

Supporting Documentation & Attachments for an Application for an Integrated Pollution Prevention Control By Westland Horticulture For The Management Of Peat Harvesting operations For Peat Bogs In County Westmeath

Section A; Non Technical Summary;

- See attached Environmental management plan for Westland Horticulture for peat harvesting of bogs in county Westmeath attached (Attachment A). This documents Westland Horticultures processes and procedures for operating the peat harvesting sites and deploys the best available practises as detailed in this documents including our own adjustable weir design to help control flow rate consistency within silt traps regardless of rainfall event and to minimise pollution to the Inny river from our discharge waters.

**Environmental Management Plan
For Peat Harvesting Operation
For County Westmeath**

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1. INTRODUCTION

These bogs have served the local community in the area for many hundreds of years acting as an important source of fuel for heating homes & schools. Extensive areas of these particular bogs have been cut over previously to service this demand. In the late 1970's – early 1980's these bogs were further developed and assisted by state funding and guidance from Bord Na Mona to allow for more mechanised production of fuel peat in an effort to reduce the country's reliance on imported oil & gas to meet the growing demands for Heat & Power consumption.

The bog has had several differing owners / operators during the last 30 years. Westland took over occupation of the site in the mid 1990's with the aim of producing milled peat for use in the horticultural industry. Since this time there has been an ongoing phase in of continuous improvements on the site in terms of site drainage and silt pond design & implementation. There has also been significant improvements in the management & control of activities on this site.

Westland strive to be good environmental citizens and are strongly conscious of their environmental responsibilities as outlined in the company's environmental policy attached Appendix "A". The company has also implemented an environmental management system which is fully certified to ISO14001 international standards and has been implemented fully across multiple sites covering a range of differing processes and operations.

The company is consistently looking for opportunities to improve on its environmental performance and hence has developed a set of environmental goals & objectives that are analysed each year against pre set targets to try and drive continuous improvement.

This commitment to environmental awareness and protection has been exemplified by the company's development of peat free composting alternatives which now account for 65% of our total composting output. The company also employs a fulltime Environmental officer with third level qualification in Environmental Studies and a background in water quality analysis to help us drive our continuous improvement projects and minimise potential risks to environment at all times.

2. LOCATION

The peat lands in County Westmeath comprise of 4 separate holdings situated in the town lands of Mayne, Ballinealoe & Lower Coole near Coole and at Clonsura near Fineagh in County Westmeath. These bogs are all managed by the same Peat Harvesting Manager and are operated by the same plant and the same Peat Harvesting operatives.

3. CONDITION OF PEATLAND AND EXISTING DRAINAGE

Drainage commenced in the late 1970's and the bog has gone through changing peat production methods over the past 30 years.

The total area is within the Inny River catchment, and drainage at the present time is generally through the original bog outfalls to the Inny River.

The average surface level of the general area is now about 68.00m (223ft) A.O.D. and the average bottom contour level is 63.00m (207ft) approx. giving an average peat depth remaining of 5.00m (16ft).

The water level of the Inny River at this location was 61.43m (201ft) A.O.D. on the 10th April 2003, and the highest flood level recorded in this vicinity was 62.87m (206ft) A.O.D. at Camagh Bridge, which is almost 5 kilometres north of the site.

4. OUTLINE OF ENVIRONMENTAL MANAGEMENT PLAN

4.1 AIM

The aim of this environmental management plan is to complete a number of significant action plans that will minimise the risk of pollution of the Inny River and meet the Environmental Protection Agency specification limits for total suspended solids. This management plan will be developed, updated and amended as required to meet future changes in regulations as stipulated by local authorities.

4.2 SCOPE

This management plan shall cover the control, operation and maintenance of all activities taking place at all Bogs in County WESTMEATH including:

- i. The range of Peat Harvesting process to be carried out.
- ii. Training, Recertification and induction of all operatives.
- iii. All activities on site which may affect the nature or quantity of any omission.
- iv. The control of fuels or other waste generated.
 - v. The site management and control.
- vi. Incorporate documentation & record into ISO14001 Environmental System.

5. MANAGEMENT OF ACTIVITY

Westland Horticulture shall establish and maintain an Environmental Management System that shall access all operations and review all practical options for the use of cleaner technology, cleaner production, and reduction and minimisation of waste. This will include:

- i. The same site manager, manages all peat bogs in townlands Mayne, Ballinealoe, Lower Coole & Clonsura
- ii. The same plant & process operatives harvest all peat bogs in Co. Westmeath.

Individual action items included in the Environmental management plan should specifically address the following

- a) Minimisation of suspended solids movement to surface water systems via peatland surface water drainage channels during development and operation of boglands.
- b) Rationalisation of surface water discharge points.
- c) Investigation of reed-bed systems for final polish of silt pond discharges
- d) Reduction of fugitive dust emissions during loading and transfer operation on the bog and during unloading operations at the tipper and works yard areas.
- e) Provision of measures to protect dust sensitive areas.
- f) Reuse of silt pond waste..
- g) Use of reusable material for stockpile protection.
- h) Effective spill/leak management of mobile fuelling units.

We will go through these items in much more detail when we look at corrective actions specific to controlling particular sources of pollution.

Regular updates of the success of these actions plan items and necessary amendments to timelines will be communicated to appropriate local authority contacts.

6. DOCUMENTATION

Westland Horticulture shall establish and maintain an environmental management Documentation system which shall be included as part of the company's Environmental System to ISO14001 certified standards.

A comprehensive documentation manual covering all procedures, records and personal training records shall be retained and available for inspection onsite at all times. The initial documents relating to this activity are included for review and are attached to the appendix at the end of this Environment Management Plan.

The procedures established will ensure that corrective action will be taken should the specified requirements for water discharge quality (total suspended solids less than 35mg/litre) and records of all corrective actions shall be maintained and available for review onsite.

7. TRAINING AND AWARENESS

Westland Horticulture Quality Systems Manager and the Peat Harvesting Site Manager shall establish and maintain procedures for identifying training needs and for providing appropriate training for all personnel whose work could have a significant impact upon the environment. Appropriate records of training shall be maintained and available for review onsite.

Personnel performing specifically assigned tasks shall be qualified on the basis Of appropriate education, training and/or experience, as required.

This training will include mandatory induction for all new employees or temporary staff. The training shall also be delivered to experience personnel with annual recertification.

All employees on site must have been trained to document WI20/01 Peat Harvesting Site Operational Controls in Appendix "B" with key site employees also trained on the following documents attached in appendix "C" i.e. WI20/02 Silt Pond Visual inspection & Sampling Requirements & WI20/03 Silt Pond Cleaning Appendix "D". WI20/04 Action to Take in the Event of Chemical Spills in Peat Harvesting Area Appendix "E".

Failure to adhere to the conditions outlined in this training will lead to disciplinary action.

Each of the above documents will include Records sheets where applicable and Training Records which will be include in each appendix accompanying the work instructions.

Signed original copies of Training Records will be retained onsite.

8. RESPONSIBILITY

The site manager shall be contactable at all times when activity is in operation. They shall also be available to meet with relevant contact persons from local authorities at all reasonable times.

9. COMMUNICATION

An update of progress, records and sampling measurements shall be communicated to relevant local authorities upon request.

10. DISCHARGE LIMITS

For total suspended solids 75% of grab samples for each monitored discharge shall not exceed the emission limit value of 35ml/L and no individual grab sample shall exceed 3 times the emission limit (allowing for instances of torrential rainfall and flash flooding).

For airborne dust emissions activities onsite will be monitored to determine environmental risk assessment based on specific activity with our aim being not to exceed emission limit of 350mg/m²/day.

11. NOTIFICATION

The Site Manager shall notify the relevant local authorities by telephone and e mail if available to the council offices in Mullingar as soon as practicable after the occurrence of the following:

- i. Any release to atmosphere resulting in significant impairment of, or significant interference with amenities or the environment.
- ii. Any emission that does not comply with the requirements of this Environmental management plan.
- iii. Any incident with the potential for environmental contamination of surface water or groundwater, or posing an environmental threat to air or land, or requiring an emergency response by a Local Authority.

The Site Manager shall include as part of the notification, date and time of the incident, details of the occurrence, and the steps taken to minimise the emissions and avoid recurrence.

The Site Manager shall make a record of any incident as set out in Condition above. The notification given to the Agency shall include details of the circumstances giving rise to the incident and all actions taken to minimise the effect on the environment and minimise wastes generated.

In the case of any incident as set out in Condition b) above which relates to discharges to water, the Site Manager shall notify the Shannon Regional Fisheries Board, as soon as practicable after such an incident.

In the event of any incident, as set out in Condition c) having taken place, the Site Manager shall notify the appropriate Local Authority as soon as practicable, after such an incident.

12. EMISSONS TO WATER

It is generally accepted when completing an Environmental Risk Assessment of a peat harvesting operation that the most significant risk is to water pollution from loose peat deposition as silt with increased risk of total suspended solids exceeding the specified discharge limit as stipulated by Environmental Protection Agency.

There are a number of control measures that can be implemented to minimise the risk of water pollution, the main one being the implementation and optimisation of silt control systems including the following components:

- a) Catchments Areas and Silt Pond Design Optimisation.
- b) Adjustable Weir Outlet Flow Control
- c) Inspection.
- d) Sampling and Analysis.
- e) Cleaning frequency.
- f) Cleaning Methodology & Silt pond sludge Re-use

Each of the above items will now be covered in more detail.

a) Catchments Areas and Silt Pond Design Optimisation

The silt control ponds are based on the knowledge that peat bogs in milled moss peat production will produce approx 50m^3 of runoff per hectare per annum. The silt ponds are designed in accordance with this requirement. The design capacity of all silt ponds should be a minimum of 50m^3 per hectare.

The Westland Horticulture site at Cul Na Gun Bog has a total of 7 silt ponds the peat bog at Clonsura has 5 silt traps each located at strategic locations based on the surface topography of the bog and drainage requirements and the nett area of production area serviced.

The location of each of the silt ponds are identified and labeled in the Land Survey Site Maps included in appendix "F" attached.

The catchment area and design specifications for each of the silt ponds onsite are included in detailed engineering drawings attached in appendix "G".

