

Community Liaison Group & Local Design Panel

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Jan 2024

Agenda: Surfleet

- Terms of reference
- Introductions
- Project Update
 - Consultation overview
 - Category 3 communications
 - CBF boundary and themes review
- Timeline

Local Design Panel

- The Design Review Process
- The Onshore Substation
- Consultation & Feedback
- Design Considerations & Design Scope
- Timeline & Next Steps

AOB

Terms of Reference and Aims

Our Aims ...

To involve key local stakeholders in the design and development of the Outer Dowsing Offshore Wind project (landfall, onshore cable route and substation) through presentations, discussions and planned workshop activities.

To act as a two-way communication channel between local communities and the project team.

To help foster local involvement and ownership of the project.

To facilitate focused discussions and ensure attendees can make the most out of the CLG's – it is intended for these groups to be focused on concerns/ issues / thoughts relative to their specific **local area**.



Approval of previous minutes



Any comments or queries prior to the meeting?



Declaration of Conflicts of Interests.

Introductions

Project Update

Consultation Overview

The project team have worked to engage local communities through extensive consultation

2022-2024 overview



16 public engagement events



8 webinars



1491 Attendees at engagement events



107 written responses



74 phone calls



246 Completed feedback forms



- We have received a large number of pro-actively supportive responses and positive feedback on our consultations
- Themes of interest primarily related to onshore matters such as noise, visual impacts and traffic
- Targeted consultation closed on Jan 19th
- What is the current sentiment in your community?

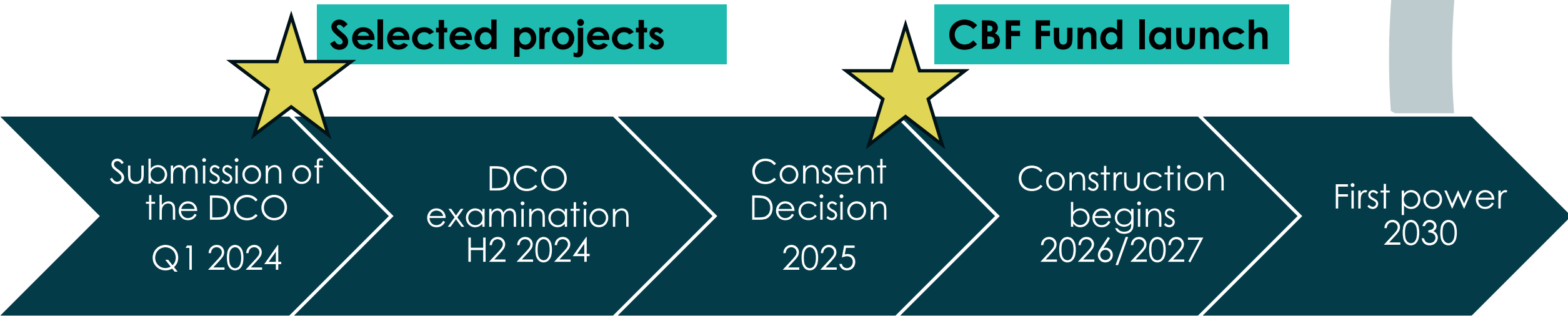


Community Benefit Fund

Community Benefit Fund (CBF) – early proposals

- 1. Aim of the fund** – to bring long-lasting value to the communities closest to our project
- 2. Proposed themes of focus** - themes we hope to support in the local community.
- 3. Eligibility criteria** - sets out which applications get through the first sift. Ensures the funding is in line with ODOW standards and those of our partners.
- 4. Award criteria** – outlines how the applications will be scored to ensure that the projects with the highest impact and closest to the project are more likely to get funding
- 5. Fund administration** – we will likely work with a third party to administer the fund
- 6. Lessons learnt** – we want to incorporate learnings from other developers and feedback gained from the community consultation events.

Timeline



Proposed themes for the CBF



Nature
positive



STEM and
skills



Sustainable
enterprise



Community
health and
wellbeing

Volunteering and staff engagement

Proposed eligibility criteria and exclusions for the CBF



Eligible

- Have a constitution outlining your objectives and rules for your organisation
- Have a bank account or credit union account set up in the organization's name.

Projects must be:

- Within the eligibility zone as outlined on our map
- Aligned with our themes



Excluded

- Religious organisations, trade unions and political parties
- Promotion of any kind of discrimination (ages, sexes, ethnicities, or minority groups)
- Requests for funding that benefit a single person
- Requests for funding to pay for salaries or other ongoing running costs (e.g. rent)
- Recipients that promote illegal or unsafe activities
- Retrospective funding or existing loans or debts
- Requests for funding that relate to public infrastructure
- Members-only sports clubs or facilities unless they are open to the general public

DRAFT

Award evaluation criteria themes

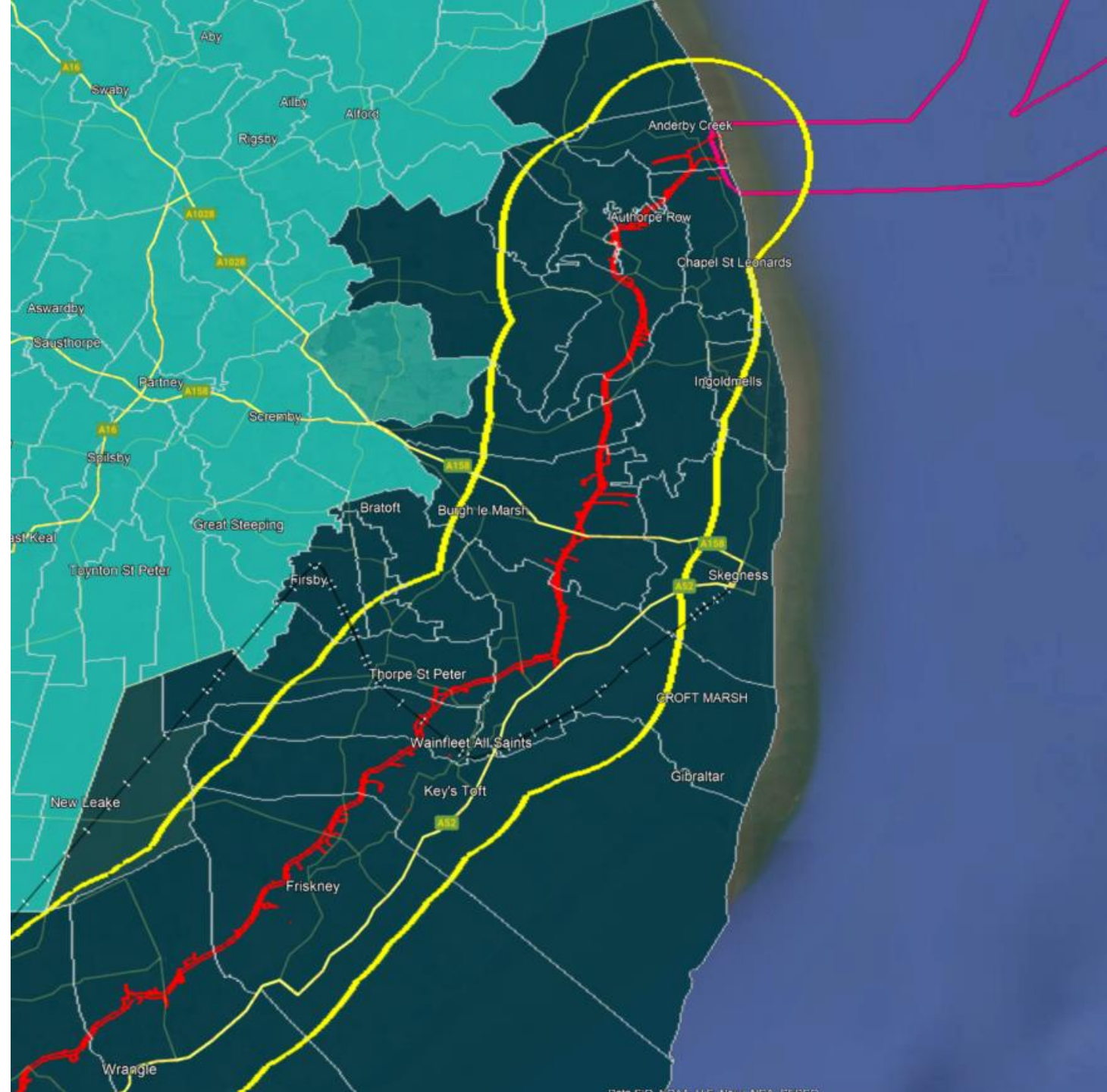
Proposed themes that will influence which projects are selected

