welcome, the establishment of breeding lapwing cannot be considered a realistic target in the present circumstances. Little ringed plover and oystercatcher breeding habitats remain as management plan targets.

2 Scope and methodology

2.1 Plan format

The Mitigation Plan format follows guidelines in BS42020:2013 (*Biodiversity — Code of practice for planning and development*) for post-development management of habitats and species, and is structured as follows:

- a) Description and evaluation of features to be managed.*
- b) Ecological trends and constraints on site that could influence management.*
- c) Aims and objectives of management.*
- d) Appropriate management options for achieving aims and objectives.*
- e) Prescriptions for management actions.*
- f) Preparation of a work schedule (including an annual work plan capable of being rolled forward over a five year period).*
- g) Body or organization personnel responsible for implementation of the plan.*
- h) Monitoring and remedial measures.*
- i) Funding resources and mechanisms to ensure sustainable long-term delivery of the proposed management.*

The Plan is focussed on the habitat requirements of two wader species: little ringed plover and oystercatcher, although the needs of lapwing, a species which it is hoped will occur on site in future years are also a priority. The Plan also considers grassland biodiversity, and the needs of dingy skipper butterflies.

2.2 Methodology

A search for potential mitigation sites was undertaken for areas within the wider land ownership of Haworth Estates at Bilsthorpe Colliery. Known constraints were overlain on a site plan, including an existing wind farm, and areas of future development (e.g. a consented Solar Farm site). A distance of 200m from each turbine was taken as a possible displacement distance, within which lapwing and little ringed plover would be less likely to breed; the rationale for this is explained in more detail in Section 4 below.

The initial site search suggested that an area of pasture land in the north-west of the site could be suitable for enhancement for breeding waders. Separate, independent breeding bird surveys carried out by Argus Ecology and SLR Consulting in 2013 had

not recorded breeding waders on this part of the site, so the key issue to determine was whether the site could be enhanced to be suitable for waders, rather than whether its carrying capacity (i.e. breeding density) could be improved.

A site visit was carried out on 24th February 2014 to assess the opportunities and constraints presented the potential mitigation site. Current habitat quality was assessed and constraints identified which might explain the lack of current usage by waders. Potential improvements were identified, and the location of any proposed additional features was plotted in the field using a mapping-grade Topcon GMS-2 Pro GNSS receiver. Other parts of the site were also visited for comparison, including the planned Solar Farm site which held breeding lapwings in 2013, and the proposed Energy Centre site which had supported a pair of little ringed plover in 2013.

In order to inform the revised plan, a further visit was carried out on 7th August 2015, in order to record sward species composition and confirm the position of the new fence.

3 Description and evaluation of features

3.1 Habitats and vegetation

Habitats present in proposed mitigation area

The proposed mitigation area is located just over 100m north of the proposed development site, and incorporates the top and south-facing slopes of a mound which runs along the northern part of the former colliery site. The location is shown on Figure 1, and illustrated on the oblique aerial photograph below, with most of the site visible (shaded blue); the proposed Energy Centre boundary is shown edged red.



Photo 3.1: Mitigation area location

Note that this is a more recent aerial than currently available on Google Earth or Bing Maps, and shows changes following coal recovery operations.

The northern part of the mitigation area comprises part of a large field of improved grassland, previously managed as sheep-grazed permanent pasture. This has now been integrated with an area of less well-established open grassland occupying a south-facing slope, and separated from cattle-grazed pasture on the north and west-facing slopes of the mound. The flat ground at the base of the slope was damp during the February 2014 survey, with some standing water in wheel-ruts, and evidence of occasional standing water during wetter periods (see Photo 3.2 below). The boundaries of this flat area were plotted with the GNSS in order to define the maximum possible extent of wetland (shingle & scrape) habitat creation.