Silt Pond Locations, Dimensions and Capacities

Silt Trap ID	Silt Trap Location	Grid Reference East	Grid Reference West	Area of bog Serviced	Length (M)	Breadth Avg (m)	Depth Max (M)	Depth Min (M)	Capacity (Max) M ³	Capacity (Min) M ³
1	Lower Coole	239547.6	272724.6	16	50	6.625	3	2	993.75	662.5
2	Mayne	239262.6	272362.6	36	120	7.725	3	2	2781	1854
3	Mayne	239246.6	271815.4	15	50	7.5	3	2	1125	750
4	Mayne	239446.6	271443.4	16	30	9	4	3	1080	810
5	Ballinealoe	239822.7	271192.3	16	40	7.5	4	3	1200	900
6	Ballinealoe	239259.6	271289.3	11	30	7.5	3.5	2.5	787.5	562.5
7	Ballinealoe	240337.8	270693.2	18.000	60	7.5	3	2	1350	900
8	Clonsara	241291.0	276767.5	16	30	12	3.5	2.5	1260	900
9	Clonsara	241639.1	276801.5	16	30	12	3.5	2.5	1260	900
10	Clonsara	242118.2	277086.6	16	30	12	3.5	2.5	1260	900
11	Clonsara	241824.1	277184.6	16	30	12	3.5	2.5	1260	900
12	Clonsara	240831.9	277259.6	20	40	12	3.5	2.5	1680	1200

b) Adjustable Weir Outlet Flow Control

To optimise silt pond level control to cope with changes in seasonality and unexpected occurrences of heavy rainfall Westland Horticulture have designed an innovative adjustable weir as detailed in engineering drawing attached in appendix “H”.

This design concept has a number of benefits and advantages for flexibility and control as follows:

- i. Allows us to operate within a 1 metre range of an effective operating depth of adjustment to compensate for unexpected incidences of heavy rainfall and to minimise the risk of silt deposition in the overflow from the silt pond.
- ii. Allows us to control the weir level in increments of 150cm accordingly as dictated by the silt pond level and overflow velocity changes.
- iii. We have flexible control over the size of the weir opening and hence we can restrict the flow across the settlement pond thereby enabling us to control flow velocity to a maximum of <10cm/sec. This flow velocity will be measured either conventionally as in river survey method or by use of a propeller driven rotor based measurement system. See example of potential system Appendix “I”.
- iv. Enables us to completely dam off the outlet from the silt pond during cleaning operation and increases holding capacity. This is particularly

important post cleaning when there is a delay period when we cannot discharge from the outlet whilst we wait for disturbed solids to settle out post disruption from the cleaning process.

c) Inspection

To optimise silt pond level control and cleaning operation we have completing work instruction documentation as part of our ISO14001 environmental management system document WI20/02 Appendix “C” attached, with key employees on site trained to complete the visual inspection with training records attached TR20/02 Appendix “C” and original hard copies available for inspection on site.

The visual inspection must be completed to schedule every week for all silt ponds with a full audit made on silt pond level control and overflow speed appearance that will be verified by actual velocity measurement in future. The visual inspection will also report on evidence of silt deposition post the overflow from the silt pond. All findings shall be logged in detail and recorded in the visual audit inspection record sheet (attached) WIR20/02 Appendix “C” and any issues observed must be reported to the site manager immediately to carryout corrective action as required.

An update of the visual inspection records shall be reported to Westmeath county council on a quarterly basis.

d) Sampling & Analysis

To ensure our silt ponds are operating to optimal conditions and that we are meeting the required standard of water quality on our discharge from the overflow post silt pond we will require to continuously monitor and analyse our performance.

A 1 Litre sample of our discharge waters post the overflow from the silt ponds shall be sampled once per month for all silt ponds as per work instruction document WI20/02 Appendix “C” attached.

The samples will be sent to an accredited lab were analysis will be completed for Total Dissolved solids and the results will be recorded on the appropriate record sheet WIR20/02b Appendix “C” the results will be reported back to the site manager, who will take corrective action as required based on the findings of the analysis.

The analytical results will be logged and monitored for ongoing performance of all silt ponds and corrective actions will be taken accordingly as we observe changes in trend analysis overtime.

An update of the analytical records for suspended solids shall be reported to Westmeath county council on a quarterly basis.

e) Cleaning Frequency

To ensure our silt ponds are operating to optimum performance we will set up a schedule of regular silt pond cleaning and desludging.

This will involve a minimum cleaning regime of at least twice a year once in April before the peat harvesting production season commences and secondly in September at the end of the production season and before ditching commences.

Dependant on rainfall trends it may also be essential to complete an additional routine clean possibly in January or during the harvesting season.

Out of schedule cleaning will also be triggered as necessary as a corrective action based on feedback from visual inspection or results of analytical laboratory analysis for total suspended solids.

f) Cleaning Methodology & Silt Pond Sludge Re-Use

To ensure our silt ponds are operating at optimised performance we need to complete regular scheduled cleaning as detailed above with minimum occurrence of 2 times per year.

When cleaning there are some guidelines that we have outlined as per Work Instruction WI20/03 attached appendix "D". This includes outline of instruction for reuse of excavated Silt Pond sludge.

These guidelines include the complete damming off or sealing of the outlet from the Silt pond through adjustable weir that will give us additional capacity to contain silt pond outlet flows post cleaning until disturbed silt has resettled.

The outfall from silt ponds are always cleaned from upstream direction with downstream end blocked

The sludge excavation should be carried out by a long reach excavator and where none is available ledging is required

Additional Measures Taken To Minimize Emissions To Water;

- i. Along the small tributary river of the Inny river which runs through the centre of the bog a 1 metre high bund or levy shall be constructed out of compacted peat to prevent run off from the bog surface into the water course.

- ii. Where necessary outlets from field drains shall be blocked during stock pile loading.
- iii. Ditching process should occur in dry weather and while ditching outfalls from silt ponds will be blocked and we will ditch towards the outfall.
- iv. We will ensure that stock piles are kept away from field drains were possible but any field drains that are adjacent to stockpile loading should be cleaned out immediately after stock pile loading.
- v. We will investigate the planting of Reed beds post the outlet from our silt ponds to act as a final polish as part of a continuous improvement programme for the management of the site.
- vi. A 30 metre buffer zone of non peat harvesting production will be maintained adjacent to all land adjacent to the Inny River. This Buffer zone will be planted with a species of native vegetation that will thrive in the harsh conditions of a peat environment with the optimum time to sew this successfully being during the sewing season from September to November. We will select the species from a selection of the natural peat land habitat vegetation as detailed in. Table #1 below

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Table #1 Common Peat Land Native Vegetation.

Common Raised Bog Plants

	Fen	Raised Bog	Blanket Bog
Bladderwort - lesser	✓	✓	✓
Bog Asphodel		✓	✓
Bogbean	✓	✓	✓
Bog Myrtle		✓	✓
Bog Pondweed	✓	✓	✓
Cottongrass - common		✓	✓
Cottongrass - hare's tail		✓	✓
Cranberry		✓	✓
Deer Sedge		✓	✓
Heather - Cross-leaved heath		✓	✓
Heather - Ling		✓	✓
Lichen - Cladonia sp		✓	✓
Moss - Sphagnum sp		✓	✓
Purple Moor grass	✓	✓	✓
Sundews		✓	✓
White-beaked Sedge		✓	✓

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vii. Harvesting shall be avoided during the winter season September = March dependant on rainfall & weather conditions as trended by Met Eireann climate information (see table #1 below).

Table #1 Average Monthly Rainfall Data from Met Eireann weather County Westmeath station in Mullingar as representative of the Peat bog lands in County Westmeath.

Total rainfall in millimetres for MULLINGAR

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2010	45.0	41.9	0.0										86.9
2009	104.6	25.7	40.6	102.9	75.0	86.6	191.3	135.2	38.1	89.7	213.6	74.2	1177.5
mean	92.4	66.3	72.6	59.0	70.9	67.0	61.2	82.9	85.1	94.1	87.9	92.2	931.5

RAINFALL (mm)	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec	year
mean monthly total	92.4	66.3	72.6	59	70.9	67	61.2	82.9	85.1	94.1	87.9	92.2	931.6
greatest daily total	31	38.7	29.5	21.6	42.2	26.2	69.8	49.9	42.2	60.2	48.6	54.1	69.8
mean no. of days with $\geq 0.2\text{mm}$	20	17	19	16	17	16	16	18	17	20	18	20	214
mean no. of days with $\geq 1.0\text{mm}$	16	12	14	12	14	12	11	13	13	14	13	15	157
mean no. of days with $\geq 5.0\text{mm}$	7	4	6	4	5	5	4	5	6	6	6	6	65

3. EMISSIONS TO AIR

It is not clearly defined the extent of milled peat harvesting operation as a source of air borne dust contamination but we are prepared to work with the local government authorities on continuously improving our operations on this site to minimise any potential impact of airborne dust emissions to atmosphere or potentially to water courses.

We will manage & control our operations on site to minimise the risk of dust adopting the following measures which have been detailed to all of our staff operating on site in DOC WIR20/01 Attached Appendix "B" with formal training & awareness and training sign off records completed and available for review attached Appendix "C" with originals retained on site at each location.

- i. All headlands and travel areas must be kept free of loose peat at all times by regular ridging & harvesting.
- ii. There should be no harvesting equipment transportation in the designated 30 metre buffer zone adjacent to the Inny River.

- iii. The 30 metre buffer zone adjacent to the Inny River will be maintained with natural vegetation species planted.
- iv. Traffic along headlands will be kept to a minimum and slow speeds maintained.
- v. At the end of season all milled peat remaining on fields should be ridged or compacted to prevent airborne dust generation or silt deposition in waterways.
- vi. There should be no stock piling of loose peat within 100 metres of the Inny River.
- vii. Production operations will be suspended in very windy weather.
- viii. When harvesting the jib is maintained low to the stockpile collection trailers.
- ix. Road transported Peat is suitably covered (sheeted or enclosed).

Monitoring Of Emissions To Air;

Additional to best practice items above we will source a dust monitoring system to be placed on the banks of the Inny River as the area of greatest environmental risk identified on site.

We will also control our operations on site to meet the dust emission discharge limits of 350mg/m²/day as stipulated by EPA.

We have specified a suitable dust monitor design from BERGERHOFF deposit dust gauge as detailed in Appendix "J" and we are currently trying to source a local supplier to try and shorten the lead time to delivery and implementation to meet our scheduled timeline for action plan implementation

Once measurement of dust emissions has commenced a detailed report of monitoring analysis shall be reported to local government agencies on an annual basis.

