

# MONA OFFSHORE WIND PROJECT

## Environmental Statement

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Image of an offshore wind farm

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### Glossary

| Term                               | Meaning   |
|------------------------------------|---|
| British Trust for Ornithology      | A non-statutory ornithological research organisation.   |
| Expert Working Group (EWG)         | Expert working groups set up with relevant stakeholders as part of the Evidence Plan process.   |
| Potential Special Protection Areas | A site identified as potentially qualifying for Special Protection Area classification and for which a decision to classify has yet to be taken pending consultation.   |
| Ramsar sites                       | Wetlands of international importance that have been designated under the criteria of the Ramsar Convention. In combination with Special Protection Areas and Special Areas of Conservation, these sites contribute to the national site network.      |
| Special Protection Areas           | A site designation specified in the Conservation of Habitats and Species Regulations 2017, classified for rare and vulnerable birds, and for regularly occurring migratory species. Special Protection Areas contribute to the national site network. |

### Acronyms

| Acronym  | Description  |
|----------|--|
| BOCC4    | Birds of Conservation Concern Wales 4 (Johnstone <i>et al.</i> , 2022) |
| BOCC5 UK | Birds of Conservation Concern 5 (Stanbury <i>et al.</i> , 2021)        |
| BTO      | British Trust for Ornithology  |
| EWG      | Expert Working Group   |
| LERC     | Local Environmental Records Centre                                     |
| LNR      | Local Nature Reserves  |
| NNR      | National Nature Reserves   |
| PEIR     | The Preliminary Environmental Information Report                       |
| PRoW     | Public Right of Way  |
| pSPA     | Possible Special Protection Area                                       |
| RSPB     | Royal Society for the Protection of Birds                              |
| SPA      | Special Protection Area  |
| SSSI     | Sites of Special Scientific Interest                                   |

### Units

| Unit            | Description       |
|-----------------|-------------------|
| km              | Kilometres        |
| m               | Metres            |
| %               | Percentage        |
| km <sup>2</sup> | Square kilometres |

# 1 Onshore ornithology - breeding birds technical report

## 1.1 Introduction

1.1.1.1 The purpose of this technical report is to present baseline data on the breeding bird assemblage recorded along the Mona Onshore Development Area. It describes the methods used to characterise the baseline bird assemblage and presents the results of the desk-based studies and site-specific surveys undertaken at the Mona Onshore Development Area during the 2022 and 2023 breeding seasons.

1.1.1.2 This baseline information has been used to inform the assessment reported in Volume 3, Chapter 4: Onshore and intertidal ornithology of the Environmental Statement.

## 1.2 Onshore ornithology search and study areas

1.2.1.1 In this report there are two specific terms used to identify areas used for data collection, as outlined below.

### 1.2.1 The onshore ornithology search area

1.2.1.1 The onshore ornithology search area (Figure 1.1) has been used as a tool to identify designated sites with breeding features that are likely to utilise the broad habitat types that are present within the Mona Onshore Development Area and therefore be directly or indirectly affected by the elements of the Mona Offshore Wind Project.

1.2.1.2 The onshore ornithology search area reflects standard industry good practice for identification of ornithological sites that could be affected by the Mona Offshore Wind Project and is the approach used for other offshore wind farm development consent order applications in England and Wales. It covers:

1. Internationally designated ornithological sites, specifically Special Protection Areas (SPAs), possible Special Protection Areas (pSPAs) and Ramsar sites located within 20 km of the Mona Onshore Development Area
2. Nationally designated sites, specifically Sites of Special Scientific Interest (SSSIs) and National Nature Reserves (NNRs) located within 5 km of the Mona Onshore Development Area
3. Locally designated sites, specifically Local Nature Reserves (LNRs) and Local Wildlife Sites (LWSs) located within 2 km of the Mona Onshore Development Area.

1.2.1.3 The location and geographic extent of designated sites within the onshore ornithology search area is presented in Figure 1.1 of this technical report below.

## **1.2.2 The onshore ornithology study area**

- 1.2.2.1 The onshore ornithology study area encompasses the Mona Onshore Development Area plus a 250 m buffer and is the area covered by the review of desktop studies/data sources and the site-specific surveys (Figure 1.2).
- 1.2.2.2 The 250 m buffer is included to take account of bird interests that may occur adjacent or close to the Mona Onshore Development Area. This distance is based on potential maximum disturbance distances for breeding birds expected to be found in the area (Goodship and Furness, 2022).
- 1.2.2.3 The location and geographic extent of the onshore ornithology study area is presented in Figure 1.2 of this technical report below.

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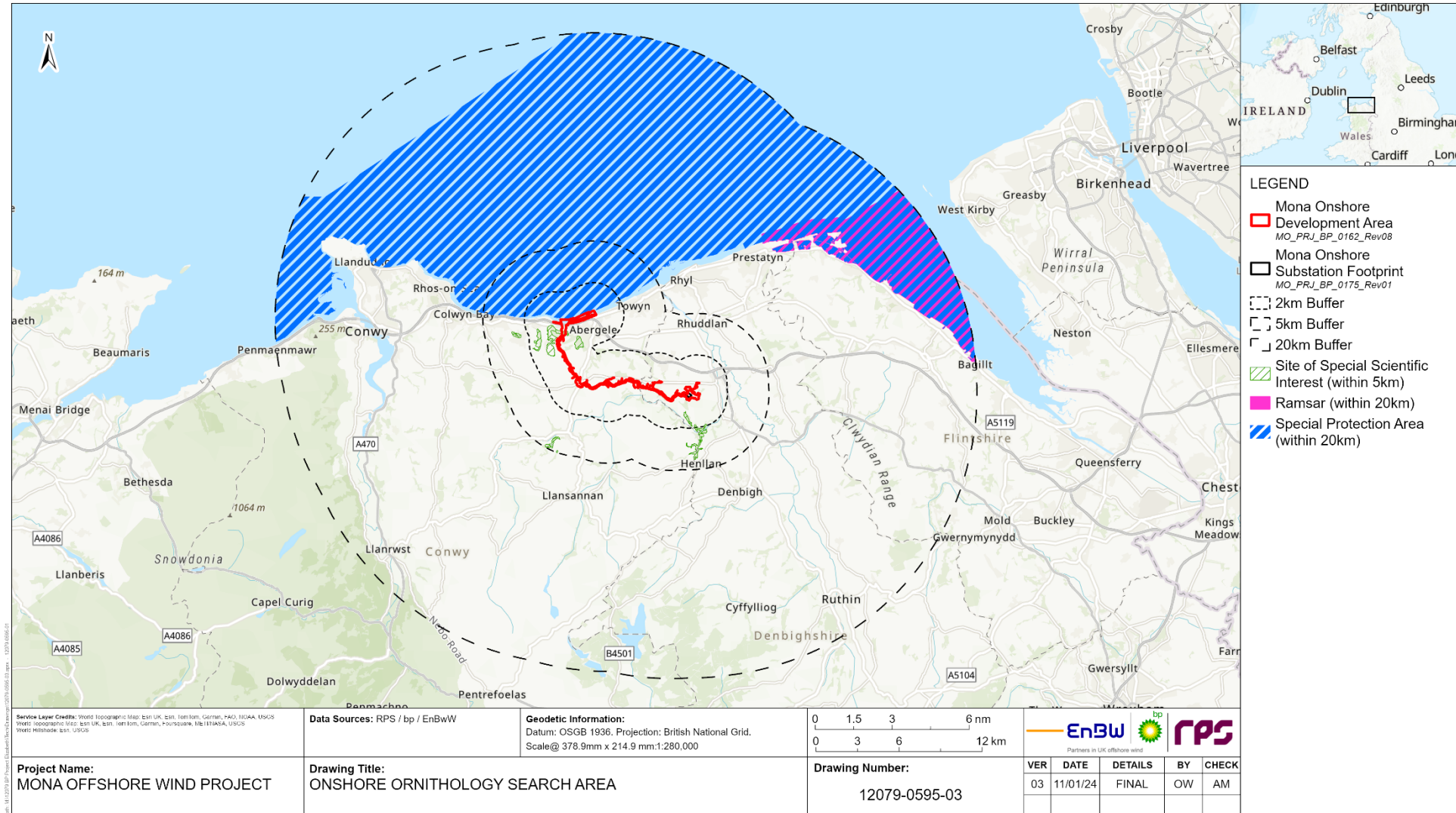


Figure 1.1: The onshore ornithology search area.



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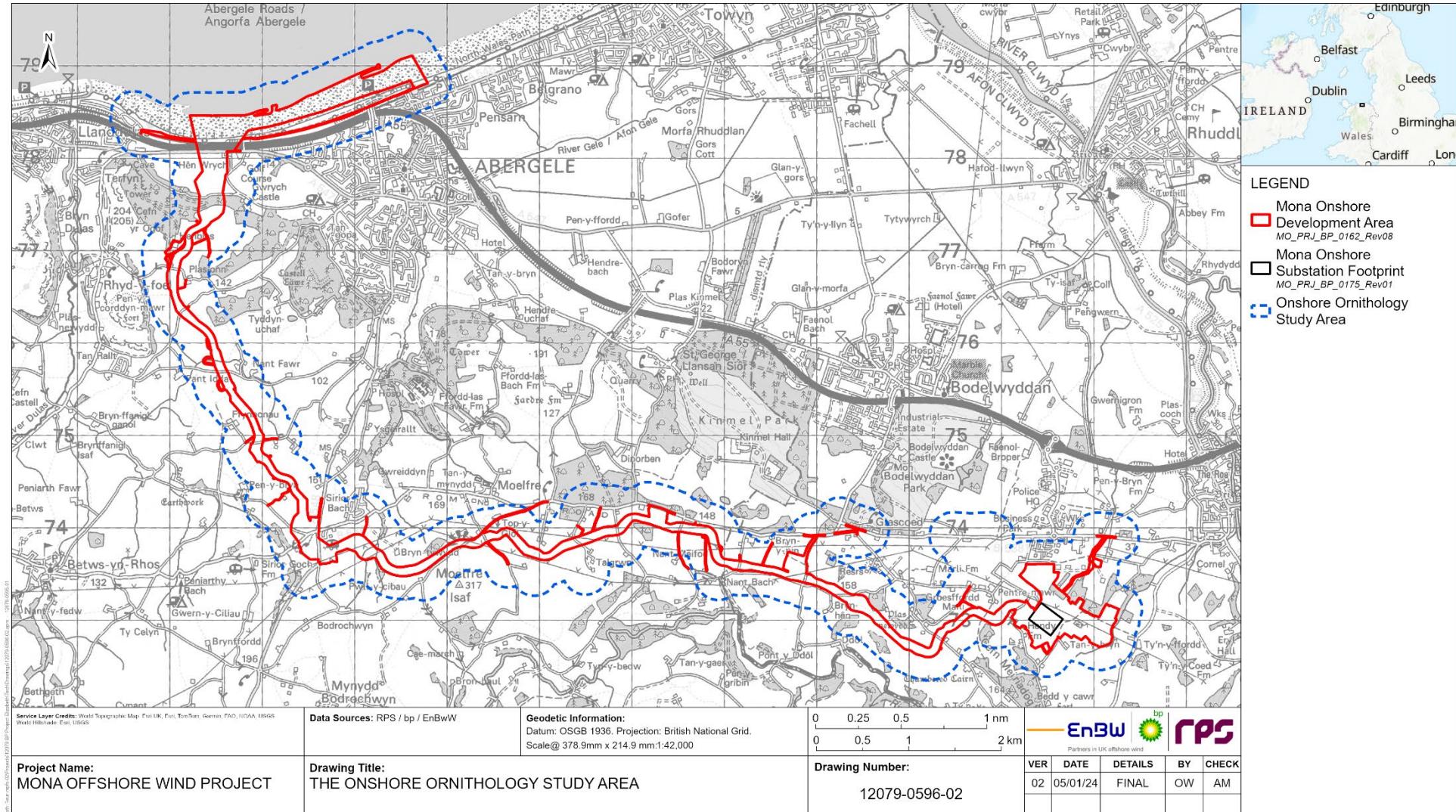


Figure 1.2: The onshore ornithology study area.

### 1.3 Consultation

1.3.1.1 A summary of the key topics raised during consultation activities undertaken to date within the Expert Working Group (EWG), set up to discuss and agree breeding bird specific issues, is presented in Table 1.1.

**Table 1.1: Summary of key consultation topics raised during consultation activities undertaken for the Mona Offshore Wind Project relevant to breeding birds.**

| Date             | Consultee and type of response  | Topic covered/consultee response   |
|------------------|---|--|
| 16 June 2022     | EWG (01) - NRW, Denbighshire County Council, Conwy County Borough Council, The Royal Society for the Protection of Birds (RSPB).                  | <ul style="list-style-type: none"> <li>Agreement on the Remit and Inputs to the EWG (as set out in the Evidence Plan Template).</li> <li>Agreement on Ways of Working Documents, including timescales.</li> <li>Agreement on broad approach to future surveys.</li> <li>Agreement on broad approach to baseline characterisation.</li> </ul> |
| 08 December 2022 | EWG (02) - NRW, Conwy County Borough Council, RSPB.   | <ul style="list-style-type: none"> <li>Summary findings of the first year (2022) of breeding bird surveys was presented with the EWG.</li> </ul>   |
| 24 April 2023    | EWG (03) - NRW, Denbighshire County Council, Conwy County Borough Council, Welsh Government RSPB, Amphibian and Reptile Conservation Trust (ARC). | <ul style="list-style-type: none"> <li>The Preliminary Environmental Information Report (PEIR) assessment was presented to the EWG.</li> </ul>   |
| 24 April 2023    | NRW, Denbighshire County Council, Conwy County Borough Council, Welsh Government, RSPB, ARC.  | <ul style="list-style-type: none"> <li>A detailed note of the bird survey methodologies was shared with the EWG for consultation.</li> </ul>   |
| 19 July 2023     | EWG (04) – NRW, Denbighshire County Council, Conwy County Borough Council, Welsh Government, RSPB, ARC.   | <ul style="list-style-type: none"> <li>Summary findings of the second year (2023) of breeding bird surveys was presented to the EWG.</li> </ul>  |
| 08 December 2023 | EWG (06) – NRW, Denbighshire County Council, ARC, RSPB.   | <ul style="list-style-type: none"> <li>A summary of the surveys to date was presented</li> </ul>   |

### 1.4 Methodology

#### 1.4.1 Approach to establishing the baseline

1.4.1.1 To establish a baseline of potential breeding ornithological receptors within the onshore ornithology search and study areas a combination of review of existing data sources and site-specific surveys have been undertaken. The methodology of the desktop study is presented in section 1.4.2 whilst the methodology followed during the site-specific surveys is described in section 1.6.2 of this technical report.



### 1.4.2 Desktop study methodology

#### Desktop data sources

1.4.2.1 Information on breeding birds within the onshore ornithology search and study areas was collected through a detailed desktop review of existing studies and datasets. These are summarised within Table 1.2.

**Table 1.2: Summary of key desktop sources.**

| Title   | Source   | Year | Author   |
|---|--|------|--|
| Bird Atlas 2007-11  | The British Trust for Ornithology (BTO)                        | 2013 | Balmer, D., Gillings, S., Caffrey, B., Swann, B., Downie, I., Fuller, R.   |
| Birds in Wales. Welsh Bird Report 2018.   | Welsh Ornithological Society                                   | 2019 | Welsh Ornithological Society. Edited by Hughes, J.   |
| The status of our bird populations: the fifth Birds of Conservation Concern (BOCC) in the United Kingdom, Channel Islands and Isle of Man and second IUCN Red List assessment of extinction risk for Great Britain. | British Birds  | 2021 | Stanbury, A., Eaton, M., Aebischer, N., Balmer, D., Brown, A., Douse, A., Lindley, P., McCulloch, N., Noble, D., and Win I.        |
| Birds of Conservation Concern Wales 4: the population status of birds in Wales  | Milvus   | 2022 | Johnstone, I.G., Hughes, J., Balmer, D., Brenchley, A., Facey, R.J., Lindley, P.J., Noble, D.G., Taylor, R.                        |
| The Breeding Bird Survey 2021   | BTO  | 2022 | Harris, S.J., Massimino, D., Balmer, D.E., Kelly, L., Noble, D.G., Pearce-Higgins, J.W., Woodcock, P., Wotton, S. and Gillings, S. |
| Bird records for Mona Onshore Development Area plus 2 km buffer   | North Wales Local Environmental Records Centre (LERC) (Cofnod) | 2022 | N/A  |

### 1.4.3 Designated sites

1.4.3.1 As noted in section 1.2.2, internationally, nationally and locally designated sites were identified up to 20 km from the nearest point of any element of the Mona Onshore Development Area. Designated site (i.e. SPAs, Ramsar sites or SSSIs etc.) citations for each site were reviewed to identify those with breeding bird interests.

### 1.4.4 Conservation status

1.4.4.1 For the bird species considered likely to be breeding and present, consideration was also given to their conservation status, specifically whether the species were listed on Annex 1 under the Birds Directive (2009) or under Schedule 1 under the Wildlife and Countryside Act 1981 (as amended). Elements of the Birds Directive (2009) were transposed into British law through the Conservation of Habitats and Species

Regulations 2017 (as amended). This has created a national site network to ensure continued protection for existing SPAs and their designated features.

1.4.4.2 Consideration was given to species listed as priority species by Welsh Ministers under Section 7 of the Environment and Rural Communities Act 2006, which replace Section 41 of the Natural Environment and Rural Communities Act 2006 within Wales. Consideration was given to species listed as either red or amber listed species on the Birds of Conservation Concern 5 (Stanbury *et al.*, 2021), hereafter called BOCC5 UK. Lastly, consideration was also given to species listed as either a red or amber on the Birds of Conservation Concern Wales 4 (Johnstone *et al.*, 2022), hereafter called BOCC4 Wales.

## 1.5 Desktop data source baseline characterisation

### 1.5.1 Designated sites

#### Special Protection Areas (SPAs)

1.5.1.1 Dee Estuary SPA and the Liverpool Bay/Bae Lerpwl SPA are located within the onshore ornithology search area (i.e. within 20 km of the Mona Onshore Development Area) (Figure 1.1).

1.5.1.2 A summary of the designated breeding features is listed below, and a complete list of the breeding species for each SPA is detailed in Table 1.3:

- The Dee Estuary SPA is designated for two species during the breeding season
- The Liverpool Bay/Bae Lerpwl SPA is designated for two species during the breeding season.

**Table 1.3: Breeding bird qualifying features of the SPAs within, or partly within, the onshore ornithology search area.**

| Site name                    | Distance (km) | Interest feature                      | Designated season | SPA population |
|------------------------------|---------------|---------------------------------------|-------------------|----------------|
| The Dee Estuary SPA          | 10.9          | Common tern <i>Sterna hirundo</i>     | Breeding          | 392 pairs      |
|                              |               | Little tern <i>Sternula albifrons</i> | Breeding          | 69 pairs       |
| Liverpool Bay/Bae Lerpwl SPA | 00.0          | Common tern                           | Breeding          | 180 pairs      |
|                              |               | Little tern                           | Breeding          | 130 pairs      |

#### Ramsar sites

1.5.1.3 The Dee Estuary Ramsar site is located within the onshore ornithology search area (i.e. within 20 km of the Mona Onshore Development Area) (Figure 1.1). The Ramsar site is located 10.9 km from the Mona Onshore Development Area.

1.5.1.4 The Dee Estuary Ramsar site does not support qualifying breeding bird species, however the following species are supported in nationally important numbers (a minimum of 1% of the national population):

- Little tern: 69 pairs
- Common tern: 392 pairs
- Common redshank *Tringa totanus*: approximately 200 pairs.

### Sites of Special Scientific Interest (SSSIs)

- 1.5.1.5 There are six SSSIs within the onshore ornithology search area (i.e. within 5 km of the Mona Onshore Development Area).
- 1.5.1.6 Of these SSSIs, only Coedydd Derw Elwy SSSI, which is located 3.7 km from the Mona Onshore Development Area, has the following species listed on the citation:
- European pied flycatcher *Ficedula hypoleuca*
  - European green woodpecker *Picus viridis*
  - Great spotted woodpecker *Dendrocopos major*
  - Wood warbler *Phylloscopus sibilatrix*.
- 1.5.1.7 The other five SSSIs located within the onshore ornithology search area do not have listed breeding ornithological features.

### National Nature Reserves (NNRs)

- 1.5.1.8 As shown in Figure 1.1, there are no NNRs with listed breeding ornithological features within the onshore ornithology search area.

### Local Nature Reserves (LNRs)

- 1.5.1.9 As shown in Figure 1.1, there are no LNRs or LWSs with listed breeding ornithological features within the onshore ornithology search area.

## 1.5.2 Broad habitat type

- 1.5.2.1 As taken from Copernicus satellite imagery, the CORINE (Coordination of Information on the Environment) Land Cover data from 2018 shows that pasture is the most common habitat within onshore ornithology study area (Table 1.4). The rest of the area consists of arable land, deciduous, coniferous and mixed woodland, urban areas and urban green spaces, all of which are suitable habitats for different assemblages of breeding birds.

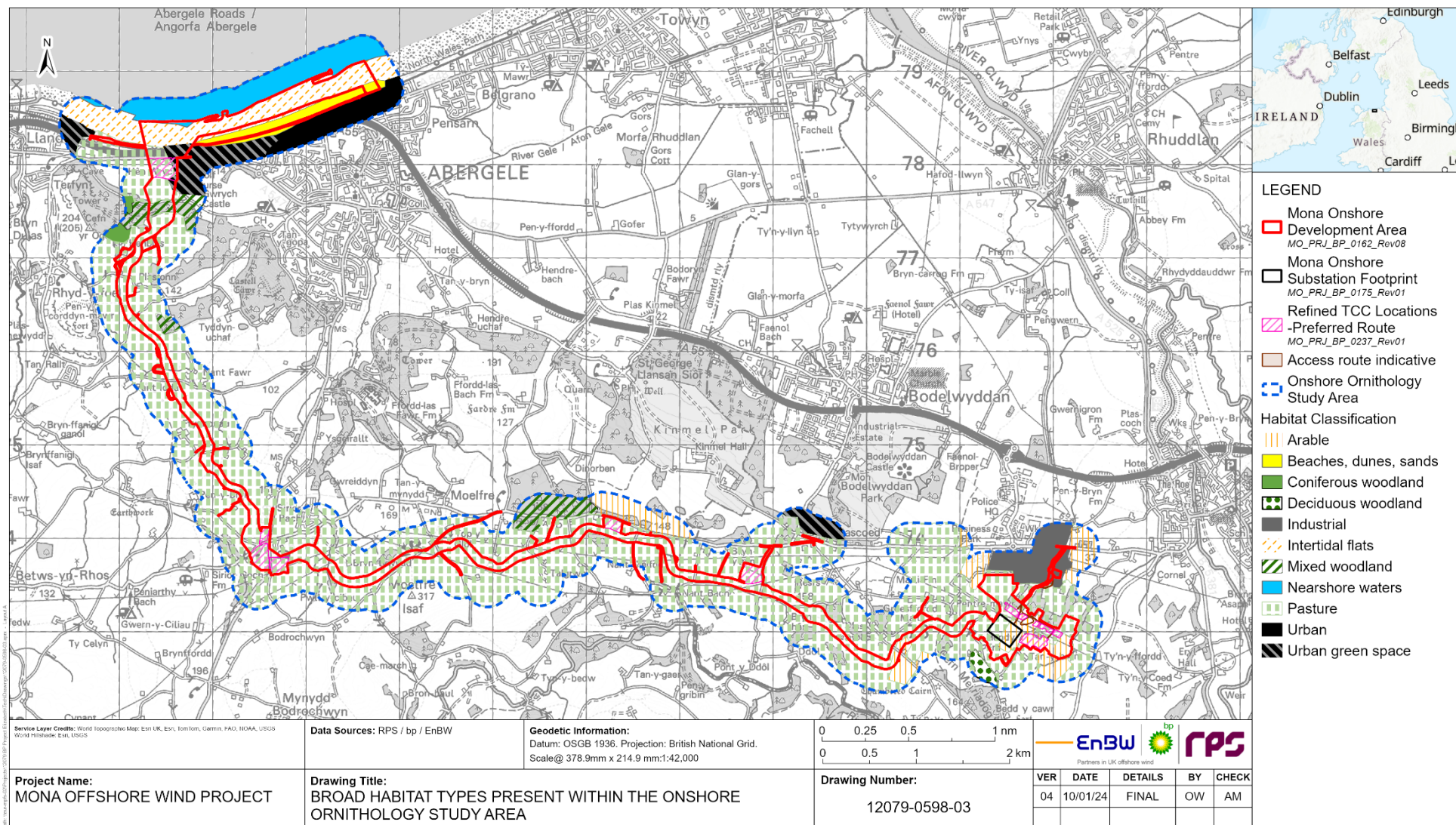
**Table 1.4: The percentage of broad habitat types present within onshore ornithology study area.**

| Broad habitat type | Percentage of the onshore ornithology study area covered by each habitat type (%) |
|--------------------|---|
| Urban              | 2.3   |
| Industrial         | 2.3   |
| Urban green space  | 3.5   |
| Arable             | 5.7   |

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| Broad habitat type    | Percentage of the onshore ornithology study area covered by each habitat type (%) |
|-----------------------|---|
| Pasture               | 70.6  |
| Deciduous woodland    | 0.4   |
| Coniferous woodland   | 0.4   |
| Mixed woodland        | 2.8   |
| Beaches, dunes, sands | 1.7   |
| Intertidal flats      | 5.5   |
| Nearshore waters      | 4.9   |

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**Figure 1.3: Broad habitat types present within the onshore ornithology study area.**



### 1.5.3 Review of bird assemblage associated with habitat types

- 1.5.3.1 The assemblage of species described in Table 1.5 is based on local records provided by Cofnod (2022) and on the review of breeding atlas (Balmer *et al.*, 2013) and Birds in Wales 2018 (Welsh Ornithological Society, 2019). For each habitat present within the onshore ornithology study area the expected bird assemblage is presented.
- 1.5.3.2 Table 1.5 focusses on species listed Annex I of the EU Birds Directive, Schedule 1 of the Wildlife and Countryside Act, Section 7 species of the Environment (Wales) Act 2016, an individual qualifying species or a species of qualifying of a nearby SPA or SSSI, red or amber listed BOCC5 UK (Stanbury *et al.*, 2021) or BOCC4 Wales species (Johnstone *et al.*, 2022).
- 1.5.3.3 The location of records provided is intended as a guide only. Due to the natural fluctuations the location of breeding species is likely to change from year to year.



