REPORT

Boston Alternative Energy Facility – Environmental Statement

Chapter 4 Site Selection and Alternatives

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4.1 Introduction

4.1.1 This chapter details the rationale behind the selection of the site for the Boston Alternative Energy Facility (herein 'the Facility') and the approach to determining the proposed technology and the size and scale of the Facility. The selection of alternatives primarily relates to the Principal Application Site and the infrastructure to be constructed and operated on this land. Consideration of the Habitat Mitigation Area is covered in **Section 4.7**.

Environmental Impact Assessment Regulations and Advice Note Seven

4.1.2 The Infrastructure (Environmental Impact Assessment) Regulations 2017 ('EIA Regulations') state that an Environmental Statement (ES) should include:

> *'A description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the developer, which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects.'*

4.1.3 The Planning Inspectorate's Advice Note Seven identifies that a good ES is one that (*inter alia*):

> *'…explains the reasonable alternatives considered and the reasons for the chosen option taking into account the effects of the Proposed Development on the environment'.*

4.1.4 This ES will fulfil the requirements of the EIA Regulations and Advice Note Seven by identifying the reasonable alternatives considered by the developer and explain the main reasons for the choices made (to the extent that reasonable alternatives were considered).

4.1.5 In this context, the consideration of alternatives and design evolution has been undertaken with the aim of avoiding and/ or reducing adverse environmental effects (following the mitigation hierarchy of avoid, reduce and, if possible, remedy), while maintaining operational efficiency and cost-effectiveness, and considering other relevant matters such as available land and planning policy.

4.1.6 This ES identifies the considerations of alternatives that have been made to date, including changes to the scheme following the first three phases of consultation

(see **Chapter 7 Consultation** for details on consultation phasing).

4.2 Policy Consideration

National Policy Statement EN-1

4.2.1 NPS EN-1 does not contain a requirement to consider alternatives. However, it is noted (Paragraphs 4.4.1 and 4.4.2) that applicants are obliged to include in their ES information about the main alternatives they have studied including the main reasons for the choice taking account of environmental, social and economic effects including where relevant, technical and commercial feasibility (Department of Energy and Climate Change (DECC), 2011a).

National Policy Statement EN-3

4.2.2 This section provides information on how these factors have been considered when selecting the Principal Application Site for development, however in accordance with paragraph 2.1.3 of NPS EN-3 (DECC, 2011b):

> *'It is for energy companies to decide what applications to bring forward and the Government does not seek to direct applicants to particular sites for renewable energy infrastructure…"*

4.2.3 NPS EN-3 also identifies (Para 2.5.25) that transport infrastructure is another determining factor, in that:

> *"Government policy encourages multi-modal transport and the IPC [PINS] should expect materials (fuel and residues) to be transported by water or rail routes where possible".* It also states, *"Applicants should locate new biomass or waste combustion generating stations in the vicinity of existing transport routes wherever possible."*

4.2.4 Furthermore, relating to grid connections, NPS EN-3 states (para 2.5.23):

> *"Applicants will usually have assured themselves that a viable grid connection exists"*, and *"any application to the [decision maker] must include information on how the generating station is to be connected and whether there are any particular environmental issues likely to arise from that connection".*

4.3 Scoping Responses

4.3.1 One response relevant to the consideration of alternatives was received through the EIA scoping exercise. Boston Borough Council (2018) identified that it would like more information regarding:

"Justification of the proposed wharf so close to residential properties across the river. Why is the wharf not located towards the mouth of the river away from residential properties?".

4.3.2 The suitability of the Principal Application Site is addressed below.

4.4 Principal Application Site Suitability

4.4.1 For the following factors, the Principal Application Site was considered to be highly advantageous and meant that the consideration of alternative locations was not deemed necessary:

- The location is directly adjacent to a navigable watercourse and the proposal includes importing of feedstock entirely by ship.
- The location benefits from being allocated within the Lincolnshire Mineral and Waste Local Plan (LMWLP) (Lincolnshire County Council, 2016) as identified in The Lincolnshire Minerals and Waste Local Plan Site Allocations document adopted in December 2017. This identifies the Principal Application Site as falling predominantly within the 119 hectare (ha) of land allocated as WA22-BO: *Riverside Industrial Estate Waste Area. The allocation identifies a range of potential uses for the site comprising: Resource Recovery Park; Treatment Facility, Waste Transfer; Materials Recycling Facility; Household Waste Recycling Centre; Metal Recycling / End of Life Vehicles; Reuse Facility; Construction and Demolition Recycling; and Energy Recovery* (Lincolnshire County Council, 2017).
- The location has the significant benefit of an existing on-site grid connection directly into the 132 kilovolts (kV) overhead line.
- The Applicant has the benefit of experience and history in the development of power generation in Riverside Industrial Estate, having originally secured planning permission for the adjacent gasification plant now run by Boston Biomass UK No. 3 Ltd.
- The Applicant has strong and established links with the sole onshore landowner where the proposed Facility will be located. As a result, the Applicant has been able to secure the land and rights necessary to construct and operate the Facility and no further third-party land / rights acquisitions will be required.

4.4.2 These factors are considered further below.

Land Allocation

4.4.3 As described in **Chapter 3 Policy and Legislation**, the adopted LMWLP Site Allocations document, adopted in December 2017 identifies the Principal Application Site as predominantly falling within 119 ha of land allocated as WA22-BO: Riverside Industrial Estate Waste Area (Lincolnshire County Council, 2017). The accompanying Sustainability Appraisal undertaken for the 'Site Locations' report confirms that the site is suitable for potential waste uses including, Energy from Waste (EfW) projects. See **Plate 4-1** below for the allocation taken from the LMWLP.

WA22-BO Riverside Industrial Estate, Boston
Development Brief

Grid Reference: E 533482 N 342188
District: Boston Borough Council
Parish: Boston
Area of Site: 119 ha
Potential Uses: Resource Recovery Park, Treatment Facility, Waste Transfer, Materials Recycling Facility, Household Waste Recycling Centre, Metal Recycling / End of Life Vehicles, Re-Use Facility, C&D Recycling, Energy Recovery

WA22-BO Riverside Industrial Estate

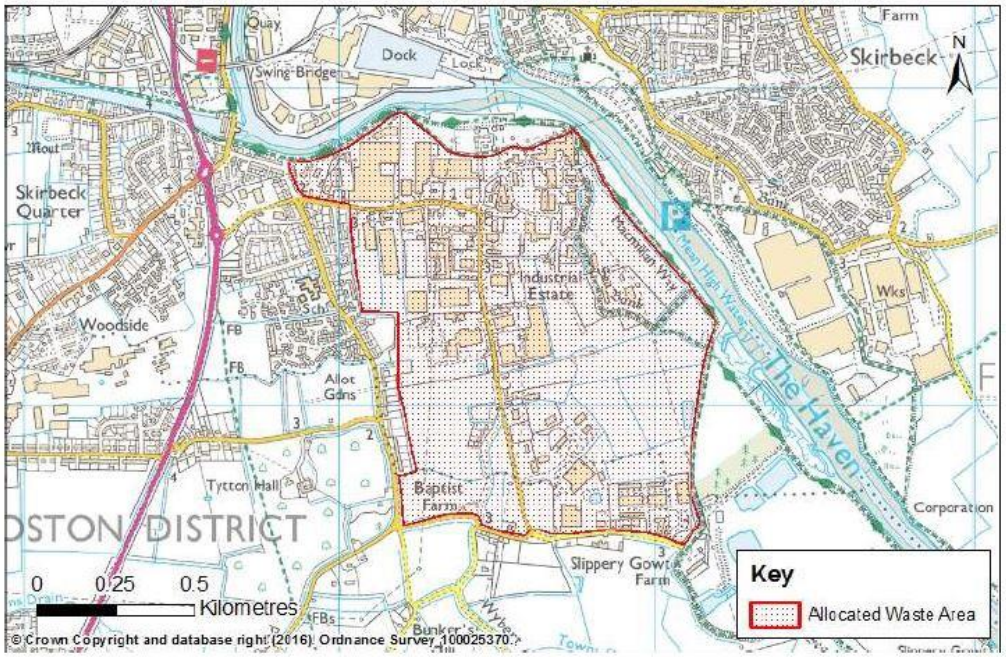

Plate 4-1 Riverside Industrial Estate Land Allocation. Source: https://www.lincolnshire.gov.uk/residents/environment-and-planning/planning-and-development/minerals-and-waste/

4.4.4 The South-East Lincolnshire Local Plan (SELLP) (March 2019) identifies 89.7 ha of land as BO006 within the Riverside Industrial Estate, allocated for the purposes of Business (B1), General industrial (B2) and Storage or distribution (B8). Part of the Principal Application Site falls within this Local Plan allocation, with the remainder designated as countryside. However, it is noted that whilst the SELLP deals with all land use and development issues affecting South-East Lincolnshire, issues associated with minerals and waste are covered in the LMWLP. See **Plate 4-2** for the relevant section of the Policies Map from the South-East Lincolnshire Local Plan.

