Topic – receptor / resource

Cultural heritage (including architectural and archaeological aspects)

Summary of baseline

Cultural heritage assets are shown on the Environmental Constraints and Opportunities Plan for Cultural Heritage, Landscape and Visual (drawing 4020938-BUK-ZZ-00-DR-EN-00007, Appendix A).

Registered Parks and Gardens and Registered Landscapes of Outstanding and of Special Interest are described in the Landscape and visual topic.

Scheduled Monuments

There are three Scheduled Monuments within the study area: Hulks at Ynyslas, Ceredigion at the north western; Dyfi blast furnace and charcoal store on the A487 at Furnace; and, Domen Las medieval mott in the north-east.

The 'Hulks at Ynyslas' is located at the mouth of the Afon Leri. The three vessels probably date to the mid-19th century and are thought to represent the remains of the Derwenlas fleet, which largely fell out of use with the coming of the railways in the 1860s (JBA, 2021). It has been observed that there has been substantial movement of the Afon Leri channel, which has likely continued since this information was published in 2016 (Royal Haskoning, 2016). Weakening of the southern inner channel has resulted in the seaward end of the Afon Leri swinging further west towards the site of the hulks. The implication of this is that there is increased erosion of the bank where the hulks are located, especially for wreck 3 which is closest to the channel. Although it is possible for the Afon Leri to swing back eastward due to the dynamic nature of the estuary, it was concluded that it seems likely that wreck 3 will eventually be fully exposed and experience increased erosion. This may lead to its eventual loss in the future. As for wrecks 1 and 2, they fortunately are likely to be less affected due to being protected by the river-bank. It was recommended in the Royal Haskoning report that these conclusions be re-assessed in the future.

The Dyfi blast furnace and charcoal store Scheduled Monument is in Furnace on the east edge of the study area where the A487 road crosses over the Afon Einion. It was built in 1755 and abandoned in 1810 and is designated for its insight into the development of the iron industry (Cadw, 2022a).

Domen Las, north of the railway line in the north east of the study area, comprises the remains of a medieval motte and ditch dating to 1066 -1540 AD (Cadw, 2022b).

To the east and south of the study area there are Scheduled Monuments scattered across the upland areas including hill forts, cairns, round barrows and stone circles. The locations of some of these overlook the study area. There are Scheduled Monuments associated with former lead mining to the south and east of Furnace. At Pennal, approximately 3.5 km upstream of the study area, is the Cefn-Caer Roman Site comprising buried features and earthworks on a low spur about 100m northeast of the marshy floodplain of the Dyfi.

Listed Buildings

There are approximately 40 Listed Buildings within the study area, primarily concentrated around settlements and the A487. These are found at the settlements of Llancynfelyn, Tre'r-ddol, Tre Taliesin, Morfa Borth, Ffwrnais/Furnace, Eglwys Fach; along the A487 between Tre Taliesin and the Afon Dyfi/River Dovey; and one farmhouse between Morfa Borth and Coed Erglodd. Church of Michael, Yynys Greigiog, Dyfi Furnace and Barn above Dyfi Furnace in the north-east are Grade II*; all other Listed Buildings are Grade II. There are no Grade I Listed Buildings in the study area. The

Challenges / Objectives / Priorities

Challenges

- The 'Hulks at Ynyslas' Scheduled Monument is at risk of damage as the course of Afon Leri channel mouth changes over time, and is also susceptible to climate change induced sea level rise which threatens to increase the rate of erosion to the Scheduled Monument.
- Maintaining the condition of listed buildings within the tidal floodplain as flood risk and land drainage management approaches transition from Hold the Line to Managed Realignment/Coastal Adaption with rising sea levels.
- Cadw has a work programme on risks associated with sea level rise, and a report to Historic Environment Group assessed historic assets located on the coastal edge, foreshore and below the 1m contour as being at significant risk from sea level rise, coupled with the impact of increasingly frequent storm surges (Powell et el, 2012).

