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Disused coal tip management in Wales: environmental regulation under climate change

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journals.sagepub.com/home/elj**Robert G Lee**

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Abstract

In view of recent coal tip failures in Wales under pressures of climate change conditions, particularly severe rainfall, the Welsh Government has committed to taking preventive action to address threats associated with disused coal tips, which number more than 2,500. This legislation is currently under development, aided by a report from the Law Commission of England and Wales, which recommended the creation of a coal tips register and the designation of an authority for overseeing inspections, assessing risk levels, and ensuring appropriate management. Whilst the intent of such regulatory action on coal tips is the protection of both public safety and environmental health, paradoxically a central barrier to an effective regime is the body of environmental regulations which constrain development. This article reviews such tensions in areas such as waste management, environmental permitting, habitat protection, ecological assessments, and nature conservation, before considering potential solutions to enable timely implementation of coal tip safety measures whilst safeguarding long-term ecological health and sustainability. The conclusion reflects on how the issue of disused coal tip safety serves as a harbinger of the types of legislative challenges likely to arise under climate change.

Background

At the time of writing, Welsh Government intends to legislate to ensure effective risk management of disused coal tips in Wales. This follows recent coal tip failures in Wales under pressures of climate change conditions, particularly severe rainfall in periods of stormy weather. This legislation is currently under development, aided by a report from the Law Commission of England and Wales, which recommended the creation of a coal tips register and the designation of an authority for overseeing inspections, assessing risk levels, and ensuring appropriate management. The background to this is covered in the paper, which covers one problematic issue, which is reconciling emergency interventions to ensure coal tip stability with wider demands of planning and environmental law. After explaining the proposed powers to manage the risks of coal tip failure, the paper identifies and analyses potential clashes between any new powers and existing statutory provisions. It ends by reflecting how adaptive action in the face of climate emergencies may generate potential conflicts between wider environmental goals.

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From Aberfan to Tylorstown

On 21 October 1966, the collapse of a coal tip took the lives of 144 people in Aberfan in the Taff Valley, South Wales. Some 116 were children attending the Pantglas Junior School, which was buried under a tsunami of coal waste. A Tribunal commissioned to investigate the incident reached the ‘strong and unanimous view that the Aberfan disaster could and should have been prevented’.¹ The coal tip, one of seven serving the Merthyr Vale Colliery and labelled tip number 7, rose to a height of 111 feet, being made up of 300,000 cubic yards of waste. It covered an underground spring that lay beneath porous sandstone. In a wet spell of weather, the tip had become oversaturated causing it to fail. In the words of Counsel to the Tribunal, water was ‘long recognised as the destroyer of the stability of refuse tips’.²

Some significant legislation was put in place post-Aberfan,³ but in the 50 intervening years, certain features of that legislation became outdated. One significant change concerns the closure of coal mines. Although some open-cast mining for coal persists in South Wales, there are no active deep mines in Wales or in Britain. The last active mine, Kellingley Colliery in North Yorkshire, closed in December 2015.⁴

Another relevant change since the time of the Aberfan disaster and the passage thereafter of the Mines and Quarries (Tips) Act 1969 is the adoption of extensive environmental laws controlling industrial activity and land use practices. In this case, as this report will illustrate, legislation intended to protect the environment may have unwittingly created barriers to mitigating threats associated with coal tip stability.

More than 50 years later, with the coal mines now closed but with the memories of Aberfan still raw in the communities of the South Wales valleys, another tip failed. In February 2020, 60,000 tonnes of coal tip waste toppled down a hillside at Tylorstown in the Rhondda Valley. Fortunately, on this occasion, no lives were lost. A river separated the community in the valley from the coal tip, resulting in the river absorbing the coal waste, causing infrastructure damage and generating a bill estimated at more than £20 m for clean-up and restoration. This incident led to a review by the Welsh Government of coal tip safety, not least because, under climate change, more and more events of excessive rainfall are experienced in South Wales.

Law Commission Report

As part of this programme of work, the Welsh Government approached the Law Commission of England and Wales with a request for a review of the legislation governing coal tip safety. The Law Commission consulted widely on a range of issues related to coal tip safety.⁵ It produced a Report⁶ with recommendations for the management of disused coal tips in light of their current status and ownership, related environmental regulations, and changing conditions associated with climate change. Published in March 2022,

1. Inquiry into the Aberfan Disaster: Report of The Tribunal appointed under the Tribunals of Inquiry (Evidence) Act, 1921 at para. 18, available at: <http://www.dmm.org.uk/ukreport/553-04.htm>.

2. *Ibid* at para. 34.

3. In particular, see the Mines and Quarries (Tips) Act 1969, Part 2 of which is still in force.

4. While a much-contested plan for a new Woodhouse Colliery deep mine has been proposed in West Cumbria, the UK Government’s plans to close all coal fired power stations by 2024 portend that future legislation is likely to govern closed rather than active coal tips. See Ministerial announcement by Anne-Marie Trevelyan (Energy and Climate Change) 30 June 2021; <https://www.gov.uk/government/news/end-to-coal-power-brought-forward-to-october-2024>.

5. Law Commission, *Regulating Coal Tip Safety in Wales*; A Consultation Paper (June 2021, CP 255).

6. Law Commission, *Regulating Coal Tip Safety in Wales*: Report (March 2022, LC 406).

the Report recommended the creation of a new supervisory authority and a register for all disused coal tips (estimated to number about 2,500 in Wales, most of which are privately owned).

Whereas the 1969 Act focused exclusively on *unstable* tips, the Law Commission Report emphasised prevention by requiring inspections of all disused tips with the designation of those at risk of becoming unstable or otherwise posing a hazard due to their physical placement or potential for pollution, combustion, or flooding. The Report recommended that tip management agreements be established for each disused coal tip, prioritising those at higher risk, with penalties and enforcement powers triggered by non-compliance. The Report acknowledged several outstanding challenges, such as dwindling coal management expertise with the eclipse of the industry, lack of clarity on who should pay for inspections and remedial works, and potential stress on local authority resources if tasked with enforcing tip agreements and tip orders.

Environmental controls: need for further consideration

The Law Commission determined that it would limit its consideration of the overlap between tip safety concerns and environmental controls, stating that: ‘the project would not review wider environmental law concerns except insofar as they were directly relevant to regulating the safety risk posed by coal tips’.⁷ The Commission’s limitation on its scope of environmental law considered is understandable; the Welsh Government sought to develop an identifiably distinct regime of statute law concerning disused coal tips rather than asking the Law Commission to engage in a broad review of environmental law. While the Law Commission Report contains a most useful chapter on ‘Tip Safety and Environmental Legislation’⁸ discussing possible clashes between existing environmental controls and urgent coal tip safety or remediation needs, the chapter concludes by stating:

We do not make recommendations as to these broader strategies. We relay the suggestions made to the Welsh Government with our observations in the hope that they will assist with policy development.⁹

The analysis in this report adds to the discussion, therefore, by providing a wider consideration of the extent to which existing environmental legislation might stand in the way of preventive responses to the threats posed by coal tips and remedial interventions in the aftermath of coal tip failures. As will become apparent, the regulatory issues involved are wide-ranging, concerning not only environmental permits and planning consents but also contextual and geographical issues such as water regulation, nature conservation, land reclamation, and even tree felling.

