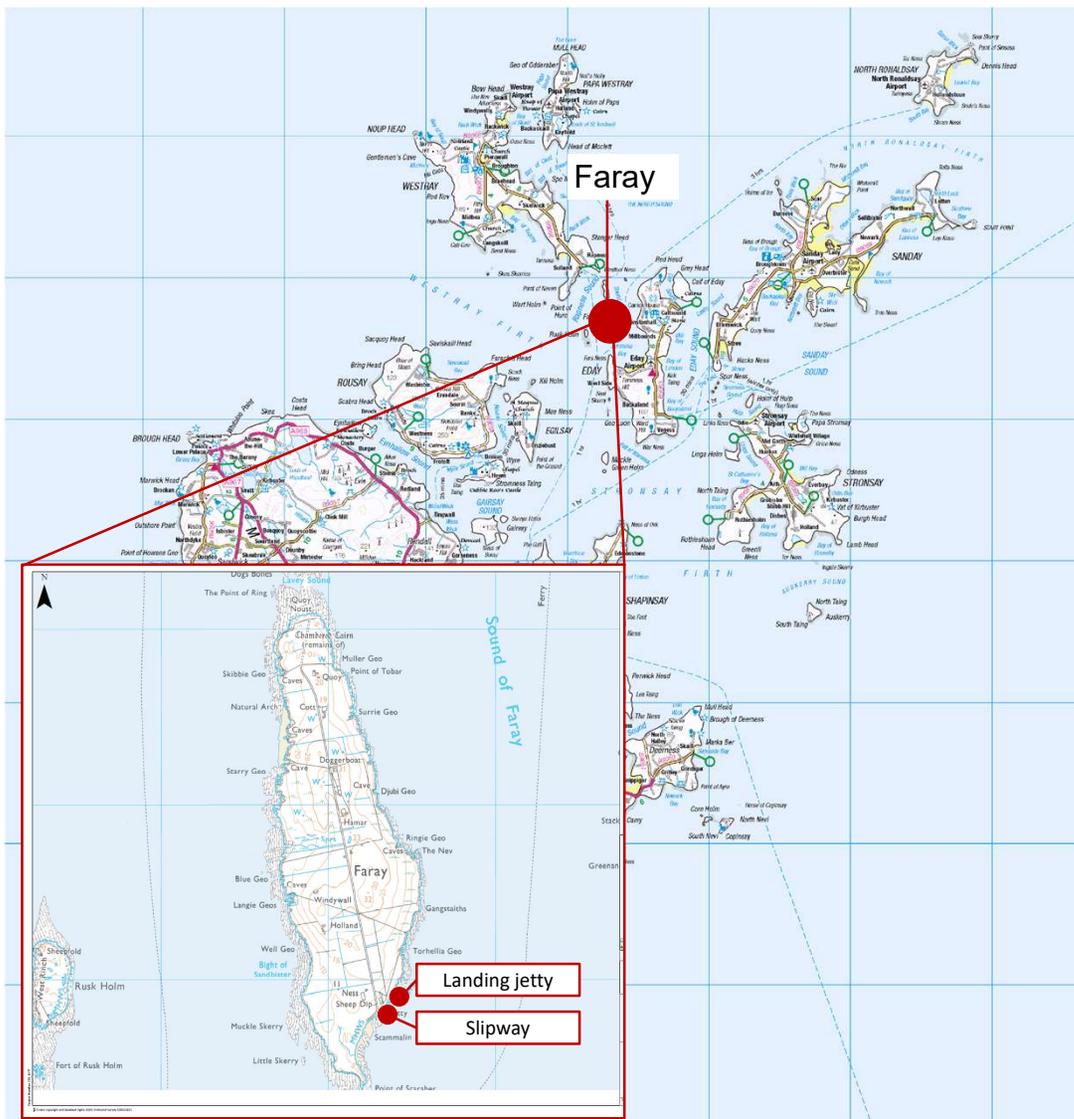




# What is the proposed development?



- The Faray Community Wind Farm Project is seeking to develop a wind farm on the island of Faray. Comprising:
  - Six turbines with 149.9m tip
  - Approx. 28.8MW
  - Council owned land
  - **Improved access** via installing the following **marine infrastructure**:
    - **A new extended existing slipway** and
    - **A new landing jetty**
- The improved access will ensure **continued access to Faray** for current agricultural works and **facilitate future developments**, such as the proposed Faray Community Wind Farm Project.
- A **marine licence** application will be submitted to Marine Scotland for the **marine infrastructure** as they will be **below mean high-water springs (MHWS)**.
- This **marine licence pre-application consultation event** is in relation to the **marine infrastructure only (i.e. the new slipway and landing jetty)**.
