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LONGFORDPASS, LITTLETON, LANESPARK AND DERRYVELLA BOGS - APPLICATION FOR SUBSTITUTE CONSENT

Remedial Environmental Impact Assessment Report

Chapter 16 – Schedule of Mitigation and Monitoring Measures

Prepared for:

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BnM

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16.1 Introduction

All control measures that have been implemented at the Application Site from 1941 at the onset of site preparation up to July 1988, control and monitoring measures implemented from July 1988 to the cessation of peat extraction in 2017, control and mitigation measures implemented during the management of the Application Site since 2017 and the mitigation measures proposed for the activities intended to be carried out at the Application Site into the future are set out in the relevant chapters of this rEIAR.

All control and mitigation measures for the Project are presented in Table 16-1 below. The measures have been grouped together according to the relevant phase of the Project. The Project formed part of an overall development at the Application Site which commenced many years prior to July 1988.

For completeness, measures undertaken from 1941 at the onset of site preparation works up to July 1988 are also presented below in Table 16-1, below.

As such the measures are grouped under the following headings:

- **'Peat Extraction Phase':** peat extraction and ancillary activities at the Application Site from July 1988 to the cessation of peat extraction in 2017 (July 1988 – 2017). The Peat Extraction Phase is described in detail in Sections 4.4 to Section 4.7 of Chapter 4 - Description of the Development, Volume 2, of this rEIAR.
- **'Current Phase':** the management of the Application Site since 2017 to present day including decommissioning works and Rehabilitation Phase 1 works. The Current Phase is described in detail in Section 4.7 and Section 4.8 of Chapter 4 - Description of the Development, Volume 2, of this rEIAR.
- **'Remedial Phase'**: the activities intended to be carried out at the Application Site into the future (Rehabilitation Phase 2 works). The Rehabilitation Phase is described in detail in Section 4.9 of Chapter 4 - Description of the Development, Volume 2, of this rEIAR.

16.2 Schedule of Measures

Table 16 -1, below, sets out the relevant Schedule of Mitigation and Monitoring Measures for each phase of the development as set out in the preceding chapters of this rEIAR.

Table 16-1: Schedule of Mitigation and Monitoring Measures

Measure	Location in rEIAR	Receptor	Control Measure	Impact
Pre July 1988				
Control Measures Pre 1988 as per Chapter 4 and Chapter 7, Volume 2, of the rEIAR				
Emissions Control (dust, noise, water, silt run-off); Health and Safety	Chapter 7, Volume 2	Surface and ground water; Sensitive receptors; Habitats; Aquatic species	***Machinery Storage and Maintenance (Pre-IPC Licence)*** All peat harvesting machinery was stored at the Littleton Works or at local storage areas at the end of each workday. Machinery was regularly inspected and serviced by dedicated Bord na Móna staff. Machinery was regularly cleaned using a power steam wash system at a wash bay, with wash water drained into an interceptor tank and associated gravel soak pit. The interceptor removed floatable oil/grease components. A self-contained machine parts washer was located at the Workshop.	Containment of dust, surface and groundwater emissions; Minimisation of fuel leak/groundwater contamination.
Emissions Control (dust, noise, water, silt run-off); Fire Prevention; Health and Safety; Terrestrial Habitat protection; Aquatic habitat protection	Chapter 7, Volume 2	Surface and ground water; Sensitive receptors; Habitats; Aquatic species; Bord na Móna Employees	***Refuelling and Spill Management (Pre-IPC Licence)*** All refuelling and vehicle maintenance was undertaken at the Littleton Works depot or at local holding areas in Longfordpass, Littleton, and Lanespark Bogs. On-site refuelling, if required, was carried out using a mobile fuelling unit.	Containment of dust, surface and groundwater emissions; Minimisation of fuel leak/groundwater contamination.

Measure	Location in rEIAR	Receptor	Control Measure	Impact
			In the event of a spill: the General Manager was immediately informed; the spill was assessed for potential risks to employee health and environmental impact; the source of the spill was isolated and contained using polystyrene booms or dry peat (10% moisture content); measures were taken to prevent the spill from entering storm drains or outfalls; once contained, the spill was absorbed using dry peat; all ignition sources and combustible materials in the spill area were removed; appropriate remedial work was implemented to prevent recurrence; and significant spillages were reported to the local authority.	
Emissions Control (dust, noise, water, silt run off); Fire Prevention; Health and Safety; Terrestrial Habitat protection; Aquatic habitat protection	Section 4.5.3 Chapter 4	Surface and ground water; Sensitive receptors; Habitats; Aquatic species; Bord na Móna Employees	*Fire Safety* 1. Annual training provided for bog fires crew and factory personnel and all general staff was provided with a minimum of 2 hours training in fire prevention; 2. All fire exits were designated. These doors were required to be fitted with push-bar mechanisms only and lighted from independent sources. They were required to be unobstructed inside and outside at all times and open outwards; 3. Each canteen/office were required to be equipped with a fire blanket and fire extinguisher; 4. There were required to be at least 1 fire point at all office premises; 5. Petrol and other oils were required to be stored in designated oil stores;	Prevention/minimisation of environmental and human health impacts by dust and pollutant release to air; Prevention/minimisation of environmental impacts dust and pollutant release to surface waters; Prevention/minimisation of impacts to human health by personal injury

Measure	Location in rEIAR	Receptor	Control Measure	Impact
			6. Batteries were not charged in working areas unless suitable protection was provided; 7. Training was provided for Oxygen cylinder storage and use; 8. Fire Wagons: wagons were provided for fire prevention which contain: hoses, shovels, fire beaters, baskets, buckets, breathing apparatus, first aid kit, drums of foam and foam making machine, Floatation Pumps also extinguishers etc.; 9. Stockpiles were covered with polythene film gauge sheets and secured in position by spreading an even layer of high moisture content milled peat. This prevented spontaneous combustion of certain peat types by excluding air as much as possible; and, 10. Fire Safety Audits undertaken at six monthly intervals along with random audits. Yearly assessments were undertaken of all audits completed.	

Measure	Location in rEIAR	Receptor	Control Measure	Impact
Emissions Control (dust, noise, water, silt run off); Health and Safety; Terrestrial Habitat protection; Aquatic habitat protection	Section 4.3.5.4 Chapter 4	Surface and ground water; Sensitive receptors; Habitats; Aquatic species	*Dust Management at Bog Boundaries and Headlands* Dust emissions were higher from the milled peat extraction process than the sod peat extraction process. Tree cover along the fringes of bogs minimised the amount of dust that would travel off-site. In 1976 Bord na Móna established a policy to preserve the vegetation and tree cover on all bog fringes and on any mineral islands[1]. In addition, the following measures were undertaken at a minimum to minimise dust emissions and later expanded under IPC licence. 1. Stockpiles were compacted on either side by large rollers drawn by tractors; 2. Stockpiles were covered with polythene film gauge sheets and secured in position by spreading an even layer of high moisture content milled peat; 3. Peat extraction during windy weather was to be avoided; 4. The headlands were to be kept clean and loose peat removed;; 5. Drivers were required to drive slow along dusty headlands; and, 6. All road crossing points were to be maintained clean.	Prevention/minimisation of environmental and human health impacts by dust and pollutant release to air; Prevention/minimisation of environmental impacts dust and pollutant release to surface waters.

