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# The status and distribution of the shrill carder bee *Bombus sylvarum* in the Kenfig – Port Talbot area in 2013

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NWR Evidence Report No. 23



Male Shrill Carder Bee on Chalk Knapweed at Kenfig National Nature Reserve, 4th August 2013.

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## 1. Crynodeb Gweithredol

Yn ystod Awst 2013 arolygwyd llawr gwlad a glannau môr ardaloedd awdurdodau unedig Pen-y-bont ar Ogwr a Chastell Nedd Port Talbot er mwyn canfod lled dosbarthiad *Bombus sylvarum* (Cardwenynen Feinlais). Yr oedd cyfanswm hyd y trawsluniau yn 208 km, gan ddarparu 936 arsylliad cofnodedig o 2,122 cacynen unigol o 16 rhywogaeth. Cofnodwyd *B. sylvarum* ar 49 achlysur yn ystod yr arolwg (101 unigolyn), ynghyd â thair rhywogaeth Adran 42 ychwanegol, *B. ruderarius* (Cardwenynen Goesgoch), *B. muscorum* (Cardwenynen y Mwsogl) a *B. humilis* (Cardwenynen Lwydfrown).

Amcangyfrifwyd fod tiriogaeth *B. sylvarum* yn 66 km<sup>2</sup>, gyda chyfanswm y cynefin chwilota addas o fewn y diriogaeth honno yn rhyw 30 km<sup>2</sup>. Ceid dwysedd mwyaf y rhywogaeth hon yn 2013 yng nghyffiniau ymylon gogleddol GNG Cynffig, a chaeau Morfa Bach, sydd rhwng y warchodfa ac Ystâd Ddiwydiannol Cynffig. Y manau eraill roedd y rhywogaeth yn brin, gyda dim ond ffigurau sengl ym mhob safle arall. Hynny, o bosibl, o ganlyniad i gynefinoedd darniog, llawer ohonynt â golwg llai na delfrydol arnynt, a chyfres o hafau gwael. Ymestynnodd arsylliadau ym Maglan a Phort Talbot y diriogaeth hysbys gan tuag 8km i'r gogledd, ond ni chanfuwyd ond ymestyniad bychan o 1.5km i'r de-ddwyrain ger y Notais. Awgryma'r methiant i ganfod y rhywogaeth ym Mharc Slip grebachiad tiriogaeth o 7km yn y dwyrain, er bod y boblogaeth hon ymhell o'r ardal graidd.

Mae poblogaeth gwastadedd arfor Pen-y-bont ar Ogwr / Castell Nedd *B. sylvarum* yn fechan o'i chymharu â'r eiddo Morfa Gwent ac ar Faes Tanio Castell Martin yn Sir Benfro, ac awgryma cofnodion y gorffennol y bu'r rhywogaeth wastad yn brin, gydag amrywiadau bychain yn ei helaethrwydd. Darpara canlyniadau'r astudiaeth hon yr arolwg sylfaenol cyntaf ar gyfer poblogaeth Morgannwg.

Yn ystod 2013, caeau Morfa Bach oedd ardal greiddiol *B. sylvarum* ym Morgannwg, ac y mae rheolaeth ar ffurf porfa geffylau arw wedi esgor ar glytwaith o gynefinoedd cynhyrchiol. Nid yw'r ardal wedi'i dynodi hyd yn hyn, a dylid ystyried dull sicrhau rheolaeth addas at anghenion y rhywogaeth yn y dyfodol yn amcan â blaenoriaeth.

## 2. Executive Summary

During August 2013 survey work was carried out across coastal and other lowland areas in the unitary authority areas of Bridgend and Neath Port Talbot to investigate the extent of the distribution of *Bombus sylvarum* (Shrill Carder Bee). Survey transects totalled 208 km providing 936 recorded observations of 2122 individual bumblebees of 16 species. *B. sylvarum* was recorded on 49 occasions during the survey (101 individuals) along with three other Section 42 species, *B. ruderarius* (Red-shanked Carder Bee), *B. muscorum* (Moss Carder Bee) and *B. humilis* (Brown-banded Carder Bee).

The range of *B. sylvarum* was calculated to cover 66 km<sup>2</sup>, with the total amount of suitable forage habitat within this approximating to 30 km<sup>2</sup>. The largest concentration of the species in 2013 was the area centred at northern margins of Kenfig NNR and the fields at Morfa-bach which lie between the reserve and Kenfig Industrial Estate. Elsewhere the species was very sparse with just single figures at all other sites, possibly a consequence of fragmented habitats, many of which appeared suboptimal, together with a run of poor summers. Observations at Baglan and Port Talbot extended the known range to the north by approximately 8km, but only a small increase of 1.5 km to the south-east near Nottage was detected. Failure to find the species at Parc Slip indicates a reduction in eastern range by 7 km, although this population is remote from the core area.

The Bridgend / Neath Port Talbot coastal plain population of *B. sylvarum* is small in comparison to that found on the Gwent Levels and on Castlemartin Range in Pembrokeshire and past records indicate the species has always occurred at low abundance with minor fluctuations in abundance. The results of this study provide the first baseline survey for the Glamorgan population.

During 2013 Morfa-bach fields proved to be the core area of *B. sylvarum* in Glamorgan and management in the form of rough horse-grazing has provided a mosaic of productive habitats. This area is currently undesignated and a mechanism for securing sympathetic management in the future should be considered a priority objective.

### 3. Introduction

#### 3.1. The status of the shrill carder bee in Wales

The Shrill Carder Bee *Bombus sylvarum* was once relatively widespread throughout southern England and lowland Wales, favouring flower-rich habitats such as sand dunes, well-established grasslands and heathlands, but it is now known from less than 20 sites in the UK. The reasons for its decline are not known with certainty, but the loss of many important flower-rich grasslands as a result of the intensification of agriculture is likely to have been a key factor. Work undertaken to date under the auspices of the UK Bumblebee Working Group, and part-funded by the Countryside Council for Wales (CCW), has identified some of the key pollen and nectar sources as Red Bartsia *Odontites vernus*, Red Clover *Trifolium pratense*, Common Bird's-foot-trefoil *Lotus corniculatus*, Black Knapweed *Centaurea nigra* agg. and Viper's Bugloss *Echium vulgare*. The bee constructs nests out of grass and plant fibres at or just below ground level, each of which supports a relatively small colony of worker bees dominated by a single queen and worker bees from May until September. Only the queen survives the winter, establishing a new nest and fresh colony of workers from her eggs in the following spring.

In Wales, the bee is known from a handful of sites in Glamorgan, most notably Kenfig Burrows NNR, Margam Moors SSSI and Parc Slip Nature Reserve, and from the Castlemartin peninsula in Pembrokeshire where large populations occur on Castlemartin Range, with smaller populations on neighbouring farmland. Records of three workers on the Gwent Levels between 1998 and 2002 provoked a wider search in August 2003, as part of a joint project between CCW and the National Museums & Galleries of Wales, Cardiff. As a result, *B. sylvarum* was found widely on the Levels with 100s of workers recorded at some sites (Pavett 2004). Adults were found foraging on a wide range of plants, although ruderal plants were particularly important, especially stands of Creeping Thistle *Cirsium arvense*. A survey along a proposed pipeline through St. Brides SSSI on the Gwent Levels between July and September 2007 recorded 41 workers and males at 17 locations foraging on 13 species of flowering plants (Ecosulis 2007), and small numbers of workers have recently been recorded at the Maes Glas landfill site on Newport Docks (Sinead Lynch pers. comm.).

In August 2009, a CCW-funded survey found *B. sylvarum* to be widely distributed across the eastern Gwent Levels, with large populations on the Newport Wetlands National Nature Reserve and Nash & Goldcliff SSSI, and smaller numbers on Redwick & Llandevenny SSSI and Whitson SSSI (Smith 2010). Only nine bees were recorded on Magor & Undy SSSI. Important forage plants included Black Knapweed, Narrow-leaved Everlasting-pea *Lathyrus sylvestris*, Common Bird's-foot-trefoil, Red Clover, Tufted Vetch *Vicia cracca* and, on Newport Wetlands NNR, Sunflower *Helianthus annuus*. A CCW-funded survey of the eastern Gwent Levels between Magor and Chepstow in 2010 located small numbers at 16 localities, with singletons at four inland stations at Leechpool and Five Lanes (Smith 2011). Further survey work was undertaken on Nash & Goldcliff SSSI and Rumney & Peterstone SSSI was undertaken in 2012 (Smith 2013).

On the basis of this information, *B. sylvarum* has been identified as a qualifying feature on six of the eight SSSI which comprise the Gwent Levels, namely Newport Wetlands SSSI (542 individuals at 18 sites in 2009), Gwent Levels - Nash & Goldcliff (381 at 32 sites in 2009), Gwent Levels - Rumney & Peterstone (305 at six sites in 2003), Gwent Levels - Whitson (300 at one site in 2003; 87 at 29 sites in 2009), Gwent Levels - St. Brides (220 at two sites in 2003) and Gwent Levels - Redwick & Llandevenny (61 at 20 sites in 2009). Numbers at Gwent Levels - Magor & Undy SSSI and Magor Marsh SSSI (5 individuals) are too small to merit this status unless considered part of a wider Gwent Levels population.

### 3.2. The shrill carder bee in Glamorgan

Whilst populations of the bee are robust and widespread on the Gwent Levels and the Castlemartin peninsula in Pembrokeshire, its status in the Kenfig – Port Talbot area is insecure and its distribution is poorly understood, with the last survey undertaken 13 years ago (Carvell 2000).

*B. sylvarum* was first recorded in Glamorgan in as late as 1970 (Mike Howe pers.comm.) from the coastal plain in central Glamorgan, with the key area for the species being focussed around Kenfig NNR (Carvell 2000). This extensive nature reserve has undoubtedly provided an element of stability to the bee metapopulation. Outside of the reserve envelope many of the adjacent habitats have undergone dramatic changes in response to changes in agricultural practices, new developments and abandonment and redevelopment of existing brownfield sites. These changes have taken place over many decades and are most evident to the north of Kenfig NNR where the landscape has long been heavily industrialised and urbanised with green spaces variably fragmented. However, despite these ongoing changes, there is still a remarkable range of bumblebee-friendly habitats within this landscape - the area supports the greatest botanical diversity within Glamorgan (BSBI database, 2013) - and numerous potential survey sites for *B. sylvarum* were identified. To the south and east of Kenfig NNR, golf courses, agriculture, quarrying and residential areas form a mosaic of land uses, within which a variety of opportunities for *B. sylvarum* were identified for survey. Sympathetic management of restored land at Parc Slip Nature Reserve has provided habitats favourable for *B. sylvarum* and indicates that other similar sites providing secondary habitats might also support the species, both currently and in the future.

### 3.3. Objectives

The main purpose of this survey was to provide an up-to-date account of the current status of the species, with an emphasis placed on determining the distribution limits, by re-visiting sites with previous records and surveying sites supporting flower-rich dunes, grasslands and other habitats.

## 4. Methods

A survey of the coastal plain and inland lowland areas in central Glamorgan was carried out during late July and early September 2013, when numbers of workers and males were likely to be at their peak. Twelve days of fieldwork were undertaken, with good to fair weather prevailing throughout the period. Surveys targeted known sites,



including Kenfig NNR (including Sker Point/Farm), Margam Moors SSSI, Margam Burrows, Parc Slip Nature Reserve, Maesteg Golf Course but equal emphasis was also placed on extending into areas previously unsurveyed and a range of potential sites with suitable habitats were systematically surveyed using the following method:

#### 4.1. Fieldwork

- The survey areas shown on Figure 1 were visited during late July and early September.
- Within each survey area a 'look and see' approach was taken. This allowed flexibility that enabled suitable foraging/nesting areas to be located more quickly, maximising survey effort.
- Where suitable foraging/nesting areas were located, timed counts along survey routes were undertaken and a proforma completed for each section.
- All observations of *B. sylvarum* were recorded as a centroid point using GPS and / or positions marked on to aerial image at an appropriate suitable resolution, from which OSGR were later be taken.
- All forage plants were noted and a species list recorded of all plants within a 3m radius of the centroid, each species being allocated a DAFOR value.
- All occupied habitats were recorded at Phase 1 or NVC level where appropriate.
- The survey primarily focussed on locating *B. sylvarum*, but all other *Bombus* species were also noted.
- A photographic record was made of key features and sites.

#### 4.2. Data entry and Mapping

- All survey routes were mapped as timed transect lines and bee positions marked as centroids. These were input into Google Earth facilitating transfer to GIS layers in other GIS systems. Each feature has been given a unique identifier to enable cross-reference to the tabulated survey results, supplied as an Excel spreadsheet and reproduced in Appendix 1.

#### 4.3. Reporting

- In addition to the production of this report, all data will be synchronised with South East Wales Biological Records Centre (SEWBRc).

## 5. Results

### 5.1. Survey effort

A total of 88.69 hours were spent carrying out dedicated fieldwork, during which the prescribed survey methods were applied. In addition, a further 14.85 hours of casual

observations were carried out in areas with potential habitat for *B. sylvarum* (totalling 103.54 hours). The total distance covered during the survey was 168.83 km for the formal survey (shown by yellow transects on Figure 1), plus an additional 39.44 km of casual observations (shown by blue transects on Figure 1) the total distance covered being 208.27km. An average survey rate of 1.90 km/hour was calculated from the formal survey records which are reproduced at Appendix II, which also provides the weather conditions encountered during the survey. In general, conditions were favourable for the bulk of the study period with many days of sunshine and temperatures generally staying within 2°C either side of 20°C. A moderate, occasionally strong breeze was experienced on a large number of days which may have modified bee behaviour to a degree, although it is unlikely this will have been a significant factor.

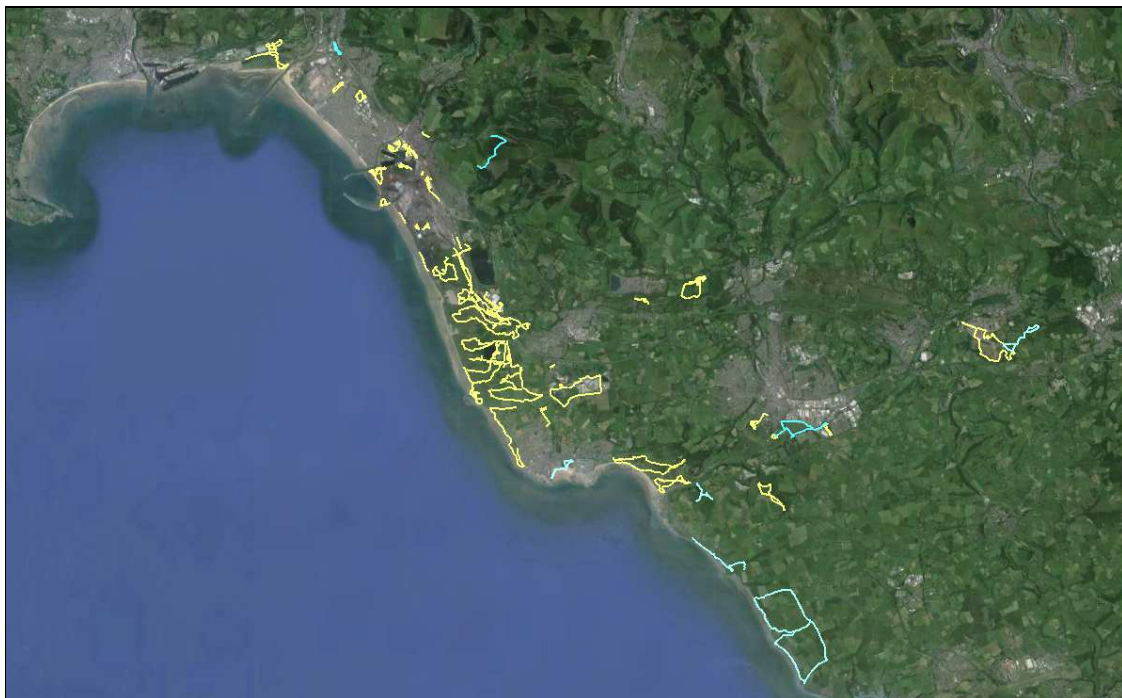


Figure 1: 2013 survey transects (formal surveys yellow, casual surveys blue).

## 5.2. Bumblebee species and abundance

A total of 17 species of bumblebee, including *B. sylvarum*, was recorded during the survey, with a total of 936 recorded observations of 2122 individual bumblebees as detailed in Table 1 below. Full data collected from each observation are provided at Appendix I. *B. sylvarum* was recorded on 49 occasions during the survey, with the total number of individuals recorded being 101. Three other Section 42 species, *B. ruderarius* (Red-shanked Carder Bee), *B. muscorum* (Moss Carder Bee) and *B. humilis* (Brown-banded Carder Bee) were also found during the survey. Of these, *B. humilis* was the most frequently recorded with 55 observations of 88 individuals, followed by *B. ruderarius* with 13 observations of 29 individuals, and *B. muscorum* producing just five records of eight individuals.

Table 1: Totals of all *Bombus* species recorded during the 2013 survey.

Species	Designation	Observations	Individuals
<i>B. barbutellus</i>		4	5
<i>B. bohemicus</i>		2	2
<i>B. campestris</i>		5	10
<i>B. hortorum</i>		26	28
<i>B. humilis</i>	Section 42**	55	88
<i>B. hypnorum</i>		1	2
<i>B. jonellus</i>		2	6
<i>B. lapidarius</i>		250	609
<i>B. lucorum</i>		42	70
<i>B. muscorum</i>	Section 42*	5	7
<i>B. pascuorum</i>		243	598
<i>B. pratorum</i>		14	23
<i>B. ruderarius</i>	Section 42*	13	29
<b><i>B. sylvarum</i></b>	Section 42**	<b>49</b>	<b>101</b>
<i>B. sylvestris</i>		4	4
<i>B. terrestris</i>		218	536
<i>B. vestalis</i>		3	4
Totals =		936	2122

\* Those species list as Priority Species Wales under Section 42 of the Natural Environment and Rural Communities Act 2012 (WBP, 2012).

\*\* Original Section 74 species.

### 5.3. Distribution of *B. sylvarum* in Glamorgan

The localities of all *B. sylvarum* observations are shown by the red dots on Figure 2. A polygon trace around the outlying observations, including recent historical observations, indicates that the Glamorgan population occupies an area off 66 km<sup>2</sup>. Within this area, the habitats are fragmented and using the boundary marker as a

guide to the known range of *B. sylvarum* in Glamorgan<sup>1</sup>, all of the areas of potential foraging habitat have been shaded red on Figure 2, this total resource approximating to 30 km<sup>2</sup>.



Figure 2: Main resource (red shading) and observations of *B. sylvarum* (red dots) within polygon trace of outliers marking known range.

All areas where the species has been recorded in recent historical times were resurveyed. The species was absent from a number of these, suggesting either a reduction in its distribution or changes in response to resource availability, a series of poor summers being a likely cause. Former sites where the species was absent during 2013 were mostly outliers, with most sites within the core of the population being occupied during 2013, albeit typically at low abundance. The 2013 observations show that the largest concentration of the species was the area centred at northern margins of Kenfig NNR and the fields between the reserve and Kenfig Industrial Estate as shown on Figure 2 and at higher resolution at Figure 8. The observations at Baglan and Port Talbot extended the known range to the north by approximately 8km, although only a small increase of 1.5 km to the south-east near Nottage was detected. Failure to find the species at Parc Slip indicates a reduction in eastern range by 7 km, although this population is remote from the core area.

<sup>1</sup> Excluding the Lavernock records.

#### 5.4. Habitat and food resources

Bumblebees were recorded from a wide range of habitats within the range of *B. sylvarum*, which included saltmarshes, sand dunes, fens, semi-improved grasslands, scrubby waysides, verges, brownfield sites and gardens. The habitat of each observation for all species is included at Appendix I, with those of *B. sylvarum* summarised as follows:

- Dune and dune /fen transitions 51 observations
- Shrubby /tall herb wayside 4 observations
- Grassy Verge 1 observations
- Species-rich brownfield sites 8 observations
- Rough horse-grazed pasture 37 observations

Foraging data for 2137 bumblebees observations (all species), summarised in Table 2 (see p.20), reveals that 86 different species of flowering plant were visited during the 2013 survey. This compares to only 37 species utilised during the Gwent Levels survey (Smith 2010), the difference most likely being a function of the wider diversity of habitats occupied by the Glamorgan population. *B. sylvarum* was recorded visiting 14 species from this list, compared with 26 species noted during the Gwent Levels survey (Smith 2010).

A plot at Figure 3 shows the relative importance of flowering plants as food resource for all species of bumblebee recorded during August and mid-September 2013. The three most important species during the period were Red Bartsia (*Odontites vernus*), Common Knapweed species (*Centaurea nigra* agg.) and Viper's Bugloss (*Echium vulgare*). Other species found to be of local importance included Rosebay Willowherb (*Chamerion angustifolium*), Sea-heath (*Frankenia laevis*), Butterfly-bush (*Buddleja davidii*) and Bramble (*Rubus fruticosus* agg.). The full list of all 86 species recorded as forage species is provided at Table 2.

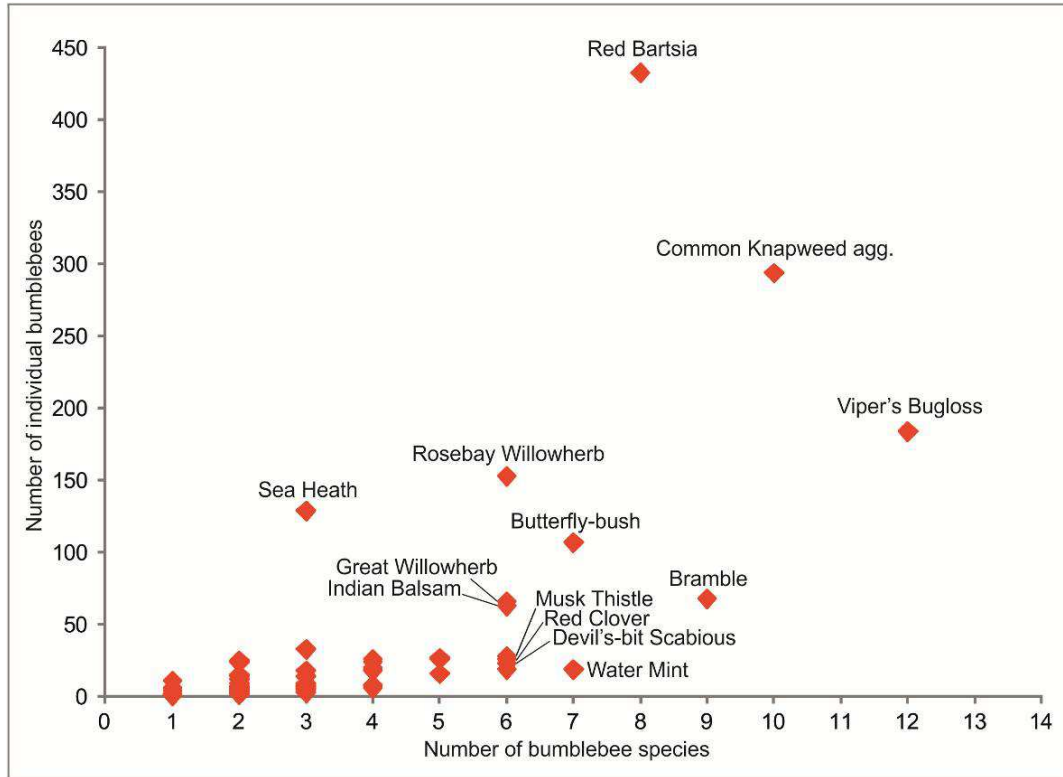


Figure 3: Plot of relative importance of flowering plants as food resource for all species of bumblebee recorded during August and mid-September 2013.

### 5.5. Vegetation Structure

The composition and structure of the vegetation used by bumblebees was highly varied within and between sites and an analysis of the vegetation height, shown at Figure 4, shows the most frequent vegetation height in which *B. sylvarum* was recorded was the 21-30cm range. This happens to be the average height of swards with Red Bartsia, so vegetation structure may not necessarily be an important factor, especially as bees were also recorded in other much taller vegetation including scrubby waysides and stands of Indian Balsam over 1m high.

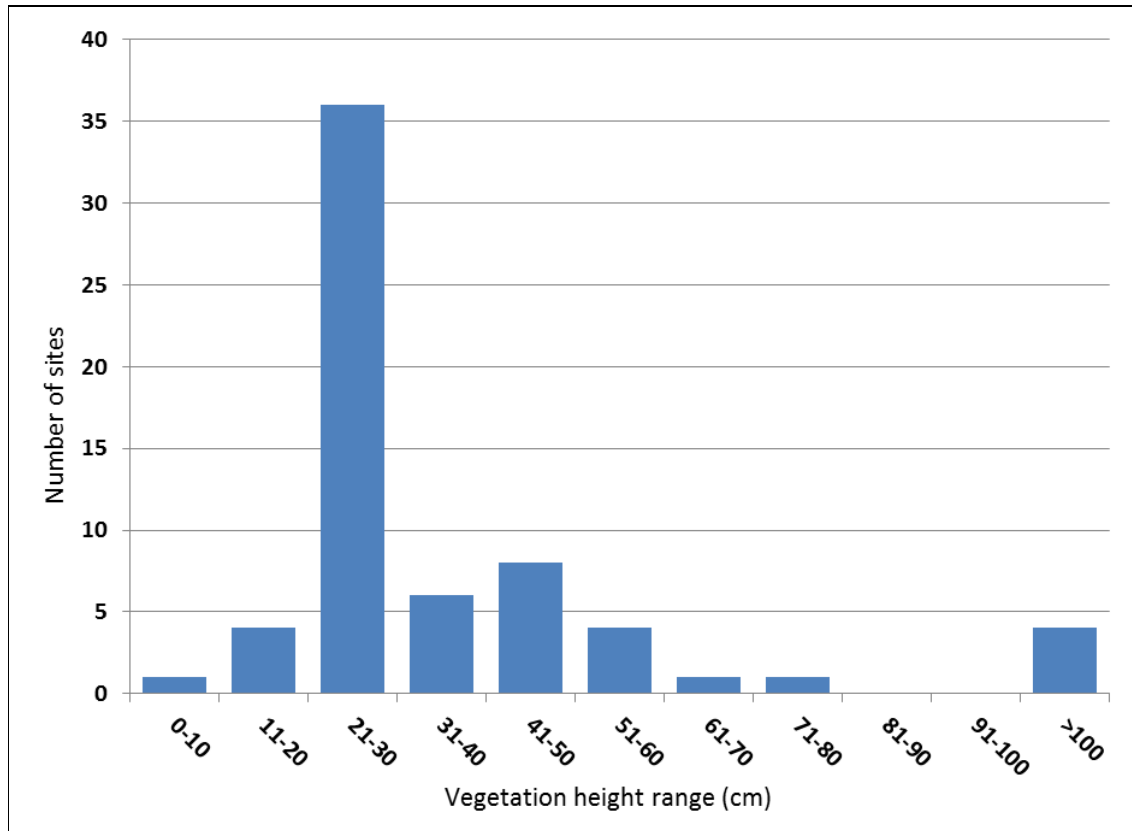


Figure 4: Plot of vegetation height frequency at *B. sylvarum* forage sites.

### 5.6. Key Sites

The numbers of Section 42 species recorded at key sites are shown below in Table 3, which due to repeat visits could include an element of double counting, but do show clearly the relative importance of key sites such as Morfa-bach and Kenfig NNR. The main characteristics of the sites where *B. sylvarum* was recorded are provided in the area descriptions below, working from north to south. A map of each key area shows the locations of survey transects and sightings of *B. sylvarum*. Photographs showing representative habitats at each site where *B. sylvarum* was recorded appear at Appendix III. Note that a chronological sequence of maps and photographs of all sites surveyed is also provided online at <http://bosyl2013.blogspot.co.uk/>, providing the opportunity to view photographs and maps at higher resolution. This resource additionally shows details of transect routes and images of sites where *B. sylvarum* was not recorded.

Table 3: Numbers of Section 42 species recorded at key sites.

Site	<i>B. sylvarum</i>	<i>B. humilis</i>	<i>B. muscorum</i>
Baglan Moors	1 worker 1 male	1 male	
BP Baglan			2 workers
Cefn Cribwr		1 worker	
Crymlyn Burrows		9 workers	
Dunraven		1 worker	
Island Farm			1 queen
Kenfig NNR	1 queen 25 workers 1 male	1 queen 20 workers 1 male	1 worker
Locks Common		1 queen	
Margam Moors	6 workers 1 male	10 workers/undet. 1 male	
Margam Tip		1 worker	
Merthyr Mawr Warren		1 queen 3 workers	
Morfa-bach	1 queen 47 workers/undet. 1 male	1 queen 2 workers	
Moor Lane, Nottage	2 workers	7 workers	
Ogmore Estuary		2 females	1 female
Parc Slip		4 workers	
Port Talbot Docks	1 queen 2 workers	4 workers/undet.	
TATA steelworks		10 workers/undet. 1 male	2 males

Habitat and vegetation details were recorded at the majority of sites where *B. sylvarum* was observed along with species lists of plants recorded within a 3m radius of the observation point. DAFOR values were attributed to each species providing a semi-quantitative measure of the community composition. Other site attributes, such as habitat condition and management, were noted where appropriate. The reference number of each observation can be used to cross-reference full details of each record reproduced at Appendix I. Transects and data points have been provided electronically for use with GIS applications.



DAFOR Scale used for recording vegetation within 3m radius of observation point:

- d = dominant
- a = abundant
- f = frequent
- o = occasional
- r = rare
- l = locally (used as prefix to d, a & f)

## BAGLAN MOORS



Figure 5: Survey transects (yellow lines) and observations of *B. sylvarum* (red dots) in area around the mouth of the River Neath.

There are a number of suitable areas that appear to be suitable for *B. sylvarum* around the Neath river mouth. These include Crymlyn Burrows, Baglan Burrows, the old BP Baglan site (no access) and Baglan Moors, plus there are some flower-rich verges in the area that provide good connectivity. Despite an abundance of habitats with good potential the only site where *B. sylvarum* was recorded was the brownfield land at Baglan Moors, where two workers were recorded at Red Bartsia. The land at this site has in recent years undergone a transition from an open sward with much bare ground to a rather rank, yet still highly diverse and structurally varied mosaic of wet and dry vegetation. Scrub and Reed (*Phragmites australis*) encroachment is very evident at the site and threatens the biological interest there. There is no management at this site which is allocated for development. A number of the adjacent habitats are candidate SINCS.

