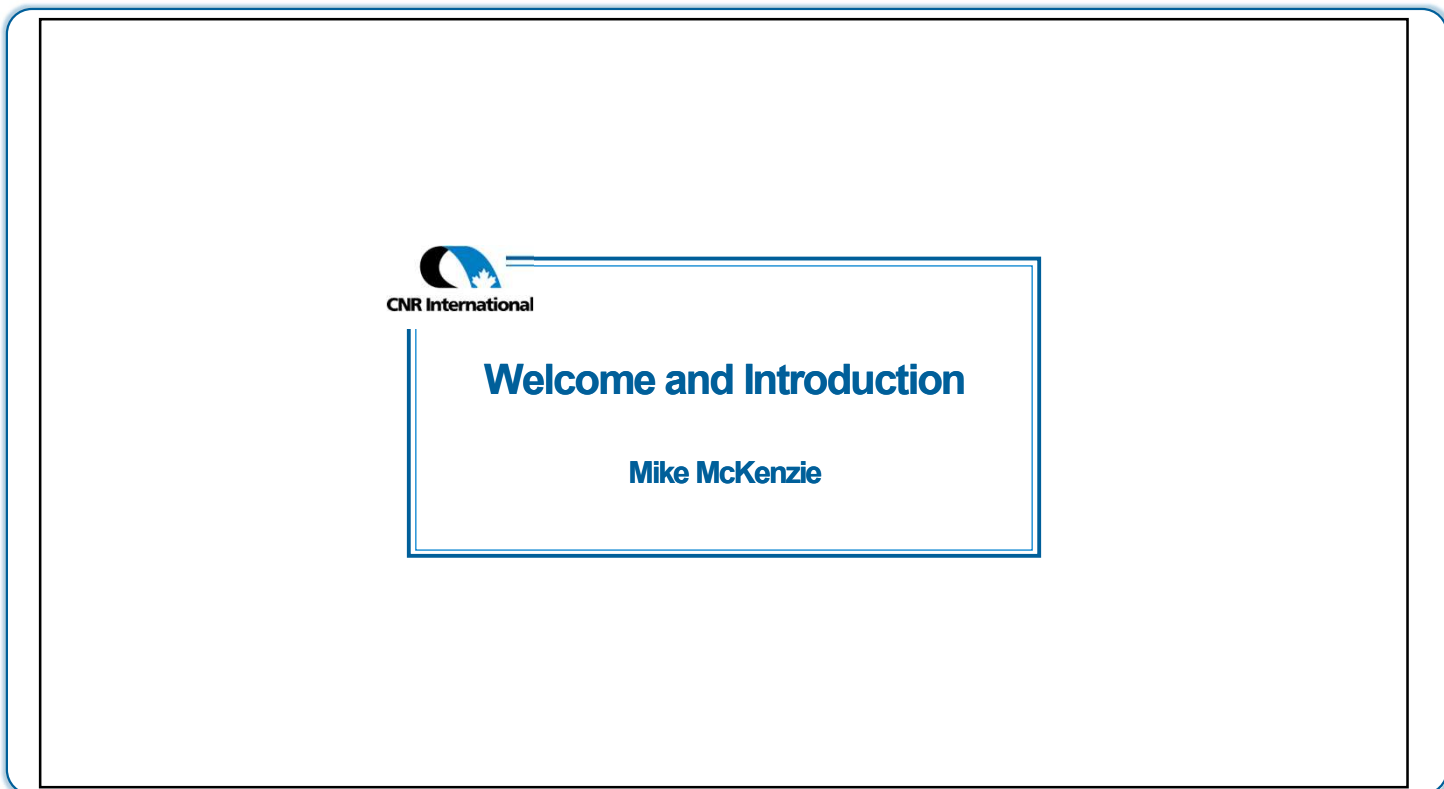




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Ninian Field Decommissioning

Caroline Lawford

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Meet the Team



Mike McKenzie
Director
Production
Operations

Caroline Lawford
Manager,
Decommissioning

Mark Raistrick
Project Lead
Ninian Central

Scott Imrie
Team Leader
Safety Health &
Environment

Kate Black
Environmental
Consultant

Iain Shepherd
Technical
Superintendent
Production Ops.

Carol Barbone
Stakeholder
Advisor

Nic Duncan
Decommissioning
Consultant

Jonathan Hoare
Project Lead,
Ninian Subsea

Dawn Eddie
Operations
Superintendent



Murray Rattray
Director,
Supply Chain,
Commercial & Legal

Ann-Marie Grant
Project Engineer
Decommissioning

Jim Patience
Manager,
Production
Operations UK

Toby Rider
Project Lead
Ninian Southern

Gregor Leitch
Project Engineer
Decommissioning

Nikki Morris
Senior SHE Advisor
Safety Health &
Environment

Susan Lawie
Senior
Commercial
Advisor

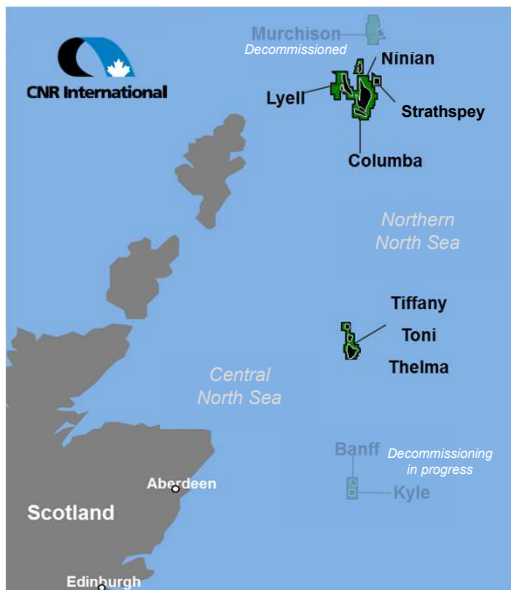
Sharon McHardy
Manager
Safety Health &
Environment