[1] 4 Brown Gold 'A History of Bord na Móna and the Irish Peat Industry', 2010 Clarke, Donal, Chapter 10 Pg 206

Measure	Location in rEIAR	Receptor	Control Measure	Impact
Emissions Control (dust, noise, water, silt run off); Fire Prevention; Health and Safety; Terrestrial & Aquatic Habitat protection;	Section 4.3.5.5 Chapter 4	Surface and ground water; Bord na Móna Employees; Sensitive receptors	*Internal Rail Network Maintenance* Railway tracks and railway locomotives underwent continuous inspection and maintenance to prevent de-railments, fires, accidents and fuel leaks. The locomotives were fitted with beam lighting and electric windscreen wipers for both directions of travel.	Containment of dust, and surface and groundwater emissions; Minimisation of fuel leak/groundwater contamination; Prevention/minimisation of environmental and human health impacts by fire, dust and pollutant release to air.

Measure	Location in rEIAR	Receptor	Control Measure	Impact
Emissions Control (dust, noise, water, silt run off); Health and Safety; Terrestrial & Aquatic Habitat protection;	Section 4.3.5.6 Chapter 4	Surface water; Habitats; Aquatic species; Sensitive receptors	*Surface Water Management* Surface water run-off from Littleton Works and hard standing areas drained via onsite surface water drainage systems, which were installed as part of the construction of buildings and hardstand areas over the decades, into the adjacent peatland surface water drainage network. All machinery was regularly inspected and serviced. All machinery was cleaned at the end of the season via a compressed air wash system at a wash bay located at Littleton Works. There are two interceptor units which facilitated the removal of any oil/grease components at the Works. This was done to minimise dust and particle release. Formal silt control measures adopted in 1974 are outlined in Section 4.7 below.	Containment of dust, surface and groundwater emissions; Minimisation of fuel leak/groundwater contamination.

Measure	Location in rEIAR	Receptor	Control Measure	Impact
Emissions Control (dust, noise, water, silt run off); Health and Safety; Terrestrial & Aquatic Habitat protection;	Section 4.3.5.6 Chapter 4	Surface water; Habitats; Aquatic species	*Maintenance Programme for Internal Drains* The internal drains were cleaned on a regular basis in suitable weather, mainly prior to and post the peat extraction season (i.e. between October and March). This was necessary to remove sludge from the bottom of drains and dispose of it by spreading it on the adjacent field. Drain maintenance was carried out using ditchers. These works were programmed to ensure that the drains servicing the peat extraction areas were fit for purpose. Drain maintenance was carried out mainly prior to and post the peat extraction season (i.e. between October and March).	Containment/minimisation silt run off.

Measure	Location in rEIAR	Receptor	Control Measure	Impact
Emissions Control (dust, noise, water, silt run off); Health and Safety	Section 4.3.5.8 Chapter 4	Surface water; Habitats; Aquatic species	*Maintenance of Onsite Surface Water Pumps* The following procedure was followed with respect to ensuring that the onsite pumps were maintained in good working order: 1. Visual inspection of pumps daily; 2. Operational check of pumps biweekly; and, 3. Service of pumps monthly.	Containment/minimisation silt run off.

Measure	Location in rEIAR	Receptor	Control Measure	Impact
Emissions Control (dust, noise, water, silt run off); Health and Safety; Terrestrial Habitat protection; Aquatic habitat protection	Section 4.3.5.9 Chapter 4	Surface water; Habitats; Aquatic species	*Silt Management* As part of the Third Development Programme in the 1970s (which is discussed in further detail in Chapter 2), Bord na Móna decided in 1974 to control all effluent by means of specially designed and constructed silt ponds, thereby trapping more than 90% of the suspended solids present in the drainage water. A silt committee was set up in October 1975 to study the feasibility of removing silt from the bog effluents. Recommendations of an interim report prepared by the committee in 1975/1976 were as follows: 1. Provision of silt ponds should be a basic feature of new bog development for milled peat and their construction should be planned for all outlet systems; 2. Ideally, silt ponds should be located in cutaway bog; 3. Sufficient area should be acquired at the initial stage to provide for silt ponds; 4. In production bogs, existing large catchments should be broken up into manageable proportions and ponds constructed to accord with local topography; 5. Revision of drainage techniques should be considered such as arranging flatter gradients in external and internal outfalls and extending their width and length in the lower reaches to encourage settlement of silt;	Containment/minimisation silt run off.

Measure	Location in rEIAR	Receptor	Control Measure	Impact
			6. Initial drainage effluent should be allowed to spill over face banks (where practicable) until adequate silt ponds have been provided. This should be applied to all new bog development immediately. Similarly, growth and vegetation should not be removed from external outfalls until interference with drainage and/or complaints force us [Bord na Móna] to act; 7. It is recommended that catchments to be protected by silt ponds should not be greater than 500 acres; 8. Ponds should be designed for maximum run-off of 1 cubic foot per minute per acre and run-off controlled by provision of small diameter culverts, weirs or sluices; 9. For milled peat, 50 square foot of pond per acre of catchment. For 500 acres, 45-foot wide x 555-foot long x 7-foot deep, i.e., 6-foot maximum of silt and 1 foot minimum of water; 10. Ponds should be provided in pairs each sufficient for the catchment protected; 11. Ponds should be cleaned out at regular intervals as required but at least four times a year using dragline or Hymac retained permanently for this purpose. Investigations to be made into the suitability of pumping units; and, 12. Second parallel pond should be used during excessively large water flow (storm water).	

Measure	Location in rEIAR	Receptor	Control Measure	Impact
Emissions Control (dust, noise, water, silt run-off); Health and Safety; Terrestrial Habitat protection; Aquatic habitat protection	Chapter 7, Volume 2;	Surface and ground water; Sensitive receptors; Habitats; Aquatic species; Bord na Móna Employees	***Waste Management (Pre-IPC Licence)*** Waste oil and brake fluids drained from machinery were collected in drums and transported off-site by licensed disposal contractors. Used oil and fuel filters, as well as used batteries, were collected by licensed disposal and battery collection contractors, respectively. Wash water from the self-contained machine parts washer was collected in a sludge tank at the Littleton Works.	Containment of dust, surface and groundwater emissions; Minimisation of fuel leak/groundwater contamination.

Measure	Location in rEIAR	Receptor	Control Measure	Impact
Archaeological Preservation	Section 4.3.5.11 Chapter 4	Unrecorded subsurface Archaeology	*Archaeological Disturbance* As part of peat extraction training, all employees hired to work on the bogs were required to read and adhere to the recommendations set out in the Department of Education publication entitled, Ancient Objects in Irish Bogs and Farmlands: A Guide for Finders (1942). Workers were required to stop all works and report to the Bog Manager if archaeological finds were encountered. If materials thought to be of archaeological interest were encountered, the Bog Manager was required to report the findings to the Garda Síochána within seven days. The Gardai would then contact the Commissioner of Public Works. A record of archaeological finds and observations within the Application Site can be found in Chapter 12: Cultural Heritage of this rEIAR.	Minimisation/prevention of subsurface archaeological destruction, loss or interference through drainage and extraction operations and/or failure to recognise/report finds.

