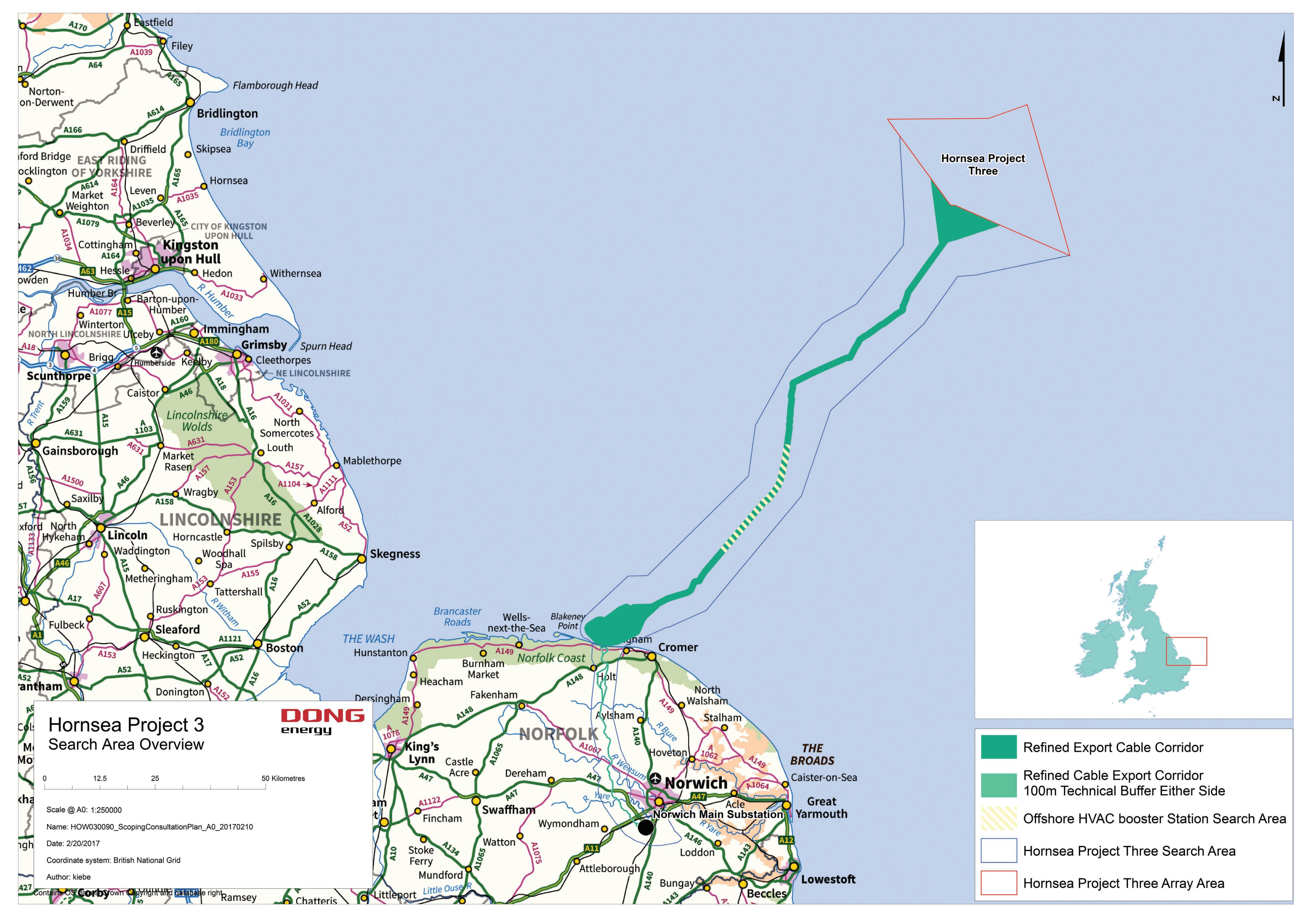
# Hornsea Project Three Offshore Wind Farm

DONG Energy is proposing to develop a new offshore wind farm (Hornsea Project Three), in the North Sea, approximately 120 km off the north Norfolk coast.

