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17.0 SCHEDULE OF MITIGATION & MONITORING MEASURES

17.1 INTRODUCTION

All control measures that have been implemented at the Application Site from 1950 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 June of 2020, control and mitigation measures implemented during the management of the Application Site since June 2020 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 remedial EIAR.

All control and mitigation measures for the Project are presented in Table 17-1 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 1950 at the onset of site preparation works up to July 1988 are also presented below in Table 17-1. As such the measures are grouped under the following headings:

- Pre-July 1988: activities employed at the Application Site from 1950 at the onset of preparation works up to July 1988;
- Peat Extraction Phase: peat extraction activities and all ancillary works at the Application Site from July 1988 to the cessation of peat extraction in June 2020 (July 1988 – June 2020);
- Current Phase: the management of the Application Site since June 2020 (June 2020- to Present Day); and
- Remedial Phase: the activities intended to be carried out at the Application Site into the future.

17.2 SCHEDULE OF MEASURES

Table 17-1 sets out the mitigation measure for each phase of the development as set out in the preceding chapters of this remedial EIAR

Table 17-1: Schedule of Mitigation and Monitoring Measures

Pre-July-1988				
Control Measures Pre-July 1988 as per Section 4.5.4 of Chapter 4 Project Description of the remedial EIAR				
Measure	Location in remedial EIAR	Receptor	Control Measure	Impact
Emissions Control (dust, noise, water, silt run off)	Section 4.5. Chapter 4; Chapter 9	Surface and ground water; Sensitive receptors; Habitats; Aquatic species; Traffic / road users	Peat Extraction Machinery – maintenance programmes and storage • All peat extraction machinery listed in Section 4.4.4 (of Chapter 4 of the remedial EIAR) were stored either at the Derrygreenagh Works (outside the Application Site boundary), or at local holding areas in bogs at the end of the workday; • All machinery was regularly inspected, serviced and maintained; • All machinery was regularly cleaned via power steam wash system at a wash bay which drained into a fuel/oil interceptor unit and associated gravel soak pit. The interceptor unit facilitated the removal of any oil/grease components. This was done to minimise dust and particle release; and • A self-contained machine parts washer was located in the workshop at the Derrygreenagh Works.	Containment of dust, surface and groundwater emissions, and traffic disruption/soiled roads; Minimisation of fuel leaks/groundwater contamination.
Emissions Control (dust, noise, water, silt run off); Fire Prevention; Health and Safety; Terrestrial Habitat protection; Aquatic habitat protection	Section 4.5. Chapter 4; Chapter 9	Surface and ground water; Sensitive receptors; Habitats; Aquatic species	Refuelling Facilities Refuelling and maintenance of all vehicles were undertaken at the Derrygreenagh Works (outside the Application Site boundary), or at local holding areas at the Application Site. When machinery required refuelling on the Application Site, it was carried out by a mobile (rail or tractor-transported) fuelling unit which travelled out from the Derrygreenagh Works to the bogs where the machinery was located. Refuelling procedures were upgraded to standard bunding specifications to comply with IPC Licence requirements in 2000 (refer to Section 4.4.5.4 (of Chapter 4 of the remedial EIAR) for details).	Containment of dust, surface and groundwater emissions, and traffic disruption/soiled roads; Minimisation of fuel leaks/groundwater contamination. Minimisation of fuel leak/groundwater contamination.

			The following emergency action procedure was implemented at the Application Site prior to IPC Licencing (i.e., pre-2000): • When a spill occurred, the General Manager was immediately informed of the incident; • The spill was required to be assessed by the General Manager for potential risk to the health and safety of employees and the potential environmental consequences; • If there was a risk of explosion, all personnel were required to be evacuated from the area; • The spill was sourced, isolated and contained with polystyrene booms or dry peat (moisture content of 10%); • All efforts were made to prevent the spill from entering a storm drain or nearest outfall; • Once the spill had been contained, a suitable absorbent (e.g., dry peat) was to be used to soak the spillage; • All possible ignition sources such as electrical equipment, naked lights, machinery were removed from the area. Any combustibles in the spill area were removed; • Follow up action measures taken includes the implementation of appropriate remedial work to prevent such a spillage recurring in the future; and • In the event of a significant spillage, the General Manager was required to notify the local authority.	
Emissions Control (dust, noise, water, silt run off); Fire Prevention; Health and Safety; Terrestrial Habitat protection; Aquatic habitat	Section 4.5.4 Chapter 4	Surface and ground water; Sensitive receptors; Habitats; Aquatic species; Bord na Móna Employees	Fire Safety With respect to Fire Safety, the following emergency action procedure was implemented at the Application Site prior to IPC Licencing (i.e., pre-2000): • Annual training provided for bog fires crew and factory personnel and all general staff were provided with a minimum of two hours training in fire prevention; • 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; • Each canteen/office were required to be equipped with a fire	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.

protection			blanket and fire extinguisher; • There were required to be at least one fire point at all office premises; • Petrol and other oils were required to be stored in designated oil stores; • Batteries were not charged in working areas unless suitable protection was provided; • Training was provided for oxygen cylinder storage and use; • Fire Wagons: Designated rail wagons were provided for fire prevention which contained: hoses, shovels, fire beaters, baskets, buckets, breathing apparatus, first aid kit, drums of foam and foam making machine, extinguishers etc.; • 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 • Fire Safety Audits were undertaken at six monthly intervals along with random audits. Yearly assessments were undertaken of all audits completed.	
Emissions Control (dust, noise, water, silt run off); Health and Safety; Terrestrial Habitat protection; Aquatic habitat protection	Section 4.5.4 Chapter 4	Surface and ground water; Sensitive receptors; Habitats; Aquatic species	Dust Management at Bog Boundaries and Headlands Tree cover along the fringes of bogs minimised the amount of dust that would travel off-site. In 1976 the Applicant established a policy to preserve the vegetation and tree cover on all bog fringes and on any mineral islands¹. In addition, the following measures were undertaken at a minimum to minimise dust emissions and later expanded under IPC Licence: • Stockpiles were compacted on either side by large rollers drawn by tractors; • Stockpiles were covered with polythene film gauge sheets and secured in position by spreading an even layer of high moisture content milled peat; • Peat extraction during windy weather was to be avoided; • The headlands were to be kept clean and loose peat removed; • Drivers were required to drive slow along dusty headlands; and • 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.

Emissions Control (dust, noise, water, silt run off); Fire Prevention; Health and Safety; Terrestrial & Aquatic Habitat protection;	Section 4.5.4 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 derailments, fires, accidents and fuel leaks. The locomotives were fitted with beam lighting, electric windscreen wipers and driving mirrors 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.
Emissions Control (dust, noise, water, silt run off); Health and Safety; Terrestrial Habitat protection; Aquatic habitat protection	Section 4.5.4 Chapter 4	Surface water; Habitats; Aquatic species; Sensitive receptors	Surface Water Management - Surface water run-off from the Derrygreenagh Works (outside the Application Site boundary) 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 regularly cleaned via power steam wash system at a wash bay which drained into an interceptor unit and associated gravel soak pit. There are 2 interceptor units which facilitated the removal of any oil/grease components. This was done to minimise dust and particle release; - Formal silt control measures adopted in 1974 are outlined in Section 4.5.4.9 (of Chapter 4 of the Remedial EIAR).	Containment of dust, surface and groundwater emissions; Minimisation of fuel leak/groundwater contamination.
Emissions Control (dust, noise, water, silt run off); Health and Safety;	Section 4.5.4 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	Containment/minimisation silt run off.

Terrestrial & Aquatic Habitat protection;			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).	
Emissions Control (dust, noise, water, silt run off); Health and Safety	Section 4.5.4 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 at Ballybeg were maintained in good working order: • Visual inspection of pumps daily; • Operational check of pumps biweekly; and • Service of pumps monthly.	Containment/minimisation silt run off.
Emissions Control (dust, noise, water, silt run off); Health and Safety; Terrestrial Habitat protection; Aquatic habitat protection	Section 4.5.4 Chapter 4	Surface water; Habitats; Aquatic species	Silt Management As part of the Third Development Programme in the 1970s, Bord na Móna decided in 1974 to control all effluent by means of specially designed and constructed silt ponds in 1974, 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: • 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. • Ideally, silt ponds should be located in cutaway bog. • Sufficient area should be acquired at the initial stage to provide for silt ponds. • In production bogs, existing large catchments should be broken up into manageable proportions and ponds constructed to accord with local topography. • 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.

