Welcome

Welcome to our Phase Three Public Information Day about the Boston Alternative Energy Facility.

At today's event we are presenting information boards, maps, images and videos that will tell you more about the Facility and the work we have done so far.

Photomontage view of the proposed facility at Year 1

We have now published our Preliminary Environmental Information Report (PEIR) for the Facility. The PEIR identifies potentially significant impacts and considers mitigation measures to reduce these impacts. It has been shaped by the feedback we received in the previous two rounds of consultation. A copy of the PEIR is available to view at today's event as well as being available on the project website.

Your Views

Your opinion is very important to us.

We would like to collect your feedback on the PEIR and the project. This will help finalise our project proposals and impact assessments before we submit the application for consent later this year.

To provide your feedback, please complete a feedback form. This will enable us to capture your views. We are happy to (and are obliged to) respond to all comments.

▶ *The feedback form can be completed here today, later at home and posted back to us using the freepost envelope, or completed online. The link to the online survey is on our project website* **www.bostonaef.co.uk**

You can also email comments or questions to us at: **consultation@bostonaef.co.uk**

What is important about Boston Alternative Energy Facility?

The proposed Facility will help Boston play a part in finding a solution to the UK's growing waste problems as well as benefitting both the environment and local economy. It will:

Use the latest proven gasification technology
to operate safely and efficiently and within strict European emission standards

Recover energy from 1 million tonnes of refuse derived fuel (RDF) from non-recyclable household waste, generating enough power for more than 206,000 homes
(equivalent to over 66% of the households in Lincolnshire)

Reduce either the amount that goes into landfill or the three million tonnes currently exported abroad
– so the UK benefits from generating renewable energy rather than Europe

Offer a preferential alternative to landfill.
Recovering energy from residual non-recyclable material is far better than it being disposed to landfill and we expect this technology to continue to grow significantly worldwide

Contribute to meeting the need for new electricity generating capacity in the UK

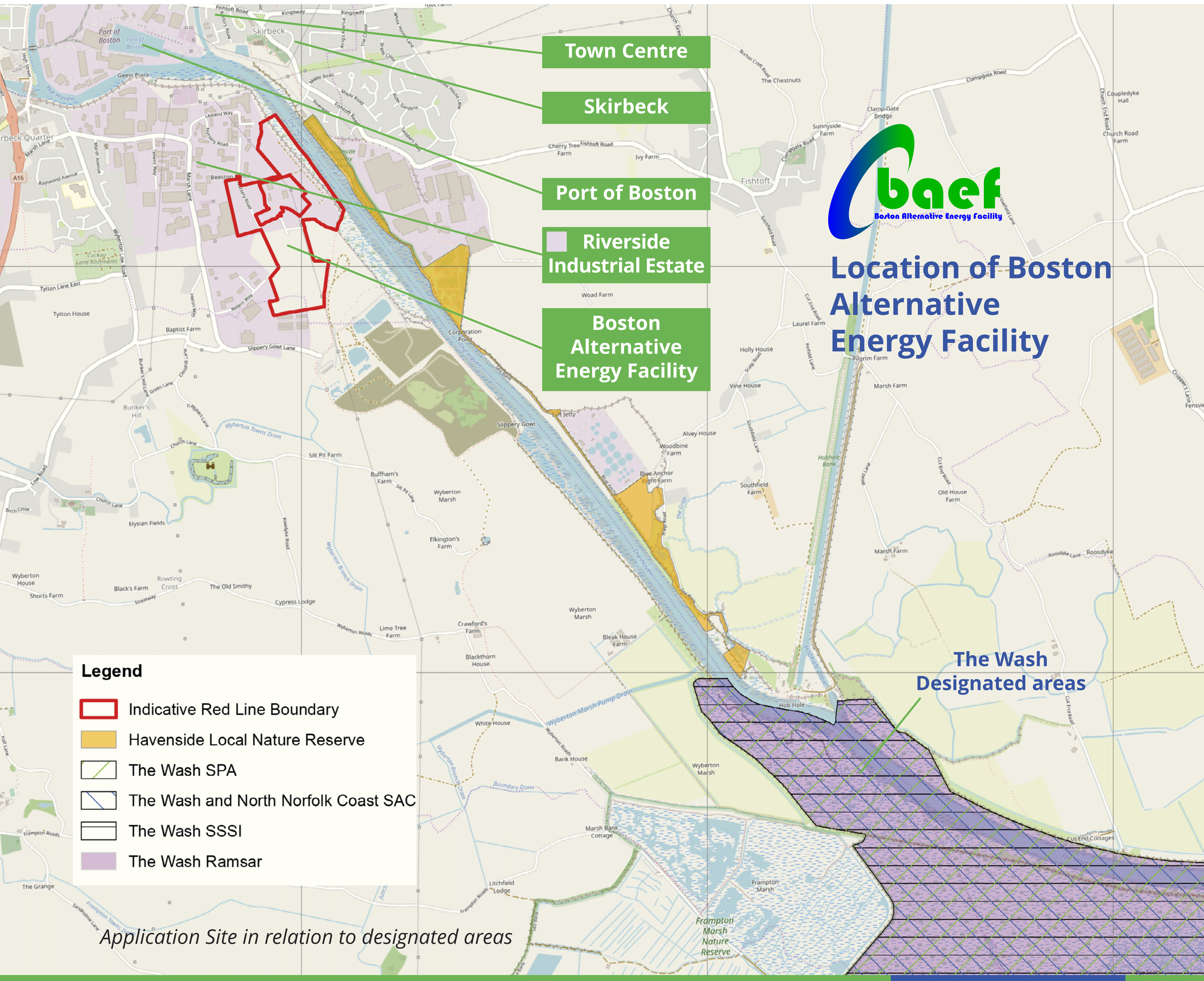
Provide investment for the region's economy; creating approximately 300 jobs during the construction phase and around 80 permanent jobs when operational

Site Location

The proposed site is at the Riverside Industrial Estate in Boston. It is adjacent to the Haven, which will allow the feedstock to arrive at a newly constructed wharf by ship rather than road; and will allow removal of the aggregate product by ship rather than road.

