



**CNR International**  
**Introduction**  
Mike McKenzie



## Ninian Hub Decommissioning Introduction Caroline Lawford

### Meet the Team



**Barry Duncan**  
Managing Director  
& VP Finance



**Mike McKenzie**  
Director Production  
Operations



**Caroline Lawford**  
Manager,  
Decommissioning



**Toby Rider**  
Project Lead  
Ninian Southern



**Scott Imrie**  
Team Leader  
Safety Health &  
Environment



**Kate Black**  
Environmental  
Consultant



**Carol Barbone**  
Stakeholder Advisor



**Murray Rattray**  
Director, Supply Chain  
Commercial & Legal



**Nic Duncan**  
Decommissioning  
Consultant



**Mark Raistrick**  
Project Lead  
Ninian Central



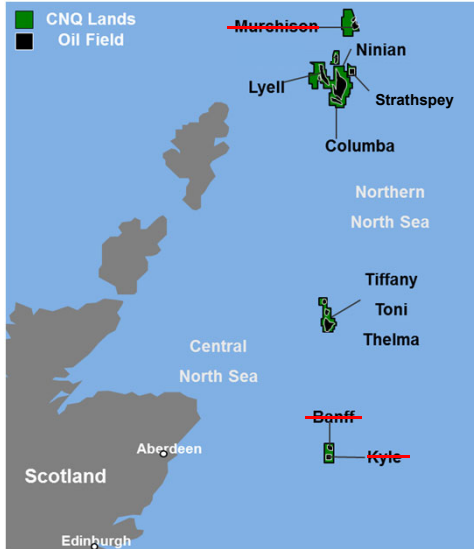
**Jonathan Hoare**  
Project Lead,  
Ninian Subsea



**Jim Patience**  
Manager, Production  
Operations UK



## North Sea Assets

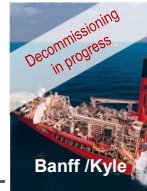
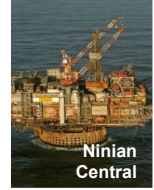
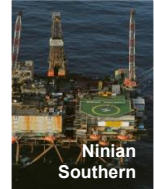


3 fixed platforms remain to be decommissioned

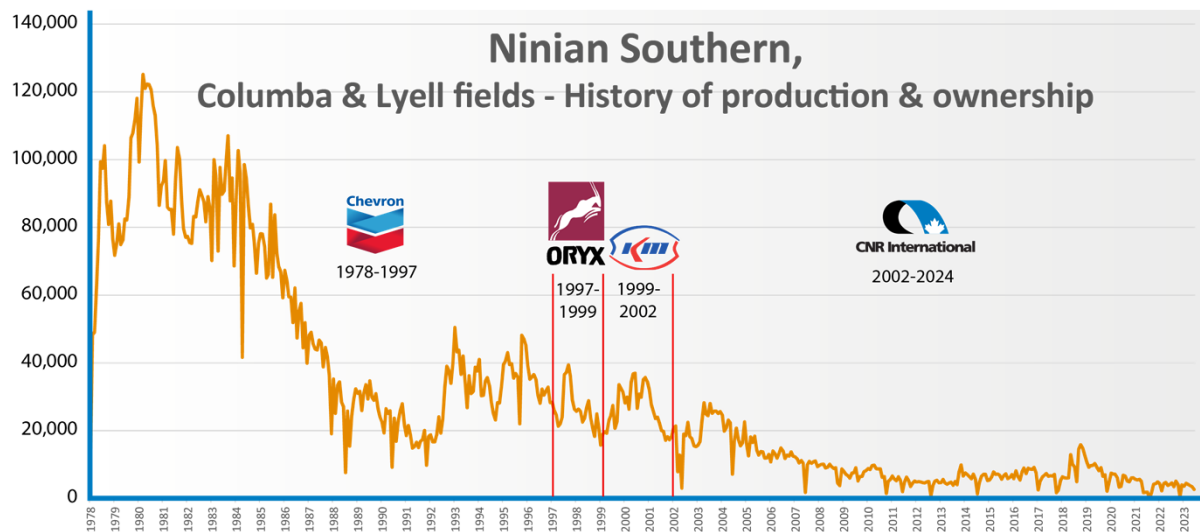
Ninian Southern,  
Ninian Central  
& Tiffany