**[Ref.# 547] *B. sylvarum* 1 worker 25/08/2013**

**Baglan Moors (SS7478291630)**

**Species-rich brownfield damp grassland scrub mosaic (avge. ht: ~40cm)**

Ash <i>Fraxinus excelsior</i> r	Meadowsweet <i>Filipendula ulmaria</i> o
Bird's-claw Beard-moss <i>Barbula unguiculata</i> o	Parsnip <i>Pastinaca sativa sens. lat.</i> o
Carrot <i>Daucus carota</i> o	Pointed Spear-moss <i>Calliergonella cuspidata</i> f
Chalk Knapweed <i>Centaurea debauxii</i> a	<b><u>Red Bartsia <i>Odontites vernus</i> f</u></b>
Common Bird's-foot-trefoil <i>Lotus corniculatus</i> o	Red Clover <i>Trifolium pratense</i> o
Common Fleabane <i>Pulicaria dysenterica</i> o	Red Fescue <i>Festuca rubra</i> f
Common Ragwort <i>Senecio jacobaea</i> o	Red-osier Dogwood <i>Cornus sericea</i> o
Common Vetch <i>Vicia sativa subsp. segetalis</i> o	Ribwort Plantain <i>Plantago lanceolata</i> o
Creeping Bent <i>Agrostis stolonifera</i> f	Selfheal <i>Prunella vulgaris</i> o
Creeping Buttercup <i>Ranunculus repens</i> f	Silverweed <i>Potentilla anserina</i> o
Crested Dog's-tail <i>Cynosurus cristatus</i> f	Southern Marsh-orchid <i>Dactylorhiza</i>
Glaucous Sedge <i>Carex flacca</i> o	<i>praetermissa</i> r
Hard Rush <i>Juncus inflexus</i> f	Tall Melilot <i>Melilotus altissimus</i> lf
Hemp-agrimony <i>Eupatorium cannabinum</i> r	Yorkshire-fog <i>Holcus lanatus</i> o

**[Ref.# 548] *B. sylvarum* 1 worker 25/08/2013**

**Baglan Moors (SS7474491562)**

**Species-rich brownfield damp grassland scrub mosaic (avge. ht: ~45cm)**

Alder *Alnus glutinosa* o  
 Ash *Fraxinus excelsior* o  
 Bramble *Rubus fruticosus* agg. o  
 Clustered Dock *Rumex conglomeratus* o  
 Common Fleabane *Pulicaria dysenterica* a  
 Common Sedge *Carex nigra* a  
 Creeping Bent *Agrostis stolonifera* o  
 Creeping Buttercup *Ranunculus repens* f  
 Creeping Cinquefoil *Potentilla reptans* f  
 Crested Dog's-tail *Cynosurus cristatus* o  
 Great Willowherb *Epilobium hirsutum* o  
 Greater Bird's-foot-trefoil *Lotus pedunculatus* f  
 Hard Rush *Juncus inflexus* f  
 Italian Alder *Alnus cordata* r  
 Marsh Ragwort *Senecio aquaticus* o  
 Pointed Spear-moss *Calliergonella cuspidata* a  
**Red Bartsia *Odontites vernus* f**  
 Ribwort Plantain *Plantago lanceolata* o  
 Soft-rush *Juncus effusus* o  
 Square-stalked St John's-wort *Hypericum*  
*tetrapterum* o  
 Tall Melilot *Melilotus altissimus* f  
 Timothy *Phleum pratense* o  
 Tufted Vetch *Vicia cracca* o  
 Water Mint *Mentha aquatica* f  
 Yorkshire-fog *Holcus lanatus* o

## PORT TALBOT DOCKS AREA



Figure 6: Survey transects (yellow lines) and observations of *B. sylvarum* (red dots) in the Port Talbot Docks area.

The area within and surrounding Port Talbot Docks supports a wide range of grassland communities that are flower-rich; these include secondary dune habitats on industrial land, long-established species-rich brownfield grassland/scrub mosaics and substantial areas of disturbed ground with diverse ruderal vegetation.

Recent demolition works on land to the north of the docks has made some areas with good habitats accessible for survey and *B. sylvarum* was recorded at three locations where Red Bartsia was locally abundant. It is likely that the two easternmost of these sites will be redeveloped or remediated in the near future, although the westernmost site has not been modified for over 10 years and appears less vulnerable. The presence of a queen highlights the local importance of this area, with well connected habitat fragments collectively providing a valuable resource.

At all of these sites, no specific management is carried out for the purposes of ecological conservation. Ongoing redevelopment of the area undoubtedly helps provide favourable conditions during those periods following site clearance, with some of the longer established dockside grasslands also providing more stable habitats for bees. However, scrub encroachment on brownfield land does appear to be a limiting factor where there is no management.

None of the sites where *B. sylvarum* was recorded has any conservation status, with Little Warren dunes on the north side of the Afan river mouth, a candidate Site of

Importance for Nature Conservation (cSINC), being the only designated site within this area.

**[Ref.# 500] *B. sylvarum* 1 worker 19/08/2013**

**Port Talbot Ind. Est. (SS7598089556)**

**Established brownfield grassland (avge. ht: ~25cm)**

Carrot <i>Daucus carota</i> o	Lesser Trefoil <i>Trifolium dubium</i> o
Chalk Knapweed <i>Centaurea debauxii</i> o	Oxeye Daisy <i>Leucanthemum vulgare</i> o
Cock's-foot <i>Dactylis glomerata</i> o	Parsnip <i>Pastinaca sativa sens. lat.</i> o
Common Bird's-foot-trefoil <i>Lotus corniculatus</i> f	<b><u>Red Bartsia <i>Odontites vernus</i> f</u></b>
Common Fleabane <i>Pulicaria dysenterica</i> lf	Red Clover <i>Trifolium pratense</i> o
Common Vetch <i>Vicia sativa subsp. segetalis</i> o	Red Fescue <i>Festuca rubra</i> f
Creeping Bent <i>Agrostis stolonifera</i> f	Redshank <i>Ceratodon purpureus</i> o
Creeping Cinquefoil <i>Potentilla reptans</i> a	Ribwort Plantain <i>Plantago lanceolata</i> f
Curled Dock <i>Rumex crispus</i> o	Small-flowered Evening-primrose <i>Oenothera cambrica</i> o
Hairy Sedge <i>Carex hirta</i> r	Spear Thistle <i>Cirsium vulgare</i> r
Hard Rush <i>Juncus inflexus</i> o	White Clover <i>Trifolium repens</i> o
Hawkweed Oxtongue <i>Picris hieracioides</i> o	Wild Teasel <i>Dipsacus fullonum</i> r
Hoary Ragwort <i>Senecio erucifolius</i> r	Yorkshire-fog <i>Holcus lanatus</i> f
Lesser Bird's-claw Beard-moss <i>Barbula convoluta var. sardoa</i> o	

**[Ref.# 504] *B. sylvarum* 1 worker 19/08/2013**

**Port Talbot Ind. Est. (SS7629489619)**

**Ruderal vegetation with coarse grasses on disturbed ground (avge. ht: ~25cm)**

Bilbao's Fleabane <i>Conyza floribunda</i> o	Lesser Trefoil <i>Trifolium dubium</i> o
Bramble <i>Rubus fruticosus agg.</i> o	Parsnip <i>Pastinaca sativa sens. lat.</i> f
Butterfly-bush <i>Buddleja davidii</i> o	Rat's-tail Fescue <i>Vulpia myuros</i> o
Carrot <i>Daucus carota</i> o	<b><u>Red Bartsia <i>Odontites vernus</i> la</u></b>
Common Bird's-foot-trefoil <i>Lotus corniculatus</i> o	Red Clover <i>Trifolium pratense</i> f
Common Ragwort <i>Senecio jacobaea</i> o	Redshank <i>Ceratodon purpureus</i> f
Dandelion <i>Taraxacum agg.</i> o	Ribwort Plantain <i>Plantago lanceolata</i> f
Hare's-foot Clover <i>Trifolium arvense</i> o	Rusty Willow <i>Salix cinerea subsp. oleifolia</i> r
Hawkweed Oxtongue <i>Picris hieracioides</i> o	Small-flowered Evening-primrose <i>Oenothera cambrica</i> r
Hemp-agrimony <i>Eupatorium cannabinum</i> o	Yorkshire-fog <i>Holcus lanatus</i> f
Hogweed <i>Heracleum sphondylium</i> r	
Lesser Bird's-claw Beard-moss <i>Barbula convoluta var. sardoa</i> o	

**[Ref.# 646] *B. sylvarum* 1 queen 04/09/2013**

**Maritime Road, Port Talbot (SS7683789311)**

**Species-rich, weedy verge (avge ht: ~300cm)**

Annual Meadow-grass <i>Poa annua</i> o	Gypsywort <i>Lycopus europaeus</i> o
Black Medick <i>Medicago lupulina</i> o	Hoary Mustard <i>Hirschfeldia incana</i> f
Bramble <i>Rubus fruticosus agg.</i> r	Lesser Swine-cress <i>Lepidium didymum</i> o
Broad-leaved Dock <i>Rumex obtusifolius</i> f	Mugwort <i>Artemisia vulgaris</i> o
Butterfly-bush <i>Buddleja davidii</i> r	Nipplewort <i>Lapsana communis</i> r
Carrot <i>Daucus carota</i> r	Pale Toadflax <i>Linaria repens</i> r
Colt's-foot <i>Tussilago farfara</i> o	Parsnip <i>Pastinaca sativa sens. lat.</i> r
Creeping Buttercup <i>Ranunculus repens</i> o	<b><u>Red Clover <i>Trifolium pratense</i> f</u></b>
Creeping Thistle <i>Cirsium arvense</i> o	Redshank <i>Persicaria maculosa</i> r
Dandelion <i>Taraxacum agg.</i> o	Ribwort Plantain <i>Plantago lanceolata</i> r
False Oat-Grass <i>Arrhenatherum elatius</i> f	Small Sweet-grass <i>Glyceria declinata</i> o
Fat-hen <i>Chenopodium album</i> o	Small Toadflax <i>Chaenorhinum minus</i> o
Great Willowherb <i>Epilobium hirsutum</i> o	Small-flowered Evening-primrose <i>Oenothera cambrica</i> o
Groundsel <i>Senecio vulgaris</i> r	

Smooth Sow-thistle *Sonchus oleraceus* o  
 Spear Thistle *Cirsium vulgare* o  
 Wallflower Cabbage *Coincya monensis* subsp.  
*cheiranthos* o

Water-pepper *Persicaria hydropiper* o  
 White Clover *Trifolium repens* o  
 Yorkshire-fog *Holcus lanatus* la

## MARGAM MOORS & SURROUNDS



Figure 7: Survey transects (yellow lines) and observations of *B. sylvarum* (red dots) in the Margam Moors area.

Margam Moors comprises coastal grazing levels characterised by mostly species-poor semi-improved grassland within a network of ditches that support the bulk of the ecological interest. Much of the grazing land is rather impoverished in terms of providing forage for bees, but to the west and south the land gets progressively wetter and species-rich fen communities become more prominent. To the west there is an area of fen-dune transition that provides particularly good invertebrate habitat and is area where *B. sylvarum* was recorded. Land to the east and north of the moors is mostly industrialised, but it supports some very diverse and flower-rich plant communities. The disused railway lines and sidings provide excellent bumblebee habitats that link into the works areas to the north and Kenfig dunes to the south. A few small areas of wet pasture with abundant Red Bartsia and other good forage plants were also found at the north end of Eglwys Nunydd Reservoir. Margam Tip lies to the south of the moors, separating the levels from Kenfig dunes. A progressive, long-term dune grassland restoration scheme is being implemented on the tip, running from east to west which has already increased the connectivity of good forage habitats in the area. Whilst no *B. sylvarum* was recorded on the tip during the survey, there is a significant resource for bumblebees at this site. Unfortunately, Sea Buckthorn (*Hippophae rhamnoides*) is very well established at

this site and has spread dramatically in recent years. Conventional control may not be possible due to the geotextiles used in capping the tip, but the situation needs to be best addressed as soon as possible if the situation is not to become unmanageable.

The pastures of Margam Moors are managed by cattle grazed and haymaking. Other industrialised habitats in the area receive no specific management for the purposes of ecological conservation. In some areas, cyclical development-abandonment has provided disturbance to help maintain a continuum of habitats that support an extensive range of invertebrate-friendly habitats. However, scrub encroachment on brownfield land does appear to be a limiting factor where there is no management.

Sites with ecological designations in this area include Margam Moors SSSI and Eglwys Nunydd Reservoir (open water only) SSSI, plus Eglwys Nunuydd Reservoir surrounding vegetation cSINC. None of the industrial sites, including the disused railway site where *B. sylvarum* was recorded, has any conservation status.

**[Ref.# 510-511] *B. sylvarum* 2 workers 22/08/2013**

**Margam Moors (SS7769884710)**

**Rank fen/dune transition (avge. ht: ~35cm)**

Chalk Knapweed *Centaurea debauxii* o  
Common Fleabane *Pulicaria dysenterica* f  
Common Reed *Phragmites australis* f  
Dewberry *Rubus caesius* o  
Great Willowherb *Epilobium hirsutum* r

**Greater Bird's-foot-trefoil *Lotus***

**pedunculatus** f

Hairy Sedge *Carex hirta* o  
Hard Rush *Juncus inflexus* r  
Meadow Vetchling *Lathyrus pratensis* o  
**Red Bartsia *Odontites vernus*** f

Red Clover *Trifolium pratense* o  
Red Fescue *Festuca rubra* f  
Ribwort Plantain *Plantago lanceolata* o  
Silverweed *Potentilla anserina* o  
Sweet Vernal-grass *Anthoxanthum odoratum* f  
Tufted Vetch *Vicia cracca* r  
Velvet Bent *Agrostis canina* o  
Yarrow *Achillea millefolium* o  
Yellow-rattle *Rhinanthus minor* f  
Yorkshire-fog *Holcus lanatus* a

**[Ref.# 515] *B. sylvarum* 2 workers 22/08/2013**

**Margam Moors (SS7774584663)**

**Rank fen/dune transition (avge. ht: ~25cm)**

Bramble *Rubus fruticosus* agg. f  
C'mon Bird's-foot-trefoil *Lotus corniculatus* f  
Common Reed *Phragmites australis* o  
Dewberry *Rubus caesius* f  
G'ter Bird's-foot-trefoil *Lotus pedunculatus* f  
Hairy Sedge *Carex hirta* f  
**Red Bartsia *Odontites vernus*** f  
Ribwort Plantain *Plantago lanceolata* f  
Silverweed *Potentilla anserina* f  
Sweet Vernal-grass *Anthoxanthum odoratum* o  
Yorkshire-fog *Holcus lanatus* f

**[Ref.# 521] *B. sylvarum* 1 male 22/08/2013**

**Heolcae'r-bont, Margam (SS7754684668)**

**Ruderal secondary dune (avge. ht: ~40cm)**

Bilbao's Fleabane *Conyza floribunda* o  
Common Fleabane *Pulicaria dysenterica* f  
Common Nettle *Urtica dioica* o

Common Restharrow *Ononis repens* o  
Dewberry *Rubus caesius* o  
Hawkweed Oxtongue *Picris hieracioides* o

Hemp-agrimony *Eupatorium cannabinum* o  
 Hoary Mustard *Hirschfeldia incana* f  
 Parsnip *Pastinaca sativa* sens. lat. o  
 Perennial Sow-thistle *Sonchus arvensis* o  
 Rusty Willow *Salix cinerea* subsp. *oleifolia* o  
 Silverweed *Potentilla anserina* r

Small-flowered Evening-primrose *Oenothera cambrica* o  
Viper's-bugloss *Echium vulgare* a  
 Wallflower Cabbage *Coincya monensis* subsp. *cheiranthos* r

**[Ref.# 328] *B. sylvarum* 1 worker 13/08/2013**

**Margam Moors (SS7848585382)**

**Disused railway line with short ruderal vegetation (avge. ht: ~10cm)**

a lichen *Cladonia rangiformis* o  
 a lichen *Peltigera canina* f  
 Biting Stonecrop *Sedum acre* a  
 Black Medick *Medicago lupulina* o  
 Compact Brome *Anisantha madritensis* f  
 Dove's-foot Crane's-bill *Geranium molle* o  
 False Oat-Grass *Arrhenatherum elatius* o  
 Ivy-leaved Toadflax *Cymbalaria muralis* r  
 Mouse-ear-hawkweed *Pilosella officinarum* o  
 Red Fescue *Festuca rubra* lf  
 Ribwort Plantain *Plantago lanceolata* f

Sheep's-fescue *Festuca ovina* o  
 Soft-brome *Bromus hordeaceus* o  
 Thyme-leaved Sandwort *Arenaria serpyllifolia* o  
Viper's-bugloss *Echium vulgare* la  
 Wallflower Cabbage *Coincya monensis* subsp. *cheiranthos* o  
 Yarrow *Achillea millefolium* o  
 Yellow Feather-moss *Homalothecium lutescens* f

**MORFA-BACH (KENFIG MARSHALLING YARDS, INDUSTRIAL ESTATE, MARGAM TIP AND ADJACENT LAND)**

The small area of land sandwiched between Kenfig NNR and Kenfig Industrial Estate was found to be the core area for *B. sylvarum* during 2013, with just a couple of horse-grazed pastures being especially important for the species. These rough, damp grasslands appeared to provide optimal habitat, in that there was an abundance of Red Bartsia in an area surrounded by other habitats with a high level of botanical diversity, which included wet woodland, riparian tall herb / scrub mosaic, flower-rich waysides, diverse brownfield communities, ornamental plantings around the industrial units, a disused railway line and species-rich fen, with the sand dunes of Kenfig NNR immediately adjacent to the south. These habitats combined provide an incredibly diverse range of foraging opportunities for bumblebees with few obstacles or hard boundaries to restrict movements.

The small areas of rough pasture are managed by horse-grazing which provides what appears to be the optimal habitat for *B. sylvarum*. The other neglected areas of land and brownfield habitats in the area receive no specific management for the purposes of ecological conservation and whilst occasional redevelopment of the area helps provide favourable conditions during those periods following site clearance, scrub encroachment appears to be a limiting factor in some areas.

Outside of the Kenfig SAC/SSSI/NNR boundary, none of the land within this area has any conservation status. Given that during 2013 Morfa-bach fields proved to be the core area of *B. sylvarum* in Glamorgan, a mechanism for securing sympathetic management in the future should be considered a priority objective.

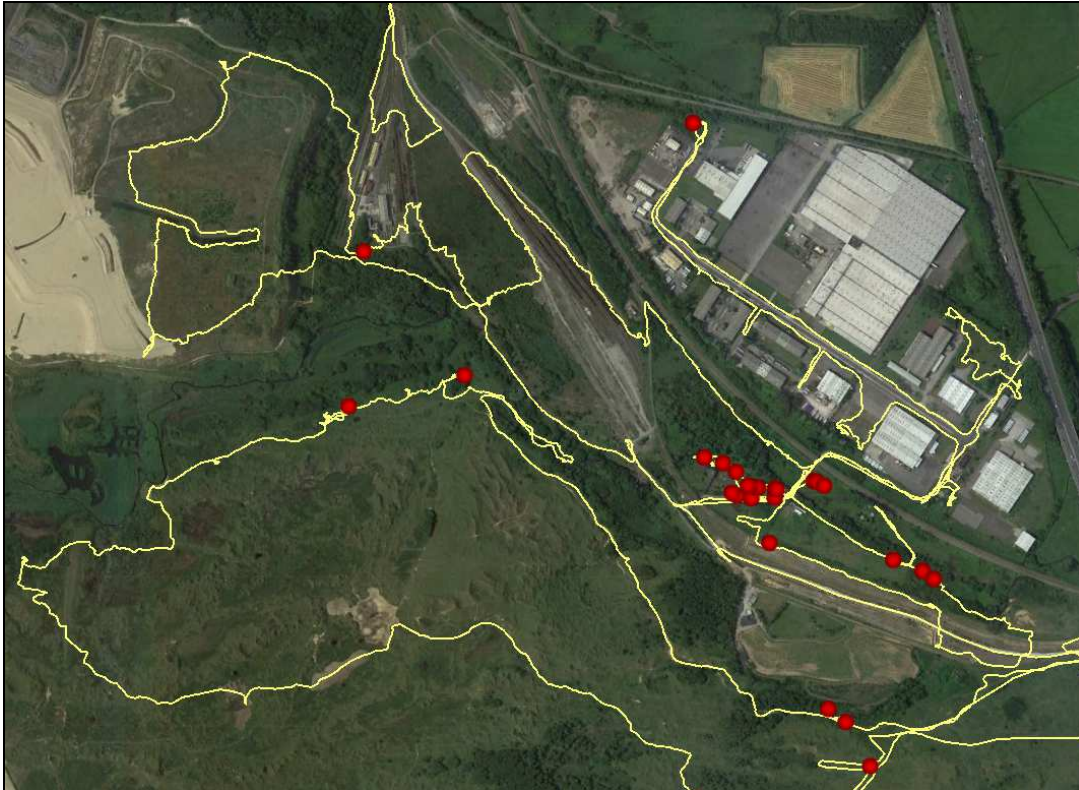


Figure 8: Survey transects (yellow lines) and observations of *B. sylvarum* (red dots) in the Morfa-bach area.

[Ref.# 140, 142 & 589-592] *B. sylvarum* 5 workers 11/08/2013 & 19 workers 28/08/2013

**Morfa-bach adjacent to Kenfig Ind. Est. (SS7967483053)**

**Rough semi-improved grassland (avge ht: ~30cm)**

Cat's-ear *Hypochaeris radicata* o  
 Clustered Dock *Rumex conglomeratus* o  
 Common Bent *Agrostis capillaris* o  
 Creeping Buttercup *Ranunculus repens* f  
 Dewberry *Rubus caesius* f  
 Hairy Sedge *Carex hirta* f  
 Meadow Buttercup *Ranunculus acris* r

Ribwort Plantain *Plantago lanceolata* f  
 Silverweed *Potentilla anserina* o  
 Water Mint *Mentha aquatica* o  
 Water-pepper *Persicaria hydropiper* o  
 White Clover *Trifolium repens* f  
 Yarrow *Achillea millefolium* f  
 Yorkshire-fog *Holcus lanatus* f

**Red Bartsia *Odontites vernus* a**

[Ref.# 587] *B. sylvarum* 4 workers 28/08/2013

**Morfa-bach, Kenfig Ind.Est. (SS7962283119)**

**Rough horse grazing fen/scrub/river (avge ht: ~45cm)**

Agrimony *Agrimonia eupatoria* o  
 Alder *Alnus glutinosa* r  
 Clustered Dock *Rumex conglomeratus* o  
 Common Fleabane *Pulicaria dysenterica* a  
 Common Mouse-ear *Cerastium fontanum* o  
 Creeping Bent *Agrostis stolonifera* f

Creeping Buttercup *Ranunculus repens* f  
 Indian Balsam *Impatiens glandulifera* o  
 Meadowsweet *Filipendula ulmaria* o  
**Red Bartsia *Odontites vernus* f**  
 Ribwort Plantain *Plantago lanceolata* f  
 Yorkshire-fog *Holcus lanatus* f



**[Ref.# 588] *B. sylvarum* 1 worker 28/08/2013****Morfa-bach, Kenfig Ind.Est. (SS7960883129)****Rough horse grazing fen/scrub/river (avge ht: ~100cm)**

Clustered Dock *Rumex conglomeratus* o  
 Common Fleabane *Pulicaria dysenterica* a  
 Common Sorrel *Rumex acetosa* o  
 Creeping Bent *Agrostis stolonifera* f  
 Creeping Buttercup *Ranunculus repens* f  
 Hairy Sedge *Carex hirta* o

**Indian Balsam *Impatiens glandulifera* a**

Meadowsweet *Filipendula ulmaria* o  
 Ribwort Plantain *Plantago lanceolata* f  
 Silverweed *Potentilla anserina* f  
 Water Mint *Mentha aquatica* f  
 White Clover *Trifolium repens* o  
 Yarrow *Achillea millefolium* o  
 Yorkshire-fog *Holcus lanatus* o

**[Ref.# 200] *B. sylvarum* 1 worker 12/08/2013****Morfa –bach adjacent to Kenfig Ind. Est. (SS7998282919)****Rank species-rich wayside vegetation (avge ht: ~150cm)**

Agrimony *Agrimonia eupatoria* d  
 Alder *Alnus glutinosa* f  
 Bramble *Rubus fruticosus* agg. o  
 Burnet Rose *Rosa spinosissima* a  
 Cock's-foot *Dactylis glomerata* a  
 Common Knapweed *Centaurea nigra* f  
 Common Nettle *Urtica dioica* a  
 Common Toadflax *Linaria vulgaris* d  
 Creeping Cinquefoil *Potentilla reptans* f  
 False Oat-Grass *Arrhenatherum elatius* f  
 Fool's Parsley *Aethusa cynapium* o  
 Hawthorn *Crataegus monogyna* f

Hoary Plantain *Plantago media* d  
 Hogweed *Heracleum sphondylium* a  
 Indian Balsam *Impatiens glandulifera* o  
 Mugwort *Artemisia vulgaris* a  
 Pineappleweed *Matricaria matricarioides* a  
**Red Bartsia *Odonites vernus* f**  
 Red Clover *Trifolium pratense* f  
 Sweet Vernal-grass *Anthoxanthum odoratum* a  
 Yarrow *Achillea millefolium* a  
 Yorkshire-fog *Holcus lanatus* a

**[Ref.# 203-204] *B. sylvarum* 1 worker & 1 queen 12/08/2013****Morfa-bach adjacent to Kenfig Ind. Est. (SS8004082897)****Rank species-rich wayside vegetation (avge ht: ~100cm)**

Alder *Alnus glutinosa* f  
 Blackthorn *Prunus spinosa* f  
 Bramble *Rubus fruticosus* agg. f  
 Broad-leaved Willowherb *Epilobium montanum* a  
 Clustered Dock *Rumex conglomeratus* f  
 Cock's-foot *Dactylis glomerata* a  
 Cock's-foot *Dactylis glomerata* a  
 Common Nettle *Urtica dioica* a  
 Creeping Cinquefoil *Potentilla reptans* f  
 False Oat-Grass *Arrhenatherum elatius* a  
 Great Willowherb *Epilobium hirsutum* f  
 Greater Plantain *Plantago major* f  
 Hedge Mustard *Sisymbrium officinale* a  
 Hemp-agrimony *Eupatorium cannabinum* a

Hogweed *Heracleum sphondylium* a  
 Imperforate St John's-wort *Hypericum maculatum* a  
 Mugwort *Artemisia vulgaris* a  
 Red Bartsia *Odonites vernus* f  
 Red Campion *Silene dioica* a  
 Red Clover *Trifolium pratense* a  
 Ribwort Plantain *Plantago lanceolata* a  
 Smooth Sow-thistle *Sonchus oleraceus* a  
**Spear Thistle *Cirsium vulgare* a**  
 Sweet Vernal-grass *Anthoxanthum odoratum* a  
 Tufted Vetch *Vicia cracca* f  
 Yarrow *Achillea millefolium* a

**[Ref.# 212] *B. sylvarum* 4 workers 12/08/2013****Morfa-bach adjacent to Kenfig Ind. Est. (SS8005682880)****Rank species-rich wayside vegetation (avge ht: ~60cm)**

Agrimony *Agrimonia eupatoria* a  
 Alder *Alnus glutinosa* a  
 Autumn Hawkbit *Scorzoneroides autumnalis* a  
 Blackthorn *Prunus spinosa* f  
 Bramble *Rubus fruticosus* agg. f  
 Burnet Rose *Rosa spinosissima* a

Cock's-foot *Dactylis glomerata* f  
 Common Fleabane *Pulicaria dysenterica* f  
 Common Knapweed *Centaurea nigra* f  
 Common Mouse-ear *Cerastium fontanum* d  
 Common Nettle *Urtica dioica* a  
 Dewberry *Rubus caesius* a

False Oat-Grass *Arrhenatherum elatius* a  
 Hogweed *Heracleum sphondylium* f  
 Hop Trefoil *Trifolium campestre* f  
 Imperforate St John's-wort *Hypericum maculatum* a  
 Indian Balsam *Impatiens glandulifera* f  
Red Bartsia Odonites vernus 3  
 Red Clover *Trifolium pratense* a

Ribwort Plantain *Plantago lanceolata* f  
 Sweet Vernal-grass *Anthoxanthum odoratum* a  
 Tufted Vetch *Vicia cracca* f  
 Wild Parsnip *Pastinaca sativa* f  
 Yarrow *Achillea millefolium* f  
 Yorkshire-fog *Holcus lanatus* a

**[Ref.# 219] *B. sylvarum* 3 workers 12/08/2013**  
**Morfa-bach adjacent to Kenfig Ind. Est. (SS7983883069)**  
**Semi-improved damp grassland (avge ht: ~30cm)**

Autumn Hawkbit *Scorzoneroideis autumnalis* a  
 Bird's-foot-trefoil *Lotus corniculatus* f  
 Clustered Dock *Rumex conglomeratus* f  
 Common Bent *Agrostis capillaris* a  
 Common Fleabane *Pulicaria dysenterica* f  
 Creeping Buttercup *Ranunculus repens* f  
 Meadow Buttercup *Ranunculus acris* f  
Red Bartsia Odonites vernus o

Ribwort Plantain *Plantago lanceolata* f  
 Selfheal *Prunella vulgaris* a  
 Silverweed *Potentilla anserina* f  
 Sweet Vernal-grass *Anthoxanthum odoratum* a  
 Water Mint *Mentha aquatica* f  
 Water-pepper *Persicaria hydropiper* f  
 White Clover *Trifolium repens* a

**[Ref.# 696] *B. sylvarum* 1 worker 18/08/2013**  
**Kenfig Ind. Est. (SS7960583788)**

**Species-rich brownfield land with encroaching scrub (avge ht: ~30cm)**

Black Medick *Medicago lupulina* f  
 Broad-leaved Willowherb *Epilobium montanum* a  
 Canadian Fleabane *Conyza canadensis* f  
 Clustered Dock *Rumex conglomeratus* a  
 Cock's-foot *Dactylis glomerata* a  
 Common Bird's-foot-trefoil *Lotus corniculatus* a  
 Common Centaury *Centaureum erythraea* d  
 Common Fleabane *Pulicaria dysenterica* o  
 Creeping Cinquefoil *Potentilla repens* a  
 Creeping Thistle *Cirsium arvense* a  
Dewberry Rubus caesius o  
 Dog Rose *Rosa canina* d  
 Eyebright sp *Euphrasia* sp a

False Oat-Grass *Arrhenatherum elatius* f  
 Goat Willow *Salix caprea* a  
 Lesser Trefoil *Trifolium dubium* a  
 Perforate St John's Wort *Hypericum perforatum* f  
Red Bartsia Odonites vernus o  
 Red Fescue *Festuca rubra* a  
 Restharrow *Ononis repens* f  
 Tufted Vetch *Vicia cracca* a  
 Wild Parsnip *Pastinaca sativa* o  
 Wild Strawberry *Fragaria vesca* f  
 Wild Teasel *Dipsacus fullonum* d  
 Yarrow *Achillea millefolium* f

**[Ref.# 132] *B. sylvarum* 1 worker 11/08/2013**  
**Kenfig marshalling yards (SS7895483550)**

**Rough brownfield vegetation (avge ht: ~30cm)**

Annual Meadow-grass *Poa annua* lf  
 Black Medick *Medicago lupulina* o  
 Cock's-foot *Dactylis glomerata* o  
 Common Couch *Elytrigia repens* o  
 Common Fleabane *Pulicaria dysenterica* o  
 Common Reed *Phragmites australis* lf  
 Creeping Bent *Agrostis stolonifera* lf  
 Dewberry *Rubus caesius* f  
 False Oat-Grass *Arrhenatherum elatius* f  
 Field Horsetail *Equisetum arvense* o  
 Greater Plantain *Plantago major* lf

Lesser Bird's-claw Beard-moss *Barbula convoluta* var. *convoluta* o  
 Meadow Vetchling *Lathyrus pratensis* o  
 Parsnip *Pastinaca sativa* sens. lat. f  
Red Bartsia Odontites vernus f  
 Ribbed Melilot *Melilotus officinalis* la  
 Ribwort Plantain *Plantago lanceolata* f  
 Sand Sedge *Carex arenaria* lf  
 Scarlet Pimpernel *Anagallis arvensis* r  
 Silverweed *Potentilla anserina* f  
 Yorkshire-fog *Holcus lanatus* f

## KENFIG NATIONAL NATURE RESERVE

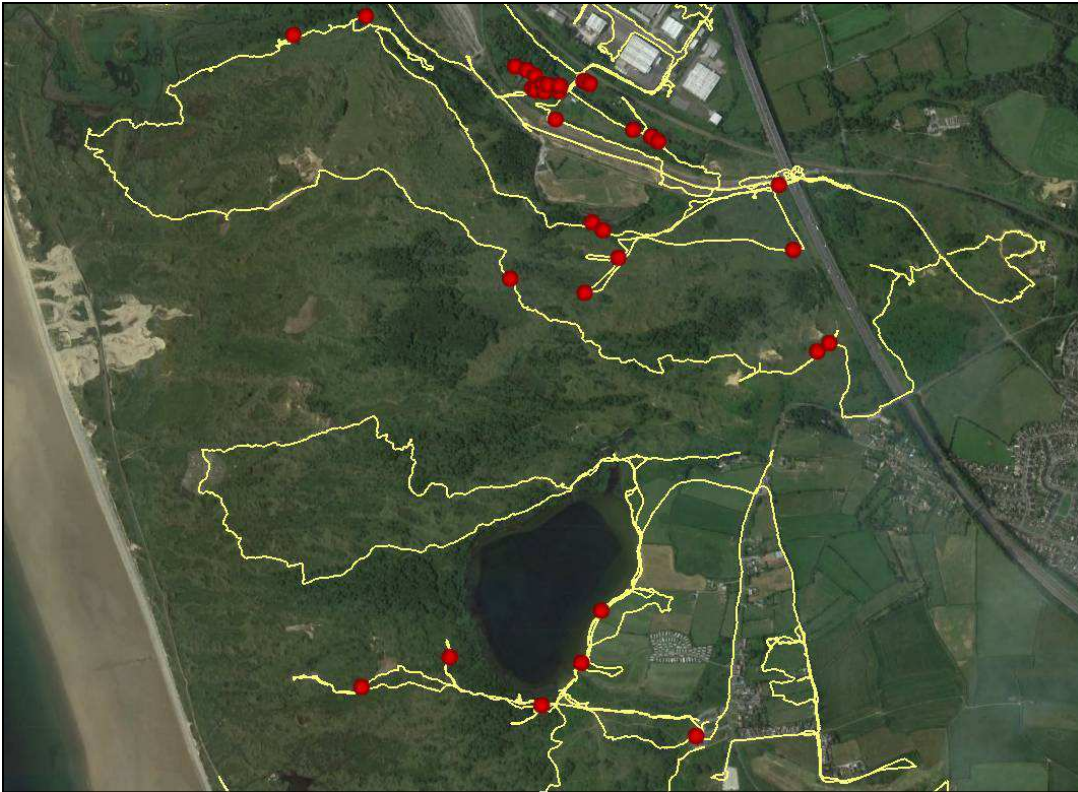


Figure 9: Survey transects (yellow lines) and observations of *B. sylvarum* (red dots) at Kenfig NNR and surrounds.