# Who is DONG Energy?

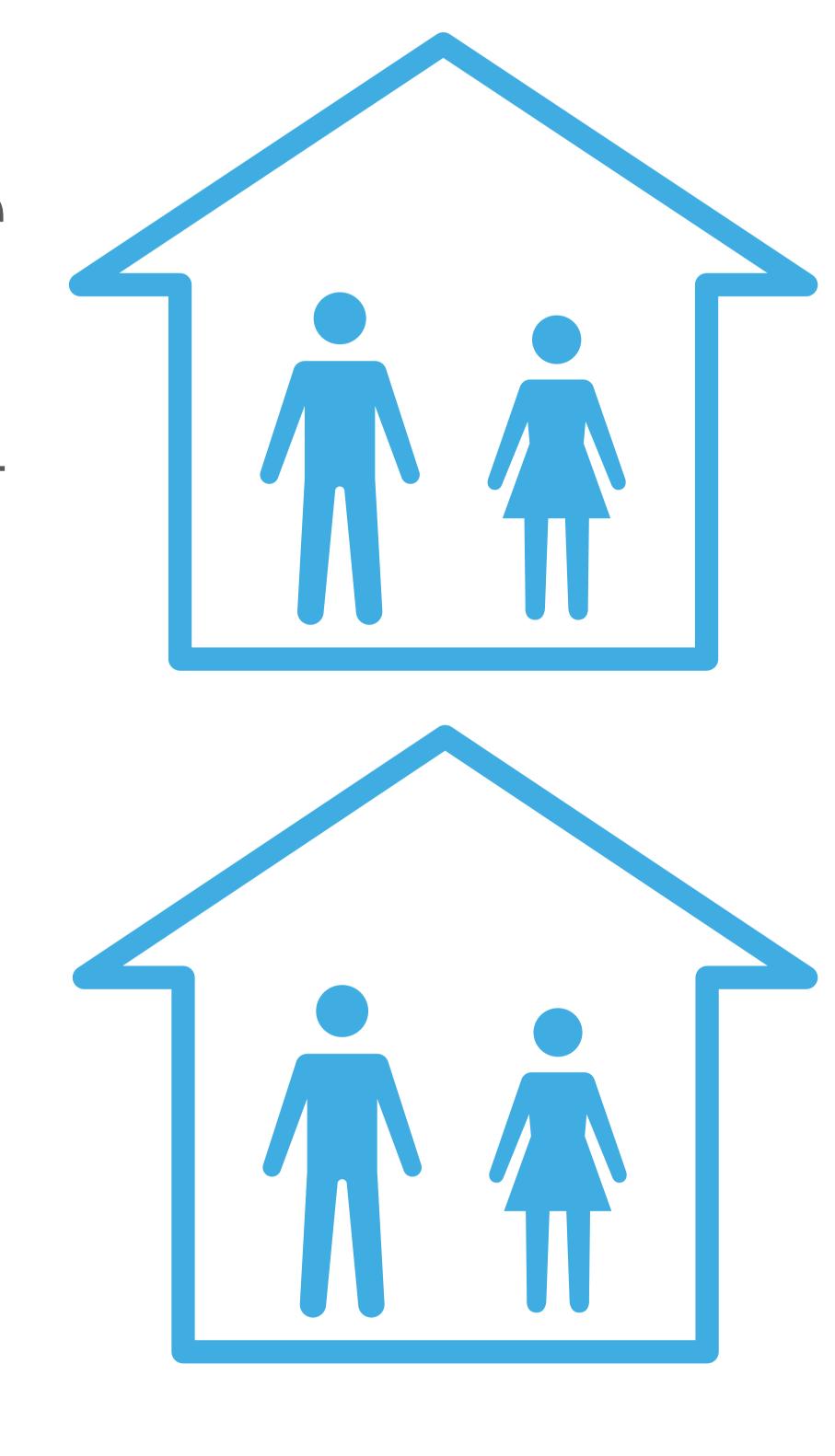
DONG Energy is one of Northern Europe's leading energy groups, headquartered in Denmark. We are the global leader in the development, construction and operation of offshore wind farms, an oil and gas producer and a leading energy supplier to the industrial and commercial market.

DONG Energy has been in the UK since 2004 and the UK is now our primary market for offshore wind power production. We have invested approximately £6 billion in the UK to date and expect to double this investment by 2020. We are committed to innovation, taking the lead in driving down the cost of offshore wind power and developing innovative solutions for our energy customers.



