



Little Crow

Solar Park

Little Crow Solar Park, Scunthorpe

CUMULATIVE EFFECTS ASSESSMENT - POST SUBMISSION

REVIEW OF KEADBY 3

DEADLINE 5

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**CUMULATIVE EFFECTS ASSESSMENT
POST SUBMISSION REVIEW OF KEADBY 3**

ON BEHALF OF INRG SOLAR (LITTLE CROW) LTD

DEADLINE 5

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1. CUMULATIVE EFFECTS ASSESSMENT - REVIEW OF KEADBY 3

Purpose of this Document

- 1.1 This document is submitted by INRG Solar (Little Crow) Ltd ("the Applicant") and considers the potential for cumulative effects to occur between Little Crow Solar Park and the Keadby 3 Low Carbon Gas Power Station Project. This assessment has been carried out as discussed at ISH2 and as noted in the Applicant's Deadline 4 submission [add ref to cover letter]. This document sits alongside Chapter 2 of the Little Crow Environmental Statement (Document Ref 6.2 LC ES CH1, PINS Reference APP-059).

Background

- 1.2 The Keadby 3 Low Carbon Gas Power Station was received by the Planning Inspectorate on 1 June 2021 and accepted on 28 June 2021. The application was accompanied by an Environmental Statement (NSIP Project No EN010114). The development relates to the construction, operation and management of a combined cycle gas turbine (CCGT) power station, comprising a CCGT unit with a capacity of up to 910 megawatts electrical output (gross), carbon capture and compression plant, electrical, gas, and cooling water connections, and associated development. For ease of reference, the Keadby 3 site location plan (PINS Document Ref EN010114 APP-010). is provided at Appendix 1 of this document.
- 1.3 In considering the potential for cumulative effects, the Applicant and its environmental consultant team have had regard to the following Keadby 3 documentation:-
- Keadby 3 Environmental Statement Volume 1 (Written Statement) (PINS Document refs EN010114 APP-043 to APP-063)
 - Keadby 3 Environmental Statement Volume 2 (Technical Appendices) (PINS Document Refs EN010114 APP-064 to APP-098)
 - Keadby 3 Environmental Statement Volume 3 (Technical Appendices) (PINS Document Refs EN010114 APP-099 to APP-159)
- 1.4 The Keadby 3 Environmental Statement identified that there may be potential for overlap during the construction phase between Keadby 3 and Little Crow Solar Park, however it deemed that the scale and nature of development would not have

a significant cumulative effect as ***"..the Little Crow Solar Park is located beyond the ZOI of most environmental topics, with the exception of Landscape and Visual Amenity and Biodiversity in relation to potential air quality effects on statutory designated ecological sites (i.e. within 15km). A review of the ES for the application outlines that landscape and visual effects would be highly limited and given the distance (10km) between this development and the Proposed Development is considered there is not the potential for significant cumulative effects. No significant effects on statutory ecological sites are predicted and given the distance of the application from the Proposed Development, there is not considered the potential for significant cumulative effects. Significant cumulative Traffic and Transport effects during construction are also not anticipated as the proposed routes to site would use different junctions from the M180 and associated minor roads"*** (extract from Keadby 3 Environmental Statement Table 19.5 Identification of other development for the CEA (Stage 2 shortlist) PINS Ref EN010114 - APP-062).