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**Table 1.5: Summary of the breeding habitats and likely associated breeding species within the onshore ornithology search area and onshore ornithology study area.**

| Broad habitat type | Common name            | Latin name                     | Location of records  | Data source                             |
|--------------------|------------------------|--------------------------------|--|---|
| Grassland/pasture  | Eurasian oystercatcher | <i>Haematopus ostralegus</i>   | Within the Mona Onshore Development Area                               | Cofnod (2022)                           |
|                    | Northern lapwing       | <i>Vanellus vanellus</i>       | Within the Mona Onshore Development Area                               | Cofnod (2022)                           |
|                    | Eurasian curlew        | <i>Numenius arquata</i>        | Within the Mona Onshore Development Area                               | Cofnod (2022)                           |
|                    | Common snipe           | <i>Gallinago gallinago</i>     | Present within the local authority area of Denbighshire County Council | The Welsh Ornithological Society (2019) |
|                    | Northern wheatear      | <i>Oenanthe oenanthe</i>       | Within onshore ornithology study area                                  | Cofnod (2022)                           |
| Arable             | Common quail           | <i>Coturnix coturnix</i>       | Present within the local authority area of Denbighshire County Council | The Welsh Ornithological Society (2019) |
|                    | Eurasian skylark       | <i>Alauda arvensis</i>         | Within onshore ornithology search area                                 | Cofnod (2022)                           |
|                    | Western yellow wagtail | <i>Motacilla flava</i>         | Within the onshore ornithology study area                              | The Welsh Ornithological Society (2019) |
|                    | Eurasian magpie        | <i>Pica pica</i>               | Within onshore ornithology search area                                 | The Welsh Ornithological Society (2019) |
|                    | Meadow pipit           | <i>Anthus pratensis</i>        | Within onshore ornithology search area                                 | The Welsh Ornithological Society (2019) |
|                    | Northern wheatear      | <i>Oenanthe oenanthe</i>       | Within onshore ornithology study area                                  | Cofnod (2022)                           |
| Hedgerow           | Eurasian wren          | <i>Troglodytes troglodytes</i> | Within onshore ornithology study area                                  | Cofnod (2022)                           |
|                    | Dunnock                | <i>Prunella modularis</i>      | Within onshore ornithology search area                                 | Cofnod (2022)                           |

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| Broad habitat type            | Common name           | Latin name                     | Location of records  | Data source                             |
|-------------------------------|-----------------------|--------------------------------|--|---|
|                               | Common chaffinch      | <i>Fringilla coelebs</i>       | Within onshore ornithology study area                                  | Cofnod (2022)                           |
|                               | Willow warbler        | <i>Phylloscopus trochilus</i>  | Within onshore ornithology study area                                  | Cofnod (2022)                           |
|                               | Song thrush           | <i>Turdus philomelos</i>       | Within onshore ornithology study area                                  | Cofnod (2022)                           |
|                               | Mistle thrush         | <i>Turdus viscivorus</i>       | Within onshore ornithology search area                                 | The Welsh Ornithological Society (2019) |
|                               | Eurasian tree sparrow | <i>Passer montanus</i>         | Within onshore ornithology search area                                 | Cofnod (2022)                           |
|                               | Yellowhammer          | <i>Emberiza citrinella</i>     | Within onshore ornithology search area                                 | Cofnod (2022)                           |
| Mixed and coniferous woodland | Common wood pigeon    | <i>Columba palumbus</i>        | Within onshore ornithology study area                                  | Cofnod (2022)                           |
|                               | Tree pipit            | <i>Anthus trivialis</i>        | Present within the local authority area of Denbighshire County Council | The Welsh Ornithological Society (2019) |
|                               | Wood warbler          | <i>Phylloscopus Sibilatrix</i> | Within onshore ornithology search area                                 | Cofnod (2022)                           |
|                               | Willow tit            | <i>Poecile montanus</i>        | Present within the local authority area of Denbighshire County Council | The Welsh Ornithological Society (2019) |
|                               | Eurasian bullfinch    | <i>Pyrrhula pyrrhula</i>       | Within onshore ornithology study area                                  | Cofnod (2022)                           |
|                               | Common chaffinch      | <i>Fringilla coelebs</i>       | Within onshore ornithology study area                                  | Cofnod (2022)                           |
|                               | Coal tit              | <i>Periparus ater</i>          | Within onshore ornithology study area                                  | Cofnod (2022)                           |

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| Broad habitat type | Common name               | Latin name                           | Location of records  | Data source                             |
|--------------------|---------------------------|--------------------------------------|--|---|
|                    | Red crossbill             | <i>Loxia curvirostra</i>             | Present within the local authority area of Denbighshire County Council | The Welsh Ornithological Society (2019) |
|                    | Goldcrest                 | <i>Regulus regulus</i>               | Within onshore ornithology search area                                 | Cofnod (2022)                           |
|                    | Northern goshawk          | <i>Accipiter gentilis</i>            | Within onshore ornithology search area                                 | Cofnod (2022)                           |
|                    | Hawfinch                  | <i>Coccothraustes coccothraustes</i> | Within onshore ornithology search area                                 | Cofnod (2022)                           |
|                    | Eurasian sparrowhawk      | <i>Accipiter nisus</i>               | Within onshore ornithology study area                                  | Cofnod (2022)                           |
|                    | European nightjar         | <i>Caprimulgus europaeus</i>         | Present within the local authority area of Denbighshire County Council | The Welsh Ornithological Society (2019) |
| Deciduous woodland | Red kite                  | <i>Milvus milvus</i>                 | Within onshore ornithology study area                                  | Cofnod (2022)                           |
|                    | Eurasian sparrowhawk      | <i>Accipiter nisus</i>               | Within onshore ornithology study area                                  | Cofnod (2022)                           |
|                    | Common kestrel            | <i>Falco tinnunculus</i>             | Present within the local authority area of Denbighshire County Council | The Welsh Ornithological Society (2019) |
|                    | Eurasian woodcock         | <i>Scolopax rusticola</i>            | Present within the local authority area of Denbighshire County Council | The Welsh Ornithological Society (2019) |
|                    | Common cuckoo             | <i>Cuculus canorus</i>               | Within onshore ornithology search area                                 | Cofnod (2022)                           |
|                    | Tawny owl                 | <i>Strix aluco</i>                   | Within onshore ornithology search area                                 | Cofnod (2022)                           |
|                    | Lesser spotted woodpecker | <i>Dryobates minor</i>               | Within onshore ornithology search area                                 | Cofnod (2022)                           |

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| Broad habitat type | Common name              | Latin name                           | Location of records  | Data source                             |
|--------------------|--------------------------|--------------------------------------|--|---|
|                    | Common redstart          | <i>Phoenicurus phoenicurus</i>       | Cofnod (2022)  | Cofnod (2022)                           |
|                    | Common chaffinch         | <i>Fringilla coelebs</i>             | Within onshore ornithology study area                                  | Cofnod (2022)                           |
|                    | Hawfinch                 | <i>Coccothraustes coccothraustes</i> | Within onshore ornithology search area                                 | Cofnod (2022)                           |
|                    | Mistle thrush            | <i>Turdus viscivorus</i>             | Within onshore ornithology search area                                 | The Welsh Ornithological Society, 2019  |
|                    | Song thrush              | <i>Turdus philomelos</i>             | Within onshore ornithology study area                                  | Cofnod (2022)                           |
|                    | Spotted flycatcher       | <i>Muscicapa striata</i>             | Within onshore ornithology search area                                 | The Welsh Ornithological Society, 2019  |
|                    | European pied flycatcher | <i>Ficedula hypoleuca</i>            | Present within the local authority area of Denbighshire County Council | The Welsh Ornithological Society (2019) |
|                    | Rook                     | <i>Corvus frugilegus</i>             | Within onshore ornithology study area                                  | Cofnod (2022)                           |
| Parkland           | Eurasian hobby           | <i>Falco subbuteo</i>                | Within onshore ornithology study area                                  | Cofnod (2022)                           |
|                    | Stock dove               | <i>Columba oenas</i>                 | Within onshore ornithology study area                                  | Cofnod (2022)                           |
|                    | Marsh tit                | <i>Poecile palustris</i>             | Present within the local authority area of Denbighshire County Council | The Welsh Ornithological Society (2019) |
|                    | Common starling          | <i>Sturnus vulgaris</i>              | Within onshore ornithology search area                                 | Cofnod (2022)                           |
|                    | European greenfinch      | <i>Chloris chloris</i>               | Within onshore ornithology study area                                  | Cofnod (2022)                           |
|                    | Garden warbler           | <i>Sylvia borin</i>                  | Within onshore ornithology search area                                 | Cofnod (2022)                           |

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| Broad habitat type              | Common name             | Latin name                  | Location of records  | Data source                             |
|---------------------------------|-------------------------|-----------------------------|--|---|
| Scrub                           | Whinchat                | <i>Saxicola rubetra</i>     | Present within the local authority area of Denbighshire County Council | The Welsh Ornithological Society (2019) |
|                                 | Common whitethroat      | <i>Curruca communis</i>     | Within onshore ornithology study area                                  | Cofnod (2022)                           |
|                                 | Common linnet           | <i>Linaria cannabina</i>    | Within onshore ornithology study area                                  | Cofnod (2022)                           |
|                                 | Lesser redpoll          | <i>Acanthis cabaret</i>     | Within onshore ornithology search area                                 | Cofnod (2022)                           |
| Sand dunes, and the upper beach | Common ringed plover    | <i>Charadrius hiaticula</i> | Within onshore ornithology search area                                 | Cofnod (2022)                           |
|                                 | Great black-backed gull | <i>Larus marinus</i>        | Present within the local authority area of Denbighshire County Council | The Welsh Ornithological Society (2019) |
|                                 | Common tern             | <i>Sterna hirundo</i>       | Dee Estuary SPA  | The Welsh Ornithological Society (2019) |
|                                 | Little tern             | <i>Sternula albifrons</i>   | Dee Estuary SPA and Liverpool Bay SPA                                  | The Welsh Ornithological Society (2019) |
|                                 | Sandwich tern           | <i>Sterna sandvicensis</i>  | Within onshore ornithology search area                                 | Cofnod (2022)                           |
| Freshwater                      | Common shelduck         | <i>Tadorna tadorna</i>      | Within onshore ornithology study area                                  | Cofnod (2022)                           |
|                                 | Gadwall                 | <i>Mareca strepera</i>      | Present within the local authority area of Denbighshire County Council | The Welsh Ornithological Society (2019) |
|                                 | Mallard                 | <i>Anas platyrhynchos</i>   | Within onshore ornithology study area                                  | Cofnod (2022)                           |
|                                 | Little egret            | <i>Egretta garzetta</i>     | Within onshore ornithology search area                                 | Cofnod (2022)                           |

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| Broad habitat type | Common name                | Latin name                        | Location of records  | Data source                             |
|--------------------|----------------------------|-----------------------------------|--|---|
|                    | Common moorhen             | <i>Gallinula chloropus</i>        | Within onshore ornithology study area                                  | Cofnod (2022)                           |
|                    | Eurasian coot              | <i>Fulica atra</i>                | Within onshore ornithology study area                                  | Cofnod (2022)                           |
|                    | Common sandpiper           | <i>Actitis hypoleucos</i>         | Within onshore ornithology study area                                  | Cofnod (2022)                           |
|                    | Black-headed gull          | <i>Chroicocephalus ridibundus</i> | Within onshore ornithology study area                                  | Cofnod (2022)                           |
|                    | Common kingfisher          | <i>Alcedo atthis</i>              | Within onshore ornithology search area                                 | Cofnod (2022)                           |
|                    | Grey wagtail               | <i>Motacilla cinerea</i>          | Within onshore ornithology search area                                 | Cofnod (2022)                           |
|                    | Grey heron                 | <i>Ardea cinerea</i>              | Within onshore ornithology search area                                 | The Welsh Ornithological Society (2019) |
|                    | Cetti's warbler            | <i>Cettia cetti</i>               | Present within the local authority area of Denbighshire County Council | The Welsh Ornithological Society (2019) |
|                    | Common grasshopper warbler | <i>Locustella naevia</i>          | Within onshore ornithology study area                                  | Cofnod (2022)                           |
|                    | Sedge warbler              | <i>Acrocephalus schoenobaenus</i> | Within onshore ornithology study area                                  | Cofnod (2022)                           |
|                    | Common reed bunting        | <i>Emberiza schoeniclus</i>       | Within onshore ornithology search area                                 | The Welsh Ornithological Society (2019) |
|                    | White-throated dipper      | <i>Cinclus cinclus</i>            | Within onshore ornithology search area                                 | The Welsh Ornithological Society (2019) |
| Built environment  | European herring gull      | <i>Larus argentatus</i>           | Within onshore ornithology study area                                  | Cofnod (2022)                           |
|                    | Lesser black-backed gull   | <i>Larus fuscus</i>               | Within onshore ornithology search area                                 | Cofnod (2022)                           |



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| Broad habitat type | Common name          | Latin name                     | Location of records  | Data source                             |
|--------------------|----------------------|--------------------------------|--|---|
|                    | Western barn owl     | <i>Tyto alba</i>               | Within onshore ornithology search area                                 | Cofnod (2022)                           |
|                    | Common swift         | <i>Apus apus</i>               | Within onshore ornithology study area                                  | Cofnod (2022)                           |
|                    | Common house martin  | <i>Delichon urbicum</i>        | Within onshore ornithology study area                                  | Cofnod (2022)                           |
|                    | House sparrow        | <i>Passer domesticus</i>       | Within onshore ornithology search area                                 | Cofnod (2022)                           |
|                    | Little ringed plover | <i>Charadrius dubius</i>       | Present within the local authority area of Denbighshire County Council | The Welsh Ornithological Society (2019) |
|                    | Eurasian magpie      | <i>Pica pica</i>               | Within onshore ornithology search area                                 | The Welsh Ornithological Society (2019) |
| Crags and cliffs   | Peregrine falcon     | <i>Falco peregrinus</i>        | Within onshore ornithology study area                                  | Cofnod (2022)                           |
|                    | Red-billed chough    | <i>Pyrrhocorax pyrrhocorax</i> | Present within the local authority area of Denbighshire County Council | The Welsh Ornithological Society (2019) |

## 1.6 Site-specific surveys

1.6.1.1 A summary of the breeding bird surveys undertaken to inform Volume 3, Chapter 4: Onshore and intertidal ornithology of the Environmental Statement is outlined in Table 1.6 below.

**Table 1.6: Summary of breeding bird surveys undertaken within the onshore ornithology study area.**

| Title                | Extent of survey               | Overview of survey  | Survey contractor                        | Date  |
|----------------------|--------------------------------|---|--|---|
| Breeding bird survey | Onshore ornithology study area | Identification of breeding ornithological features within the onshore ornithology study area. | Enfys Ecology Ltd and AMC Ecological Ltd | April 2022 to July 2022 (year 1) and March 2023 to July 2023 (year 2) |

### 1.6.2 Methodology

1.6.2.1 Site-specific surveys aimed to characterise the distribution and abundance of breeding birds within the onshore ornithology study area.

#### Survey schedule

1.6.2.2 A total of nine breeding bird surveys were undertaken during the 2022 and 2023 breeding bird seasons across the onshore ornithology study area. Four surveys were undertaken between April 2022 to July 2022 and five surveys were undertaken between March 2023 to July 2023. Each breeding bird survey was undertaken once per month over several survey visits.

1.6.2.3 Each monthly survey comprised on average 10 days of surveys to achieve sufficient survey coverage. The number of days per survey varied due to weather conditions. Each monthly survey was undertaken no sooner than ten days after the previous survey had been undertaken, in line with recommendations from the Common Bird Census protocol (Gilbert *et al.*, 1998).

1.6.2.4 All breeding bird surveys were undertaken in favourable weather conditions, avoiding heavy rain and strong winds (Beaufort wind force of greater than 5). All surveys commenced within half an hour of sunrise and concluded by mid-morning, in line with recommendations from the Common Bird Census protocol (Gilbert *et al.*, 1998).

#### Spatial site-specific survey coverage

1.6.2.5 Site-specific survey coverage of the onshore ornithology study area was achieved using a combination of access from both Public Rights of Way (PRoW) and private access. Where access to privately owned land parcels was granted, transects were walked as close to all areas of habitat as possible.

## Survey technique

- 1.6.2.6 Surveys used a simple territory mapping method, whereby birds were detected and located along a survey route. The method consists of walking the same survey route each visit to detect and locate breeding birds, adopting a modified Common Bird Census survey method and protocol (Marchant, 1983; Gilbert *et al.*, 1998 and Bibby *et al.*, 2000).
- 1.6.2.7 For each survey the position of each bird was recorded and plotted onto a field map and details of behaviour indicative of breeding, such as singing males, or birds carrying food were noted, using standard BTO behaviour notation. Results were then transferred onto Geographic Information System software and mapping from which territory analysis was completed.
- 1.6.2.8 The breeding bird baseline characterisation approach was agreed with the EWG and survey methodology as detailed in section 1.3.

## Territory mapping

- 1.6.2.9 Territories were assigned following the Common Bird Census method described in Marchant (1983) and Bibby *et al.* (2000). This involves the identification of clusters of registrations of birds of the same species displaying breeding characteristics (e.g. singing, alarm calling, nest building, mating) in the same general area over successive survey visits.
- 1.6.2.10 A breeding territory is defined as at least two registrations conforming to the above criteria recorded on separate survey visits. The registrations indicate the likely territory centre and not the location of a nest. Territories are indicative of a breeding attempt and do not confirm successful nesting.

## Species recorded

- 1.6.2.11 During the 2022 surveys, only species which are of conservation importance and belonging to one of the following criteria were recorded:
- EU Birds Directive Annex 1 (transposed into UK law with the Habitats and Species Regulations 2017, as amended) and regularly occurring migratory species
  - Schedule 1 of the Wildlife and Countryside Act (1981)
  - Section 7 species of the Environment (Wales) Act 2016
  - A qualifying interest of a nearby SPA or SSSI (as highlighted in Table 1.3)
  - Red or Amber-listed Birds of Conservation Concern (BOCC5 UK) (Stanbury *et al.*, 2021)
  - Red or Amber-listed Birds of Conservation Concern (BOCC4 Wales) (Johnstone *et al.*, 2022).
- 1.6.2.12 To focus field survey efforts and subsequent territory mapping on species of conservation importance, as described above, species of relatively low conservation concern and therefore not covered by the above criteria were not recorded in the 2022 breeding season (e.g. blackbird *Turdus merula* and robin *Erithacus rubecula*).
- 1.6.2.13 However, to comprehensively characterise the overall breeding bird assemblage within the onshore ornithology study area, all species regardless of their conservation

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importance were recorded during the second season of breeding bird surveys (March to July 2023).

### Limitations

- 1.6.2.14 Although every effort was made to start the first year's surveys as early as possible, the Mona Onshore Development Area was not refined in time for surveys to commence in March 2022. Despite this, surveyors noted that it was a slow start to the breeding season even into April 2022 due to unseasonably cold weather.
- 1.6.2.15 The 2023 surveys were started promptly in March, and although it is recognised that this may have missed early breeders such as common crossbill, wintering walkovers with a similar methodology were taking place in February (see Annex 4.1 Onshore ornithology – wintering and migratory birds of the Environmental Statement). These surveys picked up common crossbill although not displaying breeding behaviours.
- 1.6.2.16 Although coverage of the route was good some of the privately owned access parcels were not available for survey every month. However, as the majority of the route is grassland interspersed with hedges the surveyors could at least scan the route with optics, therefore this is not seen as a major limitation. Nevertheless, a precautionary approach was taken during the territory analysis and territories assigned for only one registration.
- 1.6.2.17 Despite these limitations it is considered that the two years-worth of data collected represents a robust characterisation of the grazed pasture dominated study area.

### 1.6.3 Breeding territory mapping results

- 1.6.3.1 A total of 20 and 52 species were recorded as probable and confirmed breeders within the onshore ornithology study area during site-specific surveys carried out in 2022 and 2023 respectively (Table 1.7). The most abundant species group recorded breeding during the 2022 and 2023 were passerines.
- 1.6.3.2 The conservation status of species recorded breeding within the onshore ornithology study area is shown in Table 1.7 and summarized below.

#### SPA listed species

- 1.6.3.3 There were no breeding qualifying SPA species (as identified within Table 1.3) found to be breeding within the onshore ornithology study area (Table 1.7).

#### SSSI listed species

- 1.6.3.4 Two species listed on a SSSI citation at the Coedydd Derw Elwy SSSI site were recorded during the site-specific surveys, European green woodpecker, and great spotted woodpecker. Only great spotted woodpecker was recorded as a probable breeder (Table 1.7).

#### Annex 1 and Schedule 1 listed species

- 1.6.3.5 Although a total of five Annex 1 listed species were recorded during the site-specific surveys, red kite was the only species identified as a probable breeder within the onshore ornithology study area during both the 2022 and 2023 breeding seasons.

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- 1.6.3.6 A total of 11 Schedule 1 listed species were recorded during the site-specific surveys. In addition to red kite during the 2022 and 2023 breeding seasons, little ringed plover were identified as confirmed breeding during the 2022 season (Table 1.7).

### **Section 7 listed species**

- 1.6.3.7 A total of 18 Section 7 listed species were recorded during the site-specific surveys. Of these, 11 species were determined likely to hold a minimum of at least one probable breeding territory within the onshore ornithology study area (Table 1.7).