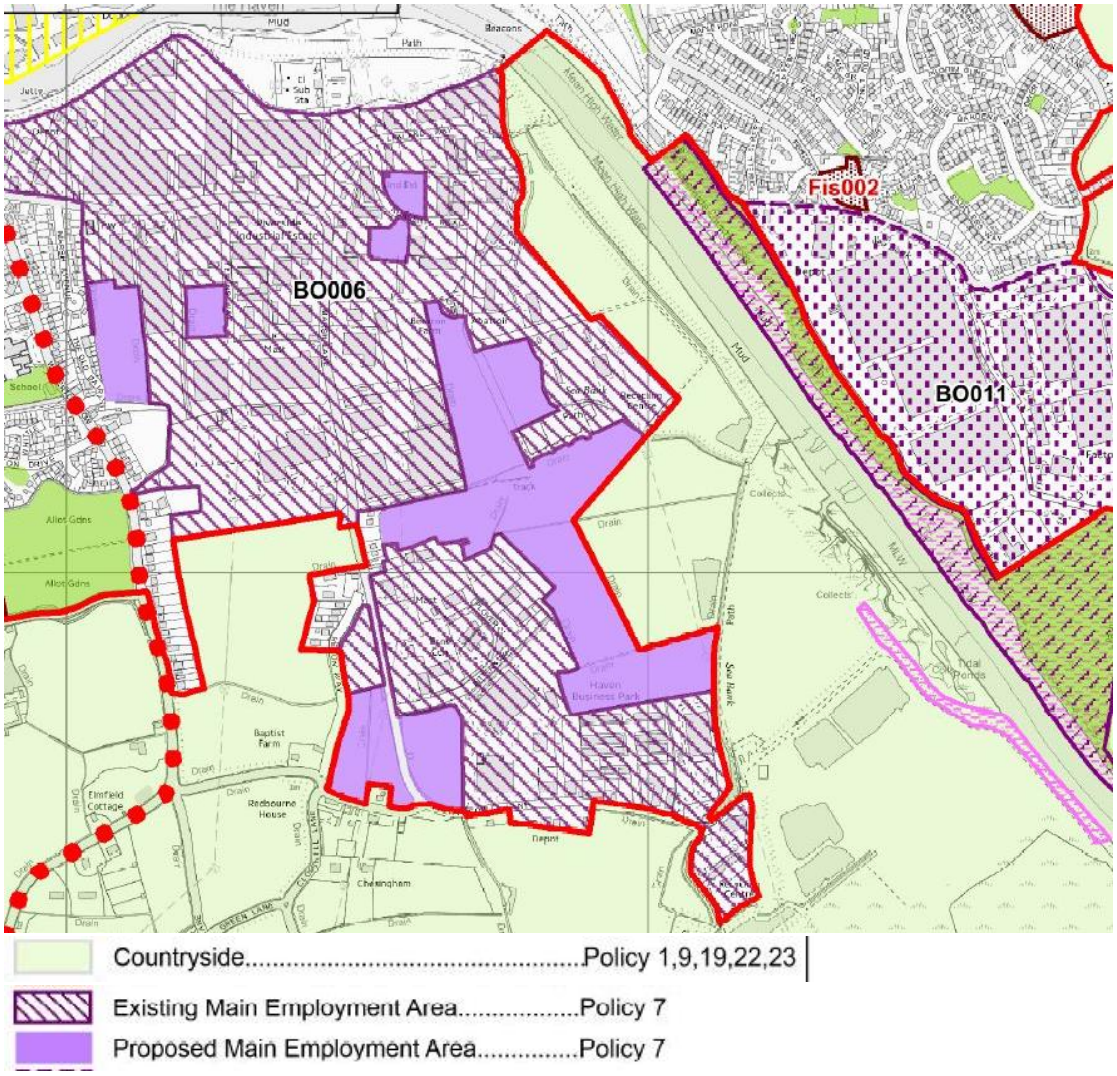

Plate 4-2 Land allocation South-East Lincolnshire Local Plan (March 2019) Source: http://www.southeastlincslocalplan.org/wp-content/uploads/2019/02/1-Boston.pdf

Locale

4.4.5 The Principal Application Site locale affords several benefits to a development of this nature. The location directly adjacent to a navigable watercourse provides a means of delivery of RDF, import of clay and export of aggregate material by river, which significantly reduces the amount of HGV vehicle trips which would otherwise be required for a facility of this scale. HGV trips are limited to those of raw material import and export of carbon dioxide and residual metals extracted from the ash.

