Risk assessment for SR2010No4

Standard Facility: Waste operation: Mobile Plant for landspreading

Location: Pensieri

Risk assessment carried out by: 360 Environmental Ltd

Date: 08-Nov-18

The scope of the permit and associated rules is defined by the following risk criteria:

Parameter 1 Permitted activities - The storage and recovery of waste by landspreading (R13, R10) .
Parameter 2 Permitted wastes -waste suitable for landspreading as specified by the SR.
Parameter 3 Maximum quantity of waste stored limited to 3000 tonnes at any one time
Parameter 4 No point source discharges to controlled waters or groundwater
Parameter 5 The activities must not be carried out within 10m of a watercourse
Parameter 6 The activity must not be carried out within 50m from any spring or well or any borehole used to supply water for domestic or food production purposes
Parameter 7 The activity must not be carried out in an SPZ 1

Abbreviations: SR - Standard Rule

Data and information				Judgement				Action (by permitting)	
Receptor	**Source**	**Harm**	**Pathway**	**Probability of exposure**	**Consequence**	**Magnitude of risk**	**Justification for magnitude**	**Risk management**	**Residual risk**
What is at risk? What do I wish to protect?	**What is the agent or process with potential to cause harm?**	**What are the harmful consequences if things go wrong?**	**How might the receptor come into contact with the source?**	**How likely is this contact?**	**How severe will the consequences be if this occurs?**	**What is the overall magnitude of the risk?**	**On what did I base my judgement?**	**How can I best manage the risk to reduce the magnitude?**	**What is the magnitude of the risk after management? (This residual risk will be controlled by Compliance Assessment).**
Local human population	Releases of airborne dusts/ particulate matter	Harm to human health - respiratory irritation and illness.	Air transport then inhalation	Low	Medium	**Low**	Permitted waste types are spread on land and have a low potential to produce bio aerosols, and particulate matter.	Permitted waste types are spread on land and have a low potential to produce bio aerosols, and particulate matter.	Low
Local human population	As above	Nuisance dust on cars, clothing etc.	Deposition from air	Low	Medium	**Low**	As above	As above	Low
Local human population	Emissions; litter	Nuisance loss of amenity and harm to pet health	Transport through air	Very low	Very low	**Very low**	No litter in waste being spread	Any litter will be picked from affected areas.	Low

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Local human population and local environment.	Emissions; litter and mud on local roads	Nuisance, loss of amenity, risk of accident	Vehicles entering and leaving site	Low	Medium	**Medium**	Road safety. Tractors/ spreaders trailing mud and debris from fields	Operational measures include clearing the waste, road sweeping affected area, and timeliness of spreading.	Low
Local human population	Odour	Nuisance, loss of amenity	Air transport then inhalation.	Medium	Medium	**Medium**	Local residents often sensitive to odour, permitted waste types have medium odour potential depends on waste type and prevailing wind	If wind is blowing towards receptors spreading will cease. Material injected to reduce odour generation.	Low
Local human population	Noise and vibration	Nuisance, loss of amenity, loss of sleep.	Noise through the air and vibration through the ground.	Low	Low	**Low**	Local residents often sensitive to noise and vibration.	Agricultural machinary used at all times, areas near dwellings will be spread during working hours.	Low
Local human population and local environment	Scavenging birds and animals	Harm to human health , nuisance, loss of amenity	Transport through air	Low	Medium	**Low**	Permitted waste types are unlikely to attract scavenging animals	Sludge can be shallow injected to further reduce attraction to animals.	Low
Local human population	Pests (e.g. flies)	Harm to human health, nuisance, loss of amenity	Air transport and over land	Medium	Medium	**Medium**	Some potential for pests	As above	Low
Local human population and local environment	Flooding of site	If waste is washed off site it may contaminate buildings / gardens / natural habitats downstream.	Flood waters	Medium	Medium	**Low**	Permitted waste types are stored securely prior to landspreading.	Low application rates and precision application will aid infiltration and prevent run off.	Very low

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Local human population and / or livestock after gaining unauthorised access to the waste operation	All on-site hazards: wastes; machinery and vehicles.	Bodily injury	Direct physical contact	Medium	Low	**Low**	Only a low magnitude risk is estimated for landspreading operations	No machinary left on site when not operational.	Low
Local human population and local environment.	Arson and / or vandalism causing the release of polluting materials to air (smoke or fumes), water or land.	Respiratory irritation, illness and nuisance to local population. Injury to staff, fire fighters or arsonists/vandals. Pollution of water or land.	Air transport of smoke. Spillages and contaminated firewater by direct run-off from site and via surface water drains and ditches.	Medium	Low	**Low**	Only a low magnitude risk is estimated.	As above. Material to be spread is not combustable.	Low
Local human population and local environment	Accidental fire causing the release of polluting materials to air (smoke or fumes), water or land.	Respiratory irritation, illness and nuisance to local population. Injury to staff or fire fighters. Pollution of water or land.	As above.	Low	Low	**Low**	As above.	As above. Permitted activities do not include the burning of waste.	Low
All surface waters close to and downstream of site.	Spillage of liquids, leachate from waste, contaminated rainwater run-off from waste e.g. containing suspended solids.	Acute effects: oxygen depletion, fish kill and algal blooms	Direct run-off from site across ground surface, via surface water drains, ditches etc.	Medium	Medium	**Medium**	No point source emissions to water are permitted, but there is potential for run-off from landspreading activities particularly during heavy rain.	Low application rates and precision application will aid infiltration and prevent run off. At least 10m buffer zone from all surface water bodies.	Low
All surface waters close to and downstream of site.	As above	Chronic effects: deterioration of water quality	As above. Indirect run-off via the soil layer	Medium	Medium	**Medium**	There is a medium risk of magnitude	As above	Low