Measure	Location in rEIAR	Receptor	Control Measure	Impact
Peat Extraction Phase July 1988 – 2017 (Pre-IPC Licence Control Measures 2001)				
Control Measures Post July 1988 as per Chapters 7, 8, 9, 10, 12, 13 and 14, Volume 2 of the rEIAR				
Emissions Control (dust, noise, water, silt run-off); Health and Safety; Terrestrial Habitat protection; Aquatic habitat protection	Chapter 7 to 9 Volume 2; IPC Licence Reg. No. P0499-01; Appendix 4-1, Volume 3.	Surface and ground water; Sensitive receptors; Habitats; Aquatic species; Bord na Móna Employees	***Pre-IPC Licence Control Measures (Pre-2001)*** Prior to the regulation of activities at the Application Site by the EPA, the Applicant was implementing several control measures, including: all peat harvesting machinery stored at Littleton Works or local storage areas at end of each workday; regular inspection, servicing and cleaning of all machinery at a wash bay draining to an interceptor tank; refuelling and maintenance at Littleton Works or by mobile fuelling unit; emergency spill procedures (isolate, contain, absorb, remediate, report); all waste oil and brake fluids collected for licensed off-site disposal; used oil and fuel filters and batteries collected by licensed contractors; and all machine parts washer wash water collected in a sludge tank at Littleton Works. Post-1988, but prior to the implementation of the IPC Licence at the Application Site in 2001, the environmental management measures set out in the previous section remained in place across the Application Site.	Prevention/minimisation of environmental and human health impacts including from fire, dust and air pollutant emissions; Containment of dust, surface and groundwater emissions, and silt run-off; Minimisation of fuel leak/groundwater contamination.

Measure	Location in rEIAR	Receptor	Control Measure	Impact
			In addition, as evidenced in the 1991 Harkins Report (Appendix 4-9, Volume 3), silt control measures in the form of silt ponds were in place prior to 1988, with Bord na Móna carrying out further studies and surveys throughout the 1980s and 1990s to make improvements to how silt ponds operated so that suspended solids emissions in surface run-off were reduced. This included the construction of new ponds (as described in Section 4.3.5.9) to maintain treatment of run-off while cleaning of existing ponds was in progress.	
Land, Soils and Geology	Chapter 7, Volume 2	Land; Soils; Peat stability	Land use restricted to Bord na Móna lands; drainage by competent personnel; continuous maintenance; shallow peat limits instability	Maintenance of peat stability; prevention of land degradation
Hydrology and Surface Water Control	Chapter 8, Volume 2	Surface water; Groundwater	Drainage design based on 1.7 l/s/Ha; silt ponds provide attenuation and sediment control	Controlled runoff; protection of hydrology
Emissions Control (dust, noise, water, silt run-off); Health and Safety; Terrestrial Habitat protection; Aquatic habitat protection	Chapter 8, Volume 2	Surface and ground water; Sensitive receptors; Habitats; Aquatic species	Drainage and Silt Pond Control Measures (Pre-IPC Licence) Internal drains were cleaned regularly in suitable weather to remove sludge. Silt ponds were utilised to control sediment discharged at outfalls, with an upper limit of 100mg/l suspended sediment. Silt ponds were upgraded in the 1990s, often with a second silt pond added as backup. Silt ponds were de-sludged twice per annum. Field drains had low gradients (<1.0m depth).	Containment/minimisation of silt run-off; Protection of surface water quality in downstream waterbodies.

Measure	Location in rEIAR	Receptor	Control Measure	Impact
			Silt ponds also acted as attenuation measures during peak rainfall events — each metre of silt pond provides approximately 12m³ of water storage. Pipeline capacities were designed based on a runoff rate of 1.7 l/s/Ha.	
Archaeological Preservation	Section 4.6.1 Chapter 4 Chapter 12	Archaeological and cultural heritage receptors; Unrecorded subsurface Archaeology	Archaeological Code of Practice Bord na Móna has a long history of co-operation with the National Museum of Ireland, the National Monuments Service and the relevant governmental departments overseeing heritage at the time, in relation to the cultural and archaeological importance of wetlands as well as the potential for, and handling of, archaeology discovered in bogs. After the discovery and subsequent preservation of trackways at Corlea Bog, Co. Longford by Bord na Móna employees in the 1980s, a new programme for peatland archaeology was established. Since 1991 an annual programme of archaeological survey, initially funded by the National Monuments Service, has been conducted in Bord na Móna Bogs, with the results being forwarded for inclusion in the Sites and Monuments Record. Since 1998, Bord na Móna has a statutory duty under the Turf Development Act 1998 (Section 56) to afford appropriate protection for the environment and the archaeological heritage. Section 56.- The Company and each subsidiary shall ensure that its activities are so conducted as to afford appropriate protection for the environment and the archaeological heritage.	Minimisation/prevention of subsurface archaeological destruction, loss or interference through drainage and extraction operations and/or failure to recognise/report finds.

Measure	Location in rEIAR	Receptor	Control Measure	Impact
			The 1998 Act was in accord with the development of an Agreed Principles for the Protection of Wetlands Archaeology in Bord na Móna Bogs (1998) between the Minister for Arts, Heritage and the Gaeltacht, the National Museum of Ireland and Bord na Móna. The Agreed Principles set out 10 standards within which archaeology in the Bord na Móna peatlands were managed. Five Archaeological Liaison Officers were spread across the Bord na Móna Bog Groups and received training on how to deal with and report finds. Since 1998, all archaeological surveys were funded by Bord na Móna. The surveys have been accompanied by an annual programme of selective archaeological excavation and paleo-environmental analysis. By 2013, 64,000 of the c. 80,000-hectare land holdings of Bord na Móna had been subject to archaeological survey.[2] A Code of Practice between the Department of Arts, Heritage and the Gaeltacht, the National Museum of Ireland and Bord na Móna was established in 2012. This Code superseded the Agreed Principles. The Code provided a framework within existing legislation, policy and practice to enable Bord na Móna to progress with peat extraction and ancillary activities and simultaneously ensure archaeological control measures are in place. The measures Bord na Móna are responsible for are listed below:	

[2] Department of the Arts, Heritage and the Gaeltacht 2013 Review of Archaeological Survey and Mitigation Policy relating to Bord na Móna Peatlands since 1990. https://www.archaeology.ie/sites/default/files/media/pdf/bnm-peatland-review-final-report-20-06-2013.pdf

Measure	Location in rEIAR	Receptor	Control Measure	Impact
			Bord na Móna will 1. Engage a Project Archaeologist 2. Maintain the network of Archaeological Liaison Officers. 3. Disseminate a set of Archaeological Protection Procedures 4. Ensure that any monuments or archaeological objects discovered during peat extraction are protected in an appropriate manner by following the Archaeological Protection Procedures. 5. Ensure that any newly discovered monuments on Bord na Móna lands are reported in a timely manner to the National Monuments Service of the Department of Arts, Heritage and the Gaeltacht. 6. Ensure that any archaeological objects discovered on Bord na Móna lands are reported immediately to the Duty Officer of the National Museum of Ireland. 7. Prioritise monuments for investigation taking account of monument vulnerability, contractual obligations and peat production targets. 8. Prepare tenders for archaeological mitigation of impacts on monuments, to include excavation and recording, in consultation with the Project Archaeologist and the Minister. 9. Engage professional Consultant Archaeologists to carry out mitigation of monuments, including the required palaeo-environmental assessment and post-excavation studies.	