If built out to full capacity,
Hornsea Project Three could be
the world's largest offshore
wind farm, capable of powering
well over





Hornsea Project Three Offshore Wind Farm will be located approximately 120 km off the north Norfolk coast, within an offshore area over









# Consultation Process

## The Planning Process

Hornsea Project Three is a Nationally Significant Infrastructure Project (NSIP) and must apply for a Development Consent Order (DCO) under the Planning Act 2008 (the Act). Consents for the wind farm, offshore and onshore cable route, including substations and final grid connection, will be included in the DCO.

Hornsea Project Three is currently in the pre-application phase for a DCO, with a consent application expected to be submitted in 2018.

If successful, construction of Hornsea Project Three could take place between 2022 and 2025\*.

We are in the early stages of developing Hornsea Project Three, and are looking for your input to help shape the Project as it progresses.

For more information on our plans for community consultation, please see our Statement of Community Consultation (SoCC).

Guidance on the planning process can be found on the PINS website at:

http://infrastructure.planninginspectorate.gov.uk legislation-and-advice/

## Public Consultation

This is the second round of community consultation events across the consultation area. There are two phases of consultation;

**Phase One** – Informal consultation on initial Project information, including the consultation process and considerations for siting the proposed infrastructure.

**Phase Two** – Formal consultation on the contents of our Preliminary Environmental Information Report (PEIR) and preferred cable corridor and substation locations.

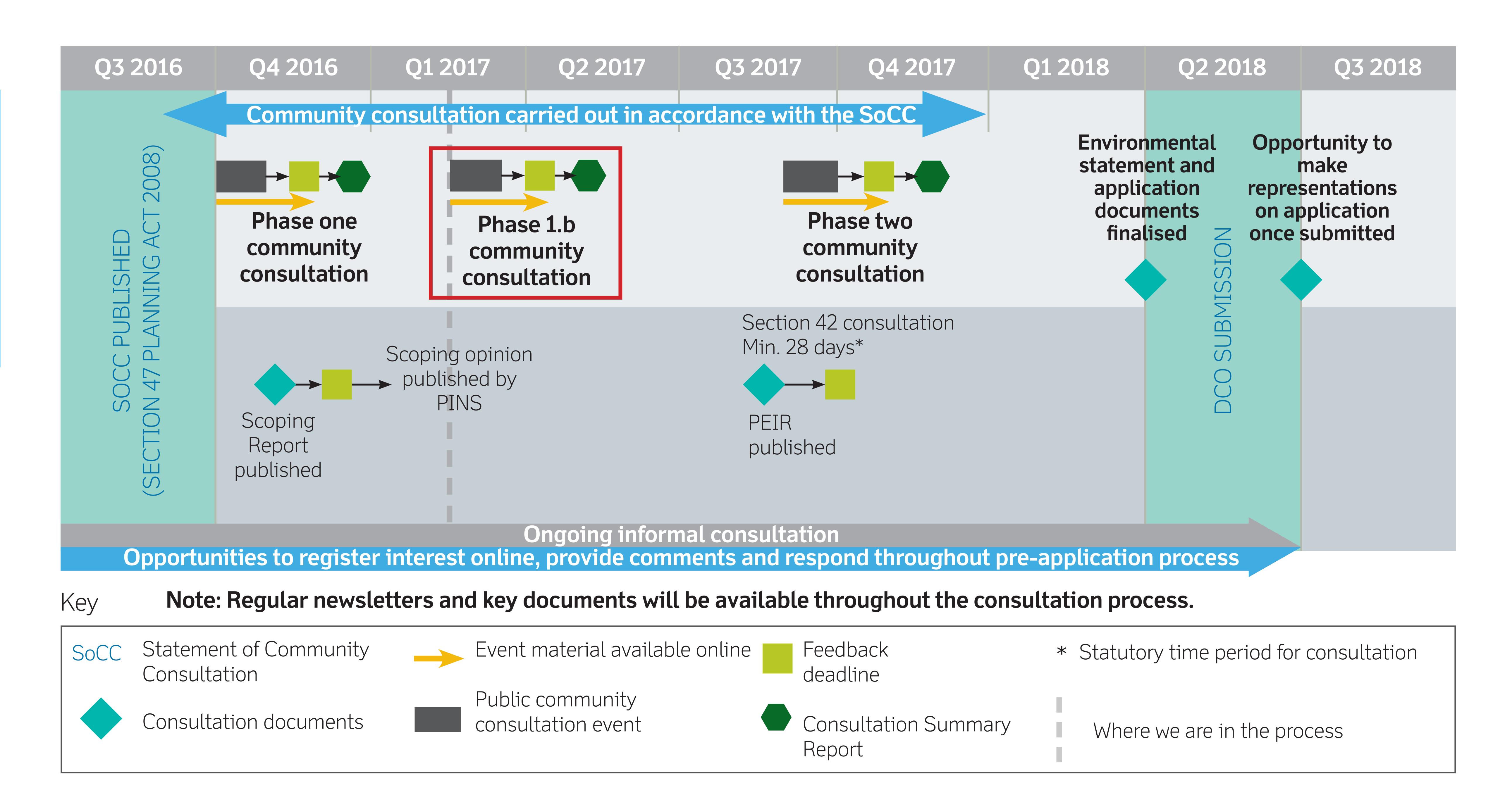
We are halfway through our first phase of consultation. All plans shown at this stage are indicative and no decisions have been made yet.