1. Proximity to project
2. Relevance to community
3. Level of impact
4. Ability to deliver results



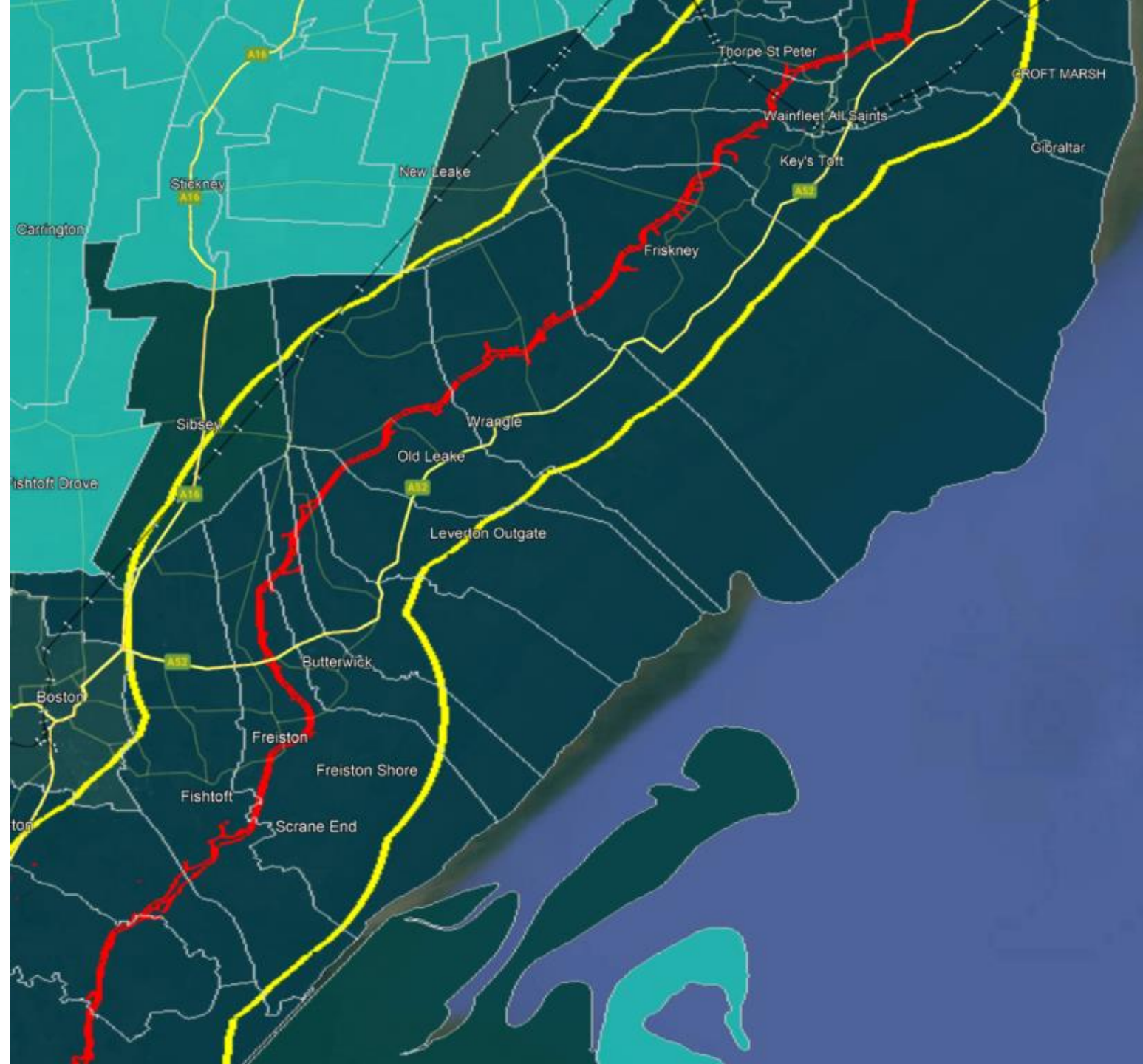
Community Benefit Fund: Proposed Boundary

- Landfall and northern part of cable route
- Red line shows the 80m corridor
- Yellow line shows a 3km distance from the cable corridor
- If a parish council boundary comes within 3km of the cable route, projects across the whole Parish will be eligible to apply to the fund



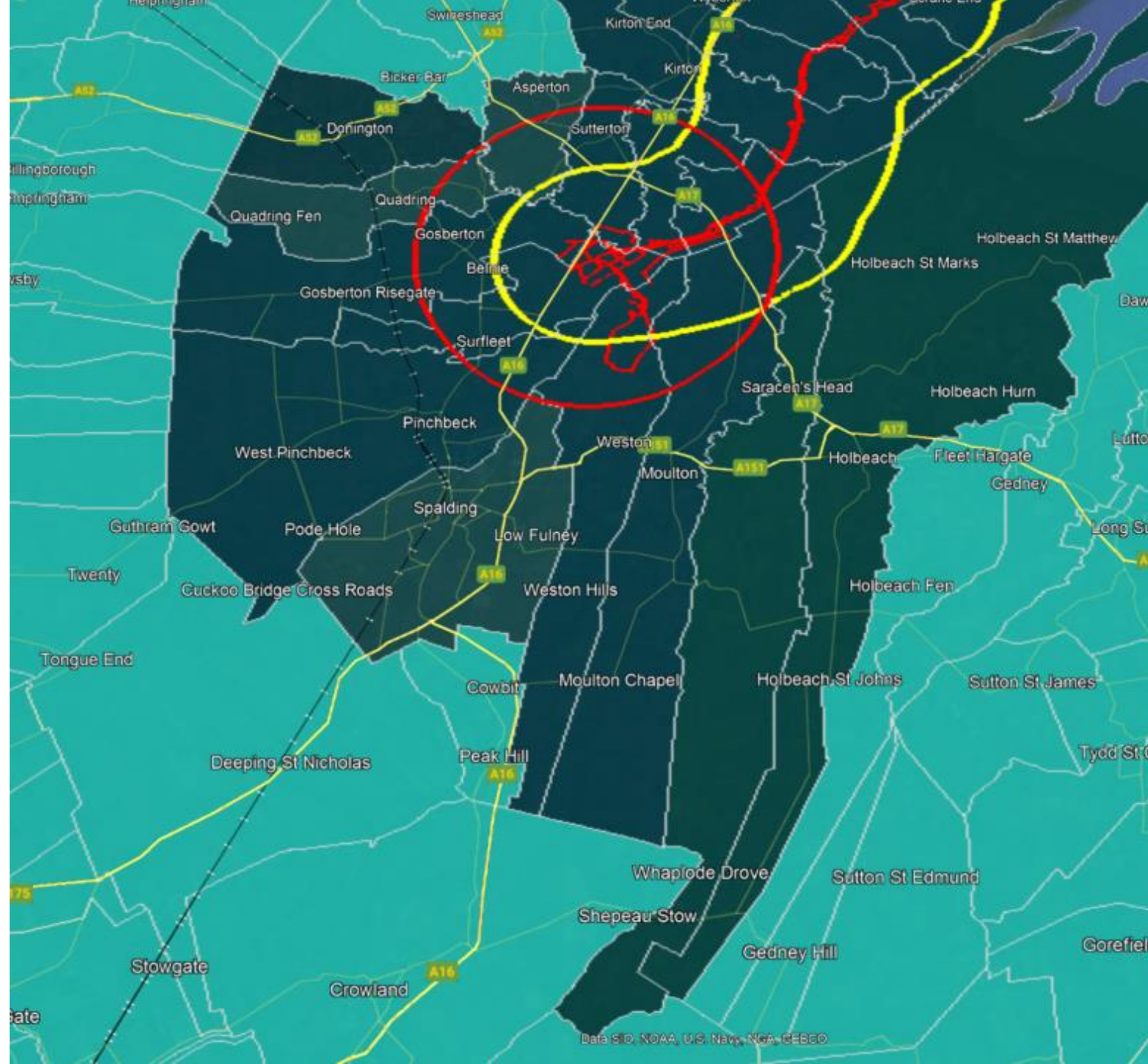
Community Benefit Fund Proposed Boundary

