BP40B

Vale of Glamorgan Council

Coastal Designations in the Vale of Glamorgan

SINC criteria review

May 2024

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This report describes work commissioned by the Vale of Glamorgan Council following an instruction dated April 2024. [redacted] of JBA Consulting carried out this work.

Contents

1 Introduction

1.1 Background

JBA were commissioned by the Vale of Glamorgan Council to undertake a review of the existing criteria and approach for designating local coastal wildlife sites within South Wales as well as a review of the current criteria for Coastal SINCs across the UK, in order to propose a set of criteria based on priority habitats and species for designating coastal SINCs within the Vale of Glamorgan.

Once a set of coastal SINC criteria has been agreed, existing data for both habitats and species along the Vale coast will be reviewed in order to identify candidate coastal SINC sites that meet the new criteria proposed. Where data is insufficient or out of date, further surveys will be recommended where necessary.

This initial report details a review of existing guidelines for coastal SINC selection in order to present a draft set of guidelines for coastal SINC selection in the Vale of Glamorgan.

1.2 Local Wildlife Sites

SINCs are considered the most important places for wildlife outside legally protected land such as Sites of Special Scientific Interest (SSSIs), and their importance is significant in a more localised context than internationally or nationally designated sites.

Other habitats and species should also be considered if they contribute substantially to local biodiversity, and would be judged a priority based on an evaluation of the relevant factors, even if not currently selected as such within the relevant

2 Legislation

SINCs are by definition non-statutory sites, and do not receive the degree of legal protection given to SSSIs. However, they do gain protection through legislation which applies to the wider countryside, species-specific legislation and other policy constraints within the planning system. The following legislation provides some degree of protection for specific species and habitats found on SINCs.

2.1 Environment (Wales) Act 2016

The Environment (Wales) Act 2016 is an act of the National Assembly of Wales to promote sustainable management of natural resources; to provide for targets for reducing emissions of greenhouse gases; to reform the law on charges for carrier bags; to provide for the separate collection of waste, prohibit disposal of food waste to sewers and provide for prohibiting or regulating disposal of waste by incineration; to make provision about several and regulated fisheries for shellfish; to make provision about fees for marine licences; to establish the Flood and Coastal Erosion Committee; and to make minor changes to the law about land drainage and byelaws made by the Natural Resources Body for Wales.

Under the Environment (Wales) Act (2016), Section 7 requires biodiversity lists and duty to take steps to maintain and enhance biodiversity. It states that:

'The Welsh Ministers must prepare and publish a list of the living organisms and types of habitat which in their opinion are of principal importance for the purpose of maintaining and enhancing biodiversity in relation to Wales.'

This list supersedes the duty in Section 42 of the NERC Act 2006 (as outlined below). In 2019 the interim list of habitats of principle importance was exactly the same as the previous list under Section 42 of the NERC Act.

The current representation of Priority Habitats in the Environment (Wales) Act Section 7. The Habitats of Principle Importance catalogue is incomplete due to an ongoing review of the data. Therefore, the current list of habitats will be used until the review has been undertaken.

2.2 Natural Environment and Rural Communities Act 2006 (NERC)

The Natural Environment and Rural Communities Act (NERC) requires all public authorities, including planning authorities to have regard to the purpose of conserving biodiversity whilst carrying out their normal functions. The NERC Act includes lists of Habitats and Species of Principal Importance (HPIs and SPIs) to the conservation of biodiversity (Section 42) which should be considered in the implementation of duties under the NERC Act. In line with government circular 06/2005 (ODPM, 2005) which provides supplementary guidance, the presence of a Priority species may be a

material consideration when a planning authority is considering a development proposal. The HPI and SPI listed under the NERC Act are largely also UK BAP Priority habitats and species. The UK Post-2010 Biodiversity Framework succeeds the UK BAP partnership; though its list of Priority species and habitats agreed under the UK BAP still form the basis of much biodiversity work in the UK. Although the UK BAP has been succeeded, Species Action Plans (SAPs) developed under the UK BAP still remain important and valuable reference sources for background information on Priority species under the UK Post-2020 Biodiversity Framework.

2.3 Biodiversity Strategies

Habitats and Species of Principal Importance (HPI and SPI) listed under the NERC Act are largely also UK BAP Priority habitats and species. The UK Post-2010 Biodiversity Framework succeeds the UK BAP partnership; though its list of Priority species and habitats agreed under the UK BAP still form the basis of much biodiversity work in the UK. The Welsh Biodiversity Strategy, 'Environment Strategy for Wales' was published in 2006 and explains how Wales will tackle the challenge it faces over the next 20 years. The Environment (Wales) Bill was introduced in May 2015 and creates legislation needed to plan and manage Wales' natural resources in a more sustainable and joined-up way. Following on from the introduction of the Bill 'A Snapshot of the State of Wales' Natural Resources' was produced. This report was prepared to inform the passage of the Environment Bill through the National Assembly. Although the UK BAP has been succeeded, Species Action Plans (SAPs) developed under the UK BAP still remain important and valuable reference sources for background information on Priority species under the UK Post-2010 Biodiversity Framework.

3 Wildlife Sites Guidance Wales

The Wildlife Sites Guidance for Wales provides regional guidance for individual Local Authorities to use as a framework for their own Wildlife Site criteria, allowing appropriate local characteristics and features to be considered accordingly. The system can then demonstrate to Local Authorities, landowners, land managers and others why a particular site has qualified or not. General guidelines for choosing and evaluating sites of nature conservation importance were first formulated by Ratcliffe (1977) in the UK Nature Conservation Review. These guidelines represent general principles and factors to be taken into account when considering the nature conservation value of a given site, rather than defined or quantified factors to be assessed. A good model for the selection of Wildlife Sites is considered to be the criteria used in selecting the national series of Sites of Special Scientific Interest.

The guidelines have been through an extensive consultation and revision process, extending over several years. They will be subject to active use and testing in the Local Authority areas.

3.1 Vale of Glamorgan SINCs

Local wildlife sites in the Vale of Glamorgan are designated as Sites of Interest to Nature Conservation (SINC)

Sites have been designated through a common set of guidelines for the selection of Wildlife Sites in the South Wales region in accordance with the above legislation or in many cases legislation which preceded it. The guidelines provide a framework within which individual authorities are free to refine their own detailed criteria for the selection and designation of Wildlife Sites within their administrative boundaries with the aim of creating a robust and defensible Wildlife Site system.

3.2 Marine and Coastal Sites Wales

Marine and coastal habitats are included in the wildlife sites guidance Wales.

It recommends that all examples of undesignated marine habitats as identified in the Section 42 list as being of principle importance for conservation in Wales should be considered for selection were appropriate.

- Littoral Rock
- Intertidal Boulder Communities
- Sabellaria Alveolota reefs
- Estuarine rocky habitats
- Littoral sediment
- Coastal Saltmarsh
- Intertidal Mudflats

- Sea grass Beds
- Sheltered muddy gravels
- Peat and Clay Exposures

4 UK wide guidance for designation for coastal sites

A review of local authorities with coastal habitats and readily available guidance for their selection was undertaken. By reviewing a number of local authorities it has been possible to reach a conclusion on the best way forward for selecting coastal sites.

It has become usual practice to differentiate between habitat-based and species-based guidelines when creating a framework for the identification of Wildlife Sites. Some sites may be significant entirely because a certain species is present, whilst others may be significant because they contain a threatened habitat type which is intrinsically of interest. Many sites will be of interest on both grounds. For the most part local authorities either use a habitat approach, where criteria such as community composition are specified (e.g. certain NVC communities) or a species approach where a either a prescribed number of species or individuals are used to evaluate the site.

It is considered that for coastal sites the habitat based approach is a more robust and efficient approach to quickly identify sites for protection, however, the inclusion of sites for specific rare species or high numbers of individuals may be considered in the subsequent development of SINC criteria.

4.1 Habitat Types

Coastal habitats have been identified as all intertidal habitats and land above the limit of high tides, including tidal estuaries and their floodplains. Coastal habitats relevant to the Vale of Glamorgan and the wider South Wales region have been identified as semi-natural coastal and estuarine habitats including saltmarsh, intertidal mudflats, intertidal rocky shore, sand dunes, brackish ponds, saline lagoons, inundation grasslands of the coastal plain, maritime cliffs and maritime grasslands

This would include the priority habitats: Coastal and floodplain grazing marsh, Coastal Saltmarsh, Coastal Sand Dunes, Coastal Vegetated Shingle, Intertidal Mudflats, Maritime Cliffs and Slopes, Littoral rock, Seagrass Beds and Saline Lagoons

It is recommended that maritime grasslands which include a halophytic plant component are included, but Agriculturally Unimproved Grasslands are excluded unless they occur in mosaics with maritime grasslands. Maritime habitats frequently occur in close proximity and exhibit marked zonation over very small distances in relation to distance from the sea and the effects of salinity and extreme weather events.

4.2 Habitat Criteria

The 2019 the interim list of habitats of principle importance and previously UK BAP Priority Habitat descriptions include descriptions of each habitat that should be protected, for vegetative habitats this often includes a description of the NVC community.

4.2.1 Coastal Grazing marsh

NVC Communities: MG11, SM16, mesotrophic communities typical of improved and semi-improved grasslands including MG9, MG10, MG12. In the Vale of Glamorgan many of these grasslands have been agriculturally improved but they potentially remain important sites for breeding and wintering birds.

Ditches and wet areas within these grasslands can also be important features. Any sites with well-developed systems of wet ditches or sea walls should be considered for SINC designation.

Where the vegetation of coastal grazing marsh has remained agriculturally unimproved, there is the potential for it to retain the character of upper salt-marsh grassland, grading into the mesotrophic grassland communities MG11b and MG11a with increasing distance from the sea.

All stands of Coastal Grazing Marsh larger than 1ha should be considered for SINC designation for their current and potential ornithological interest.

4.2.2 Saltmarsh

NVC Communities: SM4-SM18, SM24 Coastal saltmarsh. This habitat includes all land that is regularly inundated sea-water. Small areas of salt-marsh can also occur on the inland side of sea-walls where water can penetrate. There is a characteristic zonation of salt-marsh vegetation related to the duration and frequency of flooding. Salt-marsh is of great importance for nesting, migratory and wintering birds. All stands of salt-marsh larger than 0.25ha should be considered for SINC designation. Some linear stands (e.g. on sea-walls) may be smaller in area than this and should be considered for designation.

4.2.3 Coastal sand-dunes

NVC Communities: SD6-SD19, U1, W21, W22, W23, W24

All areas of coastal sand dune greater than 0.25ha outside the SSSI series should be considered for SINC designation. Sand dune systems will have vegetation mosaics including pioneer communities of marram grass *Ammophila arenaria* and sand sedge *Carex arenaria*, “yellow” dunes of partially-stabilised sand, well-established dune grassland on “grey” stabilised dunes and scrub. Stabilised dune grassland includes classic dune grasslands SD8 and SD12 but can also have stands of grassland closer to U1 on sands with low calcium content.

4.2.4 Coastal Vegetated Shingle

NVC Communities: SD1, SD2, SD3, MC5, MC8, MC9, U1, maritime variants of MG1 Coastal vegetated shingle

This criterion will include all areas of coastal vegetated shingle. A well-developed area of coastal shingle can exhibit active geomorphological processes including parallel ridges of different ages, stabilised plains and areas of erosion. This structural diversity can lead to the presence of a range of vegetation types in addition to the classic shingle beach community SD1 (Sneddon & Randall, 1993). In particular, more stabilised areas can include substantial stands of MC5, MC8, MC9 and U1 grassland. All areas of vegetated coastal shingle outside the SSSI series greater than 0.25ha should be considered for SINC designation.

4.2.5 Intertidal Mudflats and Seagrass Beds

Intertidal Mudflats outside the SSSI series greater than 0.25ha should be considered for SINC designation. The seagrasses *Zostera noltii* and *Zostera angustifolia* can form extensive beds on intertidal deposits, and these are of great importance to wintering widgeon and Brent geese, and to marine organisms. Seagrass beds become more common in Wales towards the west coast, however, it is recommended that the provision for their protection is included in Vale of Glamorgan guidance.

4.2.6 Intertidal Rocky Shore

Significant sections intertidal rocky shore along the South Coast of Wales are designated as SSSIs. However, in many places they have been designated for their geological interest rather than biodiversity. It is considered that there is value in further designating this habitat for biodiversity value where appropriate.

All littoral rock with fucoid dominated or mussel/barnacle communities should be considered for SINC designation. The situation of the Vale of Glamorgan means that coastal sites experience a range of wave exposure which has the potential to influence the littoral rock communities present, SINC selection should seek to include the full range of communities present.

Special consideration should be made for areas of intertidal boulder communities as identified in the Welsh guidelines. These areas should be identified using JNCC Marine Habitat Classification for Britain and Ireland, where intertidal boulder communities can be identified in the following biotopes

- Fucus serratus and red seaweeds on moderately exposed lower eulittoral rock
- Fucus serratus and under-boulder fauna on exposed to moderately exposed lower eulittoral boulders
- Fucus serratus and piddocks on lower eulittoral soft rock
- Fucus serratus and red seaweeds on moderately exposed lower eulittoral rock

- Fucus serratus and under-boulder fauna on exposed to moderately exposed lower eulittoral boulders
- Fucus serratus and piddocks on lower eulittoral soft rock

4.2.7 Sabellaria reef

The reef forming worm *Sabellaria alveolota* is present throughout the Vale of Glamorgan. All areas where the species occurs should be considered for SINC designation, however, in some cases the species can be ephemeral, quickly colonising when conditions are suitable. Therefore seasonal monitoring of suitable areas may be required in order to identify the best sites for the species.