Opportunities

- Identify the changing level of risk to listed buildings and Scheduled Monuments within the tidal plain over time as flood risk and land drainage management approaches transition from Hold the Line to Managed Realignment/Coastal Adaption with rising sea levels.
- Identify potential sustainable mitigation measures to maintain historic assets and heritage knowledge, e.g. in situ or through measures such as recording.
- Archaeological surveys may need to be undertaken which would promote further understanding of local heritage assets and could discover new finds. This would work towards objectives 11 and 13 of the Ceredigion Local Development Plan (Ceredigion County Council, 2013), which aim to conserve and protect local heritage.

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Topic – receptor / resource	Summary of baseline	Challenges / Objectives / Priorities
Cultural heritage (continued)	historic character and interest of Borth may not be well captured in the small number of listed buildings present within the town itself.	
	Conservation Areas	
	There are no Conservation Areas within the study area. However, the Aberdyfi Conservation Area is located on the north bank of the Dyfi estuary and has clear views across to the study area. There are multiple key views associated with the Aberdyfi Conservation Area, which look over the Dyfi estuary towards the study area.	
	Historic Environment Record	
	There are approximately 20 Historic Environment Record (HER) features within the study area as identified on the Historic Wales portal (NRW, 2021b).	
	The HER for the study area identifies numerous archaeological remains and finds, including Neolithic/Mesolithic flint remains recovered from Borth Beach, remains of prehistoric cropmarks towards the north western side of Cors Fochno, a potential Medieval fish trap recorded on the Afon Leri, a Medieval coin horde recovered from Cors Fochno, and numerous post-Medieval and Modern era records distributed across the study area, including the remains of farmsteads, metal mines, and other industrial activities.	
	It is assumed, based on the number of HER features within the study area, and the extensive cover of peat, that the area will include the potential for further 'unknown' heritage assets.	
Landscape and visual	Landscape and visual constraints are shown on the Environmental Constraints and Opportunities Plan for Cultural Heritage, Landscape and Visual (drawing 4020938-BUK-ZZ-00-DR-EN-00007, Appendix A). Scheduled Monuments and Listed Buildings are described within the Cultural heritage topic.	 Challenges The range of landscape types and nature conservation sites are important features contributing to the definition of SLA 01. Recreational pressure on the estuarine and dune landscape habitats are identified within LANDMAP, including from vehicles and pollution incidents Recreational pressure on Ynyslas dune system from litter, trampling and eutrophication from dogs, despite boardwalks having been installed for access.
	Designated Landscapes and Features	
	The project study area does not fall within a National Park, Registered Landscape of Outstanding and of Special Interest in Wales, or Area of Outstanding Natural Beauty.	
	Snowdonia National Park (SNP) is immediately north of the study area on the northern side of the Dyfi Estuary. In order to safeguard the landscape and tranquillity of SNP, the SNP Management Plan (Snowdonia National Park Authority, 2020) states that proposals close to the Park's boundary should safeguard views into and out of the National Park. The habitats and landscape of the Dyfi Estuary	<u> </u>
	are noted within the SNP Management Plan as contributing to two of the Special Qualities for which the National Park is designated (Special Quality 1: Diverse Landscapes and Special Quality 9: Internationally Important Habitats and Species).	The decline in the rabbit population due to disease may be damaging to Ynyslas dunes as the very short turf supports invertebrate species and plants, and reduced grazing will allow a "thatch" of vegetation to develop, smothering these.
	Whilst the study area is not within Snowdonia National Park, reference is made in Snowdonia National Park Authority's Supplementary Planning Guidance 07: Landscape and Seascapes of Eryri (SNPA, 2014) to views from within LCA25: Aber y Dyfi (the landscape character area bordering the study area), across the open landscape of the Dyfi Estuary. It is noted that 'The estuary is distinctive,	 Japanese knotweed and rhododendron invasive species noted within woodland areas (identified through LANDMAP) and may also be present elsewhere.
	picturesque and largely unspoilt, and is a popular walking and recreational destination.'	 Climate change and changes in water levels are threatening rare habitats in SCA27, as identified in SPG07.

