

BOSTON ALTERNATIVE ENERGY FACILITY

PROJECT UPDATE – JULY 2020



Welcome to this update on the Boston Alternative Energy Facility.

THE SCHEME

The proposed Boston Alternative Energy Facility (the Facility) will be a state-of-the-art power-generation facility located south of Boston, Lincolnshire on the Riverside Industrial Estate, next to The Haven.

The Facility is classed as a Nationally Significant Infrastructure Project (NSIP) for which Alternative Use Boston Projects Limited (the Applicant) will submit an application to the Planning Inspectorate (PINS) for a Development Consent Order (DCO).

The Facility will generate 102 megawatts (MW) of renewable energy, of which 80MW will be exported to the National Grid, with the rest used for the running of the Facility. This energy will be generated by processing approximately one million tonnes of refuse derived fuel (RDF – derived from non-recyclable waste) per year. This will generate power that is equivalent to the annual power demand of more than 206,000 homes (roughly 66% of the number of households in Lincolnshire).

PROJECT UPDATE AND YOUR VIEWS

We last undertook public consultation (Phase 3) on the proposals in June and July 2019. Copies of the documents provided for that consultation, including the Preliminary Environmental Information Report (PEIR), are available on the project website: www.bostonaef.co.uk.

Since the Phase 3 consultation there have been changes proposed to the project. These are due to several reasons including; a project review and ongoing iterative design work, the feedback received during earlier consultations, and input from specialist bodies. Because of this we are undertaking an additional round of consultation (Phase 4), of which this newsletter forms part of.

This newsletter provides an overview of the changes made since the previous consultation and provides preliminary information on the impact of those changes. The Phase 4 consultation only refers to the changes made to the proposal since the Phase 3 consultation.

The Facility remains an Energy from Waste (EfW) facility, although the technology used to treat the waste has now switched from gasification to traditional EfW technology. We have summarised this change and others later on in this document. The changes are anticipated to have minor effects, resulting in an overall reduction in potential negative impacts.

We welcome your feedback on these changes to help us as we begin to finalise our proposal before we submit the application for a DCO later this year. We also welcome any questions you might have on the changes to the proposed scheme. We detail how you can ask questions and share feedback at the end of this newsletter.

Following submission of the Application there will be a further opportunity for any person to make representations on the proposals and to engage during the Examination process.

Site Layout



CHANGES DURING CONSTRUCTION

Previous Proposal

CONCRETE TRANSPORTED BY ROAD

High volumes of concrete were needed to be supplied to the site in the early stages of construction to construct the six large silos (each were 48,000m³) for storing processed RDF.

This was to be transported by road. The predicted construction traffic comprised 26 separate weeks where the number of HGV movements would exceed 10 per hour (all within the first 18 months of construction), this included 15 weeks where the number exceeded 15 per hour and seven weeks exceeding 20 per hour. The peak was at 41 movements per hour at the beginning of the second year of construction.

Project Change

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.

There will be a concrete batching plant on site. The raw materials for making concrete can be transported in larger quantities, thus **reducing vehicle movements**. The predicted construction traffic comprises only two separate weeks where the number of HGV movements exceeds 10 per hour, peaking at 15 movements per hour mid-way through year two of construction.