Photo 3.2: Flat ground – south part of mitigation area

The agricultural grassland was partly divided by a small area of scrub and a post-and-rail fence running north-south, although this was not stock-proof, and the field was managed as a single unit, as illustrated by the photograph below:



Photo 3.3: Scrub and fence – looking north

The landscaped mound has a broad, relatively level top offering an open aspect, which is illustrated by the photograph below, taken looking west from the fenced boundary with the established permanent pasture and more recently-established sward. The fence line has now been moved northwards to the right-hand side of the picture, creating a large open area on the flat topped mound.



Photo 3.4: Elevated grassland within proposed mitigation area (Feb 2014)

To the west of the mitigation area land slopes down steeply to a row of tall poplars just over the site boundary, while the northern edge slopes down to a hedgerow adjacent to a minor road. There is also a small plantation on the northern slope, with young ash trees in the upper, southern part of the enclosure. These areas are not suitable for breeding waders, because of the slope and proximity of taller trees; they were previously to have been managed as part of the same grazing unit, but would not have been considered part of the mitigation area. The gradient also makes this area difficult to crop for hay or silage, and they are currently (summer 2015) managed as a single field unit of cattle-grazed permanent pasture.

Habitats previously and currently utilised by waders

There are two areas previously and currently utilised by breeding waders which have been or would be displaced by currently implemented and proposed developments at Bilsthorpe Colliery.

Proposed BEC site

The proposed Energy Centre site supported a pair of little ringed plover in the 2013 breeding season, which were also observed adjacent to areas of shallow standing water on the planned Solar Farm site to the south.

The suitability of the Energy Centre site for little ringed plover was a consequence of the loss of vegetation and creation of areas of bare ground due to the coal recovery operations which had been carried out. Parts of the site had been colonised by tall ruderals later in 2013, rendering it less open and less suitable for little ringed plover, as illustrated by the photograph below:



Photo 3.5: Proposed Energy Centre site in February 2014

Occurrence of little ringed plover on this site in the absence of development was predicted to be ephemeral in nature, as habitat quality declines due to natural succession. This was found to be the case in summer 2015, when grassland cover was mapped at 55% of total site area, with just 24% of the site including ephemeral – short perennial vegetation which retained some value for little ringed plover. Only one little ringed plover was recorded on site on one occasion, and could not be regarded as more than a 'possible' breeder.

A pair of oystercatchers were recorded in the vicinity of the proposed BEC site in both 2013 and 2015. In 2013 successful breeding was confirmed; in 2015 breeding was

assessed as 'probable', although the oystercatcher territory extended onto adjoining land to the east.

Solar Farm site

The Solar Farm site supported an estimated five pairs of lapwing in 2013, occupying an area of elevated improved grassland on the former colliery waste cap. In February 2014 this area maintained its suitability for breeding lapwing, with a number of areas of shallow standing water present within an area of open grassland, as illustrated overleaf. Loss of this site will also affect little ringed plover breeding on the Energy Centre site, as they will lose aquatic marginal habitats for foraging.



Photo 3.6: Grassland and shallow standing water – Solar Farm site

By April 2015 construction of the Solar Farm was complete, and this area was covered in ground-mounted solar panels and enclosed by a tall security fence. Shallow standing water remained under the panels, and the area continued to be used by territorial skylarks and even roosting grey heron, but lapwing had been displaced from the Bilsthorpe Colliery site.

3.2 Evaluation of habitat quality for breeding waders

Habitat requirements for breeding little ringed plover

Little ringed plover require bare or sparsely vegetated habitats for breeding; their natural habitat includes areas such as shingle islands on braided streams within rivers. They colonised Britain in the second half of the 20th century after first breeding in 1938, taking advantage of the availability of similar habitat in sand & gravel quarries. They will also breed on recently cleared industrial sites and colliery spoil heaps.

Key habitat requirements include:

- Bare, preferably coarse-textured shingle substrate (if set in grassland, at least 0.2ha in area);
- Availability of shallow water margin habitats; and
- Limited opportunities for predators (e.g. maintaining open aspect with limited cover around nest sites).

Habitat requirements for breeding oystercatcher

Oystercatcher prefer to nest in bare areas with a loose substrate (Heppleston, 1972), and would benefit from habitat creation targeted at little ringed plover.