14. WASTE MANAGEMENT

We will agree to control and manage the disposal of all wastes on site including any of the following:

- i. Fuel waste
- ii. Contaminated waste post fuel spills
- iii. Spent Batteries
- iv. Polythene

Waste sent off site for recover or disposal shall only be conveyed to a licensed waste Contractor, and only transported from the site of the activity to the site of disposal in a manner which will not adversely affect the environment.

Records will be kept of all waste generated on site the records will include

- i. The name of the agent or transporter of the waste
- ii. The name of the person ultimately responsible for disposal /recovery of the waste
- iii. The ultimate destination of the waste
- iv. Written confirmation of the acceptance & disposal /recovery of the waste

These records will be available for review by local government authorities upon request.

15. SURFACE & GROUND WATER POLLUTION PROTECTION

We Manage & control the site operations to ensure that no potentially polluting substance or matter shall be permitted to discharge to off surface waters, off site storm drains or groundwater's

On our current site operation we have identified refuelling on harvesting vehicles by mobile refuelling units as our biggest source of potential pollution and hence we will undertake the following steps to ensure no contamination of the Inny River or connecting tributaries shall take place as per work instruction WI20/04 Appendix 'E'.

- i. Refuelling vehicles need to be banded to ensure no leaks can occur.
- ii. We will maintain in storage an adequate supply of containment booms and or suitable absorbent material (spill kits) on site at all times.
- iii. Absorbent materials (spill kits) are to be held on standby in all instances of refuelling.
- iv. A visual inspection will be completed every week to ensure that there is no evidence of fuel contamination in silt ponds or outlets.
- v. Any contaminated peat shall be removed and deposited in a contaminated waste container and disposed of by licensed waste hauliers.
- vi. A bi-annual inspection shall be carried out of all transported fuelling systems to ensure that should record any damages leaks or flaws that could result in an accidental spillage.

16. CUTAWAY BOG REHABILITATION

As part of our overall management plan we will develop plans for bog rehabilitation following termination or of use or involvement in all or part of the site currently used for peat harvesting.

At present we do not know what the remaining working life expectancy is off the sites in Co. Westmeath. Our calculations based on actual production volumes would indicate that at the current production rate for example the site at Cul Na Gun would have a working life expectancy remaining in the region of 60 – 100 years.

A detailed bog rehabilitation programme will be developed post consultation with numerous environmental organisations such as the EPA and also drawing on a wealth of experience and papers written on the subject of successful bog rehabilitation by other contractors e.g. Bord Na Mona who have been through this process in their life time. The outcome & findings of these consultations shall be recorded and reported to relevant local authorities or agencies or other interested parties.

The cutaway bog rehabilitation plan will be discussed with the local authorities and will be updated over time to monitor the progress of bog rehabilitation. This plan will include the following considerations

- i. 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
- ii. Complete a Risk assessment of the area including environmental & health & safety implications as applicable.
- iii. A study of the current state of the hydrology of the site with potential to return the area to a flooded natural wetland.
- iv. An evaluation of peat depth remaining
- v. A study of differing types of peat remaining
- vi. A study of natural flora & fauna on the site.
- vii. Definition of criteria that defines the successful rehabilitation of the site and ensures minimum environmental impact.
- viii. Will include a program of aftercare and maintenance of the site to promote bog rehabilitation.

We will agree to the completion of a certificate of completion for rehabilitation to be submitted to local authorities within 3 months of the date of the rehabilitation action plan items being fully completed.

17. MONITORING

The success of the overall environment management plan will be dependent on the quality of our monitoring plans and hence we will set up a detailed outline of requirements for monitoring that will be relayed to key staff & site manager. We will incorporate the following items into the monitoring portion of the Management plan.

- i. Location and identification of silt ponds & outlets across the sites.
- ii. The results of visual inspections on site of all silt ponds & outlets.
- iii. The location of dust monitors on site.
- iv. The results of dust monitoring on site
- v. Contaminated waste storage area on site

Additional to our own internal monitoring we will provide access to all sampling points as required by local authorities and agencies.

18. RECORDING & REPORTING

The environmental management plan will include constant update and upkeep of records with regular scheduled reporting to the local government authorities as requested. The main items to be reported as follows;

- i. *Visual inspection records of silt ponds – Reported quarterly*
- ii. *Data from Total suspended solids sampling from silt ponds – Quarterly*
- iii. *Records of silt pond cleaning - Biannually*
- iv. *Data from Dust monitoring - Annually*
- v. *Records of waste discharge or off haul – Annually*
- vi. *Inspection of training records – Annually*

Appendix Attachment no A.1

- “A” Westland Horticulture Environmental Policy
- “B” WI20/01 Peat Harvesting Site Operational Controls Work Instruction
- “C” WI20/02 Silt Pond Visual Inspection & Sampling Requirements
- “D” WI20/03 Silt Pond Cleaning Work Instructions
- “E” WI20/04 Action to Take in the Event of a Chemical Spill in Harvesting Area
- “F” Site Map
- “G” Silt Pond Design Specification Engineering Drawings
- “H” Adjustable Weir Design Specification Engineering Drawing
- “I” Rotary Flow Velocity Meter
- “J” BERGERHOFF Deposit Dust Gauge Monitor

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Section C Management & Control of Peat Harvesting Operations

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C.1 Westland Horticulture Environmental Policy

Westland Horticulture recognises that the environment is a central business concern and that our manufacturing and distribution operations, products and services all have a potential environmental impact. Westland is committed to the continual improvement of our environmental performance.

We manufacture and supply growing media, seeds & bulbs, fertilisers and chemicals into the home and garden market. The following key environmental aspects are associated with the business:

- Peat and bark harvesting
- Packaging use
- Energy consumption
- Transportation of goods and emissions

The company is committed to reducing these and other environmental impacts and to achieve this have registered as members of the Business & Environmental Management Scheme (no. 1041).

Westland are committed to working with our staff, customers, suppliers, investors, contractors, regulators and neighbours to set and review our environmental objectives and targets. Accordingly we have adopted the following policy, which provides a framework for these objectives and targets.

Specifically we will:

- ❖ Ensure compliance with existing and future environmental legislation, and other quality and operating requirements to which we subscribe
- ❖ Liaise with relevant external bodies at all levels and work with our own employees to maintain a program of continual improvement of our environmental performance.
- ❖ Identify and seek to reduce the significant environmental aspects of our business and to prevent pollution.
- ❖ Optimise the use of resources and ensure we use processes, techniques, material and products that avoid, reduce or control pollution.
- ❖ We will recover & recycle materials where possible and justifiable. For waste that cannot be reused in any form, we shall ensure that the correct disposal procedures are followed.
- ❖ Work with our suppliers, sub-contractors, customers and local community to improve our overall environmental performance and wherever feasible influence them to do likewise.
- ❖ Require our employees to assist in the implementation of this policy and to work with due consideration and provide appropriate training and supervision to ensure this.
- ❖ Strive to establish and maintain an Environmental Management System compliant with requirements of ISO14001 to cover all activities.

The introduction and implementation of this policy is a commitment of Westland Horticulture management and a shared responsibility with our employees. The policy will be maintained and reviewed annually as part of the organisations overall environmental management plan. This Environmental Policy is publicly available at all times via our website <http://gardenhealth.com/page/company-information> and has been approved and authorised by:

Signed.....Robert Lavery.....Date...08/02/2008.....

Managing Director.

Ongoing monitoring of Environmental Impacts & Performance;

- ✓ The peat harvesting sites will be monitored closely by our Peat Harvesting site operations manager Shane Currie who will ensure that all company procedures as detailed in the attached work instructions are adhered to as listed below.
- ✓ Our Operations Documents for Operating the peat Bogs can be observed in attachment D.1 as follows;
 - i. WI2001 Peat Harvesting Operational Controls Procedure
 - ii. WI2002 Silt Pond Visual Inspection & Sampling Requirements
 - iii. WI2003 Silt Pond Cleaning Procedure
 - iv. WI2004 Action To Be Taken in Event Of Chemical Spills On Peat Harvesting Site
- ✓ Shane will also ensure that all employees are trained in the effective use of these work instructions and also in the full detail of the Environmental management Plan for the site detailing best practise and appropriate measures for minimising environmental issues.
- ✓ As detailed in WI2001 Peat Harvesting Operational Controls Procedure all employees will be made aware of best practise for operating and transportation around the bogs with a view to minimising any negative environmental impacts on the Inny River and the surrounding catchment area from total suspended solids pollution, which we believe to be our biggest potential source of environmental impact on the area.
- ✓ We do however believe and our grab sample analysis would support the fact that with proper design, good management of adjustable weir level to control flow rate and regular cleaning of our silt traps that we can minimise any potential impact on the Inny River. All of our grab samples to date have been below the 35Mg/l threshold as stipulated by the EPA for Total suspended solids discharge.
- ✓ The only other potential environmental impact from our peat harvesting operations is dust emissions but again with deploying best practise techniques for operation of the bogs as set out in the environmental management plan (Section A) we believe we can minimise any risk and all employees operating the site have been through training and awareness sessions and signed off by the Site Technical manager.
- ✓ We have 2 BERGERHOFF DEPOSIT DUST GAUGES for monitoring.
- ✓ These dust gauges will be deployed at each site at sensitive areas on the banks of the River Inny to assess our environmental impact with regard to fugitive dust emissions. We will measure each dust gauge to ensure that we stay below the stipulated threshold as detailed by the EPA of 350mg/m²/day.

SectionC2: Environmental management System;

- ✓ The Peatlands management plan is part of Westland's overall Environmental management system which is accredited and approved to ISO140001 international standard see attached accreditation.

(See attached ISO14001 Certificate) Attachment C.

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Section C3: Hours of Operation;

- ✓ The proposed hours of operation of peat Harvesting will be from 8 AM to 8 PM Monday through to Saturday and seasonally from May through to September.
- ✓ There may be additional time required to load trucks from our stockpiles in October to April as demand and weather permits.

Section D1: Infrastructure & Operation;

Extensive areas of these particular bogs have been cut over previously to service this demand. In the late 1970's – early 1980's these bogs were further developed and assisted by state funding and guidance from Bord Na Mona to allow for more mechanised production of fuel peat in an effort to reduce the countries reliance on imported oil & gas to meet the growing demands for Heat & Power consumption.

