

Restoration of opencast mining sites

Senedd Cymru | Welsh Parliament

Pwyllgor Newid Hinsawdd, yr Amgylchedd a Seilwaith | Climate Change, Environment, and Infrastructure Committee

Adfer safleoedd glo brig | Restoration of opencast mining sites

Ymateb gan Sue Jordan a Owen Jordan | Evidence from Sue Jordan and Owen Jordan

The **Climate Change, Environment and Infrastructure Committee** ('the Committee') has agreed to undertake a short piece of work to explore the restoration of former opencast mining sites in south Wales.

This work will focus on:

- the financial and practical arrangements for the restoration of the Ffos y Fran opencast site;
 - how restoration of opencast sites can be secured, and contingency planning in the event of insufficient funds being available; and
 - the findings and recommendations from the Welsh Government report on **Research into the failure to restore opencast coal sites in south Wales (April 2014)** and whether these still apply.
-

Background

Never again

Opencast mining reduced our home to an insurance write off.

These events are narrated to warn the executive, residents, and others, that homes are vulnerable to opencast mining, and no effective duty of care is afforded by the Coal Authority, the planning authorities, mine owners and operators or the civil service.

We moved to Ochr y Waun, Cwmllynfell in 1978. In 1995, the coal industry was privatised, and the common and opencast workings were bought by Celtic Energy. Celtic Energy's 2004 planning consent for opencast mining expired in

2012, but Neath Port Talbot (NPT) local planning authority (LPA) took no action, and mining continued. The 2004 consent was conditional on full restoration of the common. Celtic Energy applied for extension in 2012. The CA's 2012 Groundsure report indicated a 'high potential for natural ground instability', vulnerability of adjacent residents and very high risk of flooding. By 2012, we were the only 'adjacent residents' (attached). The LPA sought an alternative report, and did not share the Groundsure report with 'adjacent residents', elected councillors or, to our knowledge, anyone else. The extension in 2015 was approved without provision for restoration. The Senedd declined to 'call in' the application, despite common land being removed from the commoners' use, and Carl Sargeant signed it days after the Senedd elections.

Our home began to crack in 2017 (photographs below), and we contacted the LPA and the Coal Authority (CA); both denied any association with the opencast. Report (31.3.17) from the CA indicate their awareness of slippage close to our home and the possibility of fault activation affecting our road. It took 2 years and a top solicitor (from AXA insurance company) before Celtic Energy agreed to settle. Photographs are appended.

These events suggest institutional failings: our difficulties would have been avoided had the CA or the LPA shared the Groundsure report with us in 2012, as we believe they were obliged to do under the Coal Mining Subsidence Act of 1991, the Coal Industry Act 1994 and the Planning Act 1990. These failures to discharge a duty of care cost us years of stress, and time, energy and resources to bring the mine operator to a legal settlement. This narrative could provide valuable learning for those seeking to build better institutions around Wales' natural resources, but has gone unremarked, to date.

What procedures are in place to ensure that such failures will never occur again?

How many other homes must crack and crumble – or worse – before a meaningful lesson is learned?

The financial and practical arrangements in place for the restoration of the Ffos y Fran opencast site;

This has been addressed by Chris Austin and Coal Action Network, and we urge this enquiry to take their statements into consideration.

We urge this enquiry not to treat Ffos y Fran in isolation. Opencast mining across South Wales has left sites in potentially dangerous conditions as currently exists at East Pit: this must be addressed. At all sites, it is unsafe to leave millions of cubic

metres of water several hundred feet above the valley floor, with no constructed dam to retain water should the sides of the void slip.

How restoration of opencast sites can be secured, and contingency planning in the event of insufficient funds being available to restore sites;

Public safety must be prioritised.

The volumes of water held in former opencast mine voids are sufficient to pose real risks to the public should discharge or breaches occur. The residents of the Llynfell, Twrch and Swansea valleys are owed a duty of care.