4.2.8 Maritime Cliffs and Slopes

NVC Communities: MG12b, MC5, MC8, MC9, MC11, S4d

These vegetation mosaics can be locally species-rich, and the south-facing soft-rock and soil exposures are very important for invertebrates. Areas larger than 0.25ha or linear stands longer than 50m should be considered for SINC designation.

4.2.9 Saline Lagoons

Saline lagoons of natural or artificial origin can occur immediately inland of sea walls, shingle structures or protecting zones of saltmarsh, and frequently occur in conjunction with other coastal habitats of SINC or SSSI quality. These lagoons can be very important for vascular plants and invertebrates, and specialist advice should be sought. All examples should be considered for SINC designation.

4.3 Ecological Networks

The habitats detailed above are essential for many plants and animals and will remain important even if the species and habitats within them change. Surviving in small, isolated sites is, however, difficult for many species, and often impossible in the longer term, because they rarely contain the level of resources, or the diversity of habitats needed to support sustainable populations.

However, re-creating large expanses of contiguous natural habitat is not a feasible option for the most part. An alternative approach is to secure a suite of high quality sites which collectively contain the range and area of habitats that species require and ensure that ecological connections exist to allow species to move between them. It is this network of core sites connected by buffer zones, wildlife corridors and smaller but still wildlife-rich sites that are important in their own right and can also act as ‘stepping stones. ‘Wildlife corridors’ do not have to be continuous, physical connections: a mosaic of mixed land use, for example.

The potential for a site to connect other sites along the coast should be considered as well as potential to connect terrestrial sites to marine sites which has the potential to create more natural functioning ecosystems.

5 Criteria and assessment methodology

5.1 Criteria

Based on the desk-based information presented in Section 4, a series of initial criteria have been developed to identify sites for potential SINC designation. These are as follows:

1. All Coastal Grazing Marsh stands larger than 1ha should be considered for SINC designation.
2. Species-rich Coastal Grazing Marsh stands larger than 0.25 should be considered for SINC designation.
3. All stands of Saltmarsh larger than 0.25ha should be considered for SINC designation.
4. All vegetation mosaics on sand-dunes larger than 0.25ha should be considered for SINC designation.
5. All vegetation mosaics on coastal shingle larger than 0.25ha should be considered for SINC designation.
6. All areas of Intertidal Mudflats and Seagrass Beds larger than 0.25ha should be considered for SINC designation.
7. Areas of vegetated Maritime Cliffs and Slopes larger than 0.25ha or linear stands longer than 50m should be considered for SINC designation.
8. All Saline Lagoons should be considered for SINC designation.
9. Littoral Rock habitats with diverse fucoid, mussel or barnacle communities should be considered. Special attention should be paid to designating a diverse range of habitats with differing wave exposure.
10. All sites with the potential to link with other protected sites should be considered and the potential to link terrestrial and marine sites should also be considered.

5.2 Assessment methodology

To identify sites which meet the criteria outlined above, QGIS a spatial mapping tool was utilised. Several shapefile datasets were obtained and utilised for this initial assessment, these are as follows:

- Vale of Glamorgan Intertidal Habitats, including:
  - LS.LBR.LMus.Myt.Sa
  - LS.LMu.MEst.HedMac

- LS.LMu.MEst.HedMacScr
- LS.LSa.FiSa.Po
- LS.LSa.MuSa.HedMacEte

- Vale of Glamorgan Phase 1 Coastal Habitats, including:
  - LR.FLR.CvOv.AudCla
  - LR.FLR.CvOv.BarCv
  - LR.FLR.CvOv.ScrFa
  - LR.FLR.CvOv.SpByAs
  - LR.FLR.Rkp.Cor
  - LR.FLR.Rkp.FK
  - LR.FLR.Rkp.G
  - LR.FLR.Rkp.G
  - LR.FLR.Rkp.SwSed
  - LR.LLR.F.Asc.FS
  - LR.LLR.F.Asc.X
  - LR.LLR.Fserr.X
  - LR.LLR.F.Fspi.FS
  - LR.LLR.F.Fves
  - LR.LLR.F.Pel
  - LR.LLR.FVS.FvesVS
  - LR.LLR.FVS.Fser.Bo
  - LR.MLR.BF.Fser.Pid
  - LR.MLR.BF.Fser.R
  - LR.MLR.BF.FspiB
  - LR.MLR.BF.FvesB
  - LR.MLR.BF.PelB
  - LR.MLR.BF.Rho
  - LR.MLR.MusF.MytPid

available maps each criteria against the available spatial data.

Table 5-1: Criteria and associated spatial information available

Criteria (no.)	Shapefile layer and sublayer	Justification
1	Vale of Glamorgan Phase 1 Coastal Habitats: Saltmarsh	
2	Vale of Glamorgan Phase 1 Coastal Habitats: Saltmarsh	
3	Vale of Glamorgan Phase 1 Coastal Habitats: Saltmarsh	

Criteria (no.)	Shapefile layer and sublayer	Justification
4	Vale of Glamorgan Phase 1 Coastal Habitats: Dune Grassland	
5	Vale of Glamorgan Phase 1 Coastal Habitats: Shingle/ gravel above mean high water	
6	Vale of Glamorgan Intertidal Habitats: Littoral Sediments layers	
7	Vale of Glamorgan Phase 1 Coastal Habitats: Maritime hard cliff, Maritime soft cliff	
8	No data available	
9	Vale of Glamorgan Intertidal Habitats: Littoral Rock layers	
10	Existing designated sites	

Starting from the first criteria, the associated layers were selected and checked for their compliance with the threshold area. For criteria (1-5) where habitats were less common, where two areas were within 300m of each other, they were assessed together to meet the threshold.

5.2.1 Criteria amendments

Following review of the spatial data available, it became clear that due to the prevalence of the habitats of interest, some of the thresholds were revised to focus the assessment. Therefore, the following adjustments were made:

- Revised threshold for criteria 7 from 50m linear or 0.25ha, to 1km continuous.
- Revised threshold for criteria 9 from 0.25ha to 20ha.

5.2.2 Limitations and assumptions

The following assumptions and limitations are relevant to the assessment of potential SINC sites:

- The layers within the Vale of Glamorgan Intertidal Habitats shapefile including littoral sediments are not fully representative of the full intertidal areas. The Shapefile layer only represents near-shore littoral sediments.
- This assessment has been based on information obtained from the shapefile data. Therefore, there may be some discrepancies on habitat abundance

5.3 Baseline habitat information

The following map shows the baseline habitat information utilised in this assessment, and the spatial distribution of this information.

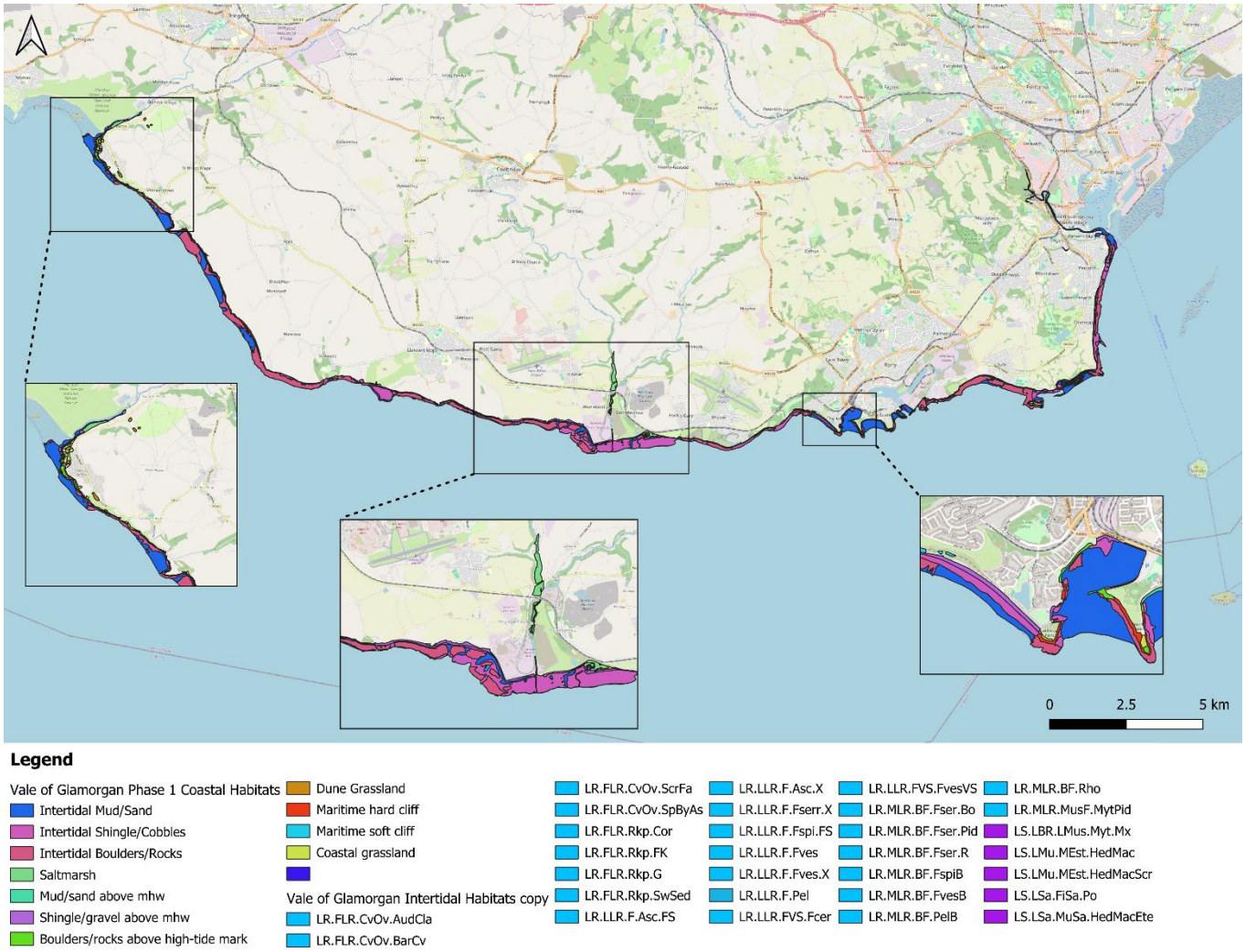


Figure 5-1: Baseline habitat information and its spatial distribution.

5.4 Proposed SINC sites

The following map shows the results of the spatial analysis and proposed SINC sites based on the criteria outlined in Section 5. Higher resolution maps have been created for groups of potential sites and these can be found in Appendix A.

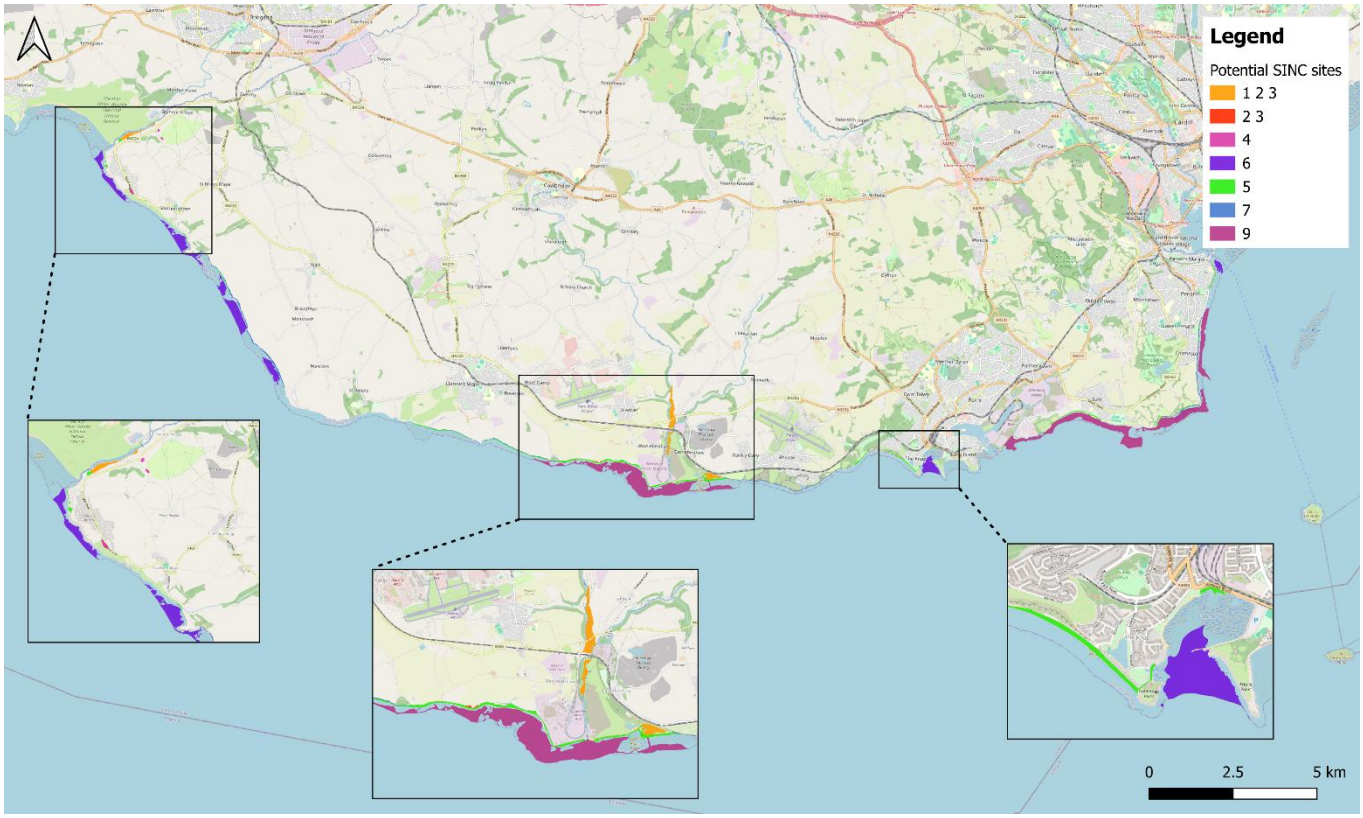


Figure 5-2: Potential SINC sites based on the spatial analysis undertaken.

