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Just energy transition and the planning and permitting of critical mineral extraction

Aleksandra Čavoški, Jyoti Ahuja and Robert Lee

1. Intro

The UK Government set its first climate change target in the Climate Change Act 2008 by prescribing the reduction of the emission of greenhouse gases by at least 80%, compared to a 1990 baseline.¹ The Government revised this target in 2019, along with the devolved administrations, and it now stipulates a net zero target to be achieved in the UK by 2050. This will be predominantly achieved by deploying low carbon technologies such as solar and wind energy, as well as switching to electric mobility as listed in the Ten Point Plan for a Green Industrial Revolution.² For example, in the Ten Point Plan, the UK Government has committed to advancing offshore wind and to “quadruple our offshore wind capacity so as to generate more power”.³ This is further elaborated in the UK’s Critical Minerals Strategy⁴ as low carbon technologies are heavily reliant on critical minerals (CMs), such as lithium, cobalt, and rare earths, the production of which is unevenly distributed across the globe. The UK requires a steady supply of technology metals to achieve the net zero target. A key regulatory challenge is to develop a critical minerals’ circular economy model underpinned by better resource flows and stocks of these metals across their value chains. However significant the contribution made by recycling and recovery, these secondary sources of critical minerals will not prove sufficient to serve the huge energy transition currently underway.

Policy shifts to facilitate domestic production of key minerals will carry associated environmental costs and risks implying a fundamental revaluation of competing regulatory objectives. This will result in the need for present generations to bear some of the associated environmental and social costs of production in the interest of future generations threatened by climate change. Mining of minerals unquestionably creates localised pollution, risks to the water environment, nuisances and potential for biodiversity loss. While mining activity may boost economic growth, by creating employment, and aid regional economies, it can add to the greenhouse gas emissions that we hope to curb. The environmental and social costs of minerals’ extraction can be

¹ Climate Change Act 2008, s. 1. Available at: <https://www.legislation.gov.uk/ukpga/2008/27/contents> (accessed 30 March 2023)

² HM Government, *Ten Point Plan for a Green Industrial Revolution* (2020) https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/936567/10_POINT_PLAN_BOOKLET.pdf (accessed 2 April 2022)

³ HM Government, *Ten Point Plan for a Green Industrial Revolution* (2020) https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/936567/10_POINT_PLAN_BOOKLET.pdf Accessed 02 April 2022, Point 1

⁴ HM Government, *Resilience for the Future: the UK’s Critical Minerals Strategy* (accessed on 2 June 2022) <https://www.gov.uk/government/publications/uk-critical-mineral-strategy/resilience-for-the-future-the-uks-critical-minerals-strategy#:~:text=The%20UK's%20first%20ever%20Critical,challenges%20with%20our%20international%20partners>

significant as mining can be both dirty and dangerous. However, severely restricting or banning UK mining activity does little to prevent these environmental impacts; rather it simply transfers these impacts to other points of production, often in the Global South. With little domestic production and as a major importer of critical materials, the UK is effectively off-shoring these externalities, often to jurisdictions where regulatory efforts to mitigate environmental harms and internalise the social costs of production may be feeble. Without effective regulation, there is a danger that the adverse impacts of current fossil fuel production will simply be replicated in an economy then dependent on critical minerals, in a manner entirely inconsistent with green economy goals. This raises a wider question about environmental justice and the global distribution of environmental risks and hazards.

Achievement of a true low-carbon and sustainable economy requires the UK to take the lead in delivering its share of sustainable production. This may necessitate immediate action to accelerate domestic mineral exploration in areas such as Cornwall, which is known to have significant supplies of some critical minerals. Mineral development is an issue likely to be high on the agenda in competitor economies. The EU, for example, is looking into lowering regulatory barriers to mining and production which may include “creating a one-stop shop for all projects”.⁵ In her 2022 State of the Union address, the President of the European Commission Ursula von der Leyen announced the European Critical Raw Materials Act⁶ as a measure to address the global race for critical minerals and facilitate local supply.⁷ Similar developments are seen in the USA, where developers of low carbon technologies are concerned about regulatory obstacles to their wider deployment.⁸ However, any new policy shift to facilitate new mining, if incorporated into the legal framework, carries the risk of compromising wider regulatory objectives of protecting human health and environment.

This imperative to secure critical minerals for low carbon technologies poses certain broader challenging questions about intergenerational equity and balancing the interests of present communities while shielding future generations against the impacts of climate change. Future generations will be deeply affected by climate change, yet a prompt and radical governmental response to the climate emergency through energy transition can protect them by mitigating greenhouse gas emissions. If, however, the shift to low carbon energy requires increased mining that will affect present domestic communities, raising significant questions of how best to secure just energy transition. The notion of a just energy transition must balance the interests of present communities affected by mining and the protection of future generations against the impacts of climate change and biodiversity loss. The supply of critical minerals to enable low carbon technologies, seen as a crucial driver of ‘green’ economic growth, cannot override environmental protection objectives serving both present and future generations.

In the light of minerals’ development in Cornwall,⁹ this paper evaluates the UK legal framework

⁵ [EU digs for more lithium, cobalt and graphite in green energy push | Financial Times \(ft.com\)](#)

⁶ [European Critical Raw Materials Act \(europa.eu\)](#)

⁷ [State of the Union Address by President von der Leyen \(europa.eu\)](#)

⁸ [Permitting reforms for US infrastructure lay bare energy tensions | Financial Times \(ft.com\)](#)

⁹ See S Morris, “Significant Lithium Find Spurs Hope of Cornwall Regeneration” The Guardian (17 September 2020)

for regulating mineral exploration and development. It investigates the extent to which the current legal framework operates effectively to accommodate intergenerational and environmental justice concerns. By deploying these two frameworks, the paper develops an explanatory model highlighting and assessing the hallmarks of the planning and permitting processes in England and Wales. This paper puts forward a somewhat contentious argument that policy makers may need to make hard policy decisions regarding mining, that may not be widely accepted by local residents, to address just climate change transitions. Finally, the paper offers suggestions how policy decisions can be managed through more structured planning and permitting processes to deliver environmental justice and intergenerational equity.

This original contribution of this paper lies in the novel data on planning and permitting experiences related to mining. The paper is informed by empirical findings obtained from interviews and focus groups with key stakeholders involved in the planning and permitting processes, either as applicants or as decision-makers. Given the paucity of current literature on UK mining law, and the fact that most remaining UK mining is still governed by diffuse and outdated legislation, a research methodology based on interviews with stakeholders was chosen as the most effective way to assess the ‘fitness for purpose’ of the law governing mining development. We know of no similar UK empirical study that introduces and interprets primary data to offer a critical insight into regulatory processes in the context of mineral planning. Although Cornwall was used as a case study, the paper identifies wider legal and regulatory themes applicable to the jurisdiction of England and Wales, some of which may extend beyond mining and apply to other infrastructure development.

