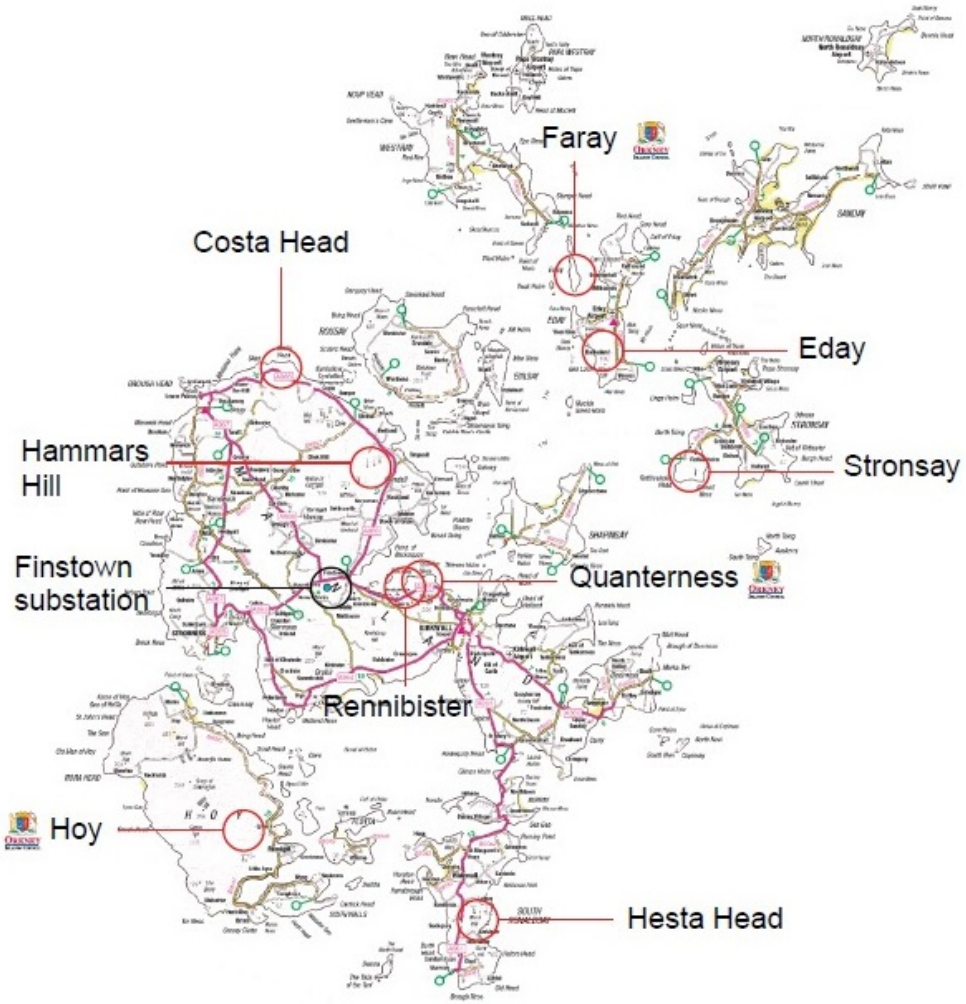
What is Orkney's Community Wind Farm Project?



Wind Farms under investigation

0 5 10 15 20 km

- The project is seeking to develop wind farms in Orkney with the aim of:
  - ✓ Generating income from publicly owned wind energy projects to support services for local communities.
  - ✓ Supporting the Needs Case for a new cable for Orkney to open up wider economic development opportunities for the energy industry, including marine energy.
  - ✓ Ensuring that the local benefits from a new cable are maximised.
  - ✓ Making the most of our resources.
- Development activity will be funded from the Council's Strategic Reserve Fund.
- Three sites are under consideration.

Faray
Seven turbines
150m tip-height
~34MW total
Council owned land

Hoy
Seven turbines
150m tip-height
~34MW total
Privately owned land

Quanterness
Six turbines
150m tip-height
~29MW total
Privately owned land

What are the benefits for Orkney?

Securing a new cable

OFGEM has now conditionally approved SSEN proposals to build a 220MW interconnector linking Orkney with the Scottish mainland. Approval is dependent on **at least 135 MW** of new wind farm projects in Orkney either being awarded a Contract for Difference (CfD) or **being judged 'likely to be developed' by December 2021.**

'Likely to be developed' means that the project should;

- be financially viable.
- have signed a relevant grid connection agreement.
- been granted planning permission.

