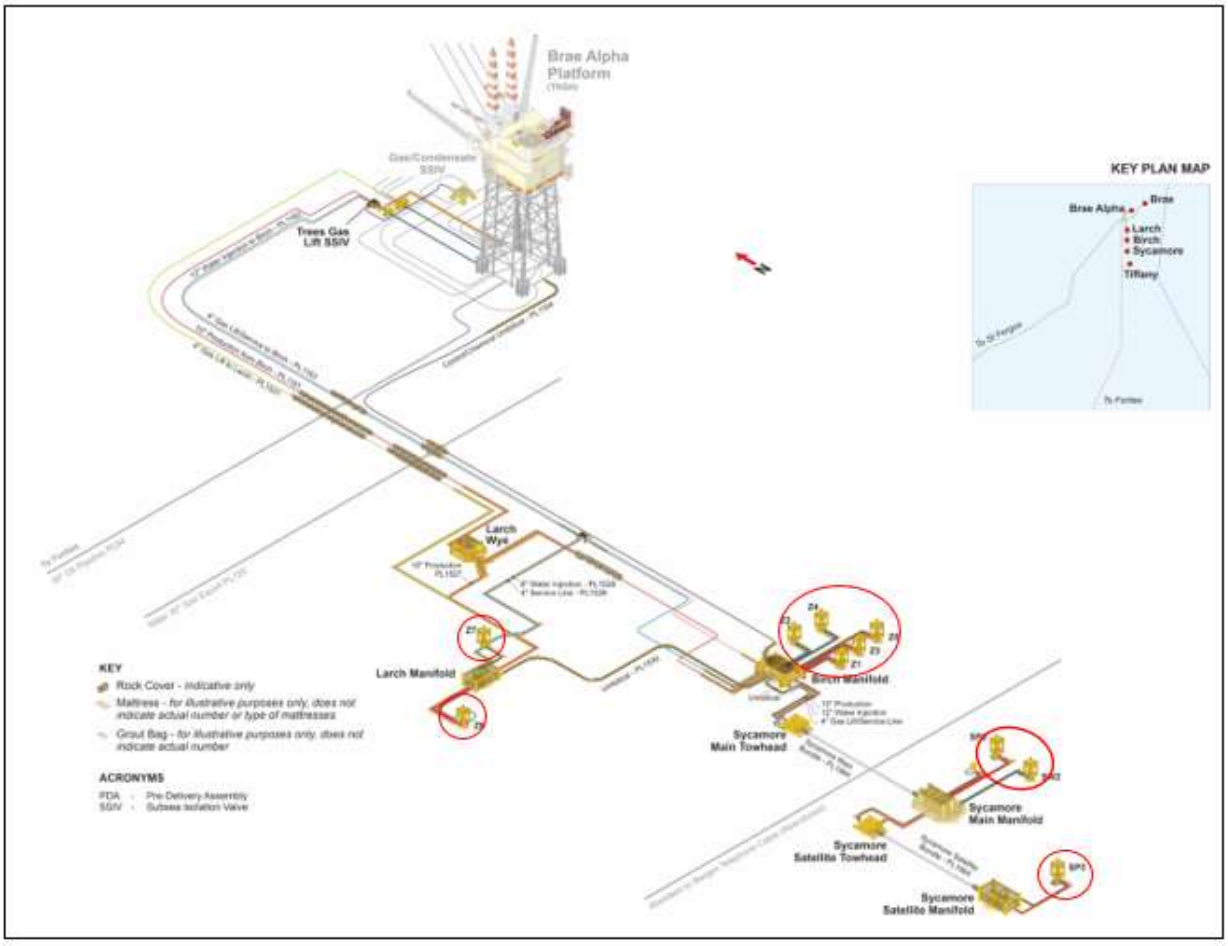
Trees Protection Cages (Birch, Larch and Sycamore) Close Out Report



30 January 2026

SPIRIT ENERGY

DOCUMENT CONTROL

Document ID:		TREEDC-SPT-Z-0000-REP-0001	
Document Classification:		PUBLIC	
Document Ownership:		Decommissioning	
Date of Document:	01/08/2024	Signature	Date
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REVISION RECORD

Revision No.	Date of Revision	Reason for Issue
A1	04/11/2024	Issued to OPRED for review and comment
A2	07/03/2025	Issued in response to OPRED comments
C1	12/12/2025	Issued following conductor removal technical note review
C2	30/01/2026	Issued following consultee comments