- Cable route
- Red line shows the 80m corridor
- Yellow line shows a 3km distance from the cable corridor



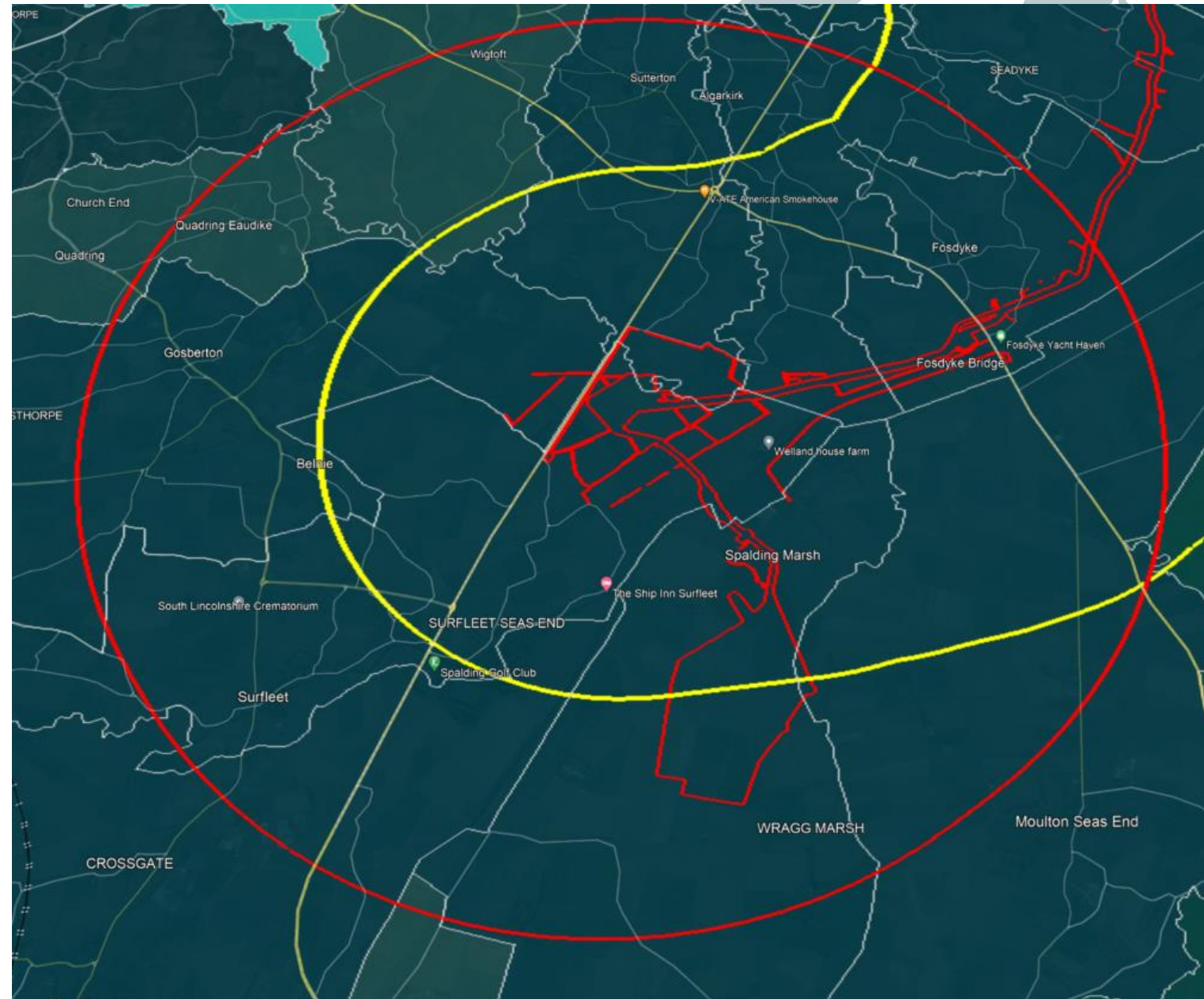
Community Benefit Fund Proposed Boundary

- ODOW substation site
- Red line shows 80m corridor
- Yellow line shows a 3km distance from the cable corridor
- Red line shows a 5km distance from the substation site



Community Benefit Fund Proposed Boundary

- ODOW substation site
- Red line shows 80m corridor
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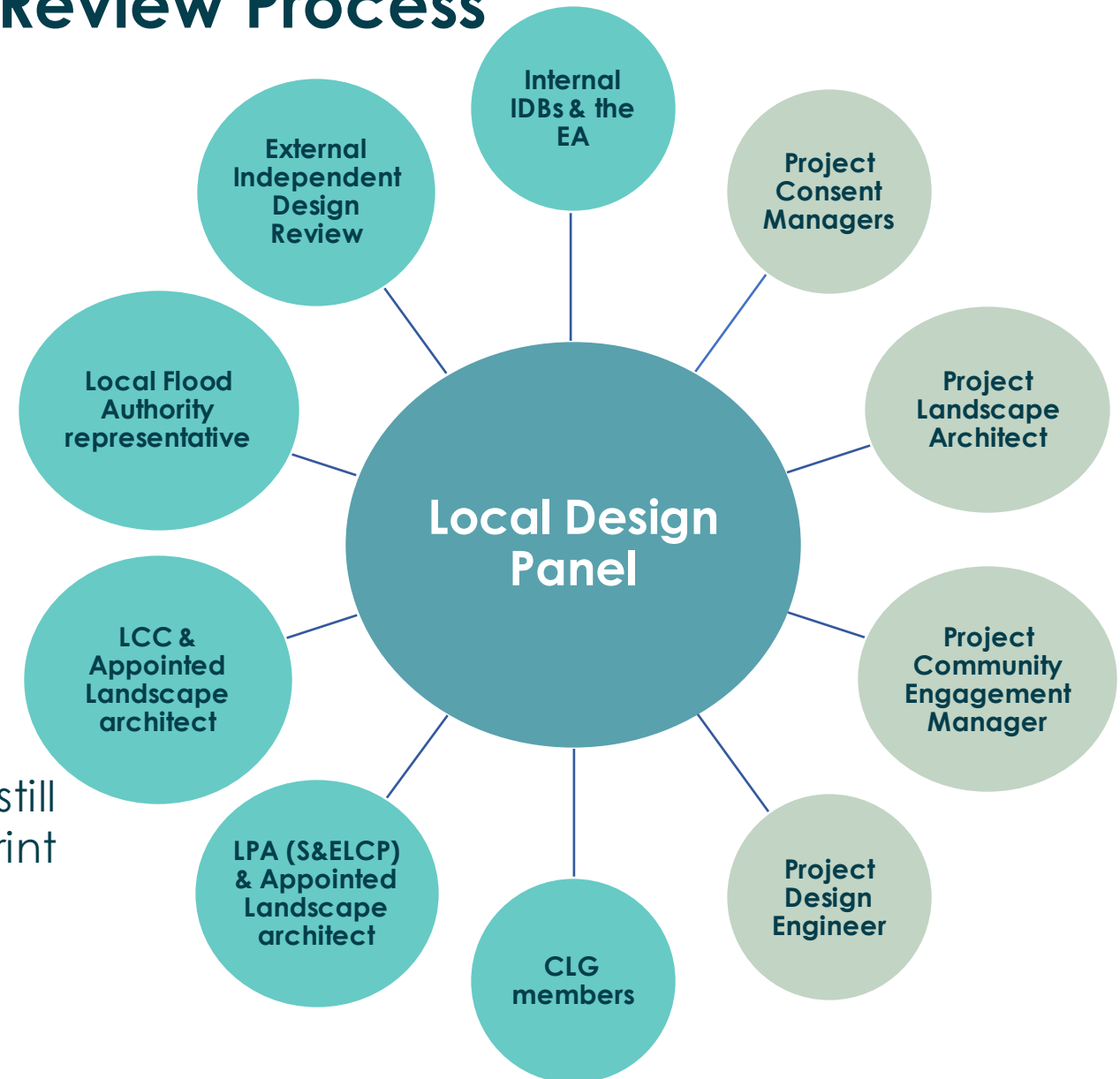
Local Design Panel

