



## CITY AND COUNTY OF SWANSEA

### NOTICE OF MEETING

You are invited to attend a Meeting of the

### GOWER AONB PARTNERSHIP GROUP

**At:** Llanrhidian Holiday Park, Llanrhidian, Swansea

**On:** Monday, 2 March 2015

**Time:** 7.00 p.m.

### AGENDA

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- 15 Annual Forum Discussions. (Verbal)
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**Patrick Arran**  
**Head of Legal, Democratic Services & Procurement**  
**23 February 2015**

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**Contact: Jeremy Parkhouse**  
**01792 636016**

## GOWER AONB PARTNERSHIP GROUP (6)

### Councillors

#### Labour Councillors: 4

Mark C Child	P Lloyd ( <b>Chair</b> )
Jan P Curtice	Jane E C Harris

#### Liberal Democrat Councillor: 1

Richard D Lewis	
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#### Independent Councillor: 1

Keith E Marsh	
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#### Officers:

Kim Flanders	Planning Policy and Environment Manager, Planning Services
Chris Lindley	Gower AONB Team Leader, Planning Services
Huw Lloyd	Gower AONB Ranger, Planning Services
Mike Scott	Gower AONB Officer
Jeremy Parkhouse	Democratic Services

#### For Information Email Only:

Phil Roberts	Director of Place
Ryan Thomas	Planning Control Manager
Phil Holmes	Head of Regeneration & Planning
Chris Dale	Countryside Access Team Leader (Rights of Way), Planning Services

#### Total Copies Needed:

32
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### GOWER AONB Partnership Group

Name	Organisation	Address	Post Code	Telephone
Gordon Howe (Vice-Chair)	Gower Society	Annie's Stables, Middleton, Rhossili, Swansea	SA3 1PJ	01792 390560 <a href="mailto:mewslade@aol.com">mewslade@aol.com</a>
Roger Button	Tourism Swansea Bay	Pitton Cross Caravan and Camping Park, Pitton Cross, Rhossili	SA3 1PN	01792 390593 <a href="mailto:rogerpitton@yahoo.co.uk">rogerpitton@yahoo.co.uk</a>
Alan Woodman	Representing Forestry & Farming	57, Gowerton Road, Three Crosses, Swansea	SA4 3PY	07970870490 <a href="mailto:woodman@lonisa.fsnet.co.uk">woodman@lonisa.fsnet.co.uk</a>
Barbara Parry	Gower Walking Groups	127 Broadmead, Dunvant, Swansea	SA2 7RJ	01792 520293 <a href="mailto:barbara19652@hotmail.com">barbara19652@hotmail.com</a>
Stephen Heard	Gower Riding Club / Port Eynon Community Council	Bowstones, Berry Lane, Scurlage	SA3 1BJ	<a href="mailto:steveheard1@aol.com">steveheard1@aol.com</a>
Community Councillor P R Hood – Williams	Upper Killay Community Council	50, Pant-y-Dwr, Three Crosses, Swansea	SA4 3PG	<a href="mailto:Paxton.hood-williams@swansea.gov.uk">Paxton.hood-williams@swansea.gov.uk</a>
Sue Hill	Glamorgan-Gwent Archaeological Trust	Heathfield House, 91, Heathfield, Swansea	SA1 6EL	01792 655208 <a href="mailto:sue@ggat.org.uk">sue@ggat.org.uk</a>
John Davies	BayTrans			01792 205071 <a href="mailto:johnbaytrans@btinternet.com">johnbaytrans@btinternet.com</a>
Peter Lanfear	Gower Commoners Association	31, Pennard Drive, Pennard, Swansea	SA3 2BL	01792 233624 <a href="mailto:peter.lanfear@gmail.com">peter.lanfear@gmail.com</a>
Community Councillor Rod Cooper	Llanrhidian Higher Community Council	The Lodge, Park Road, Penclawdd, Swansea	SA4 3FQ	<a href="mailto:rcooper@yllety.F9.co.uk">rcooper@yllety.F9.co.uk</a>
Ceri Daugherty	Natural Resources Wales	Llanion House, Llanion Park, Pembroke Dock, Pembrokeshire	SA72 6DY	01792 634981 <a href="mailto:ceri.daugherty@cyfoethnaturlolcymru.gov.uk">ceri.daugherty@cyfoethnaturlolcymru.gov.uk</a>
Rebecca Wright	Natural Resources Wales	Maes Newydd, Britannic Way West, Llandarcy, Neath	SA1 8PG	01792 634966 <a href="mailto:rebecca.wright@cyfoethnaturlolcymru.gov.uk">rebecca.wright@cyfoethnaturlolcymru.gov.uk</a>

## Disclosures of Interest

To receive Disclosures of Interest from Councillors and Officers

### Councillors

**Councillors Interests are made** in accordance with the provisions of the Code of Conduct adopted by the City and County of Swansea. You must disclose orally to the meeting the existence and nature of that interest.

**NOTE:** You are requested to identify the Agenda Item / Minute No. / Planning Application No. and Subject Matter to which that interest relates and to enter all declared interests on the sheet provided for that purpose at the meeting.

1. If you have a **Personal Interest** as set out in **Paragraph 10** of the Code, you **MAY STAY, SPEAK AND VOTE** unless it is also a Prejudicial Interest.
2. If you have a Personal Interest which is also a **Prejudicial Interest** as set out in **Paragraph 12** of the Code, then subject to point 3 below, you **MUST WITHDRAW** from the meeting (unless you have obtained a dispensation from the Authority's Standards Committee)
3. Where you have a Prejudicial Interest you may attend the meeting but only for the purpose of making representations, answering questions or giving evidence relating to the business, **provided** that the public are also allowed to attend the meeting for the same purpose, whether under a statutory right or otherwise. In such a case, you **must withdraw from the meeting immediately after the period for making representations, answering questions, or giving evidence relating to the business has ended**, and in any event before further consideration of the business begins, whether or not the public are allowed to remain in attendance for such consideration (**Paragraph 14** of the Code).
4. Where you have agreement from the Monitoring Officer that the information relating to your Personal Interest is **sensitive information**, as set out in **Paragraph 16** of the Code of Conduct, your obligation to disclose such information is replaced with an obligation to disclose the existence of a personal interest and to confirm that the Monitoring Officer has agreed that the nature of such personal interest is sensitive information.
5. If you are relying on a **grant of a dispensation** by the Standards Committee, you must, before the matter is under consideration:
  - i) Disclose orally both the interest concerned and the existence of the dispensation; and
  - ii) Before or immediately after the close of the meeting give written notification to the Authority containing:

- a) Details of the prejudicial interest;
- b) Details of the business to which the prejudicial interest relates;
- c) Details of, and the date on which, the dispensation was granted; and
- d) Your signature

## **Officers**

### **Financial Interests**

1. If an Officer has a financial interest in any matter which arises for decision at any meeting to which the Officer is reporting or at which the Officer is in attendance involving any member of the Council and /or any third party the Officer shall declare an interest in that matter and take no part in the consideration or determination of the matter and shall withdraw from the meeting while that matter is considered. Any such declaration made in a meeting of a constitutional body shall be recorded in the minutes of that meeting. No Officer shall make a report to a meeting for a decision to be made on any matter in which s/he has a financial interest.
2. A "financial interest" is defined as any interest affecting the financial position of the Officer, either to his/her benefit or to his/her detriment. It also includes an interest on the same basis for any member of the Officers family or a close friend and any company firm or business from which an Officer or a member of his/her family receives any remuneration. There is no financial interest for an Officer where a decision on a report affects all of the Officers of the Council or all of the officers in a Department or Service.

## CITY AND COUNTY OF SWANSEA

### MINUTES OF THE GOWER AONB PARTNERSHIP GROUP

HELD AT LLANRHIDIAN HOLIDAY PARK ON MONDAY, 8 DECEMBER  
2014 AT 7.00 PM

**PRESENT:** Councillor P Lloyd (Chair) presided

<b>Councillor(s)</b>	<b>Councillor(s)</b>	<b>Councillor(s)</b>
J P Curtice J E C Harris	R D Lewis	K E Marsh

#### **Representing Organisations:**

R Button	-	Tourism Swansea Bay
S Heard	-	Gower Riding Club/Port Eynon Community Council
Community Councillor P R Hood-Williams	-	Upper Killay Community Council
G Howe	-	Gower Society
B Parry	-	Gower Walking Festival
P Lanfear	-	Gower Commoners Association
Alan Woodman	-	Forestry and Farming
Community Councillor R Cooper	-	Llanrhidian Higher Community Council
J Davies	-	Bay Trans
R Wright	-	NRW

#### **Officers:**

K Flanders	-	Planning Policy and Environment Manager
M Scott	-	Gower AONB Officer
J Parkhouse	-	Democratic Services Officer

#### **Also Present:**

I Button	-	Rhossili Community Council
E Cowley	-	Dunraven Farm, Burry Green
M Cowley	-	Dunraven Farm, Burry Green
A Flanagan	-	Gower Power Co-operative
L Mabbett	-	Manselfold Farm, Llanrhidian

#### 30 **APOLOGIES FOR ABSENCE.**

Apologies for absence were received from Councillor M C Child, C Lindley and H Lloyd.

31 **WELCOME AND INTRODUCTIONS.**

The Chair, who was attending his first Partnership Group Meeting, welcomed all present to Llanrhidian Holiday Park, Llanrhidian and commenced proceedings.

32 **DISCLOSURES OF PERSONAL AND PREJUDICIAL INTERESTS.**

In accordance with the provisions of the Code of Conduct adopted by the City and County of Swansea, no interests were declared.

33 **PUBLIC QUESTION TIME. (10 MINUTES - QUESTIONS MUST BE RELATED TO AGENDA ITEMS)**

The public present indicated that they wished to ask questions in relation to items listed on the agenda.

**RESOLVED** that the questions be asked when each item is being discussed.

34 **MINUTES.**

**AGREED** that the Minutes of the Gower AONB Partnership Steering Group Meeting held on 22 September 2014 be accepted as a correct record subject to the following amendment:

Add the apologies of Community Councillor R Cooper - Llanrhidian Higher Community Council and R Wright - NRW.

35 **MATTERS ARISING FROM THE MINUTES.**

**Broadband on Gower**

R Button highlighted that very little progress had been made in relation to improving the Broadband service, particularly in Rhossili. He stated that some local businesses had to move back to Swansea due to the insufficient Broadband speed and other businesses were encountering significant problems as a result.

It was added that Edwina Hart AM had been contacted and had highlighted the issue with BT. It was hoped that the situation would be overcome very quickly.

36 **GOWER AONB - AFFORDABLE HOUSING.**

A Woodman presented a report on affordable housing in Gower. He made reference to Policy EV 26 of the Unitary Development Plan which states that "within the Gower AONB, the primary objective is the conservation and enhancement of the area's natural beauty". In addition it added that "Government guidance requires decisions affecting AONBs to favour conservation of the natural beauty of the landscape, whilst having regard to the social and economic wellbeing of the area".



He further outlined that if the Gower AONB is required to contribute to future housing needs, then that housing must facilitate the conservation and enhancement of the AONB by providing affordable housing for rural workers who contribute to these objectives. Executive housing for people who make lifestyle choices to live on Gower, whilst daily commuting off the AONB for work, education, etc., does not contribute or conserve the area and must be resisted. National planning policy recognises the detrimental impact that commuting has on the environment. Traditionally people employed in the rural economy are amongst the lowest wage earners. It is critical for the future protection, conservation and wellbeing of Gower AONB that sufficient affordable housing, suitably located, for rural workers is provided. For these reasons it is critical that sufficient affordable housing for local workers is a central objective of future planning policy.

It was further commented that the forthcoming Local Development Plan should resist residential development within the AONB except for affordable housing needed for those workers employed within the AONB rural sector. Furthermore, building affordable housing away from existing settlements should be considered favourably where such development would support an established existing rural business site.

It was commented that the current policy of the Council was in favour of tourism but not of local workers. Any policy going forward should consider local people and the Authority needed to adopt a clear policy regarding affordable housing.

Detailed discussions followed and centred around the following:

- The LDP was currently out for consultation and having allocations on Gower which targeted affordable and local needs was a priority of the Authority. The consultation process will end on 16 January 2015 and the Authority is trying to address the issue through the LDP in order to support the rural economy;
- There are a number of houses on Gower that still have agricultural conditions attached to the property and those owners who had attempted to get the condition removed. The condition puts a responsibility on the owners to place the properties for sale as agriculturally based dwellings. This situation should be addressed prior to agreeing any policies;
- Houses for rent, shared ownership and converting properties to holiday lets should all be considered;
- Local people must accept that if they have planning permission due to their agricultural based job they must accept the position and the costs and may have to sell the property for less money. New policies need careful consideration;
- The only way the Authority can manage the situation regarding social housing is having control over the issue and should look at the profitability of rural businesses. Businesses should also consider using the industrial estate at Crofty;
- It is important to tie in the comments of the Steering Group to the City and County of Swansea priorities.

It was outlined that the LDP Map with proposed candidate sites was available for inspection at the Civic Centre.

It was proposed that the Gower AONB Officer draft a letter on behalf of the Steering Group to submit to the Planning Policy Team.

**RESOLVED** that:

- (1) the contents of the report be noted;
- (2) the Gower AONB Officer circulates a draft letter regarding affordable housing on behalf of the Steering Group to the Planning Policy Team.

### 37 **RENEWABLE ENERGY AND CLIMATE CHANGE.**

A Woodman presented a report on renewable energy and climate change. He outlined that the need to use renewable energy was a more recent pressure affecting many protected areas, from within and outside their boundaries. Government requirements to reduce carbon dioxide emissions and the need to secure alternative sources of energy would have an increasing impact upon development within Gower, its landscape and seascape.

Currently the Unitary Development Plan governing the Gower AONB gives no clear framework over policy for deciding applications for renewable energy installations within the AONB. However, the Gower AONB Design Guide does give some guidance. It was added that an increasing number of houses within the AONB have domestic scale solar panel installations either on the roof or within their gardens. Already a number of small commercial ground mounted solar arrays have received planning approval and an application for a large scale commercial array at Ilston was recently refused planning permission by the Authority, which may be subject to appeal.

It was added that wind turbines and tidal regeneration, both within and outside the AONB boundaries could impact significantly on the landscape.

He added that the Gower AONB Partnership Steering Group should have a strong, clear policy on renewables and advise or lobby the Council in its development of the new Local Development Plan.

Mr A Flannagan circulated a leaflet which outlined the following in relation to renewable energy in the AONB:

- (i) Variety of types and sizes.
- (ii) Variety of ownership structures (i.e. where do the profits go?).
- (iii) Is it okay to export problems out of an area because it is beautiful?

- (iv) Food and energy security.
- (v) Is climate change a reality?
- (vi) Existing planning regulations.

He added that the Welsh Assembly Government were very progressive regarding renewable energy but he recognised that it is hard to generate income from the landscape. He added that it was important to innovate regarding future use of the land sensitively, particularly in these austere times.

It was stated that the LDP will include a renewable energy policy and these will be out for consultation early in 2015.

Members commented upon whether Gower was the correct area for introducing a model mixed economy, the amount of money Gower brings in to the economy of Swansea, how the land and food production is used effectively, i.e. should land be used for food production or providing renewable energy.

It was proposed that a subgroup be formed in order investigate the issues raised further.

**AGREED** that:

- (1) the contents of the report be noted;
- (2) a renewable energy subgroup be formed in order to formulate the draft policy of the Steering Group on renewable energy;
- (3) the subgroup reports its findings to the Steering Group in due course;
- (4) the membership of the subgroup be as follows: G Howe (Chair),  
A Woodman, P Lanfear and Councillor K E Marsh.

### 38 **WELSH GOVERNMENT DESIGNATED LANDSCAPES REVIEW.**

The Planning Policy and Environment Manager, on behalf of the Gower AONB Team Leader, presented an update report on the Welsh Government Designated Landscapes Review. It was outlined that the Steering Group response to stage 1 of the review as provided at Appendix 1. It was added that as part of issues and events around Wales, Welsh Government had arranged a workshop to discuss the review at Parkmill on 10 November 2014 and notes and conclusions from the meeting will be published on the Welsh Government website.

Furthermore, the Gower AONB Team Leader attended an evidence session along with the NAAONB Chief Executive (Howard Davies) and other Welsh AONBs on 21 November 2014 and draft notes from the session would be circulated shortly. The review panel were expecting to report back to the Minister for Natural Resources early in the New Year.

**AGREED** that the contents of the report be noted.

39 **GOWER AONB MANAGEMENT PLAN CONSULTATION.**

The Planning Policy and Environment Manager, on behalf of the Gower AONB Team Leader, presented a report on the Gower AONB Management Plan Consultation.

It was outlined that the public consultation on the Draft AONB Management Plan commenced on 10 October and closed on 19 December 2014. Invitations to comment had been sent to all email addresses on the AONB Partnership distribution list. There had also been a press release and a special edition of the AONB Newsletter had been distributed, focusing on the plan review which was available for comment on the Council's website.

It was added that a few responses had been received from organisations. Following the consultation, the intention is to review the plan in the light of the comments received and to formally adopt the plan during 2015.

**AGREED** that the contents of the report be noted.

40 **PLANNING MATTERS WITHIN THE GOWER AONB.**

G Howe (Vice-Chair) presented a report regarding planning matters within the Gower AONB. It was commented that the Group had been repeatedly told that it cannot discuss any matter that has in any way a planning aspect. In his opinion, that did not allow the Partnership to express any sort of collective view on many issues that affect the long term viability of the AONB. He added that the Group is chaired by the elected City and County of Swansea Councillor and has a total of six other elected Members. None of these Members are allowed to be seen to be "predetermining" any planning issues. As a consequence, in his opinion, some issues that affect to AONB are neither discussed nor commented upon by the Steering Group. On one occasion, the City and County of Swansea Members did leave the room and the remaining Members of the Steering Group were able to make an observation on a particular point. However, this procedure was not comfortable and it was procedurally difficult.

He added that another aspect of concern was the perceived lack of requested input from the AONB Officers into the weekly planning process. He commented that in his understanding, the Officers are rarely consulted upon what are often key planning issues that can affect the AONB. He noted that Mark Winder is recorded as very often having an input into planning applications (environmental, barn owl, bats, etc.) and the effect upon the AONB is minor in comparison with key planning issues. He questioned why the AONB Team are not consulted and had an input into planning issues that affect the AONB.

Members commented on the planning procedures and practices that they must follow, including those of predetermination. It was added that the Welsh Assembly Government were imposing changes upon Local Authorities in relation to planning matters, particularly management of planning committees. This could potentially reduce the number of planning committees within the City and County of Swansea to

one, therefore resulting in a number of elected Members not being part of the formal planning process. Further details will be available in the New Year.

It was added that matters applicable to the AONB were included in the AONB Design Guide guidance. In addition, any matters outside the Design Guide would result in Officers within the AONB Team being consulted.

**AGREED** that the contents of the report be noted.

41 **GOWER AONB RANGER REPORT - QUARTER 3 2014/2015.**

The Gower AONB Ranger Report for Quarter 3, 2014/2015 was provided for information. The Planning Policy and Environment Manager added that sadly, due to a reduction in funding, the contract of the Gower AONB Ranger would not be renewed at the end of March 2015. She added that this was in no way a reflection of the job undertaken by the Gower AONB Ranger but was as a result of the significant budget cuts being imposed upon the Council and NRW.

**AGREED** that the contents of the report be noted.

42 **SUSTAINABLE DEVELOPMENT FUND PANEL UPDATE REPORT.**

The Gower AONB Officer provided a verbal update on the Sustainable Development Fund Panel. He outlined that for this Financial Year the panel had committed their £70,000 budget in full. The Welsh Government had verbally confirmed that the panel would have a budget of £60,000 for the next Financial Year and of that amount, only £6,000 remained uncommitted. He added that an Annual Sustainable Development Fund Panel Report will be provided at the Gower AONB Partnership Annual Forum in 2015.

**AGREED** that the contents of the report be noted.

43 **GOWER AONB PARTNERSHIP STEERING GROUP - MEMBER TRAINING.**

It was reported that the National Association for AONBs had arranged a bespoke training event for members of Welsh AONB Partnerships. The training will take place on 26 and 27 January 2015 at Snowdonia National Park Study Centre, Plas Tan y Bwlch, Maentwrog. Members who were interested were requested to contact the Gower AONB Team.

44 **DATE AND TIME OF NEXT MEETING - 7 P.M. ON MONDAY, 2 MARCH 2015.**

**NOTED** that the next meeting be scheduled for 7.00 p.m. on Monday 2 March 2015. The Democratic Services Officer will circulate details of the venue in due course.

The meeting ended at 8.45 pm

**CHAIR**

# Agenda Item 6

## **Report of the Gower AONB Team Leader**

### **Gower AONB Partnership Steering Group – 2 March 2015**

#### **GOWER AONB MANAGEMENT PLAN – UPDATE**

The consultation period on the draft management plan ended on 19 December 2014.

Responses were received from the following organisations:

- Natural Resources Wales
- The National Trust
- The Gower Society
- The Countryside Management System (CMS) Consortium
- Swansea Bay Sustainable Travel & Tourism Partnership (Baytrans)
- Glamorgan Gwent Archaeological Trust
- Wildlife Trust for South and West Wales
- South Wales Police

The Council has also conducted an Integrated Impact Assessment on the Management Plan, which has made a number of recommendations for the final version.

Responses were also received from ten private individuals/businesses.

Gower AONB Team Leader is preparing a Consultation Report detailing the consultation and proposed amendments to finalise the Management Plan. This will be issued to the AONB Steering Group for approval.

The table below gives an indicative timetable for Council adoption of the final management plan as Supplementary Planning Guidance (SPG).

<b>Date</b>	<b>Activity</b>
19 Dec 2014	Consultation end date
February 2015	Preparation of consultation report and final management plan
6 March	Issue consultation report and final management plan to Steering Group – for comments/approval
27 March	Deadline for Steering Group comments/approval
30 March-10 April	Preparation of Corporate Briefing Paper
10 April	Internal deadline for Corporate Briefing Paper
21 April	Corporate Briefing
May/June (date TBC)	Planning Committee – to confirm adoption of Plan and SPG
June (date TBC)	Gower AONB Partnership annual meeting

**Chris Lindley**  
**10 February 2015**

# Agenda Item 7

## Report of the Gower AONB Team Leader

### Gower AONB Partnership Steering Group – 2 March 2015

#### GOWER AONB – ALTERNATIVE ENERGY SUB GROUP – PROGRESS UPDATE

The previous steering group meeting AGREED that a renewable energy subgroup be formed in order to formulate the draft policy of the Steering Group on renewable energy; and that the subgroup should report its findings to the Steering Group in due course.

The subgroup (G Howe (Chair), A Woodman, P Lanfear, Steve Heard and Councillor K E Marsh) met on 7 January 2015, with the AONB Team (Chris Lindley and Mike Scott) in attendance. The meeting reviewed the range of issues, technologies, policy and guidance/policy adopted in other AONBs.

The Subgroup asked the AONB Team to prepare a position statement for the approval of the Steering Group. The statement would inform the local planning authority, landowners, applicants and other interested parties regarding the development of new energy projects within – or likely to affect – the Gower AONB. The scope of the position statement would be broadened, to include other (non-renewable) energy technologies that could impact on the AONB. There was also some discussion on future energy provision and technologies.

The subgroup envisaged a position statement similar to that produced by North Wessex Downs AONB (attached). The outline contents for position statement are below.

The position statement will be prepared for review by the Subgroup and subsequent Steering Group approval in due course.

#### **Outline Position Statement contents:**

- Position Statement Status and scope
- Introduction:
  - Role of the AONB Partnership – advice body to CCS and S.85 duty to ‘conserve and enhance’ Gower AONB
  - Wider energy context – e.g. climate change, reducing energy demand
  - Energy conservation and efficiency
  - Developing technologies
  - Clear definition of and differentiation between:
    - § ‘Renewable Energy’ (solar, wind etc) and
    - § Other alternative energy proposals – ie unconventional hydrocarbons – currently hydraulic fracturing and Underground Coal Gasification
    - § Domestic and non-domestic/commercial installations
- UK, Welsh and local planning policy context, including:



- UK Energy/Major Infrastructure Policy
- Planning Policy Wales
- Unitary and Local Development Plans (UDP/LDP)
- AONB Management Plan (current and under review)
- Gower AONB Design Guide
- Gower AONB and its setting:
  - AONB special qualities
  - Landscape character
  - Seascape
  - AONB setting –outside/offshore of the AONB
- Information/advice regarding specific energy developments – potential issues/impacts on the AONB. Specific technologies to include:
  - Renewables:
    - Wind turbines:
      - § Domestic
      - § Commercial
      - § Offshore Wind
    - Solar:
      - § Domestic Photovoltaic (PV)/Heating
      - § Larger arrays on buildings
      - § Ground level installations
  - Ground/Air Source Heat Pumps (Domestic)
  - Wood fuel
  - Other biofuels
  - Anaerobic Digesters and Biomass
  - Hydro-electric
  - Waste to Energy
  - Marine Technologies – tidal stream/tidal flow/wave energy
  - Other alternative energy:
    - Shale Gas – Hydraulic Fracturing ('Fracking')
    - Underground Coal Gasification (UCG)

**Gordon Howe/Chris Lindley**  
**20 February 2015**

# Agenda Item 8



Our ref: MIP-SWA3014  
Contact: Katie Yeoman  
Email: [planning@harlequin-group.com](mailto:planning@harlequin-group.com)

FAO Gower AONB Team  
Economic Regeneration & Planning  
Directorate of Place  
Civic Centre  
Oystermouth Road  
Swansea  
SA1 3SN

**Via Email**

12<sup>th</sup> January 2015

Dear Sirs,

**Re: The Mobile Infrastructure Project  
Pre application Consultation with Gower AONB Team:**

**Proposed installation of 22.5 High Lattice Tower Mobile Phone Base at land at  
Beeches Farm, Horton, Swansea, SA3 1LW**

**NGR: 247620 186550**

I write on behalf of Arqiva Services Ltd who propose to develop a shared electronic communications base station at the above site as part of the Government's Mobile Infrastructure Project (MIP), a publicly funded initiative that seeks to remove 'not-spots' in rural areas where no mobile phone coverage is currently non-existent. The MIP project is state funded as it is to correct a market failure in the supply of mobile coverage.

