



**Cyfoeth
Naturiol
Cymru
Natural
Resources
Wales**



Twyni Cymreig Adnewyddol Rejuvenating Welsh Dunes

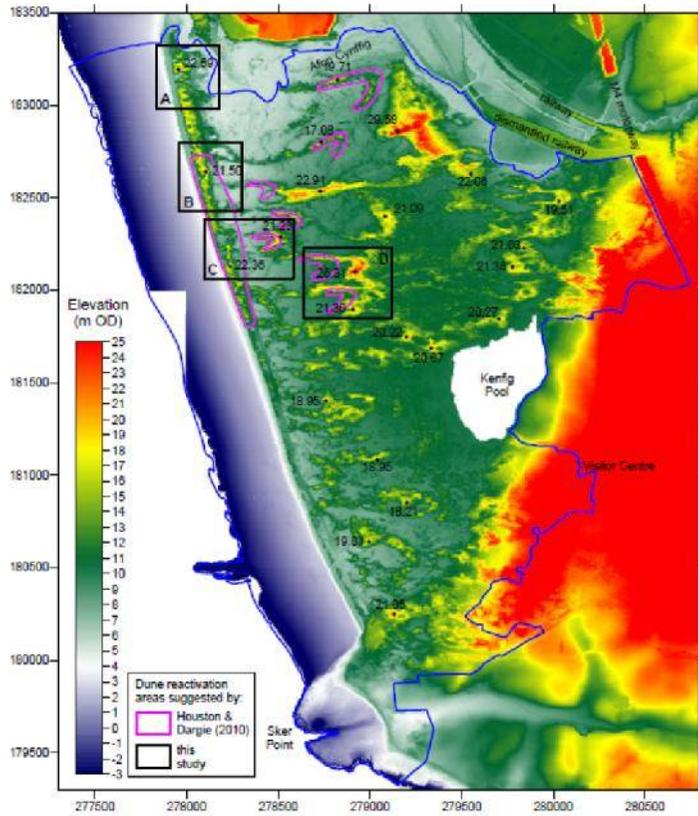
**Dr. Emmer Litt
NRW Marine and Coastal Physical Scientist
Update July 2013**

Expenditure on excavation work for the Welsh dune rejuvenation programme, 2011-2013.

Site Work	Description	Cost
Kenfig NNR, Phase 1	Excavation of 3.5ha plot	£35K - £15K ERDF + £20K from Plantlife
Kenfig NNR, Phase 1	Spraying of vegetation re-growth	£1.5k from CCW
Kenfig NNR, Phase 2	Excavation of 6.5ha plot	£35K from ERDF, £6,600 from CCW + ?? from Plantlife
Merthyr Mawr Warren NNR	Excavation of 1.5ha plot	£15K from ERDF
Newborough Warren NNR	Excavation of 3 plots totalling 3ha	£24K from CCW + £4K from Pond Conservation
Brownslade Burrows	Excavation of 1ha plot	£3650 from CCW

This does not include costs for geomorphological or biological surveys nor monitoring costs.

Twyni Cymreig Adnewyddol / Rejuvenating Welsh Dunes



Pye, K. & Blott, S.J. 2011. Kenfig Sand Dunes - Potential for Dune Reactivation. CCW Contract Science 971. Countryside Council for Wales.

Kenfig NNR dune rejuvenation, winter 2011-12



Produced by CCW on 5 March 2012. Scale 1:1000

OS base maps reproduced with permission of HMSO. Crown copyright reserved. OS licence No. 100018815