If legislation is to follow from the Law Commission Report, then the aim of this document is to provide a policy agenda to accompany such legislation in order to ensure smooth passage for interventions to prevent or address coal tip failures. Importantly, the current problem of coal tip stability stems at least in part from conditions accompanying climate change. As such, this paper investigates how it might be necessary to allow for emergency action to respond to climate change by adapting regulatory regimes designed to protect the environment. Before reviewing these issues of environmental protection, we first explain the present nature and legal status of emergency interventions regarding coal tips.

7. Ibid at para. 1.8.

8. Ibid at Chapter 11.

9. Ibid at para. 11.73.

Coal tips and powers of intervention

Early coal tip legislation

The coal tips of the Welsh Valleys are made up of colliery spoil excavated from mine shafts. This waste consists mainly of shale and contains small amounts of bituminous and carbonaceous matter, sandstone, clay, ironstone, and limestone.¹⁰ Much of this waste is coarse material, which is relatively easy to manipulate and through which water drains fairly freely, but waste may also include ‘fine discard’, which refers to particles of a diameter less than 0.5 mm, through which water does not drain so well.¹¹ The use of the term ‘discard’ here is meaningful: the legal test for what constitutes waste is largely driven by the question of whether the holder of that material can be taken to have ‘discarded’ it.

In the Welsh coalfields, the ordinary disposal method for waste from active deep mines was to create spoil heaps, usually on adjacent land, though sometimes utilising lagoons as repositories. The legal status of these coal tips has evolved over time. The Mines and Quarries Act of 1954 contained a provision stating that ‘premises’ used for depositing refuse from a mine could be taken to form part of that mine,¹² but the context of this legislation was relevant for matters relating primarily to the safety and welfare of workers rather than broader community-level safety concerns or environmental considerations. Licensing of waste tips as independent entities came only towards the end of coal mining in the UK. Following the Aberfan disaster, these types of structures were governed by the Mines and Quarries (Tips) Act of 1969 and the Mines and Quarries (Tips) Regulations of 1971. However, this legislation still presumed active mines, necessitating a new framework for coal tip safety for disused tips as proposed by the Law Commission¹³ and the White Paper from Welsh Government.¹⁴

Prior to 1969 and during peak coal production, where worker safety was a major regulatory concern, the environmental impacts of coal mining do not appear to have received much attention. One exception was the Mineral Workings Act of 1951, which dealt with the impact of ironstone production and levied a tonnage fee on mineral rights owners and producers to cover restoration costs.¹⁵ It was not until the Control of Pollution Act of 1974 that landfilling of waste was licensed and records of the type and volume of waste deposited was recorded, and it would take until 1994¹⁶ and the closure of most coal mines for effective control to be implemented over the design and engineering of land-based structures housing waste.

Post-Aberfan legislation

In part, the absence of effective waste licensing governed the legislative response post-Aberfan in the form of the Mines and Quarries (Tips) Act 1969. That Act empowers local authorities to ensure that disused tips do not ‘by reason of instability pose a threat to the public’.¹⁷ This specification of ‘instability’ in the legislation means that, in order to act, there must be reasonable grounds for believing that the refuse that makes

10. Welsh Government, Minerals Technical Advice Note 2: Coal, Appendix P (MTAN 3, 31 January 2009) available at <https://gov.wales/minerals-technical-advice-notes-mtans>.

11. *Ibid.*, Appendix P paras 2 and 3.

12. Section 180(4) Mines and Quarries Act 1954.

13. *Supra*, n.6.

14. Welsh Government, Coal Tip Safety (Wales) White Paper, 12 May 2022, available at: <https://gov.wales/sites/default/files/consultations/2022-05/white-paper-on-coal-tip-safety-consultation.pdf>.

15. Largely repealed by the Mineral Workings Act 1985.

16. Waste Management Licensing Regulations 1994 (S.I. 1994 No. 1056).

17. Mines and Quarries (Tips) Act 1969, section 11(1).

up the tip is likely to shift in such a way as to cause a significant increase in the area of land that the tip covers.¹⁸

The Mines and Quarries (Tips) Act grants local authorities power to:

1. access information about tips in their jurisdiction and carry out exploratory tests;
2. require (on notice) the owner of the tip to provide documents, such as maps and surveys, which could assist the authority in its assessment of the tips' stability; and
3. enter (on notice)¹⁹ to conduct investigations to determine whether any instability might constitute a danger to the public.

These provisions cover disused as well as active tips. If such a tip is found to be unstable, then the local authority may serve a notice on the owner to undertake remedial works within a stipulated time.²⁰ If necessary, the authority itself can undertake work on 'dangerous' tips, subject to a 21-day notice (save in emergencies), thereafter exercising the power to recover the cost of the remedial works from the owner.²¹

Unsurprisingly given the tragedy in Aberfan, provisions are made in the Act for speedy intervention. If a local authority has reasonable grounds for believing that a disused tip is unstable, posing a possible danger to members of the public, it may immediately pursue any necessary remedial operations regardless of whether or when it has given notice. If remedial operations are begun without serving notice, the Act specifies that the local authority should serve notice to the owner of the tip as soon as is reasonably practicable thereafter, explaining the commencement of the operations and specifying the nature and extent of the operations and any consequential works of reinstatement it proposes to carry out.²²

These provisions remain in the statute book. As is shown below, however, in practice these remedial works may be subject to a host of restrictive regulations post-dating the 1969 Act.

Environmental legislation discussed in Law Commission Report

Despite the 1969 Act's intent to empower immediate action to prevent a tip disaster, and the intent of subsequent regulations to protect environmental health, the present body of law can stand in the way of carrying out urgent operations to reduce the likelihood of a tip failure or respond when such a failure occurs. Although the Law Commission Consultation Paper examined the potential for other legally enshrined powers of intervention to be activated to circumvent these constraints, most of these powers could face the same legal problems.

For example, under Part 3 of the Environmental Protection Act of 1990, a coal tip might possibly be seen as a statutory nuisance, defined as 'an accumulation or deposit which is prejudicial to health or a nuisance'.²³ This definition dates back to 1846, a time prior to the emergence of germ theory when the Victorian public health fear was of miasma emanating from the deposits (thought to be the source of disease). Specific accumulations targeted by earlier laws have included cinders and ashes²⁴ and, at one

18. Ibid. section 36(2).

19. Except where there are reasonable grounds to believe there is an emergency; section 13 of the Act.

20. Section 14 of the Act, and see section 15 which allows the owner to serve counter notice and to appeal.

21. Sections 17–19 of the Act.

22. Section 17(3) of the Act.

23. Section 79(1)(e), Environmental Protection Act 1990.

24. Section 91(4) Public Health Act 1875 and see *Bishop Auckland Local Board v Bishop Auckland Iron and Steel Co.* (1882) LR 10 QBD 138.

time, coal tip fires.²⁵ The fact that these ‘accumulations’ were specifically mentioned in legislation tends to suggest that there were doubts as to whether the more general formulation of ‘accumulation or deposit’ would have covered these specific risks, each of which related in some way to fires. Subsequent interpretations of ‘statutory nuisance’ have limited public health legislation to risks of ‘disease or ill health, not ... physical injury’,²⁶ which could exclude acute events like tip failures.