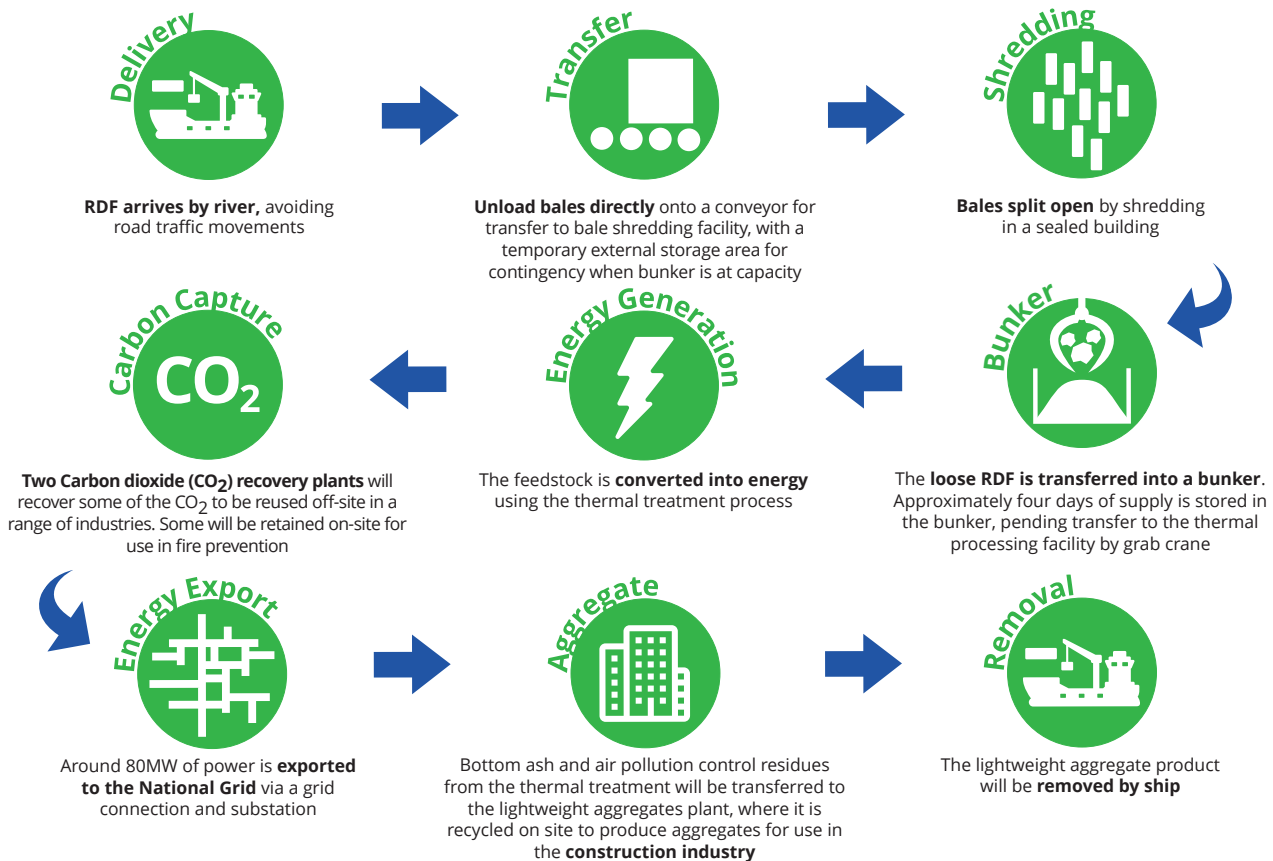
However, 40% of these movements in the peak week will be within the site boundary; 17% will be movements on local private roads next to the site within the industrial estate and 43% of movements outside the local area.

To reduce road transport movements, there will also be delivery of aggregate (for making concrete) via ship. To make this possible, **an early part of the wharf** at the site will be constructed to allow ships to deliver raw materials whilst the site is being constructed.

It is estimated that 132 shipments of aggregate would be required over the construction period.

CHANGES DURING OPERATION

The process is as follows:



SUPPLY OF FEEDSTOCK (RDF)



Previous Proposal

QUANTITY

A worst-case estimate required 1.5 million tonnes of RDF to be supplied to the Facility. This was required to allow for wide variations in the calorific value of the incoming RDF. Gasification facilities require input material to be within a very narrow specification range, hence the previous requirement to have a large RDF processing plant on site to process material to the required specification and remove material such as metals, glass and stone for off-site recycling or recovery.

SOURCE

Previously the RDF was to be largely sourced from facilities that process household and other municipal type waste to remove potential recyclate. The residual non-recyclable output from these facilities is processed into RDF.

All RDF was to be supplied in bales.

RDF SUPPLY FROM THREE PORTS

Previously the RDF was expected to be transported (by ship) from three UK ports, on the east coast.

Project Change

QUANTITY

A worst-case estimate requires 1.2 million tonnes of RDF to be supplied to the Facility. This reduction is possible because conventional EfW is less sensitive to wide variations in the calorific value of the incoming RDF. Therefore, the EfW facility does not need to have a large RDF processing plant on site.