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Topic - receptor / **Summary of baseline Challenges / Objectives / Priorities** resource One Registered Park and Garden is located within the study area: Grade II Lodge Park in Landscape and • Development and visitor pressure are affecting the remoteness, visual Llangynfelyn (a 17th century deer park with pleasure grounds and kitchen garden). There are three tranquillity and wilderness of SCA27, as identified in SPG07. Significant Views noted from Lodge Park to the east and north (see drawing 4020938-BUK-ZZ-00-The study area, and therefore development and land DR-EN-00007, Appendix A); but these do not face directly into the study area. The deer park is NRW (continued) management changes within it will be highly visible from (Welsh Government Woodland Estate) land and is publicly accessible along waymarked trails (this is surrounding high ground. Dedicated Woodland under the CROW Act). Lodge Park house and kitchen garden are privately owned with no visitor access. Lodge Park is also a Grade II Listed Building. **Opportunities** There are no Registered Historic Landscapes in the study area although Area 4: Upland Ceredigion lies to the south-east and there may be views from high ground within Upland Ceredigion into the Increasing the open character and sense of wilderness in line with SLA SPG, by reducing pastoral use. study area. • Increasing the coverage of habitat types / conservation sites that Tree Preservation Orders are not available publicly; these can be requested at future project stages contribute to the character of the SLA through actions such as as necessary. re-wetting / ditch blocking. Managing visitors to protect sensitive areas and providing **Landscape Character Assessments** interpretation about key features. SNPA's SPG07 defines seascape character areas (SCAs); and despite falling outside the SNP, the Linking the existing woodland groups of Glandyfi and Afon Leri to study area lies largely within the Snowdonia National Park's SCA27: Dyfi Estuary, and partly within further solidify the woodland network. SCA26: Borth. SPG07 describes the land within the study area as comprising farmland (reclaimed Removal of Japanese knotweed. grazing marsh and irregular enclosures), raised peat bog, deciduous woodland including Ynys-hir and Dyfi oak woodlands, saltmarsh, intertidal sand, intertidal mud, estuarine channels, dunes/dune Maintenance and restoration of traditional field boundaries slack, golf course/amenity land, and settlement. The railway line forms a distinct separation between including hedgerows and hedge banks. the estuarine channels, intertidal habitats and dunes, from the terrestrial habitats of farmland, Removal of invasive Rhododendron from degenerate parts of woodland and freshwater bog. Cors Fochno, to compliment current programme of willow and birch scrub removal. Key characteristics of SCA27 according to SPG07 include the diverse range of habitats supporting a wide variety of plant, insect and bird species; expansive views across the broad estuary and meandering channel of River Dyfi, enclosed by the surrounding hills of Ceredigion and Snowdonia, which create an impressive and distinctive backdrop and strong sense of place; limited settlement; and marine areas popular for sailing and fishing. The perceptual qualities are noted as calm, with the less accessible estuarine areas noted as wild and remote. Extensive tourism is described at Ynyslas, attracting a large number of visitors. Climate change, flooding, visitor pressure, development pressure and agricultural land management changes are noted as the key forces of change likely to affect the character of the SCA. Key characteristics of SCA26 include a linear beach with linear settlement and linear transport routes behind; Upper Borth rises on cliffs at the southern end of the SCA; dynamic sand banks at the Dyfi Estuary; an open, spacious feel, with long range views over the sea, Borth bog and the Dyfi Estuary; and extensive tourism development and recreational activity which make the SCA feel busy. particularly in summer. Cultural heritage can have a strong influence on defining landscape character, and SPG07 describes the cultural influences affecting the landscape character of the study area to include early 19th Century land reclamation to drain marshes for agriculture; military defence from Roman and Norman

(fort at Doman Las) to World War II pillboxes and firing range at Ynyslas; small fishing villages including Borth which later expanded due to tourism; construction of the railway which brought in tourism; maritime trade with associated quays, shipbuilding yard and remains of three schooners at

Ynyslas, abandoned after the construction of the railways; and slate quarries, lead mines and

furnaces from the industrial period.

