Bord na Mona Energy Ltd.

Environmental and Operational Procedures for the Protection of Surface Water

Prepared by

BORD NA MÓNA
Naturally Driven

Bord na Móna Environmental and Operational Procedures for Protection of Surface Water

Title	SOP Ref	Rev	Purpose
Bund Maintenance & Integrity Procedure	BM&IP	4	Procedure for the maintenance and integrity testing of bund structures
Communication Procedure	CP	3	Effective communication of environmental issues.
Environmental Complaints Procedure	ECP	3	To ensure all environmental complaints are dealt with effectively.
Composite Sampler Service procedure	VSD		Procedure for servicing of Composite Samplers
Environmental Management Plan (Draft)		1	To specify the method in which emissions and energy usage will be reduced or eliminated over a specified period of time.
Dust Complaint Procedure			Procedure to deal with all complaints relating to emissions air and land
Environmental Communications	VSD		Procedure for external and internal environmental communications
Environmental Training Procedure		4	Procedure for training of operatives in good environmental work practices.
Gas Oil Loading Procedure	VSD	1	Procedure for external delivery, internal loading and dispensing of gas oil.
General ERP	VSD		General Emergency Preparedness and Response
Litter Action Plan			Prevention and control of litter arising from Bord na Mona's activities and from unauthorised dumping on and around its property.
Local Authority Contact Info			Local Authority contact information relating to IPC Incidents
Programme for Public Information			To define how Bord na Mona Peat manages the communication of Environmental information concerning the facility with external parties.
Restoration and Aftercare Procedure	RAP	3	Procedure to address Condition 10, regarding the Restoration & Aftercare requirements of IPC Licence P0499-01 to P0507-01
Service Level Agreement (between AES and BnM)			Document setting out the waste management services provided by AES to Bord Na Móna Peat including the communication lines, responsibilities and response times.
Waste Management Procedure		Rev 1	To define the correct procedure to be followed when requesting a waste collection service from AES regarding removal of all wastes from all sites within the Feedstock group.
Bog Maintenance Flowchart	SOP: FS-BM-01		Flowchart for Bog maintenance
Bog Maintenance Plan	SOP: FS-BM-02	2	SOP for Bog Maintenance Plans to include ditching, piping, pumps, open drains, silt ponds, timber extraction, pile field levelling, screw levelling and headland preparation.
Drainage Planning and Implementation	SOP: FS-BM-03	2	SOP for preparation and implementation of Bog Drainage Plans
Ditching	SOP: FS-BM-04	2	SOP for ditching work as required in Bog Drainage Plan.
Piping and Re-Piping	SOP: FS-BM-05	2	SOP for piping and re-piping work as required in Bog Drainage Plan.
Open Outfalls	SOP: FS-BM-06	2	SOP for opening of outfalls as required in Bog Drainage Plan.
Silt Pond Cleaning	SOP: FS-BM-07	3	SOP for cleaning of Silt Ponds as set out in Bog Maintenance Plan.
Timber Extraction	SOP: FS-BM-08	2	SOP for clearing of Timber as set out in Bog Maintenance Plan.
Headland Levelling	SOP: FS-BM-09	2	SOP for levelling of headlands as set out in Bog Maintenance Plan.
Screw Levelling	SOP: FS-BM-10	2	SOP for use of screw leveller as set out in Bog Maintenance Plan.
Pile Field Lowering	SOP: FS-BM-11	3	SOP for lowering of pile field greater than 1m above adjoining field as set out in Bog Maintenance Plan.
Production Flowchart	SOP: FS-PR-01	2	Flowchart for Peat Production

Bord na Móna Environmental and Operational Procedures for Protection of Surface Water