Landscape and Visual

- 1.5 The landscape and visual elements of the Keadby 3 application documents have been reviewed against the Little Crow proposals. The Keadby 3 scheme lies approximately 10km to the west of the Little Crow site, on the opposite side of Scunthorpe (as illustrated on Figure 19.1 of the Keadby 3 ES, PINS Ref EN010114 APP-158). It therefore lies outside of the 5km detailed study area which was used for the Little Crow LVIA, as illustrated on Figure 6.1 of the Little Crow ES (Document Ref 6.6B LC ES CH6).
- 1.6 It is noted that the ES for the Keadby 3 scheme considered the potential for cumulative landscape and visual effects to arise in relation to the Little Crow scheme as part of its assessment work. It was confirmed in Table 19.5 of the Keadby 3 ES (page 46 of Chapter 19, PINS Document Ref EN010114 APP-062) that *'given the distance (10km) between this development [Little Crow] and the Proposed Development [Keadby 3] is considered there is not the potential for significant cumulative effects'*. Having reviewed the potential for any cumulative landscape and visual effects to arise between the two schemes this conclusion is considered to be appropriate. This is also demonstrated with reference to the Zone of Theoretical Visibility Plan included in the Keadby 3 ES (Figure 14.4, PINS Document Ref EN010114 APP-134) which illustrates insignificant overlap with the

visibility of the Little Crow scheme as shown in Figure 6.3 of the Little Crow ES (Document Ref 6.6B LC ES CH6).

- 1.7 There may be a very small number of locations in the landscape where it would be possible to see both Little Crow in one direction and the Keadby 3 scheme in a different direction, should weather conditions be clear. However, with a distance of 10km between the two schemes, and within the context of the urban area of Scunthorpe and the substantial steelworks complex which lies between the two sites, any such views would be no more than negligible in nature. It is therefore considered that there would be no potential for significant cumulative landscape and visual effects to arise between Little Crow and the Keadby 3 scheme and that landscape and visual matters in relation to Little Crow and Keadby 3 would not require to be addressed in a formal update to the Environmental Statement.

Ecology and Nature Conservation

- 1.8 The ecological and nature conservation elements of the Keadby 3 application documents have been reviewed against the Little Crow proposals.
- 1.9 The most prescient issues are those associated with impacts on the Humber Estuary designated Sites (SPA/SAC/Ramsar). The Keadby 3 ES chapter (PINS Document Ref EN010114 APP-054) and Habitat Regulations Assessment Screening Report (PINS Document Ref EN010114 APP-041) do not consider there to be any likely significant effects through displacement of bird species associated with the Humber Estuary SPA. Effects were largely ruled out on the basis of the distance of the Keadby site from the SPA. Potential effects identified for the SAC/Ramsar relate to direct impacts on the River Trent (and fish species inhabiting it). No impacts on surrounding watercourses are anticipated to arise from the Little Crow scheme, and Little Crow is sufficiently distant from the River Trent and does not have any direct connection to it, meaning that there is no shared impact pathway.
- 1.10 Potential air quality effects on the Humber Estuary from NO_x and ammonia emissions during operation of Keadby have been identified, however the Little Crow scheme is predicted to have negligible air quality impacts and therefore cumulative effects can be ruled out.
- 1.11 Potential cumulative effects on a small number of other shared ecological receptors (namely bats, badgers, and breeding birds) can be ruled out on the basis of both

the distance and intervening landscape between the two sites, and the lack of major impacts predicted for these at both sites.

- 1.12 For these reasons it is considered there would be no potential cumulative impacts between Little Crow and Keadby 3 with regard to ecology and nature conservation.

Cultural Heritage

- 1.13 The cultural heritage elements of the Keadby 3 application documents have been reviewed against the Little Crow proposals. It is noted that the two schemes are of a different character and type, with differing potential affects. Keadby 3 lies in a different historic environment/landscape context to Little Crow, with the Trent River and its influence on human activity in the landscape being a more dominant feature of the Keadby 3 area. The distance between the two sites, at around 10km, with the town of Scunthorpe and the existing steel works lying between them means that there is no visual relationship. There is additionally no known historical or functional relationship between the two sites.
- 1.14 As has been set out in the assessment work undertaken for each site there are no heritage assets where potential impacts might result from their implementation that are common to both schemes. It is also noted for neither scheme has any significant impact (following mitigation) been identified.
- 1.15 For these reasons it is considered that there are no cumulative impacts with regard to cultural heritage.