The purpose of this letter is to invite your comments on this proposal so that they can be taken into account in finalising the detailed design of the development. The alternative site discounted options considered in our site selection process are also briefly discussed, including an explanation of the reasons why they are not being progressed. The Traffic Light Rating assessment for this site is discussed and the associated consultation strategy proposed is set out, I would like your view on this.

## **The Proposal**

You may recall from the information previously sent to the Local Planning Authority that Arqiva has been selected by the Government's Department for Culture, Media and Sport to deliver the MIP. The MIP, which forms part of the Government's National Infrastructure Plan, provides £150 million to build base station infrastructure that will deliver coverage improvements to selected not spots. This funding has to be spent by the end of March 2015, providing a one-off opportunity to address the disadvantages affecting communities without access to mobile coverage. If this opportunity is missed, the ability to eradicate the not-spot in this area will be lost, in all probability forever, further compounding the rural economy and divide.

Harlequin Group • Innovation Centre • Maidstone Road • Chatham • ME14 2TA  
T: 01634 683635 F: 01634 661550 E: [planning@harlequin-group.com](mailto:planning@harlequin-group.com)

In this case, the proposal involves the development of a shared base station which would remove a number of not-spot areas in and around the area. The structure must be located within a specific area in order to provide an acceptable level of coverage and remove these not-spots. It is proposed to develop a shared base station comprising:

- A 22.5m high lattice tower
- Six antennas and two 0.6m diameter dishes attached to the tower
- Six equipment cabinets at ground level
- A compound secured by fencing
- A small new access track

The line of site transmission link has been proven to link the site back into both MBNL (EE (T-Mobile and Orange) and 3) and CTIL (Vodafone and O2) phone networks. The line of sight trials indicate that the lowest height the structure could be at this location would be 22.5m in order to gain point to point transmission links and whilst providing the desired level of coverage to the 'Not Spots'.

### Alternative Sites Considered

The proposal site has been selected following a comprehensive search of a number of locations for the development of a base station to provide coverage to the local area. A full summary of the sites considered and the reasons for discounting is given below.

In brief, due to limited nature of the search area and the target to cover the maximum amount of 'not spot' areas, the proposed site provides the most suitable location taking into consideration the available screening and with the lowest height structure.

Other alternative sites were assessed as not being preferable or as an available location for the base station. This was due various factors such as the failure of a site to provide an acceptable level of coverage to remove the not-spots, landownership restrictions, town and country planning constraints (higher structures, more intrusive, less available screening etc), or technical and operational factors.

<b>Discounted option no.</b>	<b>Location</b>	<b>Justification</b>
<b>1</b>	Little Hills Farm	We were unable to ascertain the site provider's interest in accommodating an installation on their land, as such this option was discounted.
<b>2</b>	Bank Farm Caravan Park	We were unable to ascertain the site provider's interest in accommodating an installation on their land, as such this option was discounted.
<b>3</b>	Western Slade Farm	This option is located on low lying land (66m ASL) and in an area of dense woodland, as such a structure here will not be able to achieve the

		necessary coverage to not spot premises. This option was discounted as a result.
<b>4</b>	Land North of Caravan Park	Due to the gradient of the land leading to the village of Horton, a site at this location is unlikely to be able to provide the necessary coverage to the not spot premises. This option was discounted as a result.
<b>5</b>	Caravan Park	This option is close to the residential area of Horton and a structure here is likely to be visible from a number of properties. Additionally, this option is close to the Horton and Port Eynon Conservation Areas and the Heritage coastline. This option was discounted due to its potential visual impact on the surrounding areas.
<b>6</b>	Moor Corner Farm	This option is located away from the village of Horton and, due to the gradient of the land, would not provide the necessary coverage to not spot premises. Additionally, there is limited screening available at this site, meaning that an installation here would be visible on the horizon. For these reasons, this option was discounted.
<b>7</b>	Land to north Western Slade Farm	This option was discounted as it is located outside of the search area so it would be unlikely to be able to provide the necessary coverage to not spot premises. Additionally, there is little screening available, increasing the potential visual impact of the structure. As a result, this option was discounted.
<b>8</b>	Port Eynon Holiday Park	This option was discounted due to its location adjacent to the Port Eynon Holiday Park and its proximity to the residential areas of Port Eynon and Horton. A structure at this location would be visible from a number of residential properties and from within the holiday park. Additionally, the site would be close to the Port Eynon Conservation area and within 500m of the Gower Coast SSSI and Limestone Coast SAC. This option was discounted due its potential visual impact on the surrounding areas.
<b>9</b>	Existing MBNL Site	This option was discounted as it would be unable to provide the necessary coverage to the not spot premises.
<b>10</b>	Land at Horton Farm	This option is adjacent to the Horton Farm Caravan Park. A structure at this location would be highly visible from the Holiday Park, causing a higher visual impact on the area.

11	Horton Farm	There are potential complications regarding power and access at this location and as such this option was discounted for operational reasons.
12	Land at Beeches Farm	This option is opposite the Horton Farm Caravan Park. A structure at this location would be highly visible from the Holiday Park, causing a higher visual impact on the area.



**Map showing discounted options (red) and proposed option (green)**

The proposal site is therefore considered the most suitable location for the development covering the maximum number of not spot areas whilst minimising any environmental impact, as far as practicable.

### **Other Consultations**

In accordance with best practice guidelines and the advice contained in the National Planning Policy Framework, Arqiva and Harlequin Group are committed to undertaking consultation with a range of organisations who may be interested in the MIP. Consultations undertaken to date include the information circulated following the MIP stakeholder conference held in June 2013. A further information letter was sent on 10 October 2013 setting out progress on the project.

Arqiva and Harlequin Group are keen to undertake an appropriate level of consultation for the proposal site. The site has been assessed using the Traffic Light Rating contained in the revised Code of Best Practice on Mobile Phone Network Development. The proposal has been categorised as amber. This rating has been attained as the proposed development would be located within an area of high landscape sensitivity, within the Gower AONB. Further, the

topography is relatively flat and undulating and benefits from limited natural screening therefore will be visible in long distance views. However, the choice of lattice design would assist in mitigating this visual impact, allowing views through the installation to the backdrop of trees and sky.

Considering this score, we propose to consult with Local Planning Authority, Penrice Community Council, Ward Councillor Lewis, the AONB Unit and Gower Broadband Community Group prior to the submission of a full planning application. If however, you feel the rating to be incorrect or consider that other interested parties such as local schools or community groups should be notified at this stage, then please pass on the contact details as soon as possible.

We would also like to take this opportunity to extend an invitation to organise a community consultation event to give the community an opportunity to ask questions about the proposed development and its location, to make suggestions, to view plans and see photographs of similar installations. Should you consider this to be beneficial, then please let me know at your earliest convenience.

Having read the details of this proposal and the accompanying information, if you wish to comment I ask that you do so within 14 days of the date of this letter. This will enable your comments to be considered prior to making a formal submission.

It is requested that should you have any comments, they be sent by e-mail rather than letter to: [planning@harlequin-group.com](mailto:planning@harlequin-group.com). In the meanwhile if you have any queries please call at your earliest opportunity to discuss.

Yours faithfully

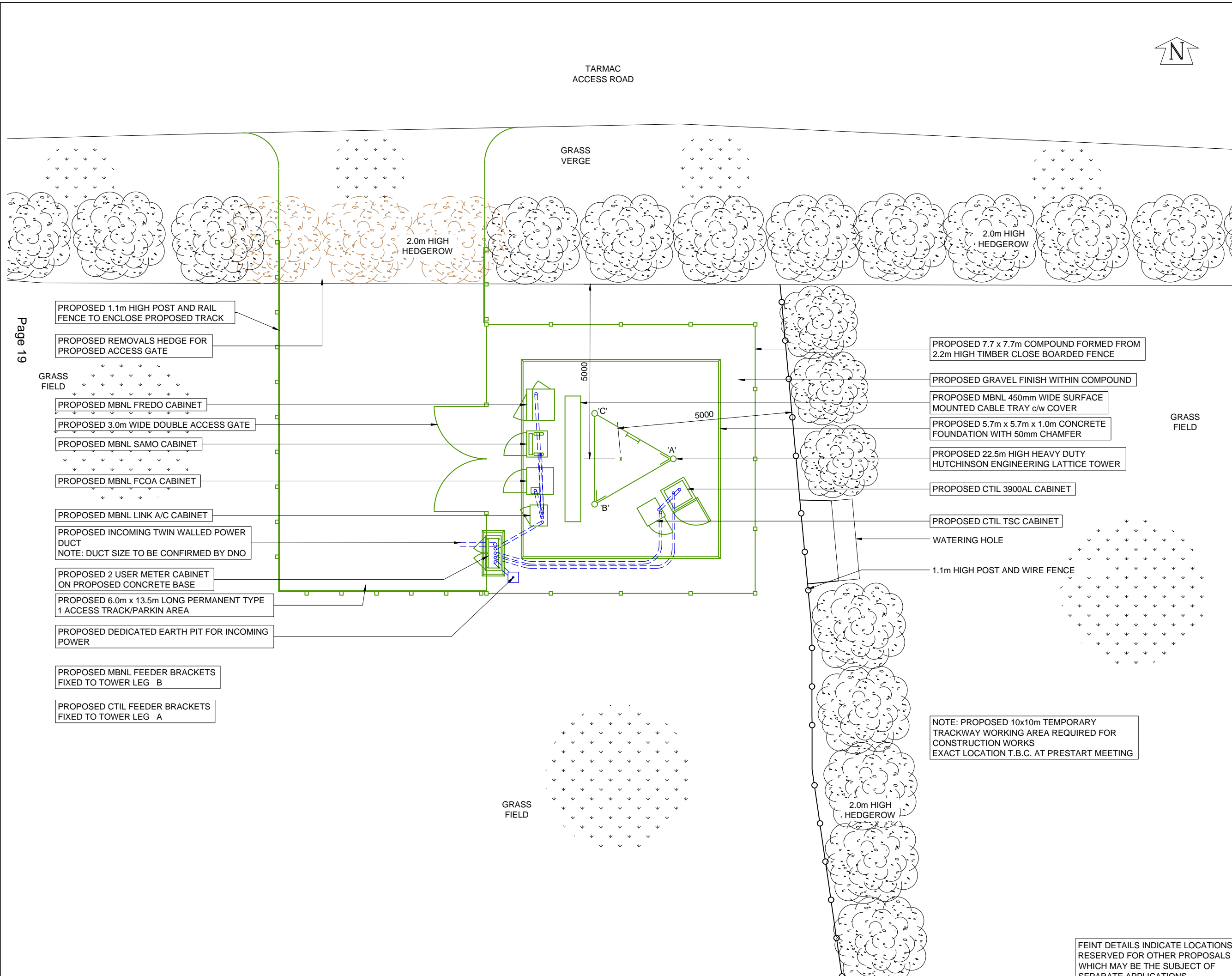
Katie Yeoman  
Town Planner  
Harlequin Group

*M - 07854 377 802*  
*DD - 01634 661 556*  
Planning@harlequin-group.com

(for and on behalf of Arqiva Services Ltd as a duly authorised agent)



NOTES



Page 19

- PROPOSED 1.1m HIGH POST AND RAIL FENCE TO ENCLOSE PROPOSED TRACK
- PROPOSED REMOVALS HEDGE FOR PROPOSED ACCESS GATE
- PROPOSED MBNL FREDO CABINET
- PROPOSED 3.0m WIDE DOUBLE ACCESS GATE
- PROPOSED MBNL SAMO CABINET
- PROPOSED MBNL FCOA CABINET
- PROPOSED MBNL LINK A/C CABINET
- PROPOSED INCOMING TWIN WALLED POWER DUCT  
NOTE: DUCT SIZE TO BE CONFIRMED BY DNO
- PROPOSED 2 USER METER CABINET ON PROPOSED CONCRETE BASE
- PROPOSED 6.0m x 13.5m LONG PERMANENT TYPE 1 ACCESS TRACK/PARKIN AREA
- PROPOSED DEDICATED EARTH PIT FOR INCOMING POWER
- PROPOSED MBNL FEEDER BRACKETS FIXED TO TOWER LEG B
- PROPOSED CTIL FEEDER BRACKETS FIXED TO TOWER LEG A

- PROPOSED 7.7 x 7.7m COMPOUND FORMED FROM 2.2m HIGH TIMBER CLOSE BOARDED FENCE
- PROPOSED GRAVEL FINISH WITHIN COMPOUND
- PROPOSED MBNL 450mm WIDE SURFACE MOUNTED CABLE TRAY c/w COVER
- PROPOSED 5.7m x 5.7m x 1.0m CONCRETE FOUNDATION WITH 50mm CHAMFER
- PROPOSED 22.5m HIGH HEAVY DUTY HUTCHINSON ENGINEERING LATTICE TOWER
- PROPOSED CTIL 3900AL CABINET
- PROPOSED CTIL TSC CABINET

- WATERING HOLE
- 1.1m HIGH POST AND WIRE FENCE

NOTE: PROPOSED 10x10m TEMPORARY TRACKWAY WORKING AREA REQUIRED FOR CONSTRUCTION WORKS  
 EXACT LOCATION T.B.C. AT PRESTART MEETING

CONTRACTOR:-	HF COMMS
CONSULTANT:-	HARLEQUIN GROUP RUTLAND HOUSE 5 ALLEN ROAD LIVINGSTON EH54 6TQ
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PROJ No	
PROJ No	
PROJ No	
PROJ No	
PROJ No	158098
.A	PLANNING ISSUE 03/11/14
ISS	REVISION DATE DRN APP



Crawley Court, Winchester, Hampshire, SO21 2QA  
 Tel. 01962 823434, Fax. 01962 822378

SITE No **304448**  
 MIP\_SWA3014  
 BEECHES FARM  
 HORTON  
 SWANSEA  
 SA3 1LW

NGR **SS 47620 86550**  
 OS GRID **247620 186550**

TITLE  
**SITE PLAN  
 PROPOSED  
 DCMS**

SCALE **1:100**

DRAWN  
 APPROVED  
 27/10/14

DRG No. **304448-20-100-MD001** Sheet 1 of 1 Rev **.A**

FEINT DETAILS INDICATE LOCATIONS RESERVED FOR OTHER PROPOSALS WHICH MAY BE THE SUBJECT OF SEPARATE APPLICATIONS

NOTES

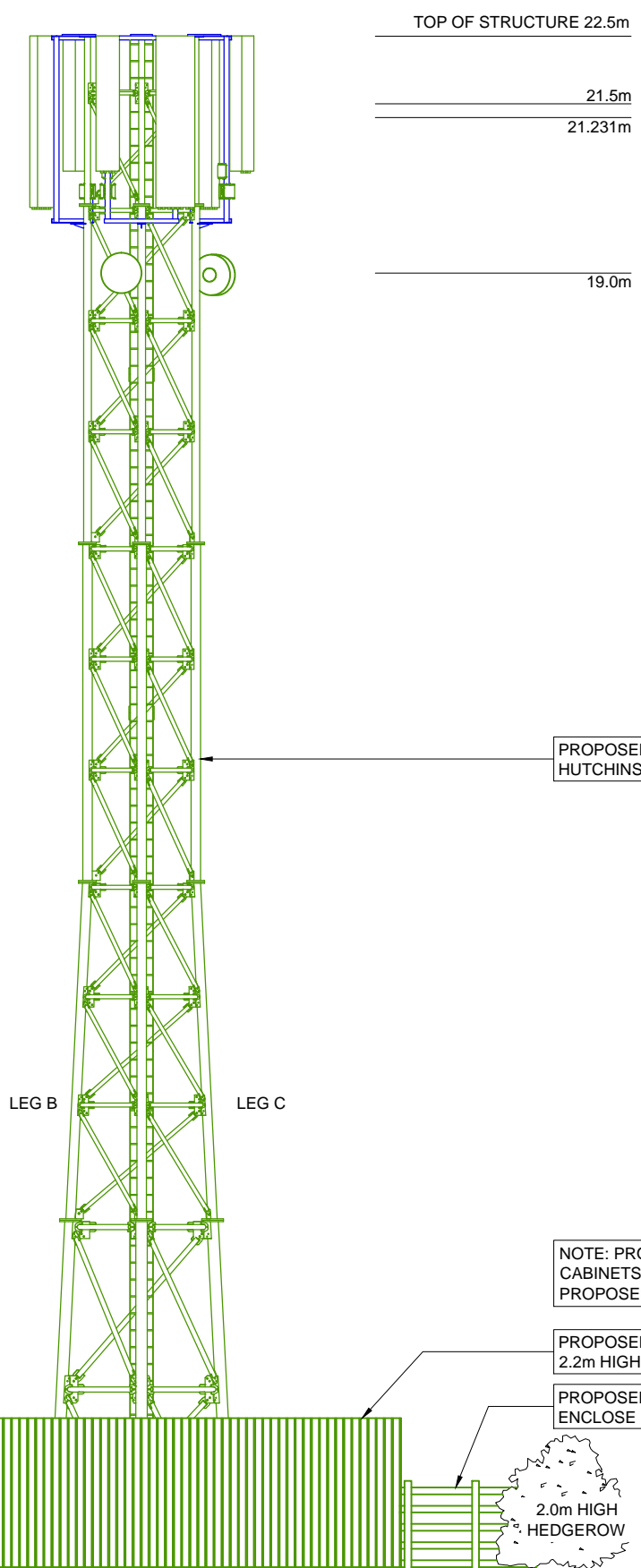
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PROPOSED CTIL 3 No. ANTENNAS AT 21.231m BEARINGS 100°, 200° & 325° E.T.N. I.D. No.'s 314702, 314703 & 314705

PROPOSED MBNL 9 No. MHA'S TO BE FIXED TO ANTENNA SUPPORT POLES

PROPOSED MBNL 1 No. 0.6m DISH AT 19.0m BEARING 286° E.T.N. I.D. No. TBC

PROPOSED CTIL 1 No. 0.6m DISH AT 19.0m BEARING 91° E.T.N. I.D. No. TBC



PROPOSED 22.5m HIGH HEAVY DUTY HUTCHINSON ENGINEERING LATTICE TOWER

NOTE: PROPOSED 6 No. EQUIPMENT CABINETS WITHIN COMPOUND. REFER TO PROPOSED PLAN FOR DETAILS.

PROPOSED 7.7 x 7.7m COMPOUND FORMED FROM 2.2m HIGH TIMBER CLOSE BOARDED FENCE

PROPOSED 1.1m HIGH POST AND RAIL FENCE TO ENCLOSE PROPOSED TRACK

2.0m HIGH HEDGEROW

2.0m HIGH HEDGEROW

G.L. 0.0m

EAST ELEVATION

FEINT DETAILS INDICATE LOCATIONS RESERVED FOR OTHER PROPOSALS WHICH MAY BE THE SUBJECT OF SEPARATE APPLICATIONS

CONTRACTOR:- HF COMMS  
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PROJ No			
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PROJ No			
PROJ No	158098		
.A	PLANNING ISSUE	03/11/14	
ISS	REVISION	DATE	DRN APP



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 Tel. 01962 823434, Fax. 01962 822378

SITE No 304448  
 MIP\_SWA3014  
 BEECHES FARM  
 HORTON  
 SWANSEA  
 SA3 1LW

NGR SS 47620 86550  
 OS GRID 247620 186550

TITLE  
 ELEVATION  
 PROPOSED  
 DCMS

SCALE 1:100

DRAWN 27/10/14

APPROVED

DRG No. Sheet 1 of 1 Rev  
 304448-20-150-MD001 .A





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O.S. LANDRANGER MAP No. 159

CONTRACTOR:- HF COMMS  
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PROJ No			
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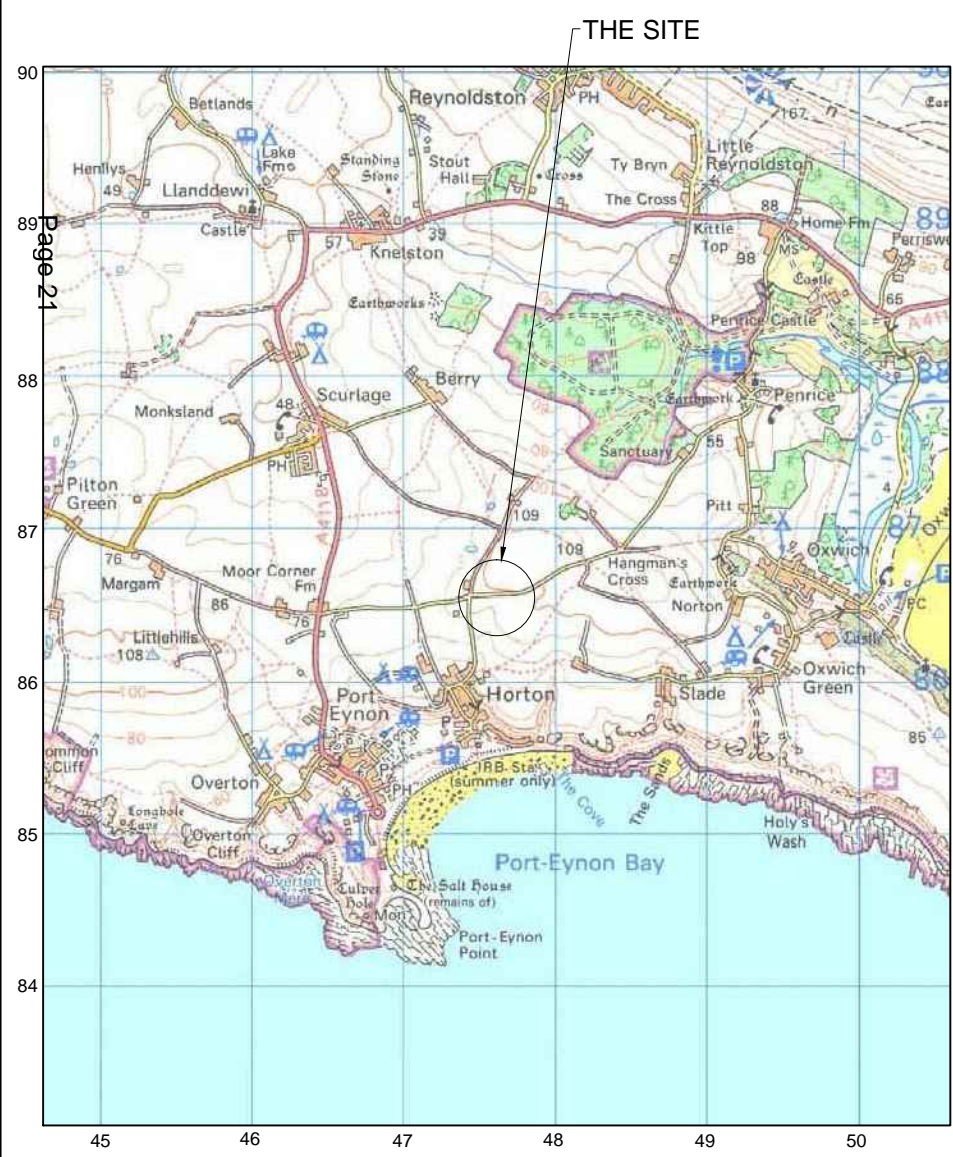
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 OS GRID **247620 186550**

TITLE  
**LOCATION PLAN**

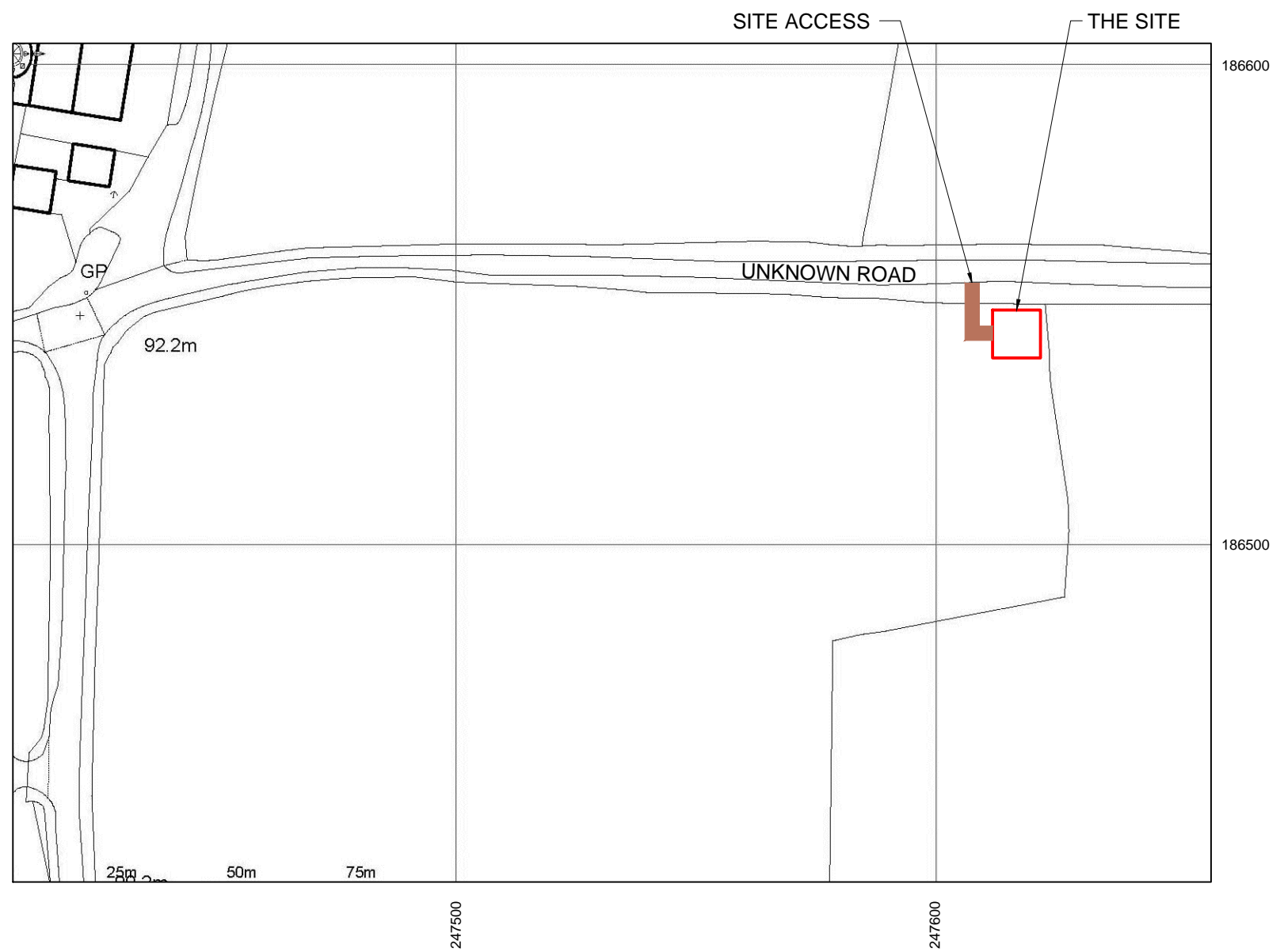
SCALE **SEE DRAWING**

DRAWN **27/10/14**  
 APPROVED

DRG No. **304448-00-004-ML001** Sheet 1 of 1 Rev **.A**



**LOCATION PLAN**  
 SCALE 1:50,000



**LOCATION PLAN**  
 SCALE 1:1250

# Agenda Item 9

## Report of Alan Woodman

### Gower AONB Partnership Steering Group – 2 March 2015

#### **POSSIBLE DIALOGUE WITH OTHER AUTHORITIES REGARDING DECISIONS WHICH MAY AFFECT THE GOWER AONB**

Two planning decisions, by neighbouring authorities, in recent years have and continue to attract criticism by people living on North Gower. Both of these planning decisions affect North Gower by causing pollution and nuisance which spoils the natural beauty of the AONB. The Llanelli golf driving range floodlights cause substantial light pollution along much of North Gower. Secondly, the motor racing facility at Pembrey causes noticeable noise pollution over much of North Gower when Formula One teams are testing their cars at the facility.

