LAND ON THE LLANDOW TRADING ESTATE, GLUE POT ROAD, nr. CARDIFF, CF71 7PB, WALES

Ecological Walkover Survey



View of site from Glue Pot Lane



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On behalf of

Oliver Taylor, Coastal Oil & Gas, Unit 9, Bridgend Business Centre, BRIDGEND, CF3 3SH

Dated 5 April 2013

1. Executive Summary

- The site is a 100% concrete hard-standing.
- The site is of low wildlife interest.
- No trees or scrub or water bodies are present.
- No protected habitats were found on site.
- Apart from birds (all protected) no other protected species were found on site.
- The site is sub-optimal for most groups of wildlife.
- No protected bats or barn owls were present.
- No protected badgers were present on site.
- It is unlikely that reptiles or amphibians are present.
- The proposed development would not have to remove any habitats or destroy any hedgerows in gaining access.
- The proposed development will not see any land lost.

2.0 Instructions and aims

- 2.1 Wildlife Matters was instructed by Mr Oliver Taylor of Coastal Oil & Gas to carry out a walkover ecology survey of the site.
- 2.2 The aim of the report is to assess the site for protected habitats and wildlife in advance of boreholes being made.
- 2.3 The sole purpose of the borehole is to send down monitoring equipment to a depth of 600-800m in order to monitor shale gas.
- 2.4 No other works resultant from the monitoring are proposed.
- 2.5 Works will only occupy the open hard-standing area; no works will involve the building on site.

3.0 Site Visits

3.1 A site visit was made on 21st March 2013 when the temperature was 4°C, rainy, with 8/8 oktas of cloud cover and a 2 knot wind (Beaufort scale) from the west.

4.0 Location of site

4.1 The site is located in the parish of Llandow, in the Vale of Glamorgan, to the west of Cardiff, Wales, at Ordnance Survey SS 954717. It is one of many existing plots on the Llandow Trading Estate off Glue Pot Lane.

5.0 Description of site

- 5.1 The 'red-line' curtilage of the site encloses a very small area of 1,848m2 that is 100% concrete hard-standing that also includes a small building (Technical Appendix WM01).
- 5.2 The on-site requirement for the drilling to take place will only require usage of part of the existing hard-standing, not the small building on site. The hard-standing is required for the erection of the derrick. On this site there is a surplus of space available to use, so there will be no requirement to use the building on site.
- 5.3 The site has roads on all sides, albeit very rough roads, and is adjacent to a (noisy and busy) council waste recycling centre so there is constant traffic during working hours. The application site has four gates. To the southwest of Glue Pot Road there is another recycling area (currently being cleaned-up) which is adjacent to a woodland which is itself adjacent to a railway line.

6.0 Ecology of the proposed development site.

Habitats

- 6.1 The site is not a natural habitat, or a semi-natural habitat that would be recognised by the Natural Vegetation (NV) Classification, and it lacks any hedgerows, trees, scrub or water bodies.
- 6.2 The lack of habitats is the key reason why the site has no wildlife interest, and the site is sub-optimal for wildlife.

Flora

- 6.3 The site is fenced in chain-link and a number of flowering plants have grown up around the edges and alongside the roads and tracks that surround the site.
- 6.4 Over 20 species of wildflower were recorded around the outside of the site, none of which is protected. It is important to note that none of these plants was actually found within the site where the proposed development is planned and which is concreted-over.
- 6.5 None of the wildflower species found on the edge of the site was rare in a conservation sense, and all were otherwise common and widespread species, none of which is protected by UK or EU law

Mammals

- 6.6 Only one mammal species was recorded on site: fox from its faeces. Rat was suspected, but no evidence was seen.
- 6.7 No evidence of protected badgers was seen on site.
- 6.8 No evidence of badgers was seen in the adjacent industrial estate units. The woodland to the south-west of the site is about 40m distant, but was not investigated as it is outside the area where any disturbance might be expected. The adjacent recycling unit is a continuous area of noise and vibration.