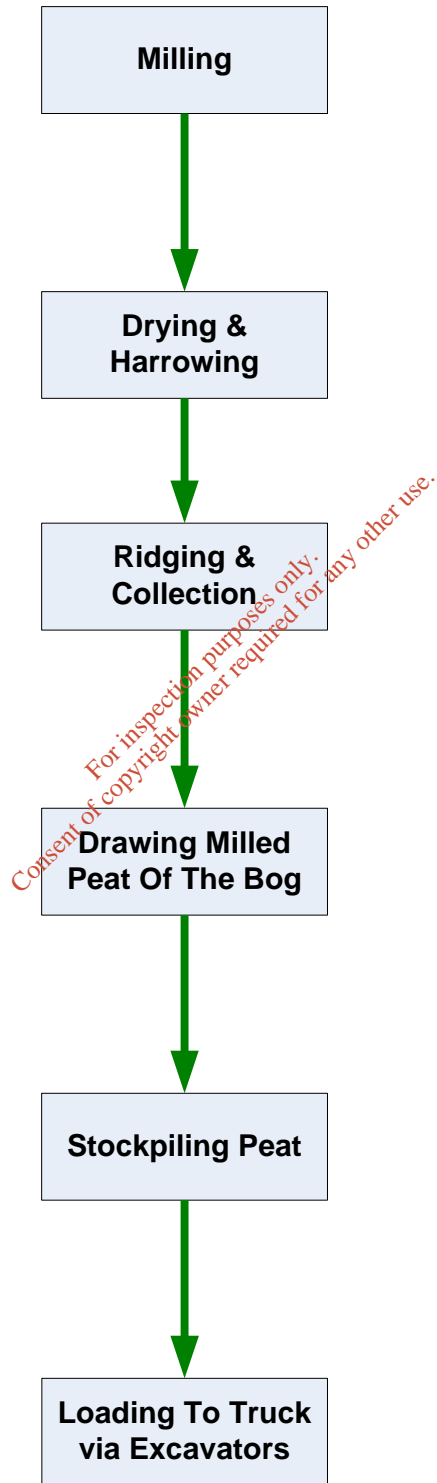
The bog has had several differing owners / operators during the last 30 years. Westland took over occupation of the site in the mid 1990's with the aim of producing milled peat for use in the horticultural industry. Since this time there has been an ongoing phase in of continuous improvements on the site in terms of site drainage and silt pond design & implementation. There have also been significant improvements in the management & control of activities on these sites.

Westland strive to be good environmental citizens and are strongly conscious of their environmental responsibilities as outlined in the company's environmental policy attached Appendix "A". The company has also implemented an environmental management system which is fully certified to ISO14001 international standards and has been implemented fully across multiple sites covering a range of differing processes and operations. The company is consistently looking for opportunities to improve on its environmental performance and hence has developed a set of environmental goals & objectives that are analysed each year against pre set targets to try and drive continuous improvement.

This commitment to environmental awareness and protection has been exemplified by the companies' development of peat free composting alternatives which now account for 65% of our total composting output. The company also employs a fulltime Environmental officer with third level qualification in Environmental Studies and a background in water quality analysis to help us drive our continuous improvement projects and minimise potential risks to environment at all times.

Attachment D:

Peat Harvesting Operations Process Flow:



Section E.1B: Fugitive & potential Emissions;

- ✓ The only other potential environmental impact from our peat harvesting operations is dust emissions but again with deploying best practise techniques for operation of the bogs as set out in the environmental management plan (Section A) we believe we can minimise any risk and all employees operating the site have been through training and awareness sessions and signed off by the Site Technical manager.
- ✓ We have 2 BERGERHOFF DEPOSIT DUST GAUGES for monitoring.
- ✓ These dust gauges will be deployed at each site at sensitive areas on the banks of the River Inny to assess our environmental impact with regard to fugitive dust emissions. We will measure each dust gauge to ensure that we stay below the stipulated threshold as detailed by the EPA of $350\text{mg}/\text{m}^2/\text{day}$.

EMISSONS TO AIR

It is not clearly defined the extent of milled peat harvesting operation as a source of air borne dust contamination but we are prepared to work with the local government authorities on continuously improving our operations on this site to minimise any potential impact of airborne dust emissions to atmosphere or potentially to water courses.

We will manage & control our operations on site to minimise the risk of dust adopting the following measures which have been detailed to all of our staff operating on site in DOC WIR20/01 Attached Appendix “B” with formal training & awareness and training sign off records completed and available for review attached Appendix “C” with originals retained on site at each location.

- x. All headlands and travel areas must be kept free of loose peat at all times by regular ridging & harvesting.
- xi. There should be no harvesting equipment transportation in the designated 30 metre buffer zone adjacent to the Inny River.
- xii. The 30 metre buffer zone adjacent to the Inny River will be maintained with natural vegetation species planted.
- xiii. Traffic along headlands will be kept to a minimum and slow speeds maintained.
- xiv. At the end of season all milled peat remaining on fields should be ridged or compacted to prevent airborne dust generation or silt deposition in waterways.
- xv. There should be no stock piling of loose peat within 100 metres of the Inny River.
- xvi. Production operations will be suspended in very windy weather.

- xvii. When harvesting the jib is maintained low to the stockpile collection trailers.
- xviii. Road transported Peat is suitably covered (sheeted or enclosed).

Monitoring Of Emissions to Air;

Additional to best practice items above we will source a dust monitoring system to be placed on the banks of the Inny River as the area of greatest environmental risk identified on site.

We will also control our operations on site to meet the dust emission discharge limits of 350mg/m²/day as stipulated by EPA.

We have specified a suitable dust monitor design from BERGERHOFF deposit dust gauge as detailed in Appendix “J” and we are currently trying to source a local supplier to try and shorten the lead time to delivery and implementation to meet our scheduled timeline for action plan implementation

Once measurement of dust emissions has commenced a detailed report of monitoring analysis shall be reported to local government agencies on an annual basis.

Section E: Emissions to Surface Waters;

TABLE E.2(i): EMISSIONS TO SURFACE WATERS			
Emission Point:			
Emission Point Ref. N ^o :	Silt Trap #1		
Source of Emission:	Rain water		
Location :	Lower Coole		
Grid Ref. (12 digit, 6E,6N):	239547E, 272724 N		
Name of receiving waters:	Inny river		
Flow rate in receiving waters:	0.23 m ³ .sec ⁻¹ Dry Weather Flow		
Available waste assimilative capacity:	34781 kg/day		
Emission Details:			
(i) Volume to be emitted			
Normal/day	547 m ³	Maximum/day	11168 m ³
Maximum rate/hour	465 m ³		
Table E.2 (ii): Period or periods during which emissions are made, or are to be made, including daily or season			
Periods of Emission (avg)	Peat Harvesting May - September 8AM 8PM Monday - Saturday		

Emission Point:			
Emission Point Ref. N°:	Silt Trap #2		
Source of Emission:	Rain water		
Location :	Mayne		
Grid Ref. (12 digit, 6E,6N):	239262E, 272362 N		
Name of receiving waters:	Inny river		
Flow rate in receiving waters:	<div style="text-align: right;"> 0.23 m³.sec⁻¹ Dry Weather Flow m³.sec⁻¹ 95%ile flow </div>		
Available waste assimilative capacity:	97335 kg/day		
Emission Details:			
(i) Volume to be emitted			
Normal/day	547 m ³	Maximum/day	25128 m ³
Maximum rate/hour	1047 m ³		
(ii) Period or periods during which emissions are made, or a			
Periods of Emission (avg)	Peat Harvesting May - September 8AM - 8PM Monday - Saturday		

Emission Point:			
Emission Point Ref. N°:	Silt Trap #3		
Source of Emission:	Rain water		
Location :	Mayne		
Grid Ref. (12 digit, 6E,6N):	239246E, 271815 N		
Name of receiving waters:	Inny river		
Flow rate in receiving waters:	<div style="text-align: right;"> 0.23 m³.sec⁻¹ Dry Weather Flow m³.sec⁻¹ 95%ile flow </div>		
Available waste assimilative capacity:	39378 kg/day		
Emission Details:			
(i) Volume to be emitted			
Normal/day	512 m ³	Maximum/day	10470 m ³
Maximum rate/hour	436 m ³		
(ii) Period or periods during which emissions are made, or a			
Periods of Emission (avg)	Peat Harvesting May - September 8AM - 8PM Monday - Saturday		

Emission Point:	
Emission Point Ref. N°:	Silt Trap #4
Source of Emission:	Rain water
Location :	Mayne
Grid Ref. (12 digit, 6E,6N):	239446E, 271443 N
Name of receiving waters:	Inny river
Flow rate in receiving waters:	0.23 m ³ .sec ⁻¹ Dry Weather Flow m ³ .sec ⁻¹ 95%ile flow
Available waste assimilative capacity:	37800 kg/day

Emission Details:			
(i) Volume to be emitted			
Normal/day	547 m ³	Maximum/day	11168 m ³
Maximum rate/hour	465 m ³		

Table E.2 (ii):Period or periods during which emissions are made, or are to be made, including daily

Periods of Emission (avg)	Peat Harvesting May - September 8AM - 8PM Monday - Saturday
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Emission Point:	
Emission Point Ref. N°:	Silt Trap #5
Source of Emission:	Rain water
Location :	Ballinacloe
Grid Ref. (12 digit, 6E,6N):	239822E, 271192 N
Name of receiving waters:	Inny river
Flow rate in receiving waters:	0.23 m ³ .sec ⁻¹ Dry Weather Flow m ³ .sec ⁻¹ 95%ile flow
Available waste assimilative capacity:	kg/day

Emission Details:			
(i) Volume to be emitted			
Normal/day	547 m ³	Maximum/day	11168 m ³
Maximum rate/hour	465 m ³		

Table E.2 (ii):Period or periods during which emissions are made, or are to be made, including daily or seas

Periods of Emission (avg)	Peat Harvesting May - September 8AM - 8PM Monday - Saturday
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Emission Point:	
Emission Point Ref. N ^o :	Silt Trap #6
Source of Emission:	Rain water
Location :	Ballinealoe
Grid Ref. (12 digit, 6F,6N):	239259F, 271289N
Name of receiving waters:	Inny river
Flow rate in receiving waters:	0.23 m ³ .sec ⁻¹ Dry Weather Flow m ³ .sec ⁻¹ 95%ile flow
Available waste assimilative capacity:	27563 kg/day