6 Summary

All Coastal Grazing Marsh stands larger than 1ha should be considered for SINC designation.

Species-rich Coastal Grazing Marsh stands larger than 0.25 should be considered for SINC designation.

All stands of Saltmarsh larger than 0.25ha should be considered for SINC designation.

All vegetation mosaics on sand-dunes larger than 0.25ha should be considered for SINC designation.

All vegetation mosaics on coastal shingle larger than 0.25ha should be considered for SINC designation.

All areas of Intertidal Mudflats and Seagrass Beds larger than 0.25ha should be considered for SINC designation.

Areas of vegetated Maritime Cliffs and Slopes larger than 0.25ha or linear stands longer than 50m should be considered for SINC designation.

All Saline Lagoons should be considered for SINC designation.

Littoral Rock habitats with diverse fucoid, mussel or barnacle communities should be considered. Special attention should be paid to designating a diverse range of habitats with differing wave exposure.

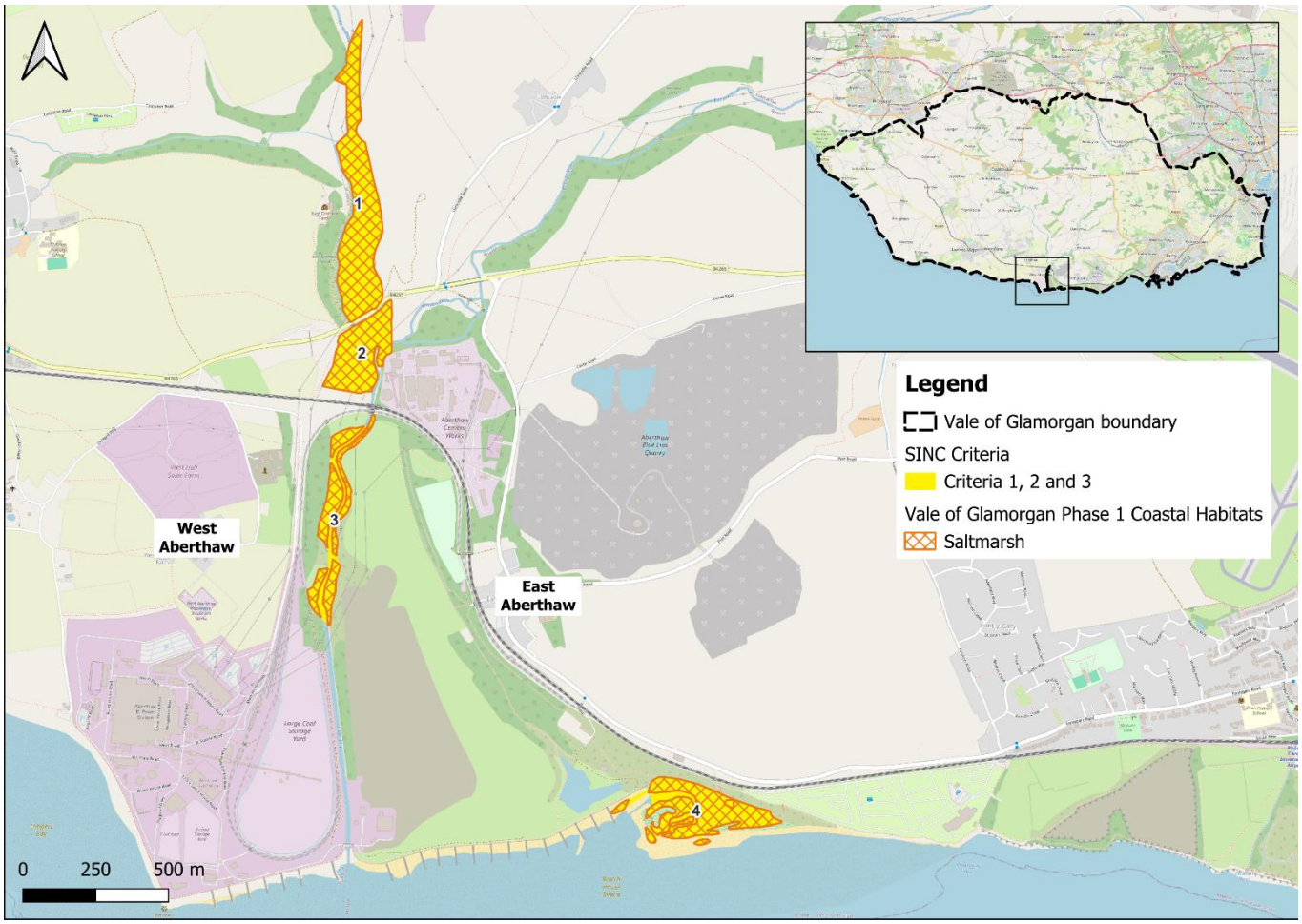
All sites with the potential to link with other protected sites should be considered and the potential to link terrestrial and marine sites should also be considered.

7 Candidate Coastal SINC Sites

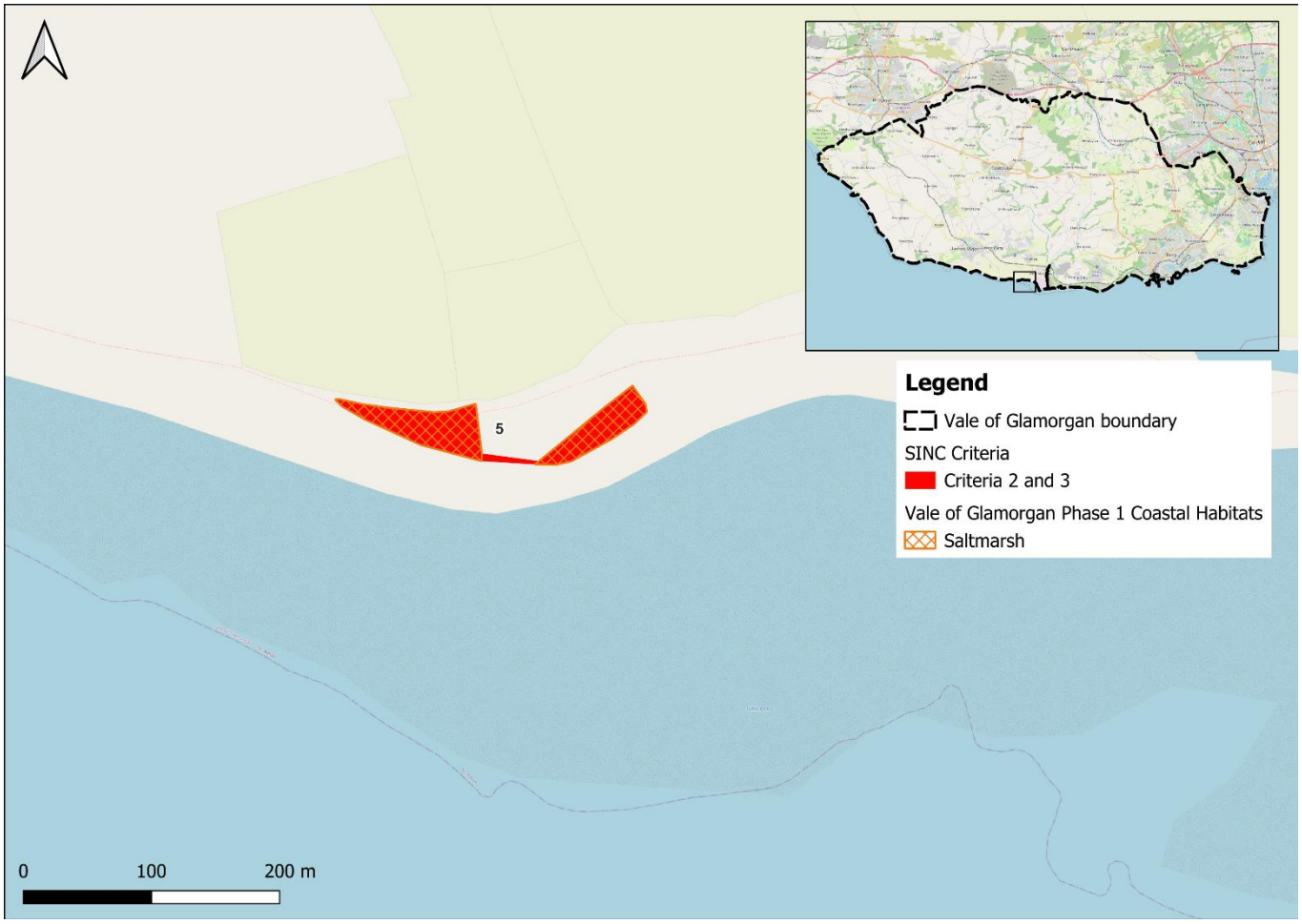
SINC ID	Criteria	Central Grid Reference	Area (ha)