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Topic – receptor / resource	Summary of baseline	Challenges / Objectives / Priorities
Landscape and visual (continued)	The land within the study area is located within NRW's National Landscape Character Area 22: Glannau Aberdyfi / Aberdovey Coast (NLCA 22). The study area cover 4,098 ha in the south of this 12.2ha NLCA and is overlooked by NLCA 06: Snowdonia from the north; NLCA 21: Cambrian Mountains from the east; and NLCA 23: Rheidol and Ystwyth Hills and Valleys from the south. There are likely to be views into the study area from the periphery of these three adjacent NLCAs.	
	According to NRW's National Landscape Character Assessment (NRW, 2014), key characteristics of NLCA22 of relevance to the study area include:	
	Exposed open coastline with artificial defences by settlements and extensive dune systems;	
	 Extensive sandy estuarine inter-tidal areas and salt marsh including sand and mud flats, marsh and wetland grazing; 	
	Small seaside towns with some Victorian elements and some modern development. The area is noted as important for tourism and leisure;	
	Lowland raised bog formed from peat deposits within the Dyfi Estuary;	
	• Extensive open floodplain in lower river valleys with grazing on the valley floor, with a well-defined edge where the land starts to rise;	
	 Pastoral farmland in low-lying flat land by the coast, with generally limited ecological value and improved grassland, although ditches provide some habitat for birds. This land is generally devoid of woodland; 	
	 The surrounding lower hill slopes contain a patchwork of small fields, hedgerows and woodland including small deciduous woodland blocks and conifer plantation. The woodland at Ynys-hir RSPB reserve supports many species typical of Welsh oak woodlands; 	
	The picturesque qualities of the landscape lead to a series of large houses in landscaped grounds on hill slopes, with views over the coast;	
	Surrounding mountains, including within Snowdonia National Park, form a dramatic backdrop and contrast with the flat coastal and valley floodplain;	
	Archaeological remains, hill forts and remains of industrial heritage including mining are present;	
	There are multiple designations for nature conservation of importance for birds, estuarine, raised bog habitats and woodlands.	
	The Dyfi Estuary, network of major drains including the Afon Leri, Afon Clettwr and Afon Ddu, and the coastline bordering the study area to the west are within NRW's Marine Character Area 15 (MCA15): Cardigan Bay (North) and Estuaries. The study area occupies only a very small proportion of MCA15. Characteristics of MCA15 of relevance to the study area include: extensive beaches and sand dunes along the coast and saltmarsh in the estuaries, many of which are of conservation importance, and there is evidence of exposed intertidal peats and submerged forest deposits, such as the petrified remains of trees at Ynyslas and in the Dyfi Estuary. The coast is an open landscape of which the perceptual qualities can change dramatically in response to varying weather conditions. There are expansive views across the beach, dunes and grazing marsh hinterland with mountains providing a backdrop. The area attracts leisure and tourism and there is tourism related infrastructure along the cost including many caravan parks. The Dyfi Estuary is cited as providing evidence for environmental changes through the Holocene epoch, and being of considerable value for wetland birds.	

