

Welcome



Welcome to our Phase One public information day about the Boston Alternative Energy Facility, a state-of-the-art power-generation plant which will lead the way in land-based renewable power across the UK.

The facility is being promoted by Alternative Use Boston Projects Ltd, a privately-owned project company.

It is classed as a Nationally Significant Infrastructure Project because it is a land-based power facility with a generating capacity exceeding more than 50 MW of energy.

This means we need a Development Consent Order (DCO) under the Planning Act 2008 to allow it to be constructed and operated.

This is your chance to find out more about our initial proposals, including details of potential local environmental and economic impacts, and share your views.

Your feedback is important to us and will help shape the development of the proposals.

More detail on how your opinions have helped develop the scheme will be

provided in our Phase Two consultation which is expected to begin early in 2019. This second consultation will provide you with a further opportunity to comment on the proposal.



The site for Boston Alternative Energy Facility viewed from across the Haven

Our proposal (1)



The Boston Alternative Energy Facility will have a proposed generation capacity of 102MW (gross) of renewable energy, of which 80MW (net) will be exported to the National Grid. This is enough to power the equivalent of 185,000 homes. The remainder will be used to power the facility itself.

What will happen at the Boston Alternative Energy Facility?

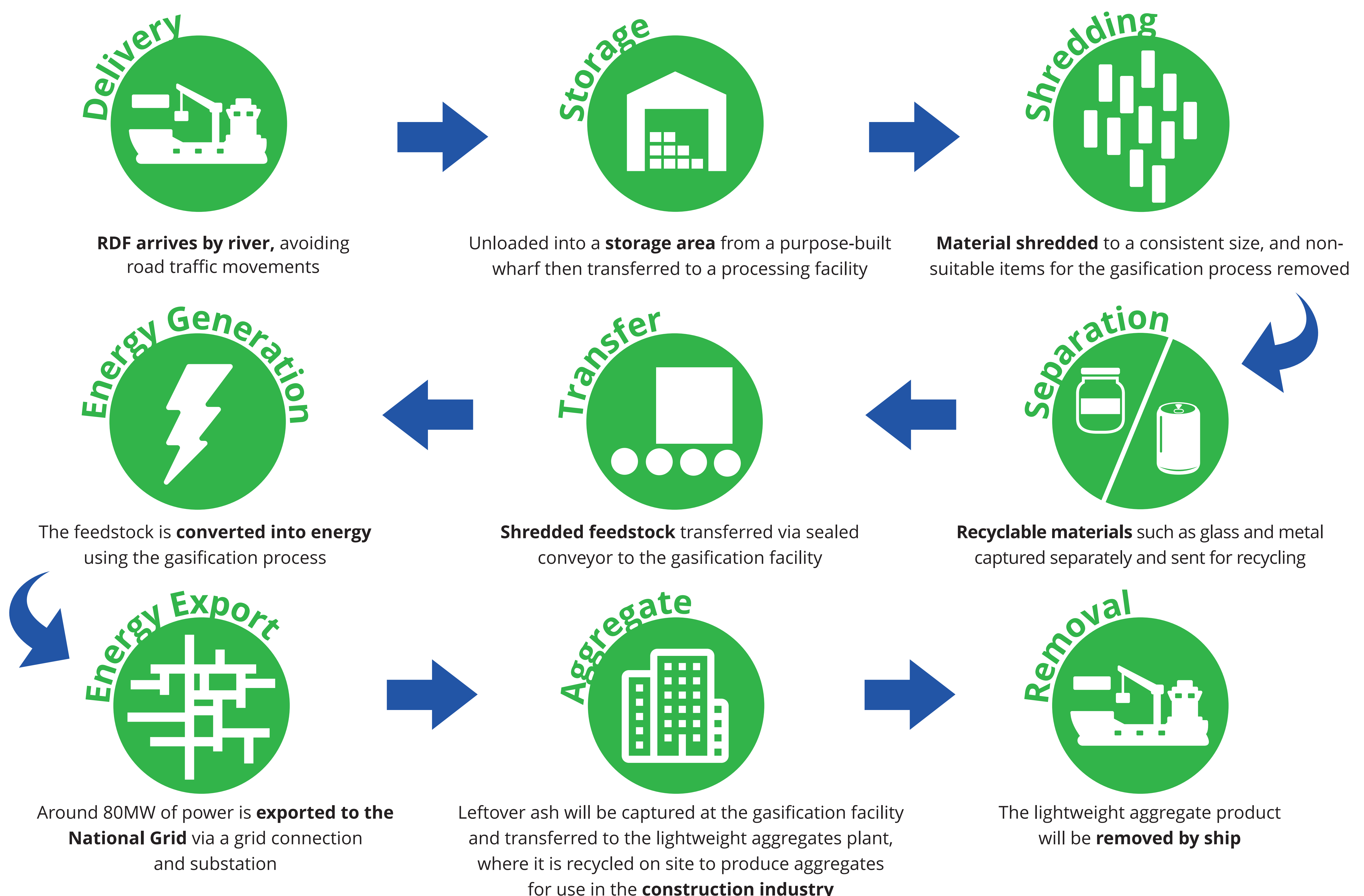
Delivering this power involves a number of stages, from receipt of the fuel; storage and processing; generation of energy; and dealing with the residues.

