



# **Annual Restoration and Aftercare Report for 2014 and Programme for 2015**

Cory Environmental Resource Management  
Hafod Quarry Landfill  
Bangor Road  
Johnstown  
Wrexham  
LL14 6ET

Planning Permission Refs: 6/18883 and P2003/1220 (both as Modified January 2010)



# **Annual Restoration Report 2014**

## **Interfaces**

- Planning Permission: 6/18883
- Environmental Permit: PP3139GB
- Landscape Management Plan: CE-HF-0238-RP01b, August 2010
- Long Term Nature Conservation Management Scheme 2010
- Landscape Masterplan: CE-HF-0238-DW01a, July 2010
- Great Crested Newt Monitoring Report 2014

## **Objective**

To provide a review of the restoration and aftercare operations undertaken at Hafod Quarry Landfill during 2014 and to set out the proposed management programme for 2015.

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## **Introduction**

The Hafod Quarry Landfill Site, excluding the great crested newt mitigation areas (R1 and R2) extends to approximately 28.5 Ha. Around 3 Ha of the site (Cell 1 and North West Lagoon Area) has been permanently capped or landscaped in accordance with the Landscape Masterplan CE-HF-0238-DW01a as approved under Condition 27 of the modified landfill planning permission. The remaining area is made up of operational landfill, areas still to be developed and/or site infrastructure.

## **Work undertaken in 2014**

### ***Capping***

There has been no further capping works undertaken at Hafod during 2014, with the total amount of permanent capping still standing at approximately 19,000 m<sup>2</sup>.

### ***Restoration soils***

Over 17,000 tonnes of restoration soils were accepted at the site during 2014 and stockpiled in two information areas. This material will be moved onto permanently capped areas once these are available and ensure that these areas are restored as quickly as possible once final tipping levels have been achieved.

### ***Trees Planting***

The tree planting undertaken in 2013 on the 2.3 hectares of the Southern section of Cell 1 and behind the North West lagoons, was frequently inspected throughout the year and grass sprayed around individual trees on two occasions. The tree take has been very successful in the majority of areas and following a beat up in January 2014, 500 trees were replanted in January 2014. A further beat up was undertaken in December 2014 to identify any further areas suffering losses and we can confirm that this work was undertaken in March 2015 with a further 500 trees being replanted.



Plate 1: Southern Eastern corner of Cell 1 showing the beat up tree planting undertaken

### ***Bulb Planting***

Daffodil bulbs were planted on the grass verges at the entrance of Hafod by local primary and junior schools in Johnstown towards the end of 2013. In Spring 2014 Daffodils duly emerged and spelt out the name 'Hafod', clearly visible to passers by along Bangor Road,

### ***Aftercare and Management***

Management of Phase A (part) restoration, together with the management of existing and restored areas outside the landfill area, continues to be undertaken in accordance with the details presented in the approved Landscape Management Plan (2010) and the Long Term Nature Conservation Management Scheme (2010), together with the management recommendations from the Great Crested Newt Monitoring Reports.

All areas of established grassland on site are subject to an annual maintenance regime, involving either two grass cuts per year or periodic grazing by sheep and cattle. Any noxious weeds are also treated through application of an approved herbicide weed spray. This work is contracted out to a local farmer.

The grazing of the restored, non tree planted areas of Cell 1 and the area behind the North West Lagoons continues with sheep to reduce the need for mechanized grass



control. This is allowing a lush meadow/pasture land to develop and this method of control will continue in future years.

Grass within tree planted areas is controlled with spot spraying of glycosulphate around the trees and inter-row strimming, by landscape contractors.

The grass sward and tree planting to the restored part of Phase A of the landfill has established well and their continued success will be through continuation of the existing aftercare management practices. The health of the trees and tree take are monitored and individual tree specimens replaced where necessary. There is currently no requirement for thinning of the developing trees.



Plate 2: Scrape pond in R1 Area, protected by fencing to allow cattle grazing.

In 2012, part of the R1 was fenced off to allow cattle from a local organic farm to graze the grassland. During 2013 cattle movements from the farm were prevented due to an outbreak of TB, but after receiving the all clear cattle were once again brought onto the R1 area. As a result of the close grazing by the cattle wildflowers are having chance to develop and the flora and fauna of the area is showing clear signs of improvement, with grass snakes having been spotted on a few occasions.

Self-set trees are continuing to become established on the outer facing slope of the north embankment, which forms part of the wildlife corridor linking areas R1 and R2. These are left to develop naturally.

The area of tree planting around the screening bund of the Landfill Gas Utilisation Compound continues to develop and offer significant screening during the Spring and Summer months. A new access ramp has been constructed in this area and to aid surface water management and prevent runoff onto the public highway, a new pond has been established and landscaped.



Plate 3: Trees and shrubs developing along screening bund around LFG Compound.

### ***R1 and R2 Great Crested Newt Management***

Vegetation removal and clearance was again undertaken during the winter of 2014/15 on the R1 and R2 Great Crested Newt Mitigation Sites. These works included removing shading vegetation, removing overhanging branches and thinning woodland areas to prevent encroachment. These works were in line with those identified within the Great Crested Newt Monitoring Report 2014 and were undertaken by suitably qualified personnel under a site specific Conservation License. The numbers of GCN's recorded during the peak population counts in Spring 2014



were the highest ever recorded at Hafod, with 521 adult GCN's recorded and larvae being found in 11 of the ponds. This increasing trend is very positive and contrary to the regional trend.

### ***Bee Hives at the Site***

After the first bee hive was introduced to the site in late Summer 2013, a second bee hive and colony was installed in Spring 2014. The aim of this was to increase the number of pollinators on site and act as a barometer on how the site was progressing. The hope was that the bee colony would flourish if there was enough nectar sources at the site, thus proving that the flora was diverse and providing good opportunities for the bees. In September 2014 honey was extracted from the first hive, which yielded approximately 90 jars of honey.



Plate 4: Two bee hives located behind the site offices.



Plate 5: Hafod Honey

### **Works programmed for 2015**

#### ***Capping***

During 2015 we will cap an area of approximately 10,000 m<sup>2</sup> of permanent capping on the landfill (Phase A). Waste disposal operations continue in Cell 3, and once this and the adjacent area on Cell 2 is up to final levels, the permanent clay cap will be installed. Once this has been completed sub soils will be placed over this area immediately.

#### ***Restoration***

The stockpiled restoration soils located in the two information areas, will be placed on the capped area once completed. This material came from two local sources, Some will be ideal as a sub soil, whilst some will probably have enough nutrient content to be used as a topsoil. Soil improvers may be added to provide better quality soils should the need arise.

Upon placing and cultivating the soils the area will, subject to timing of the works, be landscaped in accordance with the approved Landscape Masterplan for the site.

#### ***Aftercare and Management***

All areas capped restored and planted, will be subject to the aftercare maintenance programme, as detailed in the Landscape Management Plan.

#### ***R1 and R2 Management***

Within the Great Crested Newt (GCN) Monitoring Report 2014, a number of recommendations were made which would ensure that the habitat within the R1 and R2 mitigation areas could be enhanced to ultimately increase the numbers of breeding GCN at the site. As detailed previously many of the recommendations have

already been instigated. Later in the year a new large lagoon will be constructed in the R1 area, and two lagoons with *Crassula Helmsi* present will be partially filled.

The GCN Monitoring Reports are demonstrating that the ecological works being undertaken at the site are giving effect to the Long Term Nature Conservation Management Scheme (2010), in particular the protection, maintenance and enhancement of the habitat of the R1, R2 and wildlife corridor habitats for GCN.