PEMBROKESHIRE COAST NATIONAL PARK TRADITIONAL BOUNDARIES SURVEY

Report by: Trysor

For: Pembrokeshire Coast National Park

March 2020

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PEMBROKESHIRE COAST NATIONAL PARK TRADITIONAL BOUNDARIES SURVEY

By

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Trysor

Trysor Project No. 2020/709
DAT HER Event Record PRN 114831

For: Pembrokeshire Coast National Park

March 2020

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Cover photograph: Looking north across the field system below Carn Llidi on St David's Head

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TRADITIONAL BOUNDARIES SURVEY

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DYDDIAD 31ain Mawrth 2020 **DATE** 31st March 2020

Paratowyd yr adroddiad hwn gan bartneriad Trysor. Mae wedi ei gael yn gywir ac yn derbyn ein sêl bendith.

This report was prepared by the Trysor partners. It has been checked and received our approval.

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Croesawn unrhyw sylwadau ar gynnwys neu strwythur yr adroddiad hwn.

We welcome any comments on the content or structure of this report.

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DAT –	Dyfed Archaeological Trust
HER –	Historic Environment Record
NMR -	National Monuments Record curated by the RCAHMW
NPRN -	National Primary Record Number in NMR held by RCAHMW
PCNP -	Pembrokeshire Coast National Park
PCNPA -	Pembrokeshire Coast National Park Authority
PRN –	Primary Record Number in regional HER held by Dyfed Archaeological Trust
RCAHMW –	Royal Commission on Ancient and Historical Monuments in Wales

Event Record PRN – DAT HER

PRN	DAT 114831
Name	PCNP TRADIDTIONAL BOUNDARIES SURVEY
Type	DESK BASED ASSESSMENT
NGR	SM8000030000
Easting	180000
Northing	230000
Summary (English)	In February to March 2020 Trysor undertook a survey of traditional boundaries within the Pembrokeshire Coast National Park for the Park Authority. Samples of traditional boundaries within six areas were studied, a typology constructed and recommendations made for boundary management within the National Park. © Trysor 2020
Summary (Cymraeg)	Yn ystod Mis Chwefror a Mis Mawrth 2020, fe gariwyd allan arolwg o gloddiau traddodiadol o fewn ardal Parc Cenedlaethol Arfordir Penfro gan gwmni Trysor, ar gais Awdurdod y Parc. Astudiwyd enghreifftiau o gloddiau traddodiadol o fewn chwe ardal arolwg, diffiniwyd teipoleg a gwnaed argymhellion ar gyfer rheoli cloddiau traddodiadol o fewn y Parc Cenedlaethol. © Trysor 2020
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Sources	Trysor, 2020, PCNP Traditional Boundaries Survey, Trysor Report 2020/709
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Contents

1. Introduction

1.1 Pembrokeshire Coast National Park Authority commissioned Trysor to undertake a survey of field boundaries within the National Park.

1.2 The purpose of the survey was to establish the types of field boundaries extant within the National Park and provide information on their origins and their condition. Advice was also required on the future management of field boundaries in terms of creation, maintenance and repair, to underpin a grant scheme planned by the National Park Authority.

1.3 Trysor selected six areas for limited field survey, representing different types of landscapes and fieldscapes. The Historic Landscape layer of LANDMAP was used to identify the areas for field survey. LANDMAP includes a list of main boundary types within each of its described areas, and so it was a useful starting point for the survey. The six areas chosen for field visits were Moylegrove, Llethr (Mynachlogddu), Porthmawr (St. David's), St. Ann's Head (Dale), Manorbier Newton Strip Fields and Greenways (Tenby).

1.4 The survey found that the modern, functioning field systems of the National Park area comprises predominantly of post-medieval field boundaries. Earlier boundaries may underlie the present boundaries in some areas, with localised examples noted at both Whitesands Bay and Manorbier Newton but they do not dominate the wider fieldscapes of the region.

1.5 The boundary types identified in the field fit into three broad categories; Earthwork Boundaries, Stone-faced Boundaries and Stone Boundaries. A fourth type, Hedgerows, was not seen in the field and is not identified by LANDMAP as a characteristic boundary type within the National Park area.

1.6 This report provides an overview of the six survey areas, an overview of the historical development of field boundaries in the region as well as a description of the characteristic boundary types now found here and information on how they are best managed.

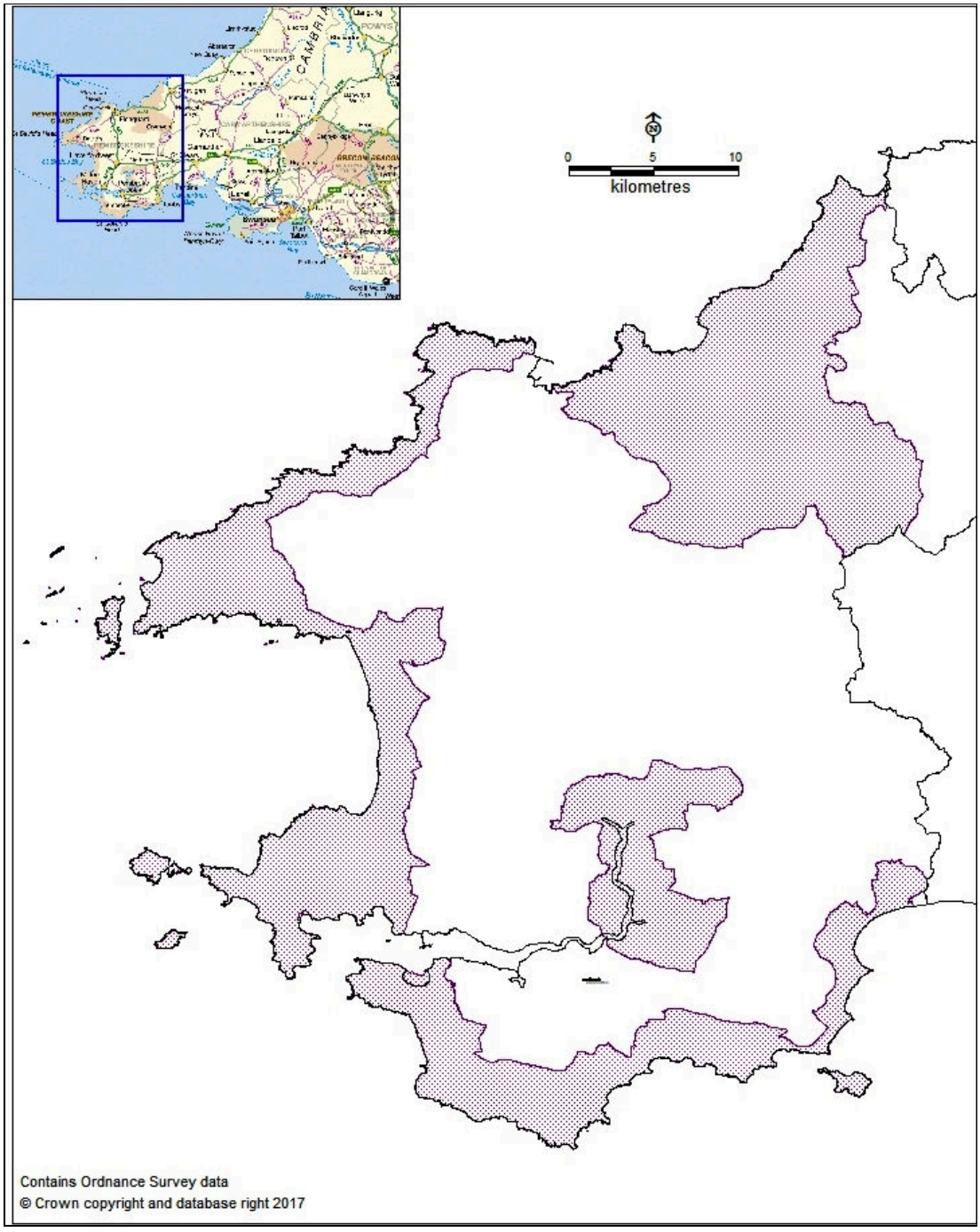

Figure 1: The location of the Pembrokeshire Coast National Park.

2. A history of field boundaries in PCNP area

2.1 Field systems

2.1.1 In order to understand more about different types of field boundary, it is helpful to have an overview of how field systems developed in the area over time.

2.1.2 Prehistoric field systems from the Neolithic through to the Iron Age (4,400 BC to 43AD) undoubtedly existed in parts of the National Park area. They can still be seen in more marginal areas like northwest of Carn Llidi and Bernard's Well Mountain where later land use has not removed or obscured them. Both of these examples are Scheduled Monuments (PE093 and PE399, see bibliography).

2.1.3 Two main types of these early field systems have been recognized. The first is characterised by long straight, boundaries that can run for several kilometres dividing the landscapes up into fairly regular blocks of land. These are known as co-axial field systems and an example is the former field system to the northwest of Carn Llidi (Murphy, 2001). It has also been put forward that some of the field systems in south Pembrokeshire, such as that around Manorbier Newton, have been produced by the fossilisation of prehistoric coaxial field systems (Kissock, 1993). The hedges and banks that now define these fields are far more recent though. At Manorbier Newton, the high ground of the Ridgeway appears to be a dividing line as the field systems to the north of it are completely different character.

2.1.4 Although there seems to be some evidence that the co-axial field systems within less marginal areas may have influenced the layout of later field system layouts, there is no evidence that the current boundaries are of prehistoric date. They are later field boundaries which have been built along earlier boundary lines and have thereby fossilized the earlier form.

2.1.5 The second form of early field system recognized is more closely identified with prehistoric domestic sites. Stone-built hut circles and small enclosures are often associated with sinuous stone boundaries. There are examples on Skomer, northwest of Carn Llidi, and scattered across the Preselis, including at Carningli, Carnalw and the scheduled site on Bernard's Well Mountain. These field systems are all on marginal land and are not used as part of the present field systems. Some are protected as Scheduled Monuments and all are recorded within the regional HER or the NMR.

2.1.6 Any management of the remains of either type of prehistoric field system would be of an archaeological nature rather than field boundary management.

2.2 Open field System

2.2.1 During the medieval period the development of Open Field systems changed the landscape, particularly around settlements. Arable fields were unenclosed and were divided into narrow, ploughed strips. The strips were shared out amongst the inhabitants of the settlements, who would usually hold several strips within the open field system, not necessarily all adjoining each other.

2.3 Informal Enclosure

2.3.1 George Owen (1552- 1613) at the start of the 17th century described Pembrokeshire as being "bare champion grounde" with a want of inclosures and that animals had to be looked after by "herdes", young people from the age of 10 or so to early 20s, to stop them eating the crops as there were few physical boundaries to stop them. In the following centuries the process of enclosing this land would develop across most of the country.

2.3.2 The definition of "champion land" as given by in the Oxford Companion to Local and Family History is *"A term used in the early modern period to denote land given over to cereals in open fields as distinct from wood pasture, fens, moors, etc. The term conjures up a picture of a certain kind of landscape with large fields, few hedges, and little timber. It also implies the settlement of people in villages rather than hamlets or scattered farms."* (Hey, D, 2009)

2.3.3 Many political and social changes took place in the 16th century and in the 1530s/1540s Welsh laws were replaced by laws from England. One of the impacts of this was the law of gavelkind was replaced by primogeniture so instead of land being inherited by all sons everything went to the eldest son. Although by custom gavelkind still continued things began to change. Champion land was seen as being a poorer way to manage the land, there were no trees/hedges to provide shelter for the land, animals had to be continually herded and often didn't benefit from the manure from their own animals, and if land was enclosed it was said to double in value.

2.3.4 The manorial records of Manorbier demonstrate that enclosure had begun in that area by at least 1680 when land surrendered was sometime described by name, i.e. a field and sometimes by adjoining land holders, i.e. open fields (Walker, RF, 1991, p.147)

2.3.5 An annotation by John Lewis in 1700 on a copy of George Owens History of Pembrokeshire stated that *"Pembrokeshire now, though there be too much champion, still is so much altered by inclosures, that it is not liable to the same censures as it might have merited in Queen Elizabeth's day.* One hundred years after George Owens' account, the landscape was beginning to change and Walter Davies stated that between 1750 and 1760 most parishes were enclosed by common consent (Davies, W, 1815, p.221).

2.3.6 In 1815 Walter Davies described that the western coast of Pembrokeshire, the area into which most of the National Park falls, was still open and unenclosed (Davies, W, 1815, p. 220). He describes the "table-lands of the western coast" as being entirely destitute of woods and hedges but that enclosure had been progressing. By the time of the tithe surveys of the 1840s most of the coastal lands within the National Park area had been enclosed

2.4 Parliamentary Enclosure

2.4.1 Formal enclosure was undertaken through Acts of Parliament. In Pembrokeshire it tended to be used as a method of enclosing common/waste lands. The layout of Parliamentary enclosures was planned by surveyors and the resulting fields were regular with straight boundaries. Examples within Pembrokeshire Coast National Park can be seen to the south of Crymych and north of Maenclochog.

2.4.2 Castlemartin Corse, which runs inland from Freshwater West, was enclosed by act of Parliament by Campbell of Stackpole Court. This area was bog and marsh previously but in the late 18th century was turned into farmland. Charles Hassall in 1794 described the process "It is now completely drained, inclosed and divided by ditches, most of which are planted with willows or other aquatics" Hassall, C, 1794, p.15-16).

2.5 Dating of Field Boundaries

2.5.1 What date to assign to the current form of an individual field boundary is not straightforward. When a boundary is shown on a historic map we don't know what the physical form of that boundary was at the time the map was made. The line on the map usually only denoted that there was a boundary present. We cannot be sure whether the physical boundary we see today is the same as that which is shown on an historical map?

2.5.2 Understanding something of the history of field enclosures as outlined above can help to put the field into a context, which might give clues as to the date of the boundary line, although not necessarily the current boundary itself.

2.5.3 Hooper's Law was very popular in the second half of the 20th century and it seemed to offer a solution to the enduring question of How Old is That Hedge? (Hooper, M.D, 1970). It used a formula based on the number of woody species in a 30 yard length of hedge to give the age of the hedge. This formula was based on a hedge being planted with a single woody species and that a new species will be naturally added every 100 years. This has been simplified to Number of Woody Species in 30 yards/metres stretch of hedge x 100, so a hedge with 3 species would be 300 years old, one with 7 species would be 700.

2.5.4 It has since been shown by many people that, for all sorts of reasons, the formula is flawed and shouldn't be used to provide a definitive date for a hedge (Muir, R & N, 1989, p. 48 to 69).

2.6 Types of Field Boundaries

2.6.1 The form of a field boundary is undoubtedly determined in the first instance by what is locally available. Dry stone walls will not abound in a stoneless area, and neither will earth banks in a rocky area for example 18th and 19th century enclosure of Carningli Common. Hedges in general will not generally do well where sea breezes batter them, but gorse might thrive. Some field boundaries show differences within themselves, often where repairs have taken place, or sometimes where availability of resources changed.

2.6.2 In some localities an association with a landowner, or an estate, sometimes shows an influence on the form of boundaries. John Mirehouse of Brownslade, Castlemartin undertook many improvements to the Brownslade estate and is said, after trial and error, to have found that drystone walls with single stones along the top of the wall in manner of castellation broke up the strong sea breezes. This was adopted by the neighbouring Stackpole estate and others (Jones, F 1946, p.136). The English Dialect Dictionary recorded that water–worn stones used to decorate walls and houses were called *Babaloobies* in south Pembrokeshire (Wright, J, 1905).

2.6.3 The location of a boundary or part of a boundary, in relation to the field entrances, roads, farmyards and houses has an effect on the form of a boundary.

2.6.4 In many areas where the main form of boundary is an earthwork bank, the banks either side of the gateway will have been reinforced with stone in some form or other to prevent erosion and damage (see Plates 41 & 58). Walter Davies in 1815 described that in the woodless tracts of Pembrokeshire, entrances into recent enclosures were often stopped up with drystone walling as the cost

of the enclosure meant the landowners could ill –afford the cost of a gate as well. Presumably when access was required the stone was moved to one side

2.6.5 The boundaries along most roads are more modified than those within the internal field system. Some roads have been widened over time, and in particularly in the 20th/21st century the major roads have been reworked and even re-aligned and the roadside boundaries may be very different to the internal field system boundaries (see Plate 47). On smaller roads vehicles have become broader and the roadside form of the bank is often near vertical.

2.6.6 The boundaries close to farms and houses often become neater and are often built of stone or partially of stone. Those around dwellings around Manorbier Newton have mortared stone boundary walls alongside the road as well as round the property (see Plates 59 & 60). Near dwellings on St Ann's Head, the earthwork banks are replaced by Cloddiau and Dry Stone Walls (see Plate 41).

2.6.7 The date a boundary was constructed can also have some bearing on its form and function as has been outlined in Section 2.3. Parliamentary enclosure boundaries are more likely to be consistent within each field system as these were generally well-planned and well-resourced events.

2.6.8 Local tradition, particularly once enclosure started, leads to certain distinctive types of boundary. This is reflected in Walter Davies' evidence (Davies, W., 1815). He states very clearly that different areas used different techniques to construct boundary banks. Geology and the availability of materials were undoubtedly factors in these variations of technique; hence Dry Stone Walling is common in areas where surface stone is abundant, whilst relatively stoneless areas saw the adoption of Earth Banks as the characteristic boundary type.

2.6.9 The purpose of the boundary will also help to determine its form. For instance;

- boundaries along roadsides tend to be higher, with more vertical faces, compared to boundaries within holdings. The need to keep stock on a holding undoubtedly determined the need for more substantial boundaries along public routes.

- holding boundaries are usually not distinguishable from other boundaries in terms of their construction; apart from an

absence of gateways through the boundary (although stopped up gateways often denote fields which have changed ownership). The management of holding boundaries certainly can differ, however, as in modern times double fencing along either side of holding boundaries often allows for the growth of a thicker and higher hedge, which forms an effective barrier between the stock on adjacent holdings.

- in some instances substantial banks or hedgebanks form the boundary between common land and enclosed farmland. Known as the "Clawdd Mawr" in some areas, there are important boundaries separating very different management regimes and are usually also holding boundaries. They separate farmland from open access land in many areas and are therefore important to maintain. These banks can be up to 2 metres high, 3 metres wide and base and often have an accompanying ditch (see Plates 6, 7 & 8). The common boundary around the Preseli commons has in many places not changed since the mid-19th century or earlier.

2.6.10 The terminology for different boundary types in historical documents has to be used with caution as the terms, hedge, fence and even wall are used interchangeably. In Pembrokeshire Welsh, the word *clawdd* is also generally used to refer to a boundary, but does not discriminate between different types of boundary banks.

2.7 Walter Davies in 1815 described three types of boundaries;

- Quick hedges, in particular blackthorn in Pembrokeshire
- Stone walls
- Naked Sod Fences

2.7.1 Quick hedges in Pembrokeshire were not just usually a hedge but a hedge on a bank that provided extra height and nutrients for the hedge plants. There are extensive instructions on how to set the plants within the bank to maximize the success rate and their growth (Davies, W, 1815, Towne, L, 1822). David Thomas, a Welsh topographer, described around 1720 that Pembrokeshire fields were "*Meusydd mawrion, sychion, llydain. Planwydd, union o'r coed du-ddrain*" (Fields dry and extensive, with luxuriant sets of the black thorn) and this does seem to have been one of the most popular hedging plants in Pembrokeshire, although Richard Fenton described flourishing hedges of elder at Solva withstanding the ravages of the sea air. (Davies, W, 1815, p.227-8).

2.7.2 Drystone walls, Walter Davies describes as being most common in the naked tracts of the western South Wales but gives

few other details other than to mention the local style of placing single stones at intervals along the tops of walls to lessen the force of the wind around the Stackpole area (Davies, W, 1815, p.254).

2.7.3 Walter Davies describes the naked sod fences as being 5 to 6 feet high, 5 to 6 feet wide at the base, tapering to about 2.5 to 3 feet wide across the top (Davies, W, 1815, p.254). Both sides were faced on both sides with turf, or, in the case of Pembrokeshire, with stone (p.257). The latter appears to be an early reference to the Cloddiau Variant known as the "Pembrokeshire Hedgebank."

2.7.4 Davies described how the turf should be laid on either side of the bank to prevent shrinkage and subsequent erosion of the bank. When using stone to face the banks there several methods depending on the type of stone available. Flat stones, which can pack together tightly, could be used for herringbone patterns, or vertical patterns. Where the stone available was more rounded a course of stone about 9 to 10 inches deep would be topped by a bonding course of flat stones, and this repeated to the requisite height. If flat stones were just not available, the bonding course could be made from turf sods (Davies, W, 1815, p.258). He describes the centre being filled as the courses were built up. The centre was of remnants of turf, sol or stone and well-rammed.

3. Methodology

3.1 Parameters of the Survey

3.1.1 The purpose of this report is to provide the Pembrokeshire Coast National Park Authority with baseline data to help with the implementation of a pilot grant scheme for the repair of traditional boundaries within the Park.

3.1.2 Currently the Park Authority has limited understanding of the extent and condition of traditional boundary features within the Park. The Authority wanted advice on how to approach an overall assessment of the traditional boundary features using a field–based sampling strategy as well as considering remote sensing techniques.

3.1.3 As this study is to provide guidance in implementing the repair of traditional boundaries, certain boundaries have been excluded from this report.

a) Prehistoric Field Systems. There are examples of prehistoric field systems which have been scheduled within the Park area, e.g. northwest of Carn Llidi, scheduled monument PE093, and Bernard's Well Mountain, scheduled monument PE399, see Figure 2. They are both in marginal areas where there has been little medieval or post-medieval pressure to bring the land under cultivation. These are now archaeological features and not in use as boundaries.

b) Other redundant boundaries of various dates, mainly along the cliff top strip of land, lying outside the current field systems.

c) Urban property boundaries.

d) Military sites, including Castlemartin Tank Range and airfields

Figure 2: Two Scheduled Prehistoric Field Systems within Pembrokeshire Coast National Park

3.2 Review of HER and NMR data

3.2.1 Data requests were made to the regional Historic Environment Record managed by Dyfed Archaeological Trust and the National Monument Record managed by the RCAHMW (Dyfed HER, 2020, RCAHMW, 2020). These two data sources record archaeological features and historical built structures.

3.2.2 The HER data included 238 records for 23 Earthwork (Banks), 53 Boundary Banks, 2 Boundary Ditches, 45 Boundary Walls, 55 Field Boundaries, 59 Field Systems, and 1 Field. These terms are all included in the Welsh Thesaurus of Monument Types (Heritage Data, accessed March 2020). A rapid assessment of each record showed that over 165 records were for historic assets which would be considered archaeological features rather than a traditional boundary currently in use. 54 records were for traditional boundaries still in use, recorded during particular fieldwork projects, including military defences around the Haven, and Stackpole Estate management plan.

3.2.3 The RCAHMW data contained 96 records, over two thirds of which were for Field Systems. A rapid assessment of each record showed that most were for historic assets which would be considered archaeological features rather than a boundary that was currently in use. There were 87 records for archaeological features, 8 traditional boundaries still in use and 1 in an urban setting.

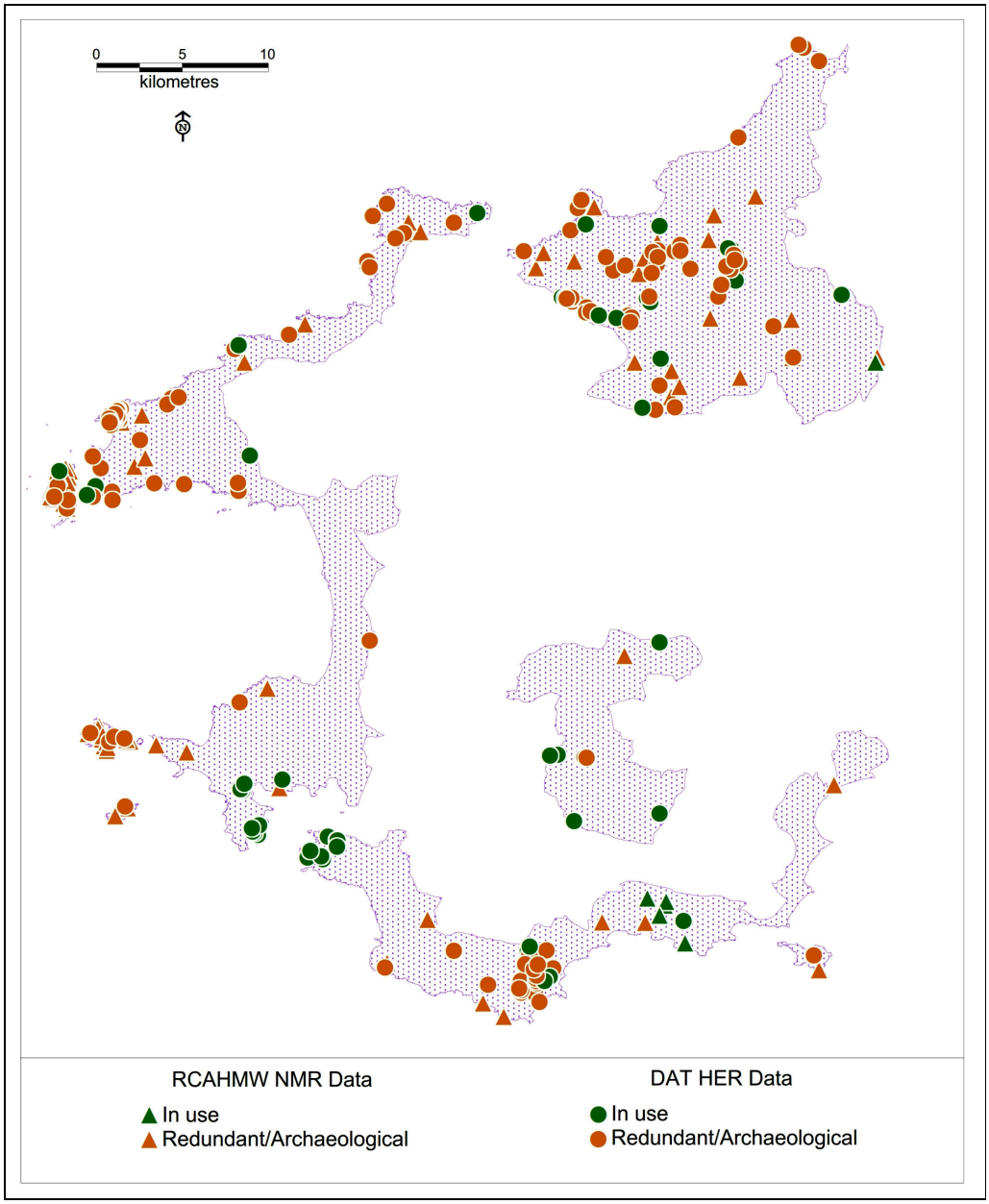

Figure 3: Field boundaries currently recorded in the NMR and HER categorised as to whether they are is use or are redundant and now an archaeological feature

3.3 LANDMAP is an all-Wales data resource, managed by Natural Resources Wales, which aims to record landscape characteristics and evaluate them through 5 different aspects: Historic Landscape, Cultural Landscape, Visual and Sensory, Landscape Habitat and Geological Landscapes.

3.3.1 Each aspect layer is subdivided into smaller Aspect Areas breaking the landscape down into definable blocks. Each block has its own identity with similar key characteristics and this makes them ideal units of landscape to study.

3.3.2 There are 183 aspect areas in the Historic Landscape layer that lie wholly or partially within the Pembrokeshire Coast National Park, see Figure 4.