Even if this provision could apply to the risk of coal tip failure, however, the service of an abatement notice on a landowner would in no way exempt that owner from the need to obtain any regulatory permits or permissions to undertake the work.²⁷ The Law Commission Report discusses some of these constraints, which could render tip safety measures unlawful if not accompanied by cumbersome and time-consuming permits that would delay and complicate both emergency and remedial action. In its Consultation Paper, the Law Commission considers other regimes that might allow interventions to curb risks of coal tip failure without these constraints. For example, the Law Commission indicates that the transposition of the EU Environmental Liability Directive (ELD) into Welsh Law²⁸ could ‘provide preventative powers in relation to an imminent threat of environmental damage, which could include coal tip failure’.²⁹

There are two major limitations to this ELD approach. The first is that the ELD regards liability only in a prospective manner. It does not apply to damage resulting from an ‘event, emission or incident’ that took place before 30 April 2007, or an ‘event, emission or incident’ that ‘derives from a specific activity that took place and finished’ before that date.³⁰ As discussed above, most coal mining activity had ceased by this date, which would exclude most tips from coverage under this directive. Secondly, primary liability under ELD falls on-site operators who hold permits in accordance with EU law, and, again, most coal tips will never have been subject to such permits. Consequently, transposing the ELD into Welsh Law is unlikely to grant effective powers of intervention.

Another possible statutory power to address the risks presented by coal tips is Part 2A of the Environmental Protection Act of 1990 – the so-called ‘contaminated land regime’. The Law Commission in their Consultation Paper stated that the environmental regulator, Natural Resources Wales (NRW), had suggested ‘that Part 2A regime was unlikely to be used to deal with coal tip issues’. Although the regime could apply where tips on land pose a significant possibility of harm to receptors, including humans and controlled waters, liability would fall primarily on the ‘appropriate person’ who caused or knowingly permitted the substances to be in, on, or under the land. The practical impossibility of tracing such persons (few of whom are likely to be among the living) over numerous decades as the facilities passed into and out of public ownership³¹ may account for the NRW’s stance. In practice, NRW would prefer to tackle issues of land contamination through environmental permitting or planning consent. Once again, however, even if a remediation notice under Part 2A of the 1990 Act was served, demanding the remediation of a coal tip, there is nothing in the legislation to suggest that this work could be conducted without regard to other environmental controls, such as the requirement for an environmental permit in order to allow waste to be removed from the site.

25. Being added to the list of statutory nuisances in the Public Health Act 1936; see background in Law Commission Consultation Paper (supra n.5) at para 2.58 et seq.

26. See the judgment of Buxton LJ in *R v Bristol City Council ex p. Everett* [1999] 2 All ER 193 at 204.

27. See, for example, *Chapman v Gosberton Farm Produce* [1993] Env LR 191 (planning permission needed but not actively pursued by the company).

28. The Environmental Damage (Prevention and Remediation) (Wales) Regulations 2009 (S.I. 2009 No. 995 (W.81)).

29. Supra n. 5 at para. 5.23.

30. See Arts 16 and 17 of the Environmental Liability Directive 2004/35/EC.

31. See, for example, *R (Transco) v Environment Agency* [2007] UKHL 30.

Finally, the Law Commission considers the potential use of the Civil Contingencies Act of 2004 to address coal tips. Under this legislation, a power of direction could be put in place by an order of the Welsh Ministers. However, the list of actions allowed by order in the Civil Contingencies Act may not be sufficiently inclusive to address emergency action in relation to a coal tip. Furthermore, once again, even if this power was employed, there is no express provision to allow Welsh Ministers to enable a responder to bypass permitting and planning controls. The Law Commission in its report favoured a power exercisable by Welsh Ministers to give directions in the event of a tip emergency, and this proposal received wide support during the consultation process.³² This approach does not eliminate the need to provide legislative powers that would allow other pertinent regulatory duties to be temporarily overridden in the wider public interest.

Conflicts with existing planning and environmental regulation

The Law Commission recommended legislation containing ‘a proactive and holistic approach to coal tip safety [that] would allow earlier intervention to prevent tip problems developing, help to tackle issues beyond tip instability and protect against future implications of climate change’.³³ The question to which we now turn is what other conflicts might arise between new coal tip safety provisions and existing obligations under environmental legislation.

Waste management and environmental permitting

The purpose of the environmental permitting system for England and Wales is to protect human health and the environment from potential harm from regulated facilities. Unless the facility is exempt, operators of facilities are required to obtain a permit, which will contain conditions of operation in order to safeguard the environment. Operating a regulated facility without a permit or failing to comply with the conditions of a permit constitute two of the principal offences under the Environmental Permitting Regulations (EPR).³⁴

Among a list of ten types of regulated facilities, both ‘waste operation’ and ‘mining waste operation’ are specified. A ‘mining waste operation’ manages extractive waste, whether or not that operation involves a ‘mining waste facility’. The separation of mining waste from other types of waste operations follows the pattern of EU law. Waste is defined in the EPR³⁵ by reference to the definition in Article 3(1) of the Waste Framework Directive (WFD)³⁶ as constituting ‘any substance which the holder discards or intends or is required to discard’. However, the definition in the EPR then states that this definition does not cover waste excluded from the WFD by Article 2(1)(d) of that Directive. This exclusion refers to waste from prospecting, extraction, treatment, and storage of mineral resources, as these are separately regulated by the Mining Waste Directive (MWD).³⁷

While one might imagine that coal waste tips would fall under the MWD, in practice they do not, as a result of the lack of an accompanying active mining operation. A ‘mining waste facility’ refers to facilities operational on or after 1 May 2008. Such facilities require a permit, whereas facilities that stopped accepting waste after 1 May 2006 or closed by 1 May 2008 do not require permits. The broad consequence of these specifications is that extractive waste deposited prior to 2006 (applying to most if not all tips in Wales) is not

32. Law Commission Report (supra n. 6) at 11.25 and 11.27.

33. See the summary of the Report available at: <https://www.lawcom.gov.uk/recommendations-to-improve-safety-of-coal-tips-in-wales/>.

34. The Environmental Permitting (England and Wales) Regulations 2016 (S.I. 2016 No 1154); see reg. 38 for these offences.

35. *Ibid.* reg. 2(1).

36. Waste Framework Directive 2008/98/EC.

37. Mining Waste Directive 2006/21/EC.

governed by the MWD, and does not require a permit. It is possible that some of the coal waste tips could have been subject to a waste management licence prior to the introduction of the environmental permitting regime in 2008, and in such cases, the waste licences would have automatically become environmental permits regulated under the EPR. For the most part, however, coal tips will not be subject to environmental permits.

This exclusion does not mean, however, that the material in the tips is not waste. Although the MWD does not apply to tips that have long been inactive, the WFD definitions continue to apply to tipped material, which was clearly discarded and will remain waste until subject to some form of a recovery operation in accordance with 'end of waste' criteria.³⁸ It follows that any redevelopment of a tip will involve the recovery and disposal of waste,³⁹ constituting a waste operation under the EPR and necessitating the grant of a permit. Therefore, while disused coal tips have not previously held permits under the MWD, action taken to address the threats they now pose will trigger permitting under EPR.

