NORTH FALLS

Offshore Wind Farm

Appendix to the Applicant's Response to Secretary of State's Request for Information

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2. Applicant's Response Regarding Worst-Case Scenarios in the Environmental Statement and the Habitats Regulations Assessment

2.1 Worst case scenario ports (Ref 20)

2.1.1 This document provides the Applicant's response to the Secretary of State's request for further information dated 26 November 2025, Paragraph 20 which states:

> Paragraph 20: *"Noting that no final decision has been made on the location of the ports that will service the Proposed Development, the Applicant is requested to clarify how the relevant Environmental Impact Assessment ("EIA") and Habitat Regulations Assessment ("HRA") topics / documents suitably account for the worst-case scenario, as is noted in Appendix B of REP6-027."*

2.1.2 Table 2.1 outlines the approach to assessing ports for each offshore chapter of the North Falls ES and RIAA. The approach taken by the Applicant is consistent with that of consented UK offshore wind farms, such as the recently consented Morecambe offshore wind farm.

2.1.3 With regards to potential onshore effects associated with the final port(s), works within the port are anticipated to be within the port's permitted development rights and are therefore beyond the scope of the North Falls EIA. With regards to effects associated with traffic and transport to/from the port, the Applicant's ES outlined the rationale for scoping out onshore effects arising from the offshore construction, operation and decommissioning activities], as was agreed with both Essex County Council (as the local highway authority) and National Highways (responsible for the Strategic Road Network) (see Appendix 27.4 Traffic and Transport Consultation [APP-168]). However, comments were raised by Suffolk County Council as the neighbouring local highway authority on the matter and the matter was examined by the ExA in detail as part of the first Examiners Questions (ExQ1s) (Q17.1.1) [REP2-020] and the first Issue Specific Hearing (ISH1), section 3.3 [REP4-026].

2.1.4 In response to the ExQ1s and ISH1 the Applicant provided explanation and included further detail along with salient examples of the approach taken and where this has been accepted by the Secretary of State for multiple recently consented offshore windfarms. In particular, the Applicant explained the two routes to securing the necessary permissions and ensuring the environmental impacts are assessed. These include:

- Option A being that a preferred port is selected which has the requisite planning permissions to enable the delivery of the project. Under Option A, the Applicant would work within existing permissions, including considerations given to, or restrictions on, traffic and transport matters and associated effects such as air quality and noise.

- Option B is a port is selected where permissions are not currently in place and new permissions would be granted or need to be sought and then granted. Option B would mean that transport matters and associated effects would be considered as part of the new application for permission.

2.1.5 During the ISH1 [REP4-026] the Applicant was also able to provide examples of how this process has worked practically for other base ports along with clarifications of the low levels of traffic that can be expected. Following ISH1 Suffolk County Council confirmed agreement with the approach as outlined in the final Statement of Common Ground [REP8-068].

For all offshore ornithology receptors the worst-case scenario, including in respect of port location, is addressed in the EIA and HRA. The final location of ports and confirmed vessel routes is only of relevance to red-throated diver at the Outer Thames Estuary SPA. However, the worst-case scenario assessment for red-throated diver takes account of the ports optionality and considered the embedded mitigation set out in the Protocol for Reducing Disturbance to Red-Throated Diver (Appendix B of the Outline Project Environmental Management Plan [Document reference 7.6]), which provides vessel disturbance mitigation of relevance to this species. Reflecting the Applicant's commitment to further reduce environmental effects below the levels concluded in the EIA and HRA, the Applicant has expanded the mitigation measures in Appendix B in response to this RFI, adding further precautionary margin to ensure the worst-case scenario would not be exceeded in respect of red-throated divers.

2.1.6 In conclusion, the realistic worst-case scenarios in respect of all topics has been robustly assessed in the EIA and HRA (as summarised in Table 2.1) and will not change on confirmation of the location of the ports to be used for delivery of the Project, including in terms of the route of vessels.

Table 2.1 Applicant's Response regarding worst case scenario assessment of ports

Chapter no.	Chapter Title	Ports/ vessels assessed	Applicant's rationale for the worst case scenario assessment
Environmental impact assessment (EIA)			
8	Marine Geology Oceanography and Physical Processes	x	Any works in the subtidal or intertidal areas of the final port(s) selected are beyond the scope of the North Falls EIA and if required, are anticipated to be within the port's permitted development rights. Vessel movements to and from the port(s) have no pathway for effect on these topics. Therefore, no assessment of a worst case port location is required. This is in accordance with the scoping report and scoping opinion.
9	Marine Water and Sediment Quality	x	
10	Benthic and Intertidal Ecology	x	
11	Fish and Shellfish Ecology	✓	Any works in the subtidal or intertidal areas of the final port(s) selected are beyond the scope of the North Falls EIA and if required, are anticipated to be within the port's permitted development rights. Vessel movements to and from port are assessed. It is noted that the quantum of North Falls vessels is relatively small in the context of existing vessel traffic in the Outer Thames Estuary region. As vessels move away from the offshore project area they will typically be incorporated within existing vessel routes (see also Section 2.2, Ref 2.5.3) and will therefore remain of negligible magnitude, regardless of the port location. On approach to the port(s), marine wildlife in these areas will already be accustomed to vessel traffic.
12	Marine mammals	✓	
13	Offshore Ornithology	✓	The worst case scenario during construction is based on the longest construction period and the maximum numbers of plant on site and operational at a given time; during operation it is based on the maximum numbers of plant on site and operational at a given time. For red-throated diver in the Outer Thames Estuary (OTE) Special Protection Area (SPA), embedded vessel disturbance mitigation is included in the Protocol for Reducing Disturbance to Red-throated Diver in Appendix B of the Outline Project Environmental Management Plan [Document reference 7.6, Rev 3] which applies during the core winter period, 1 November to 1 March. This states: '*There is potential for vessel traffic to disturb red-throated diver within the OTE SPA dependent upon the location of load-out and Operation and Maintenance ports. If the port locations result in vessel transits which cross the OTE SPA, the PEMP will include procedures to be adopted within vessel transit corridors to reduce disturbance to red-throated diver during construction, operation and maintenance activities*'. Port location is considered to be neutral in relation to assessments for all other offshore ornithology receptors.
14	Commercial Fisheries	✓	Any works in the subtidal or intertidal areas of the final port(s) selected are beyond the scope of the North Falls EIA and if required, are anticipated to be within the port's permitted development rights. Potential interference to commercial fishing associated with vessel movements to and from port are assessed in ES Chapter 14, including the potential for static gear being fouled by transiting vessels. Embedded mitigation, including a Code of Good Practice for contracted vessels, a Fisheries Liaison and Co-existence Plan, and a claims procedure for loss or damage to fishing gear will ensure the effects are not significant in accordance with the assessment conclusions, regardless of the port location.
15	Shipping Navigation	✓	Chapter 15 Shipping and Navigation and the supporting Navigation Risk Assessment have assessed the impact from project vessels in terms of impacts on port access and increased collision risk to third party vessels. Worst case assumptions have been made in terms of numbers of project vessels, peak numbers of return trips to port, and phase durations. Embedded mitigations to manage the impact on shipping and navigation include marine coordination for project vessels including entry/exit ports to site, application of the requirements of the Convention on the International Regulations for Preventing Collisions at Sea (COLREGS) and Safety of Life At Sea (SOLAS), promulgation of information, and the Navigation and Installation Plan (NIP). The exact routes that vessels will take to site will depend on the locations of the ports selected, however these mitigations will ensure the impact is managed regardless of ports used.
16	Offshore and Intertidal Archaeology and Cultural Heritage	x	Any works in the subtidal or intertidal areas of the final port(s) selected are beyond the scope of the North Falls EIA and if required, are anticipated to be within the port's permitted development rights. Vessel movements to and from the port(s) have no pathway for effect on archaeology. Therefore, no assessment of a worst case port location is required. This is in accordance with the scoping report and scoping opinion.
17	Aviation and Radar	x	Vessel movements and use of port facilities have no pathway for effect on Aviation and Radar. This is in accordance with the scoping report and scoping opinion.
18	Infrastructure and other users	✓	The assessment considers effects on ports, however port services will be secured through a contract agreement and as part of the procurement process, ports will need to demonstrate their capability to meet the demand for the required service. Therefore, no likely significant effects on port facilities are expected, regardless of the final selected location.
29	Seascape, Landscape and Visual Impact Assessment	x	Any works associated with the final port(s) selected are beyond the scope of the North Falls EIA and if required, are anticipated to be within the port's permitted development rights. Vessel movements in proximity to the port would be in areas of high existing vessel traffic. Therefore, no likely significant effects on port facilities are expected, regardless of the final selected location.

Chapter no.	Chapter Title	Ports/ vessels assessed	Applicant's rationale for the worst case scenario assessment
31	Socio-economics	✓	Any works associated with the final port(s) selected are beyond the scope of the North Falls EIA and if required, are anticipated to be within the port's permitted development rights. Use of a marshalling port outside of the Essex and Suffolk study areas during construction represents the worst-case scenario for economic value and employment benefits for all development scenarios. The realistic worst case scenario that the O&M port will be located either in Essex or Suffolk is assessed.
32	Tourism and Recreation	x	Any works associated with the final port(s) selected are beyond the scope of the North Falls EIA and if required, are anticipated to be within the port's permitted development rights with no pathway for likely significant effects on tourism and recreation.
33	Climate change	✓	A range of ports that were deemed to be suitable to support the Project were considered in the assessment. The selected local port in the greenhouse gas assessment for construction and operation and maintenance activities was the one situated at the furthest distance away from the site of the ports that were considered to be suitable. For some bespoke components of offshore infrastructure, a distance to a range of European ports was adopted in the assessment, depending on the type of material/ component, and the most likely source of origin in the supply chain.
34	Major accidents and Disasters	x	Any works associated with the final port(s) selected are beyond the scope of the North Falls EIA and if required, are anticipated to be within the port's permitted development rights.
Report to Inform Appropriate Assessment			
Part 2	Benthic Ecology (Annex I habitat in SACs and SPA supporting habitat)	x	Any works in the subtidal or intertidal areas of the final port(s) selected are beyond the scope of the North Falls HRA and if required, are anticipated to be within the port's permitted development rights. Vessel movements to and from the port(s) have no pathway for effect on benthic ecology. Therefore, no assessment of a worst case port location is required.
Part 3	Marine Mammals (Annex II Species)	✓	Any works in the subtidal or intertidal areas of the final port(s) selected are beyond the scope of the North Falls HRA and if required, are anticipated to be within the port's permitted development rights. Vessel movements to and from port are assessed. It is noted that the quantum of North Falls vessels is relatively small in the context of existing vessel traffic in the Outer Thames Estuary region. As vessels move away from the offshore project area they will typically be incorporated within existing vessel routes (see also Section 2.2, Ref 2.5.3) and will therefore remain of negligible magnitude, regardless of the port location. On approach to the port(s), marine wildlife in these areas will already be accustomed to vessel traffic.
Part 4	Part 4 Offshore Ornithology (Birds Directive Annex 1 and Migratory Species)	✓	As above for Chapter 13 Offshore Ornithology.

2.2 'Where Practicable' Mitigation (Ref 21)

2.2.1 This section provides the Applicant's response to the Secretary of State's request for further information dated 26 November 2025, Paragraph 21 which states:

> *"In response to NE's Deadline 8 Risks and Issues Log comments [REP8-099] and the use of terms such as "where practicable" in the Schedule of Mitigation [REP7- 004], the Applicant is requested to confirm that any mitigation which includes such caveat, and therefore may not be fully delivered, is considered in the assessed worst-case scenario."*

2.2.2 As explained below, the realistic worst-case scenarios as presented in the ES have either been determined without consideration of 'where practicable' mitigation or it has been concluded that the outcomes of the relevant assessments would not be influenced by 'where practicable' mitigation. 'Where practicable' mitigation typically represents the Applicant's commitment to further reduce environmental effects, either below the significance levels concluded in the EIA and HRA or with no change to the conclusions of the assessment. As the scope for such mitigation can only be adequately determined during post-consent detailed design once further information is available and/or whilst in the field during construction and/or operation and maintenance works, it can only be employed if practicable. Regardless of any such measures being practicable or not, the Applicant has assessed and presents to the Secretary of State the realistic worst-case scenario (based on best-available evidence) of the Project's impacts.

2.2.3 Table 2.2 provides an outline of how the worst case scenario has been assessed in relation to each reference to 'where practicable' mitigation in the Schedule of Mitigation.