3.3.3 In order to select LANDMAP Historic Landscape Aspect Areas to study in detail, aspect areas which lay partly outside the Park were removed, leaving 122 aspect areas which are wholly within the PCNP area. The following were also removed;

- Aspect Areas which had no entry for Field 12 (Traditional Boundaries) and were on marginal or common land.
- Those on the islands, e.g. Skomer, Caldey etc
- Urban areas
- Military areas such as Castlemartin tank range and airfields

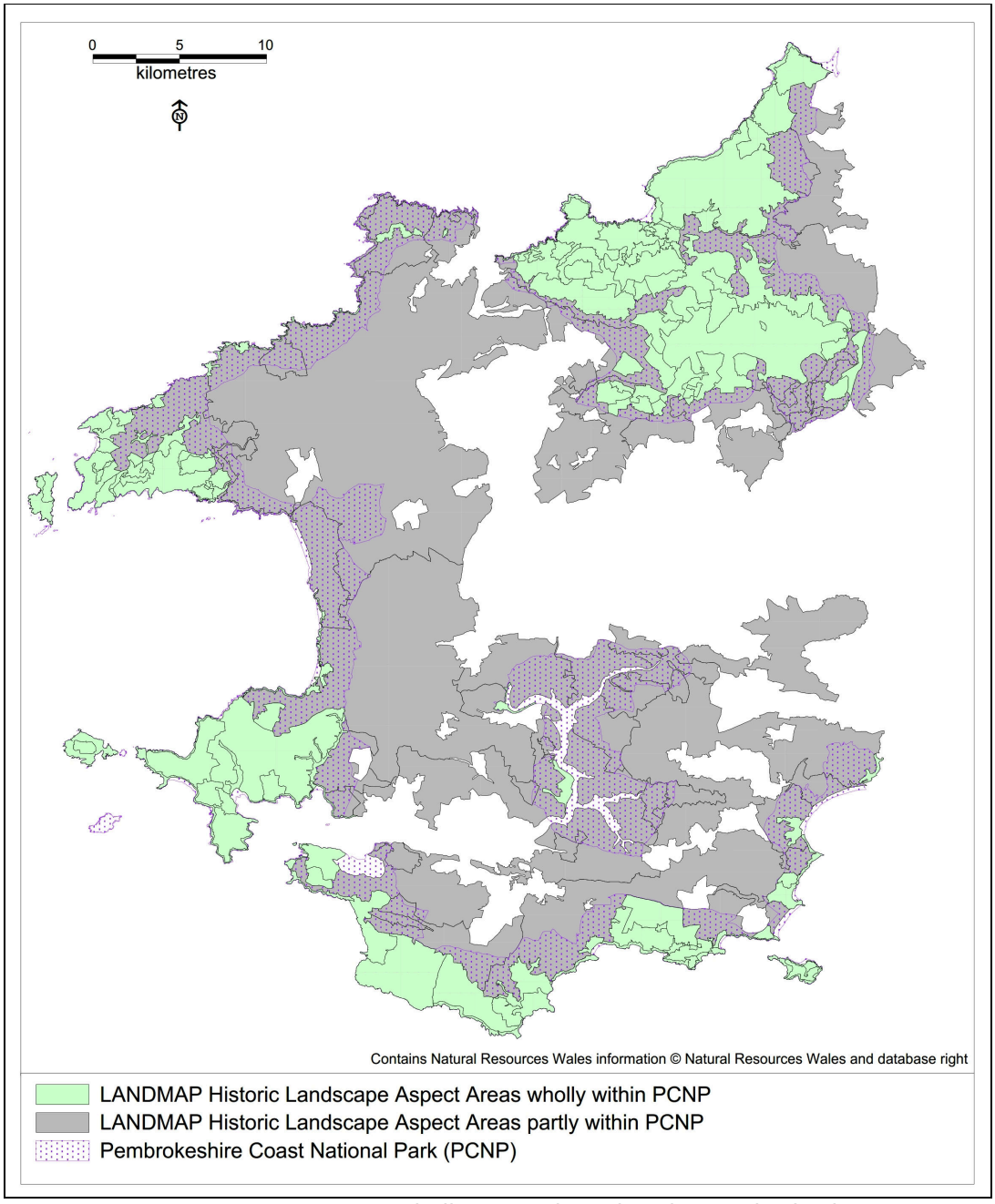

Figure 4: LANDMAP Aspect Areas wholly or partly within the Pembrokeshire Coast National Park.

3.4 LANDMAP records many different characteristics about each Aspect Area. Question 12 asks what traditional field boundaries are present within each Aspect Area, to be chosen from the following list;

- Hedgerow
- Hedgerow with Trees
- Hedgebank
- Dry Stone Walls
- Stone –faced Drystone Wall
- Single Thickness Drystone Wall
- Boulder Wall
- Orthostat- faced Wall
- Stone slab Wall
- Mortared Wall
- Earth/ Turf Bank
- Stone Rubble Bank
- Cloddiau Variants/ Stone & Earth banks
- Slate Fence
- Wooden Fence
- Post & Wire Fence
- Iron Railings
- Cut Drainage

3.4.1 The terms used are particular to LANDMAP and are different from those used in the archaeological thesaurus for Wales. However, if boundary types such as Iron Railings, and Slate, Wooden and Post & Wire Fences are discounted for the purposes of this survey, the remaining boundary types fall within four broad categories;

- Earth Banks (Hedgebank, Earth/Turf Bank)
- Stone-faced Banks (Hedgebank, Orthostat-faced Wall, Cloddiau Variants/Stone & Earth Banks)
- Stone Walls (Dry Stone Walls, Stone-faced Drystone Wall, Boulder Wall, Stone Slab Wall, Mortared Wall, Stone Rubble Bank)
- Hedgerows (Hedgerow, Hedgerow with trees)

3.5 During the site visits, boundaries were selected for recording, photographs taken and each boundary later recorded in an Access database. Boundaries were recorded from Node to Node following slightly adapted guidance from the People's Trust for Endangered Species in their Hedgerow Survey Guidelines (PTES, accessed 22 March 2020)

3.5.1 Nodes are defined as:

- Where another boundary meets the boundary being recorded
- Where there is a gateway or a gap in the boundary of 5 metres or more
- Where boundary structure changes dramatically
- Where the boundary turns a corner of 90 degrees or more

3.6 Selecting Aspect Areas for Survey

3.6.1 In order to select LANDMAP Historic Landscape Aspect Areas to study in detail, aspect areas which lay partly outside the Park were removed, leaving 122 aspect areas which are wholly within the PCNP area. The following were also removed;

- Aspect Areas which had no entry for Field 12 (Traditional
- Boundaries) and were on marginal or common land (44 records)
- Those on the islands, e.g. Skomer, Caldey etc (4 records
- Urban areas (8 records)
- Military areas (5 records)

3.6.2 From the remaining 61 Aspect Areas, 6 Aspect Areas were selected to reflect different parts of the National Park. These were Greenways, Manorbier Newton Strip Fields, St Ann's Head, Porthmawr, Llethr and Moylegrove, see Figure 5, and are described in more detail in Section 5.

3.6.3 It should be noted that field survey and the visual assessment of field boundaries on the ground appears to be the only satisfactory way of recording and understanding traditional boundaries. It is very difficult to identify boundary types or their condition from aerial photographs. Hedges obscure their underlying banks even in winter, and from the air a stone wall may look the same as a Cloddiau Variant or a stone rubble bank. Also, fine detail such as the presence or absence of stone-facing is not possible using remote techniques. These difficulties also apply to the use of LiDAR as a survey tool.

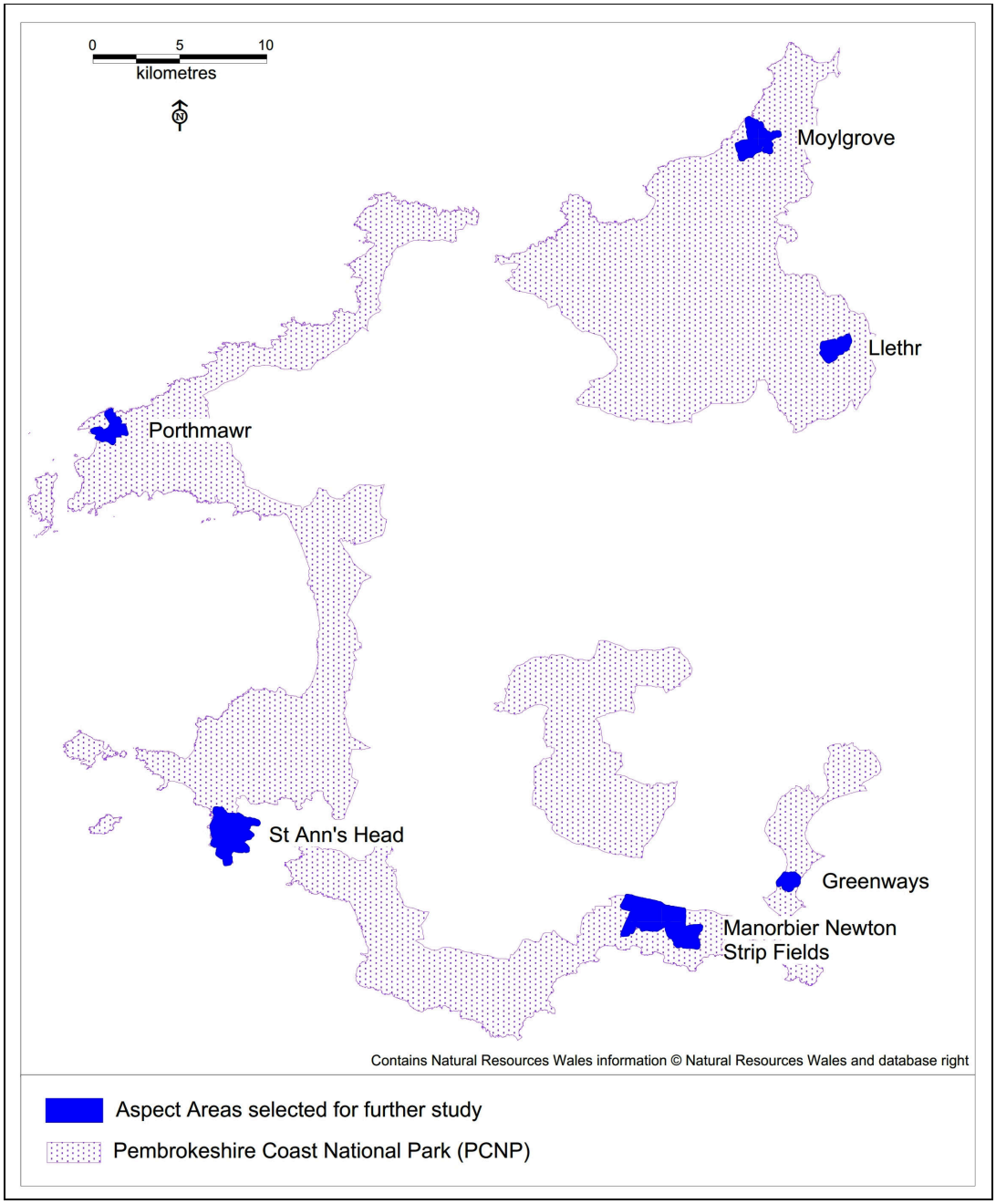

Figure 5: Aspect Areas selected for more detailed study

4. Typology of Traditional Boundaries in the PCNP area

4.1 The main traditional field boundaries within the National Park are composed of earth or stone or a combination of the two, sometimes with the addition of a hedge. Most traditional earth banks are now strengthened by post and wire fences either along the top of the bank or on one or both sides.

4.2 Varying terminologies are used in archaeological thesauri or sources such as LANDMAP. For the purposes of this study, a modified list of boundary types has been adopted for use, based partly on LANDMAP but also informed by field survey in the six chosen aspect areas. The main types of traditional boundary encountered in the National Park area are:

- Earth Bank
- Hedgebank
- Lynchets
- Revetted Boundaries
- Pembrokeshire Hedges/Cloddiau
- Stone Rubble Bank
- Dry Stone Wall
- Mortared Wall

4.3 These boundary types again conform to the four broad categories of boundary described in 3.4.1 above;

- **Earthwork Boundaries** (Earth Bank, Hedgebank, Lynchets)
- **Stone-faced Boundaries** (Hedgebank, Pembrokeshire Hedgebanks/Cloddiau/Cloddiau Variants, Revetted Boundaries)
- **Stone Boundaries** (Dry Stone Walls, Mortared Walls, Stone Rubble Banks)
- **Hedgerows** (Hedgerows are boundaries consisting of closely planted hedge shrubs and trees without an underlying bank. They were not encountered in the six aspect areas visited and do not appear as a traditional boundary type in LANDMAP for the National Park area, although they may exist in some localities)

4.4 Many boundary banks are now covered in dense vegetation and even in winter it is sometimes difficult to tell the difference between an Earth Bank and a stone-faced "Pembrokeshire Hedgebank" (see Plate 002).

4.5 A simple **Earth Bank** may be accompanied by a ditch from which the bank material was originally excavated or for drainage purposes (see Plate 10, 34, 35 & 36). They are not hedged, although may originally have been so. Usually, post and wire fencing makes these boundaries stock proof. LANDMAP indicates that they are widespread within the National Park area and are the dominant boundary type in several districts (see Figure 6).

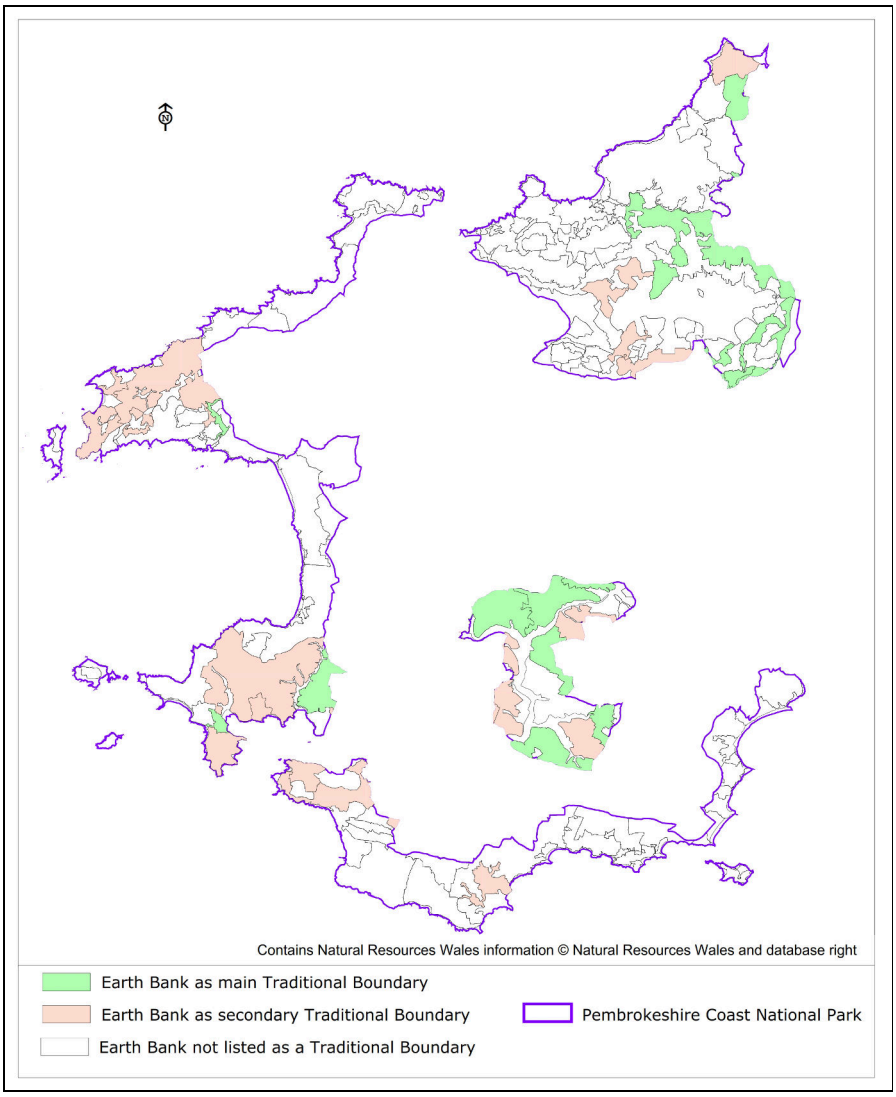

Figure 6: Distribution map showing where earth banks are characteristic of the landscape, based on LANDMAP, field 12. Main Traditional Boundaries are listed first in LANDMAP and so the most common, Secondary Traditional Boundaries are listed in second place or more in LANDMAP and not so frequent.

4.6 A **Hedgebank** is an Earth Bank which is hedged, either along its top or its sides. A ditch may be present and hedges are often accompanied by post and wire fencing to make the boundary stock proof (see Plates 13, 14, 44, 53 7 54).

4.6.1 There are 53 Aspect Areas where the main traditional boundary is a Hedgebank. There are a further 26 Aspect Areas where Hedgebanks are a secondary traditional boundary type. This makes the Hedgebank the most significant traditional boundary type in the National Park. These are spread fairly evenly throughout the PCNP area with conspicuous absences around St David's Head, the Preselis, and north of the Preselis, which tend to be areas where stone was more accessible for boundary construction (see Figure 7).

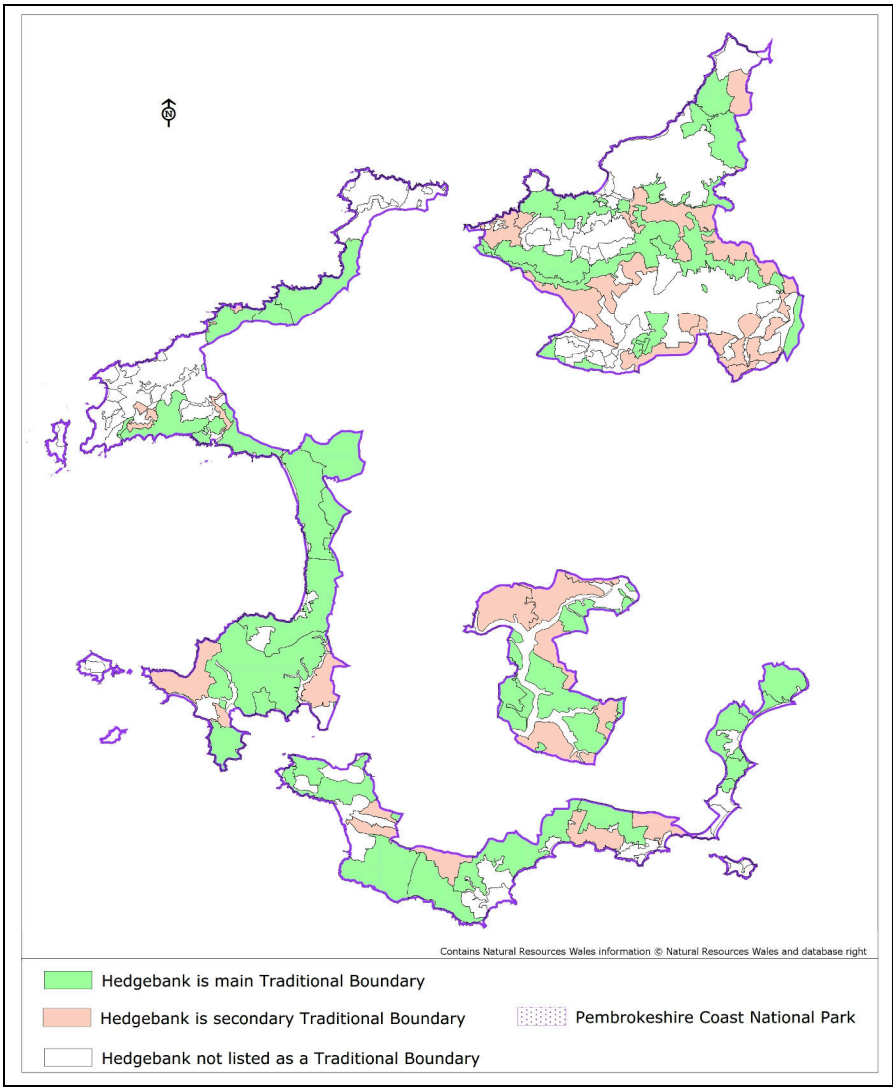

Figure 7: Distribution map showing where Hedgebanks are characteristic of the landscape, based on LANDMAP, field 12. Main Traditional Boundaries are listed first in LANDMAP and so the most common, Secondary Traditional Boundaries are listed in second place or more in LANDMAP and not so frequent.

4.7 **Lynchets** are another type of Earthwork Boundary but they should be considered as relict features (see Plates 26, 27 & 68). Where they still act as field boundaries they must be accompanied by hedgebanks, walls or fencing to make them stock proof. Their preservation as historic landscape features is important as some may be of medieval or even prehistoric origin. Any fencing or hedging undertaken along a lynchet should avoid damaging the original earthwork. They should be managed as archaeological features, recorded and potentially investigated archaeologically in future. Lynchet is not a LANDMAP term and not a dominant traditional boundary.

4.8 **Revetted Boundaries** include stone revetments or facings built to retain a bank of earth or sometimes an earlier lynchet (see Plates 21, 22, 30 & 31). It is not a LANDMAP term and not a dominant traditional boundary.

4.9 **Pembrokeshire Hedgebanks – Cloddiau/Cloddiau Variants** are an important type of boundary are those which can be defined as being of earth and stone construction and are known in Wales as "**Cloddiau**" (Welsh for "banks"). These include a range of variations, some very localised, known to LANDMAP as "**Cloddiau Variants.**" Among these are the variant recognised as the **Pembrokeshire Hedgebank** within the region. They share many characteristics with the Cornish Hedges and Devon Banks of southwest England and their essential characteristic is an earth core with stone-facing on both external faces. They can be topped off with either turf or a hedge (see Plates 16, 17, 20, 40 & 42).

4.9.1 As Figure 8 demonstrates, they are chiefly recorded on LANDMAP in the northern part of Pembrokeshire. It is possible that their distribution is under-reported as their stone-facing often become hidden from view when grass and other vegetation grows profusely on their sides.

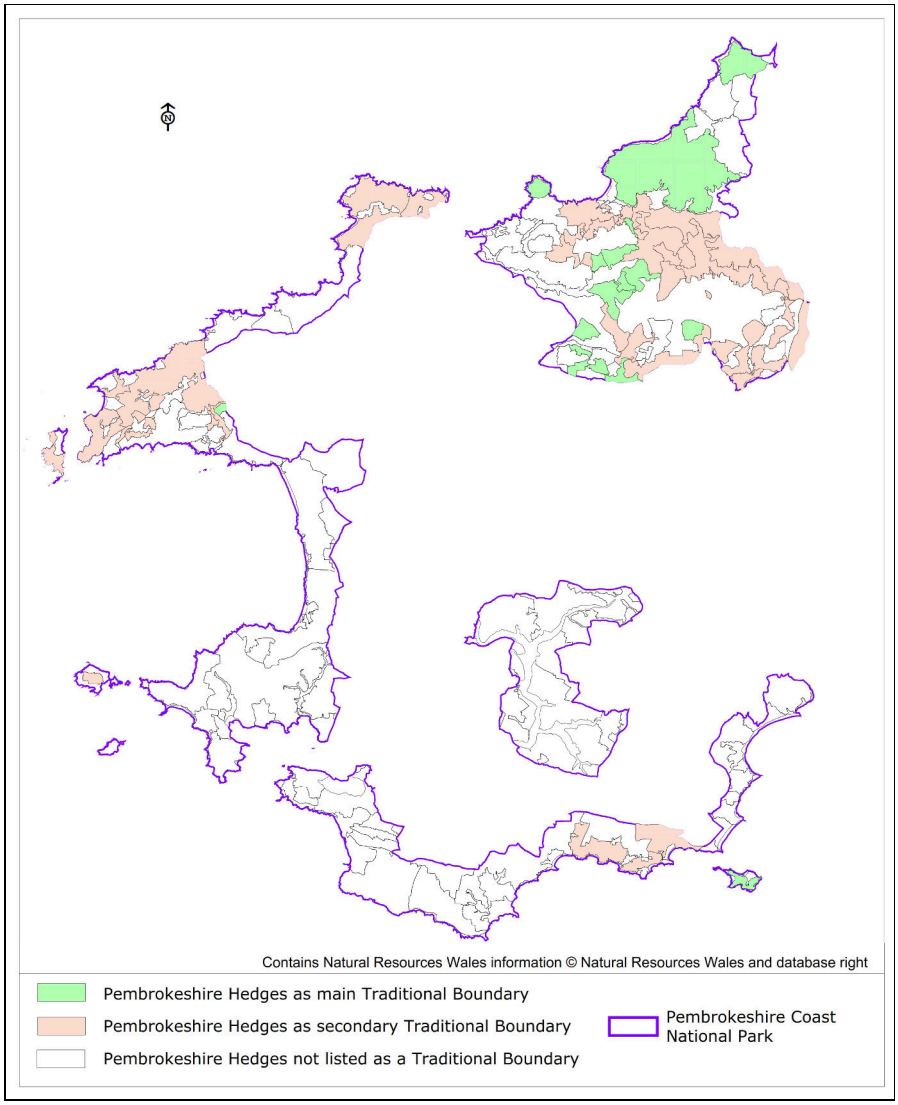

Figure 8: Distribution map showing where Pembrokeshire Hedgebanks are characteristic of the landscape, based on LANDMAP, field 12. Main Traditional Boundaries are listed first in LANDMAP and so the most common, Secondary Traditional Boundaries are listed in second place or more in LANDMAP and not so frequent.

4.10 A **Stone Rubble Bank** is a mixture of earth, clay or stone. Their origins may vary and they may represent the decayed remains of former Stone-faced Banks, or former Earth Banks which have become denuded and had their earth component eroded away (see Plates 24, 25 & 26).

4.10.1 Stone Rubble Banks are recorded as relatively common features, though not dominant, in the stonier areas of northern Pembrokeshire and the limestone belt around Manorbier. Their dominance on Ramsey Island reflects past field survey by archaeologists on the island.

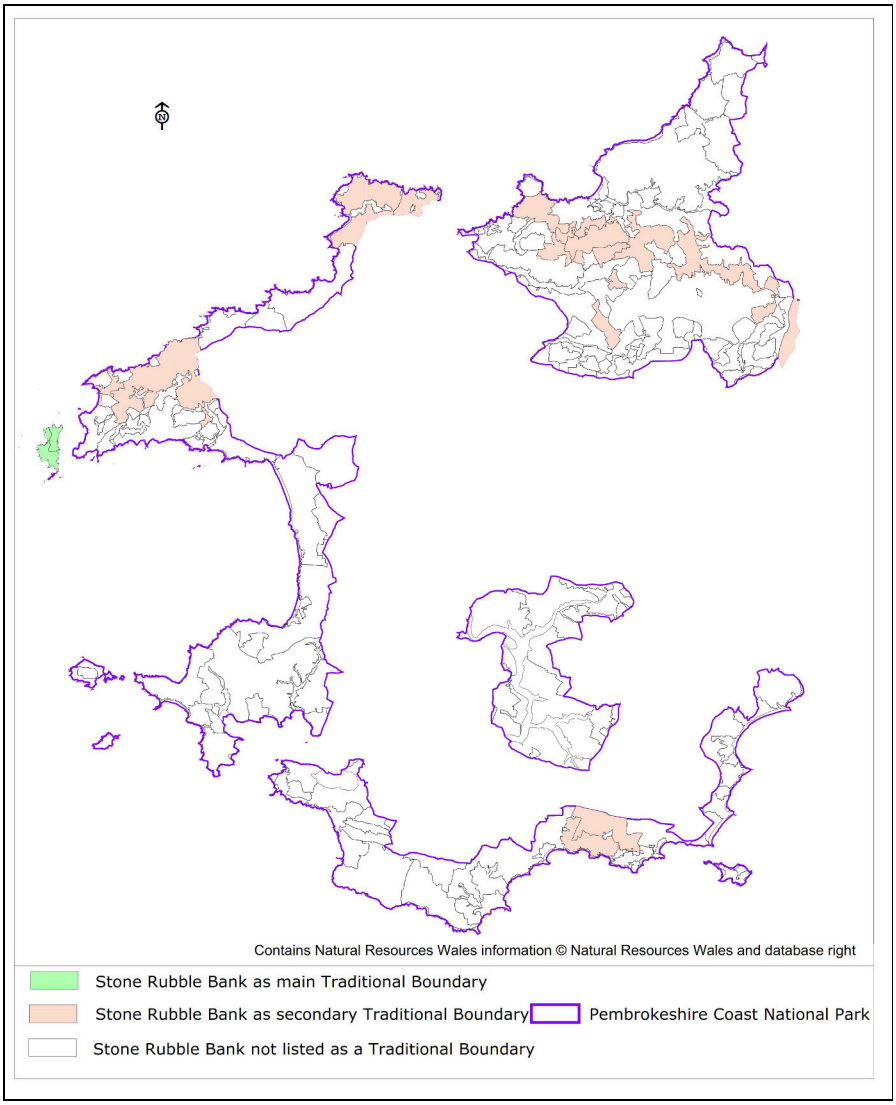

Figure 9: Distribution map showing where stone rubble banks are characteristic of the landscape, based on LANDMAP, field 12. Main Traditional Boundaries are listed first in LANDMAP and so the most common, Secondary Traditional Boundaries are listed in second place or more in LANDMAP and not so frequent.

4.11 **Dry Stone Walls** are constructed almost entirely of stone, usually with a stone face on both sides and some form of stone coping. They have a core of smaller stones, sometimes mixed with clay or earth. Dry stone walls are not usually accompanied by ditches as the stone is brought from quarries or picked up during land de-stoning (see Plates 1, 3 & 32).

4.11.1 Their distribution, as recorded by LANDMAP, is again concentrated on the stonier districts of the north and the limestone districts of the south.