The significance of this paper is two-fold. This paper provides the first comprehensive account and critical assessment of the law and practice as it relates to planning and permitting of mining illustrating through both doctrinal and empirical analysis not only the content but the operation of the current regulatory framework. It does so through a lens of environmental justice and intergenerational equity. This analysis is particularly timely due to the increased prominence of mining with the switch to renewables. This is then followed by a set of reflections on how planning and permitting may be better streamlined to enable mining exploration and extraction needed to produce low carbon technologies in fulfilment of the UK net zero policy.

2. Research framing and methodology

The foundational study aims to fill a gap in legal scholarship and assess hallmarks of a regulatory framework from the perspective of environmental justice and intergenerational equality, These hallmarks are balanced against the economic growth envisioned from the development of green technologies driven by the need to address the climate emergency. Environmental justice and intergenerational equity are two intertwined concepts, though intergenerational equity is often regarded as a dimension of the wider notion of environmental justice.¹⁰ Environmental justice is a concept initially associated with the discriminatory impacts of environmental pollution on Black

<https://www.theguardian.com/business/2020/sep/17/significant-lithium-find-spurs-hopes-of-cornwall-regeneration> (accessed 25 August 2022)

¹⁰ G Walker, *Environmental Justice Concepts*, Evidence and Politics (Routledge, 2012) pp 2-3.

communities in the USA in the 1980s but over time has been associated with such impacts on the global environment.¹¹ Walker suggests that it is mostly defined in terms of an objective that is pursued and for which certain conditions are specified.¹² Despite different interpretations of this framework and different approaches in framing it, some of the common themes or values surround the consumption of goods coupled with the inequality in the access to those goods. Compounding this is the distribution of environmental ills and risks attached to their production¹³. These themes form part of the distributive perspective, which is followed by procedural perspective of environmental justice and calls for open and participatory environmental decision-making.

With regards to critical minerals, the UK must make policy choices about primary extraction and security of domestic supply within national planning and permitting rules, rather than continuing reliance on unsustainable modes of production elsewhere. This approach has long-term advantages in limiting the inequality in the distribution of risks to other countries, many with ineffective regulation of mining, while maintaining resource benefits locally. Any policy approach should be examined against the right globally to enjoy an environment of a quality that permits a life of dignity and well-being.¹⁴

Intergenerational equality is concerned with the voices of present and future generations being heard in determining the distribution of risks and benefits in environmental decision-making. This concept owes much to Weiss, who advocated that each generation has a fiduciary obligation to future generations which entails the preservation of natural and cultural heritage for those future generations.¹⁵ The fiduciary obligation derives from the widely recognised universal obligation of stewardship over the natural and cultural heritage entrusted to people.¹⁶ Each generation is not only a trustee of resources but also a beneficiary of the same resources and thus should aim not to leave the planet in a worse condition than that which it inherited, ensuring every new generation the access to adequate resources.¹⁷ This should be achieved through: conservation of options which allow for the preservation of diversity of natural and cultural resources; conservation of quality that should assist in protecting the resources at comparable levels to future generations; and conservation of access that allows entitlement to same resources to

¹¹ See G. Walker, p. 1

¹² See G. Walker, p. 8.

¹³ G. Walker, p. 10 and David Schlosberg, "Reconceiving Environmental Justice: Global Movements and Political Theories" *Environmental Politics* (2004) 13:3, 517-540

¹⁴ Declaration of the United Nations Conference on the Human Environment (Stockholm Declaration, 1972) Principle 1.

¹⁵ Edith Brown Weiss, "The Planetary Trust: Conservation and Intergenerational Equity" (1984) 11 *Ecology LQ* 495 pp. 499-500.

¹⁶ Edith Brown Weiss, "The Planetary Trust: Conservation and Intergenerational Equity" (1984) 11 *Ecology LQ* 495, pp. 499-500. See R Attfield, *Environmental Ethics: An Overview for the Twenty-First Century* (Polity, 2003) p. 21

¹⁷ Edith Brown Weiss, "The Planetary Trust: Conservation and Intergenerational Equity" (1984) 11 *Ecology LQ* 495 and Edith Brown Weiss, "Climate Change, Intergenerational Equity and International Law" (1989) 15 *Climatic Change*, 327-335

future generations.¹⁸ Thus, the precondition for intergenerational equity requires that the regulatory process is informed by environmental justice values, including the equality of the distribution of risks and benefits determined by an open and transparent process. These values constitute the hallmarks of an effective framework which might serve a low carbon economy while respecting intergenerational and climate justice.

Having considered the framing of the research, it may be helpful to explain further the methodology. We limit the discussion in this paper to findings related to the planning and permitting process for exploration and subsequent extraction of critical minerals in Cornwall. We draw on 17 interviews with different key stakeholders directly involved in applying for or determining planning or permitting applications, including regulators, mineral planning authorities (MPAs), mining companies undertaking different forms of exploration both onshore and off-shore, lawyers and consultants working on mining applications, and representatives of trade associations. Semi-structured interviews were followed by focus groups, conducted between February and June 2022, such methods chosen as the most appropriate method for data collection due to limited scholarship or case law on UK mining law coupled with lack of earlier relevant empirical legal research. Such data could not have been obtained either through doctrinal analysis or, as efficiently, through other social and legal research methods. The interactions in the interviews and focus groups offered insights into the broader institutional context of the regulation and allowed some element of co-production in understanding and critiquing the practical workings of that regulation.¹⁹

Interviews took place using Zoom software (both one-to-one interviews and small group interviews, depending on the preference of interviewees), lasting between 40 and 60 minutes. The researchers initially sent emails to all prospective interviewees outlining the research question and consent form. Interviewees also received a semi-structured interview guide in advance, setting out the main legal and regulatory topics on which the interview would focus. These included core issues of the planning and permitting process such as: the UK mineral rights; UK planning and permitting systems; involvement of and consultation with local residents; access to geological resources; sustainable mining; and governmental support for the mining sector. All interviewees agreed to participate in the research on the understanding that their contributions would remain anonymous, via the application of anonymised identifiers. Following the completion of the interviews, the data was coded to identify the main themes. These themes subsequently helped construct a hypothetical case study for invited focus groups to discuss in meetings held in hybrid form (in Cornwall for those attending in-person) in June 2022. Invitations to attend the focus groups were sent to all interviewees and to a wider pool of stakeholders. This format allowed for a constructive consideration of the barriers and opportunities to mining of critical minerals in the UK and helped examine tensions between competing objectives of accelerated mining and environmental protection. Before reviewing the findings of the empirical research, we first outline the relevant UK policy context.

¹⁸ Edith Brown Weiss, "In Fairness to Future Generations and Sustainable Development" (1992) *American University International Law Review* 8, No. 1 19-26.

¹⁹ See more in S. Qu & J. Dumay, "The Qualitative Research Interview" (2011) 8(3) *Qualitative Research in Accounting and Management*, pp. 238-64.