			- 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. - It is recommended that catchments to be protected by silt ponds should not be greater than 500 acres. - 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. - 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. - Ponds should be provided in pairs each sufficient for the catchment protected. - 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. - Second parallel pond should be used during excessively large water flow (storm water). - The problem of discharging into the Clodiagh River at Monettia (County Offaly) has become difficult in view of ESBs requirement that the entire river be kept free of silt. Silt ponds will be essential and provision should be made in their layout to allow for further extension of the ponds if decantation needs to be improved further. A copy of a memo sent to Derrygreenagh Works from the Bord na Móna Production Manager in March 1976 setting out the recommendations of the Silt Committee is included in Appendix 4.9 of the remedial EIAR. The memo directed that "At all milled peat bogs in production, works should carry out surveys and select sites for silt ponds as recommended", and it is therefore assumed that Derrygreenagh Works would have commenced the selection of sites for the establishment of silt ponds around this time.	
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			Further Bord na Móna records show that silt pond measures were introduced across all Bord na Móna bogs in the early to mid-1980s in response to the 1977 Water Pollution Act, with a number of silt ponds installed at the Application Site pre-1988 to reduce sediment discharge from the extraction works. Silt ponds were installed to trap and reduce the emission of suspended solids to surface water bodies originating from activities associated with peat extraction, such as suspended peat particles generated from the extraction fields and collected in the bog drainage network, as well as run-off from workshop areas. Silt ponds were primarily designed and constructed with a width of 8 m, with some up to 12 m wide where access was available to both sides for cleaning; their length varied depending on the capacity required. In some locations, baffles were installed to reduce the energy in the flow and increase residence time and aid settlement. Silt ponds were generally excavated to a depth of 1.5 m below the pipe invert level, with low-velocity flow controlled by inlet and outlet pipes so that velocity within the pond was less than 0.1 m/sec, allowing suspended sediment to settle and thereby reducing sediment loading of the outflow. The silt ponds are cleaned twice a year and are located hydraulically upgradient of discharge/outfall points. The April 1984 Silt Committee records, attended by the Manager from the Derrygreenagh Bog Group, also set out acceptable standards of effluent and note a target value of 100 mg/l for suspended solids in bog effluent, providing evidence of early control measures implemented across the Bord na Móna landbank, including the Application Site, to control sediment levels in effluent.	
Emissions Control (dust, noise, water, silt run off); Health and Safety; Terrestrial Habitat	Section 4.5.4 Chapter 4	Surface and ground water; Sensitive receptors; Bord na Móna Employees; Bog Habitats	Waste Management The following measures were carried out with respect to management of waste: • Waste oils and brake fluids drained from machinery during servicing were collected in drums and emptied to a designated waste oil storage tank; • Waste oil storage tank contents were transported off-site by a licenced waste disposal contractor; • Oil and fuel filters were changed at vehicle service intervals;	Containment of dust, and surface and groundwater emissions; Minimisation of fuel leak/groundwater contamination; Prevention/minimisation of environmental impacts and

protection; Aquatic habitat protection			- Spent filters were collected and disposed of by a licensed waste disposal contractor; - Used batteries were collected by licensed battery collection contractor; - Off-washings from the self-contained machine parts washer were collected within a sludge tank at the workshops; - Ash from the onsite boiler was stored in a skip onsite and collected by a licenced waste contractor and taken to a landfill for disposal; - Waste polythene removed from stockpiles was collected at the roadside by a plastic recycling company; and - Workshop waste and general refuse from canteens/offices were historically burned on site or disposed of into waste disposal areas at the workshops. This practise changed to the use of skips which were then collected by licenced waste contractors.	human health impacts by fire, dust and pollutant release to air.
Archaeological Preservation	Section 4.5.4 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 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 Section 13.3 (of Chapter 13 Cultural Heritage of this remedial EIA).	Minimisation/prevention of subsurface archaeological destruction, loss or interference through drainage and extraction operations and/or failure to recognise/report finds.

Peat Extraction (1988 to June 2020)				
Control Measures Post-July 1988 as per Section 4.7.8 in Chapter 4 Project Description of the remedial EIAR				
Measure	Location in remedial EIAR	Receptor	Control Measure	Impact
Emissions Control (dust, noise, water, silt run off); Health and Safety; Terrestrial Habitat protection; Aquatic habitat protection	Section 4.7.7 Chapter 4; Appendix 4-10; Chapters 4 - 15	Surface and ground water; Sensitive receptors; Habitats; Aquatic species; Traffic / road users; Bord na Móna Employees; Bog Habitats	Post-1988, but prior to the implementation of the IPC Licence at the Application Site in 2000, the environmental management measures set out in Section 4.7.6 under Peat Extraction Phase, remained in place across the Application Site. In addition, as evidenced in the 1991 Harkins Report (see Appendix 4.7), silt control measures in the form of silt ponds were in place prior to 1988, with the Applicant carrying out further studies and surveys throughout the 1980s and 1990s to improve silt pond design and use such that suspended solids emissions in surface run-off were reduced.	Prevention/minimisation of environmental and human health impacts, including from fire, dust and air pollutant emissions; Prevention/minimisation of environmental impacts from dust and pollutant release to surface waters; Containment of dust, surface and groundwater emissions, traffic disruption/soiled roads, and silt run off; Minimisation of fuel leak/groundwater contamination; Prevention/minimisation of impacts to human health by personal injury.
Emissions Control (dust, noise, water, silt run off)	Chapter 8 and 9	Surface and ground water; Sensitive receptors; Habitats;	Pre-IPC Licence: The following environmental control measures implemented at the Applications Site Pre-2000 (as per section 8.6 of Chapter 8 of the remedial EIAR). All peat extraction machinery were stored at the Derrygreenagh Works or local holding areas at the end of each workday;	Prevention/minimisation of environmental and human health impacts, including from dust and air pollutant emissions; Prevention/minimisation of

		Aquatic species; Bord na Móna Employees; Bog Habitats	• All machinery were regularly inspected, serviced by dedicated Bord na Móna staff; • All machinery was regularly cleaned via power steam wash system at a wash bay and drained into an interceptor tank and associated gravel soak pit. The interceptor unit facilitated the removal of any oil and grease components to minimise dust and particle release; • A self-contained machine parts washer was located at the Derrygreenagh Works,; • All refuelling and vehicles maintenance was undertaken at the Derrygreenagh Works depot; • When machinery required refuelling on the Application Site, it was carried out by a mobile (rail or tractor-transported) fuelling unit which travelled out from the Derrygreenagh Works to the bog where the machinery was located. • In the event of a spill, the General Manager was immediately informed of the incident: ○ The spill was assessed by the General Manager for potential risk to the health and safety of employees and the potential environmental consequences; ○ A spill would be sourced, isolated and contained with polystyrene booms or dry peat (moisture content of 10%). ○ All effort should be made to prevent the spill from entering a storm drain or nearest outfall. ○ Once the spill has been contained, a suitable absorbent (dry peat) is to be used to soak the spillage. ○ All possible ignition sources such as electrical equipment, naked lights, machinery should be removed from the area. Any combustibles in the spill area should be removed. ○ Follow up action measures taken must include the implementation of appropriate remedial work to prevent such a spillage recurring in the future.	environmental impacts from dust and pollutant release to surface waters; Containment of dust, surface and groundwater emissions, traffic disruption/soiled roads, and silt run off; Minimisation of fuel leak/groundwater contamination; Prevention/minimisation of impacts to human health by personal injury.
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			○ In the event of a significant spillage, the General Manager must notify the local authority. • All waste oil and break fluids drained from machinery were collected in drums and emptied into a waste oil storage tank which were transported off-site by a licenced disposal contractor; • All used oil and fuel filters and used batteries were collected by licenced disposal and battery collection contractors respectively; • All washing from the self-contained machine parts washer was collected within a sludge tank at the Derrygreenagh Works.	
Air Quality	Section 10.5, Chapter 10	Air /Atmosphere; Surface and ground water; Sensitive receptors; Habitats; Aquatic species; Bord na Móna Employees; Bog Habitats	Vehicle Emissions As outlined in Chapter 4 Project Description, a range of environmental management measures were implemented at the Application Site throughout the Peat Extraction Phase, including controls relating to vehicle and machinery emissions. Control measures were in place on site prior to 2000 with the implementation of the IPC licence and the measures imposed with the granting of the IPC licence for the site. These measures included routine inspection, servicing and maintenance of site vehicles and plant to ensure equipment remained in good working order and operated efficiently. Regular maintenance reduced the potential for excessive exhaust emissions arising from poorly maintained engines. Dust Emissions The following control measures were undertaken as part of general site management and daily operation procedures at the Application Site from the onset of extraction in the 1950s to the cessation of peat extraction in 2020: • Stockpiles were compacted on either side by large rollers drawn by tractors; • Stockpiles were covered with polythene film gauge sheets and secured in position by spreading an even layer of high moisture content milled peat;	Prevention/minimisation of environmental and human health impacts, including from dust and air pollutant emissions; Prevention/minimisation of environmental impacts from dust and pollutant release to surface waters; Containment of dust; Minimisation of fuel leak/groundwater contamination.