In its present state, the former East pit site offers a point of meaningful comparison: it currently constitutes an unplanned reservoir of 40 million cubic metres of water, on an active earthquake fault and some 150m above the valley floor, with unstable sides and no constructed dam to retain water. Yet, in his reply to Gwaun Cae Gurwen community council (25.3.21), Steve Ball from NPT planning dept. refused a request to engage an indemnified, chartered engineer from the 'Reservoirs panel' to assess any dangers associated with the site. Since then, the level of water in the void has risen to within a few metres of the sill, and the A4069 has collapsed due to mine workings; we, and Gwaun Cae Gurwen Community Council are now also requesting a hydrology assessment.

Only restoration, as promised in the 2004 planning application, can remove dangers of serious flooding should another earthquake occur on the site of the February 2018 earthquake (4.6 on Richter scale).

Costs of restoration of abandoned opencast sites have been an agenda exclusively in the control of the site owner/operator (not always the same company). This has allowed Escrow funds to be returned to the mine operator with very little to show for it. Restoration, particularly backfill costs, may be disproportionate to the actual competitive cost per cubic metre for large civil engineering works.

Where does responsibility lie?

We have seen a letter from the UK (Westminster) government Dept of Energy and Commerce encouraging Rhodri Morgan to proceed with East Pit (attached). There is no mention of the inevitable environmental destruction and carbon dioxide emissions associated with opencast. The UK government profited from opencast mining by selling opencast licences; they made the decision not to insist on escrow accounts during the first decade of privatised opencast.

Discussion of the findings and recommendations from the Welsh Government report on *Research into the failure to restore opencast coal sites in south Wales (April 2014)* and whether these are still applicable.

We agree that ground stability, public hazards and water management may need to be funded by tax payers. The report does not indicate whether this should be from the UK or Wales' budget.

Our experience is incongruent with the statement in 5.2.2 p.45 that the LPA and CA have clearly defined roles and responsibilities: we were tirelessly referred from one to the other, and, on occasions to NRW. The failure of the CA to engage with our concerns in any substantive way, share reports, and fulfil any duty of care negates any suggestion that the CA might act as an 'honest broker' (p.81). Greater transparency is needed regarding the roles, responsibilities and power of the Westminster civil service, particularly the Department for Business. A single authority, publicly accountable, accessing the expertise of indemnified, chartered engineers, and accepting full responsibility might be more effective than the present arrangement.

The risks now posed from unrestored opencast coal sites (East Pit, Margam, Ffos y Fran), are, in the main, attributable to the statutory authorities' failure, either severally or in co-operatively, to use the legislation available to them (The Coal Industry Act 1994, Coal Mining subsidence Act 1991, Mines and Quarries (Tips) Act 1969, Reservoirs Act 1975, Planning Act 1990) to effectively control both the site operations and the restoration. Care must be taken that any new legislation does not eviscerate existing statutory provision. Failure to hold the multiple, publicly funded agencies to account when statutory provision is not followed appears to be more problematic than the statutory provision itself.

Despite public opprobrium regarding Celtic Energy's sequestration of resources to offshore accounts (Private Eye 2014, attached), NPT, the CA and WG approved further opencast extensions in 2015.

The climate change emergency indicates that further opencast must not be considered (5.3.1 p.46): the environmental, climate and public health costs are prohibitive. There has been no gain for local communities - only losses.

The Coal Action Network produced [an update report](#) to the 2014 Welsh Government report at the end of 2022. This illustrates the problems, for which the solutions are full restoration, as promised in initial planning consents.

We are disappointed that there is no discussion of the health impacts of surface mining, opencast, coal, pollution and landfill, including the increased risk of birth

defects, and consider these to be **incompatible with the Wellbeing of Future Generations**. (Bibliography below)

