

**RHONDDA CYNON TAF COUNTY BOROUGH COUNCIL
MUNICIPAL YEAR 2014-2015**

**ENVIRONMENTAL SERVICES
SCRUTINY COMMITTEE**

14th July, 2014

**REPORT OF THE GROUP
DIRECTOR, ENVIRONMENTAL
SERVICES**

Agenda Item No 4

Land Reclamation Report

Author: Nigel Brinn, Service Director - Highways, Transportation and Strategic Projects.

Tel. No. 01443 494861

1.0 PURPOSE OF THE REPORT

1.1 This report advises on the current progress since gaining cabinet approval on 22 February 2010 to progress the Albion scheme and provide a general update on the land reclamation programme.

2.0 RECOMMENDATION

2.1 The progress to date on the Albion scheme is noted.

2.3 Lack of Welsh Government funding for future Land Reclamation is noted.

3.0 REASON FOR THE ALBION LOWER TIP SCHEME

3.1 The reason for undertaking the proposed reclamation work on the Albion Lower Tip is the need to improve the stability of the Tip where significant movements were experienced in the late 1980's. Specialist drainage works were installed in and below the Lower Tip in 1991 in order to arrest the active movement. These drainage measures were successful and resulted in a significant improvement in stability.

The aim of the scheme is: -

- To reduce the threat to people and their property from the tip complex
- To reduce the on-going burden on monitoring and maintenance and general liability as land owner on the council.
- To provide a project with a significant design life of 50 years.
- To provide a project with minimal environmental impact.

4.0 BACKGROUND THE ALBION LOWER TIP SCHEME

- 4.1 Albion Lower Tip lies on a west-facing hillside, immediately east of the village of Cilfynydd at Grid Reference ST 091 924 between 95 and 170m AOD. The site has an area of 10.5 ha.
- 4.2 The Lower Tip is bounded to the east by a 15m high rock face above which is the Albion Upper Tip. This rock face is the remnant of a former quarry. Albion Colliery and the Lower Tip were first reclaimed in 1975 when colliery spoil was transported to the Upper Tip. Since this time the Lower Tip has been grazed and there were proposals for some tree planting on its lower slopes. However these were not implemented and the grazing arrangements terminated when significant tip movements were noted in 1990 after a period of heavy rainfall. The crest of the Lower Tip is traversed by a 132kV high voltage cables between pylons, two of which lie within the site. Two 33kV power lines also cross the Lower Tip in a north to south direction
- 4.3 The Land Reclamation Section previously obtained planning consent (planning application number 51/92/0413), based on a reclamation scheme designed by Halcrow in 1994/95. The proposed scheme was to reprofile the Albion Lower Tip by the removal of some 600,000 cu.m of spoil to Cilfynydd Common where the material would be worked in conjunction with the reprofiling of the Abercynon Ropeway (NCB Tip. 159) and the Putwell Farm (NCB Tip. 106) utilising coal washing methods.
- 4.4 A revised scheme was submitted in 2002 by the Land Reclamation Section with the general concept unchanged in that it involves the bulk removal of colliery spoil from the site and the provision of surface and sub-surface drainage. However, the scheme was no longer linked with the Cilfynydd Common and the receptor site for the excavated spoil was to be determined. Planning consent for this revised scheme was obtained in April 2004 (planning application number 02/0788/10). Although granted, the scheme required significant ecological disturbance and required a new haulage route out from the tip to be created with a predicted 120 Lorries leaving the site on a daily bases for 30 weeks per year for 3 years. (54,000 movements). To implement the permission a CPO would be required for the haulage route. This permission has now lapsed.
- 4.5 Cabinet approval was gained on 22 February 2010 to progress an alternative scheme based on the already successful “under tip drainage”. The basic elements of the scheme are re-produced below:-
- a) Duration of Construction contract reduced by 2 years from 3 to 1 year.
 - b) No significant access/haulage route requirements on privately owned land.
 - c) No significant off site ecological impacts
 - d) No CPO requirements (Some land entry negotiations only)
 - e) No High voltage cable diversions required
 - f) 50 year design life for active drainage extended by pre installed non active drainage
 - g) A reduced maintenance liability. No significant renewal for 50 years.
- 4.5 The current i.e. pre scheme monitoring and maintenance of the tip complex is costing £30 - £40k per annum.

5.0 THE ALBION LOWER TIP SCHEME PROGRESS.

- 5.1 The detailed design has progressed alongside the preparation and submission of a planning application which was approved on the 15th of September 2011. The planning process was slow due to ecological constraints found on the main body of the tip
- 5.2 Ecological constraints, and their mitigation, were agreed with National Resources Wales. These constraints include bat roosts and reptile re-location. The timescales for these mitigation works have now been incorporated into the scheme.
- 5.3 The procurement strategy for the scheme allowed for Early Contractor Involvement (ECI). This was seen as imperative to the success of the scheme due to the high level of specialist work required to install the drainage.
- 5.4 The scheme progressed through the ECI process with the completion of:-
- The Design Development Phase.
 - The Enabling works Phase – Consisting of Ecology mitigation, ground investigation and a full trial bore.
 - Initial scheme publicity – Press Release and Newsletter.
 - A negotiated price for the Construction Phase with Alun Griffiths Ltd being agreed and contract awarded.
 - A delegated decision to advance the scheme was given on 23 September 2013 to advance the scheme subject to Welsh Government Funding.
 - Welsh Government funding was obtained on 3 October 2013 for **£2,941,395.00**
 - The Construction Phase Contract was awarded to Alun Griffiths Ltd on 9 October 2013.
 - Construction Phase commenced on 21 October 2013
 - Construction Phase due for completion by August 2014