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Topic – receptor / resource	Summary of baseline	Challenges / Objectives / Priorities
Landscape and visual (continued)	A review of LANDMAP (NRW, 2022d) has been undertaken within the study area:	
	Visual and sensory category: four land types are identified within the study area according to LANDMAP including coastal (the Dyfi Estuary, saltmarsh and dunes); flat lowland/levels (Cors Fochno and reclaimed agricultural land); rolling lowland (a woodland and farmland mosaic between Taliesin and Glandyfi); and the urban area of Borth. Borth and the Dyfi saltmarsh are described as having a moderate character, scenic quality and overall visual and sensory value. The Dunes at Ynyslas are described as having a high character, scenic quality and overall visual and sensory value. All other areas, which comprises the majority of the study area (Dyfi Estuary, Cors Fochno, the agricultural land and rolling lowland) are classed as 'outstanding' for both character and scenic quality and for overall visual and sensory value.	
	• Geological Landscape category: LANDMAP identifies the land within the study area as largely Coastal Landscape, with the exception of pockets of Lowland hills and valleys along the A487. The south western part of the study area is classed as having an overall evaluation of 'Outstanding' including: 1) Borth Sands for its example as a classic storm beach with sand-dominated foreshore and storm gravel and cobble beach, and an extensive Holocene submerged forest. Coastal flood defence works are noted as a significant threat to the features of the area. 2) Ynys Tachwedd blown sand spit landward of Borth Sands and extending into the Dyfi Estuary at Ynyslas. 3) Cors Fochno for Quaternary stratigraphy and as one of the finest raised bogs in Britain as a result of peat formation. Peat has been extracted from here in the past. All have presence of Geological Conservation Review (GCR) sites / SSSI features of national / international importance, which should be maintained in a favourable condition. The Afon Dyfi Estuary has a 'high' overall classification for geological landscape as part of the estuary system shows features related to the geomorphology of the adjacent Dyfi SSSI; and the remaining eastern / central land is classed as 'moderate' value.	
	• Landscape habitats category: LANDMAP identifies the broad habitat types within the study area as marine offshore shallow waters (Dyfi Estuary and Borth Sands); coastal intertidal and sand dune (bordering Dyfi Estuary and Borth Sands respectively); peat bog at Cors Fochno; and the Glandyfi woodland mosaic in pockets along the A487, all of which are classed as having an overall 'outstanding' value. There is also grassland habitat in the south, east and centre amounting to approximately 50% of the study area, which is classed as high-moderate value, with the highest value as a result of the field drainage system of ditches. The urban area of Borth is classed as low value in terms of landscape habitat. The Dyfi Estuary is cited as an internationally important example of a sandy estuary with a spit at the mouth and tidal meanders, whilst the coastal intertidal saltmarshes behind support pioneer and successional communities including rare transitions from saltmarsh to freshwater bog. The Ynyslas dunes are the largest sand dune complex in Ceredigion and contain all stages of dune development including the strand line, yellow and grey dunes and dune slacks; and the Ynyslas dunes as well as Cors Fochno support important species of fungi, mosses, liverworts and rare invertebrates. The Glandyfi woodland mosaic supports a diverse range of flora including nationally scarce bryophytes and lichens and several species of fern. There are areas of managed coniferous plantation which LANDMAP recommends are re-planted with native species when felled.	
	 Historic landscape category: within the study area the landscape of the Dyfi Estuary and Borth beach has largely been formed by tidal action although there is isolated evidence of human intervention including coastal structures, sea defences and wrecks such as the Hulks at Ynyslas Scheduled Monument; this area is valued as 'outstanding' in LANDMAP for its in-tact nature and very good condition with very little development. Further inland, human intervention has occurred through draining to reclaim the land for agriculture, and small settlements, however this land still has an 'outstanding' value through LANDMAP for its cohesive character, presence of Cors 	