The site forms part of a larger area allocated within the development plan for a range of potential uses which include: resource recovery park; treatment facility, energy recovery and part for employment.

Proposed site boundary on bird's-eye view of the site

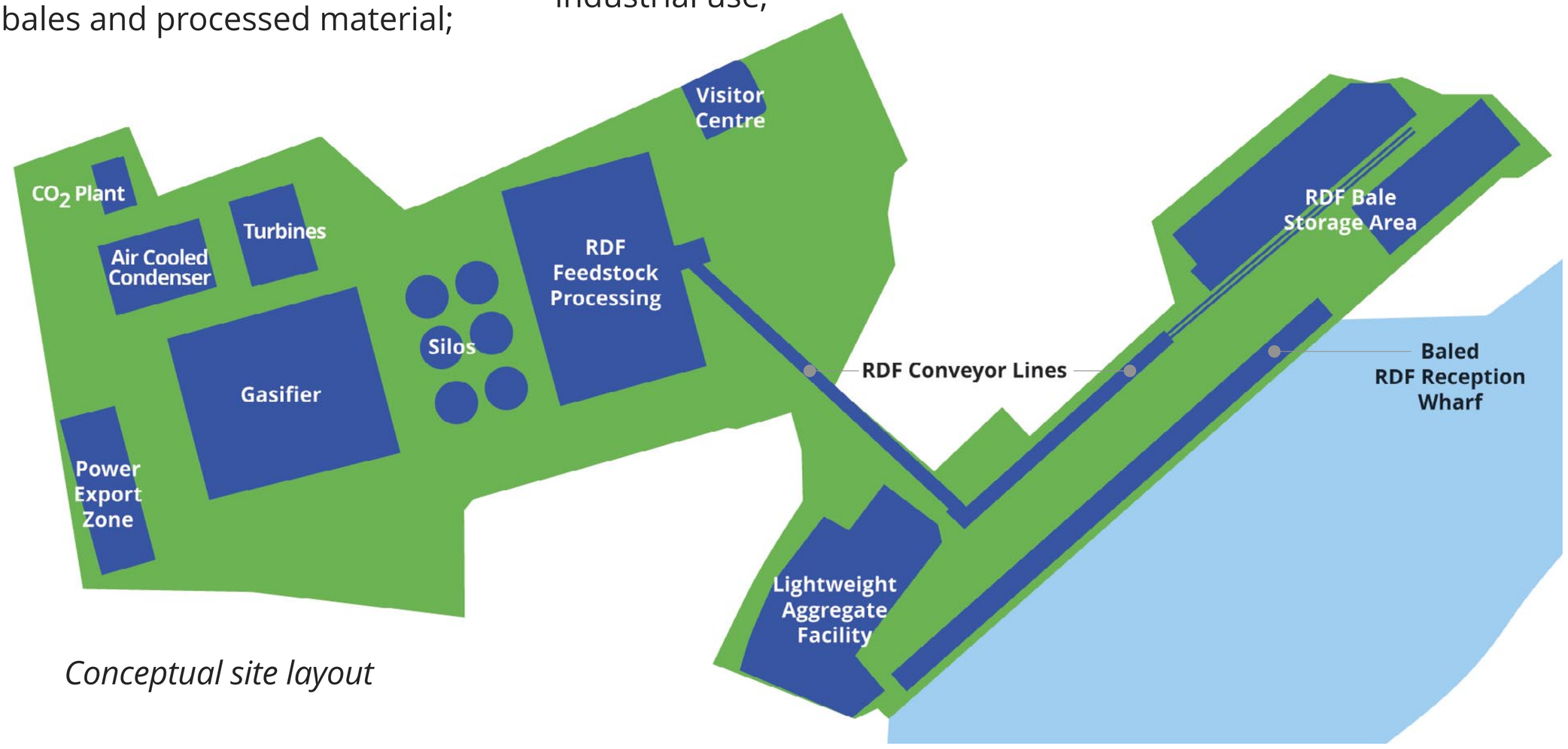


Application Site in relation to designated areas

What will happen at the Facility?

The Facility comprises:

- A gasification facility comprising three gasification units and steam turbine generators to generate up to 102 MW (gross) of energy;
- A wharf with cranes and berthing points;
- A storage area for the temporary storage of Refuse Derived Fuel (RDF) bales;
- A processing facility for RDF preparation, including storage silos;
- Conveyors to transfer RDF bales and processed material;
- An on-site Grid Connection and sub-station to facilitate the export of up to 80 MW to the National Grid;
- A lightweight aggregate manufacturing plant to process the gasification facility residues into an aggregate product;
- A carbon capture facility, allowing a proportion of the carbon dioxide (CO_2) from one of the three gasification units to be captured and converted to high grade CO_2 for off-site industrial use;
- A storage area for lightweight aggregate product prior to removal (by ship) from the site; and
- Associated infrastructure including a visitor centre, car parking, onsite roads, site surfacing, site security, storage and workshop facility, weighbridge, fencing, site control centre, and welfare facilities.



