REGULATION 22 RESPONSE BY WEST CUMBRIA MINING IN RESPONSE TO REGULATION 22 REQUEST BY THE PLANNING INSPECTOR

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Attachment C – Revised ES Chapter 19

Contents

INTRODUCTION

1. This chapter updates and replaces the previous greenhouse gas ("GHG") emissions chapter (19) of the environmental statement. It has been produced in response to the regulation 22 request issued by the Planning Inspectorate on 30 June 2021 and to address other changes that have arisen since the publication of the original chapter.

2. The key changes which are addressed in the revised chapter are as follows:

    i. The publication of the sixth carbon budget by the Climate Change Committee, and its adoption by the UK Government through the Carbon Budget Order 2021 on 24 June 2021.
    ii. The proposed amendment to the operational life of the project, which has been reduced from 50 years so that development will now cease in 2049.
    iii. An updated description of the measures envisaged to prevent, reduce or offset any significant adverse effects on the environmental resulting from the GHG emissions of the development.
    iv. The effect of the decision of the High Court in R (Finch) v Surrey County Council [2020] EWHC 3566 (Admin), which was handed down on 21 December 2020, and considers the relevance of GHG emissions arising from the end use of a product that is produced or extracted by another development when assessing the environmental effects of that other development under the EIA Regulations.
    v. Changes and updates to emissions factors used to calculate GHG emissions in the GHG assessment.

3. The main body of the assessment for this chapter is provided in the revised GHG Assessment, which has been prepared by Ecolyse and is produced at Appendix 1. As explained in that document, Ecolyse were commissioned to review and update the previous GHG Assessment prepared by AECOM. In order to avoid a "paper chase" through various documents (per the observations of Lord Hoffmann in Berkeley v Secretary of State for the Environment [2001] 2 AC 603 at p. 617), it was decided to present all of the various updates to the GHG Assessment as one composite document prepared by Ecolyse. Accordingly, the Ecolyse Assessment should be read as a stand-alone document that updates and replaces the previous work carried out by AECOM in its entirety.

4. This Chapter contains three parts and three appendices:

- Part 1: Explanation of greenhouse gases, including definition, impacts and likely sources
- Part 2: Scope of GHG Assessment
- Part 3: GHG Assessment Findings and Conclusion

- Appendix 1: GHG Assessment by Ecolyse
- Appendix 2: Independent Expert Statement Relating to Coal and Steel Markets and the likely market effects of extracting metallurgical coal in the UK at the Proposed Development, produced by Dr Bristow from H & W Worldwide Consulting Pty Ltd, a consultancy with extensive technical expertise and knowledge of international coal mining, coal and steel making methods, markets, and predictions.
- Appendix 3: Steel and Metallurgical Coal Expert Report by Wood Mackenzie

PART 1. GREENHOUSES GASES: DEFINITION, IMPACTS AND SOURCES

5. This Part of the Chapter provides an overview of the impacts of Greenhouse Gases (GHGs) and their likely sources. The objective is to provide some brief context for the rest of the Chapter.

Definition of Greenhouse Gases

6. The impacts of anthropogenic activity on the natural environment have been documented for many decades, with environmental science emerging and developing at pace since the 1960s. As this field of science and research develops, the understanding of the impacts of human activity on different aspects of the Earth's systems has become detailed and sophisticated.

7. One of these systems, the atmosphere, has been the topic of advances in modelling and understanding since the first suggestions in the 1970s and 1980s that anthropogenic activity might be having an impact on the Earth's climate. Together, researchers from various fields including physics, chemistry and biology, investigated and described the mechanisms and complexities of the Earth's climate. Whilst there is far from complete understanding of the Earth's climate, and what drives it, the consensus view is that certain constituent gases in the atmosphere, when present in different concentrations, can impact the Earth's climate. These gases include:

- carbon dioxide (CO_2),
- methane (CH_4);
- nitrous oxide (N_2O);
- sulphur hexafluoride (SF_6);
- hydrofluorocarbons (HFCs);
- perfluorocarbons (PFCs); and
- nitrogen trifluoride (NF_3).

8. A combination of historical evidence and computer modelling show that the effect of increased concentrations of these gases in the Earth's atmosphere is an overall

planetary warming. This resulted in an interpretation of the warming effect becoming known as the “greenhouse effect”, and the contributory gases becoming known as “greenhouse gases”, or GHGs.

Impacts of Greenhouse Gases

9. The impacts of increased concentrations of GHGs in the atmosphere upon the Earth’s climate are the subject of scientific research and, as a result, governments and industry across the world are working to find ways to reduce GHG emissions in order to reduce the effects of a changing climate upon the Earth and its inhabitants.

Sources of Greenhouse Gases

10. GHG emissions arise from a range of processes and activities including power generation, industrial activity, domestic heating and lighting, and transport. Power generation throughout the world largely relies on the use of so-called fossil fuels - hydrocarbon based fuels including refined oil and gas. When used, these fuels are a significant source of greenhouse gas emissions.

11. In the absence of mitigation, the likely major sources of GHG emissions from West Cumbria Mining’s operations will be emissions linked to the consumption of electricity and fuel at the mine, as well as the release of methane from the coal.

PART 2: SCOPE OF GHG ASSESSMENT

12. The Ecolyse Assessment covers the whole life of the mine as assessed by the AECOM 2020 report and therefore covers the enabling and construction, operational and decommissioning phases of the Proposed Development.

