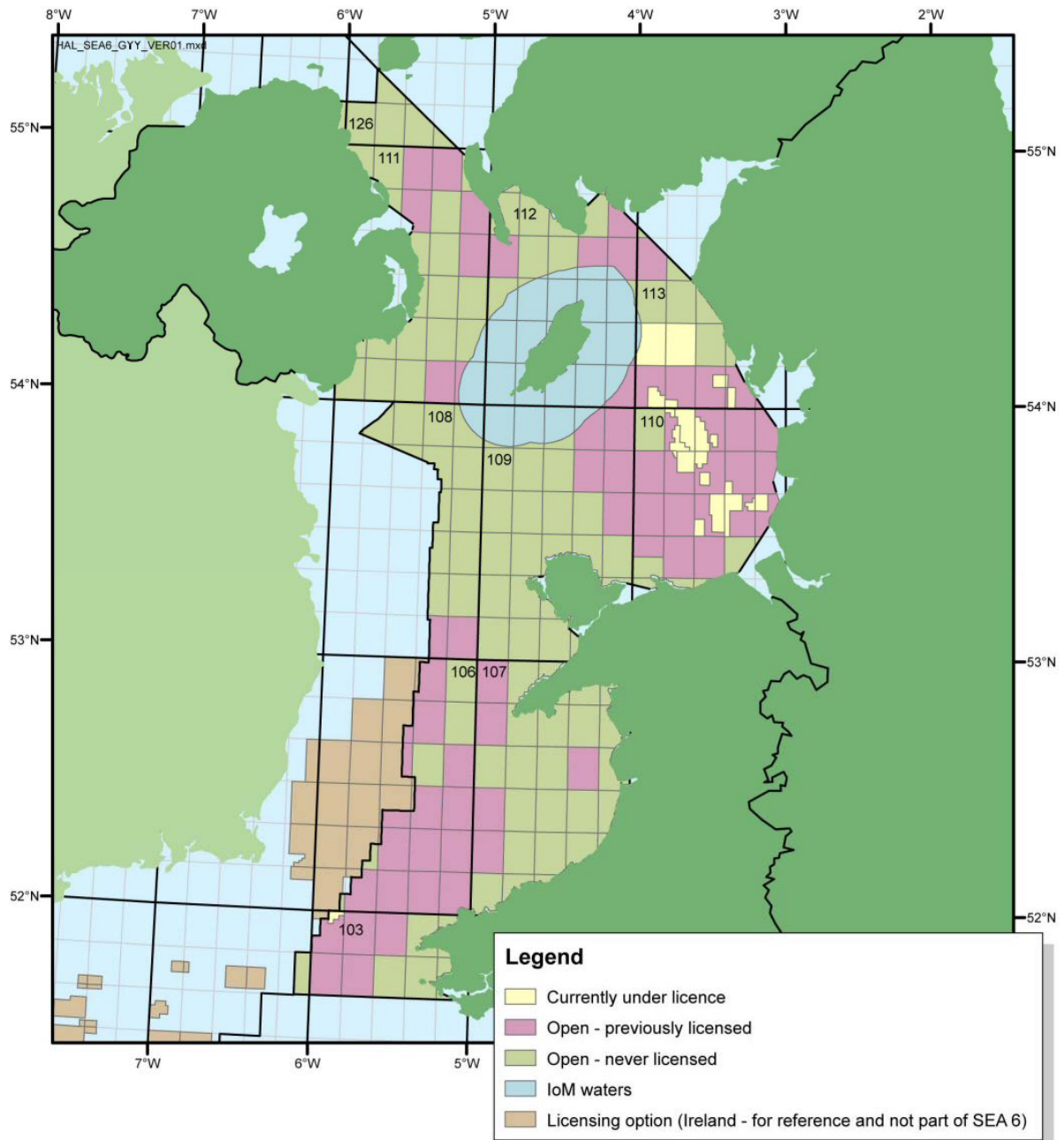


4 THE DRAFT PLAN AND ALTERNATIVES

4.1 Background

Blocks within the SEA 6 area were first offered for oil and gas licensing in 1965. Of the blocks within the area, 2 are currently wholly under licence, 13 are partly licensed and partly relinquished, 57 have been licensed but are now wholly relinquished - see Figure 4.1. Many blocks have been previously offered for licensing but have never been applied for.

Figure 4.1 – SEA 6 oil & gas licensing history and current status



4.2 Draft Plan and the alternatives

SEA 6 addresses all the Blocks within the area in terms of the implications of licensing for oil and gas exploration and development. Depending on the outcome of the SEA process and other Government considerations, all or a proportion of the unlicensed Blocks within the SEA 6 area and the re-offer areas (see Figures 1.2 and 1.3) may be offered for licensing in the 24th round.