- A planning application is being submitted for the onshore aspects of the development (i.e. the onshore wind turbines and associated onshore infrastructure)
- **One Environmental Impact Assessment (EIA) Report for the project** (onshore wind farm and marine access) is being prepared to support **both the planning application (onshore) and marine licence application (marine infrastructure)**.



# What will be included on site?

We are currently finalising the design of the structures and having ongoing discussions with Marine Scotland and NatureScot. Our current proposal is two stage.

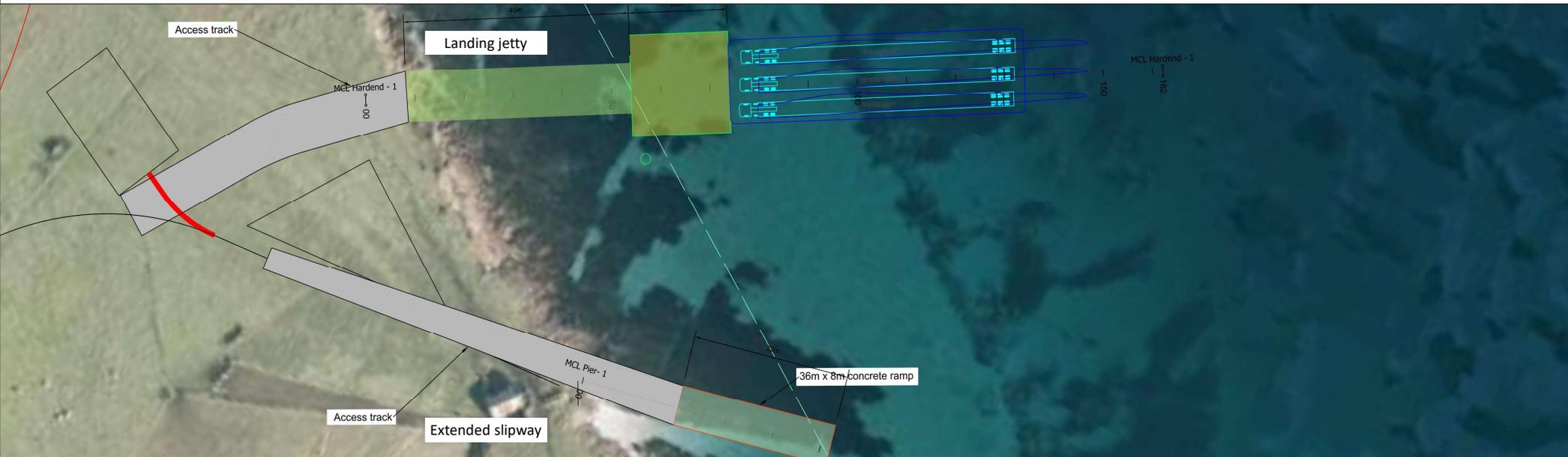
## Stage 1 – New extended slipway

- ✓ Replace existing facility, which is badly damaged and may need replacement regardless of the Faray Community Wind Farm Project
- ✓ Maximum 36 m long and 8 m wide
- ✓ Built in the same location to allow access onto the existing track
- ✓ Designed to accommodate standard local vessels
- ✓ Localised dredging required for construction