Data and information				Judgement				Action (by permitting)	
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What is at risk? What do I wish to protect?	**What is the agent or process with potential to cause harm?**	**What are the harmful consequences if things go wrong?**	**How might the receptor come into contact with the source?**	**How likely is this contact?**	**How severe will the consequences be if this occurs?**	**What is the overall magnitude of the risk?**	**On what did I base my judgement?**	**How can I best manage the risk to reduce the magnitude?**	**What is the magnitude of the risk after management? (This residual risk will be controlled by Compliance Assessment).**
Abstraction from watercourse downstream of facility (for agricultural or potable use).	As above	Acute effects, closure of abstraction intakes.	Direct run-off from site across ground surface, via surface water drains, ditches etc. then abstraction.	Medium	Medium	**Medium**	No emissions are permitted but permitted wastes have potential to cause pollution.	The operation will not be carried out within 250 metres of a spring, well or borehole supplying water for human consumption or food production or 50 metres of a spring, well or borehole supplying water for other purposes	Low
Groundwater	As above	Chronic effects: contamination of groundwater, requiring treatment of water or closure of borehole.	Transport through soil/groundwater then extraction at borehole.	Medium	Medium	**Medium**	No emissions are permitted but permitted wastes have potential to cause pollution	No spreading in groundwater source protection zone.	Low
Local human population	Contaminated waters used for recreational purposes	Harm to human health - skin damage or gastro-intestinal illness.	Direct contact or ingestion	Low	Medium	**Low**	Unlikely to occur	The operation will not be carried out within 250 metres of a spring, well or borehole supplying water for human consumption or food production or 50 metres of a spring, well or borehole supplying water for other purposes	Low
Soils	Direct application to land	Deterioration of soil, damage to soil structure or build up of contaminants in the soil	Direct application	Medium	Medium	**Medium**	Permitted wastes may contain contaminants	Waste materials to be spread in accordance with the deployment form and any waste spread will not damage the soil structure or cause the unacceptable build up of potentially toxic elements in the soil.	Low

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Protected nature conservation sites - Anglesey Terns SPA	Deterioration of site through toxic contamination, nutrient enrichment, habitat loss, siltation, smothering, disturbance and predation.	Harm to protected site through toxic contamination, nutrient enrichment, disturbance etc.	Any	Medium	Medium	**Medium**	Dust, ammonia volatilisation, direct application, run off from fields etc	The deployed area is 131m from Angelsey Terns that is designated as a SPA for its nesting features and marine foraging area for Terns. It is wholly outside the SPA boundary. The material will be shallow injected and will present no risk to the SPA. The site is not connected hydrogeologically to the cliffs and, as normal agricultural machinary is used fo rth eoperation, will present no increased risk to any bird populations resident in the cliffs or foraging in the sea.	Low

Notes: Red triangle indicates comment containing supporting information
Yellow columns contain drop down menus that allow automatic evaluation of risk in green column

Cyfoeth Naturiol Cymru
Natural Resources Wales

Anglesey Terns / Morwenoliaid Ynys Môn

Tudalen **Page** **1 / 3**

Côd Safle y GE **EC Site Code** **UK9013061**

Ynys Feurig, Cemlyn Bay and The Skerries Ardal Gwarchodaeth Arbennig (AGA)
Ynys Feurig, Cemlyn Bay and The Skerries Special Protection Area (SPA)

Ardal Gwarchodaeth Arbennig arfaethedig (AGAa)
potential Special Protection Area (pSPA)

Ardaloedd Gwarchodaeth Arbennig Eraill (AGA)
Other Special Protection Areas (SPA)

AGA bresennol **Existing SPA** **85.98 ha**

AGA arfaethedig **Potential SPA** **101,845.10 ha**

Arwynebedd cyfan **Total area** **101,931.08 ha** (Bresennol ac Arfaethedig) **(Existing and Potential)**

Hydred **Longitude** **-4.5122** gradd degol **decimal degrees**

Lledred **Latitude** **53.4118** gradd degol **decimal degrees**

G/N

N.G. Mae'r ffigurau Lledred/Hydred i gyd wedi deillio o System Geodesig y Byd 84 (WGS 84)

N.B. All Latitude/Longitude figures have been derived from World Geodetic System 84 (WGS 84).