Emission Details:	
(i) Volume to be emitted	
Normal/day	376 m ³ Maximum/day 7678 m ³
Maximum rate/hour	319 m ³

Table E.2 (ii): Period or periods during which emissions are made, or are to be made, including daily o

Periods of Emission (avg)	Peat Harvesting May - September 8AM - 8PM Monday - Saturday
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Emission Point:	
Emission Point Ref. N ^o :	Silt Trap #7
Source of Emission:	Rain water
Location :	Ballinealoe
Grid Ref. (12 digit, 6E,6N):	240337E, 270693N
Name of receiving waters:	Inny river
Flow rate in receiving waters:	0.23 m ³ .sec ⁻¹ ¹ Dry Weather Flow m ³ .sec ⁻¹ 95%ile flow
Available waste assimilative capacity:	47250 kg/day

Emission Details:	
(i) Volume to be emitted	
Normal/day	615 m ³ Maximum/day 12564 m ³
Maximum rate/hour	523 m ³

Table E.2 (ii): Period or periods during which emissions are made, or are to be made, including daily c

Periods of Emission (avg)	Peat Harvesting May - September 8AM - 8PM Monday - Saturday
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Emission Point:	
Emission Point Ref. N°:	Silt Trap #8
Source of Emission:	Rain water
Location :	Clonsura
Grid Ref. (12 digit, 6E,6N):	241290E, 276673N
Name of receiving waters:	Inny river
Flow rate in receiving waters:	0.23 m ³ .sec ⁻¹ Dry Weather Flow m ³ .sec ⁻¹ 95%ile flow
Available waste assimilative capacity:	44100 kg/day

Emission Details:			
(i) Volume to be emitted			
Normal/day	547 m ³	Maximum/day	11168 m ³
Maximum rate/hour	465 m ³		

Table E.2 (ii): Period or periods during which emissions are made, or are to be made, including daily

Periods of Emission (avg)	Peat Harvesting May - September 8AM - 8PM Monday - Saturday
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Emission Point:	
Emission Point Ref. N°:	Silt Trap #9
Source of Emission:	Rain water
Location :	Clonsura
Grid Ref. (12 digit, 6E,6N):	241639E, 276801N
Name of receiving waters:	Inny river
Flow rate in receiving waters:	0.23 m ³ .sec ⁻¹ Dry Weather Flow m ³ .sec ⁻¹ 95%ile flow
Available waste assimilative capacity:	44100 kg/day

Emission Details:			
(i) Volume to be emitted			
Normal/day	547 m ³	Maximum/day	11168 m ³
Maximum rate/hour	465 m ³		

Table E.2 (ii): Period or periods during which emissions are made, or are to be made, including daily or

Periods of Emission (avg)	Peat Harvesting May - September 8AM - 8PM Monday - Saturday
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Emission Point:	
Emission Point Ref. N ^o :	Silt Trap #10
Source of Emission:	Rain water
Location :	Clonsura
Grid Ref. (12 digit, 6E,6N):	242118E, 277086N
Name of receiving waters:	Inny river
Flow rate in receiving waters:	0.23 m ³ .sec ⁻¹ Dry Weather Flow m ³ .sec ⁻¹ 95%ile flow
Available waste assimilative capacity:	44100 kg/day

Emission Details:			
(i) Volume to be emitted			
Normal/day	547 m ³	Maximum/day	11168 m ³
Maximum rate/hour	465 m ³		

Table E.2 (ii):Period or periods during which emissions are made, or are to be made, including daily

Periods of Emission (avg)	Peat Harvesting May - September 8AM - 8PM Monday - Saturday
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Emission Point:	
Emission Point Ref. N ^o :	Silt Trap #11
Source of Emission:	Rain water
Location :	Clonsura
Grid Ref. (12 digit, 6E,6N):	241824E, 277184N
Name of receiving waters:	Inny river
Flow rate in receiving waters:	0.23 m ³ .sec ⁻¹ Dry Weather Flow m ³ .sec ⁻¹ 95%ile flow
Available waste assimilative capacity:	44100 kg/day

Emission Details:			
(i) Volume to be emitted			
Normal/day	547 m ³	Maximum/day	11168 m ³
Maximum rate/hour	465 m ³		

Table E.2 (ii):Period or periods during which emissions are made, or are to be made, including daily

Periods of Emission (avg)	Peat Harvesting May - September 8AM - 8PM Monday - Saturday
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Emission Point:			
Emission Point Ref. N ^o :	Silt Trap #12		
Source of Emission:	Rain water		
Location :	Clonsara		
Grid Ref. (12 digit, 6E,6N):	240831E, 277259N		
Name of receiving waters:	Inny river		
Flow rate in receiving waters:	0.23 m ³ .sec ⁻¹ ¹ Drv Weather Flow m ³ .sec ⁻¹ 95%ile flow		
Available waste assimilative capacity:	58800 kg/day		
Emission Details:			
(i) Volume to be emitted			
Normal/day	683 m ³	Maximum /day	13960 m ³
Maximum rate/hour	581 m ³		
Table E.2 (ii): Period or periods during which emissions are made, or are to be made, including			
Periods of Emission (avg)	Peat Harvesting May - September 8AM - 8PM Monday Saturday		

E.6 Tabular Information on Emission Points

Silt Trap ID	Silt Trap Location	Easting	Northing	Point Type	Verified	Emission
1	Lower Coole	239547.6	272724.6	SW=Surface Water	N = GPS Not used	Total Suspended Solids
2	Mayne	239262.6	272362.6	SW=Surface Water	N = GPS Not used	Total Suspended Solids
3	Mayne	239246.6	271815.4	SW=Surface Water	N = GPS Not used	Total Suspended Solids
4	Mayne	239446.6	271443.4	SW=Surface Water	N = GPS Not used	Total Suspended Solids
5	Ballinealoe	239822.7	271192.3	SW=Surface Water	N = GPS Not used	Total Suspended Solids
6	Ballinealoe	239259.6	271289.3	SW=Surface Water	N = GPS Not used	Total Suspended Solids
7	Ballinealoe	240337.8	270693.2	SW=Surface Water	N = GPS Not used	Total Suspended Solids
8	Clonsara	241291.0	276767.5	SW=Surface Water	N = GPS Not used	Total Suspended Solids
9	Clonsara	241639.1	276801.5	SW=Surface Water	N = GPS Not used	Total Suspended Solids
10	Clonsara	242118.2	277086.6	SW=Surface Water	N = GPS Not used	Total Suspended Solids
11	Clonsara	241824.1	277184.6	SW=Surface Water	N = GPS Not used	Total Suspended Solids
12	Clonsara	240831.9	277259.6	SW=Surface Water	N = GPS Not used	Total Suspended Solids

Section F: Control & Monitoring;

Section F1 Detailed Schematics of All Silt treatment systems are attached in (attachment F1)

TABLE F.1(i): ABATEMENT / TREATMENT CONTROL

Control ¹ parameter	Monitoring to be carried out ³	Monitoring equipment	Monitoring equipment calibration
Total Suspended Solids	Grab samples to be pulled 4 times per year	Sample bottles, weight scales test completed by independent laboratory	Test equipment calibrated regularly by independent laboratory.

TABLE F.2(i): EMISSIONS MONITORING AND SAMPLING POINTS

Silt Trap ID	Silt Trap Location	Easting	Northing	Parameter	Monitoring frequency	Accessibility of Sampling Points	Sampling method	Analysis method/ technique
1	Lower Coole	239547.6	272724.6	Total Suspended Solids	once per month	Good	Grab	Suspended Solids Filtration Method
2	Mayne	239262.6	272362.6	Total Suspended Solids	once per month	Good	Grab	Suspended Solids Filtration Method
3	Mayne	239246.6	271815.4	Total Suspended Solids	once per month	Good	Grab	Suspended Solids Filtration Method
4	Mayne	239446.6	271443.4	Total Suspended Solids	once per month	Good	Grab	Suspended Solids Filtration Method
5	Ballinaloe	239822.7	271192.3	Total Suspended Solids	once per month	Good	Grab	Suspended Solids Filtration Method
6	Ballinaloe	239259.6	271289.3	Total Suspended Solids	once per month	Good	Grab	Suspended Solids Filtration Method
7	Ballinaloe	240337.8	270693.2	Total Suspended Solids	once per month	Good	Grab	Suspended Solids Filtration Method
8	Clonsara	241291.0	276767.5	Total Suspended Solids	once per month	Good	Grab	Suspended Solids Filtration Method
9	Clonsara	241639.1	276801.5	Total Suspended Solids	once per month	Good	Grab	Suspended Solids Filtration Method
10	Clonsara	242118.2	277086.6	Total Suspended Solids	once per month	Good	Grab	Suspended Solids Filtration Method
11	Clonsara	241824.1	277184.6	Total Suspended Solids	once per month	Good	Grab	Suspended Solids Filtration Method
12	Clonsara	240831.9	277259.6	Total Suspended Solids	once per month	Good	Grab	Suspended Solids Filtration Method

Section G: Resource & Energy Efficiency;

The main source of fuel used on site in the bogs is diesel fuel which will be used to run mobile plant. The plant will be refuelled using a mobile bowser which will be used for storing the diesel fuel and for refuelling. The diesel oil is categorised as danger category **EU Category of Danger: Carcinogenic category 3 Harmful**

Risk (R) Phrases: R40 Possible risks of irreversible effects R65 Harmful: May cause lung damage if swallowed.

Safety (S) Phrases: S2 Keep out of reach of children S24 Avoid Contact with skin R36/37 Wear protective clothing and gloves S43 In case of Fire use foam/dry powder/CO2. Never use water jets S62 If swallowed, do not induce vomiting: seek medical advice immediately and show this Container or label S61 Avoid release into the environment. Refer to special instructions/Safety data sheets.

Chemical Composition: A complex mixture of middle distillate hydrocarbons, with carbon numbers in C10 to C28 range. The product may contain Small quantities of performance enhancing additives.

Hazardous Components: Fuels, diesel. EINECS No: 269-822-7, CAS No: 68334-30-5, Xn, N, R40 Possible risks of irreversible effects, R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment, R65 Harmful: may cause lung damage if swallowed.