Duncan McLaren
Environmental
Advisor



4

North Sea Assets

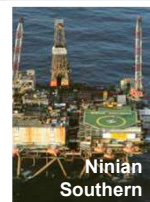


3 fixed platforms remain to be decommissioned:

- Ninian Central
- Ninian Southern
- Tiffany

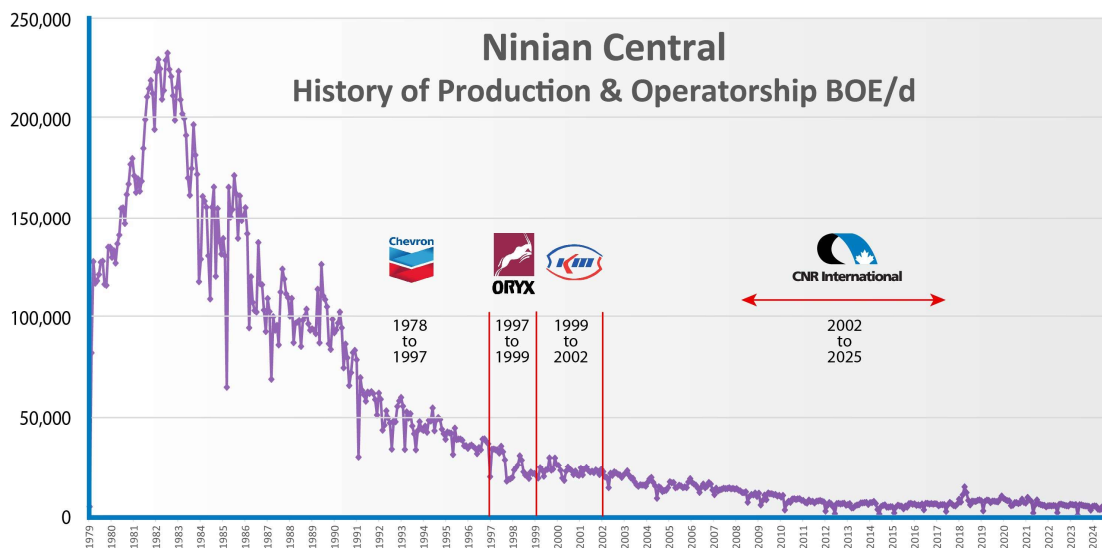
The Ninian Field Subsea infrastructure includes:

- Lyell, Strathspey and Columba E fields.

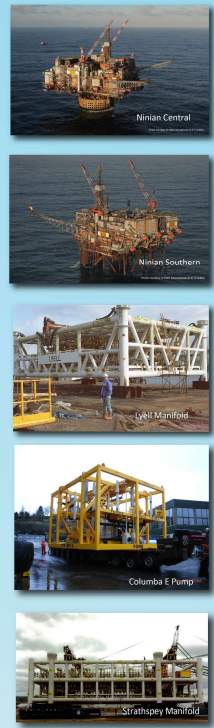
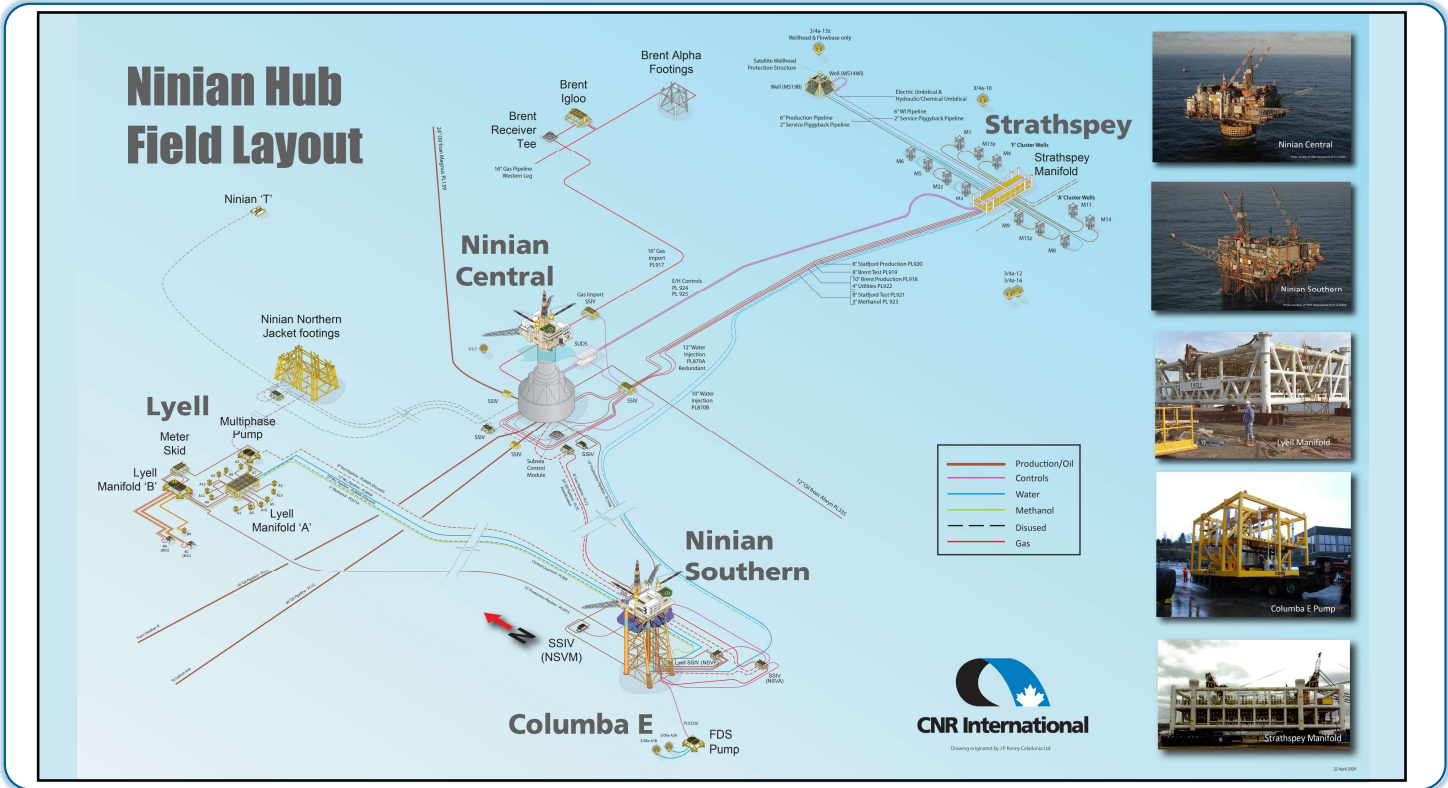