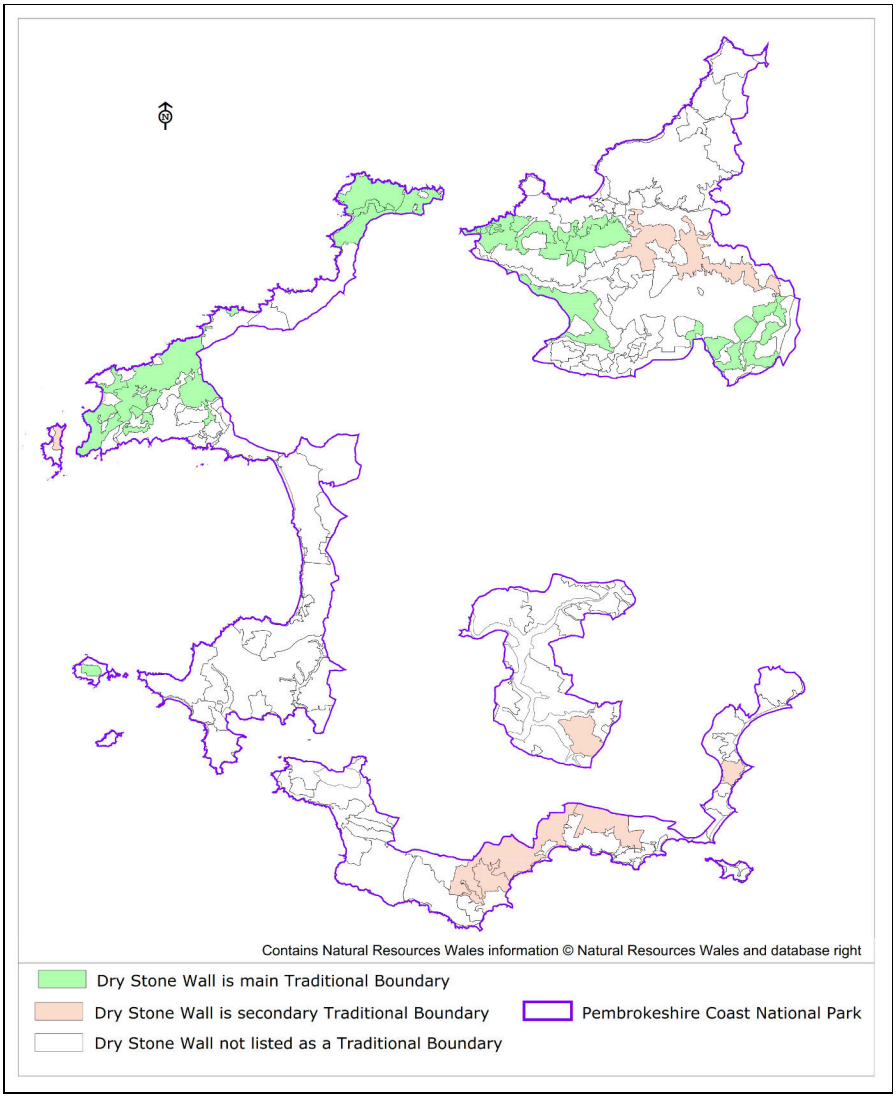

Figure 10: Distribution map showing where dry stone walls are characteristic of the landscape, based on LANDMAP, field 12. Main Traditional Boundaries are listed first in LANDMAP and so the most common, Secondary Traditional Boundaries are listed in second place or more in LANDMAP and not so frequent.

4.12 **Mortared Walls** are also almost entirely built of stone, but lime mortar is used to bond the stones. The mortar increases their stability and they can therefore sometimes be quite thin, single-skinned walls (see Plates 60, 61 & 62).

4.12.1 The LANDMAP distribution of Mortared Walls shows they are dominant or common in the south and also in the settlements of St. David's and Newport in the north. This reflects the availability of lime mortar in southern areas and the import of limestone for the production of lime and mortar in the north, both post-medieval phenomena.

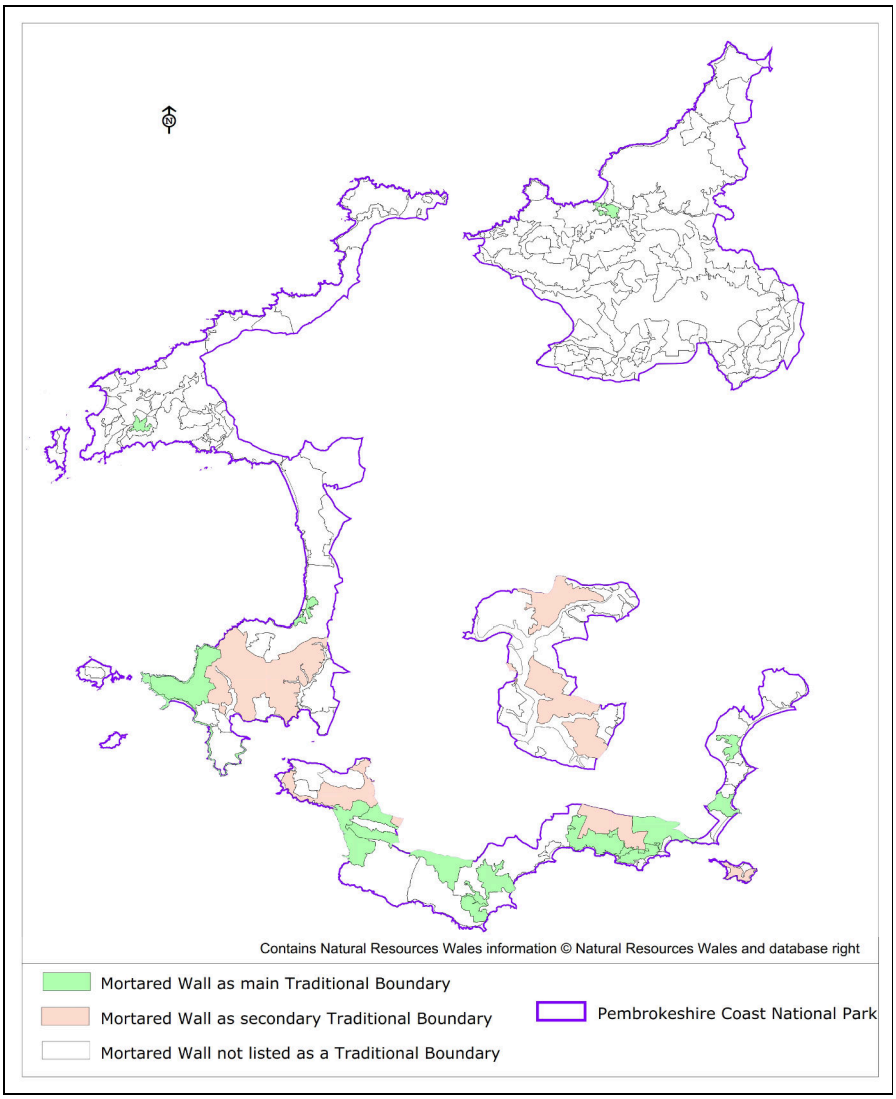

Figure 11: Distribution map showing where mortared walls are characteristic of the landscape, based on LANDMAP, field 12. Main Traditional Boundaries are listed first in LANDMAP and so the most common, Secondary Traditional Boundaries are listed in second place or more in LANDMAP and not so frequent.

5. An Overview of the Selected Aspect Areas

This section examines each of the six LANDMAP aspect areas selected for field visits in more detail. Where individual boundaries have been recorded, they are identified by unique numbers allocated by the regional Historic Environment Record, more details in Appendix A.

5.1 Llethr Overview

This survey area is identified as aspect area PMBRKHL42243 in LANDMAP's Historic Landscape layer. It forms the Llethr Character Area (261) within the Preseli Historic Landscape as defined by Cadw/CCW/ICOMOS. Llethr also falls within the large Mynydd Preseli Character Area (LCA 27) as defined by Pembrokeshire Coast National Park's Landscape Character Assessment.

5.1.1 Extent: 1.22 square kilometres

5.1.2 Land Use: The area has a small coniferous plantation. It is chiefly composed of pasture fields and there are several small holdings and cottages.

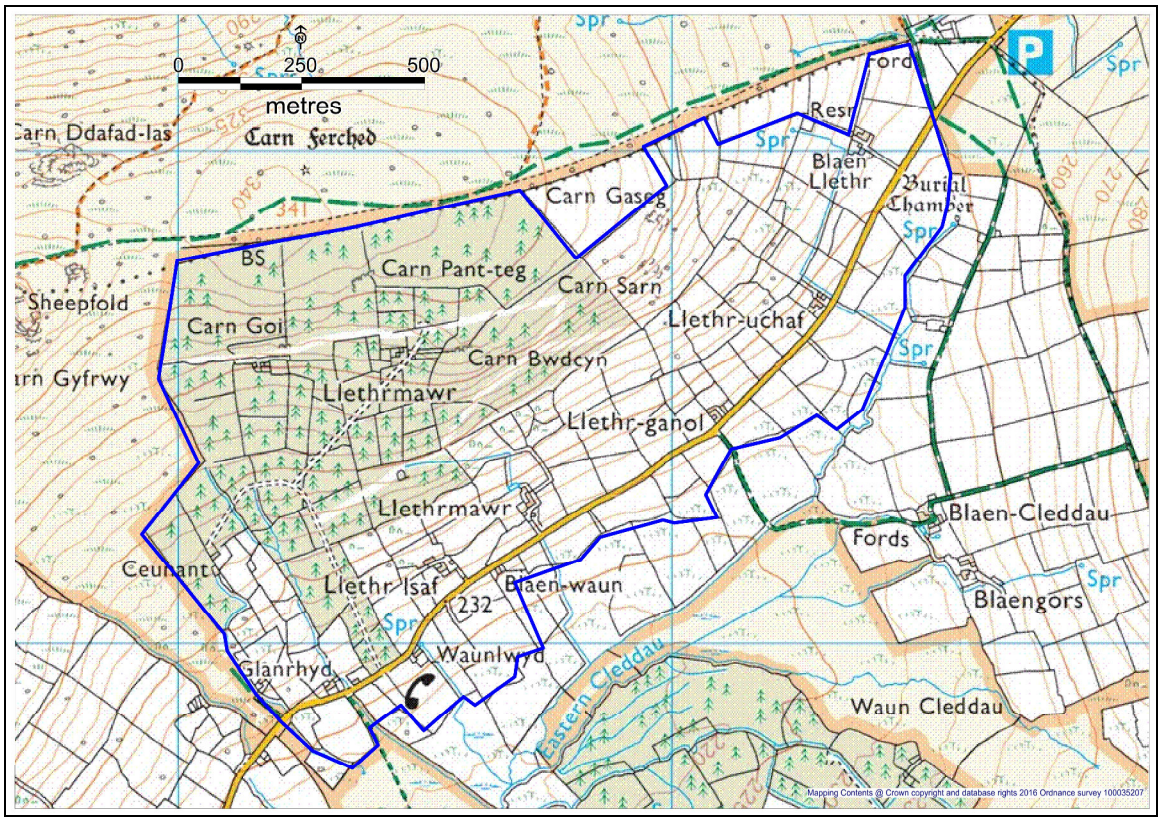

Figure 12: The Llethr aspect area (boundary shown in blue).

5.1.3 Geology & Soils: The northern part of the area is underlain by Llanvirn Rocks, mudstone, siltstone and sandstone laid down in shallow seas some 464 to 467 million years ago during the Ordovician Period. A narrow band of Ordovician volcanic tuffs, produced during volcanic eruptions, runs northeast to southwest through the centre of the area. To the south of the band are Arenig Rocks, also Ordovician, which were deposited in deep sea conditions between 467 and 479 million years ago. The surface is covered with glacial deposits, dating to the last 3 million years including sand, gravel and silts. The soils at Llethr are composed mainly of Freely Draining Acid Loamy Soils of low fertility. The soils have been improved by farming in recent centuries.

5.1.4 Historical Overview: The Llethr area is known to have been used for open upland grazing in medieval times and formed a part of the Nigra Grangia or Black Grange (Mynachlogddu) of the Tironian abbey of St. Dogmael's. The area was specifically used as the "hafod" lands by the inhabitants of the parish of Monington, near St. Dogmael's, until the 16th century. In more recent times the Llethr area has largely been enclosed from the Preseli commons and turned into productive farmland. The process of enclosure was probably underway during the 18th century. The 1810 Ordnance Survey Original Surveyors Drawings show the strip of land along the Crymych to Mynachlogddu road had been enclosed. The slopes to the northern were enclosed soon after and these fields are shown on the Mynachlogddu parish tithe map of 1846. The area was divided into small fields owned by a number of small farmsteads. In the later 20th century a coniferous forest plantation was created in the northwestern part of the area, overplanting many field boundaries.

5.1.5 Documented Boundary Characteristics: LANDMAP lists Dry Stone Walls and Stone Rubble Banks as the characteristic, traditional field boundary types within this area.

5.1.6 Boundaries Encountered During Field Survey: The field survey of Llethr identified a range of boundary types, including Cloddiau Variants, Dry Stone Walls, Rubble Banks and Earth Banks. This represents a wider range of boundary types than suggested by LANDMAP.

Plate 1. TBS2020_001: A Dry Stone Wall, HER PRN 114832, at the roadside with further Dry Stone Wall boundaries extending up the slope at Llethr. The use of stone reflects the ample supply of outcropping stone here on the south-facing Preseli slopes.

Plate 2. TBS2020_002: This damaged boundary bank, HER PRN 114833, is revealed to be a Cloddiau Variant when the earth which has built up against its side has been removed.

Plate 3. TBS2020_003: A section of Dry Stone Wall, HER PRN 114834, at the roadside.

Plate 4. TBS2020_004: A simple fence to the right, HER PRN 114835, with an earth bank running off to the left beyond, HER PRN 114836. Whether this bank ever had a hedge is not known but some gorse and a tree are present at its right-hand end. It could not be ascertained from remote visual inspection if the bank has a stone component. The boundary which continues that line to the right of the fence, HER PRN 114837, is a rubble bank with a blackthorn hedge planted in front of it.

Plate 5. TBS2020_005: A Hedgebank, HER PRN 114838, along the roadside. The blackthorn hedge is not maintained and a post and wire fence now secures the field.

Plate 6. TBS2020_006: A large Earth Bank with an external ditch, HER PRN 114839, defines the common boundary at the northeastern end of the Llethr area. Here it is clear where the material to build the bank was obtained, i.e. from the excavation of the ditch. The bank has stone within it but no structure to the stone was visible.

Plate 7. TBS2020_007: The same boundary line as in the previous image, but a separate node to node section further upslope to the west, HER PRN 114840. This section is a Cloddiau Variant. Field boundary banks can often change character more than once in a short distance and this may reflect the materials available close at hand when the bank was being constructed, although in this case it maybe because HER PRN 114839 was of a later construction as it is not shown on the 1810 OSD map, whereas HER PRN 114840 is. This boundary is just outside the Llethr LANDMAP HL Aspect Area but should be considered part of it.

Plate 8. TBS2020_008: The top of the section of boundary, HER PRN 114840, shown in the previous image. Like all Cloddiau Variants there is stone to either side with an earth core, topped with turf and usually a hedge. The hedge is absent here and it is not known if the gorse is a relic of a gorse hedge planted along the boundary when it was constructed.

Plate 9. TBS2020_009: An Earth Bank, HER PRN 114841, within the field system at Llethr. Apart from some possible relict gorse, there is no hedge. The mixture of earth and stone, and the odd boulder incorporated into the bank, presumably reflects the material available when the bank was constructed.

Plate 10. TBS2020_010: A simple Earth Bank, HER PRN 114842, within the field system at Llethr. The regularity of the ditch and bank suggest a machine may have been used to enhance the boundary. The presence of gorse may be as the result of recent invasion or a survival from original planting. The ditch seems to be from where turf, earth and stone were removed to create the bank.

5.1.7 Sources

Natural Resources Wales, LANDMAP Historic Landscape Aspect Area PMBRKHL42243 https://landmap-maps.naturalresources.wales/

Dyfed Archaeological Trust, Historic Landscape Characterisation, Preseli, http://www.dyfedarchaeology.org.uk/HLC/Preseli/area/area261.htm

British Geological Survey, http://mapapps.bgs.ac.uk/geologyofbritain/home.html

Cranfield Soil and Agrifood Institute http://www.landis.org.uk/soilscapes/

Google Earth Images 2003, 2005, 2006, 2009, 2010, 2013, 2017, 2018

Welsh Aerial Photographic Unit, 1969

Natural Resources Wales, Lle website, Lidar 2m survey.

Mynachlogddu Parish Tithe Map, 1846

Ordnance Survey, 1810, Original Surveyors Drawings, 1: 31680 Scale, Cardigan Sheet

Ordnance Survey, 1888, 1:10560 First Edition

Ordnance Survey, 1905, 1:10560 Second Edition

Ordnance Survey, 1948-1953, 1:10560 Fourth Edition

5.2 Moylegrove Overview

This survey area is identified as aspect area PMBRKHL46129 in LANDMAP's Historic Landscape layer. Moylegrove also falls within the Cemaes Head Character Area (LCA 25) as defined by Pembrokeshire Coast National Park's Landscape Character Assessment.

5.2.1 Extent: 2.26 square kilometres

5.2.2 Land Use: This is a highly rural area, which includes the small village of Moylegrove as well as the partly wooded Cwm Trewyddel valley. It is largely characterised by surrounding pasture fields, which are generally irregular in shape and has a number of scattered farms and cottages.

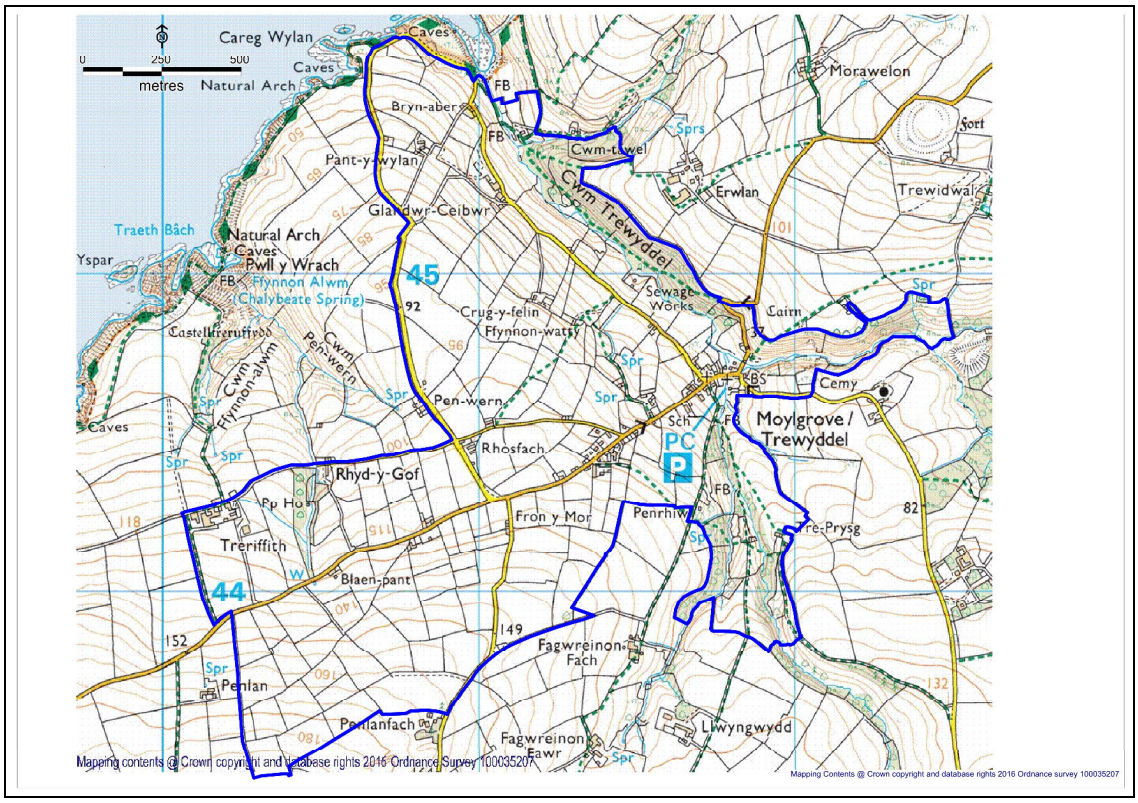

Figure 13: The Moylegrove Aspect Area (boundary shown in blue)

5.2.3 Geology & Soils: The underlying bedrock of this area includes mudstone, siltstone and sandstone of the Caradoc Rocks, which date to the Ordovician Period and were laid down in shallow seas between 451 and 461 million years ago. The bedrock is overlain by glacial clays and gravels laid down by ice and meltwater during periods of glaciation over the past 2 million years. The soils of the area are freely draining acid loamy soils over rock, which are of low fertility and best suited to grassland for grazing.

5.2.4 Historical Overview: Moylegrove has a medieval origin as a hamlet or estate said to originally be known as Matilda's Grove. The medieval parish church was rebuilt in the 19th century but still stand within its churchyard. The area has little recorded archaeology. The area is dominated by the post-medieval village of Moylegrove which is a cluster of cottages and modern homes, including two 19th century chapels and former school. The surrounding landscape is characterised by a post-medieval field system and scattered farms and cottages. The parish tithe map of 1841 shows that the fields here were once smaller and more irregular in shape. Field amalgamation during the second half of the 20th century has resulted in fewer, larger fields in parts of the area.

5.2.5 Documented Boundary Characteristics: LANDMAP lists Hedgebanks as the characteristic, traditional field boundary type within this aspect area.

5.2.6 Boundaries Encountered During Field Survey; The field survey demonstrated that LANDMAP is essentially correct and Hedgebanks are the dominant field boundary type outside the area of the village. In parts of the area, which is often exposed to coastal winds, there are no hedges on top of the banks however, therefore a significant number of Earth Banks also found here. Occasional examples of Cloddiau Variants were noted in banks at roadsides. Stone walling, Dry Stone and Mortared, was also noted either side of some field gateways.

Plate 11. TBS2020_011: A typical Hedgebank, HER PRN 114843, in the Moylegrove area. A low earth bank topped with gorse, reinforced with a post and wire fence.

Plate 12. TBS2020_012: A Hedgebank, HER PRN 114844, consisting of a low earth bank, with a thick blackthorn hedge along its entire length forming an impenetrable barrier.

Plate 13. TBS2020_013: Hedgebanks either side of the roadway. The banks are approximately 1 metre high. That to the left, HER PRN 114845, has a ditch alongside it. The hedge on the bank to the right, HER PRN 114846, has been deliberately planted on the inside of the bank, rather than along the top of the bank.

Plate 14. TBS2020_014: Another roadside Hedgebank, HER PRN 114847, this time over 1 metre high.

Plate 15. TBS2020_015: A damaged roadside boundary bank, no HER PRN, with exposed stonework revealing that it is a Cloddiau Variant, rather than a simple Hedgebank.

Plate 16. TBS2020_016: A Cloddiau Variant, HER NPRN 114848, where the stonework is still visible through the vegetation.

Plate 17. TBS2020_017: A roadside bank, HER PRN 114849, at Ceibwr. Stonework exposed at the base of the bank puts this example in the Cloddiau Variation category. There is no hedge on the bank and a post and wire fence makes the boundary secure.

5.2 Sources

Natural Resources Wales, LANDMAP Historic Landscape Aspect Area PMBRKHL46129 https://landmap-maps.naturalresources.wales/

PCNP, 2011, Landscape Character Assessment, Cemaes Head LCA 25 https://www.pembrokeshirecoast.wales/default.asp?PID=249

British Geological Survey, http://mapapps.bgs.ac.uk/geologyofbritain/home.html

Cranfield Soil and Agrifood Institute http://www.landis.org.uk/soilscapes/

Google Earth Images 2003, 2005, 2006, 2009, 2010, 2013, 2017, 2018

Natural Resources Wales, Lle website, Lidar 2m survey.

Moylegrove Parish Tithe Map, 1841

Ordnance Survey, 1810, Original Surveyors Drawings, 1:31680 Scale, Cardigan Sheet

Ordnance Survey, 1888, 1:10560 First Edition, Pembrokeshire II.SW

Ordnance Survey, 1907, 1:10560 Second Edition, Pembrokeshire II.SW

Ordnance Survey, 1953, 1:10560 Fourth Edition

5.3 Porthmawr Overview

This survey area is identified as aspect area PMBRKHL42268 in LANDMAP's Historic Landscape layer. It forms the Porthmawr Character Area (286) within the St. David's Historic Landscape as defined by Cadw/CCW/ICOMOS Porthmawr also falls within the Carn Llidi and St. David's Headland Character Areas (LCA 16 and LCA 18) as defined by Pembrokeshire Coast National Park's Landscape Character Assessment.

5.3.1 Extent: 1.14 square kilometres

5.3.2 Land Use: This area is chiefly characterized by irregular pasture fields. There are several small farmsteads within the area, which lies between the coastal strip at Whitesands Bay/Porth Mawr and the rocky crags of Carn Llidi and Carnedd Lleithr.

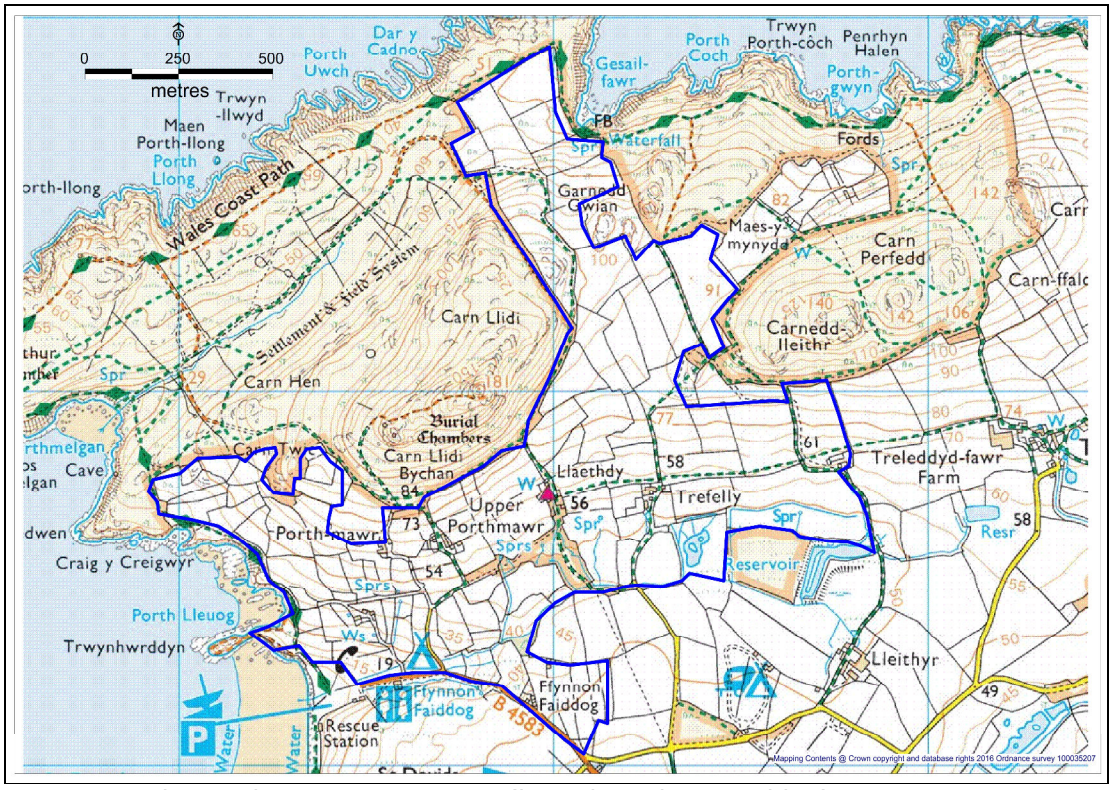

Figure 14: The Porthmawr Aspect Area (boundary shown in blue)

5.3.3 Geology & Soils: The southern part of the area is underlain by mudstones of the Penmaen Dewi Shale Formation, which were laid down in open sea conditions between 466 and 478 million years ago, during the Ordovician Period. The northern part of the area is composed of intrusive igneous rocks known as Carn Llidi Gabbro, which were formed between 449 and 466 million years ago during the Ordovician period. This hard igneous band rises up to the Carn Llidi crag just beyond the northern boundary of the area. The soils of the area are freely draining acid loamy soils over rock, which are of low fertility and best suited to grassland for grazing.

5.3.4 Historical Overview: The landscape of this area is dominated by a number of post-medieval farmsteads and their associated field systems. Some elements of the field system may have early origins, especially a series of lynchets on the slopes to the western side of the area, which could have prehistoric origins. An extensive prehistoric field system lies outside the area to the north on Penmaen Dewi but any relationship with the fields within the area is unproven. Early activity here is also recorded in the historical record and in a number of interesting traditions. The small farm of Ty Gwyn is in tradition the site where St. Patrick established a monastic college in the 5th century AD, where St. Non, mother of St. David was a nun. The site of St. Patrick's Chapel and cemetery lie just outside the area on the coastal strip above Whitesands Bay, now buried in the sand. An Early Medieval cist cemetery was reportedly found at Ty Gwyn in the mid-19th century and this gave rise to another tradition that the site was associated with Vallis Rosina, the monastic community first founded by St. David in the 6th century AD and the forerunner of his later community at St. David's itself.

5.3.5 Documented Boundary Characteristics:
LANDMAP lists Dry Stone Walls, Earth/Turf Banks, Stone Rubble Banks, Cloddiau Variants and Stone & Earth Banks as the characteristic, traditional field boundary types within this aspect area. The LANDMAP description of the area also notes that there are few hedges in this often exposed landscape. The presence of lynchets, forming boundary features within the area, is also mentioned.

5.3.6 Boundaries Encountered During Field Survey
A variety of boundary types were noted here during the field visit. LANDMAP is correct in its description of the area. Dry Stone Walls and Stone Rubble Banks are common, with some Cloddiau Variants in some sections of boundary. There are some Earth Banks also. Another boundary type encountered, which does not feature in the LANDMAP description is the Lynchet. Lynchets and simple steps

down in the land surface from one land parcel to the next, creating a form of terracing on slopes. They are the product of centuries of ploughing adjacent parcels of land and there is evidence that some at least may be of prehistoric origin. They are also often considered to be a product of medieval agrarian activity. Recent studies by the RCAHMW at the South Stream settlement on Skomer Island, which included excavation and luminescence dating, demonstrated that one lynchet had Bronze Age origins, but was also in use through the Iron Age and during Medieval times. The excavation demonstrated that there had been increased field clearance during the 12th century, leading to stone dumping on the lynchet (Driver, T. et al, 2017). Within the Porthmawr area examples of earth Lynchets are seen at Ty Gwyn Farm, where a Stone Wall or Rubble Bank has been added to the top of the earthwork feature. An example of a Revetted Lynchet was also noted, where the Lynchet is stone-faced. It is likely that the stone was added to already existing lynchets in relatively recent historic times. The presence of large stones in the landscape around Carn Llidi has also given rise to some Boulder Walls on the higher slopes, with many large stones presumably obtained during land clearance over many years, quite probably centuries.