Should the Steering Group request that the officers of the Council identify areas where decisions of other Authorities would detrimentally affect the objectives of the Gower AONB. Further, should the Steering Group request that the Council open dialogue with identified Authorities with the objective of avoiding/preventing issues and decisions that will detrimentally affect the objectives of the Gower AONB.

Alan Woodman

**Gower AONB Partnership Steering Group – 2 March 2015**

**GOWER AONB RANGER REPORT – Q3 Updated - 2014-15**

Work Area No.	Gower Ranger Objective(s)	Actions to achieve objectives – including dates to be achieved by	Reporting mechanism	Report
<b>1 – Awareness raising (not targeted)</b>	<p>49.1 Increase contact with the public (residents and visitors) 'on the ground'.</p> <p>49.2 Provide informal opportunities to increase understanding and awareness of the AONB, both on site and off, through media including social media.</p>	<ul style="list-style-type: none"> <li>• Contribute to AONB web-pages, including use of social media. Social media to be updated weekly.</li> <li>• Provide advice and information on site as requested and especially at key sites such as Port Eynon/ Horton and Pennard Valley/ Three Cliffs by 31<sup>st</sup> March 2015.</li> <li>• Contribute at least 1 article to the Annual AONB newsletter and produce at least 2 press releases relating to the work of the AONB Ranger by 31<sup>st</sup> March 2015.</li> <li>• Distribute leaflets and AONB Newsletter to main outlets (list required) and TIC's in Swansea and Mumbles by 31<sup>st</sup> March 2015.</li> </ul>	<ul style="list-style-type: none"> <li>• Circulate link to page or blog when it goes live. Report on progress to GRLG.</li> <li>• Keep a record of advice provided, to be provided upon request. Report on progress to GRLG.</li> <li>• Provide copy of AONB newsletter and any press releases when produced (circulate draft for comment as well).</li> <li>• Keep a record of leaflet/ newsletter deliveries to be provided upon request.</li> </ul>	<ul style="list-style-type: none"> <li>• Pinterest page has been updated, however recurrent IT problems currently prevent regular updates. NT Facebook and Twitter are including AONB Rangers work (joint working) and input is highlighted. Working to resolve IT problems with CapGemini, particularly with laptop power supply. Problems accessing Pinterest, and loading photos continuing – currently having log-in problems.</li> <li>• Providing information on request - 4 people advised about The Dingle during conversation at Caswell – 4 July. Continuing to provide information as and when opportunity arises. Gower College have had guided walks around the Dingle and up to the chapel. Other members of the public have also been given information and advice around Bishopswood LNR.</li> <li>• A member of the public phoned to complain about cyclists using the Wales Coast Path, and others have contacted the Ranger about dogs causing a nuisance at Pennard Castle. Through his contacts, the Ranger was able to identify the owner concerned, and has since spoken to them.</li> <li>• Contributed to production of AONB Newsletter (produced in time for Gower Show – end of July 2014).</li> <li>• Reynoldston Community Newsletter included an article on AONB Ranger and his role, received a number of phone calls reporting issues as a result.</li> <li>• Ongoing - leaflets provided for Mumbles TIC - 2 July 2014. Further distribution after production of Newsletter, as before. Newsletter, general leaflets, events booklet and walks leaflets distributed as requested to outlets across Gower.</li> </ul>
<b>2 – Guided walks &amp; events (targeted awareness raising)</b>	<p>49.3 Provide structured opportunities for local residents (including schools) and visitors to engage with the AONB and learn about issues and opportunities.</p>	<ul style="list-style-type: none"> <li>• Contribute to delivery of Gower Walking Festival June 2015 – development and lead/support 3 walks.</li> <li>• Attend Gower Show on 3rd August 2014.</li> </ul>	<ul style="list-style-type: none"> <li>• Report on Gower Walking Festival to GRLG and as part of standard claim reporting to NRW.</li> <li>• Report on Gower Show to GRLG and as part of standard claim reporting to NRW.</li> </ul>	<ul style="list-style-type: none"> <li>• No report from Gower Walking Festival to date. Requesting meeting with new GWF team to discuss AONB Team contribution for 2015.</li> <li>• Guided Walk for St. Madoc's Centre to Pwll Du on 12<sup>th</sup> September, 20 people in group. Director of Arocha (international Christian conservation charity) was a member of the group.</li> <li>• Gower College group given guided walk around Bishopswood – the group will be coming out with the AONB Ranger as volunteers on a regular basis.</li> <li>• AONB Team attended Gower Show - sharing GLP tent. Tent was good, but visitor engagement was low.</li> </ul>

<p><b>3. Visitor Management</b></p> <p><b>Note – during the period April to September this is to be the key focus for the ranger and is more important than any other element of the programme</b></p>	<p>4.1 Raise awareness of impact of anti-social behaviour on the special qualities of Gower.</p> <p>4.2 Tackle antisocial behaviour (which impacts upon the special qualities of Gower) at specific locations.</p> <p>4.3 Monitor and manage key visitor sites to ensure that visitors are able to enjoy the special qualities of Gower.</p>	<ul style="list-style-type: none"> <li>Attend all Gower Safe Partnership meetings and deliver agreed actions relating to patrolling key sites. E.g. agreed patrol rota and delivering presentations within schools as part of the Gower safe partnership.</li> <li>Inspect key visitor sites quarterly completing a formal checklist and ensuring that practical work identified is carried out. Additional informal inspections to be carried out as appropriate.</li> <li>In addition to the Gowersafe rota, Patrol Port Eynon, Horton and Pennard Valley as least as often as follows: <ul style="list-style-type: none"> <li>Monthly between Sept &amp; April;</li> <li>Weekly May – June;</li> <li>Twice weekly July – August</li> </ul> </li> <li>Carry out Fire Survey Patrols, main focus on inland commons. Collate weekly map showing burn sites during March – May 2014.</li> </ul>	<ul style="list-style-type: none"> <li>Circulate notes/ minutes/actions from Gower Safe meetings to GRLG and keep a record (including map of geographical locations) of illegal camping/ fire sites and anti-social activities encountered. Attend all agreed rota shifts and presentation events. If, for valid reasons, attendance is not possible ensure Gower Safe partners are notified and, wherever possible (i.e. unless a last minute emergency) cover is provided.</li> <li>Submit quarterly inspection sheets to GRLG along with a list of completed actions and programmed actions.</li> <li>Keep a record (including a map of geographical locations) of illegal camping/fire sites and anti-social activities encountered.</li> <li>Keep a record (including a map of geographical locations) of burn sites and date recorded. Provide a report as an appendix to Annual Report.</li> </ul>	<ul style="list-style-type: none"> <li>GowerSafe patrol attended on 11 July 2014. No problems..</li> <li>Patrol on 22<sup>nd</sup> August was cancelled by Police, due to pressure on officers.</li> <li>GowerSafe patrols for 2014 have now finished – a meeting to wind up and plan for 2015 is needed.</li> <li>Inspections carried out as programmed.</li> <li>Inspection sheets for July, October &amp; January completed.</li> <li>Patrols of sites is being carried out to programme, records of sites are being kept.</li> <li>15 reports have been fed back to the 101 phone number over the summer – several of these included multiple sites, with the good weather over the first half of the summer tempting many people out.</li> <li>Currently (February 2015) quiet.</li> <li>Wildfire Officer Wales (Richard Hammond) is providing information about all wildfires on Gower. AONB Ranger will collate this and provide a record in an agreed format for NRW - agreed with Glyn Lloyd-Jones.</li> </ul>
<p><b>4. Practical Countryside Management</b></p>	<p>1.1 Carry out practical countryside management tasks to support management plans (including Swansea LBAP).</p>	<ul style="list-style-type: none"> <li>Use Ranger Job Sheets to assist programming of practical works. Ensure feedback is provided to those partners submitting the sheets within 10 working days of receipt of the proforma. Projects to be delivered will be determined by the AONB Officer and AONB Ranger.</li> <li>By 31<sup>st</sup> March 2015, undertake practical countryside management works as determined through Ranger Job Sheet. During the months April – September these are to take place on no more than 2 days per week and not on any day where a joint patrol has been agreed as part of Gowersafe. Works can take place on any agreed sites across Gower and can include: <ul style="list-style-type: none"> <li>CCS owned sites;</li> <li>Any GRLG partner owned sites e.g. NT, WTSWW, NRW;</li> <li>Third party sites (SSSI's)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Supply copy of proforma to GRLG partners. Report to GRLG on numbers received, feedback times and numbers delivered.</li> <li>Report to each GRLG on progress with targets.</li> </ul>	<ul style="list-style-type: none"> <li>Ranger Job Sheets being used, and records kept as agreed. 1 feedback note has been received to date.</li> <li>Report provided for GRLG (16 July 2014) – next GRLG meeting 8 October 2014.</li> <li>A wide variety of groups and individuals have volunteered with the Ranger, They have picked litter, cut and raked bracken, pulled ragwort, erected benches and a goat seesaw, and cleared paths.</li> <li>Sites worked include Coeden Fach, Bishopswood, Llanmadoc, Whiteford, Gower Heritage Centre, and CHAPS (Three Crosses).</li> <li>HSBC volunteers continue to come out on a regular basis – clearing view point at Caswell, also working with CHAPS (moving stone and timber, painting the centre, building keyhole gardens, constructing a firepit and benches).</li> <li>Work at Bishopswood includes building a camera obscura, clearing paths, clearing litter and removing fallen trees from paths.</li> <li>At Coeden Fach, work has included adding fresh topsoil, and clearing scrub.</li> <li>Clearing ragwort from Pwll Dw Head, on SSSI site.</li> <li>Constructed goat see-saw at Gower Heritage Centre.</li> <li>Bracken clearance at St Madocs.</li> <li>Starfish survey, at Worms Head causeway, with Judith Oakley.</li> </ul>

<b>5. Volunteer Resource Development</b>	<p>1.1 Carry out practical countryside management tasks to support management plans (including Swansea LBAP).</p> <p>1.2 Provide opportunities for volunteering in support of management plans (including Swansea LBAP).</p>	<ul style="list-style-type: none"> <li>Promote the corporate volunteer model developed with HSBC across the Swansea area and investigate demand for further developing this.</li> <li>Use the work proforma agreed in work area 4 to plan work for volunteers on sites across Gower – required if Gower Ranger is supervising the group and therefore leading the task, not required if group has been 'handed over'. Ranger will not generally attend once groups have been handed over.</li> </ul>	<ul style="list-style-type: none"> <li>Report to each GRLG on progress with targets.</li> <li>Report on progress to GRLG.</li> <li>Maintain records of volunteer hours.</li> </ul>	<ul style="list-style-type: none"> <li>HSBC group is going well, with regular workdays. Last HSBC group cleared viewpoint at west side of Bishopswood LNR. HSBC groups continue to come out and work with the Ranger – a variety of work is being undertaken across the AONB.</li> <li>Enquiries from Nationwide (similar set up as HSBC), looking to bring out a regular group.</li> <li>Also a group from Gower College.</li> <li>Ranger Job Sheets are in use – see Job Sheet Summary for details.</li> </ul>
<b>6. Governance</b>	<p>Delivery of AR3 – support effective governance arrangements for the management of the AONB.</p>	<ul style="list-style-type: none"> <li>Report to quarterly GRLG on work programme.</li> <li>Produce written reports for the Gower AONB Partnership Steering Group.</li> <li>Produce an illustrated Annual Report for the period 1<sup>st</sup> April – 31<sup>st</sup> March.</li> </ul>	<ul style="list-style-type: none"> <li>Attend GRLG, provide a written report on the quarter's activities against the work areas in this programme as well as evidence as listed above. Input into development of work programme.</li> <li>Provide a written report for each Gower AONB Partnership Group meeting.</li> <li>Provide a draft Annual Report for comment with each End of Year/Final claim to NRW. A final report is to be provided by 1<sup>st</sup> July 2014.</li> </ul>	<ul style="list-style-type: none"> <li>Ranger attended GRLG meeting on 16<sup>th</sup> July and 8<sup>th</sup> October 2014, next meeting due 24<sup>th</sup> February 2015.</li> <li>in progress.</li> <li>Annual Report for 2013/14 provided by agreed deadline.</li> </ul>

Huw Lloyd,  
AONB Ranger,  
18<sup>th</sup> February 2015

## Chapter 2: Management update on Chalara

### Key facts: Chalara<sup>14</sup>



- Chalara dieback of ash is a disease caused by the fungus *Chalara fraxinea*<sup>15</sup>. The disease causes loss of leaves, dieback of the crown of the tree, and usually leads to tree death.<sup>16</sup> (CR High)
- *Chalara fraxinea* has infected many species of ash worldwide, but with differing intensities<sup>17</sup>. (CR High)

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<sup>14</sup> Confidence ratings (CR) are used throughout the document in order to help the reader understand the data presented. Please see Annex C for further details. Confidence ratings have only been applied to completed projects

<sup>15</sup> Kowalski T (2006). *Chalara fraxinea* sp. nov. associated with dieback of ash (*Fraxinus excelsior*) in Poland. Forest Pathology 36, 264-270.

<sup>16</sup> Kowalski T and Holdenrieder O (2009). Pathogenicity of *Chalara fraxinea*. Forest Pathology 39, 1–7.

<sup>17</sup> Forest Research (2012). *Rapid assessment of the need for a detailed Pest Risk Analysis for Chalara fraxinea*

- Common ash (*Fraxinus excelsior*) is the most severely affected species and is the only native species of ash in the UK. Young trees are particularly vulnerable to *Chalara fraxinea* and succumb to disease rapidly.<sup>18</sup> (CR High)
- Infection is via air-borne spores produced from fruit bodies on leaf litter.<sup>19</sup> (CR High)
- *Chalara fraxinea* infection starts primarily on leaves and is progressive over time with dieback and stem lesions usually manifesting in the next growing season. Leaf symptoms can be detected within two months of infection (experience from Denmark). (CR Medium)
- Natural spread is by wind-blown spores (ascospores) from the fruiting bodies.<sup>20</sup> Spread can also occur via the movement of infected material through trade. (CR High)
- The impact of *Chalara fraxinea* infection depends on tree age, provenance or genotype, location, weather and microclimate conditions and presence of honey fungus (*Armillaria*) or opportunistic secondary pathogens. Trees in forests are likely to be more affected because of the greater prevalence of honey fungus and favourable microclimates for spore production and infection. Trees cannot recover from infection, but larger trees can survive infection for a considerable time and some might not die. (CR Medium)
- Ash as a proportion of total GB woodlands is around 4.7percent (142k hectares as a proportion of 3 million hectares), and therefore the social and environmental value of ash is estimated at between £72 million and £124 million per year. Combined with the commercial value of ash, which is estimated at around £22

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<sup>18</sup> Kowalski T (2006). *Chalara fraxinea* sp. nov. associated with dieback of ash (*Fraxinus excelsior*) in Poland. Forest Pathology 36, 264-270 Forest Research (2012). [Rapid assessment of the need for a detailed Pest Risk Analysis for \*Chalara fraxinea\*](#)

<sup>19</sup> Timmermann V, Børja I, Hietaka AM, Kirisits T and Solheim H (2011). Ash dieback: pathogen spread and diurnal patterns of ascospore dispersal, with special emphasis on Norway. EPPO Bulletin, 41: 14-20. doi: 10.1111/j.1365-2338.2010.02429.x

<sup>20</sup> (Kowalski T (2006). *Chalara fraxinea* sp. nov. associated with dieback of ash (*Fraxinus excelsior*) in Poland. Forest Pathology 36, 264-270. Kirisits T and Cech TL (2009). Zurücksterben der Esche in Österreich: Ursachen, Verlauf, Auswirkungen und mögliche Forstschutz- und Erhaltungsmaßnahmen. Kowalski T and Holdenrieder O (2008). A new fungal disease of ash in Europe. Schweiz. Z. Forstwes 159, 45–50. Queloz V, Grünig CR, Berndt R, Kowalski T, Sieber TN and Holdenrieder O (2010). [Cryptic speciation in \*Hymenoscyphus albidus\*](#). Forest Pathology. doi: 10.1111/j.1439-0329.2010.00645.x.

million per year, the total yearly value is estimated at between £94 million to £146 million.<sup>21</sup> (CR Medium)

## Government Policy

In response to the discovery of Chalara in October 2012, the Government - in collaboration with stakeholders - developed the Chalara Management Plan which was published in March 2013. This set out an approach to managing the disease with four objectives: (1) reducing the rate of spread; (2) building resistance to the disease; (3) encouraging citizen, landowner and industry engagement in surveillance, monitoring and action in tackling the problem of Chalara; and (4) building environmental and economic resilience. Details of progress against each of these are set out later in this chapter.

## Improving our understanding of the disease

Over the last year the Government has sought to increase our collective knowledge and understanding of Chalara to inform potential management approaches and to mitigate impacts of the disease. It has commissioned an extensive programme of research that focuses on:

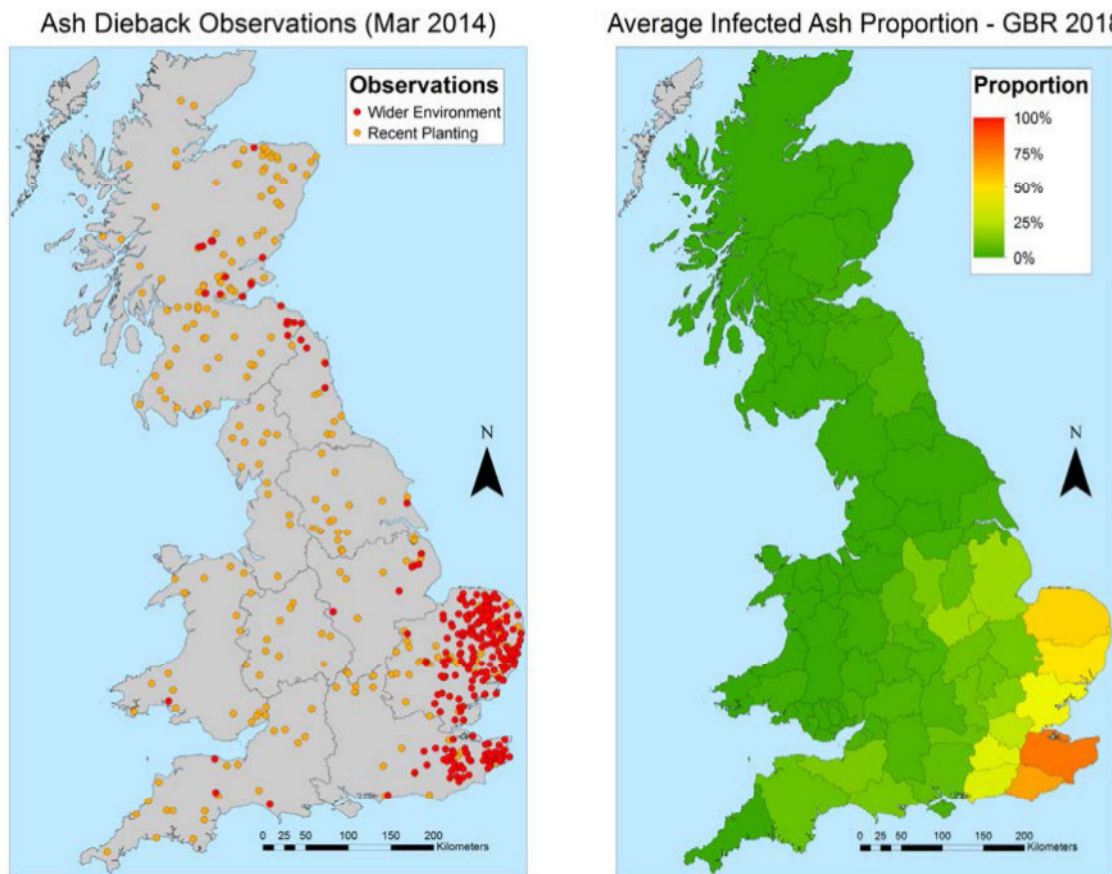
- Identifying and exploiting resistance (tolerance) for longer-term adaptation and resilience.

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<sup>21</sup> The direct commercial value of UK woodlands (reflected in GVA of timber and sawmilling as outlined above) is around £0.8bn per year (2012 prices). The social and environmental value of GB woodlands is estimated at £1.8bn per year (2012 prices), including the value of landscape, biodiversity, recreation and carbon sequestration (as outlined above). Therefore the total value of GB woodlands is around £2.6bn per year. Data on hectares of tree species are taken from Forestry Statistics 2013. The monetary values are derived from methods that are developing (as described in 'Chalara in Ash Trees; a Framework for Assessing Ecosystem Impacts and Appraising Options' (Defra 2013)), but nevertheless are useful, current indications of value. In future, values may be developed more specifically by geographical location, which will help to provide more accurate information on social and environmental value – e.g. to reflect where specifically in the country individual tree species are most prominent along with the amount of people who benefit from them. The method used to derive commercial value, is a developing method, but does try to reflect the value of individual tree species specifically – rather than simply using the proportion of overall forestry as a proxy for the proportion of GVA.



**Figure 1: Current outbreaks of Chalara in recently planted sites and the wider environment (left pane) as of March 2014 and the predicted proportion of ash trees that are expected to be infected by 2018 (right pane)<sup>24</sup>**



## Progress and next steps

Since the publication of the Chalara Management Plan in March 2013 the Government has worked with stakeholders to implement commitments in this plan. The information below sets out progress against each of these objectives.

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<sup>24</sup> This map is the result of a large number of stochastic simulations and shows the average proportion of ash in each county that predicted to be infected in 2018.

## Objective 1: Reducing the rate of spread

Given what the recent modelling is predicting and our current knowledge of the pathogen's biology, the Government continues to believe there is benefit in seeking to reduce the rate of spread of the disease where it remains cost effective to do so, and whilst our scientific understanding is still evolving.

