



**PROPOSED DEVELOPMENT OF A
BIOMASS FUELLED RENEWABLE
ENERGY PLANT AT BRIGG, NORTH
LINCOLNSHIRE**

ENVIRONMENTAL STATEMENT

NON-TECHNICAL SUMMARY

Volume 3

March 2009

PROPOSED DEVELOPMENT OF A BIOMASS FUELLED RENEWABLE ENERGY PLANT AT BRIGG, NORTH LINCOLNSHIRE (RESUBMISSION)

March 2009

This report has been prepared in support of the re-submitted planning application for the Brigg biomass fuelled Renewable Energy Plant and has been prepared on behalf of Eco 2 North Lincs Ltd, the applicant. The application has been co-ordinated by AXIS with technical inputs from:

- AXIS – Planning, Transportation and Environment
- Fichtner – Air Quality
- Argus – Ecology and Nature Conservation
- NVC – Noise
- Pre-Construct – Archaeology
- RPS Burks Green – Architecture



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FOREWORD

This Environmental Statement is submitted in support of a planning application made by Eco2 to develop a biomass fuelled renewable energy plant in Brigg, North Lincolnshire. The application is a resubmission of a near identical application originally submitted in May 2008. It consists of the three following documents:

- the Environmental Statement (ES) Main Report (Volume 1), which contains the detailed project description; an evaluation of the current environment in the area of the proposed development; the predicted environmental impacts of the scheme; and details of the proposed mitigation measures which would alleviate, compensate for, or remove those impacts identified in the study. Volume 1 also includes a summary of the overall environmental impacts of the proposed development and all relevant schematics, diagrams and illustrative figures.
- Technical Appendices (Volume 2), which include details of the methodology and information used in the assessment, detailed technical schedules and, where appropriate, raw data.
- a Non-Technical Summary (Volume 3), containing a brief description of the proposed development and a summary of the ES, expressed in non-technical language.

Copies of the documents, as a three volume set, are available at a cost of £180 from Eco2, Vision House, Oak Tree Court, Mulberry Drive, Cardiff Business Park, Cardiff, CF23 8RS. Alternatively, the Non-Technical Summary can be purchased on its own from the same point of contact for £20. An electronic copy of the Non-Technical Summary is also available via email, free of charge. In addition, all of the planning application documentation, including the ES can be downloaded from www.briggprep.co.uk

1.0 INTRODUCTION

1.1 Introduction and Background

1.1.1 Eco2 North Lincs Ltd (hereafter referred to as Eco2) has submitted an application for planning permission to North Lincolnshire Council for the development of a renewable energy plant near Brigg, North Lincolnshire (hereafter referred to as Brigg Renewable Energy Plant or Brigg REP). The facility would comprise a biomass fired power station, for which the primary fuel would be straw.

1.1.2 This application is a resubmission of a previous application for the development of a biomass fuelled renewable energy plant, submitted in May 2008, which was withdrawn in September 2008 following a review of statutory/technical consultation responses pertaining to the application. The main difference between the re-submitted application and the original specifically relates to the nature of the proposed flood mitigation measures.

1.1.3 The original planning application indicated that flood mitigation measures (compensatory flood storage capacity and surface water drainage attenuation) would be the subject of a separate planning application and that these elements would be located on an area of land to the north of the proposed REP development outside of the then planning application boundary.

1.1.4 This resubmission incorporates a wholly new flood mitigation scheme which involves no material off-site works, with flood compensatory storage and drainage attenuation measures being on-site and contained wholly within the original planning application boundary.

1.2 The Proposal

1.2.1 The Brigg REP development would be based around four main buildings comprising the turbine and boiler hall, two straw storage barns and a wood storage building. These four buildings would be linked by a series of high level conveyors. In addition there would be a stack (chimney). The development would also include a series of air cooled condensers, offices, control room and

staff welfare facilities, external hardstanding areas for vehicle manoeuvring/parking, a weighbridge and extensive perimeter landscaping.