SJ/OJ 20.4.24

Photographs

Plate boundary on the common November 2018



Road cracks outside house November 2018



Photographs of house

Dec 2018 Hearth arch pulls off bearing. 2 inch crack

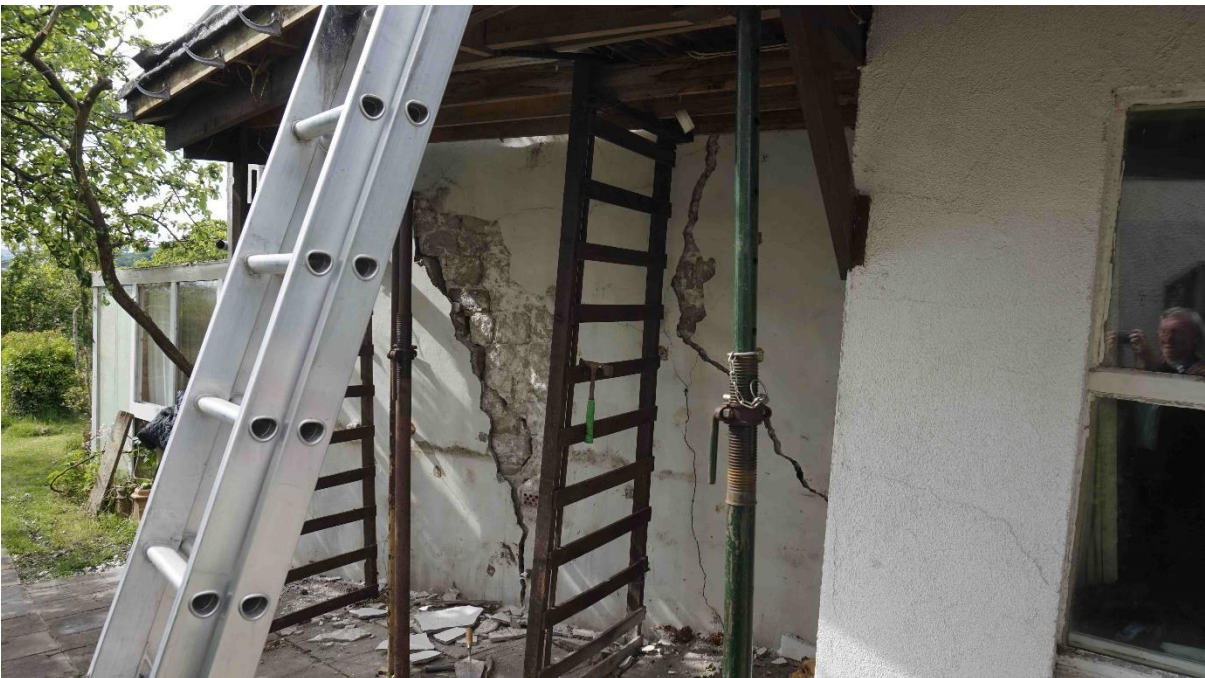


Small bedroom

August 2019



NE end of house May 2020 (jack in position to prevent roof fall)



Glazing panel explodes December 2018



Bibliography

The unborn child

Kihal-Talantikite W, Zmirou-Navier D, Padilla C, Deguen S. Systematic literature review of reproductive outcome associated with residential proximity to polluted sites. *Int J Health Geogr.* 2017 May 30;16(1):20. doi: 10.1186/s12942-017-0091-y. Review. PubMed PMID: 28558782; PubMed Central PMCID: PMC5450119.

Agay-Shay K et al. (2013) Air pollution and congenital heart defects. *Environmental Research.* Jul 124:28-34.

Dolk H, Armstrong B, Lachowycz K, Vrijheid M, Rankin J, Abramsky L, Boyd PA, Wellesley D. Ambient air pollution and risk of congenital anomalies in England, 1991-1999. *Occup Environ Med.* 2010 Apr;67(4):223-7. Epub 2009 Oct 9. PubMed PMID:19819865.

Jenkins KJ, et al Non-inherited Risk Factors and Congenital Cardiovascular Defects: Current Knowledge, (*Circulation* 2007).

Hehua Z, Qing C, Shanyan G, Qijun W, Yuhong Z. The impact of prenatal exposure to air pollution on childhood wheezing and asthma: A systematic review. *Environ Res.* 2017 Nov;159:519-530. doi: 10.1016/j.envres.2017.08.038. Epub 2017 Sep 8. PMID: 28888196.