13. The scope of emissions addressed through this assessment includes direct, indirect and secondary GHG emissions resulting from the Proposed Development, as required by Schedule 4 of the Town and Country Planning (Environmental Impact Assessment) Regulations 2011 (which are applicable in the present case). It does not include an assessment of the GHG emissions caused by the end use of the coking coal that will be extracted by the proposed development ("the End-use Emissions") because those emissions are not an environmental effect (whether direct, indirect or secondary) of the development, which is a metallurgical coal mine. This is consistent with the approach previously taken by AECOM and set out in the previous iteration of this chapter. It is also consistent with the judgment in R (Finch) v Surrey County Council [2020] EWHC 3566,1 which held that the assessment of GHG emissions from the future combustion of refined oil products said to emanate from the development of an oil well site was, as a matter of law, incapable of falling within the scope of the EIA required by the 2017 EIA Regulations.

14. Nevertheless, even if the End-use Emissions were capable of being an environmental effect of this development as a matter of law, it is not considered that there would be any requirement to assess those emissions on the particular facts of this case because they would not comprise any material additional emissions when compared to the existing baseline – i.e. when compared to the no development scenario. This is because the evidence demonstrates that demand for coking coal is led by the demand for steel. Accordingly, the coking coal produced by this development would replace, rather than be additional to, other coking coals that are already used in the coke blend. The evidence which addresses this issue is set out in the statement that has been prepared by Dr Bristow that was appended to the previous chapter and is now produced at appendix 2 to this chapter, and the additional evidence prepared by Wood Mackenzie in preparation for the inquiry following the Secretary of State's decision to call-in the application, which is produced at appendix 3.

15. The direct and indirect/secondary effects from GHG emissions of onward transportation and distribution have been assessed as follows: A proportionate approach has been taken in order to ensure that the assessment captures the direct and indirect (and secondary) effects of the GHG emissions caused by the onward transportation of coal produced by the Proposed Development. This has been achieved by taking into account GHG emissions generated from transportation from the Development Site to the point of first distribution. This includes the GHG emissions of all rail transportation of coal from the Rail Loading Facility to UK Steelworks (at Port Talbot and Scunthorpe) or the Port at Redcar. As a matter for professional judgement, rail journeys from the RLF are considered to be an indirect effect of the operation of the Development, whereas further onward distribution beyond those rail journeys are not. This acknowledges the need to transport coal away from the Development site, whilst recognising that onward distribution beyond the point of first distribution (e.g. international shipping) should

[1] It is noted that this judgment is currently subject to an outstanding appeal to the Court of Appeal.

properly be regarded as the indirect GHG emissions of another development (e.g. the port) and/or the upstream indirect effects of the development (e.g. the steelworks) where the actual consumption of the product for energy as part of the production of steel takes place.

16. GHG emissions which take place outside of the UK in this case are unlikely to be capable of being indirect effects of the development in question (for EIA purposes) in this case. However, it should be noted that, as with the use of coal, subsequent transportation of that coal beyond the first point of distribution may still be capable of being a material consideration. Whilst not an "indirect effect" or "secondary effect" of the purposes of EIA, this subsequent distribution may nonetheless be capable of being a material planning consideration.

17. Without prejudice to the above approach, and in any event, Wood Mackenzie has sought to quantify the comparable GHG emissions that would be likely to arise from the transportation of coking coal from other sources which the proposed development would replace. This analysis shows that, even if there was a requirement to take shipping emissions into account, the Proposed Development would not be likely to cause any additional GHG emissions. Accordingly, the adoption of this approach to GHG emissions generated by the onward transportation of coal beyond the point of first distribution, which excludes the emissions of international shipping, is likely to represent a worst-case scenario for EIA purposes since it does not take into account the significant reduction in GHG emissions from shipping that is considered likely to arise as a result of the Development. Therefore, it incorporates a precautionary and robust approach to GHG emissions for the purposes of EIA caused by onward transportation.

PART 3: GHG ASSESSMENT FINDINGS AND CONCLUSION

18. The GHG Assessment finds that the likely unmitigated GHG emissions of the proposed development will be 8,199,705 CO2e. This likely increase in GHG emissions is considered to be significant. Accordingly, section 5 of the GHG Assessment identifies mitigation that has been proposed to avoid and reduce these GHG emissions. This proposed mitigation will reduce likely GHG emissions down to 1,850,767 CO2e. However, since these residual emissions are still considered to be significant, a planning obligation will also be entered into that will ensure that any residual GHG emissions are compensated for through the purchase of Gold Standard offsets or similar.

19. The proposed mitigation will therefore ensure that the proposed development will not result in any net additional GHG emissions and will be net zero compliant. As a result, once all proposed mitigation has been taken into account (including offsets), the GHG Assessment finds that the likely GHG effects of the proposed development are neutral and not significant.

20. All GHG emissions are capable of contributing to cumulative effects since the receptor for GHG emissions is the global climate. However, since the Proposed Development will not result in any net additional GHG emissions, it will not contribute towards these cumulative effects.

Appendix 1: GHG Assessment

Appendix 2: Independent Expert Statement Relating to Coal and Steel Markets

Appendix 3: Steel and Metallurgical Coal Expert Report by Wood Mackenzie