3. Policy context

In July 2022, the UK Government published its first Critical Minerals Strategy,²⁰ which sets out how the UK intends to improve the resilience of critical minerals supply chains and secure future supplies. As the strategy notes, there is a heavily reliance on minerals supplied by global mining operations (most of which have highly concentrated supply chains and are sourced from a small handful of countries). Future demand for such minerals is expected to rise significantly with the growth of green and digital technologies²¹ such as electric vehicles and offshore wind. By 2040, the world is expected to generate four times the current demand for critical minerals such as lithium, cobalt and rare earth elements. However, supply chains remain opaque and complex. The dominance of a few countries such as China in the market for primary, processed and finished materials has led to supply vulnerabilities and market distortions.²² These risks are now intensified by recent geopolitical events such as the war in Ukraine. There is growing recognition that the UK needs to identify minerals at greatest supply risk and increase self-sufficiency in sourcing minerals that are vital for future industrial, economic and environmental goals, not least net zero targets.

The UK is far from alone in this realisation. The EU, for example, is urgently looking for ways to end its reliance on Russian oil and gas; and the European Commission is exploring the need to lower regulatory barriers for mining raw materials needed for green energy (such as lithium, cobalt and graphite).²³ Accelerating domestic minerals production and processing capabilities of the UK in relation to both primary and secondary resources will require a revaluation of the policy towards the mining industry over several decades. In addition, there is room for a re-examination of the regulatory frameworks both to support and control a revival in domestic mining. The South-West of England, which was once at the centre of the UK's leading tin mining industry, has witnessed a significant decline in mining activity. Cornish tin mining, for example, which was at its height in the 19th century, suffered widespread mine closures towards the end of the 19th century: in 1875, over 10,000 tin miners from Cornwall were reported to have emigrated overseas to find work in developing mining areas such as Australia, South Africa and North America.²⁴ The Great Tin Crisis of 1985,²⁵ which saw international prices of tin suddenly fall by more than half, further accelerated permanent closures of several tin mines in Cornwall.

²⁰ HM Government, *Resilience for the Future: the UK's Critical Minerals Strategy* (June 2022) <https://www.gov.uk/government/publications/uk-critical-mineral-strategy/resilience-for-the-future-the-uks-critical-minerals-strategy#:~:text=The%20UK's%20first%20ever%20Critical,challenges%20with%20our%20international%20partners>

²¹ International Energy Agency, 'The Role of Critical Minerals in Clean Energy Transitions' (May 2021) <https://www.iea.org/reports/the-role-of-critical-minerals-in-clean-energy-transitions>

²² See for example the World Trade Organisation dispute involving the USA complaint about China's export controls on rare earths., tungsten and molybdenum: WT/DS431/17/26 May 2015.

²³ S Fleming, A Hancock and P Wise, "EU digs for more Lithium, Cobalt and Graphite in Green Energy Push" *Financial Times* (16 August 2022) <https://www.ft.com/content/363c1643-75ae-4539-897d-ab16adfc1416>

²⁴ William Rowland, "The History of Tin Mining in Britain" <https://www.william-rowland.com/news/item/the-history-of-tin-mining-in-britain>

²⁵ J Ferry, "Tin Crisis hits Brokers in London" *Washington Post* (November 3 1985) <https://www.washingtonpost.com/archive/business/1985/11/03/tin-crisis-hits-brokers-in-london/cdde3a1f-a315-495c-bfdd-f72657eafe28/>

Energy transition under climate change may herald a resurrection of UK mining.²⁶ The discovery of lithium deposits (crucial for the manufacture of many green and digital technology products) in Cornwall has sparked a renaissance in geological exploration in the region;²⁷ alongside this there is new global demand and significant rise in prices for tin (which is seen as an environmentally friendlier alternative to lead) and existing mining of tungsten. Although some mining for industrial minerals has been ongoing in the UK throughout the last century, the pressing demand for future critical minerals' supplies needed for climate goals could provide a much-needed impetus to the UK mining industry.

This will depend on a robust legal framework in which mining can develop and operate without leading to depletion of natural capital, to allow future generations access to comparable resource provision. While laws on mine safety remain in place, wider regulation of the impacts of mining has not been at the forefront of the policy agenda and UK mining law remains outdated, being largely governed by disparate and disjointed legislation (as is shown below). There is neither a unified regulatory regime for mining; nor a single mining code as is common in other jurisdictions.²⁸ Little attempt has been made to modernise mining law to respond to the critical materials' vulnerabilities intensified by a climate emergency. We question below whether current regulatory frameworks are suited to the effective governance of sustainable mining to serve the needs of future generations and deliver environmental justice.

Extraction of minerals is subject to the minerals planning policy in the UK,²⁹ which is devolved and contained in the National Planning Policy Framework ('NPPF' England),³⁰ and Planning Policy Wales³¹. Key legislation and policies applicable to mining are contained across various different pieces of legislation,³² including The Mines and Quarries Act of 1954³³ (governing the management and control of mines and quarries); The Health and Safety at Work Act 1974;³⁴ the Town and Country Planning Act 1990;³⁵ The Mines Regulations 2014³⁶ (which contains mine-

²⁶A Tunnicliffe, "A New Industrial Revolution: is a UK Mining Boom on the Way?" (Mining Technology, 21 October 2021) <https://www.mining-technology.com/analysis/uk-mining-boom/>

²⁷See, for example, S Morris, 'Significant Lithium Find Spurs Hope of Cornwall Regeneration' The Guardian (17 September 2020) <https://www.theguardian.com/business/2020/sep/17/significant-lithium-find-spurs-hopes-of-cornwall-regeneration> (accessed 25 August 2022)

²⁸[https://uk.practicallaw.thomsonreuters.com/w-027-8698?transitionType=Default&contextData=\(sc.Default\)&firstPage=true](https://uk.practicallaw.thomsonreuters.com/w-027-8698?transitionType=Default&contextData=(sc.Default)&firstPage=true)

²⁹ HM Government, *Mining and Quarrying in the UK* (December 2019) <https://www.gov.uk/government/publications/extractive-industries-transparency-initiative-payments-report-2018/mining-and-quarrying-in-the-uk>

³⁰ <https://www.gov.uk/government/publications/national-planning-policy-framework--2>

³¹ https://gov.wales/sites/default/files/publications/2021-02/planning-policy-wales-edition-11_0.pdf

³²J Dewar and E. Whittaker, in 'International Comparative Legal Guides: Mining Law 2022' (edited Andrew Emrich), 9th Edition (2022)

³³ <https://www.legislation.gov.uk/ukpga/Eliz2/2-3/70/contents>

³⁴

https://www.google.com/search?q=health+and+safety+at+work+act+1974&rlz=1C1GCEB_enGB816GB816&oq=health+and+safety+at+work+act&aqs=chrome.1.69i57j0i20i263i512j0i512l8.6520j0i4&sourceid=chrome&ie=UTF-8

³⁵ <https://www.legislation.gov.uk/ukpga/1990/8/contents>

³⁶ <https://www.legislation.gov.uk/uksi/2014/3248/contents/made>

specific health and safety regulations) and the Environmental Permitting Regulations 2016³⁷ (or their equivalent in devolved regions). The Environmental Impact Assessment Regulations 2017 apply where the exploration or extraction activity meets the threshold criteria for environmental impact assessment.³⁸ The question that remains is whether this framework is adequately directed and coordinated to support the re-establishment of a UK mining industry in a difficult post-Brexit, post-pandemic landscape where even established industries are grappling with these challenges. If not, then a further question is whether the framework might be simplified to produce a more efficient process of consenting to operations, whilst promoting sustainability.