Measure	Location in rEIAR	Receptor	Control Measure	Impact
			10. Provide the necessary finance to fulfil the post-excavation requirements of the Minister and the Director including the conservation of archaeological objects and the provision of scientific analyses and dating, as well as the production of reports on all archaeological work, to a standard which will meet the approval of the Minister.	
Peat Extraction Phase (July 1988 – 2017): Post-grant of IPC Licence (2001 onwards)				
Measure	**Location in rEIAR**	**Receptor**	**Control Measure**	**Impact**
Emissions to Atmosphere; Emissions to Water; Waste Management; Noise; Water Protection	Chapters 7 to 14, Volume 2; IPC Licence Reg. No. P0499-01; Appendix 4-1, Volume 3.	Air/Atmosphere; Surface and ground water; Residential receptors; Mammals; Habitats; Aquatic species	***IPC Licence Condition 5 – Emissions to Atmosphere*** 5.1 No specified emission to atmosphere shall exceed the emission limit values set out in Schedule 1(i). 5.2 Boiler AB1 (Templetuohy Works) combustion efficiency shall be tested annually and reported in the AER. 5.3 All on-site operations shall be carried out so that air emissions and/or dust do not result in significant impairment of, or significant interference with, amenities or the environment beyond the site boundary. 5.4 Activities on-site shall not give rise to dust levels off-site at any Dust Sensitive Location (DSL) which exceed 350 mg/m²/day (TA Luft, IW1 method).	Prevention/minimisation of environmental and human health impacts by dust and air pollutant emissions.

Measure	Location in rEIAR	Receptor	Control Measure	Impact
			5.5 Within six months of licence grant, the licensee shall submit a proposal for identification and monitoring of DSLs on and off site. A report on this monitoring shall be submitted annually as part of the AER. 5.7 Dust control measures to be implemented within 12 months of licence grant, including: shelter belts planted in sensitive areas; harvesting in sensitive areas avoided during windy weather; machinery to use grassed pathways where possible; stockpiles sheeted where possible; moving machinery to maintain slow speeds along dusty headlands; jib maintained low to the stockpile during harvesting; shelter belts planted around outloading facilities; road-transported peat adequately covered; wind breaks planted wherever appropriate. 5.9 The licensee shall not operate the briquette manufacturing plant during the last two weeks of May and the months of June, July, and August unless air dispersion modelling demonstrates compliance with Air Quality Standards.	
Emissions to Water; Water Protection	Chapters 7 to 9, Volume 2; IPC Licence Reg. No. P0499-01; Appendix 4-1, Volume 3.	Surface and ground water; Residential receptors; Habitats; Aquatic species	***IPC Licence Condition 6 – Emissions to Water*** 6.1 No specified emission to water shall exceed the emission limit values (35 mg/l suspended solids) set out in Schedule 2(i). There shall be no other emissions to water of environmental significance. 6.2 Within three months of licence grant, submit to the EPA a surface water discharge monitoring location programme, reviewed annually as part of the AER.	Containment of dust, surface and groundwater emissions, and silt run-off; Minimisation of fuel leak/groundwater contamination.

Measure	Location in rEIAR	Receptor	Control Measure	Impact
			6.3 Within six months, install a composite sampler at a representative discharge point; results reported annually in the AER. 6.4 Monitoring and analyses of agreed emission monitoring locations as specified in Schedule 2(ii), with a report submitted to the Agency quarterly. 6.5 A summary report of emissions to water shall be submitted annually as part of the AER. 6.6 Within six months, develop and implement a programme to ensure all drainage from boglands is discharged via an appropriately designed silt pond treatment arrangement. 6.7 Within three months, prepare an operational procedure for de-silting of silt ponds with minimum fortnightly visual inspection. A log and summary report shall be included in the AER. 6.8 Silt ponds serving operational bogs shall be cleaned a minimum of twice a year — once before ditching and once before harvesting. 6.9 Within six months, prepare an upgrade programme for sedimentation pond treatment systems addressing additional ponds, weir/pipe installation, baffles, performance efficiency and de-silting frequency.	

Measure	Location in rEIAR	Receptor	Control Measure	Impact
			6.10 Within three years of licence grant, all silt ponds serving operational bogs shall achieve: maximum flow velocity < 10 cm/s; silt design capacity of minimum 50m³ per net ha of bog serviced. 6.11 All silt ponds prone to flooding shall be de-silted by 1st November each year. 6.12 Silt control procedures to be implemented within six months, including: drainage manholes protected and maintained free of peat; headlands kept clean and free of loose peat; all new manholes set well back from turning grounds; harrows/millers/ridgers not to drag loose peat into drains; all fields that have been milled to be ridged at end of production season.	
Waste Management	Chapters 7 to 15, Volume 2; IPC Licence Reg. No. P0499-01; Appendix 4-1, Volume 3.	Air/Atmosphere; Surface and ground water; Residential receptors; Employees	***IPC Licence Condition 7 – Waste Management*** 7.1 Disposal or recovery of waste shall take place only as specified in Schedule 3(i) Hazardous Wastes and Schedule 3(ii) Other Wastes, and in accordance with national and European legislation. 7.2 Waste sent off-site shall only be conveyed to a waste contractor agreed by the Agency, and transported in a manner that will not adversely affect the environment. 7.3 A full record of waste management operations shall be maintained on-site and be open to inspection at all times; submitted to the Agency as part of the AER.	Containment of dust and surface/groundwater emissions; Minimisation of fuel leak/groundwater contamination.

Measure	Location in rEIAR	Receptor	Control Measure	Impact
			7.4 Within six months, submit a proposal for identification and management of all ash and screening disposal areas.	
Noise and Vibration	Chapter 10, Volume 2; IPC Licence Reg. No. P0499-01; Appendix 4-1, Volume 3.	Sensitive receptors; Mammals; Habitats; Aquatic Species; Bord na Móna Employees	***IPC Licence Condition 8 – Noise*** Activities on-site shall not give rise to noise levels off-site at any noise sensitive location which exceed the following sound pressure limits (Leq,30min): Daytime: 55 dB(A) Night-time: 45 dB(A) There shall be no clearly audible tonal component or impulsive component in the noise emission from the activity at any noise sensitive location. The licensee shall carry out noise surveys as may be required by the Agency, and a summary report shall be included as part of the AER when relevant.	Containment/minimisation of health impacts from noise and vibration emissions.
Emissions Control (dust, noise, water, silt run-off); Terrestrial Habitat protection; Aquatic habitat protection	Chapters 7 to 15, Volume 2; IPC Licence Reg. No. P0499-01; Appendix 4-1, Volume 3.	Surface and ground water; Residential receptors; Mammals; Habitats; Aquatic species	***IPC Licence Condition 9 – Water Protection*** 9.1.1 No potentially polluting substance or matter shall be permitted to discharge to off-site surface waters, off-site storm drains or groundwaters. 9.1.2 Monitoring and analysis of surface water discharges from workshops/depots as per Schedule 4, reported to the Agency quarterly.	Containment of dust, surface and groundwater emissions; Minimisation of fuel leak/groundwater contamination.