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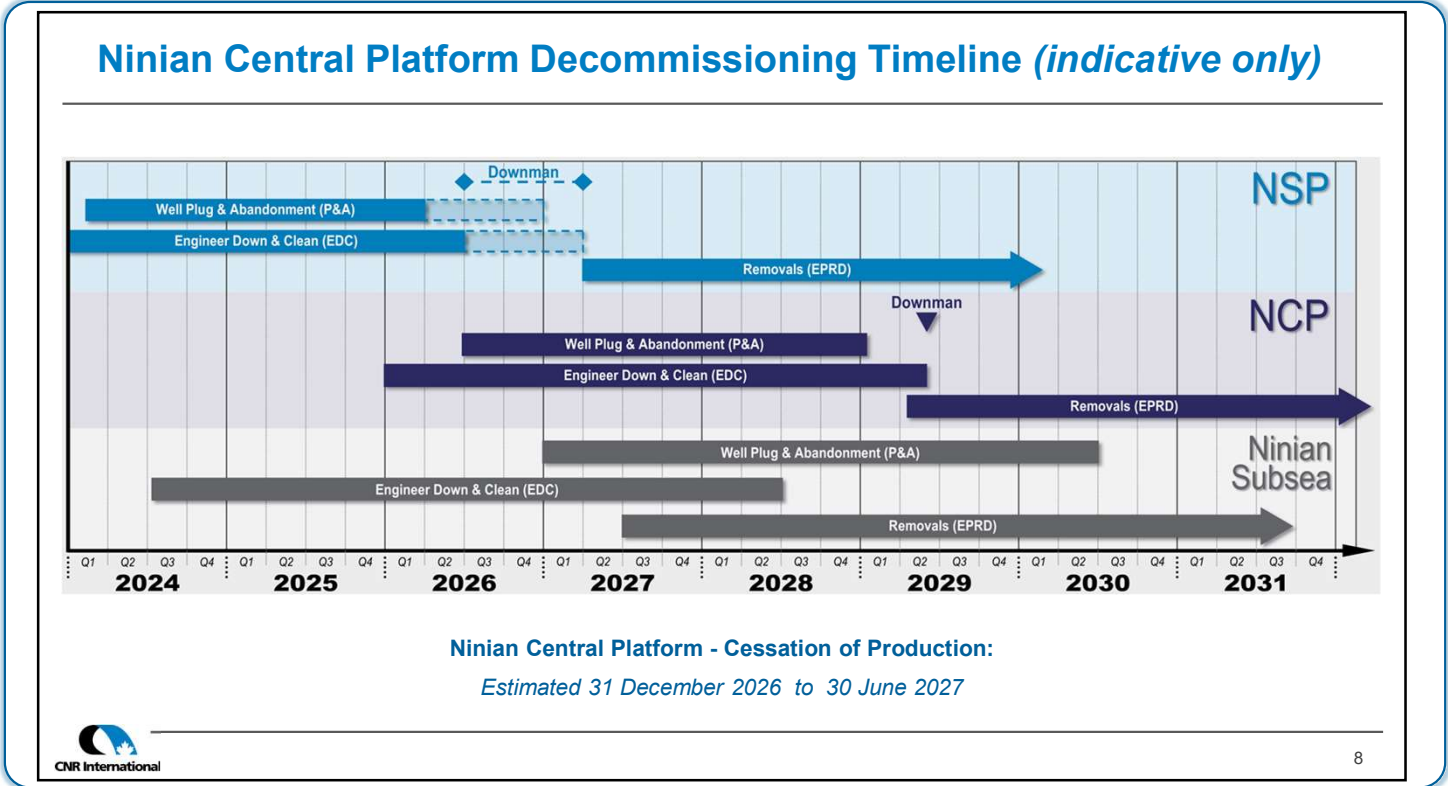
Ninian Central Production History



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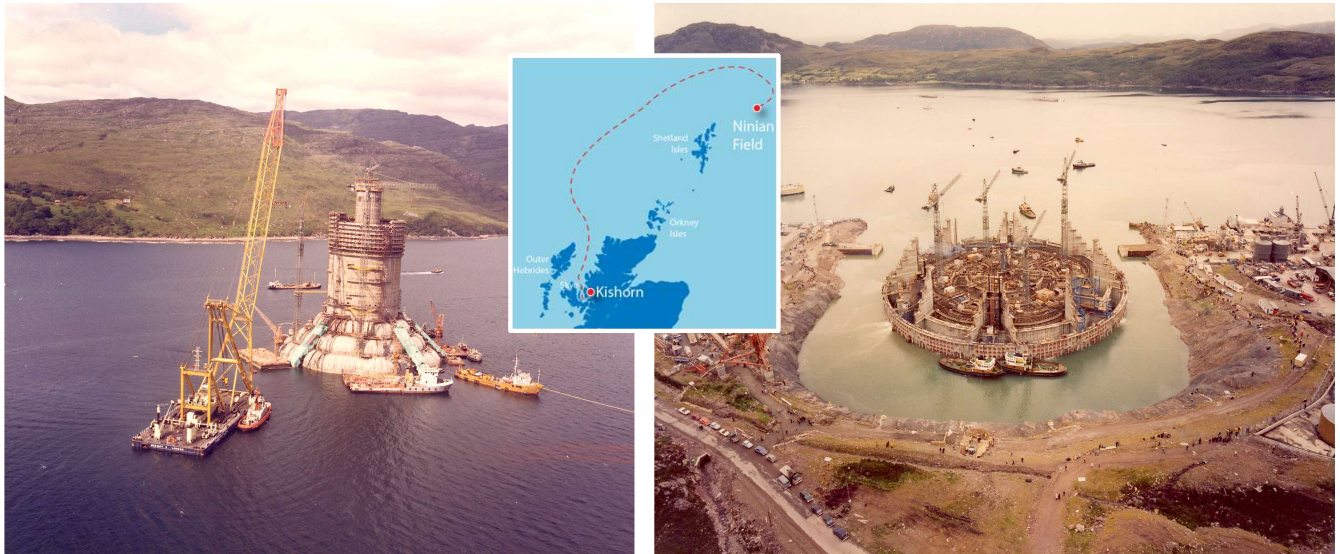
Introducing the Ninian Central Platform