- 1.2.2 The facility would have an electricity generating capacity of 40 megawatts (MW) and would use approximately 240,000 tonnes per annum of biomass, consisting primarily of baled straw sourced from the local area.
- 1.2.3 Eco2 is in the process of completing contracts for the straw fuel, which the applicant aims to secure from within a 30 mile radius of the facility. Contracts for fuel supply will be based upon a 12 year initial commitment and result in over £6 million per annum investment into the local agricultural economy. Whilst the vast majority of fuel will be straw, the plant would be able to accept a modest proportion of other biomass (e.g. willow coppice) and clean, untreated wood, which would be delivered to the site as chippings.
- 1.2.4 A more detailed description of the Brigg REP development is contained within Section 2 of this document.

1.3 The Site

- 1.3.1 The site comprises circa 5.26 hectares of previously developed land, formerly occupied by British Sugar's Brigg works. It lies approximately 800 metres east of the B1206 Scawby Road (from which the site is accessed) and 500 metres west of the River Ancholme. It is located approximately 1.5 kilometres south-west of Brigg Town and 1.8 kilometres east of Scawby. The smaller village of Scawby Brook is around 600 metres to the north-west (see Figure 1.1). The site is ostensibly flat and stands at a level of circa 3-4m AOD.
- 1.3.2 Most of the buildings that comprised the British Sugar works have been demolished to ground level leaving areas of concrete hard surfacing. The buildings remaining on the site include a manned security office and unoccupied former factory offices, stores and warehouses.
- 1.3.3 In terms of the 'natural' features, the site is bordered to the north by Scawby Beck, a well maintained stream. There are a number of mature trees intermittently bordering the west, north and east of the site.

- 1.3.4 Arable fields surround the site to the east and west. To the north lies what are understood to be former settling lagoons from washing activities relating to sugar beet. These are now backfilled and have become naturally covered by rough grass and some scrub. South of the site is Glanford Brigg gas fired power station.
- 1.3.5 Due to the very flat nature of the surrounding area, views into and out of the site can be long distance, but even relatively small features can provide a high degree of screening, such as the trees bounding the site. In terms of context, the villages of Brigg and Scawby have little visibility of the site, due to intervening trees providing a reasonable degree of screening. From the south of the site the existing power station is visually dominant and screens many views towards the REP site.

1.4 This Document

- 1.4.1 This document is the Non-Technical Summary of the Environmental Statement (ES), which has been prepared to accompany the planning application. It summarises, in non-technical language, the potential environmental effects of the proposed scheme, both during its construction and operation. It has been prepared in accordance with European Community (EC) Directives on the assessment of the effects of certain projects upon the environment (85/337/EEC updated by 97/11/EEC). This legislation is now manifest in England through the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999 (the EA Regulations), with which this report is fully compliant.

1.5 The Need for the Development

- 1.5.1 Whilst national policy is unequivocal that it is not necessary to demonstrate need as part of this planning application, the applicant has elected to identify the need for the Brigg REP in order to highlight a material planning consideration to which considerable weight should be attached.
- 1.5.2 The need for the Brigg REP development has been considered in the context of a number of strategic policy documents. The assessment has established that there is a demonstrable need for the development as:

- the Energy White Paper includes targets which aim to see renewables grow as a proportion of electricity supply to 10% in 2010, rising to 20% in 2020. The provision of electricity supply by renewables in 2006 was 4%. Consequently, a significant number of new facilities will need to come forward if the targets are to be achieved;
- the UK Biomass Strategy promotes the use of biomass as an energy source and notes that biomass will have a central role to play in meeting the Government's aspiration of 20% renewable energy by 2020. It also acknowledges the importance of energy generated from biomass in tackling climate change;
- the UK Renewable Energy Strategy Consultation Document promotes investment in renewable energy technology, in order to meet the EU set target that renewables will constitute 15% of the UK energy mix by 2020;
- from a national, regional and local perspective, all existing and emerging policy and strategy documentation support renewable energy developments;
- there is a significant renewable energy capacity shortfall on a regional basis. The Regional Spatial Strategy (RSS) states that in 2007 installed renewable energy capacity totalled approximately 168MW. Therefore, there is a substantial requirement for new renewable energy capacity in order for the region to meet its targets of 708MW by 2010 and 1,862MW by 2021. Consequently, there is a need for a range of new renewable energy facilities such as the Brigg REP;
- the 2020 target for renewable energy generated in North Lincolnshire is 112MW. The Brigg REP would produce 40MW at maximum capacity and, as such, would be capable of providing over a third of the 2021 target for renewable energy in North Lincolnshire.

1.6 Planning Policy

- 1.6.1 An assessment of the proposals against relevant planning policy has demonstrated that the scheme meets the requirements of the Planning and Compulsory Purchase Act as it fully complies with the policies of the statutory development plan and a comprehensive assessment of other material considerations has not revealed any justification for determining this application other than in accordance with the development plan. In fact, the proposals have been found to strongly accord with, and be supported by, a

range of other material factors, specifically planning policy and guidance (including The Energy White Paper, The UK Biomass Strategy, Planning Policy Statement (PPS) 1, Supplement to PPS1 – Planning and Climate Change, PPS22, the Yorkshire and Humber Plan: Regional Spatial Strategy to 2026, North Lincolnshire Housing and Employment Land DPD – Issues and Options and The Regional Energy Infrastructure Strategy for Yorkshire and Humber), all of which are material to the determination of the planning application.

2.0 SCHEME DESCRIPTION

2.1 Introduction

2.1.1 This section provides a description of the intended layout and design of Brigg REP. It also outlines the processes that would take place at the facility.

2.2 Intended Layout and Design of the Proposed Development

2.2.1 The Brigg REP development would be based around four main buildings comprising the turbine and boiler hall (circa 1,935m² and 30.61m high), two straw storage barns (circa 3,158m² each and 16.82m high) and a wood storage building (circa 563m² and 13.9m high). These four buildings would be linked by a series of high level conveyors. In addition, there would be a stack (chimney) of 62m in height. The development would also include the following ancillary / infrastructure elements:

- an air cooled condenser;
- a vehicle weighbridge;
- offices, control room and staff welfare facilities;
- site fencing and a security barrier;
- external hardstanding areas for vehicle manoeuvring / parking;
- internal access roads and car parking;
- compensatory flood storage;
- surface water attenuation pond;
- radiator fans;
- sedimentation tank;
- water tank;

- bottom ash storage and transfer area;
- transformers;
- silos; and
- extensive new areas of landscape planting.

2.2.2 The layout of these elements is shown on Figure 2.1 (the Site Layout).

Landscaping

2.2.3 In order to provide a level of mitigation against the potential adverse landscape and visual effects of the development, landscape works would be implemented as part of the proposal. An indicative landscape design is shown on Figure 2.1.

2.2.4 An extensive area of new woodland planting would extend north from the site entrance along the western and northern boundaries of the site. This would, as the trees mature, provide a degree of visual screening for the properties at Scawby Brook from the effects of the development (with the exception of the upper parts of the buildings and the chimney stack). The woodland would also be in keeping with guidelines as set out in North Lincolnshire Landscape Character Assessment & Guidelines.

2.2.5 The southern and eastern boundaries of the site would be marked by new hedgerow planting with trees, again in keeping with guidelines for the landscape type. The hedgerow trees would, to some degree, provide screening to the south and east in the longer-term.

2.2.6 The area between the proposed site buildings and the woodland at the western boundary would be seeded with a species-rich mix which would be low in maintenance requirements and would enhance wildlife diversity.