Measure	Location in rEIAR	Receptor	Control Measure	Impact
			9.1.4 All tank and drum storage areas shall be rendered impervious; bunded to minimum 110% of the largest tank capacity or 25% of total volume within the bunded area. 9.1.5 Drainage from bunded areas shall be diverted for collection and safe disposal. 9.1.6 Integrity and water tightness of all bunding structures tested and reported to the Agency within 18 months of licence grant and every two years thereafter. 9.1.7 Loading and unloading of fuel oils in designated areas protected against spillage and leachate run-off. 9.1.8 All surface water discharges from workshop areas (except roof water) to be fitted with oil interceptors. 9.1.9 A maintenance/cleaning log for all oil interceptors and septic tanks shall be maintained, including weekly inspections of oil interceptors and bi-annual inspections of septic tanks. 9.1.10 Weekly inspection for leaks on all flanges and valves on over-ground pipes transporting materials other than water. 9.1.11 An adequate supply of containment booms and/or suitable absorbent material shall be maintained in storage. 9.1.12 Bi-annual inspections of all rail and tractor transported fuelling units maintained in a log.	

Measure	Location in rEIAR	Receptor	Control Measure	Impact
Emissions Control; Terrestrial Habitat protection; Aquatic habitat protection	IPC Licence Reg. No. P0499-01; Appendix 4-1, Volume 3.	Surface and ground water; Sensitive receptors; Habitats; Aquatic species	***IPC Licence Condition 10 – Cutaway Bog Rehabilitation*** 10.1 Following termination of use or involvement of all or part of the site in the licensed activity, the licensee shall: 10.1.1 Decommission, render safe or remove for disposal/recovery any soil, subsoils, buildings, plant or equipment, or any waste, materials or substances that may result in environmental pollution. 10.1.2 Implement the agreed cutaway bog rehabilitation plan. 10.2 The licensee shall prepare a fully detailed and costed Cutaway Bog Rehabilitation Plan for permanent rehabilitation of the cutaway boglands, submitted to the Agency within 18 months of licence grant, reviewed every two years. 10.3 The Rehabilitation Plan shall include as a minimum: scope statement; rehabilitation criteria; programme to achieve stated criteria; test programme; programme for aftercare and maintenance. 10.4 A final validation report including a certificate of completion shall be submitted to the Agency within six months of execution of the plan.	Raised bog restoration and development of active raised bog where possible; Enhanced ecosystem services; Optimising climate action benefits.

Measure	Location in rEIAR	Receptor	Control Measure	Impact
Emissions to Atmosphere; Emissions to Water	IPC Licence Reg. No. P0499-01; Appendix 4-1, Volume 3.	Air/Atmosphere; Surface and ground water; Sensitive receptors; Habitats; Aquatic species	***IPC Licence Condition 12 – Monitoring*** 12.1 The licensee shall carry out sampling, analyses, measurements, examinations, maintenance and calibrations as set out in Schedules 1(ii) (Monitoring of Emissions to Atmosphere), 2(ii) (Monitoring of Emissions to Water), and 4 (Monitoring of Workshop/Depot Surface Water Run-off). 12.3 All automatic monitors and samplers shall be functioning at all times (except during maintenance and calibration). 12.4 Monitoring and analysis equipment shall be operated and maintained to accurately reflect the emission or discharge. 12.6 The licensee shall provide signage to clearly identify and label all emission points. 12.8 Safe and permanent access to be provided to waste storage areas, surface and process water discharges, dust sampling locations, and emission to atmosphere sampling points.	Verification of compliance with licence conditions; Protection of environment.
All media	IPC Licence Reg. No. P0499-01; Appendix 4-1, Volume 3.	All environmental receptors; Bord na Móna Employees	***IPC Licence Conditions 13 & 14 – Recording, Reporting and Emergency Response*** 13.1 The licensee shall record all sampling, analyses, measurements, examinations, calibrations and maintenance carried out in accordance with the licence requirements.	Protection of the environment and human health; compliance with licence reporting obligations.

Measure	Location in rEIAR	Receptor	Control Measure	Impact
			13.2 All incidents affecting normal operation of the activity that may create an environmental risk shall be recorded. 13.3 All complaints of an environmental nature shall be recorded and reported to the Agency monthly (where complaints arise). 14.1 A documented Accident Prevention Policy shall be in place within six months of licence grant. 14.2 A documented Emergency Response Procedure shall be in place within six months of licence grant. 14.3 Both policies shall be reviewed annually.	
Emissions Control (dust, noise, water, silt run-off); Health and Safety	Chapter 9, Volume 2; IPC Licence Reg. No. P0499-01; Appendix 4-1, Volume 3.	Air/Atmosphere; Surface and ground water; Sensitive receptors; Habitats; Aquatic species	Air Quality / Dust Emissions Control (Peat Extraction Phase) Fuel-efficient machinery was used and regularly serviced and cleaned, including power steam washing. Vegetation buffers (tree cover along bog fringes) were preserved to reduce off-site dust transport. Stockpile management: peat stockpiles were compacted and covered with polythene sheeting, anchored with high-moisture peat to prevent wind erosion.	Prevention/minimisation of environmental and human health impacts from dust and air pollutant emissions.

Measure	Location in rEIAR	Receptor	Control Measure	Impact
			Operational controls: extraction during windy conditions was avoided; headlands were kept clean; slow driving was enforced on dusty routes. IPC Licence Condition 5.7 dust control measures were implemented within 12 months of licence grant (August 2001). Dust monitoring was conducted annually from commencement of the IPC Licence to the end of peat extraction, with results reported in the AER.	
Emissions Control (noise and vibration); Health and Safety	Chapter 10, Volume 2; IPC Licence Reg. No. P0499-01; Appendix 4-1, Volume 3.	Sensitive receptors; Bord na Móna Employees	***Noise and Vibration Control (Peat Extraction Phase)*** The IPC Licence (P0499-01) applied to the site from August 2001 onwards. Under Condition 8 of the IPC Licence, Bord na Móna were obliged to undertake noise monitoring as may be required by the EPA. Site vehicles were regularly inspected and maintained on site to minimise noise emissions. There are no recorded noise compliance issues for the Application Site.	Containment/minimisation of health impacts from noise and vibration emissions.
Biodiversity – Habitats and Species (Peat Extraction Phase)	Chapter 7, Volume 2; IPC Licence Reg. No. P0499-01; Appendix 4-1, Volume 3.	Habitats; Bog habitats; Aquatic habitats; Mammals (Otter, Badger, Pine Marten); Breeding and Wintering Birds; Amphibians; Aquatic species	***Prior to IPC Licence (1988–2001):*** Control measures for biodiversity were relatively minimal. Silt control measures in the form of silt ponds were in place and progressively improved throughout the 1980s and 1990s to reduce suspended solids emissions. These measures indirectly benefitted aquatic habitats and species.	Indirect protection of habitats and species through water quality control; minimisation of impacts on aquatic habitats, Otter, fish and macroinvertebrate communities.

Measure	Location in rEIAR	Receptor	Control Measure	Impact
			Post-IPC Licence (2001–2017): The IPC Licence required the establishment of an Environmental Management Programme which included the following minimum objectives relevant to biodiversity: minimisation of suspended solids movement to surface water systems via peatland surface water drainage channels; rationalisation of surface water discharge points; investigation of reed-bed systems for final polish of silt pond discharges; reduction of fugitive dust emissions; reuse of silt pond waste. Additional IPC Licence measures applied from 2001–2017: refuelling procedures upgraded to standard bunding specifications; railway lines regularly maintained and biannual inspection of railcars for damage, leaks or flaws; cleaning of silt ponds; decommissioning of peat stockpiles, buildings and fuel tanks; Annual Environmental Reports (AERs) prepared annually to monitor water quality within receiving waterbodies. Archaeological Code of Practice: All employees trained to halt works and report to Bog Manager if archaeological finds were encountered, in accordance with the 2012 Code of Practice between the Applicant, the Department of Arts, Heritage and the Gaeltacht, and the National Museum of Ireland.	