The process by which power will be generated is called gasification, which is explained in more detail on our dedicated exhibition board.

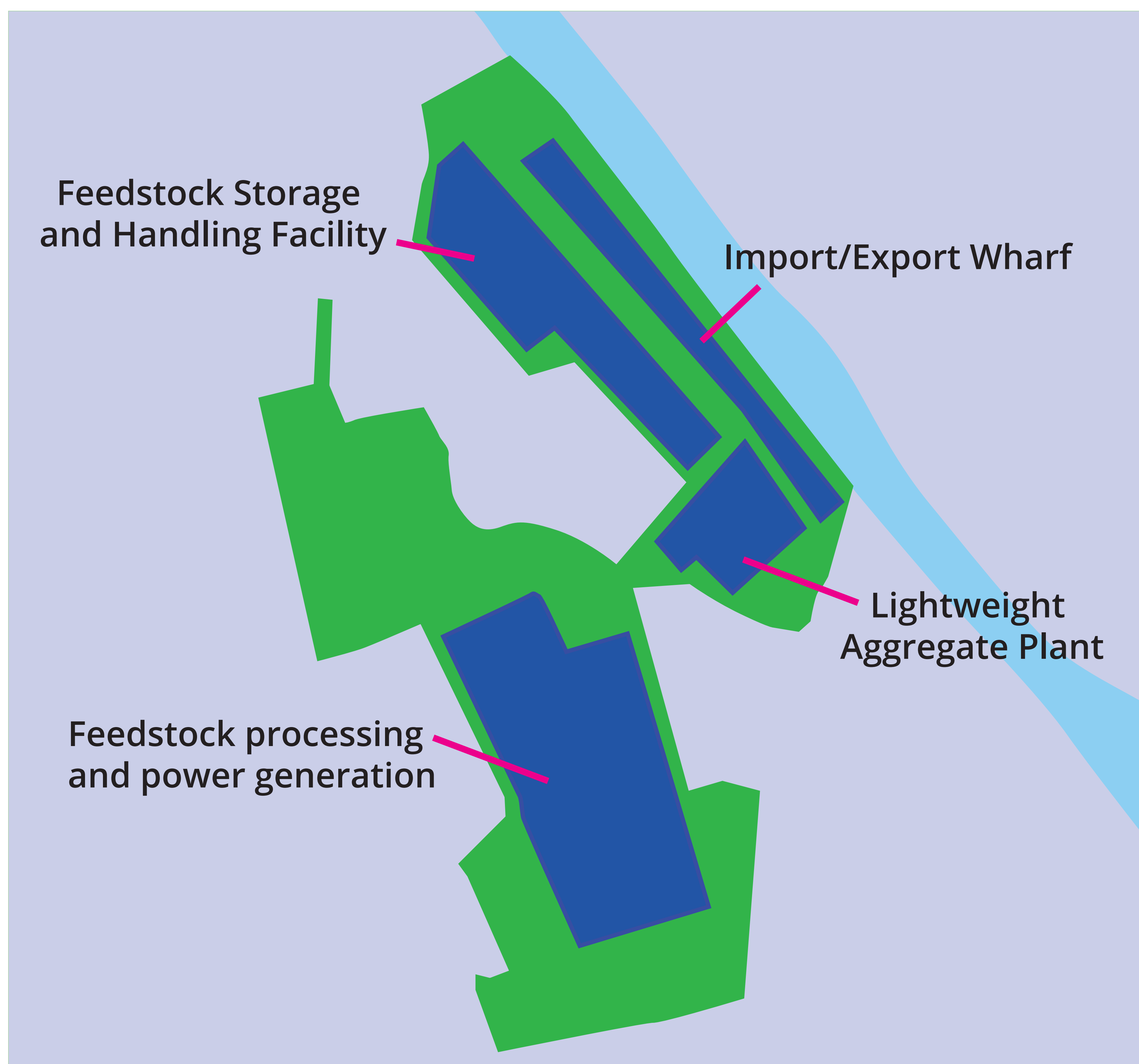
This process will use a fuel (or feedstock) called refuse derived fuel (RDF). The RDF is made from residual non-recyclable household waste, which will be baled and transported by ship to the Boston Alternative Energy Facility from UK ports. This will avoid road traffic movements to and from the site.