The Onshore Substation Design Review Process

- Local Design Panel first meeting in Jan, share preferences
- External Design Review – Independent Architects, will undertake a design review from Q2
- Engineers need to assess technical requirements
- Local Design panel will be consulted as the design progresses

Maximum Design Scenario

- “Worst case scenario”
- Defined based on two potential technologies still under consideration that will impact the footprint and maximum heights of buildings:
 - Air Insulated Switchgear (AIS)
 - Gas Insulated Switchgear (GIS)



Functional requirements of a substation

The project aims to generate renewable electricity and export it to the National Grid, which is process at the 400kV ODOW Substation.

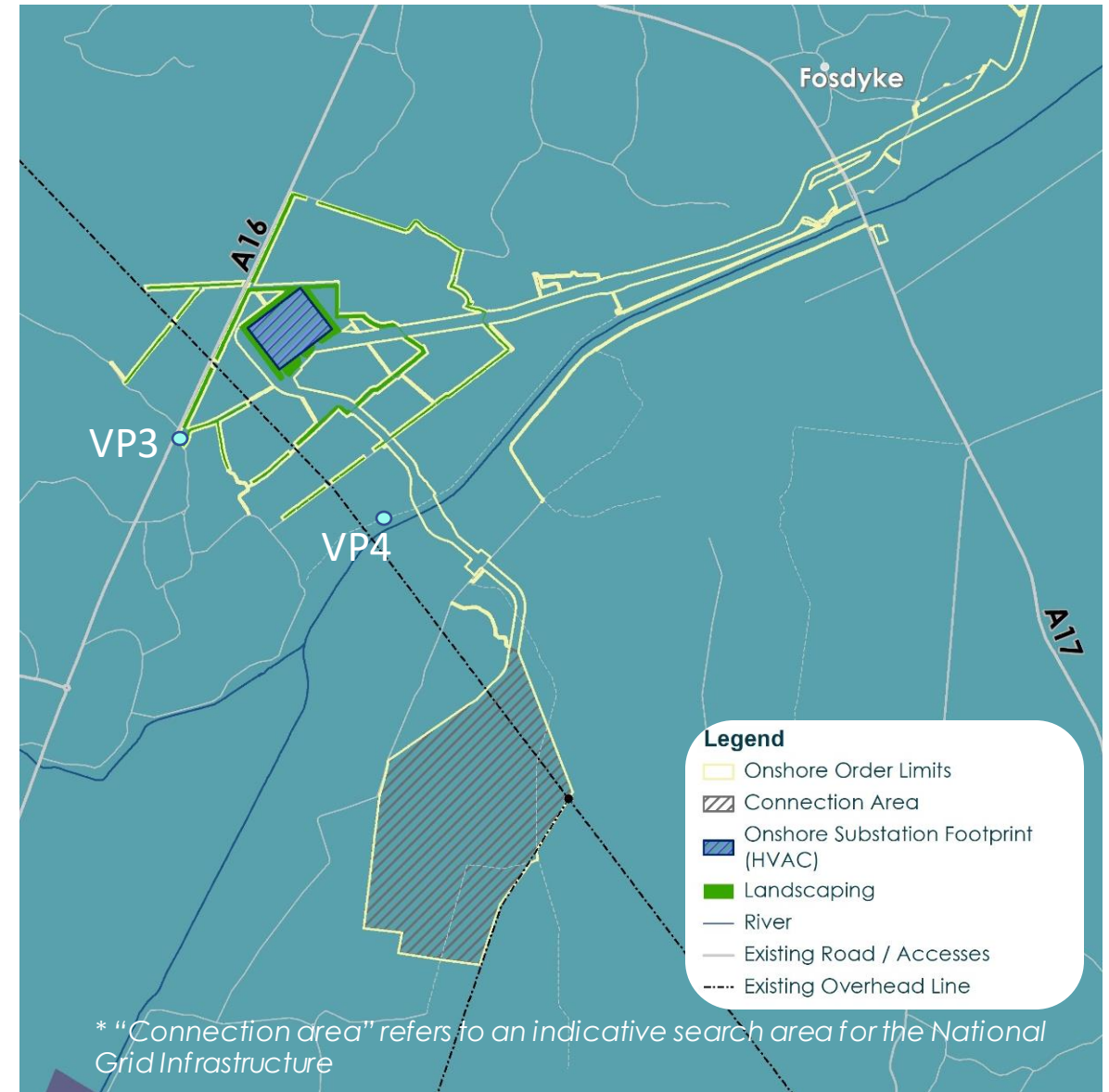
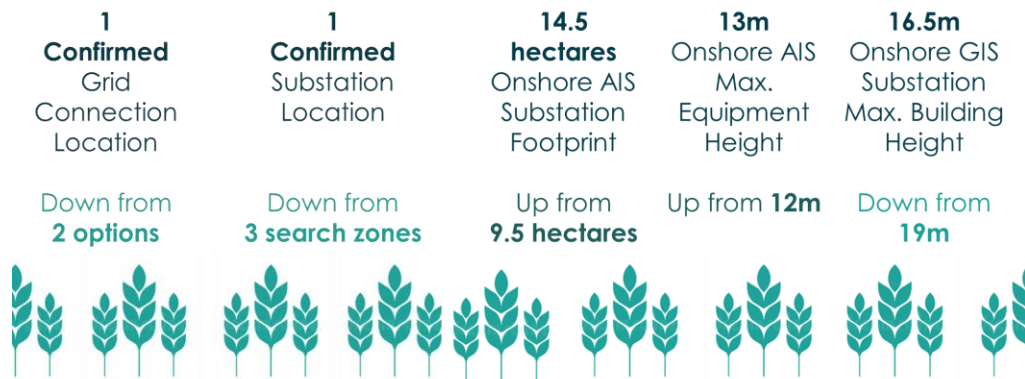
The substation area indicated enables the installation and operation of either an AIS (Air Insulated Switchgear) or GIS (Gas Insulated Switchgear) type substation*. From a transmission perspective, AIS or GIS transmits the power generated offshore to meet the grid requirements. The main considerations for the substation are as follows:

- **Insulation Medium:** The AIS uses air as the insulation medium between conductors and equipment, whereas the GIS employs a specialist gas in modular units. GIS equipment offers reduced footprint and maintenance requirements. The switchgear in AIS is outdoors, and GIS is installed indoors and requires additional building.
- **Size and Space:** The AIS substations require a larger footprint, whereas the GIS substations are compact and space-efficient. Subject to equipment and design, the GIS Converter Hall(s) could be up to 16.5m in height. *These maximum parameters are represented on the visualisations.*

**The electrical system design and technology from the Supply chain will impact the selection of the substation.*

Onshore substation

- Following a **decision from the National Grid** that our connection point would be in the vicinity of Weston Marsh, we were able to remove Lincs Node from our Project Scope.
- We have subsequently selected **Surfleet Marsh** as the optimum site for our substation taking into account multiple factors including engineering and environmental considerations.
- There will also be a need for a National Grid substation and associated enabling works within the vicinity of the project's onshore substation which we will connect to using 400kV underground cables which will run between our project substation and that which will be developed by National Grid Electricity Transmission



Onshore substation

• VP4 (Views from PRow)



Proposed **AIS** Onshore Substation (AIS OnSS) Indicative Model with Mitigation Planting (15 Years Growth) Viewpoint 4: Macmillan Way at Surfleet Bank



Proposed **GIS** Onshore Substation (AIS OnSS) Indicative Model with Mitigation Planting (15 Years Growth) Viewpoint 4: Macmillan Way at Surfleet Bank



Onshore substation ◦ VP3 (Views from the A16)



Proposed AIS Onshore Substation (AIS OnSS) Indicative Model with Mitigation Planting (15 Years Growth) Viewpoint 4: Macmillan Way at Surfleet Bank



Feedback on Landscaping

- ***There were concerns around the use of “deciduous trees”, what about views in Winter?***
 - The Project have commissioned a “Winter Photography” campaign which is being undertaken this season.
 - The woodland shelterbelts will be approximately 20m wide which will ensure that even without leaves they will provide a screen.
 - In the detailed design of the shelterbelts some evergreen trees, hedges and understorey shrubs will be included to add to the screening effect in winter.
- ***Comments on the inclusion of native species.***
 - The planting design will always prioritise native species, but also with thought and consideration given to ensuring the planting will be resilient to climate change.
- ***It was noted by landowners that the landscaping areas proposed could be adjusted to better align with the landownership boundaries***
 - As a result, the landscaping areas have been moved slightly to better align with landownership boundaries.
- ***It was highlighted that there was the possibility for potential impacts on agricultural drainage from the planting.***
 - The Project has included for drainage works within the order limits to ensure existing land drainage is not impacted.



Landscaping - What is the aim?

From our feedback to date it has become clear that the **screening of the substation** is the desired outcome for the local communities.

This is why the Project have developed such extensive planting proposals – not only are we able to provide an effective screen, but we are able to enhance the overall landscape and biodiversity of the Surfleet area.

- *Do you feel this approach is line with feedback received from the local community?*
- *Do you feel that other approaches should be considered?*

Cumulative Impacts



A cumulative assessment including Visualisations (based on an indicative location within the connection area and typical parameters) will be included in the DCO application documents.

- Noting the location of the **Connection Area** (*the indicative search area for the National Grid substation*) relative the Project substation – the planting strips will be an effective screen for those viewpoints that would be affected by both of these infrastructures.
- The cumulative Visualisations will be based on both VP4 & VP5 on Macmillan Way

Design Considerations: LDP Scope

| Design Influence | Design Element | How is it determined? | Factors considered / to consider | Options |
|------------------|-----------------------------------|---|--|---|
| Consideration | Building position and orientation | Predominantly controlled by operational requirements of the site layout | Minimise land-take and landscape and visual impacts, inter relationships with the grid connection and 400kV cable corridor | Limited options, however open to feedback. |
| Consideration | Material | Predominantly controlled by technical and commercial feasibility | Operational, electrical safety and fire standards | |
| Scope (1) | Colour | Aesthetics and cost | Minimise visual impacts | Consultation with LDP within the range of commercially viable & available options |
| Scope (2) | Cladding | Aesthetics and cost | Minimise visual impacts | |
| Scope (3) | Roof Shape | Operational requirements, Aesthetics and cost | Minimise visual impacts | |
| Scope (4) | Landscaping | LVIA – Mitigating against visual impacts | Minimise visual impacts, enhance biodiversity, | |

Design Consideration: **Material**

The key technical requirements of the materials to be used in the construction of the converter buildings are set out below;

- **Strong** enough to form robust and secure large-scale structures;
- **Fire resistant** and able to withstand high temperatures without the structural integrity of the material being compromised;
- **Resistant to severe weather conditions**, including high winds, water ingress and heat waves;
- Forming surfaces and joints that are completely **impermeable to water**;
- Suitable to form the **large spans and surfaces** required to construct large structures;
- **Sufficiently durable** to withstand the impacts of a 35 year lifecycle;
- **Modular** to reduce the time for installation, provide aesthetics and reduce the building's carbon footprint; and
- **Low maintenance.**

Material Consideration: Steel

Advantages

- Robust material that is fire resistant, very low maintenance and durable.
- Relatively low-cost material that is available from local manufacturers in the UK.
- Large and lightweight and can be readily and quickly assembled on-site.
- Large scale agricultural and industrial sheds made from sheet metal are a common feature in rural landscapes.
- Options for recycled steel
- Complete cladding system
- Insulated sheet metal panels last beyond the 35-year lifecycle of the converter buildings.
- The colour range available is extensive, with different types of finish available, making colour matching to local contexts possible.







































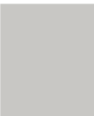








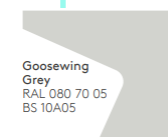
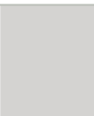








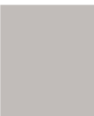








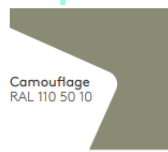
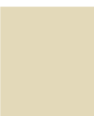








Disadvantages

- Sheet metal can present a reflective surface if the **appropriate finishes and coatings** are not applied.
- The extraction of raw materials and production of sheet metal reduces the sustainability of this material, especially if also imported from overseas.
- Cladding panels could look a bit tatty toward the end of their design life. Thus, routing checks, cleaning and maintenance is required.