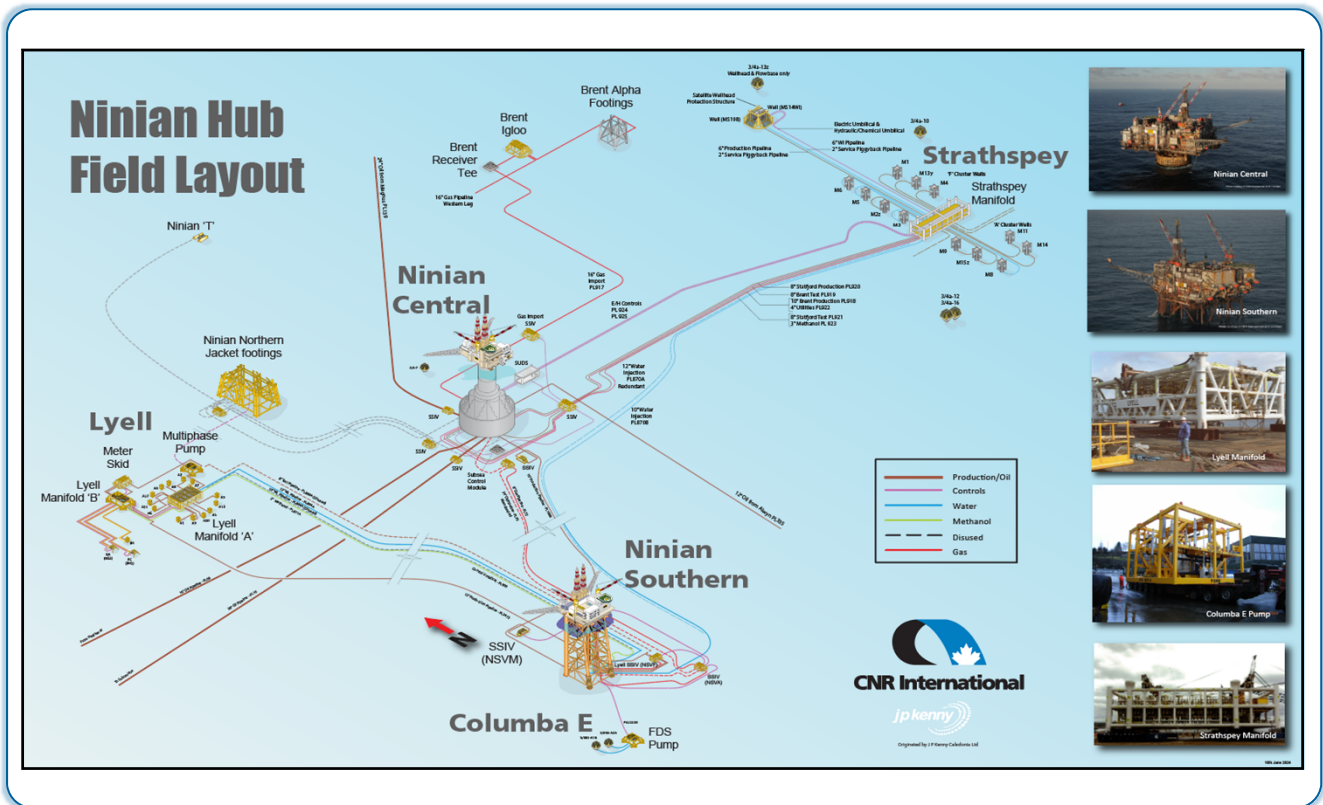
Ninian Subsea infrastructure

100% Operated assets with average working interest of 85%



## Ninian Southern Production History





## Question & Answer Opportunity # 1

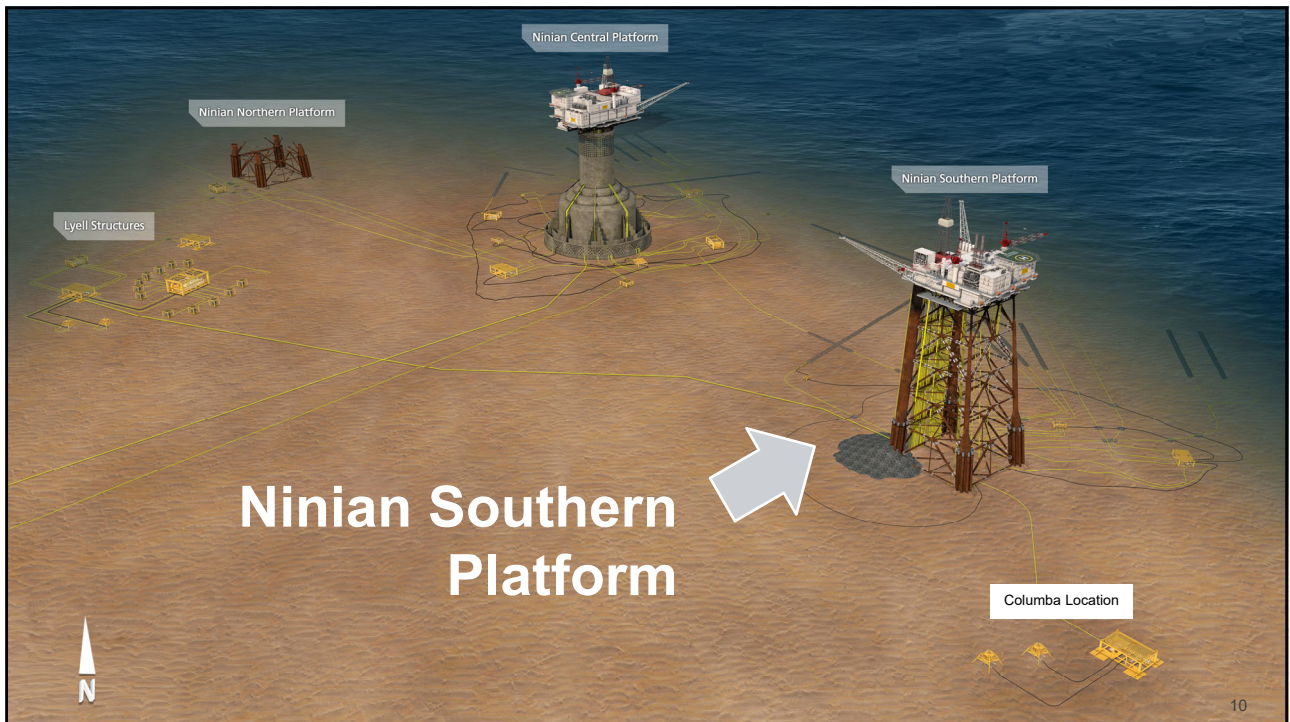
Resources FOR CHANGE



## Introducing the Ninian Southern Platform

Toby Rider

9



## Ninian Southern Platform (NSP)

### Location

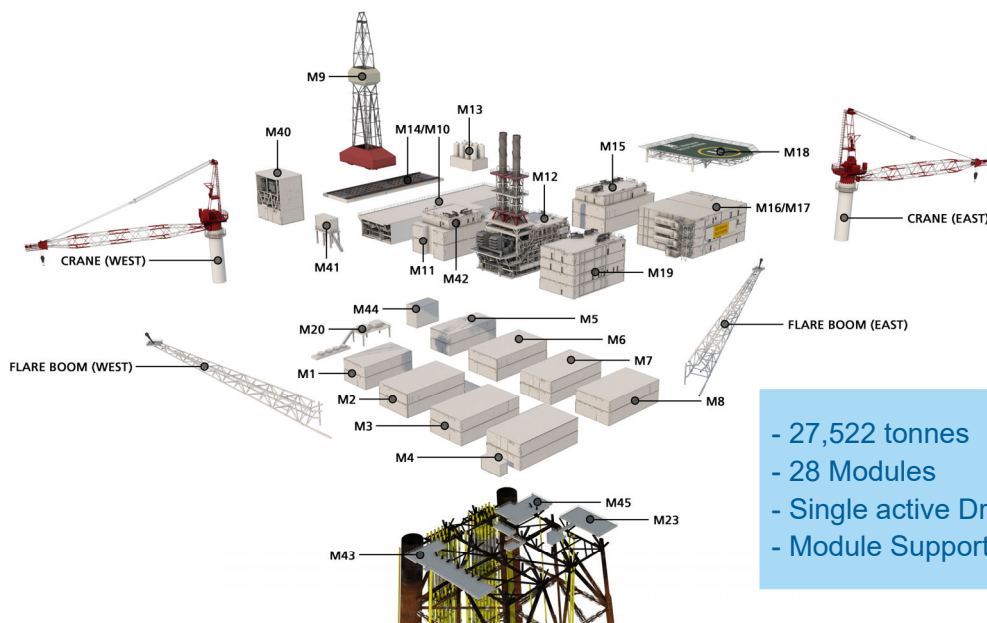
Northern North Sea, East Shetland Basin  
 Block 3/3 & 3/8a  
 60° 48' 20.2" N  
 01° 26' 57.7" E



- Discovered March 1974
- First Oil December 1978
- Type
  - Fixed Steel Jacket
  - Supporting drilling & production facilities
  - Accommodation for 200, Average 160-180
- Weight
  - Jacket 17,727 tonnes (dry mass excluding conductors)
  - Topsides 27,522 tonnes
- Water Depth 140m (458ft)
- Oil Export
  - Ninian Southern – Ninian Central - Sullom Voe
- Reservoir details & depth
  - Middle Jurassic Brent Group 2,727m (8,945 ft)
- Host for Lyell Field (subject to separate consultation)