### **BOCC5 UK and BOCC4 Wales red and amber listed species**

- 1.6.3.8 A total of 40 species amber listed under at least one of the BOCC5 UK or BOCC4 Wales lists were recorded during the site-specific surveys within the onshore ornithology study area. Of these, only 21 species were determined likely to be breeding within the onshore ornithology study area. Dunnock exhibited the highest number of probable breeding territories (Table 1.7).

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**Table 1.7: Breeding bird survey and territory analysis results within the onshore ornithology study area.**

**Note:** <sup>1</sup>Qualifying Dee Estuary SPA and Ramsar site species. <sup>2</sup>Listed on Coedydd Derw Elwy SSSI citation.

| Taxonomic group          | Species                                       | BOCC5 UK status | Wales BOCC4 status | Annex 1 listed | Schedule 1 listed | Section 7 listed | Number of territories (2022) | Number of territories (2023) | Breeding status (2023) |
|--------------------------|---|-----------------|--------------------|----------------|-------------------|------------------|------------------------------|------------------------------|------------------------|
| Swans, geese and ducks   | Canada goose<br><i>Branta canadensis</i>      | Introduced      | Introduced         |                |                   |                  | 0                            | 0                            | Non-breeding           |
|                          | Common merganser<br><i>Mergus merganser</i>   | Green           | Green              |                |                   |                  | 0                            | 0                            | Non-breeding           |
|                          | Mallard                                       | Amber           | Green              |                |                   |                  | 0                            | 1                            | Probable               |
|                          | Mandarin duck<br><i>Aix galericulata</i>      | Introduced      | Introduced         |                |                   |                  | 0                            | 0                            | Non-breeding           |
|                          | Mute swan<br><i>Cygnus olor</i>               | Green           | Green              |                |                   |                  | 0                            | 0                            | Non-breeding           |
|                          | Eurasian teal <sup>1</sup>                    | Amber           | Amber              |                |                   |                  | 0                            | 0                            | Non-breeding           |
|                          | Tufted duck<br><i>Aythya fuligula</i>         | Green           | Green              |                |                   |                  | 0                            | 0                            | Non-breeding           |
| Grebes                   | Little grebe<br><i>Tachybaptus ruficollis</i> | Green           | Green              |                |                   |                  | 0                            | 0                            | Non-breeding           |
| Partridges and pheasants | Common pheasant<br><i>Phasianus colchicus</i> | Introduced      | Introduced         |                |                   |                  | 0                            | 4                            | Probable               |
| Herons and storks        | Grey heron                                    | Green           | Amber              |                |                   |                  | 0                            | 0                            | Non-breeding           |
|                          | Little egret                                  | Green           | Green              | Yes            |                   |                  | 0                            | 0                            | Non-breeding           |



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| Taxonomic group         | Species                                       | BOCC5 UK status | Wales BOCC4 status | Annex 1 listed | Schedule 1 listed | Section 7 listed | Number of territories (2022) | Number of territories (2023) | Breeding status (2023) |
|-------------------------|---|-----------------|--------------------|----------------|-------------------|------------------|------------------------------|------------------------------|------------------------|
| Raptors                 | Common buzzard <i>Buteo buteo</i>             | Green           | Green              |                |                   |                  | 0                            | 2                            | Probable               |
|                         | Northern goshawk                              | Green           | Amber              |                | Yes               |                  | 0                            | 0                            | Non-breeding           |
|                         | Eurasian hobby                                | Green           | Green              |                | Yes               |                  | 0                            | 0                            | Non-breeding           |
|                         | European honey buzzard <i>Pernis apivorus</i> | Amber           | Red                |                | Yes               |                  | 0                            | 0                            | Non-breeding           |
|                         | Common kestrel                                | Amber           | Red                |                |                   | Yes              | 0                            | 1                            | Probable               |
|                         | Osprey  | Amber           | Amber              | Yes            | Yes               |                  | 0                            | 0                            | Non-breeding           |
|                         | Peregrine falcon                              | Green           | Green              | Yes            | Yes               |                  | 0                            | 0                            | Non-breeding           |
|                         | Red kite                                      | Green           | Green              | Yes            | Yes               |                  | 1                            | 1                            | Probable               |
|                         | Eurasian sparrowhawk                          | Amber           | Green              |                |                   |                  | 0                            | 2                            | Probable               |
| Rails, crakes and coots | Eurasian coot                                 | Green           | Amber              |                |                   |                  | 0                            | 0                            | Non-breeding           |
|                         | Moorhen                                       | Amber           | Green              |                |                   |                  | 0                            | 1                            | Probable               |
| Waders                  | Eurasian curlew <sup>1</sup>                  | Red             | Red                |                |                   | Yes              | 0                            | 0                            | Non-breeding           |
|                         | Eurasian oystercatcher <sup>1</sup>           | Amber           | Amber              |                |                   |                  | 0                            | 0                            | Non-breeding           |
|                         | Little ringed plover                          | Green           | Green              |                | Yes               |                  | 1                            | 0                            | Not recorded           |

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| Taxonomic group | Species   | BOCC5 UK status | Wales BOCC4 status | Annex 1 listed | Schedule 1 listed | Section 7 listed | Number of territories (2022) | Number of territories (2023) | Breeding status (2023) |
|-----------------|---|-----------------|--------------------|----------------|-------------------|------------------|------------------------------|------------------------------|------------------------|
| Gulls and terns | Common ringed plover                            | Red             | Red                |                |                   | Yes              | 0                            | 2                            | Probable               |
|                 | Common snipe                                    | Amber           | Amber              |                |                   |                  | 0                            | 2                            | Probable               |
|                 | Eurasian whimbrel                               | Red             | Amber              |                | Yes               |                  | 0                            | 0                            | Non-breeding           |
|                 | Great black-backed gull                         | Amber           | Amber              |                |                   |                  | 0                            | 0                            | Non-breeding           |
|                 | European herring gull                           | Red             | Red                |                |                   | Yes              | 0                            | 0                            | Non-breeding           |
| Woodpeckers     | Great spotted woodpecker <sup>2</sup>           | Green           | Green              |                |                   |                  | 0                            | 20                           | Probable               |
|                 | European green woodpecker <sup>2</sup>          | Green           | Amber              |                |                   |                  | 0                            | 0                            | Non-breeding           |
| Passerines      | Common blackbird                                | Green           | Green              |                |                   |                  | 0                            | 86                           | Probable               |
|                 | Eurasian blackcap<br><i>Sylvia atricapilla</i>  | Green           | Green              |                |                   |                  | 0                            | 56                           | Probable               |
|                 | Eurasian blue tit<br><i>Cyanistes caeruleus</i> | Green           | Green              |                |                   |                  | 0                            | 44                           | Probable               |
|                 | Eurasian bullfinch                              | Amber           | Amber              |                |                   | Yes              | 5                            | 19                           | Probable               |
|                 | Carrion crow<br><i>Corvus corone</i>            | Green           | Green              |                |                   |                  | 0                            | 3                            | Probable               |

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| Taxonomic group | Species  | BOCC5 UK status | Wales BOCC4 status | Annex 1 listed | Schedule 1 listed | Section 7 listed | Number of territories (2022) | Number of territories (2023) | Breeding status (2023) |
|-----------------|--|-----------------|--------------------|----------------|-------------------|------------------|------------------------------|------------------------------|------------------------|
|                 | Common chaffinch                                       | Green           | Amber              |                |                   |                  | 0                            | 48                           | Probable               |
|                 | Common chiffchaff<br><i>Phylloscopus collybita</i>     | Green           | Green              |                |                   |                  | 0                            | 129                          | Probable               |
|                 | Red-billed chough                                      | Green           | Amber              | Yes            | Yes               | Yes              | 0                            | 0                            | Non-breeding           |
|                 | Coal tit   | Green           | Amber              |                |                   |                  | 0                            | 9                            | Probable               |
|                 | Eurasian collared dove<br><i>Streptopelia decaocto</i> | Green           | Green              |                |                   |                  | 0                            | 2                            | Probable               |
|                 | Red crossbill  | Green           | Green              |                | Yes               |                  | 0                            | 0                            | Non-breeding           |
|                 | Common redstart  | Amber           | Green              |                |                   |                  | 10                           | 14                           | Probable               |
|                 | Common whitethroat                                     | Amber           | Red                |                |                   |                  | 4                            | 22                           | Probable               |
|                 | Common cuckoo  | Red             | Red                |                |                   | Yes              | 2                            | 1                            | Probable               |
|                 | White-throated dipper                                  | Amber           | Green              |                |                   |                  | 0                            | 0                            | Non-breeding           |
|                 | Dunnock  | Amber           | Amber              |                |                   | Yes              | 0                            | 92                           | Probable               |
|                 | Garden warbler   | Green           | Amber              |                |                   |                  | 0                            | 5                            | Probable               |
|                 | Goldcrest  | Green           | Red                |                |                   |                  | 0                            | 27                           | Probable               |

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| Taxonomic group | Species  | BOCC5 UK status | Wales BOCC4 status | Annex 1 listed | Schedule 1 listed | Section 7 listed | Number of territories (2022) | Number of territories (2023) | Breeding status (2023) |
|-----------------|--|-----------------|--------------------|----------------|-------------------|------------------|------------------------------|------------------------------|------------------------|
|                 | Eurasian golden oriole<br><i>Oriolus oriolus</i> | Former breeder  | Scarce             |                | Yes               |                  | 0                            | 0                            | Non-breeding           |
|                 | European goldfinch<br><i>Carduelis carduelis</i> | Green           | Green              |                |                   |                  | 0                            | 13                           | Probable               |
|                 | Common grasshopper warbler                       | Red             | Red                |                |                   | Yes              | 0                            | 0                            | Non-breeding           |
|                 | Great tit <i>Parus major</i>                     | Green           | Green              |                |                   |                  | 0                            | 63                           | Confirmed              |
|                 | European greenfinch                              | Red             | Red                |                |                   |                  | 2                            | 12                           | Probable               |
|                 | Grey wagtail                                     | Amber           | Amber              |                |                   |                  | 2                            | 2                            | Probable               |
|                 | Common house martin                              | Red             | Amber              |                |                   |                  | 4                            | 5                            | Confirmed              |
|                 | House sparrow                                    | Red             | Amber              |                |                   | Yes              | 43                           | 44                           | Probable               |
|                 | Western jackdaw<br><i>Corvus monedula</i>        | Green           | Green              |                |                   |                  | 0                            | 0                            | Non-breeding           |
|                 | Eurasian jay<br><i>Garrulus glandarius</i>       | Green           | Green              |                |                   |                  | 0                            | 7                            | Probable               |
|                 | Lesser redpoll                                   | Red             | Amber              |                |                   | Yes              | 0                            | 0                            | Non-breeding           |
|                 | Lesser whitethroat<br><i>Sylvia curruca</i>      | Green           | Green              |                |                   |                  | 0                            | 3                            | Probable               |

**MONA OFFSHORE WIND PROJECT**

| Taxonomic group | Species                                    | BOCC5 UK status | Wales BOCC4 status | Annex 1 listed | Schedule 1 listed | Section 7 listed | Number of territories (2022) | Number of territories (2023) | Breeding status (2023) |
|-----------------|--|-----------------|--------------------|----------------|-------------------|------------------|------------------------------|------------------------------|------------------------|
|                 | Linnet <i>Linaria cannabina</i>            | Red             | Red                |                |                   | Yes              | 5                            | 8                            | Probable               |
|                 | Long-tailed tit <i>Aegithalos caudatus</i> | Green           | Green              |                |                   |                  | 0                            | 12                           | Probable               |
|                 | Eurasian magpie                            | Green           | Amber              |                |                   |                  | 0                            | 13                           | Probable               |
|                 | Marsh tit                                  | Red             | Red                |                |                   | Yes              | 0                            | 0                            | Non-breeding           |
|                 | Meadow pipit                               | Amber           | Red                |                |                   |                  | 1                            | 11                           | Probable               |
|                 | Mistle thrush                              | Red             | Amber              |                |                   |                  | 5                            | 20                           | Probable               |
|                 | Eurasian nuthatch <i>Sitta europaea</i>    | Green           | Green              |                |                   |                  | 0                            | 19                           | Probable               |
|                 | White wagtail <i>Motacilla alba</i>        | Green           | Green              |                |                   |                  | 0                            | 12                           | Probable               |
|                 | Northern raven <i>Corvus corax</i>         | Green           | Green              |                |                   |                  | 0                            | 0                            | Non-breeding           |
|                 | Redwing                                    | Amber           | Green              |                | Yes               |                  | 0                            | 0                            | Non-breeding           |
|                 | European robin                             | Green           | Green              |                |                   |                  | 0                            | 71                           | Probable               |
|                 | Rook                                       | Amber           | Red                |                |                   |                  | 0                            | 0                            | Non-breeding           |
|                 | Sand martin <i>Riparia riparia</i>         | Green           | Green              |                |                   |                  | 0                            | 0                            | Non-breeding           |
|                 | Eurasian siskin <i>Spinus spinus</i>       | Green           | Green              |                |                   |                  | 0                            | 1                            | Probable               |
|                 | Eurasian skylark                           | Red             | Amber              |                |                   | Yes              | 4                            | 7                            | Probable               |

**MONA OFFSHORE WIND PROJECT**

| Taxonomic group | Species  | BOCC5 UK status | Wales BOCC4 status | Annex 1 listed | Schedule 1 listed | Section 7 listed | Number of territories (2022) | Number of territories (2023) | Breeding status (2023) |
|-----------------|--|-----------------|--------------------|----------------|-------------------|------------------|------------------------------|------------------------------|------------------------|
|                 | Song thrush                                    | Amber           | Green              |                |                   | Yes              | 20                           | 43                           | Probable               |
|                 | Spotted flycatcher                             | Red             | Red                |                |                   | Yes              | 0                            | 2                            | Probable               |
|                 | Common starling                                | Red             | Red                |                |                   | Yes              | 0                            | 1                            | Probable               |
|                 | Stock dove                                     | Amber           | Green              |                |                   |                  | 3                            | 0                            | Non-breeding           |
|                 | European stonechat<br><i>Saxicola rubicola</i> | Green           | Green              |                |                   |                  | 0                            | 6                            | Probable               |
|                 | Barn swallow<br><i>Hirundo rustica</i>         | Green           | Green              |                |                   |                  | 0                            | 20                           | Probable               |
|                 | Common swift                                   | Red             | Red                |                |                   |                  | 0                            | 0                            | Non-breeding           |
|                 | Treecreeper<br><i>Certhia familiaris</i>       | Green           | Green              |                |                   |                  | 0                            | 20                           | Probable               |
|                 | Northern wheatear                              | Amber           | Amber              |                |                   |                  | 0                            | 0                            | Non-breeding           |
|                 | Willow warbler                                 | Amber           | Red                |                |                   |                  | 8                            | 14                           | Probable               |
|                 | Common wood pigeon                             | Amber           | Green              |                |                   |                  | 0                            | 6                            | Probable               |
|                 | Eurasian wren                                  | Amber           | Green              |                |                   |                  | 0                            | 21                           | Probable               |
|                 | Yellowhammer                                   | Red             | Red                |                |                   |                  | 0                            | 0                            | Non-breeding           |

## Species abundance and distribution by species group

### Swans, ducks and geese

- 1.6.3.9 No swans, duck and geese were found to be breeding within the onshore ornithology study area during the 2022 season. However, a total of seven species were observed during the 2023 season: Canada goose, common merganser, mallard, Mandarin duck, mute swan, Eurasian teal and tufted duck. Of these species, only mallard was found to be probably breeding within the onshore ornithology study area, with a single territory identified (Figure 1.3).

### Grebes

- 1.6.3.10 No grebes were found to be breeding within the onshore ornithology study area during the 2022 and 2023 season, although two observations of little grebes were made during the March 2023 surveys.

### Partridges and pheasants

- 1.6.3.11 Four common pheasant breeding territories were found within the onshore ornithology study area during the 2023 season.

### Herons and storks

- 1.6.3.12 No herons and stork species were found to be breeding within the onshore ornithology study area during the 2022 breeding bird surveys.
- 1.6.3.13 Grey heron and little egret were observed during the 2023 breeding bird surveys. Little egret was observed on one occasion and grey heron was observed on six occasions. As no behaviour associated with breeding was noted, it was determined that both species were not breeding within the onshore ornithology study area.

### Raptors

- 1.6.3.14 Eurasian sparrowhawk and red kite were recoded as breeders within the onshore ornithology study area during the 2022 breeding bird survey. One probable red kite territories were identified, while two probable sparrowhawk and one Eurasian kestrel territory were identified.
- 1.6.3.15 Nine species of raptor were observed during 2023 breeding bird surveys, including common buzzard, northern goshawk, Eurasian hobby, European honey buzzard, common kestrel, osprey, peregrine falcon, red kite and Eurasian sparrowhawk.
- 1.6.3.16 Common buzzard, common kestrel (Figure 1.5), red kite and Eurasian sparrowhawk (Figure 1.4) were found to be probably breeding within the onshore ornithology study area. Single territories of common kestrel and red kite were found whilst two territories of common buzzard and Eurasian sparrowhawk were found in 2023.

### Rails, crakes and coots

- 1.6.3.17 No rail, crakes and coots were found to be breeding within the onshore ornithology study area during the 2022 breeding bird surveys.
- 1.6.3.18 Common moorhen was the species recorded within the onshore ornithology study area during 2023 breeding bird surveys. A minimum of one breeding territory was identified (Figure 1.6). Eurasian coot were observed on two separate occasions during the March 2023 survey visit but no further observations of the species were made. Therefore, it was determined that the species is unlikely to be breeding within the onshore ornithology study area.

### Waders

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1.6.3.19 One wader species, little ringed plover, was identified as likely to be breeding within the onshore ornithology study area during the 2022 breeding bird surveys. One territory was identified for this species.

1.6.3.20 A total of five wader species were observed during the 2023 breeding bird surveys, Eurasian curlew, Eurasian oystercatcher, common ringed plover, common snipe and Eurasian whimbrel. Common ringed plover and common snipe were found to be breeding within the onshore ornithology study area. Two breeding common snipe (Figure 1.11) and two common ringed plover (Figure 1.9) breeding territories were identified.

### **Gulls and terns**

1.6.3.21 No gull or tern species were found breeding within the onshore ornithology study area. Although great black-backed gull and European herring gull were observed during the 2023 surveys, no behaviour indicative of breeding activities was noted.

### **Woodpeckers**

1.6.3.22 No woodpeckers were found breeding within the onshore ornithology study during the 2022 breeding bird surveys.

1.6.3.23 European green woodpecker and great spotted woodpecker were recorded during the 2023 breeding bird surveys. Only great spotted woodpecker was recorded as a probable breeder, with at least 20 probable territories identified.

### **Passerines**

1.6.3.24 A total of 17 passerine species were identified as probably breeding within the onshore ornithology study area during the 2022 breeding bird surveys. All these species were identified as likely to be breeding during the 2023 breeding bird surveys except for stock dove. Indeed, stock dove was not recorded as a probable breeder in 2023.

1.6.3.25 Due to green-listed species also being recorded during the 2023 breeding bird surveys (in addition to species of specific conservation importance), a further 21 breeding passerines were found to be breeding within the onshore ornithology study in 2023.

1.6.3.26 The passerine assemblage recorded during the 2022 and 2023 breeding bird surveys was dominated by birds associated with hedgerows, copses and woodlands.

1.6.3.27 The distribution of territories for red-listed and amber-listed BOCC5 UK or BOCC4 Wales lists species is shown in to Figure 1.4 to Figure 1.35.



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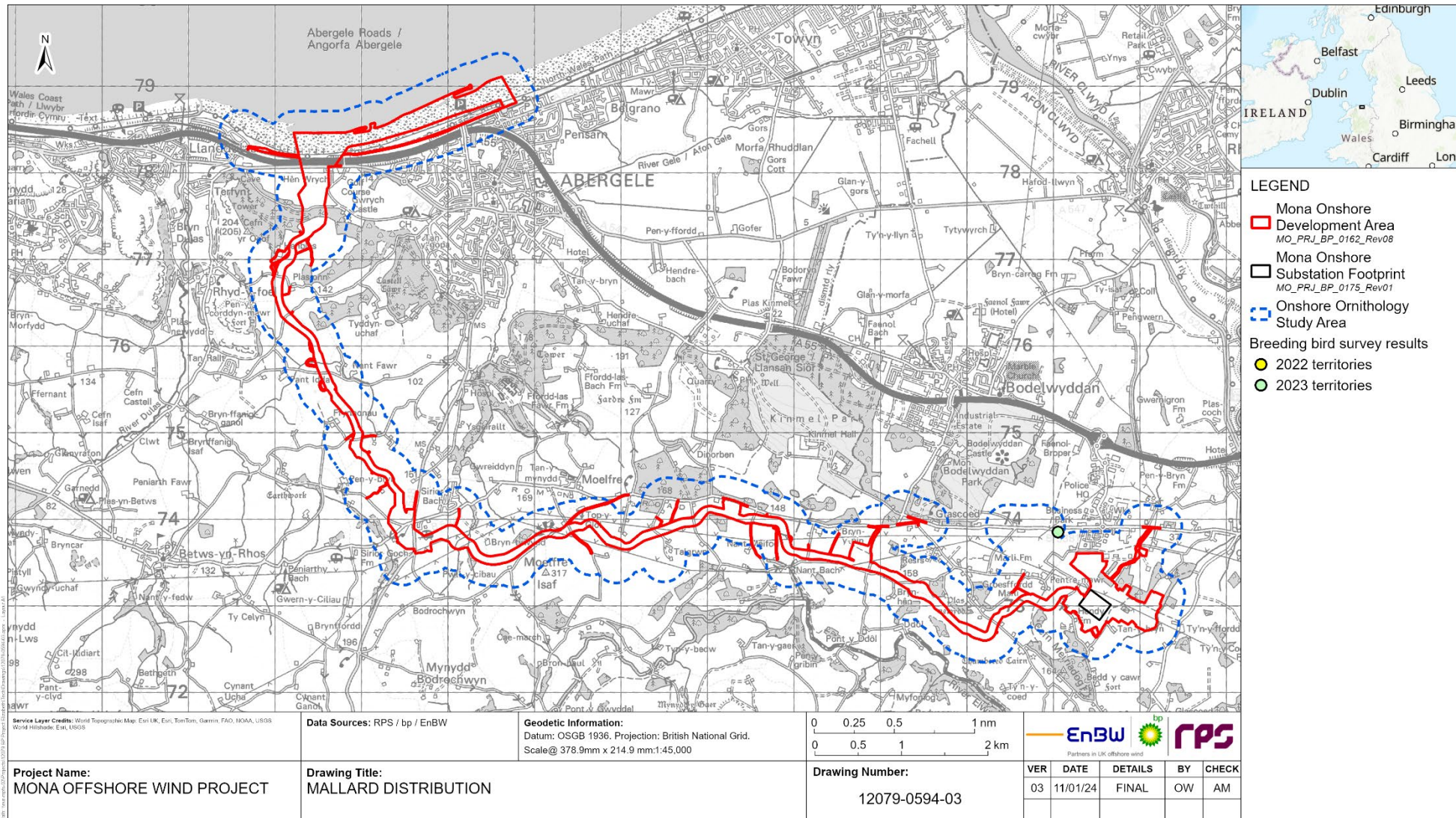


Figure 1.4: Distribution of mallard breeding territories.