In addition, the ash residues from the gasification process will be processed on site into an aggregate product. This will be exported from the site by ship.

The process is as follows:



Our proposal (2)



Conceptual Site Layout

The proposed development includes:

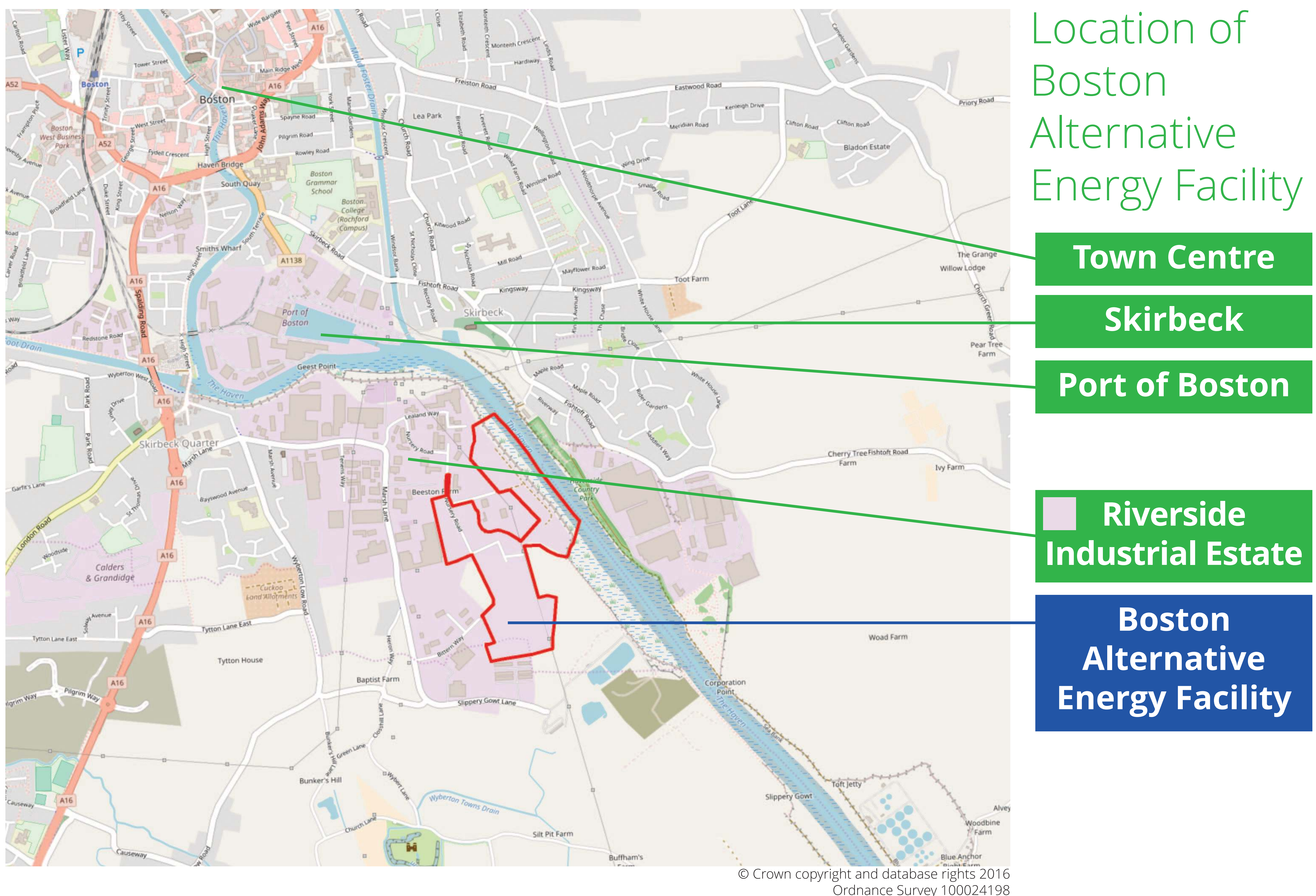
- a new wharf on the bank of the Haven with cranes and berthing points for up to three ships
- a storage area behind the wharf to house the incoming material
- a processing facility to prepare the feedstock to a consistent specification
- conveyors for transferring the processed material to the gasification facility
- a gasification unit that will generate power, which will then be exported to the National Grid via a grid connection and substation
- a lightweight aggregate manufacturing plant which uses the ash residue from the gasification process and
- a storage area for loading of the lightweight aggregate onto a ship for removal from the site.