They also require short grassland vegetation with penetrable ground for foraging; unlike lapwing and little ringed plover, oystercatcher feed by probing. Unlike most other waders, oystercatcher feed young chicks, so the availability of suitable foraging habitat in close proximity to the chicks is not so critical as in other species which have to forage for themselves.

Habitat requirements for breeding lapwing

The management needs of lapwing on agricultural land are now reasonably well-established, with recently published guidance from Natural England (TIN090: Natural England, 2011), and RSPB (Farming For Birds – Lapwing advice sheet: http://www.rspb.org.uk/Images/lapwing_england_tcm9-207562.pdf).

For permanent grassland habitats, key management principles include:

- Maintaining a short sward in spring (grass height in March 3cm or less over 80% of the field);
- Maintaining taller patches and tussocks for shelter (10-15cm height in March, covering no more than 20% of the field);

- Reducing the risk of trampling nests by keeping stocking levels low between mid-March and mid-June;
- Grazing the field more intensively in late summer and autumn to produce the short sward height needed in spring;
- Creating or maintaining damp areas within each field, either by creating shallow scrapes or linear footdrains (Smart *et al*, 2006); and
- Avoiding areas with trees or other vantage points, which could be used by predators.

Habitat quality for breeding waders

The proposed mitigation area did not support any breeding waders in 2013 or 2015, so it is important to understand the potential constraints which are likely to be restricting current habitat quality. These include:

- Lack of standing water during the breeding season;
- Grazing by sheep in 2013, giving an even sward without longer vegetation to provide cover for chicks;
- Grazing by sheep during the breeding season, increasing the risk of nest losses through trampling;
- Absence of winter grazing, leading to a longer, less suitable sward for nesting at the start of the breeding season;
- Proximity of hedgerows and plantation, increasing predation risk, and subdividing fields into smaller, more enclosed units;
- Lack of bare shingle habitat for little ringed plover;
- Proximity of wind turbines; and
- Presence of steeper slopes with trees and hedgerows around the northern and western margins.

With respect to wind turbines, although a buffer distance of 200m was chosen to aid mitigation site selection, evidence suggests that this is conservative with respect to lapwing. A study of breeding bird displacement distances around turbines (Pearce-Higgins *et al*, 2009) did not find a significant effect on proximity to turbines for lapwing, although there was a (non-significant) reduction in probability of occurrence within 200m of the turbine.

The mitigation plan previously excluded areas most areas within 200m of the nearest turbine from habitat improvements. As the emphasis has shifted towards little ringed plover, dingy skipper and grassland biodiversity and away from lapwing, it is legitimate to include these areas in grassland diversification measures. This will also allow for a net benefit in terms of the Biodiversity Offsetting Metric to be achieved.

The mitigation area is designed to be large enough to provide mitigation for waders and grassland habitats greater than the predicted impacts of the Energy Centre, while allowing for agricultural management in conjunction with the other parts of the Bilsthorpe Colliery site; in particular, it is important to retain sufficient area for grazing stock in other parts of the site to allow for reduction in grazing levels during the breeding season. This has been achieved in the revised plan by retaining cattle grazing on permanent pasture to the north and west of the mitigation area.

Implications of future developments

The area of land most likely to be utilised by nesting lapwings is on top of the hill, around 170m north of the nearest current or planned development area. It will retain an open aspect in the future, and continue to provide suitable lapwing habitat if other parts of the colliery site are developed. Future developments will not therefore impose any constraints on utilisation of the site by lapwing.

The scrape and shingle area designed for little ringed plover is adjacent to a potential future industrial plot, with the boundary a minimum distance of 25m from the edge of the shingle. In the author's experience little ringed plover are less affected by the proximity of built structures when choosing suitable breeding sites. Examples include:

- a site in South Yorkshire adjacent to a large commercial vehicle factory building where an open area supporting breeding little ringed plover was located as close as 25m to the factory unit, with patches of scrub in places;
- a site in Gloucestershire where little ringed plover were breeding on a small area of suitable habitat on a vacant industrial plot, adjacent to a road with shrubs and trees, with tall lamp standards; and
- the Bilsthorpe Energy Centre site itself, where little ringed plover occupied the site although it was adjacent to buildings, noise and human activity associated with the Council depot site.