Bats

- 6.9 There was no evidence of bats on the open hard-standing part of the site, and the metal building did not shown any external evidence of bats, and is generally not a usually preferred location for roosting bats as there is adequate woodland in the neighbourhood. The building on site will not be part of the site to be used for the drilling machinery.
- 6.10 It is understood that the neighbourhood does have a roost of Horseshoe bats (*Rhinolophus* sp.) so some consideration is now given to these mammals.
- 6.11 The site does not have any foraging areas for bats, and is not underneath, or part of any foraging or commuting corridors between feeding areas for bats. Bats in the area would commute along the edge of the woodland which is 40m away, and would have no reason to commute or forage over the site because the feeding resource (insects) would not be present over the site. The part of the site to be used does not support any suitable roosting areas, and particularly there are no trees which might have hollows in which bats might roost.
- 6.12 For the above reasons it is not considered that the local horseshoe bats would be restricted in any of their habitat with the construction of the derrick. The derrick height will be a maximum of 15m which is consistent with other buildings on the industrial estate and would not constitute a threat to bats in transit.
- 6.13 With respect to noise emitted from the drilling rig this is likely to be less than some of the neighbouring activities such as produced by the adjacent recycling unit. Clearly bats have chosen to roost locally to an industrial area that is subject to all sorts of noise production at different times of the day. It is known scientifically that bat species vary with regard to their responses to noise¹, and it has

¹ Murphy, S., Hill, D. & Greenaway, F. 2009. *Pilot Study of a technique for investigating the effects of artificial light and noise on bat activity*. Report for People's Trust for Endangered Species.

been shown that the noise produced by tree branches or rustling reedbeds produces the same levels of noise in the bat's acoustic environment that they can differentiate between natural and manmade noises. Researchers found 'that noise does interfere with bat's ability to locate prey and feed, but no more than naturally occurring noises that the bats regularly encounter.' At this site at Llandow measures to reduce noise pollution will include noise absorbent ecobarriers fixed to the surrounding fencing.

Birds

- 6.14 Four bird species were seen over the site Technical Appendix WM02. All were common and widespread species.
- 6.15 No birds were actually seen on the small plot.
- 6.16 No Protected Barn Owls were seen.
- 6.17 The site has no trees or shrubs in which birds could breed or feed.
- 6.18 Whilst most birds are protected by UK law, none of the bird species found were Biodiversity Action Plan (BAP) species.

Herptiles (Reptiles and Amphibians)

- 6.19 The small plot does not have any suitable habitats for herptiles.
- 6.20 There are no water bodies which would support amphibians, and there is no suitable terrestrial habitat to support amphibians (they prefer light thickets and long grass often near water).
- 6.21 The hard-standing site was not suitable for supported reptiles.
- 6.22 The hard-standing was in good order, without any surface cracks that might support hibernating amphibians.
- 6.23 Overall, the small plot offered completely unsuitable habitat for herptiles, i.e. it was sub-optimal, and so for this site the issue of the possible presence of protected herptiles is not an issue.

Invertebrates

6.24 A single common snail species was recorded on site. The site itself was sub-optimal for invertebrates, and the fact that the site visit coincided with rain, meant that the invertebrate list was poor. On a good day the insect quantum would increase but it would be unlikely that protected species would be present because of poor habitat.

² Schaub A, Ostwald J, Siemers BM. 2008. Foraging bats avoid noise. *The Journal of Experimental Biology*, 211(Pt 19):3174-80

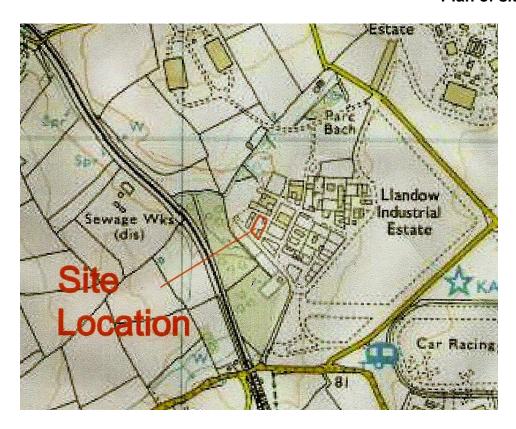
7.0 Conclusions of flora and fauna seen on site

7.1 No protected species were seen on site.

8.0 Assessing Potential Impact of proposed development

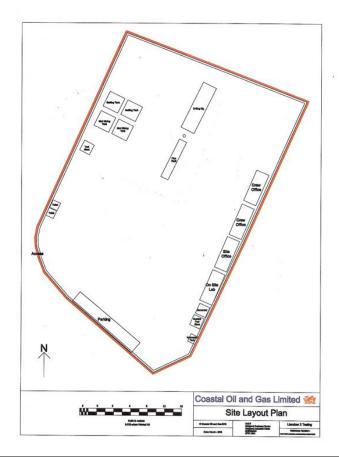
- 8.1 The site already has a hard-standing so there is no vegetation to remove. Therefore there will be no adverse environmental impact upon any habitat.
- 8.2 There are four existing gates onto the property, and, as there are no hedgerows on site, there will be no loss of any hedgerows.
- 8.3 It is not anticipated that the proposed development will have adverse environmental effect on the adjacent habitats as they are all involved with recycling materials.
- 8.4 The woodland to the south-west is sufficiently far away (40m) and it is unlikely that there would be any adverse environmental impact.