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 proposed site boundary is within an area allocated for waste recovery processes and industrial development by the local planning authority, making it an ideal location for the facility.



The gasification process

Gasification is a way of generating energy from carbon-based fuel.

Gasification is identified in National Policy Statement EN-3 as one of a number of renewable energy processes which use the biomass in waste material. This involves the creation of a chemical conversion using a restricted oxygen supply. This converts the carbon-based materials in the RDF feedstock into a synthetic gas (syngas). The syngas is a fuel, which is turned into electricity by recovering heat in

a boiler. The process of producing the syngas does not involve combustion, so the facility is not an incinerator. Gasification is more efficient and cleaner than mass-burn incineration, and has the additional benefit of creating a useful product – energy.

Gasification does not compete with recycling, as materials can and should be recycled where possible.



Artist's impression of a gasification plant

What is important about Boston Alternative Energy Facility?

The facility will....

Use the latest proven gasification technology

to operate safely and efficiently and within strict European emission standards

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

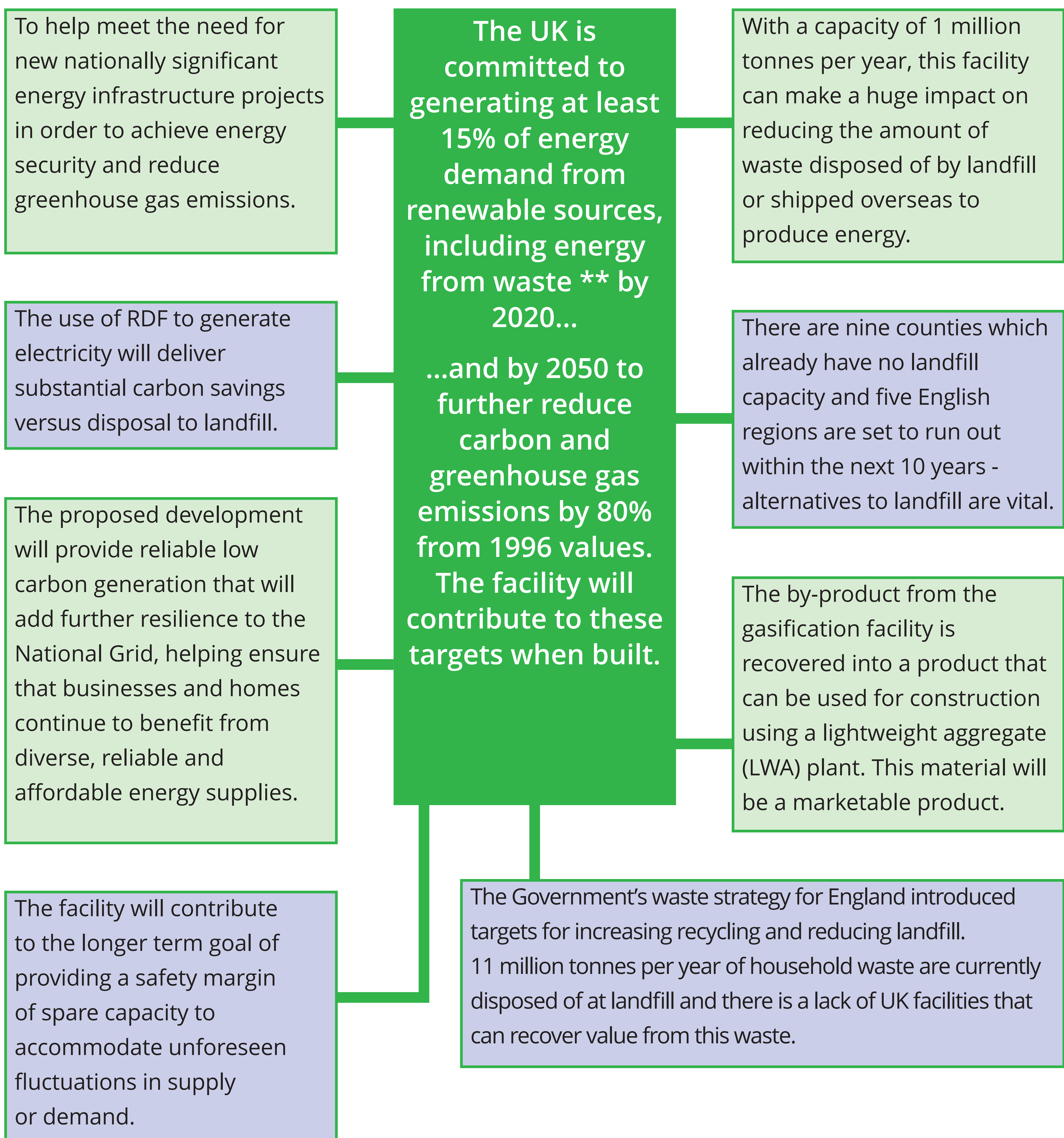
Recover energy from 1 million tonnes of refuse derived fuel (RDF) from non-recyclable household waste, **generating enough power for more than 185,000 homes** (equivalent to over 60% of the households in Lincolnshire)

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

Contribute to meeting the **need for new electricity generating capacity in the UK**, replacing capacity which has come to the end of its life because of old technology

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

Why is the facility needed?



** The Government defines technologies such as gasification as 'renewables' in National Policy Statement for Renewable Energy Infrastructure (EN-3)

Where will material come from?