			• Peat extraction during windy weather was to be avoided; • The headlands were to be kept clean and loose peat removed; • Drivers were required to drive slow along dusty headlands; and • All road crossing points were to be maintained clean. From 1988 to June 2020, it is considered that the majority of the time, dust emissions were reduced naturally due to meteorological conditions. Condition 5.5 of the IPC licence which came into effect in May 2000 for the site specifies the following dust control measures were to be implemented on site within 6 months of granting of the licence.	
Peat Extraction (1988 to June 2020)				
Control Measures 2000 to Present-Day (Post-grant of IPC Licence) as per Section 4.7.9 of Chapter 4 Project Description of the remedial EIAR				
Measure	Location in remedial EIAR	Receptor	Control Measure	Impact
Emissions to Atmosphere; Emissions to Water; Waste Management; Noise; Water Protection	Chapters 4 - 15; Appendix 4-1: IPC Licence P0501-01	Air / Atmosphere; Surface and ground water; Residential receptors; Mammals; Habitats; Aquatic species	Control Measures 2000 to Present Day (Post-grant of IPC Licence) The IPC Licence is subject to 14. no conditions pertaining to the ongoing monitoring and maintenance to ensure any emissions from site activities will comply with and not contravene, any of the requirements of Section 83(3) of the Environmental Protection Agency Act, 1992 outlined below: <i>(3) The Agency shall not grant a licence or revised licence for an activity unless it is satisfied that—</i> <i>(a) any emissions from the activity will not result in the contravention of any relevant air quality standard specified under section 50 of the Air Pollution Act, 1987, and will comply with any relevant emission limit value specified under section 51 of the Air Pollution Act, 1987,</i> <i>(b) any emissions from the activity will comply with, or will not result in the contravention of, any relevant quality standard for waters, trade effluents and sewage effluents and standards in relation to treatment of such effluents prescribed under section 26 of the Local Government (Water Pollution) Act, 1977,</i> <i>(c) any emissions from the activity or any premises, plant, methods,</i>	Prevention/minimisation of environmental and human health impacts, including from fire, dust and air pollutant emissions; Prevention/minimisation of environmental impacts from dust and pollutant release to surface waters; Containment of dust, surface and groundwater emissions, traffic disruption/soiled roads, and silt run off; Minimisation of fuel leak/groundwater contamination; Prevention/minimisation of

		<i>processes, operating procedures or other factors which affect such emissions will comply with, or will not result in the contravention of, any relevant standard including any standard for an environmental medium prescribed under regulations made under the European Communities Act, 1972, or under any other enactment,</i> <i>(d) any noise from the activity will comply with, or will not result in the contravention of, any regulations under section 106,</i> <i>(e) any emissions from the activity will not cause significant environmental pollution, and</i> <i>(f) the best available technology not entailing excessive costs will be used to prevent or eliminate or, where that is not practicable, to limit, abate or reduce an emission from the activity,</i> <i>and, where appropriate, the Agency shall attach conditions relating to the matters specified in the foregoing paragraphs to the licence or revised licence.</i> Conditions 1 to 4 of the IPC Licence outlined the Scope, Management, Interpretation and Notification procedures required by the Applicant, respectively. Conditions 11 to 14 detail the Monitoring (equipment use), Recording and Reporting, Emergency Response and Financial Provisions duties of the Applicant. Conditions 5 to 10 pertain to environmental monitoring and management: • Condition 5 Emissions to Atmosphere; • Condition 6 Emissions to Water; • Condition 7 Waste Management; • Condition 8 Noise; • Condition 9 Water Protection; and • Condition 10 Cutaway Bog Rehabilitation In compliance with Condition 5, the Applicant must undertake annual tests on boiler combustion efficiency and dust monitoring. Please see Chapter 10 Air Quality (of the remedial EIAR) for further details. Condition 6 ensures the Applicant establishes a surface water discharge monitoring programme which is reviewed annually, and a report	impacts to human health by personal injury.
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			submitted to the EPA quarterly. The Applicant is also required to submit water sample results annually, implement and maintain silt ponds. Condition 9 pertains to the 'Water Protection' and outlines the daily, weekly, monthly, quarterly, and annual inspections Bord na Móna must carry out to provide for the protection of surface and groundwater. There are currently silt pond inspections and maintenance including quarterly grab sampling ongoing at the Application Site. Please see Chapter 9 Hydrology, Hydrogeology and Water Quality (of the remedial EIAR) for further details. Condition 7 requires the Applicant to correctly dispose of waste to licenced facilities. Please see Chapter 14 Material Assets (of the remedial EIAR) for details. Condition 8 ensures that any on site activities do not give rise to noise exceedances at noise sensitive locations. Please see Chapter 11 Noise and Vibration (of the remedial EIAR) for further details. Condition 10 pertains to site decommissioning followed by peatland rehabilitation and is detailed in Section 4.9 (of Chapter 4 the remedial EIAR) which details the Remedial Phase, and Chapter 7 Biodiversity (of the remedial EIAR). It is the intention of the of the Applicant to continue implementing and practising the monitoring measures as listed in the Licence after the site is decommissioned, where applicable.	
Emissions Control (dust, noise, water, silt run off); Health and Safety; Terrestrial Habitat protection; Aquatic habitat protection	Chapters 4 -15; Appendix 4-1: IPC Licence P0501-01	Air / Atmosphere; Surface and ground water; Residential receptors; Mammals; Habitats; Aquatic species	IPC Licence Condition 5 Emissions to Atmosphere: 5.1 Boiler Combustion Efficiency shall be tested annually and results reported on annually as part of the AER. 5.2 The licensee shall ensure that all operations on-site shall be carried out in a manner such 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. 5.3 Within three months of the date of grant of the licence, the licensee shall submit to the Agency for agreement, a proposal for the identification and monitoring of Dust Sensitive Locations (DSL's) on and off site for dust deposition. A report on this monitoring shall be submitted annually as part of the AER. 5.4 Activities on-site shall not give rise to dust levels off site at any Dust	Prevention/minimisation of environmental and human health impacts by dust and pollutant release to air; Prevention/minimisation of environmental impacts from dust and pollutant release to surface waters.

			Sensitive Location which exceed an emission limit of 350 mg/m²/day. (The sampling method to be in accordance with German TA Luft Emissions Standards for Particle Deposition (IW1)). 5.5 In relation to Dust Control the licensee shall, within six months of date of grant of this licence, develop and implement procedures to ensure that: • Shelter belts are planted in sensitive areas; • Harvesting in sensitive areas is avoided during windy weather; • Where possible machinery use grassed pathways; • Headlands are kept clean and free of excessive loose peat; • Stockpiles are sheeted where possible; • Moving machinery maintains slow speeds when travelling along dusty headlands; • When harvesting, the jib is maintained low to the stockpile; • Shelter belts are planted around out-loading facilities; • Road transported peat is adequately covered (sheeted or similar); Wind breaks are planted where-ever possible.	
Emissions Control (dust, noise, water, silt run off); Health and Safety; Terrestrial Habitat protection;	Chapter 4 - 9; Chapter 13; Appendix 4-1: IPC Licence P0504-01	Surface and ground water; Residential receptors; Mammals; Habitats; Aquatic species	IPC Licence Condition 6 Emissions to Water: 6.1 No specified emission to water shall exceed the emission limit values set out in Schedule1(i) Emissions to Water subject to Condition 3 of this licence. There shall be no other emissions to water of environmental significance. 6.2 The licensee shall within three months of date of grant submit to the Agency for approval, a proposal for a surface water discharge monitoring location programme. This programme shall, inter alia, have regard to the current status of each bogland (virgin, under development, operational or worked out), sensitivity of the receiving water, status of	Containment of dust, surface and groundwater emissions, traffic disruption/soiled roads, and silt run off; Minimisation of fuel leak/groundwater contamination; Prevention/minimisation of environmental impacts dust
Aquatic habitat			silt pond upgrade programme. This programme shall be reviewed and	And pollutant release to

