

Ecology

Mudflats are those glistening expanses of mud uncovered by the receding tides in estuaries and sheltered bays. They originate from years of slow accumulation of tiny particles of silts and clays washed down from rivers. Despite their apparent barrenness on the surface, there can be over 10 million microscopic worms in a square metre of mud. Other more obvious life in mud includes bivalve molluscs and large numbers of rag and lug worms. All this life within mud provides an important larder of food for birds and fish. Estuarine mudflats form a natural protection from wave energy for nearby saltmarsh, and swathes of the only flowering marine plant, seagrass, are also found on mud in Pembrokeshire.



Where in Pembrokeshire?

In the Milford Haven waterway, mudflats are distributed as far as the tidal limits of the western and eastern Cleddau, along the main channel, in large bays such as Angle Bay and in the many Pills flowing into the waterway. In Newport estuary, mudflats extend from above the road bridge to the estuary mouth, changing to sandy mud towards the estuary opening. Additional small areas of mud are found in Solva harbour, Porth Clais and near Poppit sands. Muddy habitat is also found either side of the breakwater at Goodwick and within the harbour at Lower Town, Fishguard. Mudflats on the south side of the Teifi estuary are also in Pembrokeshire.

Side profile of mud showing rag worms in burrows © CCW

Outline Distribution map (1985 - 2004)

Data Source: CCW Phase I intertidal survey



Why is it in trouble?

There has been a great deal of loss and degradation of mudflat habitat in Pembrokeshire to date as a result of industrial and commercial development. One study indicated a 31% loss in Coshaston Pill, 45% loss in Hubberston Pill and 11% loss in Pembroke River. Other areas not included in this study have also experienced loss of mudflats. Coastal defence, which is widespread in Pembrokeshire, will either have resulted in further loss of mudflats or affected the quality of remaining mudflat. Current threats to mudflat include:

- Coastal engineering and land claim
- Dredging and spoil dumping
- Bait digging
- Pollution

What's being done?

Most mudflats within Pembrokeshire fall within designated sites (SSSI or SAC) and are protected. As a result there is a requirement for a formal consultation by statutory bodies with Countryside Council for Wales (CCW), where activities and developments occur within these sites. There is ongoing improvement of treatment of waste-water and outfalls by the Environment Agency and Dwr Cymru, as well as an Environment Agency review of all existing and future discharge consents to ensure protection of SAC features, including mudflats. Marine pollution contingency planning is on-going in Pembrokeshire in preparation for any future pollution incident. CCW promotes measures to reduce nutrient rich agricultural run-off through the Tir Gofal scheme.

What can you do to help?

Love your mudflats! Mudflats are a national asset to be treasured, and are not 'unsightly' and best covered in land-fill or transformed as a marina development. Mudflats have their own distinctive beauty; they form an important part of a natural filter system for our coastal seas, and are teeming with wildlife. Many bird and fish species depend on mudflats for their survival. The amount of biological material makes this habitat one of the most productive in the UK, it's comparable with that of a tropical rainforest. Take opportunities to wax lyrical with fellow bait diggers, local residents and visitors. Mudflats need YOU! You can also follow existing codes of conduct for bait digging (e.g. back-fill holes, take only what you need, and avoid seagrass beds).

For more information on this habitat or how you can get involved with specific projects see part 2 of the plan or contact the Biodiversity Officer.

FREEPOST

Freepost RLXJ-HAHU-BCAK Pembrokeshire Biodiversity Partnership, c/o Countryside Unit, Development Planning, 1B County Hall, Haverfordwest, SA61 1TP

Tel: 0790 154 1728

Fax: 01437 776496

www.biodiversitywales.org.uk

Ecoleg Traethellau llaid yw'r enw a roddir ar y gwastadeddau sgleiniog o laid sy'n cael eu dadorchuddio gan lanw sy'n cilio mewn aberoedd a baeau cysgodol. Maen nhw'n deillio o flynyddoedd o gronni araf gronynnau mân o silt a chlai sydd wedi eu golchi i lawr o afonydd. Er eu bod nhw'n ymddangos yn ddiffaith ar yr wyneb, fe all fod dros 10 miliwn o fwydon microsgopig mewn un metr sgwâr o laid. Mae'r mathau eraill o fywyd mwy amlwg mewn llaid yn cynnwys molysgiaid sydd â dwy gragen a nifer sylweddol o abwyd melys ac abwyd du. Mae'r holl fywyd yma sydd mewn llaid yn golygu ei fod yn storfa fwyd dda ar gyfer adar a physgod. Mae traethellau llaid yr aberoedd yn amddiffynfa naturiol i forfeydd cyfagos rhag ynni'r tonnau ac mae rhwymynnau o'r unig blanhigyn morol sy'n blodeuo, sef morwellt, hefyd i'w gweld ar laid yn Sir Benfro.