Kenfig dunes are designated as a SAC, SSSI, NNR and LNR. The site makes up part of the largest active sand dune system in Europe and supports a wide range of dune communities, the most important of which are the humid slacks which support Fen Orchid (*Liparis loeselii*). *B. sylvarum* is qualifying feature of Kenfig dunes SSSI. It is typically found at low abundance and has appeared across much of the reserve in the past, but was absent from the southern section of the reserve during 2013. The northern margins of the site and pool area were the main loci for the species in 2013, with a possible nest site discovered along the east pool shore by Max Whitby and Fiona Barclay on 19<sup>th</sup> July when 2-3 individuals were seen flying into a Bramble snag. Unfortunately, no bees were seen during follow up visits to the spot, suggesting the nest may have been abandoned. The day after the initial discovery MW & FB filmed 9+ *B. sylvarum* on Marsh Thistle (*Cirsium palustre*) and Greater Bird's-foot-trefoil (*Lotus pedunculatus*) along the pool edge fen/grassland/scrub mosaic to the west of the possible nest site. This was to be the highest concentration of *B. sylvarum* seen on the reserve in 2013. No *B. sylvarum* were found during three visits to this exact spot during the first 10 days of August.

Management of this extensive dune system has always been focussed on the Fen Orchid, with cutting and scraping being carried out within the key slacks. In recent years the focus has been on trying to restore dynamic processes and increased pioneer conditions in areas where the Fen Orchid has traditionally appeared. Resources have limited the amount of management carried out elsewhere on the

reserve and very low grazing levels have resulted in over-stabilisation, grasslands becoming rank and an increase in scrub cover. The results of the survey indicate that much of the reserve provides suboptimal foraging opportunities for *B. sylvarum*, and although the bee can be found across much of the reserve, large areas were virtually absent of any *Bombus* species during the survey period, as illustrated on the above plan, with blank transects running through the centre of the reserve, despite ideal survey conditions. Wet pasture adjacent to the east pool shore is grazed by horses and sheep and although a hay cut had been taken off part of this area shortly before the survey visit, there was sufficient vegetation left in patches to indicate this area could have very good forage potential for *B. sylvarum* if managed appropriately for the species. The fields to the east of Ton Kenfig had an abundance of Red Bartsia at the time of the survey and appeared to provide ideal forage for *B. sylvarum*, but only *B. pascuorum* was present in quantity. It is likely in years when the species is in greater abundance that will be a well used resource and its favourable management should be encouraged to continue.

**[Ref.# 32] *B. sylvarum* several individuals 06/08/2013**

**Kenfig NNR (SS7984581417)**

**Possible *B. sylvarum* nest site in Bramble snag on shore line (avge ht: ~150cm)**

Bittersweet <i>Solanum dulcamara</i> o	Meadow Buttercup <i>Ranunculus acris</i> o
Blackthorn <i>Prunus spinosa</i> o	Perennial Rye-grass <i>Lolium perenne</i> o
Bracken <i>Pteridium aquilinum</i> o	Red Clover <i>Trifolium pratense</i> o
Bramble <i>Rubus fruticosus</i> agg. f	Rusty Willow <i>Salix cinerea</i> subsp. <i>oleifolia</i> o
Cat's-ear <i>Hypochaeris radicata</i> o	Sand Sedge <i>Carex arenaria</i> o
Chalk Knapweed <i>Centaurea debauxii</i> o	Silverweed <i>Potentilla anserina</i> o
Common Bent <i>Agrostis capillaris</i> o	Soft-rush <i>Juncus effusus</i> lf
Gorse <i>Ulex europaeus</i> o	Sweet Vernal-grass <i>Anthoxanthum odoratum</i> o
Greater Bird's-foot-trefoil <i>Lotus pedunculatus</i> o	Yellow Iris <i>Iris pseudacorus</i> o
Gypsywort <i>Lycopus europaeus</i> o	Yellow Loosestrife <i>Lysimachia vulgaris</i> o
Hedge Bindweed <i>Calystegia sepium</i> o	Yorkshire-fog <i>Holcus lanatus</i> f
Hemlock Water-dropwort <i>Oenanthe crocata</i> o	
Jointed Rush <i>Juncus articulatus</i> o	

**[Ref.# 35] *B. sylvarum* 1 male 06/08/2013**

**Kenfig NNR (SS7937581291)**

**Rank species-rich yellow dune with encroaching scrub (avge ht: ~80cm)**

Carrot <i>Daucus carota</i> r	Red Clover <i>Trifolium pratense</i> o
<u>Chalk Knapweed <i>Centaurea debauxii</i> f</u>	Rough Hawkbit <i>Leontodon hispidus</i> f
Cock's-foot <i>Dactylis glomerata</i> f	Slender Rush <i>Juncus tenuis</i> o
Creeping Willow <i>Salix repens</i> o	Square-stalked St John's-wort <i>Hypericum tetrapterum</i> o
Crested Dog's-tail <i>Cynosurus cristatus</i> o	Sweet Vernal-grass <i>Anthoxanthum odoratum</i> o
Dandelion <i>Taraxacum</i> agg. o	White Clover <i>Trifolium repens</i> o
Dewberry <i>Rubus caesius</i> o	Wild Angelica <i>Angelica sylvestris</i> r
False Oat-Grass <i>Arrhenatherum elatius</i> f	Wild Basil <i>Clinopodium vulgare</i> o
Field Horsetail <i>Equisetum arvense</i> f	Wild Privet <i>Ligustrum vulgare</i> f
Greater Bird's-foot-trefoil <i>Lotus pedunculatus</i> o	Yellow-rattle <i>Rhinanthus minor</i> o
Hemp-agrimony <i>Eupatorium cannabinum</i> o	Yorkshire-fog <i>Holcus lanatus</i> f
Lesser Hawkbit <i>Leontodon saxatilis</i> o	Zigzag Clover <i>Trifolium medium</i> o
Lesser Trefoil <i>Trifolium dubium</i> o	
Quaking-grass <i>Briza media</i> r	

**[Ref.# 41] *B. sylvarum* 1 worker 06/08/2013**

**Kenfig NNR (SS7910081203)**

**Rank species-rich dune grassland on edge of managed slack (avge ht: ~50cm)**

Agrimony <i>Agrimonia eupatoria</i> r	Marsh Helleborine <i>Epipactis palustris</i> o
Blackthorn <i>Prunus spinosa</i> o	Marsh Pennywort <i>Hydrocotyle vulgaris</i> a
Burnet Rose <i>Rosa spinosissima</i> f	Marsh Thistle <i>Cirsium palustre</i> o
<b><u>Chalk Knapweed</u> <i>Centaurea debauxii</i> f</b>	Pointed Spear-moss <i>Calliergonella cuspidata</i> f
Common Fleabane <i>Pulicaria dysenterica</i> o	Quaking-grass <i>Briza media</i> o
Common Reed <i>Phragmites australis</i> r	Ribwort Plantain <i>Plantago lanceolata</i> o
Creeping Willow <i>Salix repens</i> f	Water Mint <i>Mentha aquatica</i> o
Dewberry <i>Rubus caesius</i> o	Wild Angelica <i>Angelica sylvestris</i> o
False Oat-Grass <i>Arrhenatherum elatius</i> o	Yellow-rattle <i>Rhinanthus minor</i> o
Field Horsetail <i>Equisetum arvense</i> f	Yorkshire-fog <i>Holcus lanatus</i> f
Honeysuckle <i>Lonicera periclymenum</i> r	

**[Ref.# 581] *B. sylvarum* 1 worker 28/08/2013**

**Kenfig NNR (SS8011781034)**

**Ruderal dune vegetation adjacent to visitor centre (avge ht: ~30cm)**

Annual Meadow-grass <i>Poa annua</i> f	Perennial Rye-grass <i>Lolium perenne</i> o
Cat's-ear <i>Hypochaeris radicata</i> o	Red Clover <i>Trifolium pratense</i> o
Common Ragwort <i>Senecio jacobaea</i> o	Ribwort Plantain <i>Plantago lanceolata</i> f
Dandelion <i>Taraxacum</i> agg. f	Sand Sedge <i>Carex arenaria</i> o
Dewberry <i>Rubus caesius</i> o	Smooth Hawk's-beard <i>Crepis capillaris</i> o
Greater Plantain <i>Plantago major</i> r	Wall Barley <i>Hordeum murinum</i> f
Hoary Mustard <i>Hirschfeldia incana</i> f	White Clover <i>Trifolium repens</i> o
Mugwort <i>Artemisia vulgaris</i> o	Yorkshire-fog <i>Holcus lanatus</i> o
<b><u>Musk Thistle</u> <i>Carduus nutans</i> r</b>	

**[Ref.# 707] *B. sylvarum* 1 worker 22/08/2013**

**Kenfig NNR (SS8057782236)**

**Rank fixed dune grassland/scrub mosaic (avge ht: ~30cm)**

Annual Meadow-grass <i>Poa annua</i> a	Knotgrass <i>Polygonum aviculare</i> a
Dandelion <i>Taraxacum</i> agg. a	Perennial Rye-grass <i>Lolium perenne</i> f
Dewberry <i>Rubus caesius</i> o	<b><u>Red Bartsia</u> <i>Odontites vernus</i> o</b>
False Oat-Grass <i>Arrhenatherum elatius</i> f	Red Fescue <i>Festuca rubra</i> a
Fool's Parsley <i>Aethusa cynapium</i> f	Ribwort Plantain <i>Plantago lanceolata</i> f
Hoary Plantain <i>Plantago media</i> a	Rough Hawkbit <i>Leontodon hispidus</i> f
Hogweed <i>Heracleum sphondylium</i> a	Smooth Hawk's-beard <i>Crepis capillaris</i> f

**[Ref.# 708] *B. sylvarum* 1 worker 22/08/2013**

**Kenfig NNR (SS8053082201)**

**Rank fixed dune grassland/scrub mosaic (avge ht: ~30cm)**

Agrimony <i>Agrimonia eupatoria</i> f	Dewberry <i>Rubus caesius</i> o
Annual Meadow-grass <i>Poa annua</i> a	Fool's Parsley <i>Aethusa cynapium</i> f
Bulbous Buttercup <i>Ranunculus bulbosus</i> a	Meadow Buttercup <i>Ranunculus acris</i> f
Cock's-foot <i>Dactylis glomerata</i> f	Perennial Rye-grass <i>Lolium perenne</i> f
Common Sorrel <i>Rumex acetosa</i> o	Pignut <i>Conopodium majus</i> a
Creeping Cinquefoil <i>Potentilla repens</i> a	<b><u>Red Bartsia</u> <i>Odontites vernus</i> o</b>
Creeping Thistle <i>Cirsium arvense</i> f	Red Fescue <i>Festuca rubra</i> f
Dandelion <i>Taraxacum</i> agg. a	

**Ref.# 714] *B. sylvarum* 1 worker 22/08/2013****Kenfig NNR (SS7958682460)****Rank fixed dune grassland/scrub mosaic (avge ht: ~20cm)**

Agrimony *Agrimonia eupatoria* a  
 Burnet Rose *Rosa spinosissima* o  
 Common Bird's-foot-trefoil *Lotus corniculatus* a  
 Common Ragwort *Senecio jacobaea* d  
 Creeping Willow *Salix repens* o  
 Crosswort *Cruciata laevipes* a  
 False Oat-Grass *Arrhenatherum elatius* a  
 Lesser Trefoil *Trifolium dubium* a  
 Marram *Ammophila arenaria* a  
 Quaking-grass *Briza media* a

**Red Bartsia *Odontites vernus*** o  
 Red Clover *Trifolium pratense* a  
 Red Fescue *Festuca rubra* a  
 Restharrow *Ononis repens* f  
 Ribwort Plantain *Plantago lanceolata* f  
 Smooth Hawk's-beard *Crepis capillaris* a  
 Sweet Vernal-grass *Anthoxanthum odoratum* a  
 Thyme-leaved Sandwort *Arenaria serpyllifolia* a  
 Yellow-rattle *Rhinanthus minor* f

**[Ref.# 727-8] *B. sylvarum* 1 worker 22/08/2013****Kenfig NNR (SS7891283248)****Rank dune vegetation bordering fen/scrub (avge ht: ~40cm)**

**Common Bird's-foot-trefoil *Lotus corniculatus*** f  
 Common Fleabane *Pulicaria dysenterica* f  
 Creeping Cinquefoil *Potentilla repens* a  
 Creeping Willow *Salix repens* a  
 Dandelion *Taraxacum agg.* d  
 Dewberry *Rubus caesius* a  
 False Oat-Grass *Arrhenatherum elatius* a  
 Field Horsetail *Equisetum arvense* f  
 Fool's Parsley *Aethusa cynapium* a  
 Great Willowherb *Epilobium hirsutum* d

Jointed Rush *Juncus articulatus* o  
 Jointed Rush *Juncus articulatus* f  
 Meadow Buttercup *Ranunculus acris* a  
 Meadowsweet *Filipendula ulmaria* a  
**Red Bartsia *Odontites vernus*** o  
 Red Clover *Trifolium pratense* a  
 Ribwort Plantain *Plantago lanceolata* f  
 Sweet Vernal-grass *Anthoxanthum odoratum* a  
 Yorkshire-fog *Holcus lanatus* a

**[Ref.# 733] *B. sylvarum* 1 worker 22/08/2013****Kenfig NNR (SS7914283303)****Rank dune vegetation with encroaching trees/scrub (avge ht: ~30cm)**

Agrimony *Agrimonia eupatoria* a  
 Annual Meadow-grass *Poa annua* a  
 Clustered Dock *Rumex conglomeratus* d  
 Common Fleabane *Pulicaria dysenterica* f  
 Common Sorrel *Rumex acetosa* a  
 Creeping Thistle *Cirsium arvense* f  
 Creeping Willow *Salix repens* a  
 Dewberry *Rubus caesius* f  
 Field Horsetail *Equisetum arvense* a

Great Willowherb *Epilobium hirsutum* a  
 Jointed Rush *Juncus articulatus* f  
 Meadow Buttercup *Ranunculus acris* a  
 Perennial Rye-grass *Lolium perenne* a  
**Red Bartsia *Odontites vernus*** o  
 Red Clover *Trifolium pratense* f  
 Sweet Vernal-grass *Anthoxanthum odoratum* a  
 Tufted Vetch *Vicia cracca* a  
 Yorkshire-fog *Holcus lanatus* a

**[Ref.# 739] *B. sylvarum* 1 worker 22/08/2013****Kenfig NNR (SS7988182602)****Rank dune vegetation bordering fen/scrub/river (avge ht: ~20cm)**

Bulbous Buttercup *Ranunculus bulbosus* f  
 Clustered Dock *Rumex conglomeratus* d  
 Cock's-foot *Dactylis glomerata* a  
 Evening-primrose *Oenothera x fallax* a  
 Common Sorrel *Rumex acetosa* a  
 Creeping Willow *Salix repens* a  
 Dewberry *Rubus caesius* a  
 False Oat-Grass *Arrhenatherum elatius* a  
 Greater Plantain *Plantago major* a

Jointed Rush *Juncus articulatus* f  
 Marsh Woundwort *Stachys palustris* a  
 Meadow Buttercup *Ranunculus acris* a  
 Meadowsweet *Filipendula ulmaria* a  
**Red Bartsia *Odontites vernus*** o  
 Red Clover *Trifolium pratense* f  
 Ribwort Plantain *Plantago lanceolata* a  
 Silverweed *Potentilla anserina* o

Sweet Vernal-grass *Anthoxanthum odoratum*  
a

Tufted Vetch *Vicia cracca* a  
Yorkshire-fog *Holcus lanatus* a

## MOOR LANE, NOTTAGE



Figure 10: Survey transects (yellow lines) and observations of *B. sylvarum* (red dots) at the southern end of Kenfig NNR and in surrounding areas.

The only site where *B. sylvarum* was recorded to the south of Kenfig NNR was a relatively small brownfield site that had a variable and diverse sward with several good patches of Red Bartsia, where two workers were noted on 16<sup>th</sup> August, though a follow up visit failed to find any further bees.

There is no active management of this undesignated site, part of which has had a planning application submitted (development unknown). A number of additional fields in this area provide good foraging for bees, such as the field with abundant Chalk Knapweed (*Centaurea debauxii*) to the south which had excellent numbers of *B. lapidarius* along with smaller numbers of other species utilising the resource. As with the Ton Kenfig fields, it is possible that in those years when *B. sylvarum* is present in greater abundance, these flower-rich pastures will be an important resource, enabling the metapopulation to expand and spread more effectively.

### Ref.# 384] *B. sylvarum* 2 workers 16/08/2013

#### Moor Lane, Nottage (SS8164279176)

#### Ruderal vegetation with coarse grasses on disturbed ground (avge. ht: ~20cm)

Bilbao's Fleabane *Conyza floribunda* f  
Bristly Oxtongue *Helminthotheca echioides* r  
Butterfly-bush *Buddleja davidii* r  
Chalk Knapweed *Centaurea debauxii* o  
Cock's-foot *Dactylis glomerata* o  
Common Bird's-foot-trefoil *Lotus corniculatus* f

Common Fleabane *Pulicaria dysenterica* o  
Common Ragwort *Senecio jacobaea* o  
Creeping Bent *Agrostis stolonifera* a  
Creeping Thistle *Cirsium arvense* o  
Hedgerow Crane's-bill *Geranium pyrenaicum* r  
Lesser Trefoil *Trifolium dubium* o

Perforate St John's-wort *Hypericum perforatum* o  
**Red Bartsia** *Odontites vernus* a  
 Red Clover *Trifolium pratense* f

Ribwort Plantain *Plantago lanceolata* o  
 Spear Thistle *Cirsium vulgare* o  
 White Clover *Trifolium repens* f  
 Wild Teasel *Dipsacus fullonum* r

## 6. Discussion

The study provides the first methodical baseline survey of *B. sylvarum* across the coastal plain and inland lowland sections of Glamorgan, covering the unitary authorities of Neath Port Talbot, Bridgend and the western fringe of the Vale of Glamorgan. The core of the population was found to be centred along northern margin of Kenfig NNR and Morfa-bach fields which lie between the reserve and Kenfig Industrial Estate. Elsewhere the distribution was rather sporadic with no more than single figures recorded in five general areas; Baglan Moors, Port Talbot Docks, Margam Moors, Kenfig NNR and Moor Lane. The observations at Baglan and Port Talbot extended the known range to the north by approximately 8km, although only a small increase of 1.5 km to the south-east near Nottage was detected. Failure to find the species at Parc Slip indicates a reduction in eastern range by 7 km; however, this population is remote from the core area making it more likely to be subject to periodic colonisation/extinction events. Whilst there appears to be good potential for the Glamorgan population to expand both east and west along the coastal plain during favourable seasons, the results of the study together with the lack of historical records from well-worked sites such as Crymlyn Burrows SSSI and Merthyr Mawr SSSI suggest there may be limiting factors that prevent *B. sylvarum* from colonising these sites.

A comparison with studies in Gwent shows the Glamorgan population occupies a similar area of land, but far fewer individuals are supported in the population. For example the best Glamorgan site in 2013 was the area of small fields at Morfa-bach, with a maximum single count of 30; this compares with 174 individuals that were seen at the Newport Wetlands NNR in 2009 (Smith, 2010) and low hundreds recorded at Peterstone, Goldcliff wetland reserve, Dyffryn and Redwick (Pavett, 2004). It is likely the reasons for these differences are complex, but two key factors that help explain these discrepancies are the general lack of extensive areas with suitable of bumblebee forage and the fragmented nature of many sites away from the core of the population. Another key factor on the Levels is the availability of (large areas of) forage throughout the spring/summer with abundant thistles and other ruderals towards the end of the summer.

On the Gwent Levels 31 species of plant have been identified as forage species of *B. sylvarum*, with those of greatest importance including Red Bartsia, Red Clover, Common Bird's-foot Trefoil, Common Knapweed agg. and Viper's Bugloss (Smith, 2010). In Glamorgan, *B. sylvarum* was observed to visit 14 species of flowering plant during the current survey, with key species accounting for the bulk of observations including, in descending order of importance: Red Bartsia, Greater Bird's-foot-trefoil, Marsh Thistle, Common Knapweed species and Viper's Bugloss. From this list, Red Bartsia make up 57% of all observations, this being remarkable given the wide range of other plants available at many sites. Whilst being widespread and found at many sites, good stands of Red Bartsia were generally only locally frequent, but invariably



it was on these patches that *B. sylvarum* was found. This is in contrast to the Gwent Levels where Pavett (2004) recorded Creeping Thistle (*Cirsium arvense*) as an important forage plant at the end of the summer, generally an infrequently noted species during the current survey, the best stands being noted on Margam Moors, in areas where *B. sylvarum* was not recorded. Creeping Thistle was locally frequent in the northern part of Kenfig dunes in areas where *B. sylvarum* was noted visiting Red Bartsia and appeared to be ignored, indicating Creeping Thistle is less preferred where both species are present. Smith (2010) found Narrow-leaved Everlasting-pea (*Lathyrus sylvestris*) accounted for 25% of all *B. sylvarum* workers seen during the survey, and also found that 10% of *B. sylvarum* workers and almost 50% of males noted were recorded visiting Sunflower (*Helianthus annua*). Neither of these species was found during the current survey, but these observations demonstrate *B. sylvarum* exhibits a level of adaptability to the available resources and also that the provision of sacrificial crops for birds may provide a means of assisting with any conservation programmes or mitigation schemes for this species. The studies in South Wales alone show the species is not dependent on any one particular species of forage plant, but more importantly it requires good stands of a selection of key forage species to be available from April/May through to mid-September.

## 7. Recommendations

The metapopulation of *B. sylvarum* in the Kenfig area is recognised as being of national importance, and the species is a qualifying feature on both Kenfig SSSI and Margam Moors SSSI. This survey has shown that the core of the metapopulation in 2013 was focussed on land outside the SSSI envelope at Morfa-bach, which has no level of protection. It will automatically qualify as a cSINC using Neath Port Talbot SINC criteria but consideration should be given to elevating the designation status of this valuable parcel of land, especially as a change in land use could see a rapid decline in habitat condition at this site. Consideration should therefore be given to extending the SSSI boundaries to include Morfa-bach in order to safeguard the metapopulation, especially as away from this area the number of bees encountered was very low.

The small population present on Margam Moors SSSI may benefit if the management of the site was altered to encourage more late-flowering forage. The fields along the western and southern margins of the site are most suited for the development of flower-rich headlands and the relaxing of late summer grazing.

A number of areas of potentially suitable habitat were not included within the survey, primarily due to access restrictions, most notably the former BP site at Baglan and areas within the TATA steel works. Future surveys covering these areas will help clarify the status of *B. sylvarum* at a county level.

The species occurs sporadically across a sizeable area of undesignated developed and brownfield land, including verges to the north of the core area. Whilst ongoing redevelopment may to some degree provide short-term gains the future of *B. sylvarum* is insecure and opportunities should be sought to provide a longer term strategy to maintain and/or enhance the habitats in these areas. Verge and green space management is a determining factor that could prove beneficial, should

appropriate measures be applied. Raising awareness and liaising with landowners to secure sensitive cutting regimes would be one such way of increasing the availability of forage at a level that could have a beneficial impact. Additional benefits could be gained by establishing wildflower seed mixes at strategic locations, ensuring that a selection of key plant species providing forage from April to September are incorporated within any schemes.

## 8. Acknowledgements

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## 9. References

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Table 2: Counts of bumblebee visits to flowering plants recorded during the survey period (sorted in order of most frequent individual visits).

Species	<i>B. barbutellus</i>	<i>B. bohemicus</i>	<i>B. campestris</i>	<i>B. hortorum</i>	<i>B. humilis</i>	<i>B. hypnorum</i>	<i>B. jonellus</i>	<i>B. lapidarius</i>	<i>B. lucorum</i>	<i>B. muscorum</i>	<i>B. pascuorum</i>	<i>B. pratorum</i>	<i>B. ruderarius</i>	<i>B. sylvarum</i>	<i>B. sylvestris</i>	<i>B. terrestris</i>	<i>B. vestalis</i>	# species	# individuals
# flower species visited =	3	2	3	13	22	1	2	55	19	5	42	8	8	14	3	49	2		
Red Bartsia <i>Odontites vernus</i>					10			19	10	2	270	13		65		44		8	433
Knapweed <i>Centaurea nigra</i> agg.			1	3	11		5	202	6		26		8	2		20		10	294
Viper's Bugloss <i>Echium vulgare</i>	2		6	5	14			18	2	2	97	3		2	2	19		12	184
Rosebay Willowherb <i>Chamerion angustifolium</i>								70	12	2	4				1	64		6	153
Sea-heath <i>Frankenia laevis</i>								76	2							51		3	129
Butterfly-bush <i>Buddleja davidii</i>				1	2			12	3	1	3					85		7	107
Bramble <i>Rubus fruticosus</i> agg.				5		2		8	3		12	1		1		26	1	9	68
Great Willowherb <i>Epilobium hirsutum</i>					1			29			3		15	1		11		6	66
Indian Balsam <i>Impatiens glandulifera</i>				3	6			15	9		29			1				6	63
Tufted Vetch <i>Vicia cracca</i>					5						27		1					3	33
Musk Thistle <i>Carduus nutans</i>	2							10			5			1	1	3		6	28
Betony <i>Betonica officinalis</i>				1	2			3			10					11		5	27
Creeping Thistle <i>Cirsium arvense</i>			2					15			2					7		4	26
Garden Lavender <i>Lavandula x intermedia</i>					1			8	3		2					12		5	26
Red Clover <i>Trifolium pratense</i>	1			3	7			1			13			1				6	26
Western Gorse <i>Ulex gallii</i>											14					11		2	25
Hoary Mustard <i>Hirschfeldia incana</i>								19			2		1			2		4	24
Soapwort <i>Saponaria officinalis</i>								1								23		2	24
Devil's-bit Scabious <i>Succisia pratensis</i>					2			7	4		5		1			4		6	23
Marsh Woundwort <i>Stachys palustris</i>				1				7			11					1		4	20
Common Bird's-foot Trefoil <i>Lotus corniculatus</i>					3			5			10			1				4	19
Ribbed Melilot <i>Melilotus officinalis</i>					1			13	1		1		1			2		6	19
Water-mint <i>Mentha aquatica</i>		1			1			4	3		5	2				3		7	19
Tall Melilot <i>Melilotus altissimus</i>								3	1			1				13		4	18

Dewberry <i>Rubus caesius</i>						6			6					6		3	18
Common Toadflax <i>Linaria vulgaris</i>			2	1		1			3					9		5	16
Hemp-agrimony <i>Eupatorium cannabinum</i>							6							9		2	15
Sea Holly <i>Eryngium maritimum</i>						1								13		2	14
Wild Basil <i>Clinopodium vulgare</i>			1	3					10							3	14
Marsh Thistle <i>Cirsium palustre</i>						2						10				2	12
Greater Bird's-foot Trefoil <i>Lotus pedunculatus</i>												11				1	11
Rough Hawkbit <i>Leontodon hispidus</i>						5			1					3		3	9
Purple Loosestrife <i>Lythrum salicaria</i>				8								1				2	9
Heather <i>Calluna vulgaris</i>						2	1		1					4		4	8
Carlina Thistle <i>Carlina vulgaris</i>						4			3					1		3	8
Hawkweed Oxtongue <i>Picris hieracioides</i>						3	1		2					2		4	8
Sea Rocket <i>Cackile maritima</i>						1								6		2	7
Wallflower Cabbage <i>Coincya monensis ssp cheiranthos</i>						5			1					1		3	7
Wild Marjoram <i>Origanum vulgare</i>						2	1							2	2	4	7
Fleabane <i>Pulicaria dysenterica</i>						6					1					2	7
Spear Thistle <i>Cirsium vulgare</i>						1			1			2		2		4	6
Lesser Hawkbit <i>Leontodon saxatilis</i>				2		2			2							3	6
Autumn Hawkbit <i>Scorzoneroides autumnalis</i>						4								2		2	6
Common Ragwort <i>Senecio jacobaea</i>						6										1	6
Smooth Sow-thistle <i>Sonchus oleraceus</i>														6		1	6
Orange-peel Clematis <i>Clematis tangutica</i>				4										1		2	5
Traveller's-joy <i>Clematis vitalba</i>									1					4		2	5
Zig-zag Clover <i>Trifolium medium</i>			1			1								3		3	5
Woolly Thistle <i>Cirsium eriophorum</i>						2								2		2	4
Sunflower <i>Helianthus annuus</i>						3								1		2	4
Butterfly Stonecrop <i>Sedum spectabile</i>														4		1	4
Greater Knapweed <i>Centaurea scabiosa</i>						2			1							2	3
Rough Hawk's-beard <i>Crepis biennis</i>						1								2		2	3
White Melilot <i>Melilotus albus</i>			1			1				1						3	3

Alsike Clover <i>Trifolium hybridum</i>											1				2		2	3
White Clover <i>Trifolium repens</i>											2		1				2	3
Vervain <i>Verbena officinalis</i>									1		2						2	3
Common Calamint <i>Clinopodium ascendens</i>						1					1						2	2
Hedge Bindweed <i>Calystegia sepium</i>						1			1								2	2
Field bindweed <i>Convolvulus arvensis</i>															2		1	2
Bell Heather <i>Erica cinerea</i>						2											1	2
Herb-Robert <i>Geranium robertianum</i>									1				1				2	2
Pale Toadflax <i>Linaria repens</i>									1		1						2	2
Hybrid Evening-primrose <i>Oenanthex fallax</i>											2						1	2
Goldenrod <i>Solidago virgaurea</i>									1	1							2	2
Wild Thyme <i>Thymus polytrichus</i>									1	1							2	2
Large Bindweed <i>Calystegia silvatica</i>																	1	1
Small Toadflax <i>Chaenorhinum minus</i>											1						1	1
Teasel <i>Dipsacus fullonum</i>									1								1	1
Broad-leaved Willowherb <i>Epilobium montanum</i>									1								1	1
Fuchsia <i>Fuchsia magellanica</i>																	1	1
Hedgerow Crane's-bill <i>Geranium pyrenaicum</i>											1						1	1
Hogweed <i>Heracleum sphondylium</i>																	1	1
Cat's-ear <i>Hypochaeris radicata</i>									1								1	1
Meadow Vetchling <i>Lathyrus pratensis</i>											1						1	1
Apple-mint <i>Mentha x villosa</i>																	1	1
Restharrow <i>Ononis repens</i>											1						1	1
Selfheal <i>Prunella vulgaris</i>																	1	1
Creeping Thistle <i>Ranunculus repens</i>											1						1	1
Sea Radish <i>Raphanus maritimus</i> ssp. <i>maritimus</i>											1						1	1
Japanese Rose <i>Rosa rugosa</i>																	1	1
Crown Vetch <i>Securigera varia</i>											1						1	1
Marsh Ragwort <i>Senecio aquatilis</i>																	1	1
Charlock <i>Sinapis arvensis</i>											1						1	1