Table 2.2 Applicant's Response regarding 'where practicable' mitigation

Schedule of Mitigation Ref	Document Reference	Environmental effect	Mitigation and monitoring commitments	Applicant's rationale for the worst case scenario assessment
2.1.1	Volume 3.1, Chapter 8 Marine Geology, Oceanography and Physical Processes	Increases in suspended sediment concentrations (SSC) and deposition of disturbed sediments to the seabed due to foundations and cable installation	Micro-siting will be used **where practicable** to minimise the requirements for seabed preparation prior to foundations and cable installation.	The assessment includes a worst case scenario for SSC and confirms the effect will not be significant. This mitigation would further reduce the effect.
2.1.6	Volume 3.1, Chapter 8 Marine Geology, Oceanography and Physical Processes	Morphological and sediment transport effects	Cables will be buried **where practicable**, minimising the requirement for cable protection measures and thus effects on sediment transport.	The assessment includes a worst case scenario for unburied cables and associated cable protection and confirms the effect will not be significant. This mitigation would further reduce the effect.
2.2.2	Volume 3.1, Chapter 9 Marine Water and Sediment Quality	Increases in SSC and deposition of disturbed sediments	Micro-siting will be used **where practicable** to minimise the requirements for seabed preparation prior to foundation and cable installation.	See 2.1.1
2.3.4	Volume 3.1, Chapter 10 Benthic and Intertidal Ecology	Damage to benthic habitats such as *Sabellaria* reef and/or Piddocks with Sparse Associated Fauna in Sublittoral Very Soft Chalk or Clay.	Pre-construction surveys will be undertaken to determine if Annex I [1] and/or Habitats of Conservation Importance (HOCI) [2] are present within the proposed wind turbine locations or offshore cable routes (offshore export cables, array cables and/or platform interconnector cables). Should any Annex I habitats or HOCI be identified in the proposed wind turbine locations and/or cable routes during the pre-construction surveys, micro-siting would be undertaken **where practicable**, to reduce the requirements for seabed preparation prior to foundation and cable installation and potential impacts to sensitive benthic species. In the case that *Sabellaria spinulosa* reef is identified, a *S. spinulosa* reef mitigation plan will be followed.	The assessment is based on a worst case scenario that HOCI such as piddocks will be affected and concludes that the effect will not be significant. This mitigation would further reduce the effect.
2.3.11	Volume 3.1, Chapter 10 Benthic and Intertidal Ecology	Potential for offshore export cables, platform inter-connector cable and array cables to produce electromagnetic fields (EMFs) that interfere with the behaviour of benthic species	The Applicant is committed to burying cables **where practicable** which reduces the effects of EMFs	The assessment considers a worst case scenario for unburied cables and associated EMF and confirms the effect will not be significant. This mitigation would further reduce the effect.
2.4.4	Volume 3.1, Chapter 11 Fish and Shellfish Ecology	Effect EMF on fish and shellfish species	The Applicant is committed to burying offshore cables **where practicable** to a target minimum burial depth of 0.6m. Cable burial reduces the strength of EMFs to which fish and shellfish species may be exposed as it constitutes a physical barrier, with fish and shellfish species not able to transit the immediate proximity of cables where EMFs are strongest.	
2.5.3	Volume 3.1, Chapter 12 Marine Mammals	Risk of vessel collision	Vessel movements, **where practicable**, will follow set vessel routes and hence areas where marine mammals are accustomed to vessels, in order to reduce collision risk. All vessel movements will be kept to the minimum number that is required to reduce any potential collision risk. Additionally, vessel operators will use best practice to reduce any risk of collisions with marine mammals.	A worst case assessment is provided without this additional mitigation and is concluded to be of negligible to minor significance (not significant). The additional mitigation is provided with the aim of further reducing the effect.
2.7.7	Volume 3.1, Chapter 14 Commercial Fisheries	Safety issues for fishing vessels	The Applicant is committed to burying offshore cables **where practicable** to a target minimum burial depth of 0.6m. Cable burial reduces potential interactions between fishing gear and cables. In addition, cable burial reduces the amount of hard substrate which may be required. Following industry good practice the Applicant will evaluate appropriate cable protection methods available for cables which cannot be buried to the target minimum depth of 0.6m.	Where it is not practicable to sufficiently bury cables, surface laid cable protection will be used. The impact of cable protection on commercial fisheries has been assessed based on the worst case scenario.
2.9.2	Volume 3.1, Chapter 16 Offshore and Intertidal Archaeology and Cultural Heritage	Direct (physical) impact to potential heritage assets	Avoidance **where practicable** of identified anomalies (A2s) by micro-siting of design	Ref 2.9.4 of the Schedule of Mitigation provides the mitigation, should avoidance not be possible: "*Further investigation of any identified anomalies (A2s) and previously recorded sites (A3s) that cannot be avoided by micro-siting of design and the application of either embedded mitigation (avoidance) or additional*

[1] As defined by Annex I of the Habitats Directive
[2] As defined by JNCC (2016) Review of the MCZ Features of Conservation Importance

Schedule of Mitigation Ref	Document Reference	Environmental effect	Mitigation and monitoring commitments	Applicant's rationale for the worst case scenario assessment
2.9.3	Volume 3.1, Chapter 16 Offshore and Intertidal Archaeology and Cultural Heritage	Direct (physical) impact to potential heritage assets	Avoidance by micro-siting **where practicable** of previously recorded sites that have not been seen in the geophysical data (A3s) and at which the presence of surviving material is considered unlikely	*mitigation*". This is assessed as a worst case scenario in ES Chapter 16 Offshore and Intertidal Archaeology and Cultural Heritage.
2.12.8	Volume 3.1, Chapter 19 Ground Conditions and Contamination	Soil management	A Soil Management Plan (SMP) which will form part of the CoCP, outlining the mitigation measures and good practice techniques which contractors would be obliged to comply with will be produced. Mitigation measures included within the SMP include: • Consider the weather conditions and whether it is appropriate to work for each soil type; • Store soil appropriately; • Ensure effective drainage systems are used during construction; • Reinstate drainage systems following construction; and • Reinstate and plant vegetation following completion of the construction works. The SMP sets out procedures for the appropriate handling of soils during the works, including: • Using a competent contractor for soil handling, storage and reinstatement under Defra (2009) Construction code of practice for the Sustainable Use of Soils on Construction Sites; • Storing topsoil adjacent to where it is stripped, **where practicable**; • Seeding of topsoil bund with clover mix to fix nutrients and keep the soil live, therefore limiting soil loss and requirement for significant inputs when reinstated; • Storage of the excavated subsoil separately from the topsoil, with sufficient separation to ensure segregation; • Handling of soils according to their characteristics; ○ Limiting mechanised soil handling in areas where soils are highly vulnerable to compaction during wet weather; • Restricting movements of heavy plant and vehicles to specified routes; and • Minimise excavation footprint as much as reasonably practicable. Measures set out in the Ministry of Agriculture, Fisheries and Food (MAFF) (2000) Good Practice Guide for Handling Soils and Defra's (2009) Construction Code of Practice for the Sustainable Use of Soils on Construction Sites would be adopted. Additionally, guidance from the Institution of Environmental Sciences (IES) (2020) Sustainable, Healthy and Resilient: Practice-Based Approaches to Land and Soil Management would also be used. Stockpiling of excavated materials during earthworks will be temporary in nature and will only be permitted in designated areas. These designated stockpiling areas will be located a minimum of 10m from any open watercourses **where practicable**.	The assessment is based on a worst case scenario whereby stripped soils could be stored anywhere within the Order Limits of the Project.
2.12.10	Volume 3.1, Chapter 19 Ground Conditions and Contamination [**APP-033**]	Groundwater quality and abstractions for water supply	A CoCP would include specific measures that are protective of controlled waters in relation to the storage of fuels, oils, lubricants, wastewater, and other chemicals during the works. This would include: • Storing all fuels, oils, lubricants, wastewater, and other chemicals in impermeable bunds with at least 110% of the stored capacity, with any damaged containers being removed from onshore project area. • Refuelling would take place in a dedicated impermeable area, using a bunded bowser. Biodegradable oils to be used **where practicable**. • Ensuring that spill kits are available on site at all times as well as sandbags and stop logs for deployment in case of emergency spillages.	The assessment is based on a worst case scenario whereby any fuel type for machinery could be used as part of the construction phase of the Project.
2.13.1	Volume 3.1, Chapter 20 Onshore Air Quality	Construction air quality effects arising from Non-Road Mobile Machinery (NNRM)	Mitigation measures specific to Non-Road Mobile Machinery (NRMM) are outlined within the Project's OCoCP submitted as part of the Project's DCO application and will be secured within the final CoCP submitted post-consent. NRMM and plant should be well maintained. If any emissions of dark smoke occur, then the relevant machinery should stop immediately, and any problem rectified. In addition, the following controls should apply to NRMM:	Paragraph 206 of Environmental Statement Chapter 20 Onshore Air Quality [APP-034] states: "*Defra technical guidance (Defra, 2022) states that emissions from NRMM used on construction sites are unlikely to have a significant impact and effect on local air quality where relevant control and management measures are employed, and a qualitative assessment of effects is sufficient for consideration of effects. The*

Schedule of Mitigation Ref	Document Reference	Environmental effect	Mitigation and monitoring commitments	Applicant's rationale for the worst case scenario assessment
			• All NRMM should use fuel equivalent to ultralow sulphur diesel (fuel meeting the specification within EN590:2004) **where practicable**; • All NRMM should comply with the appropriate NRMM regulations; • All NRMM would be fitted with Diesel Particulate Filters (DPF) conforming to defined and demonstrated filtration efficiency (load/duty cycle permitting); • The ongoing conformity of plant retrofitted with DPF, to a defined performance standard, should be ensured through a programme of onsite checks; and • Fuel conservation measures should be implemented, including instructions to (i) throttle down or switch off idle construction equipment; (ii) switch off the engines of trucks while they are waiting to access the site and while they are being loaded or unloaded and (iii) ensure equipment is properly maintained to ensure efficient fuel consumption. Consideration will also be given to the siting of NRMM within the working area. **Where practicable**, locating generators and plant at the greatest distance from receptors will reduce the potential for air quality effects.	*results of the qualitative assessment above demonstrates that intensive construction activities are unlikely to have a significant effect on local air quality with the implementation of the embedded mitigation measures detailed in Table 20.3.*" In light of the above Defra (2022) guidance, the choice of fuel will not influence the outcome of the assessment. With respect to the siting of generators and plant, the assessment has assumed that NRMM emissions originate from the closest point within the DCO boundary to sensitive receptors, therefore, the worst case scenario has been assessed.
2.13.3	Volume 3.1, Chapter 20 Onshore Air Quality	Construction dust effects upon sensitive receptors	The Project is committing to industry good practice dust management measures, as described below. Dust Management measures: • Develop and implement a Dust Management Plan (DMP) (this will form part of the CoCP), which may include measures to control other emissions, approved by the local authority. The level of detail will depend on the risk and should include as a minimum the highly recommended measures in this document. The desirable measures should be included as appropriate for the site. • Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken. • Make the complaints log available to the local authority when asked. • Record any exceptional incidents that cause dust and/or air emissions, either on- or off-site, and the action taken to resolve the situation in the logbook. • Hold regular liaison meetings with other high risk construction sites within 500m of the site boundary, to ensure plans are co-ordinated and dust and particulate matter emissions are minimised. It is important to understand the interactions of the off-site transport/deliveries which might be using the same strategic road network routes. • Undertake daily on-site and off-site inspection, where receptors (including roads) are nearby, to monitor dust, record inspection results, and make the log available to the local authority when asked. This should include regular dust soiling checks of surfaces such as street furniture, cars and windowsills within 100m of site boundary, with cleaning to be provided if necessary. • Carry out regular site inspections to monitor compliance with the DMP, record inspection results, and make an inspection log available to the local authority when asked. • Increase the frequency of site inspections by the person accountable for air quality and dust issues on site when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions. • Plan site layout so that machinery and dust causing activities are located away from receptors, as far as is possible. • Erect solid screens or barriers around dusty activities or the site boundary that are at least as high as any stockpiles on site. • Fully enclose site or specific operations where there is a high potential for dust production and the site is active for an extensive period. • Avoid site runoff of water or mud. • Keep site fencing, barriers and scaffolding clean using wet methods.	The assessment approach is to identify the highest level of risk associated with construction activities in relation to dust soiling, human health and ecological receptors without mitigation. This level of risk is then used to identify the necessary mitigation measures required, in order to result in an effect that is not significant. If the use of mains electricity or battery powered equipment is not practicable and the use of diesel or petrol powered generators are used instead, this will not influence the outcome of the overall assessment.