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FIGURES AND TABLES

TABLE OF TERMS AND ABBREVIATIONS

ABBREVIATION	EXPLANATION
DP	Decommissioning Programme(s)
LWIV	Light Well Intervention Vessel
n/a	Not Applicable
NSTA	North Sea Transition Authority
OEUK	Offshore Energies UK
OPRED	Offshore Petroleum Regulator for Environment and Decommissioning
P&A	Plug and Abandon
PON	Petroleum Operations Notification
PWA	Pipeline Works Authorisation
SEPA	Scottish Environment Protection Agency
SFF	Scottish Fishermen's Federation
UKCS	UK Continental Shelf
XT	Xmas Tree

1. SUMMARY

1.1 Summary of Decommissioning Programmes

This document is the close out report for the Decommissioning Programmes for the Trees Protection Cages.

The Trees development is located in UK Central North Sea block 16/12a (Licence P.212), comprising of Birch, Larch, Sycamore Central and Sycamore South – in water depths around 125m. The field is owned and operated by Spirit Energy and is approximately 215km North East of Peterhead. In order to facilitate well decommissioning activity, the protection cages were required to be recovered with the Xmas Trees (XTs), as these are integrated structures. There was no requirement for cutting subsea as the cages are an integral part of the XT.

Pipelines, bundles, manifold structures and stabilisation materials are not being decommissioned at this time. The decommissioning of these items was not part of the scope to remove the integral protection cages as this will be undertaken in a separate future campaign. Flushing of pipelines will also be undertaken as part of a future campaign. In order to enable the XTs to be recovered, tie-in spools at the wells were taken out of use and disconnected under a Pipeline Works Authorisation (PWA), this scope was undertaken by Light Well Intervention Vessel earlier in 2023.

The Decommissioning Programmes underwent Statutory Consultation between 27 June 2023 and 11 July 2023, and were approved by the Offshore Petroleum Regulator for Environment and Decommissioning (OPRED) 26 February 2024.

Key elements of the Decommissioning Programmes are summarised below:

- Protection cages integral to 5 x XTs at the Birch field.
- Protection cages integral to 2 x XTs at the Larch field.
- Protection cages integral to 3 x XTs at the Sycamore field.

The activities covered under this programme included removal of the XTs at the same time as these are integrated with the protection cage. Also included are removal of the wellheads as part of full well plug and abandonment of these fields.

One Sycamore well (16/12a-25 (SP1)) was never produced from, and abandonment was completed Q4 2022. The wellhead and flowbase were recovered, however as these are not subject to notices under Section 29, it was included in the decommissioning programme for information only.

A summary of the scope is presented in Table 1.1.3 below.

Table 1.1.1: Overview of Decommissioned Installations in the Approved DP

Field	Subsea Installation Type	Number	Weight (Te)
Birch	XT with integrated protection cages	5	126
Larch	XT with integrated protection cages	2	50
Sycamore	XT with integrated protection cages	3	76

Table 1.1.2: Overview of Wells in the Approved DP

Field	Type	Number
Birch	Wells (Subsea)	5
Larch	Wells (Subsea)	2

Table 1.1.2: Overview of Wells in the Approved DP		
Sycamore	Wells (Subsea)	3

Table 1.1.3: Summary of the Approved Decommissioning Programmes	
Type	**Selected option**
1. Subsea installations	Complete removal and recycling onshore.
2. Wells	The wells will be plugged and abandoned to comply with HSE "Offshore Installations and Wells (Design and Construction, etc.) Regulations 1996" and in accordance with the latest edition of OEUK Guidelines for the Abandonment of Wells.