## Topsides Description



- 27,522 tonnes  
 - 28 Modules  
 - Single active Drill Rig  
 - Module Support Frame

## Topsides Removal Options

---

### Complete Topsides Removal

- Reverse installation with Heavy Lift Vessel
- Preparation for removals
  - Maintaining condition of the structure (walkways and lifting points) for preparation and removal



## Platform Wells

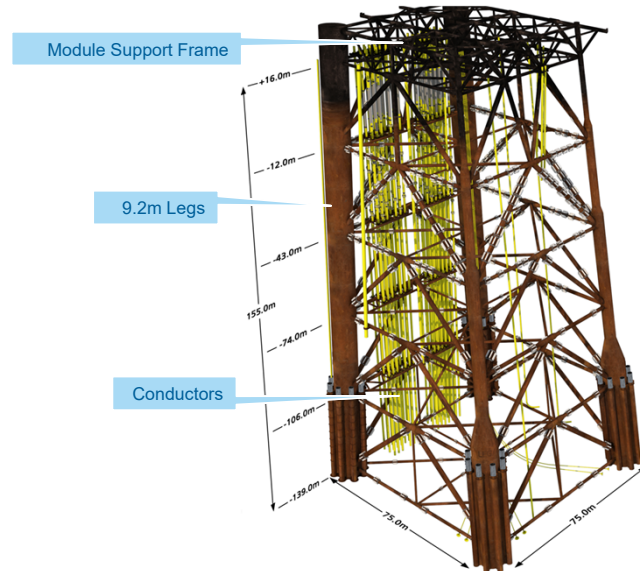
---



**32 Production wells**  
**10 Injection wells**

- Decommission wells in accordance with Offshore Energies UK (OEUK) Guidelines for well abandonment and internal policies
- Conductors cut at the height of the lowest conductor guide frame for stability during removal

## Upper Jacket Configuration



17,727 tonnes (weight in air)  
155m high from seabed to Module Support Frame



## Upper Jacket

The jacket will be cut between -77m and -87m below LAT  
(Lowest Astronomical Tide)

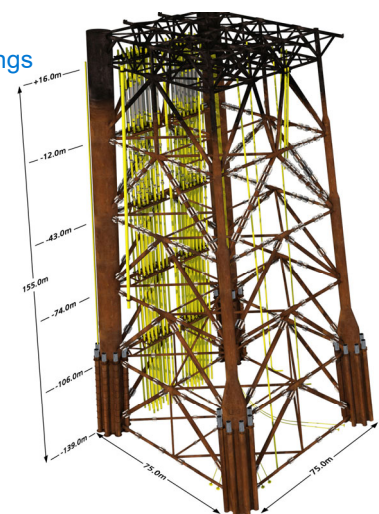
- Removal of upper jacket separately from more complex lower jacket footings
- Cut height defined by technical constraints of bracing design and structural integrity
- Returned onshore for dismantling and recycling