The Energy Centre boundary is just over 100m from the southern edge of the mitigation area, and very unlikely to disturb little ringed plover utilising shingle habitats or the adjacent scrape. Predictions of noise levels and light spillage from the site in the ES do not indicate any impact at this distance.

4 Ecological trends and constraints on site

4.1 Ecological trends

In the absence of any additional intervention, the agricultural grassland in the northern part of the site is likely to continue to support improved grassland with limited species diversity.

The more recently established grassland in the southern part of the site will establish a closed grass sward, having close to 100% cover when surveyed in summer 2015. Its ability to support grazing stock may be limited without further intervention (e.g. oversowing and fertilising), making it more suitable for conservation grazing with limitations on stocking density or on the number of weeks the site is grazed. Poor drainage at the foot of the slope may also limit its value for agriculture.

Surrounding plantation woodland will become more established, with immature trees on the northern boundary of the plantation, and the area of scrub between the two former field units increasing in height.

4.2 Constraints

The same constraints which are currently discouraging use of the site by breeding waders will continue to operate in the absence of changes in management.

The edge effect of plantations and scrub will increase with greater tree and shrub height, and will further reduce habitat quality for waders.

5 Aims and objectives of management

5.1 Aims

One primary aim of management is to establish and maintain conditions suitable for the successful breeding of ground-nesting waders, including little ringed plover, oystercatcher, and (if possible) lapwing.

A second important aim is to establish a more diverse grassland community which will offset habitat loss within the BEC site.

5.2 Objectives and vision for site

Grassland habitats

The grass sward will be short in the early spring over 80% of the field, with some tussocks of taller vegetation remaining, providing suitable conditions for nesting lapwing. Grazing pressure will reduce between mid-March and mid-June, reducing the risk of trampling nests and chicks. A small scrape will provide cover and a foraging area for chicks.

Around 2.8ha of grassland on the elevated part of the site would be suitable for breeding lapwing. As lapwing territories can be as small as 0.5ha when nesting, this could support up to 5 pairs; however, a more realistic target based on previous densities on the Solar Farm site would be 2 pairs, while current loss of the species from the wider site suggests this should be an aspiration rather than a defined target.

The grassland area would also be suitable for foraging oystercatcher, the scrape providing areas of greater penetrability compared to other areas of grassland.

Scrape and shingle habitats

The flat ground at the base of the slope will support an area of shingle large enough for one pair of nesting little ringed plover. A scrape, holding water well into the breeding season will provide suitable foraging habitat for adult birds, with ready access for chicks. This shingle area will also be suitable for a pair of nesting oystercatcher.

The scrape will have a variable depth, so that as it dries through the season it will develop as a number of separate pools, coalescing into a single waterbody in wet conditions.

The sloping grassland to the north of the scrape which currently supports poorly-established grassland will be improved to increase its resilience for grazing stock and value for wildlife by appropriate amendments and sowing a grass / legume mix, incorporating native cultivars of red clover (*Trifolium pratense*) and bird's-foot trefoil (*Lotus corniculatus*). This faces south, and will provide a suitably sheltered habitat for foraging butterflies and other invertebrates. The better established grassland on the top of the slope will be diversified by over-sowing with yellow rattle (*Rhinanthus minor*), which is known to increase grassland diversity by reducing grass vigour.

Woodland and scrub

The young plantation on the northern and north-eastern edges of the woodland will be maintained as coppice, restricting height growth to less than 3-4 metres and limiting vantage points for avian predators.

Unnecessary fencing and areas of defunct hedgerow and scrub patches will be removed to maximise openness and limit habitats for ground-based predators.

The mature woodland edge will not be coppiced, as this is further from likely areas to be used by breeding lapwing, and the mature trees themselves have an ecological and wider landscape value.