1.2 Schematic of Installation(s) Being Decommissioned (from the approved DP)

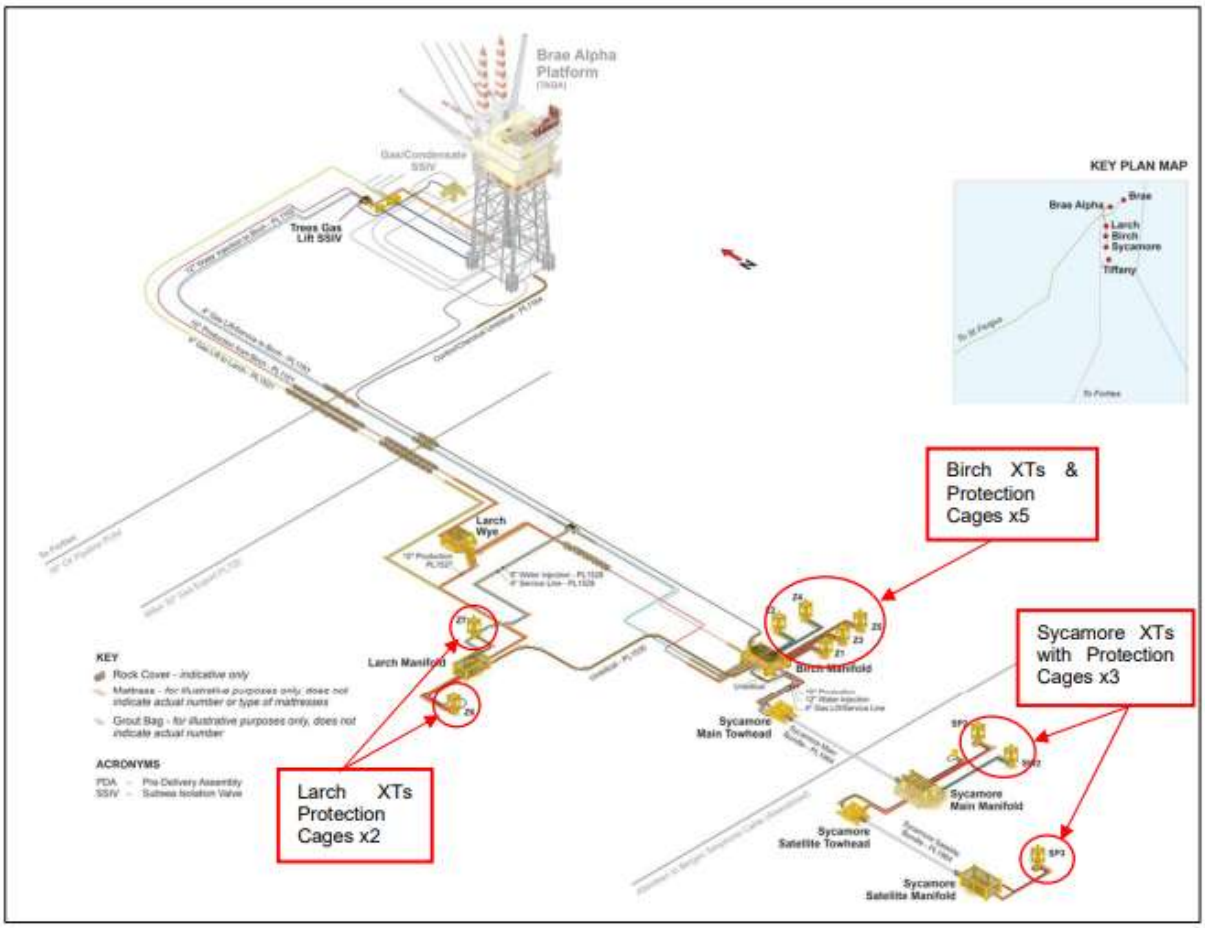

Figure 1.2.1: Scope of Decommissioning Programmes

1.3 Gantt Chart

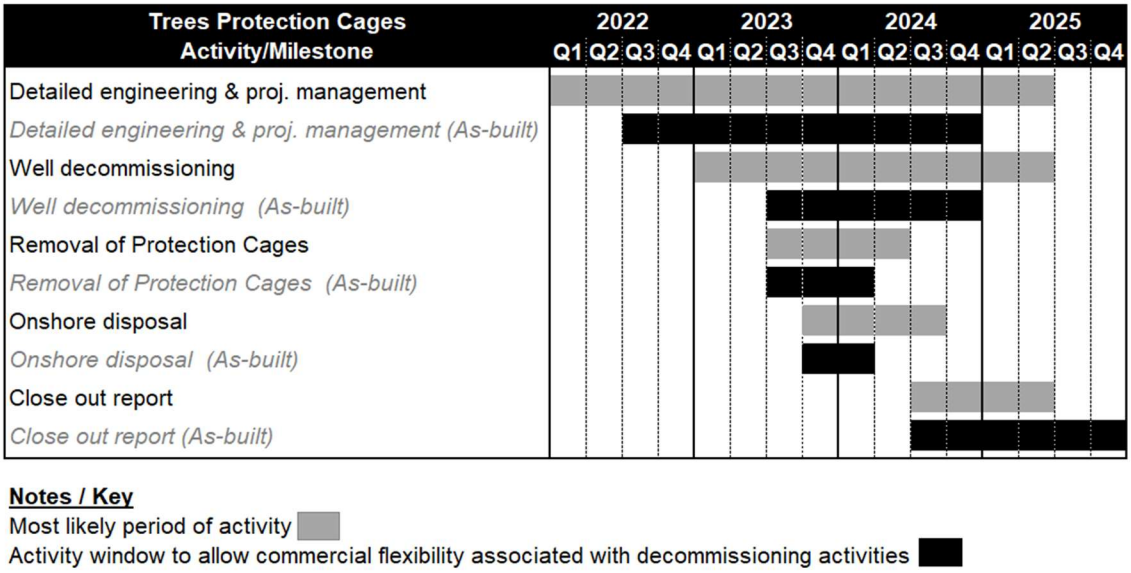

Figure 1.3.1: Gantt Chart of original c/w 'as-built' project plan

1.4 Associated Decommissioning Approvals

No formal amendments were made to the approved Decommissioning Programmes.

Table 1.4.1: Associated Decommissioning Approvals

Activity	Document	Approval	Completion Date
Disconnection of multiple tie-in spools at each area	PWA: 176/V/23 (Cat 2 Var)	20 July 2023	April 2023
	PWA: 138/V/23 (Cat 2 Var)	21 June 2023	July 2023
	PWA: 127/V/23 (Cat 2 Var)	12 June 2023	June 2023

NOTE

1. In order to enable the XTs to be recovered, tie-in spools at the wells were taken out of use and disconnected under a Pipeline Works Authorisation (PWA), this scope was undertaken by LWIV earlier in 2023.
2. Marine Licenses were not required for this scope as the protective cages and associated trees were not on the seabed.

2. DECOMMISSIONING ACTIVITIES

2.1 Contracts awarded

Table 2.1.1: Contracts awarded

Activity	Award date	Contractor
Well decommissioning including removal of protection cages	Q4, 2022	Wellsafe

2.2 Well P&A

Table 2.2.1: Well Decommissioning			
Well	**Designation**	**Status (Date of Abandonment)**	**Category of Well**
16/12a-8 (Z1)	Oil production	Decommissioned (December 2024)	SS-0-0-0
16/12a-18z (Z3)	Oil production	Decommissioned (December 2024)	SS-0-0-0
16/12a-21 (Z5)	Oil production	Decommissioned (December 2024)	SS-0-0-0