Design Scope: Colour



Commercial colour match

| | RENDER, MASONRY PAINT, WEATHER BOARDING | TIMBER, FIBRE CEMENT | STONE | BRICK, TILE | STEEL | | | | | | |
|-------------|---|--|---|--|--|--|--|--|--|---|---|
| INTEGRATION | A |  0300-N |  2005-Y20R |  2020-Y20R |  4010-G70Y |  6005-Y80R |  5010-Y10R |  6005-R80B |  5020-Y60R |  7502-Y | |
| | B |  0502-Y |  2502-Y |  3010-G80Y |  5005-Y50R |  5010-G70Y |  6010-Y10R |  3040-Y60R |  4030-Y70R |  7010-G50Y |  Olive Green RAL 100 30 20 BS 12B27 |
| | C |  0804-Y10R |  3010-Y |  4005-Y20R |  6005-G80Y |  4020-G70Y |  5030-Y10R |  4030-Y50R |  5030-Y80R |  8005-Y20R | |
| NEUTRAL |  0500-N |  2500-N |  3000-N |  5000-N |  5000-N |  5500-N |  4500-N |  4500-N |  7500-N |  Merlin Grey RAL 180 40 05 BS 18B25 | |
| CONTRAST |  3000-N |  3500-N |  4000-N |  5500-N |  4500-N |  4000-N |  3500-N |  3000-N |  2500-N |  Goosewing Grey RAL 080 70 05 BS 10A05 | |
| ACCENT | A |  2500-N |  2005-B20G |  3005-G80Y |  3020-R70B |  3005-Y80R |  3010-G90Y |  3020-G80Y |  4005-G50Y |  5040-Y | |
| | B |  2502-R |  3502-Y |  3010-R80B |  4010-G50Y |  3030-R70B |  4010-Y10R |  3010-G50Y |  4010-G30Y |  5010-G50Y |  Camouflage RAL 110 50 10 |
| | C |  1505-Y10R |  3020-Y |  2005-Y20R |  3030-G80Y |  3020-G70Y |  5010-Y10R |  4010-B50G |  4005-G20Y |  5005-Y20R | |

Colours in the landscape



Commercial colour match

STEEL



7502-Y



7010-G50Y



8005-Y20R



7500-N



2500-N



5040-Y



5010-G50Y



5005-Y20R



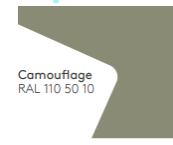
Olive Green
RAL 100 30 20
BS 12B27



Merlin Grey
RAL 180 40 05
BS 18B25



Goosewing
Grey
RAL 080 70 05
BS 10A05



Camouflage
RAL 110 50 10

Colours in the landscape



Commercial colour match

STEEL



7502-Y



7010-G50Y



8005-Y20R



7500-N



2500-N



5040-Y



5010-G50Y



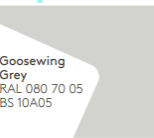
5005-Y20R



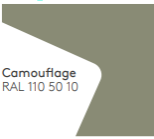
Olive Green
RAL 100 30 20
BS 12B27



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RAL 180 40 05
BS 18B25



Goosewing
Grey
RAL 080 70 05
BS 10A05

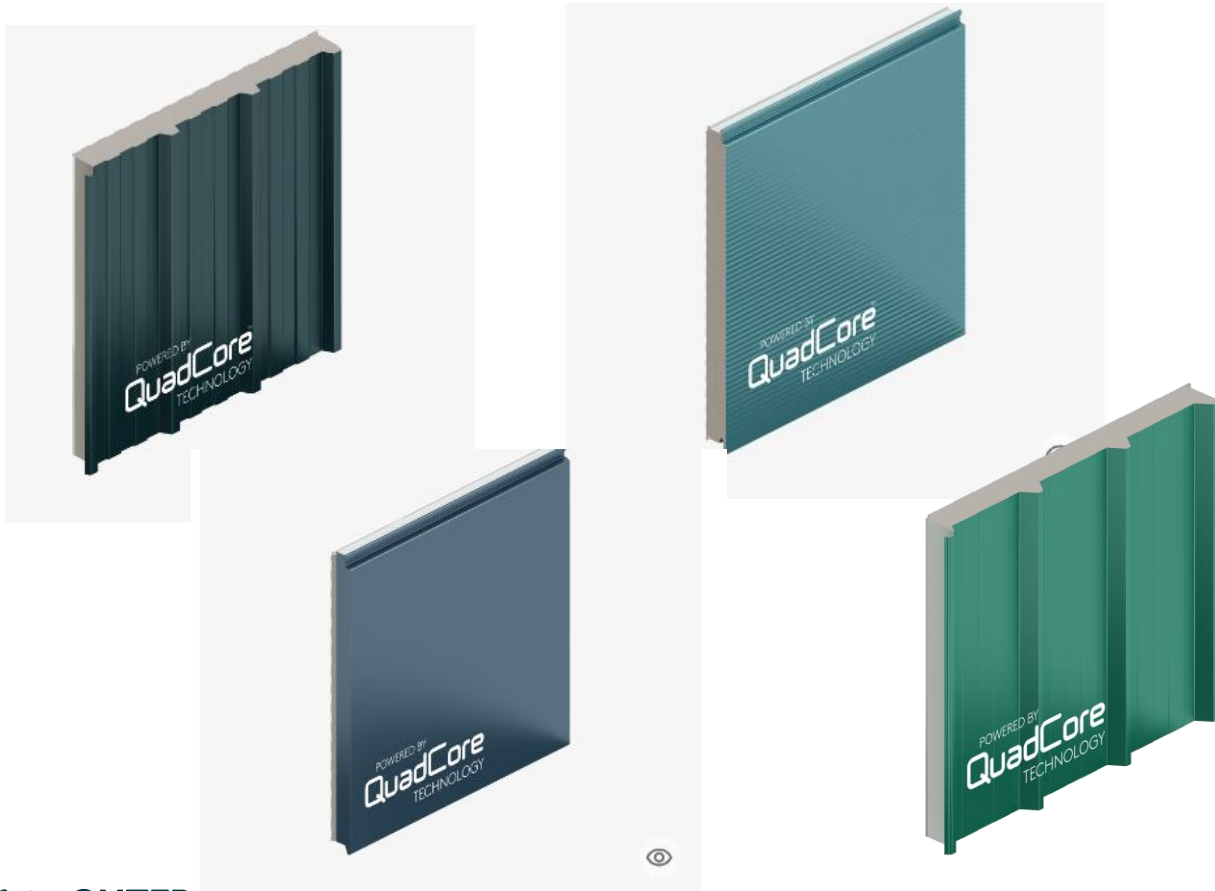


Camouflage
RAL 110 50 10

Design Scope: Cladding

Appearance of materials, in terms of colour, texture and reflectiveness.