## Letting us know your views

There are still plenty of opportunities for communities to have their say and influence our proposal going forward. You can provide feedback on the information you have received through the following channels;

- By talking directly with a member of the team
- By drawing/commenting directly on our foam boards
- By completing a feedback form

After the events we will publish a Consultation Summary Report, which will provide an overview of all of the views expressed at this set of events.







# Offshore

Up to 342 turbines will be located within the offshore array area. We are currently exploring an area of 696 km<sup>2</sup>, over 17 times the size of Norwich, located approximately 120 km off the north Norfolk coast.

## Offshore Export Cable Corridor

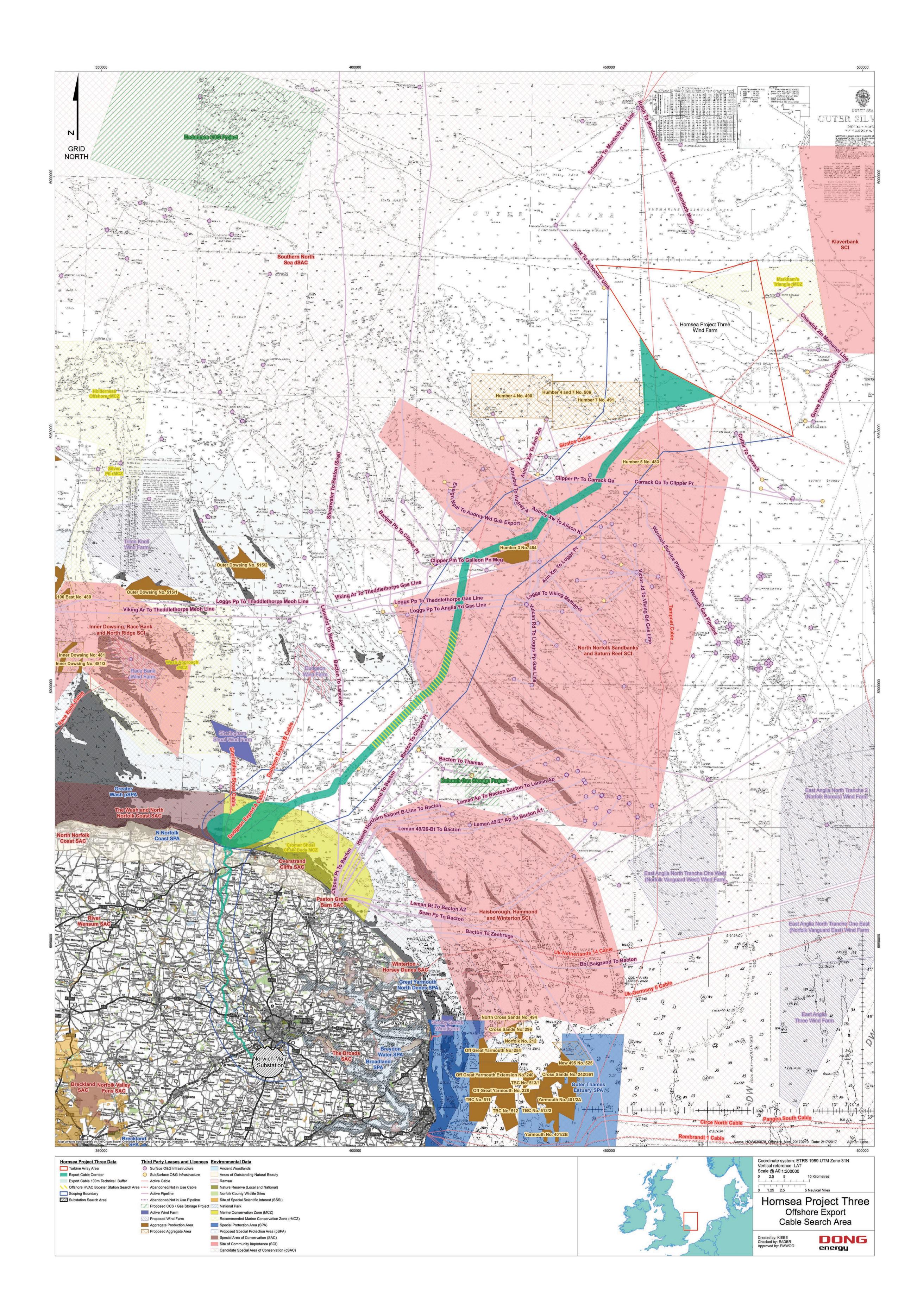
Electricity generated by the offshore wind turbines will be brought onshore by up to six subsea export cables, potentially via an offshore High Voltage Alternating Current (HVAC) booster station (if required) before reaching landfall along the north Norfolk coast.