protection			revised as necessary each year as part of the AER. 6.3 The licensee shall, within six months of date of grant of licence, present a proposal for the installation (on a long term basis) of a composite sampler to one representative discharge point within the licensed area. The proposal shall set out the rationale for selection of the nominated discharge point as well as the sampling programme. The results of this monitoring are to be reported each year as part of the AER. Any proposal to relocate the composite sampler is to be dealt with under Condition 6.2. 6.4 Monitoring and analyses of each agreed emission monitoring location shall be carried out as specified in <i>Schedule 1(H) Monitoring of Emissions to Water</i> of this licence. A report on the results of this monitoring shall be submitted to the Agency quarterly. 6.5 A summary report of emissions to water shall be submitted to the Agency as part of the AER. The information contained in this report shall be prepared in accordance with any relevant guidelines issued by the Agency. 6.6 The licensee shall, within six months of the date of grant of licence, develop and implement a programme to ensure that all drainage water from all boglands in the licensed area is discharged via an appropriately designed silt pond treatment arrangement. The programme, to be implemented within a period to be agreed with the Agency, shall ensure that all discharges associated with operational boglands should be prioritised within this programme. 6.7 Within three months of the date of grant of licence, the licensee shall prepare an operational procedure for de-silting of the silt ponds. The procedure shall as a minimum provide for visual inspection of all ponds on a fortnightly basis. The de-silting roster shall be based on recommendations of such visual inspection. A log of visual inspection and desilting shall be maintained and a summary report on the de-silting programme shall be included in the AER. The licensee shall within 12 months of the date of grant of licence demonstrate to the satisfaction of the Agency that the programme of inspection is adequate. 6.8 Silt ponds serving operational bogs shall be cleaned as a minimum	surface waters.
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			twice a year, once before ditching and once before harvesting, and more frequently as inspections may dictate (refer Condition 6.7). Septic tanks and interceptors are required to be inspected and cleaned as necessary with a log being maintained. 6.9 Within six months of the date of grant of licence, the licensee shall prepare a programme, for agreement with the Agency, to upgrade all the sedimentation pond treatment system. The programme shall, inter alia, address provision of additional ponds, weir or pipe installation (inlet and outlet), pond configuration, use of baffles, performance efficiency and frequency of de-silting. The upgrade shall have regard to the minimum silt pond specifications detailed in Condition 6.10. 6.10 Within three years of date of grant of this licence all existing silt ponds serving operational bogs shall achieve the following minimum performance criteria (flood periods excepted): • Maximum flow velocity < 10 cms¹; • Silt design capacity of lagoons, minimum 50m³ per nett ha of bog serviced; All new ponds installed shall be designed to achieve these stated minimum design criteria. 6.11 All silt ponds prone to flooding shall be de-silted by 1st November of each year. Excavated sludge shall be removed for disposal to a location outside the flood plain. 6.12 In respect of silt control the licensee shall, within nine months of date of grant of this licence, prepare and implement procedures to ensure that: Drainage manholes are protected and maintained free of excessive peat; Headlands are kept clean and free of excessive loose peat; All new manholes and outfalls are set well back from turning grounds, drivers of bog plant do not turn short (over drains) at headlands;	
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			Harrows, millers, ridgers do not drag loose peat onto manholes or into drains, outside harrow spoons are directed away from drains; Silt run-off, while piping or ditching, is minimised; Outfalls are controlled to minimise silt discharge during cleaning operations; Drains are ditched in dry weather While ditching, outfalls are blocked and ditch towards outfall; Outlets from stockpile field drains are blocked during stockpile loading; Field drains adjacent to stockpiles are cleaned as soon as practicable after stockpile loading Adequate room is allowed for rail bed beside Peco stockpiles; All fields that have been milled are ridged at the end of the production season; All fields liable to winter flooding have been cleared of milled peat or re-compacted at the end of the production season. <i>Reason: To provide for the protection of the environment by way of control, limitation, treatment and monitoring of emissions.</i>	
Emissions Control (dust, noise, water, silt run off); Health and Safety; Terrestrial Habitat protection;	Chapters 4 – 15; Appendix 4-1: IPC Licence P0501-01	Air / Atmosphere; Surface and ground water; Residential receptors;	IPC Licence Condition 7 Waste Management 7.2 Disposal or recovery of waste shall take place only as specified in <i>Schedule 2(i) Hazardous Wastes for Disposal/Recovery</i> and <i>Schedule 2(ii) Other Wastes for Disposal/Recovery</i> of this licence and in accordance with the appropriate National and European legislation and protocols. No other waste shall be disposed of/recovered either on-site or off-site without prior notice to, and prior written agreement of, the Agency. 7.3 Waste sent off-site for recovery or disposal shall only be conveyed to a waste contractor, as agreed by the Agency, and only transported	Containment of dust and surface and groundwater emissions; Minimisation of fuel leak/groundwater contamination; Prevention/ minimization of environmental impacts from dust and pollutant release to surface waters.

Aquatic habitat protection			from the site of the activity to the site of recovery/disposal in a manner which will not adversely affect the environment. 7.3 A full record, which shall be open to inspection by authorised persons of the Agency at all times, shall be kept by the licensee on matters relating to the waste management operations and practices at this site. This record shall as a minimum contain details of the following: • 7.3.1 The names of the agent and transporter of the waste; • 7.3.2 The name of the persons responsible for the ultimate disposal/recovery of the waste; • 7.3.3 The ultimate destination of the waste; • 7.3.4 Written confirmation of the acceptance and disposal/recovery of any hazardous waste consignments sent off-site; • 7.3.5 The tonnages and EWC Code for the waste materials listed in <i>Schedule 2(i) Hazardous Wastes for Disposal/Recovery</i> and <i>Schedule 2(ii) Other Wastes for Disposal/Recovery</i> sent off site for disposal/recovery; • 7.3.6 Details of any rejected consignments. A copy of this Waste Management record shall be submitted to the Agency as part of the AER for the site. 7.4 Within nine months of the date of grant of licence, the licensee shall submit to the Agency for agreement, a proposal for identification and management of all ash and screening disposal areas. Once agreed, the proposal shall be implemented within a time-scale stipulated by the Agency. <i>Reason: To provide for the disposal of waste and the protection of the environment</i>	
Emissions Control (dust, noise, water, silt)	Chapters 4 -15; Appendix 4-1: IPC Licence	Sensitive receptors;	IPC Licence Condition 8 Noise 8.1 Activities on-site shall not give rise to noise levels off site at any noise sensitive location which exceed the following sound pressure	Containment/minimisation of health impacts from noise and vibration emissions.

run off); Fire Prevention; Health and Safety; Terrestrial Habitat protection; Aquatic habitat protection	P0501-01	Mammals; Habitats; Aquatic Species; Bord na Móna Employees	limits (Leq, _{30min}) subject to Condition 3 (of this Licence): - Day-time: 55 dB(A); - Night-time: 45 dB(A). 8.2 There shall be no clearly audible tonal component or impulsive component in the noise emission from the activity at any noise sensitive location. <i>Reason: To provide for the protection of the environment by control of noise.</i>	
Emissions Control (dust, noise, water, silt run off); Terrestrial Habitat protection; Aquatic habitat protection	Chapters 4 - 15; Appendix 4-1: IPC Licence P0501-01	Surface and ground water; Residential receptors; Mammals; Habitats; Aquatic Species	IPC Licence Condition 9 Water Protection 9.1 Surface & Groundwater Protection - Workshop areas and Depots. 9.1.1 No potentially polluting substance or matter shall be permitted to discharge to offsite surface waters, off site storm drains or groundwaters. 9.1.2 Monitoring and analyses of surface water discharges shall be carried out as specified in <i>Schedule 3 Monitoring of Workshop/Depot Surface Water Run-off</i> of this licence. A report on the results of this monitoring shall be submitted to the Agency quarterly. 9.1.3 In the event that any analyses or observations made on the quality or appearance of surface water runoff should indicate that contamination has taken place, the licensee shall: (i) Carry out an immediate investigation to identify and isolate the source of the contamination; (ii) Put in place measures to prevent further contamination and to minimise the effects of any contamination on the environment; (iii) And notify the agency as soon as is practicable. 9.1.4 Within twelve months of the date of grant of licence, all tank and drum storage areas shall be rendered impervious to the materials stored therein. In addition, tank and drum storage areas shall, as a minimum be bunded, either locally or remotely, to a volume not less than the greater	Containment of dust, and surface and groundwater emissions; Minimisation of fuel leak/groundwater.