Conceptual site layout

The Facility does not compete with recycling, because materials can and should be recycled where possible. It will only accept residual household waste.

However, the Facility will remove and segregate recyclable materials such as metal and inert materials (stones and glass) that have been disposed of by householders. This will be recycled locally.

What is gasification?

The process by which renewable energy will be generated at the Facility is called gasification. This process will use a fuel (or feedstock) called refuse derived fuel (RDF), made from non-recyclable household waste.

Gasification is a way of generating renewable energy.

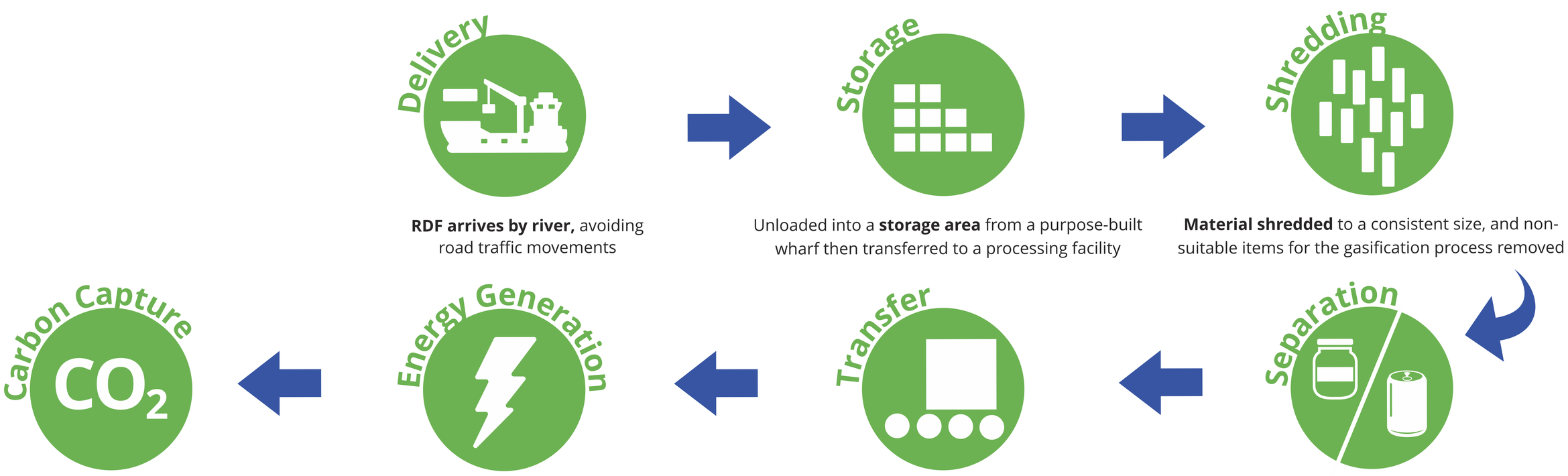
The processed RDF is introduced to a very hot environment in a restricted oxygen supply.

The lack of oxygen at this point means that the solid processed RDF fuel cannot combust. Instead, it is converted into a synthetic gas (syngas) by chemical reaction. This is different to traditional energy-from-waste incinerators, where the fuel is combusted.

The syngas is a fuel. The syngas is transferred to the next stage, where the temperature is increased and air is added into the system. This causes the syngas to combust which generates heat. This heat is converted into electricity by conventional steam turbines.

Gasification is more efficient and cleaner than conventional energy-from-waste facilities that use incineration because it is easier to combust the gas than solid material; and this process generates fewer emissions.

The process is as follows:



RDF arrives by river, avoiding road traffic movements

Unloaded into a **storage area** from a purpose-built wharf then transferred to a processing facility

Material shredded to a consistent size, and non-suitable items for the gasification process removed

Recyclable materials such as glass and metal captured separately and sent for recycling

Shredded feedstock transferred via sealed conveyor to the gasification facility

The feedstock is **converted into energy** using the gasification process

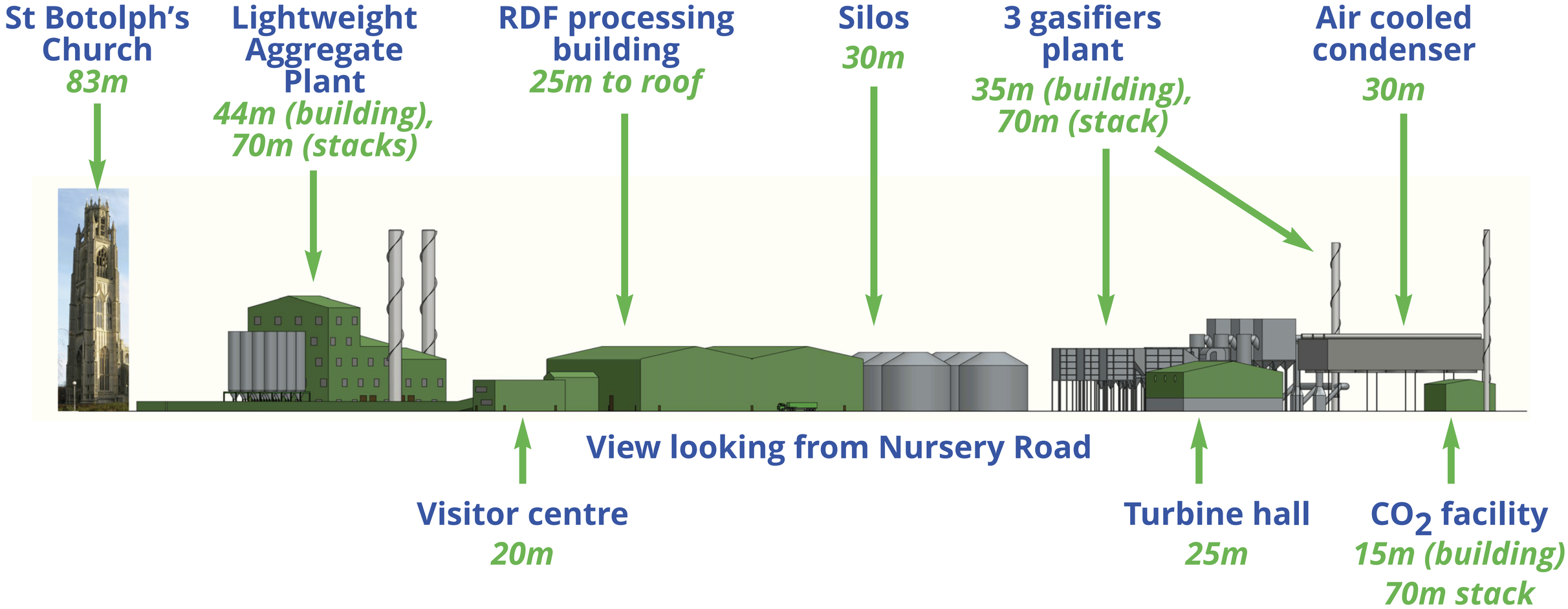
A **carbon dioxide (CO_2) recovery plant** will recover CO_2 to be reused off-site in a range of industries. Some will be retained on-site for use in fire prevention.