By developing these wind farms we can join other local developers in **meeting these requirements** giving Orkney more chance of getting the cable and all the benefits it will bring.

Creating a carbon neutral future

In our Council Plan we have a target outcome for, "A vibrant **carbon neutral** economy which supports local businesses and stimulates investment in all our communities" and in May 2019 we joined organisations around the world in declaring **a climate emergency.**

The targets Orkney can contribute to are:

- Net-zero greenhouse gas emissions in **Scotland** by 2045.
- Net zero greenhouse gas emissions in **the UK** by 2050.
- To meet these targets, emissions from **homes, transport, farming and industry** will have to be addressed.

Orkney produced 120% of its electricity needs in 2017/18, but there is still so much more we can do to **decarbonise** our agriculture, heating, and transport."

What are the benefits for Orkney?

Income and community benefits

Council-owned wind farms would have the potential to **generate a significant income every year** helping us tackle the twin challenges of budget reductions and an increasing demand for public services.

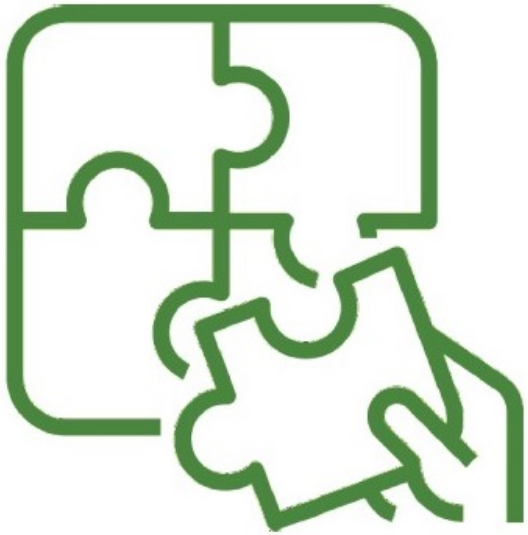
As well as creating jobs through development, build, operation and decommissioning stages, **all profit would stay in Orkney.** This money could be spent to:

- **Preserve and enhance Orkney services** like social care, education, roads and transport.
- Deliver a **community benefit scheme.**

How would the community benefit scheme be structured?

The Council has now agreed a set of guiding principles for community benefit. These include:

- **The key purpose of Orkney's Community Wind Farm Project is to generate profit to be used for the benefit of the people of Orkney.**
- This will be done via a 'Community Fund' to be used **in the interests of Orkney and its inhabitants.**
- The project will be financed in such a way that we can achieve profit which can be used for community benefit **as soon as reasonably practicable.**
- It won't be possible for private individuals to take a shareholding in any project.
- As the communities located closest to projects will be impacted most by developments these communities will get **a 'location-specific community benefit payment'.** We'll be consulting separately on this.



Why have we chosen these particular sites?

- Constraints
  - ✓ There are limited options for wind farm development sites in Orkney due to the spread of houses and designated areas for wildlife.
  - ✓ Some of the feasible sites are being developed by private companies.
- Timing
  - ✓ We looked for sites that had realistic potential of reaching planning determination by the end of 2020 – we now have until 2021.
- Scale
  - ✓ We need enough Orkney projects to trigger the cable.
  - ✓ We need wind farms that are big enough to be financially viable under a low/zero subsidy environment.

Hoy

This area was originally chosen as the largest area away from homes and designated sites with the potential for 100MW. Initial scoping and bird surveys have shown that the site could more realistically offer ~34MW.