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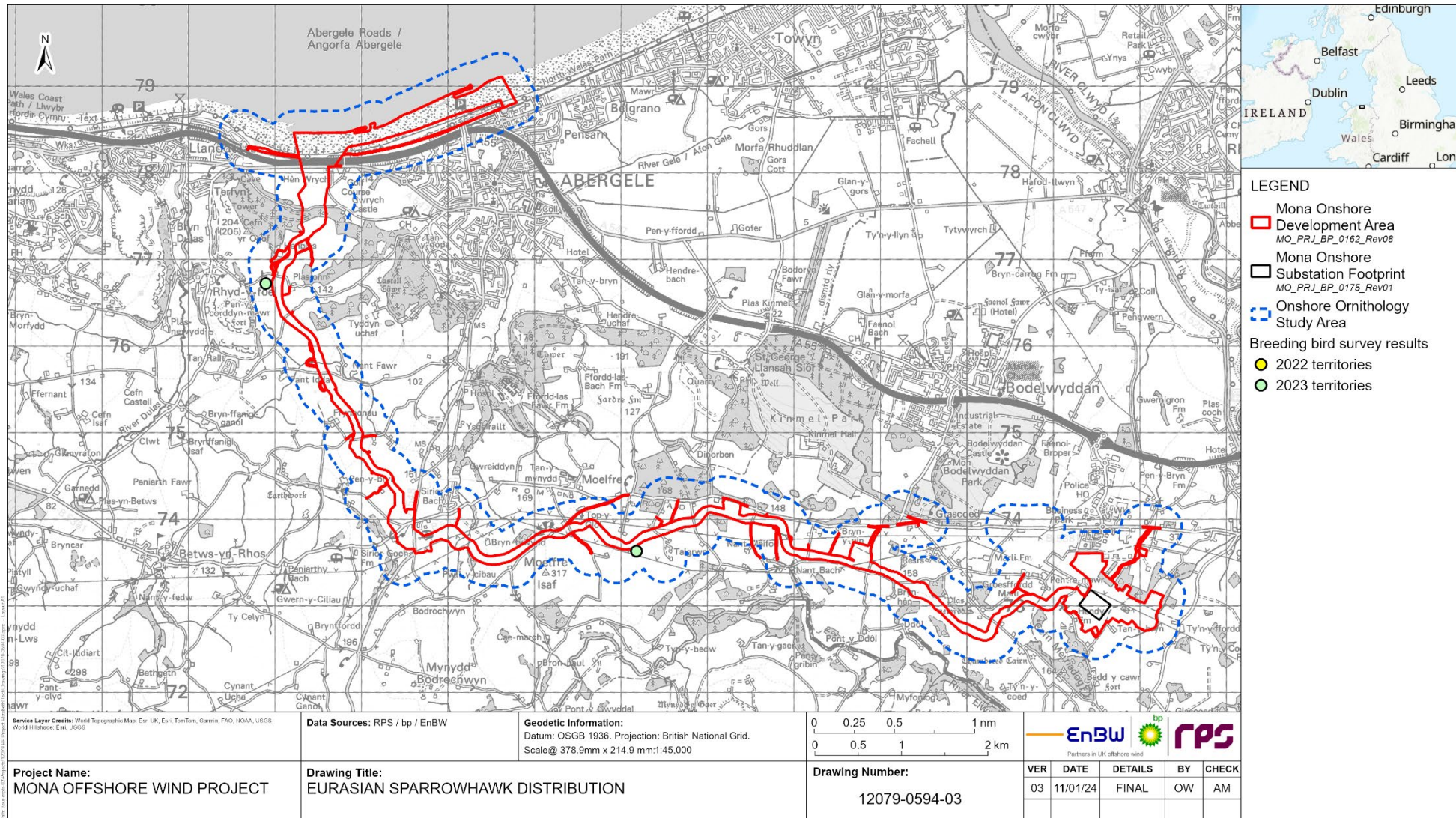


Figure 1.5: Distribution of Eurasian sparrowhawk breeding territories.



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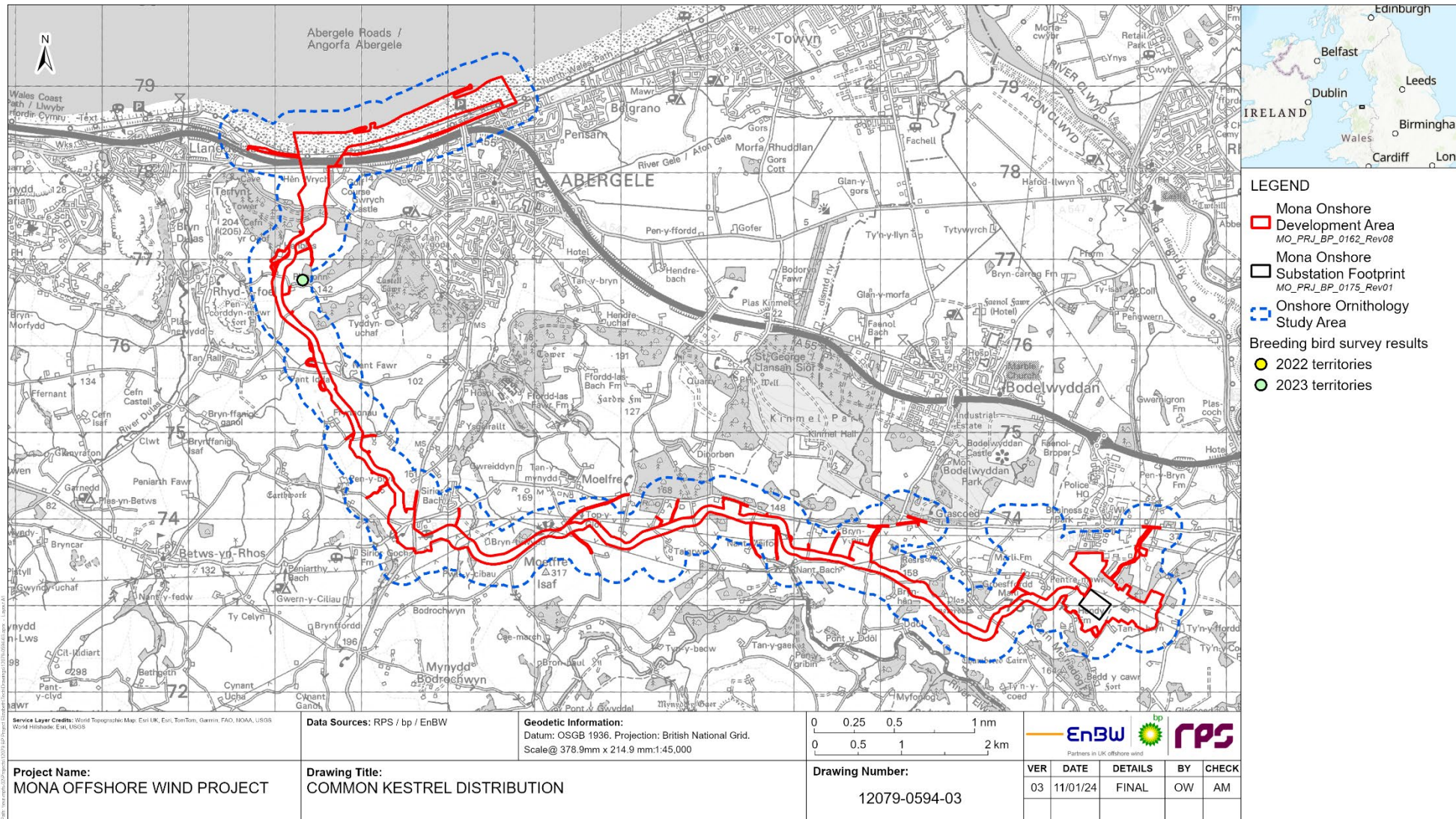


Figure 1.6: Distribution of common kestrel breeding territories.



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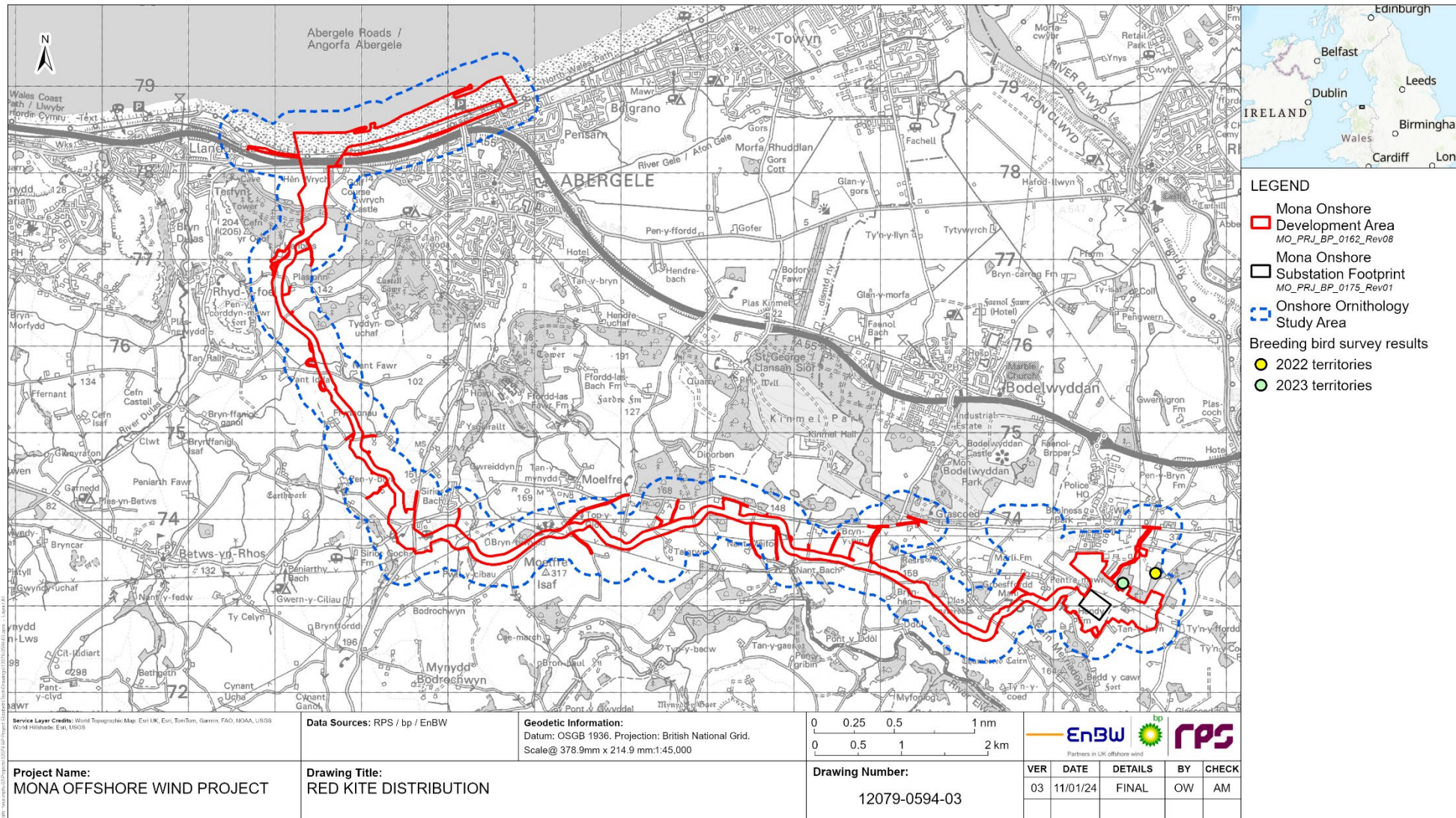


Figure 1.7: Distribution of red kite breeding territories.



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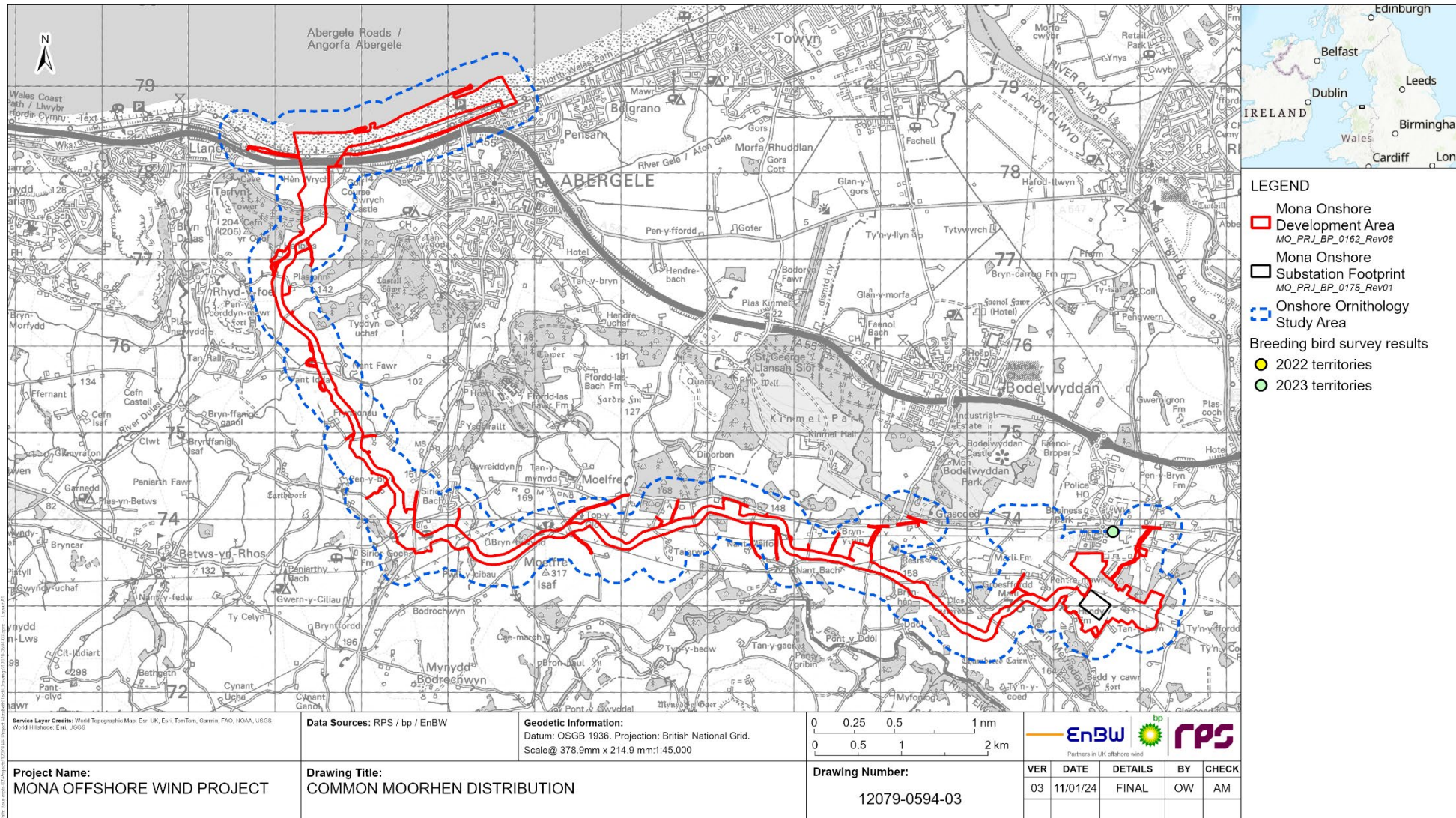


Figure 1.8: Distribution of common moorhen breeding territories.



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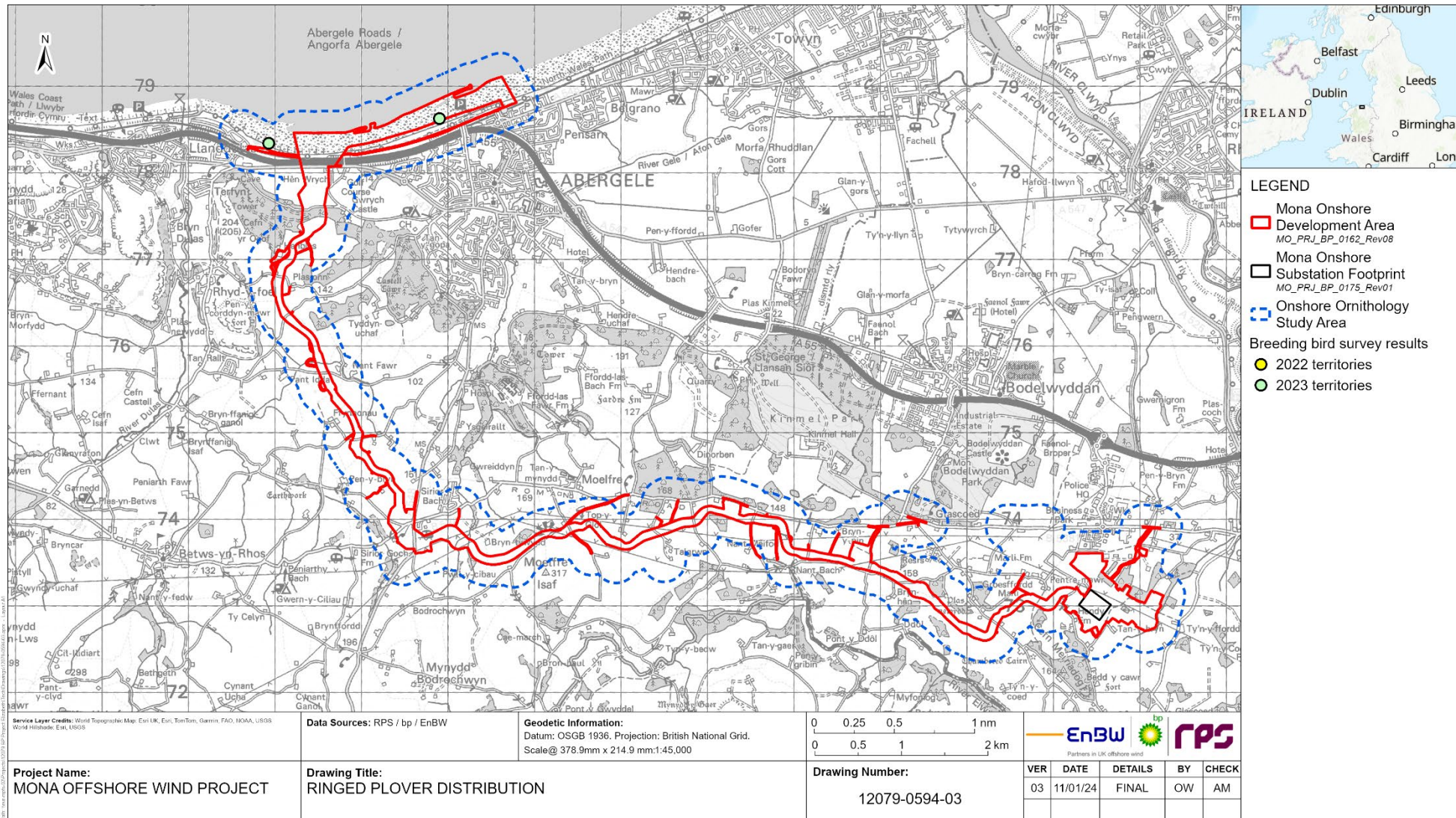


Figure 1.9: Distribution of common ringed plover breeding territories.



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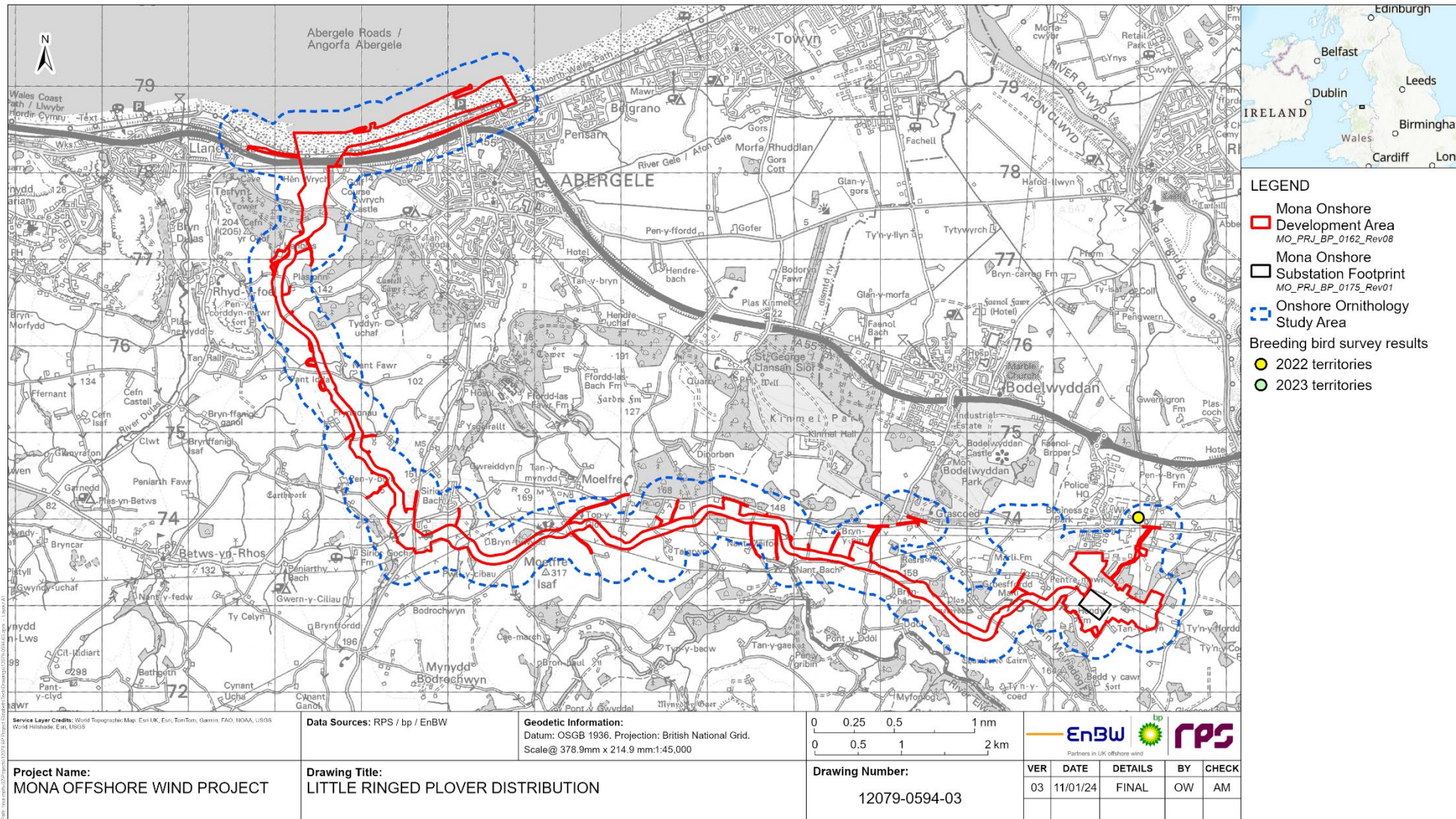


Figure 1.10: Distribution of little ringed plover breeding territories.