Around 80MW of power is **exported to the National Grid** via a grid connection and substation

Leftover ash will be captured at the gasification facility and transferred to the lightweight aggregates plant, where it is recycled on site to produce aggregates for use in the **construction industry**

The lightweight aggregate product will be **removed by ship**

What will the Facility look like?



Layout elements with a very approximate comparison to St Botolph's Church, Boston (not formally scaled)

Indicative view from Fishtoft

Indicative view from Havenside LNR

Indicative view from in front of St Nicholas' Church

Indicative view looking north from Silt Pit Lane near property Silt Pit Farm

The Preliminary Environmental Information Report (PEIR)

The purpose of the PEIR is to provide the preliminary environmental information which has been gathered to carry out an assessment of significant operational and environmental impacts of the project, from construction through to decommissioning.

The PEIR is available on the website:
www.bostonaef.co.uk

It comprises 114 separate documents, plans, figures and appendices. There is also a Non-Technical Summary, which reduces the PEIR into a summarised short report.

The PEIR's purpose is to identify what the potential adverse (or beneficial) impacts the Facility could have on people and the environment and then identify whether those impacts are significant or not. It will develop into an Environmental Statement (ES) which will comprehensively report on the likely significant effects of the Facility. The ES will be submitted with the application for the Development Consent Order (DCO).

Data collected from specific peer-reviewed sources, online data records, regulator and council data sources, as well as data obtained from surveys at and around the Application Site are used to inform the impact assessments. This allows site-specific issues to be identified and addressed. Experience and evidence are used to inform the assessment of impacts.

For each topic, the most relevant and latest guidance or best practice has been used so the assessment is tailored to each potential receptor.

Where impacts are identified as significant, further work has been carried out to assess how to make them less significant. This is called mitigation. We have identified the proposed mitigation in the PEIR to reduce the significance of impacts; or we have identified where there are gaps and what more work we need to do to identify appropriate mitigation to reduce the significance of impacts, and what additional consultation will be required to achieve this. The ES will build on, and complete this work.

Preliminary Environmental Information Report – Noise

A Noise and Vibration Assessment has been undertaken in consultation with key local stakeholders, including Boston Borough Council. This allows us to appropriately and proportionately assess the significance of potential noise and vibration impacts.

The receptors used for this assessment are shown on the map to the right.

'Significance' is identified where a noise level falls between a level which represents the lowest observable adverse effect and a level which represents a significant observed adverse effect. Where this is predicted, all reasonable steps should be taken to mitigate and minimise adverse effects on health and quality of life whilst also taking into consideration the guiding principles of sustainable development. However, this does not mean that such effects cannot occur. An unacceptable observed adverse effect noise level should be prevented.

Preliminary Environmental Information Report

Noise *(cont)*

Construction Phase

OFF-SITE CONSTRUCTION TRAFFIC NOISE

An assessment of noise and vibration from off-site construction phase traffic was undertaken for average traffic numbers across the whole of the construction period; and peak construction traffic scenarios which represents the highest predicted traffic in any one week.

For the average construction traffic scenario, noise from construction traffic was not significant.

For the peak construction traffic period, construction traffic noise was predicted to be major adverse at the Nursery Road /Lealand Way junction and moderate adverse at Marsh Lane - East of Wyberton Low Road junction.

At all other traffic links, the impact was not significant.

Following the implementation of a Traffic Management Plan, the significance is expected to reduce to minor during the peak construction traffic scenario; this is a minor adverse. This is not considered significant in EIA terms, and the impact is temporary, short-term, infrequent and local.

CONSTRUCTION NOISE

Construction impacts will be temporary in nature and include noise and vibration generating activities associated with:

- Earthworks and general construction activities at the site, along the wharf and flood defence;
- Piling works during the wharf construction; and
- Heavy goods vehicles (HGVs) delivering to site.

An assessment of on-site construction phase noise has not yet been calculated. This relies on precise details about how long plant will be used on site per day and also for how many days. This has yet to be confirmed. The assessment will be carried out in accordance with relevant British Standards guidance and will be reported in the Environmental Statement.