Plate 18. TBS2020_018: A view of the fieldscape at Ty Gwyn, showing a succession of Rubble Banks, Lynchets and Dry Stone Walls up the slope.

Plate 19. TBS2020_019: The boundary, HER PRN 114850, across the centre of the image appears to be a Cloddiau Variant, with stone-facing and an earthwork core. Other boundaries here seem to be Earth Banks with stone placed against one side only. The fenced boundaries visible are shown on the 1841 tithe map, the others are not.

Plate 20. TBS2020_020: A Cloddiau Variant bank, HER PRN 114851, alongside the Coast Path.

Plate 21. TBS2020_021: A Revetted Lynchet, HER PRN 114852, with a slight earth bank above the stone-faced lynchet. The Lynchet may be of prehistoric origin but the stone-revetting and bank are likely to be more recent features.

Plate 22. TBS2020_022: Another view of the Revetted Lynchet, HER PRN 114852, showing the earth bank more clearly.

Plate 23. TBS2020_023: This boundary, HER PRN 114853, appears to have boulders at its base, stone-faced sides and an earth top and probable earth core. It is perhaps best described as a Cloddiau Variant.

Plate 24. TBS2020_024: The boundary, HER PRN 114854, in the foreground is a Stone Rubble Bank, strengthened as a boundary by a post and wire fence.

Plate 25. TBS2020_025: Another view of the same Stone Rubble Bank, HER PRN 114855. The chimneys of Ty Gwyn Farmhouse are visible in the background.

Plate 26. TBS2020_026: The same Stone Rubble Bank, HER PRN 114854, actually forms one side of a now disused trackway to Ty Gwyn, the other side being formed by a possibly Prehistoric Lynchet. This Lynchet has survived undisturbed with no bank or revetting added to it, as it has been incorporated into the Post-Medieval trackway. As it is an archaeological feature and not a traditional boundary it has not been given a HER PRN as part of this project.

Plate 27. TBS2020_027: A view of the Post-Medieval trackway to Ty Gwyn from the Coast Path, with stone rubble bank, HER PRN 114854, to the right of the photograph, the lynchet to the left.

Plate 28. TBS2020_028: Stone revetting appears to have been added to a landform here to create an effective Revetted Boundary, HER PRN 114855.

Plate 29. TBS2020_029: This section of boundary borders the Coast Path at SM7325027492, and displays elements of a Boulder Bank and a Cloddiau Variant, HER PRN 114856, demonstrating that a single boundary can change character within a short distance.

Plate 30. TBS2020_030: Another example of a Revetted Lynchet, HER PRN 114857, with the stone extending up to form a Stone Rubble Bank along the top of the lynchet.

Plate 31. TBS2020_031: A photograph of the same Revetted Lynchet, HER PRN 114857, showing the Stone Rubble Bank clearly.

Plate 32. TBS2020_032: A Dry Stone Wall below Carn Llidi, HER PRN 114858. This boundary is not shown on the parish tithe map, 1st edition Ordnance Survey map or early 20th century Ordnance Survey maps.

Plate 33. TBS2020_033: A view of the field system below Carn Llidi. A denuded bank in the foreground appears to be a Cloddiau Variant, HER PRN 114859.

Plate 34. TBS2020_034: This large boundary bank, HER PRN 114 860, alongside the road to Whitesands Bay is an Earth Bank with little stone included in its makeup.

5.3.7 Sources

Natural Resources Wales, LANDMAP Historic Landscape Aspect Area PMBRKHL42268 https://landmap-maps.naturalresources.wales/

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PCNP, 2011, Landscape Character Assessment, Carn Llidi LCA 16 https://www.pembrokeshirecoast.wales/default.asp?PID=249

PCNP, 2011, Landscape Character Assessment, St. David's Headland LCA 18 https://www.pembrokeshirecoast.wales/default.asp?PID=249

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Natural Resources Wales, Lle website, Lidar 2m survey.

St. David's Parish Tithe Map, 1841

Ordnance Survey, 1810, Original Surveyors Drawings, 1:31680 Scale, Haverfordwest Sheet

Ordnance Survey, 1888, 1:10560 First Edition Pembrokeshire XIV.SW & XIV.SE

Ordnance Survey, 1908, 1:10560 Second Edition Pembrokeshire XIV.SW & XIV.SE

Driver, T. et al, 2017, Skomer Island: The excavation and luminescence dating of a Bronze Age, Iron Age and Medieval field lynchet associated with the South Stream settlement

5.4 St. Ann's Head Overview

This survey area is identified as aspect area PMBRKHL43885 in LANDMAP's Historic Landscape layer. It forms the St. Ann's Character Area within the Milford Haven Historic Landscape as defined by Cadw/CCW/ICOMOS. St. Ann's Head also falls within the Marloes Character Area (LCA 9) as defined by Pembrokeshire Coast National Park's Landscape Character Assessment.

5.4.1 Extent: 5.39 square kilometres

5.4.2 Land Use: This aspect area extends over the interior of St. Ann's Head and is characterised by pasture fields, amongst which are set a small number of scattered farmsteads and cottages.

Figure 15: The St. Ann's Aspect Area (boundary shown in blue).

5.4.3 Geology & Soils: This area is underlain by rocks of the Milford Haven Group, laid down in river channels, floodplains and levees around 408 to 427 million years ago, at the end of the Silurian Period and beginning of the Devonian Period. The bedrock is overlain by glacial till deposited during the last Ice Age, over 10,000 years ago. The soils of the area are freely draining slightly acid loams, which are of low fertility but used for both arable and grassland pasture.

5.4.4 Historical Overview: There is a broad span of recorded archaeology within this area. The National Museum of Wales has recorded a number of findspots of prehistoric flint artefacts in the area or around the coastal edge of the peninsula, some of which date back to Mesolithic times, over 7,000 years ago when hunting groups would have exploited woodlands which grew here. Sea levels in the Mesolithic were much lower and what are now coastal cliffs would have been inland hills, some distance from the prehistoric coastline. There is also evidence of later prehistoric activity, with an Iron Age coastal promontory fort at Dale Point falling within the area. Excavations here showed that the fort was founded in the Late Bronze Age, around 800BC and activity continued through the Iron Age and into the Roman period. Other promontory forts lie just outside the western side of the area. These forts were in use some 2,500 years ago when the sea levels and coastline would have been closer to today's levels and Iron Age communities exploited the protection of the cliffs to locate their defended settlements. Much of the archaeological record is focused on the post-medieval settlements of the headland, such as the listed farmhouse at Broomhill, as well as a number of Second World War military features, including gun emplacements positioned to protect the nearby Milford Haven waterway and port.

5.4.5 Documented Boundary Characteristics: LANDMAP lists Hedgebanks and Earth/Turf Banks as the characteristic, traditional field boundary types within this aspect area.

5.4.6 Boundaries Encountered During Field Survey
Within this area the field survey found that the LANDMAP description was essentially correct. Hedgebanks and Earth/Turf Banks are the dominant boundary types. There are also some Cloddiau Variants present, although these seem to be limited to some sections of Hedgebanks which otherwise are stoneless. Mortared and Dry Stone walls were also noted, but used specifically around garden plots and also at field gate entrances. An example of a modern Stone Revetment was noted at the public car park near Kete.

Plate 35. TBS2020_035: A good example of an Earth Bank, HER PRN 114861, with a drainage ditch along its base.

Plate 36. TBS2020_036: An Earth Bank, HER PRN 114862, with a post and wire fence forming the modern boundary. The bank turns into a Hedgebank further along the road.

Plate 37. TBS2020_037: A modern Revetted Boundary at the Kete car park at SM8032404297.

Plate 38. TBS2020_038: The road at Kete passes between two Hedgebanks; HER PRN 114863, to the left (east) and HER PRN 114864, to the right (west).

Plate 39. TBS2020_ 039: This section of boundary bank, HER PRN 114865, south of Kete appeared to have some stone-facing hidden by vegetation and is a section of Cloddiau Variant.

Plate 40. TBS2020_ 040: A Cloddiau Variant, HER PRN 114866, apparently a stone-faced, earth bank, used in a garden boundary at Kete.

Plate 41. TBS2020_041: Mortared Stone pillars at a field gate at SM8041403807. Not an uncommon sight in this area.

Plate 42. TBS2020_042: Another section of boundary bank, HER PRN 114867, south of Kete which appeared to have some stone-facing and is a section of Cloddiau Variant.

Plate 43. TBS2020_043: The Earth Banks of the area can be between 2 and 3 metres wide at base and form considerable boundary features. Their hedges, where present are often cut short and it is the post and wire fencing which are now relied upon for stock-proofing. This example is HER PRN 114868.

Plate 44. TBS2020_044: An example of a double-fenced Hedgebank, HER PRN 114869.

5.4.7 Sources

Natural Resources Wales, LANDMAP Historic Landscape Aspect Area PMBRKHL43385 https://landmap-maps.naturalresources.wales/

Dyfed Archaeological Trust, Historic Landscape Characterisation, Milford, http://www.dyfedarchaeology.org.uk/HLC/milford/area/318.htm

PCNP, 2011, Landscape Character Assessment, Marloes LCA 9 https://www.pembrokeshirecoast.wales/default.asp?PID=249

British Geological Survey, http://mapapps.bgs.ac.uk/geologyofbritain/home.html

Cranfield Soil and Agrifood Institute http://www.landis.org.uk/soilscapes/

Google Earth Images 2003, 2005, 2006, 2009, 2010, 2013, 2017, 2018

Welsh Aerial Photographic Unit, 1969

Natural Resources Wales, Lle website, Lidar 2m survey.

Dale Parish Tithe Map, 1847

Ordnance Survey, 1810, Original Surveyors Drawings, 1:31680 Scale, Cardigan Sheet

Ordnance Survey, 1869, 1:10560 First Edition, Pembrokeshire XXXVIII

Ordnance Survey, 1907, 1:10560 Second Edition, Pembrokeshire XXXVIII

5.5 Manorbier Newton Strip Fields Overview
This survey area is identified as aspect area PMBRKHL46082 in LANDMAP's Historic Landscape layer. It forms the Manorbier Newton Strip Fields Character Area within the Manorbier Historic Landscape as defined by Cadw/CCW/ICOMOS. Manorbier Newton also falls within the large Manorbier/Freshwater East Character Area (LCA 4) as defined by Pembrokeshire Coast National Park's Landscape Character Assessment.

5.5.1 Extent: 6.23 square kilometres

5.5.2 Land Use: The extensive strip fields of the Manorbier, Manorbier Newton and Jameston area are thought to reflect a fossilised pattern of medieval arable ploughlands, which had developed on the fertile soils of the district. The characteristic long, narrow field parcels still dominate the landscape. Today pasture and feed crops dominate land use in the area, but increasing tourism also plays a role with some parcels now the siting for caravan or chalet-style tourism facilities. The villages of the area have also grown to occupy some parts of the former field system.

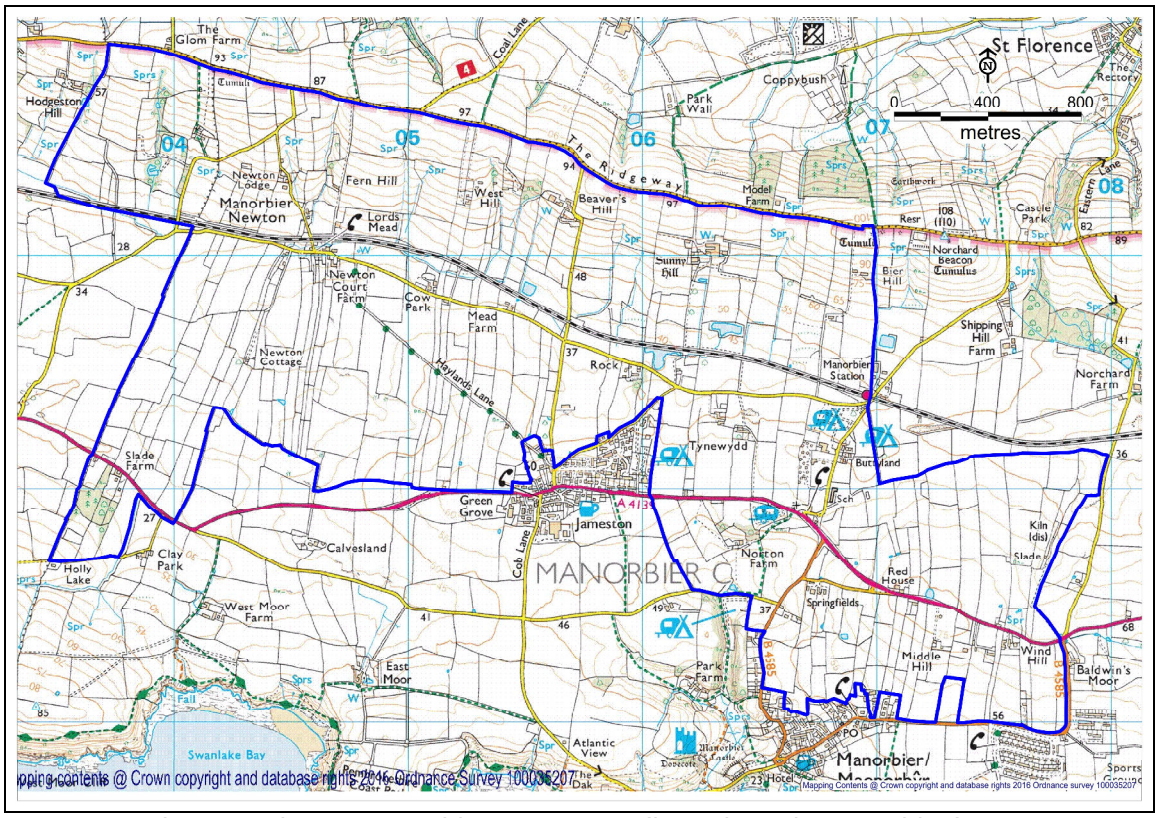

Figure 16: The Manorbier Strip Fields aspect area (boundary shown in blue).

5.5.3 Geology & Soils: The bedrock of this area is composed mainly of Dinantian limestones of Carboniferous age, laid down between 326 and 359 million years ago in warm, shallow seas. The soils of the area are freely draining, slightly acid, base-rich and fertile. They have been historically valuable for arable purposes but pasture grassland now dominates.

5.5.4 Historical Overview: This area has relatively little recorded archaeology earlier than the post-medieval period. A number of houses and cottages have been recorded, as well as some religious buildings and limestone quarries and lime kilns.

The history of the landscape is dominated by the distinctive strip field system of the area. The aspect area was defined for LANDMAP to incorporate this field system, which surrounds the neighbouring settlements of Manorbier, Jameston and Manorbier Newton. These strip fields are commonly said to have been influenced by the earlier form of medieval ploughlands within an open field system, which became fossilised in the post-medieval field system once the enclosure of land had taken place.

The long strips seen within this area appear to be very different, however, to the typical medieval strip fields in terms of length and extent. The Manorbier Newton example is known as a co-axial field system and it is one of several known in Pembrokeshire. It has also been put forward that some of these co-axial field systems, including Manorbier Newton, have in fact been created by the fossilisation of a prehistoric co-axial field system running southwards from the high ground of the Ridgeway, which runs east to west (Kissock, 1993).

Whether the strip fields are indeed prehistoric in origin, or medieval, remains a matter of debate and at present there is insufficient evidence to reach a conclusion. However, the hedges and banks which now define the field parcels within this field system are undoubtedly far more recent and largely of post-medieval date.

5.5.5 Documented Boundary Characteristics: LANDMAP lists Hedgebanks, Mortared Walls, Dry Stone Walls and Stone and Rubble Banks as the characteristic, traditional field boundary types within this area.

5.5.6 Boundaries Encountered During Field Survey

The boundary types identified in LANDMAP were all encountered within the Manorbier Newton aspect area; Hedgebanks, Mortared Walls, Dry Stone Walls and Stone and Rubble Banks. Mortared Walls were seen around farms and houses as well as alongside some lanes. In addition an example of a Revetted Boundary Wall was noted at a farm entrance. A tradition of building short sections of Mortared Wall at field gate entrances was also noted. Field boundaries are chiefly Hedgebanks, with the banks generally of earth and the hedges generally mature and lightly managed or unmanaged.

Plate 45. TBS2020_045: A Hedgebank near Jameston, HER PRN 114870. This single bank varied in character with some sections built of earth and others being stone-faced in the Cloddiau style. Individual boundary banks could clearly change character depending on the materials available to construct them.

Plate 46. TBS2020_046: A typical Hedgebank, HER PRN 114871, double fenced to keep grazing animals away from the boundary and hedge.

Plate 47. TBS2020_047: These are both modern boundaries created when this section of the A4139 was upgraded. To the left of the gateway is a hedgebank, to the right of the gateway the bank has a significant stone component at its base, and no hedge. The use of stone may be due to the proximity of a house and garden just off camera to the right, which is a trend also seen in order boundaries.

Plate 48. TBS2020_048: A view into one of the narrow strip fields between Jameston and Manorbier Newton. The boundary banks are low earth-built Hedgebanks and the one in the centre of the photograph is recorded as HER PRN 114872.

Plate 49. TBS2020_049: Animal erosion reveals an earth bank on this Hedgebank (not recorded)

Plate 50. TBS2020_50: A Hedgebank with a recently brashed hedge (HER PRN 114873). The bank has been cut through revealing an earth bank. Some stone on the bank has been cast there, probably during post-ploughing stone clearance.

Plate 51. TBS2020_051: The Hedgebank, HER PRN 114873, shown in the previous image continues southwards but loses its hedge and has a stone component.

Plate 52. TBS2020_052: Another example of an earth Hedgebank, HER PRN 114874, which has sections of stone facing, with possibly a patched repair around the water trough where animals have damaged the bank.

Plate 53. TBS2020_053: A good example of a strip field defined by a Hedgebank, HER PRN 114875, on which there is now a row of mature trees.

Plate 54. TBS2020_054: The northern end of the Hedgebank, HER PRN 114875, shown in the previous photo shows that it is of earth composition. It is now a low, broad bank, grassed on it sides.

Plate 55. TBS2020_055: A substantial Hedgebank, HER PRN 114876, near Jameston which now has mature trees growing along it.

Plate 56. TBS2020_056: Recent flooding of this Hedgebank at SS0564199412, near Jameston has caused erosion and revealed an earth bank. The trees were small saplings in 2011.Hedgebank not recorded.

Plate 57. TBS2020_057: Ditches run parallel to the road with a Hedgebank either side, just north of Jameston at SS0561299261. The ditches are probably secondary additions to manage water run-off from the road. These boundaries not recorded.

Plate 58. TBS2020_058: Mortared stone pillars at field gates such as these at SS0684398577, are not an uncommon sight in the Manorbier area. Local limestone has been used and presumably locally produced lime mortar.

Plate 59. TBS2020_059: A Revetted Boundary close to a farm at SS0675098600. Stone is most commonly used in boundaries in close proximity to houses and gardens. Not recorded.

Plate 60. TBS2020_060: A mortared stone wall, HER PRN 114877, again forming the boundary of a garden

Plate 61. TBS2020_061: Mortared Walls, often relatively thin, are most commonly found along lanes and tracks. They are often slightly damaged. Here, HER PRN 114878, local limestone and lime mortar have been used, in this wall along side Haylands Lane, Jameston.

Plate 62. TBS2020_062: Another damaged Mortared Wall, HER PRN 114879, alongside the Haylands Lane, Jameston

Sources:

Natural Resources Wales, LANDMAP Historic Landscape Aspect Area PMBRKHL46082 https://landmap-maps.naturalresources.wales/

Dyfed Archaeological Trust, Historic Landscape Characterisation, Manorbier
http://www.dyfedarchaeology.org.uk/HLC/manorbier/manorbierarea.htm

PCNP, 2011, Landscape Character Assessment, Manorbier/Freshwater East LCA 4
https://www.pembrokeshirecoast.wales/default.asp?PID=249

British Geological Survey,
http://mapapps.bgs.ac.uk/geologyofbritain/home.html

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Google Earth Images 2003, 2005, 2006, 2009, 2010, 2013, 2017, 2018

Welsh Aerial Photographic Unit, 1969

Natural Resources Wales, Lle website, Lidar 2m survey.

Manorbier Parish Tithe Map, 1842

Ordnance Survey, 1809, Original Surveyors Drawings, 1:31680 Scale, Tenby Sheet

Ordnance Survey 1:10560 First Edition

Ordnance Survey 1:10560 Second Edition

4.6 Greenways Overview
This survey area is identified as aspect area PMBRKHL46219 in LANDMAP's Historic Landscape layer. Greenways also falls within the Tenby and Saundersfoot Character Areas (LCA 1 & LCA 2) as defined by Pembrokeshire Coast National Park's Landscape Character Assessment.

4.6.1 Extent: 0.69 square kilometres

4.6.2 Land Use: The area is dominated by pasture fields, although there are also some parcels of deciduous woodland. Some fields have also been used for tourism, with one holiday caravan site found here. There is little settlement within the area otherwise. The Pembrokeshire Coast Path runs through the eastern side of the area.

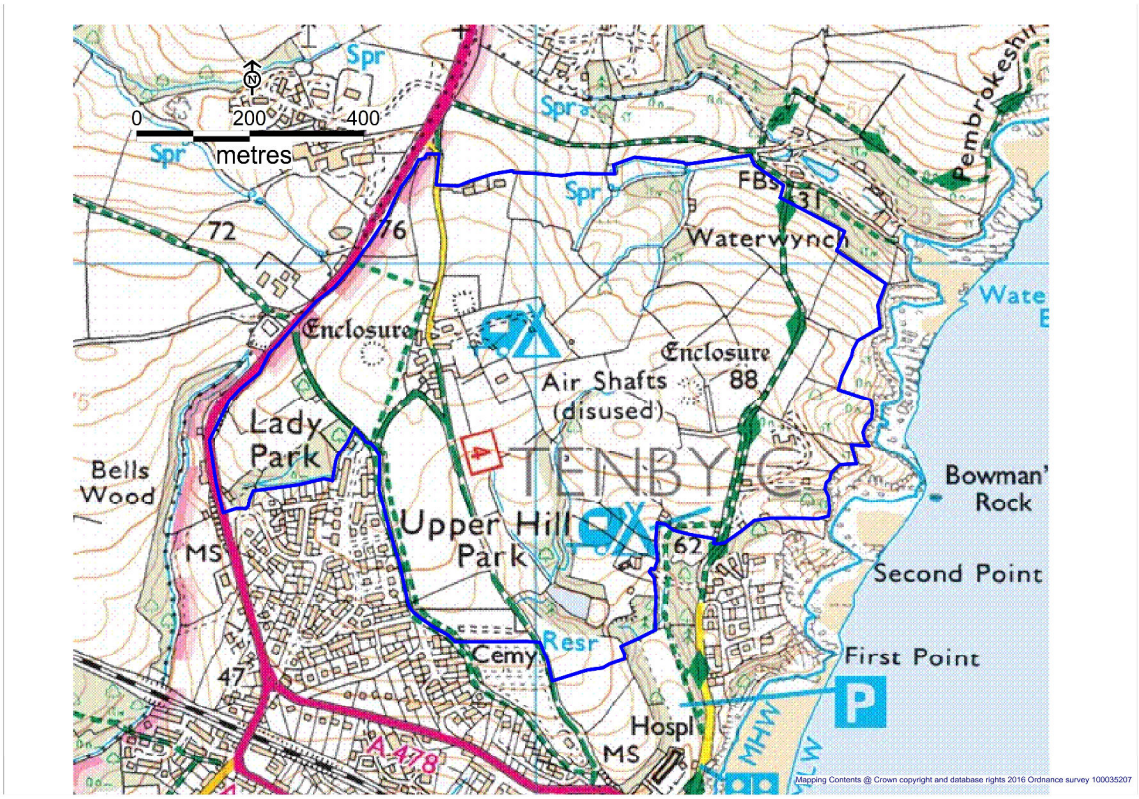

Figure 17: The location of the Greenways aspect area (blue border).

4.6.3 Geology & Soils: This aspect area is underlain by rocks of the Bishopston Mudstone Formation, consisting of mudstone, siltstone and sandstone laid down in coastal swamps and rivers some 319 to 329 million years ago during the Carboniferous Period. The soils of the area are freely draining, slightly acidic loams of low fertility which can be used for arable or pasture.

4.6.4 Historical Overview The most significant recorded archaeology within this small aspect area are the earthwork remains of two Defended Enclosures thought to be of Iron Age date. That at Meadow Park (DAT PRN 3674) is a low, horseshoe-shaped feature best seen on aerial photographs. The enclosure at Howell's Castle (DAT PRN 3673) is better preserved and was partially excavated in the 1950s, when some late-medieval pottery was found in the defensive ditch. The site is still thought most likely to be of Iron Age origin however. A Fever Hospital was also built in Meadow Park in the late 19th or early 20th century. No trace of it is now visible in the field.

4.6.5 Documented Boundary Characteristics: LANDMAP lists Hedgebanks as the characteristic, traditional field boundary types within this aspect area.

4.6.6 Boundaries Encountered During Field Survey
The field survey confirmed that LANDMAP is accurate and that Hedgebanks are the characteristic boundary type within the area. Most of these now have unmanaged hedges along their tops, often with mature trees and shrubs dominating the banks, which are now also strengthened with post and wire fencing. An example of a Lynchet was also noted near Waterwynch Lane. This lynchet had a mature, now unmanaged hedgerow along its top indicating that it was managed as a definite boundary in the past.

Plate 63. TBS2020_063: A typical Hedgebank, HER PRN 114880, in the Greenways aspect area. The bank is clothed in varied vegetation, even in early March, and the hedge is mature and unmanaged, with some relatively mature trees. The footpath here is part of the Pembrokeshire Coast Path. On the opposite side of the bank is a rock-cut lane.

Plate 64. TBS2020_064: An eroded boundary bank, HER PRN 114881, at Allen's View garden. It appears that this hedgebank has a stone component and may fit into the category described by Walter Davies in 1815 as a "naked sod bank" i.e. with alternate layers of stone and earth.

Plate 65. TBS2020_065: A section of footpath showing unmanaged Hedgebanks on Waterwynch Lane (not recorded)

Plate 66. TBS2020_066: This example of erosion caused by animal tracks suggests there is no or little stone component to most of the Hedgebanks in this aspect area. This is likely to reflect the fact that there is little outcropping stone, and the local geology is of an often thinly laminated soft mudstone, hence suitable stones are not common. (Along Waterwynch Lane, not recorded)

Plate 67. TBS2020_067: Another example of an unmanaged and overgrown Hedgebank, HER PRN 114882.

Plate 68. TBS2020_068: Some Hedgebanks are quite low features and relatively mature trees have been allowed to grow along their course. This one, HER PRN 114883, is probably mid 19th century in date as this section of Waterwynch Lane was reconfigured in the mid 19th century between the time of the tithe survey and the 1st edition Ordnance Survey map.

Plate 69. TBS2020:069: An example of a lynchet, HER PRN 114884, marking a step down from one field to the next. A post and wire fence in the upper field act as a barrier as the hedge has long fallen out of use.

Plate 70. TBS2020_ 070: The same lynchet, HER PRN 114884, showing how a hedge must originally have been planted along its upper edge, which has been allowed to grow unimpeded.

Plate 71. TBS2020_ 071: A view into Meadow Park, which is defined by Hedgebanks, consisting of mature hedgerows and some trees along relatively low earth banks. This is the common type of boundary bank in the area.

Plate 72. TBS2020_072: A view along a trackway which appears to be defined by high stony banks. Closer inspection shows that it is a hollow way, probably deliberately cut to some degree and the fields either side are at a level close to the top of the "banks" either side. The hedgebank to the left is HER PRN 114880, see also TBS2020_063.

Plate 73. TBS2020_073: A view of the soft mudstone bedrock exposed at the side of the trackway shown in the previous photograph, giving an indication of the depth to which the trackway has been sunk into the ground surface. Hedgebank HER PRN 114880 is on top of the rock-cut section.

Sources:

Natural Resources Wales, LANDMAP Historic Landscape Aspect Area PMBRKHL46219 https://landmap-maps.naturalresources.wales/

PCNP, 2011, Landscape Character Assessment, Saundersfoot LCA 1 https://www.pembrokeshirecoast.wales/default.asp?PID=249

PCNP, 2011, Landscape Character Assessment, Tenby LCA 2 https://www.pembrokeshirecoast.wales/default.asp?PID=249

British Geological Survey, http://mapapps.bgs.ac.uk/geologyofbritain/home.html

Cranfield Soil and Agrifood Institute http://www.landis.org.uk/soilscapes/

Google Earth Images 2003, 2005, 2006, 2009, 2010, 2013, 2017, 2018

Welsh Aerial Photographic Unit, 1969

Natural Resources Wales, Lle website, Lidar 2m survey.