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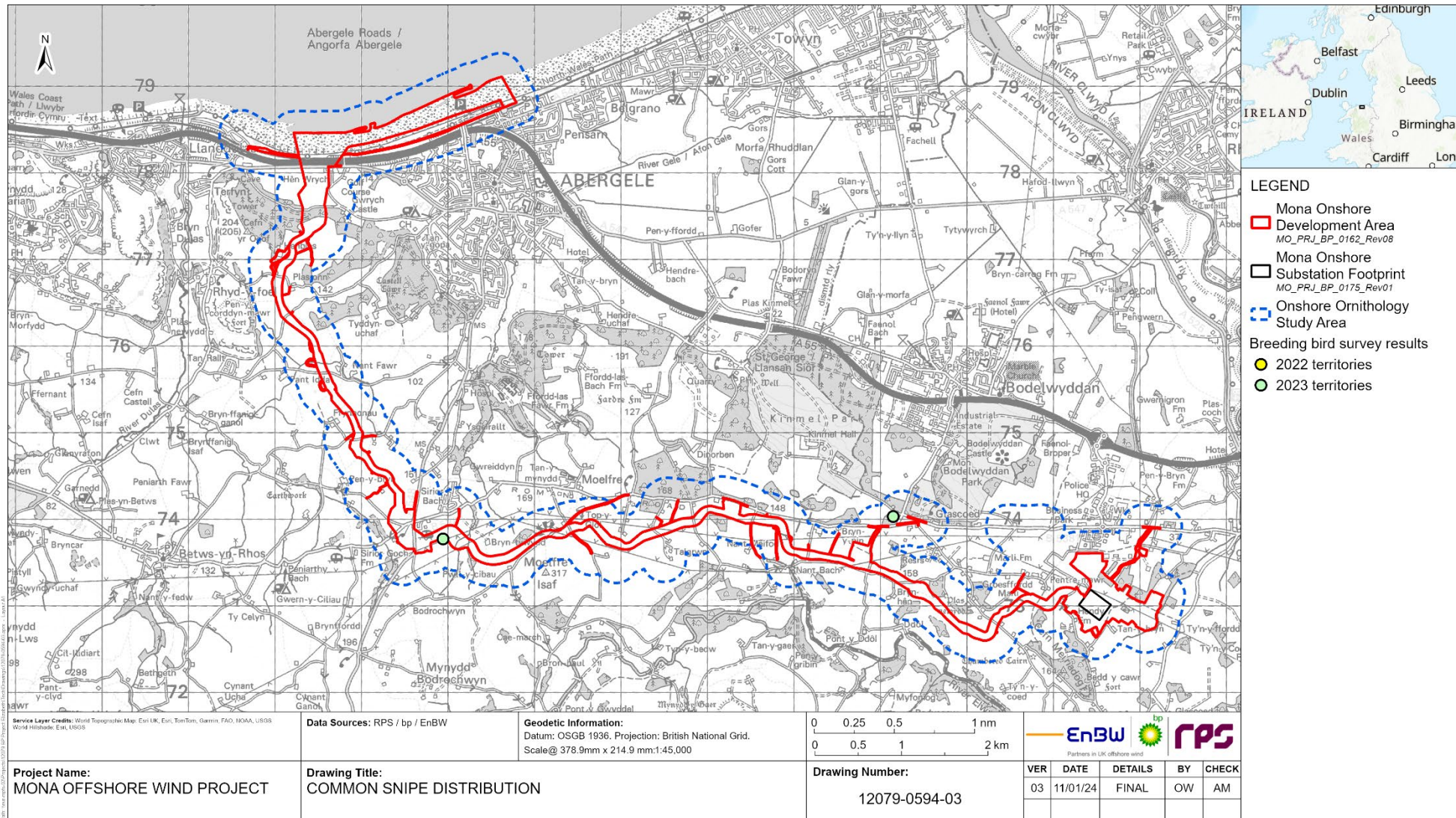


Figure 1.11: Distribution of common snipe breeding territories.



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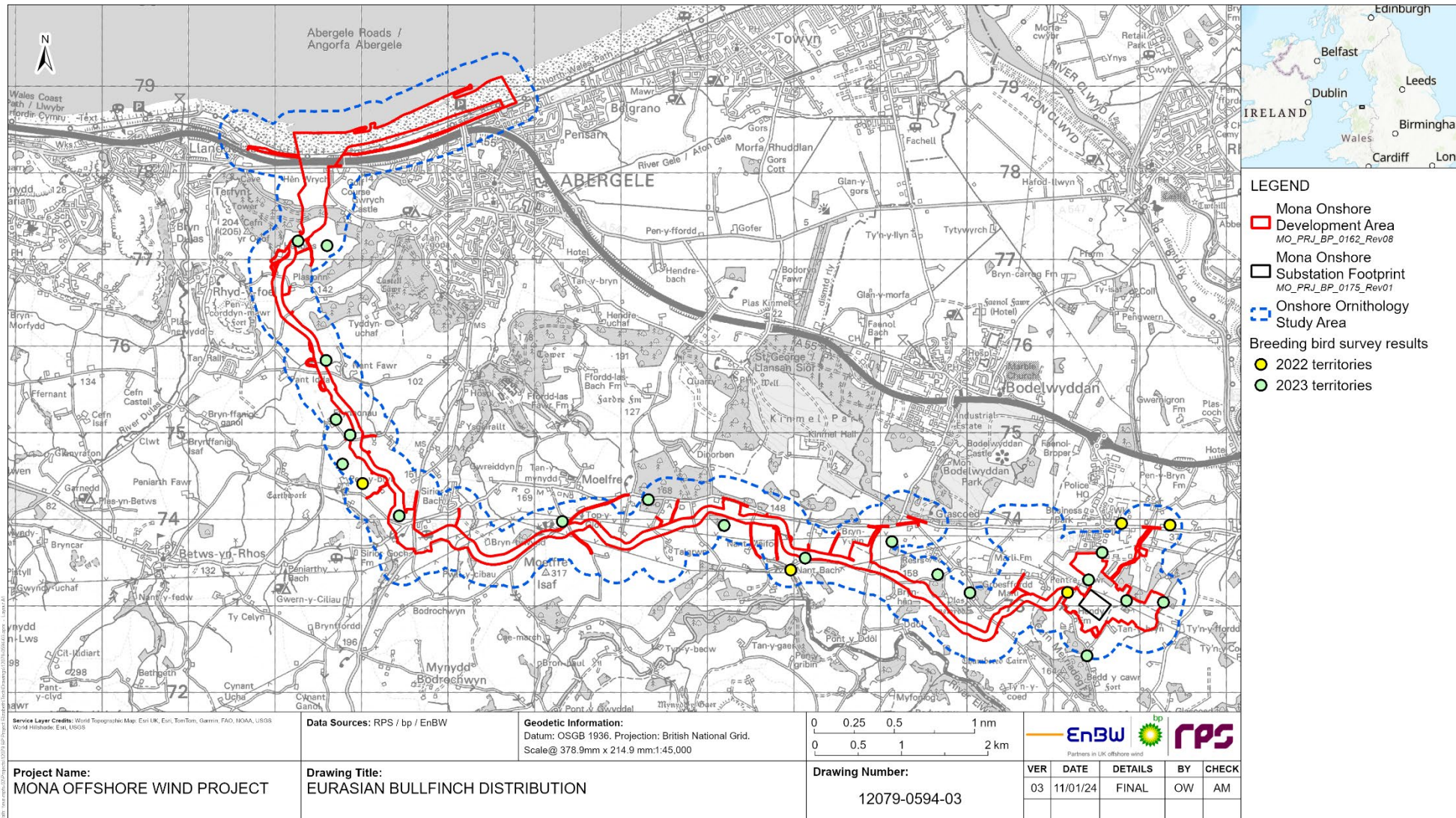


Figure 1.12: Distribution of Eurasian bullfinch breeding territories.



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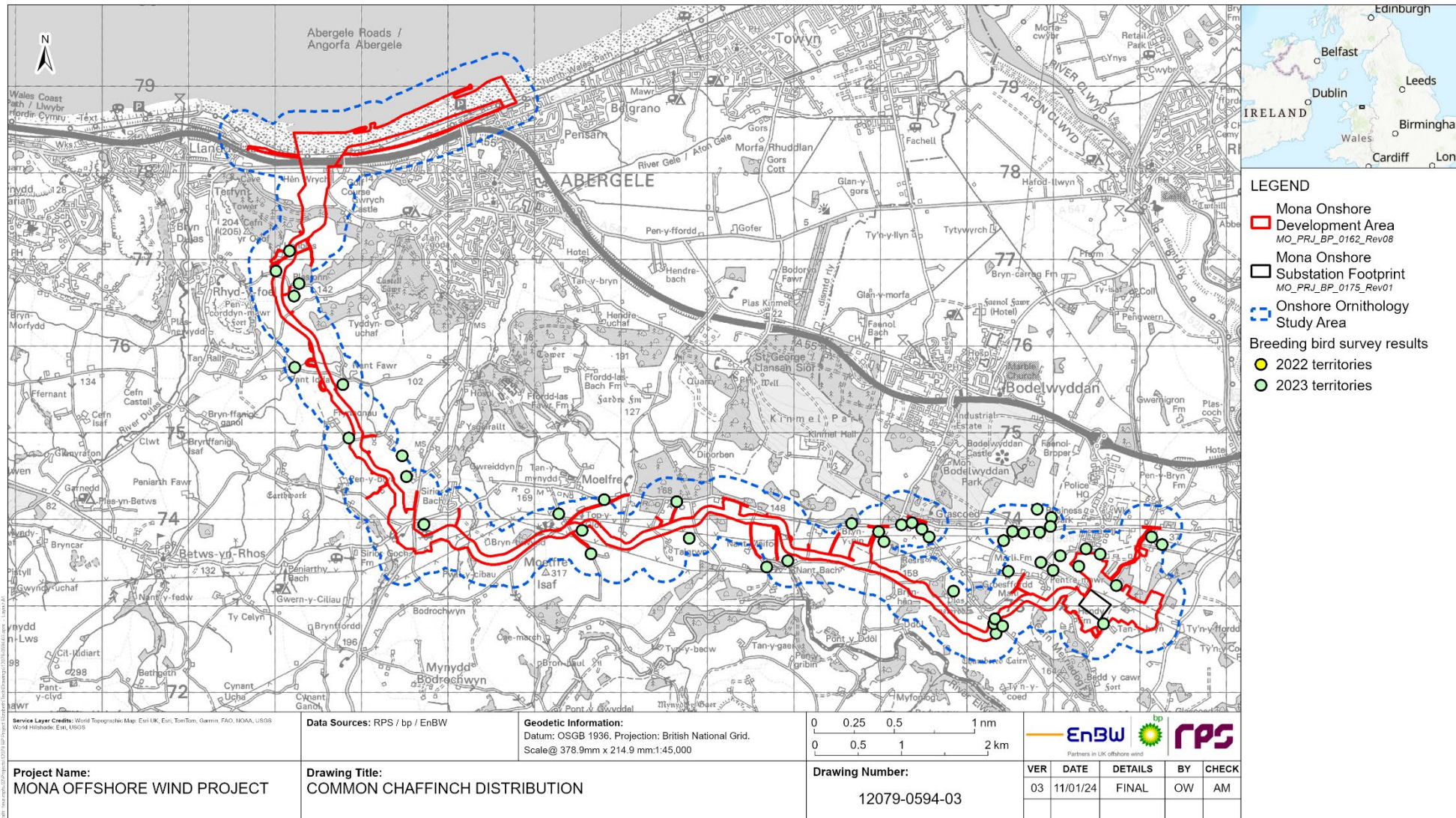


Figure 1.13: Distribution of common chaffinch breeding territories.



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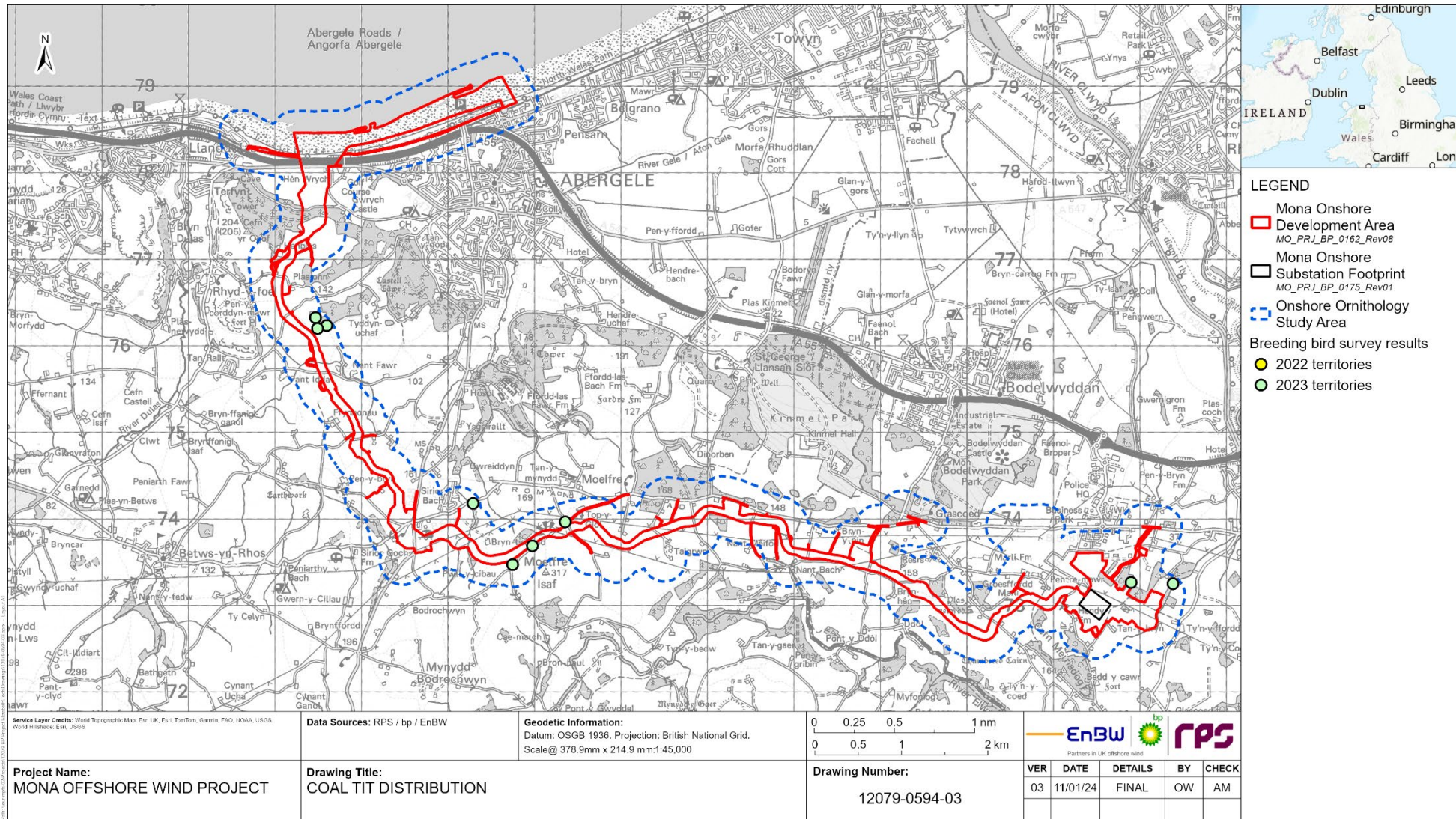


Figure 1.14: Distribution of coal tit breeding territories.



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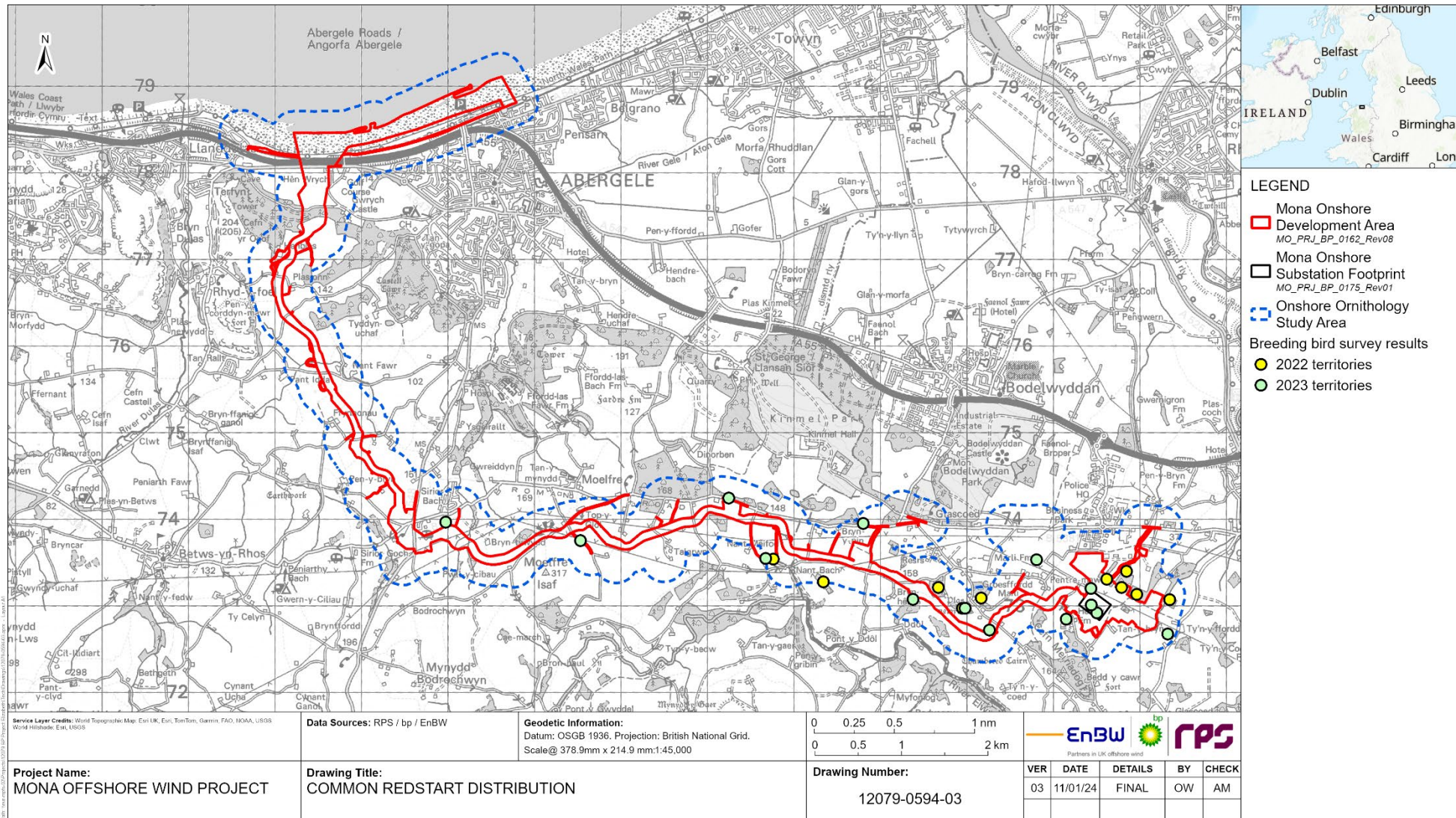


Figure 1.15: Distribution of common redstart breeding territories.



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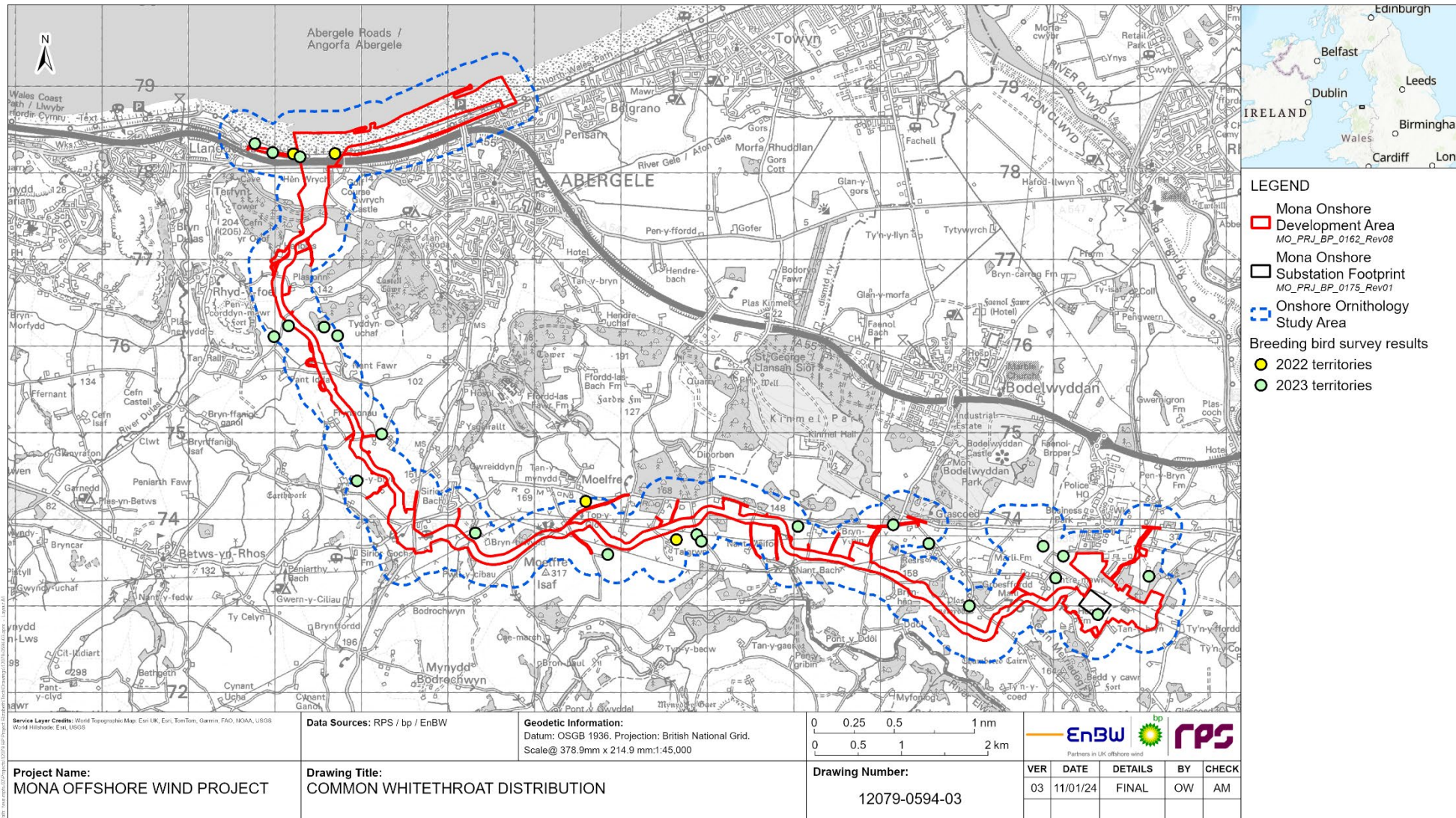


Figure 1.16: Distribution of common whitethroat breeding territories.



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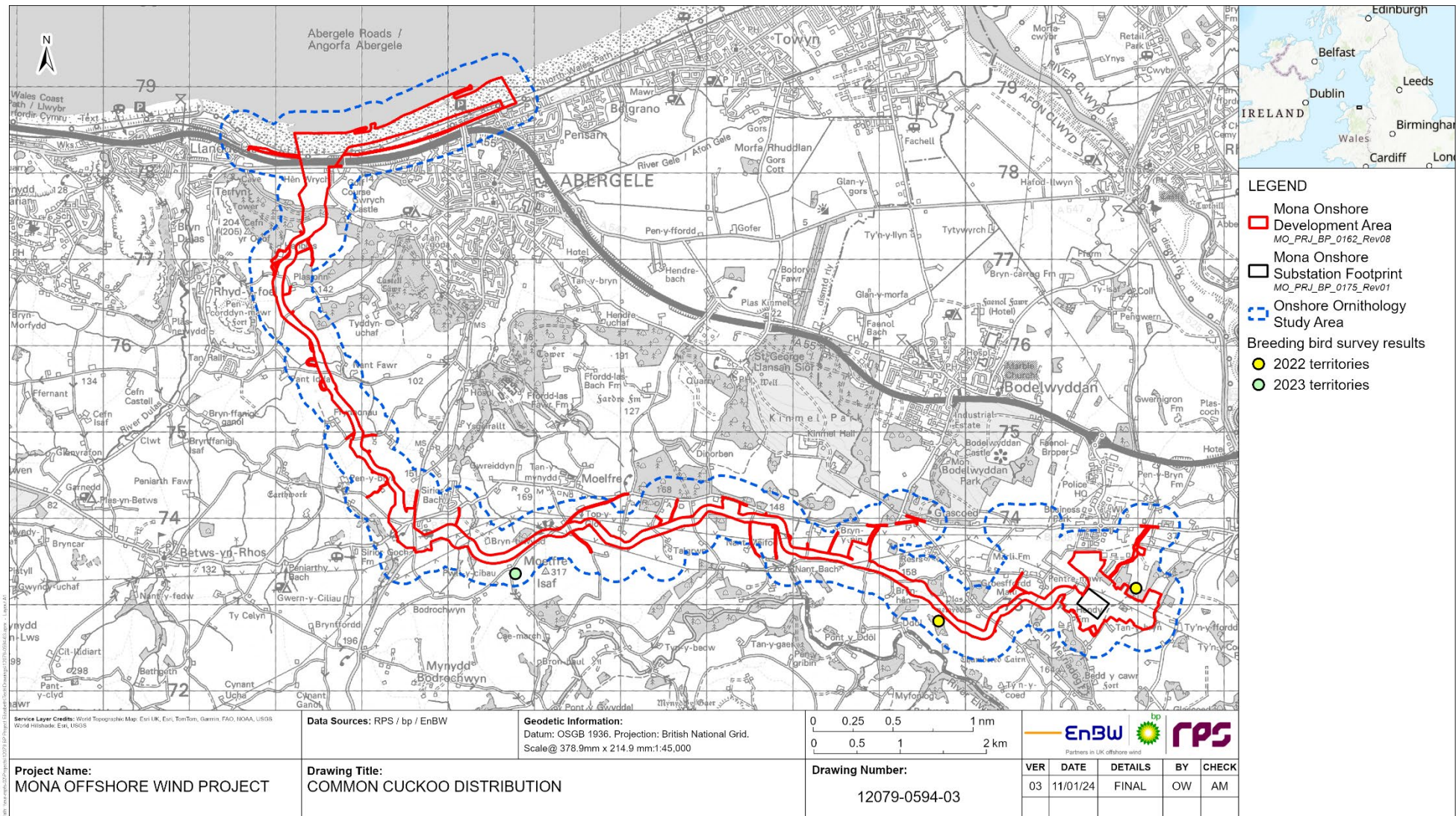


Figure 1.17: Distribution of common cuckoo breeding territories.