Schedule of Mitigation Ref	Document Reference	Environmental effect	Mitigation and monitoring commitments	Applicant's rationale for the worst case scenario assessment
			• Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site. If they are being re-used on-site cover as described below. • Manage stockpiles to prevent wind whipping. • Ensure all vehicles switch off engines when stationary – no idling vehicles. • Avoid the use of diesel or petrol powered generators and use mains electricity or battery powered equipment **where practicable**. • Impose and signpost a maximum-speed-limit of 15mph on surfaced and 10mph on unsurfaced haul roads and work areas (if long haul routes are required these speeds may be increased with suitable additional control measures provided, subject to the approval of the nominated undertaker and with the agreement of the local authority, where appropriate). • Produce a Construction Logistics Plan to manage the sustainable delivery of goods and materials. • Implement a Travel Plan that supports and encourages sustainable travel (public transport, cycling, walking, and car-sharing). Further details provided in ES Chapter 27 Traffic and Transport (Document Reference: 3.1.29). • Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g., suitable local exhaust ventilation systems. • Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate. • Use enclosed chutes and conveyors and covered skips. • Minimise drop heights from handling equipment and use fine water sprays on such equipment wherever appropriate. • Ensure equipment is readily available on site to clean any dry spillages and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods. • Avoid bonfires and burning of waste materials.	
2.13.6	Volume 3.1, Chapter 20 Onshore Air Quality	Construction dust effects upon sensitive receptors	**Trackout dust management:** • Use water-assisted dust sweeper(s) on the access and local roads, to remove, as necessary, any material tracked out of the site. • Avoid dry sweeping of large areas. • Ensure vehicles entering and leaving sites are covered to prevent escape of materials during transport. • Inspect on-site haul routes for integrity and instigate necessary repairs to the surface as soon as reasonably practicable. • Record all inspections of haul routes and any subsequent action in a site logbook. • Install hard surfaced haul routes **where practicable**, which are regularly damped down with fixed or mobile sprinkler systems, or mobile water bowsers and regularly cleaned. • Ensure there is an adequate area of hard surfaced road between the wheel wash facility and the site exit, wherever site size and layout permits. • Locate access gates at least 10m from receptors where possible.	The worst case scenario outlined in Table 20.9 in Chapter 20 Onshore Air Quality [APP-034] assumes haul roads are unpaved.
2.15.2	Volume 3.1, Chapter 22 Land Use and Agriculture	Temporary loss of agricultural land	**Wherever practicable**, access to severed land for farm vehicles and agricultural machinery will be maintained. Where necessary and feasible, crossing points would be discussed and agreed with landowners and occupiers by the Agricultural Liaison Officer (ALO) pre-construction. **Where practicable** and in order to reduce impacts on agricultural productivity, the planning and timings of works will be discussed with landowners and occupiers. An outline CoCP (Document Reference: 7.13) is being submitted with the DCO application, this includes appointment of an ALO and appropriate discussions to be had with landowners, which contractors would be obliged to legally comply with. Following construction, the Project will reinstate the surface of the affected land to a condition similar to that which existed prior to entry being taken, and as evidenced by a pre-entry schedule of condition.	The assessment of the temporary loss of agricultural land was based on the worst-case scenario set out in Section 22.3.2 of Chapter 22 Land Use and Agriculture [APP-036] and includes the incorporation of embedded mitigation set out in Section 22.3.3. In the vast majority of cases access to landowners land outwith the onshore project area has been discussed in advance with landowners and routes of access agreed. In practice, there may be some instances where circumstances change prior to construction, and the agreed route of access to severed land parcels is no longer available. This is the exception, and if it does occur would only account for a small, localised parcel of land. This therefore does not change

Schedule of Mitigation Ref	Document Reference	Environmental effect	Mitigation and monitoring commitments	Applicant's rationale for the worst case scenario assessment
			A Schedule of Condition will be undertaken prior to entry to assess the soil composition and depth of topsoil. Prior to construction, a SMP will be prepared along with a soil sampling survey. This information will be used during reinstatement to ensure the soils are returned to their former condition suitable for previous use. Contractors will abide by DEFRA's 2009 Construction Code of Practice for the Sustainable Use of Soils on Construction Sites PB13298 or latest relevant available guidance, ensuring the working area will be reinstated to its pre-existing condition as far as reasonably practical. Habitat reinstatement method statements will be implemented for all habitats reinstated following the completion of construction (including semi-improved grassland, hedgerows and arable field margins).	the worst case scenario assessed in Section 22.3.2 of Chapter 22 Land Use and Agriculture [APP-036]. Landowner liaison over the timings of works will be undertaken 'where practicable' as in some instances, such as emergency works, it will not be possible to discuss the timing of the works in advance, but in these instances liaison with landowners would occur as soon as possible to minimise the disruption. These instances would be rare and localised and not of sufficient scale to lead to significant disruption. Consideration of this disruption has been used in the worst-case scenario set out in Section 22.3.2 of Chapter 22 Land Use and Agriculture [APP-036].
2.15.4	Volume 3.1, Chapter 22 Land Use and Agriculture	Soil degradation	Mitigation measures to further reduce the effect of the construction activities include developing a SMP as part of the CoCP, secured through DCO Requirement, which will set out procedures for the appropriate handling of soils during the construction works, including: • Using a competent contractor for soil handling, storage and reinstatement under Defra (2009) Construction code of practice for the Sustainable Use of Soils on Construction Sites; • Storing topsoil adjacent to where it is stripped, **where practicable**; • Seeding of topsoil bund with clover mix to fix nutrients and keep the soil live, therefore limiting soil loss and requirement for significant inputs when reinstated; • Storage of the excavated subsoil separately from the topsoil, with sufficient separation to ensure segregation; • Handling of soils according to their characteristics; • Limiting mechanised soil handling in areas where soils are highly vulnerable to compaction during wet weather; • Restricting movements of heavy plant and vehicles to specified routes; and • Minimise excavation footprint as much as reasonably possible.	Storing of topsoil is proposed to be located adjacent to the cable trenches, as shown in Plate 5.20 of ES Chapter 5 Project Description [APP-019]. In this instance 'where practicable' is referring to instances where the layout of infrastructure within the construction swathe needs to be amended in order to microsite around features in the landscape (e.g. mature trees, etc.) during detailed design. This micrositing may result in the need to separate the topsoil bunds from the cable trench, but only for short distances and still within the cable swathe (i.e. not taken offsite). The topsoil would be stored and reused in accordance with Defra (2009) Construction code of practice for the Sustainable Use of Soils on Construction Sites. This process has been considered and assessed within the ES Chapter 22 Land Use and Agriculture [APP-036] worst case scenario.
2.16.2	Volume 3.1, Chapter 23 Onshore Ecology	Effect on ecological receptors	The EMP will include details of best practice for minimising impact to notable habitats and legally protected and notable species, including (but not limited to): • Avoid sensitive times of the year for construction activities, including: ○ Avoid undertaking vegetation removal during the bird nesting season (March – August inclusive, although weather dependent) **where practicable**. Where this cannot be achieved, a pre-construction check of all nesting habitat is required no more than 48 hours prior to removal. Should a nest be found, a buffer zone (minimum 5m) around the nest must be created, and no works must be undertaken within the buffer zone until the young have fledged. This mitigation also applies to suitable habitat for ground nesting birds. ○ Avoid undertaking above ground vegetation removal during the reptile active period (March – October inclusive) **wherever practicable** and avoiding undertaking below ground vegetation removal e.g. roots and coppice stools during the reptile hibernation period (November – February inclusive) **where practicable**. If not practicable, above ground vegetation identified as suitable to support reptiles removed during the reptile active period must be done so whilst adhering to a precautionary method of working (PMoW) for reptiles, supervised by a suitably qualified ecologist. A precautionary methodology for vegetation removal will involve cutting vegetation to a minimum height of 150mm, allowing reptiles to vacate the area as the habitat would be unsuitable for them at such a short vegetation height, allowing an ecologist to search for any reptiles, then once cleared further cutting can take place. For any reptiles found during construction, a suitable translocation area will be decided upon to re-release the reptiles away from construction activities.	Table 23.5 of Environmental Statement Chapter 23 Onshore Ecology (Volume 1, document 3.1.25) details the mitigation measures embedded into North Falls design, including these listed best practice measures for minimising impact to notable habitats and legally protected and notable species. For the best practice measures imposed "*where practicable"*, namely avoiding vegetation removal during nesting bird season (March – August, inclusive), during the reptile active period (March – October, inclusive) and removal of below ground vegetation during the reptile hibernation period (November – February, inclusive), the Project's worst case scenario has been based on the subsequent text of each of these bullet points which offers an alternative solution to avoiding such periods. These alternative solutions used for the worst-case scenario set out in Table 23.5 include: • In relation to avoiding breeding bird season the applicant states "w*here this cannot be achieved, a pre-construction check of all nesting habitat is required no more than 48 hours prior to removal. Should a nest be found, a buffer zone (minimum 5m) around the nest must be created, and no works must be undertaken within the buffer zone until the young have fledged. This mitigation also applies to suitable habitat for ground nesting birds*." • In relation to vegetation removal during both the reptile active and hibernation seasons the applicant states "*if not practicable, above ground vegetation identified as suitable to support reptiles removed during the reptile active period must be done so whilst adhering to a precautionary method of working (PMoW) for reptiles, supervised by a suitably qualified ecologist. A precautionary methodology for vegetation removal will involve cutting vegetation to a minimum height of 150mm, allowing reptiles to vacate the area as the habitat would be unsuitable for them at such a short vegetation height, allowing an ecologist to*

Schedule of Mitigation Ref	Document Reference	Environmental effect	Mitigation and monitoring commitments	Applicant's rationale for the worst case scenario assessment

			• Undertaking pre-construction checks of all habitats identified of being of conservation importance prior to works, to ensure that the ecological constraints identified prior to consent have not changed.
			• Ensuring security lighting used during construction adheres as far as possible to accepted lighting guidance (Bat Conservation Trust (BCT) and Institute of Lighting Professionals (ILP), 2023), This will include the following measures:
			  ○ Ensure lighting is cowled and angled downwards and does not shine directly on sensitive habitats;
			  ○ Ensure lighting is motion activated to minimise unnecessary light spill;
			  ○ Ensure lighting is localised and limited during construction.
			• Ensuring industry good practice pollution prevention measures are adhered to at all times to minimise the risk of pollutant release to sensitive habitats.
			• Best Practical Means (BPM) to be employed during construction to limit dust, odour, and exhaust emissions during construction works, to reduce potential effects upon air quality-sensitive habitat.
			• All habitats temporarily disturbed during constricted are reinstated in full upon completion of construction.
			• A 20m standoff will be in place where works on the north side of the SSSI/LNR, to avoid direct impacts on the designated site during construction.
			• Protective fencing will be installed around retained UK Habitat of Principal Importance (UKHPIs).
			• A 15m buffer zone will be in place surrounding most areas of ancient woodland to avoid direct impacts during construction, except for Holland Mill Wood where this distance is not possible.
				search for any reptiles, then once cleared further cutting can take place. For any reptiles found during construction, a suitable translocation area will be decided upon to re-release the reptiles away from construction activities."

2.16.7	Volume 3.1, Chapter 23 Onshore Ecology	Effects on habitats	All habitats subject to temporary disturbance during construction, will be reinstated in full following the completion of construction. The specific details of the reinstatement will be set out within the EMP for each habitat. The following core principles for habitat reinstatement would be included within the EMP: **Grassland habitats** • All topsoil stripped in grassland areas would be stored separately and reinstated following the completion of construction. Topsoil storage would be subject to a Soil Management Plan (secured through a DCO Requirement), which would also detail measures for soil storage and handling. Grassland reseeding would be undertaken using a local seed mix, to be agreed in advance with Natural England and Essex Wildlife Trust. • **Where practicable**, harvesting a green hay crop from the grassland areas being lost will be carried out, for use as seed on the reinstatement and compensation areas. **Where practicable** the salvage of turves from grasslands areas being lost will be carried out for re-use on the reinstatement and compensation areas. **Trees and hedgerows** • As advised by Essex County Council during the Evidence Plan Process (EPP), all tree and shrub planting undertaken by NFOW will be subject to an up to 10 year after care period. • As advised by Natural England during the EPP, all hedgerows within the onshore project area not removed for construction to be allowed, **where practicable**, to thicken up during construction and operation to facilitate use as feeding and commuting corridors for wildlife. • All reinstated hedgerows will be replanted using locally important and native species, as advised by Essex Wildlife Trust. Pre-planting will be carried out **where practicable** so hedgerows and trees can establish as close as possible to the time of initial habitat loss. **Arable field margins** • Efforts will be made to reinstate this habitat, in consultation with Essex Wildlife Trust and the local landowner, to ensure the optimum benefits can be gained from each margin affected. Prior to construction, the arable field margins will be	Table 23.5 of Environmental Statement Chapter 23 Onshore Ecology (Volume 1, document 3.1.25) details the mitigation measures embedded into North Falls design, including these listed core principles for habitat reinstatement. For habitat reinstatement principles to be imposed "*where practicable*", it is assumed best practice guidance will be followed respective to each habitat to ensure full reinstatement is achieved. The worst-case scenario has been assessed on the assumption that full habitat reinstatement will be achieved post-construction that are temporarily disturbed, regardless of these measures.