We have refined the original offshore export cable search area to an **indicative preferred 1.5 km export cable corridor.** The original search area was presented at the first round of events and feedback on this area was collected. This area has since been refined following an initial constraint mapping exercise, designed to identify key aspects of the offshore environment, including shipping and navigation routes, other offshore infrastructure and designated protected species zones.

This corridor funnels out at the proposed landfall in the vicinity of Weybourne and at the offshore array area to allow flexibility as plans are further developed. We will seek to refine this area where possible once we have a better understanding of what is physically and technically feasible.

The wind turbines will **not be visible** from the coast, however there is the potential for the associated offshore construction works to temporarily impact marine activities in the area.

Please take this opportunity to view the maps we have provided and highlight any features that you would like to make us aware of within or near to our refined offshore corridor.







# Onshore

As part of our onshore site selection process, we consider the associated constraints and opportunities presented by aspects of the local environment to help us identify the most suitable route. These include technical and commercial considerations.

### Onshore export cable corridor and landfall zone

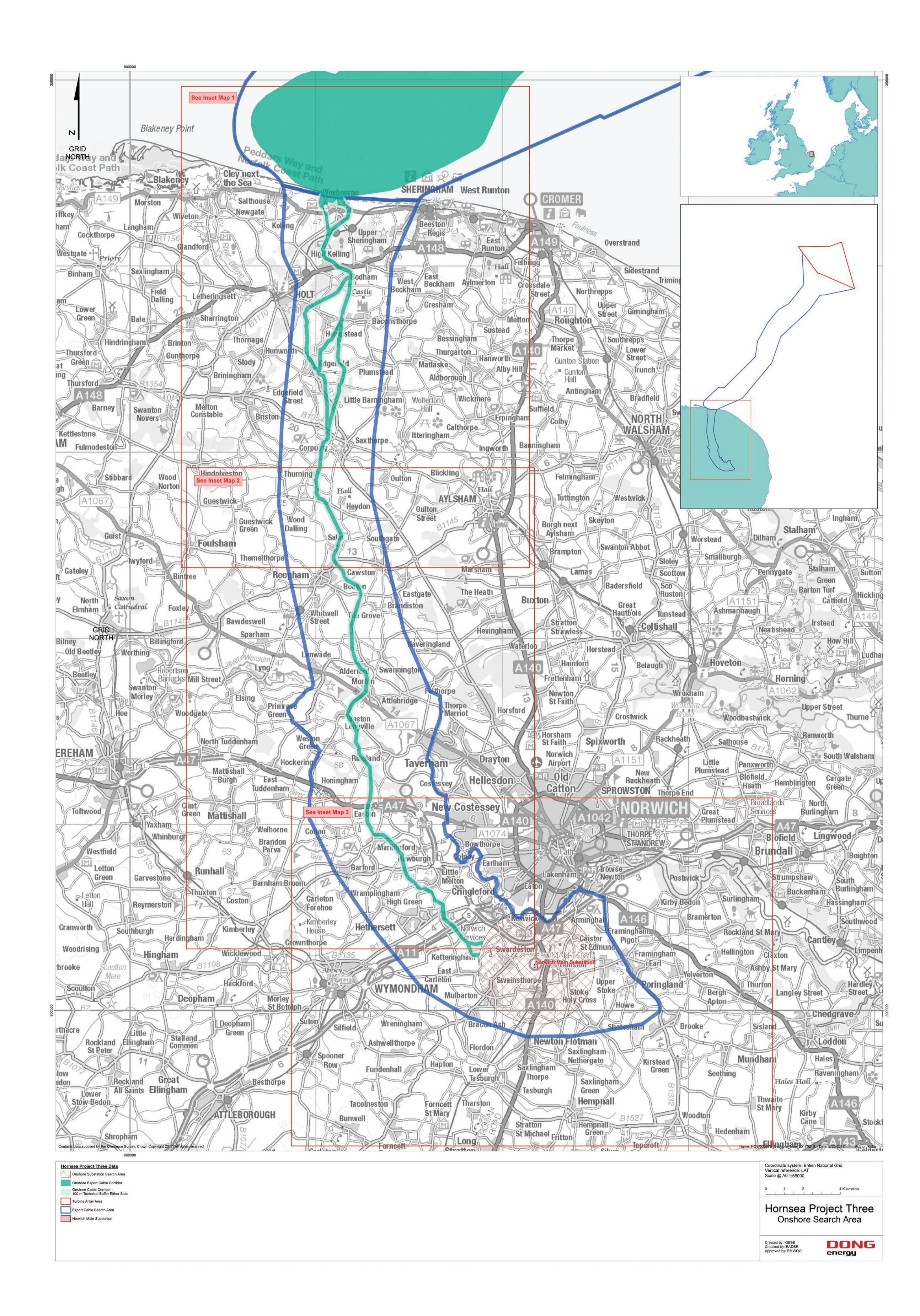
Hornsea Project Three has received a grid offer from National Grid based on an onshore connection point at the existing 400 kV Norwich Main National Grid Substation. Following initial feasibility and desk based studies, as well as feedback from early consultation with communities, landowners and statutory bodies, we have refined our original onshore search area (approximately 5 km in width) to a **200 m indicative cable corridor**, plus a 100 m buffer either side of this for technical clarifications as the route refinement matures.