A Appendix A: Potential site maps

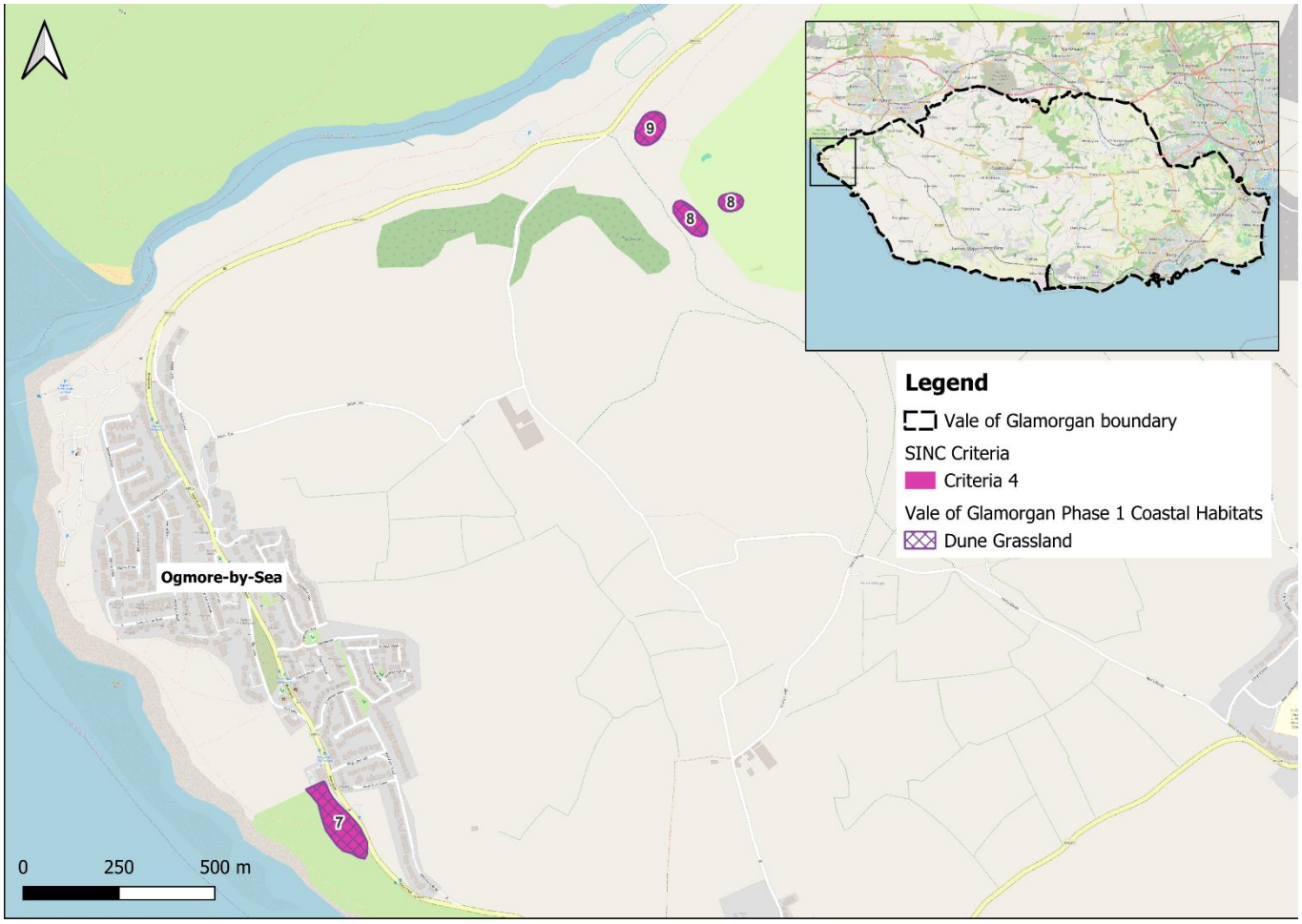
A.1 Site ID: 1, 2, 3 and 4



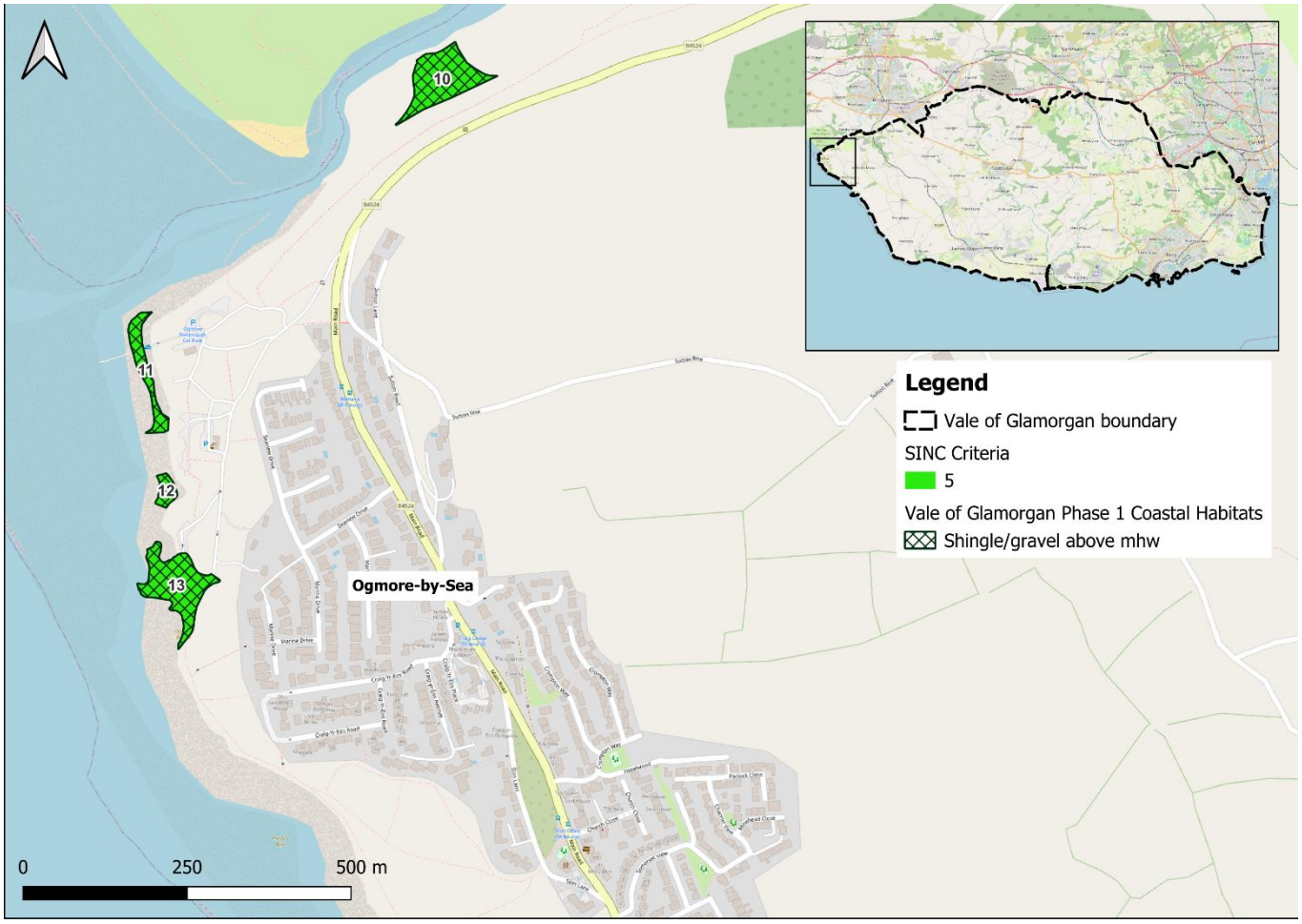
A.2 Site ID: 5


5
Legend
Vale of Glamorgan boundary
SINC Criteria
Criteria 2 and 3
Vale of Glamorgan Phase 1 Coastal Habitats
Saltmarsh
0
100
200 m