Tafluniad map: Y Grid Cenedlaethol Prydeinig
Projection: British National Grid

Rhif diweddaraf **Version number** **1** 27/07/2015

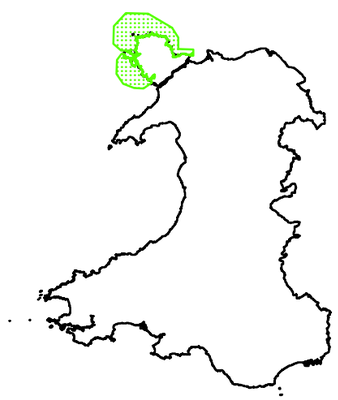
Graddfa / **Scale** **1:300,000** 0 2 4 8 Kilometers

Noder: Data wedi ei gipio ar raddfa 1:2,500 a rhoddwyd ar raddfa 1:300,000.
Mae mapiau graddfa-fawr swyddodol ar gael gan CNC.
Mae graddfa'r map yn cywir pan argraffu yn A3.

Note: Data captured at 1:2500 scale and placed on 1:300,000 scale.
A definitive large scale map is available on request from NRW.
The scale of this map is only correct when printed out at A3.

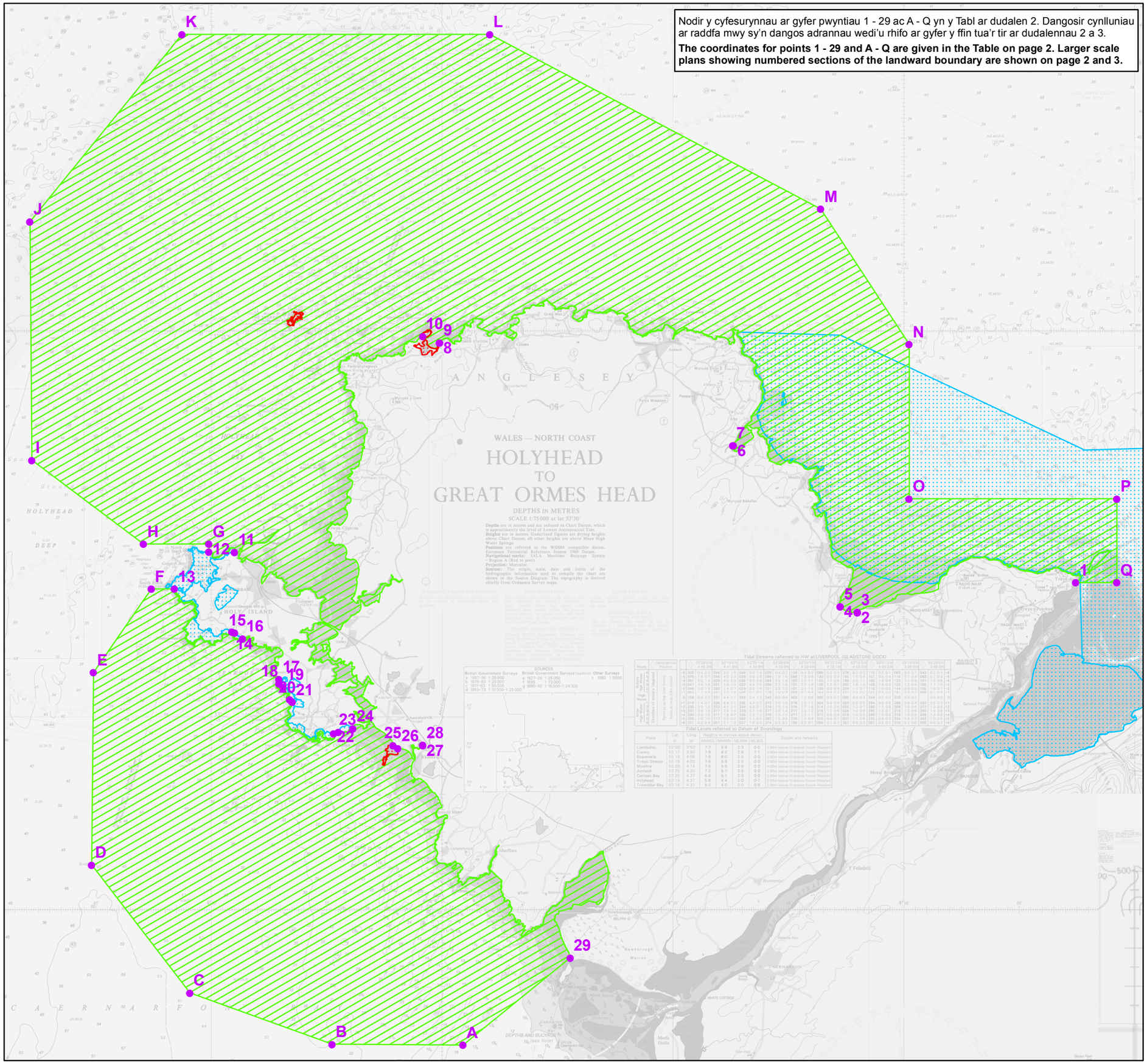
Noder: Gall y ffin newid lle mae'n dilyn llinell Marc Penllanw Cymhedrol ac/neu llinell Marc Distyll Cymhedrol.