Title	SOP Ref	Rev	Purpose
General Milled Peat Production	SOP: FS-PR-02	2	SOP to describe the general arrangements for the production of milled peat in Bord na Móna Energy.
Milling	SOP: FS-PR-03	1	SOP for milling of peat (Light or new triple miller)
Offset Milling	SOP: FS-PR-04	2	SOP for offset milling of peat to be carried out at start of production or max every fourth harvest.
Harrowing	SOP: FS-PR-05	2	SOP for harrowing of milled peat
Ridging	SOP: FS-PR-06	2	SOP for ridging of harrowed peat.
Pile Rolling	SOP: FS-PR-07	1	SOP for rolling of piles to shape pile profile to be carried out at a minimum every fourth harvest.
Peco Harvesting	SOP: FS-PR-08	4	SOP for harvesting of peat into stockpiles for rail loading and haulage
Haku Harvesting	SOP: FS-PR-09	2	SOP for harvesting of peat into stockpiles for haku trailer loading and haulage.
Preparation of Production Charts	SOP: FS-PR-10	2	SOP for general arrangements for deciding on the Production Chart for each milled peat area
Updating Production Plan	SOP: FS-PR-11	1	SOP for the updating of production charts and starting new stockpiles.
Stockpile Inventory	SOP: FS-PR-12	1	SOP for annual peat stock check.
Headland Harvesting	SOP: FS-PR-13	Draft	SOP for harvesting peat from headlands
Stockpile Survey with Trimble Tablet	SOP: FS-PR-14	1	SOP for survey of stockpile with Trimble Yuma 2 Tablet.
Ridge Sampling	SOP: FS-PR-15	3	SOP for the sampling of ridges during production.
End of Production Season Procedure	SOP: FS-PR-16	Draft	SOP describing end of production Season activities
Document Control	Procedure 001	7	The purpose of this procedure is to describe the arrangements in Bord na Móna Peat Division for document control.
Record Control	Procedure 002	3	Procedure is to describe the arrangements in Bord na Móna Peat Division for record control.
Internal Audit	Procedure 003	4	Procedure is to describe the arrangements in Bord na Móna Peat Division for internal audits.
Hort Bogs - General	SOP: FS-HO-01	2	The purpose of this procedure is to describe the differences (from standard peat division requirements) in the operation and maintenance of horticultural bogs.
Hort Bogs - Bog Maintenance	SOP: FS-HO-02	1	The purpose of this procedure is to describe the differences (from standard Feedstock requirements) in the maintenance of horticultural bogs.
Hort Bogs - Bog Housekeeping	SOP: FS-HO-03	1	The purpose of this procedure is to describe the differences (from standard Feedstock requirements) in the housekeeping of horticultural bogs.
Bog Maintenance Compliance Check List			Bog operations and maintenance check list for peat production activities.
Scheduling Flowchart	SOP: FS-SC-01	2	Scheduling flowchart for stockpile sampling and loading
Develop Moisture Targets	SOP: FS-SC-02	2	Flowchart to establish and circulate moisture targets
Peat loading	SOP: FS-SC-06	2	Procedure for loading peat from a stockpile into a wagon/lorry.
Rail Bed Creation	SOP: FS-SC-10	1	Flow chart for creation of rail bed adjacent to stockpile.
Stock Protection Flowchart	SOP: FS-SP-01	4	Flowchart for polycovering and subsequent stipping of peat stockpiles.
Polythene Ordering	SOP: FS-SP-03	2	Procedure to describe the methodology used to determine the polythene to be ordered for stock protection each year.

Bord na Móna Environmental and Operational Procedures for Protection of Surface Water

Title	SOP Ref	Rev	Purpose
Polythene Distribution	SOP: FS-SP-04	4	Procedure to describe the arrangements for distributing polythene to the production areas.
Covering Haku Piles	SOP: FS-SP-05	2	Procedure for covering of haku piles with polythene
Covering Peco Piles	SOP: FS-SP-06	2	Procedure for covering of peco piles with polythene
Stripping Haku Stockpiles	SOP: FS-SP-07	2	Procedure for stripping polythene from haku piles
Stripping Peco stockpiles	SOP: FS-SP-08	2	Procedure for stripping polythene from peco piles
Covering Piles during Production	SOP: FS-SP-09	3	Procedure for covering full piles during production.
Management of Heating Peat	SOP: FS-SP-10	1	Procedure for management of heating peat stockpiles

Bund Maintenance & Integrity Procedure

1. Purpose

The purpose of this procedure is to provide for the efficient, maintenance and integrity testing of bund structures, in accordance with conditions 9.1.6, 9.1.10 and Schedule 3 of the Bord na Mona Energy Ltd IPC Licence's. P0499-01 – P0507-01.

2. Scope

The scope of this procedure covers all Bund Structures in the Bord na Mona Energy Group.