16/12a-15 (Z2)	Water Injection	Decommissioned (December 2024)	SS-0-0-0
16/12a-22 (Z4)	Water Injection	Decommissioned (December 2024)	SS-0-0-0
16/12a-23 (Z6)	Oil production	Decommissioned (December 2024)	SS-0-0-0
16/12a-24z (Z7)	Water Injection	Decommissioned (December 2024)	SS-0-0-0
16/12a-25 (SP1)	Oil production	Decommissioned (December 2024)	SS-0-0-0
16/12a-14z (SP2)	Oil production	Decommissioned (December 2024)	SS-0-0-0
16/12a-17z (SP3)	Oil production	Decommissioned (December 2024)	SS-0-0-0
16/12a-26 (SW2)	Water Injection	Decommissioned (December 2024)	SS-0-0-0

NOTES

1. For details of well categorisation please refer the latest version of the OEUK Guidelines for the Decommissioning of Wells.
2. NSTA guideline: https://www.nstauthority.co.uk/media/8246/nsta-wons-guide_final_accessible_3006.pdf

2.3 Well 16/12a-8 Conductor Removal

All conductors were recovered to greater than 10 feet below seabed, with exception of well 16/12a-08 (Z1). On this well, the wellhead, conductor, and casings from the initial cut at 12.47ft below seabed could not be pulled due to the presence of a near seabed extended cement zone at approximately 12ft below seabed. To allow a cut to be carried out away from this extended area of cement, a contingency cut was proposed at a minimum of 5ft below seabed. The cut was eventually undertaken at 5.41ft (1.6m) below seabed and the wellhead, conductor and casings were recovered. A technical note was issued to OPRED and accepted on 18th July 2025. The WONS AB3 was accepted by NSTA on 25th September 2025.