Note: Where the boundary follows the lines of Mean High and/or Mean Low Water Marks it is subject to change.



Nodir y cyfesurynnau ar gyfer pwyntiau 1 - 29 ac A - Q yn y Tabl ar dudalen 2. Dangosir cynlluniau ar raddfa mwy sy'n dangos adrannau wedi'u rhifo ar gyfer y ffin tua'r tir ar dudalennau 2 a 3.

The coordinates for points 1 - 29 and A - Q are given in the Table on page 2. Larger scale plans showing numbered sections of the landward boundary are shown on page 2 and 3.



Anglesey Terns / Morwenoliaid Ynys Môn

Ardal Gwarchodaeth Arbennig arfaethedig (AGAa)
potential Special Protection Area (pSPA)

Gweler drosodd am fap
See overleaf for map

Pwynt	Hydred	Lledred	X	Y
Point	**Longitude**	**Latitude**	**X**	**Y**
A	-4.4850	53.1077	233,680	359,645
B	-4.5794	53.1081	227,386	359,864
C	-4.6822	53.1303	220,575	362,631
D	-4.7531	53.1859	216,072	368,989
E	-4.7516	53.2692	216,427	378,234
F	-4.7100	53.3053	219,455	382,163
G	-4.6683	53.3248	222,311	384,221
H	-4.7155	53.3248	219,167	384,340
I	-4.7961	53.3609	213,961	388,563
J	-4.7975	53.4637	214,314	399,997
K	-4.6877	53.5442	221,937	408,676
L	-4.4655	53.5442	236,658	408,143
M	-4.2266	53.4692	252,224	399,279
N	-4.1627	53.4109	256,267	392,660
O	-4.1627	53.3442	256,042	385,244
P	-4.0127	53.3442	266,027	384,952
Q	-4.0127	53.3081	265,913	380,935
1	-4.0423	53.3081	263,942	380,991
2	-4.2000	53.2953	253,389	379,876
3	-4.2001	53.2952	253,383	379,868
4	-4.2123	53.2978	252,582	380,184
5	-4.2123	53.2978	252,580	380,186
6	-4.2895	53.3673	247,687	388,074
7	-4.2900	53.3673	247,652	388,080
8	-4.5017	53.4117	233,741	393,485
9	-4.5016	53.4116	233,750	393,478
10	-4.5138	53.4144	232,951	393,812
11	-4.6498	53.3212	223,527	383,779
12	-4.6683	53.3214	222,297	383,842
13	-4.6933	53.3053	220,565	382,121
14	-4.6518	53.2868	223,254	379,962
15	-4.6496	53.2863	223,398	379,898
16	-4.6440	53.2838	223,763	379,607
17	-4.6176	53.2663	225,447	377,591
18	-4.6177	53.2643	225,437	377,377
19	-4.6148	53.2628	225,620	377,203
20	-4.6100	53.2574	225,920	376,586
21	-4.6080	53.2563	226,046	376,462
22	-4.5783	53.2427	227,973	374,877
23	-4.5749	53.2435	228,204	374,958
24	-4.5643	53.2448	228,920	375,074
25	-4.5353	53.2377	230,821	374,217
26	-4.5318	53.2364	231,050	374,058
27	-4.5139	53.2378	232,248	374,176
28	-4.5139	53.2377	232,253	374,165
29	-4.4074	53.1455	239,013	363,670

Ac eithrio pan nodir yn wahanol, mae ffin yr AGA bosibl yn dilyn y Marc Penllanw Cymedrig rhwng y pwyntiau canlynol:

1 ac 8
10 a 25
26 a 29
11 a 24 ar ochr ddwyreiniol Ynys Gybi
16 a 17

Ac eithrio pan nodir yn wahanol, mae ffin yr AGA bosibl yn dilyn y Marc Distyll Cymedrig rhwng y pwyntiau canlynol ac o gwmpas Ynys Seiriol:

11 a 12
13 a 16
17 a 24.