Trapezoidal Vs Smooth Architectural wall rib



Design Scope: Roof Shape

Monopitch



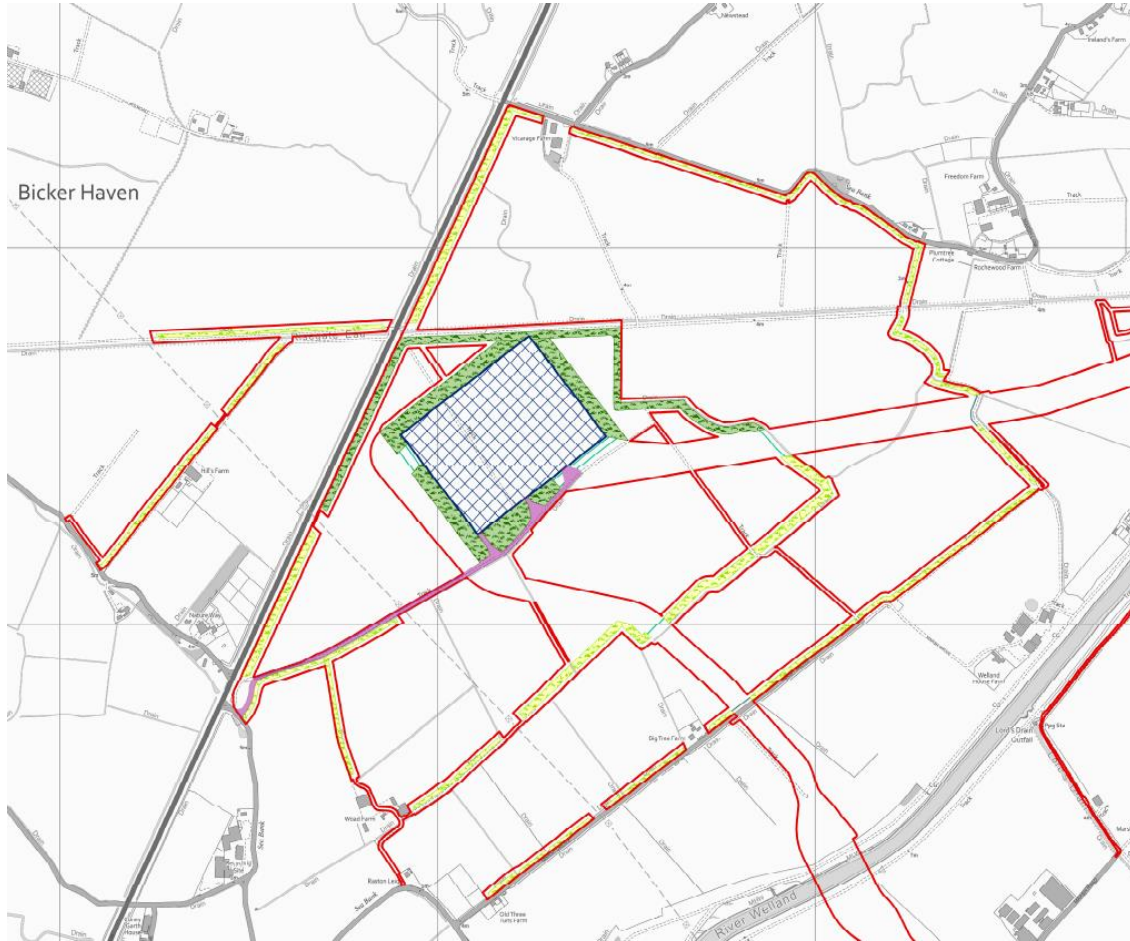
Pitched



Flat



Design Scope: Landscaping



-  OnSS site (AIS)
-  Order Limits
-  On-site Mitigation Planting
-  On-site Hedgerow
-  Off-site Mitigation Planting
-  Off-site Hedgerow
-  Permanent Access Track

Planting proposals – Increasing biodiversity, decreasing visual impacts, flood reduction and capturing carbon



Up to 130,000 trees and hedgerows would be added to the Lincolnshire landscape.



Approx 19 hectares would be planted, equivalent to 27 football fields with long term management plan.



Approx 1.6 miles of Hedgerow containing diverse species that support bats, birds and other species.

130 Biodiversity Action Plan species associated with hedges:
Lichens, fungi and reptiles.

Bank vole, harvest mouse and hedgehog all nest and feed in hedgerows alongside birds including; blue tit, yellowhammer and whitethroat.



Suggested species for planting



Quercus petraea (Sessile oak)



Alnus glutinosa (Alder)



Tilia cordata (Small leaved Lime)



Salix alba (White Willow)



Betula pubescens (Downy Birch)



Populus nigra (Black poplar)



Populus tremula (Aspen)



Acer campestre (Field maple)



Prunus padus (Bird Cherry)



Salix caprea (Goat Willow)



Salix cinerea (Sallow)



Cornus sanguinea (Dogwood)



Viburnum opulus (Guelder Rose)



Ilex aquifolium (Holly)



Sambucus nigra (Elder)



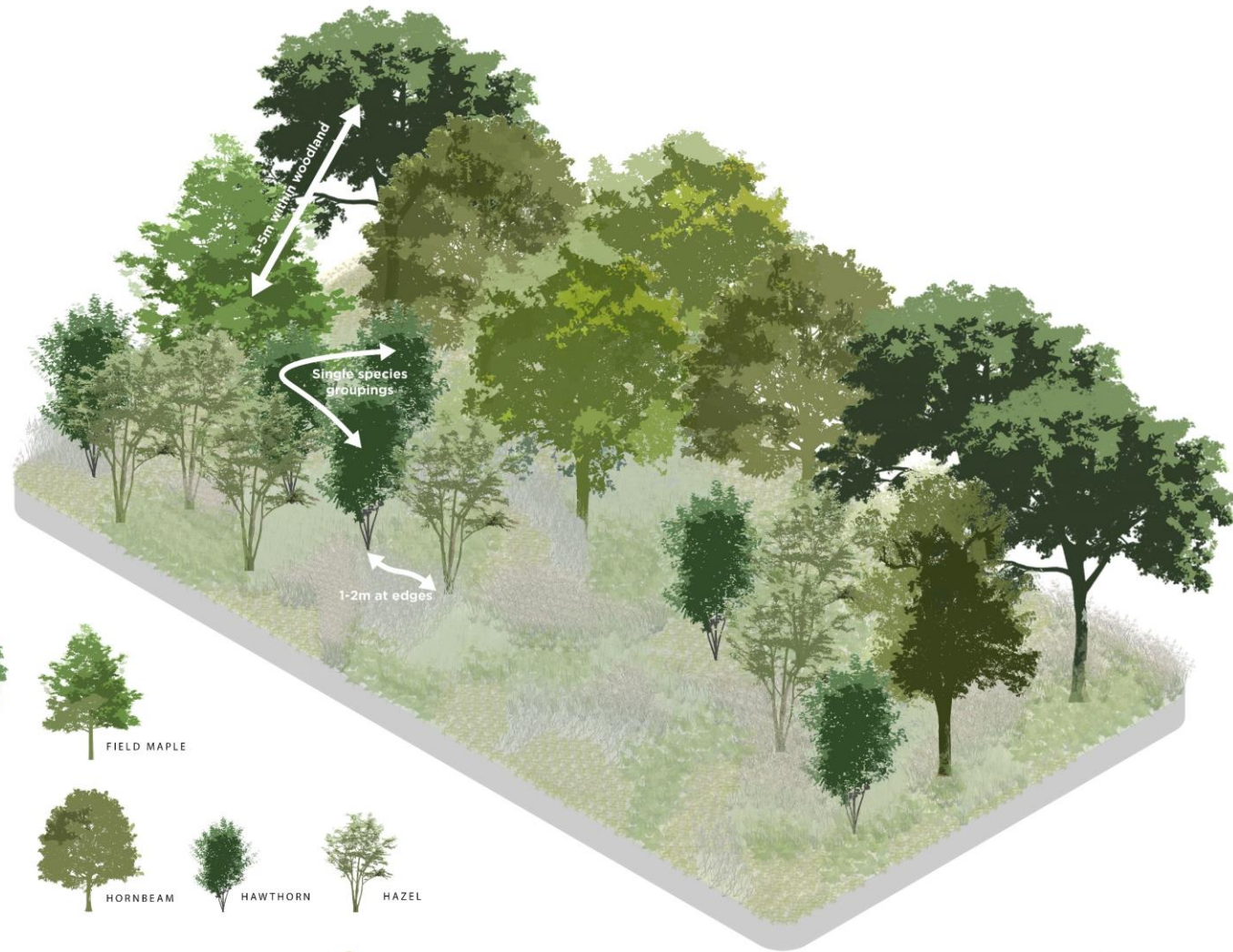
Corylus avellana (Hazel)

Hedgerows

- Crateagus monogyna (Hawthorn)
- Acer campestre (Field maple)
- Cornus sanguinea (Dogwood)
- Viburnum opulus (Guelder Rose)
- Ilex aquifolium (Holly)
- Prunus padus (Bird Cherry)
- Sambucus nigra (Elder)
- Quercus petraea (Sessile oak)
- Pyrus sp. (Pear)
- Hippophae rhamnoides (Sea Buckthorn)
- Corylus avellana (Hazel)

“We have a mixed native hedge at the rear of our garden. 10 years since planting (next March). It is in excess of 12 feet high and is cut back by about 5 feet every winter. I would expect the planting to be an effective screen before 15 years (we have hawthorn, field maple, wild privet, wild rose, blackthorn plus several other species)” **Autumn Consultation Feedback Form**