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Topic - receptor / Summary of baseline **Challenges / Objectives / Priorities** resource Landscape and Fochno raised bog and intact character with little modern development intrusion. The settlement of Borth is the one area not classed as having an 'outstanding' historic landscape value according visual to LANDMAP; this area has a 'moderate' value due to the extensive impact of tourism and (continued) modern development. **Cultural landscape services category**: The Dyfi Estuary and associated saltmarsh, Borth Sands, Cors Fochno and agricultural land are described as having wild and tranquil perceptual and sensory qualities, a strong sense of place, and attractive views in and out. 75% of this land is classed as 'undisturbed' under the Wales Tranquil Area Assessment. Rolling Lowland between Taliesin and Glandyfi is described as having a strong sense of place but with some disturbance according to the Wales Tranquil Area Assessment. The urban area of Borth is described as having a moderate sense of place and attractive views out. Special Landscape Area The project study area is located within Special Landscape Area (SLA) 01 as identified in the Ceredigion Local Development Plan 2007-2022 (LDP1, adopted 2013), and SLA 12 adjoins to the south east. A replacement LDP (LDP2) is in progress at the time of writing. Planning Policy DM18 states that development in SLAs should not cause significant damage to, and where possible should enhance, the valued visual, historic, geological, ecological and cultural characteristics of the SLA. Ceredigion County Council used the resource LANDMAP to inform Supplementary Planning Guidance (SPG) 'Ceredigion Local Development Plan (2007 – 2022): Special Landscape Areas', which was adopted 24th April 2014. Ceredigion County Council's Special Landscape Areas SPG describes SLA 01 as: Open landscape with a sense of wilderness and extensive views to the surrounding higher ground of Snowdonia National Park to the north and Northern Ceredigion Uplands to the south; • Dynamic landscape reflecting its tidal nature and close relationship with the estuary. The sinuous estuary contrasts with the saltmarsh behind with its linear drainage, road and railway development; • There are a range of landscape types including sand dunes, raised mire, reclaimed marshland (used as farmland), grassland, broadleaved woodland and a drain network. Despite this it retains a cohesive character; Cors Fochno is an important example of raised mire; Includes Lower Borth coastal resort and evidence of tourism, which has partly degraded the dune system; and It is a landscape of the highest quality and importance reflected in the range of national and international nature conservation designations. **Visual Amenity** Users of PRoWs in the study area could be visual amenity receptors, including: through site along left bank of Afon Leri (footpath Borth 2/29 and Ceredigion Coastal Path) with a connecting route to Borth Sands via footpath 2/5 and bridleway Borth 2/2; to the estuary by footpath 2/30, footpath 5/43 and restricted bridleway 2/3; along the left bank of Afon Clettwr (footpath 3/22) and small connecting

Topic – receptor / resource	Summary of baseline	Challenges / Objectives / Priorities
Landscape and visual	footpaths around the village of Llancynfelyn. The Wales Coast Path (footpath 5/44) is close to the southern boundary of the site, beyond which the land rises to the south.	
(continued)	There are pockets of Registered Common Land and one Dedicated Woodland (which are open access land under the CROW Act) within the study area. Users of these areas could be visual amenity receptors.	
	Dyfi NNR lies in the west of the study area and includes Ynyslas Dunes, Cors Fochno bog and the Dyfi Estuary. Although a designation specifically to protect wildlife rather than landscape character, NNRs can attract visitors who would become potential visual receptors. In addition, the range of landscape types and national and international nature conservation designations are noted as key features of SLA 01. The visitor centre at Ynyslas (NRW, 2022d), walking trails, shop and car parks attest to the value of the nature reserve with visitors.	
	Ynys-hir RSPB nature reserve in the north east is open to the public, with access along marked trails. The nature reserve covers 800ha and includes a wide range of habitats, including a peat bog which the RSPB restored from a conifer plantation. The reserve attracts visitors, who could be visual amenity receptors.	
	Users of the railway within the study area are also potential visual amenity receptors; there are open views from the railway across much of the study area including the Dyfi estuary and saltmarsh; RSPB Ynys-hir reserve; pastoral farmland, Cors Fochno and Borth and Ynyslas Golf Club. Borth railway station offers wide views across the study area.	
	There are many hotels, B&Bs, caravan parks and other holiday accommodation within the study area, particularly in and around the settlement of Both. These along with PRoWs, visitor centres and other recreational opportunities such as Borth and Ynyslas Golf Club show that the area is highly valuable to visitors. These visitors will vary in susceptibility to change in views as some will be engaged in activities of which enjoyment of the view is a key part of the activity; whilst others will be primarily focussed on the activity that they are partaking in.	

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