### 9.2m diameter legs

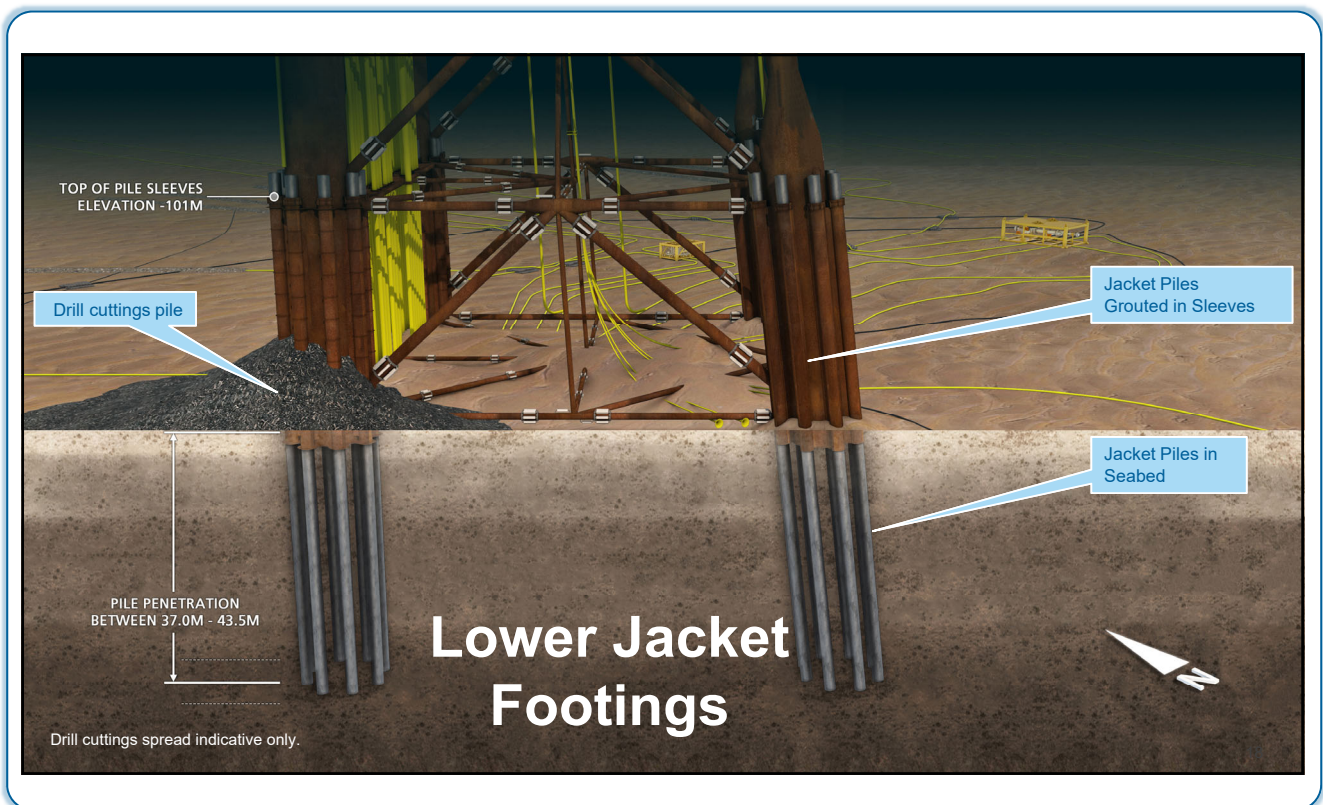
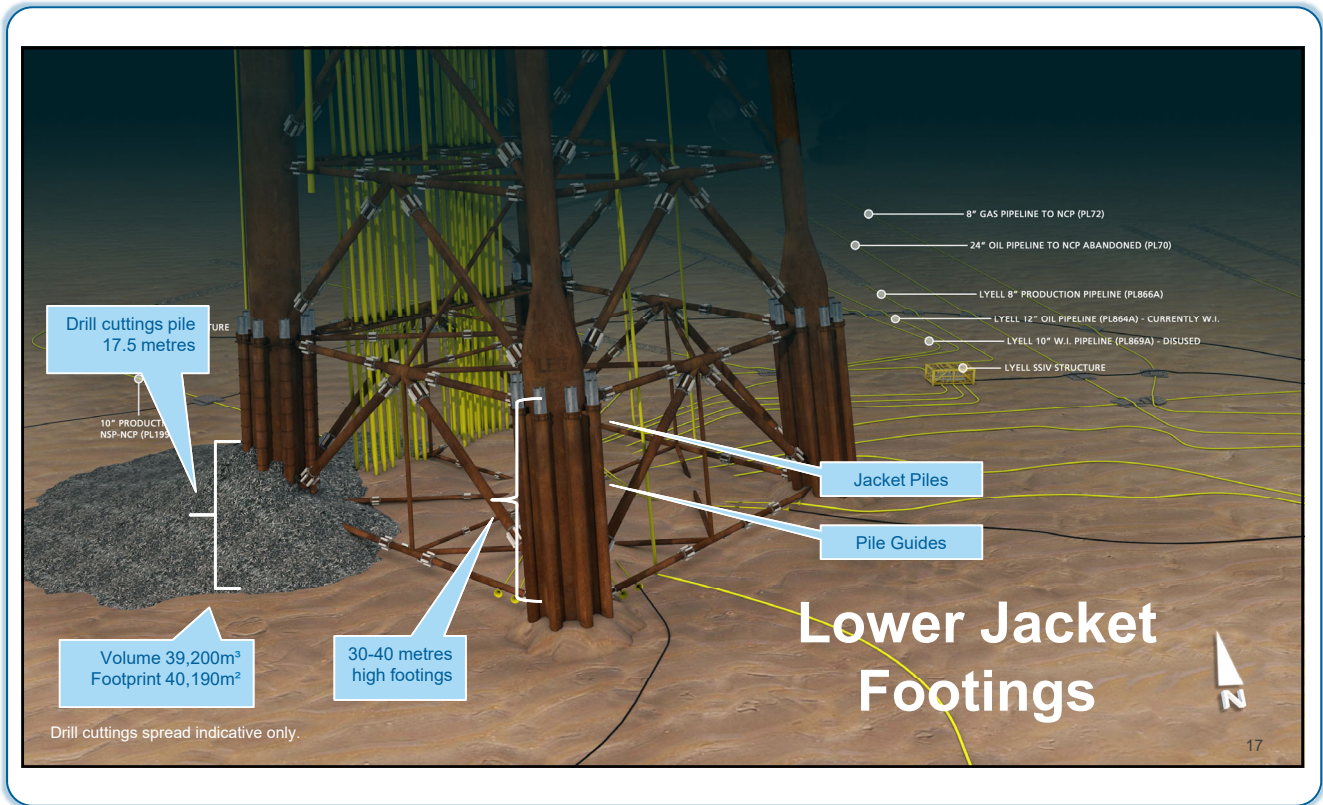
- Larger than current subsea cutting capability
- Not designed to be lifted from outside or inside