2.4 Results of Post Decommissioning & Environmental Surveys & Debris Clearance

The approved Decommissioning Programme covered removal of the protection cages that are integral to the XTs undertaken as part of the Trees well decommissioning campaign. At completion, an as-left survey was carried out. Any items remaining *in-situ* until final decommissioning will be monitored and appropriate mitigation put in place, i.e. subsea safety zones will remain in place until the 500m zone is clear of any debris that may pose a hazard to other users of the sea. Post decommissioning & environmental surveys (where required) and debris clearance will be conducted as part of the wider Trees field decommissioning, in agreement with OPRED.

2.5 Key milestones

Table 2.5.1: Key milestones	
Activity	**Completion date**
Well intervention scopes	October 2023
Removal of protection cages	March 2024
Well decommissioning including issuing of end of well report	December 2024
In order to enable the XTs to be recovered, tie-in spools at the wells were taken out of use and disconnected by Light Well Intervention Vessel.	

2.6 Stakeholder Engagement

Spirit Energy consulted with SFF in a meeting in March 2023. SFF had no adverse comments to make concerning the works. All operations were conducted within existing 500m safety zones.

SFF had no adverse comment on the DP provided the following points were taken into consideration. SFF noted that the Trees area overlaps with spawning and nursery grounds of some fish species and recommended activities be undertaken out with these periods so that activities do not adversely impact them. Spirit responded that nursery grounds are present throughout the year and that removal of the protection cages is undertaken as part of the overall well decommissioning, following which the area will be available for fishing to resume. SFF also suggested considering the minimum time required to undertake any activities in decommissioning schedule and to complete the decommissioning activities in a timely manner to allow the fishing activities resume on the development site as soon as possible post-decommissioning.

Spirit Energy consulted with OPRED and the NSTA on the Birch 16/12a-08 (Z1). Due to challenges in the field, the conductor could not be recovered to the required depth, and a Technical Note was prepared. The note was issued to both OPRED and NSTA as well as consultees for comment. Following review and update, AB3 sign off at the shallower cut depth was accepted by the NSTA.

3. IMPACT ON ENVIRONMENT

3.1 Activities

No environmental related incidents were recorded for the decommissioning activities.

3.2 Future monitoring

Following completion of the wider decommissioning scope including the pipelines, appropriate status surveys and environmental surveys will be completed with the findings being sent to OPRED in the close out report for the wider Trees infrastructure.

4. IMPACT ON HSE

No safety related incidents were recorded for the decommissioning activities.

5. WASTE

Waste was dealt with in accordance with the Waste Framework Directive. The waste authorities such as SEPA were informed as part of the notifications process. The protection cages were fully recovered with all material being recycled, as indicated in Table 5.1.1.

Table 5.1.1: Materials/Waste Returned to Shore

Material/Waste	Total Weight (t) – as per the approved DP[1]	Tonnage In situ	Tonnage to shore (including date)	Disposal Method
Steel	233.1	0	269.5 (Q1, 2024)	Recycled
Other (non-ferrous, plastic/ rubber)	18.9	0	0	N/A

[1] Approved DP detailed approximate weights based upon design drawings, actual tonnage to shore is from the calibrated weighbridge at the waste receiver's site.

Table 5.1.1: Materials/Waste Returned to Shore				
Material/Waste	Total Weight (t) – as per the approved DP[1]	Tonnage In situ	Tonnage to shore (including date)	Disposal Method
Total	252	-	269.5	

Table 5.1.2: Re-use, recycle & disposal aspirations for recovered material			
Inventory	Re-use	Recycle	Disposal (e.g., Landfill)
Protection Cages	0%	100%	0%

All waste was disposed of to John Lawrie Aberdeen (Montrose), Forties Road Ind Estate, Montrose DD10 9ET (licence number: WML/E/0000210).