**Monitoring and surveillance:** Since the publication of the March 2013 Plan, Fera and the FC have carried out further surveillance and monitoring to provide intelligence on the rate of spread of Chalara. By the end of June 2013 they had completed inspections at all suspect recently planted sites that could be identified in the high risk counties. These counties were predominately in the east of England where infection had previously been found. Nationally, trees at 1,600 sites were inspected.

In summer 2013 the Forestry Commission issued an advisory note to woodland owners to encourage them to inspect plantings of ash in the age range of 6 to 20 years. This recognised that large quantities of ash were imported from parts of continental Europe where the disease had been present before 2007 and this could mean that the disease was present on a very small proportion of plants imported from the continent at least 10 years ago. Results from this survey and other reports identified isolated outbreaks in the wider environment detected further west in Devon, Somerset, Dorset, Derbyshire and Pembrokeshire, which were associated with older plantings from the late 1990s onwards. These observations are most readily explained by the possibility that the trees were infected prior to planting. This is because at each location the planted trees appear to exhibit the oldest signs of infection and there is no other obvious explanation how the trees could have become infected at those locations 10 or more years ago.

During September 2013 the FC conducted a second wider environment Chalara survey. This work was concentrated on the eastern side of the country to assess the spread of the disease from known points of infection. Sites showing visual symptoms of infection were then confirmed by laboratory analysis of samples. Observed spread in the east has been relatively modest; however, noticeable decline was observed in the overall condition of some mature trees suggesting that these trees were infected with Chalara several years prior to the first observations of the disease in 2012.

In the future FC and Fera will continue to monitor spread of Chalara by following up on reports assessed as highly suspect in 10km squares not currently known to be infected. The Government, in consultation with stakeholders, will consider what further surveillance work is needed on Chalara, in light of the fact that our understanding of the disease is still evolving, but balancing this against surveillance needs on other pests and pathogens and where resources can best be deployed.

- Promoting removal of infected ash and replanting of recently established young ash:** The Government continues to pursue a voluntary approach to managing the disease and does not believe there is a market for ash, and is therefore not encouraging planting of this species. In line with this, the Government is supporting the removal of young, recently planted ash and replacement with alternative species through the England Woodland Grant Scheme (EWGS). Since the publication of the 2013 Chalara Management Plan the Government has funded the removal of infected ash trees in areas that were deemed higher priority counties. These were counties where Chalara had not previously been observed in the wider environment, and therefore removing young infected ash trees in these counties is likely to help slow the spread and be cost effective. Contracts for work totalling £120,000 have been agreed. These higher priority counties are likely to change in the future given spread of the disease into these areas. The FC will publish further guidance on the approach for 2014/15 in April 2014.
- The Government believes that over time, landowners and woodland managers should consider replacing young, recently planted ash with alternative species at the earliest opportunity. In 2014/15 the Government will continue to support action to remove recently planted infected ash trees in priority counties. The Government will also protect and improve the resilience of woods by supporting nationally the replacement of ash in woodlands affected by Chalara with alternative species using funds from the RDPE. Taking action in this way will help to improve the resilience of our woodlands and ensure minimal loss of woodland cover. In areas of particular importance for biodiversity, alternative management strategies may be appropriate.
- In addition landowners who have planted young ash trees on sites through the Higher Level Stewardship (HLS) funding, that subsequently become infected with Chalara, during the course of the agreement can invoke force majeure, and make an application to replant infected ash with alternative species until the end of 2014. Further information can be found at <http://www.naturalengland.org.uk/ourwork/enjoying/ashdiebackfeature.aspx>. HLS agreement holders should contact Natural England as soon as they are aware of the presence of the disease on their holding.

**Felling of mature ash trees:** The Government will not, in general, be encouraging the felling of mature ash in either urban or rural situations as part of the action to slow the rate of spread of the disease. However, there may be particular circumstances where landowners and woodlands managers should consider replacing older, more mature ash trees once they have succumbed to disease with alternative species. For example:

- If landowners and bodies such as local authorities, the Highways Agency or Network Rail believe infected trees on their property are a health and safety risk then they will be responsible for them as for any other diseased tree.
- In isolated outlying areas of infection in the wider environment.

Currently it is not possible to predict whether or how long, infected trees will survive. In European countries where the disease is more prevalent, mature ash trees have been found to survive for many years after infection. The retention of mature trees also maximises the potential for regeneration of a new population of disease resistant trees. The Government will keep the policy on mature trees under review as our collective understanding of the disease continues to evolve and the disease progresses.

**Movement restrictions:** UK emergency legislation has been in place since October 2012. Given the evolving situation, the legislation has been kept under review but retained to date as part of the overall management approach. In line with their obligations, it is anticipated that the European Commission will wish to establish a common position on Chalara, before autumn 2014. This would include the recognition of EU Protected Zones for any areas of the EU which wished to retain freedom from the disease, which could include parts of the UK (though not England, where Chalara is established in parts). One consequence would be that national legislation would need to be revoked at the same time that any EU legislation was introduced and any remaining statutory movement controls restricted to material being moved into and within Protected Zones. The Government will keep this under review as the position with the EU evolves.

**Treatments<sup>25</sup>:** The 2013 Chalara Management Plan set out an approach to scientifically test potential treatments. The Government continues to advise against expecting to find a treatment for Chalara which can be widely applied to protect or treat infected woodlands. Whilst there is currently no known means of eradicating Chalara, treatments may have a role, in protecting individual trees such as heritage or amenity trees; including trees in gardens and parkland trees, or groups of trees or

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<sup>25</sup> This section summarises insights which are emerging from current projects. These projects are still underway and findings have not yet been peer reviewed. Findings may be subject to change as further analysis and research is undertaken.

level of damage or rate of spread in some circumstances. The Government is continuing, through scientific testing, to explore whether treatments may have a role in protecting individual trees or groups of trees.

Fera, in collaboration with an expert group and industry has identified and tested 17 chemical treatments against the Chalara pathogen. Fourteen of these chemicals are registered for use in the UK, although none are currently approved for use in woodland or nurseries<sup>26</sup>.

<http://www.fera.defra.gov.uk/plants/plantHealth/pestsDiseases/documents/fungicideListForScreening20March2013.pdf>

Interim results indicated that the Chalara pathogen was sensitive to many of the chemicals tested and highly sensitive to four. Further research is under way to test the level of control that can be achieved using the most promising chemicals under field conditions.

Chemical treatments cannot fully eradicate the pathogen from infected trees and therefore they are likely only to be useful in protecting specific, high value trees through repeated treatments. The outputs of this research will need to be used alongside other research to understand the potential benefits that chemical treatments may have in managing the impacts of ash dieback or slowing the spread of the disease

In addition, further analysis and research will be needed to understand whether chemical treatments can form part of a sustainable, practical and cost-effective management strategy that will not impact adversely on the environment or biodiversity.

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<sup>26</sup> Laboratory bioassays have tested the potency of each chemical against the Chalara pathogen by defining the half maximal effective concentration (EC50) for each chemical. The EC50 concentration is point at which the chemical is producing half of its maximum effect. An EC50 at or below 0.1 parts per million (ppm) demonstrates that the pathogen is highly sensitive to the chemical

## **Objective 2: Developing resistance to the disease in the ash population**

The Government believes the best hope of securing the environmental future of the ash tree lies in understanding and, identifying durable resistance or (tolerance) to Chalara, and facilitating the spread of that resistance sustainably in our ash populations. As part of this, the 2013 Chalara Management Plan committed to take forward a programme of research to identify and exploit resistance in UK ash trees, and potentially those elsewhere.

Resistance may be conferred by reduced risk of infection (low susceptibility) or an ability to withstand infection (tolerance) the latter may not be apparent for a number of years. Identification of trees less susceptible or able to tolerate Chalara infection could potentially provide a route to maintaining ash trees as part of UK woodlands as well as limiting the impact on biodiversity.

Defra has commissioned research to identifying relevant trees as well as developing genetic tools to allow incorporation of resistance into breeding material. Ash trees within UK woodlands are being monitored for signs of reduced susceptibility and seed is being collected and maintained for future use. The level of susceptibility can only be monitored in areas where the disease is already present. As a result, Forest Research established and will monitor a mass screening trial in which ash saplings from across the UK and elsewhere have been planted in areas at high risk from Chalara to allow more rapid identification of those less susceptible to the disease. This screening and monitoring will continue until at least 2018. Genetic research is producing maps of the ash tree genome. These maps will be a valuable tool in identifying the location of genes involved in resistance and identifying genetic markers for use by breeders. The research is also attempting to understand the process by which some trees are less susceptible.

Techniques for rapid propagation are also being investigated so that resistant trees can be made available more quickly than they would be with traditional breeding.

## **Objective 3: Encouraging citizen, landowner and industry engagement in surveillance, monitoring and action in tackling the problem**

The 2013 Chalara Management Plan, referred to a wide range of activities to promote citizen science which are now part of our wider approach to tree health and these are set out in detail in Chapter 1 of this Plan under public awareness and wider engagement.

## **Objective 4: Building resilience in woodland and associated industries**

As part of this, the 2013 Chalara Management Plan committed the Government to work with stakeholders to build resilience in woodlands and associated industries.

**Environmental resilience:** Environmental resilience can be defined as the capacity of the system to resist damage and recover quickly when challenged by environmental pressure.

The impact of Chalara on England's tree population will continue to evolve. Taking into account the current and predicted spread and impact of the disease the Government will continue to balance action we take now based on the information available, with future action when further evidence is available to make better informed decisions.

The 2013 Chalara Management Plan, made commitments to help build environmental resilience in the following areas:

**Non-woodland Trees:** Ash is a significant feature of the non-woodland landscape. It is found in various locations ranging from gardens, hedgerows, along roads and railways, in urban and rural parkland. Given the diversity of areas where ash is found, the impact of dealing with Chalara will be experienced by many different types of landowner, including those not used to dealing with tree issues before. This could range from private individuals, to large infrastructure companies and public guardians of the landscape.

The Government is working with The Tree Council to better understand the impacts of Chalara in non-woodland situations. Representatives from The Tree Council's, 180 member organisations including local authority planning officers, the landscape and tree sectors, plus commercial, charity and government organisations are being consulted as part of this work which focuses on:

- The numbers of non-woodland ash and where they are located - this will provide us with a clearer picture about where non-woodland ash is and help to better understand the number of trees that could be potentially affected.
- The management issues relating to non-woodland ash, including hedgerow trees, ancient ash trees, planning issues, protected trees, and tree safety. Given that non-woodland trees feature in a variety of settings a clearer picture is needed about how these trees are currently managed.

- Continental research on the impacts of Chalara. Given that Chalara is already widespread in much of Europe, there is much we can learn from these countries experience on non-woodland trees.
- Ash trees are growing in a variety of non-woodland settings, such as urban areas, public and private gardens, and transport routes. If in the future an ash tree in one of these settings is found to have Chalara, approaches to managing this will need to be developed to ensure public safety.

This work is intended to help build our understanding about the nature of the potential spread, in order to consider what management approaches and other policies may be needed. The Government will look at what guidance is needed to support the wide range of audiences that will require information on how to manage ash in non-woodland areas. The Government will continue to work with The Tree Council and other interested parties to further develop this work.

**Ecological impacts of Chalara in woodlands:** The 2013 Chalara Management Plan set out plans by the Joint Nature Conservation Committee (JNCC) and associated countryside agencies to review of the potential ecological impacts of ash dieback. The research explored the impacts of the potential loss of ash trees in England's woodlands and how this will impact on the other species which use ash as a food source or, habitat, and the study also looked at potential management responses to this. A report of the first phase of this research was published in January 2014.<sup>27</sup> In summary, to-date the work has found the following:

- 1058 species have all or part of their lifecycle associated with ash trees in the UK. Of these, 45 have only been recorded on ash trees and are therefore considered obligate; a further 62 are highly associated but have also been recorded on other species.
- No single tree species will be able to fill the niche provided by ash trees, in terms of both its ecosystem characteristics (e.g. nutrient cycling and light penetration properties that influence other ground cover) and biodiversity contribution.

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<sup>27</sup> [http://jncc.defra.gov.uk/page\\_6459](http://jncc.defra.gov.uk/page_6459)



## Member Training – Wales AONB Partnership Members

**Date:** Monday 26<sup>th</sup> – Tuesday 27<sup>th</sup> January 2015

**Time:** Day 1 14:30–17.00  
Day 2 9.00-15:30

**Venue:** Plas Tan y Bwlch, Maentwrog, Blaenau Ffestiniog LL41 3YU  
<http://www.eryri-npa.gov.uk/study-centre/location>

### Context

Given the diverse range of duties and responsibilities, the management of an AONB is a complex activity. Increasing pressures on the Welsh environment, a changing climate, and an appetite to look at different ways of managing landscape means the context within which AONB Partnerships operate is changing rapidly. Coupled to this, reduced public sector spending, a challenging legislative programme, and the impact of further devolution, and it is clear that the role of AONB Partnership members has never been more complex and challenging.

The majority of AONB Partnerships have published management plans, and many have formal partnerships and AONB staff units to ensure the plans are implemented. Yet there is very little training or updated guidance available on what local authorities and partner organisations should consider in order to manage AONBs effectively and secure their status as nationally important landscapes.

### Objectives

At this member training event we give background information on the designation and the purpose of AONBs as well as the responsibilities that local authorities and others have for their ongoing management. The event will provide up-to-date information on the statutory arrangements for AONBs and will provide advice on how to achieve action on the ground to conserve and enhance AONBs.

The training event is aimed at those who are or will serve on AONB Partnerships and wish to develop understanding of their role in the context of fast changing political and financial circumstances.

**The National Association for  
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A company limited by guarantee no: 4729800  
Registered office as above

## Programme

Day 1	
14:30	Coffee on arrival
15:00	Welcome – Philip Hygate, NAAONB
15:10	<b>Introduction and background – Howard Davies, NAAONB</b> <ul style="list-style-type: none"> <li>• 3 key learning objectives of the training event</li> <li>• The Statutory duties of AONB partnerships</li> <li>• Role of AONB partnership members</li> <li>• AONB designation in the context of the NPPF</li> </ul>
15:20	Exploring “Expectations and roles of AONB Partnership members” – small group working
16:00	Comfort Break
16:10	AONBs in Wales – the challenges ahead – Peter Ogden, CPRW
16:30	Question and answer session
17:00	End of day

Day 2	
09:00	Recap of Day 1 and Day 2 programme – Howard Davies, NAAONB
09:10	<b>AONBs - International Protected Areas – Nigel Dudley, IUCN</b> Question and answer session
09:50	<b>The AONB Family – a UK perspective – Howard Davies, NAAONB</b> Question and answer session
10:30	Coffee and Comfort Break
10:50	<b>A Wales perspective – Carole Rothwell, NRW</b> Question and answer session
11:30	<b>Challenges and Opportunities for AONBs 2015-2019 – Howard Davies, NAAONB</b>
12:15	Lunch
13:00	<b>A Guide for AONB Partnership Members – Howard Davies, NAAONB</b> <ul style="list-style-type: none"> <li>• What is an AONB</li> <li>• Role of AONB Members</li> <li>• Management Plans / Delivery Plans</li> <li>• Role of AONB Partnerships in planning</li> <li>• Trusts / Friends of / Consultancies</li> </ul> followed by pair working to revisit what makes an ideal Partnership member
15:00	Close

## Attendees

Councillor Hugh Jones  
Mr Mike Skuse  
Mr John Roberts  
Councillor Paul Lloyd  
Councillor Richard Dew  
Councillor John Arwel Roberts  
Councillor Gruffydd Williams  
Councillor Angela Ann Russell  
TBA  
TBA

Clwydian Range and Dee Valley AONB Partnership  
Clwydian Range and Dee Valley AONB Partnership  
Clwydian Range and Dee Valley AONB Partnership  
Gower AONB Partnership  
Isle of Anglesey AONB Partnership  
Isle of Anglesey AONB Partnership  
Lleyn AONB Partnership  
Lleyn AONB Partnership  
Wye Valley AONB Partnership  
Wye Valley AONB Partnership

Ieuan Llyr Jones

Welsh Government

Philip Hygate  
Howard Davies  
Jill Smith  
David Dixon

National Association for AONBs  
National Association for AONBs  
National Association for AONBs  
National Association for AONBs

# Agenda Item 16b



**Cyfoeth  
Naturiol**  
Cymru  
**Natural  
Resources**  
Wales

## Draft Marine Character Areas

Prepared by LUC

January 2015



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## Marine Character Areas - Purpose

Welsh Government (WG) and Natural Resources Wales (NRW) have commissioned a national marine character area (MCA) assessment for Welsh inshore waters.

The aim is to provide a strategic understanding of the character of marine areas that will be meaningful to people by subdividing our seas into recognisable areas.

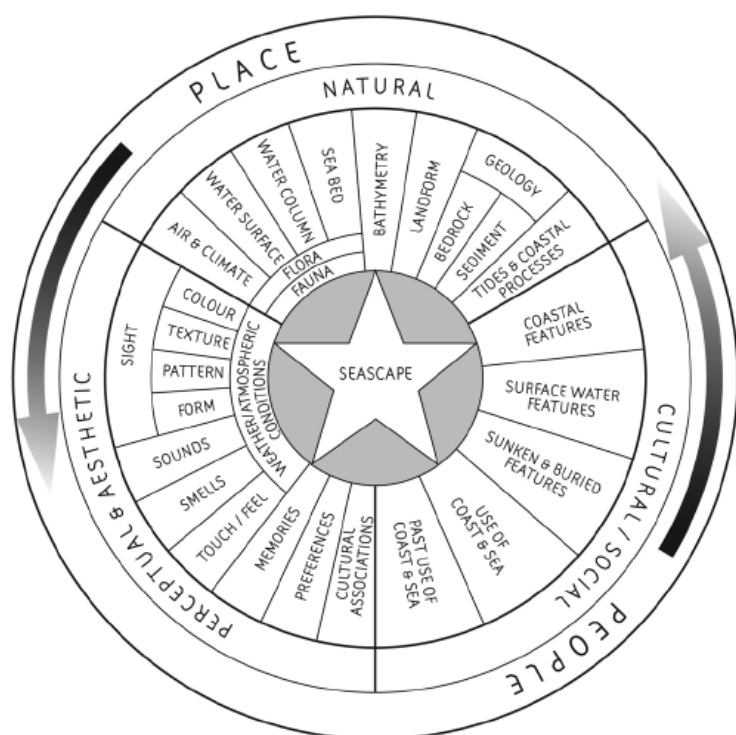
The study will complement similar studies undertaken elsewhere in the UK and build upon existing local seascape character area studies for coastal and marine areas off Pembrokeshire, parts of Gwynedd and Anglesey.

The objectives of the marine character area assessment work are to:

- **Identify broad-scale** character areas
- **Cover all parts** of the inshore Marine Plan area (because all areas have character and all areas matter)
- **Map, name and describe** the character of each area
- Do this in a **value-neutral** way i.e. not to prejudge what should or should not happen in each area.

## Marine Character Areas - context

Marine character assessment reflects the relationship between people and place. Character is a product of the interaction of the natural and cultural components of our environment and how they are perceived and experienced by people. The approach to character assessment is well established and has been adapted for seascapes in An approach to seascape character assessment (2011), Natural England. The inclusive scope includes natural, cultural and perceptual factors, as illustrated in the 'wheel' below.



Wheel from 'An approach to Seascape Character Assessment' (2011) Natural England.

Dividing up our seas into recognisable areas that are meaningful to people represents an important step in understanding the Welsh marine area. MCAs would help us to:

- recognise and communicate what is typical or commonplace to find in one area, and how that is distinct or different to that of another area, at the broad scale that we need for strategic planning; and
- provide an integrated spatial context for the identification of drivers for change, and building on that, help us to recognise and better understand the potential opportunities and constraints for each of these areas – a key part of the planning process.

MCAs are not like a designation, they won't pick out 'some areas' as being more special than others. Instead, MCAs are an 'all-areas' concept so nowhere is left out, as all areas have character and all areas matter in planning. We need to show boundary lines for our maps but these will only represent approximate, generalised zones of transition between one area and the next.

## Policy context

Planning for the use of the marine area at the scale of Wales requires a strategic understanding of the distribution and interaction of marine natural resources, the way that people perceive them and the changes that may result from ongoing and changing use.

The **European Landscape Convention (ELC)**, to which the UK is a signatory, forms the context for our understanding and working with landscapes and seascapes. The ELC is "*concerned to achieve sustainable development based on a balanced and harmonious relationship between social needs, economic activity and the environment*", noting that:

- landscape plays an important public interest role
- contributing to human well-being and identity
- all landscapes matter
- landscapes and seascapes are dynamic and evolve over time
- they are shaped by both nature and people and therefore involve everyone.

The **UK Marine Policy Statement (MPS)** (2011, HM Government, Northern Ireland Executive, Scottish Government, Welsh Assembly Government) provides the current policy framework for the preparation of marine plans in accordance with the powers and requirements set out in the Marine and Coastal Access Act (2009).

The MPS sets out that marine planning will:

- Promote sustainable economic development
- Enable the UK's move towards a low-carbon economy, in order to mitigate the causes of climate change and ocean acidification and adapt to their effects
- Ensure a sustainable marine environment which promotes healthy, functioning marine ecosystems and protects marine habitats, species and our heritage assets, and
- Contributes to the societal benefits of the marine area, including the sustainable use of marine resources to address local social and economic issues.

Marine Plans for Welsh inshore and offshore waters will be prepared in accordance with the MPS.

With regard to seascape, the MPS states the ELC definition of landscape (which includes marine areas) as *“an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors”*. It adds that in the context of the UK Marine Policy Statement, *“references to seascape should be taken as meaning landscapes with views of the coast or seas, and coasts and the adjacent marine environment with cultural, historical and archaeological links with each other.”*

In developing marine plans, the MPS states that marine plan authorities should consider at a strategic level visual, cultural, historical and archaeological impacts *“not just for those coastal areas that are particularly important for seascape, but for all coastal areas”*, liaising with terrestrial planning authorities as necessary. In addition, it states that *“any wider social and economic impacts of a development or activity on coastal landscapes and seascapes should be considered”* and take into account *“existing character and quality, how highly it is valued and its capacity to accommodate change”*. It suggests that landscape character assessment methodology may be an aid to this process.

In relation to areas such as National Parks and Areas of Outstanding Natural Beauty, the MPS states that for any development proposed within or relatively close to nationally designated areas the marine plan authority should *“have regard to the specific statutory purposes of the designated areas”* and that *“the design of a development should be taken into account as an aid to mitigation”*.

Welsh Government are preparing marine plans for the inshore and offshore areas of Wales under one plan making process. The published plan will be referred to as the Wales National Marine Plan. The marine character assessment work will provide an important evidence base that will inform the development of the plan. The evidence will also help inform the integration of the Wales National Marine Plan with the land use planning system and the plans and processes outlined in the Planning (Wales) Bill and the Area Based Approach to natural resource management in the forthcoming Environment Bill.

Natural Resources Wales and Welsh Government will work together, using the framework provided by Marine Character Areas, to develop a common evidence base and to make this available through the Marine Planning Evidence Portal.

As marine planning develops and the national plan is implemented, Marine Character Areas will be used to understand local opportunities to support blue growth and the transition to a low carbon economy.



## Seeking your views on draft Marine Character Areas (MCA)

We are seeking your views and comments on our map showing draft Marine Character Areas (MCA) for Wales.

We want to feed in your local or specialist knowledge so we can better reflect sense of place and local distinctiveness as we identify and describe each marine character area.

We have appointed LUC to look at a wide range of spatial information and written literature to begin to compile the map. You can see the map and some key characteristics in this document in the following pages.

We also show the draft MCAs with some other layers of contextual information in a separate pdf document that can also be downloaded from our web page:

<http://www.naturalresourceswales.gov.uk/marine/draft-marine-character-areas/?lang=en>

We are also working with Welsh Government who are placing the draft MCAs on their Marine Planning Evidence Portal. In addition, we are jointly running a workshop to discuss the draft MCAs on 6 February 2015 in Aberystwyth. See the links on our web page for details.

We welcome any comments but offer the following to guide your considerations:

### **1. Do you feel that the MCAs identified for Wales adequately reflect key areas of distinct character at a strategic (national) scale? Do you have any comments on their names?**

- A map showing MCAs follows.
- Maps showing MCAs with contextual information are in the other pdf that can be downloaded from our web page.

### **2. Would you like to suggest any boundary amendments to the draft MCAs? Please provide reasoning for any suggested changes.**

- We explain our choice of boundary lines in the written descriptions for each MCA in the following pages.

### **3. Do the key characteristics for the Marine Character Areas provide a good overall summary of their character?**

- Please feel free to review the areas relevant to you or all of the MCAs.
- We have looked at a lot of maps and literature but we also want your local or specialist knowledge to better reflect sense of place and local distinctiveness.

### **4. Can you suggest additional or more relevant key characteristics?**

## How to respond

Please ensure that you use the MCA numbers in your response(s) so we know which ones you are referring to.