Schedule of Mitigation Ref	Document Reference	Environmental effect	Mitigation and monitoring commitments	Applicant's rationale for the worst case scenario assessment
			re-surveyed to assess their conservation value. Attempts will then be made to ensure habitat reinstatement takes the form of one of the following (Joint Nature Conservation Committee (JNCC), 2008): ○ Cultivated, low-input margins (land managed specifically to create habitat for annual arable plants); ○ Margins sown to provide seed for wild birds (margins or blocks sown with plants that are allowed to set seed and which remain in place over the winter); ○ Margins sown with wild flowers or agricultural legumes and managed to allow flowering to provide pollen and nectar resources for invertebrates; ○ Margins providing permanent, grass strips with mixtures of tussocky and fine-leaved grasses. The precise nature of the reinstatement will be based on agreement with landowners made post-consent and detailed in the final EMP.	
2.16.19	Volume 3.1, Chapter 23 Onshore Ecology	Effects on hazel dormice	For the three hedgerows where small-scale hedgerow removal is required, the hedgerow is recommended to be cleared during the hibernation period (November to March inclusive) to avoid the risk of killing or injuring individuals during clearance works. In order to the mitigate the effects of habitat fragmentation, temporary hedgerows would be put in place across the gap during the active season (April to October inclusive. These temporary hedgerows would be taken down during the day to allow vehicles to use the haul road, and put back in place overnight when the dormice are active. They would consist of 'dead hedges', or containerised hedges, with the final proposed method being detailed within the EMP. **Where practicable**, additional feeding sites and nesting boxes would be installed in hedgerows and woodland edges outside of the onshore project area, to accommodate for any hazel dormice disturbed by noise (Bright, Morris and Mitchell-Jones, 2006).	The worst-case scenario for hazel dormice has been based on the firm additional mitigation measures set out in Environmental Statement Chapter 23 Onshore Ecology (Volume 1, document 3.1.25) Paragraphs 410 and 411 and has not included provision of additional feeding sites and nesting boxes. The practicability and quantum of such feeding sites and nesting boxes will be considered by the project post-consent based on the proposed updated pre-construction surveys.
2.18.1	Volume 3.1, Chapter 25 Onshore Archaeology and Cultural Heritage	Effects on onshore archaeological and cultural heritage features	The Project has submitted an Outline Onshore Written Scheme of Investigation (WSI) (Document Reference 7.12) as part of the Project's DCO application. This document will outline the strategy to undertake additional programmes of survey and evaluation post-consent and will include a range of likely mitigation options and responses to be utilised under various scenarios. The OWSI will be prepared in accordance with industry good practice guidance provided by the Chartered Institute for Archaeology (CIfA). Archaeological mitigation is envisaged to comprise a combination of the following recognised standard approaches: • Further advance and enacting of preservation in situ options and requirements (e.g., avoidance / micro-siting / HDD etc., **where practicable**); • Archaeological excavation: including subsequent post-excavation assessment, and analysis, publication and archiving; • Archaeological monitoring / watching brief: including subsequent post-excavation assessment, and analysis, publication and archiving (where appropriate); and Earthwork condition surveys: including subsequent reporting and archiving (followed by backfilling and reinstatement, where required on a case-by-case basis).	The assessment is based on a worst case scenario whereby all archaeological remains are required to be preserved by record, i.e. archaeological excavation or archaeological monitoring.
2.23.1	Volume 3.1, Chapter 30 Landscape and Visual Impact Assessment	Potential landscape effects during construction	North Falls has committed to seeking to use trenchless techniques **where practicable** at all key sensitive linear features, including: • All 'important' hedgerows and those hedgerows potentially suitable for supporting dormice or commuting / foraging bats; • Watercourses potentially suitable for supporting water voles / otters; • Veteran trees; • Woodland UKHPI; • Ponds UKHPI. At this stage in the Project's design, trenchless techniques cannot be committed to at all locations, where the engineering feasibility of using such techniques needs further assessment before it can be confirmed. The list of techniques being considered at each	The Landscape and Visual Impact Assessment (LVIA) is based on a worst-case scenario as set out in Table 30.2 of ES Chapter 30 [APP-044]. This includes both open trench and trenchless techniques, and specific assumptions were not made as to which technique would be used at any particular crossing. Therefore, the worst case has been considered.

Schedule of Mitigation Ref	Document Reference	Environmental effect	Mitigation and monitoring commitments	Applicant's rationale for the worst case scenario assessment
			crossing is described in Chapter 5 Project Description (Document Reference 3.1.7), Appendix 5.1 Crossing Schedule (Crossing Schedule 3.3.2).	
2.23.3	Volume 3.1, Chapter 30 Landscape and Visual Impact Assessment	Potential landscape effects during construction	All habitats subject to temporary disturbance during construction, will be reinstated in full following the completion of construction. The specific details of the reinstatement for each habitat will be set out within an Ecological Management Plan. This will be developed post-consent in line with the OLEMS (Document Reference 7.14). The following core principles for habitat reinstatement are included within the OLEMS: **Grassland habitats** • All topsoil stripped in grassland areas would be stored separately and reinstated following the completion of construction. Topsoil storage would be subject to a Soil Management Plan (secured through a DCO Requirement), which would also detail measures for soil storage and handling. Grassland reseeding would be undertaken using a local seed mix, to be agreed in advance with Natural England and Essex Wildlife Trust. • **Where practicable**, harvesting a green hay crop from the grassland areas being lost will be carried out, for use as seed on the reinstatement and compensation areas. **Where practicable** the salvage of turves from grasslands areas being lost will be carried out for re-use on the reinstatement and compensation areas. **Trees and hedgerows** • As advised by Natural England during the EPP, all hedgerows within the onshore project area not removed for construction to be allowed, **where practicable**, to thicken up during construction and operation to facilitate use as feeding and commuting corridors for wildlife. • All reinstated hedgerows will be replanted using locally important and native species, as advised by Essex Wildlife Trust. Pre-planting will be carried out **where practicable** so hedgerows and trees can establish as close as possible to the time of initial habitat loss. **Arable field margins** • Efforts will be made to reinstate this habitat, in consultation with Essex Wildlife Trust and the local landowner, to ensure the optimum benefits can be gained from each margin affected. Prior to construction, the arable field margins will be re-surveyed to assess their conservation value. Attempts will then be made to ensure habitat reinstatement takes the form of one of the following (JNCC, 2008): o Cultivated, low-input margins (land managed specifically to create habitat for annual arable plants); o Margins sown to provide seed for wild birds (margins or blocks sown with plants that are allowed to set seed and which remain in place over the winter); o Margins sown with wildflowers or agricultural legumes and managed to allow flowering to provide pollen and nectar resources for invertebrates; o Margins providing permanent, grass strips with mixtures of tussocky and fine-leaved grasses. The precise nature of the reinstatement will be based on agreement with landowners made post-consent and detailed in the final EMP.	The LVIA assumes that the disturbed areas of ground would be restored at the end of the construction period, in line with the proposals included in the OLEMS. The items listed here as being implemented 'where practicable' are matters of best practice but would not affect the overall effectiveness of site restoration if they were not undertaken. The LVIA therefore considers the worst-case scenario.
2.25.4	Volume 3.1, Chapter 32 Tourism and Recreation	Disruptions to tourism and recreational assets	An OPRoWMP has been submitted as part of the DCO application, which includes a full list of crossings and a description of onshore construction techniques at each location and other proposed mitigation measures. Disruption to Public Rights of Way (PRoWs) will be managed by the Principal Contractor to ensure continued safe access along the PRoW for members of the public, and all efforts will be made to minimise PRoW closure durations. The exact management method will be agreed in advance with the relevant local authority and detailed within the final PRoW Management Plan, secured through DCO Requirements. Methods available include:	As stated in Section 32.6.1.1.2 of Chapter 32 Tourism and Recreation [APP-046], the worst case scenario assessment has assumed that 26 PRoWs within 500m of the onshore substation and onshore export cable corridor may be temporarily closed during construction.

Schedule of Mitigation Ref	Document Reference	Environmental effect	Mitigation and monitoring commitments	Applicant's rationale for the worst case scenario assessment
			• Where possible and safe PRoWs shall remain open; • Temporary road closures with diversions in place; and • Permanent closure with an alternative route provided. Where the onshore substation will be constructed and onshore export cables installed, any PRoW that is within 500m shall remain open **where practicable** to minimise impacts to recreational users. Where this is not practicable and a PRoW is intersected by the onshore substation construction and cable installation during construction and operational phases, a suitable, short term, temporary diversion will be established. Diversions will be agreed upon prior to the commencement of the project with all relevant bodies, for all footpaths, bridleways, byways and cycle routes affected. Where haul roads intersect PRoWs, access shall be maintained safely through use of banksman and gates where necessary, ensuring there is minimal impact to the footpath, bridleway, byway or NCN. Where open cut trenching is used, trenches will be reinstated following the installation of the cable ducts to allow PRoW to be repaired and reopened as soon as possible. Where the temporary diversions will be established, relevant safety measures shall also be implemented. This shall include, for example, the erection of fencing where necessary and safety signs for guidance. This mitigation measure will allow tourists and visitors to adapt to the affected PRoWs as a result of the Project. However, where temporary diversions are not a reasonable alternative, a new permanent route shall be provided, such as for Little Bromley footpath 15, which will allow for recreational activities to continue with minimal impact.	

3. Assessment of Effect in Respect to Red Throated Diver Disturbance

3.1 Seasonal Shipping Disturbance

3.1.1 Paragraph 25 of the RFI states: '*The Applicant is requested to provide further detailed information and analysis (as available) regarding the spatial extent and event frequency (including seasonal considerations) of the existing shipping disturbance that overlaps with the 12km buffer from the Proposed Development array area, to further expand the detail provided in paragraph 107 of the RIAA [APP-178]. It would also aid the Secretary of State for the 12km buffer from the Proposed Development array to be added to Figure 4.2 of the RIAA [APP-178]*.'

3.1.2 Paragraph 107 of the RIAA Part 4 [APP-178] notes that the '*area of overlap between the 12km buffer of North Falls and the SPA also overlaps almost completely with an IMO international shipping measures (Figure 4.1 and Figure 4.2). Vessel density data for this area for the 12 month period March 2019 to February 2020 (pre-COVID19) are presented in Figure 4.2. These show high densities of shipping (>700 vessels per year) in two lanes, one immediately to the west of the North Falls array area and east of the OTE SPA boundary, and another parallel, high density, area further to the west, overlapping with the OTE SPA boundary and the 12km buffer where North Falls overlaps the SPA. North Falls Shipping Surveys carried out within a study area of 10nm around the array area reported an average of 151 vessels per day in winter 2022, 167 vessels per day in summer 2022 and 141 vessels per day in winter 2024 (ES Appendix 15.1, Document Reference: 3.3.16)*.'

3.1.3 A revised version of Figure 4.2 showing the AIS 2019 shipping density data and the OTE SPA, with the 12km buffer of North Fall added, is included in Section 3.2 below. This shows the two shipping lanes running north-south to the west of the North Falls array area, with the western-most lane overlapping with the OTE SPA and passing within the 12km buffer of North Falls where it overlaps with the SPA, and the eastern lane located between the SPA boundary and the western boundary of the North Falls Array area. Thus, as noted in paragraph 109 of the RIAA Part 4, '*there is an existing source of displacement for RTDs (the shipping lanes) closer to the SPA boundary than the North Falls OWF, and it seems valid to consider to what extent birds in the area of the SPA closest to the shipping lanes would also be affected by a more distant source of displacement in the form of the North Falls array area*.'

3.1.4 The 2019 AIS data shown in the RIAA Figure 4.2 is combined for the whole year. RTDs are only present in the SPA during the non-breeding season, defined overall as September to April, covering autumn migration (September to November), winter (December to January) and Spring migration (February to April) (ES Chapter 13 [APP-027], Table 13.10).

3.1.5 Additional shipping density figures are included below showing a breakdown of more recent shipping density data for periods overlapping with the RTD non-

breeding season, specifically the core overwintering period when the highest numbers of RTD are typically present, between November and March.

3.1.6 This additional shipping analysis used existing data held by the project which includes the following periods of relevance:

- Winter 2022 (Figure 3-1 and Figure 3-2)
- Automatic Identification System (AIS) and radar data from 29th January to 2nd March 2022
- AIS only data for 29th January to 14th February 2022
- Winter 2023 (Figure 3-3 and Figure 3-4)
    - AIS only data for 1st November to 31st December 2023
- Winter 2024 (Figure 3-5 and Figure 3-6)
    - AIS only data for 17th January to 1st February 2024

3.1.7 The carriage of AIS is only required on board larger vessels[3] and is likely to under report smaller vessels, such as fishing vessels under 15m. Radar data has been used, where possible, but this was only available for the 29th January to 2nd March 2022 dataset, as listed above.

3.1.8 These data are presented in Figure 3-1 to Figure 3-6 as absolute counts and averages of vessel numbers per day for each winter listed above.

[3] all vessels of greater than 300 Gross Tonnage (GT) engaged on international voyages, cargo vessels of more than 500GT not engaged on international voyages, passenger vessels irrespective of size built on or after 1 July 2002 and fishing vessels over 15 metres (m) length

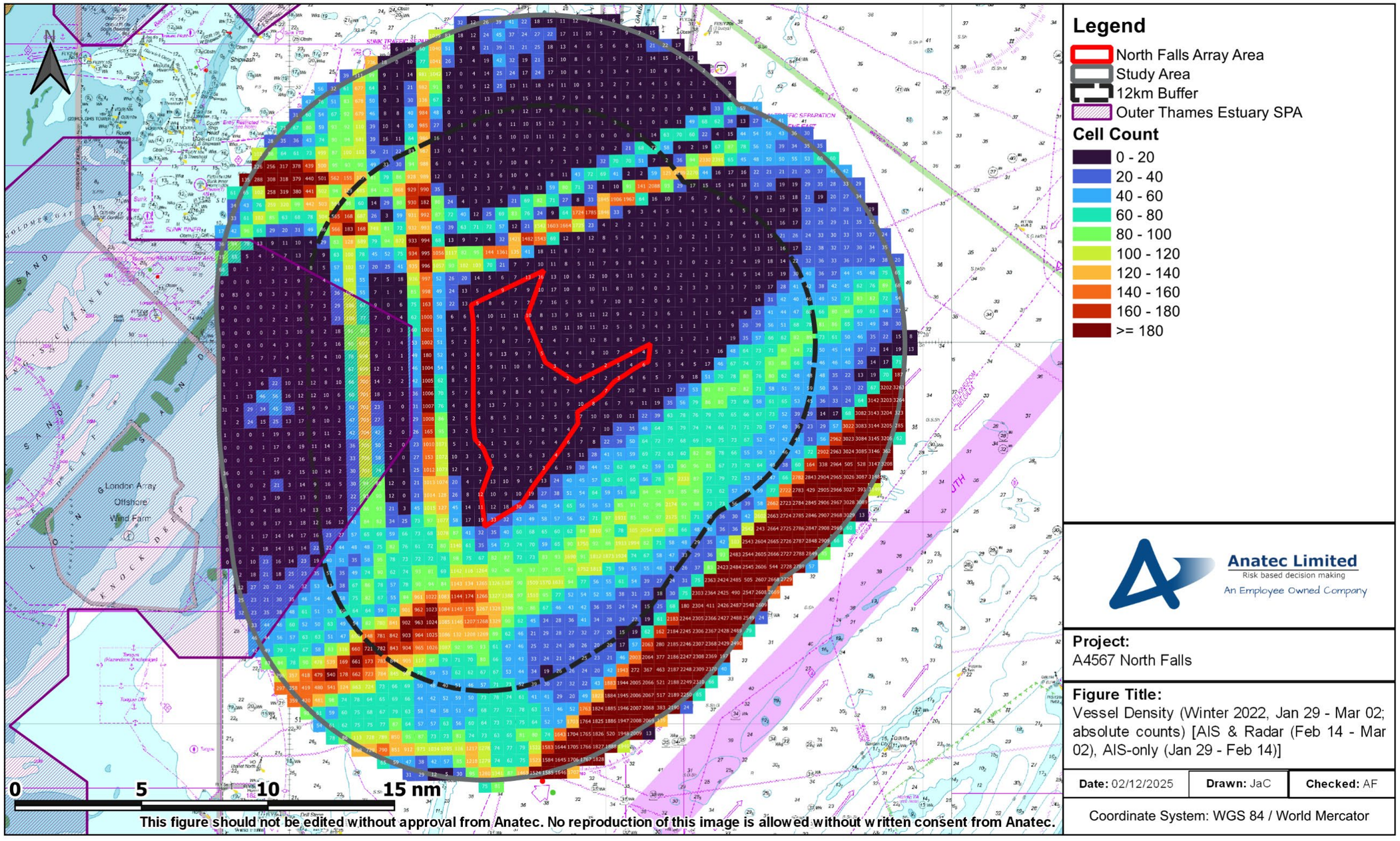


Figure 3-1 2022 Vessel counts using AIS and radar data from 29th Jan to 2nd March 2022 and AIS only data for 29th Jan to 14th February