The reduction will mean the number of RDF shipments to site could be reduced by up to 120 per year.

SOURCE

The RDF will still be sourced from residual waste from materials recycling facilities. The specification for the RDF remains unchanged.

All RDF will be received by ship in bales.

RDF SUPPLY FROM SEVERAL PORTS

The RDF supply is now expected to come from a wider range of UK ports (approximately 11 from across the UK – none of the waste received will be sourced from outside the UK).



Example EfW facility already constructed using the proposed EfW technology provider

RDF HANDLING



Previous Proposal

BALES OFFLOADED FROM SHIPS ON TRAILERS AND TRANSPORTED TO A STORAGE AREA AT THE WHARF

There was one crane at each berth for offloading RDF bales.

Cranes were to offload bales and these were to be removed to the external bale storage area by trailer.

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.



Example EfW facility already constructed using the proposed EfW technology provider

RDF PROCESSING

Previous Proposal

LARGE RDF PROCESSING FACILITY

A large RDF processing facility (135m x 94m x 20m 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 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.

Processed RDF stored in six large 48,000m³ silos pending gasification.

Project Change

BALES WILL BE DIRECTLY OFFLOADED FROM SHIPS ONTO A CONVEYOR FOR TRANSFER TO A BUNKER.

Some contingency storage is required at the wharf, but a reduced area of external storage is required.

Two cranes per berth to **reduce the time taken** to offload the bales.

Automated cranes will be used for offloading the ships to reduce operator fatigue.

Bales will be **directly loaded** onto the conveyors for transfer to the bunker building.

- The RDF bunker has approximately four days of supply.
- A temporary external storage area will still be required at the wharf for contingency for when the bunker is full. This will contain approximately two days of supply thus reducing the number of bales stored outside (and the storage area) by around 50%.



Project Change

BALE SHREDDING FACILITY, NO PRE-PROCESSING

Bales will be conveyed to a small shredding facility (footprint 8m x 15m) to remove the bale wrap and reduce the particle size.

- No silos are required.
- There will be no segregation prior to thermal treatment.
- There is no requirement for HGV movements to remove segregated material off site.
- There is increased space on site by removing the RDF processing building, which delivers a simpler and more efficient layout and allows for safer construction.

KEY MESSAGES AND OUTCOMES



RDF SUPPLY

All RDF supplied will be from UK based sources; this has not changed. This reduces the amount of RDF to be exported to Europe or taken to landfill.

The amount of RDF required is less compared to gasification because the EfW system is not as sensitive to variations in the calorific value of the RDF. This means fewer ship movements are required each year.



RDF STORAGE AND ODOUR

The amount of RDF stored outside will be reduced to between 25% and 50% of the previous requirement.

The internal bunker storage is a fully enclosed building with the air over the shredded RDF continually extracted and fed into the thermal treatment process for use as combustion air. Therefore, all odours will be treated at a high temperature (850°C) and will not be released.



VEHICLE MOVEMENTS

During construction – a concrete batching plant on site and deliveries of aggregate via ship has reduced road vehicle movements.

During operation - vehicle movements are significantly reduced because there is no need to segregate material before the thermal process and take it off site.

THERMAL TREATMENT



Previous Proposal

GASIFICATION TECHNOLOGY

- 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 70m in height.

Project Change

THERMAL TREATMENT (ENERGY FROM WASTE) TECHNOLOGY

- Thermal Treatment (Energy from Waste) technology (still three lines). See enclosed images for typical EfW facilities.
- Emissions for the EfW will have to comply with the same standards as for Gasification. New (more stringent) standards were issued in December 2019. The EfW facility will have to comply with these standards which will be controlled through an environmental permit issued by the Environment Agency.
- The reconfiguration has allowed for repositioning of the air cooled condenser (ACC) and turbine buildings to a central point which could **reduce noise impact** from the site.
- Three lines but one individual stack per line, these stacks will be the same height (currently estimated to be 70m) but narrower than the previous design.
- The EfW building is slightly taller (by approximately 4-6m).
- There will also be more cladding around the main EfW building which is likely to **reduce the noise impact**.
- A greater amount of ash (and therefore ash processing) will be ground and sent to the on-site Lightweight Aggregate (LWA) Facility. **Around 10% more aggregate would be produced and transported off-site via ship for use in the construction industry.**