Children's health

Appleton AA, Holdsworth EA, Kubzansky LD: A systematic review of the interplay between social determinants and environmental exposures for early-life outcomes. *Curr Environ Health Rep* 2016, 3(3):287-301

Pajewska-Szmyt M, Sinkiewicz-Darol E, Gadzala-Kopciuch R: The impact of environmental pollution on the quality of mother's milk. *Environ Sci Pollut Res Int* 2019, 26(8):7405-7427

DoH, Dickson Dees 1999 *Do particulates from opencast coal mining impair children's respiratory health?* The Stationery Office, London

Howel D. et al 2001 Children's respiratory health and daily particulate levels in 10 nonurban communities. *Environmental Research.* 87; 1; 1-9

Pless-Mulloli T, Howel D, King A, Stone I, Merefield J, Bessell J, Darnell R. Living near opencast coal mining sites and children's respiratory health. *Occup Environ Med.* 2000 Mar;57(3):145-51. doi: 10.1136/oem.57.3.145. PMID: 10810095; PMCID: PMC1739923.

Pollution and Respiratory / cardiovascular health

Arregocés HA, Rojano R, Angulo L, Restrepo G. Intake Fraction of PM₁₀ from Coal Mine Emissions in the North of Colombia. *J Environ Public Health.* 2018 Jul 29;2018:8532463. doi: 10.1155/2018/8532463. PMID: 30151014; PMCID: PMC6087594.

- Gan WQ, FitzGerald JM, Carlsten C, Sadatsafavi M, Brauer M. Associations of ambient air pollution with chronic obstructive pulmonary disease hospitalization and mortality. *Am J Respir Crit Care Med*. 2013 Apr 1;187(7):721-7. doi: 10.1164/rccm.201211-2004OC.
- Niu Z, Liu F, Yu H, Wu S, Xiang H. Association between exposure to ambient air pollution and hospital admission, incidence, and mortality of stroke: an updated systematic review and meta-analysis of more than 23 million participants. *Environ Health Prev Med*. 2021 Jan 26;26(1):15. doi: 10.1186/s12199-021-00937-1. PMID: 33499804; PMCID: PMC7839211.
- Cao Y, Feng Y, Xia N, Zhang J. Causal associations of particulate matter 2.5 and cardiovascular disease: A two-sample mendelian randomization study. *PLoS One*. 2024 Apr 5;19(4):e0301823. doi: 10.1371/journal.pone.0301823. PMID: 38578766; PMCID: PMC10997086.
- Kim JM, Kim E, Song DK, Kim YJ, Lee JH, Ha E. Causal relationship between particulate matter 2.5 and diabetes: two sample Mendelian randomization. *Front Public Health*. 2023 Aug 10;11:1164647. doi: 10.3389/fpubh.2023.1164647. PMID: 37637811; PMCID: PMC10450337.
- Zhang Y, Liu S, Wang Y, Wang Y. Causal relationship between particulate matter 2.5 and hypothyroidism: A two-sample Mendelian randomization study. *Front Public Health*. 2022 Nov 25;10:1000103. doi: 10.3389/fpubh.2022.1000103. PMID: 36504957; PMCID: PMC9732245.
- Khazaei S, Mohammadbeigi A, Jenabi E, Asgarian A, Heidari H, Saghafipour A, Arsang-Jang S, Ansari H. Environmental and ecological factors of stomach cancer incidence and mortality: a systematic review study on ecological studies. *Rev Environ Health*. 2020 Jul 19;35(4):443-452. doi: 10.1515/reveh-2020-0022. PMID: 32683335.
- Arregocés HA, Bonivento GJ, Ladino LA, Beristain-Montiel E, Restrepo G, Miranda J, Alvarez-Ospina H, Rojano R. Human health risk assessment of PM₁₀-bound heavy metals and PAHs around the Latin America's Largest opencast coal mine. *Environ Sci Pollut Res Int*. 2023 Dec;30(60):125915-125930. doi: 10.1007/s11356-023-30787-z. Epub 2023 Nov 27. PMID: 38008845; PMCID: PMC10754741.
- Fernández-Navarro P, García-Pérez J, Ramis R, Boldo E, López-Abente G. Proximity to mining industry and cancer mortality. *Sci Total Environ*. 2012 Oct 1;435-436:66-73. doi: 10.1016/j.scitotenv.2012.07.019. Epub 2012 Jul 28. PMID: 22846765.
-