Transport and Traffic

- 1.16 The traffic and transportation elements of the Keadby 3 application documents have been reviewed against the Little Crow proposals.
- 1.17 During the construction phase, the Little Crow Construction Traffic Management Plan (Document Ref 7.36 LC TA9.2, PINS Ref APP-105) shows that construction traffic will be routed from the M180 Junction 4 along the A15, A18 and B1208 Brigg Road. The Keadby 3 Construction Traffic Management Plan, (PINS Document Ref EN010114 APP-161) shows that construction traffic will be routed from the M180 Junction 2 via the A161 and the A18 (a different section of the A18 compared to the Little Crow construction traffic route, approximately 16km to the west). Therefore, the construction traffic routes do not overlap on the local highway network, once off the motorway (strategic highway network).

- 1.18 As set out in paragraphs 5.3 and 5.4 of Appendix 9.1 of the Little Crow ES (Document Ref 7.35A LC TA9.1, PINS Ref AS-003) the operational phase, including maintenance, would only generate four visits to the site a year. Paragraph 4.5.3 of the Keadby 3 Transport Assessment (PINS Document Ref EN010114 APP-074) states that the effects of Keadby 3 operational traffic would be negligible. It goes on to state that detailed assessment of the operational phase of the development was not undertaken within the Transport Assessment, as agreed with NLC and PINS through EIA Scoping. In conclusion, in relation to transport and traffic, the effects of the operational traffic for both sites is negligible so there is no need to undertake an operational phase cumulative impact assessment of both sites.

Agricultural Circumstances

- 1.19 The Keadby 3 Environmental Statement does not include detailed Agricultural Land Classification (ALC) survey. The Keadby 3 proposal takes a field of about 8ha for the facility, plus some land from a patchwork of paddocks for access roads etc east to Keadby. There is also an easement south of the Stainforth and Keadby canal (2 fields, 10.5ha) and access tracks to the A18 at Pilfrey farm. There is no assessment of impact on specific farm businesses.
- 1.20 The Keadby 3 is seeking a permanent consent and as such it could result in the loss of land resource that may be best and most versatile agricultural land but the Applicant is not in a position to assess that with no information from the Keadby 3 documentation. The Little Crow Solar Park would be temporary development and as such there is no potential for significant corresponding cumulative effects. This will remain the case even in the event that the Keadby 3 applicant were requested to provide a Detailed ALC assessment, regardless of the results.

Socio Economic

- 1.21 The socio-economic elements of the Keadby 3 application documents have been reviewed against the Little Crow proposals. The socio-economic chapter of the Keadby 3 application, PINS Document Ref EN010114 APP-059, estimates that 1,076 construction jobs will be supported during the build phase, of which 538 will be taken by people living in the Scunthorpe travel to work area. It concludes that this would represent a major beneficial short-term impact, which is significant in EIA terms. Adding on the construction benefits expected at Little Crow (circa 233 jobs, albeit in a slightly different geographical area – North Lincolnshire, which still

includes Scunthorpe) increases jobs in the construction sector, therefore the impact is still considered to be major beneficial (significant) in the short-term.

The operational socio-economic impact of Little Crow is considered by the ES chapter (Document Ref 6.11A LC CH11, PINS Ref PDA-013) to be moderate positive, which is significant in EIA terms. Adding on the 58 net additional jobs created by Keadby 3 (as outlined in its respective ES chapter), this position is considered to be unchanged – i.e. the cumulative operational impact is moderate positive (significant in EIA terms).

Noise

- 1.22 The noise and vibration elements of the Keadby 3 application documents have been reviewed against the Little Crow proposals. At a minimum distance of approximately 10 km, there would be no in-combination effects due to onsite noise sources during either construction or operational phases, particularly given that each application is predicted to have no significant effects on the respective local receptors. Further, the initial transport assessment undertaken into possible cumulative effects (ref 1705-57/TN/02) confirms that traffic routes to the site will not overlap outside of the M180. There are therefore no shared receptors for generated traffic.
- 1.23 The noise model of operational noise has been interrogated, and it can be demonstrated that operational noise from the Little Crow proposals as designed reaches a noise emission level of 0 dB at approximately 1.8 km from the Little Crow site. There will therefore be no contribution to cumulative levels with the Keadby 3 proposed development, which is approximately 10 km from the Little Crow site.
- 1.24 Based on the above, there would be no cumulative noise and vibration effects due to the Keadby 3 application.

