

Draft Carbon Neutrality Management Plan

Curraghinalt Project

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Contents

1.	Introduction	1
2.	Carbon Neutrality Commitment	2
3.	Carbon Neutral Management Plan	3
4.	Summary	10

1. Introduction

- 1.1 Following confirmation that PAS 2060 was withdrawn on 1st November 2025 and Dalradian's commitment to instead use the ISO14068 carbon neutrality standard, this draft Carbon Neutral Management Plan (CNMP) draws on the provisions of Section 9 of ISO14068 to set out the proposed contents and coverage of the CNMP which will form a key component of this compliance.

Updated Regulatory and Policy Context

- 1.2 In December 2024, the *Climate Change (Carbon Budgets 2023-2037) Regulations (Northern Ireland) 2024*¹ set GHG emission reduction targets for the 1st (2023-2027), 2nd (2028-2032) and 3rd (2033-2037) carbon budget periods of 33%, 48% and 62%. From 28th July 2025 to 17th November 2025, the *Consultation on the setting of Northern Ireland's Fourth Carbon Budget (2038-2042)*² proposes a reduction target of 77%.
- 1.3 In September 2025, DAERA published for consultation Northern Ireland's *draft Climate Action Plan 2023-2027*³, which sets out 52 policies and proposals designed to reduce GHG emissions across nine sectors of the economy in line with the 33% reduction required by the CCANI for this period.
- 1.4 On 29th October 2025, the UK Government published the *Carbon Budget & Growth Delivery Plan (2025)*⁴. Paragraph 10 recognises the importance of the net zero transition to reduce the carbon footprint of industrial supply chains.
- 1.5 Significantly, ISO14068 (page viii), recognises that the achievement of carbon neutrality by organisations through compliance with this standard entails actions that reduce GHG emissions and enhance GHG removals will support countries to fulfil their nationally determined contributions (NDCs) and meet the goals of the Paris Agreement.

¹ <https://www.legislation.gov.uk/nisr/2024/215/regulation/2/made>

² <https://www.northernireland.gov.uk/sites/default/files/2025-10/Consultation%20on%20the%20setting%20on%20NI%20s%20Fourth%20Carbon%20Budget%202038%20-2042.PDF>

³ <https://www.daera-ni.gov.uk/articles/northern-irelands-draft-climate-action-plan-2023-2027>

⁴ <https://www.gov.uk/government/publications/carbon-budget-and-growth-delivery-plan-2025>

2. Carbon Neutrality Commitment

- 2.1 Dalradian is committed to delivering the Curraghinalt Project as a carbon neutral project over its lifecycle through compliance with ISO14068-1 (2023) Climate change management - Transition to net zero - Part 1: Carbon neutrality⁵.
- 2.2 This commitment represents a natural extension to the corporate carbon neutral certification held by Dalradian for its operations in Northern Ireland since 2019. The CNMP will form a key component of this approach.
- 2.3 Its implementation of which will be the responsibility of the Senior Management Team led by its Managing Director, with the necessary financial and human resources made available by Dalradian. Table 1 outlines the roles and responsibilities that are proposed to deliver the CNMP.

Table 1. ISO14068 CNMP Roles and Responsibilities

Role	Responsibility
Managing Director	• Ensure accountability at senior management level • Encourage decarbonisation within the company • Effectively communicate all immediate, short-term, and long-term targets of Dalradian • Allocate appropriate resources
Sustainability Team	• Review decarbonisation strategies • Identify decarbonisation opportunities • Ensure progress is suitably tracked and reported • Coordinate between departments and initiatives • Engage stakeholders on climate-related issues
Mine Management Team	• Consider the technical feasibility of decarbonisation options when developing the mine design • Implement technological advancements accelerate decarbonisation • Devise safeguards to avoid adverse impacts where applicable • Support relevant staff training at all levels • Monitor Dalradian's carbon intensity metrics and identify inefficiencies or areas for improvement
Procurement Team	• Source suppliers with reputable sustainability credentials • Implement Dalradian's low carbon Procurement Strategy • Appraise energy / fuel contracts with appropriate consideration given to decarbonisation targets • Communicate sustainability preferences to reduce Scope 3 emissions (e.g. the use of low-carbon construction materials, electric vehicle fleets for deliveries etc.) • Encourage circular economy practices
Finance Team	• Ensure compliance with regulatory reporting requirements and external disclosures • Accurately track GHG emissions and prepare timely reports • Identify and manage climate-related financial risks • Use analytics to streamline data collection and use carbon statistics to monitor performance and inform decision-making.