Wildlife Matters Technical Appendix WM01 Plan of site



Wildlife Matters Consultancy Unit,	↑ NORTH	
Title	Land on the Llandow Industrial Estate	
Reference	Red Line Proposed Development Area	
Scale	200m = 3cm above	
Direction of North	To the TOP of page	
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File name	WM895	
Key	Red line = Curtilage of development area Green = Woodland	

Wildlife Matters Technical Appendix WM01, continued... Plan of site



Wildlife Matters Consultancy Unit,	↑ NORTH
Title	Red line curtilage plan of proposed development
Scale	As shown
Direction of North	To the TOP of page
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File name	WM895.1

Wildlife Matters Technical Appendix WM01, continued.....



View of site looking westwards



View over site looking south-east to Glue Pot Road

Technical Appendix WM02

Table 1 Angiosperms (Flowering Plants) recorded from site

SPECIFIC NAME	COMMON NAME	Tree	NOTES Ornamental and introduced plants (that contribute little for biodiversity are shown in green)
Betula pendula	Silver birch	Т	
Brassica sp.	Oilseed Rape		
Buddleia davidii	Buddleia		An Invasive Species (London's Invasive Species Initiative) An Introduced species
Conyza canadensis	Canadian horseweed		Introduced species
Erigeron sp.	Erigeron		
Fraxinus excelsior	Ash	Т	
Heracleum sphondylium	Hogweed		
Juncus sp.	Rush species		
Malva sylvestris	Mallow, Common		
Plantago lanceolata	Plantain, Ribwort		
Rosa rugosa	Rose		
Rubus complex	Blackberry		
Salix sp.	Willow		
Urtica dioica	Nettle		

Table 2 Birds recorded from site

KEY

CRoW, 2000 Countryside & Rights of Way Act, 2000

Defra Department for Environment, Food and Rural Affairs.

RSPB Royal Society for the Protection of Birds

SAP Species Action Plan

WCA 1981 Wildlife & Countryside Act 1981 (as amended)

RSPB's Red List = those species that are Globally Threatened, for which there is high conservation concern. The designation is according to the criteria of the IUCN (International Union for the Conservation of Nature). Represents a population decline in the UK during 1800-1995 with 50% decline over last 25 years.

RSPB's Amber List = showing a moderate decline in the UK over the last 25 years.

(from: Royal Society for the Protection of Birds, 1996. *Birds of Conservation Concern in the United Kingdom, Channel Islands and Isle of Man.* Royal Society for the Protection of Birds, leaflet.). Often a rare breeder with 1-300 pairs in the UK, or rare non-breeder with less than 900 pairs.

RSPB's Green List = Species that occur regularly in the UK but do not qualify under any of the above criteria.

Scientific Name	Common Name	W&CA, 1981	Importance	RSPB	Notes
Fringilla coelebs	Chaffinch			Green	Over site
Motacilla alba	Wagtail, Pied			Green	Over site
Prunella modularis	Dunnock			Amber	Over site
Turdus merula	Blackbird			Green	Over site

Table 3 Mammals recorded from site

CLASS MAMMALIA (Mammals)

Latin / Specific Name	Common English Name	Biodiversity Action Plan (BAP) species	Observations
Vulpes vulpes	Fox		faeces

Table 4 Invertebrates recorded from site

CLASS MOLLUSCA (Slugs and Snails)

CLASS MOLLOSCA (Slugs and Shalls	o)	
Latin / Specific Name	Common English Name	Observations
Cenaea nemoralis	Snail Brown Ringed	

Audit trail

Revision	Date	Report Description	Prepared by
WM895	3 April 2013	Ecology Walkover Survey	Dr John Feltwell
WM895.1	5 April 2013	Ecology Walkover Survey	Dr John Feltwell

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