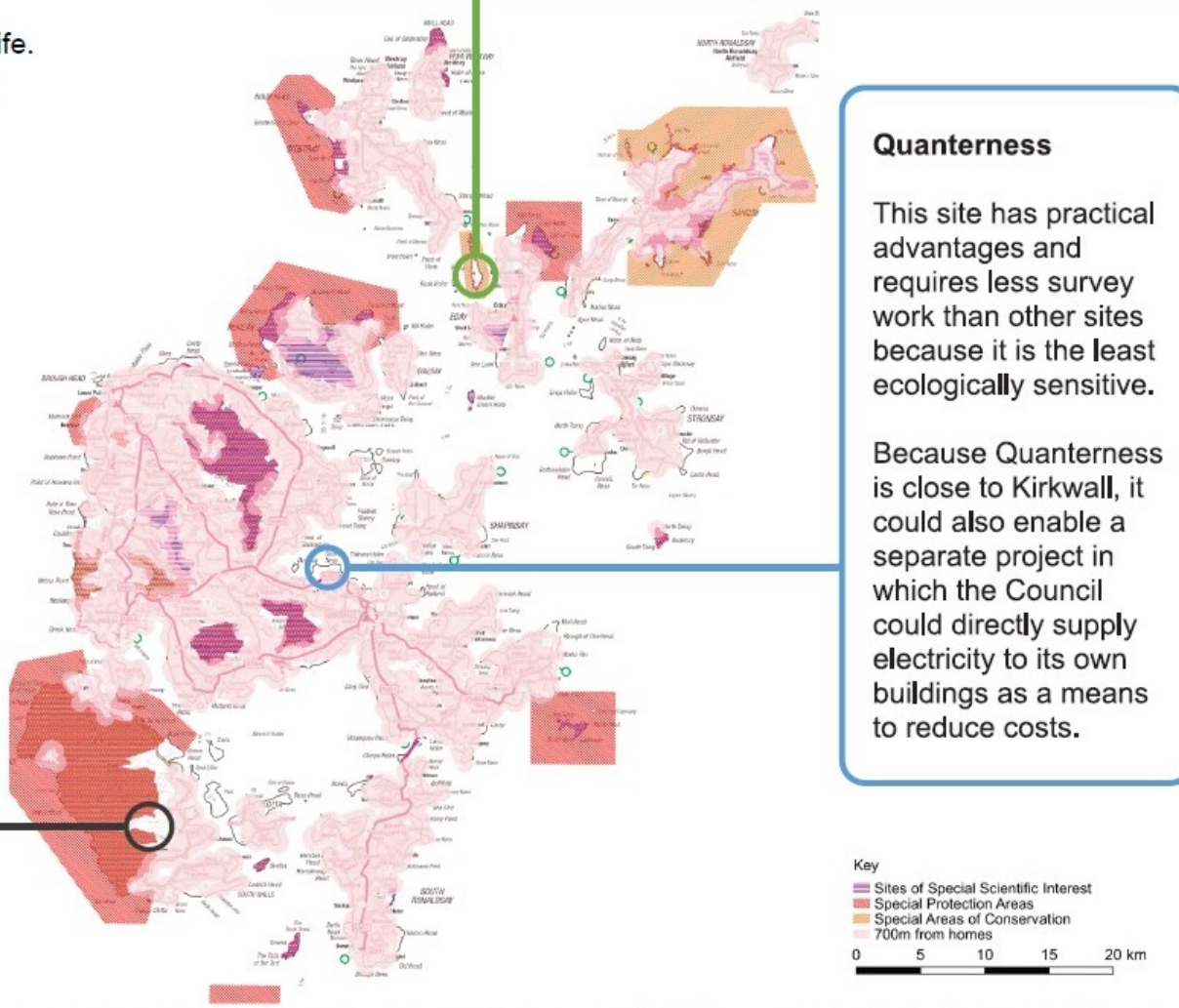
Faray

This uninhabited island was bought by the Council in January 2019 for its strategic development potential. It is possible that only one year of survey work will be required.

Quanterness

This site has practical advantages and requires less survey work than other sites because it is the least ecologically sensitive.