## Stage 2 – Landing Jetty

- ✓ Designed to accommodate vessels carrying abnormal loads, such as wind turbine components
- ✓ Comprise a causeway measuring a maximum of 55 m long by 10 m wide, terminating in a square docking structure measuring a maximum 20 m by 20 m
- ✓ Marine access review identified the south of the island as the optimum access location
- ✓ Located close to the slipway to help shelter it, take advantage of good water depths to allow access for larger vessels, and link into the existing access tracks
- ✓ Likely constructed on site using sheet piles
- ✓ Localised dredging required for construction
- ✓ Channel dredging may also be required to allow for large vessel access (contingency only)





# How will the new slipway and landing jetty be used?

## Stage 1 – New extended slipway

- ✓ The new slipway will be constructed first, the existing slipway will be used for deliveries of construction materials via landing craft
- ✓ Once constructed the new slipway will be used for primary access of construction materials for the wind farm and staff access during both construction and operation.
- ✓ The slipway will then be used for maintenance access during the operational phase of the wind farm
- ✓ Exact vessel use for construction is still to be determined. The new slipway has been designed to accommodate local vessels up to the size of the MV Thorsvoe



Example landing craft (© Leask Marine)



Example staff work boat (© Leask Marine)



Example delivery vessel (MV Thorsvoe)

## Stage 2 – New landing jetty

- ✓ Will enable abnormal load delivery, e.g. turbines, to Faray.
- ✓ Turbine loads will be brought to Hatston Pier on the Mainland of Orkney. They will then be loaded onto the specialist vessel for transport to Faray
- ✓ Exact vessel use for turbine transport is still to be determined. The jetty has been design to accommodate vessels up to the size of the MV Meri
- ✓ As agreed with Orkney Island Council's Marine Services, a Port Management Plan will be required to ensure there are no detrimental impacts to current operations at Hatston pier.



Example abnormal load vessel (MV Meri)





## What are the key design considerations?

Marine Ecology  
& Water Quality



- Impacts to marine mammals from underwater noise will be identified, assessed and appropriate mitigation measures put in place, details will be provided in the EIA – further information is provided on the next page.
- Localised dredging will be required to facilitate the construction of the new extended slipway and landing jetty
- There may be a requirement for some localised channel dredging to allow for large vessel access to the landing jetty. This is a contingency only
- The area of dredge is shown on the next page
- Sampling will be undertaken prior to dredging taking place to determine the physio-chemical properties for the sediment to be dredged
- The method of dredging is currently being finalised but is expected to be backhoe dredging
- Dredged material will be disposed of in line with the Pilot Pentland Firth and Orkney Waters Marine Spatial Plan (recycled or disposed of in appropriate locations)
- There are no seabed protected or priority marine features within the vicinity of the Proposed Development
- Dredging can result in seabed disturbance and temporary impacts to water quality. Therefore, a dredging assessment will be undertaken and included in the EIA Report



Example backhoe dredger (Source: seatools.com)