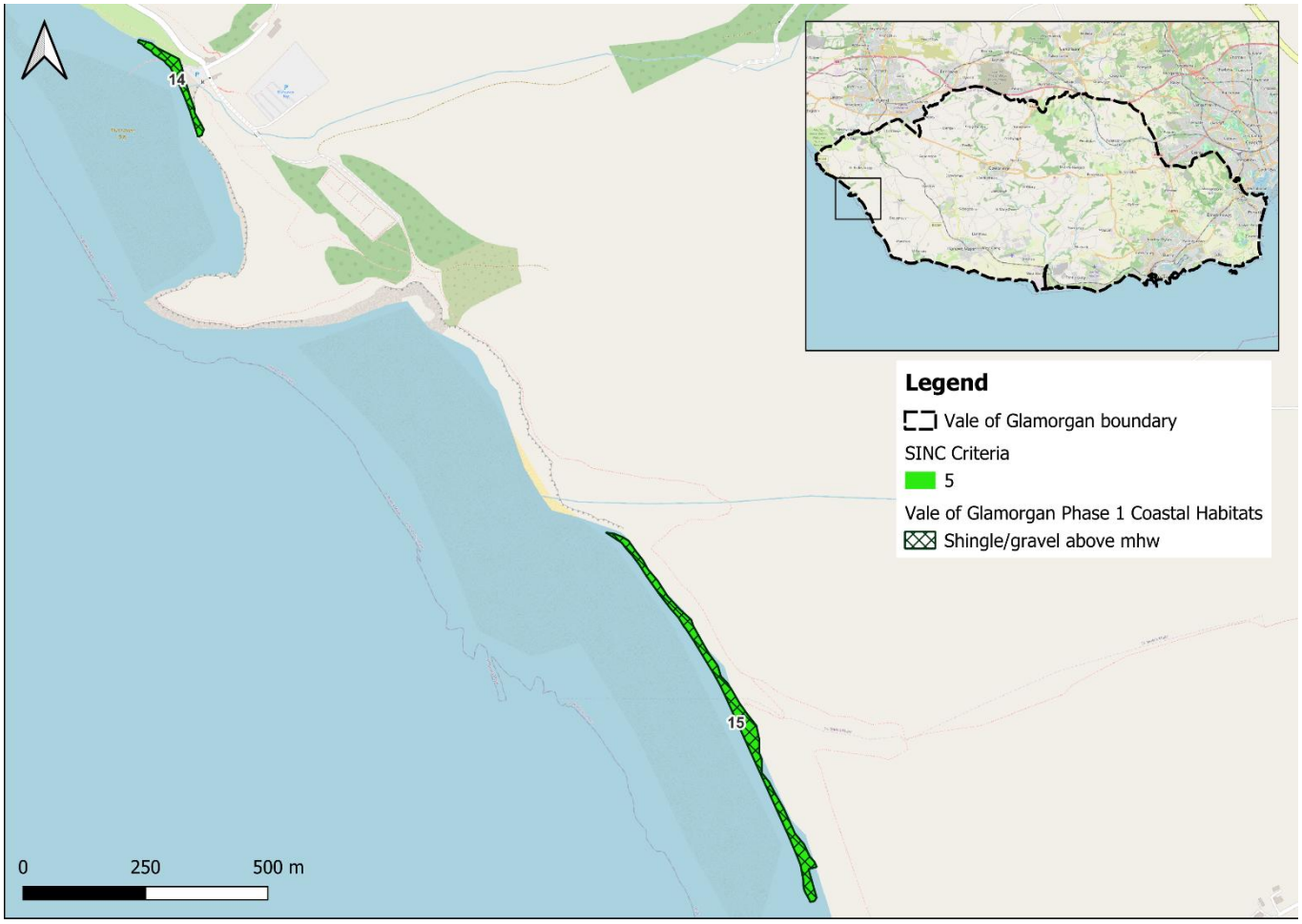
A.3 Site ID: 6, 7 and 8



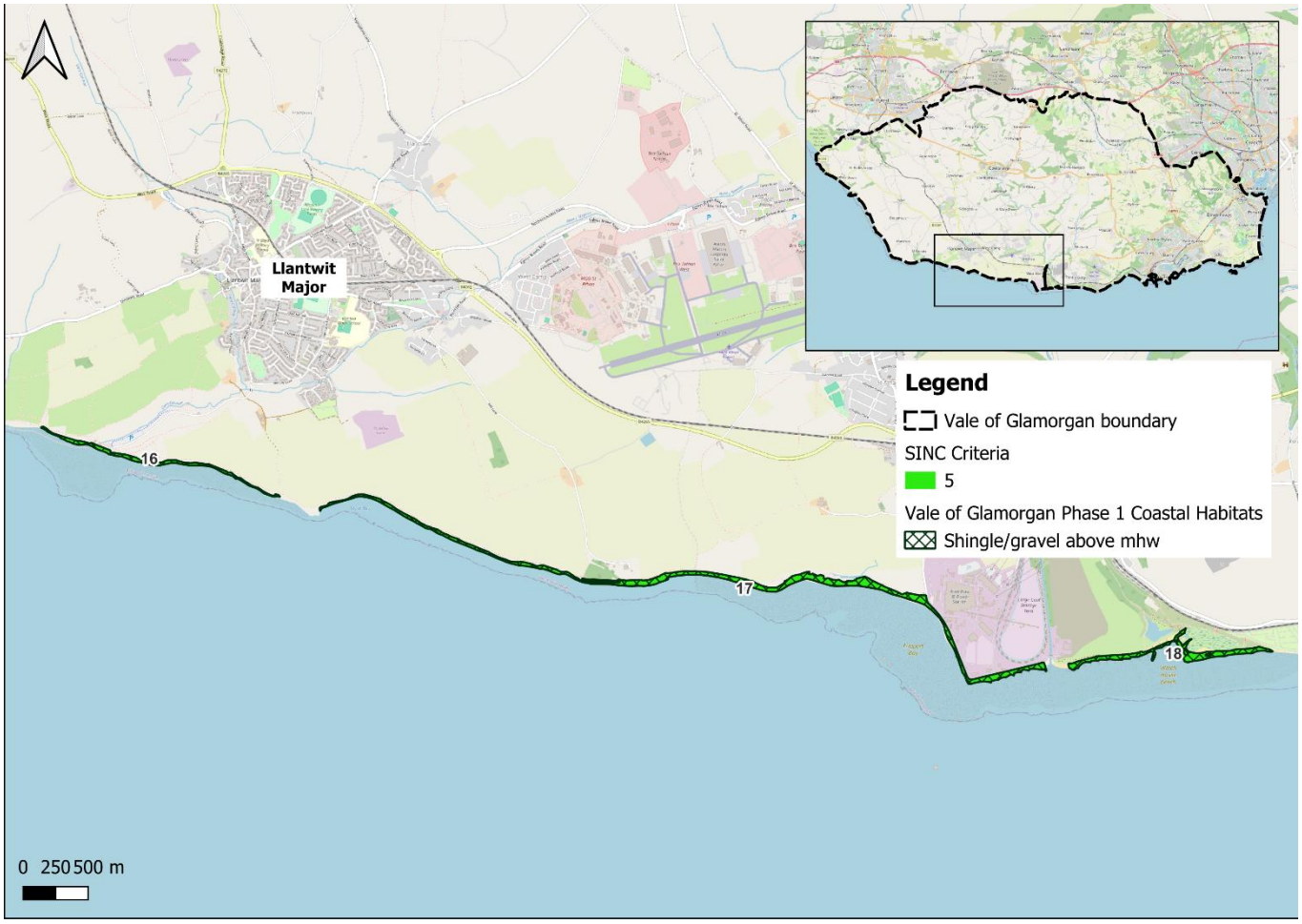
A.4 Site ID: 10, 11, 12 and 13



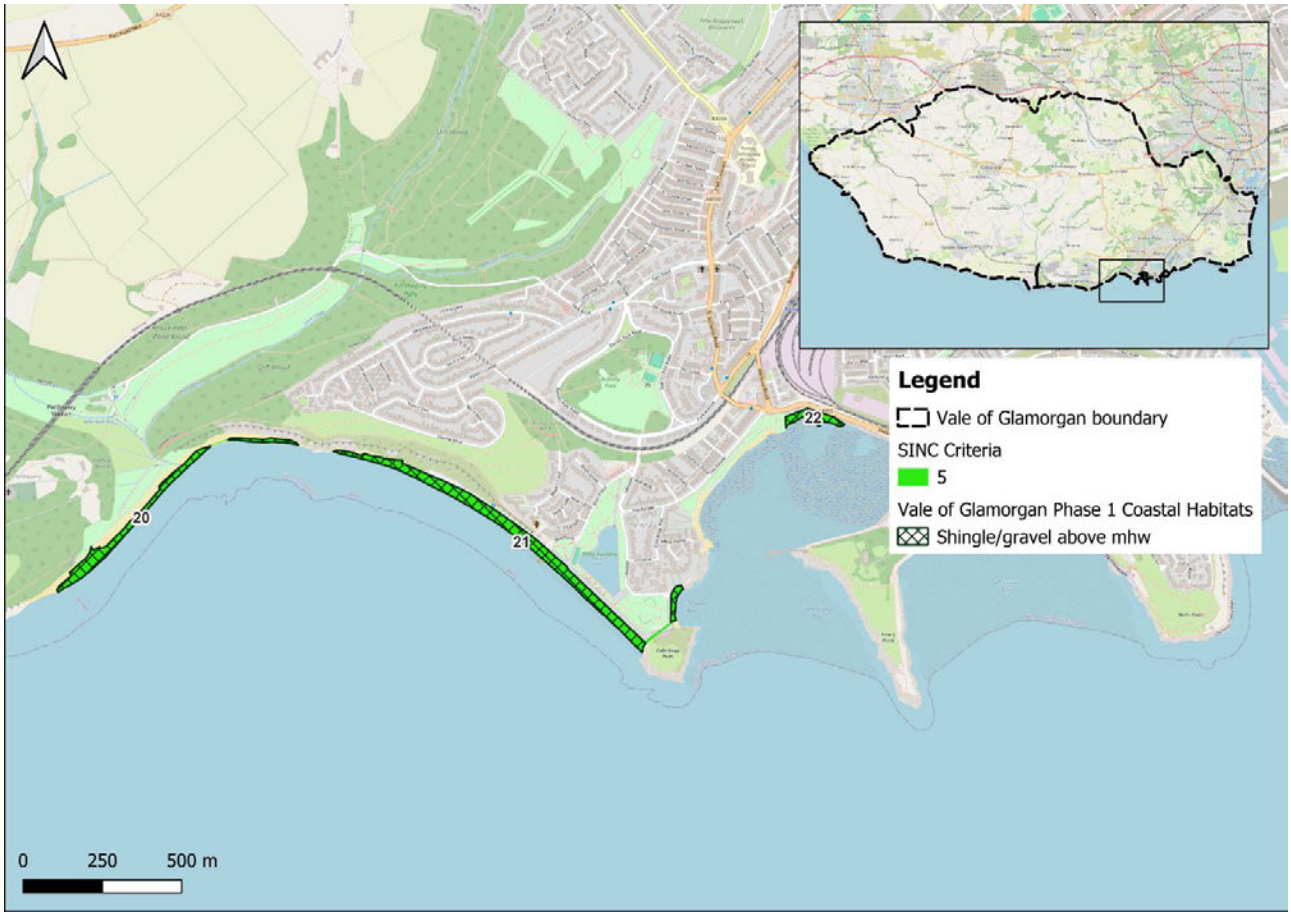
A.5 Site ID: 14 and 15



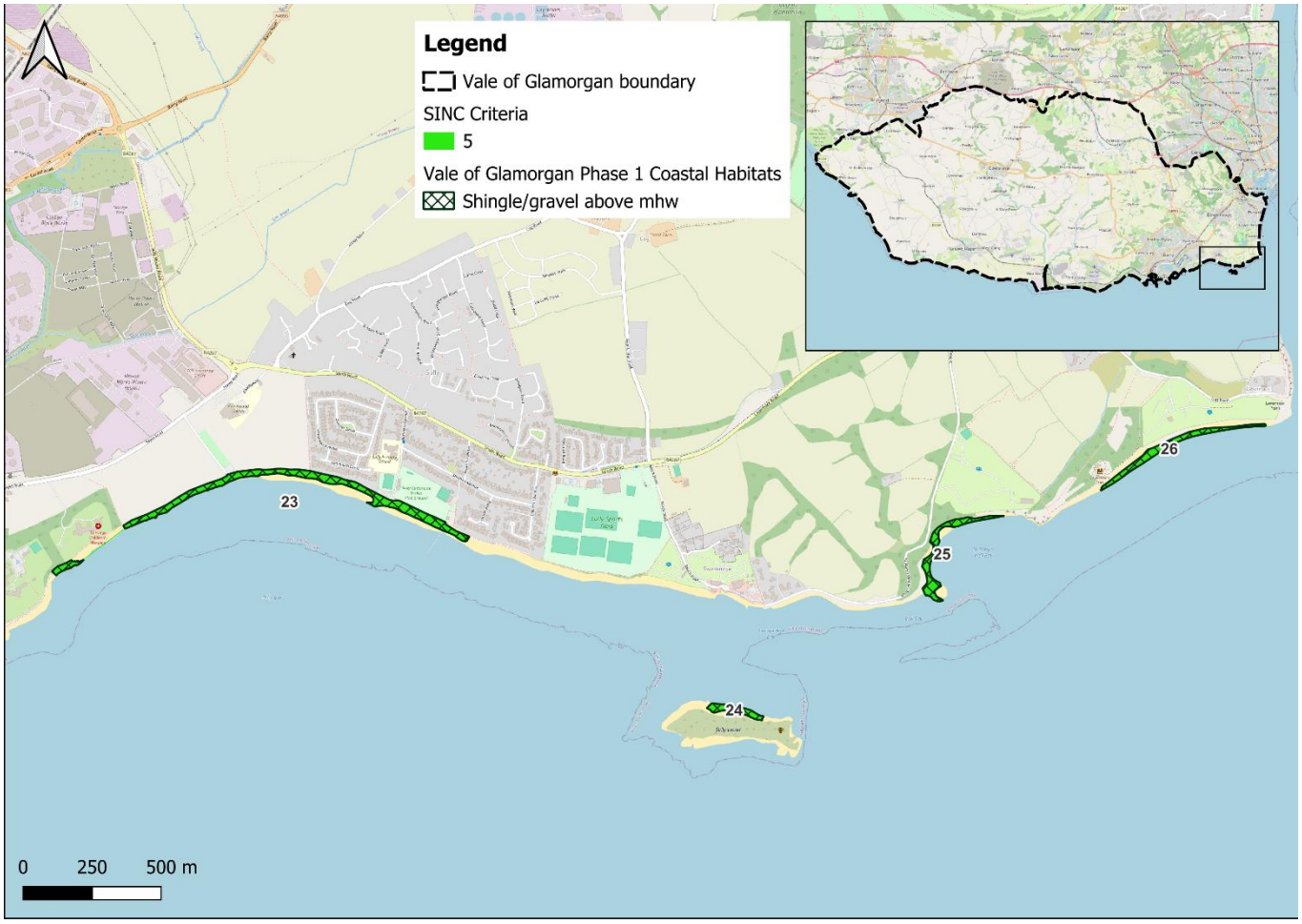
A.6 Site ID: 16, 17 and 18