Mark Raistrick, Dawn Eddie,
Iain Shepherd

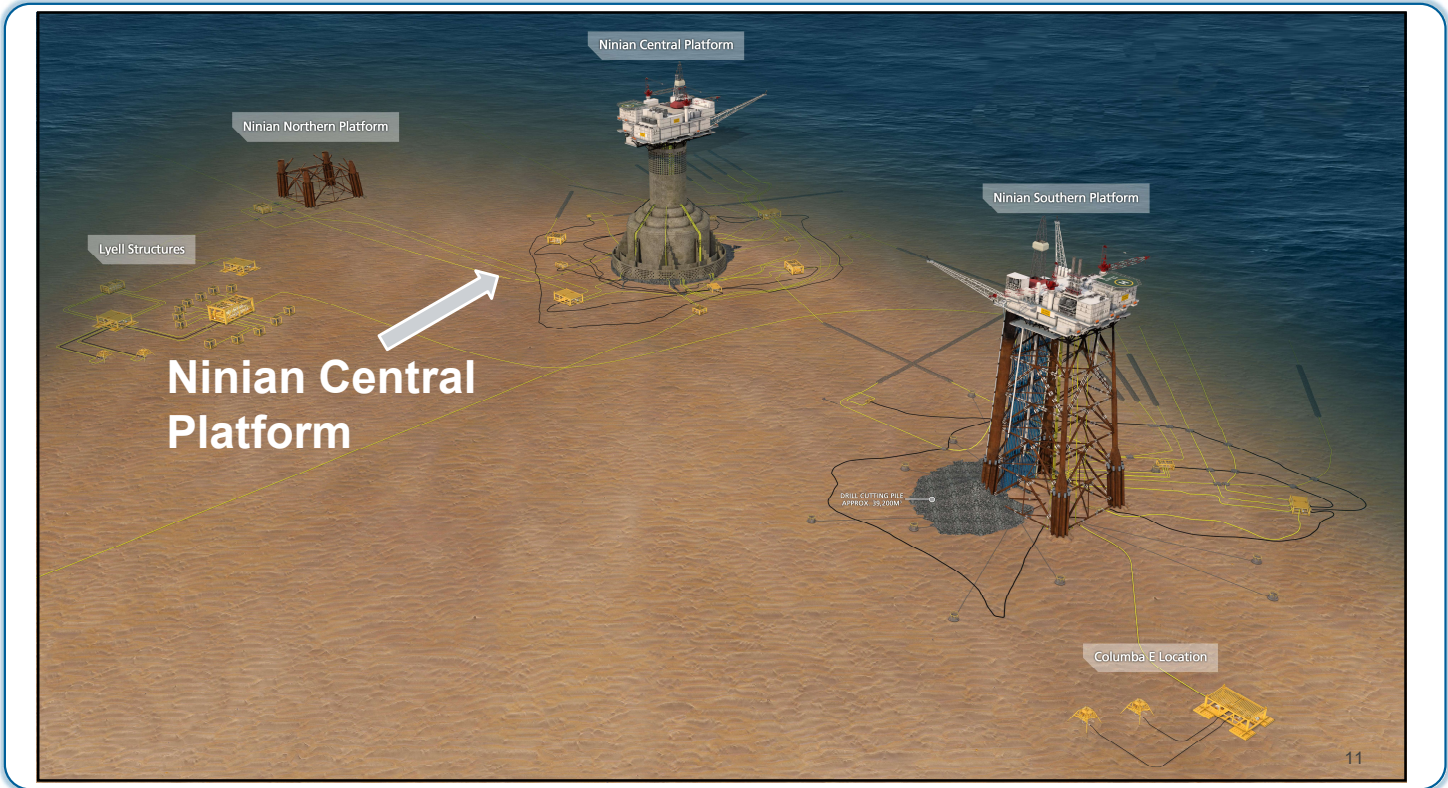
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Constructed at Kishorn, Wester Ross