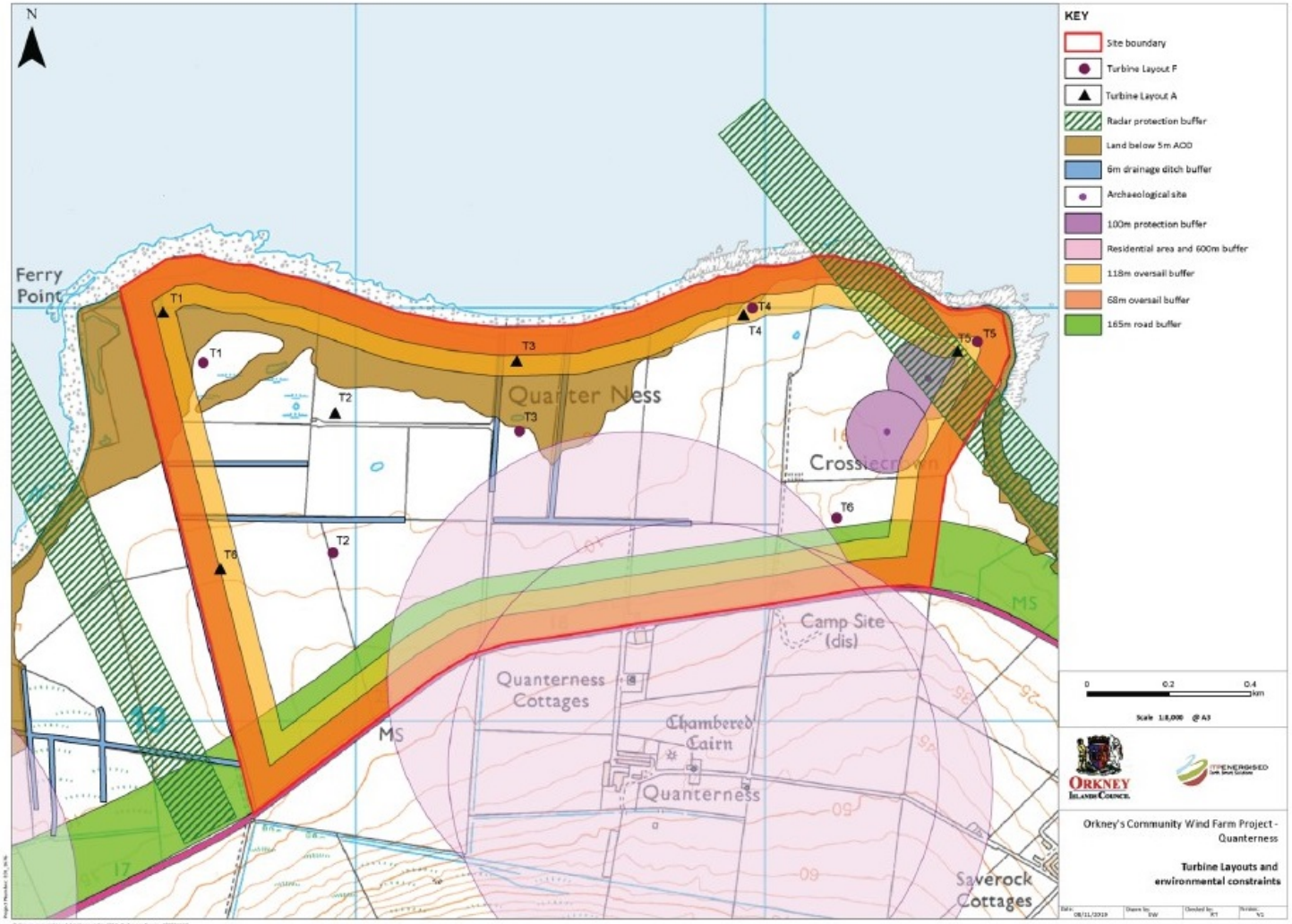
Because Quanterness is close to Kirkwall, it could also enable a separate project in which the Council could directly supply electricity to its own buildings as a means to reduce costs.