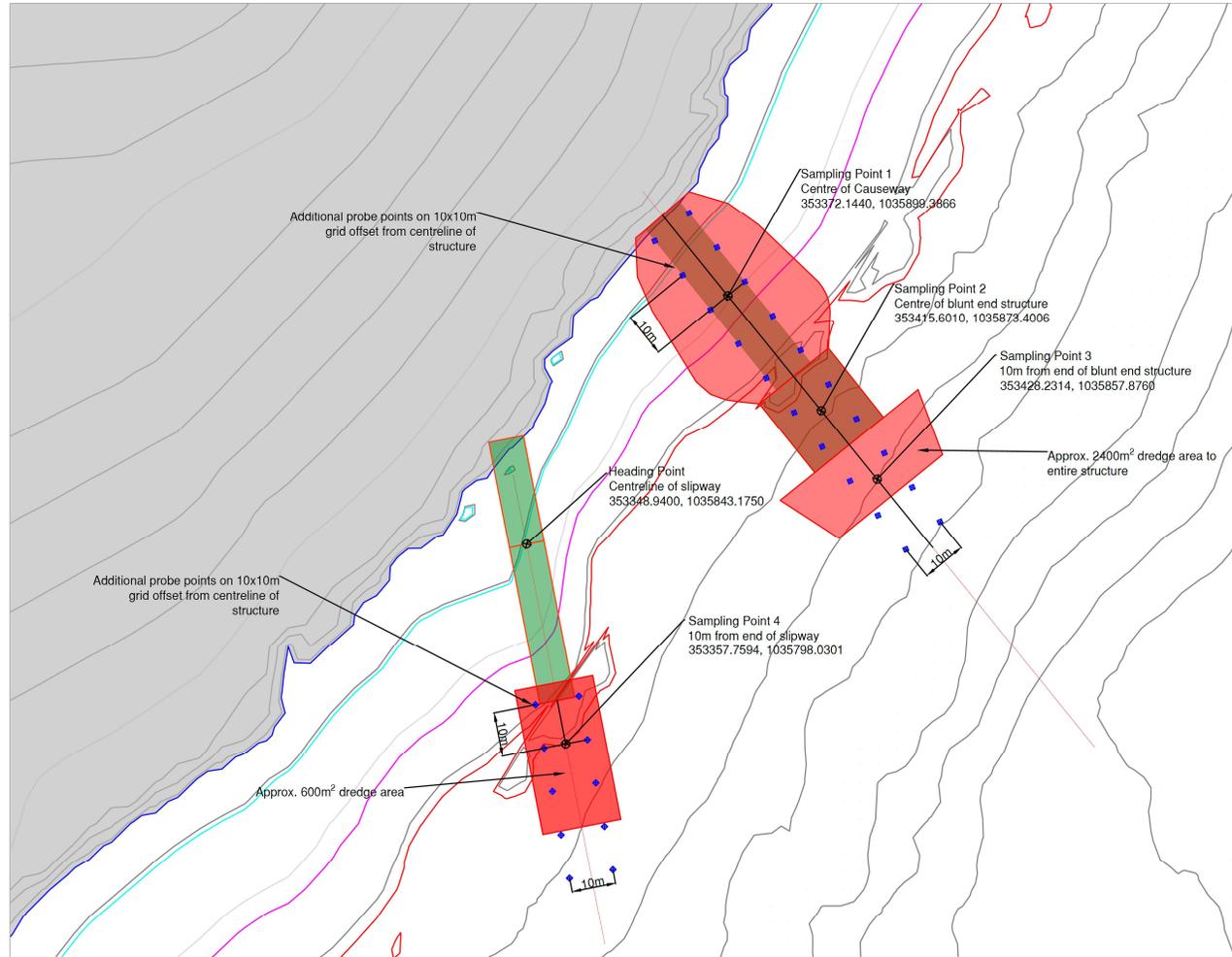


Example dredging excavator (Source: Automation.com)



# What are the key design considerations?

## Proposed dredge area





# What are the key design considerations?

Underwater noise



## Assessment

- Underwater noise associated with sheet piling causes high-amplitude, impulsive sounds that can result in a range of impacts to marine mammals, from behavioural changes to injury.
- Marine mammals that could be impacted by the piling activities include **seals, whales, dolphins and porpoises** within the area.
- Modelling is being undertaken to identify and assess potential impacts to marine mammals. Three levels of impacts to marine mammals were identified from the model:
  - Potential for permanent hearing impacts (known as Permanent Threshold Shift, PTS)
  - Potential for temporary hearing impacts (known as Temporary Threshold Shift, TTS)
  - Potential for behavioural changes
- The modelling also assesses various methods under which marine mammals would escape the area of noise – swimming directly away from the source or leaving the bay via the nearest route