Kenfig sand dune rejuvenation project area



Produced by CCW on 21 November 2011

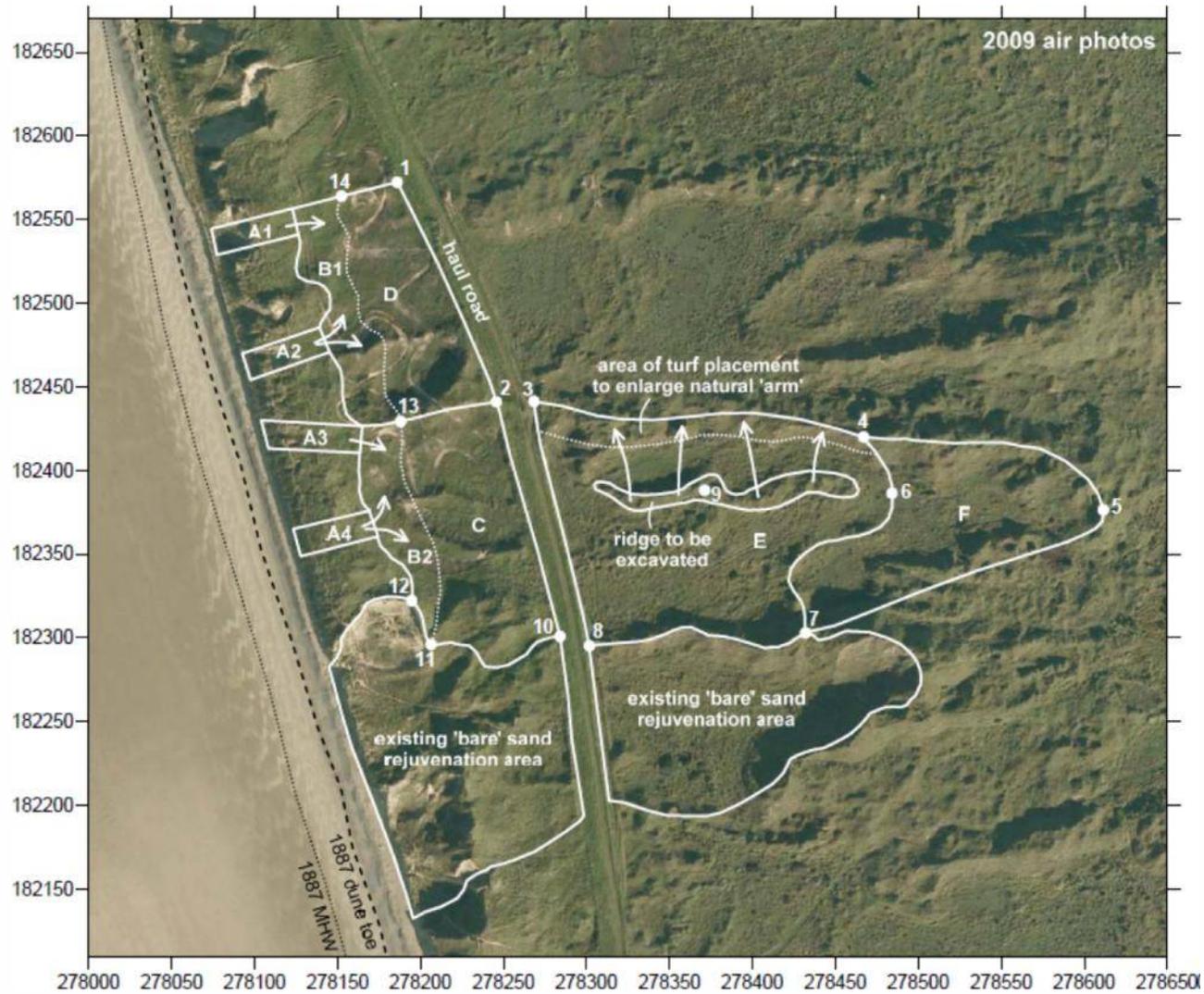
Scale 1:1000

OS base maps reproduced with permission of HMSO. Crown copyright reserved. OS licence No. 100018815