Example: LOWLAND DECIDUOUS MIXED WOODLAND



OAK



FIELD MAPLE



ASH



HORNBEAM



HAWTHORN



HAZEL



LIME



TREE SPARROW



SOPRANO
PIPISTRELLE
BAT



SONG
THRUSH



BROWN
LONG-EARED
BAT



BARBASTELLE
BAT



NOCTULE
BAT

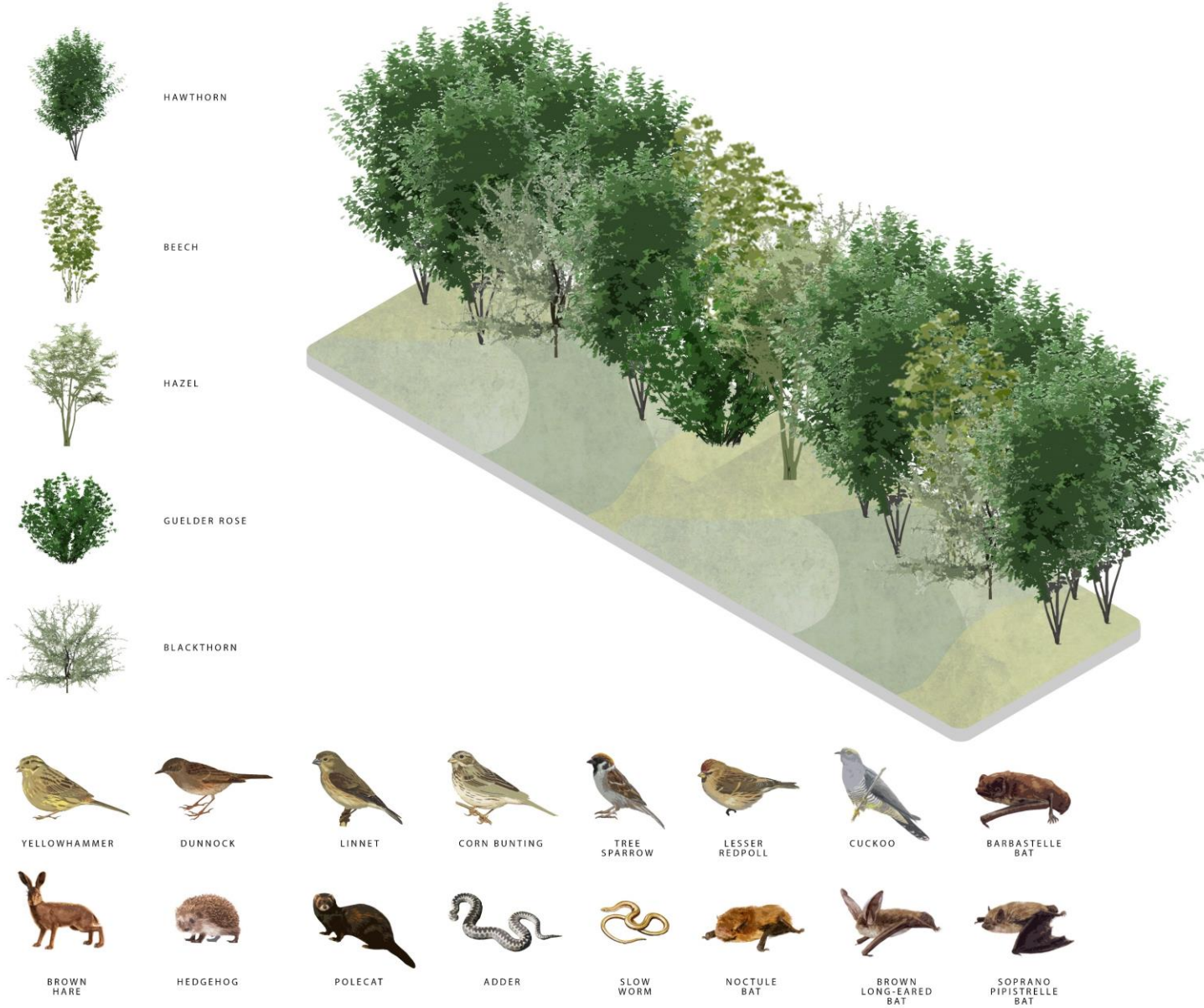


SPOTTED
FLYCATCHER



BULLFINCH

Example: NATIVE HEDGEROW



HAWTHORN

BEECH

HAZEL

GUELDER ROSE

BLACKTHORN



YELLOWHAMMER



DUNNOCK



LINNET



CORN BUNTING



TREE SPARROW



LESSER REDPOLL



CUCKOO



BARBASTELLE BAT



BROWN HARE



HEDGEHOG



POLECAT



ADDER



SLOW WORM



NOCTULE BAT

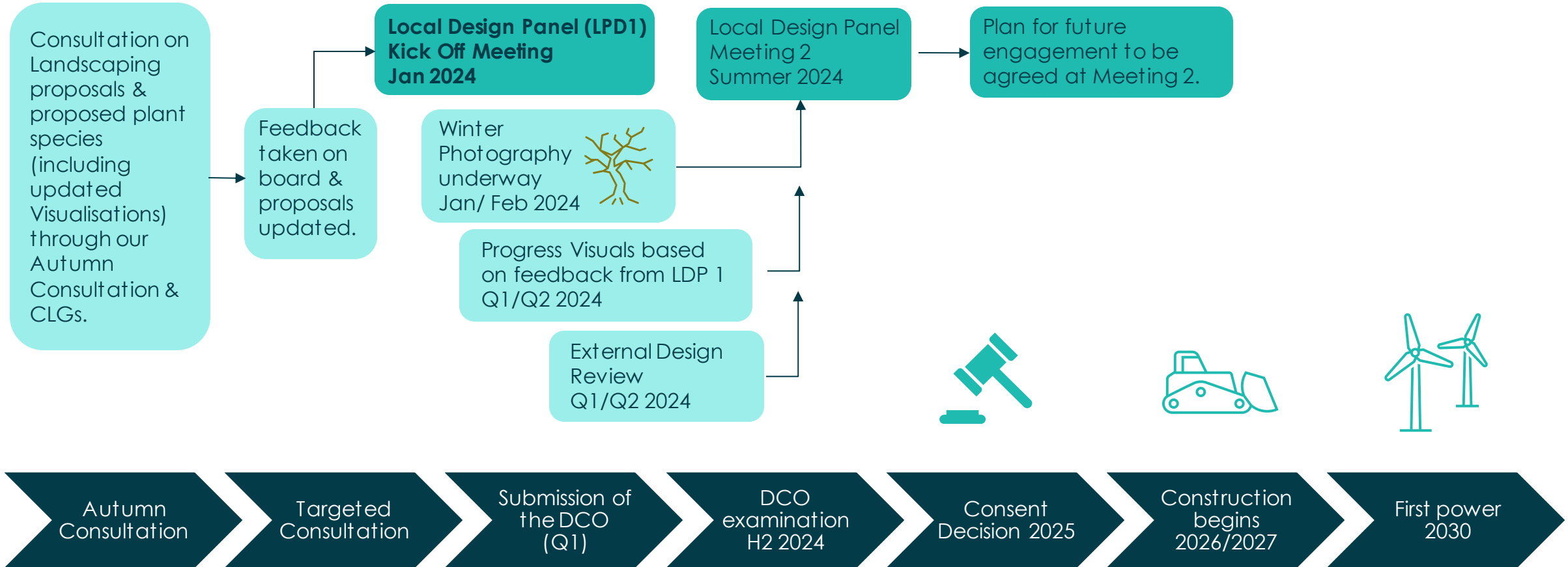


BROWN LONG-EARED BAT



SOPRANO PIPISTRELLE BAT

Timeline and next steps



AOB