Except where otherwise shown, the boundary of the potential SPA follows Mean High Water Mark between the following points:

1 and 8
10 and 25
26 and 29
11 and 24 along the eastern side of Holy Island
16 and 17

Except where otherwise shown, the boundary of the potential SPA follows Mean Low Water Mark between the following points and around Puffin Island:

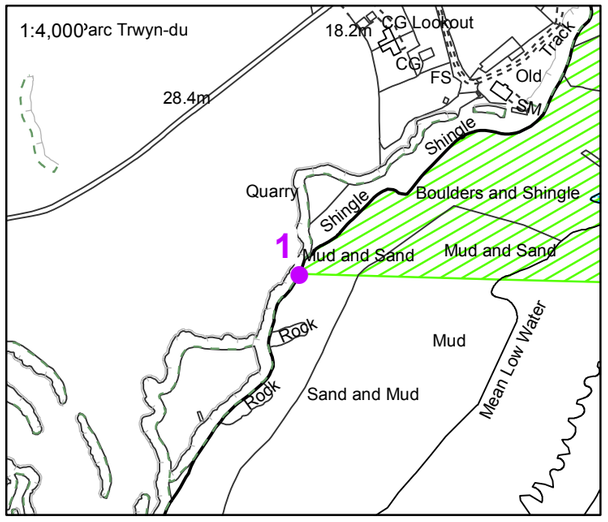
11 and 12
13 and 16
17 and 24

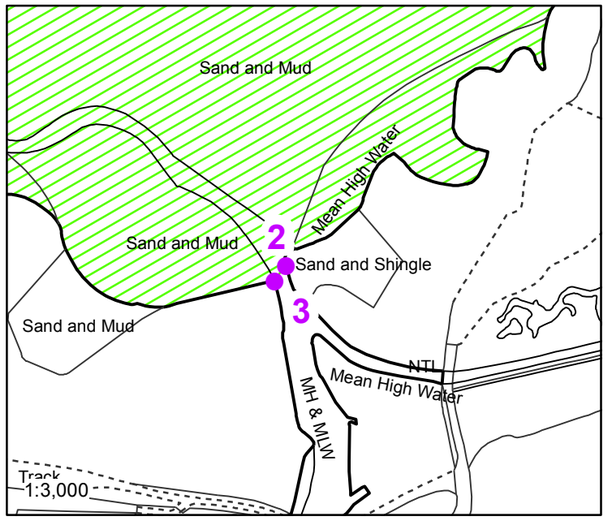
Ynys Feurig, Cemlyn Bay and The Skerries Ardal Gwarchodaeth Arbennig (AGA)
Ynys Feurig, Cemlyn Bay and The Skerries Special Protection Area (SPA)

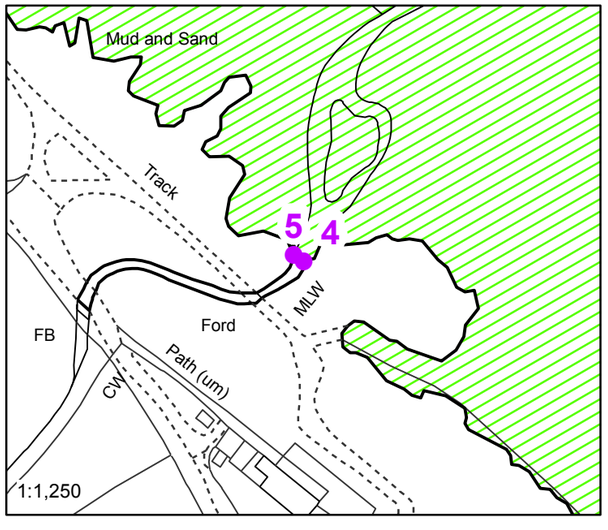
Ardal Gwarchodaeth Arbennig arfaethedig (AGAa)
potential Special Protection Area (pSPA)

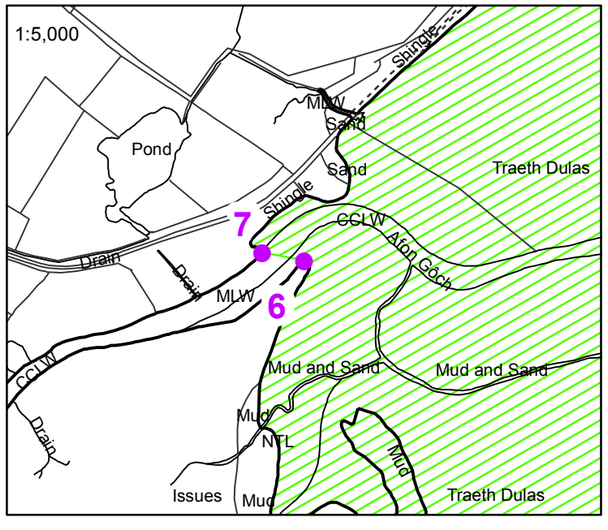
Ardaloedd Gwarchodaeth Arbennig Eraill (AGA)
Other Special Protection Areas (SPA)