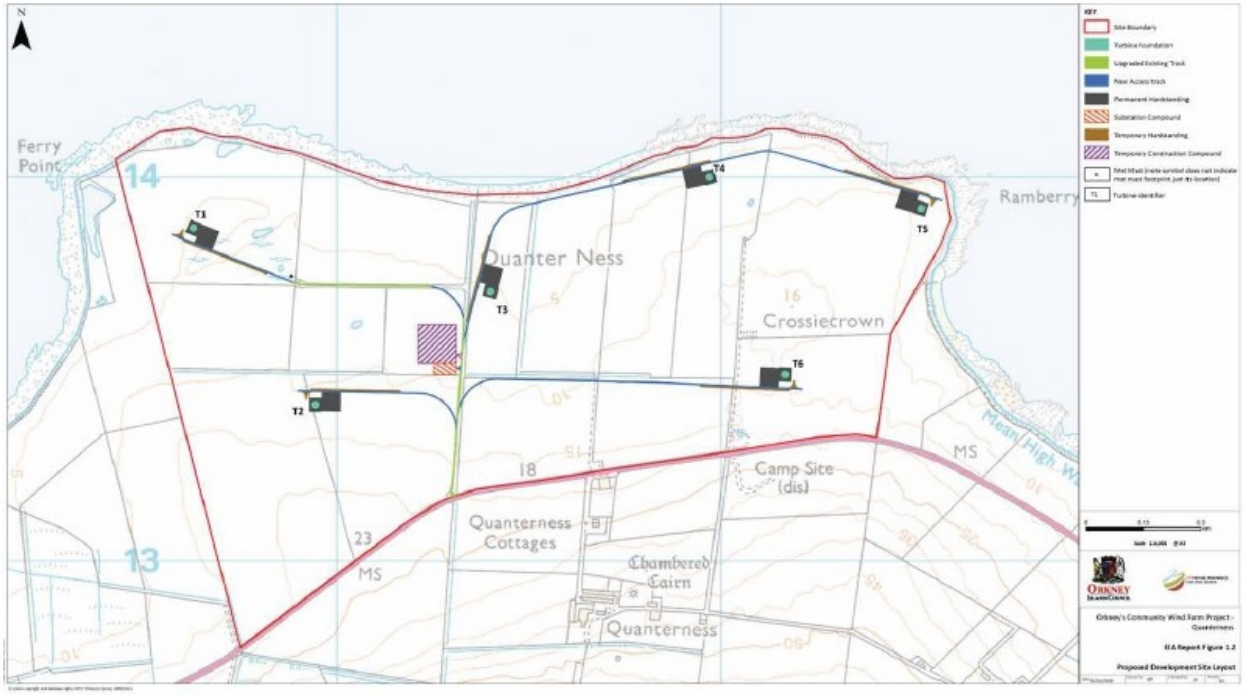
How have our plans for Quanterness changed?

Following several design iterations:

- The turbines have been moved away from residential properties to the south and west of the development.
- The turbines have been moved away from two archeological sites to the east of the site.
- The turbines avoid two telecommunications links to the east and west of the site.
- The turbines avoid drainage ditches within the site.
- The turbines avoid low lying land.
- The site boundaries have been buffered.



What else will be included on the site?



Wind farm components

- ✓ Six turbines of up to 149.9m tip height
- ✓ Permanent hardstandings for putting up and maintaining the turbines.
- ✓ An on site substation and maintenance building.
- ✓ Permanent met mast
- ✓ External transformers.
- ✓ Underground cables between the turbines

Construction components

- ✓ A temporary compound for machinery and material storage during the construction period.
- ✓ Temporary laydown areas next to the turbines for use during construction.

Access

- ✓ Components would be delivered to Hatston and then transported along the main Kirkwall to Stromness road.
- ✓ Upgrade to existing access tracks and construction of new tracks.

Grid connection

- ✓ Power generated from the turbines would be transferred via underground cables to the on-site substation (or substations) before onward transmission on the National Grid.

What challenges does the site have and how do we propose to deal with them?

Environmental Impact Assessments (EIAs) are an important part of the planning process. The EIA allows developers to predict, identify and evaluate the environmental impacts or challenges of a proposed development and attempt to reduce these through changes to the design or by implementing mitigation measures. We will submit an EIA report as part of the planning application.

Challenges that we have identified so far are:

	Challenge	Action
Landscape and Visual 	▪ Visual impact of the turbines on the surrounding area out to approximately 7km. ▪ Shadow flicker. ▪ There are residential properties to the south and west of the development.	▪ We've considered the visual impact of the development through the choice of site and the design of the turbine locations. ▪ The closest property is 132m from the site boundary and we don't anticipate any significant shadow flicker impacts. ▪ There are no landscape designations within the surrounding area or site boundary.
Ecology and Ornithology 	▪ Effect on local wildlife and birds during construction and operation including disturbance arising from construction and collision risks during operation.	▪ Ecology and ornithology surveys have been undertaken. ▪ We'll implement a Species Protection Plan and Habitat Management Plan.
Transport and Traffic 	▪ Increased traffic during construction. ▪ Disruption to roads during abnormal loads delivery.	▪ A detailed analysis of the expected logistical requirements has been performed. ▪ We'll agree a Construction Traffic Management Plan with Roads Services.

What challenges does the site have and how do we propose to deal with them?