The onshore cable route will extend for approximately 55 km inland from the landfall zone (area where the export cable comes onshore) in the vicinity of Weybourne. The cable will then travel southwards to the west of Norwich, before connecting into Norwich Main Substation, just south of Norwich.

All onshore cables will be **buried underground**. However, the Project will require some over ground infrastructure including a new onshore substation in the vicinity of the existing Norwich Main National Grid Substation and a High Voltage Alternating Current (HVAC) booster station (if required).

The corridor shown at this stage is *subject to change* and we will formally consult on the proposed 200 m cable corridor in Summer 2017, which will be presented in our Preliminary Environmental Information Report. The final 80 m cable route will be shown in our Environmental Statement, which will be submitted with our DCO application in 2018.

We want to hear your views on our indicative 200 m cable corridor and landfall zone. Please let us know if there is anything you think we should be aware of in or near to the corridor as we further refine our plans over the coming months.







# Onshore

# Temporary construction sites

During the onshore construction period, temporary compounds near to the onshore works will be required to facilitate the construction works and there is likely to be movement of construction vehicles between the compounds and the site.

We are in the process of identifying potential sites to hold these compounds within or near to our refined route. Please let us know of anything you would like us to consider when siting these compounds.

# Finding the best onshore substation location

Hornsea Project Three will require a new onshore substation near to the existing National Grid Substation (Norwich Main, located near Dunston and Mangreen). This is to ensure that the electricity supplied to the grid meets the required standards. We are currently investigating suitable sites for the onshore substation following initial desk based studies and feedback from informal consultation. The substation would require an area of up to 100,000 m<sup>2</sup> and could be up to 25 m in height.