4. Findings

Against the background above we identify and evaluate the hallmarks of the regulatory framework for the domestic supply of critical minerals to assess if this framework delivers on intergenerational and environmental justice concerns. The empirical study provides insight into challenges and opportunities associated with the planning and permitting processes. Several defining themes emerge in the research including: the complexities associated with mineral rights and mineral safeguarding; blurred boundaries between planning and permitting issues; the varying approaches by different public bodies; the value of early engagement and the role of local residents; the need to involve the local community in decision-making and the expertise of the decision-makers. Bearing in mind the objective of moving away from off-shoring externalities while facilitating access to domestic critical materials, this paper considers how the approval processes can be streamlined and rendered more transparent to better balance the tensions between mineral development and environmental protection.

4.1. Mineral rights and mineral safeguarding

The acquisition of mineral rights, although not part of the planning and permitting processes, represents an important hallmark or enabler for national mineral extraction and development. When combined with minerals safeguarding within the planning context, these two hallmarks become closely linked to the objective of redistributing the environmental risks and hazards as well as benefits in line with environmental justice and international equity. A more strategic approach to mineral planning is not easy to achieve as several competing objectives are involved. Registration of mineral rights and mineral safeguarding are aimed at facilitating mining rather than serving competing objectives of preservation of the natural and cultural environments, respect for private rights and fulfilling the social needs of present generations.

4.1.1. Mineral rights and registration

The governance of mineral rights in England and Wales is complex, although the general position (except for minerals such as gold, silver, coal, oil and gas which are expressly reserved for the Crown or other public authorities) is that of private ownership.³⁹ Landowners generally own the

³⁷ <https://www.legislation.gov.uk/uksi/2016/1154/contents/made>

³⁸ <https://www.legislation.gov.uk/uksi/2017/571/contents/made>

³⁹ BGS Minerals UK, *Legislation & Policy: Mineral Ownership*
<https://www2.bgs.ac.uk/mineralsuk/planning/legislation/mineralOwnership.html>

minerals⁴⁰ beneath their land, unless these rights have expressly been transferred to someone else.⁴¹ Licensing processes vary depending on whether a mineral is owned by the State or privately owned. Access to privately owned minerals must be negotiated with the landowner (as well as the owner of mineral rights where title is split); and there is no national licensing system for exploration or extraction of privately owned minerals.⁴² Minerals' extraction must be licensed by the Minerals Planning Authority (MPA),⁴³ which controls mineral developments under the orders established under the Town and Country Planning Act 1990 (section 97, Part II of Schedule 5, and Schedule 9).

Several interviewees raised the need to marshal mineral rights as a necessary precondition for applying for planning consent for mineral exploration and development. Moreover, identification of mineral rights is regarded as a significant tool in identifying domestic mineral resources and providing a more comprehensive overview of the geological resources as a part of natural capital. Without comprehensive data, investors may be reluctant to allocate funds to local production. Thus, identification and registration of mineral rights were identified by the industry predominantly as a major obstacle to investment in the UK mining sector compared to other jurisdictions, many of which may be more abundant in critical minerals. This is well illustrated by interviewees' observations about the UK mineral rights system which was described as 'very unique'⁴⁴ and 'archaic at best',⁴⁵ involving a 'long and complex process',⁴⁶ "disjointed"⁴⁷ and thus not helpful in facilitating a smooth, speedy acquisition or registration of mineral rights. This perception of the complexities with UK mineral rights systems stems from several factors according to the interviewees. Firstly, problems arise in identifying owners of mineral rights due to the paucity of information or records about previously registered rights. The registration of mineral rights is not compulsory in England and Wales and some owners are either unaware of their rights or decide not to register them, partly due to concerns about potential historical liability for environmental harm.⁴⁸ Moreover, it is often the case that there are several owners across an area of land which is of interest to mining companies for exploration purposes.

⁴⁰ "Any strata or seam of minerals or substances in or under any land, and powers of working and getting any such minerals or substances": see s.132 Land Registration Act 2002.

⁴¹ Section 205(1)(ix) of Law of Property Act 1925 defines land as including "land of any tenure, and mines and minerals, whether or not held apart from the surface, buildings or parts of buildings (whether the division is horizontal, vertical or made in any other way) and other corporeal hereditaments; also a manor, an advowson, and a rent and other incorporeal hereditaments, and an easement, right, privilege, or benefit in, over, or derived from land and "mines and minerals" include any strata or seam of minerals or substances in or under any land, and powers of working and getting the same". The same definition of minerals is provided in section 132(1) of the Land Registration Act 2002.

⁴² Dewar and E. Whittaker, in 'International Comparative Legal Guides: Mining Law 2022' (edited Andrew Emrich), 9th Edition (2022); though see the text below in relation to Northern Ireland.

⁴³ HM Government, *Mining and Quarrying in the UK* (December 2019)

<https://www.gov.uk/government/publications/extractive-industries-transparency-initiative-payments-report-2018/mining-and-quarrying-in-the-uk>

⁴⁴ R12

⁴⁵ R9

⁴⁶ R11

⁴⁷ R5

⁴⁸ R10

Assembly of those rights may take significant time and expense: especially where, for example, original title deeds have been lost over time.⁴⁹ Furthermore, owners of surface and subsurface rights are not always the same as, in many cases, surface rights may have been transferred over time, while the original owner retains mineral rights (or vice versa).⁵⁰

Secondly, once the application for a registration of title is submitted to the Land Registry, it may take approximately two years to complete the registration process.⁵¹ The Land Registry gives priority to compulsory registration applications; when coupled with lack of staff in the Registry, this policy creates delay for voluntary applications.⁵² Several interviewees pointed to “staff at the Land Registry overwhelmed with work, understaffed, underfunded”.⁵³ This was also raised as a significant issue during focus group discussions. Finally, certainty of the title remains a major issue for mining companies. Although, the working presumption is that minerals are included within the title, the state cannot guarantee mineral rights unless they are expressly included in a title deed. However, as one of the interviewees put it, where it “transpired that they (mineral rights) weren't included in it, the buyer would not be entitled to a guarantee from the Land Registry to bind to this”.⁵⁴

These issues prompted discussion within focus groups about the need to reform the mineral rights system and what solutions would be appropriate, starting from better promotion of voluntary registration by the Government, through introduction of compulsory registration to nationalisation of mineral rights.⁵⁵ In Northern Ireland, the Mineral Development Act 1969, vests many minerals (though not gold and silver) with the Department for the Economy. It is generally acknowledged⁵⁶ that prospecting for minerals has been facilitated under this arrangement, by overcoming the complications of investigating, in advance, title to mineral rights. One could see that from an intergenerational equity perspective a more planned approach to the release of areas for prospecting may better harness the natural resources than does a system based purely on private rights. Note that in the Northern Irish framework, such private rights remain but are effectively administered by the Department for the Economy. Bearing in mind the need to have an open decision-making process that will bring together all those interested as advocated by an environmental justice approach, reform must acknowledge the rights of private owners as interested parties as their rights may be affected by reform options to support accelerated mining.