Moreover, the coal tips themselves, in the course of re-engineering to address these threats, may newly come to constitute 'mining waste facilities' by virtue of being, in a sense, re-activated. The MWD defines a facility as any area designated for the accumulation or deposit of extractive waste for given periods of time. The longest period of time is a designation of three years or more. There is no minimum time requirement for Category A facilities under the MWD, which are facilities that contain hazardous waste or dangerous material or for which a 'failure or incorrect operation' could cause a major accident. It is precisely these risks that the Law Commission Report identifies as warranting emergency work on a disused tip. If re-engineering works to prevent or address a tip failure can be regarded as the creation of a new mining waste facility on the site, then, unless that waste is inert, the work must be permitted. If the coal waste is classed as hazardous, which it may be depending on how the safety or environmental threat is characterised, then additional regulation might apply, including the requirement for off-site disposal.

The difficulty presented by the triggering of environmental permitting requirements lies not so much in the permit conditions themselves but rather in the lag time of the permitting process. Where there is concern about the risk posed by coal tip instability or where a coal tip has already failed and remediation is required, swift action is needed to prevent or limit harm. Given the widely varying conditions and composition of coal tips, standard forms of permits are unlikely to apply; a bespoke waste permit may well be required. NRW suggest a timeframe of three months (standard) or four months (bespoke) for the development of permits, but stresses that this process might take longer where 'applications are complex, have a high level of public interest, or potentially impact on a sensitive location'.⁴⁰ The need for consultation, for example, may extend this timeframe.

Planning issues

Planning permission is generally required for work that can be said to constitute 'development', which is defined by the legislation⁴¹ to include engineering and mining operations such that groundworks, including such matters as reinstatement and landscaping, are likely to be covered. More specifically, the statute states that:

38. NRW, Guidance: Meeting the End of Waste Test available at: <https://naturalresources.wales/guidance-and-advice/environmental-topics/waste-management/meeting-the-end-of-waste-test/?lang=en> and see *OSS Group Ltd v Environment Agency* [2007] EWCA Civ 61.

39. See the definition of 'waste operation' in reg. 2(1) of the EPR 2016.

40. NRW 'Permitting Service Levels in Natural Resources Wales' available at: <https://naturalresources.wales/permits-and-permissions/permit-applications-consultations-and-decisions/permitting-service-levels-in-natural-resources-wales/?lang=en>.

41. Section 55 Town and Country Planning Act 1990.

the deposit of refuse or waste materials on land involves a material change in its use, notwithstanding that the land is comprised in a site already used for that purpose, if –

- (i) the superficial area of the deposit is extended, or
- (ii) the height of the deposit is extended and exceeds the level of the land adjoining the site.⁴²

Thus, it is highly likely that the re-engineering of a coal tip or its re-instatement following collapse would require planning permission unless this work is considered permitted development. Interestingly, the General Permitted Development Order of 1995 does allow as permitted development:

Any development required for the purposes of a mine which is carried out on an authorised site at that mine by a licensed operator, in connection with coal-mining operations.⁴³

This specification presumably reflects the presence of other controls under mining legislation, such as the Mines and Quarries (Tips) Act 1969, but it applies only to an active licensed mine and not to coal tips at sites no longer operative.

As we shall see, the requirement to gain planning consent could delay considerably any programme of works for an at-risk disused tip. Any such delay might be extended even further by any necessity to undertake an environmental impact assessment (EIA), which is mandated for certain projects. Article 1(2) of the Environmental Impact Assessment Directive⁴⁴ defines a ‘project’ as the execution of construction works or of other installations, schemes, or interventions in the natural surroundings and landscape, including those involving the extraction of mineral resources. The MWD demands that any mining waste facility be permitted and that any application for a permit includes such information provided under Article 5 of the EIA Directive where an EIA is required.⁴⁵ Projects likely to have significant effects on the environment by virtue of their nature, size, or location must be subject to an assessment of those effects as part of the development consent process.

Disused coal tips may well fall under this rubric. The EIA legislation in Wales⁴⁶ divides the categories of ‘project’ by following those contained in Annexes I and II of the EIA Directive. Schedule 1 to the Regulations sets out descriptions of developments which would require a mandatory EIA. The only mining entry is for:

Quarries and open-cast mining where the surface of the site exceeds 25 hectares, or peat extraction where the surface of the site exceeds 150 hectares.⁴⁷

This entry focuses on the mining activity rather than considering its waste sites; however, an EIA is required for the landfill of hazardous waste.⁴⁸ In the EU Landfill Directive, ‘landfill’ is defined as a

42. *Ibid*, section 55(3)(b).

43. The Town and Country Planning (General Permitted Development Order) 1995 (S.I. 1995, No. 418) Schedule 2 Part 20, Class C (GDPO).

44. The EIA Directive (85/337/EEC) as amended.

45. Article 7(2)(e) Mining Waste Directive (*supra* n. 37).

46. The Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017, (S.I. 2017 No. 567 (W 136)). Note also that this legislation has been amended by The Environmental Impact Assessment (Agriculture) (Wales) (Amendment) Regulations 2020 (S.I. 2020 No 1448 (W 312)) so that earlier exemptions from EIA for restricted works on common land have been removed, making EIA on coal tips sites more likely.

47. *Ibid* Schedule 1 Descriptions of Development 19.

48. *Ibid* Schedule 1 Descriptions of Development 9, hazardous waste being defined in regulation 6 of the Hazardous Waste (Wales) Regulations 2005.

waste disposal site for the deposit of the waste onto or into the land.⁴⁹ In many coal tips, the waste may be inert, but could be classed as hazardous,⁵⁰ such that any re-engineering of the site triggers the need for an EIA. The alternative to giving planning consent to re-engineer the coal tip facility is that the coal waste would need to be disposed of in an existing hazardous landfill or other hazardous waste facilities. At the moment there is no hazardous waste landfill in Wales and waste for disposal from the former Welsh coal-fields would need to cross the border into England.⁵¹

Even if disused tips escape the provisions of Annex I of the EIA Directive, Annex II lists projects for which national authorities must decide whether or not an EIA is needed, giving rise to a screening process to check the likelihood of significant effects on the environment. Such descriptions of developments are contained in Schedule 2 of the Welsh EIA regulations and can include any change to or extension of the development of a description listed in Schedule 1 where that change may have significant adverse effects on the environment.⁵² There is relatively little in relation to an extractive industry that will apply to coal tips, at least where there is no element of coal recovery in the course of reclamation.⁵³ Once again, however, installations for the disposal of waste (other than those included in Schedule 1) are listed where the area of the development exceeds 0.5 hectares or is within 100 metres of any controlled waters.⁵⁴ Many disused coal tips would meet this description.

Should the question of an EIA requirement arise for a given tip project, it will trigger processes of screening (whether an EIA is required), scoping (determining the issues covered by the assessment), preparing an environmental statement, submitting a planning application, consulting statutory consultees and the general public, and reaching a determination of the application. From the time of the submission of the application and environmental statement, the local planning authority will have at least 16 weeks to determine the application (longer where the parties agree, in writing).⁵⁵ Where an EIA is not required, planning authorities will seek to determine a planning application within 8 weeks, though the complexities in coal tip remediation may mean that this ordinary turnaround time is not achieved.⁵⁶ In practice, the planning approvals for a project may entail more than one application – for example, where more than one site is employed for storage of tip waste following a collapse.