	Challenge	Action
Noise 	▪ Increased noise during the construction period. ▪ Noise disturbance during the operational phase of the turbines.	▪ The closest property is 132m from the site boundary, turbines have been located to ensure noise levels during operations remain within the guidance threshold. ▪ If the operational wind turbines exceed noise limits, we'd operate one or more turbines in 'noise optimized mode' which reduces noise outputs. ▪ We'll produce a Construction Environmental Management Plan which would minimise noise and set out agreed working hours i.e. daytime only.
Site Specific 	▪ Telecommunications links running through the site. ▪ There are drainage ditches within the farmland.	▪ During the design process telecommunication providers were consulted to ensure that the layout did not impinge on any links. ▪ The Hydrologist and the Landowner fed in to the design process to ensure drainage ditches were suitably assessed.
Cultural Heritage and Archaeology 	▪ There are two archaeological sites towards the east of the development. ▪ There are potential setting effects on nearby cairns and brochs.	▪ We've placed a 100m protection buffer around the two sites and they'll be protected during construction. ▪ We'll consider the impact on nearby sites as part of the EIA.

Where are we at in the process and how can you make your views known?

Site selection

Scoping – we submitted scoping reports in May, which helped to define the scope of the Environmental Impact Assessment

Environmental Impact Assessment report which takes into account environmental surveys, desk based assessments and consultation.

→ We would be grateful for your opinions and views on the development. We will take these into consideration when finalising the design of the development.

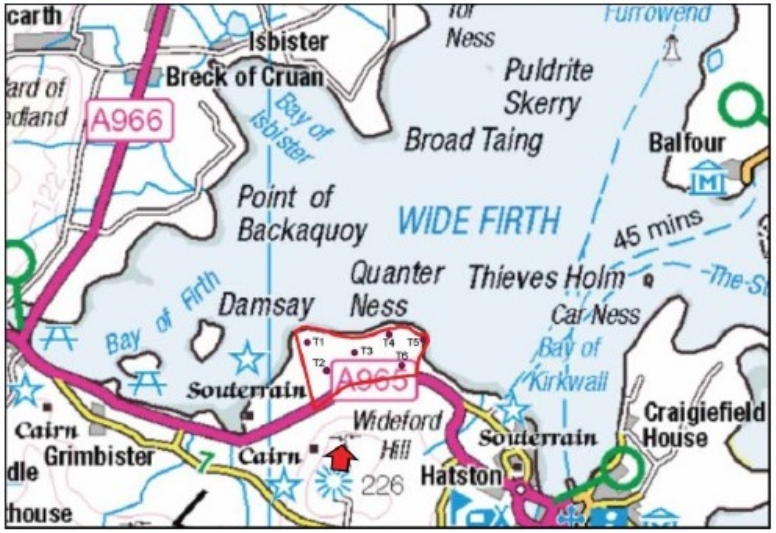
Submission of the application, with information available for public viewing during this period. We hope to do this in January 2020, submitting to the planning authority.

→ Once the application has been submitted, you can submit your letter of support or objection to Orkney Islands Council's Planning department – or the Scottish Government if they handle it instead.

Determination of application. It may be that the Scottish Government has a role to play at this stage.

View from Wideford Hill

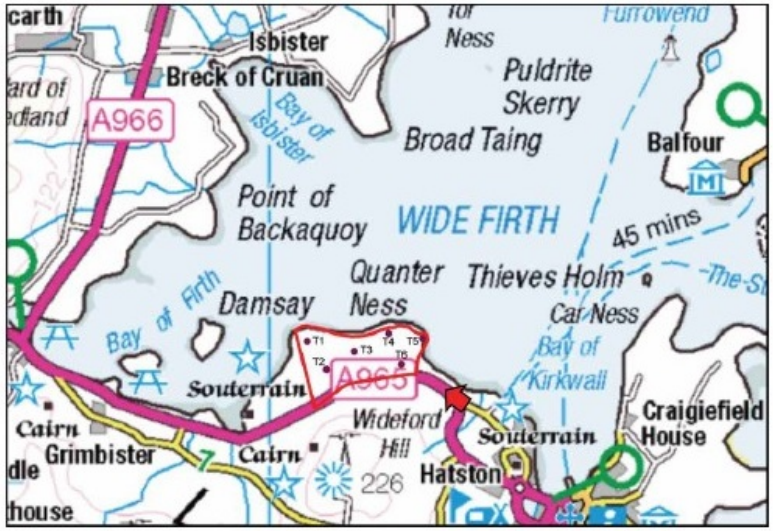
Turbine Tip Height:	149.9 m
Hub Height:	82 m
Rotor Diameter:	136 m
OS reference:	341197 E 1011674 N
Eye level:	222.61 m AOD
Direction of view:	8°
Nearest turbine:	1.751 km
Horizontal field of view:	53.5° (planar projection)