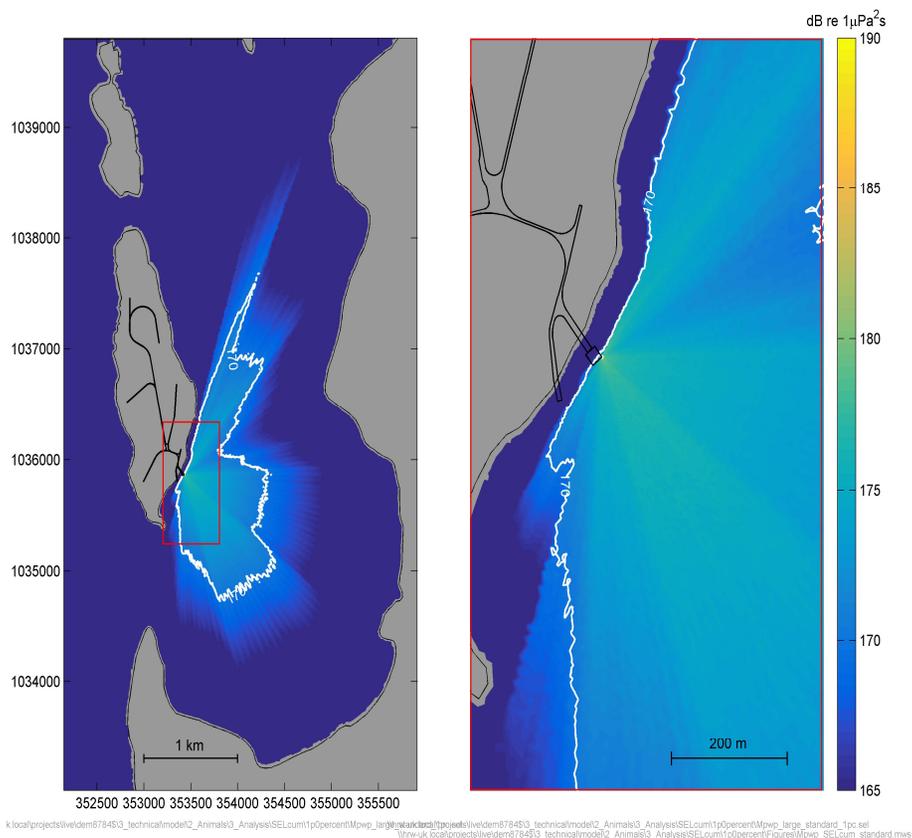
## Mitigation

- Various mitigation scenarios are being modelled:
  - **Standard mitigation** as required by JNCC's piling protocol, including:
    - Establishing a **500m mitigation zone**: a pre-piling search of the zone is undertaken to ensure the area is clear of marine mammals prior to activities commencing
    - **Soft-start procedure**: to be undertaken once the pre-piling search is completed
  - **Additional mitigation**, such as **bubble curtains**, should they be required
- Example modelling outputs are provided overleaf
- Full details of the underwater noise assessment will be provided in the EIA Report