In the case of the Tylorstown tip failure, the local authority commenced the work without planning permission, making a retrospective application thereafter. While providing a workable solution in this case, this approach may not be widely scalable where local authorities are less familiar with the planning system and when the work is preventative rather than restorative.

Habitat protection

Over time and certainly since the closure of deep mines in the Welsh Valleys, the landscape has changed. Some of this change has been engineered through an estimated 800 remediation projects to address the

49. Article 2(g) of the Landfill Directive 1999/31/EC.

50. See the view taken by NRW according to the Law Commission Consultation Paper (supra n. 5) at 5.21.

51. Cardiff Council, *Locating Waste Management Facilities, Supplementary Planning Guidance*, January 2017 at para 6.9.

52. See the table in para. 2 of Schedule 2 of the Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017 (supra n. 49) heading 13 'Changes and extensions'.

53. *Ibid* Heading 2 and see 2(e).

54. *Ibid* Heading 11 (b).

55. Regulation 61(2)(a) Town and Country Planning (Environmental Impact Assessment) (Wales) Regulations 2017 (supra n. 49).

56. See the Planning Portal for Wales: <https://www.planningportal.co.uk/wales/applications/the-decision-making-process/when-will-i-get-a-decision>.

industrial legacy and its environmental impacts.⁵⁷ Much of this work sought to create employment opportunities – for example, by creating space for light industrial or warehouse units. One part of the programme was directed at ‘greening’ the Valleys and promoting open space and recreational facilities.⁵⁸ Quite separately, tree planting, particularly of conifers, was often pursued.

In addition to such activity, many inactive coal tips that were left largely untouched transformed into thriving habitats for a wide variety of flora and fauna. Of the approximately 2500 tips in Wales, 99 of these are now within sites designated as sites of special scientific interest (SSSIs) and a further 32 are registered as special areas of conservation (SACs).⁵⁹ This designation means that these areas are significant within their wider ecosystems. On the one hand, this status creates the further impetus for preventing coal tip failures, as such events would dramatically impact these ecologically sensitive and important areas. Equally, however, the designation introduces an additional regulatory headache in re-engineering such tips where they have become protected habitats. We now examine this issue, which is closely related to the planning issues discussed above, but which is further influenced by the conservation status of the site.

Ecological assessments

Engineering or reclamation works on land will necessitate an assessment of the impact of the works on the immediate environment, including, as necessary, ecological impacts. Where the work requires planning permission, at the very least a Preliminary Ecological Assessment (PEA) should be included in the supporting documents accompanying the planning application. It might be thought that the SSSIs would attract automatic protection against development, but this is not the case, though the status does ensure that nature conservation is brought to the fore in considering development.

Any area designated as an SSSI will already have certain considerations highlighted, specific to its features. In the process of notifying local planning authorities that the land is of special interest, NRW will point to the features of the land and any operations likely to damage such features.⁶⁰ Alongside this discussion will be a statement of the views of NRW about the management of the land (including any views it may have about the conservation and enhancement of that flora or fauna or those features). For coal tips designated as SSSIs, therefore, NRW may already have made its views known about, for example, disturbances caused by shifting the coal spoil.

Where preventative coal tip work is to take place on or in the immediate proximity of a protected habitat, something more than a preliminary assessment will be required. This will take the form of an Ecological Impact Assessment.⁶¹ In determining the planning application, the local planning authority must satisfy itself, with assistance from statutory consultees including NRW, that it has all necessary ecological surveys and mitigation plans to determine the planning application. Ordinarily, such mitigation measures may include proposals on the timing of the work, such that it does not take place during sensitive times

57. David H. Llewellyn, Melanie Rohse, Jemma Bere, Karen Lewis & Hamish Fyfe (2019) Transforming landscapes and identities in the south Wales valleys, *Landscape Research*, 44:7, 804–821.

58. Greening the Valleys Partnership, *Greening the Valleys Initiative*, available at: <https://www.bridgend.gov.uk/media/1130/garw-valley-green-strategy.pdf>.

59. Welsh Government, *Integrated Impact Assessment*, attached to the Consultation on Coal Tip Safety in Wales, available at <https://gov.wales/sites/default/files/consultations/2022-05/white-paper-on-coal-tip-safety-integrated-impact-assessment.pdf>.

60. See section 28 Wildlife and Countryside Act 1981.

61. For the SPAs, this would be a Habitat Regulations Assessment in line with the Conservation of Habitats and Species Regulations 2017. Derived from ideas of environmental impact assessment, the Ecological Impact Assessment focuses on the ecology of the site and the impact of any development.

of the year. Moreover, the time needed to compile an ecological assessment will vary depending on the species affected and the time of year at which the survey work is conducted; the process might extend over months rather than weeks.

Sites of special scientific interest

Once an area is notified as an SSSI, the owner or occupier will be restricted from carrying out potentially damaging operations on the land without first notifying NRW. Unless there is a management agreement or management scheme/notice in force for the site, which covers the intended works on the site,⁶² written consent of NRW will be required for any operations. NRW have a four-month period within which to grant consent in response to an application, but failure to respond within that period is deemed to be a refusal of consent. An owner or occupier causing or permitting works to be carried out on an SSSI without express consent from NRW commits an offence.⁶³ Additionally, there is a broader offence whereby a person intentionally or recklessly destroys or damages any of the flora, fauna, or geological or physiographical features, by reason of which a site of special scientific interest is of special interest, or intentionally or recklessly disturbs any of those faunas.⁶⁴

Note that these duties of landowners can extend to public authorities and statutory undertakers, which have a specific duty in carrying out their functions to take reasonable steps, consistent with the proper exercise of the authority's functions, to further the conservation and enhancement of the flora, fauna, or geological or physiographical features by reason of which the site is of special scientific interest.⁶⁵ Such public authorities must give notice to NRW before carrying out operations likely to damage any of the flora, fauna or geological or physiographical features if the SSSI. Here, where the applicant is the public authority and not the private landowner, there is a 28 days' turn-around time for any consent or refusal. In contrast to the refusal to approve an owner or occupier's intended works, however, refusal here is not binding. The public authority could proceed to carry out the work subject to the requirement that it carries out the operations in such a way as to give rise to as little damage as is reasonably practicable to the flora, fauna, or geological or physiographical features, considering any advice received from NRW, and thereafter restoring the site to its former condition, so far as is reasonably practicable, if any such damage does occur.⁶⁶

Special areas of conservation

For sites protected under the Habitats Regulations (usually referred to as European sites), which would include those coal tip areas that have become Special Areas of Conservation,⁶⁷ proposed projects or

62. Section 16 Environment (Wales) Act enables NRW to enter into agreements with persons with an interest in the land offering broader powers than those previously exercised for nature conservation under s.39 Wildlife and Countryside Act 1981, ss. 15 and 45 Countryside Act 1968 and s.16 of the National Parks and Access to Countryside Act 1949, but see also reg. 16 Conservation of Habitats and Species Regulation 2010, which continues to apply in Wales.