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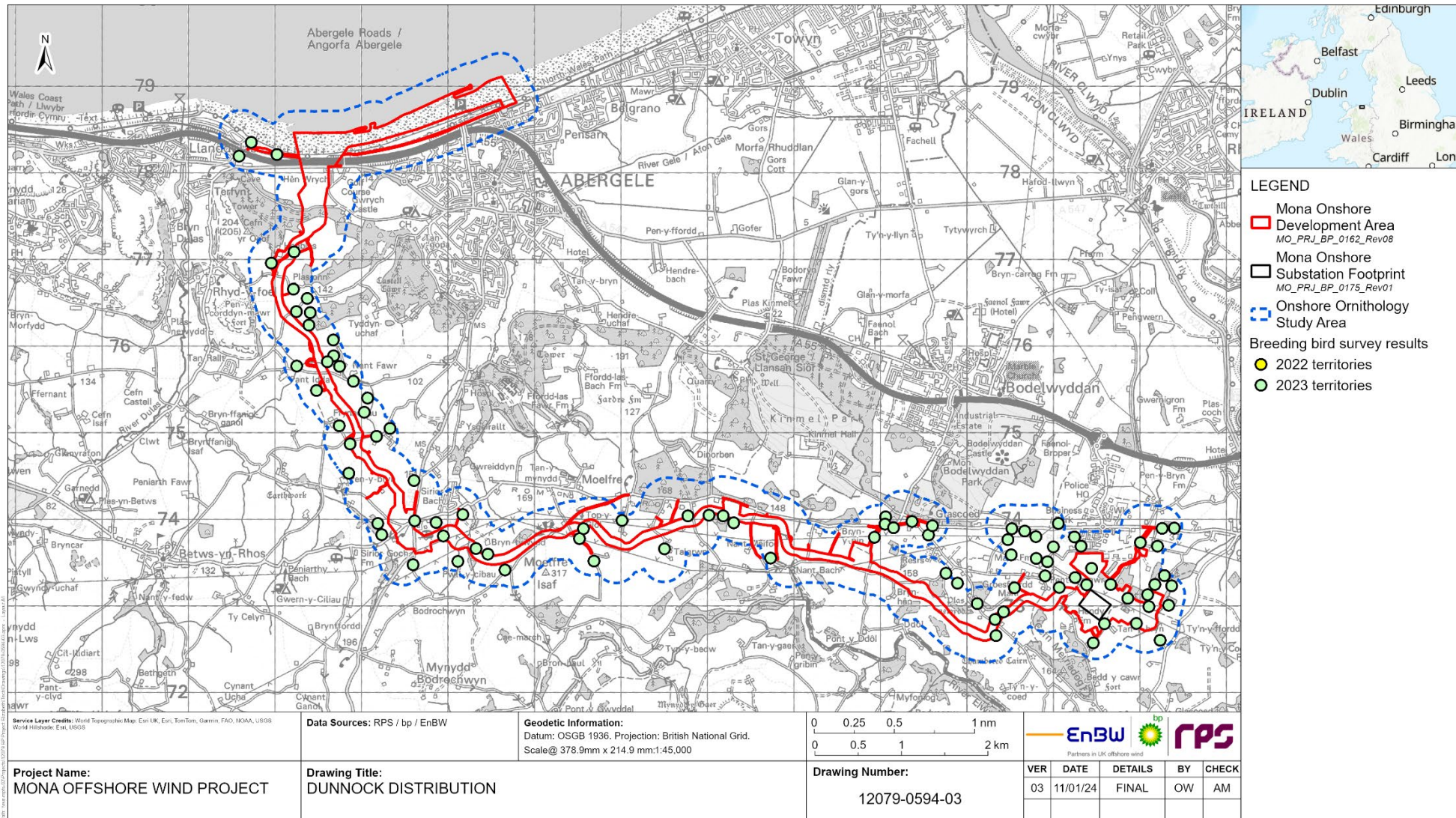


Figure 1.18: Distribution of dunnock breeding territories.



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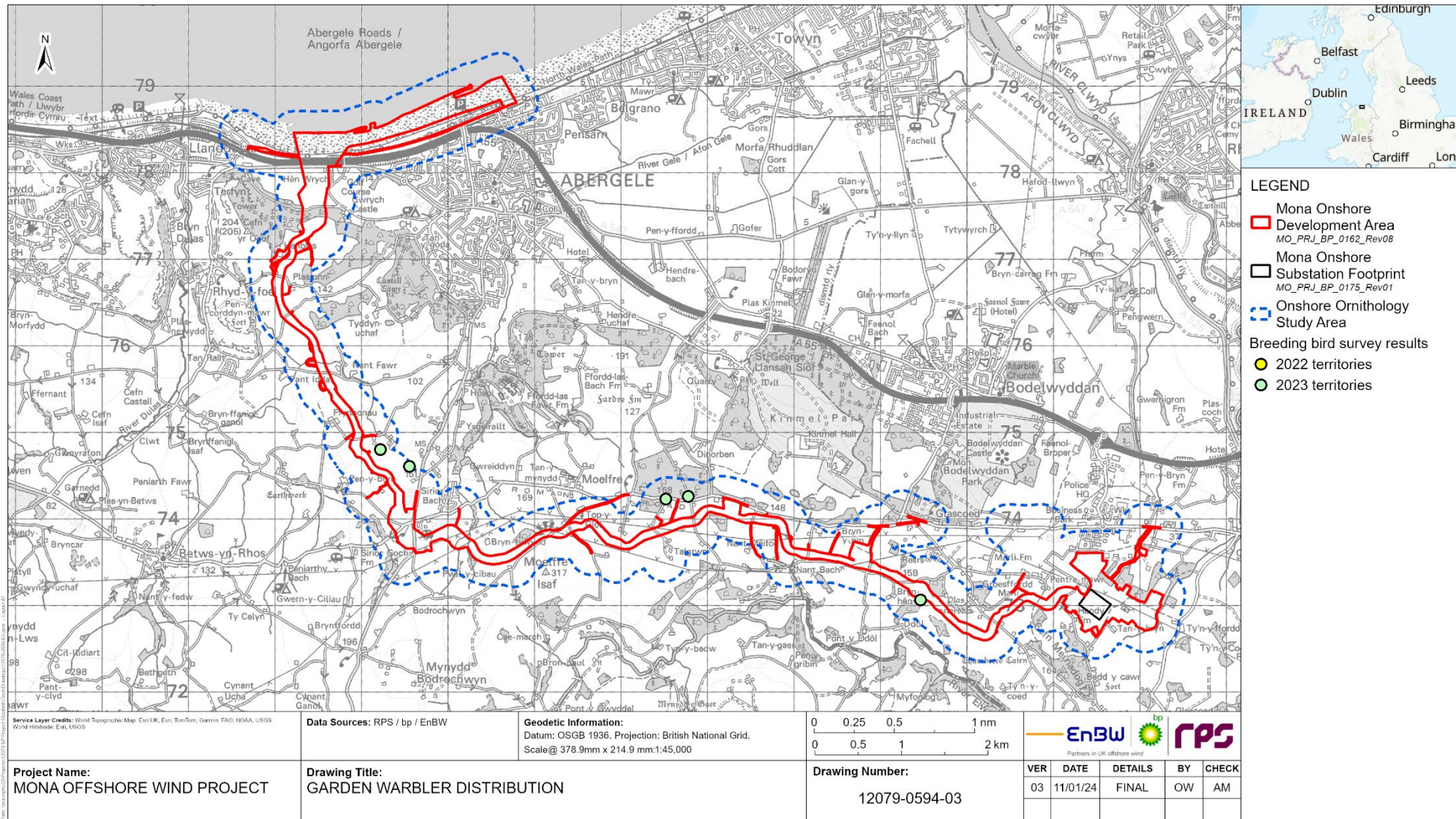


Figure 1.19: Distribution of garden warbler breeding territories.



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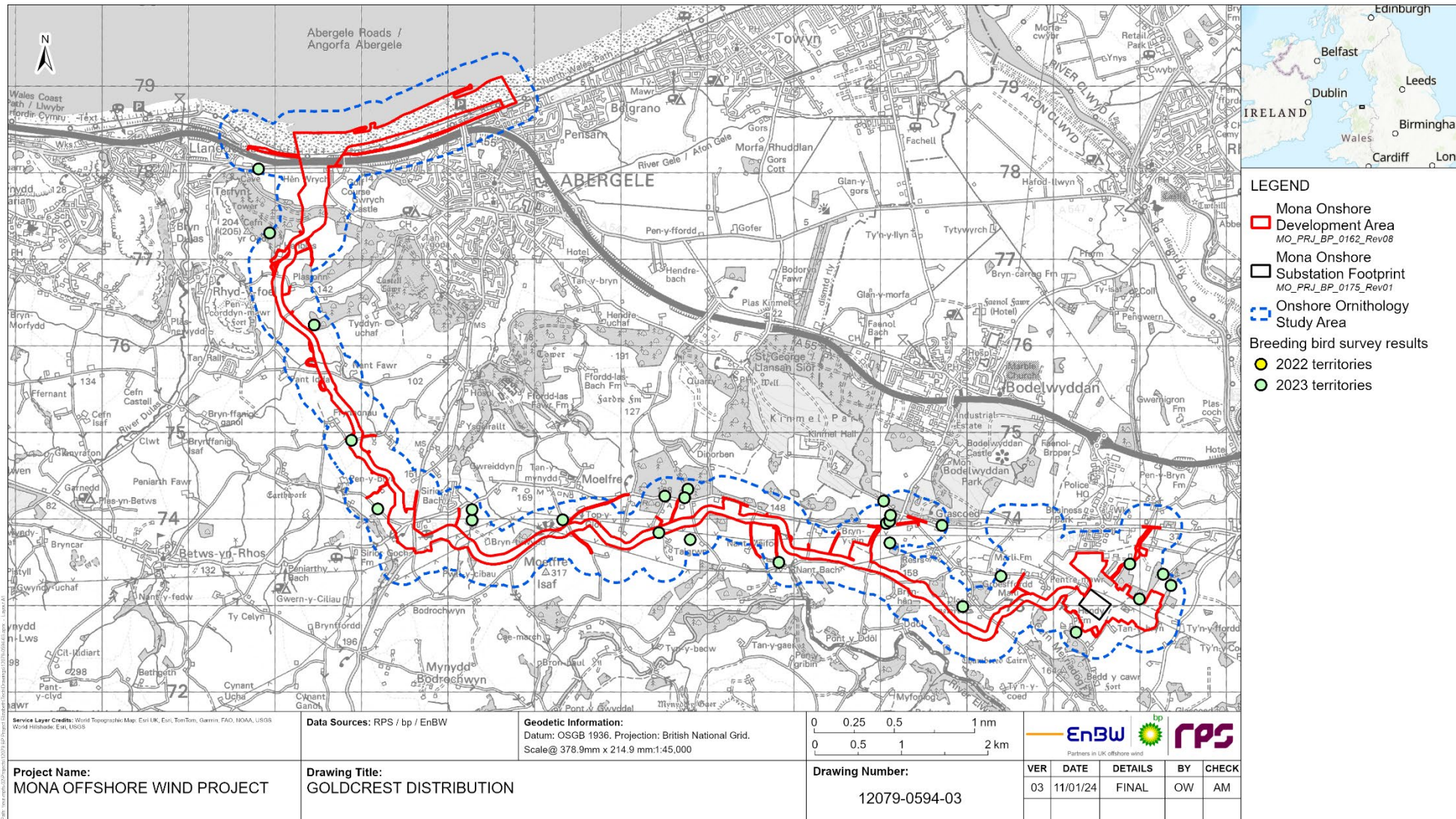


Figure 1.20: Distribution of goldcrest breeding territories.



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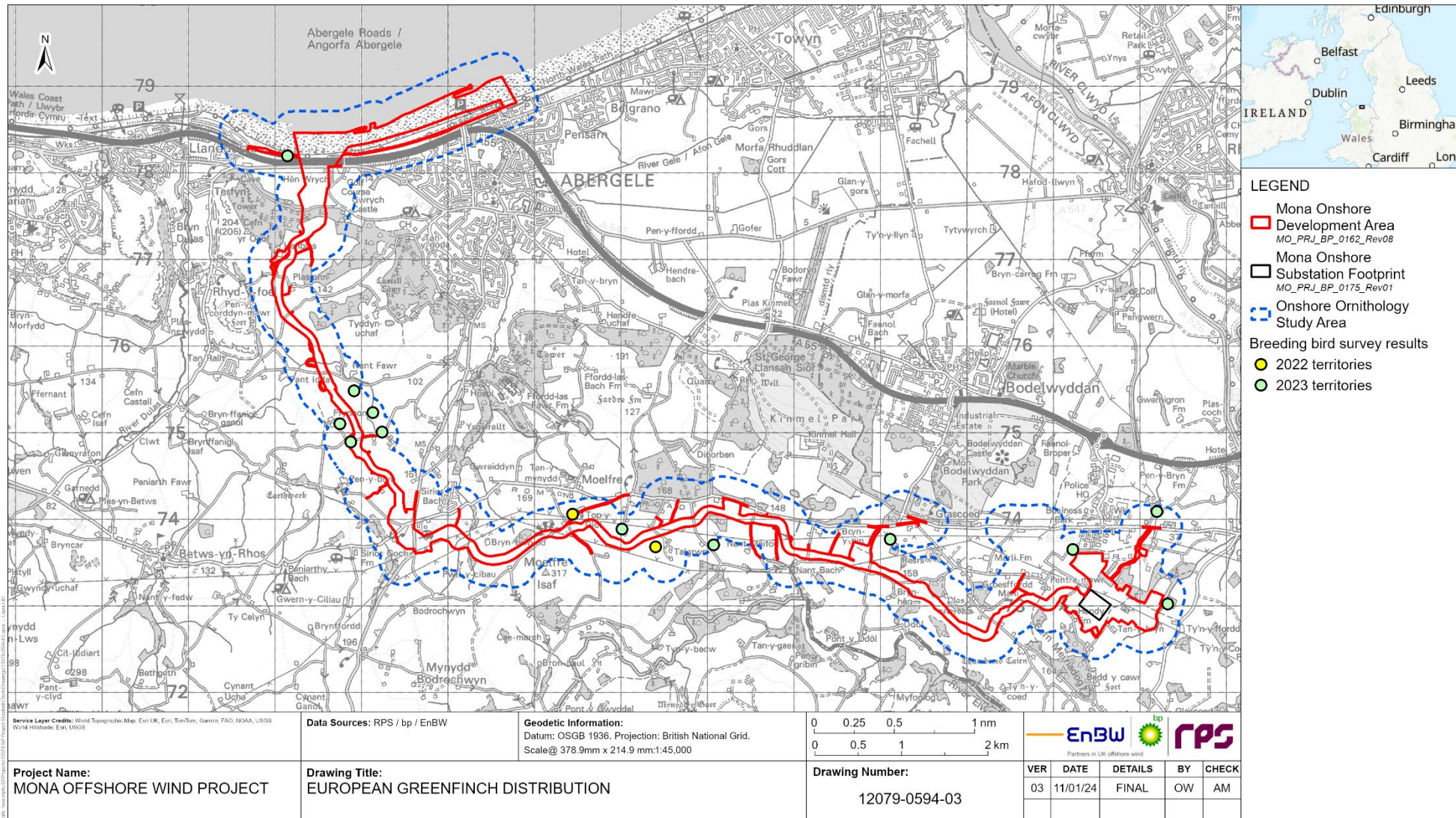


Figure 1.21: Distribution of European greenfinch breeding territories.



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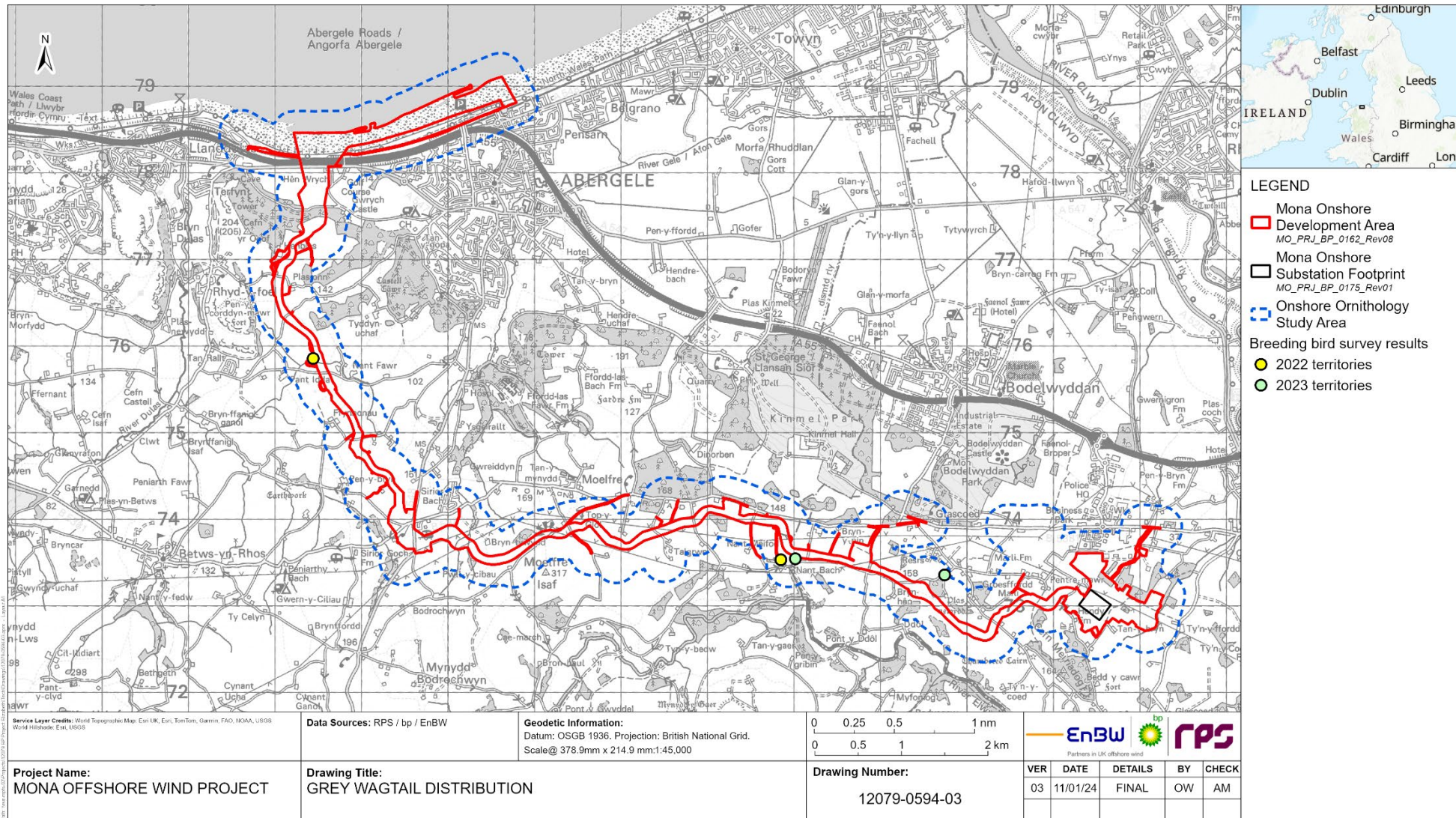


Figure 1.22: Distribution of grey wagtail breeding territories.



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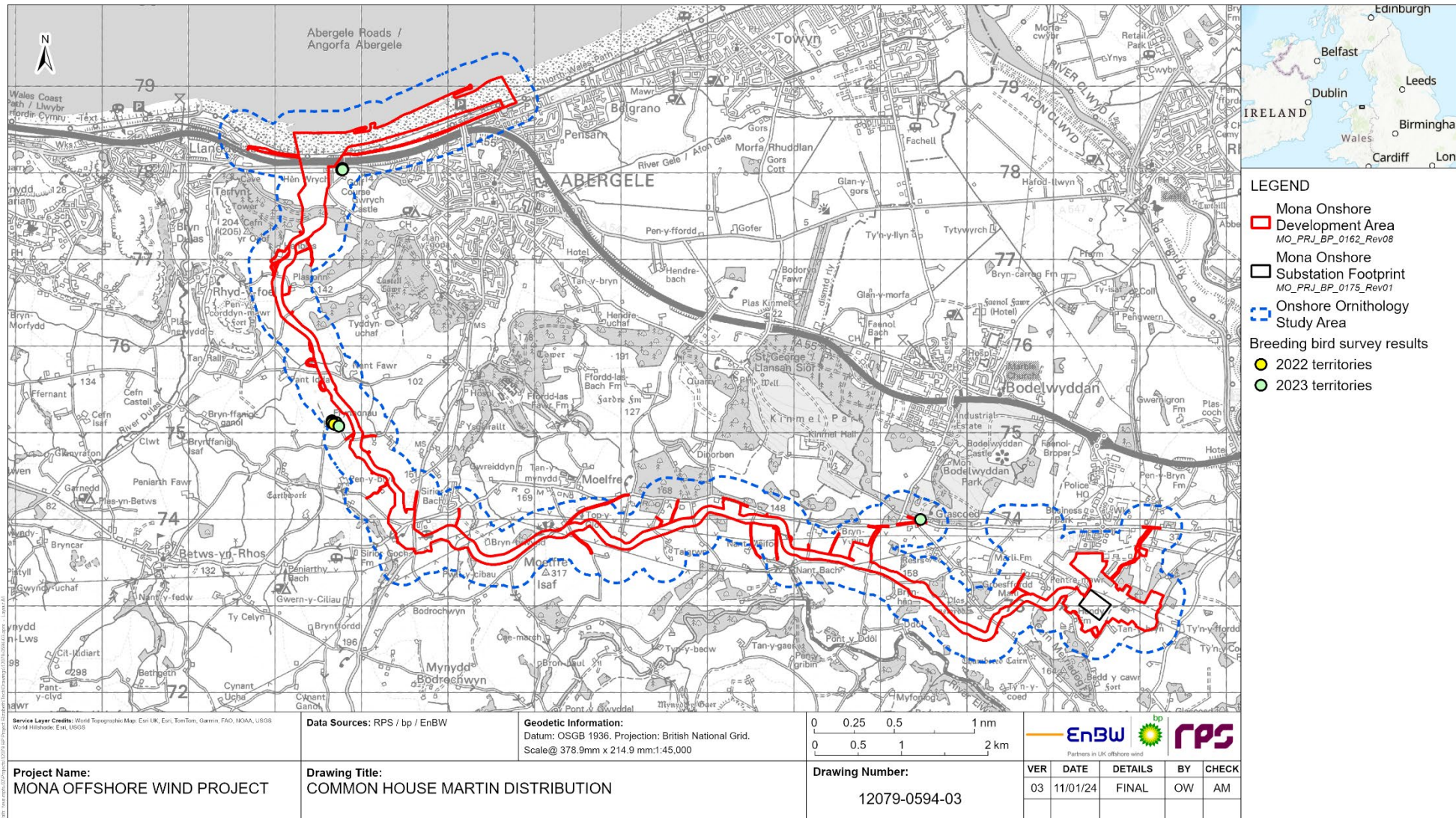


Figure 1.23: Distribution of common house martin breeding territories.