Air Quality

- 1.25 The air quality elements of the Keadby 3 application documents have been reviewed against the Little Crow proposals. The developer for Keadby 3 has completed an air quality impact assessment relating to the potential impacts of the CCGT plant upon the surrounding area, Chapter 8 of the Keadby 3 Environmental Statement (PINS Document Ref EN010114.APP-051).

- 1.26 The Keadby 3 Low Carbon Gas Power Station Project does not impact upon any of the conclusions made within the Air Quality Assessment for the Little Crow Solar Park. The assessment that has been completed quantifies both the construction and operational impacts of the proposed solar farm upon the surrounding area and concluded the likely impacts would be not significant.
- 1.27 Although, the solar farm would not have been included in the Keadby 3 cumulative assessment in terms of air quality, due to the impacts from the solar farm being negligible/not significant, it would not have changed the outcomes of the assessment. Based on distance and the nature of emissions, cumulative effects are considered unlikely and no significant residual effects are anticipated.

Conclusion

- 1.28 Overall, it is considered that the Keadby 3 proposal would not have the potential to generate any likely significant cumulative effects when considered alongside the Little Crow Solar Park when taking into consideration their nature, proximity and temporal scope (i.e. the planned timescales for construction and operation). This was also the view expressed in the Keadby 3 Environmental Statement.

Other Matters – Able Marine Energy Park

- 1.29 The Applicant has also considered the potential for cumulative effects to occur between Little Crow Solar Park and the Able Marine Energy Park Material Change 2
- 1.30 The Able Marine Energy Park Material Change 2 was received by the Planning Inspectorate on 25 June 2021 and accepted on 15 July 2021. The application was accompanied by an Environmental Statement (NSIP Project No TR030006). The material change relates to two amendments to the layout of the quay that was authorised by the Able Marine Energy Park Development Consent Order 2014 and one amendment to a footpath diversion to go round the end of a railway rather than crossing it. Technical considerations between Little Crow Solar Park and Able Marine Energy Park Material Change 2 are set out in the table below.

Topic	Applicant's Response
Heritage	The cultural heritage elements of the Material Changes to the Able Marine Energy Park application documents have been

Topic	Applicant's Response
	<p>reviewed against the Little Crow proposals. It is noted that the two schemes are of a different character and type, with differing potential affects. The Able Marine Energy Park lies in a different historic environment/landscape context to Little Crow, with the River Humber and its influence on human activity in the landscape being a more dominant feature. The distance between the two sites, at around 24km, with the industrial complex north of Immingham lying between them means that there is no visual relationship. There is additionally no known historical or functional relationship between the two sites.</p> <p>As has been set out in the assessment work undertaken for each site there are no heritage assets where potential impacts might result from their implementation that are common to both schemes. In particular it is noted that the potential heritage impacts from Able Marine Energy Park have been identified almost entirely in relation to the Marine Archaeological Environment with no terrestrial impacts identified.</p> <p>For these reasons it is considered that there are no cumulative impacts with regard to cultural heritage.</p>
Air Quality	<p>In terms of Able Marine Energy Park (24km away), as with Keadby 3 an AQA has been completed for this proposal (full ES Chapter) that takes into account the impact of the development upon existing air quality conditions. The same conclusion for Keadby 3 would apply to the Able Marine Energy Park in terms of AQ impacts at the Little Crow Solar Park; the Able Marine Energy Park proposal would not have the potential to generate any likely significant cumulative effects when considered alongside the Little Crow Solar Park when taking into consideration their nature, proximity and temporal scope (i.e. the planned timescales for construction and operation).</p>