### Reliance on Module Support Frame and Lower Section

- Lack of bracing inside structure leads to dependency on staying complete







## Lower Jacket Footings

### Jacket Piles

- Embedded 37m to 43.5m into seabed
- Grouted into sleeves
- Additional cutting width over 9.2m



### Drill Cuttings Pile

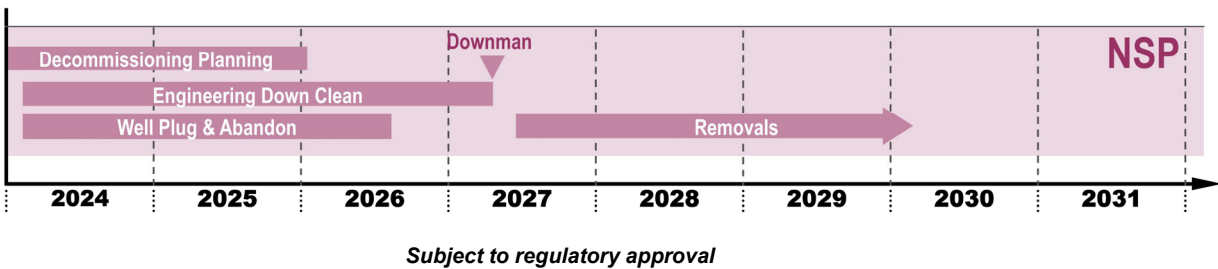
- Disturbance as part of removal

### Comparative Assessment

- Technical solutions for removal
- Separate Decommissioning Programme for lower jacket and footings to allow time to address complexity
- Candidate for derogation from International rules for full removal because of size and date of installation



## Ninian Southern Platform Decommissioning Timeline





## Question & Answer Opportunity # 2

Resources  
FOR CHANGE

21



## Breakout Session # 1

Resources  
FOR CHANGE

22



## **Environmental Context**

**Scott Imrie & Kate Black**

23

## **The Process of Environmental & Comparative Assessment**

---

### **Overview of work completed & planned**

- Environmental Baseline Overview
- Environmental Baseline Survey and outcomes
- ENVID / Environmental Appraisal
- Ornithological Studies
- Comparative Assessment Process

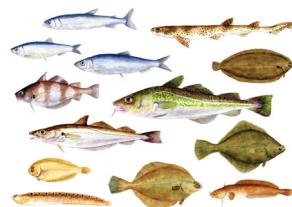


24

## Environmental Baseline – Overview

### Fish

- Several species use the Ninian area as spawning and nursery grounds
- Of these, 11 are Scottish Priority Marine Features
- High spawning of the species occurs in the winter to spring months, depending on the species
- No species have been identified as being exclusive to the Ninian area; spawning and nursery areas extend across large areas of the Northern North Sea and beyond
- Aquaculture sites are approximately 120km west of Ninian



### Marine Mammals

- White-beaked dolphin, minke whale and harbour porpoise in the area May – August, in low densities. All European Protected Species (EPS) and all Scottish Priority Marine Features (PMF).



25

## Environmental Baseline – Overview (2)

### Seabirds

- Ninian is distant from coastal breeding colonies
- Seabirds use the area year-round
- Densities are low to very low, with the exception of Northern Fulmar which have been recorded at very high densities between August and February



### Nesting birds

- Vessel and topside based survey completed in 2023 and will be repeated annually
- In addition, a portal for ongoing monitoring on the Ninian platforms has been created for specifically trained offshore staff (part of wider nesting bird study)
- No nesting birds identified on Ninian Southern Platform 2023 survey