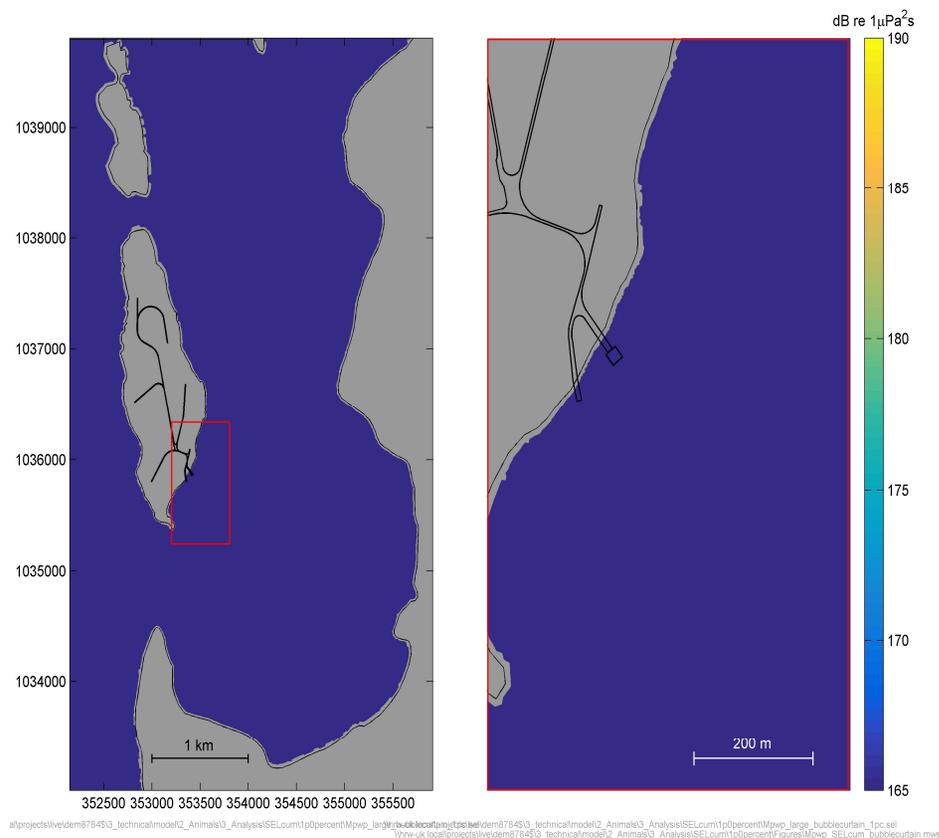


# What are the key design considerations?

## Underwater noise modelling outputs – Seals



**Standard mitigation (soft-start) only:** White contour indicates the area where the thresholds for temporary impacts to seals is exceeded. No exceedance above permanent impact thresholds. This assumes seals swim directly away from noise source.

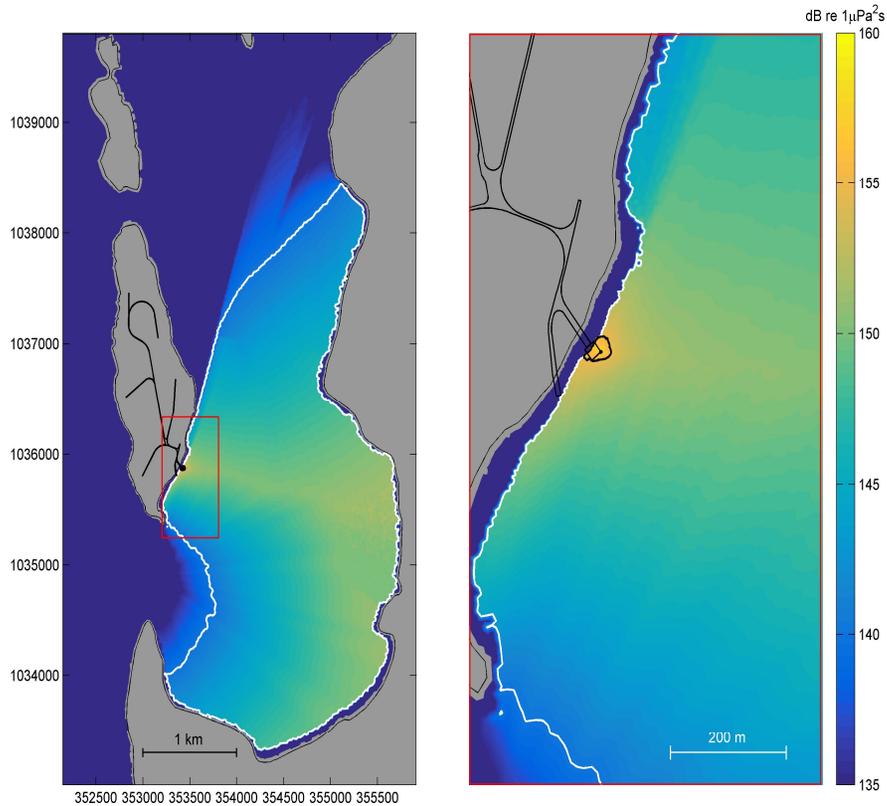


**Standard mitigation (soft-start) + additional mitigation (bubble curtain):** No exceedance of thresholds for temporary or permanent impacts to seals. This assumes seals swim directly away from noise source.