Table G.1(i) Details of Process related Raw Materials, Intermediates, Products, etc., used or generated on the site

Ref. # or code	Material/ Substance ⁽¹⁾	CAS Number	Danger Category ⁽²⁾	Amount Stored (tonnes)	Annual Usage (tonnes)	Nature of Use	R ⁽³⁾ - Phrase	S ⁽³⁾ - Phrase
	Diesel Oil	68334-30-5	EU Category of Danger: Carcinogenic category 3 Harmful	5,000	70,000	Refuelling mobile plant	R40 R36/37 R65	S2 S24 S43 S61 S62

- Notes:
1. In cases where a material comprises a number of distinct and available dangerous substances, please give details for each component substance.
 2. c.f. Article 2(2) of SI N^o 77/94
 3. c.f. Schedules 9 and 10 of SI No 62/2004

Table G.1(ii) Details of Process related Raw Materials, Intermediates, Products, etc., used or generated on the site

Ref. # or code	Material/ Substance ⁽¹⁾	TA Luft Class 1, 2 or 3	Odour			EU Lists I and II (Tick and specify Group/Family Number)			
			Odourous Yes/No	Description	Threshold $\mu\text{g}/\text{m}^3$	Dangerous Substances Directive 76/464/EEC		Groundwater Directive 80/68/EEC	
						List I	List II +129 ⁴	List I	List II
	Diesel Oil		Yes	Gas like Fuel					

- Notes (cont.): 4. The European Commission priority candidate list

Section I: Existing Environment & Impact Of The Activity;

Table I.2(i) SURFACE WATER QUALITY

Parameter	Results (mg/l)			Sampling method ² (grab, drift etc.)	Normal Analytical Range ²	Analysis method / technique
	25/11/2009	Date	Date			
	pH	7.9				
Temperature						
Electrical conductivity EC						
Ammoniacal nitrogen NH ₄ -N	0.13			Grab		
Chemical oxygen demand	46			Grab		
Biochemical oxygen demand	2			Grab		
Dissolved oxygen DO						
Calcium Ca						
Cadmium Cd						
Chromium Cr						
Chloride Cl						
Copper Cu						
Iron Fe						
Lead Pb						
Magnesium Mg						
Manganese Mn						
Mercury Hg						
Phosphorous	0.18			Grab		
Settleable Solids	<10			Grab		
Suspended Solids	<10			Grab		
Turbidity	<1			Grab		

(Sheet 1 of 2) Monitoring Point/ Grid Reference: **Lower Coole** 239547E, 272724 N

Parameter	Results (mg/l)			Sampling method ² (grab, drift etc.)	Normal Analytical Range ²	Analysis method / technique
	25/11/2009	Date	Date			
	pH	6.6				
Temperature						
Electrical conductivity EC						
Ammoniacal nitrogen NH ₄ -N	2			Grab		
Chemical oxygen demand	120			Grab		
Biochemical oxygen demand	2			Grab		
Dissolved oxygen DO						
Calcium Ca						
Cadmium Cd						
Chromium Cr						
Chloride Cl						
Copper Cu						
Iron Fe						
Lead Pb						
Magnesium Mg						
Manganese Mn						
Mercury Hg						
Phosphorous	0.03			Grab		
Settleable Solids	<10			Grab		
Suspended Solids	<10			Grab		
Turbidity	2			Grab		

(Sheet 1 of 2) Monitoring Point/ Grid Reference: **Mayne** 239262E, 272362 N

(Sheet 1 of 2) Monitoring Point/ Grid Reference: _____				Mayne	239246E, 271815 N		
Parameter	Results (mg/l)			Sampling method ² (grab, drift etc.)	Normal Analytical Range ²	Analysis method / technique	
	25/11/2009	Date	Date				
pH	7.8			Grab			
Temperature							
Electrical conductivity EC							
Ammoniacal nitrogen NH ₄ -N	0.44			Grab			
Chemical oxygen demand	54			Grab			
Biochemical oxygen demand	2			Grab			
Dissolved oxygen DO							
Calcium Ca							
Cadmium Cd							
Chromium Cr							
Chloride Cl							
Copper Cu							
Iron Fe							
Lead Pb							
Magnesium Mg							
Manganese Mn							
Mercury Hg							
Phosphorous	0.02			Grab			
Settleable Solids	<10			Grab			
Suspended Solids	<10			Grab			
Turbidity	<1			Grab			

(Sheet 1 of 2) Monitoring Point/ Grid Reference: _____				Mayne	239446E, 271443 N		
Parameter	Results (mg/l)			Sampling method ² (grab, drift etc.)	Normal Analytical Range ²	Analysis method / technique	
	25/11/2009	Date	Date				
pH	7			Grab			
Temperature							
Electrical conductivity EC							
Ammoniacal nitrogen NH ₄ -N	1.9			Grab			
Chemical oxygen demand	120			Grab			
Biochemical oxygen demand	2			Grab			
Dissolved oxygen DO							
Calcium Ca							
Cadmium Cd							
Chromium Cr							
Chloride Cl							
Copper Cu							
Iron Fe							
Lead Pb							
Magnesium Mg							
Manganese Mn							
Mercury Hg							
Phosphorous	0.03			Grab			
Settleable Solids	<10			Grab			
Suspended Solids	<10			Grab			
Turbidity	<1			Grab			

(Sheet 1 of 2) Monitoring Point/ Grid Reference: _____				Ballinealoe	239822E, 271192 N		
Parameter	Results (mg/l)			Sampling method ² (grab, drift etc.)	Normal Analytical Range ²	Analysis method / technique	
	25/11/2009	Date	Date				
pH	6.7			Grab			
Temperature							
Electrical conductivity EC							
Ammoniacal nitrogen NH ₄ -N	1.9			Grab			
Chemical oxygen demand	140			Grab			
Biochemical oxygen demand	2			Grab			
Dissolved oxygen DO							
Calcium Ca							
Cadmium Cd							
Chromium Cr							
Chloride Cl							
Copper Cu							
Iron Fe							
Lead Pb							
Magnesium Mg							
Manganese Mn							
Mercury Hg							
Phosphorous	0.04			Grab			
Settleable Solids	< 10			Grab			
Suspended Solids	< 10			Grab			
Turbidity	2			Grab			

(Sheet 1 of 2) Monitoring Point/ Grid Reference: _____				Ballinealoe	239259E, 271289N		
Parameter	Results (mg/l)			Sampling method ² (grab, drift etc.)	Normal Analytical Range ²	Analysis method / technique	
	25/11/2009	Date	Date				
pH	6.6			Grab			
Temperature							
Electrical conductivity EC							
Ammoniacal nitrogen NH ₄ -N	2			Grab			
Chemical oxygen demand	120			Grab			
Biochemical oxygen demand	2			Grab			
Dissolved oxygen DO							
Calcium Ca							
Cadmium Cd							
Chromium Cr							
Chloride Cl							
Copper Cu							
Iron Fe							
Lead Pb							
Magnesium Mg							
Manganese Mn							
Mercury Hg							
Phosphorous	0.03			Grab			
Settleable Solids	< 10			Grab			
Suspended Solids	< 10			Grab			
Turbidity	2			Grab			

(Sheet 1 of 2) Monitoring Point/ Grid Reference: _____				Ballinealoe	240337E, 270693N	
Parameter	Results (mg/l)			Sampling method ² (grab, drift etc.)	Normal Analytical Range ²	Analysis method / technique
	25/11/2009	Date	Date			
pH	7.6			Grab		
Temperature						
Electrical conductivity EC						
Ammoniacal nitrogen NH ₄ -N	0.36			Grab		
Chemical oxygen demand	68			Grab		
Biochemical oxygen demand	2			Grab		
Dissolved oxygen DO						
Calcium Ca						
Cadmium Cd						
Chromium Cr						
Chloride Cl						
Copper Cu						
Iron Fe						
Lead Pb						
Magnesium Mg						
Manganese Mn						
Mercury Hg						
Phosphorous	0.03			Grab		
Settleable Solids	<10			Grab		
Suspended Solids	11			Grab		
Turbidity	<1			Grab		

(Sheet 1 of 2) Monitoring Point/ Grid Reference: _____				Clonsura	241290E, 276673N	
Parameter	Results (mg/l)			Sampling method ² (grab, drift etc.)	Normal Analytical Range ²	Analysis method / technique
	25/11/2009	Date	Date			
pH	6.9			Grab		
Temperature						
Electrical conductivity EC						
Ammoniacal nitrogen NH ₄ -N	1.6			Grab		
Chemical oxygen demand	60			Grab		
Biochemical oxygen demand	4			Grab		
Dissolved oxygen DO						
Calcium Ca						
Cadmium Cd						
Chromium Cr						
Chloride Cl						
Copper Cu						
Iron Fe						
Lead Pb						
Magnesium Mg						
Manganese Mn						
Mercury Hg						
Phosphorous	0.02			Grab		
Settleable Solids	<10			Grab		
Suspended Solids	13			Grab		
Turbidity	<1			Grab		

(Sheet 1 of 2) Monitoring Point/ Grid Reference: _____				Clonsura	241639E, 276801N	
Parameter	Results (mg/l)			Sampling method ² (grab, drift etc.)	Normal Analytical Range ²	Analysis method / technique
	25/11/2009	Date	Date			
pH	7.1			Grab		
Temperature						
Electrical conductivity EC						
Ammoniacal nitrogen NH ₄ -N	1.7			Grab		
Chemical oxygen demand	58			Grab		
Biochemical oxygen demand	10			Grab		
Dissolved oxygen DO						
Calcium Ca						
Cadmium Cd						
Chromium Cr						
Chloride Cl						
Copper Cu						
Iron Fe						
Lead Pb						
Magnesium Mg						
Manganese Mn						
Mercury Hg						
Phosphorous	0.03			Grab		
Settleable Solids	< 10			Grab		
Suspended Solids	11			Grab		
Turbidity	<1			Grab		