Canadian Goldenrod <i>Solidago canadensis</i>									1										1	1	
Great Mullein <i>Verbascum thapsus</i>																			1	1	1

## 10. Appendices

### 10.1. Appendix I : 2013 survey observations of all *Bombus* species.

Obs.#	Date	Species	Cast	#	Flower visited	OSGR	Site	Management	Obs.
1	01/08/2013	<i>sylvestris</i>	u	1	<i>Echium vulgare</i>	SS8013281048	Kenfig NNR	none	BS
2	01/08/2013	<i>lapidarius</i>	w	1	<i>Hirschfeldia incana</i>	SS8013281048	Kenfig NNR	none	BS
3	01/08/2013	<i>lapidarius</i>	w	1	<i>Hirschfeldia incana</i>	SS8006981084	Kenfig NNR	none	BS
4	01/08/2013	<i>ruderarius</i>	w	1	<i>Hirschfeldia incana</i>	SS7994181108	Kenfig NNR	none	BS
5	01/08/2013	<i>lapidarius</i>	w	1	<i>Rubus fruticosus</i> agg.	SS7991081109	Kenfig NNR	none	BS
6	01/08/2013	<i>ruderarius</i>	w	1	<i>Vicia cracca</i>	SS7979981142	Kenfig NNR	none	BS
7	01/08/2013	<i>humilis</i>	u	1	<i>Vicia cracca</i>	SS7979981142	Kenfig NNR	none	BS
8	01/08/2013	<i>humilis</i>	u	1	<i>Trifolium pratense</i>	SS7976581207	Kenfig NNR	none	BS
9	01/08/2013	<i>terrestris</i>	u	1	NEST	SS7976081211	Kenfig NNR	none	BS
10	01/08/2013	<i>terrestris</i>	u	1	<i>Rubus fruticosus</i> agg.	SS7987481437	Kenfig NNR	horse grazing	BS
11	01/08/2013	<i>Apis mellifera</i>	u	1	<i>Rubus fruticosus</i> agg.	SS7987481437	Kenfig NNR	horse grazing	BS
12	01/08/2013	<i>Apis mellifera</i>	u	50	<i>Trifolium hybridum</i>	SS8001081470	Kenfig NNR	none	BS
13	01/08/2013	<i>Terrestris</i>	u	2	<i>Trifolium hybridum</i>	SS8001081470	Kenfig NNR	none	BS
14	01/08/2013	<i>Terrestris</i>	u	1	<i>Rubus fruticosus</i> agg.	SS7973481816	Kenfig NNR	none	BS
15	01/08/2013	<i>Pascuorum</i>	w	2	<i>Echium vulgare</i>	SS7901682004	Kenfig NNR	none	BS
16	01/08/2013	<i>Terrestris</i>	u	1	<i>Trifolium medium</i>	SS7867881940	Kenfig NNR	none	BS
17	01/08/2013	<i>Terrestris</i>	u	1	<i>Trifolium medium</i>	SS7958381722	Kenfig NNR	none	BS
18	01/08/2013	<i>Terrestris</i>	u	1	<i>Trifolium medium</i>	SS7962281734	Kenfig NNR	none	BS
19	01/08/2013	<i>Hortorum</i>	w	1	<i>Trifolium medium</i>	SS8002581468	Kenfig NNR	none	BS
20	01/08/2013	<i>Hortorum</i>	w	1	<i>Trifolium pratense</i>	SS8006681457	Kenfig NNR	moderately grazed	BS
21	01/08/2013	<i>cf. lapidarius</i>	u	1	<i>Trifolium pratense</i>	SS7990281364	Kenfig NNR	cut for hay	BS
22	01/08/2013	<i>Humilis</i>	u	1	<i>Trifolium pratense</i>	SS7980581262	Kenfig NNR	margins cut for hay	BS
23	01/08/2013	<i>Hortorum</i>	w	1	<i>Trifolium pratense</i>	SS7976681223	Kenfig NNR	none	BS
24	01/08/2013	<i>Pascuorum</i>	w	1	<i>Trifolium pratense</i>	SS7976681223	Kenfig NNR	none	BS

25	06/08/2013	<i>Ruderarius</i>	m	3	<i>Epilobium hirsutum</i>	SS7997081583	Kenfig NNR	hay cut with horse grazing	BS
26	06/08/2013	<i>Ruderarius</i>	w	1	<i>Epilobium hirsutum</i>	SS7997081583	Kenfig NNR	hay cut with horse grazing	BS
27	06/08/2013	<i>Pascuorum</i>	w	1	<i>Epilobium hirsutum</i>	SS7997081583	Kenfig NNR	hay cut with horse grazing	BS
28	06/08/2013	<i>Ruderarius</i>	m	1	<i>Epilobium hirsutum</i>	SS7996881552	Kenfig NNR	hay cut with horse grazing	BS
29	06/08/2013	<i>Terrestris</i>	u	1	<i>Epilobium hirsutum</i>	SS7996081538	Kenfig NNR	hay cut with horse grazing	BS
30	06/08/2013	<i>Terrestris</i>	u	1	<i>Epilobium hirsutum</i>	SS7995081507	Kenfig NNR	hay cut with horse grazing	BS
31	06/08/2013	<i>Terrestris</i>	u	1	<i>Senecio aquatilis</i>	SS7993481470	Kenfig NNR	hay cut with horse grazing	BS
32	19/07/2013	<b>Sylvarum</b>	nest?	1	poolside scrub	SS7984581417	Kenfig NNR	hay cut with horse grazing	MW,FB
33	19/07/2013	<b>sylvarum</b>	q	1	<i>Cirsium palustre</i>	SS7978681256	Kenfig NNR	partial hay cut	MW,FB
33	19/07/2013	<b>sylvarum</b>	q	1	<i>Lotus pedunculatus</i>	SS7978681256	Kenfig NNR	partial hay cut	MW,FB
34	20/07/2013	<b>sylvarum</b>	w	9	<i>Cirsium palustre</i>	SS7978681256	Kenfig NNR	partial hay cut	MW,FB
34	20/07/2013	<b>sylvarum</b>	w	9	<i>Lotus pedunculatus</i>	SS7978681256	Kenfig NNR	partial hay cut	MW,FB
35	06/08/2013	<b>sylvarum</b>	m	1	<i>Centaurea debeauxii</i>	SS7937581291	Kenfig NNR	none	BS,DGC
36	06/08/2013	<i>humilis</i>	u	6	<i>Centaurea debeauxii</i>	SS7937581291	Kenfig NNR	none	BS,DGC
37	06/08/2013	<i>runderarius</i>	m	5	<i>Centaurea debeauxii</i>	SS7937581291	Kenfig NNR	none	BS,DGC
38	06/08/2013	<i>runderarius</i>	w	3	<i>Centaurea debeauxii</i>	SS7937581291	Kenfig NNR	none	BS,DGC
39	06/08/2013	<i>terrestris</i>	u	6	<i>Centaurea debeauxii</i>	SS7937581291	Kenfig NNR	none	BS,DGC
40	06/08/2013	<i>pascuorum</i>	w	4	<i>Centaurea debeauxii</i>	SS7937581291	Kenfig NNR	none	BS,DGC
41	06/08/2013	<b>sylvarum</b>	w	1	<i>Centaurea debeauxii</i>	SS7910081203	Kenfig NNR	managed slack	BS,DGC
42	06/08/2013	<i>lapidarius</i>	m	1	<i>Epilobium hirsutum</i>	SS8061482733	Kenfig NNR (ne)		BS
43	06/08/2013	<i>lapidarius</i>	w	3	<i>Epilobium hirsutum</i>	SS8061482733	Kenfig NNR (ne)		BS
44	06/08/2013	<i>runderarius</i>	m	8	<i>Epilobium hirsutum</i>	SS8061482733	Kenfig NNR (ne)		BS
45	06/08/2013	<i>runderarius</i>	w	2	<i>Epilobium hirsutum</i>	SS8061482733	Kenfig NNR (ne)		BS
46	06/08/2013	<i>terrestris</i>	u	1	<i>Echium vulgare</i>	SS8050182770	Kenfig NNR (ne)		BS
47	06/08/2013	<i>pascuorum</i>	w	1	<i>Echium vulgare</i>	SS8050182770	Kenfig NNR (ne)		BS
48	06/08/2013	<i>terrestris</i>	u	2	<i>Rubus fruticosus agg.</i>	SS8043282758	Kenfig NNR (ne)		BS
49	06/08/2013	<i>lapidarius</i>	w	1	<i>Hirschfeldia incana</i>	SS8043282758	Kenfig NNR (ne)		BS
50	08/08/2013	<i>lapidarius</i>	w	16	<i>Frankenia laevis</i>	SS870762	Ogmore Estuary		BS
51	08/08/2013	<i>lapidarius</i>	m	1	<i>Frankenia laevis</i>	SS870762	Ogmore Estuary		BS
52	08/08/2013	cf. <i>lucorum</i>	w	2	<i>Frankenia laevis</i>	SS870762	Ogmore Estuary		BS
53	08/08/2013	<i>terrestris</i>	u	4	<i>Frankenia laevis</i>	SS870762	Ogmore Estuary		BS
54	08/08/2013	<i>terrestris</i>	u	2	<i>Frankenia laevis</i>	SS869763	Ogmore Estuary		BS
55	08/08/2013	<i>lapidarius</i>	w	3	<i>Frankenia laevis</i>	SS869763	Ogmore Estuary		BS
56	08/08/2013	<i>terrestris</i>	u	12	<i>Saponaria officinalis</i>	SS869763	Ogmore Estuary		BS

57	08/08/2013	<i>lapidarius</i>	w	1	<i>Saponaria officinalis</i>	SS869763	Ogmore Estuary	BS
58	08/08/2013	<i>lapidarius</i>	w	2	<i>Echium vulgare</i>	SS869763	Ogmore Estuary	BS
59	08/08/2013	<i>lapidarius</i>	w	2	<i>Echium vulgare</i>	SS869763	Ogmore Estuary	BS
60	08/08/2013	<i>humilis</i>	u	2	<i>Echium vulgare</i>	SS869763	Ogmore Estuary	BS
61	08/08/2013	<i>lapidarius</i>	w	12	<i>Frankenia laevis</i>	SS870763	Ogmore Estuary	BS
62	08/08/2013	<i>terrestris</i>	u	9	<i>Frankenia laevis</i>	SS870763	Ogmore Estuary	BS
63	08/08/2013	<i>terrestris</i>	u	4	<i>Saponaria officinalis</i>	SS870763	Ogmore Estuary	BS
64	08/08/2013	<i>lapidarius</i>	w	13	<i>Frankenia laevis</i>	SS870764	Ogmore Estuary	BS
65	08/08/2013	<i>terrestris</i>	u	1	<i>Frankenia laevis</i>	SS868763	Ogmore Estuary	BS
66	08/08/2013	<i>terrestris</i>	u	1	<i>Echium vulgare</i>	SS868763	Ogmore Estuary	BS
67	08/08/2013	<i>sylvestris</i>	u	1	<i>Echium vulgare</i>	SS868763	Ogmore Estuary	BS
68	08/08/2013	<i>pascurorum</i>	w	1	<i>Echium vulgare</i>	SS868763	Ogmore Estuary	BS
69	08/08/2013	<i>muscorum</i>	u	1	<i>Echium vulgare</i>	SS868763	Ogmore Estuary	BS
70	08/08/2013	<i>lapidarius</i>	w	16	<i>Frankenia laevis</i>	SS865761	Ogmore Estuary	BS
71	08/08/2013	<i>lapidarius</i>	m	5	<i>Frankenia laevis</i>	SS865761	Ogmore Estuary	BS
72	08/08/2013	<i>terrestris</i>	u	23	<i>Frankenia laevis</i>	SS865761	Ogmore Estuary	BS
73	08/08/2013	<i>lapidarius</i>	w	1	<i>Cackile maritima</i>	SS864761	Ogmore Estuary	BS
74	08/08/2013	<i>terrestris</i>	u	6	<i>Cackile maritima</i>	SS864761	Ogmore Estuary	BS
75	08/08/2013	<i>lapidarius</i>	w	6	<i>Frankenia laevis</i>	SS862760	Ogmore Estuary	BS
76	08/08/2013	<i>lapidarius</i>	m	4	<i>Frankenia laevis</i>	SS862760	Ogmore Estuary	BS
77	08/08/2013	<i>terrestris</i>	u	11	<i>Frankenia laevis</i>	SS862760	Ogmore Estuary	BS
78	08/08/2013	<i>terrestris</i>	u	1	<i>Senecio jacobaea</i>	SS861759	Ogmore Estuary	BS
79	08/08/2013	<i>terrestris</i>	u	1	<i>Rubus caesius</i>	SS861760	Ogmore Estuary	BS
80	08/08/2013	<i>terrestris</i>	u	1	<i>Clematis vitalba</i>	SS861760	Ogmore Estuary	BS
81	08/08/2013	<i>terrestris</i>	u	3	<i>Clematis vitalba</i>	SS861761	Ogmore Estuary	BS
82	08/08/2013	<i>terrestris</i>	u	12	<i>Chamerion angustifolium</i>	SS861761	Ogmore Estuary	BS
83	08/08/2013	<i>lapidarius</i>	w	3	<i>Chamerion angustifolium</i>	SS861761	Ogmore Estuary	BS
84	08/08/2013	<i>lapidarius</i>	m	4	<i>Chamerion angustifolium</i>	SS861761	Ogmore Estuary	BS
85	08/08/2013	<i>lapidarius</i>	w	1	<i>Rubus caesius</i>	SS860762	Ogmore Estuary	BS
86	08/08/2013	<i>terrestris</i>	u	6	<i>Chamerion angustifolium</i>	SS859763	Ogmore Estuary	BS
87	08/08/2013	<i>lapidarius</i>	m	4	<i>Chamerion angustifolium</i>	SS859763	Ogmore Estuary	BS
88	08/08/2013	<i>lapidarius</i>	w	1	<i>Rubus caesius</i>	SS859763	Ogmore Estuary	BS
89	08/08/2013	<i>lapidarius</i>	w	16	<i>Chamerion angustifolium</i>	SS859763	Ogmore Estuary	BS
90	08/08/2013	<i>sylvestris</i>	q	1	<i>Chamerion angustifolium</i>	SS859763	Ogmore Estuary	BS



91	08/08/2013	<i>terrestris</i>	u	2	<i>Chamerion angustifolium</i>	SS862764	Ogmore Estuary		BS
92	08/08/2013	<i>lapidarius</i>	m	2	<i>Chamerion angustifolium</i>	SS862764	Ogmore Estuary		BS
93	08/08/2013	<i>terrestris</i>	u	2	<i>Chamerion angustifolium</i>	SS864763	Ogmore Estuary		BS
94	08/08/2013	<i>lapidarius</i>	m	2	<i>Chamerion angustifolium</i>	SS864763	Ogmore Estuary		BS
95	08/08/2013	<i>lapidarius</i>	w	6	<i>Chamerion angustifolium</i>	SS864763	Ogmore Estuary		BS
96	08/08/2013	<i>lapidarius</i>	w	1	<i>Rubus caesius</i>	SS864763	Ogmore Estuary		BS
97	08/08/2013	<i>terr./luc.</i>	u	1	<i>Rubus fruticosus agg.</i>	SS871762	Ogmore Estuary		BS
98	08/08/2013	<i>terrestris</i>	u	1	<i>Carduus nutans</i>	SS871762	Ogmore Estuary		BS
99	08/08/2013	<i>lapidarius</i>	w	1	<i>Rubus fruticosus agg.</i>	SS871762	Ogmore Estuary		BS
100	08/08/2013	<i>lapidarius</i>	m	1	<i>Rubus fruticosus agg.</i>	SS871762	Ogmore Estuary		BS
101	08/08/2013	<i>lapidarius</i>	w	1	<i>Cirsium palustre</i>	SS871762	Ogmore Estuary		BS
102	08/08/2013	<i>lapidarius</i>	m	1	<i>Cirsium palustre</i>	SS871762	Ogmore Estuary		BS
103	08/08/2013	<i>lapidarius</i>	w	1	<i>Carduus nutans</i>	SS871762	Ogmore Estuary		BS
104	08/08/2013	<i>sylvestris</i>	u	1	<i>Carduus nutans</i>	SS871762	Ogmore Estuary		BS
105	08/08/2013	<i>lapidarius</i>	m	1	<i>Carduus nutans</i>	SS872762	Ogmore Estuary		BS
106	08/08/2013	<i>terrestris</i>	u	1	<i>Carduus nutans</i>	SS872762	Ogmore Estuary		BS
<b>107</b>	07/08/2013	<b><i>sylvarum</i></b>	w	1	<i>Epilobium hirsutum</i>	SS796581 13	Kenfig NNR		DGC
108	11/08/2013	<i>terrestris</i>	m	1	<i>Eupatorium cannabinum</i>	SS800830	Kenfig Marshalling Yard	None	BS
109	11/08/2013	<i>lapidarius</i>	w	1	<i>Centaurea scabiosa</i>	SS799830	Kenfig Marshalling Yard	None	BS
110	11/08/2013	<i>Apis mellifera</i>	w	4	<i>Eupatorium cannabinum</i>	SS799830	Kenfig Marshalling Yard	None	BS
111	11/08/2013	<i>lucorum</i>	w	1	<i>Eupatorium cannabinum</i>	SS799830	Kenfig Marshalling Yard	None	BS
112	11/08/2013	<i>lucorum</i>	w	1	<i>Eupatorium cannabinum</i>	SS799830	Kenfig Marshalling Yard	None	BS
113	11/08/2013	<i>terrestris</i>	u	3	<i>Impatiens glandulifera</i>	SS797831	Kenfig Marshalling Yard	None	BS
114	11/08/2013	<i>terrestris</i>	u	1	<i>Mentha aquatica</i>	SS797831	Kenfig Marshalling Yard	None	BS
115	11/08/2013	<i>lapidarius</i>	w	1	<i>Calystegia sepium</i>	SS797831	Kenfig Marshalling Yard	None	BS
116	11/08/2013	<i>lapidarius</i>	w	1	<i>Epilobium hirsutum</i>	SS797831	Kenfig Marshalling Yard	None	BS
117	11/08/2013	<i>pascuorum</i>	w	1	<i>Impatiens glandulifera</i>	SS795834	Kenfig Marshalling Yard	None	BS
118	11/08/2013	<i>terrestris</i>	w	1	<i>Eupatorium cannabinum</i>	SS795834	Kenfig Marshalling Yard	None	BS
119	11/08/2013	<i>runderarius</i>	m	1	<i>Pulicaria dysenterica</i>	SS794833	Kenfig Marshalling Yard	None	BS
120	11/08/2013	<i>runderarius</i>	m	1	<i>Geranium robertianum</i>	SS793835	Kenfig Marshalling Yard	None	BS
121	11/08/2013	<i>lapidarius</i>	w	1	<i>Linaria repens</i>	SS792836	Kenfig Marshalling Yard	None	BS
122	11/08/2013	<i>terrestris</i>	u	13	<i>Buddleja davidii</i>	SS792835	Kenfig Marshalling Yard	None	BS
123	11/08/2013	<i>pascuorum</i>	w	1	<i>Impatiens glandulifera</i>	SS790834	Kenfig Marshalling Yard	None	BS
124	11/08/2013	<i>lapidarius</i>	w	9	<i>Melilotus officinalis</i>	SS787834	Margam Tip	None	BS

125	11/08/2013	<i>lapidarius</i>	w	1	<i>Melilotus officinalis</i>	SS786834	Margam Tip	None	BS
126	11/08/2013	<i>terrestris</i>	u	2	<i>Melilotus officinalis</i>	SS786834	Margam Tip	None	BS
127	11/08/2013	<i>runderarius</i>	w	1	<i>Melilotus officinalis</i>	SS785833	Margam Tip	None	BS
128	11/08/2013	<i>humilis</i>	w	1	<i>Melilotus officinalis</i>	SS787835	Margam Tip	None	BS
129	11/08/2013	<i>lapidarius</i>	w	1	<i>Hirschfeldia incana</i>	SS787838	Margam Tip	None	BS
130	11/08/2013	<i>lapidarius</i>	w	1	<i>Hirschfeldia incana</i>	SS789837	Kenfig Marshalling Yard	None	BS
131	11/08/2013	<i>terrestris</i>	w	1	<i>Verbascus thapsus</i>	SS789836	Kenfig Marshalling Yard	None	BS
<b>132</b>	11/08/2013	<b><i>sylvarum</i></b>	w	1	<i>Odontites vernus</i>	SS7895483550	Kenfig Marshalling Yard	None	BS
133	11/08/2013	<i>lapidarius</i>	w	1	<i>Melilotus albus</i>	SS790835	Kenfig Marshalling Yard	None	BS
134	11/08/2013	<i>lapidarius</i>	w	1	<i>Odontites vernus</i>	SS790835	Kenfig Marshalling Yard	None	BS
135	11/08/2013	<i>hortorum</i>	q	1	<i>Melilotus albus</i>	SS790835	Kenfig Marshalling Yard	None	BS
136	11/08/2013	<i>pratorum</i>	m	1	<i>Melilotus albus</i>	SS790835	Kenfig Marshalling Yard	None	BS
137	11/08/2013	<i>lucorum</i>	w	1	<i>Melilotus officinalis</i>	SS794831	Kenfig Marshalling Yard	None	BS
138	11/08/2013	<i>terrestris</i>	w	2	<i>Echium vulgare</i>	SS794831	Kenfig Marshalling Yard	None	BS
139	11/08/2013	<i>terrestris</i>	w	1	<i>Eupatorium cannabinum</i>	SS794831	Kenfig Marshalling Yard	None	BS
<b>140</b>	11/08/2013	<b><i>sylvarum</i></b>	w	1	<i>Odontites vernus</i>	SS7967483053	Kenfig Marshalling Yard	horse grazing	BS
141	11/08/2013	<i>terrestris</i>	w	3	<i>Odontites vernus</i>	SS796830	Kenfig Marshalling Yard	horse grazing	BS
<b>142</b>	11/08/2013	<b><i>sylvarum</i></b>	w	4	<i>Odontites vernus</i>	SS7969883073	Kenfig Marshalling Yard	horse grazing	BS
<b>143</b>	11/08/2013	<b><i>sylvarum</i></b>	w	1	<i>Odontites vernus</i>	SS7975283068	Kenfig Marshalling Yard	horse grazing	BS
144	11/08/2013	<i>terrestris</i>	w	1	<i>Odontites vernus</i>	SS797830	Kenfig Marshalling Yard	horse grazing	BS
145	11/08/2013	<i>pascuorum</i>	w	1	<i>Odontites vernus</i>	SS797830	Kenfig Marshalling Yard	horse grazing	BS
146	11/08/2013	<i>lapidarius</i>	w	1	<i>Rubus caesius</i>	SS797830	Kenfig Marshalling Yard	horse grazing	BS
147	09/08/2013	<i>lapidarius</i>	w	3	<i>Epilobium hirsutum</i>	SS899785	Island Farm	None	NPR
148	09/08/2013	<i>lapidarius</i>	m	1	<i>Chamerion angustifolium</i>	SS899785	Island Farm	None	NPR
149	09/08/2013	<i>lapidarius</i>	w	1	<i>Chamerion angustifolium</i>	SS899785	Island Farm	None	NPR
150	09/08/2013	<i>hortorum</i>	w	1	<i>Rubus fruticosus agg.</i>	SS899784	Island Farm	None	NPR
151	09/08/2013	<i>terrestris</i>	m	1	<i>Rubus fruticosus agg.</i>	SS899784	Island Farm	None	NPR
152	09/08/2013	<i>terrestris</i>	w	1	<i>Rubus fruticosus agg.</i>	SS899784	Island Farm	None	NPR
153	09/08/2013	<i>lapidarius</i>	m	3	<i>Epilobium hirsutum</i>	SS899783	Island Farm	None	NPR
154	09/08/2013	<i>lapidarius</i>	w	3	<i>Epilobium hirsutum</i>	SS899783	Island Farm	None	NPR
155	09/08/2013	<i>hortorum</i>	m	1	<i>Rubus fruticosus agg.</i>	SS899783	Island Farm	None	NPR
156	09/08/2013	<i>muscorum</i>	q	1	<i>Buddleja davidii</i>	SS898784	Island Farm	None	NPR
157	09/08/2013	<i>lapidarius</i>	u	8	<i>Chamerion angustifolium</i>	SS898784	Island Farm	None	NPR
158	09/08/2013	<i>vestalis</i>	m	1	<i>Origanum vulgare</i>	SS898784	Island Farm	None	NPR

159	09/08/2013	<i>vestalis</i>	q	2	<i>Origanum vulgare</i>	SS898784	Island Farm	None	NPR
160	09/08/2013	<i>lapidarius</i>	w	4	<i>Centaurea nigra agg.</i>	SS898784	Island Farm	None	NPR
161	09/08/2013	<i>lapidarius</i>	w	1	<i>Pulicaria dysenterica</i>	SS898784	Island Farm	None	NPR
162	09/08/2013	<i>lapidarius</i>	m	1	<i>Centaurea scabiosa</i>	SS898784	Island Farm	None	NPR
163	09/08/2013	<i>lapidarius</i>	w	2	<i>Origanum vulgare</i>	SS898784	Island Farm	None	NPR
164	09/08/2013	<i>lapidarius</i>	w	3	<i>Chamerion angustifolium</i>	SS898784	Island Farm	None	NPR
165	09/08/2013	<i>lapidarius</i>	w	1	<i>Cirsium eriophorum</i>	SS898784	Island Farm	None	NPR
166	09/08/2013	<i>lapidarius</i>	m	2	<i>Centaurea nigra agg.</i>	SS898784	Island Farm	None	NPR
167	09/08/2013	<i>lapidarius</i>	q	1	<i>Centaurea nigra agg.</i>	SS898784	Island Farm	None	NPR
168	09/08/2013	<i>lapidarius</i>	q	1	<i>Chamerion angustifolium</i>	SS898784	Island Farm	None	NPR
169	09/08/2013	<i>pascurorum</i>	w	2	<i>Odontites vernus</i>	SS898784	Island Farm	None	NPR
170	09/08/2013	<i>pascurorum</i>	m	1	<i>Centaurea scabiosa</i>	SS898784	Island Farm	None	NPR
171	09/08/2013	<i>pascurorum</i>	w	1	<i>Rubus fruticosus agg.</i>	SS898784	Island Farm	None	NPR
172	09/08/2013	<i>lucorum</i>	m	1	<i>Origanum vulgare</i>	SS898784	Island Farm	None	NPR
173	09/08/2013	<i>lucorum</i>	w	2	<i>Buddleja davidii</i>	SS898784	Island Farm	None	NPR
174	09/08/2013	<i>lucorum</i>	w	1	<i>Rubus fruticosus agg.</i>	SS898784	Island Farm	None	NPR
175	09/08/2013	<i>terrestris</i>	w	3	<i>Chamerion angustifolium</i>	SS898784	Island Farm	None	NPR
176	09/08/2013	<i>terrestris</i>	q	1	<i>Chamerion angustifolium</i>	SS898784	Island Farm	None	NPR
177	09/08/2013	<i>terrestris</i>	m	1	<i>Chamerion angustifolium</i>	SS898784	Island Farm	None	NPR
178	10/08/2013	<i>pascurorum</i>	w	4	<i>Stachys palustris</i>	SS996813	Llanilid former opencast	None	NPR
179	10/08/2013	<i>pascurorum</i>	q	1	<i>Stachys palustris</i>	SS996813	Llanilid former opencast	None	NPR
180	10/08/2013	<i>hortorum</i>	u	1	<i>Stachys palustris</i>	SS996813	Llanilid former opencast	None	NPR
181	10/08/2013	<i>lapidarius</i>	w	5	<i>Stachys palustris</i>	SS996813	Llanilid former opencast	None	NPR
182	10/08/2013	<i>lapidarius</i>	m	1	<i>Stachys palustris</i>	SS996813	Llanilid former opencast	None	NPR
183	10/08/2013	<i>lapidarius</i>	q	1	<i>Stachys palustris</i>	SS996813	Llanilid former opencast	None	NPR
184	10/08/2013	<i>terrestris</i>	q	1	<i>Stachys palustris</i>	SS996813	Llanilid former opencast	None	NPR
185	10/08/2013	<i>pascurorum</i>	w	4	<i>Odontites vernus</i>	SS998810	Llanilid former opencast	None	NPR
186	10/08/2013	<i>pascurorum</i>	m	1	<i>Odontites vernus</i>	SS998810	Llanilid former opencast	None	NPR
187	10/08/2013	<i>pascurorum</i>	w	2	<i>Epilobium hirsutum</i>	SS998810	Llanilid former opencast	None	NPR
188	10/08/2013	<i>lapidarius</i>	m	1	<i>Epilobium hirsutum</i>	SS998810	Llanilid former opencast	None	NPR
189	10/08/2013	<i>lapidarius</i>	w	5	<i>Epilobium hirsutum</i>	SS998810	Llanilid former opencast	None	NPR
190	10/08/2013	<i>lapidarius</i>	q	2	<i>Epilobium hirsutum</i>	SS998810	Llanilid former opencast	None	NPR
191	10/08/2013	<i>lapidarius</i>	w	1	<i>Pulicaria dysenterica</i>	SS998810	Llanilid former opencast	None	NPR
192	10/08/2013	<i>lapidarius</i>	m	2	<i>Centaurea nigra agg.</i>	ST000809	Llanilid former opencast	None	NPR