			of the following: (i) 110% of the capacity of the largest tank or drum within the bunded area; (ii) 25% of the total volume of substance which could be stored within the bunded area. 9.1.5 Drainage from bunded areas shall be diverted for collection and safe disposal. 9.1.6 The integrity and water tightness of all the bunding structures and their resistance to penetration by water or other materials stored therein shall be tested and demonstrated by the licensee to the satisfaction of the Agency and shall be reported to the Agency within eighteen months from the date of grant of this licence and every two years thereafter. A report on such tests shall be included in the AER. 9.1.7 Within twelve months of the date of grant of licence, the loading and unloading of fuel oils shall be carried out in designated areas protected against spillage and leachate run-off. While awaiting disposal, all materials shall be collected and stored in designated areas protected against spillage and leachate run-off. 9.1.8 With the exception of roof water, all surface water discharges from workshop areas shall, within twenty-four months of date of grant of this licence, be fitted with oil interceptors. 9.1.9 A maintenance/cleaning log for all oil interceptors and septic tanks shall be maintained. This log shall also record the observations made during weekly inspections of all oil interceptors and bi-annual inspections of septic tanks. 9.1.10 An inspection for leaks on all flanges and valves on over-ground pipes used to transport materials other than water shall be carried out weekly. 9.1.11 The provision of a catchment system to collect any leaks from flanges and valves of all over ground pipes used to transport material other than water shall be examined. 9.1.12 The licensee shall have in storage an adequate supply of	
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			containment booms and/or suitable absorbent material to contain and absorb any spillage. 9.1.13 The licensee shall maintain a log of bi-annual inspections of all rail and tractor transported fuelling units. These inspections as a minimum should record any damage or leaks or flaws in rolling stock that could result in accidental spillage. <i>Reason: To provide for the protection of surface waters and groundwater.</i>	
Emissions Control (dust, noise, water, silt run off); Terrestrial Habitat protection; Aquatic habitat protection	Appendix 4-1: IPC Licence P0501-01	Surface and ground water; Sensitive receptors; Mammals; Habitats; Aquatic Species	IPC Licence Condition 11 Monitoring 11.1 The licensee shall carry out such sampling, analyses, measurements, examinations, maintenance and calibrations as set out in Schedules:- • <i>Schedule 1(ii) Monitoring of Emissions to Water;</i> • <i>Schedule 3 Monitoring of Workshop/Depot Surface Water Run-off</i> of this licence. 11.2 Where the ability to measure a parameter is affected by mixing before emission, then, with prior written agreement from the Agency, the parameter may be assessed before mixing takes place. 11.3 All automatic monitors and samplers shall be functioning at all times (except during maintenance and calibration) when the activity is being carried on unless alternative sampling or monitoring has been agreed in writing by the Agency for a limited period. Prior written agreement for the use of alternative equipment, other than in emergency situations, shall be obtained from the Agency. 11.4 Monitoring and analysis equipment shall be operated and maintained as necessary so that monitoring accurately reflects the emission or discharge. 11.5 The frequency, methods and scope of monitoring, sampling and analyses, as set out in this licence, may be amended with the written agreement of the Agency following evaluation of test results.	Containment of dust, and surface and groundwater emissions; Minimisation of fuel leak/groundwater contamination; Prevention/minimisation of environmental impacts and human health, impacts by fire, dust and pollutant release to air.

			11.6 The licensee shall provide signage to clearly identify and label all emission points. 11.7 The licensee shall install on all emission points such sampling equipment, including any data-logging or other electronic communication equipment, as may be required by the Agency. All such equipment shall be consistent with the safe operation of all sampling and monitoring systems. 11.8 The licensee shall provide safe and permanent access to the following sampling and monitoring points (i) Waste storage areas on-site; (ii) Surface water discharges; (iii) Dust sampling locations. and safe access to any other sampling and monitoring points required by the Agency. <i>Reason: To ensure compliance with the requirements of other conditions of this licence by provision of a satisfactory system of measurement and monitoring of emissions.</i>	
Emissions Control (dust, noise, water, silt run off); Fire Prevention; Health and Safety; Terrestrial & Aquatic habitat protection;	Chapters 4 - 15; Appendix 4-1: IPC Licence P0501-01	Surface and ground water; Sensitive receptors; Habitats; Aquatic species; Bord na Móna Employees	IPC Licence Condition 13 Emergency Response 13.1 The licensee shall, within six months of date of grant of this licence, ensure that a documented Emergency Response Procedure is in place which shall address any emergency situation which may originate on-site. This Procedure shall include provision for minimising the effects of any emergency on the environment. <i>Reason: To provide for the protection of the environment.</i>	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.
Emissions Control (dust, noise, water, silt	Chapters 8 - 9	Surface and ground water;	These control measures were upgraded to comply with the IPC Licence conditions in 2000:	Containment of, surface and groundwater emissions, and silt run off;

run off)		Sensitive receptors; Habitats; Aquatic species; Bord na Móna Employees; Bog Habitats	Inspections and monitoring of wastewater systems and associated discharges in accordance with the IPC licence. Bog Hydrology & Downstream Surface Water Hydrogeology: Surface Water Quality Prior to the taking of effect of the IPC Licence, control measures were already in place to protect surface water quality in downstream waterbodies (Section 9.5 of Chapter 9 of the remedial EIAR). bogs were regulated by the EPA under IPC Licence (Reg. No. P0501-01) since early 2000. No additional control measures, other than compliance with the control measures, regulated by the EPA, are considered necessary in terms of protecting groundwater quality. The following control measures are conditioned under the IPC Licence, as regulated by the EPA: • Effective spill/leak management of mobile fuelling units; • Replacement (and remediation where necessary) of all underground fuel tanks; • There shall be no other emissions to water of environmental significance; • All tank and drum storage areas shall be rendered impervious to the materials stored therein. In addition, tank and drum storage areas shall, as a minimum be bunded; • Drainage from bunded areas shall be diverted for collection and safe disposal; • The integrity and water tightness of all the bunding structures and their resistance to penetration by water or other materials stored therein shall be tested and demonstrated by the licensee to the satisfaction of the Agency and shall be reported to the Agency within eighteen months from the date of grant of this licence and every two years thereafter; • The loading and unloading of fuel oils shall be carried out in	Minimisation of fuel leak/groundwater contamination; Prevention/minimisation of environmental and human health impacts; Prevention/minimisation of impacts to human health by personal injury.
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			designated areas protected against spillage and leachate run-off; • While awaiting disposal, all materials shall be collected and stored in designated areas protected against spillage and leachate run-off; • With the exception of roof water, all surface water discharges from workshop areas shall, be fitted with oil interceptors; • An inspection for leaks on all flanges and valves on over-ground pipes used to transport materials other than water shall be carried out weekly; • The licensee (Bord na Móna) shall undertake a programme of testing and inspection of underground fuel pipelines to ensure that all underground fuel lines are tested at least every three years; and • The licensee shall have in storage an adequate supply of containment booms and/or suitable absorbent material to contain and absorb any spillage. In terms of groundwater quantity and hydrology (surface water runoff), or volumetric flows to surface water impacted by groundwater drainage of the bogs, control measures that were in place included: • Field drains with low gradients; • Silt ponds, as well as being a control measure for sediment from the bog, also acted as attenuation measures for higher flows during peak rainfall events. Each metre length of silt pond provides approximately 12m³ of water storage, which aided in slowing down the discharge from the bog; • Silt ponds were cleaned at least twice a year to maintain adequate storage and treatment (sedimentation/settlement) capacity; and • Pump capacities at pumping station were designed based on a runoff rate of <1 l/s/Ha[BK16.1][JW16.2][JD16.3], which is less than the greenfield runoff rates (max discharge rate or 0.46 m³/s for an area of 5.3km²). Runoff rates for the peatlands are greater than 5 l/s/HA therefore surface water tends to accumulate on site during the winter providing additional flood storage on site and reducing the potential for flooding off site. Pumping will be reduced	
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			or removed under the Draft rehabilitation plan. Contamination of Soil/Groundwater by Leakages and Spillages and Alteration of Peat/Subsoil/Bedrock Geochemistry Measures that mitigated against contamination of peat, subsoil and bedrock are presented below: • Effective spill/leak management of mobile fuelling units; • Replacement (and remediation where necessary) of all underground fuel tanks; • There shall be no other emissions to water of environmental significance; • All tank and drum storage areas shall be rendered impervious to the materials stored therein; • In addition, tank and drum storage areas shall, as a minimum be bunded; • Drainage from bunded areas shall be diverted for collection and safe disposal; • The integrity and water tightness of all the bunding structures and their resistance to penetration by water or other materials stored therein shall be tested and demonstrated by the licensee to the satisfaction of the Agency and shall be reported to the Agency within eighteen months from the date of grant of this licence and every two years thereafter; • The loading and unloading of fuel oils shall be carried out in designated areas protected against spillage and leachate run-off; • While awaiting disposal, all materials shall be collected and stored in designated areas protected against spillage and leachate run-off; • With the exception of roof water, all surface water discharges from workshop areas shall, be fitted with oil interceptors; • An inspection for leaks on all flanges and valves on over-ground pipes used to transport materials other than water shall be carried	
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			out weekly; and • Inspections and monitoring of wastewater systems and associated discharges. Nearby Groundwater/Surface Water Abstractions Potential effects on GWS/PWS have been assessed for the Application Site. Part of Ballybeg Bog is located in the ZOC for Toberdaly however no effects were identified. Ballybeg Bog is underlain by deep subsoils and no spills or contaminated were noted in the area by TOBIN during the site walkovers. The control measures that have protected these water sources are the same as those outlined in Chapter 4 and Section 9.6.5 relating to spills/leakages on the bog units. The implementation of these measures has protected groundwater quality and eliminated any effects on water quality in the underlying aquifer and at downstream water supply source locations. The control measures that have protected these local groundwater wells/supplies are the same as those outlined in Section 9.6.6, relating to spills/leakages on the bog units. The implementation of those measures has protected groundwater quality and eliminated any effects on water quality in the underlying aquifer and at downstream local groundwater wells/supplies. Impact on Water Quality During this period the Application Site operated under IPC licensing requirements with respect to surface water discharge quality and quantity. As required by the Licence, waste items have and will continue to be removed for recycling or disposal, using external contractors with the required waste collection permits, approved under Condition 7.2, and waste records are and will continue to be maintained as required under Condition 7.3. Measures that mitigated against contamination of waters are outlined in Section 9.6 (of Chapter 9 of the remedial EIAR) and will be being adhered to at the Application Site.	
Archaeological	Section 13.3.2,	Unrecorded	Unrecorded potential sub-surface archaeology	Minimisation/prevention of