CARBON CAPTURE



Previous Proposal

Project Change

ONE CARBON DIOXIDE CAPTURE UNIT

TWO CARBON DIOXIDE CAPTURE UNITS

KEY MESSAGES AND OUTCOMES



LANDSCAPE ASSESSMENT

There will be an updated Landscape and Visual Impact Assessment to account for the change in scheme design.



AIR QUALITY

The EfW will be required to comply with the same stringent industry standard limits on emissions as the gasification facility.

Twice as much carbon dioxide will be captured, thus lowering emissions.



VEHICLE MOVEMENTS

There will be a reduction in the number of HGV movements in operation compared to previously because the facility does not need to segregate metals and inert material from the RDF before thermal treatment.



POWER OUTPUT

Power output will remain the same.

A typical Thermal Treatment (Energy from Waste) facility



OTHER PROJECT CHANGES

PUBLIC FOOTPATH

A public footpath currently runs along the Roman Bank embankment running through the site. At present there is a gap within the embankment. Previously, the

plan was to route pedestrians down across the gap safely and back up the bank. Instead we are now proposing a footbridge over the gap in the bank.

UPDATED TIMESCALES

Boston timeline

- 1 SEPTEMBER 2018 – PHASE 1**
Informal, non-statutory, pre-application consultation introducing the project and seeking feedback
- 2 FEBRUARY 2019 – PHASE 2**
Informal, non-statutory, pre-application consultation updating on progress on the project, inviting further feedback
- 3 JUNE TO AUGUST 2019 – PHASE 3**
Formal, statutory consultation. The Preliminary Environmental Information Report (PEIR) was presented and further feedback was invited
- 4 JULY – AUGUST 2020 – PHASE 4**
Informal, non-statutory, pre-application consultation, updating on changes to the project and inviting feedback
- 5 Q3 – Q4 2020**
Review feedback from pre-application consultation before submitting an application for a Development Consent Order (DCO) to the Planning Inspectorate
- 6 AFTER THE APPLICATION IS ACCEPTED,** there will be a further opportunity for any person to register as an interested party and make representations on the proposals and to engage during the examination process. Following the examination, the Planning Inspectorate will report on the examination of the application, taking into consideration all relevant matters including representations from interested parties and make a recommendation to the Secretary of State for Business, Energy and Industrial Strategy about whether to grant or refuse the DCO
- 7 THE SECRETARY OF STATE FOR BUSINESS, ENERGY AND INDUSTRIAL STRATEGY** is responsible for making the final DCO decision

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As this is a complex decision-making process, it can take 16 months or more from acceptance of the DCO application to the final decision. Following approval, the Facility will take approximately four years to construct and commission.

The construction period will begin when the relevant pre-construction requirements have been completed. These will be identified in the decision made by the Secretary of State.

WEBINARS

Due to the Covid-19 pandemic, we're unable to hold public exhibitions as we have for previous phases of consultation. Instead we're hosting two webinars and for those without access to a computer we are offering a telephone surgery. As for phases 2 and 3 we have delivered this newsletter to all homes and businesses in the Boston Borough Council area. Details of when the webinars and telephone surgery are taking place are detailed below. Please book your place using the feedback mechanisms listed below.

WEBINARS

Each session will last between 1-2 hours, depending on the number of questions from the public. These are taking place on:

WEBINAR 1	WEBINAR 2
Tuesday	Thursday
11 August at 12pm	20 August at 12pm

TELEPHONE SURGERY

These are 15 minute slots where you can speak directly with a member of the project team. This is by appointment only. An additional session will be arranged if this date becomes fully booked.

WEDNESDAY 26 AUGUST

10am until 4.30pm

HOW TO CONTACT US

By email: consultation@bostonaef.co.uk

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To review further information about the Facility, please visit our project website:

www.bostonaef.co.uk