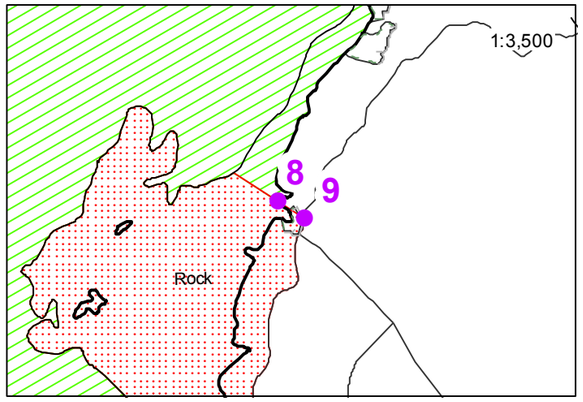
Dangosir y pwyntiau wedi'u rhifo yn y mapiau mewnol canlynol ar y prif fap ar dudalen 1.
The numbered points in the following inset maps are shown on the main map on page 1.

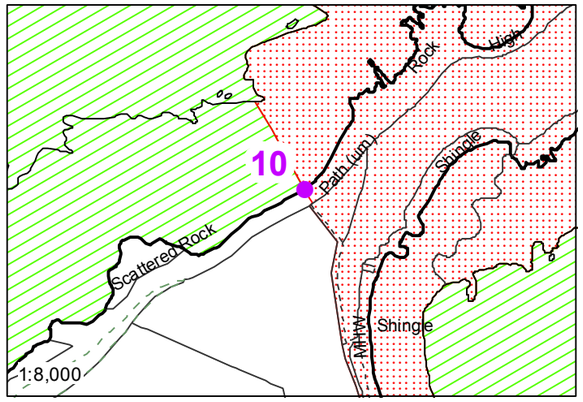


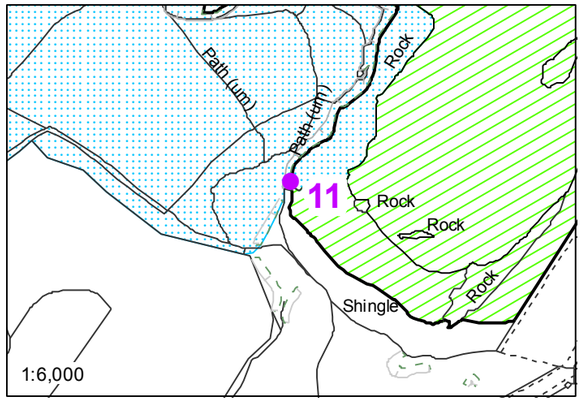


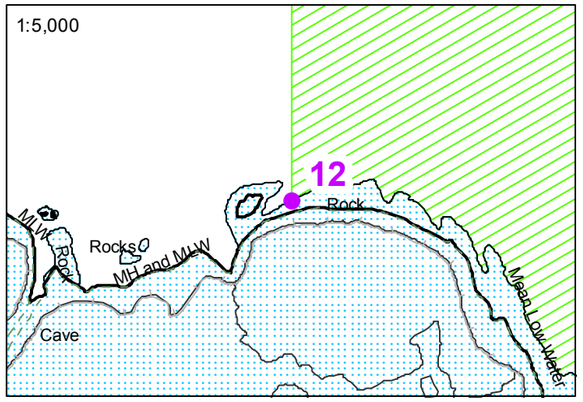


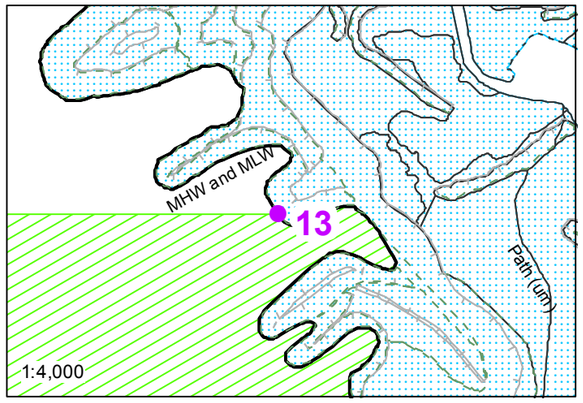


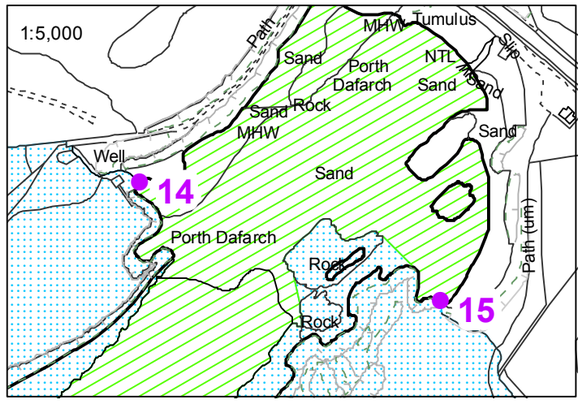

1:3,500
8
9
Rock

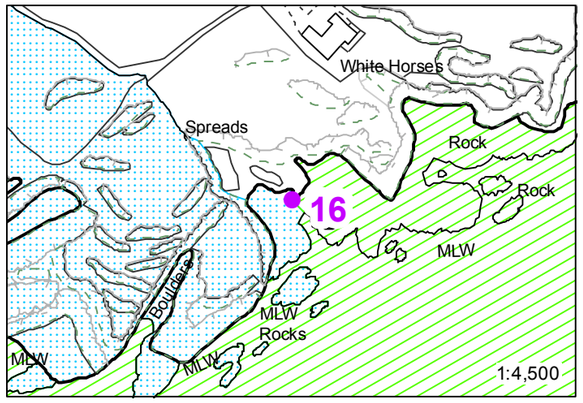

10
Path (um)
