
15.0 SUMMARY OF EFFECTS

15.1 Introduction

15.1.1 The planning application for which the Environmental Impact Assessment has been undertaken seeks planning permission for the development of a biomass fuelled renewable energy plant, at Brigg, North Lincolnshire (Brigg Renewable Energy Plant or Brigg REP). Chapter 3.0 of the Environmental Statement (ES) has established that there is a demonstrable need for the proposal.

15.1.2 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previous application for the development of a biomass fuelled renewable energy plant, submitted in May 2008, which was withdrawn in September 2008 following a review of statutory / technical consultation responses pertaining to the application.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 differences between the re-submitted application and the original are in the treatment of flood risk and archaeology.

15.1.3 The scope of the Environmental Impact Assessment, which has culminated in the production of this Environmental Statement, was established following a process of scoping undertaken with officers at North Lincolnshire Council prior to the May 2008 application. The potential effects of the proposal, as identified within the previous chapters of this Environmental Statement, are summarised below.

15.2 Planning Policy

15.2.1 It can be determined from the appraisal in Section 5.0 that the proposed Brigg REP is consistent with all planning policy and guidance. The proposal meets the provisions of the statutory development plan and meets the test of Section 38(6) of the Planning and Compulsory Purchase Act.

15.2.2 In addition, 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, PPS1, Supplement to PPS1 – Planning and Climate Change, PPS22, 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) which are material to the determination of the planning application.

15.3 Transportation

Access

- 15.3.1 It is proposed that the REP will be served by the existing vehicular access into the site (previously used by British Sugar). The existing site access road connects to B1206 Scawby Road at an 'off-set' cross-roads junction. 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).
- 15.3.2 The junction has good visibility in both directions. This is considered to be reflected by the excellent highway safety record, which has seen no accident incidents at the site access connection over the past 5 year period.
- 15.3.3 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. B1026 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.
- 15.3.4 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.

- 15.3.5 It is proposed that all HGVs entering and leaving the site do so via an agreed routeing scheme (controlled by either a planning condition or legal agreement). 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 routeing 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.

Vehicle Numbers

- 15.3.6 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.
- 15.3.7 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 typically require 100 movements per day (i.e. 50 in and 50 out).
- 15.3.8 Staffing requirements would produce 36 vehicle movements per weekday, assuming that all journeys are made individually and by car. The scheme will include provisions to encourage sustainable travel to the site.

Impact of Traffic

- 15.3.9 A detailed review of anticipated future operational highway conditions and reference to appropriate guideline standards has concluded that the development of the Brigg REP facility will not result in a material change in operational or environmental conditions on the local highway network.

Development traffic flow increases will generally be of a limited nature and it is considered that there is no requirement for significant development related off-site highway improvement works to support the scheme.

15.4 Landscape and Visual Impact

- 15.4.1 The landscape and visual effects of the proposed biomass fuelled REP at Brigg, North Lincolnshire have been subject to assessment in Chapter 7.0 of the ES.
- 15.4.2 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 and no greater than minor in terms of landscape character. None of these effects are considered to be significant in terms of EIA.
- 15.4.3 The effect of views of the proposed development would vary in significance depending upon the location of the viewer. The assessment focused upon seven representative viewpoints (VPs) from which visual effects were considered. Viewers at VP 6 (see Figure 7.1), Scawby Brook would experience visual effects of major significance and viewers at VPs 3 (southern edge of Brigg) and 5 (east of Scawby) would experience effects of moderate to major significance. These three viewpoints would experience effects considered to be significant in EIA terms.
- 15.4.4 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. Additionally, the development of the woodland would be in keeping with landscape guidelines currently followed by North Lincolnshire Council.
- 15.4.5 In conclusion, the proposed development would not have a significant effect upon landscape character. The 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.

- 15.4.6 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 stack and upper parts of the boiler house would continue to be visible.

15.5 Ecology and Nature Conservation

- 15.5.1 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 and a non-statutory site of conservation importance.
- 15.5.2 While the predicted impacts of the development will involve loss of a small amount of scrub and associated habitats, this would be compensated by new planting within the curtilage of the development site.
- 15.5.3 Further survey work and detailed micro-siting of the 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 treatment of surface water runoff from the site is recommended to avoid indirect impacts.
- 15.5.4 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.
- 15.5.5 Based on currently available data, the development should be neutral with respect of its ecological impact. Ecological enhancement measures incorporated into site landscaping should produce a net positive impact, potentially benefiting a range of bird species, depending on detailed design and after-care.

15.6 Geology and Hydrogeology

- 15.6.1 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 that there is evidence of a localised contamination source, resulting from the site's former use as a sugar factory, which would stimulate the need for remediation as part of the redevelopment process. Site Specific Risk Assessments and an outline strategy for remedial works have already been formulated based on the initial pre-demolition site investigation. A detailed remedial works specification to deal with this local source will be required following further post demolition inspections and monitoring.
- 15.6.2 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.
- 15.6.3 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 already identified, 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. The measures would include general adherence to best site practices as discussed above. Following this procedure, no significant residual effects are predicted.
- 15.6.4 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.

15.7 Surface Waters and Flood Risk

- 15.7.1 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.

- 15.7.1 Surface water runoff from the proposed buildings and hardstandings would be managed in such a fashion so as to ensure that the resulting flows are regulated to the equivalent 'green field' runoff rate via 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 hydrological regime local to the site.
- 15.7.2 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.

15.8 Noise and Vibration

- 15.8.1 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.
- 15.8.2 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 noise criteria. There are a number of different ways in which the criteria 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 (i.e. by applying BAT techniques). 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.

15.9 Air Quality

15.9.1 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.

15.9.2 Even with these conservative assumptions, the concentration of all pollutants is less than 10% of the short term air quality standard or guideline and less than 1% of the long term air quality standard (AQS) or guideline for all the pollutants.

15.9.3 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 for all the pollutants.

15.9.4 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.

15.9.5 Emissions from traffic sources do not lead to a significant increase in ground level concentrations on the B1206, but do lead to a slightly significant increase on the access road. However, no breaches of air quality standards are predicted when combined with background emissions.

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

15.10 Archaeology and Heritage

- 15.9.1 A detailed assessment has established 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 evidence suggests that the site was under 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.