You can reply in the following ways:

Email:

[seascape@cyfoethnaturiolcymru.gov.uk](mailto:seascape@cyfoethnaturiolcymru.gov.uk)

Post:

Marine Character Areas (Seascape)  
Natural Resources Wales  
Maes y Ffynnon  
Ffordd Penrhos  
Penrhosgarnedd  
Bangor  
Gwynedd  
LL57 2DW

**Please submit your comments by 9am on 16th February 2015.**

# Wales National Seascape Character Assessment

**Figure 1: Draft Marine Character Areas**

- 01: Severn Estuary and Cardiff Bay
- 02: Nash Sands and Glamorgan Coastal Waters
- 03: Swansea Bay and Porthcawl
- 04: Helwick Channel and The Gower
- 05: Carmarthen Bay and Estuaries
- 06: Bristol Channel
- 07: South Pembrokeshire Coastal and Inshore Waters
- 08: South Pembrokeshire Open Waters
- 09: Milford Haven
- 10: Western Bays and Coastal Islands
- 11: West Pembrokeshire Islands, Bars and Inshore Waters
- 12: Irish Sea Offshore
- 13: St David's to Strumble Head Coastal Waters
- 14: Cardigan Bay (south)
- 15: Outer Cardigan Bay
- 16: Cardigan Bay (north) and Estuaries
- 17: Tremadog Bay and Dwyryd Estuary
- 18: Llŷn and Bardsey Island
- 19: Llŷn and South West Anglesey Offshore Waters
- 20: Caernarfon Bay
- 21: Menai Strait
- 22: Holy Island West and Penrhos Bay
- 23: West Anglesey Open Waters
- 24: Holyhead Bay and The Skerries
- 25: North Anglesey Coastal Waters
- 26: North-West Anglesey Open Waters
- 27: Conwy and Red Wharf Bays
- 28: Rhyl Flats and Dee Estuary
- 29: Outer Liverpool and Conwy Bays

Map Scale @ A3: 1:1,000,000



## MCA 1: Severn Estuary and Cardiff Bay

### Draft key characteristics

- Expansive funnel-shaped Severn Estuary, sitting at the mouth of four major rivers (the Severn, Wye, Usk and Avon).
- The immense tidal range of the estuary is second only to the Bay of Fundy in Canada.
- Soft Triassic and Jurassic rocks exposed along the shore, creating a wide rocky intertidal area. Elsewhere the shore is defined by extensive tidal flats.
- Mud, sand and gravel sediments deposited in the Holocene period producing a varied sea bed of flats and bars, with associated shallow waters and numerous shoals presenting hazards to navigation.
- Flat Holm island (SSSI and LNR) forms a gateway feature in the west – an outcrop of harder limestone rising out of the surrounding sediments. Steep Holm forms a similar ‘twin’ feature in English waters to the south.
- Estuary important for the interpretation of coastline dynamics and land-forms, and also past changes in sea level, sediment supply, climate and river flow.
- Strong tidal streams and turbidity producing biological communities characteristic of the extreme physical conditions of liquid mud and tide-swept sand and rock.
- Tidal flats, salt marshes and the extensive wet grasslands are of international importance for wintering waterfowl and migratory birds.
- Some of the richest and most diverse populations of non-exploited fish in the UK –sea lamprey and twaite shad populations considered to be larger than in any other estuary.
- MCA’s rich natural resources exploited by humans for millennia, from the earliest hunter-gatherers roaming what was previously a much larger coastal plain (prior to sea level rise around 6,000 BC).
- Long-standing strategic importance for international trade and maritime navigation, particularly as the ports of Cardiff, Bristol and Gloucester expanded from the medieval period onwards. Steep Holm formed a strategic ‘eye’ for the Roman fleet.
- Numerous ship wrecks littering the sea floor, particularly in the west – including examples mined and sunk during WWII.
- Local trawlers catch plaice, turbot, whiting and rays from the MCA’s sandbanks.
- Salmon, eels and trout fished commercially and recreationally in the rivers feeding the estuary, including through the traditional method of putcher fishing.
- Flat coastline backed by the Wales Coastal Path, affording long views across this MCA. Cars travelling along the M4 via the Severn Bridge also overlook the area.
- Views to major commercial, port and industrial development at Cardiff and Avonmouth, as well as the two road bridges, contrasting with the open, empty vistas characterising the Gwent Levels.
- Seascape’s open character affording strong intervisibility with the Somerset coastline, including Portishead, Clevedon and Weston-super-Mare. The higher hill summits of the Quantock Hills AONB form a distinctive upland backdrop to southward views.
- Estuary’s classic funnel shape and south-west orientation make it susceptible to extreme weather conditions (including storm surges) sweeping in from the east Atlantic.

### Boundary rationale

- Marine area coincident with the majority of the Severn Estuary SAC (Wales) and full extent of the marine plan area. South western boundary broadly follows bathymetry, with the aim of excluding the deepest parts of the inshore channel.

- The proposed MCA also includes all of the Severn Estuary SPA, Ramsar and SSSI within the offshore and intertidal zones.
- It makes landfall in the west to be coincident with regional LCA 35: Newport, Cardiff and Barry (developed coastline which spreads out from Cardiff Bay)

## MCA 2: Nash Sands and Glamorgan Coastal Waters

### Draft key characteristics

- Dramatic coastline of Jurassic and Triassic mudstones and limestone; with near vertical cliffs, shingle or rock pavement beaches, and occasional sandy bays.
- South and south-westerly aspect with gently shelving waters reaching a maximum of 18m bathymetry.
- Jurassic mudstone seabed overlain by bands of sand and gravel in the west, forming the distinctive linear Nash Bank with associated shoals, shallows and changing depths.
- Tusker Rock, an extensive reef, forms a key seascape feature in the west. It is exposed at low tide and surrounded by shallow waters.
- Strong tidal streams, high wave climate and exposure to winds funnelling up the Bristol Channel form further hazards to navigation.
- Sections of SSSI designated coastline nationally valued for species rich neutral, calcareous and maritime grassland. Dunraven Bay SAC is home to the rare shore dock.
- Internationally important habitats on Methyr Mawr Warren including sand dunes and slacks, saltmarsh, limestone grasslands and swamp habitats.
- Commercial trawling and rod and line fishing, the sand banks in the west being rich grounds for plaice, turbot, whiting and rays.
- The iconic 19th Century Nash Point Lighthouse constructed of limestone from the beach below, is a key navigational feature and symbol of the area's maritime heritage (the last manned lighthouse in Wales).
- A further navigation mark guides vessels through the Nash Channel for safe passage to/from Porthcawl and Swansea.
- Tusker Rock – a notorious wrecking site – claimed the ships Maleny (1929) and Steepholm (1968). Other wrecks are testament to the often dangerous sea conditions of the MCA.
- The coastal settlements and beaches of Southerndown, Ogmere and St Bride's Major have long been popular tourism destinations for visitors to the Heritage Coast.
- The often wild qualities of the area are interrupted locally by air traffic associated with Cardiff International Airport.
- Long views across the Bristol Channel to Somerset and Exmoor; these views being appreciated by users of the clifftop Wales Coast Path.

### Boundary rationale

- Landward area encompasses all of the Glamorgan Heritage Coast (western landward boundary formed by the designation).
- Apart from Merthyr Mawr in the west (within the Heritage Coast designation), the landward boundary extent falls within regional Landscape Character Area 36: Vale of Glamorgan.
- Offshore – in the west, the MCA takes in the full extent of Nash Sands to West Nash. Also includes Tusker Rock in the bay of Merthyr Mawr.

## MCA 3: Swansea Bay and Porthcawl

### Draft key characteristics

- Large south and south-easterly facing bay backed by a developed coastal plain.
- Shallow waters of the inner bay of less than 10m bathymetry; depths reach a maximum of 20m in the outer bay.
- The dramatic Mumbles Head, formed of two limestone islands with lighthouse and pier, forms a distinctive western gateway into Swansea Bay.
- Varied coastline between development, comprising estuaries (Loughor, Tawe, Neath and Ogmore), sandy bays, dunes and low limestone cliffs and pavements.
- Kenfig Dunes are the largest sand dune system in Wales and include Kenfig Pool: the largest freshwater lake in the country (designated as SAC, NNR, LNR and SSSI).
- Seabed of Devonian and Carboniferous sandstones and mudstones, overlain by Holocene deposits of sand, gravel and mud - dredged to maintain port access.
- Linear sandbanks in the south-east: Scarweather Sands, Hugo Bank and Kenfig Patches. The associated shoals, shallows and changing depths are notorious hazards to navigation, marked by a number of buoys and fog signals.
- Carboniferous limestone reefs and rocks (including Fairy Rocks) extending from the Porthcawl coastline, with associated turbulence and shallow water.
- The bay has long provided safe refuge from heavy weather, although the seas can still be very steep in south or south-westerly storms.
- A higher wave climate is associated with the outer parts of the MCA, where the shelter provided by the land diminishes. The area around Scarweather Sands is a licenced Wind Farm Area (we will mention Swansea Bay tidal lagoon in full profile)
- Varied marine life supporting a range of commercial fishing activities including trawling, set netting, rod and line fishing, whelk potting and mussel seed harvesting.
- MCA has historic associations with native oyster catching – however, overfishing in the 19th century means few beds now remain.
- Origins as a Viking trading post, Swansea expanded significantly in the 17th to 19th centuries, its position allowing international maritime trade in a wide range of products – most notably locally produced coal and copper (termed "Copperopolis").
- Concentration of wrecks in the bay, a number torpedoed or mined during WWII.
- Swansea was the birthplace of poet Dylan Thomas – the famous link marked by an imposing statue in the Maritime harbour.
- A busy seascape, with major port-related developed and the Port Talbot steelworks forming strange geometric apparatus; chimneys and smoke plumes dominating the landward skyline.

### Boundary rationale

- Western and eastern coastal extents compatible with the regional Landscape Character Area 38: Swansea Bay. In the west this refers to the developed coastline around The Mumbles, with the western extent of the MCA making landfall at Whiteshell Point.
- Offshore boundaries informed by bedrock geology – the mudstone/sandstones of the bay itself, and protrusions of limestone extending from Merthyr Mawr.
- The sandbanks and related navigation marks (cardinal buoys South Scar, West Scar and Ledge) at the southern/SE entry to the Bay are also included.
- Smooth offshore boundary line broadly coinciding with depths of around 17-20m bathymetry.
- Fairy Rocks in east are also included – a feature of the eastern passage into the Bay.

## MCA 4: Helwick Channel and The Gower

### Draft key characteristics

- Rugged coastline of cliffs and sandy bays backed by elevated land at Rhossili Down, Llanmadoc Hill and the prominent Cefn Bryn ridge (180m AOD).
- Worms Head forms a thin, strangely profiled peninsula at low tide, becoming an island at high tide. It dramatically frames the MCA to the west.
- Coastline displaying cliffs of Carboniferous limestone, with an inlier of Old Red Sandstone outcropping at Rhossili Bay and southern bays carved into softer shales.
- Cliffs traversed by faults and folds, with evidence for past glacial activity in the form of raised beaches and cliffs. The coastal geomorphology is of national importance.
- SSSI-designated coastline with heathland and maritime grasslands and regionally important seabird nesting sites.
- Offshore, the seabed comprises a mixture of limestone, mudstone, sandstone and halite overlain by Holocene-derived sands and gravels.
- Long, narrow shoal of Helwick Sands extending westwards for over six miles from Port-Eynon Point – safe passage around this feature is assisted by cardinal buoys.
- Strong tidal streams off Worms Head, combined with the location of Helwick Sands and associated overfalls requires careful navigation, particularly during westerly weather.
- Western half of the MCA falls within the Carmarthen Bay & Estuaries European Marine Site, which recognises the variety of seabed habitats in the area.
- Rich marine environment attracting commercial and recreational fishing activity, including trawling and netting for herring and sprat, squid fishing and whelk potting.
- Helwick Sands is licensed for dredging by the aggregates industry.
- Concentration of wrecks from vessels foundering off the south coast, including a ship laden with iron ore travelling from North Africa to Port Talbot in 1940.
- Cliff-top Iron Age promontory forts, Neolithic burial chambers and Bronze Age cairns provide evidence for a long history of human occupation.
- A popular tourism and recreational destination for a range of activities, including cliff climbing, coasteering and walking (via the Wales Coast Path). Significant areas of coastline are under National Trust ownership.
- The exceptional scenic qualities of the coastline led to the Gower becoming Britain's first AONB in 1956, it is also defined as Heritage Coast.
- The MCA's iconic coastline gives rise to a number of 'voted best' views. These include wide vistas to the South Wales valleys and across the Bristol Channel (MCA 6) to the Exmoor hills and Lundy Island.
- A marked change in character between the adjacent developed, urban edge of greater Swansea to the east (MCA 3), and the more remote, strongly rural and often 'wild' qualities of this seascape.

### Boundary rationale

- Landward boundary extends from Burry Holms tidal island (at the southern estuary mouth of the Loughor) around to Whiteshell Point (to explore whether to extend this further east to Snaple Point – thoughts welcomed).
- Western offshore extent takes in the majority of the Helwick Channel and includes all of West Helwick sandbank, including the associated navigation mark.
- Western offshore boundary partially consistent with the edge of Pembrokeshire local SCA 42: Carmarthen Bay.



- Southern offshore boundary broadly follows the change to moderate/high wave energy associated with the Bristol Channel.

## MCA 5: Carmarthen Bay and Estuaries

### Draft key characteristics

- A large scale, open south facing tidal bay, the MCA extending into the large-scale estuaries of the Taf/Tywi and Loughor.
- Diverse shoreline with cliffs, rocky shores, a series of minor headlands and wide sandy beaches as well as dunes, marshes and estuarine mudflats.
- Gently shelving, shallow sandy sea floor less than 30m deep along the outer edge of the SCA.
- Edges of the bay are sheltered by the adjacent land, with wave exposure increasing in the centre. The estuaries are associated with low wave stress and low tide speed.
- Large areas designated for nature conservation interest (particularly for overwintering wildfowl) including Carmarthen Bay SPA and Carmarthen Bay and Estuaries SAC.
- The international designations combine to form the Carmarthen Bay & Estuaries European Marine Site, which also recognises the diversity of seabed habitats.
- Very few wrecks within the open Bay, with a small number of wrecks clustered around the Taf, Tywi and Loughor estuaries.
- Prominent coastal features include the monastery and lighthouse on Caldey Island and the deserted settlement on neighbouring St Margarets Island.
- Long wide sandy beach of hard sand provided ideal conditions for a previous land speed record at Pendine Sands.
- MOD training area and restricted zone at Pendine and Laugharne Burrows. The beach, dunes and part of the marsh are owned by MOD with firing range and military exercises extending out into Carmarthen Bay.
- Dredgers and commercial craft may be visible on the horizon within the Bristol Channel (MCA 6).
- Busy waters around Tenby with its harbour for fishing vessels and lifeboat station. The sheltered coastal waters are used for sailing, sail training and pleasure boating including trips to Caldey Island.
- Very well used commercially managed beach at Lydstep, with activities including jet and water skiing, as well as leisure boating. Climbing is popular on the limestone cliffs around Lydstep Point.
- A popular area for tourism due to accessibility of beaches. North Beach and South Beach flank the popular resort town of Tenby as well as beaches at Saundersfoot, Amroth and Wiseman's Bridge.
- In contrast, the eastern half of the MCA is associated with higher levels of tranquillity and remoteness, especially when MOD Pendine and Penally are not operating.
- Dylan Thomas made his home on the banks of the Taf – the dramatically located Boat House, now a visitor attraction.
- Wide unspoilt views out to sea from along the coast and the Coast Path, across to the Gower including Worms Head. There are also views across to Caldey Island, Tenby and Saundersfoot to the west.
- Key visible coastal features are Rhossilli Down and the Carmarthenshire coastal hills with Caldey Island and its lighthouse plus Tenby spire to the west. Coastal settlements and caravan parks (Lydstep Haven) are noticeable and detractive in parts.
- Offshore the sea is simple and open, large in scale and dominated by swell, waves and winds with a sense of remoteness.

### Boundary rationale

This draft MCA comprises a merge of the following Pembrokeshire local SCAs:

- 38: Lydstep Haven Coastal Waters
- 39: Tenby and Caldey Island (note this excludes the southern part of Caldey Island)
- 40: Carmarthen Bay West
- 41: Carmarthen Bay North to Pendine Sands (SCA cut off in east by local study area boundary).
- 42: Carmarthen Bay (note - SCA cut off in east by local study area boundary).

In addition:

- It includes all of Caldey Island and all of the Pendine offshore military practice area
- It covers the Loughor Estuary up to HWM, and northwards to cover Taf/Tywi Estuaries.
- The boundary with the Gower MCA formed by the tidal island of Burry Holmes, and in the marine area – the Helwick Channel (strongly associated with navigating around the Gower peninsular).

## MCA 6: Bristol Channel

### Draft key characteristics

- Open sea with medium depth water between 20 and 60m bathymetry.
- Along with the Severn Estuary (MCA 1), the Bristol Channel has the second highest tidal range in the world.
- Channels run perpendicular to the east-west tidal currents, which accelerate in the east due to the funnelling effect of the land.
- Exposure to weather rolling in from the Atlantic creates areas of high wave climate, along with an associated sense of danger during stormy conditions.
- Jurassic mudstone and limestone seabed, in parts overlain by Holocene deposits of sand and gravel which are licensed for dredging.
- This includes the sand bank of Culver Sand, marked by light buoys warning of shallow water and changing depths.
- Includes the southern edges of the Carmarthen Bay and Estuaries SAC/SPA, which recognises the area's wide variety of seabed types.
- Number of ship wrecks littering the sea floor, including those as a result of collisions (e.g. early 20th century coal ships en route to worldwide destinations from Cardiff), and others mined during WWII.
- Long-standing busy transport and trade route serving the major ports of South Wales and South West England (including Avonmouth), with thousands of ship movements per day.
- Leisure sailing by larger boats and commercial craft also takes place within the MCA.
- Sea with simple, open characteristics at a vast scale dominated by swell, waves and winds with a sense of remoteness.
- The seascape's open character affords strong inter-visibility between the South Wales and North Devon coastline, including Rhossili Down and Lundy Island.

### Boundary rationale

- MCA forms an extension eastwards from the Pembrokeshire local SCA 43: Bristol Channel Offshore to meet MCA 1: Severn Estuary.
- The proposed MCA includes significant areas of moderate to high and high wave climate, and 'moderate energy rock'.
- The outer boundary is formed by the Wales Inshore Marine Plan Area.
- Its extent is also consistent with how the Bristol Channel is depicted on the marine charts.

## MCA 7: South Pembrokeshire Coastal and Inshore Waters

### Draft key characteristics

- Diverse, rugged coast with rocky sections, steep cliffs, arches and stacks interspersed with small coves and scalloped sandy bays and beaches.
- Large area of sea, mainly 30-60m deep on gravelly sand bed with shallower waters over sand on St Gowan Shoals to east (10-30m depth)
- Internationally important and diverse coastline with rocky outcrops, deep red sandstone, white limestone cliffs (designated SAC) and wave cut platforms as well as numerous sandy coves, beaches and large sand dune systems.
- Limestone Coast of South West Wales SAC are protected for their rare and scarce plants, other designations include the European protected Pembrokeshire Marine SAC which is recognised for its rich marine life (eight Annex I habitats and seven Annex II species), the Castlemartin Range SSSI and the Stackpole Head NNR.
- Generally low wave stress except off St Anne's Head which has the potential for steep seas, large waves and strong dangerous currents with a wild character. Shallow sometimes treacherous waters en route to Millford Haven.
- Manorbier Castle is a strong coastal landmark with associated traditional settlement, designated as a Conservation Area.
- Buried archaeological landscape on cliff top and The Devil's Quoit standing stone dating from the Bronze Age indicates a long history of human inhabitants in the area.
- Several wrecks litter the shallow waters offshore from Linney Head and on the approach to Milford Haven.
- Offshore waters are used by ferries, commercial shipping and fishing boats.
- MOD practice ranges dominate the MCA with large areas restricted at Manorbier and Castlemartin.
- Millford Haven Harbour limits extend out into the west of the MCA.
- Popular with walkers using the Pembrokeshire Coast Path and network of footpaths with good access to beaches. The area is also popular with climbers, kayakers, motor and sailing cruising.
- Wide, unspoilt views out to sea and along the coastline from headlands and cliff tops, as well as from sections of the Pembrokeshire Coast Path, including views to Caldey and Lundy Islands and the North Devon coast.
- Very tranquil, remote and often wild coastline when the firing ranges are not operating. Long stretches of coastline have little or no settlement.
- Offshore open sea area with unspoilt, simple, consistent and unified marine character at a vast scale and a significant sense of openness, remoteness and exposure.

### Boundary rationale

This draft MCA comprises a merge of the Pembrokeshire local SCAs:

- 29: Southern Inshore Waters (for the purposes of the MCA, we have split off the western part of this SCA level with St Ann's head, as after this point the area takes on a westerly aspect)
- 34: Freshwater West
- 35: Castlemartin Coastal Waters
- 36: Stackpole Coastal Waters
- 37: Freshwater East and Manorbier

## MCA 8: South Pembrokeshire Open Waters

### Draft key characteristics

- Very large area of sea, 30-100m deep on gravelly sand seabed with low wave stress.
- Mudstone and limestone seabed overlain by a veneer of sand and gravel sediment.
- Small areas of the Pembrokeshire Marine SAC extending across the northern MCA boundary. The area is protected for its diverse habitats (subtidal rocky reef) and species (Allis and Twaite Shad and grey seals).
- A small section of the Carmarthen Bay and Estuaries SAC (and wider European Marine Site) covers the MCA in the east – which includes recognition of a diverse seabed.
- Relatively calm waters offshore with low wave energy strengthening along the coastline.
- There are numerous wrecks dispersed across the area including the HMS Marjoram, HMS Tormentor and the Ionian SS which struck a mine/torpedoed two miles west from St Govan's Head in 1917.
- The area is used for ferries, commercial shipping and fishing including drift lines, otter trawling and beam trawling.
- Inter-visibility with the southern Pembrokeshire coastline to the north and east, with the MCA itself forming part of an unspoilt backdrop, including in views from the Pembrokeshire Coast Path.
- Open sea area with unspoilt, simple, consistent and unified marine character at a vast scale and a significant sense of openness, remoteness and exposure.
- The area's qualities are determined almost entirely by the natural forces of water, through swell and waves, and wind.

### Boundary rationale

- The MCA boundary is consistent with the Pembrokeshire local SCA 30: Southern Offshore Waters.
- The outer boundary is formed by the Wales Inshore Marine Plan Area.

## MCA 9: Milford Haven

### Draft key characteristics

- Drowned ria with red steep sandstone cliffs and sheltered bays and shallow creeks surrounded by rolling and occasionally steep sided hills with distinctive woodland down to the water's edge.
- The sheltered tidal estuary creates a natural harbour with mudflats, sandy inlets and marshes, creeks and bays.
- Strong currents and swell at mouth of the estuary becoming more sheltered the further inland travelled where tidal changes take over as the main influence factor on the character.
- Very dispersed settlement with single dwellings and some small medieval and traditional villages. Limited transport links and no bridges.
- Historically rich area associated with the sea with the main urban settlements of Milford Haven and Pembroke Dock, with oil refineries, gas/oil storage and power station.
- Historic quays which contribute to the historic character and sense of place as do Carew Castle and tidal Mill, a promontory fort at Picton Point and local Parks and Gardens.
- Busy harbour mouth and commercial shipping channel with tanker terminals, ferry terminal and marinas.
- Popular for sailing and other recreation especially around Dale although fair low key recreation including small boat moorings elsewhere. High numbers of walkers using the coastal path runs around the entire sea edge.
- Busy harbour mouth and commercial shipping channel to the west contrasting to the high levels of tranquillity within the sheltered tidal estuary to the east.
- Views within the estuary vary with views being contained and channelled by the surrounding steep hills along the narrow estuaries then opening up towards the wide estuary mouth.
- The oil refinery and associated infrastructure dominates views into the MCA, including from the surrounding seas (MCAs 7, 8, 10 and 11).

### Boundary rationale

This draft MCA comprises a merge of the Pembrokeshire local SCAs:

- 31: Outer Milford Haven
- 32: Inner Milford Haven
- 33: Daugleddau

## MCA 10: Western Bays and Coastal Islands

### Draft key characteristics

- Diverse and spectacular coastline with rugged steep cliffs that are punctuated by sandy foreshores and isolated bays. St Brides Bay is a broad scalloped bay with a westerly aspect, gently falling away from the beaches at Newgale Sands and Broad Haven. The isles of Skomer, Skokholm, Ramsey and smaller Bishops and Clerks mark the entrance to St Bride's Bay. Each island has its own unique characteristics with an array of coastal features including rocky shores, stacks, arches, caves and small coves.
- Hazardous seas around the islands with strong tidal streams, races and eddies, especially along the Ramsey Sound which forms a north-south tidal sea passage.
- Biodiverse waters and coastline for birds, porpoises and seals. Skomer is designated as a Marine Nature Reserve and MCZ; Skokholm NNR is an important bird sanctuary.
- Subtidal rocky reefs, large shallow bays, sandflats and caves are some of the habitats that create such rich marine environment within the Pembrokeshire Marine SAC (covering all of the MCA).
- Exposure to westerly and southerly winds, with strong surf over long shallow beaches. The MCA's position affords shelter to northerlies. Drying or submerged rocks are shipping hazards.
- There are virtually no wrecks within the bay, however, around the islands there are numerous wrecks including downed planes lost during WWII.
- Historic landscape on Skomer with many remains dating from prehistoric times.
- Rich seas attract much fishing activity, including beach seining, set nets, lobster and crab potting.
- The MCA is used by commercial ships anchoring while waiting to access Milford Haven.
- Popular coastline and marine area for a range of recreational activities including sailing and motor craft, diving, angling, wildlife watching, island boat trips, surfing, kayaking and swimming.
- Uninterrupted vistas define character, including to famous cliffs (Wooltack Point, Nab Head, Black Cliff & Dina Fawr), islands (Ramsey, Skomer and the Bishops) and open sea from several high viewpoints – many accessible via the Coast Path.
- Numerous coastal settlements acting as key landmarks; the lighthouse on Skokholm is also a strongly associated coastal and maritime feature – both in the day and at night.
- The open sea has an unspoilt, simple, consistent and unified marine character at a vast scale and a significant sense of openness, remoteness and exposure.