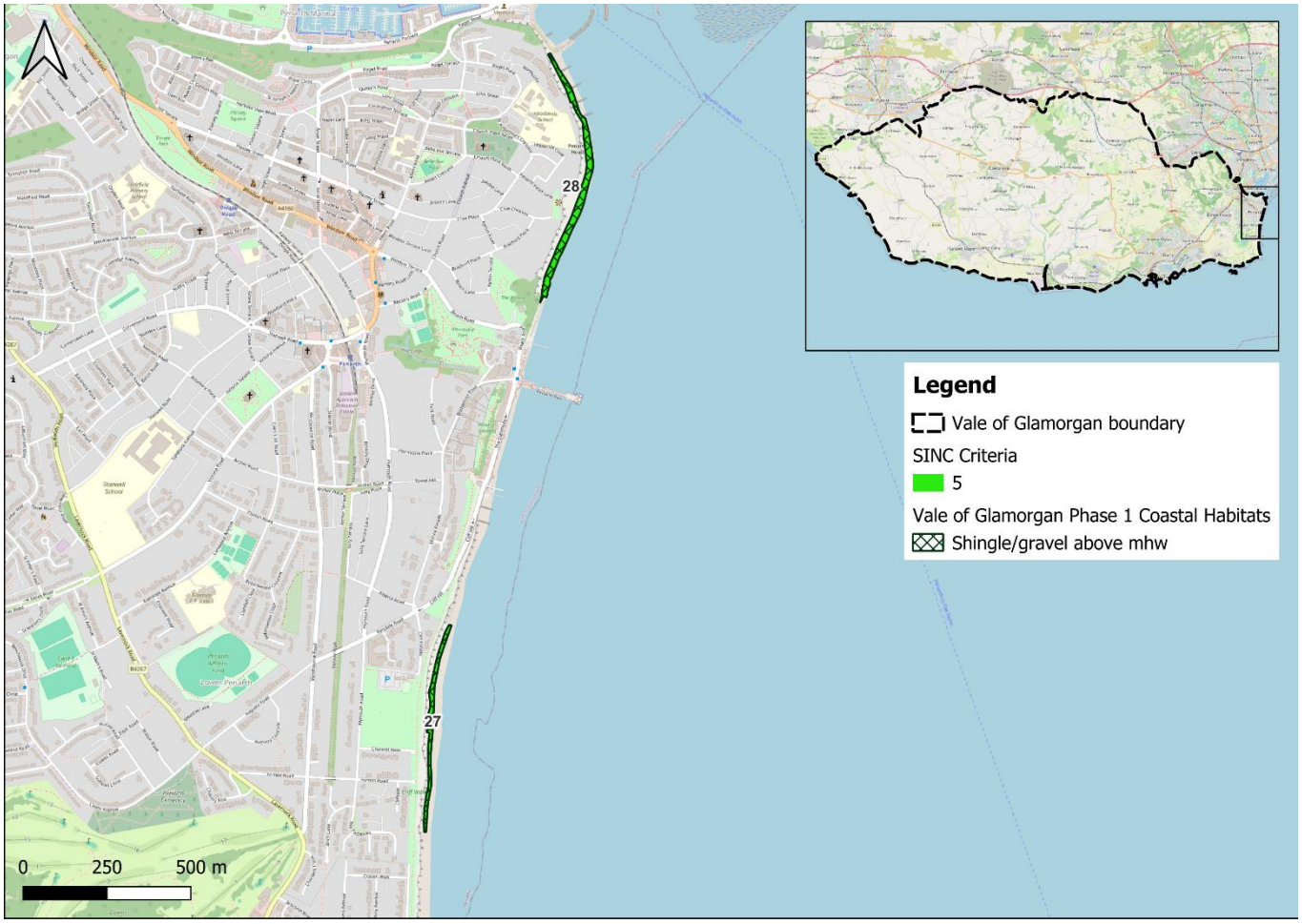
A.7 Site ID: 20, 21 and 22



A.8 Site ID: 23, 24, 25 and 26



A.9 Site ID: 27 and 28



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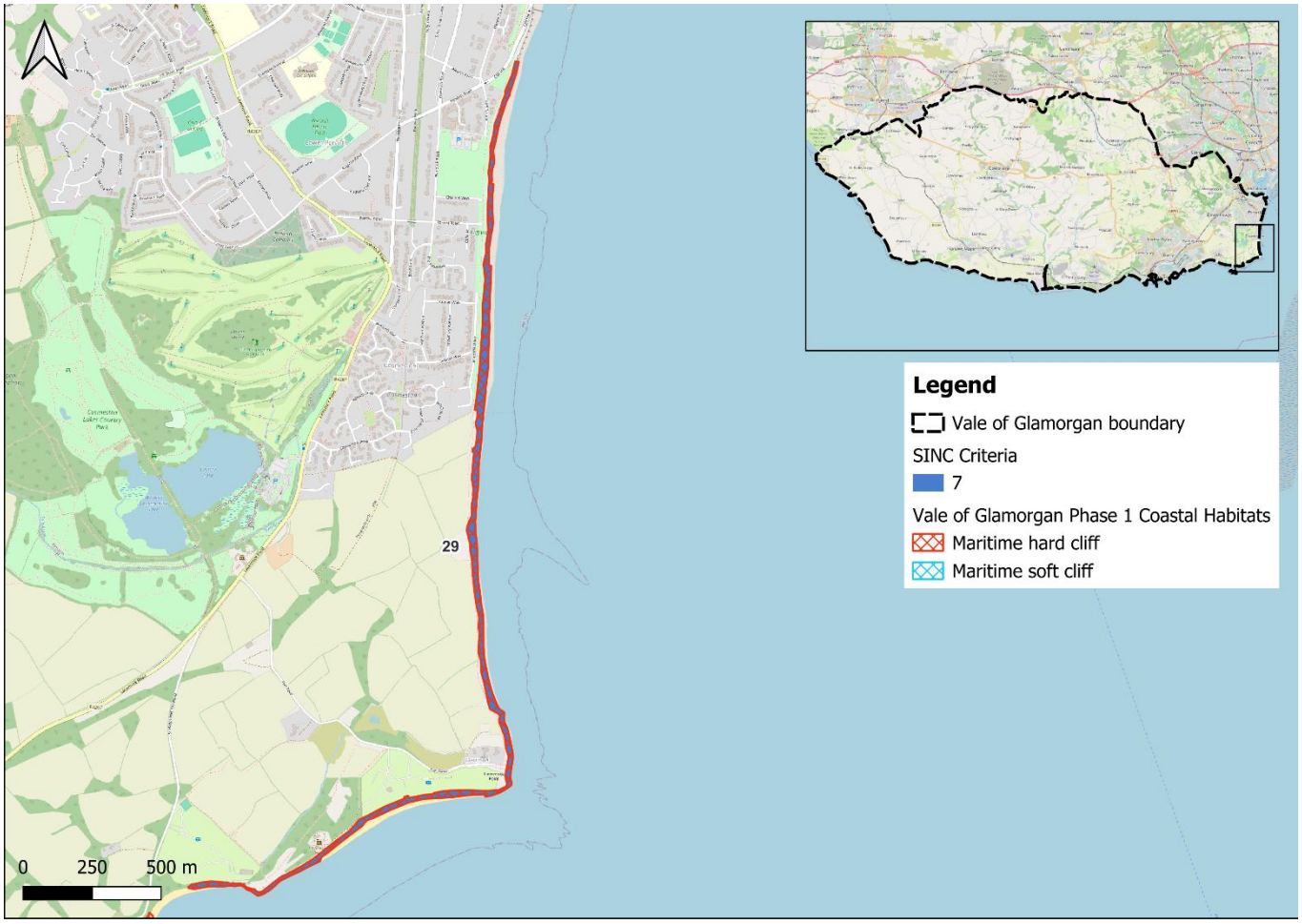
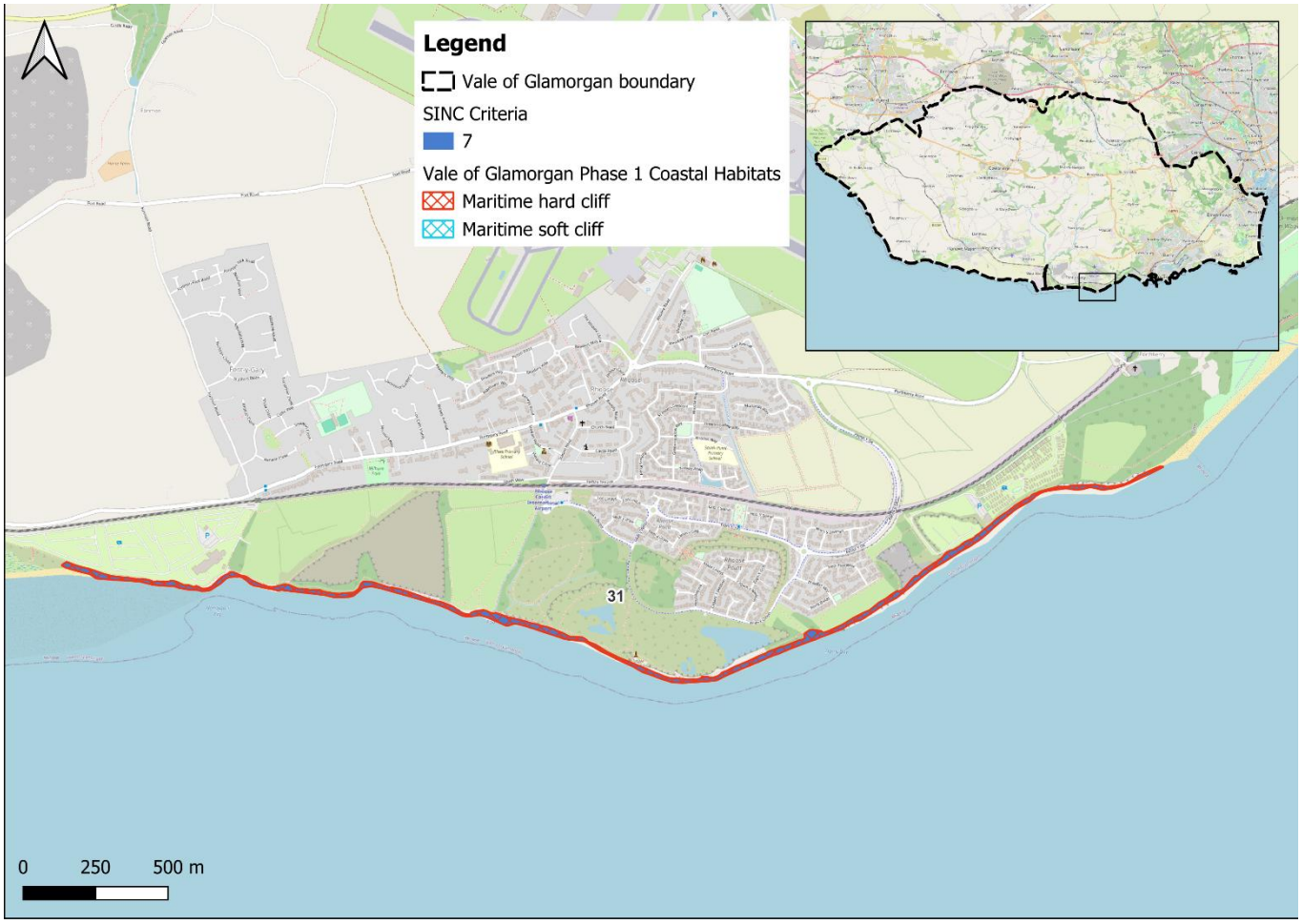