preservation	Chapter 13;	potential subsurface Archaeology	Peat extraction expanded significantly in the 1980s, leading to archaeological surveys and excavations licensed by the National Monuments Service (NMS). All bogs within the Application Site were initially surveyed in 2000–2001, with further archaeological works undertaken at Ballybeg Bog and Toar Bog between 2002 and 2014. Following the surveys, monuments threatened by extraction, particularly those close to the surface or exposed in drain faces, were prioritised for archaeological mitigation and excavation. The NMS subsequently commissioned reports to evaluate and inform peatland archaeological survey, excavation and mitigation strategies. Since 1998, Bord na Mona has had a statutory duty under the Turf Development Act 1998 to afford appropriate protection for the environment and archaeological heritage. The Applicant's peat extraction activities are also governed by the 2012 Code of Practice, which provides for the funding of archaeological investigation, excavation, post-excavation and mitigation, and procedures for suspected archaeological discoveries. The Code has been implemented across the Applicant's bogs and incorporated into staff induction training.	subsurface archaeological destruction, loss or interference through drainage and extraction operations and/or failure to recognise/report finds.
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Current Phase (July 2020 to Present Day)				
Control Measures 2000 to Present-Day (Post-grant of IPC Licence) as above and as per Section 4.8 of Chapter 4 and Chapter 13 of the remedial EIAR have been and are currently implemented during the Current Phase.				
Decommissioning and Rehabilitation Process				
Measure	Location in remedial EIAR	Receptor	Control Measure	Impact
Emissions Control (dust, noise, water, silt run off); Fire Prevention; Health and Safety; Terrestrial Habitat Protection; Aquatic habitat protection	Chapter 4; Appendix 4-1: IPC Licence P0501-01; Appendix 4-3: Cutaway Bog Decommissioning and Rehabilitation Plan	Bog habitats; Aquatic habitats; Mammals; Bird species; Surface and groundwaters; Sensitive receptors	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 or other matter contained therein or thereon, that may result in environmental pollution. 10.1.2 Implement the agreed cutaway bog rehabilitation plan (refer Condition 10.2). <i>Reason: To make provision for the proper closure of the activity ensuring protection of the environment.</i>	Containment of dust, and surface and groundwater emissions; Minimisation of fuel leak/groundwater contamination; Prevention/minimisation of environmental impacts and human health impacts by fire, dust and pollutant release to air.
Archaeology and Cultural Heritage	Section 13.3.3 Chapter 13	Archaeological and cultural heritage receptors; Unrecorded subsurface Archaeology	A 20 m buffer zone will be established around the recorded monument OF011-059, which comprises a stone enclosure that was recorded in Ballybeg Bog and has been preserved in-situ. The buffer area should be defined with temporary fencing in order to prevent inadvertent impacts associated with the passing of plant or decommissioning activities. Since peat activities associated with the Applicant fall under the 2012 Archaeological Code of Practice, should any previously unknown archaeological material be uncovered during the rehabilitation works, the material should be avoided and reported to the Applicant's Archaeological Liaison Officer and the National Museum of Ireland. Since peat activities associated with the	Minimisation/prevention of subsurface archaeological destruction, loss or interference through drainage and extraction operations and/or failure to recognise/report finds.

			Applicant fall under the 2012 Archaeological Code of Practice, any potential effects may be dealt with in the same way as past peat extraction activities and all ancillary works, through the implementation of mitigation measures detailed in the 2012 Code of Practice.	
Remedial Phase (Future Activities)				
Control measures undertaken during the Remedial Phase as per section 4.9 of Chapter 4 and Chapter 8, 9, 10, 11, 13 and 14.				
Discipline	Location in remedial EIAR	Receptors	Mitigation I Measures	Potential Impact
Emissions Control (dust, noise, water, silt run off); Fire Prevention; Health and Safety; Terrestrial Habitat Protection; Aquatic habitat protection	Chapter 4; Appendix 4-1: IPC Licence P0501-01; Appendix 4-3: Cutaway Bog Decommissioning and Rehabilitation Plan; Bord na Móna Code of Practice	Bog habitats; Aquatic habitats; Mammals; Bird species; Surface and groundwaters; Sensitive receptors	Condition 10 Cutaway Bog Rehabilitation 10.2 Cutaway Bog Rehabilitation Plan: 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. This plan shall be submitted to the Agency for agreement within eighteen months of the date of grant of this licence; 10.2.2 The plan shall be reviewed every two years and proposed amendments thereto notified to the Agency for agreement 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, the following: 10.3.1 A scope statement for the plan, to include outcome of consultations with relevant Agencies, Authorities and affected parties (to be identified by the licensee); 10.3.2 The criteria which define the successful rehabilitation of the activity or part thereof, which ensures minimum impact to the environment; 10.3.3 A programme to achieve the stated criteria; 10.3.4 Where relevant, a test programme to demonstrate the	Environmental Stabilisation raised bog restoration, and the development of active raised bog, where possible; Enhance the ecosystem services of application in particular, optimising climate action benefits.

			successful implementation of the rehabilitation plan; 10.3.5 A programme for aftercare and maintenance. 10.4 A final validation report to include a certificate of completion for the Rehabilitation Plan, for all or part of the site as necessary, 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. <i>Reason: To make provision for the proper closure of the activity ensuring protection of the environment.</i>	
Emissions Control (dust, noise, water, silt run off); Fire Prevention; Health and Safety;	Chapter 4-15; Appendix 4-1: IPC Licence P0504-01; Appendix 4-3: Cutaway Bog Decommissioning and	Bog habitats; Aquatic Habitats; Mammals; Bird species; Surface and groundwaters;	The Applicant has committed to continuing compliance with conditions outlined in the IPC Licence. The subsequent sections summarises the specific mitigation measures proposed for the Remedial Phase beyond the ones in compliance with the IPC Licence.	Containment of dust, surface and groundwater emissions, traffic disruption/soiled roads, and silt run off; Minimisation of fuel leak/groundwater contamination;
Terrestrial Habitat protection; Aquatic habitat protection; Noise and Vibration emission; Traffic and Transport; Archaeology and	Section 7.12 Chapter 7; Appendix 4-3: Cutaway Bog Decommissioning and Rehabilitation Plan; Bord na Móna Code of Practice	Sensitive receptors	<u>Biodiversity – Habitats:</u> Best Practice Measures to Prevent Habitat Loss and Degradation During Rehabilitation Works are summarised below. The rehabilitation works planned for the Application Site have been carefully designed to ensure that no loss or degradation of habitat occurs as a result of the activities or machinery required for implementation. While mechanical interventions are necessary to achieve the restoration objectives, all work will be conducted in a manner that prioritises environmental protection, minimises disturbance, and supports the long-term ecological recovery of the site.	Prevention/minimisation of environmental and human health impacts by fire, 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; Minimisation/prevention of