St. Mary's (Tenby) Parish Tithe Map, 1841

Ordnance Survey, 1809, Original Surveyors Drawings, 1:31680 Scale, Tenby Sheet

Ordnance Survey, 1887, 1:10560 First Edition, Pembrokeshire XLI.NE

Ordnance Survey, 1906, 1:10560 Second Edition Pembrokeshire XLI.NE

6. The Condition of the Resource

6.1 Most of the field boundaries within the six study areas and the rest of the National Park area examined for this report are of post-medieval date, having been built within the past 400 years.

6.2 Those which originated in earlier periods are either recorded as archaeological features, such as some lynchets or prehistoric field systems, examples of which are known in areas such as Carnllidi, St David's and at Carnalw on the Preseli hills.

6.3 Other early field boundaries may have been incorporated into the functional post-medieval or modern field systems, with the line of early boundaries effectively becoming fossilised as later field boundaries have been created over them. The co-axial field systems seen in the Manorbier Newton area are potentially a good example of this process. The visible Earth Banks and Hedgebanks are of post-medieval date, but they may follow the line of earlier boundaries.

6.4 Relict boundaries should be managed as archaeological features and assessments of their condition is a separate management issue to that concerning the functioning field boundaries of the modern field system.

6.5 The vast majority of the existing field boundaries within modern field systems are demonstrably pre-20th century in origin. They can usually be identified on historic maps, such as parish tithe maps and 19th century Ordnance Survey maps. It is also likely that many of these boundaries have undergone continuous change and management over an extended period. Some will have gained or lost hedgerows, some will have been rebuilt, realigned, cut through and repaired, reduced in height or even demolished and reinstated. It is worth noting that many boundaries shown on historic maps no longer exist, as the process of field amalgamation has been underway for many decades as agricultural practices have changed.

6.6. The condition of any functioning field boundary may therefore vary along its length, depending on how it or the adjacent land has been managed. A single boundary may be denuded in some sections and well-preserved in others; it may be well-hedged in some sections but have no hedge in others. This is evident in some of the examples shown in photographs included in this report.

6.7 The evidence of the six study areas is that;

- functioning field boundaries today depend mainly on post and wire fencing, either with barbed wire strands or sheep-netting, to create a stock-proof barrier

- in general hedges are managed by machine cutting, there is no evidence that hedge laying (*plygu clawdd* in Pembrokeshire Welsh) has survived as a living tradition across the National Park area. No examples were noted during fieldwork for this project. Where hedge-laying has been used it is likely to reflect the requirements of a modern agri-environmental programme

- the maintenance of earthwork boundaries is haphazard, although stock damage can be easily repaired with modern earth-moving machinery

- the maintenance of Dry Stone Walls and Stone-Faced Banks is equally haphazard and damage is rarely repaired using the same techniques as those originally employed, unless as part of a funded programme or agri-environmental programme. No evidence of such work was noted in the six areas visited for this study.

6.8 We are, therefore, faced with a landscape which was divided into field parcels several centuries ago and that the field systems which were created have been diminishing in complexity and condition since the 19th century, especially in the face of the change of agricultural practices since the mid-20th century as larger field parcels have become favoured. These processes have impacted on the field patterns within the National Park, although practices within the Park may have mitigated against their impact in recent decades, particularly in terms of hedgerow or boundary removal.

6.9 In conclusion, the extensive post-medieval fieldscape of the Pembrokeshire Coast National Park is in a fair condition, but continually changing. Traditional techniques are not widely applied to the creation, maintenance or repair of historic field boundaries and stockproof fencing introduced to control and protect livestock now also helps protected many field boundaries from erosion by livestock and farm machinery and vehicles.

7. Maintaining Traditional Field Boundaries

7.1 The maintenance and repair of traditional field boundaries and hedges is an issue which has been addressed by a number of organisations and authorities across Britain in recent times. Useful sources include publications by the Dry Stone Walling Association (DSWA, 2013) and the National Trust (Williamson, 2002). The Pembrokeshire Coast National Park has also issued some guidance of its own (e.g. PCNP 2015 & 2019).

7.2 Amongst these is the current guidance issued by the Welsh Government to underpin the Glastir agri-environmental programme. The "Glastir Small Grants Capital Works Technical Guidance Booklet; Landscape and Pollinators 2019" (Welsh Government, 2019) is the latest version of the guidance.

7.2.1 This an important document for landscape managers across Wales and can form the basis of guidance for the Pembrokeshire Coast National Park Authority. The online report includes more detail than is presented here. This section seeks to give the key details of the Glastir guidance only.

7.2.2 It provides detailed and comprehensive guidance on the construction, repair and maintenance of Dry Stone Walls, Earth Banks and the type of stone-faced banks which are often called "Cloddiau" or "Cloddiau Variants" (which include the "Pembrokeshire Hedgebank").

7.2.3 Guidance is also provided by Glastir on the correct planting or repair of hedges, either as hedgerows or on top of boundary banks.

7.4 The management of four distinct categories of boundary type should be considered;

- Earthwork Boundaries
- Stone-faced Boundaries
- Stone Boundaries
- Hedgerows

7.5 Earthwork Boundaries

7.5.1 There are three types of Earthwork Boundary, which can be defined as boundaries which are predominantly of earth construction. Stone may be present in their make-up but does not define their character.

7.5.2 A simple **Earth Bank** may be accompanied by a ditch from which the bank material was originally excavated or for drainage purposes. They are not hedged, although may originally have been so. Usually, post and wire fencing makes these boundaries stock proof.

7.5.3 A **Hedge Bank** is an Earth Bank which is hedged, either along its top or its sides. A ditch may be present and hedges are often accompanied by post and wire fencing to make the boundary stock proof.

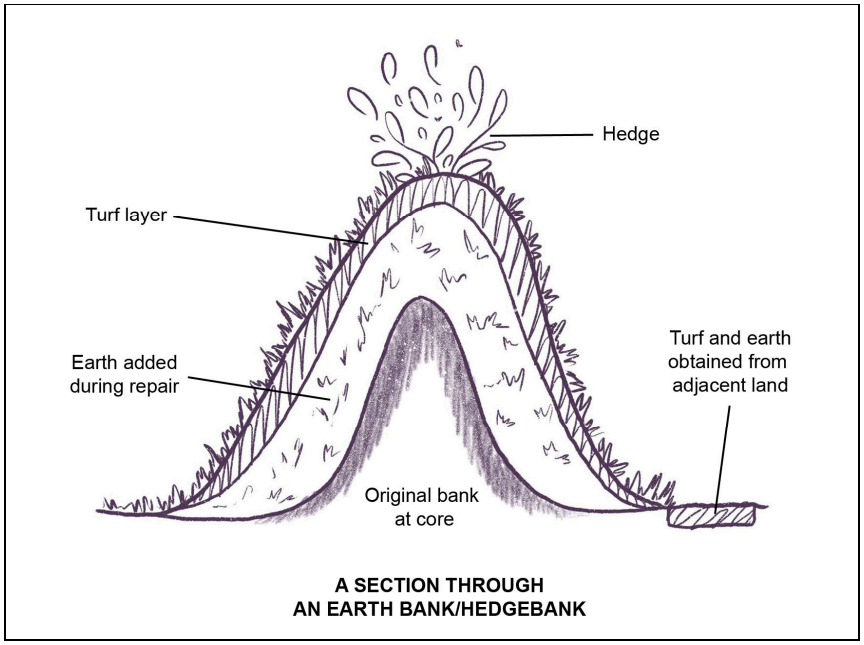

Figure 18: A section through a simple Earth Bank or Hedgebank showing restoration features. A hedge adds biodiversity value and increases the shelter value of the boundary for stock, as well as creating a better barrier between stock in adjacent fields. The turf covering helps keep the bank sides relatively steep, although with time erosion can spread the bank. Some Earth Banks can be relatively low and rounded however (see Plates 10 & 36) and were presumably created to carry a hedgerow. When repairing an Earth Bank or Hedgebank it is important to maintain the character of the original bank, in terms of height and profile, rather than follow a set design.

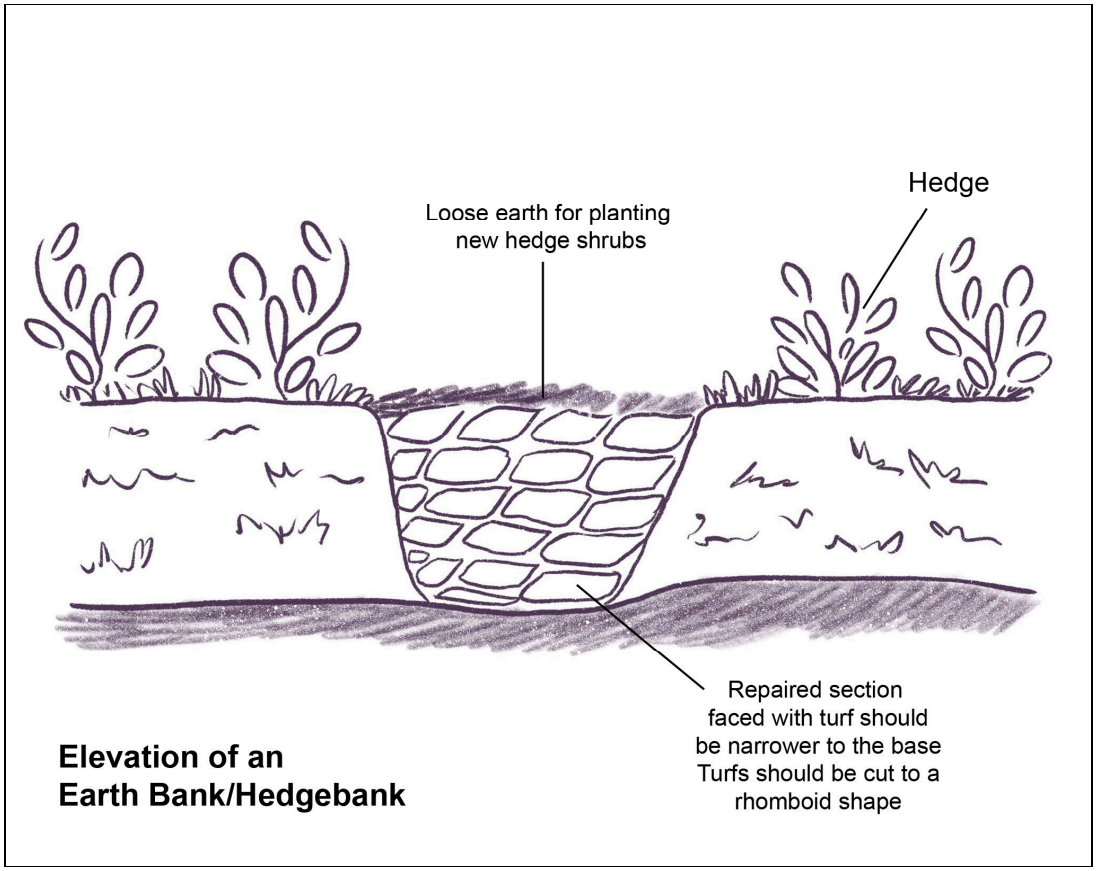

Figure 19: An elevation view of a repaired Earth Bank or Hedgebank showing restoration features. The turfs cut to repair the face of the bank should be rhomboid in shape as this will make them more stable than square or rectangular turfs.

7.5.4 **Lynchets** are another type of Earthwork Boundary but should be considered as relict features. Where they still act as field boundaries they must be accompanied by hedges or fencing to make them stock proof. Their preservation as historic landscape features is important as some may be of medieval or even prehistoric origin. Any fencing or hedging undertaken along a lynchet should avoid damaging the original earthwork. They should be managed as archaeological features, recorded and potentially investigated archaeologically in future. Any proposed work that causes ground disturbance should involve an archaeological watching brief.

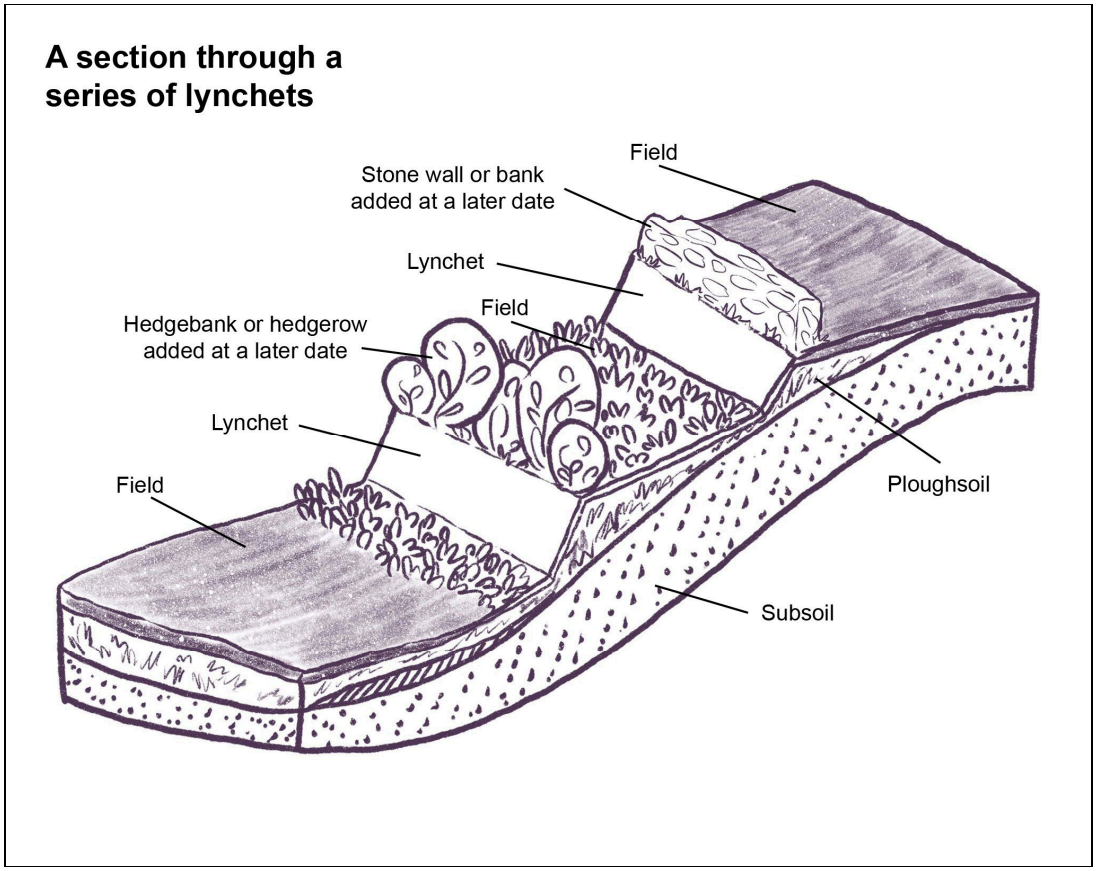

Figure 20: A section of a series of lynchets dividing field parcels. Whereas the lynchets may have been first created centuries or even millennia ago, banks, wall, stone revetments or hedges added to them are likely to be of relatively recent date i.e. post-medieval

7.5.5 The Glastir guidance recognises that Earth Banks, hedged or unhedged, are important landscape features in terms of landscape history and also for biodiversity and stock shelter. As earthworks they are seen to be susceptible to erosion by stock, wildlife or weathering.

7.5.6 The general principles of their restoration are outlined in the guidance;

- degraded sections should be restored to the height and line of the best preserved surviving sections. The profile of the existing bank should also be maintained
- grazing animals should be prevented from eroding restored banks
- trenches or pits from which soil has been taken to restore the banks should be filled with loose earth or discarded turfs

- when restoring section of Earth Banks all loose earth and vegetation should be removed to establish a firm foundation

- earth removed from the bank should be retained for reuse in the repair

- earth used in repair should be tamped down to create a firm new bank section

- small replacement turfs (less than 30cm square) are most suitable for use in repair work. These should be cut from the field at the foot of the bank and loose earth excavated with them used in the repair also

- loose soil should be added to the top of the bank to prepare for the addition of a hedge, above the level of the turf to allow for settlement

7.6 Stone-faced Boundaries

7.6.1 An important type of boundary are those which can be defined as being of earth and stone construction and are known in Wales as "**Cloddiau**" (Welsh for "banks"). These include a range of variations, some localised, known generally as "**Cloddiau Variants.**" Among these are the variant recognised as the **Pembrokeshire Hedgebank** within the region. They share many characteristics with the Cornish Hedges and Devon Banks of southwest England and their essential characteristic is an earth core with stone-facing on both external faces. They can be topped off with either turf or a hedge.

7.6.2 The Glastir guidance recognises that Stone-faced Banks, hedged or unhedged, are important features in terms of landscape history and also for biodiversity and stock shelter. Both their stone-facing and their earth cores are seen to be susceptible to erosion by stock, wildlife or weathering.

7.6.3 The general principles of their restoration are outlined in the guidance;

- to restore degraded stone faced banks to the height and line of the surviving sections of the existing feature

- prevent grazing animals from damaging restored banks

- remove surplus stone and earth from the site when work has finished and return the adjacent ground to its original vegetation

- use local stone where possible and reuse dislodged stones from the boundary feature itself

- do not take stone from other walls or ruined structures

- remove loose stones and earth to create a sound earth bank core. Replace the removed stones and earth in stages, giving time for the earth infill to settle before completion

- Where complete restoration is undertaken, all stone facings should be removed down to the foundations and then rebuilt on the original foundation. Foundations should consist of at least one row of the largest stones available, laid in a trench 15–20cm deep with small stones packed into gaps between the foundation stones

• The stone facing should be battered e.g. if the stone facing is 70–90 cm wide at the base it should be 30–40 cm wide at the top. There must be sufficient batter to ensure a stable wall. The batter can be straight, 'A'-shaped or a concave depending upon the local style.

• if surface water run off threatens the stability of the wall, a 40–60cm deep drain should be installed in the trench bottom before refilling with loose stone

• some banks are located close to busy roads or picnic sites and in such contexts some lime mortar can be used to help stability, especially on any coping stones. Mortar should not be used throughout the whole structure however and the external appearance of a dry stone wall should be maintained

• stone-faced earth banks should be regularly maintained to prevent deterioration

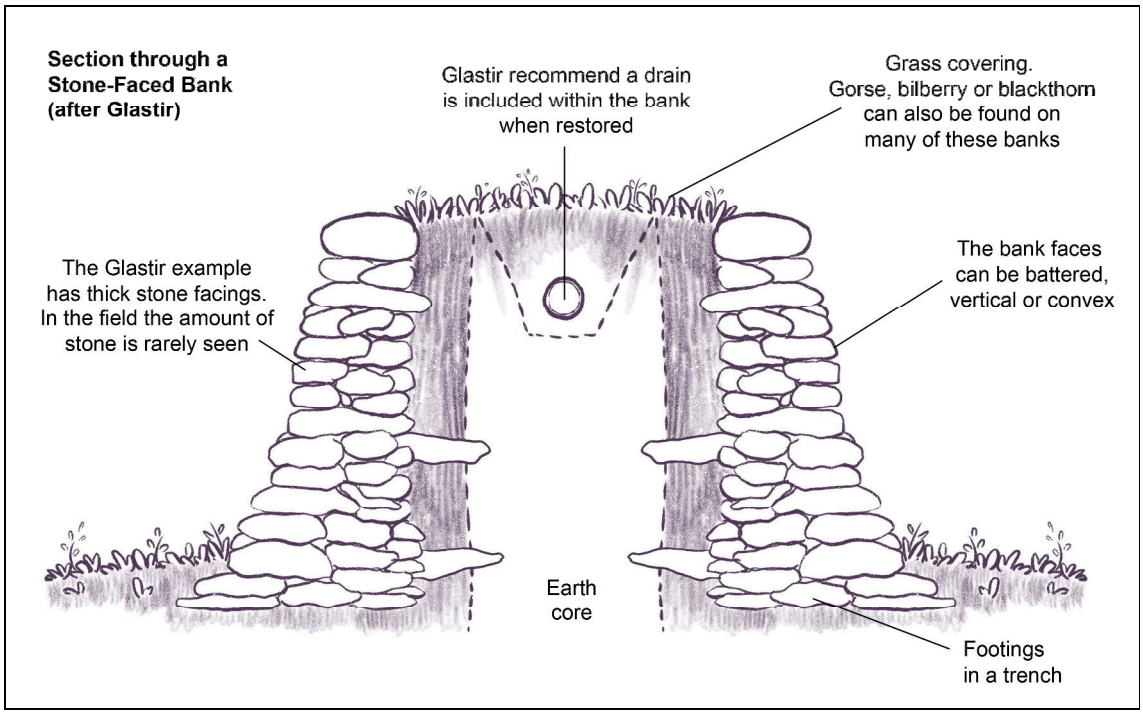

Figure 21: A section through a Stone-Faced Boundary showing restoration features, following the Glastir model.

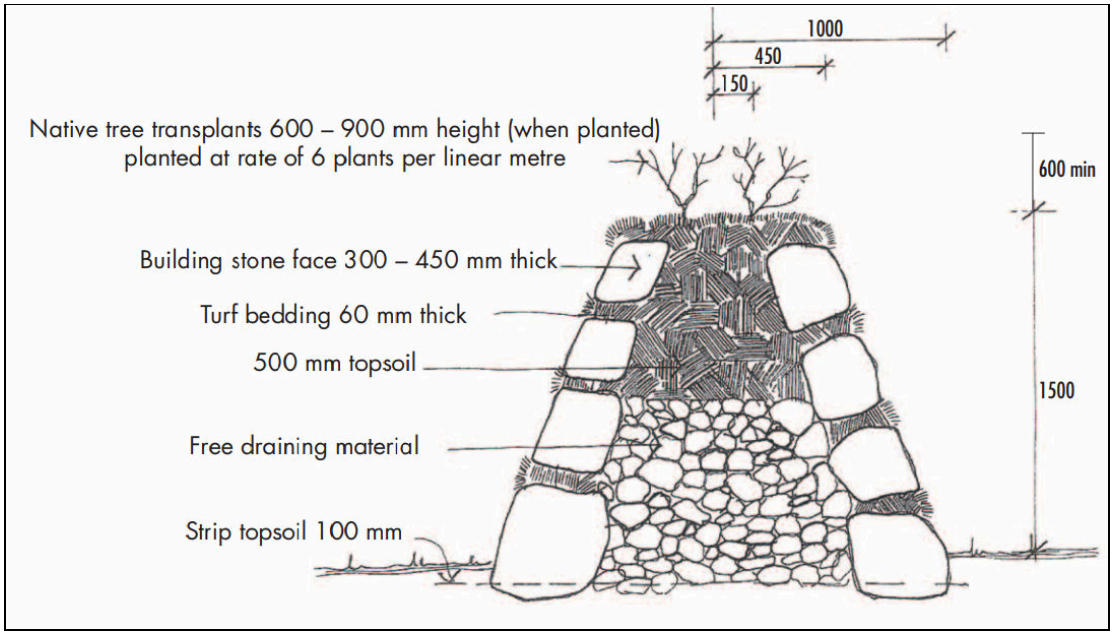

Figure 22: PCNP issued a leaflet in 2019 which includes this illustration showing the recommended structure for a Pembrokeshire Hedgebank. This is in many respects closer to the reality of stone-faced bank construction in the field. However, every boundary bank is unique and a reconstruction should respect and maintain the character of the original boundary bank as far as in practicable.

7.7 Stone Boundaries

7.7.1 There are four types of boundary which can be defined as being of stone construction;

- **Dry Stone Walls** are constructed almost entirely of stone, usually with a stone face on both sides and some form of stone coping. They have a core of smaller stones, sometimes mixed with clay or earth. Dry stone walls may not follow straight lines.

- **Mortared Walls** are also almost entirely built of stone, but lime mortar is used to bond the stones. The mortar increases their stability and they can therefore sometimes be quite thin, single-skinned walls.

- A **Stone Rubble Bank** is a mixture of earth, clay or stone. Their origins may vary and they may represent the decayed remains of former Stone-faced Banks, or former Earth Banks which have become denuded and had their earth component eroded away.

- A fourth type of stone boundary is the **Retaining Wall.** These are built against the face of a cut into a slope, sometimes a lynchet, or a bank and effectively prevent slumping as soil moves downslope.

7.7.2 The Glastir guidance recognises that Dry Stone Walls, and by extension other forms of stone boundary, are important features in terms of landscape history and also for biodiversity and stock shelter. They can be susceptible to erosion by stock, wildlife or weathering as well as stone theft and vehicle damage.

7.7.3 The general principles of the restoration of Dry Stone Walls are outlined in the guidance;

• ruinous or damaged Dry Stone Walls should be restored to the height and line of well-preserved sections of the wall

• the stone used to restore Dry Stone Walls should be chosen to match the stones in the original wall

• features built into the wall originally, such as stone stiles, sheep creeps or other traditional features should be retained

• once the wall has been restored, any surplus materials should be cleared from the site and the ground returned to its original vegetation

• local stone should be used where possible. Stone should not be taken from any ruined structures or other walls in the area

• footings should consist of two rows of the largest stones available, which should be laid in a trench 15cm to 30cm deep. Irregular stones should be packed in any gaps between stones in the footings. The footings should be wider than the base of the wall. Old footings should be checked and, if necessary replaced if they are would not give a secure foundation for the wall

• the wall should taper evenly on both sides to the top. For example, in the case of a 1.3m high wall, the base should be 70cm to 90cm wide, tapering to a width of 30cm to 40cm under the coping, depending on the size and type of stone used.

• two rows of heavy, large stones known as "through stones" should be placed at approximately 1 metre intervals to tie the sides together.

• walls should be built with two even faces which follow the batter. Glastir guidance further requires;
  - that the largest stones should be at the bottom, grading to the smallest at the top
  - that even courses are used if appropriate)
  - the longest axis of each stone should run into the wall and the stones should not slope into the wall
  - there should be no vertical breaks in the all so each gap between stones should be covered by a stone above the gap
  - No stones should protrude from the face of the wall, except 'through stones'
  - wedge stones should not be placed in the face of the wall

• gaps in the middle of the wall between face stones must be packed with smaller, irregular stones, not soil or other fine material which can be washed out by rainwater

• coping stones should be placed tightly together along the top of the wall to give weight and protection

• some walls are located close to busy roads or picnic sites and in such contexts some lime mortar can be used to help stability, especially on any coping stones and at the heart of

the wall, but the external appearance of a dry stone wall can be maintained.

• Wooden posts can be set into the wall to support a line of barbed wire along the length of the wall to prevent stock climbing the wall and causing damage.

7.7.4 A fourth type of stone boundary is the **Retaining Wall.** These are built against the face of a cut into a slope, sometimes a lynchet, or a bank and effectively prevent slumping as soil moves downslope. Retaining walls should be built with two faces, similar to a free standing wall. The inner face is built against the bank or cut and is hidden from view. It therefore needs to be vertical but does not have to have an even face. The outer face is visible and should be finished neatly, similar to a free-standing wall, and also be battered. Drainage through the wall may be required to prevent the build-up of ground water behind the retaining wall.

7.7.5 A simpler form of protecting the face of a cut into the slope or a bank is the use of a revetment**. Revetted Boundaries** are earthwork features which have been stone-faced with a single-sided wall of stone built against the earthwork. These are much simpler than Retaining Walls.

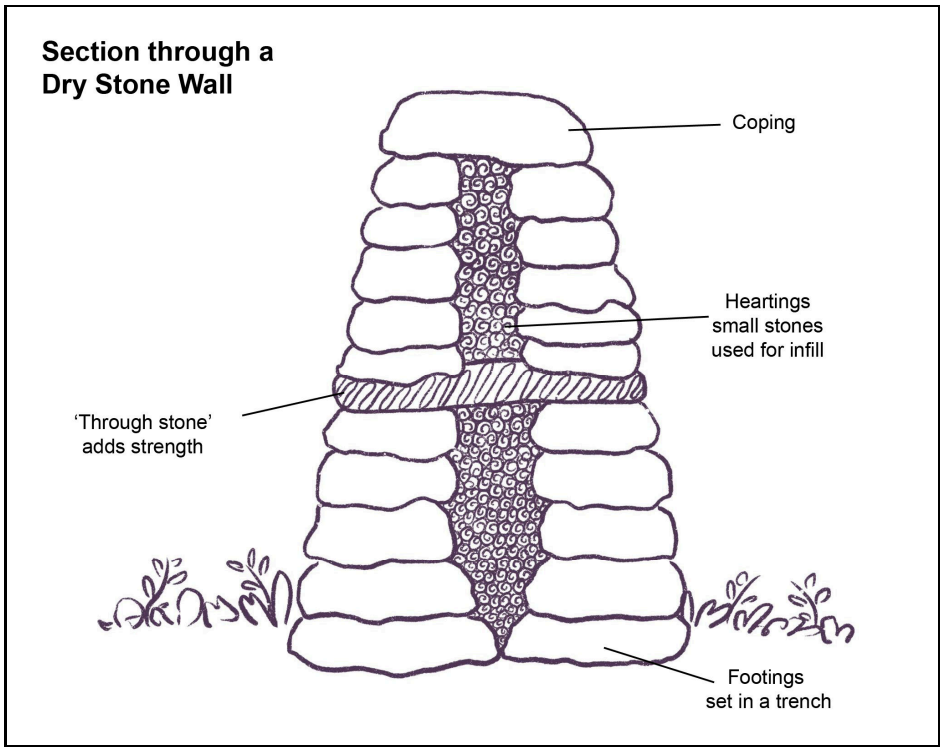

Figure 23: A section through a Dry Stone Wall. The restoration of any Dry Stone Wall should seek to replicate the character and style of the original wall as far as is practicable, adhering to good practice to ensure longevity, and not follow a set template.