63. See section 28E(1) Wildlife and Countryside Act 1981.

64. See section 28P Wildlife and Countryside Act 1981.

65. Section 28G Wildlife and Countryside Act 1981.

66. Section 28H Wildlife and Countryside Act 1981.

67. Special areas of Conservation are essentially SSSIs which have been designated as sites of national importance – see reg.12 of the Conservation and Habitats and Species Regulation 2017 (SI 2017/1012) as substituted by The Conservation and Habitats and Species (Amendment) (EU Exit) Regulations 2019 (SI 2019/579). They are referred to as European sites (reg. 8) because most would have been designated as a site of Community importance, pre-Brexit, see art.4(2) of the Habitats Directive (Directive 92/43/EEC).

plans that might affect those sites will trigger the need for a Habitats Regulations Assessment (HRA). This might mean that plans from any statutory authority for the stabilisation of any coal tip might constitute a ‘plan’ for these purposes since the nature of a plan is that it sets out future developments within a particular area. Equally, the activity of re-engineering a tip in order to stabilise it is likely to constitute a project,⁶⁸ which encompasses activities requiring consents or permits.⁶⁹ In either case, the plan or project would trigger HRA, which will feed into any necessary authorisation (such as planning authorisation) for work on the tip.⁷⁰

With the conservation objectives for the site in mind and drawing on available data, the HRA must consider all possible impacts on the designated features of the site, including those which are indirect or temporary. The aim of HRA legislation is to devise a strategy in which the project or plan may be fulfilled while continuing to protect the site. That strategy should take into account the particular features of the site in question, drawing upon the best available ecological evidence, and detailing, with reasons, the decisions reached.

For protective re-engineering works on coal tips, those works may help to protect and preserve the habitat that would be lost if the tip fails. This protection, however, does not offer a shortcut through HRA. While conservation management proposals can be exempt from the need for HRA, exemptions are not available when proposals may have negative effects on certain features of the site or where such proposals are mixed with other activities, such as elements of recreational use. The HRA process is extensive, involving exhaustive screening of potential effects including combined effects. Unless the screening suggests no significant effects, an appropriate assessment (AA) must follow.

The AA will assess the likely significant effects of a proposal on (a) the integrity of the site as a whole and (b) the conservation objectives. Alongside this assessment, the AA will examine ways to mitigate any possible ‘adverse effect on the integrity of the site’.⁷¹ Ideally, such mitigation may be achieved by conditions attaching to the work which may govern (e.g.) the design of the structure or its method of construction, the timing of the work, and a monitoring regime. The aim of specifying these conditions is to reach a point at which there is no reasonable scientific doubt that the proposed work will not have an adverse effect on the integrity of the site (the integrity test).

Where this standard cannot be met, derogation provisions will need to be applied if the work is to proceed. The scope for derogation here acknowledges the possibility that there might be plans/projects of sufficient importance that they should proceed notwithstanding an assessment of possible damage to the site. The derogation testing process involves three sequential tests, applied after the proposal has failed to meet AA standards of having no adverse effect on the integrity of the site:

1. The *first test* determines whether there are alternative solutions to the plan/project proposed. If an alternative can be identified, then any proposed derogation fails at this point.
2. The *second test* is a determination that the plan or project must proceed for imperative reasons of over-riding public interest (IROPI). Although IROPI is more commonly found in national planning or major projects, to which a high level of public interest may attach, one could see that a coal tip failure in proximity to certain receptors might suggest that remedial work is imperative and should

68. C-254/19 *Friends of the Irish Environment Ltd.*

69. Part 6, Chapters 2, 8 and 9 of the Conservation and Habitats and Species Regulation 2017 contain examples of plans which might attract HRA and Chapters 3–7 contain indicative projects. Although the terms plan and project are central to Art 6(3) of the Habitats Directive and the requirement of assessment, these terms were never defined in the Directive: see Stefan Möckel, ‘The terms “project” and “plan” in the Natura 2000 appropriate assessment’ (2017) 23 *Nature Conservation* 31–56.

70. Case C-6/04; *Commission v UK*.

71. C-258/11 *Ireland, v An Bord Pleanála*.

be overriding. Where these receptors are likely to be harmed, the public interest considerations may outweigh the harm to the integrity of the site.

3. If test one shows no alternatives to the plan/project and test two finds IROPI, then the *third test* is applied, which determines whether there are available compensatory measures that can fully offset the damage to the original site. If so, the proposed plan or project can proceed, accompanied by those compensatory measures.

The Welsh Ministers constitute the competent authority in relation to derogations. Although there is a 21-day turnaround time for an HRA derogation notice, with the capacity to proceed in the absence of a response, it takes considerable time to undertake HRA and even longer where the case for a derogation is to be made. In fact, the likely response to a derogation notice is that the authority will wish to consider, in more detail, one or more of the derogation tests, such as potential alternatives or adequacy of compensatory provisions.

Protected species licensing

In addition to HRA considerations, the engineering work – or even a species survey prior to such work – may well trigger the need for a protected species licence from NRW. A licence will be necessary for any activity that affects a protected species, either by disturbing, trapping, or handling such species or by damaging the habitat. Even where the work does not involve a protected *habitat*, where a protected *species* is involved work such as maintaining and developing land, carrying out groundworks, or felling trees may require a licence. To take one example (and there are many), damaging a badger sett is an offence under the Protection of Badgers Act 1992. Any works⁷² which might have this effect will require a licence from NRW; in this case, a survey licence is listed at 30 days and a badger development licence at 40 days in the NRW service-level agreements.⁷³

Tree-felling licensing

In the course of work to stabilise or re-instate a coal tip, it may also be necessary to fell trees, either as part of the engineering work or to gain access to the site with the necessary plant and machinery. It is an offence to fell a licensable tree; outside of areas such as gardens and churchyards, most growing trees of any volume will be licensable.⁷⁴ Liability is wide-ranging as it can encompass anyone involved in the felling (e.g. the landowner and the contractor). There is an available exemption for trees felled for the purpose of development authorised by planning permission, so whether a licence is necessary may depend on the planning authorisation for the wider work on the coal tip.

While a ‘dangerous tree’ can be felled without a licence, the danger is referable to the (presumably diseased) condition of the tree itself, generally determined by arboricultural evidence. Therefore, tree felling licences could be required for trees on any coal waste tip, and more information would need to be furnished to NRW where the tree work occurs within or alongside an SSSI or SPA. The application for a licence would be made by the owner of the land in question or a lessee with power in the lease to

72. In the form of a development within the meaning of s.55(1), Town and Country Planning Act 1990.

73. NRW, Service level agreements which set out response times to an application for protected species licensing are available at: <https://naturalresources.wales/permits-and-permissions/species-licensing/service-level-agreements-for-protected-species-licensing/?lang=en>.