4.1.2. Mineral safeguarding

Mineral safeguarding in the UK featured as a significant part of the discussion on mineral

⁴⁹ R1, R2, R10 and R14

⁵⁰ R11 and R17

⁵¹ R11

⁵² R10

⁵³ R9 and R10.

⁵⁴ R11

⁵⁵ R7 and focused groups

⁵⁶ See for example: Hansard HC Deb 11 December 1979 vol 975 cc1239-49

planning. It is defined as “the process of ensuring that non-minerals development does not needlessly prevent the future extraction of mineral resources, of local and national importance”.⁵⁷ All interviewees regarded it as one of the key strategic steps in ensuring the country’s ability to meet climate change targets and develop low carbon technologies. Mineral safeguarding forms part of the mineral planning system and is a policy “of ensuring that non-minerals development does not needlessly prevent the future extraction of mineral resources (that are) of local and national importance”.⁵⁸ This element of foresight makes it an important consideration for intergenerational equity. While mineral safeguarding is another enabler for potential domestic mineral development and exploration, it exposes a potential clash between this objective and preservation of natural and cultural heritage. This is particularly true with regards to nature conservation in national parks, which may have abundance of these minerals.

Mineral safeguarding frameworks recognise the values of environmental and intergenerational justice by an emphasis on sustainable development. The National Planning Policy Framework 2021, underpinned by a sustainable development objective, stipulates the need to ensure “that there is a sufficient supply of minerals to provide the infrastructure, buildings, energy and goods that the country needs. Since minerals are a finite natural resource, and can only be worked where they are found, best use needs to be made of them to secure their long-term conservation.”⁵⁹ The NPPF lists material considerations for MPAs when it comes to mineral planning decisions.⁶⁰ While mineral safeguarding is intrinsically linked to mineral planning policy, it provides no guarantee that planning permission for minerals exploitation within the area will be approved as there may be competing considerations.⁶¹ Despite the importance of mineral safeguarding acknowledged in national and local plans, most interviewees agreed that there are challenges surrounding mineral safeguarding as an important hallmark in boosting mineral exploration and development nationally. Comprehensive data on mineral and mineral deposits constitutes a precondition for identifying areas of importance for mineral development.⁶² At the moment, neither mining companies nor MPAs have a full and detailed knowledge of existing mineral resources, though it was pointed out during discussions that this data gap may be filled by industry or the British Geological Survey (BGS).⁶³ As a way of being more strategic, the interviewees suggested that frequent (perhaps five yearly) reviews of mineral policies would be welcome in light of changing governmental objectives and urgent climate change actions.⁶⁴ Implementation of mineral safeguarding policy was also identified as another challenge, especially when set against other competing imperatives, such as targets for new housing at the local level. This is even more complex in two-tier authorities which were said to be “under pressure to provide affordable housing or economic growth immediately through building and

⁵⁷ Guidance on the planning for mineral extraction, [Minerals - GOV.UK \(www.gov.uk\)](https://www.gov.uk)

⁵⁸ [Minerals - GOV.UK \(www.gov.uk\)](https://www.gov.uk)

⁵⁹ National Planning Policy Framework, para 209

⁶⁰ Para 211

⁶¹ Confirmed in the interviews. See R17.

⁶² R1, R9 and R17.

⁶³ Focus groups

⁶⁴ Focus groups

commercial development”⁶⁵ (i.e. present needs) and thus might be reluctant to give proper weight to mineral safeguarding and future interests. Other competing land uses may be of local or national significance including heritage sites or biodiversity protected sites. These barriers to safeguarding might be overcome by raising awareness among different stakeholders through training and better communication, as well as raising the profile and significance of critical minerals for purposes of climate change action.

4.2. General observations about planning and permitting

Planning and permitting are key processes in ensuring the integration of environmental justice concerns, especially at a procedural level, as well as allowing for sustainable preservation of natural and cultural capital both for current and future generations. Walker includes within procedural justice: how justice is conceived in terms of making decisions; the role of parties involved; and who can influence the process.⁶⁶ For intergenerational equity, Weiss emphasises the importance of conserving access to resources for the present generation without jeopardising that same right for future generations.⁶⁷ Weiss highlights the value of processes and institutions in limiting the impacts of each generation beyond their lifetime, allowing each generation to have access to comparable quality of the natural environment.⁶⁸ Mineral approvals in England and Wales ordinarily involve a two-step process whereby mining companies first apply for a planning permission (to the MPA) followed by an environmental permit (which falls under the remit of the Environment Agency in England or Natural Resources Wales (NRW)), both processes constituting a legal precondition for mineral development and extraction. Section 57 of the Town and Country Planning Act 1990 directs that all operations or work falling within the statutory definition of ‘development’ require planning permission. There are various formats of planning permission, including local authority grants of planning permission, development consent for nationally significant infrastructure under the Planning Act 2008 and planning permission by the General Permitted Development Order (GPDO). Some projects will also additionally require an environmental permit, while others may be exempted from permitting requirements. For example, minerals exploration falling under Class K of the Town and Country Planning (General Permitted Development) Order 2015 may be exempt from the permitting process,⁶⁹ though this may depend on an operation which is environmentally compliant in terms of other impacts such as discharges to water, protection of groundwater or generation of waste.⁷⁰ Where a development requires both planning permission and an environmental permit, both applications can be submitted at the same time for ease in a process known as twin-tracking.⁷¹

An Environmental Impact Assessment (EIA) is particularly significant as a tool to limit and control

⁶⁵ R16

⁶⁶ See G. Walker, p. 10

⁶⁷ Edith Brown Weiss, “In Fairness to Future Generations and Sustainable Development” (1992) *American University International Law Review* 8, No. 1 19-26.

⁶⁸ Edith Brown Weiss, *The Planetary Trust: Conservation and Intergenerational Equity*, 11 *Ecology L.Q.* 495 (1984).