### Boundary rationale

This draft MCA is created from a merge of the following Pembrokeshire local SCAs:

- 17: Ramsey Sound
- 18: Ramsey Island Coastal Waters (note outer boundary extended for the MCA to ensure associated waters are within)
- 24: St Brides Bay
- 25: Skomer Island and Marloes Peninsula.
- 23: St Brides Bay South Coastal Waters – The Nab Head
- 22: St Brides Bay South Coastal Waters – Borough Head
- 21: St Brides Bay Coastal Waters East
- 20: St Brides Bay Coastal Waters North



- 26: Skokholm and Gateholm Coastal Waters (note that we have ensured that the tidal races and shoals associated with Skokholm are included within this MCA (the Pembrokeshire assessment includes them with SCA 29))
- 29: Southern Inshore Waters (note we have split off the eastern part of this component SCA level with St Ann's head, as after this point the area takes on an easterly aspect. Have rounded southern boundary around Skokholm following bathymetry and nautical mile lines).

## MCA 11: West Pembrokeshire Islands, Bars and Inshore Waters

### Draft key characteristics

- Varied offshore MCA with a large area of sea, ranging from 30-100m in depth on a gravelly sand seabed. A striking east-west volcanic bedrock ridge extends west of Skomer.
- A series of rock islets and reefs along submarine ridges, interspersed with moderately deep channels off the west coast.
- Two elongated offshore bars of gravelly sand lie on the seabed parallel to the coastline, shaped in line with tidal stream.
- Bais Bank (parallel with St David's Head) includes shallows of less than 10m depth and dangerous shoals/overfalls.
- Rich marine wildlife, especially around rocks including puffins, seals, porpoises and dolphins, a large gannetry is present on the isolated rugged island of Grassholm, part in the Pembrokeshire Marine SAC.
- Exposed seascape area with high wave stress, strong tidal currents and tidal rips and overfalls around rocks create hazardous waters.
- Numerous wrecks in the area especially around the Smalls, Grassholm and North Bishop rocks.
- The area is used for sea angling, fishing, ferries and commercial shipping.
- Some recreation including wildlife trips, sailing and diving.
- The Smalls and Bishop lighthouses are prominent features on isolated islands marking the surrounding hazardous waters.
- Unspoilt views from the western coast, including from the Pembrokeshire Coast Path with distant views to and from mainland, Ramsey Island and Skomer Island.
- Forms a maritime backdrop to the iconic Pembrokeshire Coast National Park view from Carn Llidi to Ramsey Island.
- Open sea area with unspoilt, simple, consistent and unified marine character at a vast scale and a significant sense of openness, remoteness and exposure.
- The area's qualities are determined almost entirely by the natural forces of water, through swell and waves, and wind.

### Boundary rationale

This draft MCA is created from a merge of the following Pembrokeshire local SCAs:

- 12: Strumble Head Deep Water
- 14: Western Sand and Gravel Bars
- 19: Bishops and Clerks
- 28: West Open Sea
- 27: Grassholm and The Smalls

In addition:

- It also includes the western part of local SCA 8: North Open Sea.
- The boundary between this MCA and MCA 15 (Outer Cardigan Bay) has been smoothed to reduce the kinks created from the local SCA boundaries. The revised, smoothed boundary is consistent with a change from low energy sub-littoral sediment in the eastern part of this MCA to moderate/high energy sub-littoral sediment influencing MCA 15.

## MCA 12: Irish Sea Open Waters

### Draft key characteristics

- Very large area of sea, over 100m deep on gravelly sand and sand seabed with low wave stress.
- Mudstone and sandstone covers the majority of the area with a slither of slate breaking through the middle and an area of chalk bedrock in the southern corner.
- A very small part is in the Pembrokeshire Marine SAC – important for its rich marine life supported by a diverse mix of habitats including reefs and subtidal sandbanks.
- There are a moderate number of wrecks in the area including the Churchill, Solitude and the Flint Stones cargo ship which was captured during WWI by a German submarine and blown up.
- The area is used by commercial shipping with a traffic separation zone west of the Smalls, for ferries and for fishing.
- Deep water submerged cable crosses the area south to north connecting England with Ireland.
- Open sea area with unspoilt, simple, consistent and unified marine character at a vast scale and a significant sense of openness, tranquillity, remoteness and exposure.
- The area's qualities are determined almost entirely by the natural forces of water, through swell and waves, and wind.

### Boundary rationale

- This draft MCA incorporates all of the Pembrokeshire local SCA 44: Western Offshore – very deep water, which is consistent with the Marine Character Type 'Low energy sub-littoral sediment: deep water'.
- The MCA sits within the Inshore Marine Plan Area outer boundaries.

## MCA 13: St David's to Strumble Head Coastal Waters

### Draft key characteristics

- An indented north-west facing coastline with rugged cliffs and headlands rising between 50m to 140m AOD.
- Clifed coastline interspersed with steep narrow valleys, harbours, sandy beaches and inlets with rocky islets and stacks slightly offshore.
- St David's peninsula backed by the highly prominent landform of Carn Llidi: an abrupt rocky volcanic outcrop.
- The western extent of the MCA falls within the Pembrokeshire Marine SAC, with valued marine habitats including subtidal reefs and sea caves, and rare species such as Shore dock.
- Other designations include the St David's SAC, Ramsey and St David's Peninsula Coast SPA and Strumble Head SSSI – all important for their range of coastal and maritime habitats.
- Severe pattern of wave disturbance along the majority of the exposed coastline.
- The area boasts many prehistoric remains including hill forts on Garn Fawr, promontory forts and ancient settlement remains.
- Industrial heritage at Porthgain and Abereididi derived from quarrying and other trade.
- The sea is used for handline fishing and lobster/crab potting. The Fishguard ferry passes nearby within MCA 11.
- The Coast Path extends around the cliff tops, affording walkers with outstanding views across the MCA and beyond. Pwll Deri is a popular destination for climbers.
- The inaccessibility of long sections of the foreshore means that Strumble Head and its lighthouse are a key attraction for visitors.
- Sandy coves including Whitesands Bay and Abereididi Bay provide visitors with a rare opportunity to access the sea for surfing, swimming, kayaking and diving.
- A small links golf course lies behind the dunes at Whitesands Bay.
- Occasional caravan parks and camping sites are evident in views from the sea and along the coast.
- Unspoilt, long views out to sea from the coast and panoramic views from Garn Fawr.
- Prominent, exposed rocky coastline with a wild and remote character, particularly due to the lack of access to the shoreline in many locations.

### Boundary rationale

This draft MCA comprises a merge the following Pembrokeshire local SCAs:

- 16: Whitesands Bay
- 15: St David's Head
- 13: Penbwchdy to Penllechwen
- 11: Strumble Head to Penbwchdy

Note that the offshore extent of the MCA has been extended from that of the above SCAs, into Pembrokeshire SCA 28: West Open Sea, following logical bathymetry lines marked on the marine charts. The distance from Strumble Head has also been extended to take in the associated waters influenced by the headland (this also applies to MCA 14).

## MCA 14: Cardigan Bay (south)

### Draft key characteristics

- Diverse coastline with spectacular craggy high cliffs rising to over 175m AOD, jagged rocky foreshore with cliff arches, sinuous estuaries with mudflats and sandy bays,
- High sandstone and mudstone cliffs characterise the headlands to the south. The landform is lower to the north and on Cardigan Island at around 50m AOD.
- Prominent whale-backed headland dividing and containing Newport Bay and Fishguard Bay.
- Gently shelving sea bed of a medium depth water on sandy gravel seabed. Islets lie just offshore, linked at low tide.
- Highly exposed seas, especially in north or north westerly winds, with over-falls around the headlands.
- High wave climate associated with the coastline from New Quay northwards, facing the full brunt of weather conditions sweeping in from the Atlantic.
- Highly designated stretch of coastline and surrounding waters (Afon Teifi SAC, Cardigan Bay SAC and several SSSIs), with valued sandbanks, reefs and sea caves supporting species such as the bottlenose dolphin.
- A busy sailing centre forms a focus of summer activity at Newport.
- Few wrecks, concentrated on the approaches to Fishguard Harbour, north of Strumble Head.
- Area boasts many prehistoric remains including burial chambers, promontory forts, standing stones and field systems. The last (abortive) invasion of Britain by the French Republican La Legion Noire occurred at Carregwastad Point.
- Rich seas attracting fishing activity – otter trawling, set netting, handline fishing and lobster/crab/prawn potting all take place.
- Much coastal and marine recreation, including leisure sailing, beach angling, sea kayaking and use of Celtic longboats, swimming and beach-based activities, as well as dolphin spotting trips to Cardigan Island.
- Hub of activity at Fishguard, including commercial fishing and leisure craft – the ferries travelling to and from Rosslare (Ireland) forming frequent seascape features.
- The Coast Path provides access for walkers along the cliff tops and headlands, affording expansive views out to sea, including outer Cardigan Bay (MCA 15) and north towards Anglesey.
- Large parts of the coastal waters within the Aberporth military training area. During periods of live firing, an overriding sense of remoteness is broken.
- Parts of the sea near Llannon are licensed for oil and gas exploration.
- Coastal landmarks visible in landward views include Cemaes and Dinas Heads, fronting a backcloth of coastal hills including Mynydd Carningli.
- The lighthouse at Strumble Head forms a strong night-time feature; the beam sweeping across a dark, empty sky.

### Boundary rationale

This draft MCA comprises a merge of the following Pembrokeshire local SCAs:

- 1: Teifi Estuary
- 2: Cardigan Island Cemmaes Head
- 3: Pen y Afr to Pen y Bal
- 4: Newport Bay
- 5: Dinas Island

- 6: Fishguard Bay East
- 7: Fishguard and Goodwick Harbours
- 8: North Open Sea (note that in creating the MCA, we have ensured that Strumble Bank and surrounding waters are kept with Strumble Head, within this MCA. The boundary of the MCA here is guided by bathymetry).
- 10: Crincoed Point and Strumble Head

Please note that the offshore extent of the MCA between Pembrokeshire and Anglesey is guided by sediment geology; consistent with the approach taken by the local studies either side. This also pulls in a logical extent of coastal waters where the interrelationships between coast and sea are strong.

The northern extent of the MCA loops around the Cynfelyn Patches following logical sediment geology lines (again consistent with approach to similar features further north). This sarn (rocky reef) is kept with the others as distinctive characteristics of MCA 16: Cardigan Bay (north) and Estuaries.

## MCA 15: Outer Cardigan Bay

### Draft key characteristics

- MCA comprises the outer edges of Cardigan Bay with a north-westerly and westerly aspect.
- Mudstone and sandstone seabed overlain by Holocene deposits of sand and gravel – forming hummocks on the sea floor and associated areas of shallower water depth (particular examples off Dinas Head).
- Water is deeper in the south (up to 40m), compared with shallower water (up to 20m) in the northern section.
- Wave climate increases significantly in the central and northern part of the MCA, as the sea becomes fully exposed to prevailing westerly weather conditions creating a wild and dramatic quality.
- Robust infauna (invertebrates that burrow into the seafloor substrate) are adapted to the MCA's mobile coarse sediment.
- Important demersal fish spawning and scallop fishing grounds. Other commercial fishing activity includes beam and otter trawling, as well as whelk/lobster/crab potting.
- The rich fish life found in the area means cetaceans are regularly sighted, including bottlenose dolphins.
- Few wrecks, concentrated on the approaches to Fishguard Harbour including the Gramsbergen cargo vessel which broke free from her anchor chain and hit rocks before sinking off Penrhyn, and the Flying Dream which burnt at its moorings.
- Large section within the Aberporth military training area, used for missile testing. During periods of live firing, an overriding sense of remoteness is broken.
- Parts of the sea are licensed for oil and gas exploration.
- Used for leisure sailing by larger boats, commercial craft and ferries to and from Fishguard Harbour.
- Commercial shipping can be seen to the west. Flashing Cardinal Marks (buoys) at the ends of the sarnau can also be seen, especially at night.
- Coastal landmarks visible in landward views include Cemaes and Dinas Heads, fronting a backcloth of coastal hills including Mynydd Carningli.
- The lighthouse at Strumble Head forms a strong night-time feature; the beam sweeping across a dark, empty sky.
- The street lights of Fishguard and the ferry port can also be discernible from closer distances to the shore; however much of the adjacent coast is free from light pollution reflecting its lightly settled character.

### Boundary rationale

The draft MCA includes the following Pembrokeshire local SCAs:

- 8: North Open Sea (note amends in MCA 14 with regards to excluding waters around Strumble Bank to keep these with Strumble Head)
- 9: Newport and Fishguard Outer Sand Bar

It also takes in the following Snowdonia local SCA:

- 36: Cardigan Bay

The northern edge of the MCA responds to the transition from exposed (high energy) to the more sheltered (low energy) waters of the southern Llŷn. The boundary between this MCA and MCA 11 (West Pembrokeshire Islands, Bars and Inshore Waters) has been smoothed to reduce the kinks created from the local SCA boundaries. The revised, smoothed boundary is consistent with a change from low energy sub-littoral sediment in

the eastern part of MCA 11 to moderate/high energy sub-littoral sediment influencing this MCA.

The MCA sits within the Inshore Marine Plan Area outer boundaries.



## MCA 16: Cardigan Bay (north) and Estuaries

### Draft key characteristics

- Tidal and long-shore drift processes resulting in the formation of a swash-aligned landform comprising long sandy beaches backed by dunes at Morfa Dyffryn and Borth Sands, and much shell deposition.
- Around Llwyngwriil, steeply sloping cliffs drop to a narrow, pebbly beach. In the south of the MCA near Borth, the sea hits west-facing cliffs creating dramatic spray and crashing waves, causing ridges to form on cobble beaches.
- The Mawddach and Dyfi estuaries flow into the sea in this MCA, along with a number of other rivers draining from the mountains of Snowdonia to the east.
- Seabed comprising a thin layer of quaternary sand and gravel overlying Oligocene, Permo-Triassic and Jurassic sedimentary rock. It includes rare carbonate reefs.
- Shallow, mobile sand substrate, regularly disturbed by wave action. The MCA is characterised by weak to moderate tidal currents.
- MCA includes part of the Pen Llŷn a`r Sarnau/ Lleyrn Peninsula and the Sarnau SAC, recognised for its varied maritime habitats and species including seals and dolphins.
- Other internationally and nationally designated areas at Morfa Dyffryn, the Mawddach Estuary, Broadwater and the Dyfi, reflecting the rich coastal and estuarine habitats of the area.
- The rich marine environment also provides nursery grounds for commercially important demersal fish, habitats for invertebrate communities and feeding grounds for sea birds.
- Offshore historic and cultural features include Barmouth harbour and the associated historic shipbuilding and fishing industries. Summer ferry from Barmouth to Fairbourne.
- Strong historic associations between Borth and the sea. Originally a fishing village but now much expanded for coastal tourism.
- Historic harbour and former fishing village at Aberdyfi with associations with herring fishing and the export of lead ore.
- Wrecks are found along Sarn Badrig to the north of the MCA. And include the Protected Wrecks of the Diamond and the Tal y Bont. Lighthouses form charismatic day and night-time maritime features.
- Recreational and commercial fishing activity including potting, netting and light trawling and boating.
- Marine area popular for sailing and fishing, with a small harbour and slipway at Aberdyfi.
- At low tide, Mawddach estuary contains rich variety of colours and textures. At high tide, it can appear lake-like.
- An open, large-scale seascape framed to south by cliffs, and to north by Tywyn sands. Open views afforded over Cardigan Bay, with hills of the Llŷn peninsula appearing like islands on northern horizon.

### Boundary rationale

The draft MCA includes the following Snowdonia local SCAs:

- 35: Aberdyfi Bay
- 27: Dyfi Estuary
- 25: Tywyn and Sarn-y-bwch
- 34: Barmouth Bay
- 23: Mawddach Estuary
- 22: Mochrasto Fairbourne and Sarn Badrig

Note that the northern and western boundaries of SCA 22 have been extended to form the MCA extent, taking in the rough, shallow waters associated with Sarn Badrig which include areas of high energy rock and high energy sub-littoral sediment (Marine Character Types). This contrasts with the calmer gently shelving waters of MCA 17 (adjacent to the north).

## MCA 17: Tremadoc Bay and Dwyryd Estuary

### Draft key characteristics

- A sweeping, shallow bay with wide sandy beaches, and a distinctive swash-aligned coastal landform at Morfa Harlech. To the north, the rugged coastal peak of Moel-y-Gest is a prominent landmark.
- Extensive intertidal area at the mouth of the estuary, with a meandering channel running through it, and continuing inland. River flows through a notable rocky gorge near Penrhyndeudraeth before the valley widens again.
- Shallow mud and sand substrate overlying Oligocene and Permo-Triassic sedimentary rock with a diverse infaunal community. Historically, mariners used sounding leads on entering the bay, both for measuring water depth and observing changes in sediment.
- Includes part of the designated Pen Llŷn a'r Sarnau/ Llŷn Peninsula and the Sarnau SAC, recognised for its reefs, shallow inlets and estuaries.
- Extensive intertidal habitats and river channels designated SAC and SSSI (Morfa Harlech and Glaslyn) provide important bird feeding and overwintering sites and habitat for rare plants and insects.
- Nursery grounds for commercially important demersal fish including sole and plaice.
- The rocky reef of Sarn Badrig forms the southern boundary to this MCA and supports a diverse reef community.
- A fairly sheltered MCA with weak to moderate tidal currents. Wave action generates little disturbance in central, muddy areas of the MCA.
- Glaslyn and Dwyryd estuaries flow into the sea in this MCA.
- Marine environment strongly influenced by the relatively high water temperatures and turbidity associated with Tremadoc Bay.
- Wrecks are found along the southern MCA boundary of Sarn Badrig, including the schooner Vigilant (1858) and the Pride of the Sea.
- Historic and cultural features associated with the estuary include a former coastal warehouse with river access at Ynys, the harbour at Porthmadog, the associated 'cob' railway embankment in connection with the transport of slate from quarries inland and its export by ship; the former trestle bridge and toll house near Llandecwyn Station (now replaced by modern bridges), and the Italianate model village at Portmeirion, with its picturesque estuary location, designed by Sir Clough Williams-Ellis.
- Recreational and fishing boats seen accessing Porthmadog harbour and Pwllheli. There is limited fishing activity of light otter trawling and potting.
- Tourism and recreation are important uses, with recreational boating, water sports, sea angling and popular beaches.
- A relatively enclosed offshore MCA with views of the Llŷn peninsula to the north and the Gwynedd coastline to the east throughout the MCA.
- Long views across the length of the sweeping bay create an open quality and large scale to the MCA. Weather and season have strong influences on the perceptual qualities of the area.

### Boundary rationale

This draft MCA includes the following Snowdonia local SCAs:

- 33: Tremadoc Bay
- 20: Porthmadog and Glaslyn Estuary
- 21: Dwyryd Estuary and Morfa Harlech
- 19: Cricchieth to Mochras

In creating the MCA, the area covered by the above local SCAs has been extended to cover the bay up to Trwyn Cilan headland in the west. Coinciding with low energy sub-littoral sediments and gently shelving water. Bathymetry contours and sediment geology information was also used to inform logical boundary lines to create the MCA.

## MCA 18: Llŷn and Bardsey Island

### Draft key characteristics

- This MCA encompasses the waters around the Llŷn Peninsula, with a varying coastline of pebbled beaches, sandy bays and rugged cliffs and rocky headland. These waters also include Bardsey Island, 3 kilometres from the mainland.
- The depth of the water is varied with shallow sandbanks and deeps ranging from <10m to 75m.
- Sandy and gravelly sediment overlays mudstone, siltstone and slate bedrock.
- Sandbanks including Devil's Ridge to the east of Bardsey Island and Bastram Shoal.
- The majority of this MCA is contained within the Pen Llŷn a'r Sarnau SAC, recognised for its reefs, shallow inlets and estuaries which are home to wildlife include seals, otters and dolphins. The Sea cliffs of Llŷn (Clogwyni Pen Llŷn) are also an SAC.
- Ynys Enlli (Bardsey Island) is designated a SSSI and NNR for its maritime vegetation and importance to species including seals and chough.
- High wave exposure found on the south facing coast of the Llŷn Peninsula, whilst there is lower wave exposure on the more sheltered north western facing coast.
- The Bardsey Sound experiences some of the strongest tidal streams in the Irish Sea.
- Several wrecks found on the coast of the Peninsula and Bardsey Island, including the Cyprian, Stewart and the Ilesha, which was wrecked on Bardsey Island in 1915 on a voyage from Liverpool to West Africa.
- The waters in this MCA are mainly used for fishing for shellfish, scuba diving and angling.
- It a notable area for cetacean and bird watching, with a dedicated observatory located on Bardsey Island.
- This MCA is used extensively for recreation, particularly in the summer, and the Wales Coast Path follows the edge of the Peninsula, with pockets of common land found along the path. Many parts of the coast are under National Trust ownership.
- Views and perceptual qualities (to be completed post fieldwork – thoughts welcomed)

### Boundary rationale

- Boundary lines in the south informed by sediment geology and marine charts, indicating areas of rougher water (and shallows) associated with Devil's Ridge, Bastram's Shoal, Caswenan Rock and Bardsey Island. This area also coincides with moderate to high-energy wave climate, as opposed to surrounding areas of low energy.
- The distinctive break in bedrock geology along the western and northern peninsula (from mudstone-dominated to slate and siltstone) is used to inform the offshore extent of the SCA, in conjunction with bathymetry. The MCA makes landfall in the east to meet the boundary with Regional Landscape Character Area 4: Llŷn.

## MCA 19: Llŷn and South West Anglesey Offshore Waters

### Draft key characteristics

- This MCA includes the offshore waters to the west and broadly outlines the Llŷn Peninsula. Most of the water in this MCA is between 30m and 80m, although there are some trenches which plunge to 115m.
- Mudstone and sandstone bedrock overlaid by a layer of sandy-gravelly sediment. The Devil's Tails sandbank is located in the south of the MCA.
- A small portion of this MCA is contained within the Pen Llŷn a'r Sarnau SAC, recognised for its reefs, shallow inlets and estuaries.
- Cetaceans have been sighted in these waters.
- Generally the area has a low wave exposure, although rougher waters occur in the area around the Devil's Tail sandbank.
- Wrecks provide evidence of war time losses including the Erica, Knut and the Chelford.
- War Grave site at wreck of H5 Submarine, a British submarine rammed by a British ship in 1918 whilst on surface patrol. At the time, ships were instructed to ram any sighted submarines without checking which side they were on. Site now controlled under the Protection of Military Remains Act 1989.
- This MCA contains part of a large firing practice area used by the Royal Navy which stretches down to the south of Cardigan Bay.
- Part of the MCA is also licensed for oil and gas exploitation.
- Commercial ships can be seen moving through this MCA.
- Fishing uses include heavy beam trawling and lobster and crab potting.
- A vast, empty seascape with high levels of wildness and remoteness – perceptual qualities are dominated by the wind, waves and a feeling of being at the mercy of nature.

### Boundary rationale

- This draft MCA includes the western part of Anglesey local SCA 32: Caernafon Bay
- All of the MCA comprises low energy sublittoral sediment, the majority also falling within the medium depth category (50-100m).
- Boundaries also informed by breaks in sediment geology which coincide with patterns in bathymetry.
- The MCA sits within the Inshore Marine Plan Area outer boundaries.

## MCA 20: Caernarfon Bay

### Draft key characteristics

- Low, wide, plateau-like headlands with smooth profiles dividing rocky bays and wide sandy beaches. Shallow near-shore bathymetry associated with beaches.
- Rocky islands just offshore are the remains of former headlands eroded by the sea.
- Moderate tidal currents result in coarse sediment offshore with finer sand in the eastern portion of the MCA.
- Large range in depth from less than 10m in the east to a maximum of nearly 100m where this MCA meets MCA 19.
- This is a sediment-dominated MCA with sand found close to the shore and coarser sediment further offshore. Wave action disturbs the sediment particularly in shallower inshore areas.
- A layer of Quaternary sand and sandy gravel overlays a mosaic of Carboniferous, Precambrian and undivided lower Palaeozoic bedrock. Active bedforms such as sand waves are found in the mobile sediment.
- The area around Ynys Feurig is SSSI and SPA designated for its importance for birdlife as the largest tern colony in Wales breeds on Ynys Feurig. Habitats that contribute to the special interest include maritime grassland and intertidal habitats (rock pools).
- Other SSSIs at Llyn Maelog (freshwater lagoon), Rhosneigr Reefs (designated for seaweed communities), Rhosneigr and Ty Croes (designated for heathland, grassland and rock habitats).
- Atlantic waves combine with shallow bathymetry and wide beaches to create rolling breakers. Crigyll river flows into the sea at Rhosneigr.
- A dangerous stretch of coastline for shipping, often with treacherous conditions and hidden rocks.
- Crigyll Rocks are notorious for wrecks, and ruthless wreckers (known as the Crigyll Wreckers) robbing the cargoes of stricken vessels. Wrecks include the Caernarfon Bay lightship and the Defiant which sunk in 1995. .
- The wreck of the Norman Court is a popular recreational diving site.
- Another important historic and cultural feature is Cribinau Church, sited on a causewayed island.
- Transatlantic communications cables make landfall at Porth Treicastell.
- Fishing activity includes towed mobile gear as well as potting and set nets.
- Commercial shipping seen in the western part of the MCA, with recreational boats often observed closer to shore.
- Popular for offshore recreation including surfing, kite surfing and sailing.
- The seascape is visually contained by headlands, but views are afforded to near-shore islands and the Llŷn Peninsula on the southern horizon.