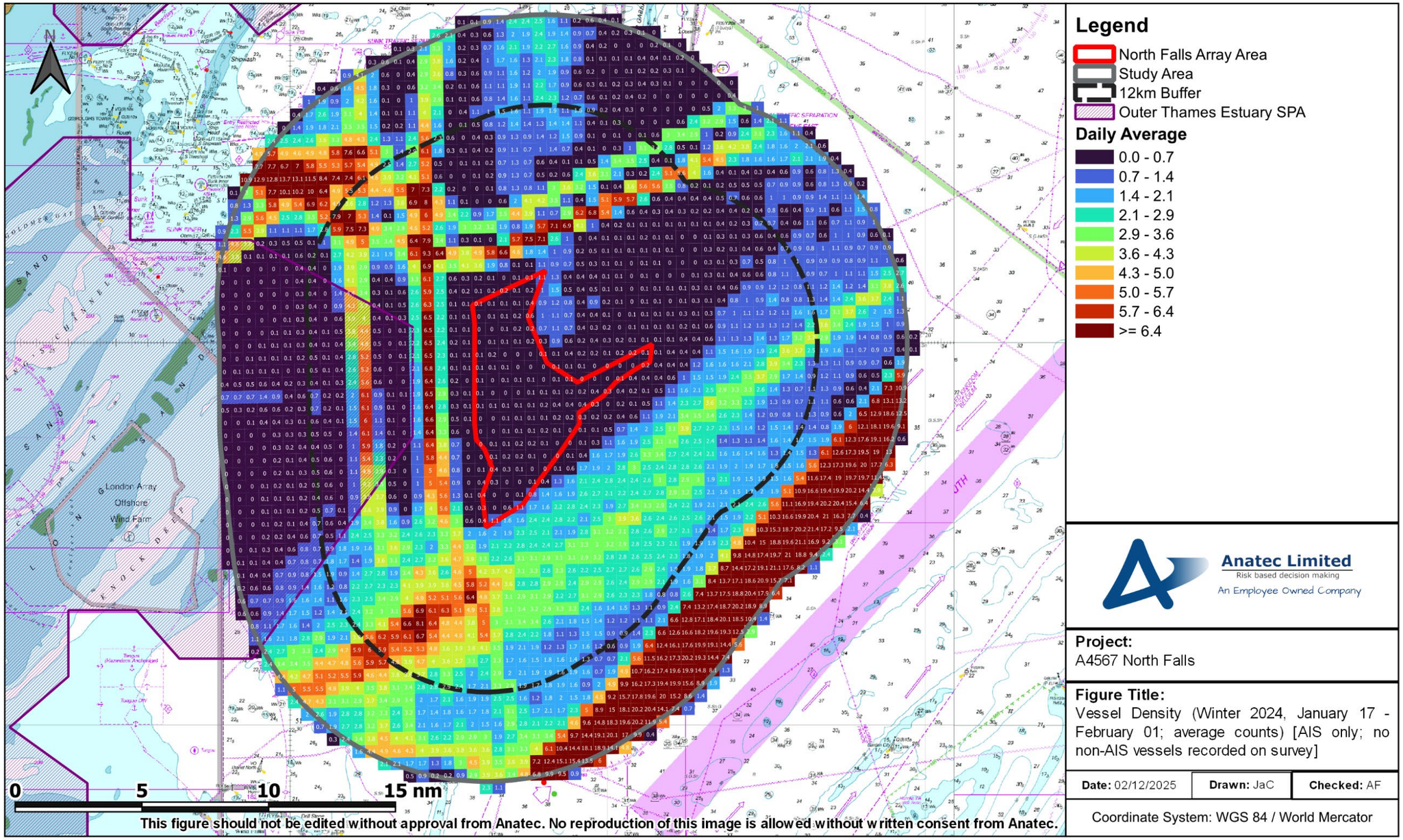


Figure 3-2 2022 Average daily vessel counts using AIS and radar data from 29th Jan to 2nd March 2022 and AIS only data for 29th Jan to 14th February

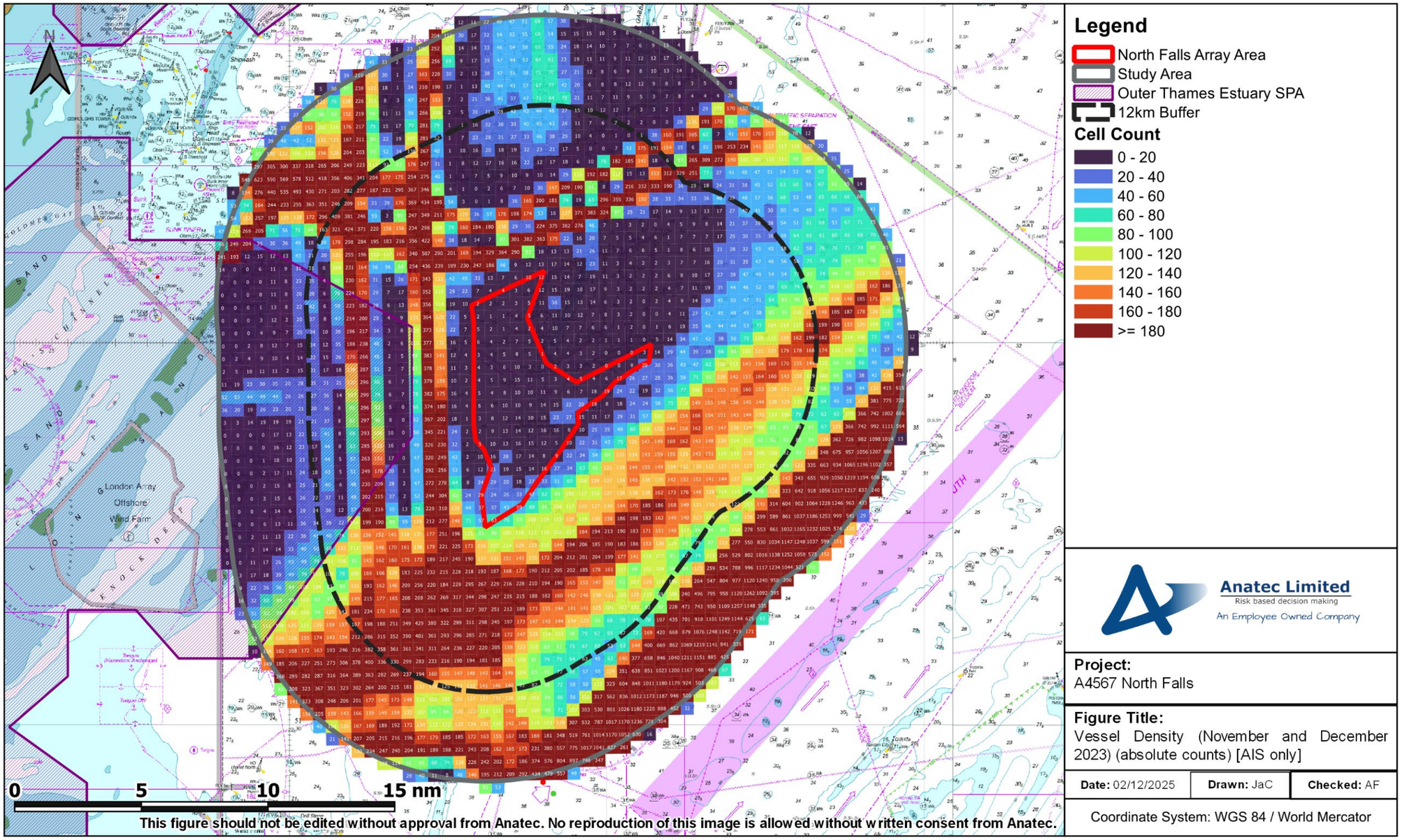


Figure 3-3 2023 Vessel counts using AIS only data for November and December

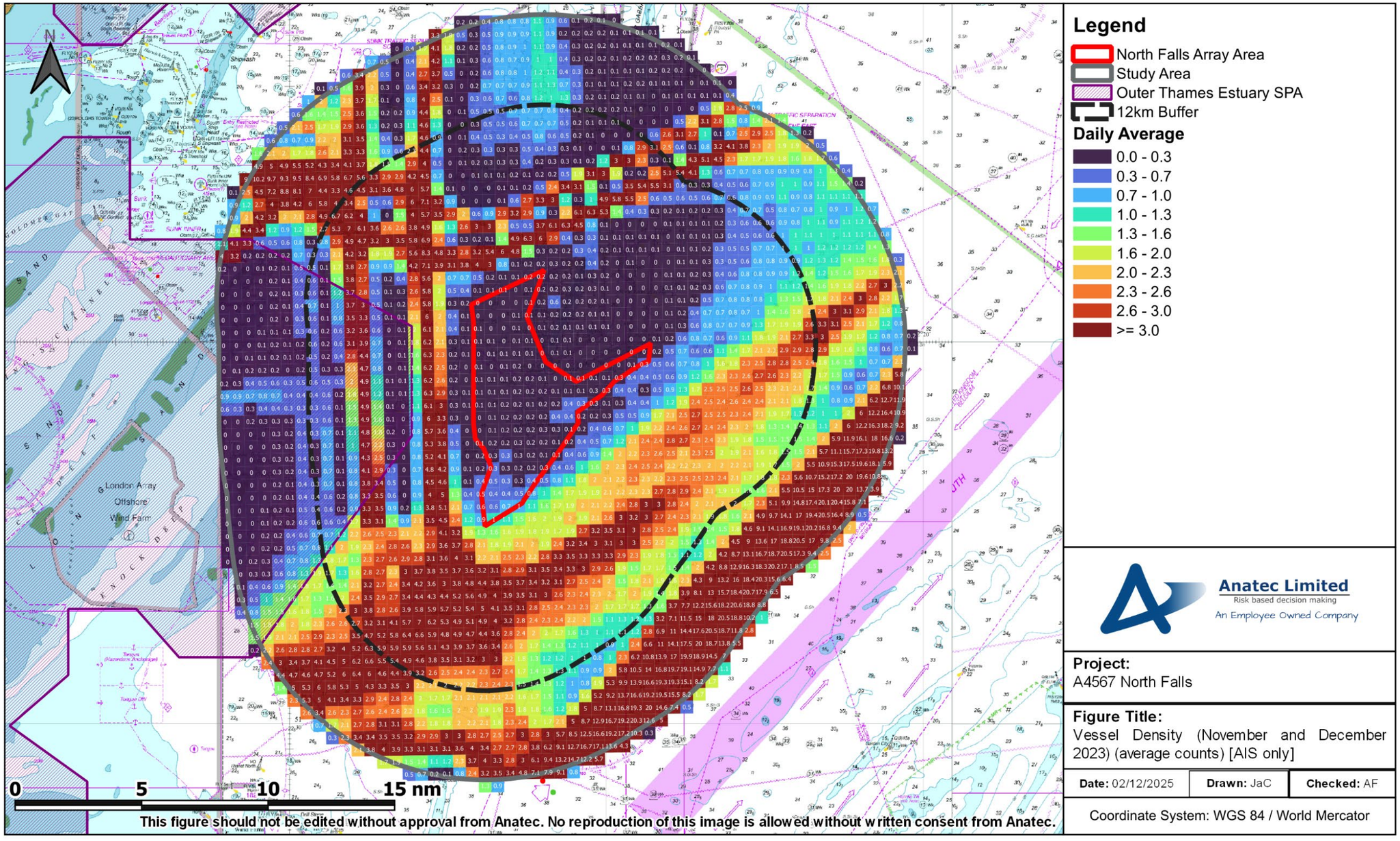


Figure 3-4 2023 Average daily vessel counts using AIS only data for November and December