⁶⁹ <https://www.legislation.gov.uk/uksi/2015/596/schedule/2/part/17/made>

⁷⁰ Environmental Permitting (England and Wales) Regulations 2016 S.I 2016 No. 1154

⁷¹ HM Government (October 2018) *Developers: get Environmental Advice on Your Planning Proposals* <https://www.gov.uk/guidance/developers-get-environmental-advice-on-your-planning-proposals>

the environmental impacts of mining. It is widely regarded as a mechanism that embeds environmental justice concerns through sustainable development and precautionary principles into the decision-making process. The nature of installation or threshold criteria (set out in Schedule 1 of EIA Regulations 2017) will determine the need for EIA.⁷² Even where EIA is not mandatory, there are a wide range of developments for which EIA screening may be required if the development is deemed to have significant environmental impact.⁷³ In reaching decisions about planning applications, as one of the interviewees pointed out, local MPAs liaise with a range of consultees to ensure that planned development will fit within the locality and that all impacts, including environmental effects, can be properly managed.⁷⁴ There was a general recognition among the interviewees that the planning system is by default permissive, which was commended as a positive feature. Thus, the current planning and permitting processes provide a general framework for mining exploration and development in England and Wales. Permitted development was seen as a positive feature of the planning system that facilitates local mining. The Town and Country Planning (General Permitted Development) Order 1995 allows for any development “not exceeding 28 consecutive days consisting of the drilling of boreholes, the carrying out of seismic surveys; or the making of other excavations.”⁷⁵ There was a general agreement among the interviewees that permitted development is an efficient way of enabling early exploratory work lasting no longer than 28 days.⁷⁶ Interviewees, however, noted that some local residents can have concerns even about this limited drilling, which is often due to misunderstanding about the extent of drilling allowed and exaggerated perceptions of what was claimed to be limited environmental impacts.

4.3. Public engagement

General considerations of planning and permitting process led to wider discussions in interviews about the crucial need for early and meaningful engagement by mining companies with local communities and local authorities. Public engagement is a key environmental justice hallmark of both planning and permitting playing a fundamental role in protecting the interests of current and future generations by resort to substantive and procedural rights embedded in the planning and permitting process. According to Weiss, the obligation to future generations is a deeply engrained social value which is regarded as a precondition for the future viability of human communities.⁷⁷ There was a general agreement that procedural justice, through the involvement of interested parties who can voice concerns of both present and future generations, is well embedded in the planning and permitting process. Interviewees stated that local planning authorities encourage mining companies to engage early with local residents rather than waiting for any statutory requirement to consult. This was seen by most interviewees as a positive

⁷² Schedule 1 of Environmental Impact Assessment Regulations 2017 lists the developments that will require an EIA: <https://www.legislation.gov.uk/uksi/2017/571/contents/made>

⁷³ Schedule 2 of Environmental Impact Assessment Regulations 2017 lists the kinds of projects that may be subject to environmental screening: <https://www.legislation.gov.uk/uksi/2017/571/contents/made>

⁷⁴ R3. See R4.

⁷⁵ Town and Country Planning (General Permitted Development) Order 1995 (as amended), Part 22A

⁷⁶ R9 and R16.

⁷⁷ Edith Brown Weiss, *The Planetary Trust: Conservation and Intergenerational Equity*, (1984) 11 *Ecology L.Q.* 495 p. 501

strategy with significant potential to “improve the efficiency and effectiveness of the planning application system for all parties” and to enable better coordination.⁷⁸ It allows for an early discussion about the impacts on the local community and local environment. Interviewees from mining companies suggest the value of a proactive approach.⁷⁹ In the words of one interviewee, “as soon as you establish yourself, you have to start (engaging)” without waiting for the mandatory engagement which forms part of the environmental impact assessment process.⁸⁰ Some interviewees supported international practice which often requires the preparation of a stakeholder engagement plan.⁸¹ Interviewees suggested that there was room for central government to do more to convince the wider public of the necessity of minerals production as part of the net zero journey.

Engagement with residents takes many forms and mining companies demonstrated innovative ways of reaching out to communities. This included drop-in centres,⁸² open door policies, community helplines, working with schools and universities to improve awareness about critical minerals mining, as well as visiting local residents to discuss concerns.⁸³ Some companies undertake outreach work and offer presentations to school children in Cornwall about mining history.⁸⁴ Most of the interviewees agreed that these forms of engagement work well, although there were some isolated voices suggesting that such efforts may amount to “a PR stunt”⁸⁵. There was a general agreement that many residents are supportive of local mining exploration and development due to a long history of mining in Cornwall. Mining seems to be deeply embedded in the Cornish DNA, especially for “those who have families who have been here for a long time... we'll have a family member or someone they know who has worked in mining in Cornwall”⁸⁶. Mining provides job opportunities in an area highly dependent on seasonal tourist income, and as such residents are more supportive, though this was said to be less the case in more scenic parts with ‘newcomers’ in the local population.⁸⁷ Residents were said to be primarily concerned with environmental impacts such as dust and preservation of the environment. This is not to underplay other considerations of residents such as the effects of mining on property prices. Interviewees pointed out that both the mining companies and local authorities are faced with “with far more organised and far more structured engagement from the local community”. This is coupled with the more prominent role of social media, which can be a helpful source of information, but at times can also lead to misunderstandings and incorrect information being promulgated by concerned residents.⁸⁸ One illustrative example was given by an interviewee who described that “there's often you know there's a sense of you know conspiracy theory, the

⁷⁸ National Planning Policy Framework 2021, para 39

⁷⁹ E.g. R8 and R10.

⁸⁰ R9. See also R1.

⁸¹ R12.

⁸² R8

⁸³ R9, R8

⁸⁴ R1 and R2.

⁸⁵ R12

⁸⁶ R9. See also R5.

⁸⁷ R10. See also R6

⁸⁸ Interviewees suggested that it is often the case they received objections which contained irrelevant studies copied from the Internet (R3 and R4).

big business versus the little man”.⁸⁹

This was linked to a question of judicial review of decisions by local planning authorities which is regarded as a key judicial avenue for reviewing decisions of public bodies and thus is an integral part in embedding environmental justice concerns within the legal process. In the case of mining, these would usually involve decisions regarding protection of the natural environment. As community groups may be well organised, there was a general agreement among interviewees that local authorities are exposed to significant social and political pressure that their decision may be subjected to a legal challenge. Furthermore, the interviewees specified that the public is both quite aware of environmental impacts of mining and familiar with legal avenues in challenging activities that may have negative effects. This finding may be less applicable to Cornwall where residents are likely to be supportive of mining. This confirms the value of the public of the importance of processes and institutions, such as courts, in ensuring the incorporation of intergenerational equity as an objective in policy making, as well as of the value of judicial review as a process that allows for a robust review of the process of environmental decision-making. However, there was a growing concern amongst interviewees that the recurrent possibility of judicial review by social groups in a multi-stage decision-making process might cause delay. Even if courts subsequently rule that a case is not well-founded, the legal challenge would inevitably prolong decision-making for individual applications.