7.8 Hedgerows

7.8.1 The Glastir guidance also extends to the planting of new hedgerows and the repair of existing hedgerows. It recognises that hedgerows are important cultural and landscape features.

7.8.2 It also recognises that they absorb carbon dioxide during growth, making a positive contribution to reducing climate change, as well as absorbing water and thereby reducing water draining off farmland and reducing the risk of flooding.

7.8.3 Hedgerows of at least 3m wide also create important biosecurity barriers and prevent contact between livestock on neighbouring holdings or within a holding, reducing the risk of disease transmission.

7.8.4 Glastir requires that:

- Ensure the best chances of survival, by planting new hedgerow plants in the winter months from November to March. Keep root balls damp during planting, and water liberally in dry spells until established

- native trees and shrubs are planted in a new hedgerow, using at least three hedging species, at least 90% of which should include blackthorn, hawthorn, crab apple, wild plum or wild cherry. Plants should be at least 45-60cm high or 3 to 4 years old

- new hedgerows should be planted at a density of 7 plants per metre in a staggered double row, with 20cm between each row

- hedgerow trees should be included at a density of 1 or 2 every 100 metres, using native tree species

- new hedges should be allowed to grow to a width of 3m

- keep livestock away from newly planted hedges with fencing at least 1m from the hedge plants

- control weed growth to protect new plants, using wood chip or black polythene sheeting

- trim new plants to encourage fresh growth

- replace dead plants

• obtain the correct permissions and follow the correct practices with regard to flood risk if planting near rivers, with regard to stiles and gates on a Public Right of Way and also if spraying to control weeds

7.8.5 The following are also to be avoided;

• the inclusion of ash trees in the hedge, to avoid ash dieback disease

• damaging existing historic hedge banks during ground preparation, planting or fencing.

• including trees and shrubs to support any fencing

7.8.6 The Glastir guidance also covers the management of existing hedges, including coppicing larger hedge shrubs and hedgerow trees;

• Coppice the hedge to within 7.5cm or less of ground level to allow to re-shoot.

• Retain all large, mature trees where undertaking hedgerow renovation work, particularly those with features such as holes, splits, cracks or dense ivy cover as these provide roosting sites for bats.

7.8.7 The guidance for "gapping up" to infill gaps in an existing hedgerow repeats that given for the planting of new hedgerows, but also includes advice to;

• remove all redundant fencing or wire

• clear all vegetation from gaps to allow for the healthy growth of newly planted hedging

7.8.8 Additional guidance on "gapping up" includes;

• undertaking restoration work on hedges between November and March to increase chances of successful planting and to benefit wildlife

• ensuring that and additional 1 metre is left between the base of the hedge and the fence to enlarge the area protected as a wildlife habitat

- plant more than 3 species of shrub in the hedgerow to increase the range food sources for wildlife

7.8.9 For hedge laying, the guidance recommends;

- that work is undertaken between November and March
- follow local traditional methods in possible
- partially cut through suitable stems at ground level, at an angle of approximately 30°
- keep the cut stems in place with stakes.
- lay the hedge upslope and in the same direction

7.8.10 Appendix 2 contains published guidance from Pembrokeshire Coast National Park on the planting of boundary hedges. This emphasises the need to use a varied selection of native species of hedging shrubs and trees to ensure a healthy hedgerow.

8. Criteria for eligibility

8.1 Archaeological features should not be included i.e. lynchets and relict boundaries.

8.2 Boundaries which have more than 50% severe damage caused by erosion by stock or machinery should not be included.

8.3 Boundaries which have already received funding from another source for repair or management should be excluded. Funding should be directed towards maintaining previously unmaintained boundaries.

8.4 Funding should not be provided where the work is a condition on a planning application.

8.5 Work on boundaries affecting Scheduled Monuments or Listed Buildings should not be eligible.

8.6 More weight should be given to boundaries which are within public view, from roads, footpaths, bridleways or open access land, to maintain or enhance landscape character.

8.7 More weight should be given to hedgebank restoration and management. This will provide beneficial outcomes for biodiversity and enhance the appearance of the historic landscape. The restoration and management of hedges on Cloddiau and Earth Banks should be encouraged, as should adherence to the published recommendations from PCNP on hedge planting.

8.8 Fencing, especially double fencing, has been demonstrated to protect the boundaries from grazing animals and farm machinery and vehicles and increase the biodiversity value of the hedgerow. Proposals to improve fencing to protect boundaries endangered by erosion should be considered eligible.

8.9 An essential criterion should be that the work should restore the original character of a boundary bank, as far as is reasonably possible, as demonstrated in the best surviving sections of the bank.

8.9.1 Any new boundaries should also reflect the character of existing boundaries within the immediate area.

9. Future Survey

9.1 There are undoubted opportunities to undertaken a wider scale survey of traditional field boundaries within the area of the Pembrokeshire Coast National Park. Such a survey could deepen the understanding of traditional boundaries; more accurately map their distribution and ensure better management and greater awareness of their value in the wider population and amongst landowners and land managers.

9.2 A future survey project could be undertaken by voluntary participants from local communities, including organisations such as the Young Farmers Clubs. It is suggested that;

9.2.1 A project co-ordinator familiar with the main types of traditional boundary would be appointed to lead the survey and co-ordinate participants.

9.2.2 A field survey would be undertaken rather than using remote survey techniques, which would not be appropriate for the study of field boundaries. It would be important that surveyors could see the boundaries close up to search for characteristics such as stone-facing or mortar, which would not be identifiable on aerial photographs or LiDAR images.

9.2.3 Participants would be supplied with training in the types of traditional boundaries and the methodology of field survey. The survey should be standardised by the use of bespoke information sheets to help participants identify boundary types and proforma record sheets to enable them to make simple records. These tools could be paper-based or provided via a bespoke app to create a digital record.

9.2.4 The framework of LANDMAP Historic Landscape aspect areas would be used as a basis for the survey and Natural Resources Wales could be invited to be involved as partners on the project. Material gathered by such a survey could help inform the LANDMAP record. This would give a purpose to the project and enrich a publicly accessible repository which would continue to inform land management into the future.

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10.3 Datasets and Online Resources

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11. Glossary

Babbaloobies: South Pembrokeshire for Water worn limestones used to decorate walls or houses. (W.M.M.); (E.L.) (Wright, J, 1905)

Champion Land; *A term used in the early modern period to denote land given over to cereals in open fields as distinct from wood pasture, fens, moors, etc. The term conjures up a picture of a certain kind of landscape with large fields, few hedges, and little timber. It also implies the settlement of people in villages rather than hamlets or scattered farms."* (Hey, D, 2009)

Co-axial Field System; these field systems are thought to have prehistoric origins. They are characterised by a series of long, parallel boundaries, with connecting boundaries running off them at right angles. They consist of long, sub-divided strips. Several examples are found within the National Park, most notable of these is the Manorbier Newton Strip Field system.

Parliamentary Field System; a field system characterised by regular, linear boundaries creating an orderly pattern of rectilinear fields. These were the product of the drive to enclose unenclosed land, particularly common land, with the permission of Parliament, during post-medieval times. The earliest examples date to the mid-17th century but in Pembrokeshire Parliamentary enclosures date to the 18th and 19th centuries.

Scheduled Monument; A Scheduled Monument is a monument or archaeological site of national importance that is recognized and protected by law through the Ancient Monuments and Archaeological Areas Act 1979.

Staggards, see also **quicksets;** – sizeable bushes dug up from copses, old hedges etc. for transplantation to new hedge, creating a ready-made boundary

Trowse; shrub or hedge cuttings, can be used to block gateways or add height to banks.

APPENDIX A:
PCNP ADVICE NOTE ON
HEDGEROW AND BOUNDARY PLANTING

Explanatory information regarding boundary planting

- The use of an increased variety of species as part of the hedge planting will ensure long term success that will not be as susceptible to pests and diseases as mono-species hedges.

- A native hedge will produce a native structure that is beneficial to nature as well as providing a substantial screen and boundary.

- The planting of deciduous native species will also allow more passive light through the structure in the winter than an evergreen structure.

- A standard native hedge should have 6 plants per metre in two staggered rows about 25cm apart (or 40-60cm apart in each row).

- Do not use plants that are too small as they can become swamped by weeds: 60-90cm tall is normally sufficient

- Smaller specimens can be considered in gardens where maintenance is carried out more often to prevent weeds and grasses competing with the planted specimens. However if the area is not under regular maintenance a taller specimen would be advised.

- In exposed situations staking with canes may be needed. If there is a risk of rabbit predation, use spiral guards or an equivalent method of protection.

- The best time for planting is :
  - Cell grown stock – September to May
  - Bare root stock - November to end of March - During this time you can buy bare rooted plants which are cheaper than pot / cell grown.

  Note: Damp, overcast weather is preferable for planting; avoid planting on sunny, windy days, periods of hard frosts and/or when snow is on the ground.

- A predominant native Pembrokeshire hedge species would be **Hawthorn** (50-60%) along with **Blackthorn, Hazel and Dogwood**. This will ensure the establishment of a native hedge with less vulnerability to pests and diseases which is an increased risk in mono-species hedges.

- **Blackthorn** is a key species in Pembrokeshire hedges however it is generally on Pembrokeshire hedge banks where the lateral root spread of the planted species can limit the invasive nature. Where **Blackthorn** is planted as a hedge and not on a bank it can encroach into open areas such as fields or gardens adjacent to the hedges in question. Where the adjacent land and hedge is regularly managed this may not be an issue but should still be taken under consideration where it is the proposed predominant species.

- The inclusion of species such as **Spindle** and **Guelder rose** can also be considered to increase diversity.

- If evergreen varieties are required, the use of native species such as **Holly** and **Wild privet** are suitable choices.

- The species listed below are trees or shrubs native to Pembrokeshire that are suitable for hedging.

Gorse**	*Ulex europaeus/gallii*	**Spindle**	*Euonymus europaeus*
Blackthorn	*Prunus spinosa*	**Wayfaring tree***	*Viburnum lantana*
Crab Apple*	*Malus sylvestris*	**Wild privet**	*Ligustrum vulgare*
Guelder rose	*Viburnum opulus*	**Elder**	*Sambucus nigra*
Hawthorn*	*Crataegus monogyna*	**Dogwood**	*Cornus sanguinea*
Hazel	*Corylus avellana*	**Dog Rose (climber)**	*Rosa canina*
Holly*	*Ilex aquifolium*		

* These species can also be grown into small trees within the hedge. Larger trees such as **Oak** can also be planted if required.
** Found in very exposed sites
*Note: Although **Ash** is a native species, it is presently advised that it is omitted from planting schemes. Refer to the **Plant Health (Wales) (Amendment) Order 2013**.*

- **Elder** can grow quicker than other hedgerow species and as such is recommended for inclusion once the hedge has begun to establish as it is beneficial to wildlife due to flower and berry production. If the aim of the hedge is a stock proof structure then **Elder** may not be suitable; due to its brittle nature producing a 'weak link'.

- Once established the inclusion of 'climber' species such as **Dog Rose**, **Honeysuckle** and **Climbing Rose** could be considered to increase diversity as well as adding additional lateral strength and cohesion to the hedgerow. It is advised that the hedge is given time to establish first to prevent climbers dominating young shrubs.

- Planning applications – Where a post development landscaping scheme is required or proposed; details of the hedge planting should be provided, including:
  - Species proposed within the hedge
  - Size – height of specimens when planted
  - Form - feathers, whips, and any standards to be included
  - Number of each species to be planted or percentage
  - Specific locations – which boundary etc
  - Spacing - double staggered etc
  - Local provenance - if known
  - Time of planting
  - Any other relevant information - bare-root, cell grown, containerized
- The simplest way to provide the necessary information is in the form of a table such as:

Name	Latin Name	No	%	Spacing	Size
Blackthorn	*Prunus spinosa*	12	20%	6 plants per metre - 2 staggered rows	60-90cm
Wild privet	*Ligustrum vulgare*	3	5%	6 plants per metre - 2 staggered rows	60-90cm
etc					

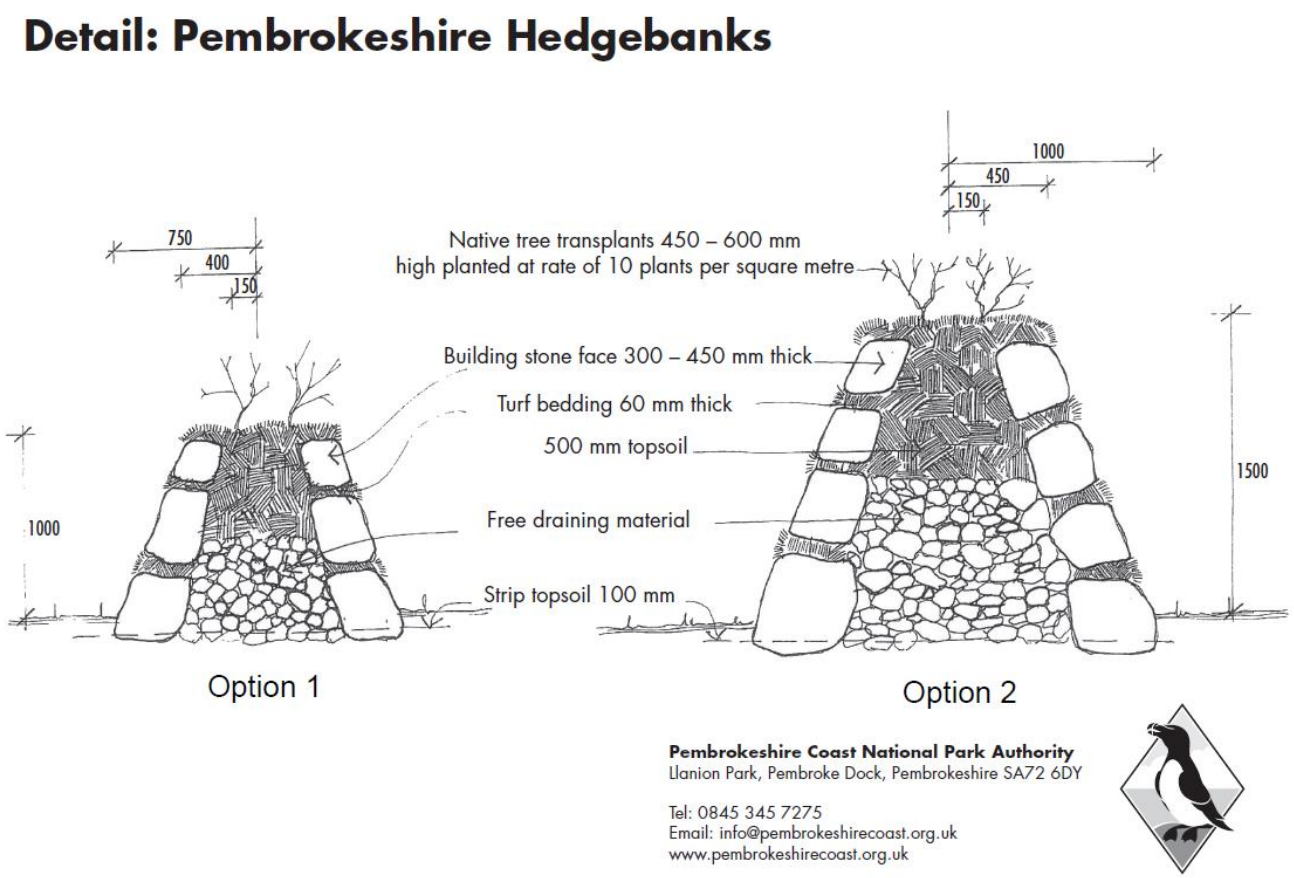
- Care should be taken to ensure where possible that native species (of local provenance) are used so as to prevent establishment or encroachment of non-native species into the surrounding area.

- It is also be necessary to ensure that any species selected are not listed in Schedule 9 of the Countryside and Wildlife Act 1981.

- A list of suitable species native to Pembrokeshire is available on request or via the link below.

- If Pembrokeshire Hedgebanks are proposed on site; details of the construction method including dimensions should also be provided in any planning application.

- Examples of typical Pembrokeshire hedgebank construction types are shown below.



Useful links:

- *Native trees and shrubs of Pembrokeshire: http://www.pembrokeshirecoast.org.uk/Files/files/7_%20Native%20trees%20and%20shrubs%20in%20Pembrokeshire%20list.pdf*

- *List of wild flowers and grasses suitable for Pembrokeshire:*

- *Pembrokeshire Hedgebank Construction details: http://www.pembrokeshirecoast.org.uk/Files/files/4_%20Pembrokeshire%20hedgebanks.pdf*

- *Guide to fruit tree rootstock selection: http://www.pembrokeshirecoast.org.uk/Files/files/11_%20Guide%20to%20rootstock%20selection.pdf*

APPENDIX B:
BOUNDARY GAZETTEER

A.1 Each boundary was recorded from Node to Node following slightly adapted guidance from the People's Trust for Endangered Species in their Hedgerow Survey Guidelines (PTES, accessed 22 March 2020)

A.2 Nodes are defined as:

- Where another boundary meets the boundary being recorded
- Where there is a gateway or a gap in the boundary of 5 metres or more
- Where boundary structure changes dramatically
- Where the boundary turns a corner of 90 degrees or more

A.3 The following tables give the details of the database fields used within the two tables, Site and Photographs.

Database: PCNP Boundaries.mdb
Table: Site

Database Field Name	**Description**
PRN	The PRN or Primary Record Number used to identify the site in the regional HER or Historic Environment Record
Trust	Who holds or manages the relevant HER or Historic Environment Record
Site name	The LANDMAP Historic Landscape Aspect Area name in which the boundary lies
HER Type	The site type used in the regional HER for this sort of traditional boundary. Thesaurus: https://heritagedata.org/live/schemes/10.html
PCNP Type	The type of traditional boundary as defined in this project for PCNPA
Period	The approximate dating of the current boundary. Thesaurus: https://heritagedata.org/live/schemes/11.html
Summary Welsh	A brief Welsh language summary or short□text description of the site for the Historic Environment Record
Summary English	A brief English language summary or short□text description of the site for the Historic Environment Record
Description	Main Boundary, Secondary Boundary, Length Node to Node, Side to Side, Nodes, Historic Mapping
Evidence	The type of evidence from which the record was created. Thesaurus used: https://heritagedata.org/live/schemes/19.html
Survival Condition	Overall snapshot of the current condition of the boundary. Thesaurus: https://heritagedata.org/live/schemes/13.html
Condition Rating	The rating of the condition. Thesaurus

	https://heritagedata.org/live/schemes/18.html
NGR	Ordnance Survey National Grid Reference
Node to Node NGR	The Ordnance Survey National Grid Reference of the node at either end of the recorded boundary
Easting	The six figure easting
Northing	The six figure northing
Land_Use	Whether the boundary is in use or disused
Vegetation	The type of vegetation visible on the boundary with the date surveyed
Record Compiled by	Name of person creating the record.
Record Compiled on	Date of compilation of the record.
Copyright	The copyright holder of the record
Site visit by	Name of person undertaking site visit
Date of site visit	Site visit date

Database: PCNP Boundaries.mdb
Table: Photographs

Database Field Name	**Description**
Image ID	Unique ID for each photograph, in the form TBS2020_XXX
PRN	The PRN or Primary Record Number used to identify the site in the regional HER or Historic Environment Record
LANDMAP HL Aspect Area	The LANDMAP Historic Landscape Aspect Area the boundary lies within
Date when Photo taken	Date the photograph was taken DD/MM/YYYY
Direction of View	Direction photograph was taken
Description	Description of what can be seen in the photograph
Name of Photographer	Name of photographer
Location of Original Photograph	Who holds the original photograph
Copyright or Access Conditions	Copyright of image
Record Compiled By	Who entered the record into the database
Record Compiled On	Date record was entered into database DD/MM/YYYY

HER PRN:	114841
AREA NAME:	LLETHR
HER TYPE:	BANK (EARTHWORK)
PCNP TYPE:	EARTH BANK
Central NGR:	SN1609133052
Node to Node NGRs:	SN1609833019;SN1608533075
Period:	Post Medieval
In use or Disused:	In Use
Condition Rating:	Fair
Survival Condition:	Near Intact
Description:	Main boundary: Earth bank Secondary boundary: Post and wire fence along the top of the bank. Length Node to Node: 58 metres Side to Side: Pasture field to the west, pasture field to the east Nodes: At southern end a field boundary at an acute angle and a boundary continuing the line, and at northern end two field boundaries at right angles, one of which is HER PRN 118480. Historic Mapping: Boundary line is probably not shown on 1810 OSD map but is definitely on the 1846 parish tithe map where it forms part of the western boundary of parcel 730.
Vegetation:	Surveyed Feb 2020: Turf- covered, grass, some gorse along top which may be remains of a gorse hedge.

HER PRN:	114864
AREA NAME:	ST ANN'S HEAD
HER TYPE:	BANK (EARTHWORK)
PCNP TYPE:	HEDGEBANK
Central NGR:	SM8036104205
Node to Node NGRs:	SM8034304275;SM8037004130
Period:	Post Medieval
In use or Disused:	In Use
Condition Rating:	Good
Survival Condition:	Near Intact
Description:	Main boundary: Hedgebank, verge Secondary boundary: None visible Length Node to Node: 148 metres Side to Side: Road to the east, pasture to the west. Nodes: At northern end boundary at right angles, at Kete car park and at southern end boundary at right angles. Historic Mapping: Boundary line is shown on the 1847 parish tithe.
Vegetation:	Surveyed March 2020: Gorse and thorn hedge, grass and other plants on sides of bank

HER PRN:	114863
AREA NAME:	ST ANN'S HEAD
HER TYPE:	BANK (EARTHWORK)
PCNP TYPE:	EARTH BANK
Central NGR:	SM8038204141
Node to Node NGRs:	SM8037804166;SM8038404120
Period:	Post Medieval
In use or Disused:	In Use
Condition Rating:	Good
Survival Condition:	Near Intact
Description:	Main boundary: Earth Bank, broad verge Secondary boundary: None visible Length Node to Node: 46 metres Side to Side: Road to the west, rough pasture to the east. Nodes: At northern end boundary at right angles and at southern end boundary at right angles. Historic Mapping: Boundary line is shown on the 1847 parish tithe.
Vegetation:	Surveyed March 2020: Grass, bramble, gorse, some thorn

HER PRN:	114862
AREA NAME:	ST ANN'S HEAD
HER TYPE:	BANK (EARTHWORK)
PCNP TYPE:	EARTH BANK
Central NGR:	SM8070804478
Node to Node NGRs:	SM8066304500;SM8076504458
Period:	Post Medieval
In use or Disused:	In Use
Condition Rating:	Good
Survival Condition:	Intact
Description:	Main boundary: Earth Bank, low gorse hedge at eastern end Secondary boundary: Post and wire fence on north side. Length Node to Node: 110 metres Side to Side: Road to the south, pasture to the north. Nodes: At western end boundary at right angles and at eastern end boundary at right angles. Historic Mapping: Boundary line is shown on the 1847 parish tithe.
Vegetation:	Surveyed March 2020: Grass and on south side, north side not seen. Occasional brambles. Eastern end gorse hedge

HER PRN:	114850
AREA NAME:	PORTHMAWR
HER TYPE:	BANK (EARTHWORK)
PCNP TYPE:	CLODDIAU VARIANT
Central NGR:	SM7340127328
Node to Node NGRs:	SM7339227327;7341027327
Period:	Post Medieval
In use or Disused:	Disused
Condition Rating:	Good
Survival Condition:	Intact
Description:	Main boundary: Cloddiau Variant Secondary boundary: None, boundary no longer in use Length Node to Node: 18 metres Side to Side: Pasture field to the north, pasture field to the south. Nodes: At western end, right angled change in direction, and at eastern end boundary joins at right angles Historic Mapping: Boundary line not shown on the 1841 parish tithe map but it is shown on the 1st edition Ordnance Survey ma of 1888
Vegetation:	Surveyed March 2020: Grass, some gorse

HER PRN:	114849
AREA NAME:	MOYLEGROVE
HER TYPE:	BANK (EARTHWORK)
PCNP TYPE:	CLODDIAU VARIANT
Central NGR:	SN1075545030
Node to Node NGRs:	SN1093945646;SN1098445617
Period:	Post Medieval
In use or Disused:	In Use
Condition Rating:	Fair
Survival Condition:	Damaged
Description:	Main boundary: Cloddiau Variant Secondary boundary: Post and wire fence on top Length Node to Node: 58 metres Side to Side: Road to the north, pasture field to the south. Nodes: At western end, change in hedging on top, and at eastern end change in vegetation. Historic Mapping: Boundary line is on the 1841 parish tithe map.
Vegetation:	Surveyed March 2020: Grass, and bracken

HER PRN:	114848
AREA NAME:	MOYLEGROVE
HER TYPE:	BANK (EARTHWORK)
PCNP TYPE:	CLODDIAU VARIANT
Central NGR:	SN1076845117
Node to Node NGRs:	SN1075545030;SN1080145157
Period:	Post Medieval
In use or Disused:	In Use
Condition Rating:	Good
Survival Condition:	Near Intact
Description:	Main boundary: Cloddiau, with thorn hedge planted on top Secondary boundary: None visible Length Node to Node: 140 metres Side to Side: Road to the northwest, pasture field to the southeast. Nodes: At northeast end, a trackway, and at southwest end a gateway. Historic Mapping: Boundary line is on the 1841 parish tithe map.
Vegetation:	Surveyed March 2020: Thorn Hedge along top, including ivy on the upper parts, grass on lower parts.

HER PRN:	114847
AREA NAME:	MOYLEGROVE
HER TYPE:	BANK (EARTHWORK)
PCNP TYPE:	HEDGEBANK
Central NGR:	SN1118544529
Node to Node NGRs:	SN1107844516;SN1136744517
Period:	Post Medieval
In use or Disused:	In Use
Condition Rating:	Good
Survival Condition:	Intact
Description:	Main boundary: Earth bank, with hedge planted on top Secondary boundary: None visible Length Node to Node: 227 metres Side to Side: Road to the north, pasture field to the south. Nodes: At western end a boundary joins at right angles, and at eastern end the boundary stops at a dwelling boundary. Historic Mapping: Boundary line is on the 1841 parish tithe map.
Vegetation:	Surveyed March 2020: Hedge along top, recently flailed contains some thorn. Northern side of bank is grass-covered but with other species present, including ivy on the upper parts, southern side not seen.

HER PRN:	114846
AREA NAME:	MOYLEGROVE
HER TYPE:	BANK (EARTHWORK)
PCNP TYPE:	HEDGEBANK
Central NGR:	SN1077545186
Node to Node NGRs:	SN1075945203;SN1079445166
Period:	Post Medieval
In use or Disused:	In Use
Condition Rating:	Good
Survival Condition:	Intact
Description:	Main boundary: Earth bank, with thorn hedge planted part-way down its northeastern side Secondary boundary: None visible Length Node to Node: 51 metres Side to Side: Road to the southwest, pasture field to the northeast. Nodes: At northwestern end a trackway and another boundary joins at right angles, and at southeastern end the boundary stops at a gateway. Historic Mapping: Boundary line is on the 1841 parish tithe map.
Vegetation:	Surveyed March 2020: Dense thorn hedge along top, contains some gorse. Southwest side is grass-covered, northeast side not seen.

HER PRN:	114845
AREA NAME:	MOYLEGROVE
HER TYPE:	BANK (EARTHWORK)
PCNP TYPE:	HEDGEBANK
Central NGR:	SN1072945217
Node to Node NGRs:	SN1068345265;1078445157
Period:	Post Medieval
In use or Disused:	In Use
Condition Rating:	Good
Survival Condition:	Intact
Description:	Main boundary: Earth bank, topped with thorn hedge, Ditch along northeast side Secondary boundary: None visible Length Node to Node: 148 metres Side to Side: Road to the northeast, pasture field to the southeast. Nodes: At northwestern end a gateway and another boundary joins at right angles, and at southeastern end the boundary turns at right angles to the southwest. Historic Mapping: Boundary line is on the 1841 parish tithe map.
Vegetation:	Surveyed March 2020: Dense hedge along top, contains gorse and thorn, also brambles. Northeast side is grass-covered, southwest side not seen.