Twyni Cymreig Adnewyddol / Rejuvenating Welsh Dunes



Twyni Cymreig Adnewyddol / Rejuvenating Welsh Dunes



Twyni Cymreig Adnewyddol / Rejuvenating Welsh Dunes



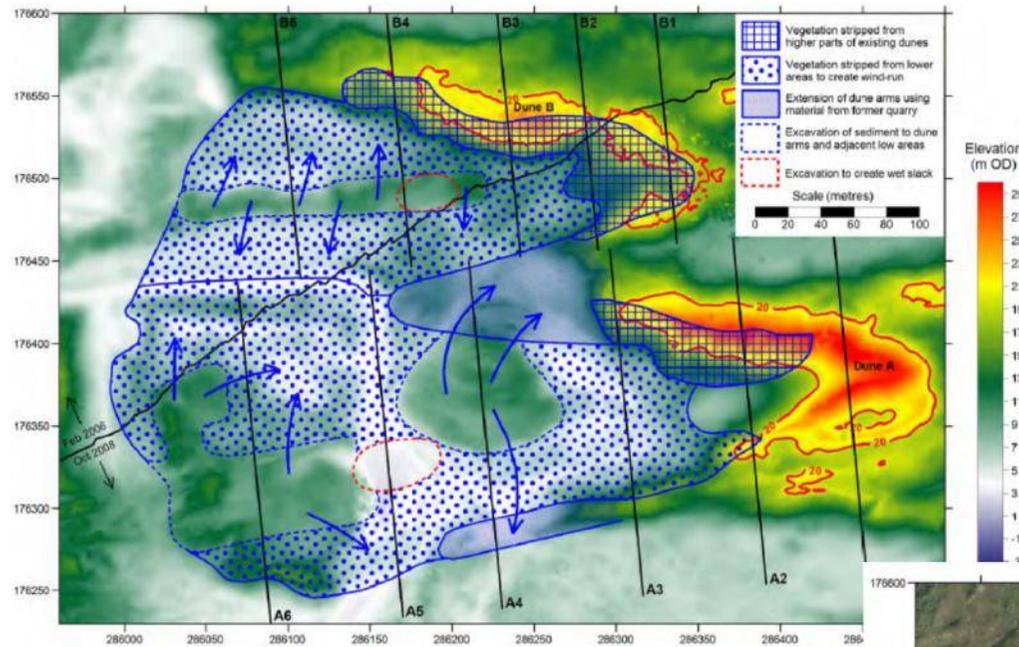


Figure 21 DEM showing areas of potential dune reactivation on dunes A and B (LIDAR surveys flown 26-27 February 2006 and 15-16 October 2008). The red line indicates the 20 m OD contour. Black lines show locations of cross-sections.

Pye, K. & Blott, S.J. 2011. *Merthyr Mawr Warren - Potential for Dune Reactivation*. CCW Contract Science 978. Countryside Council for Wales.