Shingle
Rock
Light
Scattered Rock
MHW
Shingle
1:8,000

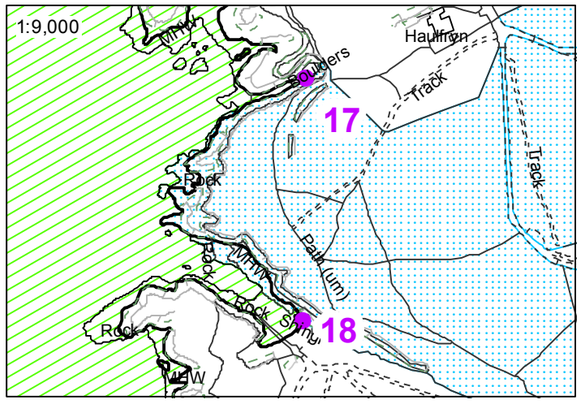

Path (um)
Path (um)
Rock
11
Rock
Rock
Shingle
Rock
1:6,000

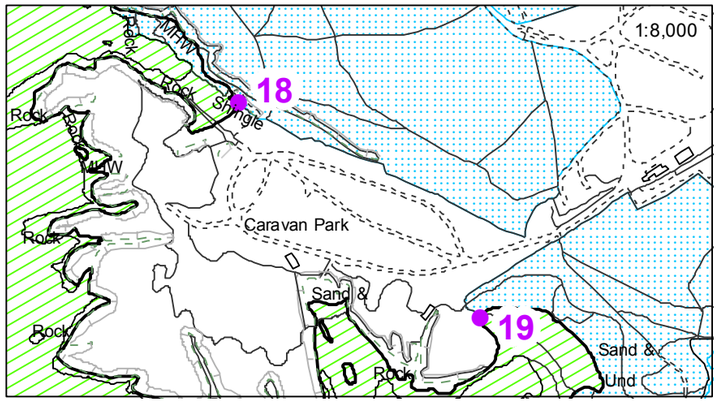

1:5,000
12
Rock
MLW
Rock
Rocks
MH and MLW
Mean Low Water
Cave

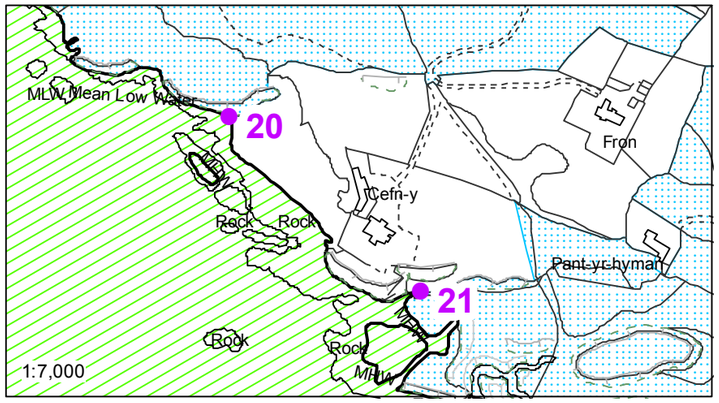

MHW and MLW
13
Path (um)
1:4,000

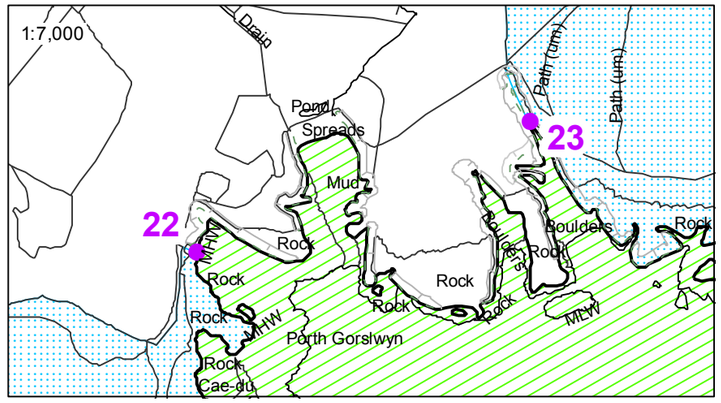

1:5,000
Path
MHW
Tumulus
Sand
Porth Dafarch
NTL
Sand
Sand
Rock
MHW
Sand
Well
14
Sand
Porth Dafarch
Rock
Rock
15
Path (um)