Employment

2.2.7 During the operation phase, the following permanent jobs would be created:

Staff Type	Approximate number of jobs
Operational staff	20 (5 shifts; 4 persons per shift)
Administration and management staff	10
Straw baling, management & haulage	50
Total	80

- 2.2.8 It should also be noted that further (temporary) employment opportunities should be available during both the construction and operation of the facility.

Access

- 2.2.9 The existing site access road connects to B1206 Scawby Road at an 'off-set' cross-road. The other side road access arm to the junction being Brigg Road, which provides local access to the village of Scawby. This cross-roads junction is designed to allow a central refuge for standing vehicles which are waiting to right turn, thus allowing free flow on the B1206. This assists in managing both highway capacity and safety. The site access road connection and the Scawby Road connection are off-set by approximately 100 metres (measured centre to centre).
- 2.2.10 The junction has good visibility in both directions. This is considered to be reflected by the excellent highway safety record, which has seen no accidents at the site access over the past 5 year period.
- 2.2.11 The B1206 Scawby Road acts as the main local distributor route for the Scawby Brook area and would accommodate all traffic movements to/from the Brigg REP proposal site. B1206 Scawby Road to the north serves the immediate local settlement of Scawby Brook and onward connections to the town of Brigg and the A18 / M180.
- 2.2.12 The B1206 to the north of the site terminates at a mini-roundabout junction with the A18. This junction has been designed to incorporate larger HGV service vehicles and includes for significant hatching/narrowing of approach lanes to the junction to promote safe operation. To the east of this junction the A18 provides local connections to Brigg Town Centre. To the north/west the A18 route provides district distributor road connections to the A15 main roundabout connection some 3.3km to the west. The A15 provides immediate connections to M180 junction 4 and onward southern links to Lincoln and

surrounding settlements. The A18 continues westwards to provide connections to the town of Scunthorpe.

- 2.2.13 It is proposed that HGVs entering and leaving the site do so via an agreed routing scheme (controlled by either a planning condition or legal agreement). In this context it should be noted that Eco2 has contractual control over all HGVs serving the facility. The 'agreed' route would involve (travelling from the site) a right turn onto Scawby Road (B1206) north, left at the mini-roundabout onto the A18, with vehicles then routing onto either the A18, A15 or M180 depending upon destination. Vehicles travelling to the site would follow this route in reverse. It is anticipated that virtually all Brigg REP operational movements would use this proposed route corridor.

Drainage

- 2.2.14 Surface water (rain water) runoff generated by the development would be collected via a separate system of below-ground pipes. Paved areas such as car parks, access roads etc would have approved oil separators/interceptors.
- 2.2.15 The surface water would then flow into an on-site surface water storage pond. Water would be discharged from this pond into Scawby Beck at an attenuated (controlled) rate which would be agreed with the Environment Agency and Internal Drainage Board.
- 2.2.16 Foul water (sewage) drainage would connect to the existing on-site infrastructure which served the site when an operating sugar factory.

Lighting

- 2.2.17 Once commissioned the Brigg REP would operate on a continuous basis. During hours of darkness there would be a need for a degree of lighting to ensure a safe working environment for operatives on site. However, the full external lighting system would only operate during hours of darkness (i.e. in winter) when vehicle deliveries are occurring, this being during the normal working day. After this time the main lighting would be automatically switched off. In order to cater for the health and safety needs of night shift workers at the plant, a reduced, low level lighting system would remain in operation after

dark, using low level lanterns and restricted to required walking routes and staff parking areas.

Security Fencing and Gates

- 2.2.18 The boundary of the REP complex perimeter would be secured by a 3 metre steel fence with matching lockable steel gates to provide means of access (all fencing would be green in colour). Further security would be provided by means of a CCTV monitoring system.

Car Parking Provision

- 2.2.19 The facility would include twenty car parking spaces including at least one disabled car parking space. In addition, a shelter would also be provided for bicycles and motorcycles.
- 2.2.20 It is not anticipated that any lorries would need to park overnight at the site. Any temporary/short-term requirement for lorry parking can be accommodated within hard standing areas provided.