4.4.6 There is adequate footprint to accommodate the construction and subsequent operation of required plant and equipment for the Principal Application Site. The use of space within the site footprint has evolved according to the changes in the proposed technology of the scheme, resulting in a more space-efficient layout following the change from proposed gasification technology, to conventional combustion based thermal treatment EfW facility. This is discussed further below (see **Section 4.5**).

4.4.7 It is technically feasible to connect to the electricity distribution network on site. This avoids the need for intrusive works required to connect to an off-site grid connection point at a nearby substation; and avoids any additional environmental impact from the installation of this infrastructure and cable route to facilitate the connection.

4.4.8 The Principal Application Site is not directly situated within any environmental designation. It is within Flood Zone 3 associated with tidal flood risk. However, the site benefits from flood defences, which will be upgraded with the Haven Banks project as described in **Appendix 13.2 Flood Risk Assessment** (document reference 6.4.13). Furthermore, the construction of the wharf will add in further flood protection by raising the height of the flood defence to +7.2 m above ordnance datum (A.O.D.) in line with the flood defence strategy for Boston imparted by the construction of the Boston Barrier (The Boston Barrier Order 2017).

4.4.9 The Principal Application Site is located within an existing urban/industrialised environment and situated adjacent to a biomass gasification plant.

4.4.10 The Principal Application Site falls within the control of a one landowner.

4.4.11 The wharf is a fundamental part of the Facility. It vastly reduces the reliance on road transport for RDF feedstock being transported to the site as well as export of the lightweight aggregate product. The RDF will be sourced from other UK

ports. Using ships to directly transport materials to and from the Facility significantly reduces the operational impact of the Facility on the local road network, and any associated adverse effects associated with such usage. Boston Borough Council in their response to the Scoping Report (as shown above) sought clarification with respect to possibly locating the proposed wharfage closer to the mouth of the river. The following points are noted:

- The wharf needs to be located on the same site as the proposed plant equipment to avoid multiple handling of the RDF; and avoid the requirement of road movements to move the RDF bales from the wharf to the site. A major benefit of delivering the feedstock by ship is to reduce road traffic movements that would otherwise be required to move 1,200,000 tonnes of RDF from a wharf facility at the mouth of the river to the power-generation facility at the Riverside Industrial Estate.
- The mouth of the river is at The Wash. The Wash has several significantly sensitive environmental designations (for example The Wash and North Norfolk Coast Special Area of Conservation (SAC), The Wash Site of Special Scientific Interest (SSSI), The Wash Ramsar, The Wash Special Protection Area (SPA), The Wash National Nature Reserve (NNR)). Therefore, if the wharf was closer to the mouth of the river it would be within or directly adjacent to such environmentally designated sites.
- The road network is inadequate close the mouth of the river. So, further road infrastructure would be required to be developed, which would be in an area of open countryside.
- The area close to the mouth of the river is not allocated for industrial development in the Lincolnshire Minerals and Waste Local Plan.

4.4.12 Overall, bearing in mind the above, the Principal Application Site is available and appropriate and alternative sites in the similar area, regardless of availability are less preferable from a planning and development perspective.

4.4.13 The need for the Facility is addressed by **Chapter 2 Project Need**. The Applicant is mindful of the current waste situation in terms of overseas recovery/disposal of residual household waste; the impact of the restrictions or bans on imports to far eastern networks (for example China), the implications of the Withdrawal Agreement on exports of RDF to continental Europe and the dwindling landfill capacity. This situation was a key driver for the Applicant to seek to divert as much currently exported or landfilled RDF as possible; and in doing so to develop an efficient EfW facility combined with additional features embracing the Circular Economy, such as capture of carbon dioxide, delivery by ship and creation of

aggregate product from ash residues.