Measure	Location in rEIAR	Receptor	Control Measure	Impact
Landscape and Visual	Chapter 11, Volume 2	Visual receptors; Local landscape character	No specific landscape or visual mitigation measures were implemented during the Peat Extraction Phase. No specific landscape or visual mitigation measures are proposed. Consequently there is no requirement for ongoing monitoring from a landscape or visual perspective.	No significant landscape/visual impacts identified.
Archaeological Preservation	Chapter 12, Volume 2; Appendix 12.3, Volume 3	Unrecorded subsurface Archaeology; Cultural Heritage receptors	***Archaeological Code of Practice (Peat Extraction Phase)*** The Applicant has had a statutory duty under the Turf Development Act 1998 (Section 56) to afford appropriate protection for the environment and the archaeological heritage. All employees were required to stop works and report to the Bog Manager if archaeological finds were encountered. The Applicant's peat extraction activities are governed under the 2012 Code of Practice agreed between the Department of Arts, Heritage and the Gaeltacht, the National Museum of Ireland and Bord na Móna. The 2012 Code includes a commitment to finance a balanced and cost-effective approach to archaeological investigation, excavation, post-excavation and mitigation. The peatlands were initially surveyed by the Irish Archaeological Wetland Unit (IAWU) in 1995. Additional surveys and programmes of excavations were carried out by Archaeological Development Services (ADS) on behalf of Bord na Móna between 2006 and 2010.	Minimisation/prevention of subsurface archaeological destruction, loss or interference through drainage and extraction operations and/or failure to recognise/report finds.
Traffic and Transport	Chapter 13, Volume 2	Traffic / road users; Bord na Móna Employees	Traffic and Transport Control Measures (Peat Extraction Phase)	Containment of dust; Minimisation of fuel leak/groundwater contamination; No significant adverse traffic impacts identified.

Measure	Location in rEIAR	Receptor	Control Measure	Impact
			The primary control measure for traffic impact was the internal rail network, which eliminated the need for HGV transport of peat on public roads. Refuelling and maintenance were undertaken at Littleton Works or by mobile fuelling unit. Dust management: tree cover along bog fringes preserved; stockpiles compacted and covered; extraction during windy weather avoided; headlands kept clean; slow driving enforced; all road crossing points maintained clean. Railway tracks and locomotives underwent continuous inspection and maintenance to prevent derailments, fires, accidents and fuel leaks.	
Current Phase (2017 to Present Day)				
Control Measures 2017 to Present Day (Post-cessation of peat extraction and post-grant of IPC Licence) as per Chapters 7–14, Volume 2 of the rEIAR				
Emissions Control (dust, noise, water, silt run-off); Fire Prevention; Health and Safety; Terrestrial Habitat Protection; Aquatic habitat protection	Chapters 7 to 14, Volume 2; IPC Licence Reg. No. P0499-01; Appendix 4-1, Volume 3.	Air/Atmosphere; Surface and ground waters; Sensitive receptors; Habitats; Aquatic species	Continuation of IPC Licence Compliance Measures (2017 onwards)	Environmental stabilisation; Raised bog restoration and development of active raised bog where possible; Enhanced ecosystem services; Optimising climate action benefits.

Measure	Location in rEIAR	Receptor	Control Measure	Impact
			Peat extraction ceased in 2017, significantly reducing emissions from machinery and dust-generating activities. Removal of stockpiles, fuel tanks, and machinery has been undertaken to eliminate residual emission sources. The site remains under IPC Licence P0499-01 which mandates continued monitoring of emissions to air, including dust and combustion efficiency. All IPC Licence conditions (Conditions 1–15) remain applicable where relevant, including Conditions 5 (Atmosphere), 6 (Water), 7 (Waste), 8 (Noise), 9 (Water Protection), 10 (Cutaway Bog Rehabilitation), 12 (Monitoring), and 13–14 (Recording, Reporting and Emergency Response). Continued compliance with these conditions ensures ongoing protection of ground and surface waters. Rehabilitation Phase 1 works were completed between 2018 and 2021 and included extensive drain-blocking and hydrological management with natural vegetation recolonisation. All works were completed in accordance with best practice procedures and the Irish Wildlife Manual, Best Practice in Raised Bog Restoration in Ireland (Mackin et al., 2017). The removal of rail infrastructure in Lanespark and Derryvella was completed in 2024. Mitigation measures with regard to fertiliser application: fertiliser was not applied on waterlogged, flooded, frozen or snow-covered land; no fertiliser was applied during heavy rain; no fertiliser was applied on steeply sloping ground or where there was a risk of water pollution; and no fertiliser was spread within 2m of a surface watercourse. Buffer zones in accordance with EPA guidelines were adhered to during fertiliser application.	

Measure	Location in rEIAR	Receptor	Control Measure	Impact
Biodiversity – Habitats and Species (Current Phase)	Chapter 7, Volume 2; IPC Licence Reg. No. P0499-01; Appendix 4-1, Volume 3.	Bog habitats; Aquatic habitats; Mammals (Otter, Badger, Pine Marten); Breeding and Wintering Birds; Amphibians; Designated Sites	Biodiversity Control Measures (Current Phase: 2017–Present Day) Cessation of peat extraction has significantly reduced anthropogenic disturbance, allowing habitats to develop and species to colonise or return to the Application Site. IPC Licence water quality conditions (Condition 6 and 9) remain in force, indirectly protecting aquatic habitats and species (including Otter, fish and macroinvertebrates) through continued silt pond operation, grab sampling and quarterly reporting to the EPA. Rehabilitation Phase 1 works (drain-blocking, re-wetting, hydrological management) are creating conditions suitable for a range of species including Otter, Badger, breeding and wintering birds, Marsh Fritillary and amphibians. All works were completed in accordance with best practice procedures and the Irish Wildlife Manual, Best Practice in Raised Bog Restoration in Ireland (Mackin et al., 2017). No works were scheduled within the core breeding bird period (March–August inclusive) where avoidable, to minimise disturbance to ground-nesting birds. Control measures relating to protection of water quality under the IPC Licence indirectly benefit species utilising downstream waterbodies, including the Lower River Suir SAC.	Positive long-term effect on habitats and species; Indirect benefit to aquatic species through improved water quality; Habitat creation for protected species; Enhanced biodiversity.

Measure	Location in rEIAR	Receptor	Control Measure	Impact
			Ongoing ecological monitoring by Fehily Timoney (habitat surveys, bird surveys, aquatic surveys by Triturus) is informing adaptive management of the site.	
Archaeological Preservation	Chapter 12, Volume 2	Unrecorded subsurface Archaeology; Cultural Heritage receptors	***Archaeological Code of Practice (Current Phase)*** The Application Site still operates under the requirements of IPC Licence P0499-01, and any decommissioning works undertaken with respect to peat extraction are in accordance with Condition 10 of the IPC Licence. Since peat activities associated with the Applicant fall under the 2012 Archaeological Code of Practice, any potential effects from decommissioning activities are addressed through the implementation of the mitigation measures detailed in the Code. Any impacts as a result of Phase 1 drain-blocking works fall under the current 2012 Code of Practice between the Applicant and the Department of Housing, Local Government and Heritage.	Minimisation/prevention of subsurface archaeological destruction, loss or interference through drainage and extraction operations and/or failure to recognise/report finds.
Climate	Chapter 14, Volume 2	Climate	Drain blocking, rewetting and revegetation to restore carbon sink function across the Application Site.	Positive climate impact through carbon sequestration and greenhouse gas emission reduction.