Cultural Heritage		To safeguard existing habitats and ensure the rehabilitation efforts are carried out with minimal impact, the following best practice measures will be strictly adhered to: 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. No works will extend beyond these defined areas to ensure that adjacent habitats remain undisturbed. This approach is essential in preventing unintended environmental impact, protecting established vegetation, and maintaining existing ecosystem functions. To enforce this measure: • Clear boundary markers and signage will be installed around the designated rehabilitation areas to prevent accidental encroachment into undisturbed habitats. • 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. • A monitoring system will be put in place to track any deviations from the approved work zones and make immediate corrective actions if necessary. • This level of control will ensure that rehabilitation activities focus only on the areas targeted for restoration, preventing unnecessary disruption to surrounding peatland and wildlife habitats. Use of Suitably Sized Machinery to Minimise Environmental Impact The use of machinery is essential for effective peatland rehabilitation, particularly for drain-blocking, water-level management, and habitat restoration activities. However, to minimise disturbance and reduce the risk of damage to the sensitive peatland environment, all works will be carried out	subsurface archaeological destruction, loss or interference through drainage and extraction operations and/or failure to recognise/report finds.
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			using appropriately sized and specialised machinery tailored for use in such conditions. Key considerations for machinery selection include: • Lightweight, low-ground-pressure equipment will be used to prevent excessive soil compaction, which can negatively impact hydrology and plant establishment. • Machines will be sized appropriately for the terrain to ensure they can manoeuvre efficiently without requiring unnecessary site modification or clearance of vegetation. • Equipment will be fitted with wide tracks or flotation tires to distribute weight evenly and prevent deep ruts or damage to the peat surface. • Operators will be trained in environmentally sensitive work practices to ensure that all mechanical interventions are carried out with precision and minimal disruption. • Wherever possible, work will be carried out during optimal ground conditions to avoid excessive disturbance caused by machinery movement on wet or unstable peat. By carefully selecting and operating machinery in a responsible manner, the risk of habitat degradation will be significantly reduced. Minimisation of Excavation Depths and Soil Displacement To protect the integrity of the peatland ecosystem, all excavation activities will be kept to the absolute minimum necessary to achieve rehabilitation objectives. Peatlands are highly sensitive to disturbance, and excessive excavation could lead to unintended consequences such as altered hydrological conditions, increased erosion, and damage to peat-forming vegetation. To mitigate these risks: • Excavation depths and volumes will be strictly limited, ensuring that only the necessary amount of material is moved to facilitate rehabilitation. • Excavated peat and soil will be reused within the site	
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			wherever feasible, reducing waste and maintaining the natural composition of the landscape. • Works will be carried out in a controlled and phased manner to minimise sudden changes in terrain and hydrology. • Site conditions will be regularly monitored, and excavation techniques will be adapted as needed to avoid excessive disturbance. • Where drainage channels need to be blocked or modified, interventions will be designed to blend seamlessly with the natural landscape, encouraging the gradual restoration of waterlogged conditions without major disruptions to the existing habitat. Environmental Monitoring and Adaptive Management To ensure that the rehabilitation works do not inadvertently cause habitat degradation, a robust environmental monitoring programme will be implemented throughout the Project. This will include: • Routine site inspections to assess the impact of machinery and ensure compliance with best practice measures. • Hydrological monitoring to track changes in water levels and ensure re-wetting efforts are functioning as intended. • Biodiversity surveys to observe how vegetation and wildlife respond to the rehabilitation activities. • Adaptive management strategies to adjust work practices in response to any unforeseen environmental changes or challenges. • If any unexpected habitat degradation is detected, immediate corrective actions will be taken to mitigate potential impacts and realign the Project with its ecological restoration goals.	
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			Minimisation of Disturbance to Wildlife and Surrounding Habitats - Although no long-term habitat loss is anticipated, the temporary presence of machinery and personnel may cause short-term disturbances to wildlife. To minimise such impacts, additional measures will be implemented. - Work scheduling will be adjusted to avoid peak breeding or nesting seasons for sensitive species. - Noise and vibration reduction techniques will be applied to reduce disturbances to local fauna. - Buffer zones will be established around particularly sensitive habitats to provide additional protection from mechanical operations. - Strict waste management protocols will be followed to ensure that no pollution, litter, or hazardous materials are introduced into the environment. Aftercare and Maintenance Post-Rehabilitation Once the initial rehabilitation measures are successfully implemented, a comprehensive aftercare and maintenance program will be established to ensure the long-term success and stability of the rehabilitation efforts. This program will be designed in accordance with the conditions outlined in the IPC Licence, ensuring that all regulatory requirements are met and that the site remains under close observation during the transition to a stable, self-sustaining ecosystem. The aftercare program will include a series of site inspections and monitoring activities aimed at tracking the progress of the rehabilitation and identifying any potential issues early on. Initially, quarterly site visits will be conducted during the first two years after the implementation of the rehabilitation measures. These visits will focus on monitoring the effectiveness of the rehabilitation actions, including the condition of the vegetation cover, the progress of water re-wetting, and the overall stability	
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			of the peatland ecosystem. If issues are detected during these visits, corrective actions will be undertaken to address any potential problems before they escalate. After the first two years, the frequency of site visits will decrease to bi-annually, allowing for a longer-term assessment of the site's recovery. Once the site reaches the five-year mark, the monitoring frequency will shift to annual visits, focusing on long-term sustainability and the continued success of the rehabilitation measures. Water Quality Monitoring and Reporting A key aspect of the aftercare program will be the implementation of a water quality monitoring program to assess the impact of the rehabilitation measures on water quality and ensure that the site's discharge remains within acceptable limits. This monitoring program will specifically focus on the quality of surface water discharge from the Application Site, ensuring that any changes in water quality resulting from the rehabilitation activities are carefully tracked and addressed. The program will include regular water quality sampling, which will help detect any alterations in key water quality parameters that could indicate the presence of pollutants or negative changes in the site's hydrological conditions. The monitoring parameters will be comprehensive and will include the following key water quality indicators: • pH: To measure the acidity or alkalinity of the water, ensuring that it remains within a suitable range for aquatic life. • Suspended Solids (SS): To assess the level of particulate matter in the water, which can affect water clarity and quality. • Total Solids (TS): To determine the overall solid content of the water, which could indicate the presence of pollutants or excess organic material. • Total Phosphorus (TP): To track nutrient levels, particularly phosphates, which can contribute to eutrophication and	
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			algae blooms if present in excess. • Total Ammonia (TA): To monitor the presence of ammonia, a potential pollutant that can be toxic to aquatic life. • Colour: To measure the colour of the water, which may indicate the presence of organic materials or dissolved substances that could affect aquatic ecosystems. • Chemical Oxygen Demand (COD): To assess the organic material load in the water and determine how much oxygen would be required to break down these materials biologically. • Dissolved Organic Carbon (DOC): To evaluate the amount of organic carbon dissolved in the water, which is a critical parameter for understanding the overall biological health of the water system. These water quality parameters will be monitored on a monthly basis during the initial stages of aftercare, with the frequency decreasing over time as the site stabilises. The results from the monitoring will be reported annually to the EPA, ensuring full compliance with environmental regulations and providing transparency to the public and stakeholders. The monitoring data will help inform decisions on whether any further interventions are needed to maintain or improve water quality, and it will also provide a long-term record of the environmental recovery of the site. By implementing these precautionary control measures, the rehabilitation plans will not only achieve its restoration objectives but also safeguard existing biodiversity and natural habitats Despite these positive outcomes, it is not anticipated that the Application Site will develop into an active raised bog analogous to the priority EU Habitats Directive Annex I habitat within the foreseeable future (approximately 50 years). The historical degradation of the site, coupled with alterations to its hydrology and substrate, means that full restoration to pristine raised bog conditions remains a long-term aspiration rather than an	
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			immediate expectation. The formation of active raised bogs is a gradual process that requires a consistent accumulation of peat-forming vegetation, sustained high water tables, and minimal external disturbances—conditions that may take centuries to fully establish. Nevertheless, the combination of re-wetting, drain-blocking, and natural colonisation will create a more ecologically valuable landscape, fostering the development of diverse wetland and semi-natural habitats. The restoration of hydrological balance and the encouragement of vegetative succession will not only enhance the site's biodiversity but also contribute to broader peatland conservation efforts, climate change mitigation, and the long-term sustainability of the ecosystem. Control Measures: The proposed rehabilitation works at the Application Site will be carried out with a strong commitment to environmental conservation. Through careful planning, the use of appropriate machinery, the restriction of activities to designated zones, and ongoing environmental monitoring, the Project will ensure that no loss or degradation of habitat occurs. These best practice measures will facilitate the successful restoration of the peatland while maintaining the ecological integrity of the site, ultimately supporting long-term sustainability and biodiversity enhancement. <u>Biodiversity – Water Quality and Aquatic Fauna and Habitats:</u> The existing drainage systems and silt control measures currently in place at the Application Site will remain operational during the initial stages of the rehabilitation plans. These measures are especially crucial during this early phase, as there is a potential for entrainment of suspended solids in surface waters, particularly during activities such as drain blocking and other earth-moving operations. As the rehabilitation work progresses, these temporary disturbances to the peat surface could increase the risk of sediment mobilisation, which may be carried away in	
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			surface runoff, impacting the water quality of nearby watercourses. To mitigate these potential effects, silt ponds will continue to operate throughout this period, effectively trapping and filtering any suspended solids before they can be released into the surrounding environment. These ponds will function as sediment retention basins, ensuring that runoff water is effectively treated before it leaves the site, reducing the risk of sedimentation and pollution in downstream aquatic systems. As stipulated in the IPC Licence, the silt ponds will be regularly inspected and maintained to ensure that they are operating at full efficiency. This includes routine cleaning, monitoring of storage capacity, and maintenance of inlet and outlet systems to prevent overflow or blockage. Furthermore, to prevent any risk of contamination, no remedial works will be carried out during periods of prolonged rainfall or when there are unfavourable weather conditions that could exacerbate the mobilisation of sediments or affect the effectiveness of the silt control measures.	
Land, Soils and Geology	Section 8.6.1, Chapter 8	Effects on Land and Contamination of Soil	Land, Soils & Geology Measures that mitigated and will continue to mitigate against contamination of peat, subsoil and bedrock are outlined in Section 8.6.1 (of Chapter 8 of the remedial EIAR) and are currently being adhered to at the Application Site. These mitigation measures reduce the risk of soil contamination. These measures/controls have been implemented as part of compliance with IPC licence conditions across the Derrygreenagh Bog Group, including the Application Site. No further control measures / mitigation, beyond that implemented to date, are deemed necessary. The existing wastewater services at the Application Site have been in operation for years with no reported issues.	Minimisation of soil contamination
Emissions Control (dust, noise, water, silt run off); Health and	Chapter 9	Surface and ground water; Residential receptors;	Bog Hydrology & Downstream Surface Water Hydrogeology: Surface Water Quality The effluent discharges from the bogs have been regulated by the EPA under IPC Licence (Reg. No. P0501-01) since early 2000. No	Protection of surface water and/or groundwater contamination, contaminated soil, groundwater and nearby groundwater/surface water