Orkney's Community Wind Farm Project

View from A965 Hatston junction

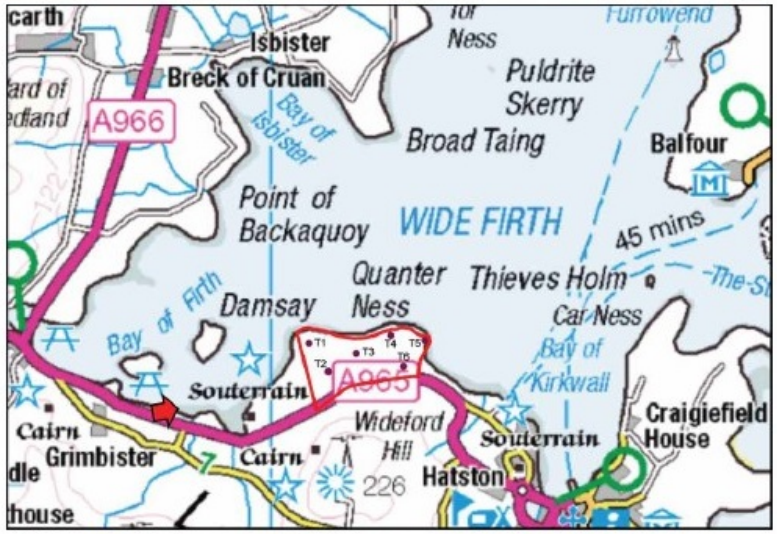
Turbine Tip Height:	149.9 m
Hub Height:	82 m
Rotor Diameter:	136 m
OS reference:	343057E 1012946 N
Eye level:	13.81 m AOD
Direction of view:	307.7°
Nearest turbine:	1.035 km
Horizontal field of view:	53.5° (planar projection)



Orkney's Community Wind Farm Project

View from A965 near Grimbister

Turbine Tip Height:	149.9 m
Hub Height:	82 m
Rotor Diameter:	136 m
OS reference:	338326E 1012660 N
Eye level:	7.0 m AOD
Direction of view:	70°
Nearest turbine:	2.599 km
Horizontal field of view:	53.5° (planar projection)



Orkney's Community Wind Farm Project

View from Kirkwall Harbour

Turbine Tip Height:	149.9 m
Hub Height:	82 m
Rotor Diameter:	136 m
OS reference:	345178E 1011382 N
Eye level:	7.59 m AOD
Direction of view:	305°
Nearest turbine:	3.668 km
Horizontal field of view:	53.5° (planar projection)

Orkney's Community Wind Farm Project

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View from Gorseness

Turbine Tip Height:	149.9 m
Hub Height:	82 m
Rotor Diameter:	136 m
OS reference:	339524E 1018736 N
Eye level:	7.5 m AOD
Direction of view:	158°
Nearest turbine:	4.992 km
Horizontal field of view:	53.5° (planar projection)

Orkney's Community Wind Farm Project

View from Balfour Castle

Turbine Tip Height:	149.9 m
Hub Height:	82 m
Rotor Diameter:	136 m
OS reference:	347472E 1016401 N
Eye level:	14.22 m AOD
Direction of view:	245°
Nearest turbine:	5.537 km
Horizontal field of view:	53.5° (planar projection)

Orkney's Community Wind Farm Project

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Please Note

The next few boards contain photomontage visualisations of how the developments may look along with a map of the proposed site layout at present.

Photomontage visualisations can only provide an indication of what could be experienced in reality. They are tools in the impact assessment process but are independent from it. They illustrate the likely change in view and, as such, to fully understand the likely changes they need to be used in conjunction with site visits and should be considered in the context of the totality of views experienced from the viewpoint and not just focussed on the proposed turbines.

All photomontages are prepared to be technically correct at a specific viewing distance that recreates the correct perspective geometry of the view available from the viewpoint. To accurately recreate this using the printed page is difficult, particularly as the flat page does not conform easily to the biconvex lens of the human eye. As such they should simply be viewed held at a comfortable arm’s length and with the page flat.