Measure	Location in rEIAR	Receptor	Control Measure	Impact
Remedial Phase				
Emissions Control; Terrestrial Habitat Protection; Aquatic habitat protection	Chapter 7, Volume 2; IPC Licence Reg. No. P0499-01; Appendix 4-1, Volume 3; Appendix 4-2: Cutaway Bog Decommissioning and Rehabilitation Plan, Volume 3	Bog habitats; Aquatic habitats; Surface and groundwaters; Sensitive receptors	***IPC Licence Condition 10 – Cutaway Bog Rehabilitation (Remedial Phase)*** 10.2.1 The licensee shall prepare, to the satisfaction of the Agency, a fully detailed and costed plan for permanent rehabilitation of the cutaway boglands within the licensed area, submitted to the Agency within 18 months of licence grant. 10.2.2 The plan shall be reviewed every two years and proposed amendments notified to the Agency as part of the AER. No amendments may be implemented without the written agreement of the Agency. 10.3 The Rehabilitation Plan shall include as a minimum: (10.3.1) A scope statement including outcome of consultations with relevant Agencies, Authorities and affected parties; (10.3.2) Criteria defining successful rehabilitation ensuring minimum environmental impact; (10.3.3) A programme to achieve the stated criteria; (10.3.4) A test programme to demonstrate successful implementation; (10.3.5) A programme for aftercare and maintenance. 10.4 A final validation report including a certificate of completion shall be submitted to the Agency within six months of execution of the plan. The licensee shall carry out such tests, investigations or submit certification, as requested by the Agency, to confirm that there is no continuing risk to the environment.	Environmental stabilisation; Raised bog restoration and development of active raised bog where possible; Enhanced ecosystem services; Optimising climate action benefits.

Measure	Location in rEIAR	Receptor	Control Measure	Impact
			Reason: To make provision for the proper closure of the activity ensuring protection of the environment. Final Cutaway Bog Decommissioning and Rehabilitation Plans have been produced for all bogs; Lanespark Derrfyvella, Longfordpass and Littleton Bogs. Please see Appendix 4-2 for copies of the Plans.	
Land, Soils and Geology	Chapter 7, Volume 2; IPC Licence Reg. No. P0499-01; Appendix 4-1, Volume 3.	Bog habitats; Aquatic habitats; Surface and groundwaters; Sensitive receptors	***Land, Soils and Geology – Remedial Phase*** Measures that mitigate (and will continue to mitigate) against contamination of peat, subsoil, and bedrock are outlined in Section 8.5 of Chapter 8, Volume 2 and are currently being implemented at the Application Site. These measures form part of ongoing compliance with IPC Licence conditions. No additional mitigation beyond those already implemented is considered necessary. No significant effects on geological heritage were identified. All drainage works were carried out by experienced and competent operatives; design and oversight of all works were conducted by qualified Bord na Móna personnel; and the drainage system has been continuously maintained and managed throughout.	Continued protection of soil and subsurface from contamination; Maintaining peat stability.
Emissions Control (dust, noise, water, silt run-off); Health and Safety; Terrestrial Habitat Protection; Aquatic habitat protection	Chapter 8, Volume 2; IPC Licence Reg. No. P0499-01; Appendix 4-1, Volume 3.	Bog habitats; Aquatic habitats; Surface and groundwaters; Sensitive receptors	***Hydrology, Hydrogeology and Water Quality – Remedial Phase***	Containment of dust, surface and groundwater emissions, and silt run-off; Minimisation of fuel leak/groundwater contamination; Downstream waterbodies protected from potential deterioration from chemical pollution.

Measure	Location in rEIAR	Receptor	Control Measure	Impact
			No specific mitigation is required in relation to alteration of existing bog hydrogeology as the proposed measures will have a positive effect. Any works undertaken as part of Rehabilitation Phase 2 will be completed under licence from the EPA with Bord na Móna reporting to the EPA until the IPC Licence is surrendered. The existing drainage systems and silt control measures, which have proven effect, will continue to operate during early stages of the works when there is potential for entrainment of suspended solids in surface waters during drain blocking. No remedial works will be completed during periods of prolonged rainfall. Silt ponds will continue in use and will be regularly inspected and maintained as per IPC Licence requirements. Aftercare and Maintenance (Water Quality): Following implementation of rehabilitation measures, a programme of aftercare and maintenance will be completed. This will comprise initial quarterly monitoring, reducing after two years to bi-annually, and after five years to annual visits. Water quality monitoring programme: Monthly monitoring for pH, Suspended Solids, Total Solids, Total Phosphorus, Total Ammonia, Colour, COD and Dissolved Organic Carbon (DOC). Results will be reported annually to the EPA.	

Measure	Location in rEIAR	Receptor	Control Measure	Impact
			Leakages and Spillages Mitigation: All machinery will be regularly checked and maintained prior to arrival at the site; fuelling and lubrication only in designated areas away from surface water features; vehicles never left unattended during refuelling; all refuelling via mobile fuel bowsers; only dedicated trained personnel to complete refuelling; fuel bowsers bunded to 100% capacity; storage tanks for bowsers and generators will be double-skinned; waste oils and fluids collected in leak-proof containers and removed from site; spill kits kept on site at all times. Fertiliser application mitigation: fertiliser will not be applied on waterlogged, flooded, frozen or snow-covered land; no fertiliser applied when heavy rain forecast within 48 hours; no fertiliser applied on steeply sloping ground or where there is risk of water pollution; no fertiliser spread within 2m of a surface watercourse; buffer zones in accordance with EPA guidelines will be utilised.	
Emissions Control (dust); Health and Safety	Chapter 9, Volume 2; IPC Licence Reg. No. P0499-01; Appendix 4-1, Volume 3.	Air/Atmosphere; Surface and ground water; Sensitive receptors; Habitats; Aquatic species	Air Quality – Remedial Phase Drain blocking and rewetting will reduce the risk of airborne dust. Natural revegetation stabilises bare peat areas, further reducing airborne particles. The Remedial Phase does not involve heavy machinery use that would generate significant emissions. The dust control measures outlined under Condition 5.7 of the IPC Licence shall be implemented throughout the Remedial Phase to ensure dust emissions are minimised until the licence is surrendered.	Prevention/minimisation of environmental and human health impacts from dust and air pollutant emissions.