⁵ <https://www.iso.org/standard/43279.html>

3. Draft Carbon Neutral Management Plan

- 3.1 This draft CNMP draws from the project's updated greenhouse gas (GHG) assessment, sets out the committed mitigation measures to reduce GHG emissions, and the approaches that are envisaged to further reduce and remove GHGs (i.e. potential further mitigation) such that only residual GHG emissions occur by 2050 at the latest. The type of carbon offset projects that will be used to achieve and maintain carbon neutrality following GHG reductions and removals are also presented, although further projects may be identified over the lifecycle of the mine. [see **Table 3, 4 & 5**]
- 3.2 The final CNMP will be agreed with the Department for Infrastructure and shall contain as a minimum the measures outlined in the draft.
- 3.3 Immediate actions (i.e. from the commencement of construction onwards) will be taken by Dalradian to contribute to the achievement of global net zero GHG emissions, with short-term and long-term targets also set.

Subject and Boundary

- 3.4 The CNMP will encompass all direct and indirect GHG emissions from the proposed development across its construction, operation and closure stages which are anticipated to comprise:
- Scope 1 (direct) emissions from peat, site fuel combustion and explosives use;
 - Scope 2 (indirect energy) emissions from the generation of purchased electricity; and
 - Scope 3 (other indirect) supply chain emissions including upstream energy (site fuel 'well to tank' and electricity transmission and distribution emissions), manufacturing (including surface infrastructure, explosives, cement, steelwork, oil & lubricants, ventilation equipment, reagents), water supply, waste management, worker transport, inbound materials transport, outbound product transport, product refining, and powerline construction.
- 3.5 Forecast Lifecycle Scope 1, 2 and 3 GHG emissions are presented in **Table 2**.

Timescales

- 3.6 The CNMP will be implemented from the commencement of construction (2027 assumed), and be maintained until completion of the closure phase (2054 assumed), and with 2050 the target date by which only residual GHG emissions will remain.

Methodology for the GHG assessment

- 3.7 The GHG assessment will be undertaken in accordance with relevant standards and guidance such as ISO14064-1 Greenhouse gases Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals, Greenhouse Gas Protocol⁶, and relevant UK Government GHG Conversion Factors for Company Reporting⁷. GHG reductions achieved by on-site peat management will be quantified in accordance with Peatland Code⁸ methodology, whilst GHG removals achieved by potential tree planting on land owned or controlled by Dalradian will be quantified in accordance with Woodland Carbon Code⁹ methodology.

⁶ <https://ghgprotocol.org/>

⁷ <https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting>

⁸ <https://www.iucn-uk-peatlandprogramme.org/peatland-code>

⁹ <https://www.woodlandcarboncode.org.uk/view-the-code>

3.8 GHG emissions will be addressed in accordance with the hierarchy approach set out at Section 5.2 of ISO14068 which requires that measures to achieve carbon neutrality are implemented through the following hierarchy of actions, in order of preference:

1. GHG emissions reductions;
2. GHG removals; and
3. Offsetting residual emissions.

Emissions Reduction Targets

3.9 GHG reduction targets will be set in both absolute emissions and intensity metric terms (e.g. tonnes of CO₂ equivalent per kg final product, tCO₂e/kg) for the following timescales:

- **Immediate:** measures to which Dalradian has committed to substantially reduce Scope 1 and 2 GHG emissions and a good proportion of Scope 3 emissions (i.e., biodiesel HVO site fuel, low carbon cement, and the procurement of 100% renewable electricity) and which will be implemented from the outset of construction; [Table 3]
- **Short-term:** interim targets to further reduce GHG emissions by 10 years (i.e. peat management and restoration); [Table 3]
- **Long-term:** targets to further reduce and remove GHG emissions such that only residual emissions remain by 2050 at the latest (i.e. 23 years). [Table 3]

Carbon Footprint

3.10 Consistent with Dalradian's on-going review of where improvement can be delivered, updated GHG assessment results are presented in Table 2, with total emissions of 305,214 tCO₂e forecast across the project lifecycle (2027 to 2054 inclusive) in the Scope 2 market-based approach. Of these emissions, 32,261 tCO₂e (i.e. 11% of the total) are forecast to occur within Northern Ireland and hence be relevant to the CCANI and Northern Ireland carbon budgets.