6.0 THE ALBION LOWER TIP SCHEME CONSTRUCTION PHASE

- 6.1 The scheme consists of:-
- 6.2 Haul routes – all the haul routes were constructed prior to December 2013. This was advantageous as the weather was bad in December 2013 and January 2014 and the advanced construction prevented any significant delays.
- 6.3 Horizontal Drilling – a specialist drilling company PBU used the latest technology to drill under the tip to drain the water (See indicative section in Appendix A. A total of 11 nr have been installed at a total length of 2,670m. The current water returned from the wells is around 2.5l/s or 47,500 gallons per day, which is above the design requirement. The Drilling equipment and example of draining water can be seen in appendix B Photo 1 and 2 respective

- 6.4 Vertically Drilled holes are nearing completion. They will assist in relieving the water pressure in the lower slopes by allowing it to rise within the vertical pipes rather than press on the bottom of the tip. An example of the drilling equipment is shown in Appendix B photo 3
- 6.5 Drainage to the lower slopes of the northern lobe of the tip has been installed as deep rubble drains. This will drain the critical areas of excess groundwater. Examples of the drainage within this area is shown in Appendix B photos 4 and 5
- 6.6 The rear lane of Mary St has been resurfaced and additional drainage installed to receive residual groundwater flows at the toe of the tip. A photo during (photo 6) and after (photo 7) is shown in appendix B
- 6.7 Improvements to the drainage regime are also being constructed such as a new headwall and pollution control pond. The construction of the headwall is shown in photo 8 Appendix B
- 6.8 Electronic monitoring equipment will be installed to monitor the post project water levels. The equipment will allow the council's engineers to receive "real time" data. An example of the equipment is shown in Photo 9 in Appendix B

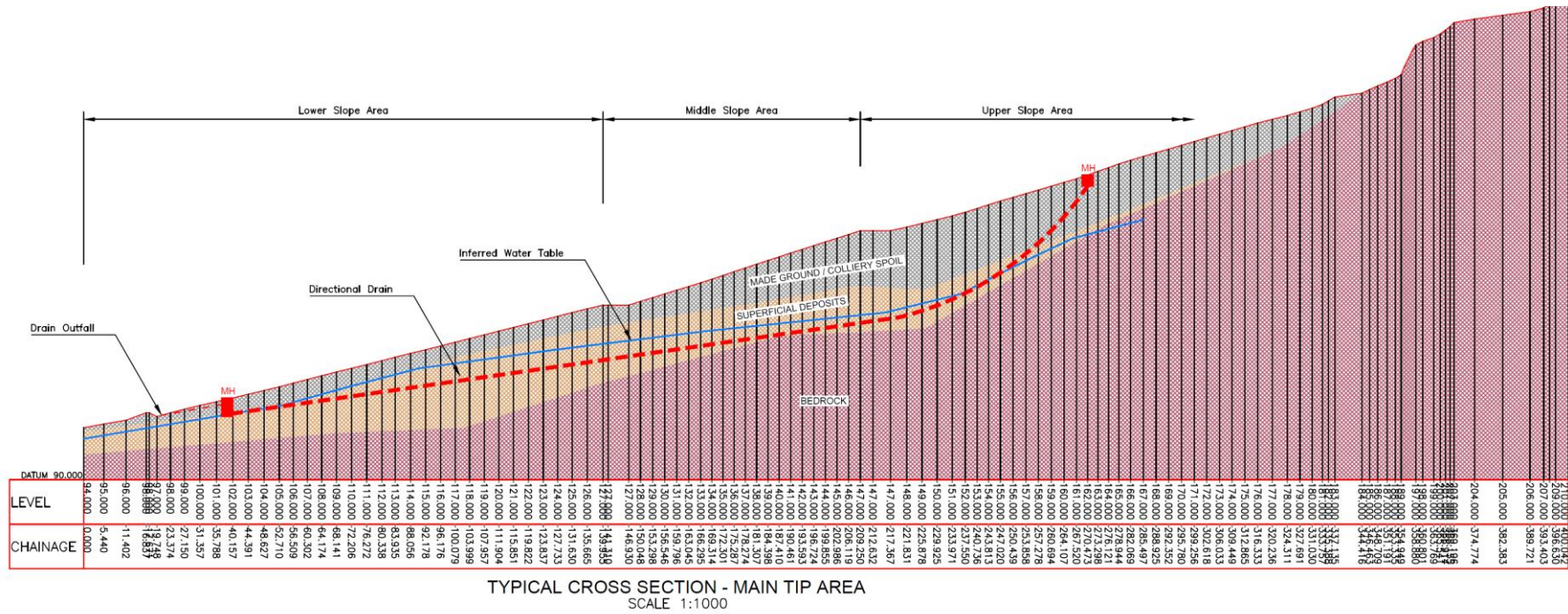
7.0 THE ALBION LOWER TIP SCHEME POST PROJECT

- 7.1 For 12 months after project completion the design consultants will monitor the effectiveness of the measures and verify the design. Completion of this project and design verification will significantly reduce the liability on the council and reduce the current monitoring cost from £30-40k per annum to around £10-15k per annum.