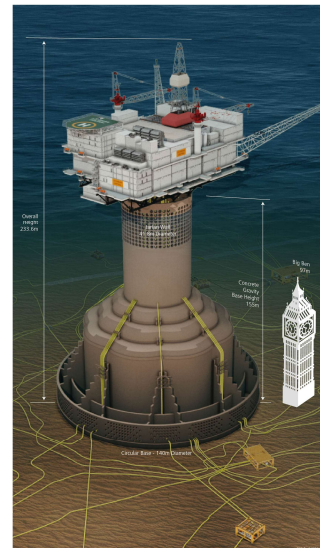


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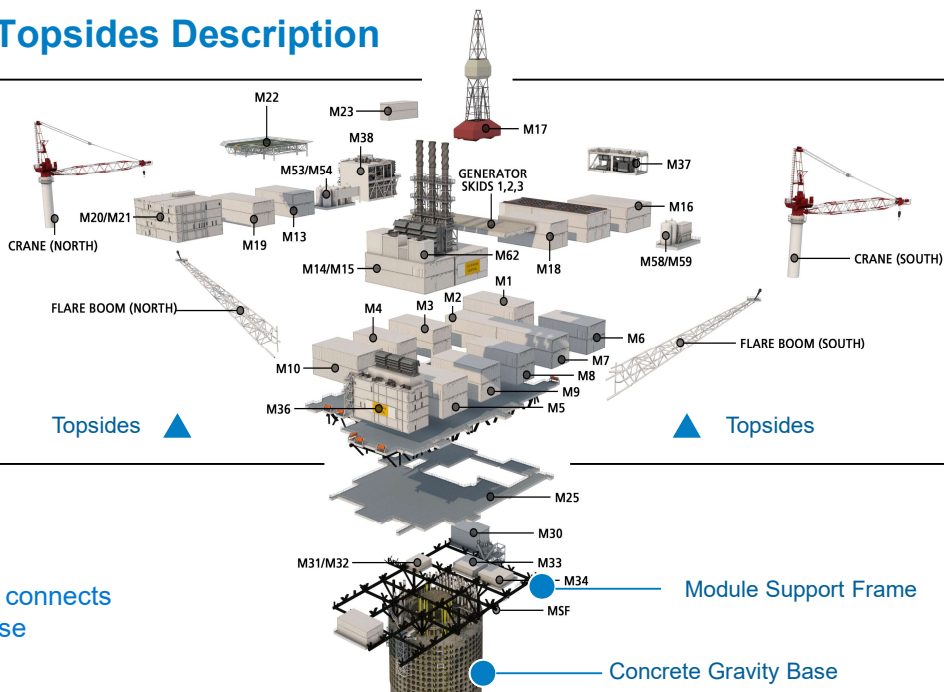
Ninian Central Overview



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Ninian Central Topsides Description

38,000 tonnes
34 Modules over 3 levels
Single active Drill Rig



Module Support Frame – connects
with Concrete Gravity Base

Module Support Frame

Concrete Gravity Base



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Ninian Central Topsides



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Ninian Central Control Room



Concrete Gravity Base – Characteristics (1)

CGBS

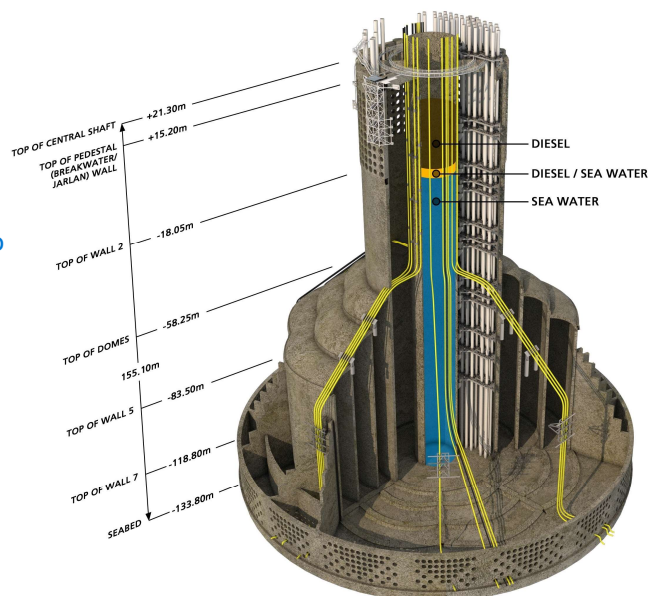
- ~ 630,000 te (+ water ballast & 6000 te grout)
- 155.1 m high
- 140.0 m diameter base
- 14.0 m diameter Central Shaft
- 41.8 m diameter Breakwater 'Jarlan Wall', ~ 1.2 to 1.6 m thick
- Central shaft wall – 0.65 m thick

No oil storage in Concrete Gravity Base

Diesel storage (to be removed from central column)

Conductors

- To be cut at top of Jarlan wall +15m





Decommissioning Options

Mark Raistrick

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Ninian Central Topsides Removal

Complete Topsides Removal

- Single Lift or Reverse installation with Heavy Lift Vessel

Preparation for removals

- Maintaining condition of the structure (walkways and lifting points) for preparation and removal



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Concrete Gravity Base Structure – Decommissioning Context

Decommissioning Programmes for Ninian Central split between:

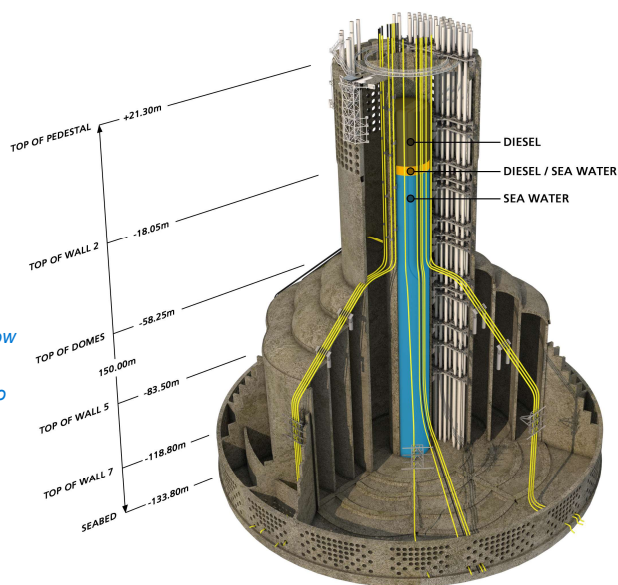
- Topsides, complete removal
- CGBS, base case is full removal

As NCP was installed in 1978 and is a “gravity based concrete installation” it is a candidate for derogation from full removal requirement of OSPAR Decision 98/3

“If...there are significant reasons why an alternative disposal mentioned below is preferable to reuse or recycling or final disposal on land.

The competent authority... may issue a permit for a concrete installation ... to be ... left wholly or partly in place.