### Boundary rationale

This draft MCA includes the following Anglesey local SCA:

- 32: Caernarfon Bay

Also note that the above local SCA has been extended southwards to form the MCA, taking in the full extent of the Bay, but limited in its western extent where waters extend 50m bathymetry (the contour forms the western boundary). This also reflects the recognition of the extent of the Bay in the Irish Sea Pilot (Imray, 2009).

## MCA 21: Menai Strait

### Draft key characteristics

- The Menai Strait occupies a glacially-eroded bedrock trough which has subsequently flooded, separating mainland Wales from Anglesey. It reaches a maximum depth of 20m.
- The Strait is tidal and has rocky islets throughout, creating hazardous navigation conditions. These include the Swellies, a famous stretch of the channel with islets, including Church Island and Ynys Gored Goch.
- The bedrock is a mixture of mudstone, sandstone, limestone and slate. Coarse sediment is found in the centre of the main channel, with finer mobile sand habitat found towards the edges and in the delta.
- The whole of the Strait is a designated SAC, representing a wealth and complexity of habitats: one of Wales' jewels in terms of marine biodiversity. These include mudflats, intertidal rocky shores, rare rocky islands and sessile oak woodland.
- Very complex tidal patterns with changing conditions in the channel due to geological variation and sediment processes.
- These give rise to constantly changing channels and sandbanks around Abermenai point, and modifications to the active dune system at Newborough Warren.
- Two iconic bridges cross the Menai Strait (The Menai Suspension Bridge designed by Thomas Telford and the Britannia Bridge designed by Robert Stephenson), which provided the first fixed road and rail connections to the Welsh mainland. The Swellies are found between the two bridges.
- Other important historic and cultural features include disused fish weirs, Church Island chapel, Bangor pier, historic harbours at Port Dinorwic and Porth Penrhyn and Ynys Llanddwyn, associated with the Welsh saint of love.
- St Dwywen Island contains the remains of a chapel, a lighthouse and the lighthouse and pilots' cottages.
- Channel contains numerous small rocky islands (including the Swellies) associated with treacherous currents, eddies and whirlpools and the scene of many shipwrecks, including the Pwll Fanog and the HMS Conway.
- Channel used for commercial and recreational shipping. Surrounding land used for estate parkland, farmland and settlement.
- Mussels and Pacific oysters are cultivated in this MCA on the northern shore of the Menai Strait.
- There is tourism development around Caernarfon, including modern harbour-side development. Recreational boating takes place in this MCA, particularly during summer.
- Views dominated by the ever-changing channel of the Menai Strait, and framed by the surrounding wooded landform. The central section of the Strait is visually dominated by Menai Suspension Bridge and Britannia Bridge.
- Spectacular views afforded to the Anglesey AONB, and southwards towards the mountains of Snowdonia National Park, further enhancing the MCA's scenic setting.

### Boundary rationale

This draft MCA includes the following Anglesey local SCAs:

- 4: Menai Strait
- 17: Caernarfon
- 18: Abermenai (here, the MCA boundary is extended southwards to meet MCA 18 – following the same bathymetry line)



## MCA 22: Holy Island West and Penrhos Bay

### Draft key characteristics

- A crenulated coastline of dramatic cliffs, geos and rocky bays. Small sandy beach at Trearddur and white sea arch, Bwa Gwyn – a well-known coastal feature.
- The steep sides of Holy Mountain plunge down to the sea as sheer rock faces, frequently punctuated by caves.
- The rocky islet of North Stack forms the northern point of the MCA. To the south is the 'twin' islet of South Stack. Waters beneath both stacks dangerously obstructed by rocks.
- The coast at South Stack displays exposures of folded sedimentary rocks, documented by Greenly (1919) as 'an amazing revelation'.
- Offshore, the schist bedrock is overlain by a thin layer of coarse sediment (mainly in the east; the western seabed is largely exposed bedrock).
- Extensive SSSIs and SPAs covering cliffs and coastal habitats. Breeding populations of guillemots, razorbills and puffins combine to create one of the largest colonies of breeding auks in North Wales.
- A high energy wave environment with the coastline feeling the full force of Atlantic breakers in prevailing south-westerly winds.
- Rocky coastal waters affected by strong tidal races (including the 'Holyhead Race'), over-falls and changes in water depth.
- A steep, confused and breaking sea is characteristic, especially when the wind and tide are opposed. Dangers are marked by a warning beacon off Rhoscolyn Point and the tall 19th century South Stack lighthouse.
- Documentary references to shipwrecks refer to the 'back of Holyhead'. It remains a notoriously dangerous stretch of coastline.
- The wrecks of the Borthwen, The Beacons, and the Missouri (off Porth Dafach) are popular diving sites.
- Treacherous conditions offshore limit sea uses to potting and recreational angling.
- Sheer cliffs plunging to the sea provide an exhilarating challenge for climbers; elsewhere cliff climbing, recreational boating and water sports are popular.
- Seascape setting contains offshore islands (e.g. Ynysoedd Gwylanod and Maen Piscar), with views across Caernarfon Bay to the Llŷn Peninsula.
- Panoramic sea and coastal views afforded from the cliff tops and Holyhead Mountain; which itself forms a prominent feature from across the western Anglesey sea and coastline.
- A wild seascape at the mercy of the elements and defined by the sounds, sights and movement of the sea and its marine life (particularly the thousands of seabirds).

### Boundary rationale

Includes the following Anglesey local SCAs:

- 13: Holyhead Mountain (split to from west/east sections to ensure North Stack and South Stack are in the same MCA – outer boundary also amended to more closely follow bathymetry and rough waters off the headlands)
- 14: Rhoscolyn (MCA boundary extended offshore to ensure all waters with close association with the coastline are included, such as the shoals off Penrhyn Mawr, following bathymetry contours).

## MCA 23: West Anglesey Open Waters

### Draft key characteristics

- An offshore MCA to the west of Holyhead with a water depth of 40-60m with deeper sections in the far north and in Holyhead Deep.
- Mostly coarse sediment in deep water with exposed Precambrian bedrock in the east.
- Robust polychaetes, crustaceans and bivalves make up the infaunal community while rocky habitats are colonised by a varied community that includes sponges, ascidians, hydroids and bryozoans among many other taxa.
- High energy water due to strong tidal currents and wave action, and high turbidity due to suspended particulate matter.
- A variety of fishing activity with towed mobile gear in the offshore sediment and static gear used closer to the shore.
- Commercial shipping and ferries seen offshore, with recreational boats more common close to the coast, particularly close to Trearddur.
- Long history of trade and communication between Holyhead and Ireland. The cargo ship Slieve Bloom was wrecked in 1918 while carrying passengers, cattle and mail from Dublin to Holyhead.
- The Dublin to Holyhead and Dublin to Liverpool ferry routes pass through the north of this MCA.
- Holyhead Mountain is a landmark in the southern part of the MCA, with the Isle of Man visible from the northern part of the MCA in clear conditions.

### Boundary rationale

- This draft MCA Includes all of the Anglesey local SCA 31: West of Anglesey (note change to inshore boundary to exclude coastal waters strongly associated with Holy Island, which fall within MCA 22)
- The MCA sits within the Inshore Marine Plan Area outer boundaries.
- The more intricate boundary lines of the local SCA have been 'smoothed out' for consistency and to fit the purposes of the national study.

## MCA 24: Holyhead Bay and the Skerries

### Draft key characteristics

- This MCA encompasses the large-scale Holyhead Bay, reaching from Carmel Head in the north to Porth Namarch on Holy Island. The rocky islets of the Skerries (with associated rough seas) are found to the north of Carmel Head.
- Bay fringed to the east by low cliffs with occasional sandy bays and deep wave-cut platforms/ reefs. Shelter is provided to the south by the rising mass of Holy Island.
- The seabed substrate follows the energy gradient, with exposed rock in the north and areas of coarse sediment in the south.
- The Skerries designated as SPA, SSSI and Important Bird Area, managed as a reserve by the RSPB. The islets are important for Arctic Terns and as a seal haul site.
- Extensive SSSI (Beddmanarch-Cymyran) covering intertidal areas, including the Afon Alaw estuary, as well as the seagrass bed, sand and rock found in Beddmanarch Bay.
- Nationally important tracts of coastal heath at Carmel Head (partially designated SSSI), with further long sections of cliff tops in National Trust ownership.
- Very strong tidal currents and wave climate around the Skerries in the north, with a more sheltered region of water within Holyhead Bay to the south.
- Many wrecks, including the protected wreck of the 17th century Royal Yacht Mary and the dangerous wreck of the Castillian, which sank in 1943 with live ordnance on board. The Meath lies close to the ferry routes and is marked with a buoy.
- Breakwaters, beacons and shipping markers mark passage into Holyhead. The Skerries lighthouse is visible over long distances, used in conjunction with other nearby land and sea markers for safe navigation.
- The wider bay is used by many different types of shipping for transport and trade – a long-standing use, particularly the connections with Ireland.
- Popular recreational dive site is the wreck of the Hudiksvall off Fydlyn Island/ Carmel Head, and the surrounding beaches are popular tourism destinations, particularly in the summer.
- Seascape setting dominated by the Skerries to the north, and by Holyhead Mountain to the south.
- Ferries (Holyhead- Dublin) are features on the seaward horizon. The Isle of Man is also visible in distant views north from Carmel Head.

### Boundary rationale

The proposed MCA includes the following Anglesey local SCAs:

- 11: Holyhead
- 12: Inland Sea
- 13: Holyhead Mountain (for the purposes of this study, the SCA has been split to put North Stack together with South Stack in MCA 22)
- 10: Carmel Head to Penrhyn

## MCA 25: North Anglesey Coastal Waters

### Draft key characteristics

- A rocky, high energy north-facing coastline with extensive wave-cut platforms and deeply incised bays. Surface rocks include West Mouse and Harry Furlough's rocks.
- Marine processes of long-shore drift creating crescent-shaped shingle beach at Cemlyn Bay - a dynamic landform.
- Steeply sloping bathymetry, with deep water of up to 25m coming in close to the shore.
- Subtidal substrate of bedrock and boulders with some coarse sediment and sand. Exposed rock colonised by marine species including featherstars and sponges.
- A range of wetland habitats associated with the brackish water of the Cemlyn Bay lagoon (designated a Nature Reserve, SSSI, SPA and SAC for its importance for bird life – especially terns).
- Other SSSIs at Henborth and Cae Gwyn notable for geological interest and plant life.
- Tidal rapids and strong currents visible from land in certain conditions, notably west of West Mouse.
- Despite navigational aids, many ships have been lost on the offshore rocks, especially around the West Mouse. Wreckage including boilers, iron hull plates and fittings still lie on the seabed, as well as cargoes such as roofing slates.
- Fishing activity along the rocky coast is mainly potting for crabs and lobsters, and recreational angling. Recreational charter fishing boats also depart from Amlwch port.
- Evidence of both modern and historic industry visible along the coast including historic brickworks, disused factories and the dominant form of Wylfa power station
- Until recent years, Amwlch Harbour was used for export of copper ore, as well as supporting industries such as shipbuilding.
- Point Lynas is a popular location for spotting cetaceans. The Isle of Anglesey Coast path runs along the coast.
- Popular recreational dive sites include wrecks of Abbotsford near Wylfa power station, Deo Gratis on the Archdeacon Rock and Edith Owen and Fawn on Coal Rock.
- Low-lying coast creates strong visual and physical connection between land and sea. The box-like, bright form of Wylfa Nuclear Power Station, with associated lighting at night, stands out in stark scale contrast.
- Seascape features include the lighthouse on Point Lynas, the offshore islands of West Mouse, Middle Mouse and East Mouse and expansive views including the Skerries and the Isle of Man on the horizon.

### Boundary rationale

The proposed MCA includes the following Anglesey local SCAs:

- 9: Cemlyn Bay
- 8: Amlwch and Cemaes
- 29: North of Anglesey

Note that the offshore extent of the MCA has been extended from the lines formed by SCAs 8 and 9 to take in the coastal waters with close association with coastline and associated features (e.g. the shoals off Archdeacon Rock). New line formed through a combination of bedrock geology – schist – and bathymetry).

## MCA 26: North-West Anglesey Open Waters

### Draft key characteristics

- The seabed drops steeply away from the north coast of Anglesey, with water depth greater than 30m bathymetry, increasing to more than 80m in the north-west.
- Preserved glacial bedforms found offshore. Sediment is suspended in the water leaving a substrate of mostly exposed Precambrian rock and boulders with shallow patches of coarse gravel, pebbles and cobbles.
- Robust infauna colonising the harsh seabed environment supporting a mixture of demersal fish species. Marine mammals can be sighted on the water surface.
- Sand scour limits the amount of life found on the rocks particularly in the south. In lower energy areas diverse reef communities are found with many filter feeders.
- Strong/very strong tidal currents and wave climate, particularly to the south west.
- A large number of wrecks, including from both World Wars, representing a wealth of seafaring heritage.
- Wartime losses include the Apapa which was sunk by a U-boat in 1917, and HMS Westphalia which was also sunk by a U boat.
- Potting takes place close to the shore with trawling and scallop dredging occurring further offshore.
- Glimpses of ferries and the Holyhead harbour breakwater are signs of significant human activity in adjacent MCA 24, while commercial shipping can be seen passing further offshore.
- Recreational boats can also be seen in coastal waters during the warmer months.
- The Skerries are prominent seascape features viewed from this MCA, with the Isle of Man and Holyhead Mountain also visible in clear conditions.
- In the south, visual relationships with the adjacent rocky north coast of Anglesey, with small bays and inlets, contribute to character.
- The box-like form of Wylfa Power Station forms a prominent man-made feature in views to the coast, standing out against a rugged and open coastal scene.

### Boundary rationale

The draft MCA includes the following Anglesey local SCAs:

- 29: North of Anglesey
- 30: North-West of Anglesey (note changes to inshore extent to parts now within MCA 25; the eastern offshore boundary has also been amended to ensure the frequent shoals marked on the marine charts are kept within the same character area, rather than being split and causing the current 'kink' in the SCA boundary).

In addition:

- The western and eastern MCA boundaries formed from the local SCAs have been 'smoothed' for the purposes of this study.
- The MCA sits within the Inshore Marine Plan Area outer boundaries.

## MCA 27: Conwy and Red Wharf Bays

### Draft key characteristics

- This MCA incorporates the Conwy Estuary, the Conwy Bay and the north-east facing coast between Red Wharf Bay and Dulas Bay.
- It is contained by the headlands and Tywyn Eilian and Great Orme, with offshore waters deepening to a maximum of 20m. There is an extensive intertidal area around the mouth of the Conwy Estuary.
- North-east aspect in the west of the MCA unusual for Wales, with Great Orme prominent in many land-to-sea views; providing shelter from prevailing south-westerlies.
- Varied coastal geology of cliffs and rocky or sandy beaches enabling diverse habitats within a relatively small area. E.g. Great Orme Coastal Grassland (SSSI and SAC grazed by herd of distinctive Kashmir goats) and Conwy Mountain coastal heathland with land cover of heather and bilberry.
- Limestone cliffs of the Great Orme host a variety of birds including Guillemot, Razorbill, Kittiwake, Fulmar and Peregrine. Grey Seals haul out on the rocky beaches. Great Orme is the largest headland on the North Wales mainland coast.
- Mostly sand and gravel marine substrate with epifauna such as brittlestars and burrowing anemones. Subtidal limestone rock around Ynys Dulas supports sponges and anemones.
- A mosaic of seabed types found in the north of the MCA with algae and fauna covered bedrock and boulders amongst sand and mixed sediments.
- Significant area within the Liverpool Bay SPA, designated for overwintering populations of red-throated diver and common scoter. Traeth Lafan (SPA/SSSI) is also designated for its birdlife.
- MCA also within the Menai Strait and Conway Bay SAC, recognised for its unusual and varied coastal and intertidal habitats and the associated reef communities.
- Migratory salmon and trout pass through these waters on their way to and from the river Conwy.
- Great Orme headland is exposed to the full force of the sea, especially in northerly wind conditions.
- Historic and cultural features include historic harbours/ quaysides (e.g. Conwy) and more modern marinas (e.g. Deganwy) and channel beacons. The 12th Century Conwy Castle (Scheduled Monument and World Heritage Site) and its defensive walls dominate Conwy harbour.
- Evidence of past industrial processes including kelp burning, brick making and lime burning. Copper mines were serviced by small craft, with an anchorage off Freshwater Bay.
- A number of ship wrecks, including the tragic loss of the Royal Charter in 1859, the Mona, and locally-owned slate-trade schooners. Wreck of the Flying Foam visible in the intertidal area on the eastern side of the Conwy Bay.
- The Northern Menai Strait mussel fishery is located within this MCA and is the UK's biggest, producing 7-10,000 tonnes of mussels per year (up to 75% of the UK's production). Red Wharf Bay is used for bait digging.
- Popular tourist destination, evidenced in development in towns along this coast. Activities include swimming, angling and diving, with a number of recreational dive sites are along the coast.

- The Wales Coast Path etches round the coastline in this MCA. There is also a large amount of common land found around adjacent to the coast around Conwy, and some coastal heath managed by the National Trust near Penmon.
- Views dominated in the west of the MCA by the open expanse of Conwy Bay, its colours and textures continually changing in response to weather and tidal conditions, and numerous boats.
- Puffin island a key feature of the seascape setting in views north, with Great Orme being a more distant feature to the east.

### Boundary rationale

The draft MCA includes the following Anglesey local SCAs:

- 7: Dulas Bay
- 6: Red Wharf Bay to Moelfre
- 5: Penmon
- 3: Traeth Lafan
- 1: Conwy Estuary
- 2: Conwy Bay (note that the offshore extent marked by this SCA has been extended for the MCA to include all of Four Fathom Bank; with a combination of bedrock geology and bathymetry helping to inform an extended, smoother outer boundary linking across the bays. Eastern extent also amended to bring all of Great Orme's Head into the MCA as a logical eastern gateway to Conwy Bay).

The outer (offshore) boundaries formed by the local assessment have also been 'smoothed' for the purposes of this study, guided in the west by sediment geology (sand).

## MCA 28: Rhyl Flats and Dee Estuary

### Draft key characteristics

- The MCA encompasses the shallow waters (<20m) and human influenced coastal edge of the North Wales coast.
- The Dee Estuary to the east forms a natural border between Wales and England.
- The Little Orme headland (along with Great Orme in MCA 27) to the west adds a wild and dramatic character to the coastline with high, steep coastal cliffs.
- The coastline is defined by numerous sea defences, tourism development and wide sandy beaches.
- Extensive marine sediments of sand and gravel extending from the Dee Estuary and forming long, linear sandbanks running roughly parallel to the shore.
- Constantly shifting sandbanks with changing depths; hazards marked by numerous buoys, lights and fog horns. Main entry channel to the Dee maintained by dredging.
- Most included in the Liverpool Bay SPA, designated for its international importance to overwintering populations of red-throated diver and common scoter.
- The Dee Estuary has extensive designations including SPA, SAC, Ramsar and SSSI, due to the extensive intertidal sand, mudflats and saltmarsh which are internationally important for birds including shelducks, teals, godwits, waders and tern.
- Wave exposure generally low closer to shore, increasing in more open waters where the sheltering effect of Great Orme's Head diminishes.
- Numerous wrecks dotted throughout the MCA including the Ant which sank in 1907 with a cargo of roofing slate and the Four Brothers which was found abandoned off Great Orme and sank whilst under tow in 1923.
- Both Colwyn Bay and Rhyl are popular shore and boat angling areas, with whiting, plaice, dab, tope, rays and gurnards being caught. Rhyl includes the only harbour along this stretch of coast.
- Rhyl Flats Offshore Wind Farm forms a dominating offshore feature, sited on Constable Bank. The moving turbines are supplemented by further turbines beyond (in MCA 29).
- Recreational activity including water sports such as jet skiing and speed boating.
- Wales Coast Path runs the length of the coastline, continuing down the southern side of the Dee Estuary. The coastal edge is also crossed by the A55, A548 and main Holyhead to Chester railway line.
- The north coast of Wales serves as a traditional holiday destination for Wales and people from north west England, with numerous tourist development including Victorian seaside resorts at Rhyl and Colwyn Bay.
- Dramatic backdrop provided by the steeply sloping foothills of northern Snowdonia, restricting inland views from the sea.

### Boundary rationale

- This draft MCA takes in the sand banks and flats (including Rhyl Flats offshore windfarm) which have a key influence on character.
- Includes the Dee Estuary up to the high water mark – at the national scale, the physical and cultural associations with the wider area (including sediment flow to the surrounding sand flats) give good reasoning for including.
- Marine chart used as a guide for boundary lines in the absence of other additional physical data in digital format.



## MCA 29: Outer Liverpool and Conwy Bays

### Draft key characteristics

- An offshore MCA where depth increases gradually from approximately 15m below chart datum near Conwy Bay to over 50m in the north west.
- A thin layer of mostly coarse quaternary sediments overlying Carboniferous and Triassic sedimentary bedrock. Finer sand is found in the south east of the MCA.
- Includes a significant proportion within the Liverpool Bay SPA and Menai Strait and Conwy Bay SAC.
- A rich variety of life on the sea bed, including high levels of phytoplankton, provides important feeding grounds for sea birds, particularly in the south east. Marine mammals including bottlenose dolphin and grey seal can be sighted.
- Moderately strong east-west tidal currents. The strongest currents are found in the south west.
- A number of wrecks can be found in the MCA, including wartime losses (e.g. HMS Derbent, sunk by a U-Boat in 1917 and Visgnes sunk by a U-Boat in 1945), and also mine-laying activity (e.g. Kinforth steam-driven long-liner mined in 1941).
- Dominant maritime character is one of transit: recreational vessels entering or leaving the Menai Strait/ Conwy, or commercial vessels passing east and west to and from the Mersey and Dee.
- Large fishing boats target demersal fish and scallops offshore with smaller potting boats seen closer to the coast.
- Gwynt-y-Mor offshore wind farm dominates the east of the MCA, and to the north – access is restricted around the Douglas Oil Field (marked by a series of lit buoys and shipping lanes depicted on marine charts).
- Commercial shipping seen offshore, including large vessels waiting for Liverpool Pilots to guide them safely into port.
- Recreational boats seen particularly in the south east of the MCA during the warmer months.
- Several wrecks are visited by recreational divers and diving clubs, including the HMS Derbent, Cartagena, Kinforth, Delfina, Cork and Vigsnes.
- The landward view changes considerably throughout the MCA, with rocky headlands, islets and large bays found to the west and the large shallow opening of Conwy Bay to the east, with a backdrop of the mountains of Snowdonia.

### Boundary rationale

- Includes the Anglesey local SCA 28: North East of Anglesey
- Sits within the Inshore Marine Plan Area outer boundaries.
- Character defined by wide open seas, low energy littoral sediment up to 50m bathymetry and the presence of offshore wind turbines marked on the marine chart.