193	10/08/2013	<i>lapidarius</i>	w	3	<i>Centaurea nigra</i> agg.	ST000809	Llanilid former opencast	None	NPR
194	10/08/2013	<i>terrestris</i>	w	2	<i>Buddleja davidii</i>	ST000809	Llanilid former opencast	None	NPR
195	10/08/2013	<i>terrestris</i>	q	1	<i>Buddleja davidii</i>	ST000809	Llanilid former opencast	None	NPR
196	10/08/2013	<i>terrestris</i>	w	2	<i>Centaurea nigra</i> agg.	ST000809	Llanilid former opencast	None	NPR
197	10/08/2013	<i>lapidarius</i>	m	5	<i>Centaurea nigra</i> agg.	SS992806	Llanilid former opencast	None	NPR
198	10/08/2013	<i>lapidarius</i>	q	1	<i>Centaurea nigra</i> agg.	SS992806	Llanilid former opencast	None	NPR
199	10/08/2013	<i>lapidarius</i>	w	12	<i>Centaurea nigra</i> agg.	SS992806	Llanilid former opencast	None	NPR
<b>200</b>	12/08/2013	<b><i>sylvarum</i></b>	w	1	<i>Odontites vernus</i>	SS7998282919	Kenfig Ind Est	None	NPR
201	12/08/2013	<i>pascuorum</i>	m	1	<i>Odontites vernus</i>	SS799829	Kenfig Ind Est	None	NPR
202	12/08/2013	<i>pascuorum</i>	w	1	<i>Rubus fruticosus</i> agg.	SS799829	Kenfig Ind Est	None	NPR
<b>203</b>	12/08/2013	<b><i>sylvarum</i></b>	q	1	<i>Cirsium vulgare</i>	SS8004082897	Kenfig Ind Est	None	NPR
<b>204</b>	12/08/2013	<b><i>sylvarum</i></b>	m	1	<i>Cirsium vulgare</i>	SS8004082897	Kenfig Ind Est	None	NPR
205	12/08/2013	<i>lapidarius</i>	w	3	<i>Impatiens glandulifera</i>	SS800828	Kenfig Ind Est	None	NPR
206	12/08/2013	<i>terrestris</i>	m	1	<i>Impatiens glandulifera</i>	SS800828	Kenfig Ind Est	None	NPR
207	12/08/2013	<i>terrestris</i>	w	4	<i>Impatiens glandulifera</i>	SS800828	Kenfig Ind Est	None	NPR
208	12/08/2013	<i>lucorum</i>	w	1	<i>Impatiens glandulifera</i>	SS800828	Kenfig Ind Est	None	NPR
209	12/08/2013	<i>lucorum</i>	m	3	<i>Impatiens glandulifera</i>	SS800828	Kenfig Ind Est	None	NPR
210	12/08/2013	<i>pascuorum</i>	u	2	<i>Rubus fruticosus</i> agg.	SS800828	Kenfig Ind Est	None	NPR
211	12/08/2013	<i>pascuorum</i>	w	1	<i>Impatiens glandulifera</i>	SS800828	Kenfig Ind Est	None	NPR
<b>212</b>	12/08/2013	<b><i>sylvarum</i></b>	w	4	<i>Odontites vernus</i>	SS8005682880	Kenfig Ind Est	None	NPR
213	12/08/2013	<i>terrestris</i>	m	1	<i>Eupatorium cannabinum</i>	SS800828	Kenfig Ind Est	None	NPR
214	12/08/2013	<i>terrestris</i>	w	2	<i>Eupatorium cannabinum</i>	SS800828	Kenfig Ind Est	None	NPR
215	12/08/2013	<i>lucorum</i>	w	2	<i>Eupatorium cannabinum</i>	SS800828	Kenfig Ind Est	None	NPR
216	12/08/2013	<i>lucorum</i>	m	2	<i>Eupatorium cannabinum</i>	SS800828	Kenfig Ind Est	None	NPR
217	12/08/2013	<i>terrestris</i>	u	9	<i>Impatiens glandulifera</i>	SS797829	Kenfig Ind Est	None	NPR
218	12/08/2013	<i>lucorum</i>	u	3	<i>Impatiens glandulifera</i>	SS797829	Kenfig Ind Est	None	NPR
<b>219</b>	12/08/2013	<b><i>sylvarum</i></b>	w	3	<i>Odontites vernus</i>	SS7983883069	Kenfig Ind Est	horse grazing	NPR
220	12/08/2013	<i>lapidarius</i>	w	4	<i>Centaurea nigra</i> agg.	SS798830	Kenfig Ind Est	horse grazing	NPR
221	12/08/2013	<i>terrestris</i>	w	5	<i>Odontites vernus</i>	SS798830	Kenfig Ind Est	horse grazing	NPR
222	12/08/2013	<i>lapidarius</i>	u	1	<i>Chamerion angustifolium</i>	SS805793	Royal Porthcawl	None	NPR
223	12/08/2013	<i>pratorum</i>	q	1	<i>Calluna vulgaris</i>	SS805793	Royal Porthcawl	None	NPR
224	12/08/2013	<i>lapidarius</i>	u	2	<i>Rubus fruticosus</i> agg.	SS803792	Royal Porthcawl	None	NPR
225	12/08/2013	<i>terrestris</i>	w	1	<i>Calluna vulgaris</i>	SS803792	Royal Porthcawl	None	NPR
226	12/08/2013	<i>lapidarius</i>	m	1	<i>Cirsium arvense</i>	SS797793	Royal Porthcawl	None	NPR

227	12/08/2013	<i>lapidarius</i>	w	1	<i>Leontodon autumnalis</i>	SS797793	Royal Porthcawl	None	NPR
228	12/08/2013	<i>terrestris</i>	w	1	<i>Crepis biennis</i>	SS797793	Royal Porthcawl	None	NPR
229	12/08/2013	<i>terrestris</i>	m	1	<i>Crepis biennis</i>	SS797793	Royal Porthcawl	None	NPR
230	12/08/2013	<i>lapidarius</i>	w	1	<i>Crepis biennis</i>	SS797793	Royal Porthcawl	None	NPR
231	12/08/2013	<i>terrestris</i>	u	3	<i>Eryngium maritimum</i>	SS798790	Royal Porthcawl	None	NPR
232	12/08/2013	<i>lapidarius</i>	m	1	<i>Eryngium maritimum</i>	SS798790	Royal Porthcawl	None	NPR
233	12/08/2013	<i>lapidarius</i>	m	5	<i>Cirsium arvense</i>	SS799788	Royal Porthcawl	None	NPR
234	12/08/2013	<i>lapidarius</i>	w	3	<i>Cirsium arvense</i>	SS799788	Royal Porthcawl	None	NPR
235	12/08/2013	<i>lapidarius</i>	q	1	<i>Cirsium arvense</i>	SS799788	Royal Porthcawl	None	NPR
236	12/08/2013	<i>lapidarius</i>	w	1	<i>Raphanus maritimus</i>	SS799788	Royal Porthcawl	None	NPR
237	12/08/2013	<i>lapidarius</i>	m	3	<i>Leontodon autumnalis</i>	SS799788	Royal Porthcawl	None	NPR
238	12/08/2013	<i>lapidarius</i>	m	1	<i>Senecio jacobaea</i>	SS799788	Royal Porthcawl	None	NPR
239	12/08/2013	<i>campestris</i>	m	2	<i>Cirsium arvense</i>	SS799788	Royal Porthcawl	None	NPR
240	12/08/2013	<i>terrestris</i>	m	1	<i>Cirsium arvense</i>	SS799788	Royal Porthcawl	None	NPR
241	12/08/2013	<i>terrestris</i>	w	4	<i>Cirsium arvense</i>	SS799788	Royal Porthcawl	None	NPR
242	12/08/2013	<i>terrestris</i>	q	1	<i>Cirsium arvense</i>	SS799788	Royal Porthcawl	None	NPR
243	12/08/2013	<i>terrestris</i>	w	1	<i>Calluna vulgaris</i>	SS804777	Lock's Common	None	NPR
244	12/08/2013	<i>lapidarius</i>	w	1	<i>Leontodon taraxacoides</i>	SS805526	Lock's Common	None	NPR
245	12/08/2013	<i>pascurorum</i>	w	2	<i>Betonica officinalis</i>	SS805475	Lock's Common	None	NPR
246	12/08/2013	<i>pascurorum</i>	q	1	<i>Betonica officinalis</i>	SS805475	Lock's Common	None	NPR
247	12/08/2013	<i>humilis</i>	q	2	<i>Betonica officinalis</i>	SS805475	Lock's Common	None	NPR
248	12/08/2013	<i>hortorum</i>	m	1	<i>Betonica officinalis</i>	SS805475	Lock's Common	None	NPR
249	12/08/2013	<i>terrestris</i>	u	4	<i>Betonica officinalis</i>	SS805475	Lock's Common	None	NPR
250	12/08/2013	<i>lapidarius</i>	w	1	<i>Betonica officinalis</i>	SS805475	Lock's Common	None	NPR
251	12/08/2013	<i>terrestris</i>	u	7	<i>Betonica officinalis</i>	SS807771	Lock's Common	None	NPR
252	12/08/2013	<i>campestris</i>	m	1	<i>Centaurea nigra agg.</i>	SS807771	Lock's Common	None	NPR
253	12/08/2013	<i>lapidarius</i>	w	2	<i>Betonica officinalis</i>	SS807771	Lock's Common	None	NPR
254	12/08/2013	<i>pascurorum</i>	w	6	<i>Betonica officinalis</i>	SS807771	Lock's Common	None	NPR
255	12/08/2013	<i>pascurorum</i>	m	2	<i>Ulex gallii</i>	SS807771	Lock's Common	None	NPR
256	12/08/2013	<i>pascurorum</i>	q	1	<i>Betonica officinalis</i>	SS807771	Lock's Common	None	NPR
257	12/08/2013	<i>lapidarius</i>	m	3	<i>Senecio jacobaea</i>	SS808771	Lock's Common	None	NPR
258	12/08/2013	<i>lapidarius</i>	m	1	<i>Centaurea nigra agg.</i>	SS808771	Lock's Common	None	NPR
259	12/08/2013	<i>lapidarius</i>	w	1	<i>Centaurea nigra agg.</i>	SS808771	Lock's Common	None	NPR
260	12/08/2013	<i>terrestris</i>	m	1	<i>Chamerion angustifolium</i>	SS807773	Lock's Common	None	NPR

261	12/08/2013	<i>terrestris</i>	w	2	<i>Chamerion angustifolium</i>	SS807773	Lock's Common	None	NPR
262	12/08/2013	<i>terrestris</i>	w	1	<i>Buddleja davidii</i>	SS807773	Lock's Common	None	NPR
263	12/08/2013	<i>lapidarius</i>	m	1	<i>Cirsium arvense</i>	SS807773	Lock's Common	None	NPR
264	12/08/2013	<i>lapidarius</i>	w	2	<i>Centaurea nigra agg.</i>	SS807773	Lock's Common	None	NPR
265	12/08/2013	<i>lapidarius</i>	m	2	<i>Centaurea nigra agg.</i>	SS807773	Lock's Common	None	NPR
266	12/08/2013	<i>lapidarius</i>	u	14	<i>Centaurea nigra agg.</i>	SS807774	Lock's Common	None	NPR
267	12/08/2013	<i>terrestris</i>	u	4	<i>Centaurea nigra agg.</i>	SS807774	Lock's Common	None	NPR
268	12/08/2013	<i>terrestris</i>	u	21	<i>Chamerion angustifolium</i>	SS806775	Lock's Common	None	NPR
269	12/08/2013	<i>lucorum</i>	u	3	<i>Chamerion angustifolium</i>	SS806775	Lock's Common	None	NPR
270	13/08/2013	<i>lapidarius</i>	m	2	<i>Centaurea nigra agg.</i>	SS839802	Cornelly Quarries	None	NPR
271	13/08/2013	<i>terrestris</i>	w	1	<i>Buddleja davidii</i>	SS839802	Cornelly Quarries	None	NPR
272	13/08/2013	<i>terrestris</i>	w	2	<i>Buddleja davidii</i>	SS839804	Cornelly Quarries	None	NPR
273	13/08/2013	<i>terrestris</i>	q	1	<i>Buddleja davidii</i>	SS839804	Cornelly Quarries	None	NPR
274	13/08/2013	<i>terrestris</i>	w	2	<i>Cirsium eriophorum</i>	SS835803	Cornelly Quarries	None	NPR
275	13/08/2013	<i>terrestris</i>	m	1	<i>Buddleja davidii</i>	SS835803	Cornelly Quarries	None	NPR
276	13/08/2013	<i>terrestris</i>	w	2	<i>Echium vulgare</i>	SS835803	Cornelly Quarries	None	NPR
277	13/08/2013	<i>lapidarius</i>	m	1	<i>Cirsium eriophorum</i>	SS835803	Cornelly Quarries	None	NPR
278	13/08/2013	<i>lapidarius</i>	w	2	<i>Cirsium arvense</i>	SS835803	Cornelly Quarries	None	NPR
279	13/08/2013	<i>pascuorum</i>	w	1	<i>Trifolium pratense</i>	SS835803	Cornelly Quarries	None	NPR
280	13/08/2013	<i>lapidarius</i>	m	1	<i>Buddleja davidii</i>	SS835803	Cornelly Quarries	None	NPR
281	13/08/2013	<i>lapidarius</i>	u	1	<i>Buddleja davidii</i>	SS835803	Cornelly Quarries	None	NPR
282	13/08/2013	<i>terrestris</i>	u	6	<i>Buddleja davidii</i>	SS833804	Cornelly Quarries	None	NPR
283	13/08/2013	<i>lapidarius</i>	w	1	<i>Buddleja davidii</i>	SS833804	Cornelly Quarries	None	NPR
284	13/08/2013	<i>lapidarius</i>	q	1	<i>Chamerion angustifolium</i>	SS831803	Cornelly Quarries	None	NPR
285	13/08/2013	<i>lapidarius</i>	w	2	<i>Chamerion angustifolium</i>	SS831803	Cornelly Quarries	None	NPR
286	13/08/2013	<i>terrestris</i>	m	1	<i>Buddleja davidii</i>	SS831803	Cornelly Quarries	None	NPR
287	13/08/2013	<i>terrestris</i>	w	1	<i>Buddleja davidii</i>	SS831803	Cornelly Quarries	None	NPR
288	13/08/2013	<i>terrestris</i>	u	2	<i>Buddleja davidii</i>	SS831804	Cornelly Quarries	None	NPR
289	13/08/2013	<i>lapidarius</i>	u	4	<i>Buddleja davidii</i>	SS831804	Cornelly Quarries	None	NPR
290	13/08/2013	<i>lapidarius</i>	w	1	<i>Buddleja davidii</i>	SS829801	Cornelly Quarries	None	NPR
291	13/08/2013	<i>terrestris</i>	m	1	<i>Epilobium hirsutum</i>	SS829801	Cornelly Quarries	None	NPR
292	13/08/2013	<i>terrestris</i>	u	1	<i>Epilobium hirsutum</i>	SS829801	Cornelly Quarries	None	NPR
293	13/08/2013	<i>terrestris</i>	w	7	<i>Epilobium hirsutum</i>	SS829801	Cornelly Quarries	None	NPR
294	13/08/2013	<i>terrestris</i>	w	2	<i>Buddleja davidii</i>	SS828800	Cornelly Quarries	None	NPR

295	13/08/2013	<i>lapidarius</i>	m	1	<i>Buddleja davidii</i>	SS828800	Cornelly Quarries	None	NPR
296	13/08/2013	<i>lucorum</i>	m	1	<i>Buddleja davidii</i>	SS828800	Cornelly Quarries	None	NPR
297	13/08/2013	<i>lapidarius</i>	m	1	<i>Centaurea nigra agg.</i>	SS828800	Cornelly Quarries	None	NPR
298	13/08/2013	<i>lapidarius</i>	w	7	<i>Centaurea nigra agg.</i>	SS828800	Cornelly Quarries	None	NPR
299	13/08/2013	<i>pascuorum</i>	m	1	<i>Centaurea nigra agg.</i>	SS828800	Cornelly Quarries	None	NPR
300	13/08/2013	<i>pascuorum</i>	w	1	<i>Vicia cracca</i>	SS828800	Cornelly Quarries	None	NPR
301	13/08/2013	<i>terrestris</i>	q	1	<i>Origanum vulgare</i>	SS828800	Cornelly Quarries	None	NPR
302	13/08/2013	<i>terrestris</i>	u	8	<i>Buddleja davidii</i>	SS826800	Cornelly Quarries	None	NPR
303	13/08/2013	<i>lapidarius</i>	q	1	<i>Mellilotus officinalis</i>	SS825800	Cornelly Quarries	None	NPR
304	13/08/2013	<i>lapidarius</i>	w	2	<i>Mellilotus officinalis</i>	SS825800	Cornelly Quarries	None	NPR
305	13/08/2013	<i>lapidarius</i>	w	5	<i>Centaurea nigra agg.</i>	SS825800	Cornelly Quarries	None	NPR
306	13/08/2013	<i>lapidarius</i>	m	1	<i>Centaurea nigra agg.</i>	SS825800	Cornelly Quarries	None	NPR
307	13/08/2013	<i>lapidarius</i>	m	1	<i>Pulicaria dysenterica</i>	SS790854	Heolcae'r-Bont	horse grazing	BS
308	13/08/2013	<i>pascuorum</i>	w	1	<i>Ranunculu repens</i>	SS790854	Heolcae'r-Bont	horse grazing	BS
309	13/08/2013	<i>terrestris</i>	u	1	<i>Mentha aquatica</i>	SS790854	Heolcae'r-Bont	horse grazing	BS
310	13/08/2013	<i>lapidarius</i>	m	2	<i>Odontites vernus</i>	SS789854	Heolcae'r-Bont	horse grazing	BS
311	13/08/2013	<i>lapidarius</i>	w	2	<i>Odontites vernus</i>	SS789854	Heolcae'r-Bont	horse grazing	BS
312	13/08/2013	<i>terrestris</i>	u	6	<i>Rubus fruticosus agg.</i>	SS789854	Heolcae'r-Bont	horse grazing	BS
313	13/08/2013	<i>terrestris</i>	u	2	<i>Scorzoneroides autumnalis</i>	SS789854	Heolcae'r-Bont	horse grazing	BS
314	13/08/2013	<i>hortorum</i>	w	2	<i>Rubus fruticosus agg.</i>	SS789854	Heolcae'r-Bont	horse grazing	BS
315	13/08/2013	<i>lapidarius</i>	f	1	<i>Pulicaria dysenterica</i>	SS788854	Heolcae'r-Bont	horse grazing	BS
316	13/08/2013	<i>terrestris</i>	w	2	<i>Odontites vernus</i>	SS788854	Heolcae'r-Bont	horse grazing	BS
317	13/08/2013	<i>pascuorum</i>	w	1	<i>Odontites vernus</i>	SS788854	Heolcae'r-Bont	horse grazing	BS
318	13/08/2013	<i>hortorum</i>	w	1	<i>Dipsacus fullonum</i>	SS789855	Heolcae'r-Bont	hay cut	BS
319	13/08/2013	<i>lapidarius</i>	w	2	<i>Hirschfeldia incana</i>	SS785853	Margam Moors	none	BS
320	13/08/2013	<i>terrestris</i>	w	1	<i>Echium vulgare</i>	SS785853	Margam Moors	none	BS
321	13/08/2013	<i>pascuorum</i>	w	3	<i>Echium vulgare</i>	SS784853	Margam Moors	none	BS
322	13/08/2013	<i>terrestris</i>	w	1	<i>Echium vulgare</i>	SS784853	Margam Moors	none	BS
323	13/08/2013	<i>terrestris</i>	w	1	<i>Rubus fruticosus agg.</i>	SS784853	Margam Moors	none	BS
324	13/08/2013	<i>lapidarius</i>	w	1	<i>Coincya monensis subsp. cheiranthos</i>	SS784853	Margam Moors	none	BS
325	13/08/2013	<i>humilis</i>	m	1	<i>Echium vulgare</i>	SS784853	Margam Moors	none	BS
326	13/08/2013	<i>pratorum</i>	w	1	<i>Echium vulgare</i>	SS784853	Margam Moors	none	BS
327	13/08/2013	<i>hortorum</i>	w	1	<i>Echium vulgare</i>	SS784853	Margam Moors	none	BS
<b>328</b>	13/08/2013	<b><i>sylvarum</i></b>	w	1	<i>Echium vulgare</i>	SS7848585382	Margam Moors	none	BS

329	13/08/2013	<i>pascuorum</i>	w	1	<i>Echium vulgare</i>	SS784854	Margam Moors	none	BS
330	13/08/2013	<i>pascuorum</i>	w	1	<i>Centaurea debeauxii</i>	SS784854	Margam Moors	none	BS
331	13/08/2013	<i>lapidarius</i>	m	1	<i>Echium vulgare</i>	SS784854	Margam Moors	none	BS
332	13/08/2013	<i>lapidarius</i>	w	2	<i>Coincya monensis subsp. cheiranthos</i>	SS784854	Margam Moors	none	BS
333	13/08/2013	<i>lapidarius</i>	m	1	<i>Centaurea debeauxii</i>	SS784854	Margam Moors	none	BS
334	13/08/2013	<i>terrestris</i>	w	1	<i>Rubus fruticosus agg.</i>	SS784854	Margam Moors	none	BS
335	13/08/2013	<i>lapidarius</i>	m	1	<i>Melilotus altissimus</i>	SS783855	Margam Moors	none	BS
336	13/08/2013	<i>terrestris</i>	u	4	<i>Buddleja davidii</i>	SS786850	Margam Moors	none	BS
337	13/08/2013	<i>hortorum</i>	w	1	<i>Buddleja davidii</i>	SS786850	Margam Moors	none	BS
338	13/08/2013	<i>lapidarius</i>	m	2	<i>Centaurea debeauxii</i>	SS787847	Margam Moors	none	BS
339	13/08/2013	<i>lapidarius</i>	w	3	<i>Centaurea debeauxii</i>	SS787847	Margam Moors	none	BS
340	13/08/2013	<i>lapidarius</i>	w	1	<i>Picris hieracioides</i>	SS787847	Margam Moors	none	BS
341	13/08/2013	<i>pascuorum</i>	w	2	<i>Centaurea debeauxii</i>	SS787847	Margam Moors	none	BS
342	13/08/2013	<i>pascuorum</i>	w	2	<i>Echium vulgare</i>	SS787847	Margam Moors	none	BS
343	13/08/2013	<i>terrestris</i>	u	6	<i>Buddleja davidii</i>	SS788845	Margam Moors	none	BS
344	13/08/2013	<i>terrestris</i>	u	1	<i>Picris hieracioides</i>	SS788845	Margam Moors	none	BS
345	13/08/2013	<i>terrestris</i>	w	1	<i>Carlina vulgaris</i>	SS788845	Margam Moors	none	BS
346	13/08/2013	<i>pascuorum</i>	w	1	<i>Buddleja davidii</i>	SS788845	Margam Moors	none	BS
347	13/08/2013	<i>pascuorum</i>	w	2	<i>Carlina vulgaris</i>	SS788845	Margam Moors	none	BS
348	13/08/2013	<i>pascuorum</i>	w	1	<i>Clinopodium vulgare</i>	SS789843	Margam Moors	none	BS
349	13/08/2013	<i>terrestris</i>	u	3	<i>Buddleja davidii</i>	SS789842	Margam Moors	none	BS
350	13/08/2013	<i>pratorum</i>	w	1	<i>Melilotus altissimus</i>	SS789841	Margam Moors	none	BS
351	13/08/2013	<i>pascuorum</i>	w	1	<i>Impatiens glandulifera</i>	SS789841	Margam Moors	none	BS
352	13/08/2013	<i>lapidarius</i>	m	2	<i>Epilobium hirsutum</i>	SS789840	Margam Moors	none	BS
353	13/08/2013	<i>pascuorum</i>	u	9	<i>Impatiens glandulifera</i>	SS789840	Margam Moors	none	BS
354	13/08/2013	<i>hortorum</i>	m	1	<i>Impatiens glandulifera</i>	SS789840	Margam Moors	none	BS
355	13/08/2013	<i>terrestris</i>	w	1	<i>Buddleja davidii</i>	SS790839	Margam sidings	None	BS
356	13/08/2013	<i>lapidarius</i>	m	1	<i>Buddleja davidii</i>	SS790839	Margam sidings	None	BS
357	13/08/2013	<i>lapidarius</i>	f	1	<i>Buddleja davidii</i>	SS790839	Margam sidings	None	BS
358	13/08/2013	<i>terrestris</i>	w	1	<i>Buddleja davidii</i>	SS790838	Margam sidings	None	BS
359	13/08/2013	<i>terrestris</i>	w	1	<i>Buddleja davidii</i>	SS789839	Margam sidings	None	BS
360	13/08/2013	<i>lapidarius</i>	f	1	<i>Geranium robertianum</i>	SS790843	Margam sidings	None	BS
361	13/08/2013	<i>terrestris</i>	u	12	<i>Melilotus altissimus</i>	SS786850	Margam Moors	None	BS
362	13/08/2013	<i>lapidarius</i>	w	2	<i>Melilotus altissimus</i>	SS786850	Margam Moors	None	BS



363	13/08/2013	<i>terrestris</i>	u	2	<i>Buddleja davidii</i>	SS786852	Margam Moors	None	BS
364	13/08/2013	<i>terrestris</i>	u	2	<i>Hirschfeldia incana</i>	SS790859	Heolcae'r-Bont	occasional cutting	BS
365	16/08/2013	<i>vestalis</i>	u	1	<i>Rubus fruticosus agg.</i>	SS820808	South Cornelly bypass	None	BS
366	16/08/2013	<i>hypnorum</i>	w	2	<i>Rubus fruticosus agg.</i>	SS820808	South Cornelly bypass	None	BS
367	16/08/2013	<i>bohemicus</i>	m	1	<i>Calystegia silvatica</i>	SS821808	South Cornelly bypass	None	BS
368	16/08/2013	<i>pratorum</i>	w	1	<i>Rubus fruticosus agg.</i>	SS821808	South Cornelly bypass	None	BS
369	16/08/2013	<i>pascuorum</i>	w	1	<i>Centaurea debeauxii</i>	SS819786	Moor Lane, Nottage	None	BS
370	16/08/2013	<i>lapidarius</i>	m	16	<i>Centaurea debeauxii</i>	SS819786	Moor Lane, Nottage	None	BS
371	16/08/2013	<i>lapidarius</i>	w	6	<i>Centaurea debeauxii</i>	SS819786	Moor Lane, Nottage	None	BS
372	16/08/2013	<i>hortorum</i>	w	3	<i>Centaurea debeauxii</i>	SS819786	Moor Lane, Nottage	None	BS
373	16/08/2013	<i>lapidarius</i>	m	37	<i>Centaurea debeauxii</i>	SS818786	Moor Lane, Nottage	None	BS
374	16/08/2013	<i>lapidarius</i>	w	10	<i>Centaurea debeauxii</i>	SS818786	Moor Lane, Nottage	None	BS
375	16/08/2013	<i>pascuorum</i>	w	2	<i>Centaurea debeauxii</i>	SS818786	Moor Lane, Nottage	None	BS
376	16/08/2013	<i>humilis</i>	w	3	<i>Trifolium pratense</i>	SS818786	Moor Lane, Nottage	None	BS
377	16/08/2013	<i>terrestris</i>	w	1	<i>Mentha x villosa</i>	SS819787	Moor Lane, Nottage	None	BS
378	16/08/2013	<i>humilis</i>	w	3	<i>Odontites vernus</i>	SS816791	Moor Lane, Nottage	None	BS
379	16/08/2013	<i>humilis</i>	w	1	<i>Lotus corniculatus</i>	SS816791	Moor Lane, Nottage	None	BS
380	16/08/2013	<i>lucorum</i>	w	2	<i>Odontites vernus</i>	SS816791	Moor Lane, Nottage	None	BS
381	16/08/2013	<i>lapidarius</i>	w	3	<i>Odontites vernus</i>	SS816791	Moor Lane, Nottage	None	BS
382	16/08/2013	<i>pascuorum</i>	w	17	<i>Odontites vernus</i>	SS816791	Moor Lane, Nottage	None	BS
383	16/08/2013	<i>terrestris</i>	u	5	<i>Odontites vernus</i>	SS816791	Moor Lane, Nottage	None	BS
<b>384</b>	16/08/2013	<b><i>sylvarum</i></b>	w	2	<i>Odontites vernus</i>	SS8164279176	Moor Lane, Nottage	None	BS
385	16/08/2013	<i>lapidarius</i>	m	5	<i>Centaurea debeauxii</i>	SS816792	Moor Lane, Nottage	None	BS
386	16/08/2013	<i>lapidarius</i>	w	1	<i>Centaurea debeauxii</i>	SS816792	Moor Lane, Nottage	None	BS
387	16/08/2013	<i>terrestris</i>	u	3	<i>Centaurea debeauxii</i>	SS816792	Moor Lane, Nottage	None	BS
388	16/08/2013	<i>pascuorum</i>	w	1	<i>Centaurea debeauxii</i>	SS816792	Moor Lane, Nottage	None	BS
389	16/08/2013	<i>lapidarius</i>	w	1	<i>Centaurea debeauxii</i>	SS818792	Moor Lane, Nottage	None	BS
390	16/08/2013	<i>lapidarius</i>	m	5	<i>Centaurea debeauxii</i>	SS818792	Moor Lane, Nottage	None	BS
391	16/08/2013	<i>lapidarius</i>	m	1	<i>Cirsium arvense</i>	SS818792	Moor Lane, Nottage	None	BS
392	16/08/2013	<i>terrestris</i>	w	6	<i>Sonchus oleraceus</i>	SS792803	Kenfig NNR (s)	None	NPR
393	16/08/2013	<i>terrestris</i>	w	1	<i>Cirsium arvense</i>	SS792803	Kenfig NNR (s)	None	NPR
394	16/08/2013	<i>pascuorum</i>	w	1	<i>Cirsium arvense</i>	SS792803	Kenfig NNR (s)	None	NPR
395	16/08/2013	<i>lapidarius</i>	m	1	<i>Cirsium arvense</i>	SS792803	Kenfig NNR (s)	None	NPR
396	16/08/2013	<i>lapidarius</i>	m	9	<i>Centaurea debeauxii</i>	SS792803	Kenfig NNR (s)	None	NPR

397	16/08/2013	<i>pascuorum</i>	m	1	<i>Centaurea debeauxii</i>	SS792803	Kenfig NNR (s)	None	NPR
398	16/08/2013	<i>pascuorum</i>	w	3	<i>Centaurea debeauxii</i>	SS792803	Kenfig NNR (s)	None	NPR
399	16/08/2013	<i>pascuorum</i>	q	1	<i>Centaurea debeauxii</i>	SS792803	Kenfig NNR (s)	None	NPR
400	16/08/2013	<i>terrestris</i>	m	1	<i>Centaurea debeauxii</i>	SS792803	Kenfig NNR (s)	None	NPR
401	16/08/2013	<i>terrestris</i>	w	3	<i>Centaurea debeauxii</i>	SS792803	Kenfig NNR (s)	None	NPR
402	16/08/2013	<i>campestris</i>	m	1	<i>Centaurea debeauxii</i>	SS792803	Kenfig NNR (s)	None	NPR
403	16/08/2013	<i>humilis</i>	q	1	<i>Centaurea debeauxii</i>	SS792803	Kenfig NNR (s)	None	NPR
404	16/08/2013	<i>pascuorum</i>	q	1	<i>Centaurea debeauxii</i>	SS792803	Kenfig NNR (s)	None	NPR
405	16/08/2013	<i>lapidarius</i>	m	1	<i>Centaurea debeauxii</i>	SS792803	Kenfig NNR (s)	None	NPR
406	16/08/2013	<i>terrestris</i>	m	1	<i>Eryngium maritimum</i>	SS789802	Kenfig NNR (s)	None	NPR
407	16/08/2013	<i>terrestris</i>	w	3	<i>Eryngium maritimum</i>	SS789802	Kenfig NNR (s)	None	NPR
408	16/08/2013	<i>pascuorum</i>	q	1	<i>Carlina vulgaris</i>	SS790797	Sker	cattle grazing	NPR
409	16/08/2013	<i>lapidarius</i>	w	1	<i>Carlina vulgaris</i>	SS790797	Sker	cattle grazing	NPR
410	16/08/2013	<i>lapidarius</i>	m	2	<i>Carlina vulgaris</i>	SS790797	Sker	cattle grazing	NPR
411	16/08/2013	<i>lapidarius</i>	q	1	<i>Carlina vulgaris</i>	SS790797	Sker	cattle grazing	NPR
412	16/08/2013	<i>terrestris</i>	q	1	<i>Leontodon hispidis</i>	SS793796	Sker	cattle grazing	NPR
413	16/08/2013	<i>terrestris</i>	w	2	<i>Leontodon hispidis</i>	SS793796	Sker	cattle grazing	NPR
414	16/08/2013	<i>lapidarius</i>	w	4	<i>Leontodon hispidis</i>	SS793796	Sker	cattle grazing	NPR
415	16/08/2013	<i>lapidarius</i>	w	1	<i>Carduus nutans</i>	SS793796	Sker	cattle grazing	NPR
416	16/08/2013	<i>pratense</i>	q	1	<i>Leontodon hispidis</i>	SS789798	Sker	cattle grazing	NPR
417	16/08/2013	<i>lapidarius</i>	w	1	<i>Leontodon hispidis</i>	SS789798	Sker	cattle grazing	NPR
418	16/08/2013	<i>lapidarius</i>	m	1	<i>Rubus caesius</i>	SS788804	Kenfig NNR (s)	None	NPR
419	16/08/2013	<i>lapidarius</i>	w	1	<i>Rubus caesius</i>	SS788804	Kenfig NNR (s)	None	NPR
420	16/08/2013	<i>pascuorum</i>	q	1	<i>Rubus caesius</i>	SS788804	Kenfig NNR (s)	None	NPR
421	16/08/2013	<i>terrestris</i>	w	3	<i>Rubus caesius</i>	SS788804	Kenfig NNR (s)	None	NPR
422	16/08/2013	<i>terrestris</i>	m	1	<i>Eryngium maritimum</i>	SS788804	Kenfig NNR (s)	None	NPR
423	16/08/2013	<i>terrestris</i>	w	5	<i>Eryngium maritimum</i>	SS788804	Kenfig NNR (s)	None	NPR
424	16/08/2013	<i>pascuorum</i>	w	1	<i>Rubus fruticosus agg.</i>	SS796810	Kenfig NNR (s)	None	NPR
425	16/08/2013	<i>pascuorum</i>	q	1	<i>Rubus fruticosus agg.</i>	SS796810	Kenfig NNR (s)	None	NPR
426	16/08/2013	<i>lapidarius</i>	m	1	<i>Rubus fruticosus agg.</i>	SS796810	Kenfig NNR (s)	None	NPR
427	16/08/2013	<i>lapidarius</i>	u	1	<i>Rubus fruticosus agg.</i>	SS796810	Kenfig NNR (s)	None	NPR
428	16/08/2013	<i>terrestris</i>	w	1	<i>Rubus fruticosus agg.</i>	SS796810	Kenfig NNR (s)	None	NPR
429	16/08/2013	<i>pascuorum</i>	w	2	<i>Centaurea nigra agg.</i>	SS796811	Kenfig NNR (s)	None	NPR
430	16/08/2013	<i>lapidarius</i>	m	1	<i>Centaurea nigra agg.</i>	SS796811	Kenfig NNR (s)	None	NPR