74. Section 9 Forestry Act 1967.

fell trees. NRW aim to issue a felling licence within three months of a correctly submitted licence application.⁷⁵

Disused coal tip management: possible solutions

How, then, can one allow for urgent action without sacrificing necessary environmental controls? There is a difficult balance to be drawn in allowing emergency interventions in relation to coal tips and protecting habitats and species likely to be disturbed by that work. A better-structured approach needs to be put in place. Achieving that balance will require the close collaboration of various stakeholders. As this report has illustrated, questions of nature conservation form part of the planning system, so that making provision for ecological assessment, in its various forms, must be part of planning processes in a situation of emergency action.

Defence process

There is little provision for emergency action built into the Environmental Permitting Regulations. Although there is a defence process wherein acts that might constitute a contravention of the EPR can be shown to be undertaken in an emergency to avoid danger to human health, it has a number of limitations.⁷⁶ One difficulty with this defence⁷⁷ is that it specifies a direct risk to human health, which might not always be an immediate threat in a coal tip failure, even though environmental damage may be a matter of public health concern. Moreover, clean-up and remediation efforts are likely to persist over an extended period. Although what constitutes an emergency is said to be a question of fact and not law,⁷⁸ the defence clearly envisions immediate urgent action, and is not easily suited to the longer-term restoration work to prevent or address a tip failure.

The Law Commission did consider in its Consultation Paper whether the defence could be extended to cover coal tip safety measures. While this proposal received a majority response in favour during the consultation, a number of respondents viewed a defence as an inadequate solution, preferring a better-established power to act.

Waste classifications

Another solution is to create waste exemptions for certain activities inherent in reclamation work, such as the drying and storage of coal tip waste in the aftermath of a tip failure. The Law Commission in the Consultation Paper reject ‘an outright exemption for tip material from environmental legislation’. Their statement appears to mischaracterise waste exemptions, however, as such exemptions are not ‘outright’ but instead are subject to strict conditions. They tend to exempt activity (such as the storage above a certain quantity) rather than reclassifying the material as something other than waste. Waste exemptions must be registered and their accompanying conditions must continually be met.

The Law Commission Report discusses whether changes to waste definitions might reclassify tip waste as an engineering material. The problem with this approach is that not all of the material might be put to engineering use, and some of the material involved may well be hazardous. While the definitions of

75. NRW, *Tree Felling: Getting Permission* (March 2019) https://cdn.naturalresources.wales/media/689103/34098_nrw_treefellingbooklet_a5_eng_fin_mar19_print.pdf.

76. Reg.40 (1) EPR.

77. A version of this defence appeared also in the Control of Pollution Act 1974, s.3(4) and remains in s.33(7)(c) of the Environmental Protection Act 1990.

78. *Waste Incineration Services v Dudley MBC* [1992] 1 Env LR 29 at 33.

waste inherited from the WFD are not always helpful, a considered review of waste definitions might be a better long-term aim than piecemeal reform as part of any legislation on coal tip safety.

Ministerial power of direction

In its final Report, the Law Commission indicates that a defence alone is insufficient, but suggests that an extended concept of defence might be provided as backup alongside other powers to act. The Law Commission also considered a power for Welsh Ministers to issue directions similar to the provisions of the Civil Contingencies Act 2004 (discussed above).

We see here the skeleton for a solution. A careful definition of what constitutes emergency action, either in terms of preventative work on a high-risk tip or urgent action where a tip has collapsed, could form the basis of a well-tailored defence. This definition could be accompanied by Ministerial directions covering any permitting requirements going forward. This approach might be assisted by a speedy (and, if necessary, retroactive) procedure for the granting of a carefully drafted, registered waste exemption for reclamation or prevention work, which might even preclude the need for the defence to be invoked and limit the scope of any permit sought.

Permitted development status

If the Law Commission proposal for Welsh Ministerial directions to allow for emergency interventions were to be adopted, it should be accompanied by some provision specifying that planning requirements should not delay such interventions. The obvious instrument here is a mechanism for permitted development, perhaps included in the 'Extractive Industries' heading of Schedule 2 of the 1995 Order. This provision would grant permitted development status to essential, emergency re-engineering of coal tips, pre- or post-failure of the tip, in line with Ministerial directions. Those directions might then demand that retroactive approvals be obtained and, where necessary, that an environmental statement covering EIA requirements be drawn up.⁷⁹ Note, however, that the use of a general development order is not necessarily a solution in relation to sites protected as habitats, and, as we have seen, this designation includes some of the Welsh coal tips.⁸⁰

Conservation

A combination of work under Ministerial directions, drawing on general permitted development rights, might allow for a speedier response to a coal tip emergency than relying on existing legislation. In order to implement such a strategy, it would be necessary to determine how, under those directions, conservation interests will be accounted for. Additionally, this approach may not fit all circumstances because, as pointed out above, permitted development rights cannot be acted on in the case of a European Protected Site without the express approval of the planning authority.⁸¹

Once again, there is a 'reasonable excuse' defence available here where an owner/occupier undertakes work that damages the conservation status of an SSSI without notifying NRW. This defence can apply where the work is authorised by planning permission⁸² or by a statutory undertaker or other public body acting after

79. See by way of example the Environmental Impact Assessment (Land Drainage Improvement Works) Regulations SI 1999 No 1783 and Environmental Impact Assessment (Land Drainage Improvement Works) (Amendment) Regulations SI 2017 No 585, together with Schedule 2, headings 14 and 15 of the GDPO 1995 (supra n. 47).

80. In the case of 'European sites' (see below) reg. 75 of the Conservation of Habitats and Species Regulations 2017 states that notwithstanding GDO no work can commence without the approval of the local planning authority.

81. Regs. 75–78 of the Conservation of Habitats and Species Regulations 2017 (supra n. 61).

82. Section 28P(4)(a) Wildlife and Countryside Act 1981.

having consulted NRW in accordance with section 28G of the Wildlife and Countryside Act 1981.⁸³ This defence can also apply to emergency operations, providing that details of the emergency with other relevant particulars are notified to NRW as soon as practicable after the commencement of operations.⁸⁴ There is no definition of ‘emergency’ under the legislation, but the fact that circumstances did not allow for any prior notification to NRW suggests that the emergency is pressing and that the ambit of this provision may be limited. In practice, however, if a public body is established to oversee coal tip safety, it will become a ‘section 28G authority’ and will deal with the NRW under the relevant provisions of the 1981 Act as discussed above.

It does seem apparent that much background work on nature conservation could be conducted alongside the new proposed regime for coal tip safety. So, for example, it is suggested in the final report of the Law Commission⁸⁵ that a coal tips register would be compiled and maintained by the supervisory authority. This register is already scheduled to include considerable information, including risk classifications and management measures, for each disused tip. For the purposes of any Bill, it would be useful for those management measures to also include issues of conservation management. Perhaps inspection of tips for the purposes of devising a tip management plan ought to include, alongside risks such as flooding, instability, and combustion, risks to protected species on or near the site. It would be useful to consider, for certain lower-risk sites, the extent to which maintenance agreements or orders might include provisions for monitoring and protecting species.

For higher-risk sites, advanced work could be undertaken to gauge the extent to which the more sensitive sites (in terms of nature protection) correlate with sites at risk of instability. Identifying these dual-designation sites might allow an early, tailored programme of work such that for the SPAs, for example, any projected work from the supervisory authority can be subject to HRA. This scheme could include preparing detailed plans for mitigation as part of any integrity test, and might even go so far as pursuing derogations where IROPI might be in play. For a given site that passes test one of the derogation considerations (no alternative to emergency action), dialogue (e.g. with Welsh Ministers) could be opened as to the nature and location of any compensatory measures for adverse effects upon the integrity of the protected site. Advanced work could determine whether tree felling may be necessary or whether species protection licences may be required.