Table 2. Summary of Updated GHG Assessment and Emissions Forecast in Northern Ireland

Scope	Emissions Source	Emissions (tCO ₂ e)	
		Total	In NI
1	• Peat	3,675	3,675
	• Biodiesel HVO	1,987	1,987
	• Explosives use	8,058	8,058
	Scope 1 Total	13,720	13,720
2	• Electricity generation (Scope 2 market-based)	--	--
	Scope 2 Total (Market-Based)	0	0
3	• Biodiesel HVO well to tank	31,515	0
	• Electricity transmission & distribution losses	524	524
	• Manufacturing (surface infrastructure, explosives, cement, steel, oil & lubricants, ventilation equipment, reagents)	195,739	6,251
	• Water supply	60	60
	• Mine waste management	821	821
	• Other waste management	694	694
	• Transport: car	3,421	3,421
	• Inbound transport (surface infrastructure except buildings, explosives, cement, steel, oil & lubricants, ventilation equipment, reagents)	4,307	2,201
	• Product outbound transport	52,065	3,737

Scope	Emissions Source	Emissions (tCO ₂ e)	
		Total	In NI
	• Product refining	358	--
	• Powerline construction	1,991	832
	Scope 3 Total	291,494	18,540
TOTAL (SCOPE 2 MARKET-BASED)		305,214	32,261

GHG Reductions

3.11 Dalradian has committed to GHG reduction measures which substantially reduce forecast GHG emissions, as set out in Table 3.

Table 3. Committed and Potential GHG Reduction Measures

Measure ID	Description	Implementation Timescale	Quantified? (tCO ₂ e)
CRED1	Committed reduction: use biodiesel hydro-treated vegetable oil (HVO) for site fuel in place of standard diesel	Immediate to long-term	144,167
CRED2	Committed reduction: procure 100% renewable electricity	Immediate to long-term	19,815
CRED3	Committed reduction: use a low carbon cement specification (CEM III/B at 70% GGBS)	Immediate to long-term	91,841
CRED4	Committed reduction: restore peat on site to reduce existing carbon losses	Immediate to long-term	Yes (within peat net emissions)
CRED5	Committed reduction: consider GHG emissions as part of Dalradian's procurement strategy	Immediate to long-term	No
CRRED6	Committed reduction: manage travel to / from site sustainable via the Travel Plan	Immediate to long-term	No
PRED1	Potential reduction: install renewable energy generation technologies on site (e.g. solar PV)	Immediate to short-term	No
PRED2	Potential reduction: use local supplies and suppliers where feasible to reduce transport emissions	Immediate to long-term	No
PRED3	Potential reduction: incentivise EV use by employees e.g. EV car charging points provision and incentives to purchase / lease EVs	Immediate to long-term	No
PRED4	Potential reduction: evaluate opportunities to enhance process efficiency	Immediate to long-term	No
PRED5	Potential reduction: identify appropriate specifications and suppliers for reduced carbon steel	Immediate to short-term	No
PRED6	Potential reduction: continue to evaluate the feasibility of electric mining trucks	Immediate to long-term	No
PRED7	Potential reduction: continue to evaluate the availability and performance of low carbon explosives	Immediate to long-term	No
TOTAL		Immediate to Long-term	255,823

3.12 These committed mitigation measures are forecast to reduce lifecycle GHG emissions by 255,823 tCO₂e, equating to a circa 91%, 100% and 25% reduction in Scope 1, 2 and 3 emissions, respectively, and a 46% reduction in total emissions.

3.13 These GHG reduction measures directly support various policies and projects of Northern Ireland's draft Climate Action Plan, including:

- *Industrial Non-Road Mobile Machinery Decarbonisation* through the commitment to use biodiesel HVO for site fuel and continue to evaluate the feasibility of introducing electric mining trucks;
- *Northern Ireland Renewables Obligation (NIRO) Support Scheme* through the commitment to procure 100% renewable electricity; and
- *Northern Ireland Peatland Strategy* through the commitment to restore degraded peatland.

3.14 Further analysis of peat areas and condition in and around the proposed mine confirm the majority is in a 'degraded' state and is currently emitting carbon rather than sequestering carbon as healthy peat. It has been advised that there is therefore a strong potential to deploy measures to improve the condition of this peat such that these existing carbon emissions are reduced.