26

## Ninian Southern Platform Baseline – Conservation Interest

### Special Areas of Conservation

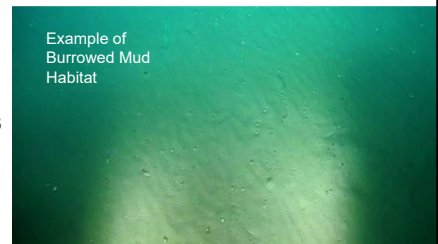
- The Southern platform is located approximately 70 km from the nearest protected area (Pobie Bank Reef Special Area of Conservation (SAC), designated for Annex I habitat (stony and bedrock reef)
- Removal of the platform topsides and upper jacket are therefore not expected to affect the designated features of the protected area
- Nature Conservation Marine Protection Area (NCMPA) and Special Protection Area (SPA)s are located further from the platform and therefore, no impacts are expected to affect the qualifying features

### UK Biodiversity Action Plan

- Does not qualify as a 'Subtidal Sands and Gravels

### OSPAR 'Seapen and Burrowing Megafauna Communities' and Scottish Priority Marine Feature (PMF) 'Burrowed Mud' habitats

- Organisms create burrows in the fine mud of the seabed. These burrows are important because the burrows allow oxygenated seawater to circulate deeper into the sediments which can then allow other benthic species to survive resulting in complex habitats and increased biodiversity
- The baseline survey indicates partial conformity with these habitats i.e. burrows were present but not in sufficient densities to meet or exceed the 0.2 burrows per square metre threshold



Example of Burrowed Mud Habitat

Seapen

invertebrate marine animal



## Environmental Baseline - Survey

### Pre-decommissioning survey completed December 2023

- Multi Beam Echo Sounder (MBES) survey
- Side Scan Sonar (SSS) survey
- Environmental grabs and drill cuttings cores

### Drill Cuttings Pile

- Establish area of influence of drill cuttings
- Inform undisturbed modelling study
- Inform disturbance modelling study

### Environmental Sampling

- Physical, chemical and biological status at the sampling stations from 100m from the Platform
- Establish area of anthropogenic effect
- Investigate whether natural recovery is underway
- Identify/quantify presence of protected habitats or species

Analysis of drill cuttings core samples



## Survey Results - Headlines

Receptor	
Protected habitats	None identified as described earlier in this presentation
Protected species	<i>Pachycerianthus multiplicatus</i> (Fireworks anemone), <i>Arctica islandica</i> (juveniles) (Ocean quahog), <i>Devonia perrieri</i> (bivalve mollusc), <i>Raja clavata</i> (Thornback ray), <i>Molva molva</i> (Ling), <i>Gadus morhua</i> (Atlantic cod), <i>Desmophyllum pertusum</i> (previously <i>Lophelia pertusa</i> , cold water coral)
Hydrocarbon concentrations in sediments	Levels >50mg/kg within 500m, with highest levels associated with or from the drill cuttings pile
Heavy metals	Broadly similar to background levels across the survey area; elevated stations within 500m of the platform. Typical of the pattern seen around oil and gas installations.
Benthic communities	Macrofaunal communities are similar to wider NNS communities, with stations near to the cuttings pile and the resulting anoxic (reduced oxygen) sediments and altered sediment type affecting species richness, abundance and diversity. This results in modified benthic communities toward pollutant tolerant species as is typical around oil and gas installations and drill cuttings piles.



## Drill Cuttings

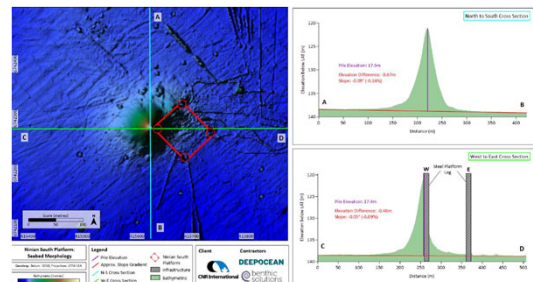
Survey indicates drill cuttings volume of approx. 39,000m<sup>3</sup>, including mussel coverage

Maximum single THC (Total Hydrocarbon Content) result >60,000mg/kg

- Though modelling is to confirm, this is similar to other drill cuttings piles which have been determined to be left in situ
- Disturbance modelling still required to inform jacket footings Comparative Assessment

Highest elevation 17.5m against jacket leg

Core samples successfully recovered at 20 locations, and penetrated through seabed



## Drill Cuttings (2)

### OSPAR threshold (under 'Recommendation 2006/5')

- Results from the pre-decommissioning survey will be used to screen the drill cuttings against the OSPAR thresholds for oil release rate (10 tonnes/yr) and area persistence (500 km<sup>2</sup> years) using an undisturbed scenario (i.e. natural degradation)
- Drill cuttings cover the lower bracing of the Western leg footings, therefore second modelling study reflecting disturbance of the drill cuttings will also be conducted to inform the Ninian Southern Platform footings Comparative Assessment and Decommissioning Programme
  - 2024 chemical impact zone (OSPAR 50mg/kg threshold) extended up to 500m northwest, 300m southwest and 250m south east of the platform
  - Comparison with 2011 survey indicates a reduction in the chemical footprint around the Ninian Southern platform over the past 13 years.
  - Calculated persistence of 3.01km<sup>2</sup> per year
  - Hydrocarbon 24-hour leachate tests and calculation indicate the pile is below the OSPAR oil loss threshold of 10 tonnes/year