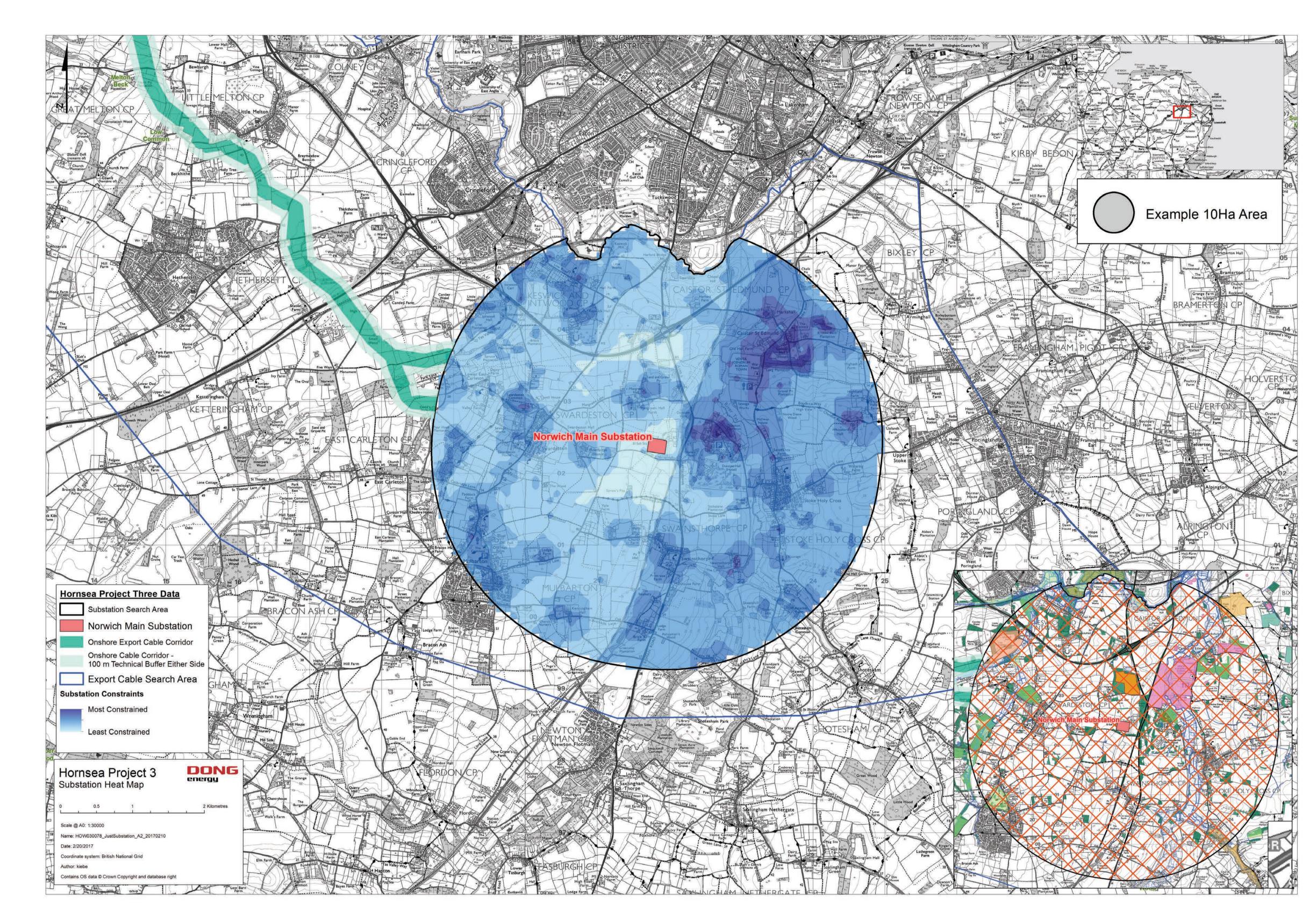
To help us to identify suitable sites for locating the new substation, we have mapped out all known constraints (such as residential properties and flood risk areas) within the original search area (3 km radius from Norwich Main). As shown in the diagram, the lighter the segment, the less constrained the area is and the more suitable it is considered to be. We will use this information, along with the feedback we gather at these events and further consultation with landowners and statutory bodies, to find the best location.

# Finding the best onshore HVAC booster station (if required)

If a High Voltage Alternating Current (HVAC) electrical transmission system is selected, the Project will also require a booster station near to the coast. This would be to mitigate against transmission losses of power between the offshore wind farm itself and the national grid connection point. Depending on the outcome of the assessment process and technical feasibility, the HVAC booster station could be situated offshore and/or onshore.