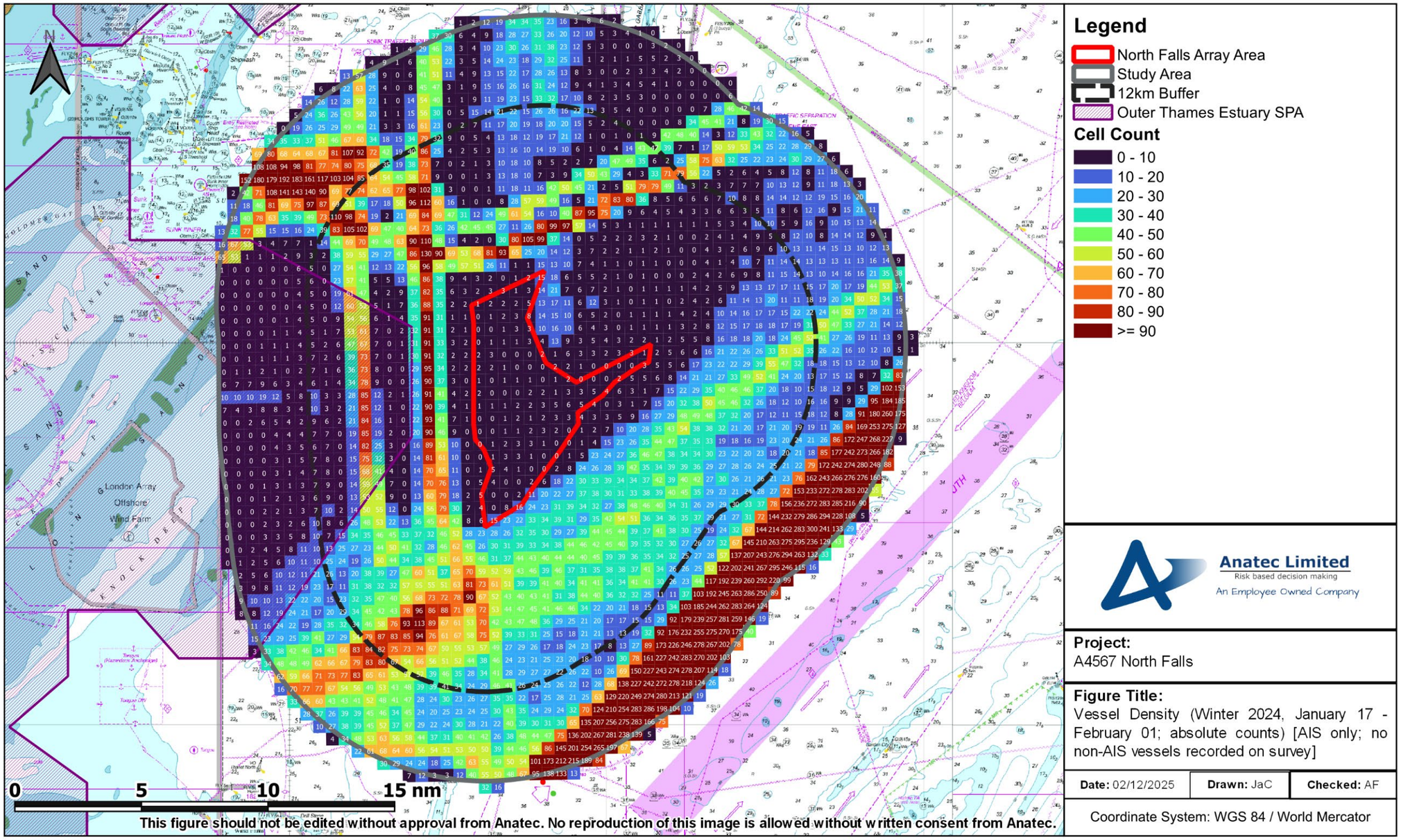


Figure 3-5 2024 Vessel counts using AIS only data for 17th January to 1st February

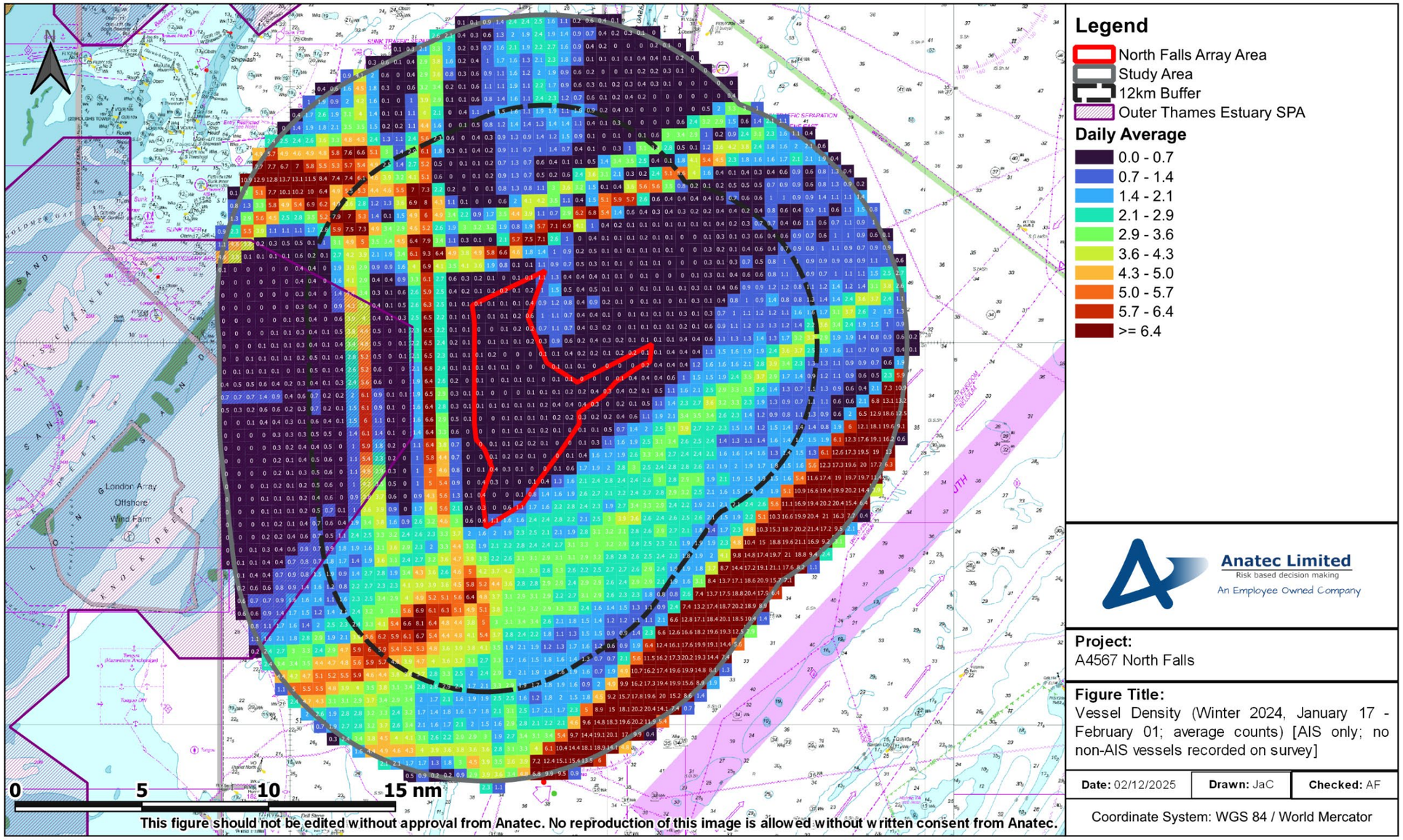


Figure 3-6 2024 Average daily vessel counts using AIS only data for 17th January to 1st February

3.1.9 As is the case for the 2019 AIS data presented in the RIAA Figure 4.2, these Figures all show consistently high densities of shipping within the two north-south lanes that run to the west of the North Falls array area, for periods overlapping with the RTD non-breeding season. The highest densities were recorded in the eastern lane between the OTE SPA boundary and the array: maxima of 6.8 vessels per day, winter 2022; 6.3 vessels per day in November and December 2023; and 6.8 vessels per day winter 2024; maximum densities in the western lane, which passes through the SPA within the 12km buffer of North falls, were 4.7 vessels per day, winter 2022; 4.9 vessels per day in November and December 2023; and 6.1 vessels per day winter 2024.

3.1.10 Given the known displacement effects of shipping and shipping lanes on RTD (RIAA part 4 [APP-178], paragraph 108), these additional shipping data for the RTD non-breeding season in 2022, 2023 and 2024, support the conclusion in the RIAA Part 4 ([APP-178], paragraphs 110-111), that: '*The area of overlap between the 12km buffer of North Falls and the OTE SPA, also overlaps with the 12km buffer of another OWF and/or IMO shipping measures, both of which are existing sources of displacement for RTDs. Thus, no part of the 12km buffer of North Falls overlaps with an area of the SPA which is not already subject to a potential source of displacement for RTDs. It is accepted that RTDs occupying these areas (i.e. birds which have not been displaced from existing OWFs or shipping lanes) may be subject to additional displacement effects from the North Falls array area, however it is considered likely that any further changes in density would be very small and represent no meaningful change to the existing situation*'.

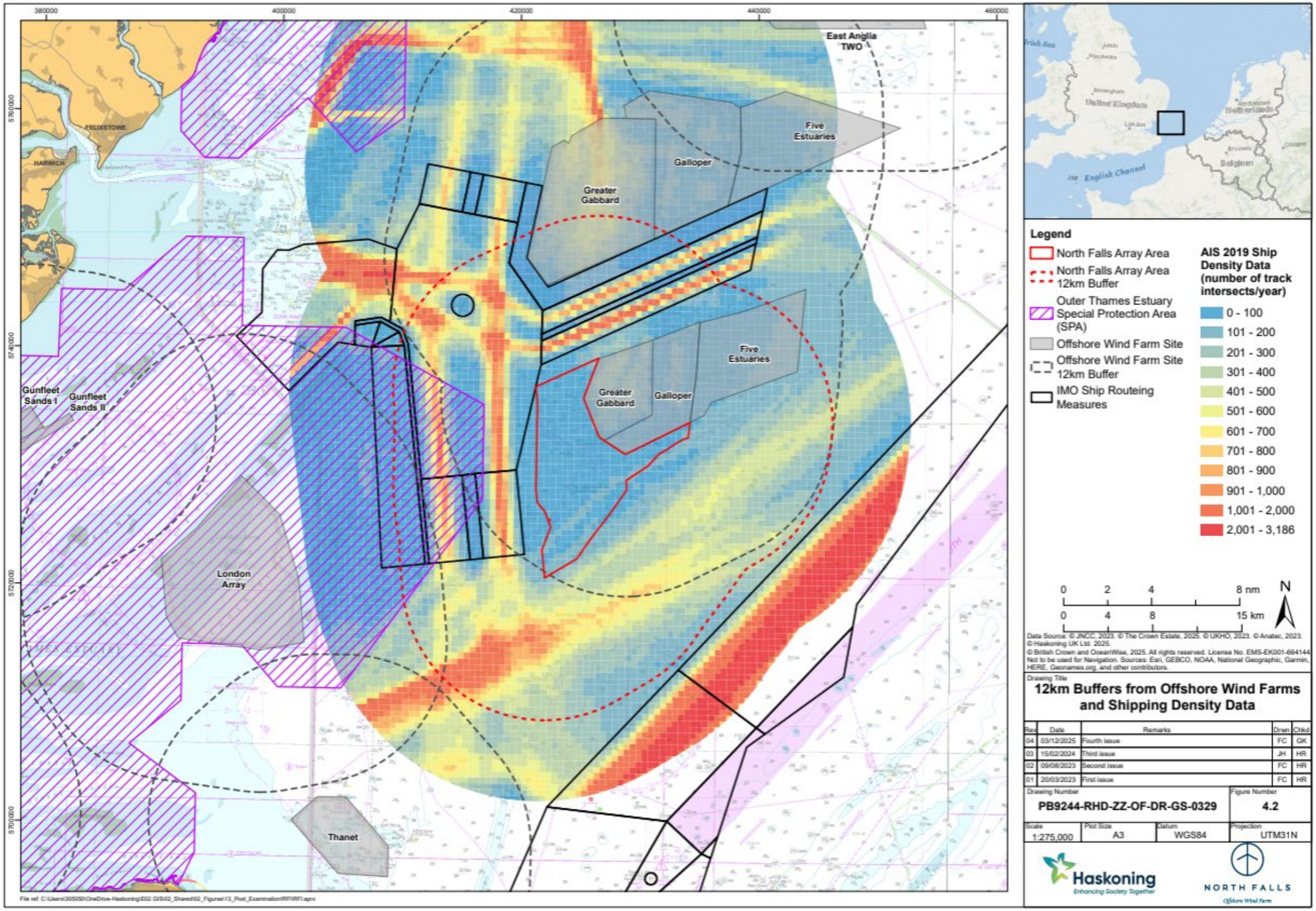
3.1.11 Further (in [REP4-028], Table 2.3 REP3-061_b) the Applicant has reiterated this conclusion with supplementary information: '*it is the Applicant's view that North Falls will not contribute significantly to the existing sources of displacement for RTDs within the area of overlap between the 12km buffer of North Falls and the OTE SPA from existing operational OWFs and international shipping lanes. The shipping lanes partially overlap with the SPA and North Falls is further away from the SPA than the shipping lanes, so the shipping lanes would be the closest source of potential displacement for RTD within the 12km buffer of North Falls where it overlaps with the SPA ([APP-178], Figure 4.1). Individual RTDs show variable responses to disturbance, with some being more tolerant than others of anthropogenic disturbance (Sue O'Brien, Pers. Comm.). Such individual variation is a common finding in bird species. It is likely that within the area of overlap between the 12km buffer of North Falls and the OTE, the levels of existing disturbance mean that the RTDs using this area are more disturbance-tolerant individuals, and the presence of North Falls beyond the international shipping lanes would not result in any detectable change in the numbers present, or the distribution of RTDs in this area of the OTE SPA'*.