We all generate waste, which we separate at home into dry recyclables that are sent for recycling and residual 'black bag' waste, which contains material that cannot be recycled. This might either be because it is unsuitable, contaminated, or because there is no efficient recycling technology available for it.

This residual 'black bag' material forms the refuse derived fuel (RDF) which will fuel Boston Alternative Energy Facility. This feedstock is a dependable, deliverable and secure energy source from the UK, and will help to meet the UK's long-term energy security needs and help to provide stability to the National Grid.

The RDF will be sourced only from the UK. None will be imported from abroad.

Much of this RDF is currently either being sent to landfill, or being exported overseas for processing (as a fuel for European energy production). So the new facility will not affect capacity at existing UK energy from waste plants.

It is possible that additional RDF could be taken from local sources (for example residual household waste from Boston and south Lincolnshire), subject to discussions with the developer and local authorities.



Map showing some of the potential routes of material to the facility

Transport



One of the key features of the Boston Alternative Energy facility will be a **new wharf** on the Haven to receive RDF material and export lightweight aggregate by ship rather than using the local road network.

A similar size ship travelling down the Haven



The wharf will be constructed so that it will not impede navigation of other vessels accessing the Port of Boston or upriver.

The wharf will be able to receive two ships delivering RDF at any one time at high tide.

If RDF was being delivered to the site by road, then 1 million tonnes would require approximately 50,000 Heavy Goods Vehicle (HGV) deliveries per year (at 20 tonnes per load); approximately 137 vehicle movements per day (1 movement equals a journey in and out of the facility) – in contrast to approximately 11 ship movements per week

to the site to provide the delivery of the RDF and removal of the aggregate.