## Environmental Impact Process

### Environmental and socio-economic impact Identification Workshop (ENVID)

- To identify key environmental sensitivities
- Potential impacts (planned and unplanned)
- Highlight those impacts that require further assessment or mitigation, if applicable
- ENVID process to be informed by Stakeholder feedback
- Note: Topside and upper jacket activities will not interact with the seabed during planned activities, however, the results of the Environmental Baseline Survey (EBS) i.e. identified sensitivities will be considered in the unplanned section of the ENVID

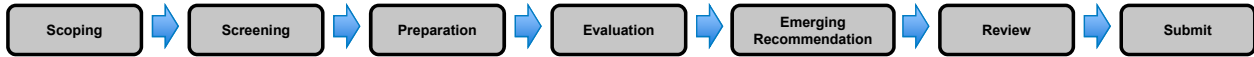
### ENVID for Jacket Footings

- Will support Environmental Appraisal in support of the NSP Jacket Footings Decommissioning Programme and Comparative Assessment

**CNR International intend to include impacts associated with onshore reuse, recycling or disposal of materials as part of the ENVID**



## Comparative Assessment Process Lower Jacket Footings



- CNRI Comparative Assessment (CA) procedure aligned with OPRED guidelines
- Determine all feasible options for decommissioning of the jacket footings
- Define CA methodology and evaluation sub-criteria
- Screening of options
- Develop remaining options to determine associated data output against which to conduct the evaluation
- Establish emerging recommendation, review with OPRED and stakeholders before formal submission.

OEUK  
OPRED  
Offshore Energies UK  
Offshore Petroleum Regulator for Environment  
and Decommissioning



**Forward Engagement**  
Carol Barbone

### Engagement Opportunities

Engagement Opportunity	How/When/Who	When
<b>Immediate Queries and Comments</b>	Breakout groups Q&A sessions Evaluation Form	Today, 4 July 24
<b>Facilitators' Report on Workshop</b> - Capturing Queries for CNRI to answer	To be shared with ALL stakeholders (not just attendees) for comment and active follow up	For issue by 31 July 24
<b>Stakeholder Meetings</b> - Responses to Individual Requests	Contact CNRI	Ongoing
<b>Meetings on Topics of Interest</b>	As needed and/or requested by stakeholders	Q3 2024 to Q2 2025
<b>Environmental scoping report</b> - Lower Jacket/Footings	Draft scope to be shared for clarifications, comment, and response to further questions	Q3 2024



### Engagement Opportunities (2)

Engagement Opportunity	How/When/Who	When
<b>Comparative Assessment:</b> - Emerging Recommendations - Stakeholder Workshop	Results to be shared via written report Workshop for follow up discussion / comment	Q4 2024
<b>Stakeholder Engagement Report</b>	Audit trail of contact and activity, published with Draft DP and updated thereafter	Q2 2025>
<b>Draft Decommissioning Programmes and Supporting Documents:</b> - Topsides/Upper Jacket - Lower Jacket/Footings	<u>Statutory and Public Consultations</u> - Notified by emails to stakeholders and via Public Notices in National / Regional Press	Q4 2024
	<u>Regulatory Consultations</u> - Notified by OPRED	Q2 2025
<b>Ninian Hub Decommissioning Website:</b> - Document Repository - Other News	<a href="http://www.cnrinternational.co.uk">www.cnrinternational.co.uk</a>	Ongoing
<b>Queries, Comments, Matters Arising</b>	Via <a href="mailto:Carol.Barbone@cnri.com">Carol.Barbone@cnri.com</a> and your normal CNRI contacts	Ongoing





## Question & Answer Opportunity # 3

Resources  
FOR CHANGE

37



## Breakout Session # 2

Resources  
FOR CHANGE

38



**Summary**  
**Closing remarks & thanks**  
Caroline Lawford & Mike King

## Evaluation

---

- Provide a link to an online survey, encouraging participants to fill it in immediately but providing the option to do it later. Suggested evaluation questions
- How satisfied are you with the opportunity you have had today to give your views?
- How useful was the workshop to gather information and further your understanding about the Ninian Southern Platform Decommissioning Plans
- How confident are you that the issues and ideas you have raised will be addressed?
- How well did the workshop process (the ways of working, the working environment) meet your needs?
- Any other comments