Moreover, there was some evidence of defensive administration of the planning process. As a matter of precaution, local planning authorities often spend more time in further clarifying certain aspects of planning applications or asking for further studies, which in turn may render the planning stage both longer and more costly for applicant companies. This defensive approach also has political consequences such that local councillors may be reluctant to back mining applications not fully supported by constituents, even where mineral planning officers do not have significant concerns about the planned mineral development. This may jeopardise significant efforts that MPAs undertake towards building rapport with mining companies working in the area. As one of the local authority interviewees emphasised: “probably the most frustrating thing is to work with a company (where)...you think you’ve ironed out all the issues and then it goes to a planning committee and Members say well, we’re not going to support the officers’ view”.⁹⁰ This exposes the tensions between the interests of mining companies and local residents and highlights a potential divide between the policy interests to allow for local mining as to move away from off-shoring externalities and the resistance of local residents to bear social and environmental costs of local mining. Still, the regulatory process allows for meaningful public engagement as a significant hallmark and assessment of competing interests.

4.4. The planning process

Turning to the planning process in more detail, several important themes emerged from interviews and focus groups, including: complex planning requirements; lengthy procedures; and the occasionally blurred relationship or overlap between planning and permitting processes. The

⁸⁹ R16.

⁹⁰ R4.

distributive aspect of environmental justice is in play here as these complexities may have an impact on prospects for local mining. If these issues are regarded as barriers, the UK remains with dependent on overseas production with limited opportunity to address environmental justice concerns. The question therefore is whether planning can be better streamlined to allow for local but sustainable mineral production. Planning requirements were seen as complex and “intensive” with a mining company needing to submit a variety of different studies to demonstrate the impact of planned development.⁹¹ One example from our data relates to the planning conditions that seek net zero operations. Interviewees suggested that energy-intensive mining faces huge and perhaps insurmountable struggles to operate as a net zero activity, which planning and permitting processes in the UK rightly seek to promote.⁹² Interchanges between the authorities and the industry on this subject are long and complex. Yet energy is needed to win materials which in due course will reduce dependencies on fossil fuels. One solution here might be to attribute a fixed contribution to decarbonisation on the part of the minerals won, which can be factored into the net zero calculation.

Most challenging are studies of environmental effects which can significantly impede mineral exploration and development. Mining companies voiced their concerns at being asked to revisit assessments multiple times covering the same ground. They reported being asked to repeat studies on any revisions to the application or where a time limit was exceeded, despite there being no projected changes to the effects on the natural environment.⁹³ Many of those companies are not able to undertake the required ecological assessments in-house and used consultants, which can prove costly. When asked about the quality of environmental statements usually submitted by mining companies, local authorities found them of a good quality, although expertise for some issues such as noise pollution was reported as being in short supply.⁹⁴

There was some discussion about opportunities to better streamline environmental impact assessment post-Brexit and to ensure that competing interests of climate change, water scarcity, biodiversity loss, changes in land use and demographics, are all balanced against the unavoidable need for mineral development and extraction. The planning requirements were seen by mining companies to be especially onerous with regards to offshore drilling which requires assessment of the impact of drilling on different species living in the sea to obtain approval from the Marine Management Organisation.⁹⁵ Interviewees made similar points with regards to geothermal projects.⁹⁶

Most of the interviewees emphasised that in their experience the planning process is often lengthy, with some describing it as “sluggish”.⁹⁷ Although the exact timeframe for a decision varies from one authority to another, current targets stipulate planning applications should be

⁹¹ R1

⁹² e.g. R7

⁹³ R9.

⁹⁴ R14

⁹⁵ R6.

⁹⁶ Linked to lithium extraction - R5

⁹⁷ R12

decided within eight weeks, unless they are unusually large or complex, in which case the time limit is extended to 13 weeks.⁹⁸ Where more time is needed to make a decision, a local planning authority is required to obtain written consent from an applicant to extend the period. An applicant has the right to appeal to the Secretary of State if no extension of time is sought but appeals can take several months to determine. Applicants are therefore actively encouraged to reach agreement on an extension of time with the LPA. If no decision is given within six months, the developer can claim a refund of planning fees which can be substantial. In practice, however, these deadlines are effectively treated as nominal and requests for time extensions are common due to severely stretched and under-resourced planning services. Equally, complex mineral planning applications require careful consideration of long-term effects of mining activity, which may also explain delays in decision-making. Local planning authorities require sufficient time to explore impacts to ensure that the diversity of natural options and quality of the environment is preserved both for present and future generations.

4.5. Multi-agency approaches

The relationship between planning and permitting became a significant point when discussing ways to better streamline regulatory processes. As mining can cause significant localised pollution, the permitting process remains a vital control. Interviewees described the two processes as “disjointed”,⁹⁹ with overlapping considerations, which led to massive duplication of data.¹⁰⁰ Companies are reluctant to submit and pay for permit applications before they are granted a planning permission. This is especially true for smaller mining companies which have difficulties raising funds for investment. Thus, in practice, “mineral companies go through several different phases to obtain planning permission; and then the duplication of information goes into the permit.”¹⁰¹ This raises a wider question about the extent to which work done during planning can align to that needed for permitting, and whether mechanisms can achieve better alignment and avoid duplication. As outlined by one of the interviewees: “Can we simplify things? Can we have a one stop shop bring everything together? Can we have it, so that we haven't got the EA and the Council second guessing as to what they think they should be doing?”¹⁰²

Several possible solutions to improve relationship between planning and permitting came from interviews and focus groups discussion. Some interviewees pointed examples of having an EA project manager working alongside the MPA for larger projects as an example of good practice. With regards to how the system could be changed, two suggestions were put forward. As pointed by some interviewees, one possible solution is to have a single regime whereby one licence covers all activities at the site which is the practice in certain parts of Canada.¹⁰³ However, there is a wider question whether this would work in all instances due to multiple layers of activities when pursuing different types of mineral development. Alternatively, twin-tracking of planning

⁹⁸ R15; also see <https://www.planningportal.co.uk/planning/planning-applications/the-decision-making-process/when-will-i-get-a-decision>

⁹⁹ R15.

¹⁰⁰ R17 and focus groups

¹⁰¹ R14.

¹⁰² R10

¹⁰³ R14

and permitting might be possible for mining permissions. This would maintain two separate systems, as is currently the case, but the applicant would undertake the planning and permitting at the same time to avoid duplication of effort and information. The different regulatory bodies would have access to all relevant documents which could be deposited using collaborative software. This might also allow for better integration of the planning and permitting systems. For example, as the Environment Agency and other agencies are already engaged with the planning process as statutory consultees, easy access to shared documents might speed up and improve the consultation process. Interviewees suggested that, currently, staff dealing with MPAs as statutory consultees were unlikely to deal with the environmental permitting. Twin tracking also seems fitting as technical issues pertaining to both planning and permitting may be discussed holistically with the applicant, allowing more comprehensive coverage of issues such as water extraction and the wider issue of security. This twin tracking option has been recommended by some interviewees although the applicants prefer to commence with the planning permission as it provides them, “foot in the door, the golden ticket, and then we’ll worry about the permit”, according to one interviewee”.¹⁰⁴