4.4.14 The Facility will also conform with NPS EN-3 as there will be recovery of energy from waste in accordance with the waste hierarchy. Other aspects of the waste hierarchy are implemented by segregation of metal residues from the ash; and by conversion of the residues from the thermal treatment process into a lightweight aggregate product.

4.5 Alternative Technology Considerations and Influence on Layout and Design

4.5.1 The considerations for choice of technology were influenced by:

- technology that is capable of beneficially recovering renewable energy from RDF that would be otherwise exported or sent to landfill;
- technology that can generate sufficient power from RDF feedstock and perform at the required efficiency to meet the definition of 'Recovery, R1' according to the definition in the Waste Framework Directive;
- transport – including use of The Haven for a means of delivering RDF;
- the EU Circular Economy Action Plan and associated UK resource efficiency and waste reduction targets that will be implemented following The Environment Bill;
- potential for carbon dioxide capture for reuse;
- available site footprint; and
- economy of scale.

4.5.2 For the Preliminary Environmental Information Report (PEIR) the use of gasification technology was assumed. However, the gasification technology provider is divesting its business. No alternative gasification technology provider was found that was capable of delivering the required power output. Therefore, the Applicant decided to change the technology to conventional combustion-based thermal treatment EfW. The supplier of this technology has several reference plants across the UK and the world. Conventional combustion-based thermal treatment EfW is proven at the required scale.

4.5.3 Following this decision, further consideration was made as to how potential impacts associated with the Facility could be reduced. Further design changes were made to the scheme, with the final description of the Facility covered in **Chapter 5 Project Description.** The key changes in the scheme from the PEIR

are highlighted in **Table 4-1** below, with a brief discussion of potential changes in impacts. Details of how these changes have influenced the impact assessment are provided in each relevant topic chapter.

Table 4-1 Design optimisation following technology change

Previous Proposal (as assessed in the PEIR)	Project Change (assessed within the ES)
Construction	
Concrete transported by road High volumes of concrete were needed to be supplied to the site in the early stages of construction to construct six large concrete silos (each were 48,000 m^3) for storing processed RDF. This was to be transported by road and meant significant peak traffic numbers in the early stages of construction.	Concrete batching plant on site The six concrete silos are no longer required because there is no need to process and store the RDF before the EfW thermal treatment process. A concrete batching plant will be set up on the Principal Application Site. The raw materials for making concrete can be transported in larger quantities, thus reducing vehicle movements associated with concrete mixer lorries. To further reduce road transport movements, there will also be delivery of aggregate (for making concrete) via ship. The PEIR did not consider any movements by ship during the construction phase, because it was assumed all deliveries would be received into the site by road. To make this possible, part of the wharf will be constructed at an early stage in the construction to allow ships to deliver raw materials whilst the Facility is being constructed. The implications for the reduction of transport movements are assessed in **Chapter 19 Traffic and Transport** and this also has a bearing on the assessment of construction traffic noise (**Chapter 10 Noise and Vibration)** and air quality (**Chapter 14 Air Quality**). Implications associated with the use of ships during the construction phase are assessed in **Chapter 18 Navigational Issues, Chapter 16 Estuarine Processes** and **Chapter 17 Marine and Coastal Ecology.**
Operation	
Supply of Feedstock	
Quantity A worst-case estimate required 1.3 million tonnes of RDF to be supplied to the Facility in the PEIR.	Quantity A revised worst-case estimate requires 1.2 million tonnes of RDF to be supplied to the Facility. This