(Sheet 1 of 2) Monitoring Point/ Grid Reference: _____				Clonsura	242118E, 277086N	
Parameter	Results (mg/l)			Sampling method ² (grab, drift etc.)	Normal Analytical Range ²	Analysis method / technique
	25/11/2009	Date	Date			
pH	7.2			Grab		
Temperature						
Electrical conductivity EC						
Ammoniacal nitrogen NH ₄ -N	1.9			Grab		
Chemical oxygen demand	63			Grab		
Biochemical oxygen demand	2			Grab		
Dissolved oxygen DO						
Calcium Ca						
Cadmium Cd						
Chromium Cr						
Chloride Cl						
Copper Cu						
Iron Fe						
Lead Pb						
Magnesium Mg						
Manganese Mn						
Mercury Hg						
Phosphorous	0.03			Grab		
Settleable Solids	< 10			Grab		
Suspended Solids	13			Grab		
Turbidity	<1			Grab		

(Sheet 1 of 2) Monitoring Point/ Grid Reference: _____					Clonsara	241824E, 277184N	
Parameter	Results (mg/l)				Sampling method ² (grab, drift etc.)	Normal Analytical Range ²	Analysis method / technique
	25/11/2009	Date	Date	Date			
pH	6.8				Grab		
Temperature							
Electrical conductivity EC							
Ammoniacal nitrogen NH ₄ -N	1.7				Grab		
Chemical oxygen demand	63				Grab		
Biochemical oxygen demand	3				Grab		
Dissolved oxygen DO							
Calcium Ca							
Cadmium Cd							
Chromium Cr							
Chloride Cl							
Copper Cu							
Iron Fe							
Lead Pb							
Magnesium Mg							
Manganese Mn							
Mercury Hg							
Phosphorous	0.02				Grab		
Settleable Solids	<10				Grab		
Suspended Solids	<10				Grab		
Turbidity	<1				Grab		

(Sheet 1 of 2) Monitoring Point/ Grid Reference: _____					Clonsara	240831E, 277259N	
Parameter	Results (mg/l)		Sampling method ² (grab, drift etc.)	Normal Analytical Range ²	Analysis method / technique		
	25/11/2009	Date					
pH	6.9		Grab				
Temperature							
Electrical conductivity EC							
Ammoniacal nitrogen NH ₄ -N	1.5		Grab				
Chemical oxygen demand	60		Grab				
Biochemical oxygen demand	5		Grab				
Dissolved oxygen DO							
Calcium Ca							
Cadmium Cd							
Chromium Cr							
Chloride Cl							
Copper Cu							
Iron Fe							
Lead Pb							
Magnesium Mg							
Manganese Mn							
Mercury Hg							
Phosphorous	0.02		Grab				
Settleable Solids	<10		Grab				
Suspended Solids	<10		Grab				
Turbidity	<1		Grab				

Section.I.2 Assessment of Impact on Receiving Surface Waters;

- ✓ As you will see from the data above with well designed and well managed silt traps we believe we can minimise the impact on the receiving waters of the River Inny as is evident from the quality of the discharge post our silt traps. The silt traps at all sites are below the required threshold for total suspended solids as stipulated by the Environmental protection Agency.
- ✓ The data analysis for the Inny River would also indicate that the river is actually in good condition at present.

Measurement Parameter	Origin Of Water Sample		
	Inny River	Measurement Units	Sample Bottle
Ammonia	< 10	mg/litre	1 Litre
B.O.D	2	mg/litre	500 ML
C.O.D	30	mg/litre	500 ML
Colour	41	Hazen	1 Litre
Phosphorous	0.09	mg/litre	1 Litre
pH	7.9	pH	1 Litre
Settleable Solids		mg/litre	1 Litre
Suspended Solids	< 10	mg/litre	1 Litre
Turbidity	< 1	NTU's	1 Litre

Section.I.7 Noise Impact;

- ✓ Our noise impact at the moment is minimal because we are only using mobile plant in non sensitive areas for the months of May – September.

Section.I.8 Environmental Considerations & BAT;

- ✓ The main environmental considerations we have are surface water contamination through Suspended solids. The potential impacts are minimised at our peat bog sites in county Westmeath through the deployment of Best Available Techniques in terms of silt trap design, adjustable weir design to control flow rates and effective management of silt trap inspection, sampling & cleaning.
- ✓ The design of these silt traps and adjustable weir can be observed in attachment I.8

It is generally accepted when completing an Environmental Risk Assessment of a peat harvesting operation that the most significant risk is to water pollution from loose peat deposition as silt with increased risk of total suspended solids exceeding the specified discharge limit as stipulated by Environmental Protection Agency.

There are a number of control measures that can be implemented to minimise the risk of water pollution, the main one being the implementation and optimisation of silt control systems including the following components:

- a. Catchments Areas and Silt Pond Design Optimisation.
- b. Adjustable Weir Outlet Flow Control
- c. Inspection.
- d. Sampling and Analysis.
- e. Cleaning frequency.
- f. Cleaning Methodology & Silt pond sludge Re-use

Each of the above items will now be covered in more detail.

a) Catchments Areas and Silt Pond Design Optimisation

The silt control ponds are based on the knowledge that peat bogs in milled moss peat production will produce approx 50m^3 of runoff per hectare per annum. The silt ponds are designed in accordance with this requirement. The design capacity of all silt ponds should be a minimum of 50m^3 per hectare.

The Westland Horticulture site at Cul Na Gun Bog has a total of 7 silt ponds the peat bog at Clonsura has 5 silt traps each located at strategic locations based on the surface topography of the bog and drainage requirements and the nett area of production area serviced.

The location of each of the silt ponds are identified and labeled in the Land Survey Site Maps included in appendix "F" attached.

The catchment area and design specifications for each of the silt ponds onsite are included in detailed engineering drawings attached in appendix "G".

Silt Pond Locations, Dimensions and Capacities

Silt Trap ID	Silt Trap Location	Grid Reference East	Grid Reference West	Area of bog Serviced	Length (M)	Breadth Avg (m)	Depth Max (M)	Depth Min (M)	Capacity (Max) M ³	Capacity (Min) M ³
1	Lower Coole	239547.6	272724.6	16	50	6.625	3	2	993.75	662.5
2	Mayne	239262.6	272362.6	36	120	7.725	3	2	2781	1854
3	Mayne	239246.6	271815.4	15	50	7.5	3	2	1125	750
4	Mayne	239446.6	271443.4	16	30	9	4	3	1080	810
5	Ballinealoe	239822.7	271192.3	16	40	7.5	4	3	1200	900
6	Ballinealoe	239259.6	271289.3	11	30	7.5	3.5	2.5	787.5	562.5
7	Ballinealoe	240337.8	270693.2	18.000	60	7.5	3	2	1350	900
8	Clonsara	241291.0	276767.5	16	30	12	3.5	2.5	1260	900
9	Clonsara	241639.1	276801.5	16	30	12	3.5	2.5	1260	900
10	Clonsara	242118.2	277086.6	16	30	12	3.5	2.5	1260	900
11	Clonsara	241824.1	277184.6	16	30	12	3.5	2.5	1260	900
12	Clonsara	240831.9	277259.6	20	40	12	3.5	2.5	1680	1200

g) Adjustable Weir Outlet Flow Control

To optimise silt pond level control to cope with changes in seasonality and unexpected occurrences of heavy rainfall Westland Horticulture have designed an innovative adjustable weir as detailed in engineering drawing attached in appendix "H".

This design concept has a number of benefits and advantages for flexibility and control as follows:

- v. Allows us to operate within a 1 metre range of an effective operating depth of adjustment to compensate for unexpected incidences of heavy rainfall and to minimise the risk of silt deposition in the overflow from the silt pond.
- vi. Allows us to control the weir level in increments of 150cm accordingly as dictated by the silt pond level and overflow velocity changes.
- vii. We have flexible control over the size of the weir opening and hence we can restrict the flow across the settlement pond thereby enabling us to control flow velocity to a maximum of <10cm/sec. This flow velocity will be measured either conventionally as in river survey method or by use of a propeller driven rotor based measurement system. See example of potential system Appendix "I".
- viii. Enables us to completely dam off the outlet from the silt pond during cleaning operation and increases holding capacity. This is particularly important post cleaning when there is a delay period when we cannot discharge from the outlet whilst we wait for disturbed solids to settle out post disruption from the cleaning process.

h) Inspection

To optimise silt pond level control and cleaning operation we have completing work instruction documentation as part of our ISO14001 environmental management system document WI20/02 Appendix "C" attached, with key employees on site trained to complete the visual inspection with training records attached TR20/02 Appendix "C" and original hard copies available for inspection on site.

The visual inspection must be completed to schedule every week for all silt ponds with a full audit made on silt pond level control and overflow speed appearance that will be verified by actual velocity measurement in future. The visual inspection will also report on evidence of silt deposition post the overflow from the silt pond. All findings shall be logged in detail and recorded in the visual audit inspection record sheet (attached) WIR20/02 Appendix "C" and any issues observed must be reported to the site manager immediately to carryout corrective action as required.

An update of the visual inspection records shall be reported to Westmeath county council on a quarterly basis.

i) Sampling & Analysis

To ensure our silt ponds are operating to optimal conditions and that we are meeting the required standard of water quality on our discharge from the overflow post silt pond we will require to continuously monitor and analyse our performance.

A 1 Litre sample of our discharge waters post the overflow from the silt ponds shall be sampled once per month for all silt ponds as per work instruction document WI20/02 Appendix "C" attached.

The samples will be sent to an accredited lab were analysis will be completed for Total Dissolved solids and the results will be recorded on the appropriate record sheet WIR20/02b Appendix "C" the results will be reported back to the site manager, who will take corrective action as required based on the findings of the analysis.

The analytical results will be logged and monitored for ongoing performance of all silt ponds and corrective actions will be taken accordingly as we observe changes in trend analysis overtime.

An update of the analytical records for suspended solids shall be reported to Westmeath county council on a quarterly basis.

j) Cleaning Frequency

To ensure our silt ponds are operating to optimum performance we will set up a schedule of regular silt pond cleaning and desludging.

This will involve a minimum cleaning regime of at least twice a year once in April before the peat harvesting production season commences and secondly in September at the end of the production season and before ditching commences.

Dependant on rainfall trends it may also be essential to complete an additional routine clean possibly in January or during the harvesting season.

Out of schedule cleaning will also be triggered as necessary as a corrective action based on feedback from visual inspection or results of analytical laboratory analysis for total suspended solids.

k) Cleaning Methodology & Silt Pond Sludge Re-Use

To ensure our silt ponds are operating at optimised performance we need to complete regular scheduled cleaning as detailed above with minimum occurrence of 2 times per year.