431	16/08/2013	<i>terrestris</i>	w	2	<i>Rubus fruticosus agg.</i>	SS796811	Kenfig NNR (s)	None	NPR
432	16/08/2013	<i>pascuorum</i>	q	1	<i>Trifolium pratense</i>	SS795811	Kenfig NNR (s)	None	NPR
433	16/08/2013	<i>pascuorum</i>	w	3	<i>Trifolium pratense</i>	SS795811	Kenfig NNR (s)	None	NPR
434	16/08/2013	<i>humilis</i>	w	1	<i>Trifolium pratense</i>	SS795811	Kenfig NNR (s)	None	NPR
435	16/08/2013	<i>pascuorum</i>	w	1	<i>Odontites vernus</i>	SS795811	Kenfig NNR (s)	None	NPR
436	16/08/2013	<i>lapidarius</i>	w	1	<i>Calluna vulgaris</i>	SS798810	Kenfig NNR (s)	None	NPR
437	16/08/2013	<i>lapidarius</i>	u	1	<i>Calluna vulgaris</i>	SS798810	Kenfig NNR (s)	None	NPR
438	16/08/2013	<i>terrestris</i>	w	1	<i>Calluna vulgaris</i>	SS798810	Kenfig NNR (s)	None	NPR
439	21/08/2013	<i>pascuorum</i>	m	1	<i>Buddleja davidii</i>	SS786856	TATA steelworks, Port Talbot	None	BS
440	21/08/2013	<i>lapidarius</i>	m	1	<i>Buddleja davidii</i>	SS786855	TATA steelworks, Port Talbot	None	BS
441	21/08/2013	<i>pascuorum</i>	u	1	<i>Clematis vitalba</i>	SS773864	TATA steelworks, Port Talbot	None	BS
442	21/08/2013	<i>pascuorum</i>	u	1	<i>Coincya monensis subsp. cheiranthos</i>	SS772863	TATA steelworks, Port Talbot	None	BS
443	21/08/2013	<i>lapidarius</i>	m	5	<i>Hirschfeldia incana</i>	SS774863	TATA steelworks, Port Talbot	None	BS
444	21/08/2013	<i>lapidarius</i>	w	3	<i>Hirschfeldia incana</i>	SS774863	TATA steelworks, Port Talbot	None	BS
445	21/08/2013	<i>humilis</i>	m	1	<i>Lythrum salicaria</i>	SS770862	TATA steelworks, Port Talbot	None	BS
446	21/08/2013	<i>humilis</i>	w	7	<i>Lythrum salicaria</i>	SS770862	TATA steelworks, Port Talbot	None	BS
447	21/08/2013	<i>pascuorum</i>	u	1	<i>Rubus caesius</i>	SS770862	TATA steelworks, Port Talbot	None	BS
448	21/08/2013	<i>lapidarius</i>	m	2	<i>Centaurea debeauxii</i>	SS765887	TATA steelworks, Port Talbot	None	BS
449	21/08/2013	<i>lapidarius</i>	w	1	<i>Centaurea debeauxii</i>	SS765887	TATA steelworks, Port Talbot	None	BS
450	21/08/2013	<i>humilis</i>	u	2	<i>Centaurea debeauxii</i>	SS765887	TATA steelworks, Port Talbot	None	BS
451	21/08/2013	<i>pascuorum</i>	u	1	<i>Rubus caesius</i>	SS766887	TATA steelworks, Port Talbot	None	BS
452	21/08/2013	<i>pascuorum</i>	u	1	<i>Centaurea debeauxii</i>	SS766887	TATA steelworks, Port Talbot	None	BS
453	21/08/2013	<i>terrestris</i>	u	3	<i>Linaria vulgaris</i>	SS766887	TATA steelworks, Port Talbot	None	BS
454	21/08/2013	<i>terrestris</i>	u	1	<i>Mellilotus altissimus</i>	SS766887	TATA steelworks, Port Talbot	None	BS
455	21/08/2013	<i>Apis mellifera</i>	w	1	<i>Mellilotus altissimus</i>	SS764888	TATA steelworks, Port Talbot	None	BS
456	21/08/2013	<i>pascuorum</i>	u	3	<i>Odontites vernus</i>	SS764887	TATA steelworks, Port Talbot	None	BS
457	21/08/2013	<i>pratorum</i>	w	3	<i>Odontites vernus</i>	SS764887	TATA steelworks, Port Talbot	None	BS
458	21/08/2013	<i>lucorum</i>	w	3	<i>Odontites vernus</i>	SS764887	TATA steelworks, Port Talbot	None	BS
459	21/08/2013	<i>humilis</i>	w	1	<i>Vicia cracca</i>	SS764887	TATA steelworks, Port Talbot	None	BS
460	21/08/2013	<i>lapidarius</i>	m	1	<i>Senecio jacobaea</i>	SS764887	TATA steelworks, Port Talbot	None	BS
461	21/08/2013	<i>pascuorum</i>	w	1	<i>Odontites vernus</i>	SS763887	TATA steelworks, Port Talbot	None	BS
462	21/08/2013	<i>pascuorum</i>	w	3	<i>Mentha aquatica</i>	SS763887	TATA steelworks, Port Talbot	None	BS
463	21/08/2013	<i>lapidarius</i>	w	1	<i>Picris hieracioides</i>	SS763887	TATA steelworks, Port Talbot	None	BS
464	21/08/2013	<i>lapidarius</i>	m	1	<i>Mentha aquatica</i>	SS763887	TATA steelworks, Port Talbot	None	BS

465	21/08/2013	<i>terrestris</i>	w	1	<i>Eupatorium cannabinum</i>	SS763887	TATA steelworks, Port Talbot	None	BS
466	21/08/2013	<i>humilis</i>	w	1	<i>Mentha aquatica</i>	SS763887	TATA steelworks, Port Talbot	None	BS
467	21/08/2013	<i>pratorum</i>	w	2	<i>Mentha aquatica</i>	SS763887	TATA steelworks, Port Talbot	None	BS
468	21/08/2013	<i>hortorum</i>	w	1	<i>Linaria vulgaris</i>	SS763887	TATA steelworks, Port Talbot	None	BS
469	21/08/2013	<i>terrestris</i>	w	1	<i>Rosa rugosa</i>	SS757886	TATA steelworks, Port Talbot	None	BS
470	21/08/2013	<i>lapidarius</i>	m	1	<i>Picris hieracioides</i>	SS754885	TATA steelworks, Port Talbot	None	BS
471	21/08/2013	<i>terrestris</i>	q	1	<i>Linaria vulgaris</i>	SS754885	TATA steelworks, Port Talbot	None	BS
472	21/08/2013	<i>lucorum</i>	m	1	<i>Chamerion angustifolium</i>	SS757873	TATA steelworks, Port Talbot	None	BS
473	21/08/2013	<i>muscorum</i>	m	2	<i>Chamerion angustifolium</i>	SS757874	TATA steelworks, Port Talbot	None	BS
474	21/08/2013	<i>terrestris</i>	u	1	<i>Chamerion angustifolium</i>	SS757874	TATA steelworks, Port Talbot	None	BS
475	21/08/2013	<i>lapidarius</i>	m	1	<i>Chamerion angustifolium</i>	SS757874	TATA steelworks, Port Talbot	None	BS
476	21/08/2013	<i>lucorum</i>	m	2	<i>Chamerion angustifolium</i>	SS756874	TATA steelworks, Port Talbot	None	BS
477	21/08/2013	<i>lucorum</i>	w	6	<i>Chamerion angustifolium</i>	SS756874	TATA steelworks, Port Talbot	None	BS
478	21/08/2013	<i>terrestris</i>	u	2	<i>Chamerion angustifolium</i>	SS756874	TATA steelworks, Port Talbot	None	BS
479	21/08/2013	<i>terrestris</i>	u	4	<i>Linaria vulgaris</i>	SS756874	TATA steelworks, Port Talbot	None	BS
480	19/08/2013	<i>pascuorum</i>	w	1	<i>Trifolium pratense</i>	SS774880	TATA steelworks, Port Talbot	None	BS
481	19/08/2013	<i>lapidarius</i>	w	1	<i>Coincya monensis subsp. cheiranthos</i>	SS775879	TATA steelworks, Port Talbot	None	BS
482	19/08/2013	<i>hortorum</i>	m	1	<i>Rubus fruticosus agg.</i>	SS775879	TATA steelworks, Port Talbot	None	BS
483	19/08/2013	<i>pascuorum</i>	w	1	<i>Odontites vernus</i>	SS775879	TATA steelworks, Port Talbot	None	BS
484	19/08/2013	<i>terrestris</i>	w	1	<i>Picris hieracioides</i>	SS754881	TATA steelworks, Port Talbot	None	BS
485	19/08/2013	<i>pascuorum</i>	w	1	<i>Picris hieracioides</i>	SS754881	TATA steelworks, Port Talbot	None	BS
486	19/08/2013	<i>pascuorum</i>	w	1	<i>Trifolium pratense</i>	SS766891	Port Talbot Dock	None	BS
487	19/08/2013	<i>pascuorum</i>	w	1	<i>Melilotus officinalis</i>	SS766891	Port Talbot Dock	None	BS
488	19/08/2013	<i>lapidarius</i>	m	1	<i>Centaurea debeauxii</i>	SS766891	Port Talbot Dock	None	BS
489	19/08/2013	<i>lapidarius</i>	m	1	<i>Pulicaria dysenterica</i>	SS766891	Port Talbot Dock	None	BS
490	19/08/2013	<i>terrestris</i>	w	1	<i>Centaurea debeauxii</i>	SS766891	Port Talbot Dock	None	BS
491	19/08/2013	<i>lapidarius</i>	m	1	<i>Coincya monensis subsp. cheiranthos</i>	SS766892	Port Talbot Dock	None	BS
492	19/08/2013	<i>pascuorum</i>	w	1	<i>Securigera varia</i>	SS766892	Port Talbot Dock	None	BS
493	19/08/2013	<i>terrestris</i>	w	4	<i>Buddleja davidii</i>	SS767892	Port Talbot Dock	None	BS
494	19/08/2013	<i>terrestris</i>	w	1	<i>Coincya monensis subsp. cheiranthos</i>	SS767892	Port Talbot Dock	None	BS
495	19/08/2013	<i>pascuorum</i>	w	1	<i>Linaria repens</i>	SS767892	Port Talbot Dock	None	BS
496	19/08/2013	<i>lapidarius</i>	m	1	<i>Verbena officinalis</i>	SS767892	Port Talbot Dock	None	BS
497	19/08/2013	<i>pascuorum</i>	u	1	<i>Buddleja davidii</i>	SS759895	Port Talbot Dock	None	BS
498	19/08/2013	<i>terrestris</i>	u	9	<i>Buddleja davidii</i>	SS759895	Port Talbot Dock	None	BS

499	19/08/2013	<i>humilis</i>	w	1	<i>Odontites vernus</i>	SS760894	Port Talbot Dock	None	BS
<b>500</b>	19/08/2013	<b><i>sylvarum</i></b>	u	1	<i>Odontites vernus</i>	SS7598089556	Port Talbot Dock	None	BS
501	19/08/2013	<i>pascuorum</i>	w	2	<i>Odontites vernus</i>	SS759895	Port Talbot Dock	None	BS
502	19/08/2013	<i>lapidarius</i>	m	1	<i>Centaurea debeauxii</i>	SS759895	Port Talbot Dock	None	BS
503	19/08/2013	<i>terrestris</i>	u	8	<i>Buddleja davidii</i>	SS763896	Port Talbot Dock	None	BS
<b>504</b>	19/08/2013	<b><i>sylvarum</i></b>	w	1	<i>Odontites vernus</i>	SS7629489619	Port Talbot Dock	None	BS
505	19/08/2013	<i>lapidarius</i>	m	1	<i>Odontites vernus</i>	SS762896	Port Talbot Dock	None	BS
506	19/08/2013	<i>humilis</i>	u	1	<i>Odontites vernus</i>	SS763897	Port Talbot Dock	None	BS
507	22/08/2013	<i>pascuorum</i>	u	3	<i>Vicia cracca</i>	SS777848	TATA steelworks, Port Talbot	None	BS
508	22/08/2013	<i>pascuorum</i>	u	1	<i>Lathyrus pratensis</i>	SS777848	TATA steelworks, Port Talbot	None	BS
509	22/08/2013	<i>pascuorum</i>	u	4	<i>Odontites vernus</i>	SS776847	Margam Moors	ungrazed	BS
<b>510</b>	22/08/2013	<b><i>sylvarum</i></b>	w	2	<i>Odontites vernus</i>	SS7769884710	Margam Moors	ungrazed	BS
<b>511</b>	22/08/2013	<b><i>sylvarum</i></b>	w	1	<i>Lotus pedunculatus</i>	SS7769884710	Margam Moors	ungrazed	BS
512	22/08/2013	<i>lapidarius</i>	w	1	<i>Pulicaria dysenterica</i>	SS776847	Margam Moors	ungrazed	BS
513	22/08/2013	<i>pascuorum</i>	u	8	<i>Odontites vernus</i>	SS777846	Margam Moors	ungrazed	BS
514	22/08/2013	<i>pratorum</i>	w	7	<i>Odontites vernus</i>	SS777846	Margam Moors	ungrazed	BS
<b>515</b>	22/08/2013	<b><i>sylvarum</i></b>	w	2	<i>Odontites vernus</i>	SS7774584663	Margam Moors	ungrazed	BS
516	22/08/2013	<i>pascuorum</i>	w	1	<i>Echium vulgare</i>	SS777845	Margam Moors	ungrazed	BS
517	22/08/2013	<i>lucorum</i>	w	1	<i>Ononis repens</i>	SS776845	Margam Moors	ungrazed	BS
518	22/08/2013	<i>hortorum</i>	w	1	<i>Echium vulgare</i>	SS775846	Margam Moors	ungrazed	BS
519	22/08/2013	<i>pascuorum</i>	w	2	<i>Echium vulgare</i>	SS775846	Margam Moors	ungrazed	BS
520	22/08/2013	<i>humilis</i>	w	2	<i>Echium vulgare</i>	SS775846	Margam Moors	ungrazed	BS
<b>521</b>	22/08/2013	<b><i>sylvarum</i></b>	m	1	<i>Echium vulgare</i>	SS7754684668	Margam Moors	ungrazed	BS
522	22/08/2013	<i>humilis</i>	u	2	<i>Erica cinerea</i>	SS404874	Rhossili headland	cutting	BS
523	22/08/2013	<i>terrestris</i>	w	1	<i>Convolvulus arvensis</i>	SS404874	Rhossili headland	arable	BS
524	22/08/2013	<i>lapidarius</i>	m	1	<i>Sinapis arvensis</i>	SS404874	Rhossili headland	arable	BS
525	22/08/2013	<i>terrestris</i>	q	1	<i>Convolvulus arvensis</i>	SS404874	Rhossili headland	arable	BS
<b>526</b>	28/08/2013	<b><i>sylvarum</i></b>	w	1	<i>Odontites vernus</i>	SS8042682736	Kenfig NNR	ungrazed	SH
<b>527</b>	28/08/2013	<b><i>sylvarum</i></b>	w	1	<i>Odontites vernus</i>	SS7992482504	Kenfig NNR	ungrazed	SH
<b>528</b>	28/08/2013	<b><i>sylvarum</i></b>	w	1	<i>Odontites vernus</i>	SS7982682388	Kenfig NNR	ungrazed	SH
<b>529</b>	28/08/2013	<b><i>sylvarum</i></b>	w	3	<i>Odontites vernus</i>	SS8045182519	Kenfig NNR	ungrazed	SH
530	25/08/2013	<i>Apis mellifera</i>	w	3	<i>Mentha aquatica</i>	SS750915	Baglan Moors	unmanaged	BS
531	25/08/2013	<i>terrestris</i>	w	1	<i>Mentha aquatica</i>	SS750915	Baglan Moors	unmanaged	BS
532	25/08/2013	<i>pascuorum</i>	w	1	<i>Centaurea debeauxii</i>	SS749914	Baglan Moors	unmanaged	BS

533	25/08/2013	<i>lucorum</i>	w	2	<i>Centaurea debeauxii</i>	SS749914	Baglan Moors	unmanaged	BS
534	25/08/2013	<i>lapidarius</i>	w	2	<i>Centaurea debeauxii</i>	SS749914	Baglan Moors	unmanaged	BS
535	25/08/2013	<i>lucorum</i>	w	4	<i>Centaurea debeauxii</i>	SS749915	Baglan Moors	unmanaged	BS
536	25/08/2013	<i>pascuorum</i>	u	1	<i>Centaurea debeauxii</i>	SS749915	Baglan Moors	unmanaged	BS
537	25/08/2013	<i>lapidarius</i>	m	2	<i>Centaurea debeauxii</i>	SS749915	Baglan Moors	unmanaged	BS
538	25/08/2013	<i>lapidarius</i>	w	1	<i>Centaurea debeauxii</i>	SS749915	Baglan Moors	unmanaged	BS
539	25/08/2013	<i>lucorum</i>	w	1	<i>Odontites vernus</i>	SS749916	Baglan Moors	unmanaged	BS
540	25/08/2013	<i>pascuorum</i>	u	1	<i>Odontites vernus</i>	SS748917	Baglan Moors	unmanaged	BS
541	25/08/2013	<i>lucorum</i>	w	3	<i>Mentha aquatica</i>	SS747916	Baglan Moors	unmanaged	BS
542	25/08/2013	<i>lapidarius</i>	m	3	<i>Centaurea debeauxii</i>	SS747916	Baglan Moors	unmanaged	BS
543	25/08/2013	<i>lapidarius</i>	w	3	<i>Centaurea debeauxii</i>	SS747916	Baglan Moors	unmanaged	BS
544	25/08/2013	<i>pascuorum</i>	m	1	<i>Odontites vernus</i>	SS747916	Baglan Moors	unmanaged	BS
545	25/08/2013	<i>pascuorum</i>	w	4	<i>Odontites vernus</i>	SS747916	Baglan Moors	unmanaged	BS
546	25/08/2013	<i>jonellus</i>	w	5	<i>Centaurea debeauxii</i>	SS747916	Baglan Moors	unmanaged	BS
<b>547</b>	25/08/2013	<b><i>sylvarum</i></b>	m	1	<i>Odontites vernus</i>	SS7478291630	Baglan Moors	unmanaged	BS
<b>548</b>	25/08/2013	<b><i>sylvarum</i></b>	w	1	<i>Odontites vernus</i>	SS7474491562	Baglan Moors	unmanaged	BS
549	25/08/2013	<i>pascuorum</i>	u	3	<i>Vicia cracca</i>	SS747916	Baglan Moors	unmanaged	BS
550	25/08/2013	<i>pascuorum</i>	u	1	<i>Odontites vernus</i>	SS747916	Baglan Moors	unmanaged	BS
551	25/08/2013	<i>humilis</i>	m	1	<i>Centaurea debeauxii</i>	SS747916	Baglan Moors	unmanaged	BS
552	25/08/2013	<i>lucorum</i>	w	1	<i>Melilotus altissimus</i>	SS749913	Baglan Moors	unmanaged	BS
553	25/08/2013	<i>Apis mellifera</i>	w	4	<i>Melilotus altissimus</i>	SS749913	Baglan Moors	unmanaged	BS
554	25/08/2013	<i>terrestris</i>	w	1	<i>Buddleja davidii</i>	SS738917	BP entrance area	unmanaged	BS
555	25/08/2013	<i>lapidarius</i>	w	2	<i>Hirschfeldia incana</i>	SS738918	BP entrance area	unmanaged	BS
556	25/08/2013	<i>terrestris</i>	w	1	<i>Odontites vernus</i>	SS738918	BP entrance area	unmanaged	BS
557	25/08/2013	<i>lucorum</i>	w	1	<i>Thymus polytrichus</i>	SS740918	BP entrance area	unmanaged	BS
558	25/08/2013	<i>pascuorum</i>	u	3	<i>Odontites vernus</i>	SS740919	BP entrance area	unmanaged	BS
559	25/08/2013	<i>pascuorum</i>	w	1	<i>Rubus caesius</i>	SS740919	BP entrance area	unmanaged	BS
560	25/08/2013	<i>lucorum</i>	w	1	<i>Odontites vernus</i>	SS740919	BP entrance area	unmanaged	BS
561	25/08/2013	<i>pascuorum</i>	u	1	<i>Odontites vernus</i>	SS741920	BP entrance area	unmanaged	BS
562	25/08/2013	<i>lapidarius</i>	w	1	<i>Odontites vernus</i>	SS741920	BP entrance area	unmanaged	BS
563	25/08/2013	<i>muscorum</i>	w	2	<i>Odontites vernus</i>	SS741920	BP entrance area	unmanaged	BS
564	25/08/2013	<i>lucorum</i>	w	1	<i>Odontites vernus</i>	SS741920	BP entrance area	unmanaged	BS
565	25/08/2013	<i>Apis mellifera</i>	w	7	<i>Calluna vulgaris</i>	SS773899	Port Talbot hillside	unmanaged	BS
566	25/08/2013	<i>humilis</i>	w	1	<i>Buddleja davidii</i>	SS766894	Port Talbot Dock	unmanaged	BS

567	25/08/2013	<i>lapidarius</i>	w	1	<i>Hirschfeldia incana</i>	SS766895	Port Talbot Dock	unmanaged	BS
568	25/08/2013	<i>lapidarius</i>	w	1	<i>Lotus corniculatus</i>	SS766895	Port Talbot Dock	unmanaged	BS
569	25/08/2013	<i>Apis mellifera</i>	w	3	<i>Buddleja davidii</i>	SS766895	Port Talbot Dock	unmanaged	BS
570	25/08/2013	<i>pascuorum</i>	u	2	<i>Odontites vernus</i>	SS766895	Port Talbot Dock	unmanaged	BS
571	25/08/2013	<i>pascuorum</i>	u	1	<i>Geranium pyrenaicum</i>	SS765895	Port Talbot Dock	unmanaged	BS
572	25/08/2013	<i>pascuorum</i>	u	9	<i>Odontites vernus</i>	SS765895	Port Talbot Dock	unmanaged	BS
573	25/08/2013	<i>pascuorum</i>	u	2	<i>Echium vulgare</i>	SS765895	Port Talbot Dock	unmanaged	BS
574	25/08/2013	<i>pratorum</i>	w	1	<i>Odontites vernus</i>	SS765895	Port Talbot Dock	unmanaged	BS
575	25/08/2013	<i>pascuorum</i>	u	1	<i>Lotus corniculatus</i>	SS766895	Port Talbot Dock	unmanaged	BS
576	25/08/2013	<i>pratorum</i>	w	1	<i>Odontites vernus</i>	SS765894	Port Talbot Dock	unmanaged	BS
577	25/08/2013	<i>pascuorum</i>	u	3	<i>Odontites vernus</i>	SS765894	Port Talbot Dock	unmanaged	BS
578	25/08/2013	<i>pascuorum</i>	w	1	<i>Lotus corniculatus</i>	SS765894	Port Talbot Dock	unmanaged	BS
579	26/08/2013	<i>lapidarius</i>	m	3	<i>Centaurea debeauxii</i>	SS957674	Col-huw cliff	unmanaged	BS
580	26/08/2013	<i>lapidarius</i>	w	2	<i>Centaurea debeauxii</i>	SS957674	Col-huw cliff	unmanaged	BS
<b>581</b>	11/08/2013	<b><i>sylvarum</i></b>	w	1	<i>Carduus nutans</i>	SS8011781034	Kenfig NNR	cut occasionally	DGC
582	28/08/2013	<i>barbutellus</i>	m	1	<i>Carduus nutans</i>	SS801810	Kenfig NNR	cut occasionally	BS,SH
583	28/08/2013	<i>pascuorum</i>	u	1	<i>Carduus nutans</i>	SS801810	Kenfig NNR	cut occasionally	BS,SH
584	28/08/2013	<i>lapidarius</i>	m	1	<i>Carduus nutans</i>	SS801810	Kenfig NNR	cut occasionally	BS,SH
585	28/08/2013	<i>lapidarius</i>	w	5	<i>Carduus nutans</i>	SS801810	Kenfig NNR	cut occasionally	BS,SH
<b>586</b>	28/08/2013	<b><i>sylvarum</i></b>	u	6	<i>Odontites vernus</i>	SS796830	Kenfig Marshalling Yard	horse grazing	BS,SH
<b>587</b>	28/08/2013	<b><i>sylvarum</i></b>	w	4	<i>Odontites vernus</i>	SS7962283119	Kenfig Marshalling Yard	horse grazing	BS,SH
<b>588</b>	28/08/2013	<b><i>sylvarum</i></b>	w	1	<i>Impatiens glandulifera</i>	SS7960883129	Kenfig Marshalling Yard	horse grazing	BS,SH
<b>589</b>	28/08/2013	<b><i>sylvarum</i></b>	w	1	<i>Lythrum salicaria</i>	SS7969583078	Kenfig Marshalling Yard	horse grazing	BS,SH
<b>590</b>	28/08/2013	<b><i>sylvarum</i></b>	w	1	<i>Trifolium repens</i>	SS7969583078	Kenfig Marshalling Yard	horse grazing	BS,SH
<b>591</b>	28/08/2013	<b><i>sylvarum</i></b>	u	15	<i>Odontites vernus</i>	SS7975883060	Kenfig Marshalling Yard	horse grazing	BS,SH
<b>592</b>	28/08/2013	<b><i>sylvarum</i></b>	w	2	<i>Odontites vernus</i>	SS7974683049	Kenfig Marshalling Yard	horse grazing	BS,SH
593	28/08/2013	<i>terrestris</i>	u	1	<i>Chamerion angustifolium</i>	SS811824	Kenfig NNR (e.of Water St)	unmanaged	BS,SH
594	28/08/2013	<i>Apis mellifera</i>	w	5	<i>Chamerion angustifolium</i>	SS811824	Kenfig NNR (e.of Water St)	unmanaged	BS,SH
595	28/08/2013	<i>pascuorum</i>	u	1	<i>Chamerion angustifolium</i>	SS811824	Kenfig NNR (e.of Water St)	unmanaged	BS,SH
596	28/08/2013	<i>pascuorum</i>	u	1	<i>Impatiens glandulifera</i>	SS811823	Kenfig NNR (e.of Water St)	unmanaged	BS,SH
597	28/08/2013	<i>Apis mellifera</i>	w	10	<i>Impatiens glandulifera</i>	SS811823	Kenfig NNR (e.of Water St)	unmanaged	BS,SH
598	28/08/2013	<i>terrestris</i>	u	2	<i>Impatiens glandulifera</i>	SS811823	Kenfig NNR (e.of Water St)	unmanaged	BS,SH
599	28/08/2013	<i>lapidarius</i>	u	2	<i>Impatiens glandulifera</i>	SS811823	Kenfig NNR (e.of Water St)	unmanaged	BS,SH
600	28/08/2013	<i>humilis</i>	u	1	<i>Impatiens glandulifera</i>	SS811823	Kenfig NNR (e.of Water St)	unmanaged	BS,SH

601	28/08/2013	<i>lapidarius</i>	w	1	<i>Hypochaeris radicata</i>	SS809824	Kenfig NNR (e.of Water St)	unmanaged	BS,SH
602	31/08/2013	<i>lucorum</i>	w	2	<i>Succisa pratensis</i>	SS712931	Crymlyn Burrows	unmanaged	BS
603	31/08/2013	<i>lucorum</i>	w	1	<i>Succisa pratensis</i>	SS712932	Crymlyn Burrows	unmanaged	BS
604	31/08/2013	<i>runderarius</i>	m	1	<i>Succisa pratensis</i>	SS712932	Crymlyn Burrows	unmanaged	BS
605	31/08/2013	<i>pascuorum</i>	u	2	<i>Succisa pratensis</i>	SS712932	Crymlyn Burrows	unmanaged	BS
606	31/08/2013	<i>pascuorum</i>	u	1	<i>Rubus caesius</i>	SS712932	Crymlyn Burrows	unmanaged	BS
607	31/08/2013	<i>humilis</i>	w	1	<i>Succisa pratensis</i>	SS712932	Crymlyn Burrows	unmanaged	BS
608	31/08/2013	<i>humilis</i>	w	4	<i>Clematis tangutica</i>	SS717927	Crymlyn Burrows	unmanaged	BS
609	31/08/2013	<i>terrestris</i>	w	1	<i>Clematis tangutica</i>	SS717927	Crymlyn Burrows	unmanaged	BS
610	31/08/2013	<i>humilis</i>	w	1	<i>Buddleja davidii</i>	SS714933	Crymlyn Burrows	unmanaged	BS
611	31/08/2013	<i>pascuorum</i>	w	1	<i>Hirschfeldia incana</i>	SS714933	Crymlyn Burrows	unmanaged	BS
612	31/08/2013	<i>terrestris</i>	w	1	<i>Rubus caesius</i>	SS714933	Crymlyn Burrows	unmanaged	BS
613	31/08/2013	<i>jonellus</i>	w	1	<i>Solidago virgaurea</i>	SS713932	Crymlyn Burrows	unmanaged	BS
614	31/08/2013	<i>lapidarius</i>	m	1	<i>Solidago virgaurea</i>	SS713932	Crymlyn Burrows	unmanaged	BS
615	31/08/2013	<i>terrestris</i>	w	1	<i>Linaria vulgaris</i>	SS713932	Crymlyn Burrows	unmanaged	BS
616	31/08/2013	<i>pascuorum</i>	w	1	<i>Linaria vulgaris</i>	SS713932	Crymlyn Burrows	unmanaged	BS
617	03/09/2013	<i>terrestris</i>	m	1	<i>Buddleja davidii</i>	SS717937	Earlswood golf course	occasional cutting	BS
618	03/09/2013	<i>pascuorum</i>	w	3	<i>Vicia cracca</i>	SS715933	Amazon roundabout area	occasional cutting	BS
619	03/09/2013	<i>humilis</i>	w	1	<i>Vicia cracca</i>	SS715933	Amazon roundabout area	occasional cutting	BS
620	03/09/2013	<i>terrestris</i>	u	1	<i>Buddleja davidii</i>	SS714933	Amazon roundabout area	occasional cutting	BS
621	03/09/2013	<i>pascuorum</i>	u	6	<i>Stachys palustris</i>	SS714934	Amazon roundabout area	occasional cutting	BS
622	03/09/2013	<i>pascuorum</i>	u	13	<i>Vicia cracca</i>	SS712935	Amazon roundabout area	occasional cutting	BS
623	03/09/2013	<i>humilis</i>	w	2	<i>Vicia cracca</i>	SS713935	Amazon roundabout area	occasional cutting	BS
624	03/09/2013	<i>pascuorum</i>	w	2	<i>Vicia cracca</i>	SS715934	Amazon roundabout area	occasional cutting	BS
625	04/09/2013	<i>pascuorum</i>	u	4	<i>Odontites vernus</i>	SS774882	TATA steelworks, Port Talbot	unmanaged	BS
626	04/09/2013	<i>terrestris</i>	w	3	<i>Odontites vernus</i>	SS774882	TATA steelworks, Port Talbot	unmanaged	BS
627	04/09/2013	<i>pascuorum</i>	u	1	<i>Trifolium pratense</i>	SS774882	TATA steelworks, Port Talbot	unmanaged	BS
628	04/09/2013	<i>pascuorum</i>	u	1	<i>Odontites vernus</i>	SS774881	TATA steelworks, Port Talbot	unmanaged	BS
629	04/09/2013	<i>pascuorum</i>	u	26	<i>Echium vulgare</i>	SS780851	Margam Moors	grazed	BS
630	04/09/2013	<i>hortorum</i>	m	1	<i>Echium vulgare</i>	SS780851	Margam Moors	grazed	BS
631	04/09/2013	<i>hortorum</i>	q	1	<i>Echium vulgare</i>	SS780851	Margam Moors	grazed	BS
632	04/09/2013	<i>barbutellus</i>	m	2	<i>Echium vulgare</i>	SS780851	Margam Moors	grazed	BS
633	04/09/2013	<i>humilis</i>	u	8	<i>Echium vulgare</i>	SS780851	Margam Moors	grazed	BS
634	04/09/2013	<i>terrestris</i>	u	7	<i>Echium vulgare</i>	SS780851	Margam Moors	grazed	BS