In order to address various competing objectives of environmental and intergenerational justice as values that underpin these regulatory processes, the expertise of public authorities was discussed as an important element of these processes. The expertise of MPAs and other agencies involved in planning and permitting came up strongly in interviews and focus groups as an important consideration in planning decision-making. Staff in the MPAs and Environment Agency were praised for their knowledge and expertise and were seen as “well engaged”.¹⁰⁵ However, interviewees raised an issue of capacity, especially in local councils which were “under-resourced”, threatening the timely processing of planning applications. As an interviewee noted: “there certainly is a challenge with capacity”¹⁰⁶ which is coupled with the wide remit of planning authorities, under which a broad range of development is controlled meaning that, for example, housing applications may be seen as taking priority given the presence of local housing strategies.¹⁰⁷

The lack of capacity limits the ability of local authorities to devote sufficient time to complex and lengthy mining applications. With regard to long term expertise of MPAs, there was a wide perception that “the resources at the local level are dwindling” potentially leading to long term decline in expertise.¹⁰⁸ A good illustration of a lack of strategic thinking was said to be the closure of the mining engineering course in the Camborne School of Mines.¹⁰⁹ According to interviewees, greater understanding of the importance of mining within governmental policy was needed to secure domestic supply of critical minerals, and such courses would be attractive and capacity building. Interviewees agreed that greater levels of support by the UK government for training in mining and minerals exploration could boost expertise at appropriate levels of decision-making.

¹⁰⁴ R15

¹⁰⁵ R10, R8 and focus groups

¹⁰⁶ R12

¹⁰⁷ See ss. 87, 88 Local Government Act 2003.

¹⁰⁸ R16 and R17. See also R8

¹⁰⁹ R12.

This would also accelerate mining serving the need for domestic supply of critical minerals and ensuring expertise to assess environmental and social impacts of mining activities.

Interviewees were asked whether the creation of a national body assuming certain planning competencies for mineral development could be a way forward to streamline the planning process. There was a near-unanimous agreement including among mining companies, that decision-making needs to remain at the local level as “one size does not fit all; so shouldn’t be taken to national level”.¹¹⁰ The understanding of local geology, local plans and competing economic, social and environmental objectives remains applicable in determining mineral planning applications and assessing the effects of mining on the local environment. Moreover, it was pointed out that “local members can have all the information in front of them, they can understand a lot of that information, they can add a lot of local knowledge and understanding, they also bring with them the full spectrum of views from their local constituents; all of which are really important aspects of making good decisions.”¹¹¹ However, a group of interviewees also recommended the establishment of a national body which, rather than dealing with planning consent, could provide leadership in terms of defining policy in sustainably securing metals for the green economy. Views varied as to how this body should be organised and what its remit would be. For some, it could be a centralized group under BEIS or one of the other ministries.¹¹² This body could provide expertise in cases where this is missing at the local level through processes of staff secondment. This was seen as a way of maintaining local capacity. More importantly, this body could assist in addressing significant variability in requirements for planning applications and could bring greater consistency in interpreting minimum national standards. As one Interviewee put it, “I think if there was some sort of central leadership... if we actually had a mines department or Ministry, then, with that leadership (rather than the Environment Agency and councils, perhaps being in a position where they're looking for reasons not to allow something) they see that actually their job is to allow it, but to control and manage it in the right way.”¹¹³ This discussion suggested unanimous agreement about need for a stronger governmental stance on importance of primary extraction, a more strategic approach and a need for urgent action.

5. Concluding remarks

In a climate emergency, policy makers must act promptly to mitigate the effects of climate change and its impact including that on future generations. This requires deployment of low carbon technologies that are dependent on critical minerals in patchwork supply across the world. The UK Government in its Critical Minerals Strategy recognises the significance of domestic supplies implying greater investment in domestic mining in areas such as Cornwall. Given the externalities attached to mining around the world, there is a moral imperative to promote sustainable domestic supply rather than off-shoring the environmental and social costs of minerals’ production. This approach is well aligned with main values of environmental justice

¹¹⁰ R1. See also R8

¹¹¹ R16.

¹¹² Focus groups

¹¹³ R10

which calls for equality both in the distribution of environmental risks resulting from their production as well as in engagement of interested parties in the decision-making processes.

However, to promote mining in the UK and attract investment, it is necessary to ensure that mining development is adequately regulated. The lead time from exploration to exploitation needs to be shortened, ideally with greater certainty of the outcomes in the approval processes. Our data suggest the main hallmarks of the planning and regulatory process broadly incorporate intergenerational and environmental justice concerns. However, certain complexities surrounding current systems of planning and permitting that may act as barriers to the production of minerals. The task is to resolve the tensions between the need to accelerate the production while ensuring robust scrutiny of its development and operation. These complexities include: mineral rights registration; mineral safeguarding; overlaps between planning and permitting; long-term issues of capacity and expertise; and more meaningful engagement with the public. The latter factor suggests the need to engage both the community and the interests of future generations in a more organised and structured manner. This aligns with the need to balance tensions between the competing objectives of expedited mining to deploy low carbon technologies and ensuring sustainable production and environmental protection.

These tensions highlight both spatial and temporal questions of environmental justice when it comes to critical minerals. Spatial because meeting the global demand for these materials guarantees neither modes of production which are sustainable, nor fair access to these materials to support climate change mitigation or adaptation. There is a temporal issue, also, arising out of the concept of intergenerational equity and the lack of voice for future generations in decision-making to ensure sustainable domestic supply. As Weiss emphasises, trade-offs are inevitable when it comes to growth, and this is true for green growth which implies change.¹¹⁴ Policy decisions should ensure that the interests of future generations are factored into the decision-making process. This requires consideration of a diversity of environmental options, and access to, at least, an undiminished quality of environment for future generations, which will depend on decarbonisation.

In addressing the climate emergency, this paper opens up a wider policy debate in the UK as to how to deploy critical materials in low carbon technologies to secure net zero targets. There are unavoidable frictions between competing objectives leading to unenviably hard decisions in alleviating the impacts of climate change both for present and future generations, and trade-offs that may not be always welcomed by the public. To this end, the paper advocates pathways to overcome conflicting objectives, primarily through a comprehensive, structured and transparent planning and permitting process that allows for those tensions to be evaluated. If mining of minerals is regarded as an imperative for the energy transition, mineral planning and permitting becomes a crucial part of a just transition. It must promote sustainable production while expediting decision-making to realise compliance with net zero targets. This serves the national interest while respecting the dual spatial and temporal dimensions of global environmental

¹¹⁴ Edith Brown Weiss, *The Planetary Trust: Conservation and Intergenerational Equity*, 11 *Ecology LQ* 495 (1984), and p. 532

justice. The research undertaken opens further significant avenues of study. This could include a wider action research with local residents and social groups in England and Wales around their engagement in the mineral planning process, which was not covered by this study. Finally, it would be very timely to undertake comparative law studies to explore complexities within mineral rights and consenting processes in other jurisdictions if only to explore the extent to which those systems address environmental justice and intergenerational equity concerns.