The project will have a positive impact on the Port of Boston, by increasing the number of vessels using the Haven (which will require a Pilot for navigation and turning the ships within the Port's basin). The Project Team will be working closely with the Port of Boston to ensure all of their requirements are met.

There will be some vehicle movements to site associated with staff movements to / from the site, and delivery of process chemicals and raw materials. There will also be removal of

hazardous residues from the gasification facility for disposal.

A transport study is being undertaken as part of the Development Consent Order (DCO) application to determine exact vehicle movements during the construction and operational phase. A Construction Traffic Management Plan will define the routes that can be used (and which routes must be avoided), and will control the maximum number of movements per day. The effect of any increase of combined road traffic movements on the local road network will be considered as part of the assessment.

Answering your questions

How will you minimise emissions and odour?

● Modern waste treatment facilities such as this must use state-of-the-art equipment and are highly regulated. They meet all the stringent environmental criteria laid down by the Government and EU Industrial Emissions Directive.

This requires use of the Best Available Techniques (BAT). The facility will not be able to obtain consent or a permit without being able to demonstrate it can achieve emission limits and implement operational control measures by using BAT.

The RDF processing facility will operate in an enclosed environment using odour control measures to ensure no unacceptable odour is released.

We will be required to secure an Environmental Permit from the Environment Agency before we are allowed to operate. The permit will include strict operating standards with which the facility will be required to comply.

Will it be noisy?

● The facility will comply with strict noise limits to ensure that it will not cause unacceptable noise or vibration for those nearby.

Baseline monitoring has already been conducted and the impact of noise will be included in the Environmental Impact Assessment which forms part of our Development Consent Order (DCO) application.

Will the construction impact wildlife and ecology?

● There will be extensive investigations to assess environmental topics in line with the proposed design of the site.

This will identify legislative requirements and good practice guidelines to ensure that the facility would not cause any unacceptable adverse ecological effects during both construction and operation.

These measures will evolve as investigations and surveys are carried out. A Construction Environmental Management Plan will specify how construction will be carried out to minimise environmental and health impacts.

The facility will not be able to operate without an environmental permit, which will ensure that there are no unacceptable risks to human health and the environment by implementing rigorous operating procedures.

Answering your questions

How tall will the proposed facility be?

How does the height compare to other local landmarks/buildings?

● There will be three main gasification buildings, each of which will be identical; and combined with one stack.

The majority of the gasification building is likely to be approximately 30 metres tall, and 38 metres at its tallest point (excluding the stack). The gasification facility will be approximately 110 metres long. The combined width of the gasification plant will be approximately 95 metres.



The silos used for storage of the processed RDF will be approximately 30 metres tall. However the majority of buildings on site will be less than 30 metres tall.

There will also be a stack for the lightweight aggregates facility. The height of the stacks has not been determined yet, because they require detailed calculations to be carried out to ensure that the facility operates efficiently and safely; and to ensure that the exhaust output is dispersed effectively to prevent unacceptable risk to the environment.

There are numerous tall structures in the area, such as masts and pylons, and a stack for the Boston wood gasification facility.

The site is very close to the Haven – what measures will you take to reduce the risk of flooding?

● The flood bank on the Haven forms an important measure to protect the Riverside Industrial Estate from flooding. The design of the wharf and associated infrastructure with the Boston Alternative Energy Facility must not compromise the level of flood protection.

A detailed Flood Risk Assessment and drainage strategy will be carried out to ensure that the design of all aspects of the facility accommodate measures to minimise the flooding risk.

Flood risk mitigation and flood prevention measures; and the potential Sustainable Drainage Solutions (SuDS) available for the site would be determined by the Flood Risk Assessment.