635	04/09/2013	<i>pratorum</i>	q	1	<i>Echium vulgare</i>	SS780851	Margam Moors	grazed	BS
636	04/09/2013	<i>lapidarius</i>	m	2	<i>Echium vulgare</i>	SS780851	Margam Moors	grazed	BS
637	04/09/2013	<i>lucorum</i>	q	1	<i>Echium vulgare</i>	SS780851	Margam Moors	grazed	BS
638	04/09/2013	<i>campestris</i>	m	4	<i>Echium vulgare</i>	SS780851	Margam Moors	grazed	BS
639	04/09/2013	<i>campestris</i>	q	2	<i>Echium vulgare</i>	SS780851	Margam Moors	grazed	BS
640	04/09/2013	<i>pascuorum</i>	u	3	<i>Odontites vernus</i>	SS779843	Margam Moors	grazed	BS
641	04/09/2013	<i>pascuorum</i>	w	1	<i>Odontites vernus</i>	SS779842	Margam Moors	grazed	BS
642	04/09/2013	<i>pascuorum</i>	w	1	<i>Centaurea debeauxii</i>	SS784843	Margam Moors	grazed	BS
643	04/09/2013	<i>humilis</i>	w	1	<i>Lotus corniculatus</i>	SS771852	TATA steelworks, Port Talbot	unmanaged	BS
644	05/09/2013	<i>lapidarius</i>	w	1	<i>Hirschfeldia incana</i>	SS767893	Port Talbot	unmanaged	BS
645	05/09/2013	<i>pascuorum</i>	w	1	<i>Chaenorhinum minus</i>	SS768893	Port Talbot	unmanaged	BS
<b>646</b>	05/09/2013	<b><i>sylvarum</i></b>	q	1	<i>Trifolium pratense</i>	SS7683789311	Port Talbot	unmanaged	BS
647	05/09/2013	<i>barbutellus</i>	m	1	<i>Trifolium pratense</i>	SS768892	Port Talbot	unmanaged	BS
648	05/09/2013	<i>pascuorum</i>	u	1	<i>Trifolium pratense</i>	SS768892	Port Talbot	unmanaged	BS
649	05/09/2013	<i>pascuorum</i>	u	1	<i>Picris hieracioides</i>	SS768892	Port Talbot	unmanaged	BS
650	05/09/2013	<i>pascuorum</i>	u	1	<i>Rubus caesius</i>	SS769891	Port Talbot	unmanaged	BS
651	05/09/2013	<i>pascuorum</i>	u	6	<i>Odontites vernus</i>	SS769892	Port Talbot	unmanaged	BS
652	05/09/2013	<i>pascuorum</i>	u	2	<i>Verbena officinalis</i>	SS769892	Port Talbot	unmanaged	BS
653	05/09/2013	<i>pascuorum</i>	u	1	<i>Hirschfeldia incana</i>	SS769892	Port Talbot	unmanaged	BS
654	05/09/2013	<i>pascuorum</i>	u	5	<i>Odontites vernus</i>	SS769893	Port Talbot	unmanaged	BS
655	05/09/2013	<i>lucorum</i>	w	1	<i>Picris hieracioides</i>	SS769893	Port Talbot	unmanaged	BS
656	05/09/2013	<i>humilis</i>	w	1	<i>Odontites vernus</i>	SS769893	Port Talbot	unmanaged	BS
657	05/09/2013	<i>pascuorum</i>	u	6	<i>Odontites vernus</i>	SS803811	Kenfig	unmanaged	BS
658	05/09/2013	<i>pascuorum</i>	u	8	<i>Odontites vernus</i>	SS803812	Kenfig	unmanaged	BS
659	05/09/2013	<i>pascuorum</i>	u	11	<i>Odontites vernus</i>	SS803813	Kenfig	unmanaged	BS
660	05/09/2013	<i>lapidarius</i>	w	2	<i>Odontites vernus</i>	SS803813	Kenfig	unmanaged	BS
661	05/09/2013	<i>pascuorum</i>	u	2	<i>Odontites vernus</i>	SS804813	Kenfig	unmanaged	BS
662	05/09/2013	<i>lucorum</i>	w	1	<i>Odontites vernus</i>	SS804813	Kenfig	unmanaged	BS
663	05/09/2013	<i>pascuorum</i>	w	1	<i>Calystegia sepium</i>	SS802813	Kenfig	unmanaged	BS
664	05/09/2013	<i>humilis</i>	w	1	<i>Calystegia sepium</i>	SS802813	Kenfig	unmanaged	BS
665	05/09/2013	<i>humilis</i>	w	1	<i>Epilobium hirsutum</i>	SS802813	Kenfig	unmanaged	BS
666	05/09/2013	<i>terrestris</i>	u	4	<i>Sedum spectabile</i>	SS804810	Kenfig	unmanaged	BS
667	05/09/2013	<i>terrestris</i>	u	1	<i>Fuchsia magellanica</i>	SS804810	Kenfig	unmanaged	BS
668	05/09/2013	<i>terrestris</i>	u	12	<i>Lavandula x intermedia</i>	SS804810	Kenfig	unmanaged	BS

669	05/09/2013	<i>lapidarius</i>	m	8	<i>Lavandula x intermedia</i>	SS804810	Kenfig	unmanaged	BS
670	05/09/2013	<i>humilis</i>	w	1	<i>Lavandula x intermedia</i>	SS804810	Kenfig	unmanaged	BS
671	05/09/2013	<i>lucorum</i>	m	3	<i>Lavandula x intermedia</i>	SS804810	Kenfig	unmanaged	BS
672	05/09/2013	<i>pascuorum</i>	w	2	<i>Lavandula x intermedia</i>	SS804810	Kenfig	unmanaged	BS
673	05/09/2013	<i>barbutellus</i>	m	1	<i>Carduus nutans</i>	SS801810	Kenfig NNR	cut occasionally	BS
674	07/09/2013	<i>humilis</i>	w	1	<i>Leontodon saxatilis</i>	SS882733	Dunraven	grazed	NPR
675	18/08/2013	<i>lapidarius</i>	w	1	<i>Centaurea nigra agg.</i>	SS802833	Kenfig Ind Est	None	NPR
676	18/08/2013	<i>lapidarius</i>	m	1	<i>Centaurea nigra agg.</i>	SS800832	Kenfig Ind Est	None	NPR
677	18/08/2013	<i>lapidarius</i>	m	5	<i>Centaurea nigra agg.</i>	SS802832	Kenfig Ind Est	None	NPR
678	18/08/2013	<i>lapidarius</i>	w	4	<i>Centaurea nigra agg.</i>	SS802832	Kenfig Ind Est	None	NPR
679	18/08/2013	<i>pascuorum</i>	w	1	<i>Centaurea nigra agg.</i>	SS802832	Kenfig Ind Est	None	NPR
680	18/08/2013	<i>pascuorum</i>	q	1	<i>Centaurea nigra agg.</i>	SS802832	Kenfig Ind Est	None	NPR
681	18/08/2013	<i>terrestris</i>	w	2	<i>Impatiens glandulifera</i>	SS800830	Kenfig Ind Est	None	NPR
682	18/08/2013	<i>terrestris</i>	q	1	<i>Impatiens glandulifera</i>	SS800830	Kenfig Ind Est	None	NPR
683	18/08/2013	<i>lapidarius</i>	m	3	<i>Impatiens glandulifera</i>	SS800830	Kenfig Ind Est	None	NPR
684	18/08/2013	<i>lapidarius</i>	w	2	<i>Impatiens glandulifera</i>	SS800830	Kenfig Ind Est	None	NPR
685	18/08/2013	<i>humilis</i>	q	1	<i>Impatiens glandulifera</i>	SS800830	Kenfig Ind Est	None	NPR
686	18/08/2013	<i>humilis</i>	w	2	<i>Impatiens glandulifera</i>	SS800830	Kenfig Ind Est	None	NPR
687	18/08/2013	<i>pascuorum</i>	w	1	<i>Impatiens glandulifera</i>	SS800830	Kenfig Ind Est	None	NPR
688	18/08/2013	<i>lapidarius</i>	m	1	<i>Impatiens glandulifera</i>	SS799831	Kenfig Ind Est	None	NPR
689	18/08/2013	<i>lapidarius</i>	w	3	<i>Impatiens glandulifera</i>	SS799831	Kenfig Ind Est	None	NPR
690	18/08/2013	<i>terrestris</i>	m	3	<i>Impatiens glandulifera</i>	SS799831	Kenfig Ind Est	None	NPR
691	18/08/2013	<i>terrestris</i>	w	5	<i>Impatiens glandulifera</i>	SS799831	Kenfig Ind Est	None	NPR
692	18/08/2013	<i>terrestris</i>	q	1	<i>Echium vulgare</i>	SS799831	Kenfig Ind Est	None	NPR
693	18/08/2013	<i>pascuorum</i>	q	1	<i>Impatiens glandulifera</i>	SS799831	Kenfig Ind Est	None	NPR
694	18/08/2013	<i>pascuorum</i>	w	1	<i>Impatiens glandulifera</i>	SS799831	Kenfig Ind Est	None	NPR
695	18/08/2013	<i>terrestris</i>	w	1	<i>Buddleja davidii</i>	SS796837	Kenfig Ind Est	None	NPR
<b>696</b>	18/08/2013	<b><i>sylvarum</i></b>	w	1	<i>Odontites vernus</i>	SS7960583788	Kenfig Ind Est	None	NPR
<b>696.1</b>	18/08/2013	<b><i>sylvarum</i></b>	w	1	<i>Rubus fruticosus agg.</i>	SS7960583788	Kenfig Ind Est	None	NPR
697	22/08/2013	<i>pascuorum</i>	w	1	<i>Odontites vernus</i>	SS808824	Kenfig NNR (n)	None	NPR
698	22/08/2013	<i>lapidarius</i>	m	1	<i>Centaurea debauxii</i>	SS807824	Kenfig NNR (n)	None	NPR
699	22/08/2013	<i>terrestris</i>	m	1	<i>Eupatorium cannabinum</i>	SS807824	Kenfig NNR (n)	None	NPR
700	22/08/2013	<i>terrestris</i>	m	1	<i>Rubus fruticosus agg.</i>	SS805822	Kenfig NNR (n)	None	NPR
701	22/08/2013	<i>terrestris</i>	w	1	<i>Rubus fruticosus agg.</i>	SS805822	Kenfig NNR (n)	None	NPR

702	22/08/2013	<i>terrestris</i>	w	1	<i>Odontites vernus</i>	SS805822	Kenfig NNR (n)	None	NPR
703	22/08/2013	<i>terrestris</i>	q	1	<i>Odontites vernus</i>	SS805822	Kenfig NNR (n)	None	NPR
704	22/08/2013	<i>pascuorum</i>	w	2	<i>Odontites vernus</i>	SS805822	Kenfig NNR (n)	None	NPR
705	22/08/2013	<i>pascuorum</i>	q	1	<i>Odontites vernus</i>	SS805822	Kenfig NNR (n)	None	NPR
706	22/08/2013	<i>humilis</i>	w	1	<i>Odontites vernus</i>	SS805822	Kenfig NNR (n)	None	NPR
<b>707</b>	22/08/2013	<b><i>sylvarum</i></b>	w	1	<i>Odontites vernus</i>	SS8057782236	Kenfig NNR (n)	None	NPR
<b>708</b>	22/08/2013	<b><i>sylvarum</i></b>	w	1	<i>Odontites vernus</i>	SS8053082201	Kenfig NNR (n)	None	NPR
709	22/08/2013	<i>terrestris</i>	m	1	<i>Odontites vernus</i>	SS805822	Kenfig NNR (n)	None	NPR
710	22/08/2013	<i>terrestris</i>	w	3	<i>Odontites vernus</i>	SS805822	Kenfig NNR (n)	None	NPR
711	22/08/2013	<i>pascuorum</i>	w	3	<i>Odontites vernus</i>	SS805822	Kenfig NNR (n)	None	NPR
712	22/08/2013	<i>humilis</i>	w	1	<i>Odontites vernus</i>	SS805822	Kenfig NNR (n)	None	NPR
713	22/08/2013	<i>pascuorum</i>	w	1	<i>Echium vulgare</i>	SS798822	Kenfig NNR (n)	cattle grazing	NPR
<b>714</b>	22/08/2013	<b><i>sylvarum</i></b>	w	1	<i>Odontites vernus</i>	SS7958682460	Kenfig NNR (n)	cattle grazing	NPR
715	22/08/2013	<i>pascuorum</i>	w	1	<i>Odontites vernus</i>	SS795824	Kenfig NNR (n)	cattle grazing	NPR
716	22/08/2013	<i>terrestris</i>	w	1	<i>Rubus fruticosus agg.</i>	SS795824	Kenfig NNR (n)	cattle grazing	NPR
717	22/08/2013	<i>lapidarius</i>	m	3	<i>Mentha aquatica</i>	SS782828	Kenfig NNR (n)	cattle grazing	NPR
718	22/08/2013	<i>pascuorum</i>	q	1	<i>Mentha aquatica</i>	SS782828	Kenfig NNR (n)	cattle grazing	NPR
719	22/08/2013	<i>pascuorum</i>	w	1	<i>Vicia cracca</i>	SS786831	Kenfig NNR (n)	cattle grazing	NPR
720	22/08/2013	<i>lapidarius</i>	m	1	<i>Epilobium hirsutum</i>	SS786831	Kenfig NNR (n)	cattle grazing	NPR
721	22/08/2013	<i>bohemicus</i>	q	1	<i>Mentha aquatica</i>	SS786831	Kenfig NNR (n)	cattle grazing	NPR
722	22/08/2013	<i>pascuorum</i>	m	1	<i>Odontites vernus</i>	SS788832	Kenfig NNR (n)	cattle grazing	NPR
723	22/08/2013	<i>pascuorum</i>	w	7	<i>Odontites vernus</i>	SS788832	Kenfig NNR (n)	cattle grazing	NPR
724	22/08/2013	<i>terrestris</i>	w	5	<i>Odontites vernus</i>	SS788832	Kenfig NNR (n)	cattle grazing	NPR
725	22/08/2013	<i>lapidarius</i>	w	1	<i>Odontites vernus</i>	SS788832	Kenfig NNR (n)	cattle grazing	NPR
726	22/08/2013	<i>humilis</i>	w	1	<i>Odontites vernus</i>	SS788832	Kenfig NNR (n)	cattle grazing	NPR
<b>727</b>	22/08/2013	<b><i>sylvarum</i></b>	w	1	<i>Odontites vernus</i>	SS7891283248	Kenfig NNR (n)	cattle grazing	NPR
<b>728</b>	22/08/2013	<b><i>sylvarum</i></b>	w	1	<i>Lotus corniculatus</i>	SS7891283248	Kenfig NNR (n)	cattle grazing	NPR
729	22/08/2013	<i>pascuorum</i>	q	2	<i>Odontites vernus</i>	SS790832	Kenfig NNR (n)	cattle grazing	NPR
730	22/08/2013	<i>pascuorum</i>	w	1	<i>Odontites vernus</i>	SS790832	Kenfig NNR (n)	cattle grazing	NPR
731	22/08/2013	<i>lapidarius</i>	w	1	<i>Odontites vernus</i>	SS790832	Kenfig NNR (n)	cattle grazing	NPR
732	22/08/2013	<i>terrestris</i>	u	1	<i>Odontites vernus</i>	SS790832	Kenfig NNR (n)	cattle grazing	NPR
<b>733</b>	22/08/2013	<b><i>sylvarum</i></b>	w	1	<i>Odontites vernus</i>	SS7914283303	Kenfig NNR (n)	cattle grazing	NPR
734	22/08/2013	<i>pascuorum</i>	q	1	<i>Odontites vernus</i>	SS791832	Kenfig NNR (n)	cattle grazing	NPR
735	22/08/2013	<i>pascuorum</i>	w	2	<i>Odontites vernus</i>	SS791832	Kenfig NNR (n)	cattle grazing	NPR

736	22/08/2013	<i>terrestris</i>	w	1	<i>Odontites vernus</i>	SS791832	Kenfig NNR (n)	cattle grazing	NPR
737	22/08/2013	<i>pascuorum</i>	w	1	<i>Odontites vernus</i>	SS791826	Kenfig NNR (n)	cattle grazing	NPR
738	22/08/2013	<i>lapidarius</i>	w	1	<i>Odontites vernus</i>	SS791826	Kenfig NNR (n)	cattle grazing	NPR
<b>739</b>	22/08/2013	<b><i>sylvarum</i></b>	w	1	<i>Odontites vernus</i>	SS7988182602	Kenfig NNR (n)	cattle grazing	NPR
740	22/08/2013	<i>pascuorum</i>	u	1	<i>Odontites vernus</i>	SS802826	Kenfig NNR (n)	cattle grazing	NPR
741	22/08/2013	<i>pascuorum</i>	w	2	<i>Odontites vernus</i>	SS802826	Kenfig NNR (n)	cattle grazing	NPR
742	22/08/2013	<i>terrestris</i>	w	1	<i>Odontites vernus</i>	SS802826	Kenfig NNR (n)	cattle grazing	NPR
743	25/08/2013	<i>pascuorum</i>	w	2	<i>Rubus fruticosus agg.</i>	SS869769	Merthyr Mawr NNR (n&w)	None	NPR
744	25/08/2013	<i>pascuorum</i>	m	1	<i>Rubus fruticosus agg.</i>	SS869769	Merthyr Mawr NNR (n&w)	None	NPR
745	25/08/2013	<i>pascuorum</i>	u	1	<i>Rubus fruticosus agg.</i>	SS869769	Merthyr Mawr NNR (n&w)	None	NPR
746	25/08/2013	<i>terrestris</i>	w	1	<i>Echium vulgare</i>	SS869769	Merthyr Mawr NNR (n&w)	None	NPR
747	25/08/2013	<i>terrestris</i>	m	1	<i>Rubus fruticosus agg.</i>	SS869769	Merthyr Mawr NNR (n&w)	None	NPR
748	25/08/2013	<i>pascuorum</i>	w	1	<i>Clinopodium vulgare</i>	SS869769	Merthyr Mawr NNR (n&w)	None	NPR
749	25/08/2013	<i>lapidarius</i>	m	1	<i>Echium vulgare</i>	SS869769	Merthyr Mawr NNR (n&w)	None	NPR
750	25/08/2013	<i>lapidarius</i>	w	2	<i>Echium vulgare</i>	SS869769	Merthyr Mawr NNR (n&w)	None	NPR
751	25/08/2013	<i>terrestris</i>	w	1	<i>Rubus fruticosus agg.</i>	SS868769	Merthyr Mawr NNR (n&w)	None	NPR
752	25/08/2013	<i>pascuorum</i>	m	1	<i>Echium vulgare</i>	SS868769	Merthyr Mawr NNR (n&w)	None	NPR
753	25/08/2013	<i>pascuorum</i>	w	6	<i>Echium vulgare</i>	SS868769	Merthyr Mawr NNR (n&w)	None	NPR
754	25/08/2013	<i>lapidarius</i>	m	1	<i>Echium vulgare</i>	SS868769	Merthyr Mawr NNR (n&w)	None	NPR
755	25/08/2013	<i>pascuorum</i>	q	1	<i>Oenanthe x fallax</i>	SS868769	Merthyr Mawr NNR (n&w)	None	NPR
756	25/08/2013	<i>terrestris</i>	w	1	<i>Rubus fruticosus agg.</i>	SS864769	Merthyr Mawr NNR (n&w)	None	NPR
757	25/08/2013	<i>pascuorum</i>	w	1	<i>Clinopodium vulgare</i>	SS864769	Merthyr Mawr NNR (n&w)	None	NPR
758	25/08/2013	<i>lapidarius</i>	m	2	<i>Chamerion angustifolium</i>	SS862769	Merthyr Mawr NNR (n&w)	None	NPR
759	25/08/2013	<i>lapidarius</i>	w	1	<i>Chamerion angustifolium</i>	SS862769	Merthyr Mawr NNR (n&w)	None	NPR
760	25/08/2013	<i>lapidarius</i>	m	1	<i>Rubus fruticosus agg.</i>	SS862769	Merthyr Mawr NNR (n&w)	None	NPR
761	25/08/2013	<i>terrestris</i>	u	1	<i>Rubus caesius</i>	SS862769	Merthyr Mawr NNR (n&w)	None	NPR
762	25/08/2013	<i>humilis</i>	w	1	<i>Clinopodium vulgare</i>	SS859770	Merthyr Mawr NNR (n&w)	None	NPR
763	25/08/2013	<i>pascuorum</i>	w	1	<i>Oenanthe x fallax</i>	SS859770	Merthyr Mawr NNR (n&w)	None	NPR
764	25/08/2013	<i>lapidarius</i>	w	1	<i>Echium vulgare</i>	SS859770	Merthyr Mawr NNR (n&w)	None	NPR
765	25/08/2013	<i>terrestris</i>	w	2	<i>Rubus fruticosus agg.</i>	SS857771	Merthyr Mawr NNR (n&w)	None	NPR
766	25/08/2013	<i>lucorum</i>	w	1	<i>Rubus fruticosus agg.</i>	SS857771	Merthyr Mawr NNR (n&w)	None	NPR
767	25/08/2013	<i>pascuorum</i>	w	6	<i>Clinopodium vulgare</i>	SS854772	Merthyr Mawr NNR (n&w)	None	NPR
768	25/08/2013	<i>pascuorum</i>	u	1	<i>Clinopodium vulgare</i>	SS854772	Merthyr Mawr NNR (n&w)	None	NPR
769	25/08/2013	<i>terrestris</i>	m	1	<i>Chamerion angustifolium</i>	SS854772	Merthyr Mawr NNR (n&w)	None	NPR

770	25/08/2013	<i>terrestris</i>	q	1	<i>Chamerion angustifolium</i>	SS854772	Merthyr Mawr NNR (n&w)	None	NPR
771	25/08/2013	<i>terrestris</i>	w	3	<i>Chamerion angustifolium</i>	SS854772	Merthyr Mawr NNR (n&w)	None	NPR
772	25/08/2013	<i>hortorum</i>	w	1	<i>Clinopodium vulgare</i>	SS854772	Merthyr Mawr NNR (n&w)	None	NPR
773	25/08/2013	<i>humilis</i>	w	2	<i>Clinopodium vulgare</i>	SS854772	Merthyr Mawr NNR (n&w)	None	NPR
774	25/08/2013	<i>lapidarius</i>	m	1	<i>Chamerion angustifolium</i>	SS854772	Merthyr Mawr NNR (n&w)	None	NPR
775	25/08/2013	<i>lapidarius</i>	m	1	<i>Echium vulgare</i>	SS854772	Merthyr Mawr NNR (n&w)	None	NPR
776	25/08/2013	<i>pascuorum</i>	m	1	<i>Echium vulgare</i>	SS854772	Merthyr Mawr NNR (n&w)	None	NPR
777	25/08/2013	<i>pascuorum</i>	u	1	<i>Echium vulgare</i>	SS851772	Merthyr Mawr NNR (n&w)	None	NPR
778	25/08/2013	<i>pascuorum</i>	w	4	<i>Echium vulgare</i>	SS851772	Merthyr Mawr NNR (n&w)	None	NPR
779	25/08/2013	<i>pascuorum</i>	m	1	<i>Echium vulgare</i>	SS850772	Merthyr Mawr NNR (n&w)	None	NPR
780	25/08/2013	<i>pascuorum</i>	w	6	<i>Echium vulgare</i>	SS850772	Merthyr Mawr NNR (n&w)	None	NPR
781	25/08/2013	<i>terrestris</i>	q	1	<i>Echium vulgare</i>	SS850772	Merthyr Mawr NNR (n&w)	None	NPR
782	25/08/2013	<i>terrestris</i>	w	1	<i>Echium vulgare</i>	SS850772	Merthyr Mawr NNR (n&w)	None	NPR
783	25/08/2013	<i>pascuorum</i>	q	1	<i>Echium vulgare</i>	SS847772	Merthyr Mawr NNR (n&w)	None	NPR
784	25/08/2013	<i>pascuorum</i>	w	4	<i>Echium vulgare</i>	SS847772	Merthyr Mawr NNR (n&w)	None	NPR
785	25/08/2013	<i>pascuorum</i>	m	2	<i>Echium vulgare</i>	SS847772	Merthyr Mawr NNR (n&w)	None	NPR
786	25/08/2013	<i>pascuorum</i>	u	1	<i>Echium vulgare</i>	SS847772	Merthyr Mawr NNR (n&w)	None	NPR
787	25/08/2013	<i>pascuorum</i>	w	1	<i>Rubus fruticosus agg.</i>	SS847772	Merthyr Mawr NNR (n&w)	None	NPR
788	25/08/2013	<i>lapidarius</i>	m	1	<i>Echium vulgare</i>	SS847772	Merthyr Mawr NNR (n&w)	None	NPR
789	25/08/2013	<i>lapidarius</i>	w	1	<i>Echium vulgare</i>	SS847772	Merthyr Mawr NNR (n&w)	None	NPR
790	25/08/2013	<i>pascuorum</i>	q	1	<i>Echium vulgare</i>	SS846772	Merthyr Mawr NNR (n&w)	None	NPR
791	25/08/2013	<i>pascuorum</i>	w	6	<i>Echium vulgare</i>	SS846772	Merthyr Mawr NNR (n&w)	None	NPR
792	25/08/2013	<i>pascuorum</i>	m	1	<i>Echium vulgare</i>	SS846772	Merthyr Mawr NNR (n&w)	None	NPR
793	25/08/2013	<i>hortorum</i>	w	1	<i>Echium vulgare</i>	SS846772	Merthyr Mawr NNR (n&w)	None	NPR
794	25/08/2013	<i>pratorum</i>	w	1	<i>Echium vulgare</i>	SS844771	Merthyr Mawr NNR (n&w)	None	NPR
795	25/08/2013	<i>pascuorum</i>	u	14	<i>Echium vulgare</i>	SS844771	Merthyr Mawr NNR (n&w)	None	NPR
796	25/08/2013	<i>lapidarius</i>	w	1	<i>Lotus corniculatus</i>	SS844771	Merthyr Mawr NNR (n&w)	None	NPR
797	25/08/2013	<i>lapidarius</i>	m	3	<i>Echium vulgare</i>	SS844771	Merthyr Mawr NNR (n&w)	None	NPR
798	25/08/2013	<i>lucorum</i>	w	1	<i>Echium vulgare</i>	SS844771	Merthyr Mawr NNR (n&w)	None	NPR
799	25/08/2013	<i>humilis</i>	q	1	<i>Echium vulgare</i>	SS844771	Merthyr Mawr NNR (n&w)	None	NPR
800	25/08/2013	<i>lapidarius</i>	w	1	<i>Thymus polytrichus</i>	SS844771	Merthyr Mawr NNR (n&w)	None	NPR
801	25/08/2013	<i>terrestris</i>	m	1	<i>Saponaria officinalis</i>	SS858767	Merthyr Mawr NNR (n&w)	None	NPR
802	25/08/2013	<i>terrestris</i>	q	2	<i>Saponaria officinalis</i>	SS858767	Merthyr Mawr NNR (n&w)	None	NPR
803	25/08/2013	<i>terrestris</i>	w	2	<i>Saponaria officinalis</i>	SS858767	Merthyr Mawr NNR (n&w)	None	NPR