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1. Conwy Estuary
2. Conwy Bay
3. TraethLafan
4. Menai Strait
5. Penmon
6. Red Wharf Bay to Moelfre
7. Dulas Bay
8. Amlwch and Cemaes
9. Cemlyn Bay
10. Carmel Head to Penrhyn
11. Holyhead
12. Inland Sea
13. Holyhead Mountain
14. Rhoscolyn
15. Rhosneigr
16. Malltraeth
17. Caernarfon
18. Abermenai
19. Criccieth to Mochras
20. Porthmadog and Glaslyn Estuary
21. Dwyryd Estuary and MorfaHarlech
22. Mochrasto Fairbourne and SarnBadrig
23. Mawddach Estuary
24. Fairbourne to Tonfanau
25. Tywyn and Sarn-y-bwch
26. Borth
27. Dyfi Estuary
28. North-east of Anglesey
29. North of Anglesey
30. North-west of Anglesey
31. West of Anglesey
32. Caernafon Bay
33. Tremadog Bay
34. Barmouth Bay
35. Aberdyfi Bay
36. Cardigan Bay

- 1: Teifi Estuary
- 2: Cardigan Island and Cemmaes Head
- 3: Pen y Afr to Pen y Bal
- 4: Newport Bay
- 5: Dinas Island
- 6: Fishguard Bay east
- 7: Fishguard and Goodwick Harbours
- 8: North open sea
- 9: Newport and Fishguard outer sand bar
- 10: Crincoed Point and Strumble Head
- 11: Strumble Head to Penbwchdy
- 12: Strumble Head deep water
- 13: Penbwchdy to Penllechen
- 14: Western sand and gravel bars
- 15: St Davids Head
- 16: Whitesands Bay
- 17: Ramsey Sound
- 18: Ramsey Island coastal waters
- 19: Bishops and Clerks
- 20: St Brides Bay coastal waters north
- 21: St Brides Bay coastal waters east
- 22: St Brides Bay coastal waters south - Borough Head
- 23: St Brides Bay south coastal waters - The Nab Head
- 24: St Brides Bay
- 25: Skomer Island and Marloes Peninsula
- 26: Skokholm and Gateholm coastal waters
- 27: Grassholm and the Smalls
- 28: West open sea
- 29: Southern inshore waters
- 30: Southern offshore waters
- 31: Outer Milford Haven
- 32: Inner Milford Haven
- 33: Dagleddau
- 34: Freshwater West
- 35: Castlemartin coastal waters
- 36: Stackpole coastal waters
- 37: Freshwater East and Manorbier
- 38: Lydstep Haven coastal waters
- 39: Tenby and Caldey Island
- 40: Carmarthen Bay west
- 41: Carmarthen Bay north - Pendine Sands
- 42: Carmarthen Bay
- 43: Bristol Channel offshore
- 44: Western offshore - very deep water

## Wales National Seascapes Character Assessment

**Figure 2: Draft Marine Character Areas showing Local SCAs**

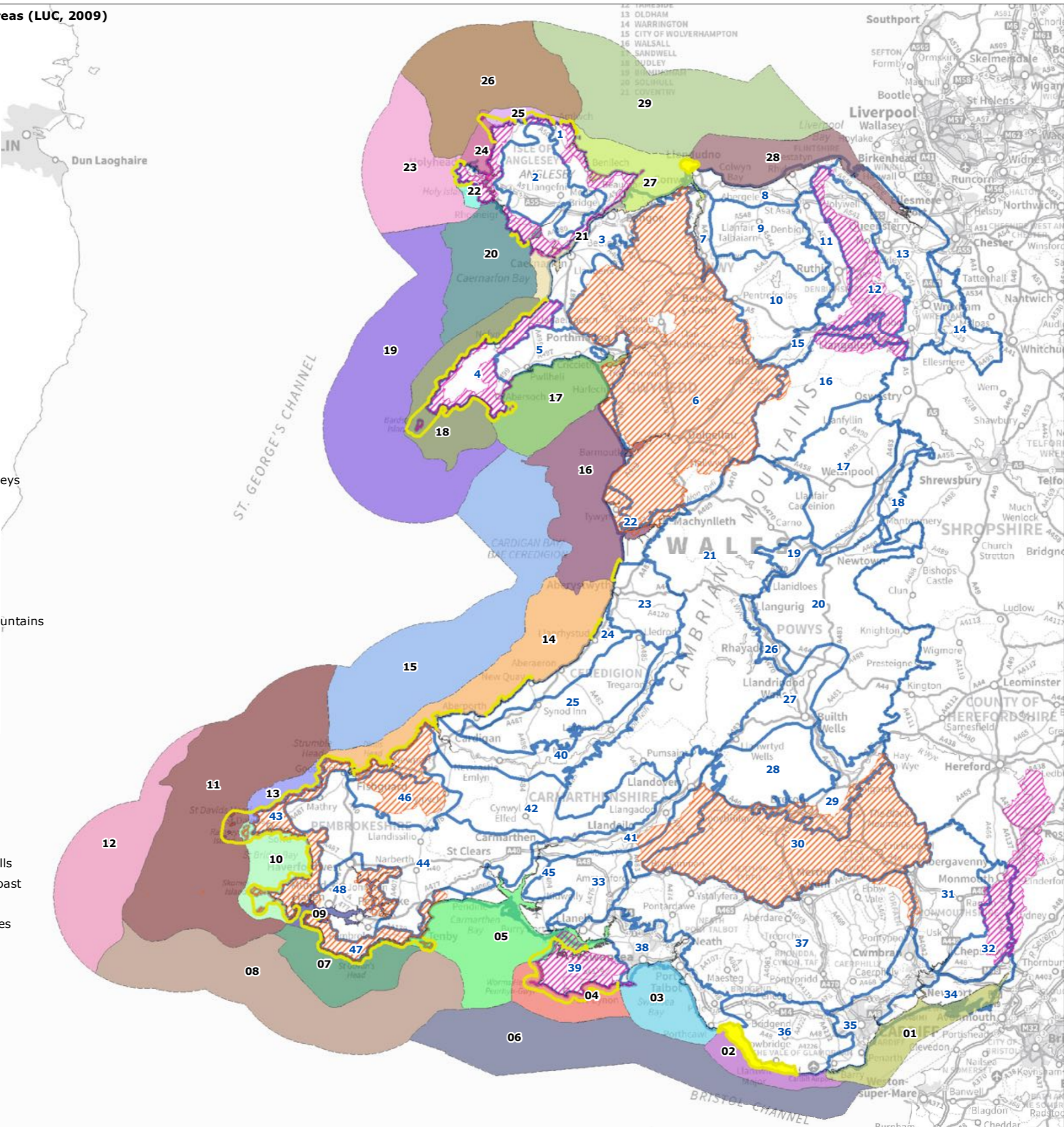
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- 02: Nash Sands and Glamorgan Coastal Waters
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- 04: Helwick Channel and The Gower
- 05: Carmarthen Bay and Estuaries
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- 19: Llŷn and South West Anglesey Offshore Waters
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- 25: North Anglesey Coastal Waters
- 26: North-West Anglesey Open Waters
- 27: Conwy and Red Wharf Bays
- 28: Rhyl Flats and Dee Estuary
- 29: Outer Liverpool and Conwy Bays

Map Scale @ A3: 1:1,000,000



**Wales Regional Landscape Character Areas (LUC, 2009)**

- 1: Anglesey Coast
- 2: Central Anglesey
- 3: Arfon
- 4: Llŷn
- 5: Tremadoc Bay
- 6: Snowdonia
- 7: Conwy Valley
- 8: North Wales Coast
- 9: Rhos
- 10: Denbigh Moors
- 11: Vale of Clwyd
- 12: Clwydian Range
- 13: Deeside and Wrexham
- 14: Maelor
- 15: Vale of Llangollen and Dee Valley
- 16: Berwyn
- 17: Montgomeryshire Hills and Vales
- 18: Shropshire Hills (Outliers)
- 19: Severn Valley
- 20: Radnorshire Hills
- 21: Cambrian Mountains
- 22: Aberdyfi Coast
- 23: Rheidol and Ystwyth Hills and Valleys
- 24: Ceredigion Coast
- 25: Bro Ceredigion
- 26: Upper Wye Valley
- 27: The Vales of Irton and Ithon
- 28: Epynt Plateau and Valleys
- 29: Wye and Usk Vales
- 30: Brecon Beacons and the Black Mountains
- 31: Central Monmouthshire
- 32: Wye Valley and Wentwood
- 33: Gwendraeth Vales
- 34: Gwent Levels
- 35: Cardiff, Barry and Newport
- 36: Vale of Glamorgan
- 37: South Wales Valleys
- 38: Swansea Bay
- 39: Gower
- 40: Teifi Valley
- 41: Tywi Valley
- 42: Pembroke and Carmarthen Foothills
- 43: West and North Pembrokeshire Coast
- 44: Taf and Cleddau Vales
- 45: Taf, Tywi and Gwendraeth Estuaries
- 46: Preseli Hills
- 47: South Pembrokeshire Coast
- 48: Milford Haven



**Wales National Seascape Character Assessment**

**Figure 3: Draft Marine Character Areas with Regional LCA and Protected Landscapes**

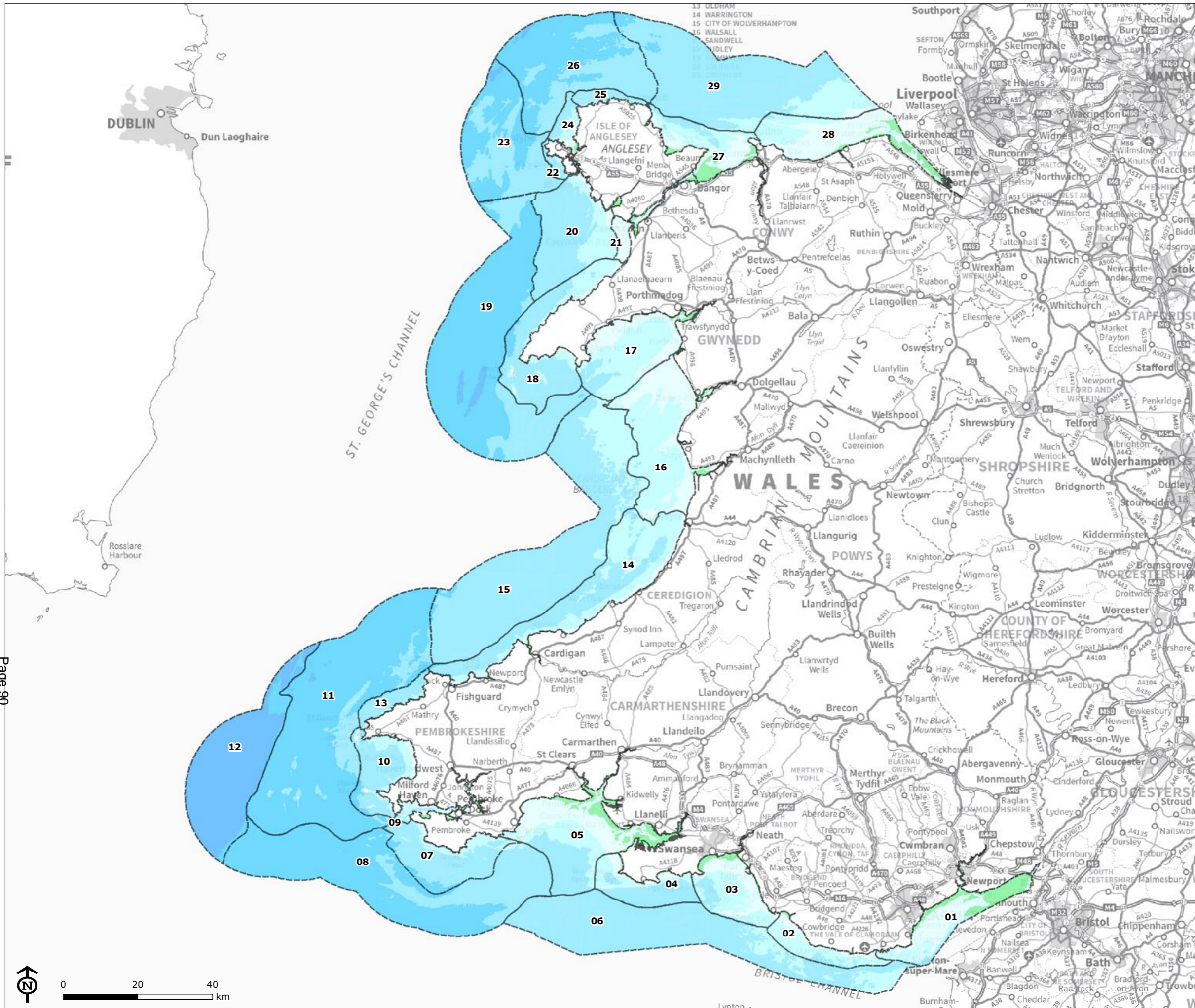
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  - 26: North-West Anglesey Open Waters
  - 27: Conwy and Red Wharf Bays
  - 28: Rhyl Flats and Dee Estuary
  - 29: Outer Liverpool and Conwy Bays
- Protected Landscapes**
- Area of Outstanding Natural Beauty
  - National Park
  - Heritage Coast

Map Scale @ A3: 1:1,000,000



# Wales National Seascape Character Assessment

**Figure 4: Draft Marine Character Areas with Bathymetry**



- 01: Severn Estuary and Cardiff Bay
- 02: Nash Sands and Glamorgan Coastal Waters
- 03: Swansea Bay and Porthcawl
- 04: Helwick Channel and The Gower
- 05: Carmarthen Bay and Estuaries
- 06: Bristol Channel
- 07: South Pembrokeshire Coastal and Inshore Waters
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- 29: Outer Liverpool and Conwy Bays

**Bathymetry Depth Areas**

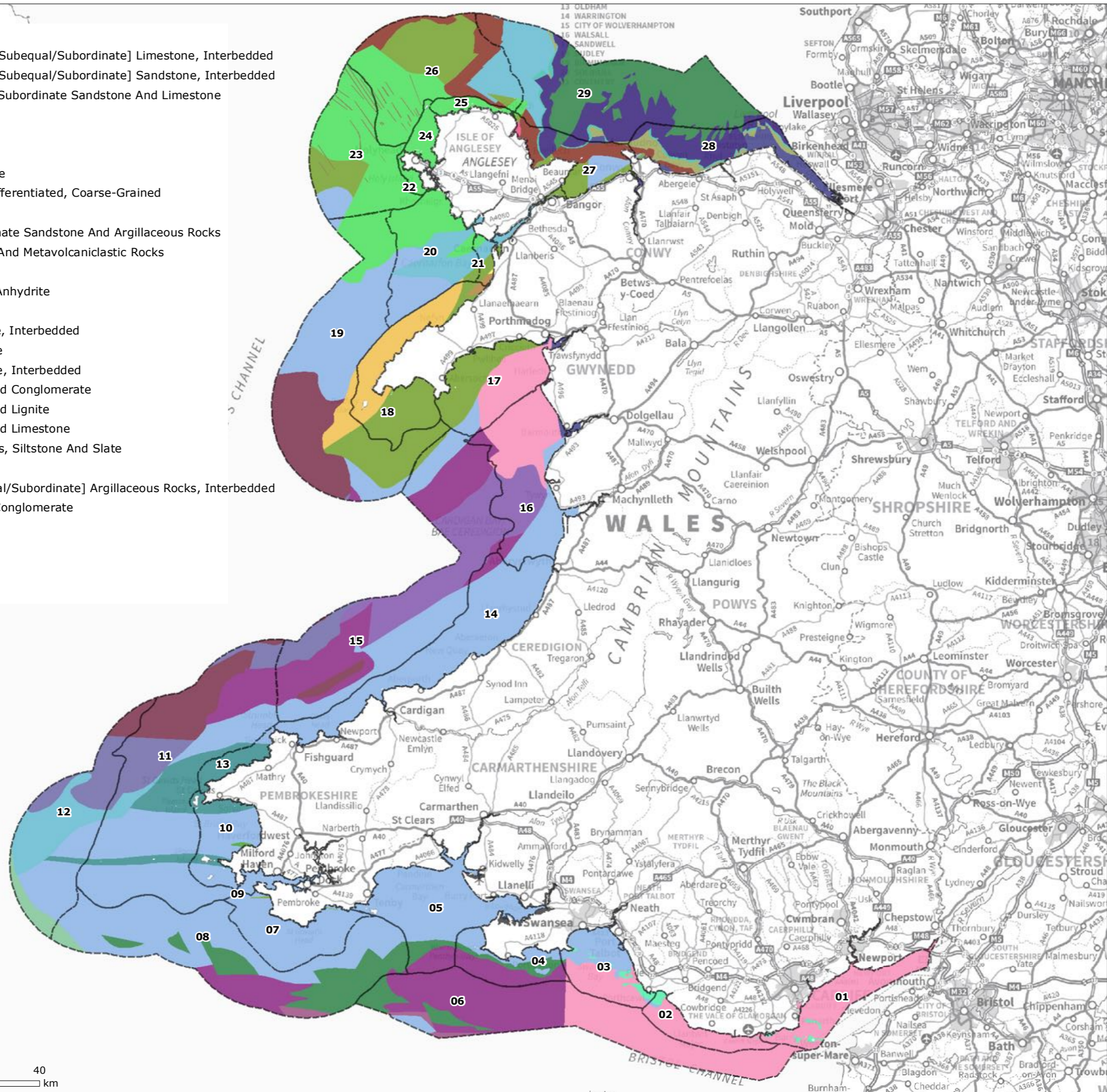
- Drying
- <=10m
- <=20m
- <=50m
- <=100m
- <=500m

Map Scale @ A3: 1:1,000,000



**Offshore Bedrock Geology**

- Argillaceous Rocks And [Subequal/Subordinate] Limestone, Interbedded
- Argillaceous Rocks And [Subequal/Subordinate] Sandstone, Interbedded
- Argillaceous Rocks With Subordinate Sandstone And Limestone
- Chalk
- Dolerite
- Gneiss
- Greywacke And Mudstone
- Intermediate Rock, Undifferentiated, Coarse-Grained
- Limestone
- Limestone With Subordinate Sandstone And Argillaceous Rocks
- Metasedimentary Rocks And Metavolcaniclastic Rocks
- Mudstone
- Mudstone And Gypsum/Anhydrite
- Mudstone And Halite
- Mudstone And Limestone, Interbedded
- Mudstone And Sandstone
- Mudstone And Sandstone, Interbedded
- Mudstone, Sandstone And Conglomerate
- Mudstone, Sandstone And Lignite
- Mudstone, Sandstone And Limestone
- Mudstone, Volcanic Rocks, Siltstone And Slate
- Sandstone
- Sandstone And [Subequal/Subordinate] Argillaceous Rocks, Interbedded
- Sandstone Breccia And Conglomerate
- Schist
- Slate
- Slate And Siltstone
- Tuff



**Wales National Seascape Character Assessment**

**Figure 5: Draft Marine Character Areas with Bedrock Geology**

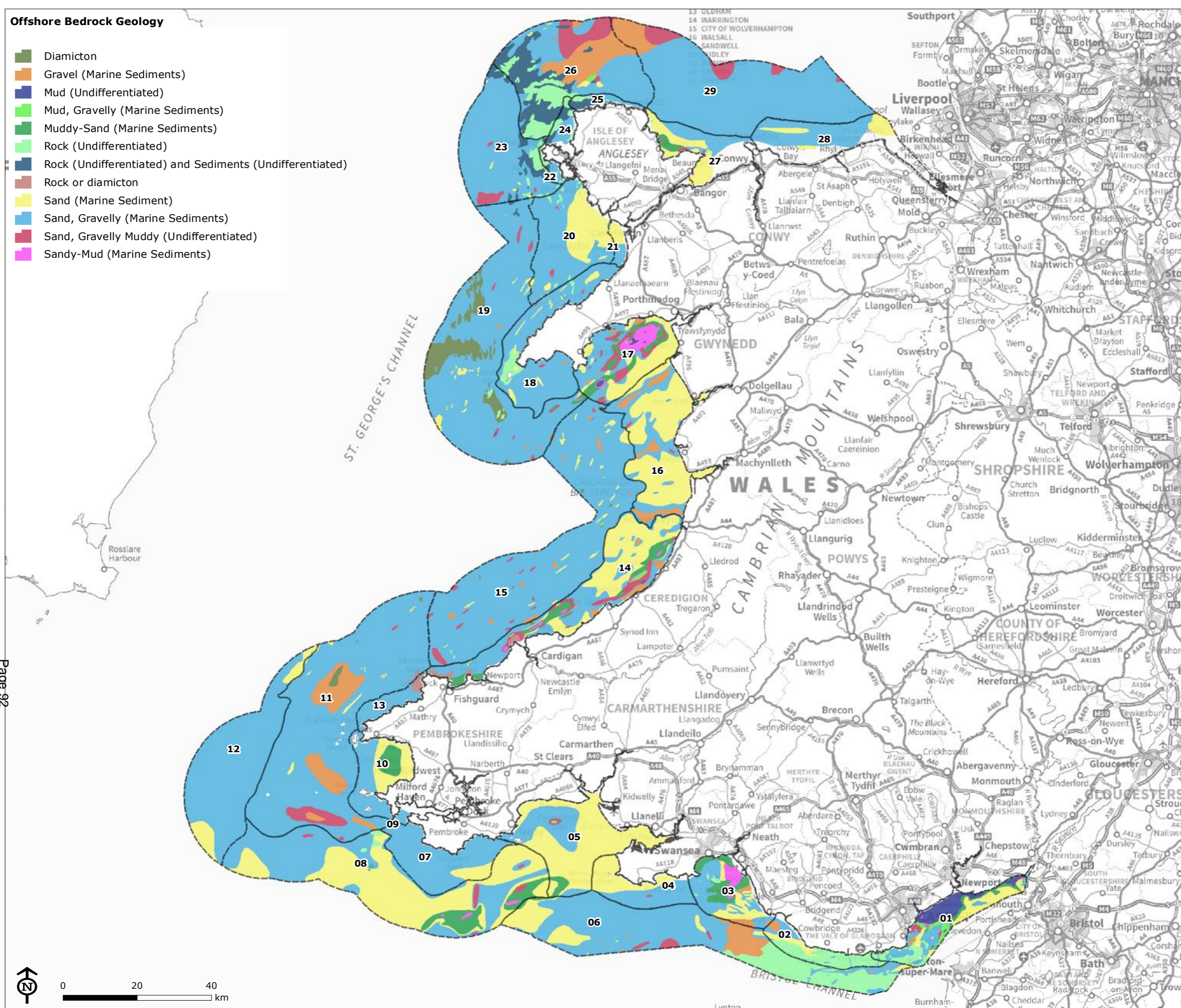
- 01: Severn Estuary and Cardiff Bay
- 02: Nash Sands and Glamorgan Coastal Waters
- 03: Swansea Bay and Porthcawl
- 04: Helwick Channel and The Gower
- 05: Carmarthen Bay and Estuaries
- 06: Bristol Channel
- 07: South Pembrokeshire Coastal and Inshore Waters
- 08: South Pembrokeshire Open Waters
- 09: Milford Haven
- 10: Western Bays and Coastal Islands
- 11: West Pembrokeshire Islands, Bars and Inshore Waters
- 12: Irish Sea Offshore
- 13: St David's to Strumble Head Coastal Waters
- 14: Cardigan Bay (south)
- 15: Outer Cardigan Bay
- 16: Cardigan Bay (north) and Estuaries
- 17: Tremadog Bay and Dwyryd Estuary
- 18: Llŷn and Bardsey Island
- 19: Llŷn and South West Anglesey Offshore Waters
- 20: Caernarfon Bay
- 21: Menai Strait
- 22: Holy Island West and Penrhos Bay
- 23: West Anglesey Open Waters
- 24: Holyhead Bay and The Skerries
- 25: North Anglesey Coastal Waters
- 26: North-West Anglesey Open Waters
- 27: Conwy and Red Wharf Bays
- 28: Rhyl Flats and Dee Estuary
- 29: Outer Liverpool and Conwy Bays

Map Scale @ A3: 1:1,000,000



**Offshore Bedrock Geology**

- Diamicton
- Gravel (Marine Sediments)
- Mud (Undifferentiated)
- Mud, Gravelly (Marine Sediments)
- Muddy-Sand (Marine Sediments)
- Rock (Undifferentiated)
- Rock (Undifferentiated) and Sediments (Undifferentiated)
- Rock or diamicton
- Sand (Marine Sediment)
- Sand, Gravelly (Marine Sediments)
- Sand, Gravelly Muddy (Undifferentiated)
- Sandy-Mud (Marine Sediments)



**Wales National Seascape Character Assessment**

**Figure 6: Draft Marine Character Areas with Bedrock Geology**

- 01: Severn Estuary and Cardiff Bay
- 02: Nash Sands and Glamorgan Coastal Waters
- 03: Swansea Bay and Porthcawl
- 04: Helwick Channel and The Gower
- 05: Carmarthen Bay and Estuaries
- 06: Bristol Channel
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- 16: Cardigan Bay (north) and Estuaries
- 17: Tremadog Bay and Dwyryd Estuary
- 18: Llŷn and Bardsey Island
- 19: Llŷn and South West Anglesey Offshore Waters
- 20: Caernarfon Bay
- 21: Menai Strait
- 22: Holy Island West and Penrhos Bay
- 23: West Anglesey Open Waters
- 24: Holyhead Bay and The Skerries
- 25: North Anglesey Coastal Waters
- 26: North-West Anglesey Open Waters
- 27: Conwy and Red Wharf Bays
- 28: Rhyl Flats and Dee Estuary
- 29: Outer Liverpool and Conwy Bays

Map Scale @ A3: 1:1,000,000





## Wales National Seascape Character Assessment

**Figure 7: Draft Marine Character Areas and Key Variations in Marine Habitats, Wave Energy and Water Depth**

- 01: Severn Estuary and Cardiff Bay
- 02: Nash Sands and Glamorgan Coastal Waters
- 03: Swansea Bay and Porthcawl
- 04: Helwick Channel and The Gower
- 05: Carmarthen Bay and Estuaries
- 06: Bristol Channel
- 07: South Pembrokeshire Coastal and Inshore Waters
- 08: South Pembrokeshire Open Waters
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- 25: North Anglesey Coastal Waters
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- 28: Rhyl Flats and Dee Estuary
- 29: Outer Liverpool and Conwy Bays

Map Scale @ A3: 1:1,000,000



### Key variations in marine habitats, wave energy and water depth

- High energy rock
- High energy sublittoral sediment / Medium depth water (50 - 100m)
- High energy sublittoral sediment / Shallow water (0-50m)
- Low energy rock
- Low energy sublittoral sediment / Deep water (100 - 500m)
- Low energy sublittoral sediment / Medium depth water (50 - 100m)
- Low energy sublittoral sediment / Shallow water (0-50m)
- Maerl beds, seagrass beds and lagoons
- Moderate energy rock
- Moderate to high energy sublittoral sediment / Medium depth water (50 - 100m)
- Moderate to high energy sublittoral sediment / Shallow water (0-50m)
- Reefs