When cleaning there are some guidelines that we have outlined as per Work Instruction WI20/03 attached appendix "D". This includes outline of instruction for reuse of excavated Silt Pond sludge.

These guidelines include the complete damming off or sealing of the outlet from the Silt pond through adjustable weir that will give us additional capacity to contain silt pond outlet flows post cleaning until disturbed silt has resettled.

The outfall from silt ponds are always cleaned from upstream direction with downstream end blocked

The sludge excavation should be carried out by a long reach excavator and where none is available ledging is required

Additional Measures Taken To Minimize Emissions to Water;

- viii. Along the small tributary river of the Inny river which runs through the centre of the bog a 1 metre high bund or levy shall be constructed out of compacted peat to prevent run off from the bog surface into the water course.
- ix. Where necessary outlets from field drains shall be blocked during stock pile loading.
- x. Ditching process should occur in dry weather and while ditching outfalls from silt ponds will be blocked and we will ditch towards the outfall.

- xi. We will ensure that stock piles are kept away from field drains where possible but any field drains that are adjacent to stockpile loading should be cleaned out immediately after stock pile loading.
- xii. We will investigate the planting of Reed beds post the outlet from our silt ponds to act as a final polish as part of a continuous improvement programme for the management of the site.
- xiii. A 30 metre buffer zone of non peat harvesting production will be maintained adjacent to all land adjacent to the Inny River. This Buffer zone will be planted with a species of native vegetation that will thrive in the harsh conditions of a peat environment with the optimum time to sow this successfully being during the sowing season from September to November. We will select the species from a selection of the natural peat land habitat vegetation as detailed in Table #1 below

Section J: Accident Prevention & Emergency Response;

We Manage & control all the site operations to ensure that no potentially polluting substance or matter shall be permitted to discharge to off surface waters, off site storm drains or groundwaters.

On our current site operation we have identified refuelling on harvesting vehicles by mobile refuelling units as our biggest source of potential pollution and hence we will undertake the following steps to ensure no contamination of the Inny River or connecting tributaries shall take place as per work instruction WI20/04 Attachment "J".

- vii. Refuelling vehicles need to be banded to ensure no leaks can occur.
- viii. We will maintain in storage an adequate supply of containment booms and or suitable absorbent material (spill kits) on site at all times.
- ix. Absorbent materials (spill kits) are to be held on standby in all instances of refuelling.
- x. A visual inspection will be completed every week to ensure that there is no evidence of fuel contamination in silt ponds or outlets.
- xi. Any contaminated peat shall be removed and deposited in a contaminated waste container and disposed of by licensed waste hauliers.
- xii. A bi-annual inspection shall be carried out of all transported fuelling systems to ensure that should record any damages leaks or flaws that could result in an accidental spillage.

The following Emergency Response Procedure (ERP 1.0) (Oil Diesel & Petrol Spillage's) in Conjunction with Bord Na Mona

Purpose:

This procedure details the steps to be taken when dealing with an oil/diesel/petrol substance spill on site. It is required in order to:

- Protect Employees
- Protect the Environment
- Prevent Fugitive Emissions

This procedure should be followed for all large and massive spills, which may occur.

Definitions:

Small Spill: Greater than 5 litres and less than 250 litres

Large Spill: Greater than 250 litres.

Responsibility:

General staff and contractors of Bord Na Mona are responsible for being aware of the procedure and their responsibilities/requirements/obligations.

Procedure:

1. Ensure all diesel/oils are handled (loaded, unloaded and moved) by a competent person using the correct procedure. Appropriate precautions should be taken at all times to minimise the risk of accidental spillage.
2. In the event of a spillage occurrence the Operations Leader in consultation with the Environmental Coordinator shall initially investigate the following issues:
 - How long has it been since the incident occurred?
 - Consult the relevant data sheets (Material Safety Data Sheets or otherwise) for the method of spill containment and fire control of the affected material.
3. The spill must be assessed immediately by the Site Manager. Coordinator/Operations Leader for potential risks to health and safety of employees, and the potential environmental consequences.

4. If there is a risk of explosion, all personnel in the area must be evacuated from The area.
5. The spill should be sourced, isolated, and contained with booms or the appropriate oil spill kits.
6. All effort should be made to prevent the spill from entering a storm drain or The nearest outfall.
7. If the spillage emanated from a drum, it is positioned so that the ruptured Section is in upwards direction, thereby preventing further leakage.
8. Use shovels brushes or a machine to sweep the spilled material into drums for specialist disposal.
9. Start on the outside and work in towards the centre of the spill.
10. Do not mix different types of waste.
11. Drum the waste and seal the container or bag and double bag
12. Label the waste with the destination name, appropriate hazard label and name Of waste, giving as much information as possible on contents, plus Concentrations of constituents if applicable etc.
13. If the spill occurred due to a damaged drum, place the ruptured drum into a Salvage drum container, until disposal is arranged.
14. Once the spill has been contained, a suitable absorbent to soak the Spillage must be applied.
15. All possible ignition sources such as electrical equipment, naked lights, Machinery etc should be removed from the area. Any combustibles in the spill Area should be removed.
16. Follow-up action measures taken must include the implementation of Appropriate remedial work to prevent such a spillage incident reoccurring in Future.
17. The Environmental Protection Agency, Regional Fisheries Board, and Local Authority Personnel are contacted by the Operations Leader or the Environmental Coordinator in the event of any incident, paying due regard to Conditions 4 using the Environmental Notification Form (EF3.2). Following an emergency, details of the incident shall be recorded on the Environmental Incident Investigation Form (EPF3.1) located within the Environmental Incident Investigation and Reporting Procedure (Environmental Procedure EP 3.0). Following the environmental incident investigation appropriate procedures shall be implemented accordingly i.e. Environmental Non-Compliance Procedure (EP 1.0) and the Environmental Corrective Action Procedure (EP 2.0)

EMERGENCY PROCEDURE IN THE EVENT OF OIL SPILLAGE

Inform Resource Manager

Resource Manager to inform EPA & Local Authority

Block outfall at nearest point

Establish cause and prevent further leakage

Inspect downstream and install booms to capture the spillage

Establish limit of spillage

Install booms in the outfall

Use dry peat (preferably 10% M.C.) to clean up

Arrange remedial work to prevent future occurrences

Requirements: Map of drainage system
 Stock of oil spill booms
 Appropriate Oil Spill Kits

Locations and contacts for Oil Spill Equipment:

Bord Na Mona: Paddy Gunning – 086 6012037
 Cuil na Gcun Workshop.

Harte Peat Sean Harte – 086 3412349

Westland Peat Shane Curry – 087 2775840

Section K: Remediation, Decommissioning, Restoration & Aftercare;

As part of our overall management plan we will develop plans for bog rehabilitation following termination or of use or involvement in all or part of the site currently used for peat harvesting.

At present we do not know what the remaining working life expectancy is of the sites in Co. Westmeath. Our calculations based on actual production volumes would indicate that at the current production rate for example the site at Cul Na Gun would have a working life expectancy remaining in the region of 60 – 100 years.

A detailed bog rehabilitation programme will be developed post consultation with numerous environmental organisations such as the EPA and also drawing on a wealth of experience and papers written on the subject of successful bog rehabilitation by other contractors e.g. Bord Na Mona who have been through this process in their life time. The outcome & findings of these consultations shall be recorded and reported to relevant local authorities or agencies or other interested parties.

The cutaway bog rehabilitation plan will be discussed with the local authorities and will be updated over time to monitor the progress of bog rehabilitation This plan will include the following considerations

- ix. Decommission, render safe or remove for disposal/recovery, any soil, subsoil's, buildings, plant or equipment, or any waste, materials or substances or other matter contained therein or thereon, that may result in environmental pollution
- x. Complete a Risk assessment of the area including environmental & health & safety implications as applicable.
- xi. A study of the current state of the hydrology of the site with potential to return the area to a flooded natural wetland.
- xii. An evaluation of peat depth remaining
- xiii. A study of differing types of peat remaining
- xiv. A study of natural flora & fauna on the site.
- xv. Definition of criteria that defines the successful rehabilitation of the site and ensures minimum environmental impact.
- xvi. Will include a program of aftercare and maintenance of the site to promote bog rehabilitation.

We will agree to the completion of a certificate of completion for rehabilitation to be submitted to local authorities within 3 months of the date of the rehabilitation action plan items being fully completed.

Section L: Statutory Requirements;

- ✓ As Part of our statutory requirement Westland will endeavour to minimise or impacts on pollution of the River Inny and neighbouring environment in which we are operating our Peat harvesting operations.
- ✓ Westland will optimise our silt traps through design, management and cleaning frequency to maintain our discharge to the River Inny at a level below the stipulated statutory requirements of 35 mg/litre as stipulated by the Environmental Protection Agency.
- ✓ This level will be maintained through optimised silt trap design and optimised weir level control and will be monitored by visual inspection and laboratory analysis of grab samples from each silt trap at a frequency of once per month unless stipulated otherwise by the Environmental Protection Agency.
- ✓ The inspection & sample analysis regime will determine our cleaning frequency that will help control our discharge of surface waters to the river Inny at a level not exceeding 35 mg/litre.

Fit & Proper Person;

- ✓ I believe Westland are very lucky to have very capable personnel overseeing the Peat Harvesting Operations from both and Environmental perspective and also operationally. The Fit & Proper People responsible for the implementation and maintaining the Integrated Pollution Prevention Control license and ensuring all requirements of the environmental protection Agency are met are as follows;
- ✓ I personally (Mark Hamill) will have the overall responsibility for the management of the Integrated Pollution Prevention Control license and originating all Environmental management plans, policies & Procedures. From my education I have an excellent knowledge of environmental Management having obtained an Honours Degree in environmental Science. I have used this knowledge to good effect during my working life were I have worked with various regulatory authorities in Northern Ireland and have also managed various Environmental projects including waste recycling and re-use and Environmental Management Plans. I am also Westland's administrator for their Environmental management System to ISO14001 international standard.
- ✓ Our site Operations Manager for our Peat Harvesting Operations is Shane Currie, Shane has over 20 years experience working in the Peat Harvesting Industry with a wealth of experience on optimisation of silt trap designs and cleaning regimes and also experience on Best Available Techniques and practises for operating the peat Harvesting area particularly with regards to minimising the impact of transportation and stock piling within the Bog areas.