2.3 Proposed Site Operations

Introduction

- 2.3.1 The operation of the facility is illustrated on Figure 2.2 and is described in non-technical language below.

Fuel Reception and Handling

Straw Deliveries

- 2.3.2 Straw will typically be delivered in the form of bales. These bales will be delivered on flat bed trailers, normally carrying three layers of 12 bales or 36 bales per load. Once on site, lorries will be directed to one of the two straw barns. Each straw barn contains two overhead cranes which are capable of unloading two lorries at the same time. The cranes remove a layer of 12 straw bales at a time. Each crane records the weight of their particular bales before

placing them in a storage area. Each straw barn is capable of storing enough bales for 36 hours operation (72 hours storage in total).

Wood Deliveries

- 2.3.3 Wood will be delivered in chip form in bulk tipping lorries. Wood lorries will drive onto the weighbridge situated just beyond the entrance barrier where their weight will be recorded. The lorry will then be directed to the wood chip storage building where they will unload in a storage area. The wood chip store will hold enough wood for 10 hours operation.
- 2.3.4 Lorries that have discharged their loads will be weighed at the weighbridge before leaving the site in order that the net weight of the load can be calculated.

Energy Recovery

- 2.3.5 Straw, or a combination of straw and wood chips, is transferred by conveyor belt from the storage buildings to the furnace where they are burned. Hot gases from the furnace pass to boilers which use the heat from the gases to turn water into superheated steam. This steam is then passed through a turbine to generate electricity. At maximum capacity Brigg REP would be capable of generating 40 MW of power.

Flue Gas Treatment

- 2.3.6 Gases generated during the combustion process would pass through a comprehensive cleaning system before being released into the atmosphere through the chimney stack. Emissions from the chimney are monitored continuously to ensure that they are within required emission limits.

Operating Hours

- 2.3.7 The plant will generate electricity on a 24-hour basis, 7 days per week. Despite this it is only proposed that straw/wood chip is brought into the site between the hours of 7am to 7pm Monday to Friday and between 8am and

2pm on Saturdays. No fuel deliveries would take place on Sundays or public holidays.

- 2.3.8 Plant maintenance shall be required once a year, halting the operation for a period of two weeks (typically scheduled during the summer).

3.0 SUMMARY OF POTENTIAL EFFECTS

3.1 Introduction

- 3.1.1 This part of the NTS provides, in non-technical language, a summary of the potential environmental effects of the proposals under a series of headings which reflect the assessment sections of the main Environmental Statement (ES) document.

3.2 Transportation

Access and Vehicle Numbers

- 3.2.1 Site access and traffic routeing has been described previously within Section 2 of this document.
- 3.2.2 Deliveries of straw and exports of ash waste would be restricted to Monday – Friday, over a 12 hour delivery window (07:00-19:00) and a six hour delivery period on a Saturday (08:00-14:00). No deliveries or collections would take place on a Sunday or public holidays.
- 3.2.3 Operational straw demand is 30 tonnes per hour at the furnace, with ash residues equating to approximately 10% of the weight of the delivered fuel. This, after allowing for the types of vehicles used and the delivery times stated above, would require 100 movements per day (i.e. 50 in and 50 out).
- 3.2.4 Staffing requirements would produce 36 vehicle movements per weekday, assuming that all journeys are made individually and by car. This is the worst case; the scheme will include provisions to encourage sustainable travel to the site.

Impact of Traffic

- 3.2.5 A detailed review of anticipated future operational highway conditions and reference to appropriate guideline standards has concluded that the development of Brigg REP will not result in a material change in operational or environmental capacity conditions on the local highway network. Development traffic flow increases will generally be low and it is considered that there is no requirement for significant development related off-site highway improvement works to support the scheme.