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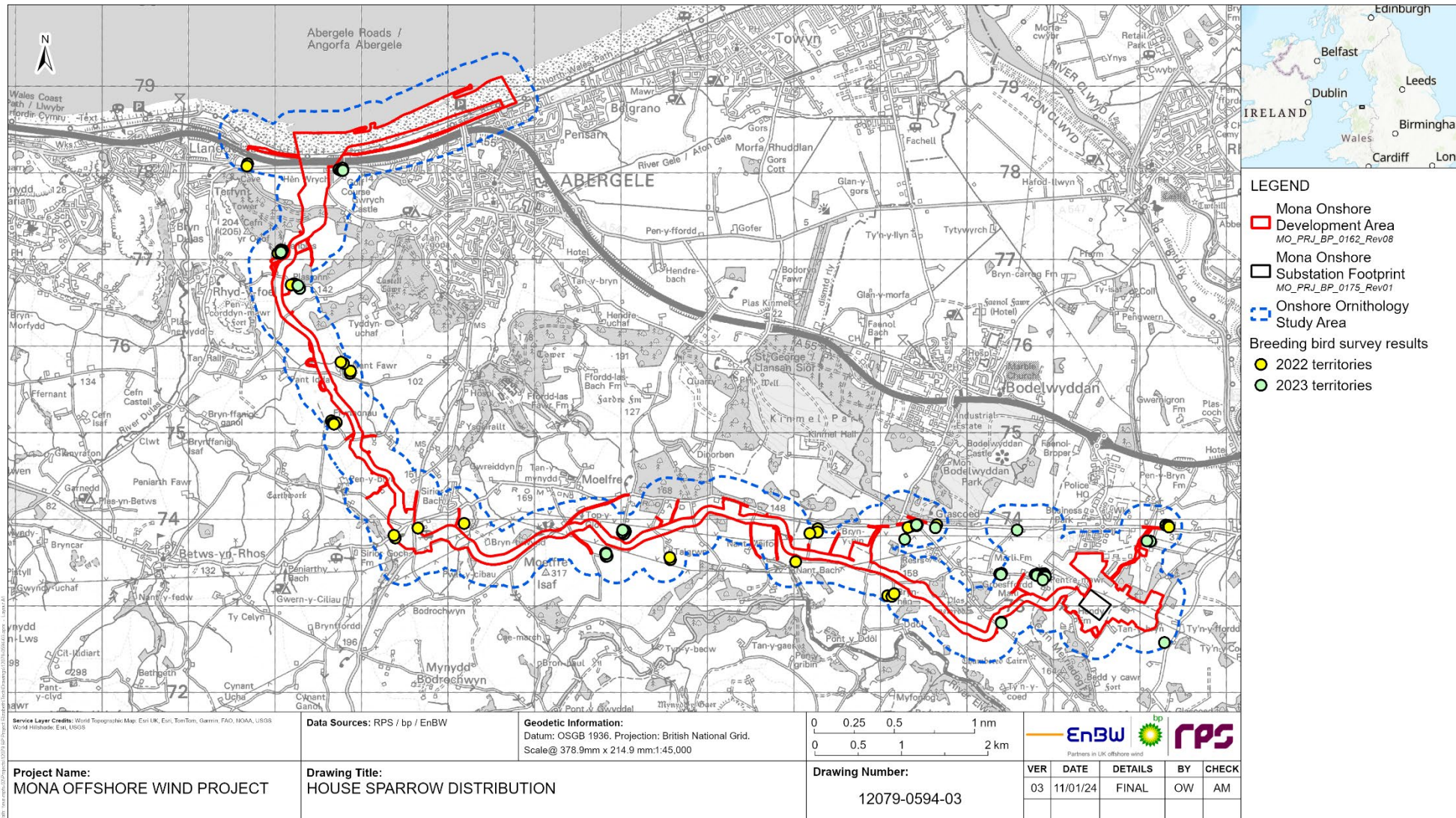


Figure 1.24: Distribution of house sparrow breeding territories.



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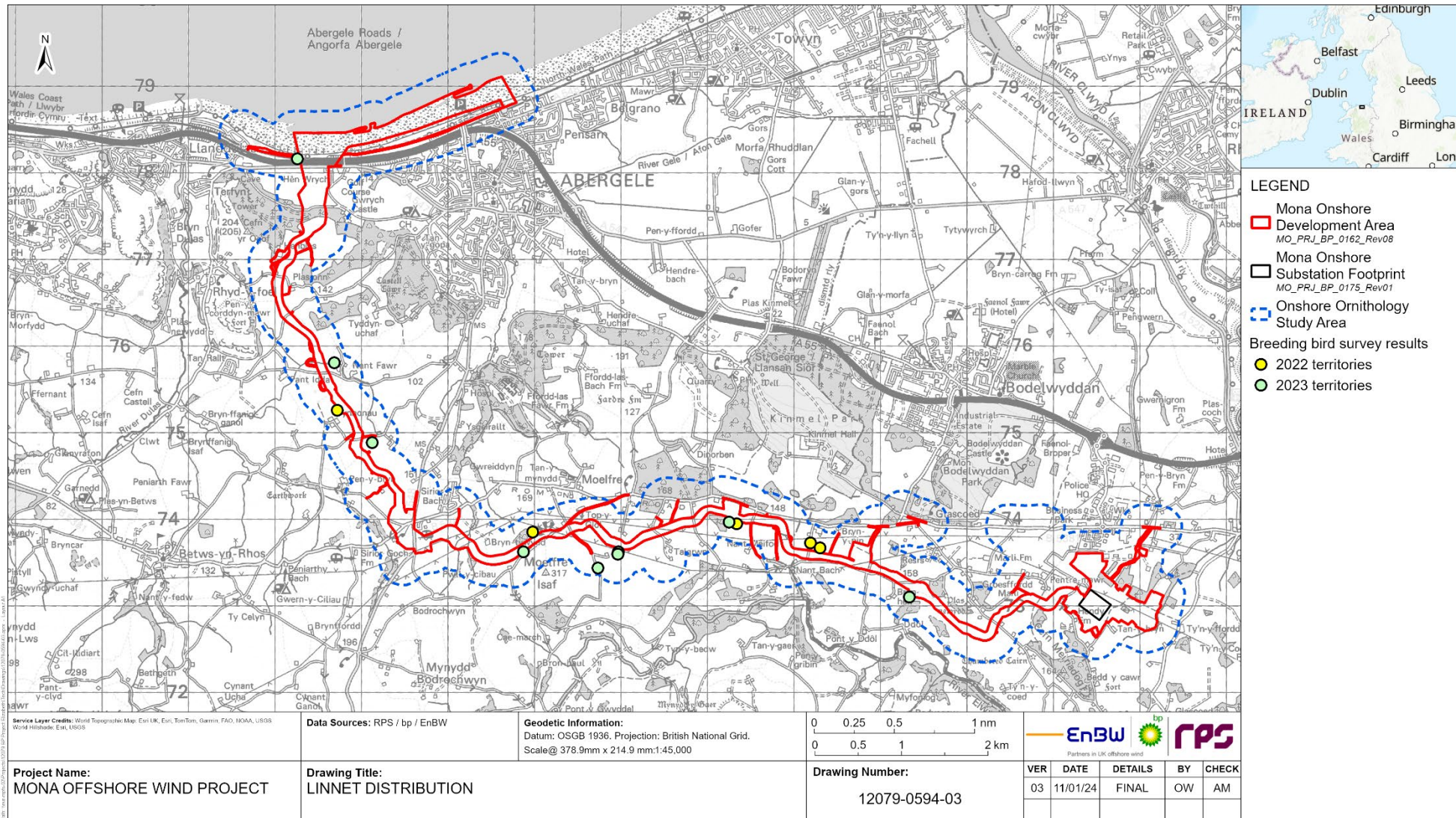


Figure 1.25: Distribution of linnet breeding territories.



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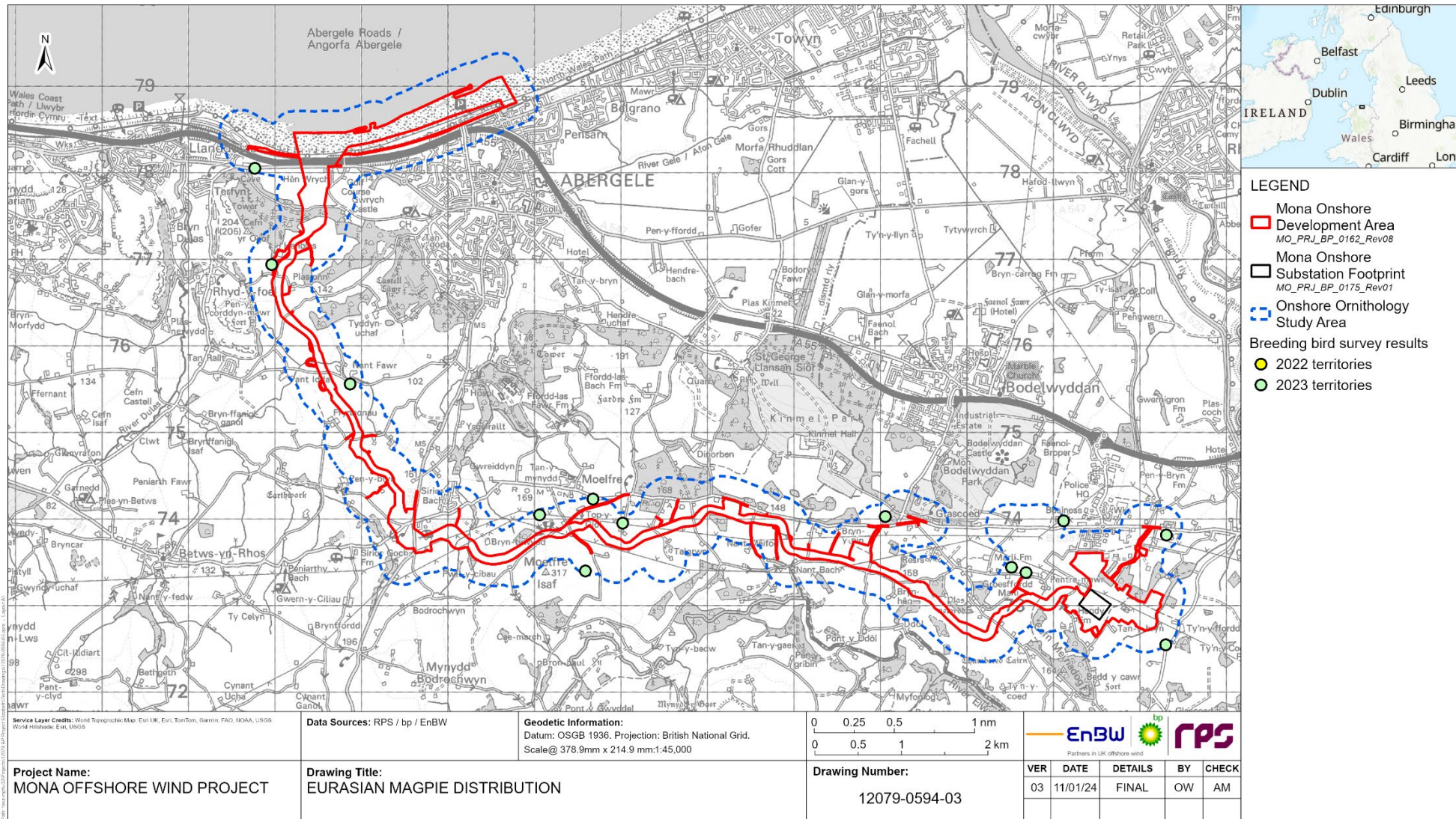


Figure 1.26: Distribution of Eurasian magpie breeding territories.



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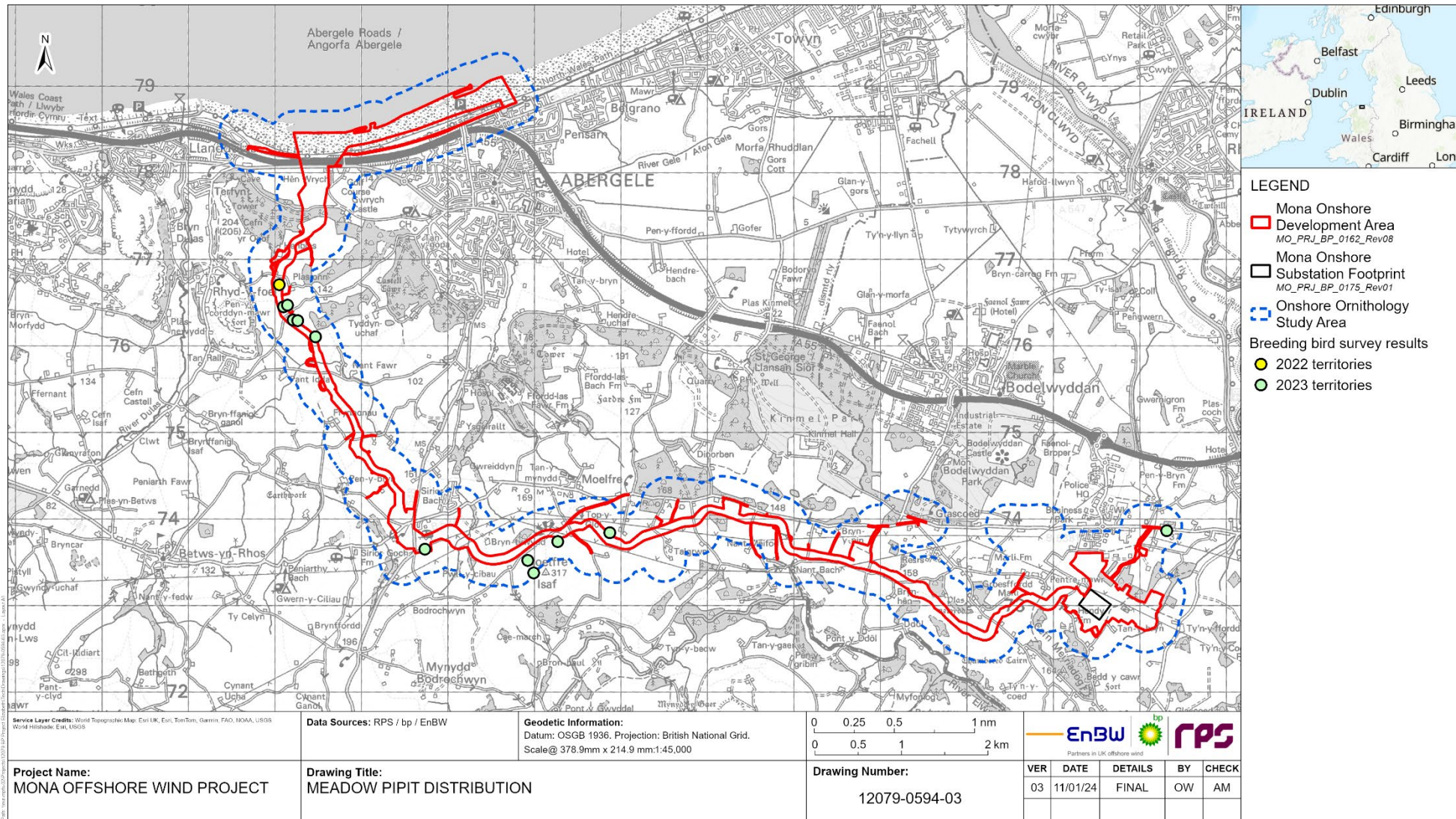


Figure 1.27: Distribution of meadow pipit breeding territories.



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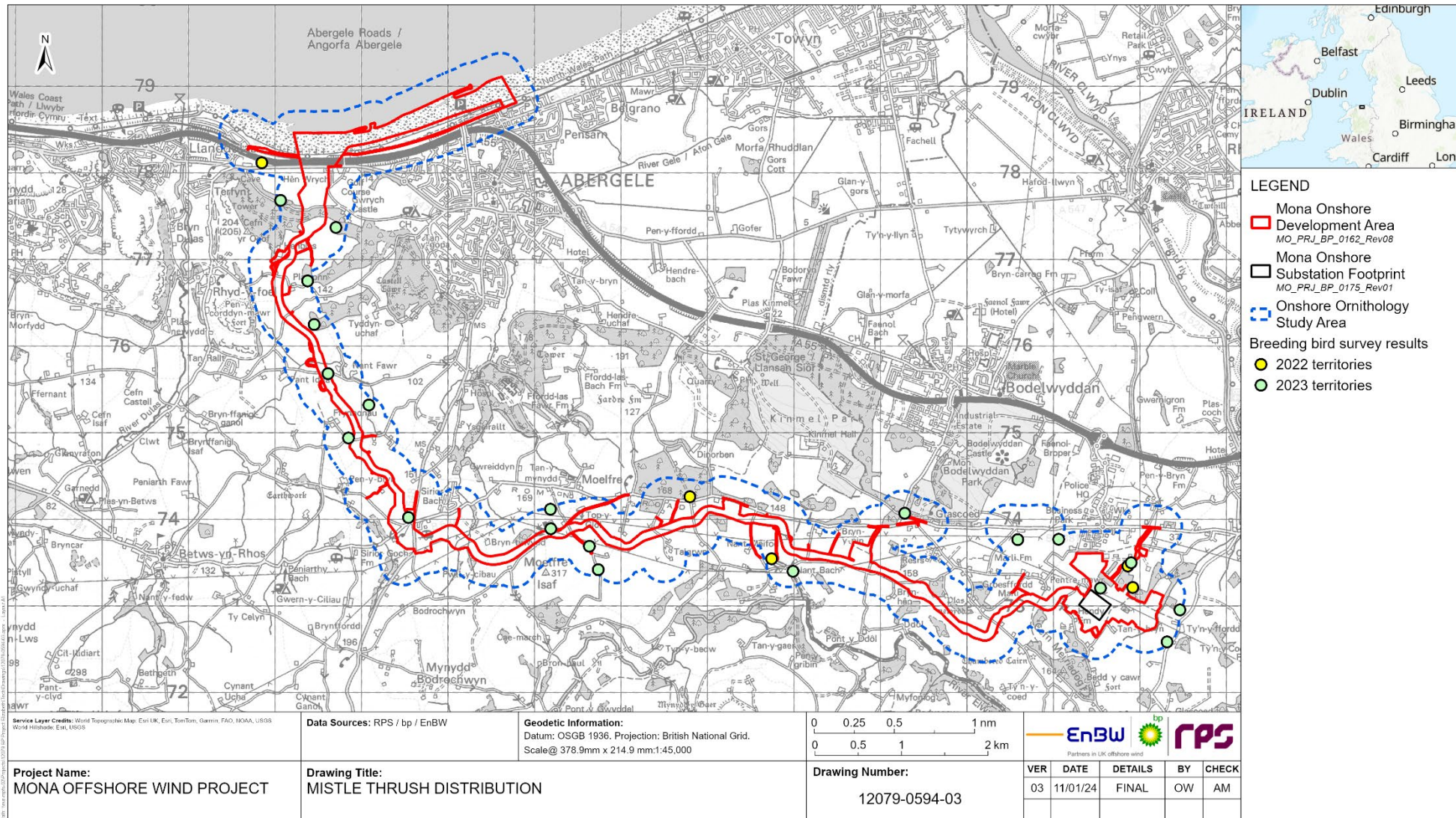


Figure 1.28: Distribution of mistle thrush breeding territories.



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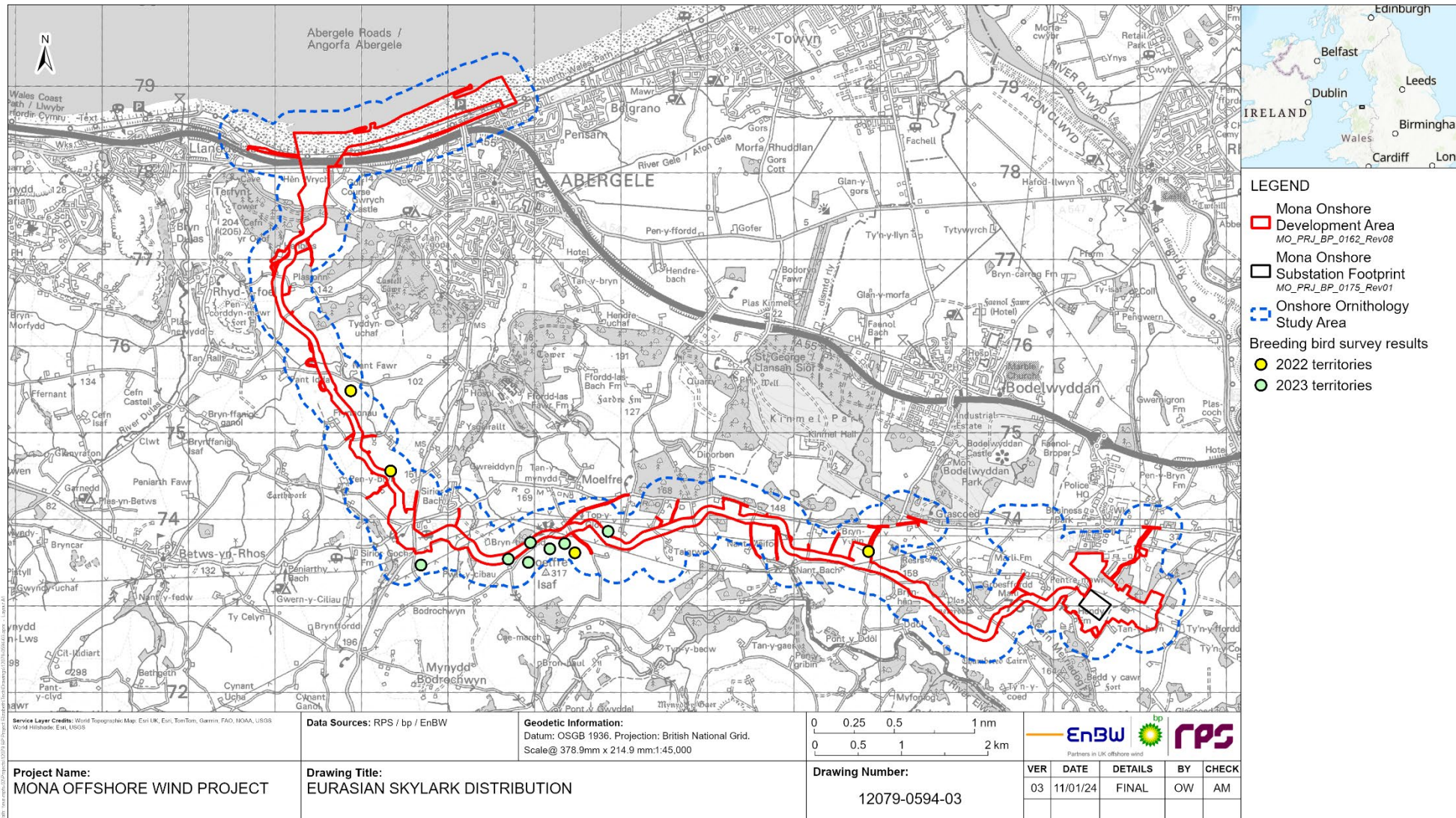


Figure 1.29: Distribution of Eurasian skylark breeding territories.