6 Appropriate management options for achieving objectives

6.1 Boundary features and adjacent habitats

Changes to field boundaries

Field boundaries have already been rationalised in order to manage the mitigation area as a single agricultural unit of 8.35ha and control grazing levels. The boundary of the revised mitigation area is shown in Figure 2.

By including areas further east than previously planned, access is possible to a water supply in the south-east corner of the new unit, allowing the field to be grazed without the need to retain access to troughs on the northern edge of the Business Park site.

Scrub and plantation management

The small area of scrub and defunct hedgerow in the western part of the site should be removed, along with any remaining fencing. A 15m strip on the northern and eastern edge of the plantation to the west (0.26ha in area). A 0.12ha area of young ash trees in the plantation to the north is now within the new permanent pasture field unit, and does not require further management.

6.2 Grassland management

Grazing management

The necessary changes in attractiveness of the established grassland for breeding waders can be accomplished by changes in the grazing regime, in terms of timing, type of stock and stocking density, in accordance with the following management principles:

- Maintaining a short sward in spring (grass height in March 3cm or less over 80% of the field);
- Maintaining taller patches and tussocks for shelter (10-15cm height in March, covering no more than 20% of the field);
- Reducing the risk of trampling nests by keeping stocking levels low between mid-March and mid-June;
- Grazing the field more intensively in late summer and autumn to produce the short sward height needed in spring;

- Creating or maintaining damp areas within the field by creating shallow scrapes; and
- Maintaining an open aspect to fields, avoiding trees or other vantage points which could be used by avian predators.

All species will benefit from a reduction or temporary cessation in grazing pressure during the breeding season, in order to reduce the risk of livestock trampling eggs.

If available, grazing by cattle is preferable on fields managed for breeding waders, both to reduce the risk of nest trampling in spring (cattle and horses are less likely to trample than sheep), and to create a more varied sward through more intensive grazing in autumn.

Levels of 1 cow / hectare between mid-March and mid-June have been recommended in the past by the RSPB. This is equivalent to a very light grazing pressure (in terms of forage intake, a 550kg dairy cow is equivalent to 1 Livestock Unit (LU); a smaller 400kg beef cow is equivalent to only 0.56LU (Crofts & Jefferson, 1994). A grazing intensity of 0.56LU / ha is probably too low in itself to prevent the development of a rank, tussocky sward as the breeding season progresses, which will not be suitable for lapwing. If cattle grazing is employed, a balance may have to be reached between preventing development of rank vegetation during the breeding season and the risk of nest trampling.

Horse grazing will result in a greater offtake per head of stock compared to beef cattle; a mature (>24 month) horse is equivalent to 1.0LU (Chapman, 2007), and a breeding season stocking rate of 1LU / ha (= 1 horse / ha) will be likely to provide the optimum balance between maintenance of a short sward and an acceptable risk of nest trampling. The selective grazing of horses is also likely to maintain a balance between a short sward with taller dunging areas. However, this option may not be advisable because of the greater risk of damage to the sward on the poorer soils in the south of the site by horse grazing, and is therefore not proposed.

Diversification of grass sward

The south-facing grass sward was not very well-established in early 2014, and may break down under grazing management, particularly on the steeper parts of the slope. This was assessed in 2015, which found that the sward had become better established, but was still quite open, and dominated in many places by non-agricultural species such as creeping bent grass (*Agrostis stolonifera*). It is still thought

to be open enough to enable establishment by re-sowing; this should include a high proportion of native legume species in the sward, including red clover and bird's-foot trefoil. This is not necessary on any areas of flat ground on the scrape and shingle area, where a poorer soil is an advantage, although areas on the gentle slopes immediately adjacent could be improved by cultivation and sowing with the native form of bird's-foot trefoil.

An appropriate target for a more diverse sward would be a threshold in the range of 10-15 species per 4m² sample area.

6.3 Scrape management

Construction of scrape and shingle area

A shallow scrape should be excavated on flat ground in the southern part of the slope of around 0.1ha in area; this encompasses an area of naturally wet ground. Material from the scrape should be spread evenly around, so as to avoid creating steep slopes or bunds close to the water. The base of the scrape should be compacted by the excavator bucket in order to reduce permeability.