3. Responsibility

The implementation of Bund Maintenance and Bund Integrity testing is the responsibility of the Environmental Co-ordinator or an individual appointed by the Resource Manager.

4. Bund Maintenance Procedure

4.1 The level equivalent to 10% of the bund volume should be highlighted on the internal bund wall.

4.2 All bunds must be inspected weekly in accordance with condition 9.1.10, with the level of rainwater noted and any evidence of leaking valves, nozzles, pipes and tanks.

4.3 On inspection of this weekly workshop inspection sheet, if a bund is noted as containing in excess of 10% of the bund volume, its contents must be pumped out as soon as is practicable.

4.4 The contents must be discharged through the adjacent oil interceptor.

4.5 Firstly a small amount of water, enough to retrieve a sample should be pumped. The sample should be retrieved from the discharge point of the interceptor.

4.6 This sample should be analyzed for COD. If results are within Bord na Mona trigger levels of 100mg/litre pumping can recommence until the bund is emptied.

4.7 Should the trigger level be exceeded then oil dispersal products such as absorbent mats and pillows should be deployed in both the bund and adjacent interceptor.

4.8 Sampling should then be carried out again as per 4.3 and 4.4 above.

4.9 If COD trigger levels are still being exceeded then a specialist contractor will be required to evacuate and clean down the bund. Prices for this should be sought through Paul Curtis AES via stores, stating the volume and location of the bund to be cleaned

5. Bund Integrity Initiation Procedure

5.1 On inspection of the Bund Master list, the Coordinator will identify bunds which are due for integrity testing as per condition 9.1.6. (every 2 years)

5.2 Bunds which are overdue in relation to testing must be prioritized.

5.3 Once a particular bund is identified as requiring an integrity test. The Co-coordinator must contact Technical Services Boora (05793/45907), who will arrange to carry out the test.

5.4 The bund which is scheduled for testing must be clear of debris and filled with water, to accommodate the test. A barrel of water must also be made available to the test Engineer and sited adjacent to the bund.

5.5 Once testing is complete, the bund must be emptied, through the oil-interceptor, at a rate not in excess of the oil-interceptor capacity.

5.6 A signed copy of the test results are to be retained on file.

5.7 Bunds which fail the integrity test should be repaired without delay and retested, following the above procedure.

_____ **Procedure: CP**

Resource Manager

Page: 1 of 2

Date:_____ **Rev: 3**

Communications Procedure

1. **Purpose**
   The purpose of this procedure is to ensure that the company will take all the necessary steps to communicate environmental issues effectively.

2. **Scope**
   The scope of this procedure covers all communications both internal and external regarding incidents requiring reporting under Condition 4 of the IPPC Licence.

3. **Responsibility**
   It is the responsibility of the Licence Holder to ensure all external and internal communications are managed in accordance with this procedure

4. **Procedure**

External Communications

4.1.1. All written communications and reports sent to the EPA and other regulatory bodies by the Licence Holder or his deputy, will be through the EPA Communications Portal Eden/Alder.

All correspondence from the EPA will be communicated, where necessary, to relevant local management for appropriate action.

4.1.2 The Licence Holder or his deputy will also deal with all verbal and electronic requests for environmental information from any source.

4.1.3 In the event of an environmental incident the company Emergency Response Procedure will be activated and the designated person will contact the following parties, if the incidents come under their remit, and provide them with the relevant information.

- EPA
- Local Authority
- NPWS

- Fire Authorities
- Garda
- Fisheries Board
- Bord na Mona Health & Safety Department

4.1.5 All complaints from the public, staff and from regulatory bodies will be handled in accordance with the company Environmental Complaints Procedure.

4.3.2 The company will retain and update a file at reception (Ref: Programme for Public Information) which will contain the following Company documents.

- IPPC Licence
- Environmental Policy
- AER

4.4 Internal Communications

4.3.1 The Licence Holder will provide details on the Company's environmental performance as per the Communications Plan.

4.4.2 The Environmental Co-ordinator will retain all records on internal and external communications.

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Procedure: ECP

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Resource Manager

Page: 1

Date:_____ **Rev: 3**

Environmental Complaints Procedure

Purpose: To ensure all environmental complaints are dealt with effectively.