It is recommended that an Outline Code of Construction Practice is provided. An OCoCP can include:

- Informing local residents about the construction works, including the timing and duration of any particularly noisy elements, and providing a contact telephone number to them;
- Avoiding operating particularly noisy equipment at the beginning and end of the day;
- Carrying out any piling using the quietest methods available, i.e. augured piling instead of driven piling;
- Keeping potentially noisy deliveries, such as skips and concrete, to the middle or less sensitive times of the day where possible;
- Locating noisy static plant, such as diesel generators, away from residential properties;
- Using the most modern equipment available and ensuring equipment is properly maintained; and
- Where possible, using silencers/mufflers on equipment.

Vibration impacts from construction works were determined to be of minor adverse significance. Therefore, no additional mitigation is required.

Operational Phase

Operational noise levels at nearby receptors due to the Facility were predicted to be above background noise levels at two receptors (R1 and R2) during day and night. There were no significant effects of noise at any of the other receptors.

The air-cooled condenser in the south-west of the site is the dominant noise source. Now that we have this information, we can work with the technology provider to alter its design to include attenuation measures to reduce the noise, for example by lowering its height or adding additional cladding.

With the incorporation of such mitigation measures, noise levels at nearby receptors due to the operation of the Facility were predicted to be negligible above existing noise levels at some receptors and the residual impacts were therefore considered to be minor adverse.

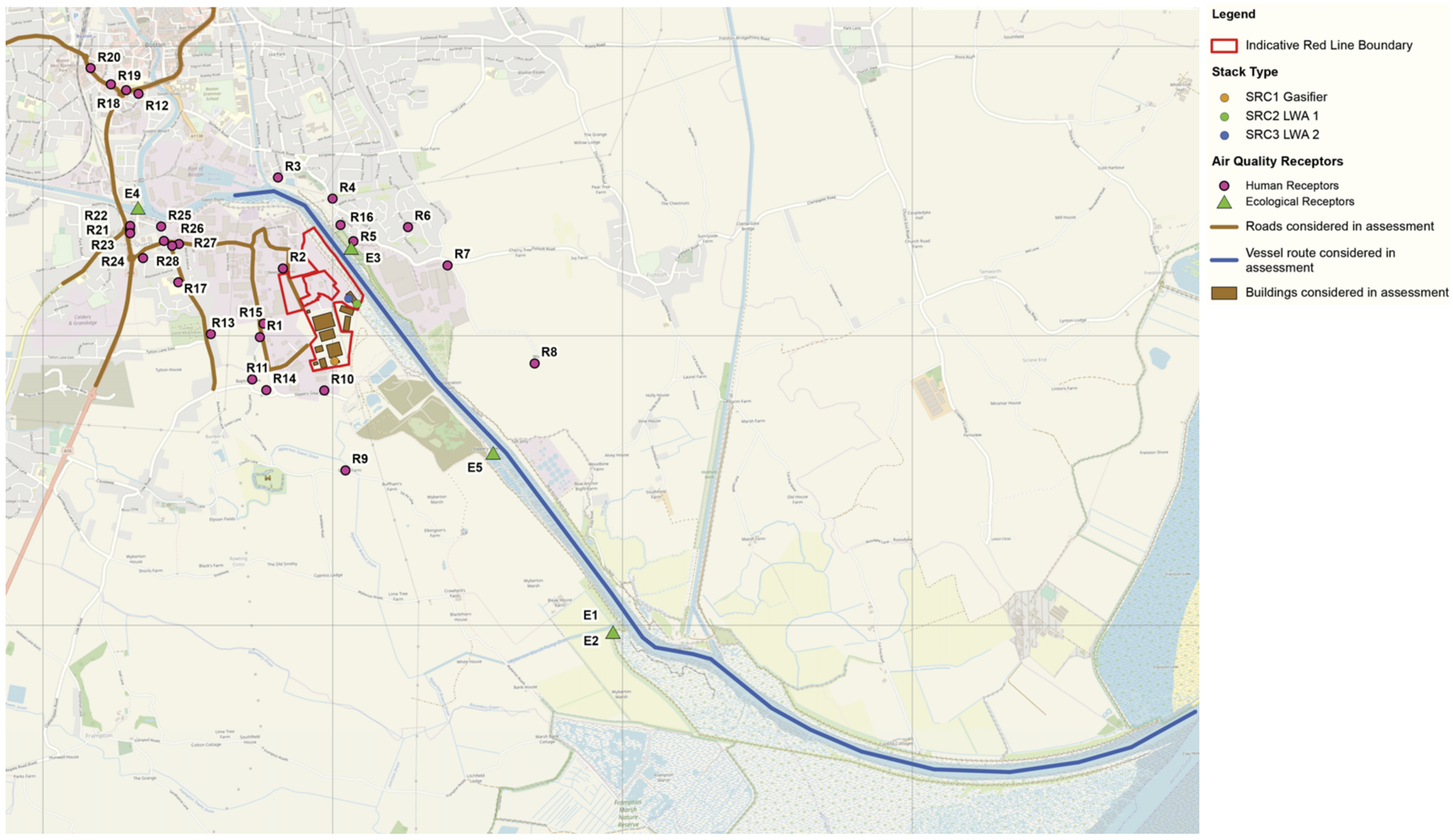
Vehicle movements generated by transportation of materials to and from the Facility by road or ship during the operational phase were assessed and considered to be not significant.

Preliminary Environmental Information Report

Air Quality

A preliminary air quality assessment of impacts during the construction and operation of the Facility was carried out, which provided an overview of existing air quality within the Study Area and allows us to understand what impact the Facility will have.