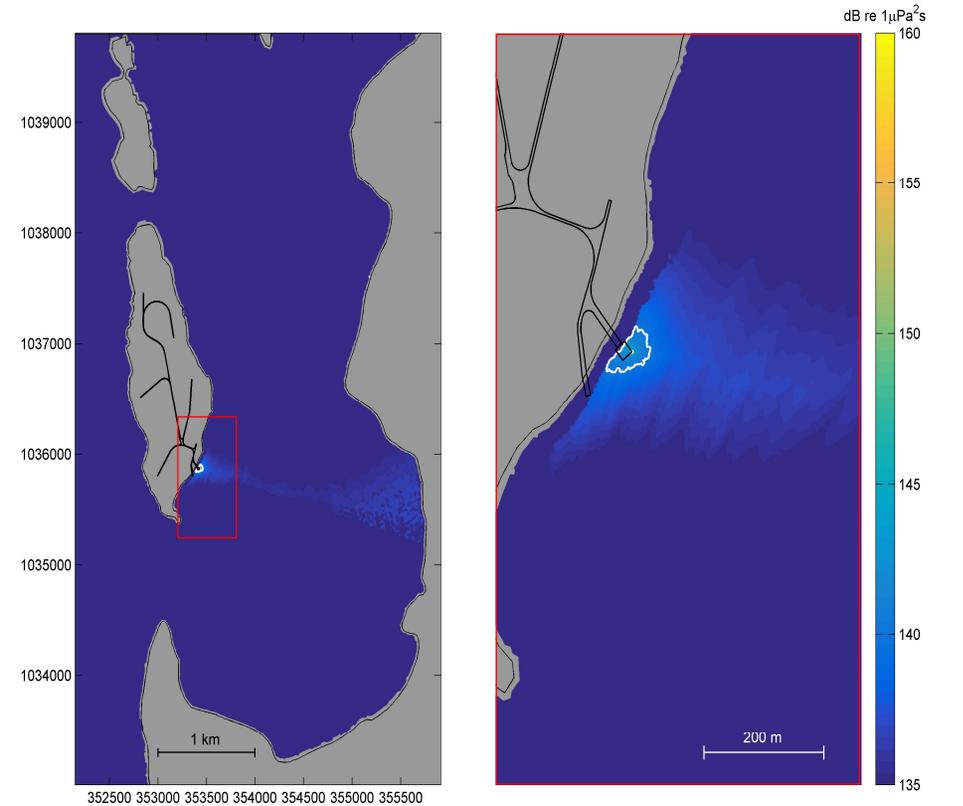


# What are the key design considerations?

## Underwater noise modelling outputs – Harbour Porpoise



**Standard mitigation (soft-start) only:** Black and white contours indicate the areas where the thresholds for permanent and temporary impacts to harbour porpoise are exceeded. This assumes harbour porpoise leave the bay area via the nearest exit



**Standard mitigation (soft-start) + additional mitigation (bubble curtain):** No exceedance of permanent impact threshold (black contour) whilst temporary impact threshold is significantly reduced and is within the mitigation zone (white contour). This assumes harbour porpoise leave the bay area via the nearest exit.



## What are the key design considerations?

### Marine Archaeology



- The construction of the structures will result in a small area of seabed disturbance
- There are no recorded wrecks, including Historic Marine Protected Areas (HMPAs) within the area
- As such, we do not consider that the installation of the marine infrastructure, including localised dredging, to present a significant impact to marine archaeology

### Navigation



- The construction works, including localised dredging, will be temporary in nature and contained within the bay, in close proximity to Faray.
- A Port Management Plan will be prepared
- Structures would not interact with existing Kirkwall – Papa Westray and Hollandstoun - Kirkwall routes
- As such, we do not consider that the installation or operation of the extended slipway and landing jetty to present significant impacts to navigation

### Fishing



- Scottish Government fish landing data suggests relatively low fishing effort within the area with no landings to Faray
- Construction works, including localised dredging, will be temporary in nature and contained within the bay, in close proximity to Faray.
- As such, we do not consider that the installation or operation of the extended slipway and landing jetty to present significant impacts to fishing



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

Site selection



Consultation with key stakeholders on the scope of the assessment

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

Submission of the application, with information publicly available. We hope to do this in the coming months, submitting to the planning authority, Marine Scotland.

Determination of application.

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.

Once the application has been submitted, you can submit your letter of support or objection to Marine Scotland