Topic	Applicant's Response
LVIA	No cumulative L&V issues are raised in relation to Able Marine Energy Park.
Transport	Given the location of the Able Marine Energy Park, we do not foresee any cumulative issue in relation to transport.
Noise	Given the location of the Able Marine Energy Park, we do not foresee any cumulative issue in relation to noise and vibration.
Ecology	<p>The ecological and nature conservation elements of the Able Marine Energy Park (AMEP) material change application documents have been reviewed against the Little Crow proposals.</p> <p>The most prescient issues are those associated with impacts on the Humber Estuary designated Sites (SPA/SAC/Ramsar). The AMEP ES Chapter and Habitat Regulations Assessment Report identify likely significant effects on features of the Humber Estuary SAC, through loss/degradation of estuarine habitat and intertidal habitats, and disturbance on grey seals and river lamprey. None of these feature are present at the Little Crow Order Limits. Furthermore no impacts on surrounding watercourses are anticipated to arise from the Little Crow scheme, and Little Crow is sufficiently distant from the Humber Estuary and does not have any direct connection to it, meaning that there is no shared impact pathway.</p> <p>With regards to the Humber Estuary SPA and Ramsar, the AMEP material change documents identified likely significant impacts on ecological receptors of these designated sites through habitat loss and disturbance on birds. Of these, lapwing is the only receptor which has also been found to use the land with the Little Crow Order Limits. Mitigatory and compensatory habitat creation was agreed for the consented AMEP DCO. There is no predicted</p>

Topic	Applicant's Response
	<p>effect of the proposed material change to the development on these species (including lapwing) in terms of habitat loss, as no changes to terrestrial development are proposed. Indeed a minor reduction in extent of habitat loss is expected as a result of the material change, although the compensation scheme is proposed to be maintained at the agreed level for the consented DCO. No potential additional effects on lapwing through disturbance above that of the consented DCO (for which mitigation was previously agreed) is expected, and no modification of mitigation measures are considered necessary as per the AMEP material change application documents. No significant effect of the material change on birds on of the SPA/Humber are therefore expected, and thus no cumulative effects on lapwing (present at both Little Crow and AMEP) are anticipated.</p> <p>Potential cumulative effects on a small number of other shared ecological receptors of terrestrial habitats (namely bats, badgers, great crested newts and breeding birds) can be ruled out on the basis of both the distance and intervening landscape between the two sites, and the lack of major impacts predicted for these at both sites.</p> <p>For these reasons it is considered there would be no potential cumulative impacts between Little Crow and the material changes to AMEP with regard to ecology and nature conservation.</p>

- 1.31 Overall, it is considered that the Able Marine Energy Park Material Change 2 would not have the potential to generate any likely significant cumulative effects when considered alongside the Little Crow Solar Park when taking into consideration their nature, proximity and temporal scope (i.e. the planned timescales for construction and operation).

APPENDIX 1

KEADBY 3 SITE LOCATION PLAN

The Keadby 3 Low Carbon Gas Power Station Project

Document Ref: 4.1

Planning Inspectorate Ref: EN010114

The Keadby 3 (Carbon Capture Equipped Gas Fired Generating Station) Order

Land at and in the vicinity of the Keadby Power Station site, Trentside, Keadby, North Lincolnshire