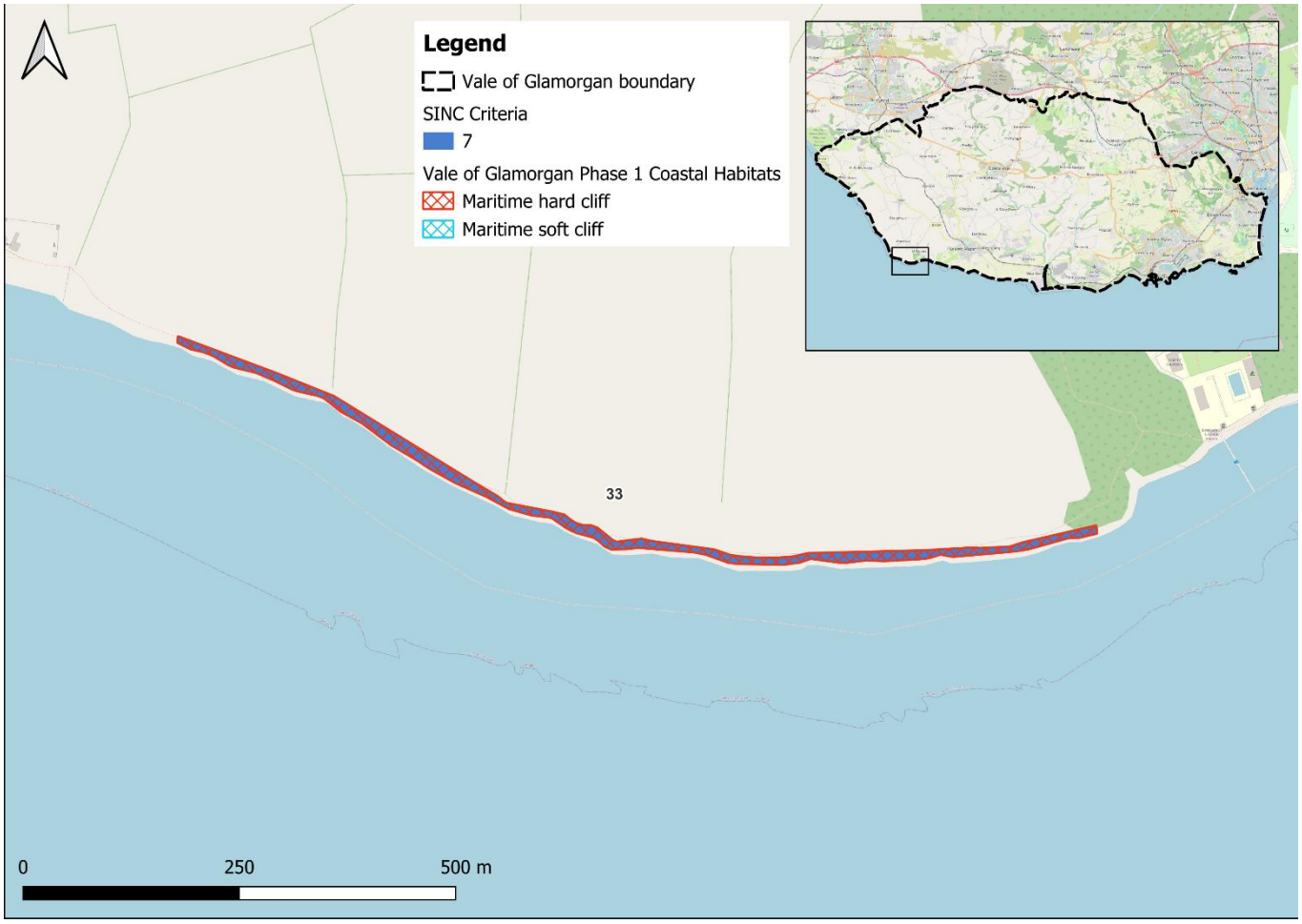
A.11 Site ID: 30

A.12 Site ID: 31



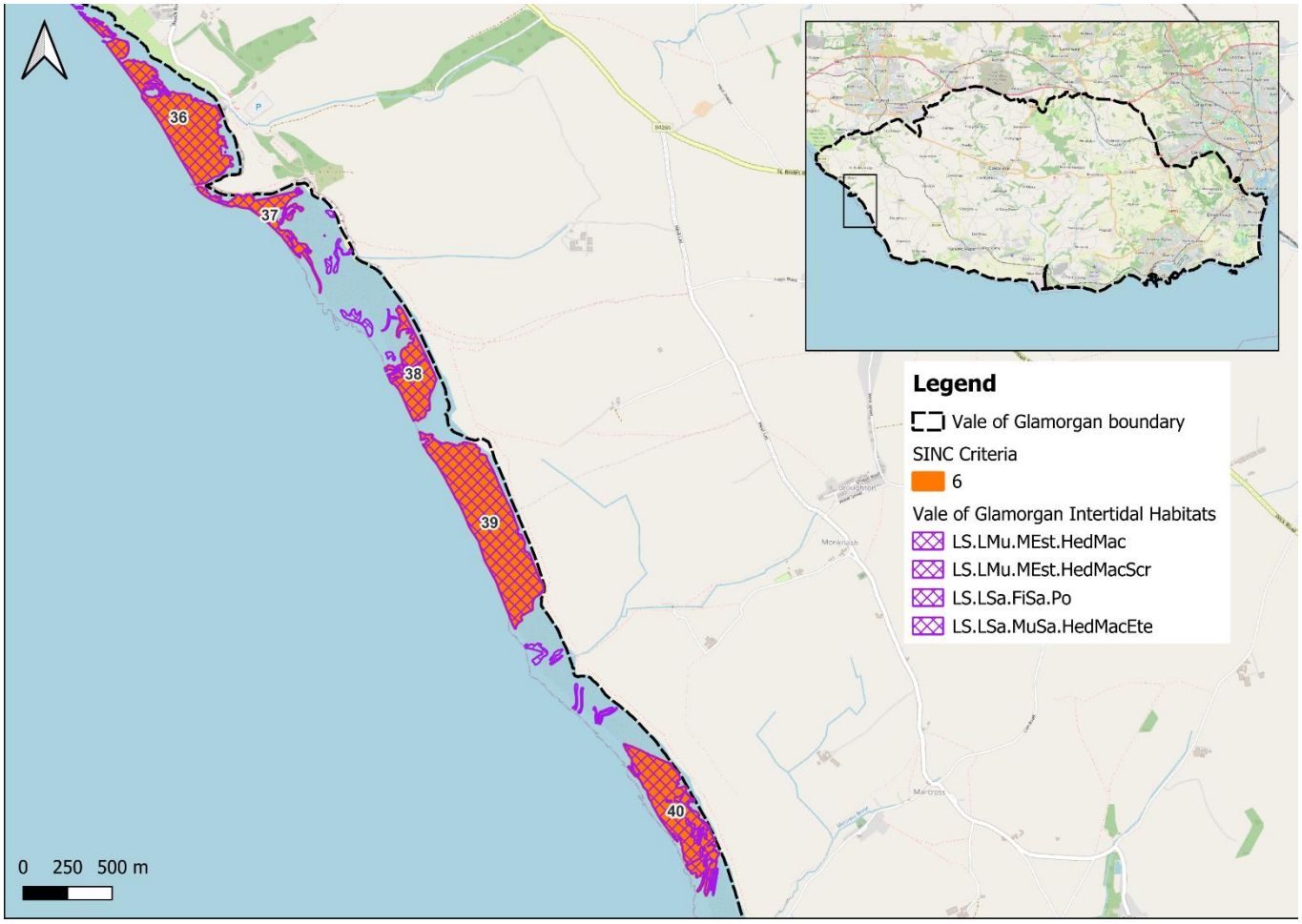
A.13 Site ID: 32

A.14 Site ID: 33

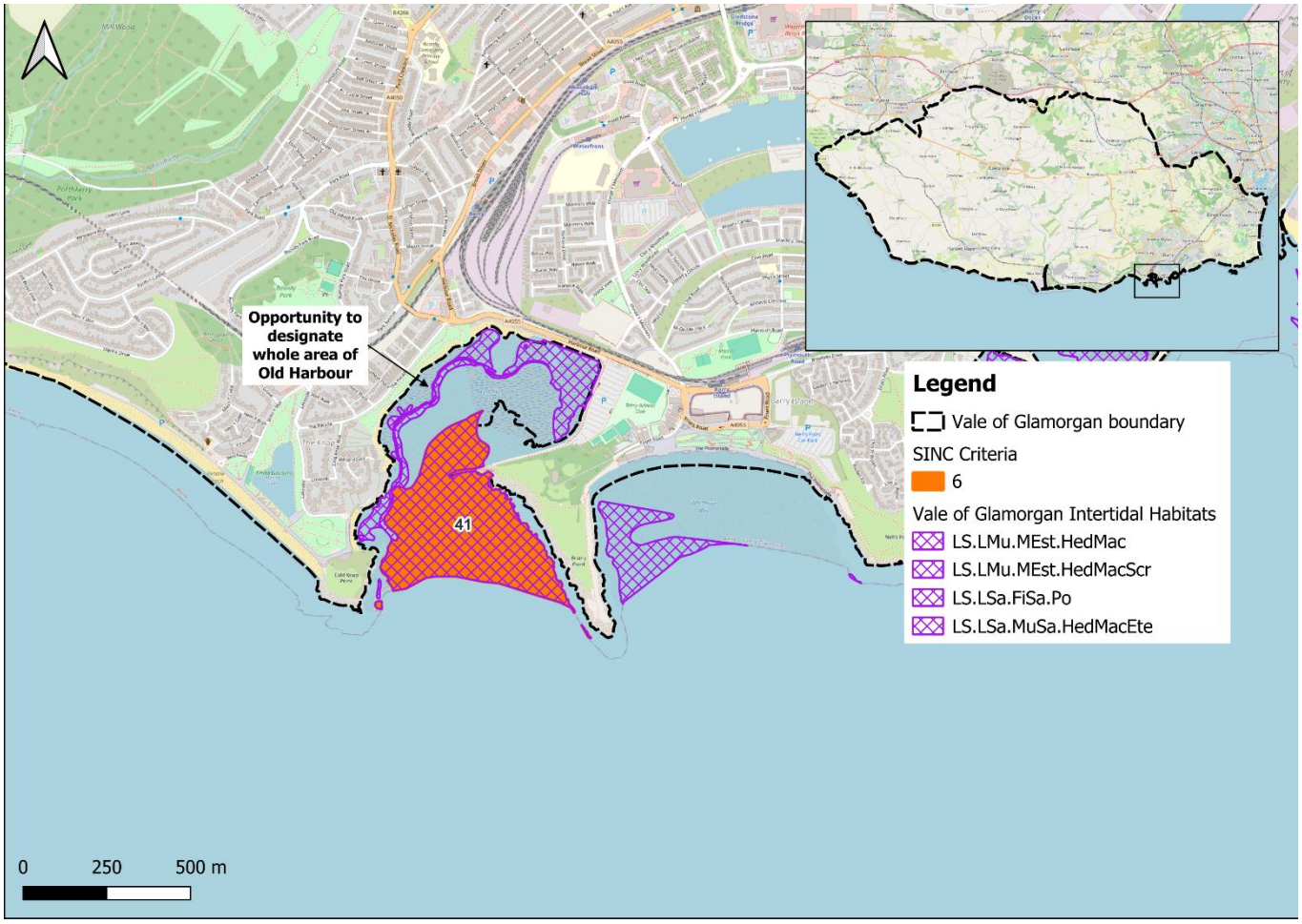


A.15 Site ID: 34

A.16 Site ID:35, 36, 37, 38, 39 and 40



A.17 Site ID: 41



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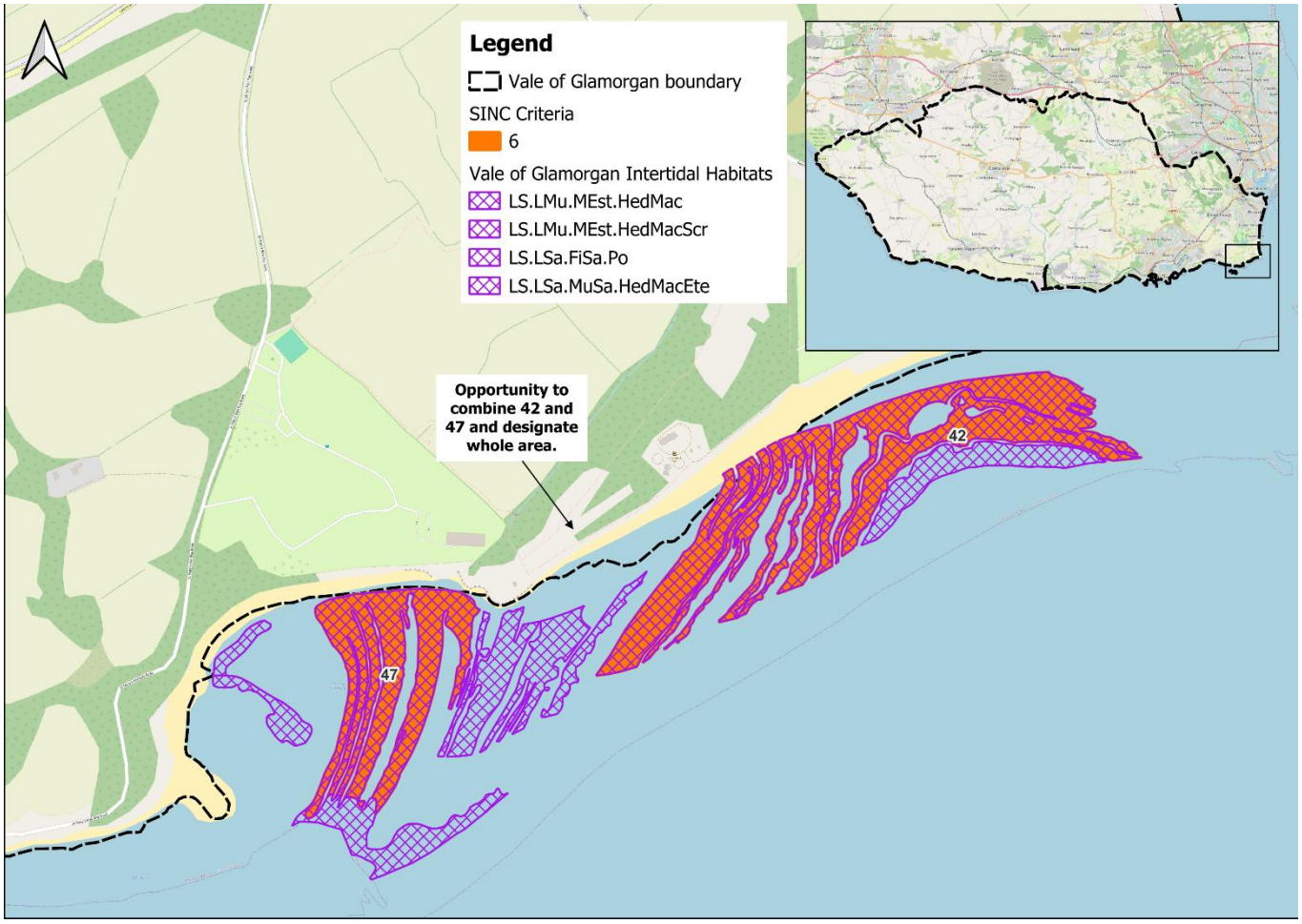

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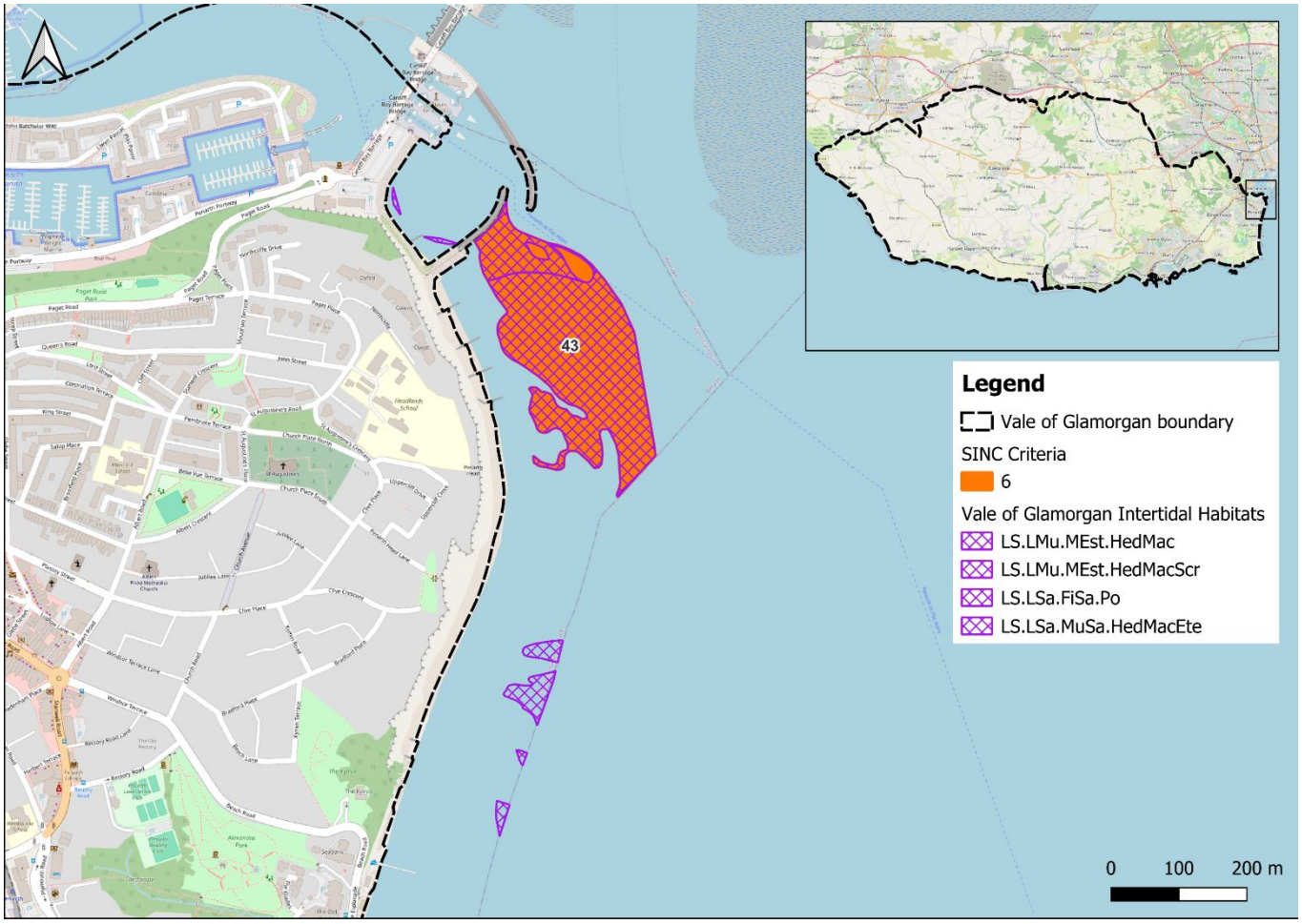

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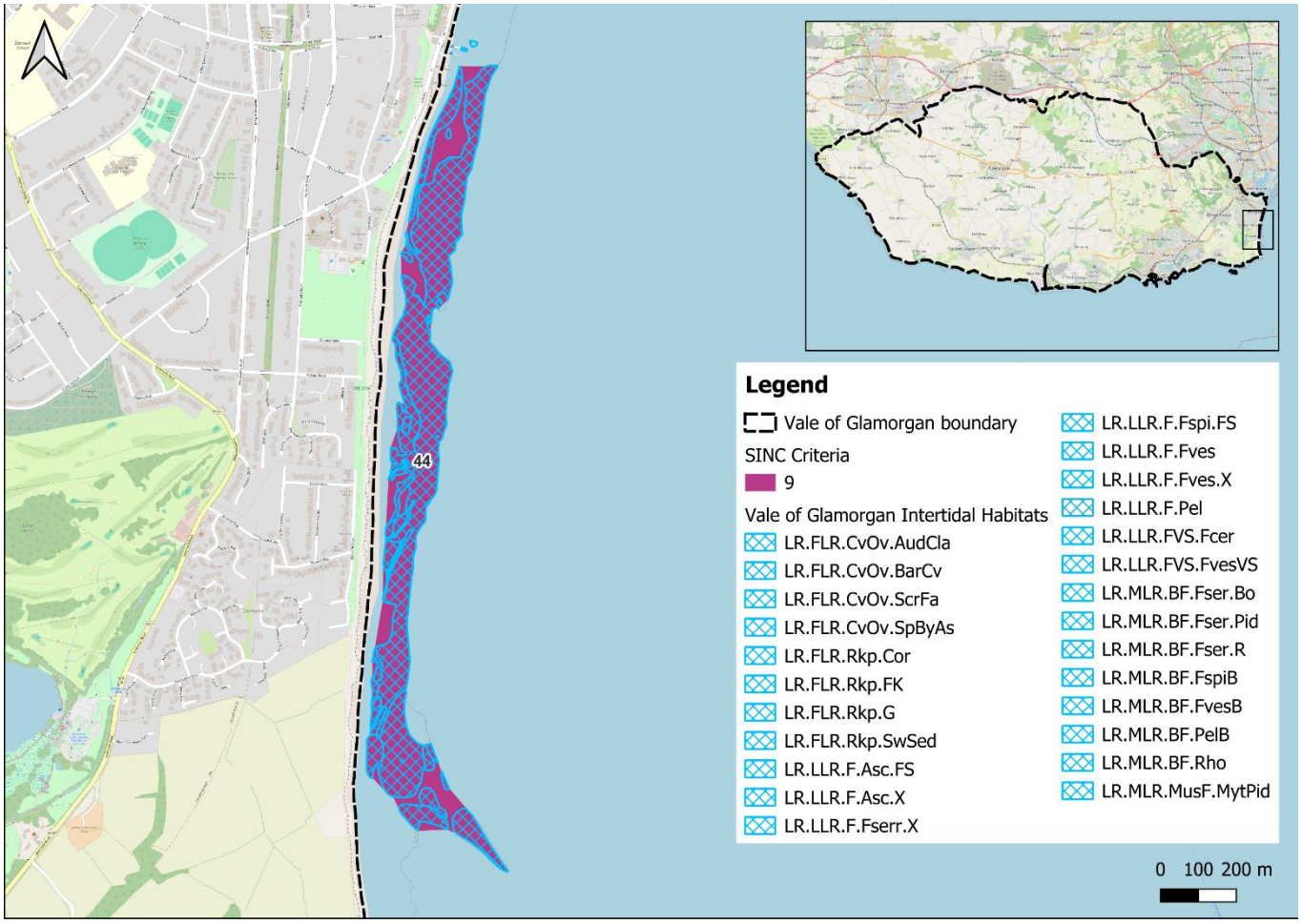