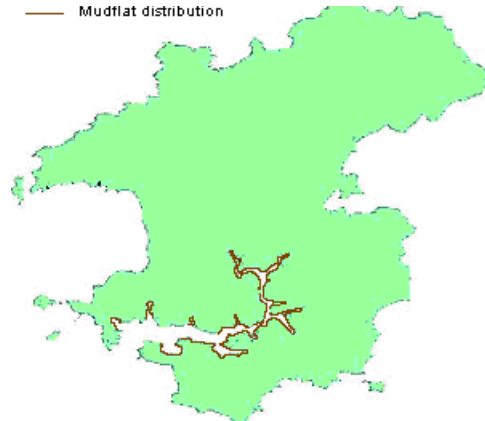


Ble yn Sir Benfro? Yn nyfrffordd Aberdaugleddau, mae'r traethellau llaid i'w gweld mor bell â therfynau llanw gorllewin a dwyrain y Cleddau, ar hyd y brif sianel, mewn baeau mawr fel Bae Angle ac yn y Pilliau niferus sy'n llifo i mewn i'r ddyfrffordd. Yn aber Trefdraeth, mae'r traethellau llaid yn ymestyn o'r ardal uwchben pont yr heol i geg yr aber, gan newid yn laid tywodlyd tuag at agoriad yr aber. Ceir mannau bach ychwanegol o laid ym mhorthladd Solfach, Porth Clais a gerllaw traethau Poppit. Ceir cynefin mwdlyd hefyd y naill ochr i'r morglawdd yng Ngwdig ac o fewn y porthladd yn Lower Town, Abergwaun. Mae traethellau llaid ar ochr ddeheuol aber y Teifi hefyd yn Sir Benfro.

Side profile of mud showing rag worms in burrows © CCW

Map Dosbarthiad Amlinellol (1985 - 2004)

Ffynhonnell data:
Arolwg rhynglanw Cam 1 CCGC



Pam ei fod mewn trafferth? Daeth tipyn sylweddol o golled a diraddiad i ran cynefin y traethellau llaid yn Sir Benfro hyd yn hyn o ganlyniad i ddatblygiadau diwydiannol a masnachol. Roedd un astudiaeth yn awgrymu colled o 31% ym Mhill Cosheston, colled o 45% ym Mhill Hubberston a cholled o 11% yn Afon Penfro. Mae ardaloedd eraill nad oedd yn rhan o'r astudiaeth hon hefyd wedi gweld colled yn eu traethellau llaid. Fe fydd amddiffyniad arfordirol, sy'n rhywbeth eang yn Sir Benfro, naill ai wedi golygu mwy o golledion i'r traethellau llaid neu wedi effeithio ar ansawdd ar y traethellau llaid sydd ar ôl. Mae'r pethau sy'n bygwth traethellau llaid ar hyn o bryd yn cynnwys:

- Hawlio tir a pheirianneg arfordirol
- Treillio a thomennu rwbel
- Palu am abwyd
- Llygredd
- Pysgodfeydd masnachol

Beth sy'n cael ei wneud? Mae'r rhan fwyaf o draethellau llaid yn Sir Benfro yn syrthio o fewn safleoedd dynodedig (SoDdGA neu ACA) ac maen nhw'n cael eu gwarchod. O ganlyniad, mae angen i gyrrff statudol ymgynghori'n ffurfiol gyda Chyngor Cefn Gwlad Cymru (CCGC), lle mae gweithgareddau a datblygiadau yn digwydd o fewn y safleoedd hyn. Mae yna welliant parhaus yn y ffordd y mae golchion ac arllwysfeydd yn cael eu trin gan Asiantaeth yr Amgylchedd a Dŵr Cymru, ac mae Asiantaeth yr Amgylchedd yn adolygu pob caniatâd am ryddhad ar hyn o bryd ac yn y dyfodol i sicrhau bod nodweddion ACA yn cael eu gwarchod, gan gynnwys traethellau llaid. Mae cynlluniau wrth gefn ar gyfer llygredd morol yn parhau yn Sir Benfro i baratoi ar gyfer unrhyw ddigwyddiad a allai ddod i'r amlwg yn y dyfodol yn ymwneud â llygredd.