HER PRN:	114844
AREA NAME:	MOYLEGROVE
HER TYPE:	BANK (EARTHWORK)
PCNP TYPE:	HEDGEBANK
Central NGR:	SN1115844575
Node to Node NGRs:	SN1112244540;SN1118744603
Period:	Post Medieval
In use or Disused:	In Use
Condition Rating:	Good
Survival Condition:	Near Intact
Description:	Main boundary: Earth bank, topped with thick thorn hedge Secondary boundary: None visible Length Node to Node: 91 metres Side to Side: Pasture field to the northwest, pasture field to the southeast. Nodes: At southwestern end a turn to the west, and at northeastern end a boundary joins at right angles to the southeast. Historic Mapping: Boundary line is on the 1841 parish tithe map.
Vegetation:	Surveyed March 2020: Dense thorn hedge along top, recently flailed

HER PRN:	114882
AREA NAME:	GREENWAYS
HER TYPE:	BANK (EARTHWORK)
PCNP TYPE:	HEDGEBANK
Central NGR:	SN1350601962
Node to Node NGRs:	SN1348301903;SN1353802024
Period:	19th century
In use or Disused:	In Use
Condition Rating:	Good
Survival Condition:	Damaged
Description:	Main boundary: Hedgebank, no longer maintained Secondary boundary: None Length Node to Node: 133 metres Side to Side: Scrub to the west-northwest, Scrub to the east-southeast, Nodes: At northern end, boundary joins at right angles, at the southern end, boundaries at right angles Historic Mapping: Boundary line may be partially shown (Northern part) on the 1841 parish tithe map but is definitely present on the 1st edition Ordnance Survey map of 1887.
Vegetation:	Surveyed March 2020: Trees, ivy, brambles, ferns, some other plants

HER PRN:	114842
AREA NAME:	LLETHR
HER TYPE:	BANK (EARTHWORK)
PCNP TYPE:	EARTH BANK
Central NGR:	SN1601432991
Node to Node NGRs:	SN1602132941;SN1600733035
Period:	Post Medieval
In use or Disused:	Disused
Condition Rating:	Fair
Survival Condition:	Damaged
Description:	Main boundary: Earth bank, Shallow flat-based ditch on western side. Secondary boundary: None Length Node to Node: 58 metres Side to Side: Pasture field to the west, pasture field to the east Nodes: At southern end two field boundary at right angles, and at northern end a gap/gateway. Historic Mapping: Boundary line is not shown on 1810 OSD map or on the 1846 parish tithe map but is shown on the 1st edition Ordnance Survey map.
Vegetation:	Surveyed Feb 2020: Turf- covered, grass, some gorse along top

HER PRN:	114867
AREA NAME:	ST ANN'S HEAD
HER TYPE:	BANK (EARTHWORK)
PCNP TYPE:	CLODDIAU VARIANT
Central NGR:	SM8045003695
Node to Node NGRs:	SM8042703807;SM8047503575
Period:	Post Medieval
In use or Disused:	In Use
Condition Rating:	Good
Survival Condition:	Intact
Description:	Main boundary: Cloddiau Variant standing up to 1.5 metres high on west side Secondary boundary: None visible Length Node to Node: 236 metres Side to Side: Road to the west, pasture to the east. Nodes: At northern end boundary at right angles and at southern end boundary at right angles. Historic Mapping: Boundary line is shown on the 1847 parish tithe.
Vegetation:	Surveyed March 2020: Grass and brambles

HER PRN:	114840
AREA NAME:	LLETHR
HER TYPE:	BANK (EARTHWORK)
PCNP TYPE:	CLODDIAU VARIANT
Central NGR:	SN1616333111
Node to Node NGRs:	SN1608533075;SN1627933159
Period:	Post Medieval
In use or Disused:	In Use
Condition Rating:	Good
Survival Condition:	Near Intact
Description:	Main boundary: Cloddiau Variant. Secondary boundary: Post and wire fence along the top of the bank. Post and Wire fence along the base on southern side Length Node to Node: 212 metres Side to Side: Pasture field to the south-southeast, open common to the north-northwest Nodes: At western end a field boundary at an obtuse angle and a boundary continuing the line, and at eastern end a field boundary at an obtuse angle and a boundary continuing the line Historic Mapping: Boundary line is probably shown on 1810 OSD map and is definitely on the 1846 parish tithe map.
Vegetation:	Surveyed Feb 2020: Turf- covered, moss, grass, some gorse along top which may be remains of a gorse hedge.

HER PRN:	114839
AREA NAME:	LLETHR
HER TYPE:	BANK AND DITCH
PCNP TYPE:	EARTH BANK;DITCH
Central NGR:	SN1643833212
Node to Node NGRs:	SN1639933201;
Period:	Post Medieval
In use or Disused:	In Use
Condition Rating:	Good
Survival Condition:	Near Intact
Description:	Main boundary: Bank to the south-southeast, ditch to the north-northwest. Secondary boundary: Post and wire fence along the top of the bank. In places there is a double fence. Length Node to Node: 90 metres Side to Side: Pasture field to the south-southeast, open common to the north-northwest Nodes: At western end a field boundary at an obtuse angle and a boundary continuing the line, and at eastern end a trackway and two boundaries at right angles. Historic Mapping: Boundary line is not shown on 1810 OSD map but it is on the 1846 parish tithe map.

Vegetation:	Surveyed Feb 2020: Turf- covered, moss, grass, occasional gorse along top and on southern side.
HER PRN:	114838
AREA NAME:	LLETHR
HER TYPE:	BANK (EARTHWORK)
PCNP TYPE:	HEDGEBANK
Central NGR:	SN1655633120
Node to Node NGRs:	SN1653433085;SN1658133155
Period:	Post Medieval
In use or Disused:	In Use
Condition Rating:	Fair
Survival Condition:	Near Intact
Description:	Main boundary: Hedge bank, with blackthorn planted on northwest side of bank Secondary boundary: Post and wire fence along top of bank Length Node to Node: 175 metres Side to Side: Road to the south, Pasture field to the north Nodes: At western end a trackway, at eastern end a trackway. Historic Mapping: Boundary line only shown on 1810 OSD map as edge of track, ground still unenclosed, same on the 1846 parish tithe map. By the time of the 1st edition Ordnance Survey map of the land immediately to the northwest had been enclosed.
Vegetation:	Surveyed Feb 2020: Turf covered, grass.

HER PRN:	114837
AREA NAME:	LLETHR
HER TYPE:	BANK (EARTHWORK)
PCNP TYPE:	STONE RUBBLE BANK
Central NGR:	SN1588332384
Node to Node NGRs:	SN1584132377;SN1592732392
Period:	Post Medieval
In use or Disused:	
Condition Rating:	Good
Survival Condition:	Near Intact
Description:	Main boundary: Stone Rubble Bank Secondary boundary: Hedgerow to the south side of bank Length Node to Node: 87 metres Side to Side: Pasture field to the south, Pasture field to the north, boundary no longer maintained. Animals can walk over it. Nodes: At western end a gap/gateway, at eastern end a gap/gateway. Historic Mapping: Boundary line not shown on 1810 OSD map, it is shown on the 1846 parish tithe map.
Vegetation:	Surveyed Feb 2020: Turf covered, grass. Gorse towards eastern end.

HER PRN:	114836
AREA NAME:	LLETHR
HER TYPE:	BANK (EARTHWORK)
PCNP TYPE:	EARTH BANK
Central NGR:	SN1580632370
Node to Node NGRs:	SN1577332362;SN1583732375
Period:	Post Medieval
In use or Disused:	Disused
Condition Rating:	Good
Survival Condition:	Near Intact
Description:	Main boundary: Earth bank - unknown if stone component Secondary boundary: None Length Node to Node: 65 metres Side to Side: Pasture field to the south, Pasture field to the north, boundary no longer maintained. Animals can walk over it. Nodes: At western end a gap/gateway, at eastern end it meets two other boundaries, including HER PRN114835. Historic Mapping: Boundary line not shown on 1810 OSD map, it is shown on the 1846 parish tithe map.
Vegetation:	Surveyed Feb 2020: Turf covered, grass. Gorse towards eastern end.

HER PRN:	114835
AREA NAME:	LLETHR
HER TYPE:	FENCE
PCNP TYPE:	FENCE
Central NGR:	SN1584932343
Node to Node NGRs:	SN1586932304;SN1583732375
Period:	Modern?
In use or Disused:	In Use
Condition Rating:	Good
Survival Condition:	Intact
Description:	Main boundary: Post and wire fence Secondary boundary: Possible very slight earthwork at base, either remains of a former boundary, or build up around fence. Length Node to Node: 78 metres Side to Side: Pasture field to the west, Pasture field to the east, Nodes: At southern end the field boundary joins the roadside boundary at right angles, at northern end it meets two other boundaries, including HER PRN114836 Historic Mapping: Boundary line maybe present on 1810 OSD map, it is shown on the 1846 parish tithe map. Form of boundary at that time unknown.

Vegetation: Surveyed Feb 2020: Grass

HER PRN: 114834
AREA NAME: LLETHR
HER TYPE: WALL
PCNP TYPE: DRY STONE WALL
Central NGR: SN1589832306
Node to Node NGRs: SN1583432772;SN1595732342
Period: Post Medieval
In use or Disused: In Use
Condition Rating: Good
Survival Condition: Near Intact
Description: Main boundary: Dry Stone Wall
Secondary boundary: Post and wire fence on south side (in field).
Length Node to Node: 140 metres
Side to Side: Pasture field to the south, road to the north
Nodes: At both ends a field boundary joins the roadside boundary at right angles.
Historic Mapping: Boundary line present on 1810 OSD map
Vegetation: Surveyed Feb 2020: Lichen, moss, grass and brambles on north side, south side not seen.

HER PRN: 114833
AREA NAME: LLETHR
HER TYPE: BANK (EARTHWORK)
PCNP TYPE: CLODDIAU VARIANT
Central NGR: SN1598932365
Node to Node NGRs: SN1596032336;SN1602232385
Period: Post Medieval
In use or Disused: In Use
Condition Rating: Good
Survival Condition: Near Intact
Description: Main boundary: Cloddiau Variant
Secondary boundary: Remains of gorse "hedge" on top at western end.
Length Node to Node: 78 metres
Side to Side: Pasture field to the south, road to the north
Nodes: At both ends a field boundary joins the roadside boundary at right angles.
Historic Mapping: Boundary line present on 1810 OSD map
Vegetation: Surveyed Feb 2020: Gorse on top, moss, grass and ferns on north side, south side not seen

HER PRN:	114832
AREA NAME:	LLETHR
HER TYPE:	WALL
PCNP TYPE:	DRY STONE WALL
Central NGR:	SN1606632425
Node to Node NGRs:	SN1606632425
Period:	Post Medieval
In use or Disused:	In Use
Condition Rating:	Good
Survival Condition:	Near Intact
Description:	Main boundary: Dry Stone Wall Secondary boundary: Post and wire fencing on the north side of wall in field Length Node to Node: 68 metres Side to Side: Road to the south with narrow verge, pasture field to north Nodes: At both ends a field boundary joins the roadside boundary at right angles. At the eastern end the joining boundary is one around a dwelling. Historic Mapping: Boundary line present on 1810 OSD map.
Vegetation:	Surveyed Feb 2020: Gorse on top at western end, brambles on top in central part, small trees growing immediately behind at eastern end - tress not identified due to season. Field side not seen. Road side evidence of lichens, moss, grass, ferns

HER PRN:	114884
AREA NAME:	GREENWAYS
HER TYPE:	LYNCHET
PCNP TYPE:	LYNCHET
Central NGR:	SN1342401987
Node to Node NGRs:	SN1341401995;SN1343601977
Period:	Post Medieval?
In use or Disused:	In Use
Condition Rating:	Fair
Survival Condition:	Damaged
Description:	Main boundary: Lynchet Secondary boundary: Hedge, Post and wire fence Length Node to Node: 28 metres Side to Side: Pasture field to the northeast, Pasture field to the southwest. Nodes: At northern end, boundary joins at right angles, at the southern end, boundaries joins at right angles onto Waterwynch Lane. Historic Mapping: Boundary line shown on the 1841 parish tithe map. It is part of Waterwynch Lane at this time.

Vegetation: Surveyed March 2020: Trees, ivy, brambles, other plants

HER PRN: 114883
AREA NAME: GREENWAYS
HER TYPE: BANK (EARTHWORK)
PCNP TYPE: HEDGEBANK
Central NGR: SN1344202030
Node to Node NGRs: SN1344402109;SN1347601906
Period: 19th century
In use or Disused: In Use
Condition Rating: Good
Survival Condition: Damaged
Description: Main boundary: Hedgebank, no longer maintained
Secondary boundary: None
Length Node to Node: 211 metres
Side to Side: Scrub to the east, Waterwynch Lane to the west.
Nodes: At northern end, boundary joins at right angles, at the southern end, boundary joins at right angles
Historic Mapping: Boundary line not shown on the 1841 parish tithe map but is shown on the 1st edition Ordnance Survey map of 1887.
Vegetation: Surveyed March 2020: Trees, ivy, moss, ferns, brambles, other plants

HER PRN: 114843
AREA NAME: MOYLEGROVE
HER TYPE: BANK (EARTHWORK)
PCNP TYPE: HEDGEBANK
Central NGR: SN1112744636
Node to Node NGRs: SN1104944548;SN1118644762
Period: Post Medieval
In use or Disused: In Use
Condition Rating: Good
Survival Condition: Intact
Description: Main boundary: Earth bank, topped with gorse hedge
Secondary boundary: Possible post and wire fence, or remains of, on northwest side of boundary
Length Node to Node: 258 metres
Side to Side: Pasture field to the northwest, pasture field to the southeast.
Nodes: At southwestern end meets a property boundary, and at northeastern end a boundary at right angles to the northwest.
Historic Mapping: Boundary line is on the 1841 parish tithe map when it ran to the road. It has since been truncated by a

dwelling and garden called Brynhyfryd at its southwestern end.

Vegetation: Surveyed March 2020: Dense gorse hedge along top, recently flailed

HER PRN: 114851
AREA NAME: PORTHMAWR
HER TYPE: BANK (EARTHWORK)
PCNP TYPE: CLODDIAU VARIANT
Central NGR: SM7333727293
Node to Node NGRs: SM7331527316;SM7335827272
Period: Post Medieval?
In use or Disused: In Use
Condition Rating: Fair
Survival Condition: Near Intact
Description: Main boundary: Cloddiau Variant
Secondary boundary: Post and wire fence (3 strands of barbed wire) along top, with electric fencing in the field to the northeast side
Length Node to Node: 61 metres
Side to Side: Pasture field to the northeast, open ground and coastal path to the southwest.
Nodes: At northwestern end, change in direction, and at southeastern end boundary joins at obtuse angle
Historic Mapping: Boundary line is shown on the 1841 parish tithe map.
Vegetation: Surveyed March 2020: Grass, sea thrift?

HER PRN: 114880
AREA NAME: GREENWAYS
HER TYPE: BANK (EARTHWORK)
PCNP TYPE: HEDGEBANK
Central NGR: Sn1335301610
Node to Node NGRs: Sn1333601535;SN1337101702
Period: Post Medieval
In use or Disused: In Use
Condition Rating: Fair
Survival Condition: Damaged
Description: Main boundary: Hedgebank, about 0.8 metes high on eastern side. On western side the boundary stands up to 1.5 metres high, but the bank itself maybe only a third of that height and lies on a rock-cut face.
Secondary boundary: None
Length Node to Node: approx 170 metres
Side to Side: Footpath to the east, Waterwynch Lane to the west.
Nodes: At southern end, boundary ceases, at the northern end, boundary ceases
Historic Mapping: Boundary line is shown on the 1841 parish tithe map and the 1st edition Ordnance Survey map shows the

	footpath alongside Waterwynch Lane. Waterwynch Lane is shown on the 1809 OSD Tenby sheet.
Vegetation:	Surveyed March 2020: Trees, Moss, Ivy, Ferns, other plants, a little grass

HER PRN:	114879
AREA NAME:	MANORBIER NEWTON STRIP FIELDS
HER TYPE:	WALL
PCNP TYPE:	MORTARED WALL
Central NGR:	SS0533699336
Node to Node NGRs:	SS0533099339;SS0534499322
Period:	Post Medieval
In use or Disused:	In Use
Condition Rating:	Poor
Survival Condition:	Damaged
Description:	Main boundary: Mortared Wall, about 0.8 metes high, single thickness Secondary boundary: None Length Node to Node: 15 metres Side to Side: Haysland Lane to the north, scrub to the south. Nodes: At eastern end, a gateway, at the western end, a change of boundary type. Historic Mapping: Boundary line is shown on the 1842 parish tithe map
Vegetation:	Surveyed March 2020: Moss, Ivy, Brambles, Harts tongue Fern, other plants

HER PRN:	114878
AREA NAME:	MANORBIER NEWTON STRIP FIELDS
HER TYPE:	WALL
PCNP TYPE:	MORTARED WALL
Central NGR:	SS0535699327
Node to Node NGRs:	SS0535099329;SS0536499322
Period:	Post Medieval?
In use or Disused:	In Use
Condition Rating:	Fair
Survival Condition:	Damaged
Description:	Main boundary: Mortared Wall, about 0.8 metes high Secondary boundary: None Length Node to Node: 15 metres Side to Side: Trackway (former road) to the north, small wood to the south. Nodes: At western end, a gateway, at the eastern end, a change of boundary type. Historic Mapping: Boundary line is shown on the 1842 parish tithe map
Vegetation:	Surveyed March 2020: Moss, Ivy

HER PRN:	114861
AREA NAME:	ST ANN'S HEAD
HER TYPE:	BANK (EARTHWORK)
PCNP TYPE:	EARTH BANK
Central NGR:	SM8063804499
Node to Node NGRs:	SM8053704523;SM8068304473
Period:	Post Medieval
In use or Disused:	In Use
Condition Rating:	Good
Survival Condition:	Intact
Description:	Main boundary: Earth Bank, low hedge at western end, ditch on road side Secondary boundary: Post and wire fence on south side, ditch on north (road) side Length Node to Node: 160 metres Side to Side: Road to the north, pasture to the south. Nodes: At western end boundary at right angles and at eastern end boundary at right angles. Historic Mapping: Boundary line is shown on the 1847 parish tithe.
Vegetation:	Surveyed March 2020: Grass and other plants on north side, south side not seen

HER PRN:	114860
AREA NAME:	PORTHMAWR
HER TYPE:	BANK (EARTHWORK)
PCNP TYPE:	EARTH BANK
Central NGR:	SM7382327223
Node to Node NGRs:	SM7378927230;SM7384927216
Period:	Post Medieval
In use or Disused:	In Use
Condition Rating:	Good
Survival Condition:	Intact
Description:	Main boundary: Earth Bank Secondary boundary: None visible Length Node to Node: 61 metres Side to Side: Rough pasture field to the north, road to the south. Nodes: At western end gateway and at eastern end gateway and boundary HER PRN 114859. Historic Mapping: Boundary line is shown on the 1841 parish tithe.

Vegetation: Surveyed March 2020: Dense brambles on top, Grass, brambles and many plants on south side, north side not seen

HER PRN: 114859
AREA NAME: PORTHMAWR
HER TYPE: BANK (EARTHWORK)
PCNP TYPE: CLODDIAU VARIANT
Central NGR: SM7385527224
Node to Node NGRs: SM7384927216;SM7386227234
Period: Post Medieval?
In use or Disused: Disused
Condition Rating: Poor
Survival Condition: Near Destroyed
Description: Main boundary: Cloddiau Variant - denuded, no longer in use
Secondary boundary: None
Length Node to Node: 21 metres
Side to Side: Rough pasture field to the west, rough pasture field to the east.
Nodes: At southern end, gateway and joins boundary HER PRN 114860, and at northern end change in direction.
Historic Mapping: Boundary line is shown on the 1841 parish tithe.
Vegetation: Surveyed March 2020: Grass, nettles, brambles

HER PRN: 114858
AREA NAME: PORTHMAWR
HER TYPE: WALL
PCNP TYPE: DRY STONE WALL
Central NGR: SM7330027626
Node to Node NGRs: SM7324127626;SM7334527625
Period: Modern?
In use or Disused: In Use
Condition Rating: Good
Survival Condition: Intact
Description: Main boundary: Dry Stone Wall
Secondary boundary: Post and wire fence to the south
Length Node to Node: 104 metres
Side to Side: Pasture field to the north, pasture field to the south.
Nodes: At western end joins two other boundaries and at eastern end joins two other boundaries.
Historic Mapping: Boundary line is not shown on the 1841 parish tithe, the 1st edition Ordnance Survey map or the early 20th

century Ordnance Survey maps

Vegetation: Surveyed March 2020: Brambles in between wall and post and wire fence

HER PRN: 114857
AREA NAME: PORTHMAWR
HER TYPE: BANK (EARTHWORK)
PCNP TYPE: REVETTED BOUNDARY;LYNCHET
Central NGR: SM7326727557
Node to Node NGRs: SM7323427556;SM7330427562
Period: Post Medieval?
In use or Disused: Disused
Condition Rating: Good
Survival Condition: Damaged
Description: Main boundary: Lynchet, Revetted Boundary, Stone Rubble Bank
Secondary boundary: None
Length Node to Node: 70 metres
Side to Side: Pasture field to the north, pasture field to the south.
Nodes: At western end joins two other boundaries including HER PRN 114856, and at eastern end a gap.
Historic Mapping: Boundary line is shown on the 1841 parish tithe.
Vegetation: Surveyed March 2020: Grass, grazed

HER PRN: 114856
AREA NAME: PORTHMAWR
HER TYPE: BANK (EARTHWORK)
PCNP TYPE: BOULDER BANK;CLODDIAU VARIANT;REVETTED BOUNDARY
Central NGR: SM7325027492
Node to Node NGRs: SM7323427556;SM7332127412
Period: Post Medieval?
In use or Disused: In Use
Condition Rating: Fair
Survival Condition: Damaged
Description: Main boundary: Combination of Boulder Bank, Cloddiau Variant, Revetted Boundary
Secondary boundary: Post and wire fence on top
Length Node to Node: 39 metres
Side to Side: Cliff edge and coast path to the west, pasture field to the east.
Nodes: At northern end, a boundary joining from east, HER PRN 114857, and boundary to the north, and at southern end a

boundary joining from east, HER PRN 114854, and boundary to the south
Historic Mapping: Boundary line is shown on the 1841 parish tithe.

Vegetation: Surveyed March 2020: Grass ungrazed, and other plants

HER PRN: 114855
AREA NAME: PORTHMAWR
HER TYPE: BANK (EARTHWORK)
PCNP TYPE: REVETTED BOUNDARY
Central NGR: SM7331227475
Node to Node NGRs: SM7329527477;SM7333427472
Period: Post Medieval?
In use or Disused: Disused
Condition Rating: Fair
Survival Condition: Near Intact
Description: Main boundary: Revetted Boundary, no longer in use
Secondary boundary: None
Length Node to Node: 39 metres
Side to Side: Pasture field to the north, pasture field to the south.
Nodes: At western end, a gap, and at eastern end change in direction of the boundary.
Historic Mapping: Boundary line is shown on the 1841 parish tithe.
Vegetation: Surveyed March 2020: Grass, grazed

HER PRN: 114854
AREA NAME: PORTHMAWR
HER TYPE: BANK (EARTHWORK)
PCNP TYPE: STONE RUBBLE BANK
Central NGR: SM7334727415
Node to Node NGRs: SM7332177412;SM7337027419
Period: Post Medieval?
In use or Disused: In Use
Condition Rating: Fair
Survival Condition: Near Intact
Description: Main boundary: Stone rubble bank
Secondary boundary: Post and wire fence along top
Length Node to Node: 49 metres
Side to Side: Pasture field to the north, pasture field to the south.
Nodes: At western end, joins two other boundaries, and at

	eastern end a gap/gateway and boundary to the north Historic Mapping: Boundary line is shown on the 1841 parish tithe as the southern boundary of a trackway.
Vegetation:	Surveyed March 2020: Grass, grazed

HER PRN:	114865
AREA NAME:	ST ANN'S HEAD
HER TYPE:	BANK (EARTHWORK)
PCNP TYPE:	CLODDIAU VARIANT
Central NGR:	SM8037504071
Node to Node NGRs:	SM8037604042;SM8037304099
Period:	Post Medieval
In use or Disused:	In Use
Condition Rating:	Good
Survival Condition:	Near Intact
Description:	Main boundary: Cloddiau Variant, Hedgebank Secondary boundary: None visible Length Node to Node: 57 metres Side to Side: Road to the east, pasture to the west. Nodes: At northern end boundary at right angles and at southern end boundary at right angles. Historic Mapping: Boundary line is shown on the 1847 parish tithe.
Vegetation:	Surveyed March 2020: Gorse and thorn hedge, brambles, grass and other plants on sides of bank

HER PRN:	114852
AREA NAME:	PORTHMAWR
HER TYPE:	BANK (EARTHWORK)
PCNP TYPE:	LYNCHET;REVETTED BOUNDARY;EARTH BANK
Central NGR:	SM7335327360
Node to Node NGRs:	SM7331827350;SM73380427368
Period:	Prehistoric?;Post Medieval?
In use or Disused:	Disused
Condition Rating:	Good
Survival Condition:	Near Intact
Description:	Main boundary: Lynchet Secondary boundary: Revetted Boundary, Earth Bank on top Length Node to Node: 64 metres Side to Side: Pasture field to the north, pasture field to the south.

Nodes: At western end, joins two other boundaries, and at eastern end boundary, a gap/gateway.
Historic Mapping: Boundary line is shown on the 1841 parish tithe map.

Vegetation: Surveyed March 2020: Grass, grazed - the boundary no longer in use and within a pasture field

HER PRN: 114866
AREA NAME: ST ANN'S HEAD
HER TYPE: BANK (EARTHWORK)
PCNP TYPE: CLODDIAU VARIANT
Central NGR: SM8039004048
Node to Node NGRs: SM8039004061;SM8039004033
Period: Post Medieval?
In use or Disused: In Use
Condition Rating: Good
Survival Condition: Intact
Description: Main boundary: Cloddiau Variant now used as garden boundary
Secondary boundary: None
Length Node to Node: 57 metres
Side to Side: Road to the east, pasture to the west.
Nodes: At northern end boundary at right angles and at southern end boundary at right angles.
Historic Mapping: Boundary line is shown on the 1847 parish tithe.

Vegetation: Surveyed March 2020: Grass

HER PRN: 114877
AREA NAME: MANORBIER NEWTON STRIP FIELDS
HER TYPE: WALL
PCNP TYPE: MORTARED WALL
Central NGR: SS0672998613
Node to Node NGRs: SS0671298615;SS0674898612
Period: Post Medieval
In use or Disused: In Use
Condition Rating: Very Good
Survival Condition: Intact
Description: Main boundary: Mortared Wall, about 1.5 metes high, with "Babbaloobies" on top.
Secondary boundary: None
Length Node to Node: 36 metres
Side to Side: Road to the south, paddock and driveway to the

north.
Nodes: At western end, joins another wall of different construction, at the eastern end, a gateway.
Historic Mapping: Boundary line is shown on the 1842 parish tithe map

Vegetation: Surveyed March 2020: None

HER PRN: 114876

AREA NAME: MANORBIER NEWTON STRIP FIELDS

HER TYPE: BANK (EARTHWORK)

PCNP TYPE: HEDGEBANK

Central NGR: SS0566599593

Node to Node NGRs: SS0567199627;SS0566299557

Period: Post Medieval

In use or Disused: In Use

Condition Rating: Fair

Survival Condition: Near Intact

Description: Main boundary: Hedgebank with mature trees, on high bank above road
Secondary boundary: None visible
Length Node to Node: 70 metres
Side to Side: Road to the west, pasture field to the east.
Nodes: At northern end boundary turns to the east, at the southern end boundary Mature trees give way to slightly more managed hedge..
Historic Mapping: Boundary line is shown on the 1842 parish tithe map

Vegetation: Surveyed March 2020: Small to large trees, ivy, Some grass on sides of bank, but also other plants.

HER PRN: 114875

AREA NAME: MANORBIER NEWTON STRIP FIELDS

HER TYPE: BANK (EARTHWORK)

PCNP TYPE: HEDGEBANK

Central NGR: SS0511499673

Node to Node NGRs: SS0511599815;SS0510299527

Period: Post Medieval

In use or Disused: In Use

Condition Rating: Fair

Survival Condition: Near Intact

Description: Main boundary: Outgrown hedgebank, on low broad bank, Hedge

now patchy with maturing trees, some erosion visible to bank
Secondary boundary: Post and wire fence along west side.
Length Node to Node: 288 metres
Side to Side: Pasture field to the west, pasture field to the east.
Nodes: At northern end boundary a gap/gateway, at the southern end boundary at obtuse angle.
Historic Mapping: Boundary line is shown on the 1842 parish tithe map

Vegetation: Surveyed March 2020: Hedge outgrown, so small to medium sized trees now on the bank. Some grass on sides of bank, but also bare eroded patches, brambles, nettles, other plants.

HER PRN: 114874

AREA NAME: MANORBIER NEWTON STRIP FIELDS

HER TYPE: BANK (EARTHWORK)

PCNP TYPE: HEDGEBANK

Central NGR: SS0479599633
Node to Node NGRs: SS0481399755;SS0478499508
Period: Post Medieval
In use or Disused: In Use
Condition Rating: Fair
Survival Condition: Damaged
Description: Main boundary: Hedgebank, on low broad bank, Hedge now patchy, bank stone faced in places, possibly as part of a repair
Secondary boundary: Post and wire fence along west side with electric fencing along top.
Length Node to Node: 249 metres
Side to Side: Pasture field to the west, pasture field to the east.
Nodes: At northern end boundary a gap/gateway, at the southern end boundary at right angles.
Historic Mapping: Boundary line is shown on the 1842 parish tithe map

Vegetation: Surveyed March 2020: Sparse, patchy thorn hedge, grass on bank, especially where the hedge doesn't exist. Daffodils?

HER PRN: 114873

AREA NAME: MANORBIER NEWTON STRIP FIELDS

HER TYPE: BANK (EARTHWORK)

PCNP TYPE: HEDGEBANK;EARTH BANK

Central NGR: SS0496899498
Node to Node NGRs: SS0497999626;SS0495299391
Period: Post Medieval
In use or Disused: Disused
Condition Rating: Fair

Survival Condition:	Damaged
Description:	Main boundary: Hedgebank, trimmed hedge on low earth bank at north end, turf covered bank to the south Secondary boundary: None Length Node to Node: 236 metres Side to Side: Pasture field to the west, pasture field to the east. Nodes: At northern end boundary at obtuse angle, at the southern end boundary at right angles Historic Mapping: Boundary line is shown on the 1842 parish tithe map
Vegetation:	Surveyed March 2020: Thorn hedge, grass on bank, especially where the hedge doesn't exist.