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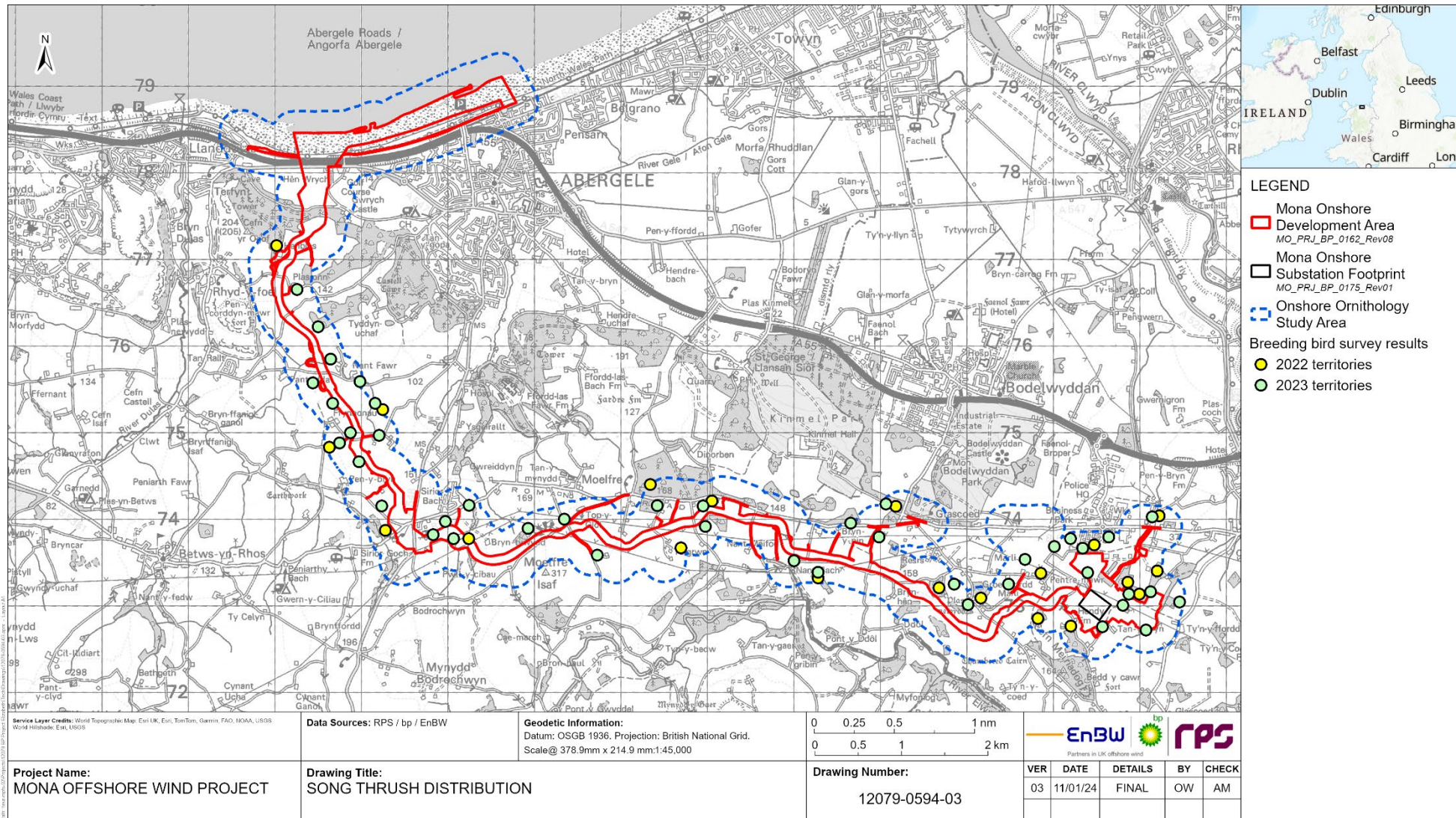


Figure 1.30: Distribution of song thrush breeding territories.



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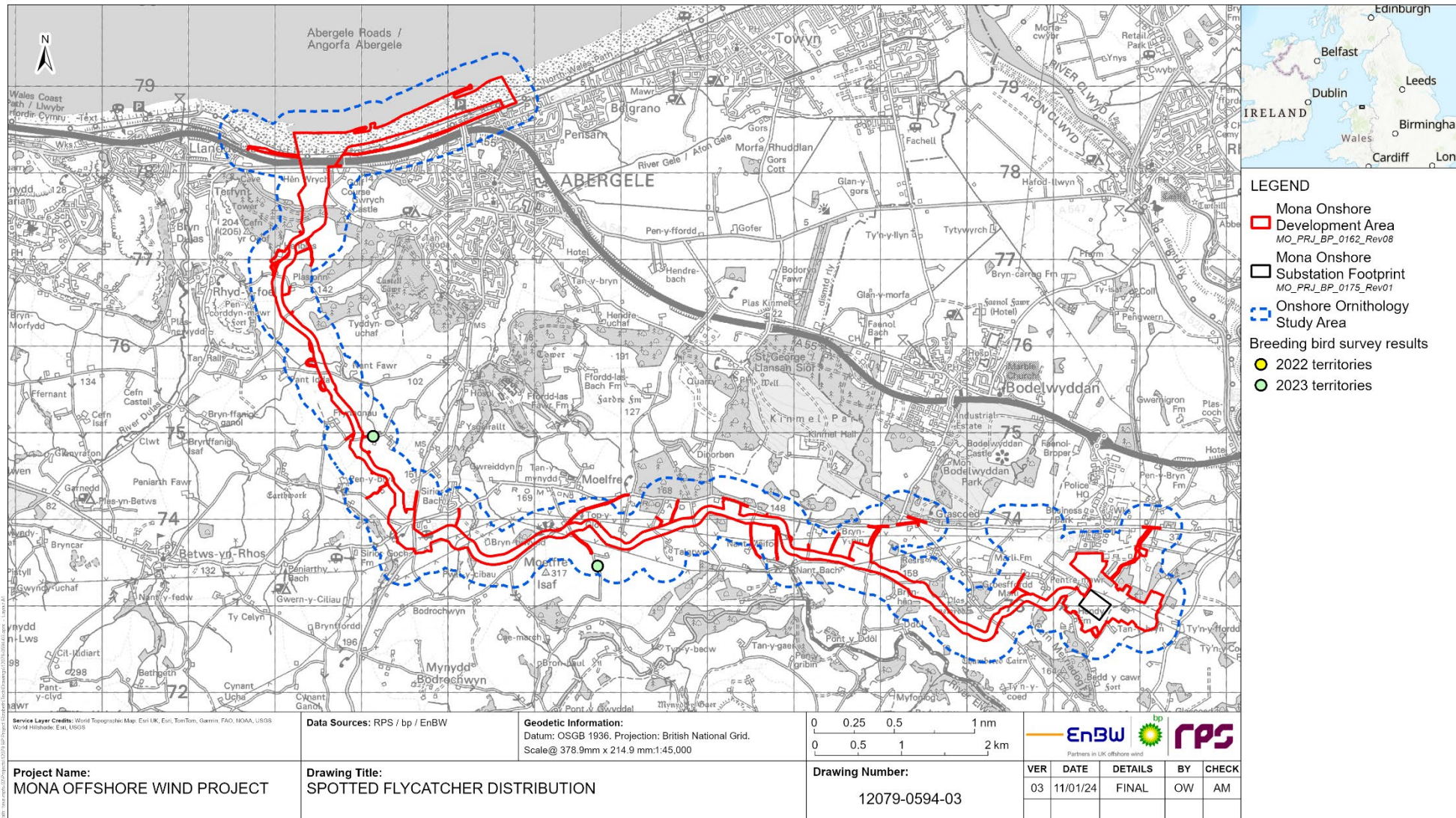


Figure 1.31: Distribution of spotted flycatcher breeding territories.



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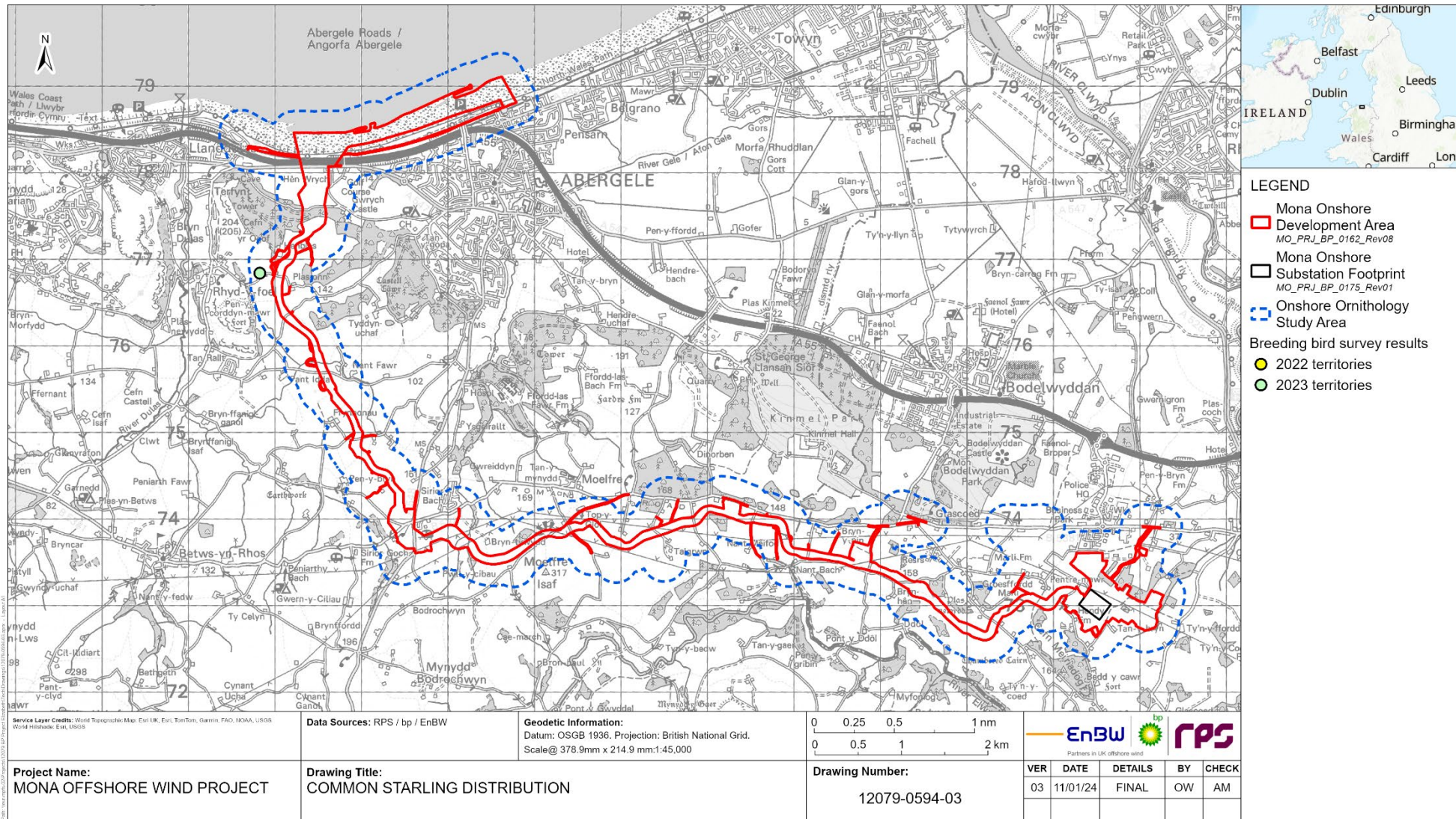


Figure 1.32: Distribution of common starling breeding territories.



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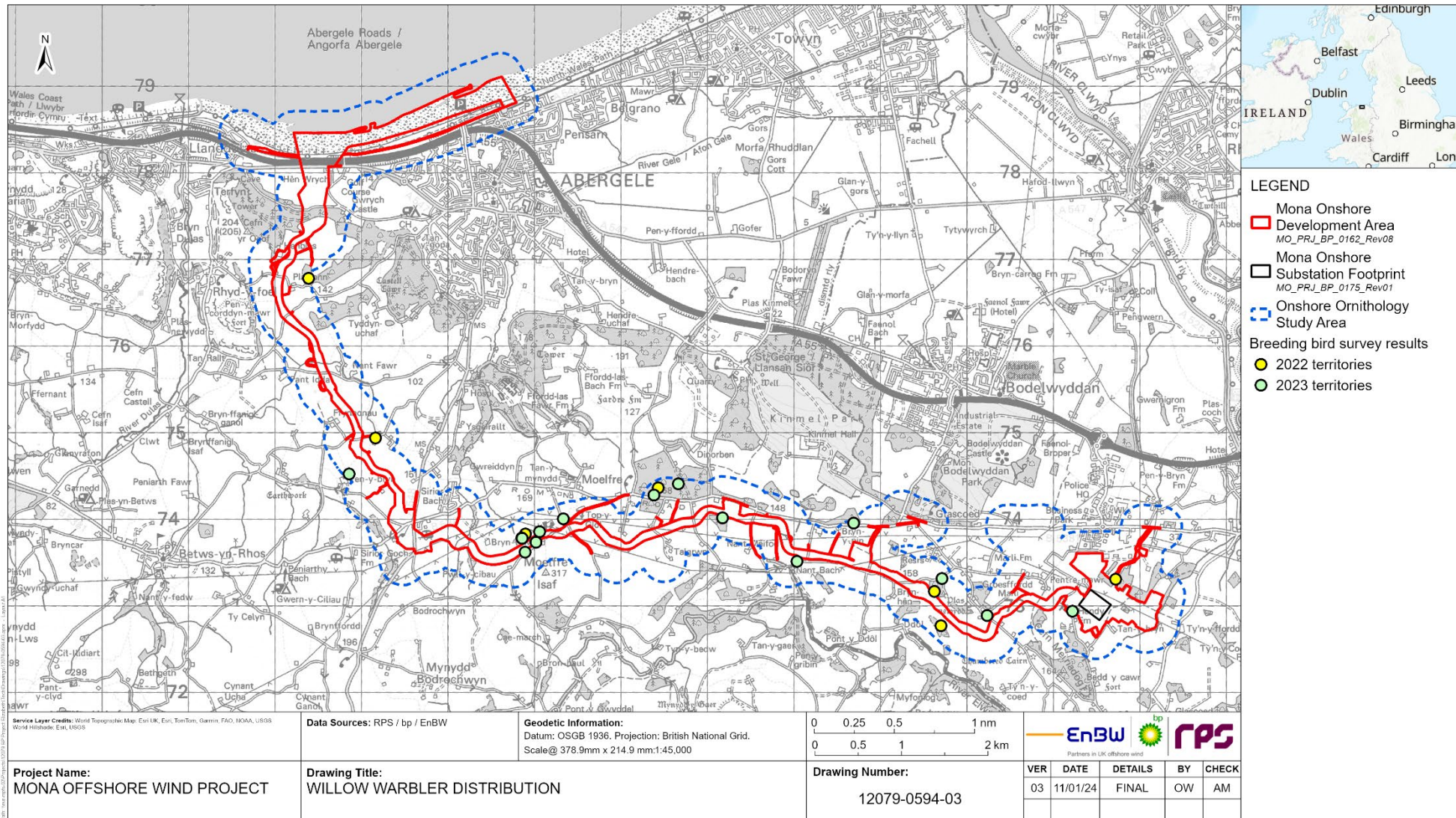


Figure 1.33: Distribution of willow warbler breeding territories.



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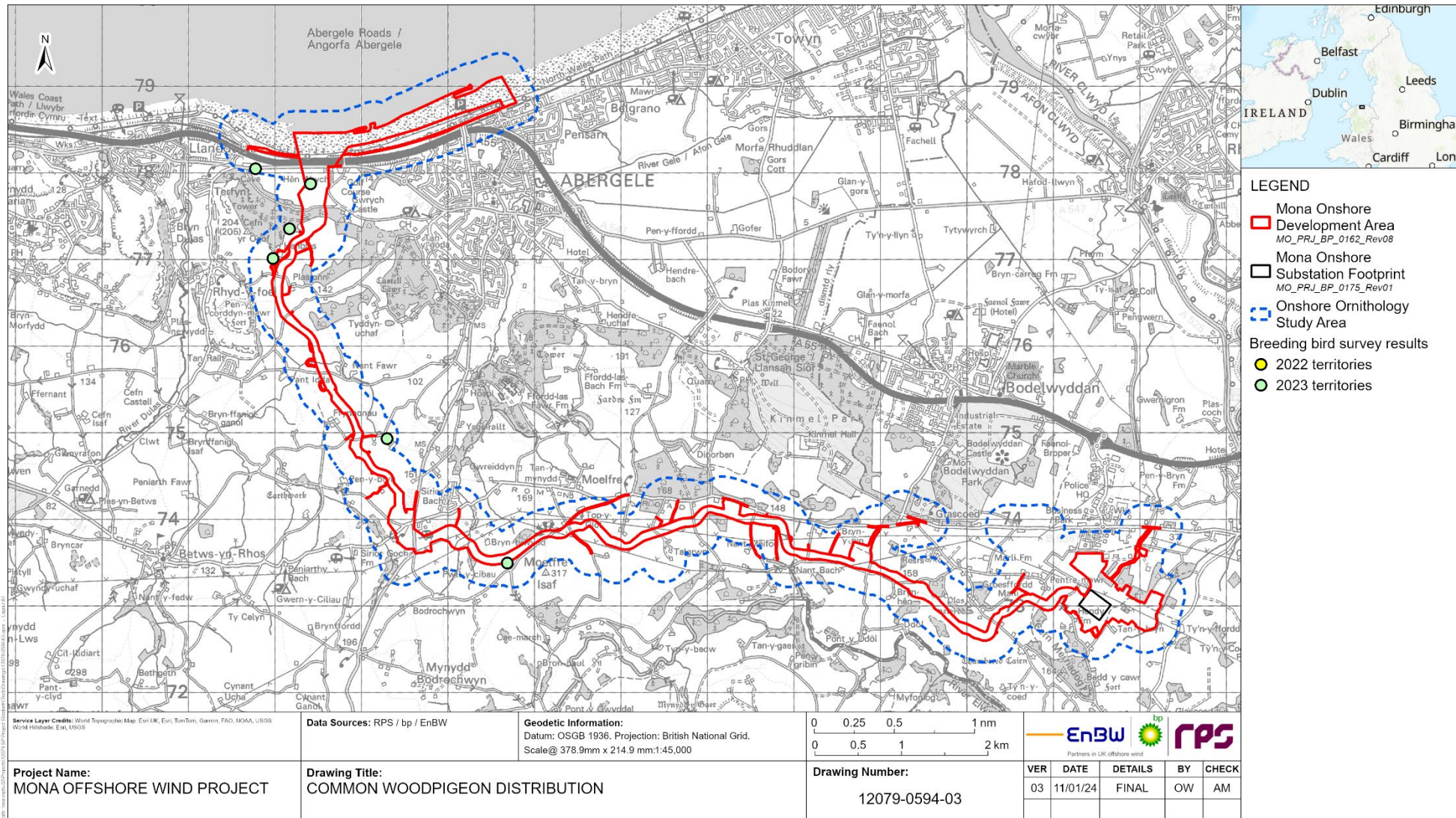


Figure 1.34: Distribution of common woodpigeon breeding territories.



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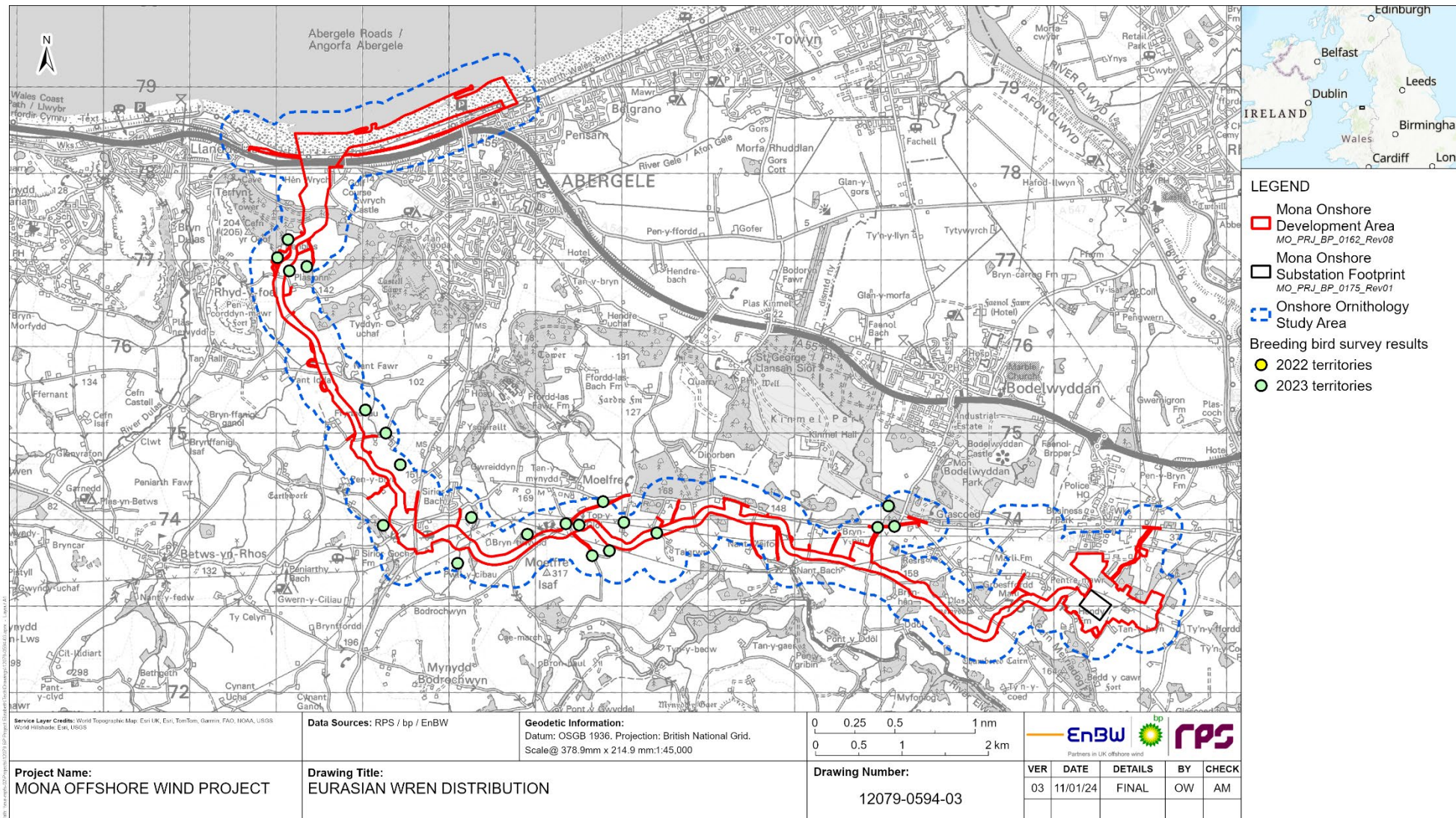


Figure 1.35: Distribution of Eurasian wren breeding territories.



## 1.7 Summary

- 1.7.1.1 The aim of this technical report is to present baseline data on breeding bird distribution and abundance within the onshore ornithology study area.
- 1.7.1.2 To establish a baseline of potential breeding ornithological receptors within the onshore ornithology study area, a combination of desk-based study and site-specific surveys (i.e. breeding bird surveys) have been undertaken in 2022 and 2023.
- 1.7.1.3 A total of 20 and 52 species were recorded as probable or confirmed breeders within the onshore ornithology study area during site-specific surveys carried out in 2022 and 2023 respectively. The most abundant species group recorded breeding during the surveys were passerines.
- 1.7.1.4 There were no breeding qualifying SPA species identified to be breeding within the onshore ornithology study area. Red kite, which is an Annex 1 and Schedule 1 species, was recorded as probably breeding within the onshore ornithology study area in 2022 and 2023. Little ringed plover, which is Schedule 1 species, was identified as confirmed breeding during the 2022 season. A total of 21 species listed on BOCC5 UK and BOCC4 Wales red and amber lists were found breeding within the onshore ornithology study area.
- 1.7.1.5 An assessment of the potential impact of the Mona Offshore Wind Project on onshore and intertidal ornithology is presented in Volume 3, Chapter 4: Onshore and intertidal ornithology of the Environmental Statement.

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