To the north of the scrape, an area of 0.3m deep shingle (gravel) should be spread over the remainder of the flat area at the foot of the slope, which should provide an area of around 0.2ha. The total area of 0.3ha of shingle and scrape encompass all of the area with potential to create such a habitat, as adjacent areas are gently sloping.

Another smaller scrape should be excavated in an area of existing damp grassland within the improved grassland area on the top of the slope. The proposed scrape would be no more than 200m² in area. It would be shallow and not with a uniform depth across the whole scrape area. At its deepest, it will be no more than 45 cm and the deeper areas will be towards the middle of the scrape. Ideally the deeper areas should stay damp even in periods of dry conditions. The edge is important for feeding waders and in particular their chicks, therefore a more complex pond with a large edge is preferable than a simple, regularly shaped, pond. Edges must be very shallow and gently sloping.

Locations of proposed scrapes and shingle areas are shown on Figure 2.

After-care requirements

The main after-care requirements are for control of encroaching vegetation on the shingle habitat. Periodic application of a non-selective, systemic herbicide should be undertaken after the end of the breeding season. This should not encroach on

adjacent grassland areas sown with bird's-foot trefoil, although selective control of noxious weeds may be necessary.

7 Prescriptions for management actions

7.1 Establishment works (year 1)

The appropriate management options set out above can be translated into the following actions:

Table 7.1: Establishment work prescriptions

Habitat / feature	Operation	Details	Timing
Scrub	Removal	Grub out small area of scrub (ca. 100m ²) on old field boundary, together with any shrubs in defunct hedgerow / fence to north.	Aug. – Feb.
Fencing	Removal	Remove any remaining remnants of fencing along former field boundaries.	Aug. – Feb.
Fencing	Installation	Construct stock-proof post-and-wire fencing with gate.	Complete
Scrub	Coppicing	Coppice 15m strip (0.26ha) along northern and eastern edge of SW plantation, and 0.12ha area of young ash trees in northern plantation.	Winter
Scrapes	Construction	Shallow excavation of scrape to <0.5m maximum depth over 0.1ha area, with spoil spread over flat area of field.	Aug. – Feb.
Shingle bed	Construction	Spread 0.2ha area of gravel in a 0.3m thick layer, compact with excavator bucket.	Aug. – Feb.
Grassland	Improvement of sward	Further assess need for fertiliser application, over-sowing or additional topsoil application / re-seeding, then carry out appropriate measures. 8ha area, excluding scrape and shingle area.	Assess summer / autumn

Habitat / feature	Operation	Details	Timing
Grassland	Introduction of legumes and yellow rattle	Harrow and over-sow with red clover and bird's-foot trefoil on sloping areas of sward, and with yellow-rattle at top of slope.	Autumn

7.2 Maintenance prescriptions

Habitat	Operation	Details	Timing
Grassland	Monitor sward height	Check <30mm over 80% of field area to monitor effectiveness of earlier management	Early March
Grassland	Grazing	Graze with cattle at 0.56LU/ha (1 head beef cattle / ha) or less	mid-March – mid-June
Grassland	Grazing	Graze with cattle or cattle / sheep at levels sufficient to reduce sward height to 20mm across 80% of field by end of season	Late June – autumn
Grassland	Mowing	Optional operation to take late-season hay or silage crop if stock not available for grazing in this period.	Late summer / autumn
Shingle bed	Herbicide treatment	Assess requirement for treatment of tall weed species; spot-treatment with appropriate systemic herbicide if necessary. Specification and use should be in accordance with Plant Protection Products (Sustainable Use) Regulations 2012 and relevant Codes of Practice	August
Plantations	Coppicing	Coppice same areas as year 1 when regrowth reaches 3m, or on a 3-year cycle, whichever is sooner	Winter (triennial)