Previous Proposal (as assessed in the PEIR)	Project Change (assessed within the ES)
However, after publication of the PEIR, discussions with technology providers and RDF suppliers identified that a worst-case position of up to 1.5 million tonnes was considered necessary to cope with variance in RDF composition and calorific value. This is because gasification facilities require input material to be within a very narrow specification range and they have a very low tolerance of non-biogenic material.	reduction can be found because conventional EfW more tolerant to wide variations in the calorific value of the incoming RDF. Therefore, the EfW facility does not need rigorous processing of the incoming raw RDF prior to thermal treatment. The reduction will mean the number of RDF shipments to the site in operation will be reduced. Implications associated with the use of ships during the operation phase are assessed in **Chapter 10 Noise and Vibration, Chapter 14 Air Quality, Chapter 16 Estuarine Processes, Chapter 17 Marine and Coastal Ecology** and **Chapter 18 Navigational Issues.**
RDF supply from three ports Previously the RDF was expected to be transported (by ship) from three east coast UK ports.	RDF supply from several ports The RDF supply is now expected to come from a wider range of UK ports (approximately 12). Implications associated with change to the number of distribution ports during the operation phase are assessed in **Chapter 17 Marine and Coastal Ecology** and **Chapter 18 Navigational Issues.**
RDF Handling	
Bales offloaded from ships on trailers and transported to a storage area at the wharf There was up to three cranes over two berths for offloading RDF bales. Cranes were to offload bales onto trailers, and these were to be removed to the external bale storage area. Approximately four days of supply (just over 12,000 tonnes) was anticipated to be temporarily stored at the wharf in an uncovered area of approximately one hectare. The RDF bales would then be removed from the external storage area by mobile crane and placed onto a conveyor for distribution to the RDF Processing facility.	Bales will be directly offloaded from ships onto a conveyor for transfer to a bale shredder and EfW bunker. Some contingency storage is still required at the wharf for when the bunker is full, but a reduced area of external storage is required compared to the previous scheme. Two cranes per RDF berth will be implemented to reduce the time taken to offload the bales. Automated cranes will be used for offloading the ships to reduce operator fatigue, which will improve safety and reduce operator error. Bales will be directly loaded onto the conveyors for transfer to the bunker building, which will minimise double-handling of bales. • The RDF bunker has approximately four days of supply.

Previous Proposal (as assessed in the PEIR)	Project Change (assessed within the ES)
	• A temporary external storage area will still be required at the wharf for contingency for when the bunker is full. This will have a maximum of two days of supply thus reducing the number of bales stored outside (and the storage area) by approximately 50%. The implications of potential nuisance reduction by reducing the external storage requirements will be assessed in **Chapter 14 Air Quality** and **Chapter 23 Waste**. The implications associated with impacts to noise by reducing double handling of bales and increasing the number of cranes will be assessed in **Chapter 10 Noise and Vibration.** The implications of the visual impact of using automated crane systems and increasing the number of cranes at the berth will be assessed in **Chapter 9 Landscape and Visual Impact Assessment.**
RDF Processing	
A large RDF processing facility (135 m x 94 m x 20 m high) was required for separating out items that were not suitable for the gasification process but were potentially recyclable. These recyclable items (approximately 300,000 tonnes per annum) were segregated within the RDF processing building into recyclable waste streams (ferrous and non-ferrous metal, glass, medium and high-density inert material, such as stones). These materials were to be transported off-site by HGV for distribution into regional recycling network. Processed RDF (meeting the rigorous biogenic specification for the gasification facility) would be stored in six large (48,000m^3) concrete silos pending gasification).	There is now no requirement for the incoming raw RDF to undergo rigorous pre-processing prior to the combustion-based thermal treatment process. Pre-treatment actions will be limited to a shredding facility to split the bales open and reduce particle size to approximately 300 mm and remove any massive particles too large for combustion. Bales will be conveyed from the wharf to a small shredding facility (footprint 8 m x 15 m) then transferred to the EfW bunker. No silos are required and there will be no segregation of potential recyclables prior to thermal treatment. The consequence of this change means that there is a reduction in the number of operational-phase HGV movements because there is no need to remove segregated material off-site.

Previous Proposal (as assessed in the PEIR)	Project Change (assessed within the ES)
	Furthermore, there is increased space on site by removing the large RDF pre-processing building and storage silos. This increased space means that the layout can be changed to a simple linear layout compared to that identified in the PEIR, which will allow for more efficient and safer construction. The implications for the reduction of transport movements are assessed in **Chapter 19 Traffic and Transport** and this also has a bearing on the assessment of operational traffic noise (**Chapter 10 Noise and Vibration)** and air quality (**Chapter 14 Air Quality**).
Thermal Treatment	
<u>Gasification Technology</u> • Gasification technology was proposed. • Three individual gasification units formed the total thermal treatment system (‘a three line’ system). • Each line had a stack, but this was combined in one large stack approximately 5m in width with three cores within, estimated to be 70 m in height.	<u>Thermal Treatment (EfW) Technology</u> • Combustion-based Thermal Treatment (EfW) technology using three lines. • The reconfiguration has allowed for repositioning of the air cooled condenser (ACC) and turbine buildings to linear layout. Both are also located further from the nearest residential receptors. • One individual stack will be provided per line, these stacks are anticipated to be at 80 m tall compared to the previous height of 70 m, to allow for more effective dispersion of the exhaust gases (please see **Chapter 14 Air Quality** for more details). The stacks are not combined in one core (as previously), and) and will be narrower than the combined core stack in the previous design, thus managing public concerns about effective dispersion of the exhaust gases from the stack. • The EfW building is taller from base to highest point by approximately 8 m. • The design will feature more cladding around the main EfW building which may will contribute to reducing the noise impact of sources within the clad structure building. This will which has enable potential noise effects from this source to be reduced at the nearest receptor – noise being a key public concern. • A greater amount of ash (and therefore ash processing) will be produced because there is