Alternatives to the draft plan to offer blocks for Production Licence award in a proposed 24th Round have been identified as:

1. Not to offer any blocks for Production Licence award
2. To proceed with the licensing programme as proposed
3. To restrict the area licensed temporally or spatially

4.3 Potential activity following licensing in SEA 6 area

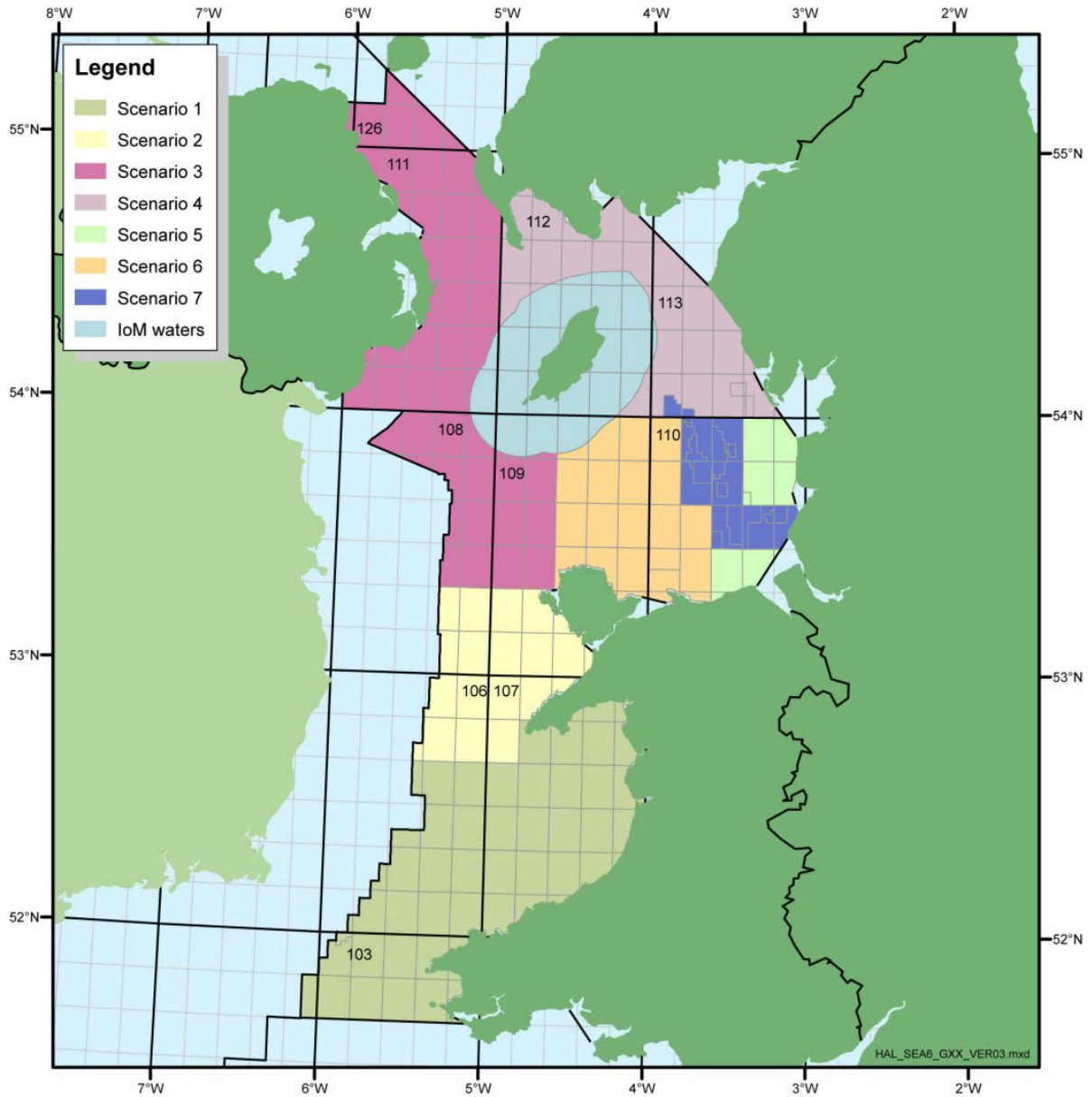
For commercial hydrocarbon resources to occur, a number of factors and features have to coincide. These include:

- The presence of source rocks, with an appreciable organic matter content
- Adequate depth of burial to allow the conversion of the organic matter to oil or gas through the action of temperature and pressure
- The presence of rocks with sufficient porosity to allow the accumulation of oil or gas
- Migration pathways to permit oil and gas formed in the source rocks to move to reservoir formations
- Cap or seal rocks to prevent the oil or gas from escaping from the reservoir rocks

Based on geological characteristics and potential for finding hydrocarbon reserves the SEA 6 area can be divided into 7 areas shown in Figure 4.2 overleaf:

1. Cardigan Bay & St George's Channel – Scenario area 1
2. Caernarfon Bay – Scenario area 2
3. West Irish Sea Basin – Scenario area 3
4. East Irish Sea Basin – Scenario area 4
5. Eastern Flanks of the Mature Irish Sea – Scenario area 5
6. Western Flanks of the Mature Irish Sea – Scenario area 6
7. Mature Irish Sea – Scenario area 7

Figure 4.2 – SEA 6 activity scenario areas



Note: Information sourced from www.og.dti.gov.uk

Both exploration and development activity levels and timing would depend on a range of factors including the number of blocks licensed, work programme commitments made by licensees, exploration success, economic and commercial factors, and Government approval of development plans.

The DTI have provided projections of the scale of potential exploration and production activity, which could follow licensing of the SEA 6 area. The projections are best estimates on the basis of current understanding and thus indicative. A summary of the prospectivity of each area is given below.

Cardigan Bay & St Georges Channel Basin - Scenario area 1

Prospectivity

There is a proven gas reserve in the St George's Channel area where an exploration well (Well 103/1-1, drilled in 1994) discovered gas in the Upper Jurassic sands. Other prospectivity has been demonstrated by oil and gas shows encountered at most stratigraphic levels in wells in the basin. However, it is possible that oil in shallower (<2500 ft) Jurassic reservoirs will be significantly biodegraded and that compaction and subsequent uplift of formations may have affected the integrity of the top seal formations. Studies indicate that the Lower Jurassic Lias Group mudstones are likely to be fully mature in the axial region of the St George's Channel Basin. Two wells in the St George's Channel have proved reservoir quality sandstones in the Middle Jurassic.

Potential activity under existing licences within the area

- Only an appraisal well in the gas discovery in Block 103/1 is likely in the near future
- If the appraisal well is successful further seismic may be required for field delineation and a development is possible

Scenarios for assessment of potential activity following future licensing

Licensing after SEA 6 will likely be dependent on the results of the appraisal well in Block 103/1. It is considered unlikely that further blocks will be applied for in this area during a 24th Round. For assessment purposes the following activity scenario will be used:

- A maximum of 10 blocks under Frontier licences
- Up to 500 km² 3D seismic data
- If licensed, a well could be drilled within 4 years of award on a Frontier licence

Caernarfon Bay – Scenario area 2

Prospectivity

The Westphalian Coal Measures are predicted to be widespread beneath the Caernarfon Basin and may have been mature for gas generation; however, neither of the two wells drilled in Caernarfon Bay encountered economic accumulations of oil or gas. Exploration Well 107/1-1 (drilled in 1992) proved the presence of basal Triassic Sherwood sandstone and the potential for Lower Permian Collyhurst reservoir.

Potential activity under existing licences within the area

- None

Scenarios for assessment of potential activity following future licensing

It is considered unlikely that further blocks will be applied for in this area during a 24th Round. For assessment purposes the following activity scenario will be used:

- A maximum of 10 blocks under Frontier licences
- Up to 500 km² 3D seismic data
- If licensed, a well could be drilled within 4 years of award on a Frontier licence

West Irish Sea Basin – Scenario area 3

Prospectivity

Large parts of the West Irish Sea Basin remain unexplored, but the few wells that have been drilled in the Solway and Peel basins did not encounter potential reservoirs or accumulations of oil or gas.

Potential activity under existing licences within the area

- None

Scenarios for assessment of potential activity following future licensing

It is considered unlikely that further blocks will be applied for in this area during a 24th Round. For assessment purposes the following activity scenario will be used:

- A maximum of 10 blocks under Frontier licences.
- Up to 500 km² 3D seismic data.
- If licensed, a well could be drilled within 4 years of award on a Frontier licence.

East Irish Sea Basin - Scenario area 4

Prospectivity

Structural closures in the Triassic Ormskirk Sandstone Formation of the Sherwood Sandstone Group provide the main target in the East Irish Sea Basin. The Permian Collyhurst Sandstone Formation forms a secondary target in the basin. The Collyhurst demonstrates close similarities with the Leman Sandstone of the Southern North Sea, which originally prompted exploration in the area, but no Permian production has been established in the area to date.