6. LESSONS LEARNED

6.1 Lessons learned

Table 6.1.1: Lessons learned		
Lesson	Root cause	Positive or negative?
Offline preparation maximised while moving rig between well locations.	Recognition that additional preparations can be undertaken to aid efficiency of rig moves whilst moving between well locations.	Positive
Helix Seawell confirmed all well orientations and headings for WellSafe Defender rig operations.	Optimisation of Helix Seawell operations for future rig operations.	Positive
Use of hot rig for Trees campaign as campaign immediately followed Chestnut P&A campaign – increased efficiency of operations.	Integrated contract strategy for rig selection.	Positive
Consistency of both onshore and offshore project team throughout WellSafe Defender P&A campaign.	Efficiencies recognised in maintaining project team throughout P&A campaign.	Positive
Importance of engagement with OPRED and NSTA to document technical note requirements and enable AB3 status to be achieved where there are issues with final depth (well 16/12a-8).	Regular engagement with both OPRED and NSTA on operational challenges and technical note requirements.	Positive

7. COST SUMMARY

Costs provided separately to OPRED in confidence.

8. PHOTOGRAPHS

8.1 Trees Protection Cages

Figure 8.1.1: Protection cage recovery using WellSafe Defender

Figure 8.1.2: Protection cages recovered to back deck of vessel

Figure 8.1.3: Protection cage recovered to quayside

9. APPENDICES

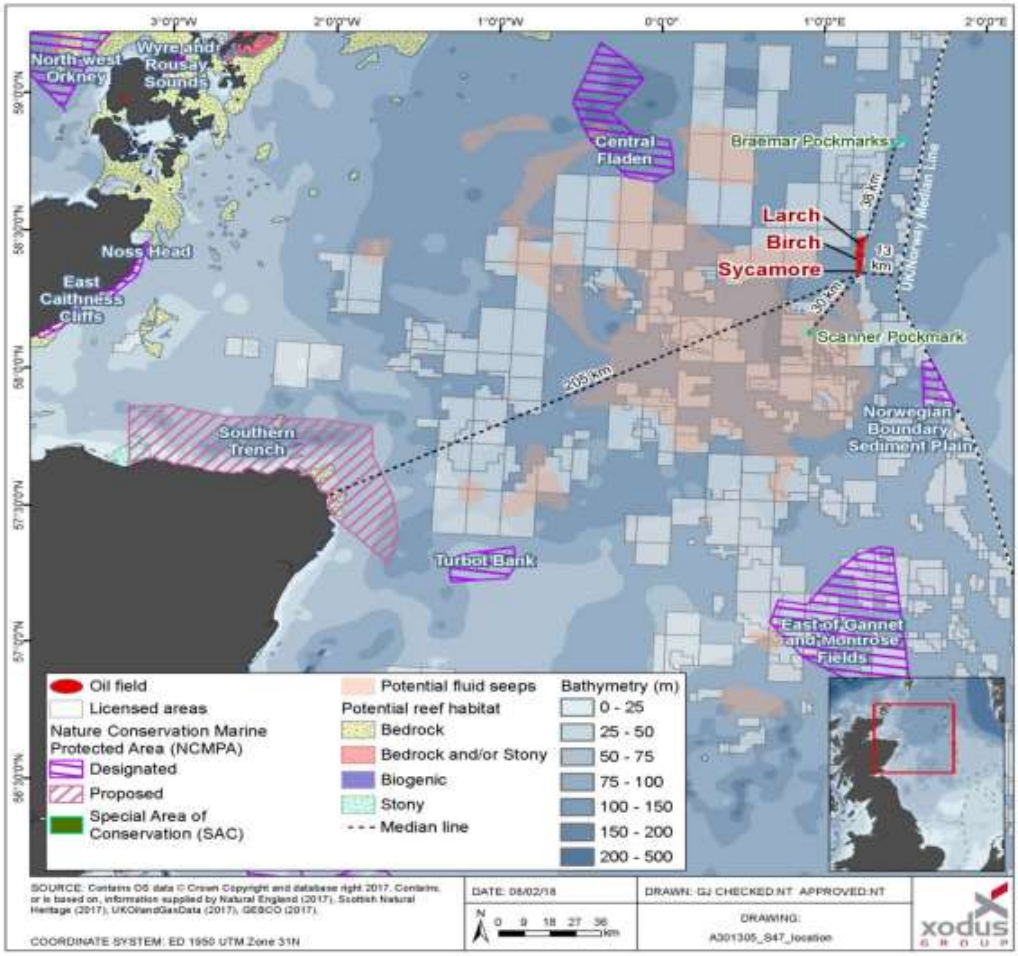

Figure 8.1.1: Field location in UKCS