Safety; Terrestrial Habitat Protection; Aquatic habitat protection		Mammals; Habitats; Aquatic species	additional control measures, other than compliance with the control measures, regulated by the EPA, are considered necessary in terms of surface water and / or groundwater contamination. Contamination of Soil/Groundwater by Leakages and Spillages and Alteration of Peat/Subsoil/Bedrock Geochemistry The control measures outlined in the IPC licence, which have proven effect, will continue to operate during the Remedial Phase. Nearby Groundwater/Surface Water Abstractions The control measures that have protected these water sources are the same as those outlined in Chapter 4 and Section 9.3.5 (of Chapter 9 of this remedial EIAR) relating to spills/leakages on the bog units. The implementation of these measures has protected groundwater quality and eliminated any effects on water quality in the underlying aquifer and at downstream water supply source locations. The control measures that have protected these local groundwater wells/supplies are the same as those outlined in Section 9.6.2, relating to spills/leakages on the bog units. The implementation of those measures has protected groundwater quality and eliminated any effects on water quality in the underlying aquifer and at downstream local groundwater wells/supplies. Impact on Water Quality During this period the Application Site will continue to operate under IPC licensing requirements with respect to surface water discharge quality and quantity. Any works undertaken for the draft Decommissioning and Rehabilitation Plans will be completed under licence from the EPA with the Applicant reporting to the EPA until the IPC Licence is surrendered.	abstraction points.
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			As required by the Licence, waste items are and will continue to be removed for recycling or disposal, using external contractors with the required waste collection permits, approved under Condition 7.2, and waste records are and will continue to be maintained as required under Condition 7.3. The validation of the success of compliance with Condition 10.2 of the IPC Licence is carried out through an Independent Closure Audit (ICA) which is followed by an EPA Exit Audit (EA) and the eventual partial or full surrender of the licence. Measures that mitigated against contamination of waters are outlined in Section 9.5 (of this remedial EIAR) and will be being adhered to at the Application Site.	
Noise and Vibration	Chapter 11	Residential receptors;	Noise & Vibration The following Environmental Control Measures related to noise will be applied to Bog Rehabilitation as outlined in Appendix 4-3 of the remedial EIAR draft (Draft Cutaway Bog Decommissioning and Rehabilitation Plans): - The proposed rehabilitation will have due regard to noise limits and hours of operation (i.e. dusk and dawn) to minimise any potential disturbance on resident and local fauna that utilise the Application Site and immediate environs. - All plant and equipment for use will comply with the Construction Plant and Equipment Permissible Noise Levels Regulations (SI 359/1996).	Prevention of noise and vibration impacts
Archaeology and Cultural Heritage	Chapter 13	Archaeological and cultural heritage receptors; Unrecorded subsurface Archaeology	Cultural Heritage As per the recommendation a 20 m buffer zone to be established around the recorded monument LF017-028. It recommended 'should any previously unknown archaeological material be uncovered during the rehabilitation works, it should be avoided and reported to the Bord na Móna Archaeological Liaison Officer and the National Museum of Ireland.' (2023).	Prevention of archaeological and cultural impacts

			Since peat activities associated with the Applicant fall under the 2012 Archaeological Code of Practice, any potential effects may be dealt with in the same way as past peat extraction activities and all ancillary works, through the implementation of mitigation measures detailed in the 2012 Code of Practice.	
Emissions to Atmosphere; Emissions to Water; Waste Management; Noise; Water Protection	Chapters 4 - 15; Appendix 4-1: IPC Licence P0501-01	Air / Atmosphere; Surface and ground water; Residential receptors; Mammals; Habitats; Aquatic species	Material Assets - Rehabilitation activities, contractor movements, and plant/machinery operations during the Remedial Phase will utilise existing site access arrangements. - During Years 1 and 2, operations will be limited to one tracked excavator and one tractor operating within Bord na Móna lands via the internal access network. - Plant and machinery are not expected to use the public road network during normal operations. - Where transfer of plant on public roads is required, machinery will be transported using appropriate low-loader trailers. - No significant upgrades or permanent modifications to the surrounding public road network will be necessary. - Rehabilitation and contractor activities will continue to comply with IPC License P0501-01 and established site operational procedures. - Any temporary traffic management required for works affecting public roads will be implemented in accordance with statutory and road safety requirements, and in consultation with the relevant road authority where necessary. - The low and intermittent traffic levels associated with the Remedial Phase, combined with predominantly internal plant movements and established access arrangements, will minimise traffic impacts. - No significant residual traffic or transportation effects are	Prevention of traffic and transportation impacts

			anticipated. No additional traffic-specific mitigation measures are required.	
Air Quality	Chapter 10	Air /Atmosphere; Surface and ground water; Sensitive receptors; Habitats; Aquatic species; Bord na Móna Employees; Bog Habitats	Air Quality The dust control measures outlined under condition 5.5 of the IPC licence for the site, see Section 10.5.1 (of Chapter 10 of the remedial EIAR) should be implemented throughout the Remedial Phase of the Application Site to ensure dust emissions are minimised until the licence is surrendered.	Prevention of Air Quality impacts