3.1.12 And in [REP8-043] (Section 2.6, REP7-090_f1) the Applicant also notes: '*In the area where the 12km buffer of North Falls overlaps with the SPA, traffic in these*

international shipping lanes, which are closer to the SPA than North Falls, will be the predominant influence on red-throated diver distribution.'

3.2 Updates to RIAA Part 4 Offshore Ornithology Figures

3.2.1 In response to the final sentence of RFI paragraph 25, the Applicant has amended Figure 4.2 of the RIAA to show the 12km buffer from the North Falls array area (provided below). The Applicant also identified an error in the 12km buffer of North Falls shown in Figure 4.3 of the RIAA and so a corrected version of this figure is also provided.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Galloper
Gunfleet Sands I
Gunfleet Sands II
London Array
Thanet
FELIXSTOWE
HARWICH
Irish Sea
United Kingdom
Netherlands
Belgium
English Channel
Legend
North Falls Array Area
North Falls Array Area 12km Buffer
Outer Thames Estuary Special Protection Area (SPA)
Offshore Wind Farm Site
Offshore Wind Farm Site 12km Buffer
IMO Ship Routeing Measures
AIS 2019 Ship Density Data (number of track intersects/year)
0 - 100
101 - 200
201 - 300
301 - 400
401 - 500
501 - 600
601 - 700
701 - 800
801 - 900
901 - 1,000
1,001 - 2,000
2,001 - 3,186
0 2 4 8 nm
0 4 8 15 km
N
Data Source: © JNCC, 2023. © The Crown Estate, 2025. © UKHO, 2023. © Anatec, 2023. © Haskoning UK Ltd. 2025.
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Drawing Title
12km Buffers from Offshore Wind Farms and Shipping Density Data
Rev Date Remarks Drwn Chkd
04 03/12/2025 Fourth issue FC GK
03 15/02/2024 Third issue JH HR
02 09/08/2023 Second issue FC HR
01 20/03/2023 First issue FC HR
Drawing Number PB9244-RHD-ZZ-OF-DR-GS-0329
Figure Number 4.2
Scale 1:275,000
Plot Size A3
Datum WGS84
Projection UTM31N
Haskoning
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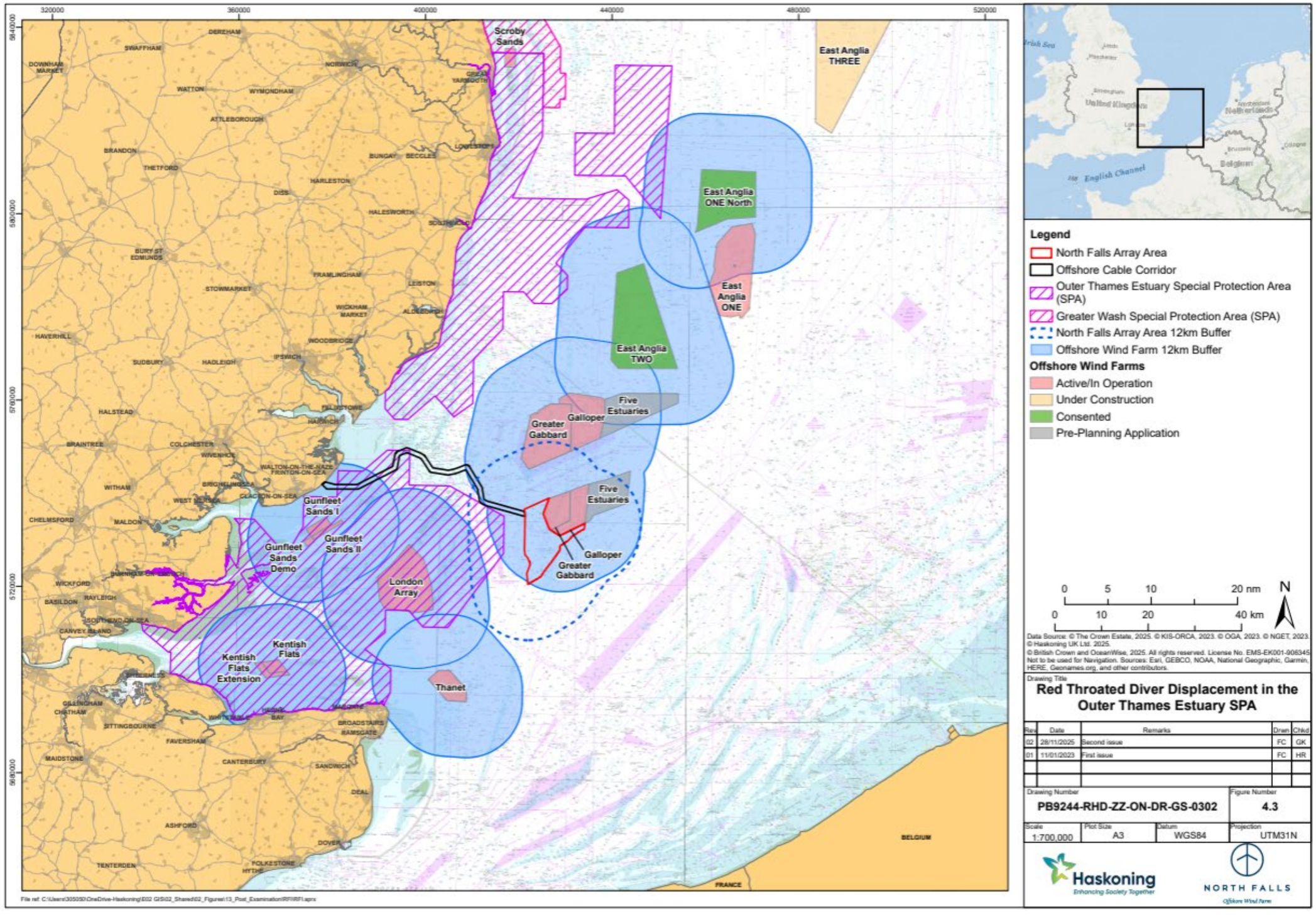
NORTH FALLS
Offshore Wind Farm



Drawing Title

Red Throated Diver Displacement in the Outer Thames Estuary SPA

Rev	Date	Remarks	Drwn	Chkd
02	28/11/2025	Second issue	FC	GK
01	11/01/2023	First issue	FC	HR

Drawing Number	Figure Number
PB9244-RHD-ZZ-ON-DR-GS-0302	4.3

Scale	Plot Size	Datum	Projection
1:700,000	A3	WGS84	UTM31N

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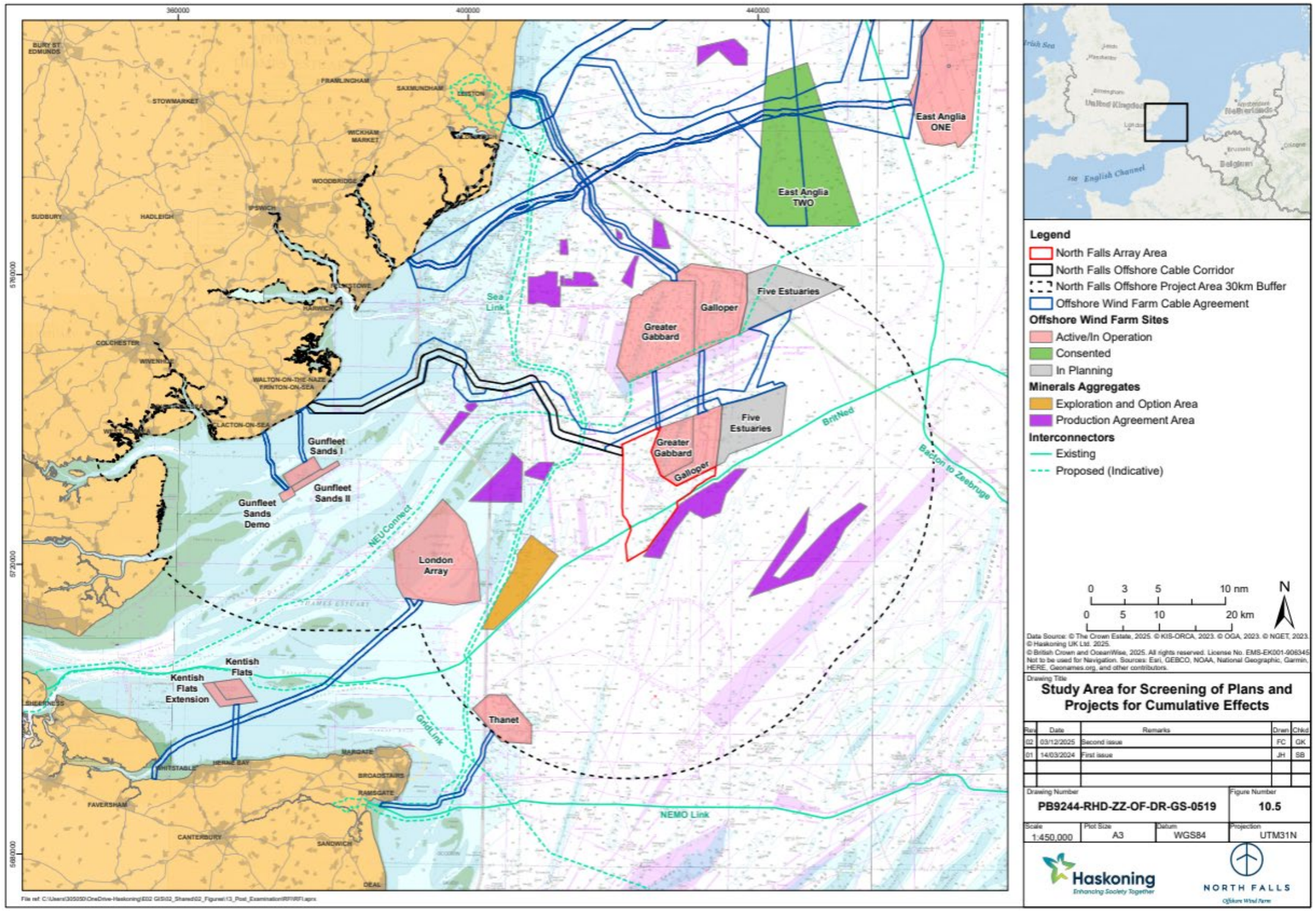
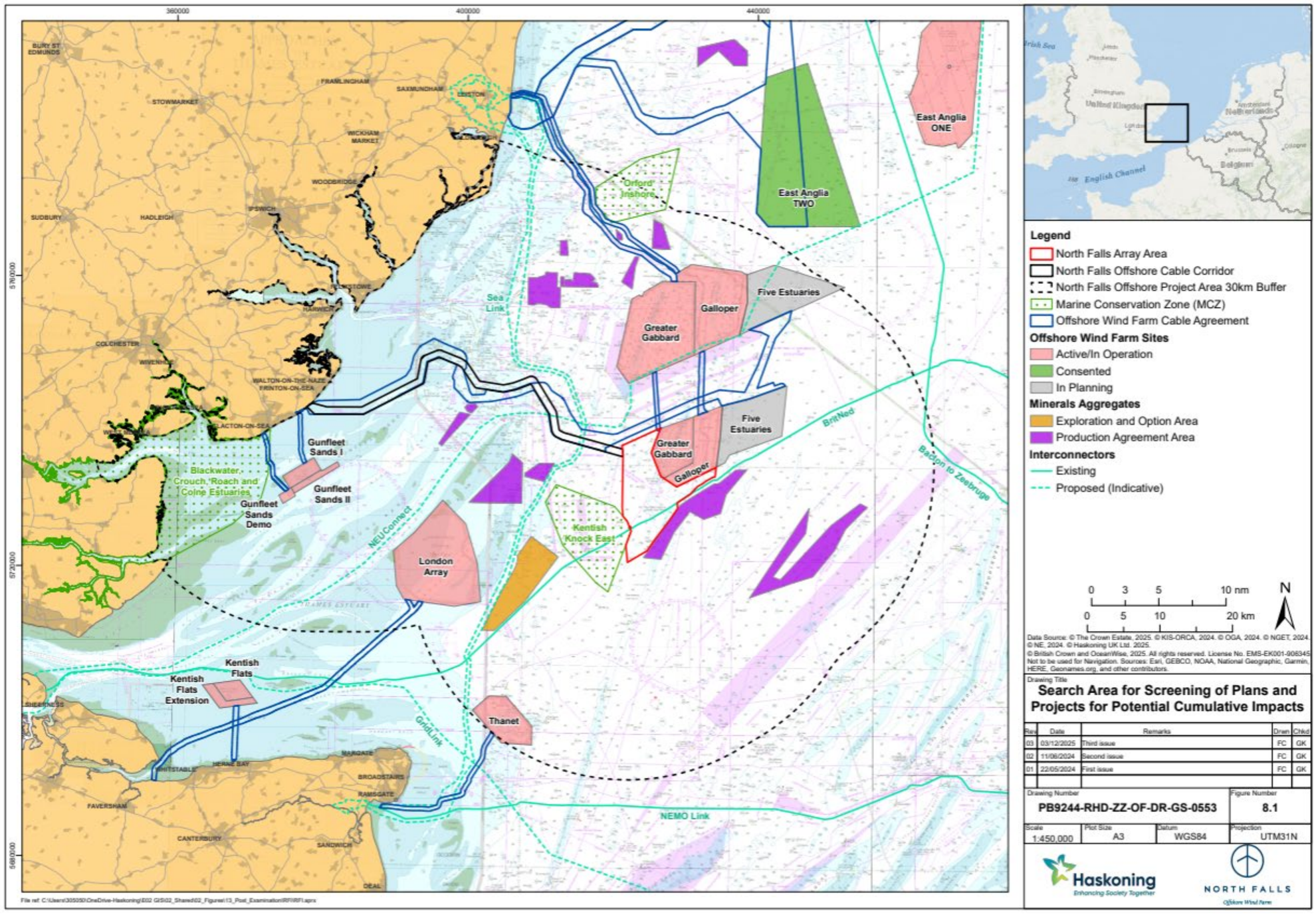
File ref: C:\Users\305050\OneDrive-Haskoning\E02 GIS\02_Shared\02_Figures\13_Post_Examination\RFI\RF1.aprx