The receptors and model inputs (i.e. roads, vessel routes and Facility stacks and buildings) used in this assessment are shown on the map below.



CONSTRUCTION

An assessment has been undertaken to assess potential dust generated during construction of the Facility, in accordance with industry guidance. The guidance includes best-practice dust minimisation and suppression methods based on the level of risk of dust generation. With the implementation of the mitigation, impacts are considered to be not significant.

The air quality impact of road traffic emissions during construction of the Facility was predicted to be negligible at all but one human receptor and is considered to be minor adverse, in accordance with relevant guidance.

OPERATIONS

The current working height of the gasifier and lightweight aggregate stacks is 70 m, however this height will be subject to further sensitivity testing at the ES stage following further design of the Facility.

Emissions from all pollution sources associated with the Facility (stacks, road traffic and vessel emissions) have been predicted to result in pollutant concentrations below all the relevant Environmental Assessment Levels (EALs) at human receptor locations.

The contributions of benzo[a]pyrene produced by the Facility are below the required EALs, however there was a predicted exceedance due to the background concentrations used in the assessment already exceeding the EAL. Further work will be carried out for the ES into whether the background concentrations are representative of the study area or not, or whether these background contributions could be sourced from another monitoring station.

It is anticipated that the requirements of National Policy Statement for Renewable Energy Infrastructure (EN-3) will be met. This states that where a “proposed waste combustion generating station meets the requirements of the Waste Incineration Directive” (now contained in the Industrial Emission Directive (IED)), and “will not exceed the local air quality standards”, the Secretary of State “should regard the proposed waste generating station as having no adverse impacts on health.” We expect this to be achieved for the Facility following further work to be carried out for our Environmental Statement (ES).

The assessments have also predicted exceedances of the 24-hour oxides of nitrogen (NOx) and weekly hydrogen fluoride (HF) level at the Havenside Local Nature Reserve site at the closest point of the Facility. However, the preliminary assessment was conservative and weekly HF process contributions are considered to be an over-estimate.

Relevant mitigation approaches will be developed as part of our Environmental Statement (ES).

An assessment has also been undertaken to consider the impact of the deposition of pollutants which cause nutrification and acidification at designated ecological sites, including The Wash and North Norfolk Special Area of Conservation and The Wash Special Protection Area. Further work into the significance of these impacts will be carried out and presented in the ES.