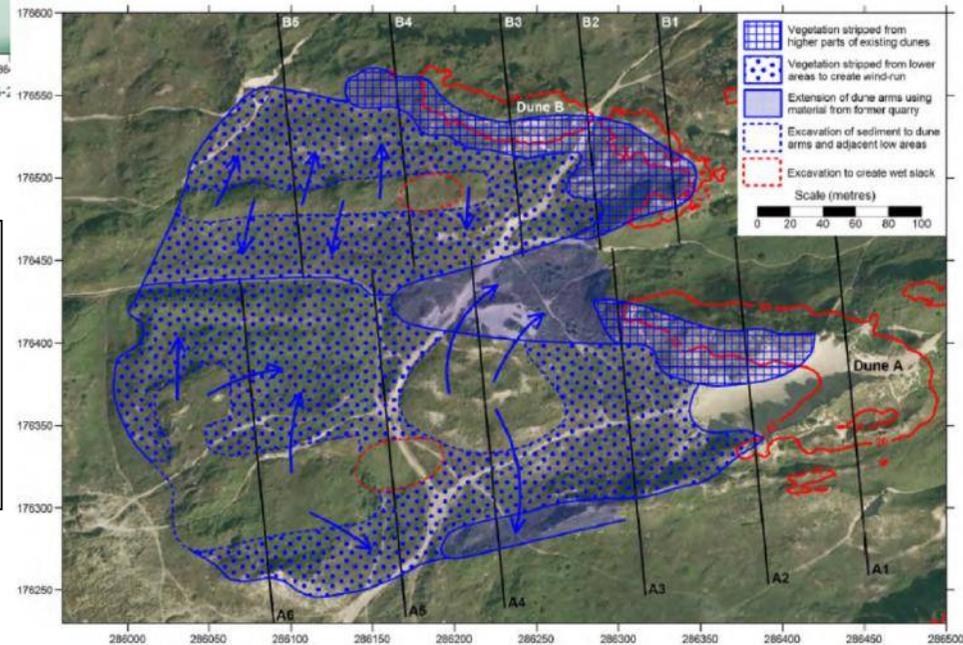
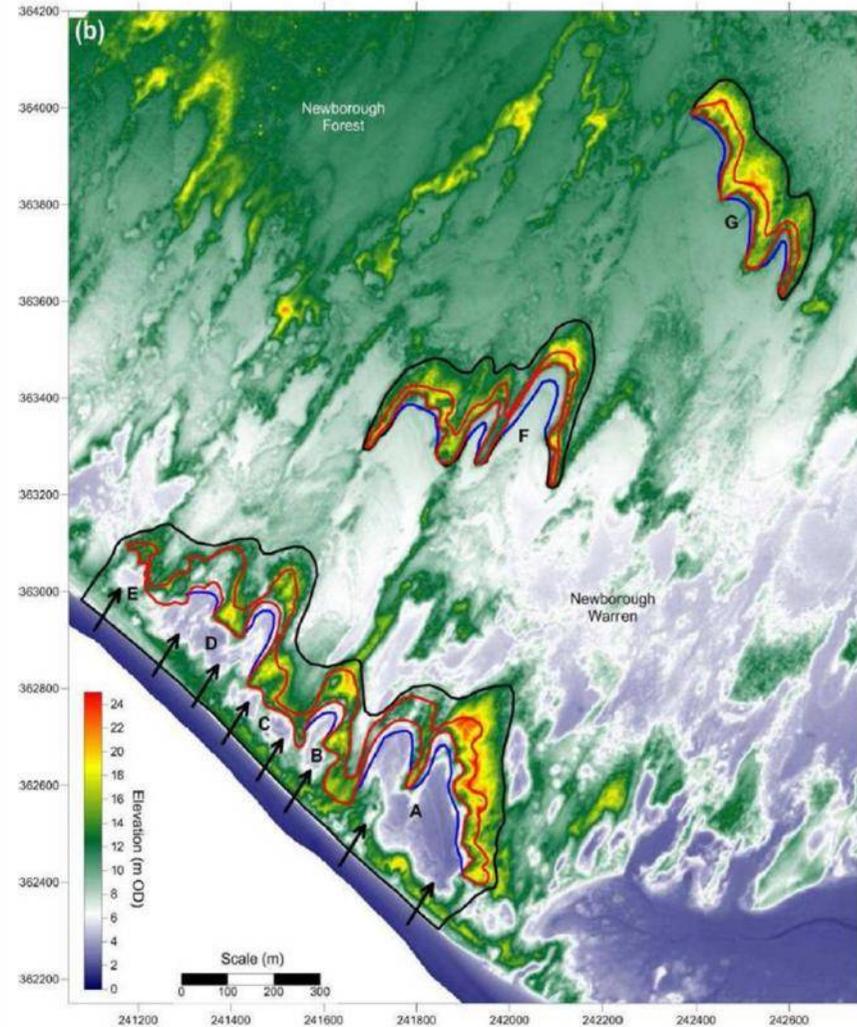
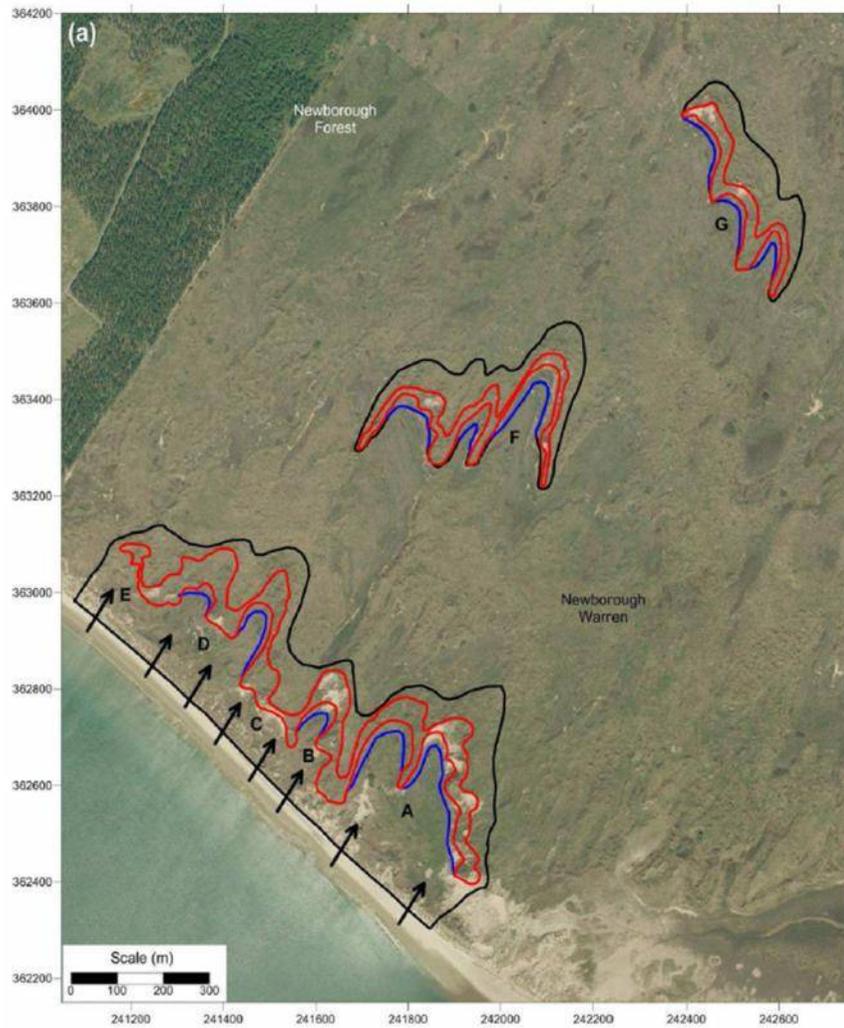


Figure 22 Aerial photograph showing areas of potential dune reactivation on dunes A and B, flown 13 September 2009. The red line indicates the 20 m OD contour from a LIDAR survey flown 26-27 February 2006.