8 Work schedule

8.1 Establishment works (year 1-2)

Action	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Boundary works											
Fence removal									year 1			
New fencing									complete			
Scrub removal									year 1			
Coppicing	year 2										year 1	
	Scrape and shingle bed											
Excavate scrape									year 1			
Form shingle bed									year 1			
	Grassland management											
Assess pasture quality								year 1				
Topsoiling and re-seeding (if required)									year 1			
Over-sowing (if required)										year 1		
Manure spreading												

8.2

Maintenance works

Action	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Plantations											
Coppicing	year 4, 7, 10 etc.											year 3, 6, 9 etc.
	Scrape and shingle bed											
Herbicide treatment								As required				
	Grassland management											
Monitor sward height			annual									
Breeding season grazing			annual									
Post-breeding season grazing								annual				
Mowing										as required		
Manuring			as required									
	Bird monitoring											
Wader survey				annual	annual							

9 Implementation

The Wader Mitigation Plan will be implemented and funded by the site operator, by agreement with Haworth Estates as landowner and their grazing tenant.

10 Monitoring and remedial measures

Monitoring provisions

Measures have been built into the management prescriptions and work schedule set out above to monitor the success of the Wader Mitigation Plan in achieving its habitat quality targets. These include:

- Annual checks on sward structure and height to assess achievement of suitable quality standards;
- Annual checks on shingle bed area to determine requirements for weed control;
- Annual checks on grassland diversity quality and resilience, to assess need for further remedial treatment;
- Monitoring of habitat utilisation by birds – the appropriate methodology for assessing utilisation of enclosed fields by breeding waders is O'Brien & Smith (1992), which requires two visits during the breeding season..

Remedial measures

Remedial measures to address lack of attainment of habitat targets have been built into the management prescriptions and work programme above. Additional measures may be required to address issues which may arise (e.g. invasive species such as Australian swamp stonecrop (*Crassula helmsii*) colonising the scrape), and to address any lack of attainment of breeding wader targets.

The results of monitoring may also suggest changes to the management prescriptions – for example, if tree growth is more vigorous than anticipated, coppicing frequency may need to be increased. Implementation of the plan should be flexible enough to make these adjustments.

Examples of anticipated and potential remedial measures are summarised in the table overleaf.

Table 10.1: Potential remedial measures

Feature	Trigger	Action
Breeding waders	No breeding little ringed plover or oystercatcher	Assess whether any further habitat quality improvements can be made.
Breeding waders	Failure to breed successfully	Assess whether improvements in habitat quality, predator control or exclusion, or changes to stocking levels would improve likely breeding success.
Grassland	Decline in quality of sward on poorer quality soils on southern slope	Assess whether temporary stock exclusion using electric fencing would allow recovery, or whether further remediation needed
Grassland	Failure to achieve gains in grassland diversity	Changes to management regime / further sowing or introduction of plants into sward
Scrape (and other habitats)	Presence of invasive species listed on Schedule 9 Wildlife and Countryside Act 1981 (as amended)	Eradication with appropriate bio-security measures in accordance with species-specific guidance.