Site Location Plan

The Planning Act 2008

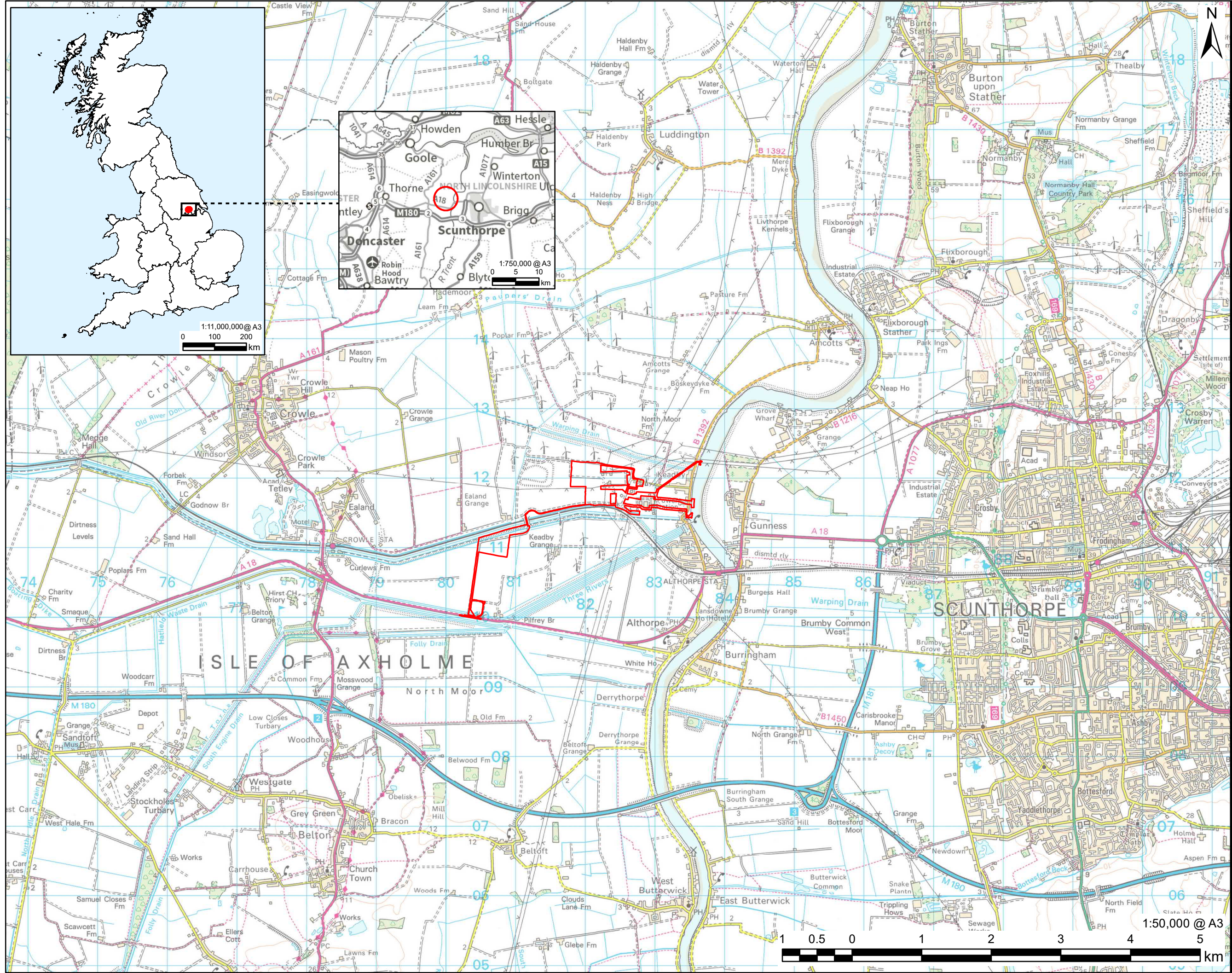
The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 - Regulation 5(2)(o)

Applicant: Keadby Generation Limited

Date: May 2021

DOCUMENT HISTORY

Document Ref	4.1/Site Location Plan
Revision	VP1.0
Document Owner	AECOM



AECOM

PROJECT

The Keadby 3 (Carbon Capture Equipped Gas Fired Generating Station) Order

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LEGEND

The Order Limits

NOTES

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The Keadby 3 (Carbon Capture Equipped Gas Fired Generating Station) Order Regulation 5(2)(o) - Infrastructure Planning (Applications: Prescribed Forms and Procedures) Regulations 2009

ISSUE PURPOSE

DCO APPLICATION

PROJECT NUMBER

60625943

SHEET TITLE

Site Location Plan

SHEET NUMBER

Application Document Ref No. 4.1