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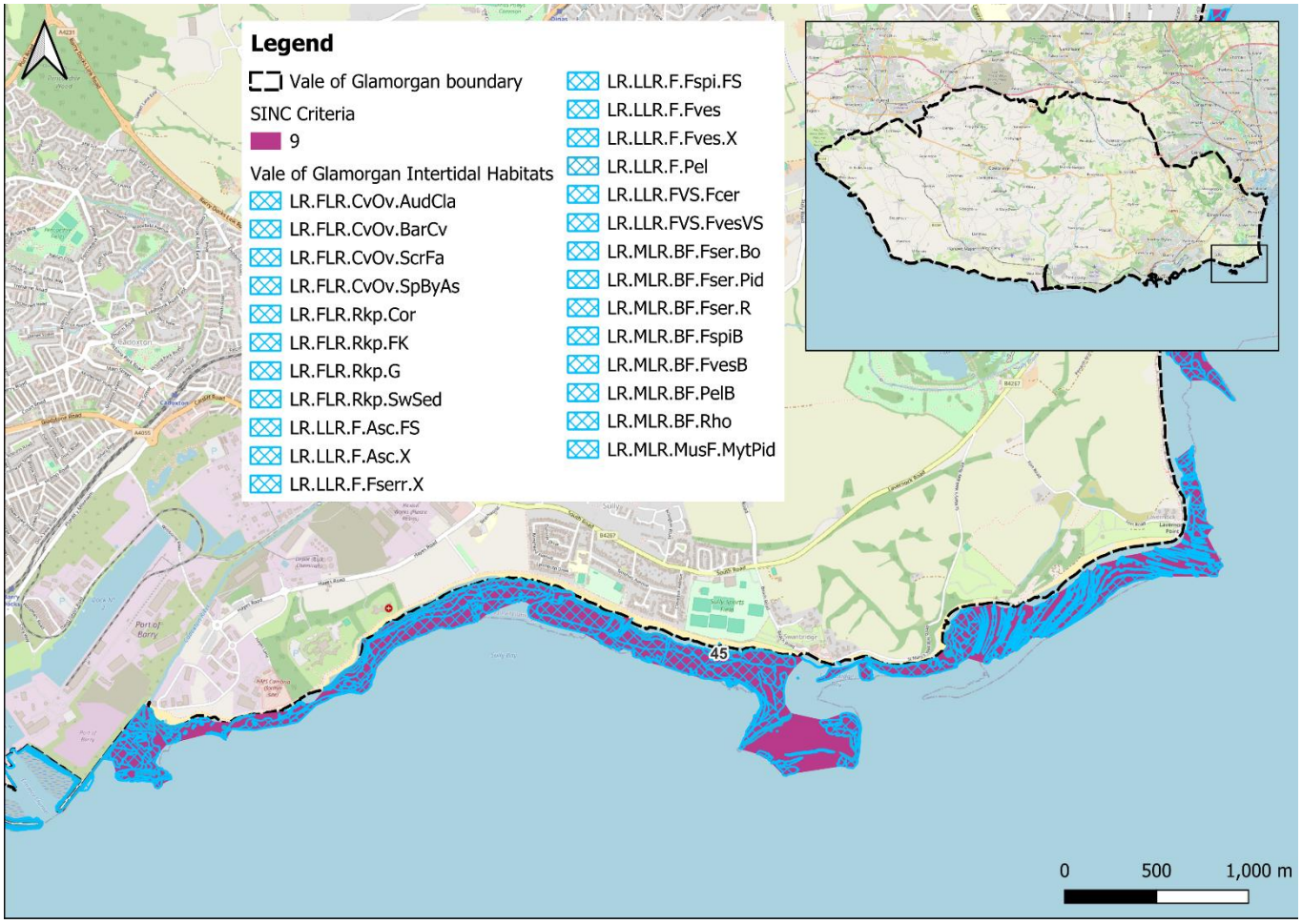

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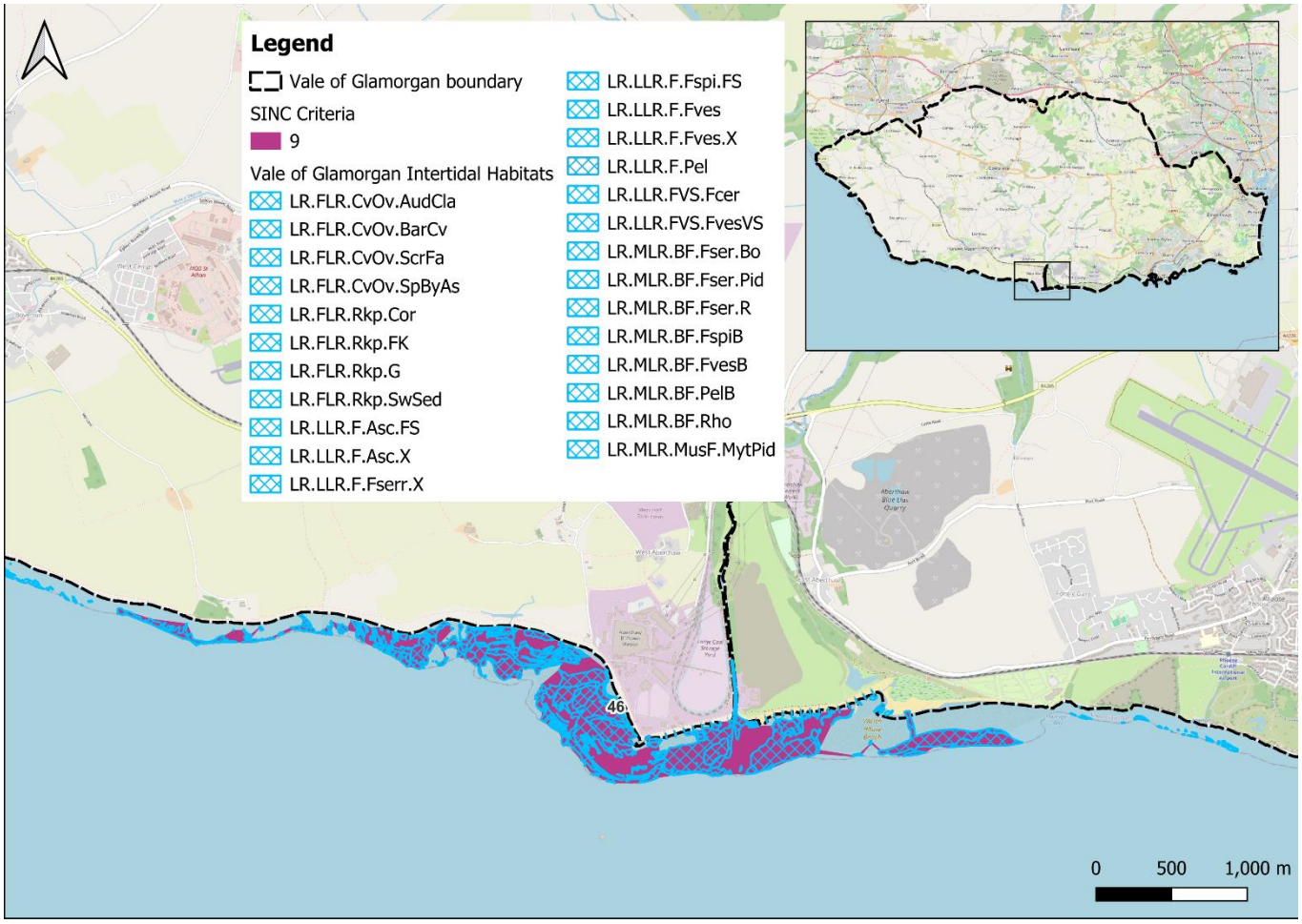

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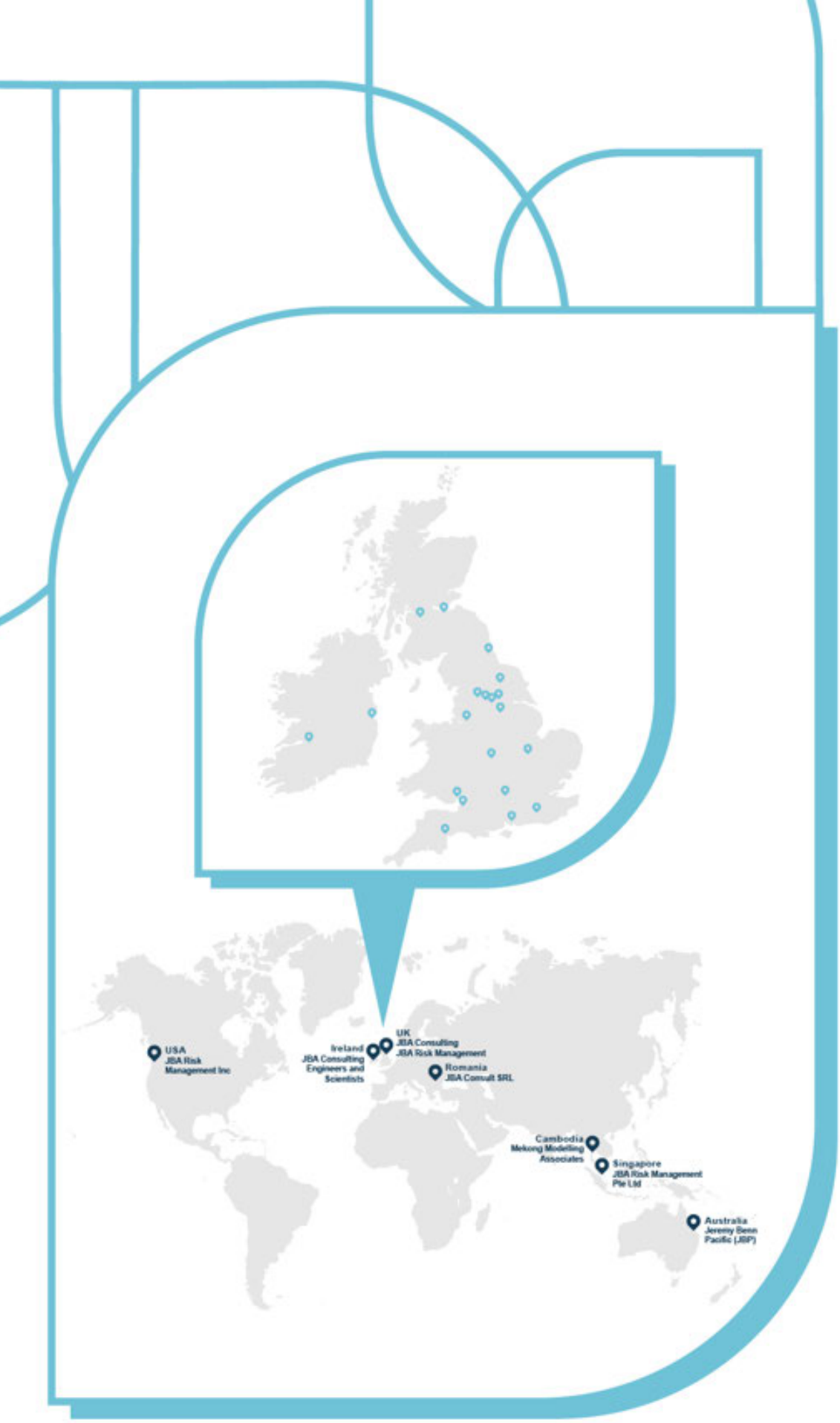

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