Structured regulatory decision-making process to be followed including consultation with OSPAR Contracting Parties...”



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Concrete Gravity Base – Potential Decommissioning Options

Decommissioning Options Identified

- Full Removal – Refloat
- Full Removal – Destruct *in Situ*
- Partial Removal – Destruct Upper CGBS and Recover to Shore
- Partial Removal – Destruct Upper CGBS
- Partial Removal – Topple Upper CGBS
- Leave *in Situ*
- 630,000 te (+ water ballast & 6000 te grout)



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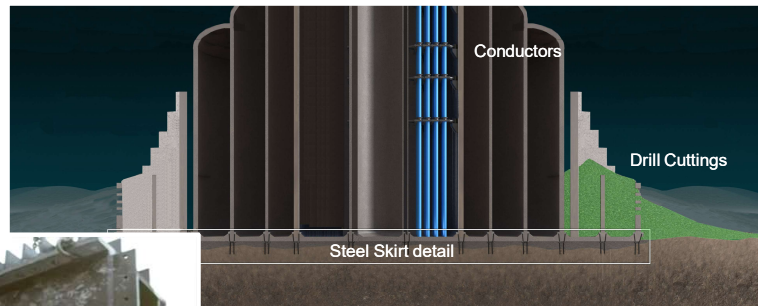
Concrete Gravity Base – Characteristics (2)

Steel skirt

- Penetrates 4.0 m into soil
- Grouted beneath the base
 - Stabilises soil beneath, with 6000 tonnes grout

Drill cuttings pile

- Volume, area and height to be confirmed in 2025 summer survey



Environmental Context

Kate Black and Nic Duncan

The Process of Environmental and Comparative Assessment

Overview of work completed and planned

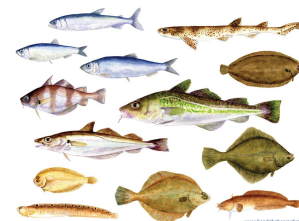
- Environmental Baseline Overview
- Environmental Baseline Survey and onshore analysis of samples
- ENVID / Environmental Appraisal
- Ornithological Studies
- CGBS decommissioning option assessment



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)



Environmental Baseline – Overview

Seabirds

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



Nesting Birds

- Vessel and topside based surveys have been completed annually since 2023 across Ninian platforms and will be continued until removal
- In addition, a portal for ongoing monitoring on the Ninian platforms has been created specifically for trained offshore staff (part of wider nesting bird study)
- No nesting birds identified on Ninian Central Platform 2024 survey



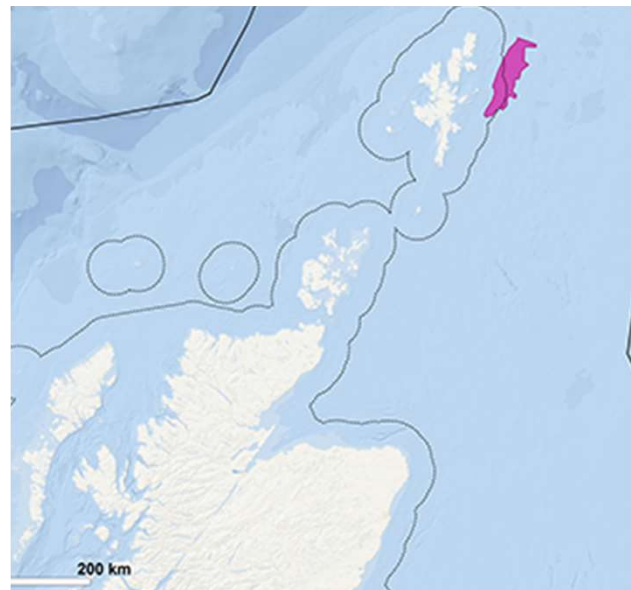
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Ninian Central Platform Baseline – Conservation Interest

Special Areas of Conservation

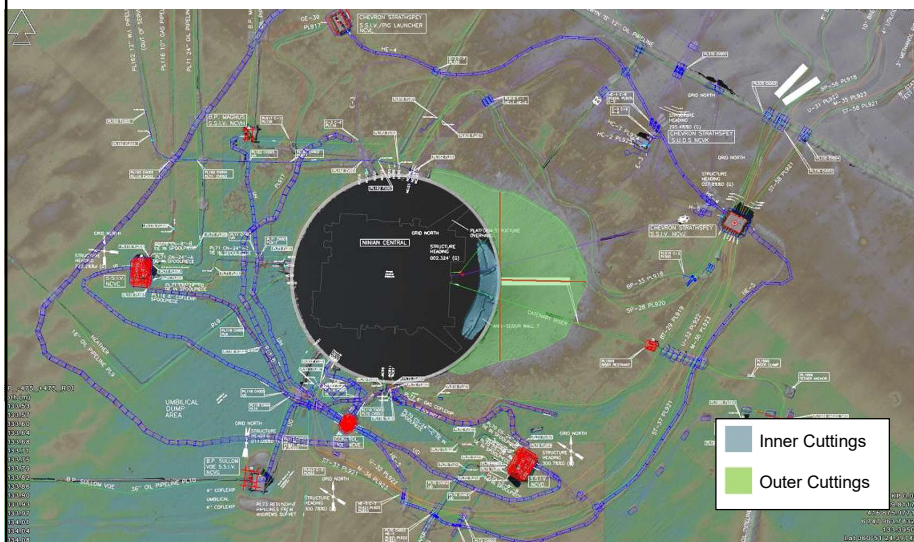
- Ninian Central is located approx 70 km from the nearest protected area
(Pobie Bank Reef Special Area of Conservation, designated for Annex I habitat (stoney and bedrock reef – shown in pink)
- Removal of the Ninian Central topsides and catenary risers therefore not expected to affect the designated features of the protected area
- Nature Conservation Marine Protected Area and Special Protected Areas located further from Ninian Central – no impacts expected to affect ‘qualifying features’



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Ninian Central Drill Cuttings Pile – 2024 Multi-Beam Echo Sounder



OSPAR Recommendations 2006/5, cutting can be left to degrade naturally if the pile is beneath the following thresholds:

- Rate of oil loss to water column
10 tonnes / year oil loss

AND

- Area where concentration above 50mg/kg less than 500km² year

2025 samples will determine compliance with these thresholds.