Previous Proposal (as assessed in the PEIR)	Project Change (assessed within the ES)
	no pre-processing of the RDF prior to combustion. • It is anticipated that approximately 5,000 tonnes of ferrous metal will be removed from the bottom ash which will be sent off-site for recycling. • The residual ash will be ground down to fine particle size and conveyed to the on-site Lightweight Aggregate (LWA) Facility. This will produce an aggregate product from the waste ash and air pollution control residues. Around 10% more aggregate would be produced and transported off-site via ship for use in the construction industry. The implications for the impact of transport movements for removing the ferrous metals from the ash are assessed in **Chapter 19 Traffic and Transport.** The assessment implications for the impact of operational noise on the proposed layout changes and cladding are provided in **Chapter 10 Noise and Vibration.** The assessment implications for the impact of operational air quality issues associated with the technology change and layout changes for the stacks and ash processing are provided in **Chapter 14 Air Quality**. The assessment implications for the visual impact of the technology and layout changes are provided in **Chapter 9 Landscape and Visual Impact Assessment.** Implications associated with increases to the number of aggregate shipments during the operation phase are assessed in **Chapter 17 Marine and Coastal Ecology** and **Chapter 18 Navigational Issues.**
One carbon dioxide capture unit (30 m length, 20 m width and 12 m height).	Two carbon dioxide capture units (30 m length, 20 m width and 12 m height).

Previous Proposal (as assessed in the PEIR)	Project Change (assessed within the ES)
	The assessment implications for the impact of operational air quality issues and climate change issues associated with the increase in carbon dioxide recovery are provided in **Chapter 14 Air Quality** and **Chapter 21 Climate Change.**

Site Layout Optimisation

- The scale of development is dictated by the best available technology that could be accommodated within the available land to process the desired amount of fuel. The system consideration starts with the availability of the fuel; and the principle concept was to design to process 1,000,000 tonnes per year, at 125 tonnes per hour of prepared RDF (with an indicative annual operational capacity of 8,000 hours) for feedstock to the process.

- This starting point, combined with the land availability and an indicative reference-point calorific value for the RDF from the suppliers of 10.9 kJ/kg at 125 tonnes/hour, led to an indicative power output of 102 megawatt electric (MWe).

- Three EfW lines were proposed to offer the most efficient long-term operation that will constantly deliver power; and will enable two lines to remain in operation whilst one is undergoing planned annual, or unplanned, maintenance or repair.

- The Principal Application Site shape dictates the arrangement of the main thermal treatment units given that this plant has the largest combined footprint.

- The site layout has been optimised for the proposed development to enable the movement of waste throughout the facility to the thermal treatment plant.

- The aggregate facility is positioned next to The Haven to facilitate export of lightweight aggregate and import of the clay for use in the lightweight aggregate manufacturing process. The approximate location of the thermal treatment facility; the lightweight aggregate facility and the proposed wharf have been essentially fixed by the site boundary.

Alternatives for use of Ash

- The lightweight aggregates facility was included to prevent the disposal of the residues from the thermal treatment process. The alternative options to this facility require sending waste incinerator bottom ash and air pollution control residues off site. This will require significant vehicle movements to remove just over 182,750 tonnes of bottom ash and almost 16,700 tonnes of air pollution control residues to be sent off site.

- While there is an active market for the recovery or recycling of bottom ash, much of the air pollution control residues, which are hazardous waste, are sent for waste treatment followed by hazardous waste landfill disposal.

- Therefore, the Applicant identified the need to retain and process these residues within the Facility to generate a useable lightweight aggregate. This promotes the waste hierarchy (recycling compared to disposal or recovery); the proximity principle (dealing with waste as close to the source of production) and promotes a sustainable use of aggregate (by reducing reliance on virgin aggregate).