3.3 Landscape and Visual Impact

- 3.3.1 The landscape and visual effects of the REP have been subject to detailed assessment, which has included discussion with officers at the local planning authority.
- 3.3.2 The significance of landscape effects upon the relevant seven landscape character areas/types identified by North Lincolnshire Council and by West Lindsey District Council would be no greater than minor to moderate in terms of landscape fabric (i.e. loss of features such as grass, trees and structures etc) and no greater than minor in terms of landscape character.
- 3.3.3 The effect of views of the proposed development would vary in significance depending upon the location of the viewer. The assessment focussed upon seven representative View Points (VPs) from which visual effects were considered. Viewers at VP6 within Scawby Brook (see Figure 7.1 of Volume 1 of the Environmental Statement for the viewpoint locations) would experience visual effects of major significance and viewers at VP3 (southern edge of Brigg) and VP5 (east of Scawby) would experience effects of moderate to major significance.
- 3.3.4 The proposed landscape works would lead to a considerable increase in both woodland and grassland when considered against the existing situation. As trees become more mature, visual screening of some of the proposal would be achieved, although the chimney stack and upper parts of taller buildings would remain visible. Also, the development of the woodland would be in keeping with landscape guidelines currently followed by North Lincolnshire Council.

- 3.3.5 In conclusion, the proposed development would not have a significant effect upon landscape character. The existing Glanford Brigg Power Station is a notable feature in the local landscape and the addition of the proposal would lead to little change in the balance of landscape characteristics. The increased tree cover proposed as part of the landscape scheme would enhance landscape character in the longer-term.
- 3.3.6 Some residential properties to the north, north-east and north-west of the proposed development, which have clear views towards the site will experience significant visual effects. From these properties the proposal would be more evident than the existing power station. Proposed woodland planting would provide some screening of views, once trees have matured, reducing the visual effects of the proposal in the longer-term, although the chimney and upper parts of the boiler house would continue to be visible.

3.4 Ecology and Nature Conservation

- 3.4.1 The proposed site contains one protected species, barn owl, and lies adjacent to Scawby Beck which has a population of water voles. It is also close to a non-statutory site of conservation importance.
- 3.4.2 While the predicted impacts of the development will involve loss of a small amount of scrub and associated habitats, this can be compensated by new planting within the curtilage of the development site.
- 3.4.3 Further survey work (to be completed before construction begins) and detailed siting of the surface water runoff outfall to Scawby Beck is necessary to avoid impacts on water voles and ensure legislative compliance. Further mitigation works may also be necessary, depending on the results of this survey. In addition, careful attention to the treatment of surface water runoff from the site is recommended to avoid indirect impacts.
- 3.4.4 Careful timing of demolition works is necessary to avoid impacts on breeding barn owls, preceded by a licensed inspection of the breeding site. Mitigation works should be implemented to provide alternative nest sites, including nest boxes and, possibly, suitable voids within the new build.

- 3.4.5 Based on currently available data, the development should be neutral with respect of its ecological impact. However, the development is likely to produce a net positive impact in practice, due to the ecological enhancement measures incorporated into site landscaping, potentially benefiting a range of bird species, depending on detailed design and after-care.

3.5 Geology and Hydrogeology

- 3.5.1 An assessment has been undertaken to identify the potential effects of the proposed development upon the geology and groundwaters local to the site. This has identified evidence of a localised area of contamination, stemming from the site's former use as a sugar factory, which would result in the need for remediation as part of the redevelopment process.
- 3.5.2 In the absence of any hazardous substances in the processes proposed at the REP, the risk of contamination of the local geology or groundwaters is considered to be negligible from this potential source.
- 3.5.3 It has been predicted that any potential adverse environmental effects would occur predominantly during the construction phase and, specifically, in relation to excavation activities. Aside from the measures planned to deal with the contaminant source, the requirement for additional measures to mitigate these effects would be determined through further ground investigations that would be required post demolition in order to provide adequate overall coverage of the site. No significant residual effects are predicted.
- 3.5.4 Although no significant effects are predicted during the operation of the proposed development, generic measures would be introduced to ensure effective site management including procedures for dealing with accidental oil and fuel spillage during the use of plant, equipment and machinery and these would be included as part of the Environmental Management System for the facility.