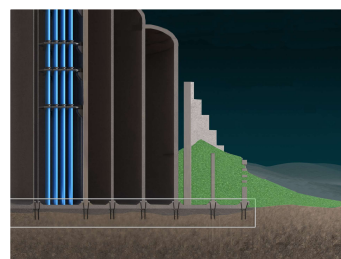
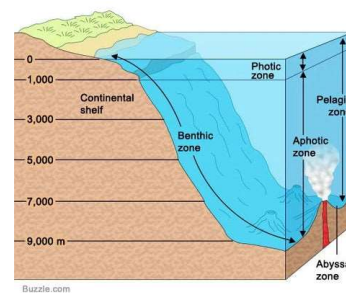
Ninian Central Platform Baseline – Historic Information

Benthic Environment

- Majority of the sediments classified as offshore circalittoral sand
- Total Hydrocarbon Content (THC) levels in environmental samples variable
- Heavy metals in environmental samples lower than those in drill cuttings pile and often below effect thresholds

Drill Cuttings Pile (typical of North Sea platforms of this age and scale)

- Comparing 2011 data only and accounting for differing core lengths, Central and Southern platforms generally had similar orders of magnitude of concentrations of heavy metals; some exceeded 'effect thresholds'
- Likely that deeper drill cuttings cores will result in higher levels of contaminants as per NSP and other drill cuttings piles
- These data will be revisited in the 2025 survey and will be used to inform the future environmental assessments (e.g. Environmental Appraisal, Comparative Assessment)



Environmental Baseline Survey

Pre-decommissioning survey planned for June 2025

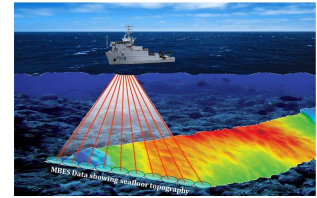
- Multi Beam Echo Sounder (MBES) survey
- Side Scan Sonar (SSS) survey
- Environmental grabs and drill cuttings cores

Drill Cuttings Pile

- Establish area of influence of drill cuttings
- Inform undisturbed modelling study
- Inform disturbance modelling study
- Quantify both the internal and external drill cuttings

Environmental Sampling

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



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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
- Until 2025 data available, precautionary approach will be taken e.g. assumption of protected habitats and species demonstrated at Ninian Southern Platform during 2024 survey

ENVID for CGBS

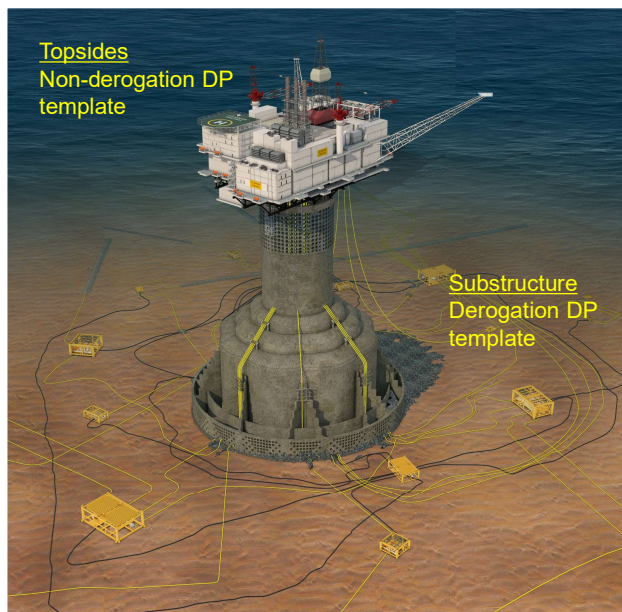
- Will support Environmental Appraisal of the Ninian Central Concrete Gravity Based Structure Decommissioning Programme and associated Comparative Assessment (CA)
- CNRI intends to include impacts associated with onshore reuse, recycling or disposal of materials as part of the ENVID



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Decommissioning Programmes



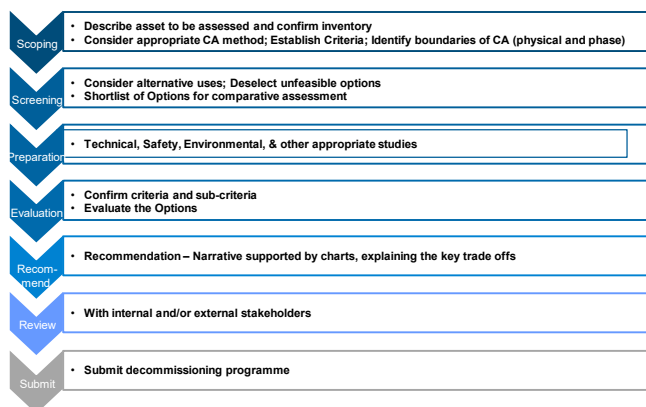
Decommissioning Programmes (DPs) for the Ninian Central Platform are separated into non-derogation and derogation templates:

- The Topsides uses a **non-derogation** DP template
- The Substructure (CGBS) uses a **derogation** DP template ... and will be subject to a comparative assessment process.