HER PRN:	114872
AREA NAME:	MANORBIER NEWTON STRIP FIELDS
HER TYPE:	BANK (EARTHWORK)
PCNP TYPE:	HEDGEBANK
Central NGR:	SS0524999509
Node to Node NGRs:	SS0525699609;SS0524499431
Period:	Modern
In use or Disused:	In Use
Condition Rating:	Good
Survival Condition:	Near Intact
Description:	Main boundary: Hedgebank, hedge outgrown on low, broad earth bank Secondary boundary: None Length Node to Node: 178 metres Side to Side: Pasture field to the west, pasture field to the east. Nodes: At northern end one boundary at right angles, and one continuing the line, at the southern end a gap. Historic Mapping: Boundary line is shown on the 1842 parish tithe map
Vegetation:	Surveyed March 2020: Outgrown hedge, ivy on hedgerow trees, some grass on the bank

HER PRN:	114871
AREA NAME:	MANORBIER NEWTON STRIP FIELDS
HER TYPE:	BANK (EARTHWORK)
PCNP TYPE:	HEDGEBANK
Central NGR:	SS0685498548
Node to Node NGRs:	SS0685598571;SS0685498528
Period:	Post Medieval
In use or Disused:	In Use
Condition Rating:	Fair

Survival Condition:	Near Intact
Description:	Main boundary: Hedgebank, hedge outgrown Secondary boundary: Post and wire fence on both sides Length Node to Node: 43 metres Side to Side: Pasture field to the west, pasture field to the east. Nodes: At northern end boundaries at right angles, the one to the right is HER PRN 114870, and at southern change in direction Historic Mapping: Boundary line is shown on the 1842 parish tithe map
Vegetation:	Surveyed March 2020: Mixed outgrown hedge, grass on the bank

HER PRN:	114870
AREA NAME:	MANORBIER NEWTON STRIP FIELDS
HER TYPE:	BANK (EARTHWORK)
PCNP TYPE:	HEDGEBANK;CLODDIAU VARIANT
Central NGR:	SS0692798560
Node to Node NGRs:	SS0685598571;SS0699098552
Period:	Post Medieval
In use or Disused:	In Use
Condition Rating:	Fair
Survival Condition:	Near Intact
Description:	Main boundary: Earth Bank or in places Cloddiau Variant with outgrown hedge. Secondary boundary: Post and wire fence on south side Length Node to Node: 136 metres Side to Side: Pasture field to the south, road to the north. Nodes: At western end boundaries at right angles and at eastern end gap/gateway. Historic Mapping: Boundary line is shown on the 1842 parish tithe map
Vegetation:	Surveyed March 2020: Mixed outgrown hedge

HER PRN:	114869
AREA NAME:	ST ANN'S HEAD
HER TYPE:	BANK (EARTHWORK)
PCNP TYPE:	EARTH BANK
Central NGR:	SM8031803802
Node to Node NGRs:	SM8021603768;SM8040403830
Period:	Post Medieval?;Modern?
In use or Disused:	In Use
Condition Rating:	Good
Survival Condition:	Intact

Description: Main boundary: Earth Bank up to 3 metres wide at its base on west side
Secondary boundary: Post and wire fence on both sides
Length Node to Node: 198 metres
Side to Side: Pasture field to the north, pasture field to the south.
Nodes: At western end two boundaries at right angles and at eastern end gap.
Historic Mapping: Boundary line is not shown on the 1847 parish tithe but is shown on the 2nd edition Ordnance Survey map

Vegetation: Surveyed March 2020: Thorn and brambles

HER PRN: 114868

AREA NAME: ST ANN'S HEAD

HER TYPE: BANK (EARTHWORK)

PCNP TYPE: EARTH BANK

Central NGR: SM8041303822
Node to Node NGRs: SM8041003836;SM8041603806
Period: Post Medieval
In use or Disused: In Use
Condition Rating: Good
Survival Condition: Intact
Description: Main boundary: Earth Bank up to 3 metres wide at its base on west side
Secondary boundary: Post and wire fence to the west side
Length Node to Node: 30 metres
Side to Side: Road to the east, pasture to the west.
Nodes: At northern end gateway and at southern end gateway with mortared stone pillars.
Historic Mapping: Boundary line is shown on the 1847 parish tithe.

Vegetation: Surveyed March 2020: Thorn and brambles

HER PRN: 114881

AREA NAME: GREENWAYS

HER TYPE: BANK (EARTHWORK)

PCNP TYPE: HEDGEBANK

Central NGR: SN1341301732
Node to Node NGRs: SN1339601747;SN1343601724
Period: Post Medieval
In use or Disused: In Use
Condition Rating: Poor

Survival Condition:	Damaged
Description:	Main boundary: Hedgebank, eroded in central section to reveal stone and earth core Secondary boundary: Metal fencing Length Node to Node: 47 metres Side to Side: Pasture field to the northeast, Allen's View garden to the southwest. Nodes: At western end, boundaries at right angles, at the eastern end, boundary joins at right angles Historic Mapping: Boundary line is shown on the 1841 parish tithe map and maybe shown on the 1809 OSD Tenby sheet.
Vegetation:	Surveyed March 2020: Mature Trees, ivy, other plants, a little grass, bare central section

HER PRN:	114853
AREA NAME:	PORTHMAWR
HER TYPE:	BANK (EARTHWORK)
PCNP TYPE:	CLODDIAU VARIANT
Central NGR:	SM7337927393
Node to Node NGRs:	SM7337327420;SM7338627361
Period:	Post Medieval?
In use or Disused:	Disused
Condition Rating:	Good
Survival Condition:	Near Intact
Description:	Main boundary: Cloddiau Variant, no longer is use Secondary boundary: None Length Node to Node: 60 metres Side to Side: Pasture field to the west, pasture field to the east. Nodes: At northern end, joins two other boundaries, and at southern end a gap/gateway. Historic Mapping: Northern part of boundary line is shown on the 1841 parish tithe map where it joins with HER PRN 114852 at is southern end.
Vegetation:	Surveyed March 2020: Grass, grazed - the boundary no longer in use and within a pasture field

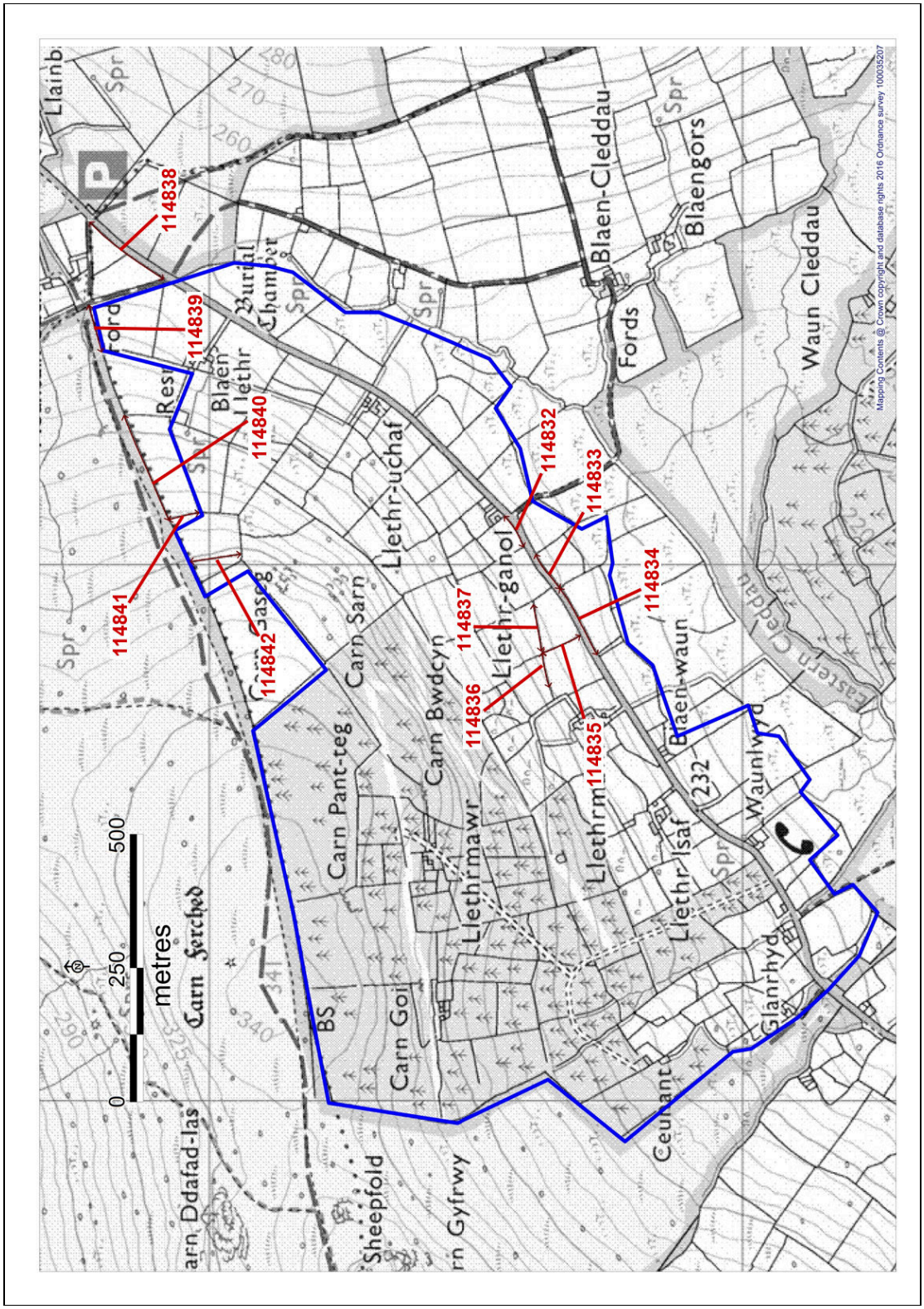


Figure 23: Boundaries recorded for this project in the Llethr survey area.

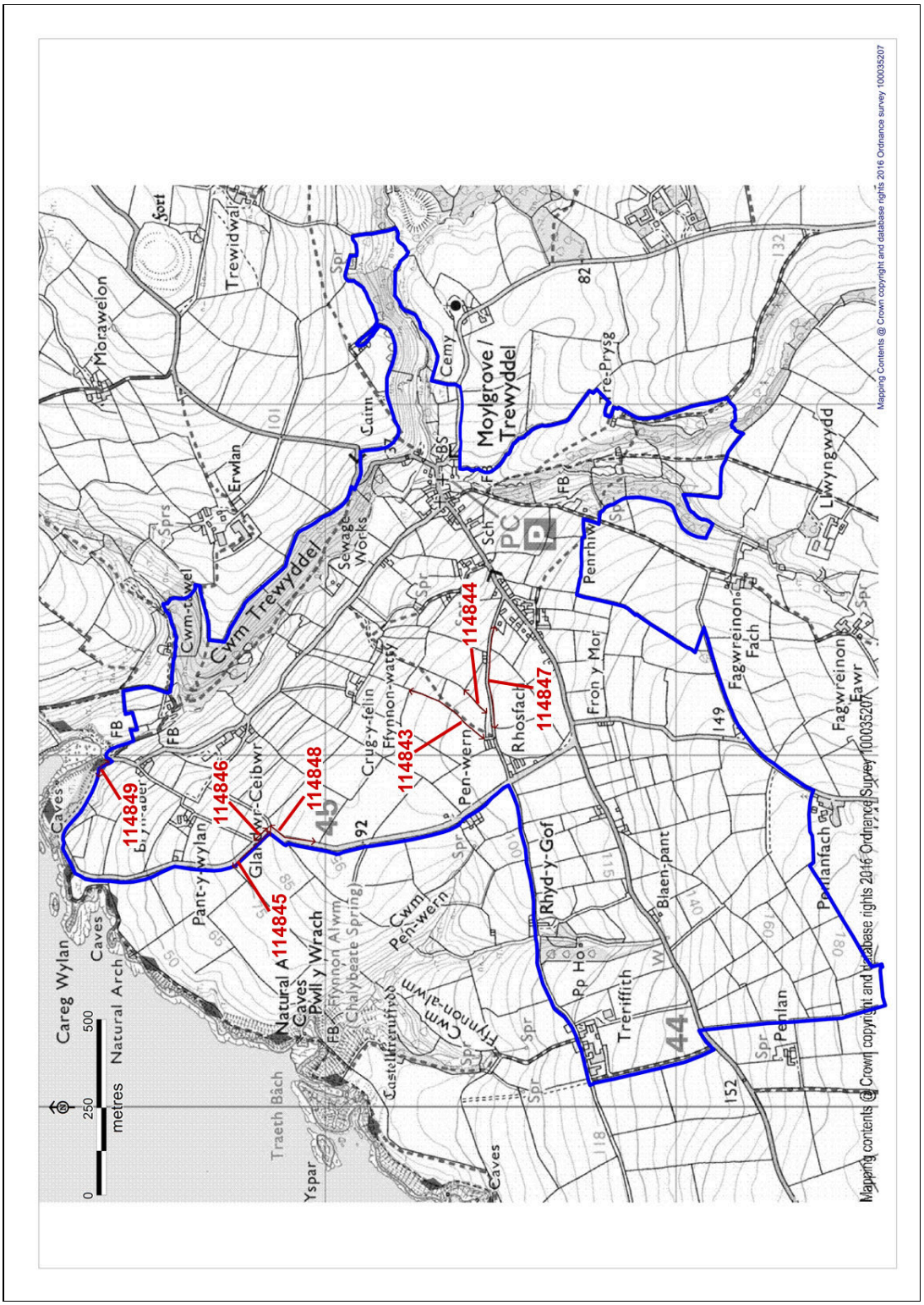


Figure 24: Boundaries recorded for this project in the Moylegrove survey area.

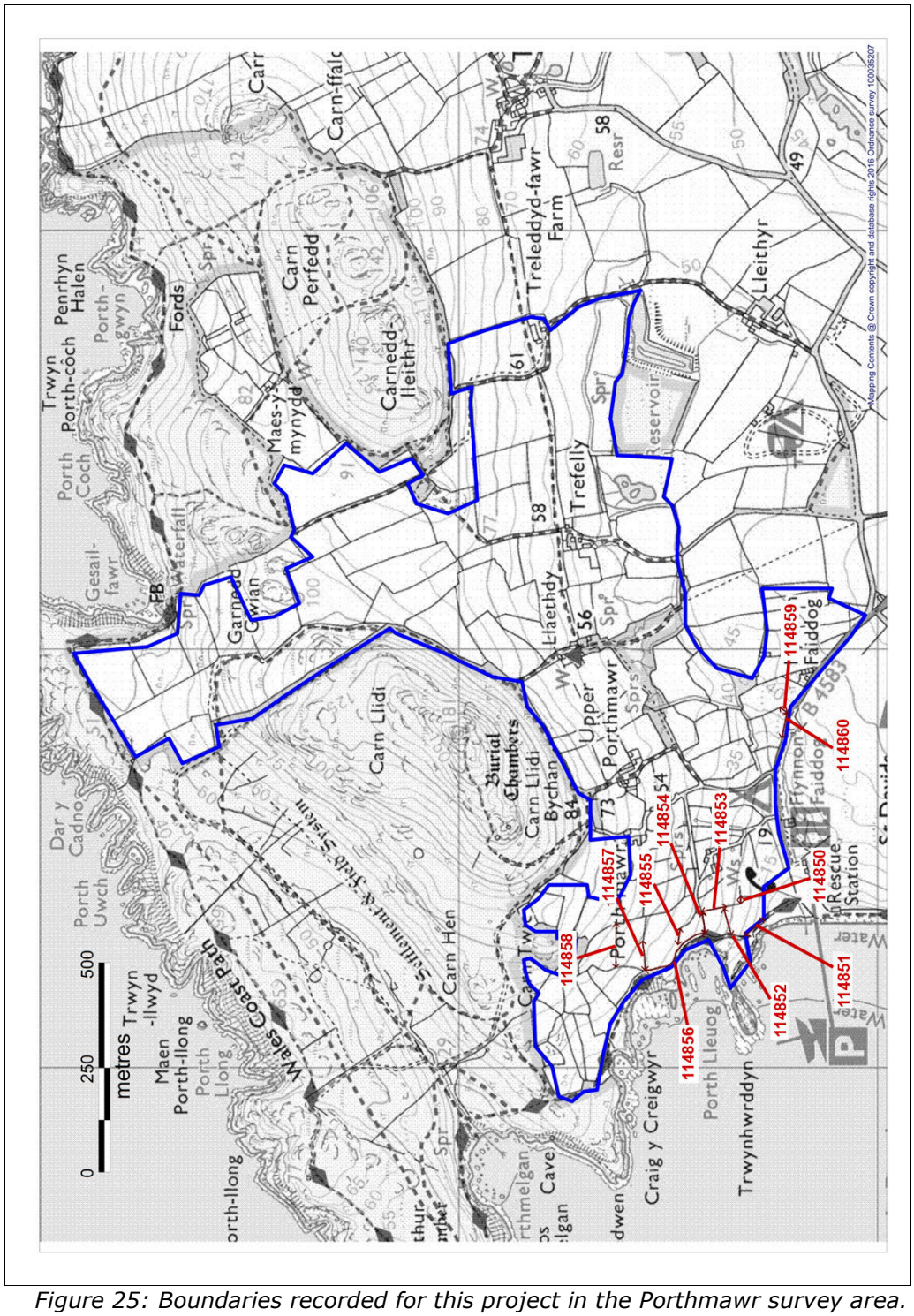


Figure 25: Boundaries recorded for this project in the Porthmawr survey area.

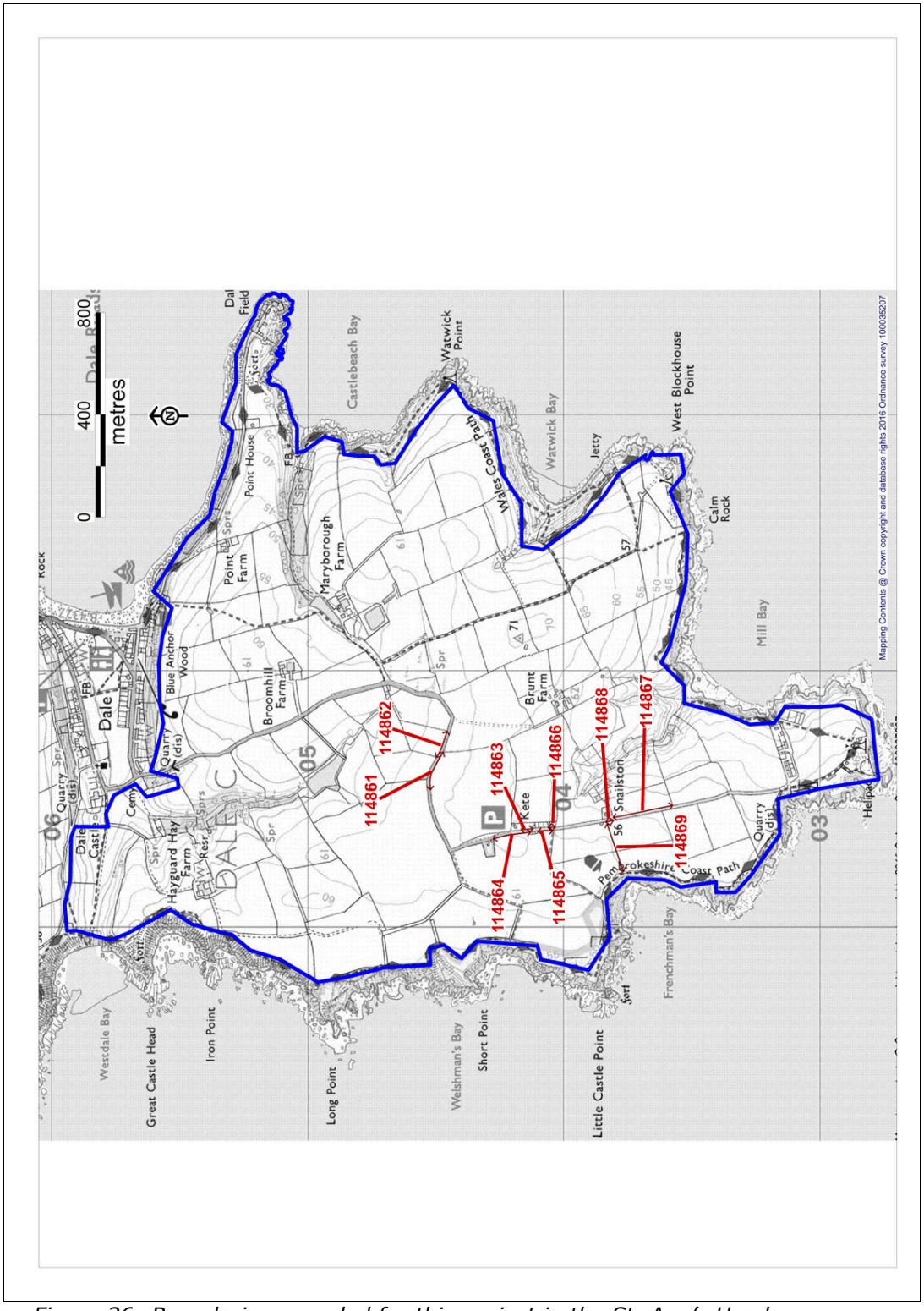


Figure 26: Boundaries recorded for this project in the St. Ann's Head survey area.

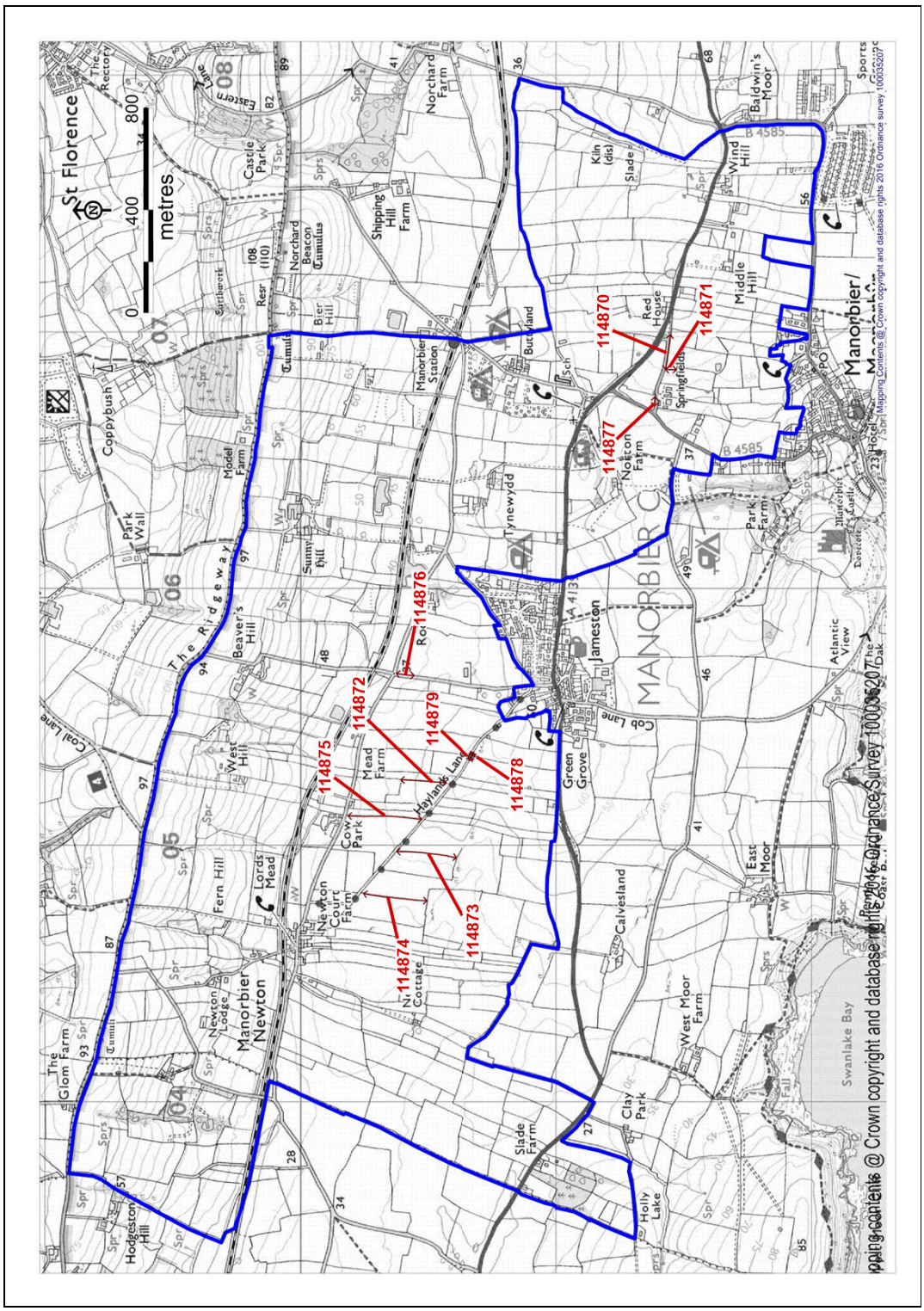


Figure 27: Boundaries recorded for this project in the Manorbier Newton Strip Fields survey area.

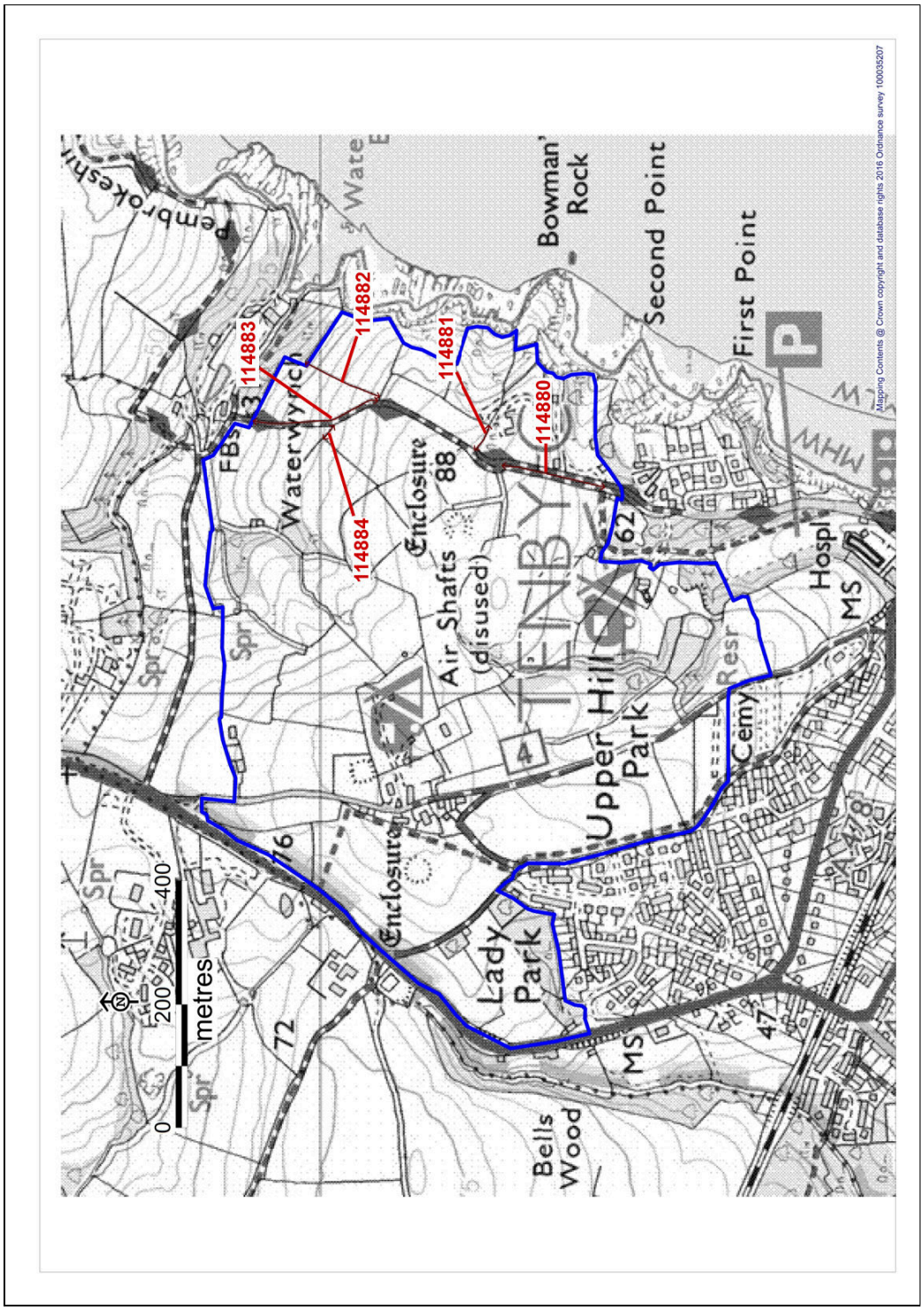


Figure 28: Boundaries recorded for this project in the Greenways survey area.