3.6 Surface Waters and Flood Risk

- 3.6.1 The proposed development does lie within an identified area of flood plain and has been subject to a detailed Flood Risk Assessment. This indicates that the

implementation of an on-site flood mitigation and surface water attenuation scheme would ensure that the risks posed to the development and the surrounding area could be managed to acceptable levels.

- 3.6.2 Surface water runoff from the proposed buildings and hard surfaces would be managed in such a fashion so as to ensure that the resulting flows are discharged at an appropriate rate, via the on-site storage ponds, into Scawby Beck when conditions in the River Ancholme permit. This, in turn, would ensure there would be no adverse disturbance to the existing surface water regime local to the site.
- 3.6.3 The proposed development would not affect the water quality of the surrounding area as a result of the infrastructure that would be installed to service the site and the specific practices employed to manage runoff from the different parts of the development .

3.7 Noise and Vibration

- 3.7.1 For the construction phase, the noise levels would vary from day to day depending upon a number of factors including type of plant being used, type of activity, distance from the site boundary, screening, duration of activity and nature of activity. For the assessment of impact for the construction phase it is concluded that by adopting the proposed mitigation measures, the impact would result in a negligible to slight adverse effect, albeit a temporary noise source.
- 3.7.2 During the operational phase, the noise assessment considers an example of mitigation that could be implemented to control noise from the site to achieve the acceptable noise level. There are a number of different ways in which this level can be achieved, for example, the use of noise control at source and/or the selection of different plant equipment, which may be quieter, can be investigated. When further detailed information is available on specific plant selection, it may be necessary to undertake a further noise assessment to check that the planning consent conditions would be achieved. The provision of appropriate mitigation measures within the detailed design would assist in minimising any noise impact and the level of risk is anticipated to be low. The

residual impact from noise is therefore deemed to have a negligible effect or at worst a slight effect on noise levels at the nearest residential dwellings.

- 3.7.3 Vibration arising from construction, operation and traffic associated with the development was evaluated and it was concluded that the levels of vibration would be insignificant.

3.8 Air Quality

- 3.8.1 The methodology used in the assessment of the impact on air quality of the Brigg REP uses a number of conservative assumptions. These include the following:

- it is assumed that the plant will continually operate at its maximum emission limits. In practice, this will not be the case and actual emissions will be less than the limits.
- the maximum ground level concentrations are considered in each case. These concentrations occur in small areas; in general, the concentration will be much lower.

- 3.8.2 Even with these conservative assumptions, the concentrations of all pollutants are less than 10% of the short term air quality standard or guideline for all the pollutants. The long term concentrations for the Brigg REP emissions are not greater than 1% of the long term air quality standard (AQS) or guideline.

- 3.8.3 The increase in the maximum ground level concentrations when considering emissions from Brigg Power station and Brigg REP increases by less than 1% of the AQS or guideline.

- 3.8.4 The peak long and short term concentrations are combined with pessimistic background concentrations for comparison with air quality standards and guidelines. No breaches of any of the standards or guidelines are predicted.

- 3.8.5 It can be concluded that the impact on both the local community and the general population from the atmospheric emissions from the Brigg REP would be insignificant.

3.9 Archaeology and Heritage

- 3.9.1 A detailed assessment has concluded that the possibility of there being significant archaeological remains of any period or significant palaeoenvironmental information on this site is negligible. The evidence within the search radius shows settlement focused away from the application area, while cartographic (map) evidence suggests that the site was farmland until the development of the Old Sugar factory, the construction of which is likely to have destroyed archaeological remains, had such remains been present.