Preliminary Environmental Information Report

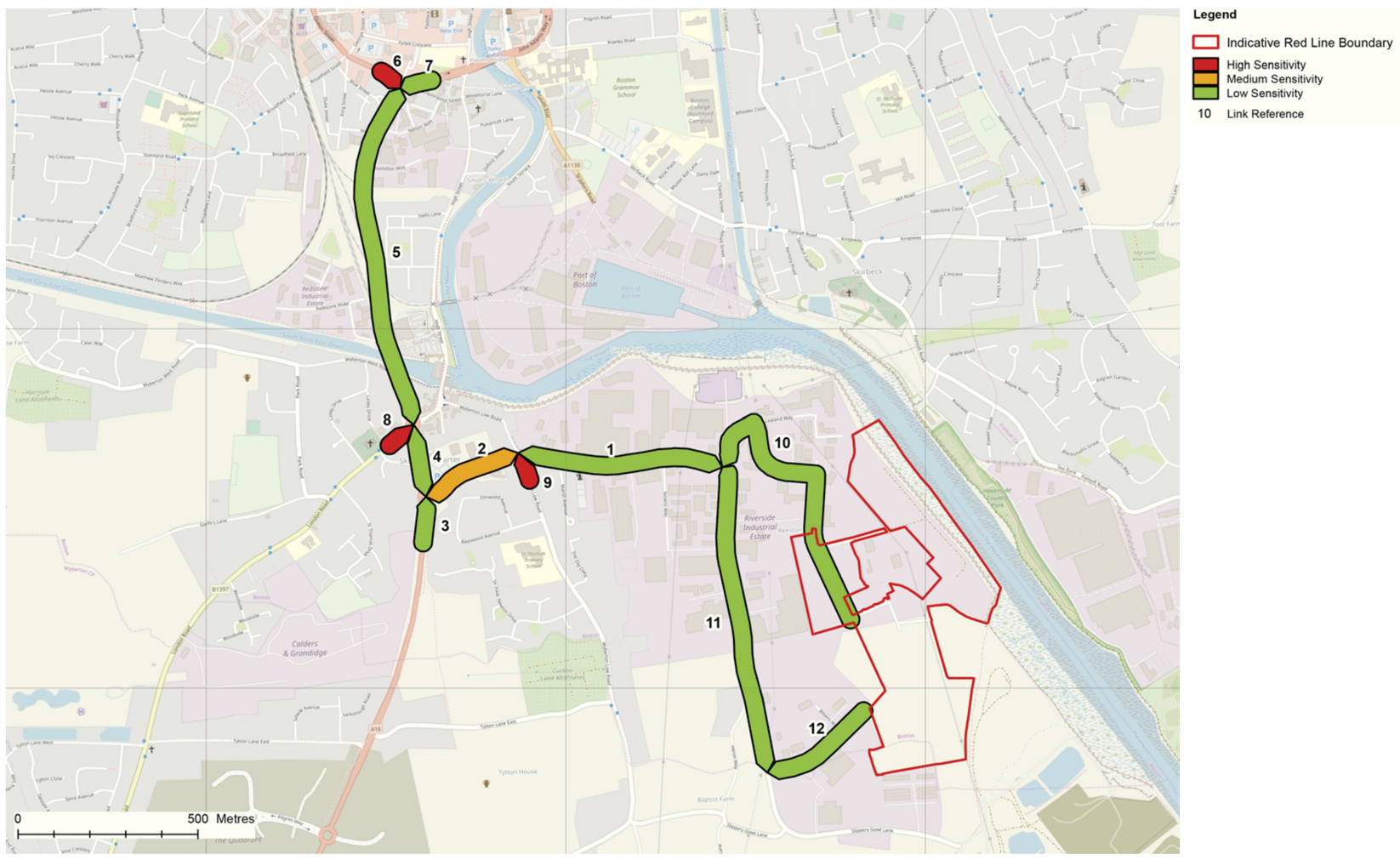
Traffic and Transport

Potential traffic and transport impacts have been assessed. This provides a review of the existing traffic and transport levels within the local area and identifies what effect the Facility could have during construction and operation.

The assessment considers 12 sections of routes (shown on the map below) and was informed through desktop studies, site visits, consultation with stakeholders and traffic surveys.

The potential impact was modelled based on daily and annual average usage.

When considered on an **annual average** basis, neither construction nor operations will have a significant impact on local traffic levels at any of the 12 sections.



However, based on **daily** average data, there will be a two-week period during the first two months of construction where HGV traffic travelling to the Facility will **increase substantially** at eight of the 12 route sections with Nursery Road/Lealand Way being most impacted.

The main factor causing this increase is the large-scale delivery of cement to site for construction.

The assessment also concludes a predicted residual impact of negligible to minor adverse for the effects of pedestrian severance, pedestrian amenity, road safety and driver delay.

POTENTIAL MITIGATION

Where appropriate, mitigation has been proposed to reduce the significance of moderate and major impacts (most notably it is proposed to divert traffic away from the A52 Liquorpond Street during peak construction).

The assessment is made on a worst-case basis. The assessment assumes that all cement is coming in mixer lorries, which cannot transport large volumes. Proposed mitigation to reduce this impact is to have a concrete batching plant on site for the construction period.

Mitigation measures will be secured through commitments contained in a Construction Traffic Management Plan. This will specify which routes must be followed to access the site for all visiting lorries; and appropriate access times outside of peak traffic hours on the routes in.

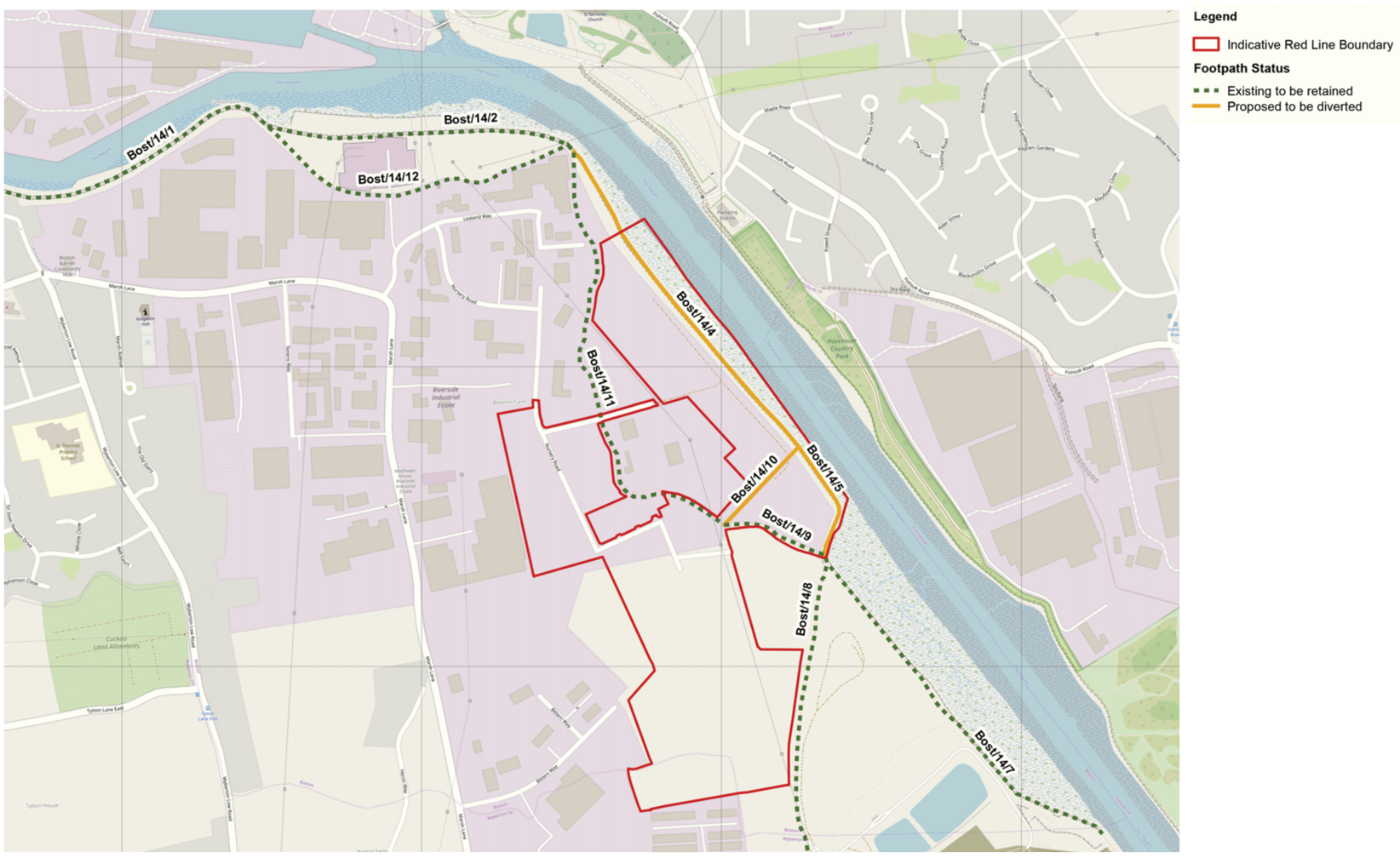
Further mitigation of these impacts will be developed as part of the Environmental Statement process.