The status of the supervisory body will be significant. Much of the legislation on nature conservation accepts that there may be ongoing work conducted in proximity to many habitats by statutory undertakers. Statutory undertakers are bodies given statutory powers to discharge functions of a public nature. Although the supervisory body itself will not always discharge the work, to the extent that any legislation positions the body as a statutory undertaker, this status should expedite approvals for work that might impact upon sites such as SSSIs.

Summarizing these recommendations, we suggest:

- Clearly defining what constitutes ‘emergency action’ on coal tips;
- Employing Ministerial directions covering permitting requirements and specifying that permitting should not delay emergency action;
- Specific and precise waste exemptions for elements of reclamation and prevention work;
- Inclusion of conservation considerations within the coal tip register, inspections, and management agreements.

83. *Supra* n. 67.

84. Section 28P(4)(b) Wildlife and Countryside Act 1981.

85. *Supra* n. 6.

Conclusion

There are broader lessons that we might learn from an analysis of the environmental law issues relating to interventions to ensure coal tip stability or remediate coal tip failure. There is a compounding problem at the heart of the problem of coal tip stability that reflects other environmental issues we face in the twenty-first century: cumulative provincial actions have given rise to collective crises that rebound in the form of acute local problems. Coal was mined in vast quantities in the Welsh Valleys in the nineteenth and twentieth centuries, literally fuelling the economy of the UK. Coal spoil represents a problematic legacy of the industrial revolution; the burning of this coal generated the accumulation of greenhouse gases that has given rise to climate change. In turn, climate change now threatens the stability of coal tips and the welfare of the people and environment in the Welsh Valleys.

The issue of coal tip stabilisation epitomises the problems generated in adapting to climate change. It emanates from a predictable physical and geological risk, yet the climate change implications of earlier decisions were not well understood. In pursuing a programme of adaptation, unexpected and unwelcome costs suddenly emerge.⁸⁶ The infrastructure response – as with comparable issues such as forestation, land irrigation, and flood protection – then generates demands on many different areas of law and policy that may be poorly positioned to address the novel challenges. In this case, the regulatory issue centres on determining to what extent ordinary protections within environmental regulation must yield to allow emergency adaptation to the problems of climate change.

Tension emerges as climate change leads to immediate humanitarian crises that require rapid response. Saving lives may require interventions that are more concerned with short-term safeguarding than with longer-term environmental protections. Such prioritisation is inevitable – political choices are likely to give precedence to humans over environmental health and well being – yet sacrificing environmental goals runs the risk of ultimately exacerbating the very conditions causing the life-threatening problems. Within the Welsh Valleys, rapid re-engineering of high-risk tips is vital to prevent another Aberfan-like disaster, yet if these works cause environmental disruption on too great a scale, the ecological effects could be devastating. There is an urgent need, then, to harmonise short-term responses with longer-term planning strategies.

This strain can also be seen with respect to the legal mechanisms employed. In response to these crises, we may need to devise answers which set aside the expected checks and balances of the legal system. For example, allowing Ministerial directions to govern processes that ordinarily would be the subject of careful procedures, aimed at participative decision making to ensure fair and balanced outcomes, may be viewed as sub-optimal from the perspective of deliberative democracy. Questions may arise about accountability and the concentration of power in such circumstances. However, in facing a climate change emergency alongside floods, droughts, wildfires, and coastal erosion, it becomes clear that coal tip landslides demand extraordinary and urgent action in which public health safeguards temporarily displace statutory protections. Handling such tensions is no simple matter, as scholars at the Centre for Law and Environment at University College London have noted:

[U]nderstanding what is at stake for the rule of law is a complex conceptual exercise, but is also important in examining the stability of our legal and political orders as planning for climate change intensifies, and as the environmental, social and political consequences of a changing climate unfold.⁸⁷

86. The cost of the Tylorstown remedial work is estimated at £20 m and Welsh Government has committed £44.4 m of capital investment for three years from 2022 to support local authority tip maintenance programmes: see White Paper (supra n. 14). The overall long term costs of ensuring coal tip safety are widely reported at £500-600m- see: James, A 'Coal tip securing "could cost more than 500m"' in Wales *BBC News* 6 November 2020 available at: <https://www.bbc.co.uk/news/uk-wales-54829054>.

87. Maria Lee, Eloise Scotford and Steven Vaughan 'Revisiting the rule of law in climate crisis: legal bedrock or legal luxury?' (blog) 4 October 2021, available at: <https://www.ucl.ac.uk/law-environment/blog-climate-change-and-rule-law/revisiting-rule-law-climate-crisis-legal-bedrock-or-legal-luxury>.

The construction of a formal legal response to allow such interventions is taxing. It begins to bring climate change law out of the realms of international agreements and onto the domestic statute book. Welsh leadership must prepare for more of this crisis management, which will affect everyday questions much more common than coal tip stability – for example, how we organise urban space and the built environment to cope with extreme weather conditions and how we respond when food production can no longer be guaranteed. Equally, we must consider which parties should shoulder this risk and responsibility.

The Tylorstown landslide in the immediate aftermath of Storm Dennis was occasioned by water flow through the tip, just as it was in the Aberfan Disaster of 1966. The topography of the Valleys has always meant that storage of spoil was a challenge, which was ordinarily met by looking upwards to the hills and creating tips on or above steep slopes with the Valleys Communities below.⁸⁸ Those communities are left with many legacies of coal mining, of which the threat from coal tips is but one. The exploitation of coal in the manner pursued was never a sustainable form of development, in spite of the great wealth that it generated for some. The risk now generated by tipped waste is a simple but sobering reminder of the crucial commitment to sustainability in a country that has been an early adopter of legislation on intergenerational equity.⁸⁹ Climate change will throw up many future issues of environmental justice, with hazards unevenly distributed and vulnerability often determined by social and economic factors.

Biolaw scholar Olivia Woolley has suggested that in considering such questions, ‘conflict between climate law and environmental law is to some extent inevitable’, particularly as the issues producing the conflict shift from being seen as future problems to those immediately present.⁹⁰ In dealing with the industrial legacy of coal tips, we straddle economic history, contemporary environmental harm, and future well-being. We deal in broad terms with the deleterious impacts of human activity. To adequately address the problem, it is crucial that we do so with sensitivity to a developing and identifiable Welsh environmental law which, rather than preferencing one set of problems above another, accepts the need to deal holistically with the sustainable management, for present and future generations, of natural resources in Wales.

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88. Petley D, Managing Spoil Tip Risks, *Ground Engineering* 10 February 2022, available at: <https://www.geplus.co.uk/opinion/managing-spoil-tip-risks-10-02-2022/>.

89. The Well-being of Future Generations (Wales) Act 2015.

90. Olivia Woolley, ‘Climate Law and Environmental Law: Is the Conflict between them inevitable?’ in Mayer B and Zahar A, *Debating Climate Law* (2021) Cambridge UP.