Alternatives for Access Route

- Following the traffic and transport assessment in the PEIR the A52 (Liquorpond Street) was removed as a route for the ES as mitigation. This was also based on stakeholder feedback received during consultation meetings.

4.6 Do Nothing Alternative

- Were development not to take place, then the Principal Application Site would be available for some other form of waste management related development in accordance with the adopted Lincolnshire Minerals and Waste Local Plan (2017). Part of this area is also allocated for B1, B2 and B8 development as set out within the South-East Lincolnshire Local Plan (2019). If the Facility were not developed, then there would be opportunity for some other form of development to be undertaken in accordance with the Local Plan.

- The ‘Do Something’ scenario is considered preferable given the established need for new energy generation in the UK meeting the requirements of NPS EN-1, including a need for low carbon and

renewable energy generation and for improved waste management capacity, and policy support via NPS EN-3 for increased use of transport other than by road.

- Additionally, a 'Do Nothing' scenario would prevent this additional investment in the local economy, removing the opportunity to generate diversity in employment use, as well as present a lack of opportunity to provide potential for skilled engineering workforce and strengthening resilience of the local power network.

4.7 Habitat Mitigation Area

4.7.1 A Habitat Mitigation Area has been included as part of the DCO application in addition to the Primary Application Site. This area is required to mitigate the loss of saltmarsh habitat for wading birds as a result of the construction of the wharf. This area is described in more detail in **Chapter 5 Project Description** and is identified on **Figure 1.1.** The key considerations in identifying the location for Habitat Mitigation Area were centred around the specific needs of redshank:

- that it provides some shelter;
- that it is usable at high tide;
- that it is no closer to any sources of disturbance than the current areas;
- that it provides roosting and foraging habitats;
- that it is of sufficient size to accommodate the needs of the birds otherwise displaced from the habitat at the wharf;
- it affords good visibility; and
- it is the nearest suitable area to the roosting and foraging grounds that will be lost i.e. following the proximity principle.

4.7.2 Alternative locations for the Habitat Mitigation Area have been considered within The Haven, including the use of Slippery Gowt Pits. This site was deemed less suitable than the proposed location due to the bunding around the pits which reduces the attractiveness for redshank who require good sightlines in order to utilise an area. Sites further up- or down-stream adjacent to The Haven were deemed less suitable due to lack of habitat present that would provide good roosting habitat with good sightlines, with the additional issue of becoming less compliant with the proximity principle with increasing distance from the proposed wharf area. The finally selected area was identified by an ornithologist with local knowledge of The Haven and its bird communities, as representing the best

opportunity in close proximity to the area of the predicted effect (i.e. the wharf) with a sufficient amount of suitable habitat to accommodate the required mitigation features that would allow successful implementation. The location is as close to the Principal Application Site as possible without it being affected to a significant degree by disturbance from activities and noise from the operational development, and this accords well with the proximity principle.

4.7.3 The Habitat Mitigation Area has been presented to key stakeholders. The enhancement of this area has been welcomed whilst noting that further work is required to agree the final details of the proposed habitat mitigation works, with any details to be presented in a final Landscape and Ecological Mitigation Strategy (LEMS), which will be secured via the DCO and based on the Outline LEMS (OLEMS) provided with the DCO Application (document reference 7.4).

4.8 References

Alternative Use Boston Projects Limited (2018). Boston Alternative Energy Facility Scoping Report. Available at: https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010095/EN010095-000013-BAEF%20Scoping%20Report.pdf [Accessed 25/06/2020]

Boston Borough Council (2018). Proposed Alternative Energy Facility – Scope of Environmental Statement. Available at: https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010095/EN010095-000019-BAEF%20-Late%20Response%20-%20Boston%20%20Borough%20Council.pdf [Accessed: 25/06/2020].

Department of Energy and Climate Change (DECC) (2011a). The overarching NPS for Energy (EN-1).

Department of Energy and Climate Change (DECC) (2011b). The NPS for Renewable Energy Infrastructure (EN-3).

Lincolnshire County Council (2017). Lincolnshire Minerals and Waste Local Plan Site Locations. Available at: https://www.lincolnshire.gov.uk/directory-record/63740/site-locations [Accessed: 25/06/2020].

South-East Lincolnshire Joint Strategic Planning Committee (2019). Available at: http://www.southeastlincslocalplan.org/ [Accessed: 25/06/2020].