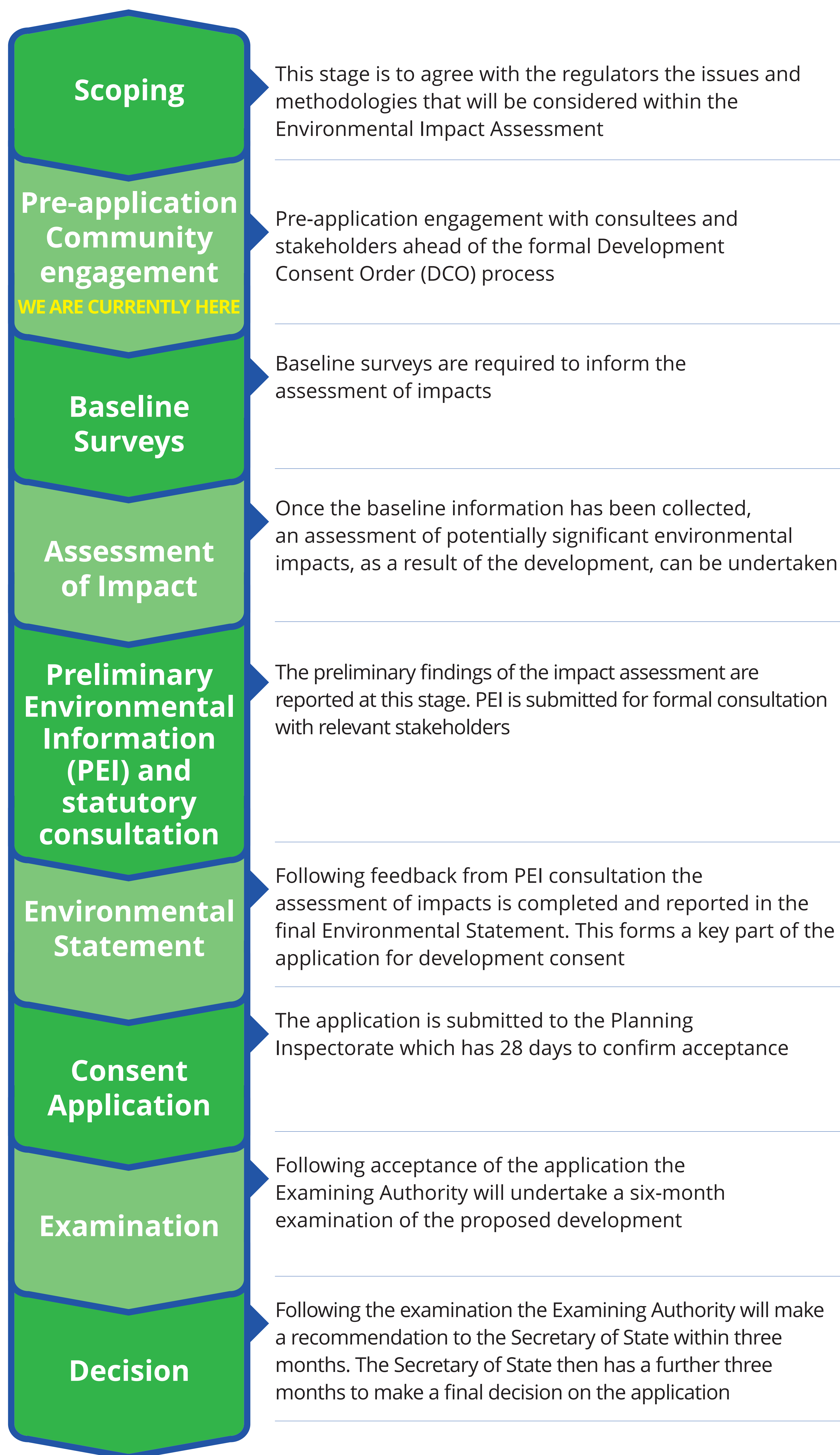
Additional mitigation measures will be discussed and agreed with stakeholders as part of our consultation process.

Where are we now?



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

We have been working with the Planning Inspectorate to agree which areas will need to be included in our Environmental Impact Assessment for the project. We are starting the work to undertake these assessments, which will help shape our final proposal for Boston Alternative Energy Facility.



Our consultation



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 our plans develop.

We'll be taking a two phase approach to consultation, with the second phase in early 2019 offering the opportunity to see how feedback from the first phase has shaped the plans.

There will be a programme of consultation with local stakeholders, e.g. local residents and community groups, and statutory consultees, e.g. Boston Borough Council, Lincolnshire County Council and the Environment Agency, up until the application submission in 2019.



- **Public Information Days**
- **Public Information Days**
- **Consultation on Preliminary Environmental Information**
- **Development Consent Order submission**
- **Commence construction**
- **Commence operation**