



Annual Restoration and Aftercare Report for 2013 and Restoration, Aftercare and Management Programme for 2014

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)



	DETAILS	DATE
OK FOR PUBLIC REGISTER	<i>[Signature]</i>	10/6/14
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Interfaces

- Planning Permissions: 6/18883 and P/2003/1220 (both as Modified January 2010)
- Environmental Permit: PP3139GB
- Landscape Management Plan: CE-HF-0238-RP01b, August 2010
- Landscape Masterplan: CE-HF-0238-DW01a, July 2010
- Long Term Nature Conservation Management Scheme 2010
- Great Crested Newt Monitoring Report 2013

Objective

To provide a review of the restoration and aftercare operations undertaken at Hafod Quarry Landfill during 2013 and to set out the proposed management programme for 2014.

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 2013

Capping

There has been no further capping works undertaken at Hafod during 2013, with the total amount of permanent capping still standing at approximately 19,000 m².

Restoration soils

No restoration soils were accepted at the site during 2013.

Trees Planting

Tree planting was undertaken on the 2.3 hectares of the already restored Southern section of Cell 1 and behind the North West lagoons, during Spring 2013. Flintshire Woodlands were chosen as the planting contractor and they planted over 5600 trees in this area. Assistance was also given by two local schools in Johnstown, who helped plant Community Woodland around the North West Lagoons. Routine maintenance including spot spraying, grass strimming and re-staking the spiral guards, was undertaken at various times throughout the year. A beat up was conducted in December 2013 and up to 500 new trees were then planted to replace those that had failed.



Plate 1: Southern Area of Cell 1 showing the tree planting undertaken and establishment of a healthy grass sward

Aftercare and Management

Management of Phase 1 (part) restoration, together with the management of existing and restored areas outwith 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. Any noxious weeds are also treated through application of an approved herbicide weed spray. This work is contracted out to a local farmer.

Following the installation of stock fencing in 2012, the restored areas of Cell 1 and the area behind the North West Lagoons, have been grazed with sheep to reduce the need for mechanized grass control. This is allowing a lush meadow/pasture land to

develop and this method of aftercare management will continue in future years. No areas of grassland have required re-seeding.



Plate 2: Area around North West Lagoon showing tree planting and sheep grazing.

The R1 Great Crested Newt Mitigation Site covers an area of 14 hectares. In 2012, approximately 9 hectares of this was fenced off to allow cattle from a local organic farm to graze the grassland. However, the cattle owner's farm suffered from TB in 2013, so no cattle were able to be brought to the site due to restrictive movements from the farm.

As a consequence we had to cut these areas with a tractor and mower during 2013. The organic farm has now received the all clear with regards TB and in 2014 cattle will be brought back to these areas to improve the pasture once again.

The area of tree planting around the screening bund of the Landfill Gas Utilisation Compound continues to develop. Tree growth is very encouraging, other than the few standards that have died since they were introduced in 2009. However, due to

the high success rates of other trees, it is not considered necessary to replace the few failed trees.

The grass sward and tree planting to the restored part of Phase 1 of the landfill are establishing 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.

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.



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

R1 and R2 Management

Vegetation removal and clearance was again undertaken during the winter of 2013/14 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. Typha weed and silt was also removed

from the ponds to improve habitat. These works were in line with those identified within the Great Crested Newt Monitoring Report 2013 and were undertaken by suitably qualified personnel under a site specific Conservation License. The amphibian proof fencing is subject to regular inspection and, if needed, maintenance work, to ensure its continuing integrity in excluding Great Crested Newt from the operational area of the site.

Bee Hives near to the Site Offices

In August 2013 a bee hive was introduced just behind the site offices. The aim of this is to increase the number of pollinators on site and act as a barometer on how the site has been progressing. The hope was that the bee colony would flourish if there was enough nectar sources at the site, thus proving that the flora is diverse and providing good opportunities for the bees. It has already been seen that the bees on site are prolific and it is planned to introduce a second hive during the Summer of 2014.



Plate 4: Bee hive located behind the site offices.

Works programmed for 2014

Capping

During 2014 we are proposing to cap an additional area of approximately 10,000 m² of permanent capping on a further area within Phase 1 of the landfill. 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

In the first three months of 2014, we have stockpiled over 10,000 tonnes of restoration soils in an information area, which can be placed on the capped area once completed. This material came from two local sources and will be ideal as a sub soil. Soil improvers may be added to provide better quality soils should the need arise.

Upon placing and cultivating the soils the area will be landscaped in accordance with the approved Landscape Masterplan for the site; this includes the establishment of further grass sward and trees.

Aftercare and Management

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

R1 and R2 Management

Within the Great Crested Newt (GCN) Monitoring Report 2013, 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.

Work to maintain and enhance the Great Crested Newt (GCN) habitat at the site will continue in accordance with the GCN Monitoring Report 2013 and any further recommendations of the GCN Monitoring Report 2014.

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.

During the first two GCN monitoring visits of 2014, record numbers of GCN's were counted at site, 521 and 367 respectively. This is very encouraging that improvements within the habitats available over the entire site are having a positive impact on the numbers of GCNs being found breeding at Hafod.

Further pond and vegetation clearance will also be programmed for winter 2014/15.