804	25/08/2013	<i>terrestris</i>	q	1	<i>Chamerion angustifolium</i>	SS864766	Merthyr Mawr NNR (n&w)	scrub clearance	NPR
805	25/08/2013	<i>terrestris</i>	w	2	<i>Chamerion angustifolium</i>	SS864766	Merthyr Mawr NNR (n&w)	scrub clearance	NPR
806	25/08/2013	<i>lapidarius</i>	m	2	<i>Chamerion angustifolium</i>	SS864766	Merthyr Mawr NNR (n&w)	scrub clearance	NPR
807	25/08/2013	<i>lapidarius</i>	w	1	<i>Chamerion angustifolium</i>	SS864766	Merthyr Mawr NNR (n&w)	scrub clearance	NPR
808	25/08/2013	<i>terrestris</i>	m	1	<i>Eupatorium cannabinum</i>	SS864766	Merthyr Mawr NNR (n&w)	scrub clearance	NPR
809	25/08/2013	<i>terrestris</i>	w	1	<i>Rubus fruticosus agg.</i>	SS864766	Merthyr Mawr NNR (n&w)	scrub clearance	NPR
810	25/08/2013	<i>lapidarius</i>	w	1	<i>Epilobium hirsutum</i>	SS864766	Merthyr Mawr NNR (n&w)	scrub clearance	NPR
811	25/08/2013	<i>lapidarius</i>	u	1	<i>Epilobium hirsutum</i>	SS864766	Merthyr Mawr NNR (n&w)	scrub clearance	NPR
812	25/08/2013	<i>lapidarius</i>	m	1	<i>Epilobium montanum</i>	SS864766	Merthyr Mawr NNR (n&w)	scrub clearance	NPR
813	27/08/2013	<i>pascurum</i>	q	1	<i>Ulex gallii</i>	SS857833	Cefn Cribwr (Cwm Ffos)	None	NPR
814	27/08/2013	<i>pascurum</i>	m	1	<i>Mentha aquatica</i>	SS857833	Cefn Cribwr (Cwm Ffos)	None	NPR
815	27/08/2013	<i>lucorum</i>	q	1	<i>Calluna vulgaris</i>	SS857833	Cefn Cribwr (Cwm Ffos)	None	NPR
816	27/08/2013	<i>terrestris</i>	w	1	<i>Calluna vulgaris</i>	SS857833	Cefn Cribwr (Cwm Ffos)	None	NPR
817	27/08/2013	<i>humilis</i>	w	1	<i>Centarea nigra agg</i>	SS856833	Cefn Cribwr (Cwm Ffos)	None	NPR
818	27/08/2013	<i>pascurum</i>	w	1	<i>Ulex gallii</i>	SS856833	Cefn Cribwr (Cwm Ffos)	None	NPR
819	31/08/2013	<i>pascurum</i>	w	2	<i>Odontites vernus</i>	SS880840	Parc Slip	cutting	NPR
820	31/08/2013	<i>pascurum</i>	m	3	<i>Odontites vernus</i>	SS880841	Parc Slip	cutting	NPR
821	31/08/2013	<i>pascurum</i>	w	21	<i>Odontites vernus</i>	SS880841	Parc Slip	cutting	NPR
822	31/08/2013	<i>pascurum</i>	w	2	<i>Lotus corniculatus</i>	SS880841	Parc Slip	cutting	NPR
823	31/08/2013	<i>terrestris</i>	w	1	<i>Odontites vernus</i>	SS880841	Parc Slip	cutting	NPR
824	31/08/2013	<i>terrestris</i>	w	1	<i>Heraclium sphondylium</i>	SS880841	Parc Slip	cutting	NPR
825	31/08/2013	<i>lucorum</i>	q	1	<i>Succisia pratensis</i>	SS880841	Parc Slip	cutting	NPR
826	31/08/2013	<i>terrestris</i>	w	2	<i>Odontites vernus</i>	SS880841	Parc Slip	cutting	NPR
827	31/08/2013	<i>humilis</i>	w	1	<i>Odontites vernus</i>	SS880841	Parc Slip	cutting	NPR
828	31/08/2013	<i>humilis</i>	w	1	<i>Lotus corniculatus</i>	SS880841	Parc Slip	cutting	NPR
829	31/08/2013	<i>pascurum</i>	q	1	<i>Odontites vernus</i>	SS880841	Parc Slip	cutting	NPR
830	31/08/2013	<i>terrestris</i>	w	1	<i>Odontites vernus</i>	SS879841	Parc Slip	cutting	NPR
831	31/08/2013	<i>pascurum</i>	w	6	<i>Odontites vernus</i>	SS879841	Parc Slip	cutting	NPR
832	31/08/2013	<i>pascurum</i>	w	7	<i>Odontites vernus</i>	SS878841	Parc Slip	cutting	NPR
833	31/08/2013	<i>pascurum</i>	w	2	<i>Lotus corniculatus</i>	SS878841	Parc Slip	cutting	NPR
834	31/08/2013	<i>pascurum</i>	w	1	<i>Lotus corniculatus</i>	SS878840	Parc Slip	cutting	NPR
835	31/08/2013	<i>pratorum</i>	w	1	<i>Odontites vernus</i>	SS878840	Parc Slip	cutting	NPR
836	31/08/2013	<i>humilis</i>	w	1	<i>Succisia pratensis</i>	SS877840	Parc Slip	cutting	NPR
837	31/08/2013	<i>terrestris</i>	w	1	<i>Succisia pratensis</i>	SS877840	Parc Slip	cutting	NPR

838	31/08/2013	<i>pascuorum</i>	w	1	<i>Lotus corniculatus</i>	SS876839	Parc Slip	cutting	NPR
839	31/08/2013	<i>lapidarius</i>	w	1	<i>Succisia pratensis</i>	SS876839	Parc Slip	cutting	NPR
840	31/08/2013	<i>lapidarius</i>	m	1	<i>Succisia pratensis</i>	SS874839	Parc Slip	cutting	NPR
841	31/08/2013	<i>terrestris</i>	w	1	<i>Succisia pratensis</i>	SS874839	Parc Slip	cutting	NPR
842	31/08/2013	<i>pascuorum</i>	m	1	<i>Succisia pratensis</i>	SS874839	Parc Slip	cutting	NPR
843	31/08/2013	<i>lapidarius</i>	m	2	<i>Succisia pratensis</i>	SS877840	Parc Slip	cutting	NPR
844	31/08/2013	<i>lapidarius</i>	m	3	<i>Succisia pratensis</i>	SS878839	Parc Slip	cutting	NPR
845	31/08/2013	<i>terrestris</i>	w	1	<i>Succisia pratensis</i>	SS878839	Parc Slip	cutting	NPR
846	31/08/2013	<i>terrestris</i>	m	1	<i>Succisia pratensis</i>	SS878839	Parc Slip	cutting	NPR
847	31/08/2013	<i>pascuorum</i>	w	2	<i>Succisia pratensis</i>	SS878839	Parc Slip	cutting	NPR
848	31/08/2013	<i>lapidarius</i>	m	3	<i>Helianthus annuus</i>	SS878839	Parc Slip	cultivation	NPR
849	31/08/2013	<i>terrestris</i>	w	1	<i>Helianthus annuus</i>	SS878839	Parc Slip	cultivation	NPR
850	31/08/2013	<i>terrestris</i>	m	1	<i>Helianthus annuus</i>	SS878839	Parc Slip	cultivation	NPR
851	31/08/2013	<i>pascuorum</i>	w	2	<i>Odontites vernus</i>	SS878839	Parc Slip	None	NPR
852	31/08/2013	<i>humilis</i>	w	1	<i>Trifolium pratense</i>	SS878838	Parc Slip	None	NPR
853	31/08/2013	<i>pascuorum</i>	m	1	<i>Prunella vulgaris</i>	SS878838	Parc Slip	None	NPR
854	31/08/2013	<i>pascuorum</i>	w	1	<i>Trifolium pratense</i>	SS878838	Parc Slip	None	NPR
855	31/08/2013	<i>lucorum</i>	w	1	<i>Impatiens glandulifera</i>	SS926783	Waterton	None	NPR
856	31/08/2013	<i>pascuorum</i>	w	3	<i>Impatiens glandulifera</i>	SS927784	Waterton	None	NPR
857	31/08/2013	<i>lapidarius</i>	m	1	<i>Impatiens glandulifera</i>	SS927784	Waterton	None	NPR
858	31/08/2013	<i>terrestris</i>	w	1	<i>Impatiens glandulifera</i>	SS927784	Waterton	None	NPR
859	31/08/2013	<i>lapidarius</i>	w	1	<i>Epilobium hirsutum</i>	SS927784	Waterton	None	NPR
860	31/08/2013	<i>pascuorum</i>	w	1	<i>Odontites vernus</i>	SS926783	Waterton	None	NPR
861	31/08/2013	<i>pascuorum</i>	w	1	<i>Odontites vernus</i>	SS927782	Waterton	None	NPR
862	31/08/2013	<i>pascuorum</i>	w	1	<i>Odontites vernus</i>	SS927782	Waterton	None	NPR
863	31/08/2013	<i>lapidarius</i>	m	1	<i>Epilobium hirsutum</i>	SS926782	Waterton	None	NPR
864	03/09/2013	<i>pascuorum</i>	w	13	<i>Odontites vernus</i>	SS906779	Eweny Moor	cattle grazing	NPR
865	03/09/2013	<i>pascuorum</i>	m	2	<i>Odontites vernus</i>	SS906779	Eweny Moor	cattle grazing	NPR
866	03/09/2013	<i>terrestris</i>	w	3	<i>Odontites vernus</i>	SS906779	Eweny Moor	cattle grazing	NPR
867	03/09/2013	<i>pascuorum</i>	w	1	<i>Trifolium hybridum</i>	SS906779	Eweny Moor	cattle grazing	NPR
868	03/09/2013	<i>pascuorum</i>	m	1	<i>Odontites vernus</i>	SS905779	Eweny Moor	cattle grazing	NPR
869	03/09/2013	<i>pascuorum</i>	w	4	<i>Odontites vernus</i>	SS905779	Eweny Moor	cattle grazing	NPR
870	03/09/2013	<i>pascuorum</i>	m	1	<i>Odontites vernus</i>	SS906780	Eweny Moor	cattle grazing	NPR
871	03/09/2013	<i>pascuorum</i>	w	1	<i>Odontites vernus</i>	SS906780	Eweny Moor	cattle grazing	NPR

872	03/09/2013	<i>lapidarius</i>	w	1	<i>Odontites vernus</i>	SS907779	Ewenny Moor	cattle/sheep grazing	NPR
873	03/09/2013	<i>pascuorum</i>	u	2	<i>Odontites vernus</i>	SS907779	Ewenny Moor	cattle/sheep grazing	NPR
874	03/09/2013	<i>pascuorum</i>	w	8	<i>Odontites vernus</i>	SS907779	Ewenny Moor	cattle/sheep grazing	NPR
875	03/09/2013	<i>pascuorum</i>	w	3	<i>Odontites vernus</i>	SS907778	Ewenny Moor	cattle/sheep grazing	NPR
876	03/09/2013	<i>pascuorum</i>	m	1	<i>Odontites vernus</i>	SS907778	Ewenny Moor	cattle/sheep grazing	NPR
877	03/09/2013	<i>pascuorum</i>	u	2	<i>Odontites vernus</i>	SS907778	Ewenny Moor	cattle/sheep grazing	NPR
878	03/09/2013	<i>lucorum</i>	q	1	<i>Rubus fruticosus agg.</i>	SS909751	Old Castle Down	None	NPR
879	03/09/2013	<i>terrestris</i>	w	1	N/A	SS907754	Old Castle Down	cutting/burning	NPR
880	03/09/2013	<i>terrestris</i>	w	2	<i>Ulex gallii</i>	SS905756	Old Castle Down	cutting/burning	NPR
881	03/09/2013	<i>pascuorum</i>	w	2	<i>Ulex gallii</i>	SS904757	Old Castle Down	cutting/burning	NPR
882	03/09/2013	<i>terrestris</i>	w	1	<i>Ulex gallii</i>	SS904757	Old Castle Down	cutting/burning	NPR
883	03/09/2013	<i>pascuorum</i>	w	2	<i>Ulex gallii</i>	SS904759	Old Castle Down	cutting/burning	NPR
884	03/09/2013	<i>terrestris</i>	w	1	<i>Ulex gallii</i>	SS904759	Old Castle Down	cutting/burning	NPR
885	03/09/2013	<i>terrestris</i>	u	1	<i>Ulex gallii</i>	SS904759	Old Castle Down	cutting/burning	NPR
886	03/09/2013	<i>pascuorum</i>	w	5	<i>Ulex gallii</i>	SS904761	Old Castle Down	cutting/burning	NPR
887	03/09/2013	<i>terrestris</i>	w	2	<i>Ulex gallii</i>	SS903760	Old Castle Down	cutting/burning	NPR
888	03/09/2013	<i>pascuorum</i>	w	1	<i>Ulex gallii</i>	SS903760	Old Castle Down	cutting/burning	NPR
889	03/09/2013	<i>terrestris</i>	w	4	<i>Ulex gallii</i>	SS903760	Old Castle Down	cutting/burning	NPR
890	04/09/2013	<i>lapidarius</i>	m	1	<i>Cirsium vulgare</i>	SS800796	Kenfig (se)	cattle grazing	NPR
891	04/09/2013	<i>pascuorum</i>	m	1	<i>Cirsium vulgare</i>	SS800796	Kenfig (se)	cattle grazing	NPR
892	04/09/2013	<i>terrestris</i>	m	2	<i>Cirsium vulgare</i>	SS800796	Kenfig (se)	cattle grazing	NPR
893	04/09/2013	<i>humilis</i>	m	1	<i>Calamintha ascendens</i>	SS796799	Kenfig (se)	None	NPR
894	04/09/2013	<i>pascuorum</i>	w	1	<i>Calamintha ascendens</i>	SS796799	Kenfig (se)	None	NPR
895	04/09/2013	<i>pascuorum</i>	m	1	<i>Carduus nutans</i>	SS796799	Kenfig (se)	None	NPR
896	04/09/2013	<i>pascuorum</i>	w	3	<i>Carduus nutans</i>	SS796799	Kenfig (se)	None	NPR
897	04/09/2013	<i>terrestris</i>	w	1	<i>Carduus nutans</i>	SS796799	Kenfig (se)	None	NPR
898	04/09/2013	<i>lapidarius</i>	m	1	<i>Carduus nutans</i>	SS796799	Kenfig (se)	None	NPR
899	04/09/2013	<i>pascuorum</i>	w	4	<i>Echium vulgare</i>	SS797800	Kenfig (se)	None	NPR
900	04/09/2013	<i>pascuorum</i>	m	1	<i>Echium vulgare</i>	SS797800	Kenfig (se)	None	NPR
901	04/09/2013	<i>muscorum</i>	w	1	<i>Echium vulgare</i>	SS797800	Kenfig (se)	None	NPR
902	04/09/2013	<i>pascuorum</i>	w	2	<i>Chamerion angustifolium</i>	SS805800	Kenfig (se)	None	NPR
903	04/09/2013	<i>lapidarius</i>	m	2	<i>Chamerion angustifolium</i>	SS805800	Kenfig (se)	None	NPR
904	04/09/2013	<i>terrestris</i>	w	1	<i>Chamerion angustifolium</i>	SS805800	Kenfig (se)	None	NPR
905	04/09/2013	<i>pascuorum</i>	w	1	<i>Vicia cracca</i>	SS805800	Kenfig (se)	None	NPR



906	04/09/2013	<i>lapidarius</i>	w	1	<i>Centarea nigra agg</i>	SS805800	Kenfig (se)	None	NPR
907	04/09/2013	<i>pascuorum</i>	m	1	<i>Odontites vernus</i>	SS806800	Kenfig (se)	None	NPR
908	04/09/2013	<i>pascuorum</i>	w	2	<i>Odontites vernus</i>	SS806800	Kenfig (se)	None	NPR
909	04/09/2013	<i>terrestris</i>	w	1	<i>Odontites vernus</i>	SS806800	Kenfig (se)	None	NPR
910	04/09/2013	<i>lapidarius</i>	m	1	<i>Solidago canadensis</i>	SS807800	Kenfig (se)	None	NPR
911	04/09/2013	<i>hortorum</i>	w	1	<i>Trifolium pratense</i>	SS806800	Kenfig (se)	None	NPR
912	04/09/2013	<i>pascuorum</i>	w	1	<i>Trifolium pratense</i>	SS806800	Kenfig (se)	None	NPR
913	04/09/2013	<i>pascuorum</i>	u	1	<i>Trifolium pratense</i>	SS806800	Kenfig (se)	None	NPR
914	04/09/2013	<i>pascuorum</i>	w	1	<i>Cirsium arvense</i>	SS805802	Kenfig (se)	None	NPR
915	04/09/2013	<i>pascuorum</i>	u	1	<i>Chamerion angustifolium</i>	SS805802	Kenfig (se)	None	NPR
916	04/09/2013	<i>lapidarius</i>	m	1	<i>Odontites vernus</i>	SS805802	Kenfig (se)	None	NPR
917	04/09/2013	<i>pascuorum</i>	u	2	<i>Impatiens glandulifera</i>	SS804802	Kenfig (se)	None	NPR
918	04/09/2013	<i>humilis</i>	u	1	<i>Impatiens glandulifera</i>	SS804802	Kenfig (se)	None	NPR
919	04/09/2013	<i>hortorum</i>	u	1	<i>Impatiens glandulifera</i>	SS804802	Kenfig (se)	None	NPR
920	04/09/2013	<i>hortorum</i>	w	1	<i>Linaria vulgaris</i>	SS805805	Kenfig (se)	None	NPR
921	04/09/2013	<i>pascuorum</i>	w	2	<i>Linaria vulgaris</i>	SS805805	Kenfig (se)	None	NPR
922	04/09/2013	<i>lapidarius</i>	m	1	<i>Linaria vulgaris</i>	SS805805	Kenfig (se)	None	NPR
923	04/09/2013	<i>humilis</i>	q	1	<i>Linaria vulgaris</i>	SS805805	Kenfig (se)	None	NPR
924	04/09/2013	<i>humilis</i>	w	1	<i>Leontodon taraxacoides</i>	SS806806	Kenfig (se)	None	NPR
925	04/09/2013	<i>pascuorum</i>	w	1	<i>Leontodon taraxacoides</i>	SS806806	Kenfig (se)	None	NPR
926	04/09/2013	<i>pascuorum</i>	m	1	<i>Leontodon taraxacoides</i>	SS806806	Kenfig (se)	None	NPR
927	04/09/2013	<i>lapidarius</i>	m	1	<i>Leontodon taraxacoides</i>	SS806806	Kenfig (se)	None	NPR
928	04/09/2013	<i>pascuorum</i>	u	7	<i>Impatiens glandulifera</i>	SS808808	Kenfig (se)	None	NPR
929	04/09/2013	<i>humilis</i>	u	1	<i>Impatiens glandulifera</i>	SS808808	Kenfig (se)	None	NPR
930	04/09/2013	<i>hortorum</i>	w	1	<i>Impatiens glandulifera</i>	SS808808	Kenfig (se)	None	NPR
931	04/09/2013	<i>lucorum</i>	u	1	<i>Impatiens glandulifera</i>	SS808808	Kenfig (se)	None	NPR
932	04/09/2013	<i>pascuorum</i>	w	1	<i>Rubus fruticosus agg.</i>	SS811795	Kenfig (se)	None	NPR
933	04/09/2013	<i>pascuorum</i>	m	1	<i>Trifolium repens</i>	SS803809	Ton Kenfig	cutting	NPR
934	04/09/2013	<i>pascuorum</i>	w	2	<i>Trifolium repens</i>	SS803809	Ton Kenfig	cutting	NPR
935	04/09/2013	<i>pascuorum</i>	w	2	<i>Lotus corniculatus</i>	SS803809	Ton Kenfig	cutting	NPR
936	04/09/2013	<i>lapidarius</i>	w	3	<i>Lotus corniculatus</i>	SS804809	Ton Kenfig	cutting	NPR
937	04/09/2013	<i>pascuorum</i>	u	4	<i>Odontites vernus</i>	SS804811	Ton Kenfig	horse grazing	NPR
938	04/09/2013	<i>pascuorum</i>	u	24	<i>Odontites vernus</i>	SS804812	Ton Kenfig	horse grazing	NPR
939	04/09/2013	<i>terrestris</i>	w	1	<i>Odontites vernus</i>	SS804812	Ton Kenfig	horse grazing	NPR

940	04/09/2013	<i>lapidarius</i>	m	1	<i>Odontites vernus</i>	SS804812	Ton Kenfig	horse grazing	NPR
941	05/09/2013	<i>pascuorum</i>	u	4	<i>Odontites vernus</i>	SS804812	Ton Kenfig	horse grazing	NPR
942	05/09/2013	<i>lucorum</i>	w	1	<i>Odontites vernus</i>	SS804812	Ton Kenfig	horse grazing	NPR
943	05/09/2013	<i>lapidarius</i>	m	1	<i>Odontites vernus</i>	SS804812	Ton Kenfig	horse grazing	NPR
944	05/09/2013	<i>pascuorum</i>	u	7	<i>Odontites vernus</i>	SS803813	Ton Kenfig	horse grazing	NPR
945	05/09/2013	<i>terrestris</i>	w	1	<i>Odontites vernus</i>	SS803813	Ton Kenfig	horse grazing	NPR

## 10.2. Appendix II : 2013 survey effort. \* supplementary casual survey effort

Survey Date	Site	Start Time	End Time	Duration (hrs)	Distance (km)	Surveyor	Weather (max temp., sun/cloud, wind)
01-Aug-13	Kenfig NNR	14:10	18:00	4.00	8.00	BS	22oC, sunny with scattered cloud, moderate breeze
06-Aug-13	Kenfig NNR	13:45	18:00	4.25	9.30	BS & DGC	21oC, sunny with scattered cloud, light breeze
06-Aug-13	Kenfig NNR (ne)	18:12	18:12	1.00	0.90	BS	19oC, sunny with scattered cloud, light breeze
08-Aug-13	Merthyr Mawr	13:23	18:45	5.37	5.34	BS	22oC, sunny with scattered cloud, strong breeze
09-Aug-13	Island Farm	13:28	16:32	3.04	4.10	NPR	21oC, sunny with scattered cloud, light breeze
*10/08/2013	Porthcawl	14:00	16:00	2.00	2.79	BS	22oC, sunny with scattered cloud, light breeze
11-Aug-13	Kenfig marsh'g yard and Margam Tip	13:40	18:11	4.52	8.45	BS	17oC, sunny with scattered cloud, moderate breeze
11-Aug-13	Llanilid former opencast	09:59	13:17	3.18	8.56	NPR	20oC, sunny with scattered cloud, light breeze
12-Aug-13	Kenfig NNR (ne)	10:29	12:57	2.28	3.19	NPR	18oC, mixed sunshine & cloud, moderate breeze
12-Aug-13	Royal Porthcawl & Locks Common	13:42	16:44	3.02	5.83	NPR	18oC, mixed sunshine & cloud, moderate breeze
13-Aug-13	Cornelly Quarry	10:56	13:36	2.67	9.12	NPR	18oC, mostly cloudy, sunny spells, moderate breeze
13-Aug-13	Margam Moors	12:53	16:05	3.20	7.34	BS	18oC, mostly cloudy, sunny spells, moderate breeze
*13/08/2013	Llanilid former opencast	14:57	16:31	1.57	4.57	NPR	18oC, mostly cloudy, sunny spells, moderate breeze
16-Aug-13	Cornelly bypass	15:14	15:48	0.57	0.71	BS	18oC, sunny with scattered cloud, moderate breeze
16-Aug-13	Cornelly - Nottage	15:55	17:55	2.00	2.11	BS	17oC, sunny with scattered cloud, moderate breeze
16-Aug-13	Kenfig NNR (s) & Sker	11:40	15:46	4.06	9.59	NPR	20oC, sunny with scattered cloud, moderate breeze
18-Aug-13	Kenfig Ind. Est.	12:36	15:05	2.48	4.59	NPR	19oC, sunny with scattered cloud, moderate breeze
21-Aug-13	TATA steel works 1	09:50	10:30	1.28	1.13	BS	17oC, cloudy with little sun, moderate breeze
21-Aug-13	TATA steel works 2	10:30	11:05	0.58	1.25	BS	17oC, cloudy with little sun, moderate breeze
21-Aug-13	TATA steel works 3	11:05	12:37	1.53	0.74	BS	18oC, cloudy with little sun, moderate breeze
21-Aug-13	TATA steel works 4	12:37	14:28	1.85	2.15	BS	18oC, cloudy with little sun, moderate breeze
21-Aug-13	TATA steel works 5	14:28	15:17	0.82	1.78	BS	18oC, cloudy with little sun, moderate breeze

21-Aug-13	TATA steel works 6	15:17	16:25	1.13	1.35	BS	18oC, cloudy with little sun, moderate breeze
22-Aug-13	Margam Moors	10:13	11:17	1.07	1.46	BS	20oC, sunny with no cloud, gentle breeze
22-Aug-13	Kenfig NNR (n)	11:23	17:41	6.30	11.04	NPR	22oC, sunny with no cloud, gentle breeze
25-Aug-13	Baglan Moors	12:24	13:57	1.55	2.26	BS	20oC, sunny with scattered cloud, moderate breeze
25-Aug-13	BP entrance land	14:13	15:08	0.57	1.83	BS	20oC, sunny with scattered cloud, moderate breeze
25-Aug-13	Port Talbot hillside	15:34	16:00	0.43	0.85	BS	20oC, sunny with scattered cloud, moderate breeze
25-Aug-13	Port Talbot Docks 3	16:24	17:19	0.92	1.43	BS	20oC, sunny with scattered cloud, moderate breeze
*26/08/2013	Col-huw east cliff	12:30	14:00	1.30	1.96	BS	22oC, clear sunny skies, gentle breeze
*27/08/2013	Pant Norton	09:00	09:36	0.60	2.32	NPR	16oC, sunny with scattered cloud, moderate breeze
27-Aug-13	Cefn Cribwr	11:01	11:57	0.93	2.23	NPR	21oC, cloudy but warm and calm
28-Aug-13	Kenfig sidings	10:42	12:15	1.55	2.00	BS & SH	20oC, sunny, light breeze
28-Aug-13	Kenfig NNR	12:08	13:00	0.87	2.00	BS & SH	20oC, sunny, light breeze
*28/08/2013	Kenfig NNR	13:00	16:30	3.50	2.01	SH	20oC, sunny, light breeze
*28/08/2013	Margam Forest	09:42	10:30	0.80	2.54	NPR	16oC, cloudy but warm and calm
*29/08/2013	Ewenny Moor & Waterton	18:50	19:36	0.77	6.18	NPR	18oC, cloudy but warm and calm
31-Aug-13	Parc Slip	12:23	15:24	3.02	6.32	NPR	20oC, sunny with scattered cloud, moderate breeze
31-Aug-13	Waterton Meadows	15:58	16:46	0.80	1.94	NPR	20oC, sunny with scattered cloud, moderate breeze
31-Aug-13	Crymlyn Burrows	09:05	12:25	3.33	6.00	BS	20oC, sunny with scattered cloud, moderate breeze
03-Sep-13	Ewenny Moor	12:14	13:14	1.00	1.53	NPR	21oC, sunny clear, very light breeze
03-Sep-13	Old Castle Down	13:29	15:02	1.55	4.11	NPR	21oC, sunny clear, very light breeze
03-Sep-13	Amazon	14:35	15:36	1.00	3.26	BS	21oC, sunny clear, very light breeze
04-Sep-13	Kenfig NNR (se)	12:53	16:26	3.55	8.98	NPR	21oC, sunny clear, very light breeze
04-Sep-13	TATA steel works 11	14:18	14:55	0.62	2.09	BS	21oC, sunny clear, very light breeze
04-Sep-13	Margam Moors	14:58	16:36	1.63	3.95	BS	21oC, sunny clear, very light breeze
04-Sep-13	TATA steel works 12	16:37	16:56	0.32	1.12	BS	21oC, sunny clear, very light breeze
04-Sep-13	TATA steel works 15	16:57	17:15	0.30	0.50	BS	21oC, sunny clear, very light breeze
04-Sep-13	Port Talbot Dock	17:17	17:38	0.35	0.89	BS	21oC, sunny clear, very light breeze
04-Sep-13	TATA steel works 16	17:42	18:11	0.48	0.45	BS	21oC, sunny clear, very light breeze
05-Sep-13	Port Talbot verges	13:27	15:07	1.67	2.14	BS	20oC, broken sunshine, light breeze
05-Sep-13	Ton Kenfig	14:35	15:20	0.75	2.71	NPR	20oC, broken sunshine, light breeze
05-Sep-13	Ton Kenfig	15:22	16:40	1.30	2.21	BS	20oC, broken sunshine, light breeze
*07/09/2013	Dunraven	10:50	11:41	0.85	3.52	NPR	17oC, broken sunshine, light breeze
*08/09/2013	Cwm Nash to Nash Point	14:12	16:05	1.88	7.22	NPR	17oC, broken sunshine, light breeze
*09/09/2013	Cwm Bach to Cwm Nash	11:02	12:37	1.58	6.33	NPR	17oC, mostly sunny with a strong breeze

10.3. Appendix III : Photographs of *Bombus sylvarum* sites.



**[Ref.# 140, 142 & 589-592] *B. sylvarum* 5 workers 11/08/2013 & 19 workers 28/08/2013  
Morfa-bach adjacent to Kenfig Ind. Est. (SS7967483053)  
Rough semi-improved grassland (avge ht: ~30cm)**



**[Ref.# 200] *B. sylvarum* 1 worker 12/08/2013  
Morfa –bach adjacent to Kenfig Ind. Est. (SS7998282919)  
Rank species-rich wayside vegetation (avge ht: ~150cm)**



**[Ref.# 203-204] *B. sylvarum* 1 worker & 1 queen 12/08/2013  
Morfa-bach adjacent to Kenfig Ind. Est. (SS8004082897)  
Rank species-rich wayside vegetation (avge ht: ~100cm)**



**[Ref.# 212] *B. sylvarum* 4 workers 12/08/2013  
Morfa-bach adjacent to Kenfig Ind. Est. (SS8005682880)  
Rank species-rich wayside vegetation (avge ht: ~60cm)**



[Ref.# 219] *B. sylvarum* 3 workers 12/08/2013  
Morfa-bach adjacent to Kenfig Ind. Est. (SS7983883069)  
Semi-improved damp grassland (avge ht: ~30cm)



[Ref.# 328] *B. sylvarum* 1 worker 13/08/2013  
Margam Moors (SS7848585382)  
Disused railway line with short ruderal vegetation (avge. ht: ~10cm)



[Ref.# 384] *B. sylvarum* 2 workers 16/08/2013  
Moor Lane, Nottage (SS8164279176)  
Ruderal vegetation with coarse grasses on disturbed ground (avge. ht: ~20cm)



[Ref.# 500] *B. sylvarum* 1 worker 19/08/2013  
Port Talbot Ind. Est. (SS7598089556)  
Established brownfield grassland (avge. ht: ~25cm)



[Ref.# 504] *B. sylvarum* 1 worker 19/08/2013  
Port Talbot Ind. Est. (SS7629489619)  
Ruderal vegetation with coarse grasses on disturbed ground (avge. ht: ~25cm)



[Ref.# 510-511] *B. sylvarum* 2 workers 22/08/2013  
Margam Moors (SS7769884710)  
Rank fen/dune transition (avge. ht: ~35cm)





**[Ref.# 515] *B. sylvarum* 2 workers 22/08/2013**  
**Margam Moors (SS7774584663)**  
**Rank fen/dune transition (avge. ht: ~25cm)**



**[Ref.# 547] *B. sylvarum* 1 worker 25/08/2013**  
**Baglan Moors (SS7478291630)**  
**Species-rich brownfield damp grassland scrub mosaic (avge. ht: ~40cm)**



**[Ref.# 548] *B. sylvarum* 1 worker 25/08/2013**  
**Baglan Moors (SS7474491562)**  
**Species-rich brownfield damp grassland scrub mosaic (avge. ht: ~45cm)**



**[Ref.# 587] *B. sylvarum* 4 workers 28/08/2013**  
**Morfa-bach, Kenfig Ind.Est. (SS7962283119)**  
**Rough horse grazing fen/scrub/river (avge ht: ~45cm)**



[Ref.# 646] *B. sylvarum* 1 queen 04/09/2013  
Maritime Road, Port Talbot (SS7683789311)  
Species-rich, weedy verge (avge ht: ~300cm)



[Ref.# 696] *B. sylvarum* 1 worker 18/08/2013  
Kenfig Ind. Est. (SS7960583788)  
Species-rich brownfield land with encroaching scrub (avge ht: ~30cm)



[Ref.# 707] *B. sylvarum* 1 worker 22/08/2013  
Kenfig NNR (SS8057782236)  
Rank fixed dune grassland/scrub mosaic (avge ht: ~30cm)



[Ref.# 708] *B. sylvarum* 1 worker 22/08/2013  
Kenfig NNR (SS8053082201)  
Rank fixed dune grassland/scrub mosaic (avge ht: ~30cm)



**[Ref.# 714] *B. sylvarum* 1 worker 22/08/2013  
Kenfig NNR (SS7958682460)  
Rank fixed dune grassland/scrub mosaic (avge ht: ~20cm)**



**[Ref.# 727-8] *B. sylvarum* 1 worker 22/08/2013  
Kenfig NNR (SS7891283248)  
Rank dune vegetation bordering fen/scrub (avge ht: ~40cm)**



[Ref.# 733] *B. sylvarum* 1 worker 22/08/2013  
Kenfig NNR (SS7914283303)  
Rank dune vegetation with encroaching trees/scrub (avge ht: ~30cm)



[Ref.# 739] *B. sylvarum* 1 worker 22/08/2013  
Kenfig NNR (SS7988182602)  
Rank dune vegetation bordering fen/scrub/river (avge ht: ~20cm)

#### 10.4. Data Archive Appendix

The data archive contains:

- [A] The final report in Microsoft Word and Adobe PDF formats.
- [B] Species records, which are held on the NRW Recorder 6 database.

Metadata for this project is publicly accessible through Natural Resources Wales' Library Catalogue <http://194.83.155.90/olibcgi> by searching 'Dataset Titles'. The metadata is held as record no 115773.



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