Beth fedrwyd chi ei wneud i helpu? Carwch eich traethellau llaid! Mae traethellau llaid yn ased cenedlaethol i'w drysori, ac nid ydynt yn 'salw' nac yn well wedi eu gorchuddio mewn tirlenwi neu eu trawsnewid yn ddatblygiad marina. Mae gan draethellau llaid eu harddwch nodweddiadol eu hunain; maen nhw'n rhan bwysig o system ffiltro naturiol ar gyfer moroedd ein harfordir ac maen nhw'n llawn bywyd gwyllt. Mae llawer o rywogaethau adar a physgod yn dibynnu ar draethellau llaid i oroesi. Oherwydd y nifer o rywogaethau gwahanol sy'n cael eu cynnal ar draethellau llaid mae'r cynefin hwn yn un o'r mwyaf amrywiol yn y Deyrnas Gyfunol a gellir cymharu'r cynhyrchiant yma gyda chynhyrchiant fforest law drofannol. Manteisiwch ar y cyfle i ddweud eich dweud wrth bobl sy'n palu am abwyd, trigolion lleol ac ymwelwyr. Mae eich hangen CHI ar y traethellau llaid! Fe allwch ddilyn codau ymddygiad sydd eisoes yn bodoli hefyd ar gyfer palu am abwyd (e.e. llenwch dyllau yn ôl, peidiwch mynd â mwy nag sydd angen, ac osgowch welyau morwellt).

MUDFLATS ● GWASTAEDDAU LLAI

The actions listed below aim

- to maintain the current extent and distribution of mudflats in Pembrokeshire through ensuring there isn't loss or degradation of mudflats;
- to maintain or enhance the current quality of mudflats;
- and where feasible to restore mudflat habitat.



	ACTION	PARTNERS	DATE	DETAILS	Link to...
1	Raise awareness and understanding of the value of mudflats as a wildlife haven and an economic resource within local planning authorities, the coastal cell group, the public and also within organisations with a statutory marine remit.	EAW, PCNPA, CCW, PCC, SWSFC, SWWFC WTSWW	Launch 04	Through public launch of plan, local walks, press release, local radio, Mud Festival event? Suitable on site interpretation.	PBP AWG
			2006	Include mudflats in biodiversity workshop within local planning authorities and coastal cell groups	PBP DAG Coast Cell Groups
2	Safeguard mudflats by incorporating necessary policies into future strategies and plans (Joint Unitary Development Plan).	PCC, PCNPA	On going	Ensure that new plans are properly assessed for implications for European Marine Sites.	PBP DAG
3	Ensure conservation needs of mudflats are taken into account when assessing marine developments or changes in activities.	CCW, EAW, PCNPA, PCC, SWSFC,	On going	Ensure that environment information in support of a development proposal sufficiently addresses potential impacts on mudflats, and any relevant mitigation measures.	PBP DAG
				Ensure that before consent is granted for development proposals or activities, that advice from statutory bodies and supporting environmental information includes potential impacts on mudflats and is properly considered.	PBP DAG
4	Ensure that the conservation needs of mudflats are taken into account in Shoreline Management Plans to guarantee there isn't any loss or degradation in the habitat as a result of development / coastal engineering.	PCC, CCW, EAW, PCNPA	2006	Include effective provisions for biodiversity and consideration of potential for habitat restoration in any review of the Shoreline Management Plan.	Coast Cell Groups
			Ongoing	Ensure that new shoreline management plans are properly assessed for implications for European Marine Sites and habitats listed in the section 74 of the CROW Act 2000 (which includes mudflats).	Individual consultation
5	Ensure that Marine pollution contingency planning and response takes full account of the sensitivities and conservation requirements of mudflats.	PCNPA, CCW, EAW, MCA, DEFRA, (i.e. WWEG), PCC	On going	Preparation and regular review of WWEG and local authority contingency plan, maintenance of resources and sensitivity database.	WWEG
6	Reduce both land and marine sources of pollution.	EAW, DCWW, CCW	2010	Completion of Environment Agency review of consents.	EAW
			On going	Continued improvement to waste water treatment and outfalls by the Environment Agency and Dwr Cymru.	EAW DCWW
				Promotion of measures, that address reduced water quality as a result of agricultural run-off, through the Tir Gofal and other schemes.	PBP FAG
				Local implementation of the Water Framework Directive.	EAW

	ACTION	PARTNERS	DATE	DETAILS	Link to...
7	Manage bait digging to minimise impacts on mudflats	PCNPA, CCW, PCC	2010	Assess bait digging impacts and resources, with a view to establishing a local scheme of management that minimises bait digging impacts on mudflats.	CCW
8	Monitor the extent and quality of mudflats.	CCW, EAW	Ongoing	By linking to Pembrokeshire Marine SAC and intertidal SSSI monitoring programmes.	CCW
				By monitoring mudflats which fall outside of protected sites, through the Species Challenge Fund (volunteers or local college using an established methodology) or by CCW.	PEVN, PBP AWG

This plan contains all known information on May 2004, future schemes will be updated on the website plans. The whole plan will be reviewed in 2010.

INTERACTION WITH OTHER HAPs AND SAPs

Management for mudflats is compatible with that for Seagrass beds and Sheltered Muddy Gravel.

A glossary for the abbreviations used in this plan can be found in the full Local Biodiversity Action Plan available from the website or the biodiversity officer.

Website: www.biodiversitywales.gov.uk

Tel: 0790 154 1728