Diversion of local footpaths

The construction of the wharf at the Facility will disrupt existing walking routes during construction. Some footpaths will need to be permanently closed.

Several sections of footpath running adjacent to or within the operational site will be permanently closed from the start of the construction period.

These are shown on the map below.



The closure would also affect the England Coast Path route which follows these footpaths, as does Macmillan Way.

These footpath closures and the proposed diversion route have been discussed with Lincolnshire County Council and Natural England.

The route of the footpath will cross a narrow section of the operational site. The assessment carried out as part of the PEIR concluded that because pedestrians would be routed near operational site traffic vehicles, this would decrease the relative pleasantness and potentially the safety of the journey, so this diversion is considered to result in a moderate adverse impact.

To mitigate this, and ensure the safety of pedestrians, measures will be put in place which could include traffic lights, barrier gates and monitoring of the crossing point. These details will be confirmed during the Environmental Statement phase.

To provide additional community benefit it has been discussed with Lincolnshire County Council to provide potential improvements to Bost/14/11 and Bost/14/09 such as:

- relocation of flood bank fencing;
- vegetation clearance;
- aesthetic improvements; and
- improving accessibility to the remaining routes in the area.

How will the Facility be constructed?

The construction period for the Facility is expected to start in 2021 and will take around 48 months to complete.

It is expected that there will be between 250-300 construction workers on site during peak periods of construction. Work will take place six days a week (Monday to Saturday) between 8am and 8pm (with an option of 7am to 7pm), with no bank holiday or public holiday working.

It is proposed that contractors will arrive on site by minibus, to minimise traffic.

The site will be designated into several areas, these are:	
1 Wharf	10 Air Cooled Condensers
2 Refuse derived fuel (RDF) bale storage area	11 Carbon Capture plant
3 RDF bale conveyors	12 Black start generators & fuel tanks
4 RDF Shredding & Recyclate recovery	13 Main stack & continuous emissions monitoring systems (CEMS)
5 Conveyors for shredded RDF to storage silos	14 Control Room
6 Silos	15 Power Export Island
7 Silo discharge conveyors to gasification plant	16 Offices and Visitors Centre
8 Gasification plant = three units	17 Operation & Maintenance stores
9 Turbine Hall	18 Cabling
	19 Outstanding plant connection

A comprehensive construction plan will be developed for each area to align with the overall delivery programme for safety, to define the appropriate method statements for each work package.

Details of construction phasing and proposed construction methods are in the process of being developed.

Next Steps

We are currently in the pre-application phase, of which these events play a key role in providing information and seeking feedback.

Phase Three consultation started on 25th June and closes on 6th August 2019.

This is our final consultation phase and represents the formal consultation in the pre-application stage.

Feedback received during Phase three consultation will be used to influence the design of the scheme prior to submission of the application for consent. So it is really important that you have your say.

NEXT STEPS

We are committed to honest, open and effective two-way engagement and welcome your views and feedback. We are happy to answer questions, and all responses received during the consultation will be carefully considered and where relevant taken into account as the Development Consent Order (DCO) application is finalised. We plan to submit our application in quarter four of 2019.

Once the DCO application is submitted and accepted the Planning Inspectorate will identify all of the relevant Interested Parties that are stakeholders to the proposed development.

The Planning Inspectorate will hold a preliminary meeting, followed by a six-month period of examination, which will determine the final details of the proposed development and the proposed DCO. The Planning Inspectorate then has three months to make a recommendation to the Secretary of State, who then has three months to grant or refuse consent.

After the DCO application has been submitted, we will be working with the Environment Agency to develop the environmental permit application.

Following consent (anticipated in early 2021), we will prepare for construction and investment which will involve the appointment of contractors.

Prior to construction starting, we will have finalised detailed mitigation and construction plans in consultation with stakeholders and using contractors' expertise to address the requirements of the DCO.

Operation is anticipated to commence in 2025.

Where are we now?

WE ARE CURRENTLY HERE

Scoping

This stage is to agree with the regulators the issues and methodologies that will be considered within the Environmental Impact Assessment.

Pre-application Community engagement

Pre-application engagement with consultees and stakeholders ahead of the formal Development Consent Order (DCO) process.

Baseline Surveys

Baseline surveys are required to inform the assessment of impacts.

Assessment of Impact

Once the baseline information has been collected, an assessment of potentially significant environmental impacts, as a result of the development, can be undertaken.

Preliminary Environmental Information Report (PEIR) and statutory consultation

The preliminary findings of the impact assessment are reported at this stage. The PEIR is submitted for formal consultation with relevant stakeholders.

Environmental Statement

Following consideration of feedback from the PEIR consultation the assessment of impacts is completed and reported in the final Environmental Statement.

Consent Application

The application is submitted to the Planning Inspectorate which has 28 days to confirm acceptance.

Examination

Following acceptance of the application the Examining Authority will undertake a six-month examination of the proposed development.

Decision

Following the examination, the Examining Authority will make a recommendation to the Secretary of State within three months. The Secretary of State then has a further three months to make a final decision on the application.