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Bilsthorpe, Nottinghamshire

ENERGY CENTRE

WADER MITIGATION PLAN

KEY

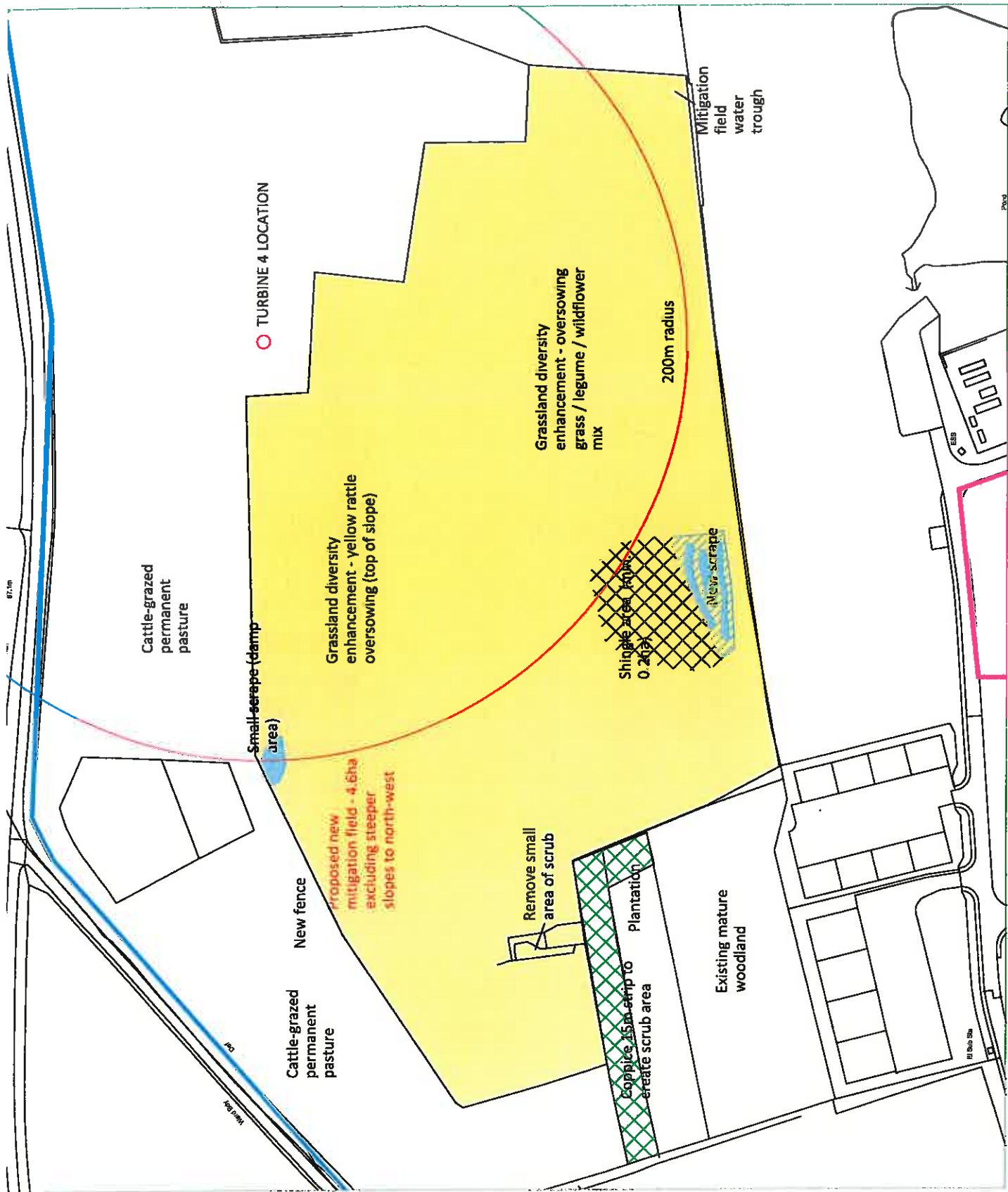
- Mitigation area
- BEC boundary
- Inundated scrape
- Deeper areas of scrape

argus ecology

The Greenhouse, Greencroft Industrial Park,
Airefield Plain, Co. Durham, DH9 7NN

Figure 1.1: Mitigation proposals

Version 3.0, 15/09/2015



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the presence of:-)

J. R. [Signature]

Authorised Officer

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delivered until the date hereof) by)
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INVESTMENTS LIMITED)
acting by a director in the presence of: -)

[Signature]

Director

Signature of witness *[Signature]*

Name (in BLOCK CAPITALS) *EDWARD CHARLES DEAN*

Address *1 WATERSIDE COTTAGE*

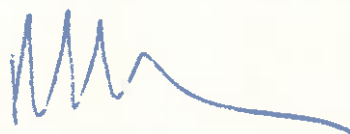
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BILSTHORPE WASTE LIMITED
acting by a director in the presence of: -

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Director



Signature of witness: J M Gaston

Name (in BLOCK CAPITALS): J M GASTON

Address: PEEL DOME, MANCHESTER,
M17 8PL