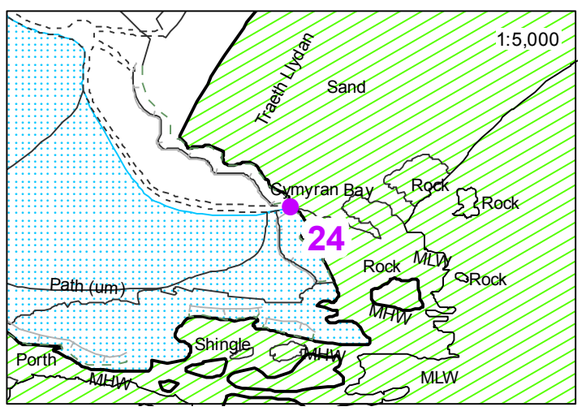

White Horses
Spreads
Rock
16
Rock
MLW
Boulders
MLW
Rocks
MLW
MLW
1:4,500

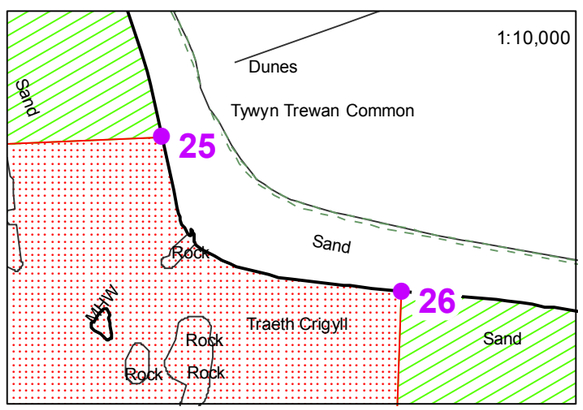

1:9,000
MHW
Haulfren
Boulders
17
Track
Track
Rock
Rock
MHW
Path (um)
Rock
Rock
Stony
18
Rock
MLW


1:8,000
Rock
MHW
Rock
Shingle
18
Rock
Rock
MLW
Caravan Park
Rock
Sand &
19
Rock
Sand &
Und


MLW Mean Low Water
20
MHW
Fron
Cefn-y
Rock
Rock
Pant-yr-hyman
21
Rock
Rock
MHW
1:7,000


1:7,000
Drain
Path (um)
Pond
Path (um)
Spreads
23
Mud
22
MHW
Rock
Boulders
Rock
Rock
Rock
Rock
Rock
Rock
MHW
Porth Gorslwyn
Rock
Cae-du
MLW


1:5,000
Traeth Lydan
Sand
Cymyran Bay
Rock
Rock
24
Rock
MLW
Rock
Path (um)
MHW
Shingle
MHW
Porth
MHW
MLW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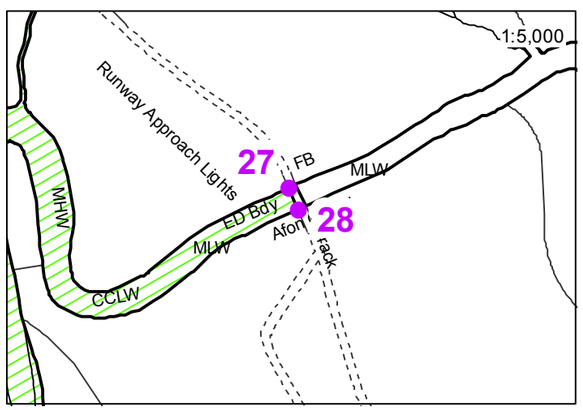
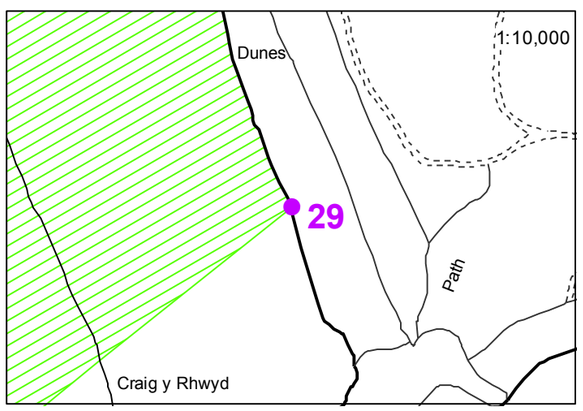
Dunes
Sand
Tywyn Trewan Common
25
Sand
Rock
MHW
Traeth Crigyll
26
Sand
Rock
Rock


1:5,000
Runway Approach Lights
27
FB
MLW
MHW
ED Bay
28
Afon
Rock
MLW
CCLW


1:10,000
Dunes
29
Path
Craig y Rhwyd