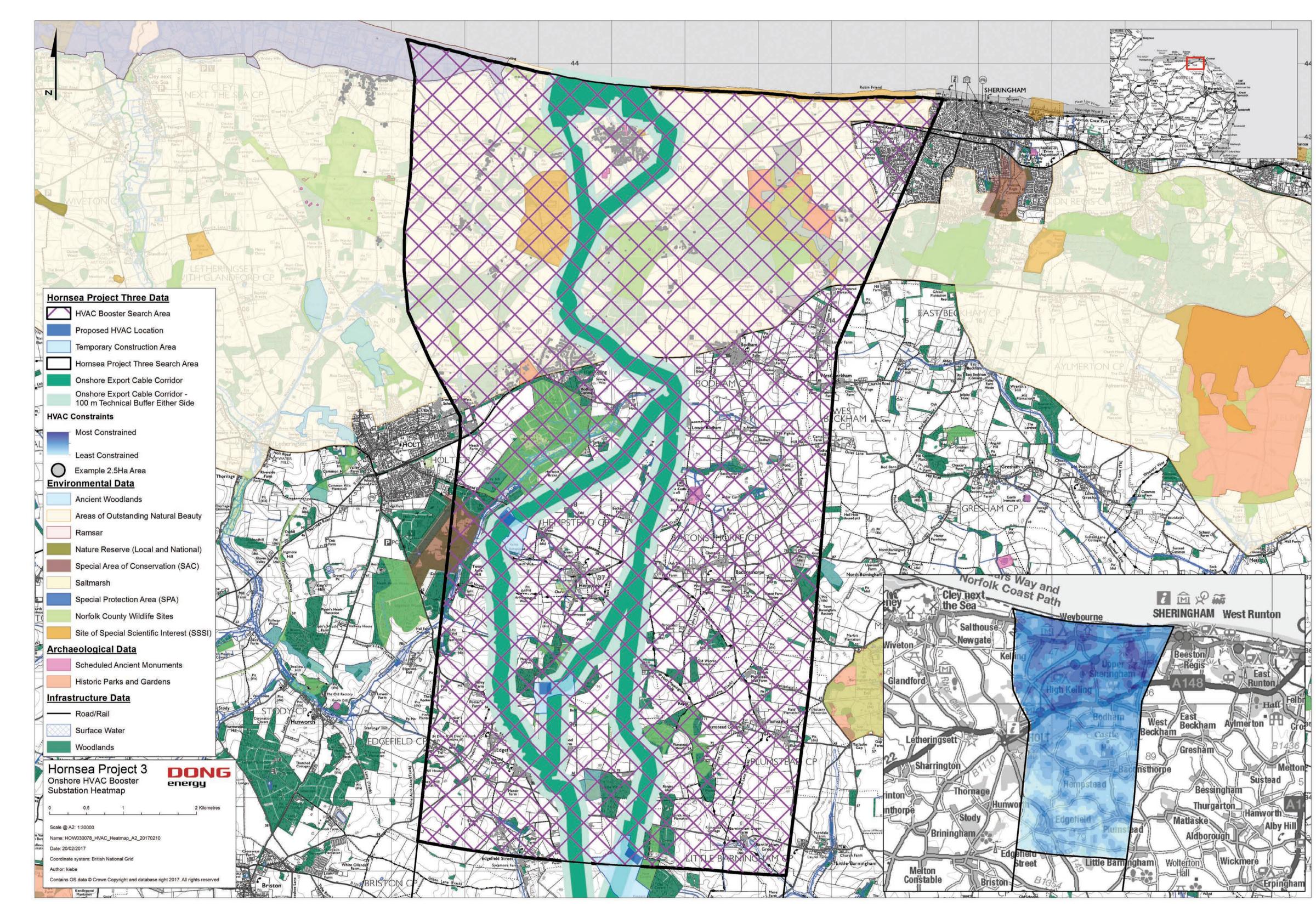
In terms of the onshore HVAC booster station, our constraint mapping exercise and initial feedback from informal consultation indicates that the southern half of our original search area (approximately 10 km from the coast) is a preferable location for this booster station. The HVAC booster station would require an area of up to 25,000 m<sup>2</sup> and could be up to 12.5 m in height. We have identified three potential sites within the original search area, and want to get your thoughts on these options.

One or more option(s) for both the onshore substation and onshore HVAC booster station will be presented within our Preliminary Environment Information Report (PEIR), due to be published in Summer 2017. The final proposal will consider all of the feedback we have received during this consultation, as well as ongoing environmental and technical surveys.



Above: Heat map exercise highlighting the most suitable zones for locating the onshore substation.

Inset: Map detailing the original search area for the onshore substation and known constraints.



Above: Map showing the three onshore HVAC booster station options within the original search area, including known constraints.

Inset: Heat map exercise highlighting the most suitable zones for locating the onshore HVAC booster station.