GHG Removals

3.15 In addition to GHG reductions, there are potential GHG removal measures presented in Table 4.

Table 4. Potential GHG Removal Measures

Measure ID	Description	Implementation Timescale	Quantified? (tCO ₂ e)
PREM1	<u>Potential removal</u> : tree planting (outside areas of peat)	Immediate to long-term	26,648
PREM2	<u>Potential removal</u> : tree planting elsewhere within Northern Ireland	Immediate to long-term	No
PREM3	<u>Potential removal</u> : contracting future GHG removals to promote early financing for removal projects e.g. Woodland Carbon Code	Immediate to long-term	No

3.16 Assuming a typical broadleaf woodland is created in 2027 across circa 160 hectares outside areas of peat, the Woodland Carbon Code Version 3.0 Carbon Calculator¹⁰ forecasts total GHG removals over the lifecycle of the mine of 26,648 tCO₂e. This GHG removal approach directly supports further Northern Ireland Climate Action Plan policies and projects specifically Forests for Our Future by supporting tree planting within Northern Ireland.

3.17 Priority will be given to GHG removals within Northern Ireland, and the CNMP will where possible support relevant policies and proposals set out in any published CAP or sectoral plan published by government departments.

Carbon Credits

3.18 Once technically and economically feasible GHG reductions and removals have been implemented, Dalradian will address remaining GHG emissions by purchasing and retiring high-quality nature-based carbon removal credits, as set out in Table 5.

3.19 The priority is to support Northern Ireland based projects where possible, however the use of projects elsewhere in the UK may be considered should carbon credit availability remain limited in Northern Ireland. International nature-based carbon removal offsets (i.e. those from outside the UK) will only be used in the event that insufficient UK-based offsets are available.

3.20 In accordance with ISO14068, only carbon credits where the end of the vintage is no more than five years prior to the start of the period for which carbon neutrality is claimed will be used, and

¹⁰ <https://www.woodlandcarboncode.org.uk/template-documents-and-tools#para-950-2-7-accordion-952-7>

with carbon credits retired no later than 12 months after the end of that reporting period. Dalradian may also contract future GHG removals to promote early financing for Northern Ireland Woodland Carbon Code and/or Peatland Code projects.

Table 5. Summary of Committed and Potential Carbon Credits Approach

Measure ID	Description	Implementation Timescale	Quantified? (tCO ₂ e)
CC1	<u>Committed credits</u> : purchasing carbon credits from Northern Ireland Woodland Carbon Code projects, where available	Immediate to long-term	No
CC2	<u>Committed credits</u> : purchasing carbon credits from Northern Ireland Peatland Code projects, where available	Immediate to long-term	No
PC1	<u>Potential credits</u> contracting future GHG removals to promote early financing for removal projects e.g. Woodland Carbon Code in line with ISO14068	Immediate to long-term	No
PC2	<u>Potential credits</u> : purchasing Woodland Carbon Code and Peatland Code carbon credits from elsewhere in the UK should insufficient carbon credits be available from Northern Ireland based projects	Immediate to long-term	No

Safeguards

3.21 Dalradian is committed to ensuring the CNMP and its associated activities avoid adverse impacts on the environment and society. We will also commit to a range of tasks which include:

- Using only recognised frameworks such as ISO14068, Woodland Carbon Code and Peatland Code for carbon credits; and
- Procure only high-quality nature-based carbon removal credits from recognised frameworks which meet the carbon offset quality criteria, thereby avoiding adverse impacts on the environment and society. These criteria (Section 11.2 of ISO14068) are: real, additional, measurable, permanent and certified.

Indicators

3.22 Dalradian will develop a series of indicators to monitor the effectiveness of this CNMP which could include:

- Absolute GHG Emissions
- GHG emissions metrics e.g.
 - GHG emissions by revenue (£M)
 - GHG emissions per OPEX (£M)
 - GHG emissions per Gross Value Added (GVA)
 - GHG emissions per Ore Mined (ktonnes)
 - GHG emissions per Au in Concentrate (koz)

3.23 The results of the monitoring will be used to inform the measures included in subsequent iterations of the CNMP to ensure compliance with ISO14068 requirements

Documentation & Reporting

3.24 The CNMP will document how the plan takes account of:

- a science-based approach;
- climate change mitigation potential for the project from a technical, economic and social perspective;
- international and national policy commitments, and
- sectoral context.