8.0 FUTURE RECLAMATION PROGRAMME



- 8.1 The council still has in its ownership, a number of un-reclaimed pieces of land consisting of mostly tips. These are included in the Local Development Plan under NSA 27 and SSA 24. Two of these sites are also designated as strategic sites, namely Maerdy Colliery (NSA4) and Cwm Tips (SSA7). The Table in appendix C provides a summary.
- 8.2 The Welsh Government has traditionally funded reclamation at 100%. Welsh Government has informed the council that it is unlikely to fund future reclamation work unless there is a "business case" for it. The focus of the business case being on economic outputs such as bringing forward development land.
- 8.3 There is therefore potential funding available for schemes that have a potential to generate reclaimed land for development such as Cwm Colliery & Tips and Maerdy Colliery. However, this leaves the other sites, some of which have historical stability issues, without potential funding and an increased future liability for the Council. The Strategic Projects Section within the council continues to work with the Welsh Government, Planning Colleagues and the private sector to bring these projects forward.

Appendix A Typical Section through Albion lower Tip – Horizontal Directional Bore



This page intentionally blank

Appendix B – Albion Lower Tip - Photographs

 A large piece of directional drilling equipment is positioned on a construction site. The machine is orange and black, with various hoses and cables attached. In the background, another piece of orange machinery is visible on a hillside.	 A close-up view of a large pipe or hose discharging a thick, brown, muddy liquid. The liquid is flowing out of a hole in the ground, creating a small stream on the dark, rocky soil.
<p>Photo 1 – Directional Drilling Equip.</p>	<p>Photo 2 – Water Flow after Drilling</p>
 A vertical drilling rig is operating on a steep, excavated slope. A worker in a high-visibility vest is standing near the base of the rig. A blue tracked vehicle is parked nearby. The background shows a residential area with houses and trees.	
<p>Photo 3 – Vertical Holes</p>	
 A view of a drainage system installed in a wooded area. A long, narrow, dark-colored drainage pipe runs through the ground, surrounded by gravel and soil. The background shows trees and a building.	 A view of a drainage system installed in a wooded area. A long, narrow, dark-colored drainage pipe runs through the ground, surrounded by gravel and soil. The background shows trees and a building.
<p>Photo 4 – Northern Lobe - Drainage</p>	<p>Photo 5 – Northern Lobe - Drainage</p>

Appendix B – Albion Lower Tip - Photographs



Photo 6 – Lane during Construction.



Photo 7 – Lane After Construction



Photo 8 – Headwall Construction

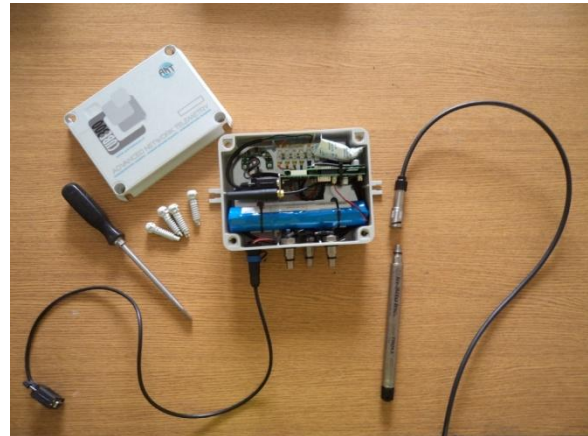


Photo 9 – Data Telemetry

Appendix C – Summary of Reclamation Schemes

Site	LDP Ref.	Type	Status
Aberaman Colliery	NSA27	Tip and Development	Completed
Tylorstown & Llanwonno Tips	NSA27	Tip with stability Issues	Prelim Design – No funding
Lewis Merthyr Tips	NSA27	Tip	No Funding
Gelli Tips	NSA27	Tip	No Funding
Craig yr Duffryn Tip	NSA27	Tip with stability Issues	Prelim Design – No funding
Cefn Pennar Tip	NSA27	Tip with Drainage Issues	Prelim Design – No funding
Maerdy Colliery	NSA4 & 27	Tip and Development	Prelim Design – No funding
Coedely Aftercare	SSA24	Post project Legacy	Monitoring of legacy landfill – 2 years funding
Albion Lower tip	SSA24	Tip with stability Issues	Construction – Fully Funded, post project legacy monitoring not funded by WG
Hetty Colliery	SSA24	Colliery surface with Development	No Funding
Cefn yr Hendy	SSA24	Development	Completed
Cwm Colliery and tips	SSA7 & 24	Tip and Development	Prelim Design – Potential Funding via private investment.

This page intentionally blank