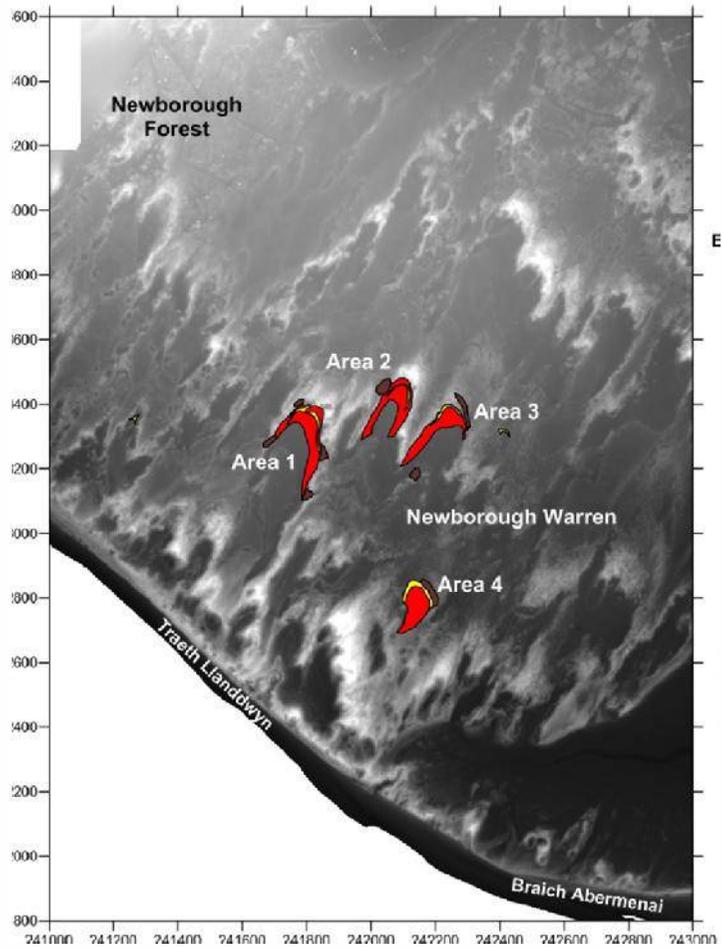
Twyni Cymreig Adnewyddol / Rejuvenating Welsh Dunes





Newborough Warren

Twyni Cymreig Adnewyddol / Rejuvenating Welsh Dunes



Brownslade Burrows

A total of 0.98ha of turf was removed from an area of previously disturbed dunes.

- 0.36ha of rank grassland and blackthorn were removed and the turf used to build bunds to attempt to funnel wind and allow sand to move.
- The area had to be of restricted size due to the presence of known but un-surveyed historic monuments in the area.
- It is hoped that if sand does blow about it will deposit it in a 0.21ha area that supports some petalwort but has a very thin layer of sand and cannot itself be turf-stripped.
- The remaining 0.62ha (three areas of 0.18ha, 0.15ha & 0.08ha respectively) of mostly rank grassland was also subjected to turf stripping.
- All existing mapped petalwort slacks were avoided as the late-successional stages were found to both support sparse petalwort populations and support diverse bryophyte communities.

Expenditure on excavation work for the Welsh dune rejuvenation programme, 2011-2013.

Site Work	Description	Cost
Kenfig NNR, Phase 1	Excavation of 3.5ha plot	£35K - £15K ERDF + £20K from Plantlife
Kenfig NNR, Phase 1	Spraying of vegetation re-growth	£1.5k from CCW
Kenfig NNR, Phase 2	Excavation of 6.5ha plot	£35K from ERDF, £6,600 from CCW + ?? from Plantlife
Merthyr Mawr Warren NNR	Excavation of 1.5ha plot	£15K from ERDF
Newborough Warren NNR	Excavation of 3 plots totalling 3ha	£24K from CCW + £4K from Pond Conservation
Brownslade Burrows	Excavation of 1ha plot	£3650 from CCW

This does not include costs for geomorphological or biological surveys nor monitoring costs.



Pembrey Burrows

Clear sea buckthorn from dune frontage?

Open up forest?

Create pioneer slacks?