3.25 Dalradian will make a Carbon Neutrality Report publicly available for each reporting period which will include:

- description of the subject and its boundary;
- elements of the carbon neutrality management plan, including targets, reduction strategy and the target year by which only residual GHG emissions remain;
- the period to which the report corresponds;
- whether there are still unabated GHG emissions in excess of residual GHG emissions;
- a description of the carbon neutrality pathway for the subject and where the reporting period stands within this pathway;
- the selected baseline, related base period and the carbon footprint for that baseline including an explanation of any change in the baseline;
- the carbon footprint of the subject and its components;
- where there are significant aviation or shipping activities, whether or not non-GHG climate impacts (such as those arising from water vapour, contrails, soot and black carbon) have been included in the carbon footprint and, if so, the GWP multiplier(s) used;
- GHG removals within the boundary of the subject;
- if there has been a significant GHG removal reversed, the GHG emissions created by the reversal;
- justification of any exclusions from the quantification of the carbon footprint;
- a reference to carbon footprint quantification methodology, including the justification for its selection, and justification of any change to the quantification methodology used in previous reporting periods;
- the reference source or documented information of the GHG emission and removal factors used;
- the impact of uncertainties on the accuracy of the quantified GHG emissions and removals;
- a description of the GHG emission reductions and GHG removal enhancements over the reporting period, how they were achieved, and their alignment with the carbon neutrality management plan and, where applicable, national and international climate policy objectives;
- the carbon crediting programmes and GHG projects, and type of GHG project and associated methodologies used to generate the carbon credits used for offsetting;
- the number of carbon credits used by registry and type, including their unique serial numbers;

- disclosure of whether or not corresponding adjustments have been applied to the carbon credits that have been purchased;
- confirmation that the carbon credits used originate from carbon crediting programmes that are consistent with the criteria in 11.2 and 11.3;
- the time period over which the carbon credits have been generated and their date of retirement;
- the verification opinion;
- explanation about how carbon neutrality will be achieved and maintained in the future.

Carbon Neutrality Claim

- 3.26 A carbon neutrality claim will be made only when all ISO14068 requirements are met, and will be verified in accordance with ISO 14064-3 Greenhouse Gases: Part 3 Specification with guidance for the verification and validation of greenhouse gas statements or equivalent verification standard.
- 3.27 Dalradian will publish background information forming an executive summary of the Carbon Neutrality Report for each reporting period and will ensure this information:
- is consistent with the information in the Carbon Neutrality Report;
 - is publicly accessible with a link to the Carbon Neutrality Report;
 - accurately summarises the scope and boundary of the subject;
 - states the carbon neutrality reporting period;
 - includes the carbon neutrality pathway;
 - states the amount of GHG emissions, GHG removals, GHG emission reductions and GHG removal enhancements;
 - states the carbon footprint that has been offset in CO₂e;
 - indicates the type of carbon credits purchased and retired to achieve carbon neutrality;
 - states whether the carbon neutrality claim includes unabated GHG emissions or only residual GHG emissions;
 - states that double claiming has been avoided; and
 - states when and by whom the carbon neutrality claim has been verified.

4. Summary

- 4.1 The CNMP will play a key role in achieving and maintaining carbon neutrality for the project in accordance with ISO14068 and assist with the verification of delivery of this commitment.
- 4.2 GHG emissions are reduced by circa 91% (Scope 1), 100% (Scope 2 market-based), 25% (Scope 3) and 46% (all Scopes) through committed mitigation measures.
- 4.3 Further reduction opportunities for Scope 1 and Scope 3 emissions will be evaluated on an ongoing basis. GHG removal projects will be developed and/or funded, including tree planting outside areas of peat and also peat restoration to further mitigate project emissions whilst supporting wider sustainability objectives such as biodiversity, flood risk management, and access to nature.
- 4.4 Finally, remaining GHG emissions will be addressed through the procurement of carbon credits from high quality nature-based carbon removal projects such as those under the Woodland Carbon Code and Peatland Code. Priority will be given to Northern Ireland projects where available, followed by projects elsewhere in the UK. International offsets will only be used should there be a shortfall in credits available from projects in Northern Ireland and UK.
- 4.5 Combined with the project's demonstrably insignificant contribution to Northern Ireland and UK carbon budgets, ISO14068 compliance including the CNMP will ensure the project directly supports Northern Ireland and UK net zero ambitions.