Triassic Ormskirk gas discoveries were made by exploration Wells 113/29-2 (1992) and 113/28-2 (1994). Another undeveloped gas discovery lies in Block 113/27, the well found an accumulation in the Permian Collyhurst, but the primary Triassic Helsby reservoir did not flow. Further prospectivity in the area has been identified by the British Geological Survey (BGS).

Potential activity under existing licences within the area

- Field development plans for simultaneous gas and wind farm development of what is now called Ormonde North and South Fields are now under review. Ormonde will be a phased co-generation development. Phase 1 includes drilling and completion of production wells at Ormonde South (Block 113/29), installation of a removable gas turbine generator platform, a transformer hub platform and cable connected to the wind farm to be installed in Block 113/28a. Phase 2 includes drilling and completion of production wells at Ormonde North (Block 113/28) and relocation of the gas turbine generator platform from Ormonde South to Ormonde North. A number of alternative export routes are still being evaluated for gas and power
- An exploration well was drilled in Block 113/22 in 2005. No further seismic planned to be acquired

Scenarios for assessment of potential activity following future licensing

There may be some interest in Licences in this area with potentially one block being applied for under a Traditional Licence with a firm well and up to 200km² of 3D seismic. For assessment purposes in addition to the above the following activity scenario will be used:

- A maximum of 10 blocks under Frontier licences
- Up to 500 km² 3D seismic data
- If licensed, a well could be drilled within 4 years of award on a Frontier licence

Eastern Flanks of the Mature Irish Sea - Scenario area 5

Prospectivity

Triassic Ormskirk and Permian Collyhurst leads have been identified by the BGS, but they are poorly defined on 2D seismic data. Exploration Well 110/8a-5 encountered only minor amounts of oil and was not tested. The elongate north/south block structure could be re-licensed, appraised and if successful potentially tied back subsea to existing infrastructure.

Potential activity under existing licences within the area

- None

Scenarios for assessment of potential activity following future licensing

There may be some interest in Licences in this area with potentially two blocks being applied for under Traditional Licences with a firm well each and up to 500km² of 3D seismic. For assessment purposes in addition to the above the following activity scenario will be used:

- A maximum of 8 blocks under Frontier licences
- Up to 500 km² 3D seismic data
- If licensed, a well could be drilled within 4 years of award on a Frontier licence

Western Flanks of the Mature Irish Sea - Scenario area 6

Prospectivity

Numerous wells on the western flank of the mature Irish Sea basin have encountered potential reservoirs or accumulations of gas. The 110/12a-1 well encountered a small gas column in Triassic Ormskirk reservoir. Shows were encountered in the 112/30-1 well at Carboniferous level; however the presence and deliverability of Carboniferous reservoirs are unproven. The BGS has identified Triassic Ormskirk prospectivity that could be developed as subsea tie backs to existing infrastructure.

Potential activity under existing licences within the area

- None

Scenarios for assessment of potential activity following future licensing

Very limited interest is expected in this area. For assessment purposes in addition to the above the following activity scenario will be used:

- A maximum of 10 blocks under Frontier licences
- Up to 500 km² 3D seismic data
- If licensed, a well could be drilled within 4 years of award on a Frontier licence

Mature Irish Sea - Scenario area 7

Prospectivity

Established production and identified prospectivity is found in the Triassic Ormskirk reservoir, and currently there is limited ullage in existing facilities. The 110/14-1 well encountered oil, but further appraisal is required. Additional exploration prospectivity is identified in structurally complex traps.

Potential activity under existing licences within the area

- Calder field began production in 2004 and phase 2 development will include Crossans and Darwen fields
- An appraisal well of the 110/14-2 gas discovery will be drilled in Block 110/9c in 2005.
- Exploration drilling in Block 110/14 may progress in 2005
- There may be an appraisal well of the oil discovery 110/14-1. A vertical well would be necessary to confirm the interpretation, but development could be via a long offset well from the Lennox platform until the Lennox field oil is depleted and the oil pipeline is converted to a gas pipeline
- There are no current plans for seismic acquisition. However, there are only three 3D proprietary (but now released) seismic surveys in the mature fields area, acquired in 1994/5. It is likely that new seismic will be acquired in the next 5 years to delineate infield and near field potential (250-500 km² 3D seismic)

Scenarios for assessment of potential activity following future licensing

There may be some interest in Licences in this area. For assessment purposes in addition to the above the following activity scenario will be used:

- A maximum of the remaining unlicensed whole or part blocks applied for under a Frontier or Promote licence
- Up to 500 km² 3D seismic data
- If licensed, a well could be drilled within 4 years of award on a Frontier or Promote licence

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