Comparative Assessment Concrete Gravity Based Structure

Comparative Assessment Process

- Define extents of Comparative Assessment process
- Consider all feasible options for decommissioning of the Concrete Gravity Based Structure
- Define Comparative Assessment methodology and evaluation sub-criteria
- Screening out of options assessed as unrealistic or obvious non-starters
- Develop remaining options to determine associated data output against which to conduct an evaluation
- Apply Harmonised Comparative Assessment Methodology
 - Stage 1 – full removal assessment – ‘is full removal achievable?’
 - Stage 2 – if full removal is determined as not achievable, conduct a comparative assessment of alternative options against the evaluation criteria
- Establish emerging recommendation, review with OPRED and stakeholders before formal submission



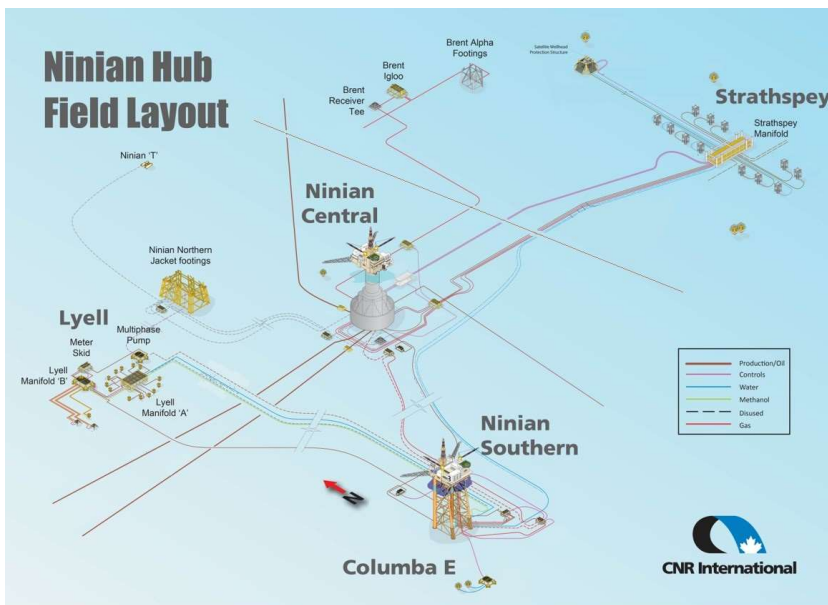
Source: OEUK Guidelines for Comparative Assessment in Decommissioning Programmes, 2015



Subsea Infrastructure Decommissioning

Jonathan Hoare

Subsea Infrastructure – Decommissioning Scope (1)



Subsea infrastructure to be covered by separate Decommissioning Programmes

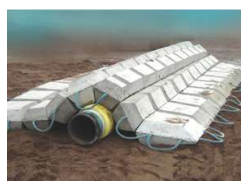
Removal / remediation of subsea infrastructure, excluding:

- Items already decommissioned in-situ (Ninian Northern jacket footings)
- 3rd party infrastructure



Subsea Infrastructure - Decommissioning Scope (2)

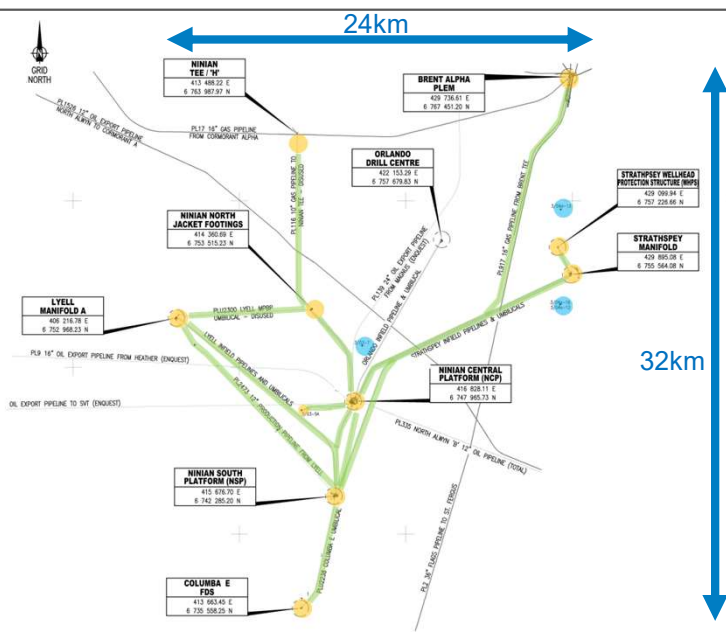
- Permanent abandonment of subsea wells
- Removal of subsea structures / installations
- Removal of surface laid pipelines, umbilicals, spools
- Removal / partial removal & remediation of trenched / buried pipelines or large diameter trunk pipelines
 - Determined by outcomes of Comparative Assessment.
- Removal of stabilisation features
 - Mattresses, grout bags etc.
- Removal of oil and gas related debris in platform 500m Safety Zone and pipeline corridors
- Seabed clearance verification



Ninian Hub Subsea Decommissioning

- Subsea field / 500m Safety Zone decommissioning activity (includes P&A)
- Subsea E&A wells (P&A activity)
- Subsea pipeline corridor decom

- 35 subsea wells (including 4 E&A wells)
- 29 subsea structures (~5700te total)
- ~200km of surface-laid pipelines / umbilicals
- ~300km of trenched / buried pipelines
- ~1400 concrete mattresses





Forward Engagement

Carol Barbone

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Going Forward: Next Steps

Engagement Opportunity	How/When/Who	When
Immediate Queries and Comments	Evaluation Form at the end of this session	Today
Facilitators' Report on Workshop - including responses to unanswered questions	To be shared for comment and active follow up	Issued late June
Stakeholder Meetings - responses to requests, other opportunities	As needed and/or requested by stakeholders	Ongoing
Environmental Scoping Report Consultation	Written comments to CNRI if not made today	By 31 May 2025
Comparative Assessment Emerging recommendations / workshop	Share with all stakeholders and invite participation	tbc
Draft Decommissioning Programmes with Supporting Documents - Consultations	Statutory and Public Consultations – via CNRI; Regulatory Consultations – via OPRED	Topsides: late July CGBS: tbc
Ninian Hub Decommissioning Web Resources	...and new site coming soon	Ongoing

via Carol.Barbone@cnri.com

CNR International

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