Measure	Location in rEIAR	Receptor	Control Measure	Impact
Noise and Vibration	Chapter 10, Volume 2; IPC Licence Reg. No. P0499-01; Appendix 4-1, Volume 3.	Sensitive receptors; Bord na Móna Employees	***Noise and Vibration – Remedial Phase*** The IPC Licence (P0499-01) applies to the site operations, including activities undertaken during the Remedial Phase. Under the licence, Bord na Móna are required to undertake noise monitoring if required by the EPA. Where Rehabilitation Phase 2 works occur, the works will not occur within 50m of a Noise Sensitive Location (NSL). All plant and equipment for use will comply with the Construction Plant and Equipment Permissible Noise Levels Regulations (S.I. 359/1996).	Containment/minimisation of health impacts from noise and vibration emissions.
Landscape and Visual	Chapter 11, Volume 2	Visual receptors; Local landscape character	No specific landscape or visual mitigation measures are proposed for the Remedial Phase. Rehabilitation works are focused primarily on biodiversity enhancements. Consequently, there is no requirement for ongoing monitoring from a landscape or visual perspective.	No significant landscape/visual impacts identified.
Biodiversity – Habitats and Species (Remedial Phase)	Chapter 7, Volume 2; IPC Licence Reg. No. P0499-01; Appendix 4-1, Volume 3.	Bog habitats; Aquatic habitats; Mammals (Otter, Badger, Pine Marten); Breeding and Wintering Birds; Marsh Fritillary; Amphibians; Designated Sites (Cabragh Wetlands pNHA, Ardmayle Pond pNHA)	Biodiversity – Habitats: Best Practice Measures to Prevent Habitat Loss and Degradation During Rehabilitation Works Restriction of Rehabilitation Activities to Designated Areas: All bog restoration and rehabilitation activities will be confined strictly within the boundaries of the designated rehabilitation zones as outlined in the approved rehabilitation plans. Clear boundary markers and signage will be installed; site personnel will be briefed on the importance of staying within approved work zones; and regular site inspections will be carried out to ensure compliance.	Positive long-term significant effect on habitats. Habitat creation and enhancement for protected species including Otter, Badger, Marsh Fritillary, breeding and wintering birds, and amphibians. Indirect positive benefit to downstream designated sites.

Measure	Location in rEIAR	Receptor	Control Measure	Impact
			Use of Suitably Sized Machinery: Lightweight, low-ground-pressure equipment will be used to prevent excessive soil compaction. Machines will be sized appropriately for the terrain. Equipment will be fitted with wide tracks or flotation tyres to distribute weight evenly and prevent deep ruts or damage to the peat surface. Operators will be trained in environmentally sensitive work practices. Minimisation of Excavation Depths and Soil Displacement: Excavation depths and volumes will be strictly limited. Excavated peat and soil will be reused within the site wherever feasible. Works will be carried out in a controlled and phased manner. Work Scheduling: Work scheduling will be adjusted to avoid peak breeding or nesting seasons (March–August inclusive) for sensitive species, including ground-nesting birds, Marsh Fritillary and amphibians. Noise and vibration reduction techniques will be applied. Buffer Zones: Buffer zones will be established around particularly sensitive habitats including areas supporting Marsh Fritillary larval webs and any areas supporting protected species.	It is not anticipated that the Application Site will develop into active raised bog analogous to the priority EU Habitats Directive Annex I habitat within the foreseeable future (~50 years); however, the combination of re-wetting, drain-blocking and natural colonisation will create a more ecologically valuable landscape.

Measure	Location in rEIAR	Receptor	Control Measure	Impact
			Environmental Monitoring and Adaptive Management: Routine site inspections; hydrological monitoring to track changes in water levels; biodiversity surveys to observe how vegetation and wildlife respond to rehabilitation activities; adaptive management strategies to adjust work practices in response to unforeseen environmental changes. If any unexpected habitat degradation is detected, immediate corrective actions will be taken. Waste Management: Strict waste management protocols will be followed to ensure that no pollution, litter, or hazardous materials are introduced into the environment. Silt Control: The existing drainage systems and silt control measures will remain operational during rehabilitation works. Silt ponds will continue to operate and will be regularly inspected and maintained as stipulated by the IPC Licence. No remedial works will be carried out during periods of prolonged rainfall or unfavourable weather conditions. Aftercare Programme: Initially, quarterly site visits during the first two years after implementation, reducing to bi-annually after two years and annually after five years. Biodiversity Monitoring: Ongoing ecological monitoring (habitat surveys, bird surveys, bat surveys, aquatic surveys, mammal surveys) to be carried out to inform adaptive management of the site.	

Measure	Location in rEIAR	Receptor	Control Measure	Impact
			Effects on Designated Sites: The rehabilitation plans will have a net positive impact on the Application Site and will indirectly benefit downstream designated sites (Cabragh Wetlands pNHA and Ardmayle Pond pNHA) through improved water quality and reduced sediment transport.	
Archaeological Preservation and Cultural Heritage	Chapter 12, Volume 2; Appendix 1.3, Volume 3	Unrecorded subsurface Archaeology; Cultural Heritage receptors	***Cultural Heritage – Remedial Phase*** As per the recommendations in the Archaeological Impact Assessment for Bog Decommissioning and Rehabilitation at Ballybeg, Co. Tipperary, all surviving archaeological sightings within Derryvella Bog will be protected by 20m buffer zones. Irish Archaeological Consultancy (IAC) will conduct twice weekly inspections of any re-profiling works. In the event that any previously unknown archaeological material is uncovered during rehabilitation works, it should be avoided and reported to the Bord na Móna Archaeological Liaison Officer and the National Museum of Ireland. Since peat activities associated with the Applicant fall under the 2012 Archaeological Code of Practice, any potential remedial phase effects will be dealt with through the implementation of mitigation measures detailed in the Code.	Minimisation/prevention of subsurface archaeological destruction, loss or interference through drainage and extraction operations and/or failure to recognise/report finds.

Measure	Location in rEIAR	Receptor	Control Measure	Impact
			Bord na Móna are required under Condition 10 Cutaway Bog Rehabilitation of the IPC Licence to prepare and implement a Cutaway Bog Rehabilitation Plan. Final Cutaway Bog Decommissioning and Rehabilitation Plans have been produced for all bogs; Lanespark, Derryvella, Longfordpass and Littleton Bogs.	
Traffic and Transport; Material Assets	Chapter 13, Volume 2; IPC Licence Reg. No. P0499-01, Volume 3	Traffic / road users; Local roads; Bord na Móna Employees	***Traffic and Transport – Remedial Phase*** In addition to continued compliance with the IPC Licence, the following mitigation measures are proposed for the Remedial Phase: All vehicles used on site will undergo regular inspection and maintenance checks. Vehicles used on site will undergo wheel washing as required prior to crossing the local road network. Only personnel holding the appropriate licence will operate the vehicles and will undergo regular re-training on safety operations and vehicle maintenance. Machinery crossing points on local roads between bogs will be inspected at the end of each working day. Car sharing by personnel and bike to work schemes will be encouraged.	No significant adverse traffic impacts anticipated; Minimisation of road soiling and dust; Minimisation of fuel leak/groundwater contamination.

Measure	Location in rEIAR	Receptor	Control Measure	Impact
Climate	Chapter 14, Volume 2	Climate/Atmosphere	***Climate – Remedial Phase*** No specific control measures were implemented at the Application Site with respect to climate during the Remedial Phase. The proposed rehabilitation works, including drain blocking, rewetting and natural revegetation, will have a positive effect on carbon sequestration and climate action. The rehabilitation aims to restore peatland conditions capable of sequestering carbon and reducing greenhouse gas emissions from the site. Bord na Móna continues to implement its programme of cutaway bog rehabilitation in support of Ireland's National Recovery and Resilience Plan and climate targets.	Positive climate effect through peatland rehabilitation and carbon sequestration.

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