4. Benthic and Intertidal Ecology Figures (Ref 34)

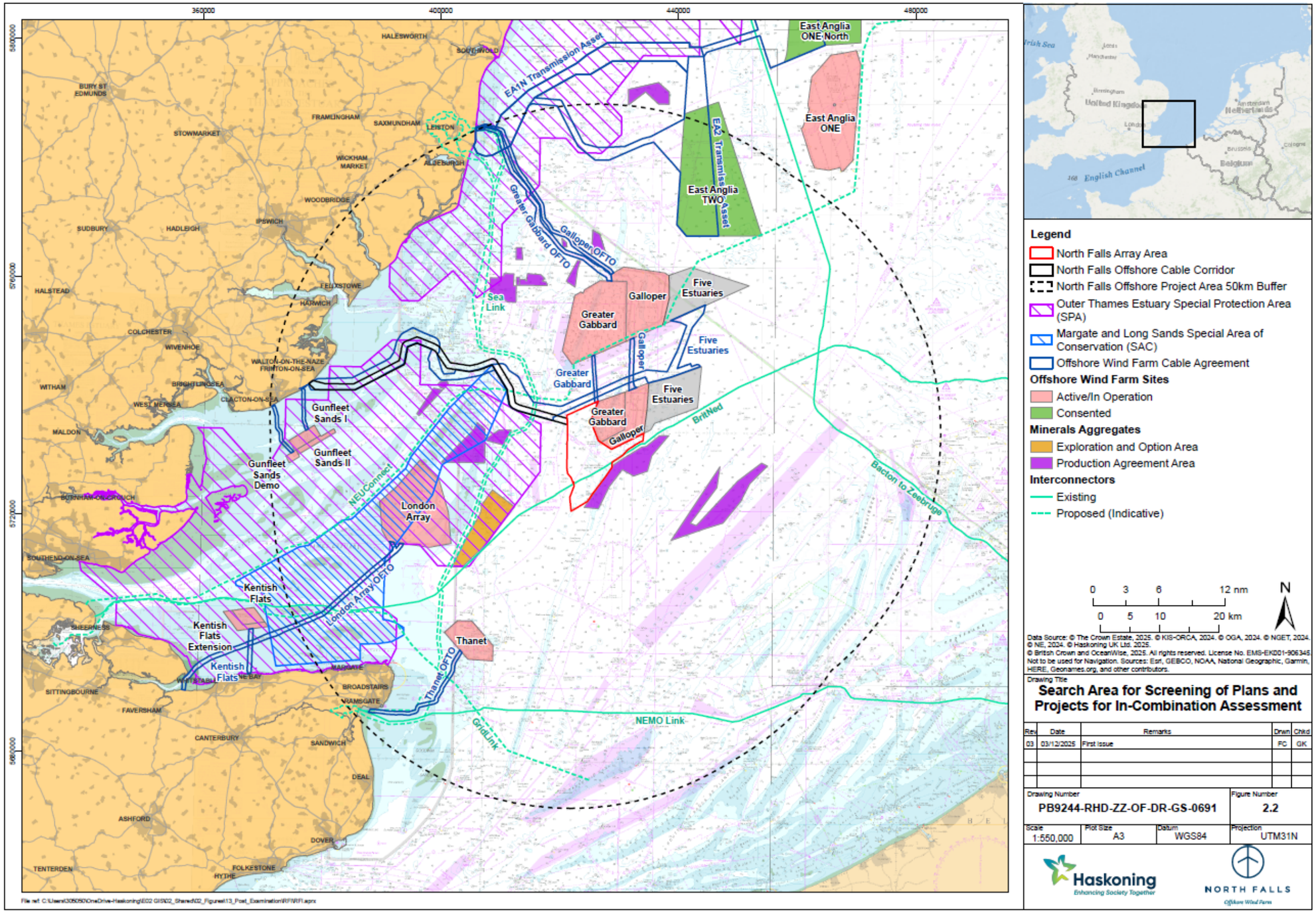
4.1 Figure 10.5 of the ES



4.2 Figure 8.1 of the MCZ Assessment

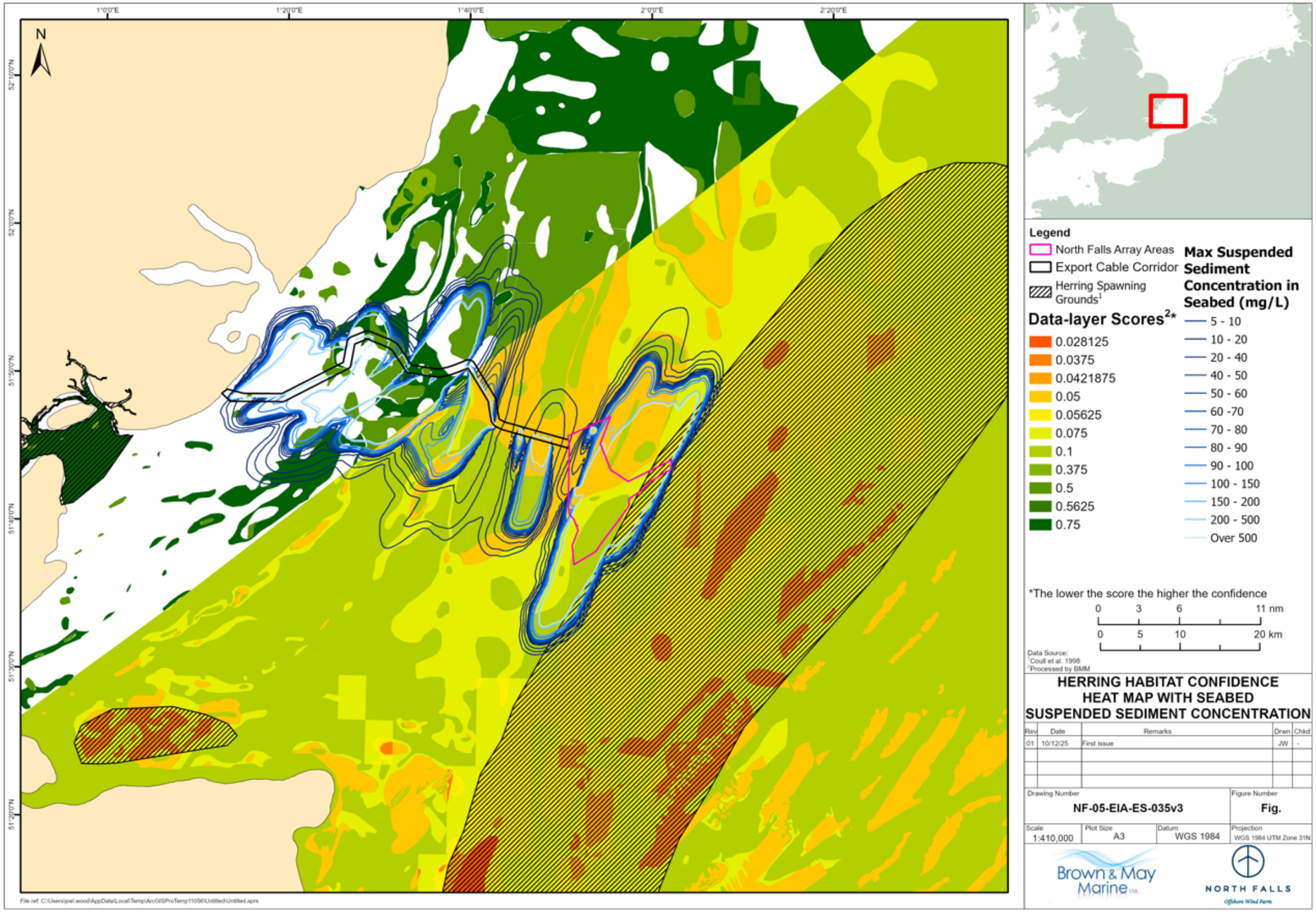


4.3 RIAA Part 2 In-combination Figure

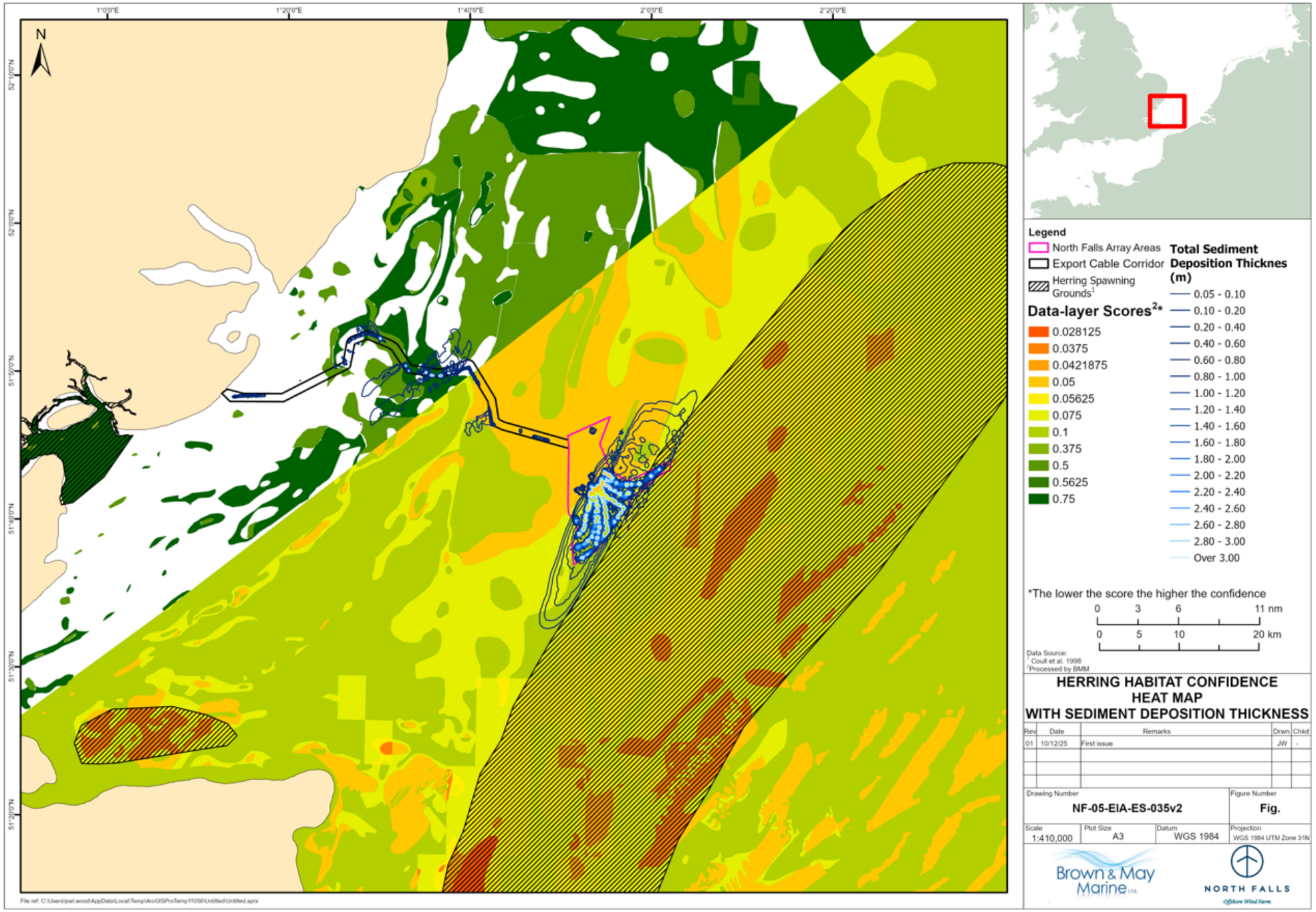


5. Fish and Shellfish – Herring Spawning Grounds and Hydrodynamic and Dispersion Modelling (Ref 39)

5.1 Figure 1 Worst case scenario suspended sediment contours in relation to herring spawning grounds



5.2 Figure 2 Worst case scenario sediment deposition contours in relation to herring spawning grounds



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North Falls Offshore Wind Farm Ltd

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To contact please email contact@northfallsoffshore.com

North Falls Offshore Wind Farm Limited Registered Address: Windmill Hill Business Park, Whitehill Way, Swindon, Wiltshire, SN5 6PB, United Kingdom

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