Scope: External and internal environmental complaints.

Responsibility: Licence Holder or his/her environmental deputy

References: EPA Communications Portal Eden/Alder

Procedure:

1. All environmental complaints with regard to the activities of the company are recorded, investigated and actioned if deemed necessary, or feasible, by the Licence Holder or his /her environmental deputy.

2. The Licence Holder or his/her environmental deputy will ensure that all environmental complaints written and verbal, from internal and external sources, are recorded on the EPA Communications Portal Eden/Alder.

3. Each *Environmental Complaint* will be completed with information detailing the name and address of the complainant, the nature of the complaints and the time and date of the receipt of the complaint.

4. If further corrective action is required, the Licence Holder or his/her deputy will communicate corrective action via the EPA Communications Portal.

5. All complaints will be logged on the internal Peat Compliance Log and remain until they are closed out. Ref. G:\Feedstock\Compliance

Composite Sampler Service Procedure

PROCEDURE

Sampler Service

Remove Sampler cover and leave programme running

Remove top of sampler cover and secure ring removed

Extract the 7 x 2 litre composite samples from the sampler

NB: The bottle number previous to the number being filled on arrival is the full range analysis sample bottle.

Rinse/clean all of the 2 litre composite sample bottles and return to sampler

Secure Ring and replace cover on the sampler

Before leaving the site, check the velocity probe in the pipe for debris & scum build up

Check the suction head for accumulated dirt/peat

Under no circumstances is the sampler to be turned off in times of Little /No flow.

Sampling Method

A cap is placed on the composite sample and it is gently agitated to provide a representative sample

Rinse the plastic sample bottle before filling from the 2 litre composite bottle.

NB: Where a sample volume is below the required volumes, the flow should be reduced to provide sufficient volume in the next week

A minimum of 500mls in a plastic container is required for the daily composite samples for Total Solids and Total Suspended Solids analysis.

A minimum of 1 litre of sample in a plastic container is required for the full suite of analysis with 1 100ml bottle required for Ammonia

NB: If no sample has been collected for the day receiving the full suite of analysis, then a grab sample should be taken.

Labelling & Chain of Custody

Each sample bottle for transportation to Newbridge is labeled

IPC No:
Sample ID: (Composite sample SW?)
Client: (Bord na Mona Energy Ltd (Boora, Mountdillon, etc))
Sampling Date & Time: It is important to log each sample over a 24 hour period, eg 24/25-11-2011 etc. This will allow for the 24 hour COD requirement

Complete a Chain of Custody form

NB: As the programme is running continuously, the day previous to what is displayed on the screen will always be the seventh day sample, regardless of its number.

Samples must be delivered to the laboratory ASAP after sampling, and always within 24 hrs of taking the samples

NOTE: To change either the **flow between sampling** setting or the **sample volume** setting, please follow the step by step guide posted in the sampler box. For any other changes to the settings please ring 086 / 6182424 for advice while attending the sampler.

Date:_____ **Rev: 1**

Environmental Management Plan

1. ***Purpose***

The purpose of the environmental management programme is to specify the method in which emissions and energy usage will be reduced or eliminated over a specified period of time.

The EMP will be prepared by the Environmental Management Systems team and will be reported on and up-dated annually to account for yearly improvements resulting from the phased introduction of the objectives and targets programme

2. Scope

All operations shall be assessed and all practicable options for the use of cleaner technology and the reduction and minimisation of waste shall be reviewed in accordance with the licence.

3. Procedure

Emissions to Atmosphere (cdn. 5.3)

- Train all personnel as per the Environmental Training Procedure
- Provide shelter belts if required
- Erect wind socks if required
- Deploy hydraulic harrows at dust sensitive locations
- Details of any CI projects with link

Emissions to Water (cdn. 6.2)

- Train all personnel as per the Environmental Training Procedure
- Details of any CI projects with link

Waste Management (cdn. 7.3)

- Details of any CI projects with link
- Continue to follow Waste Management Procedure XXX

Water Protection (cdn. 9.1.2)

- Details of any CI projects with link
- Implement Silt Pond upgrade programme
- Review production footprint and assess current Silt Pond adequacy

4. Reporting

4.1 Report progress annually in the AER

1. Responsibility

The implementation of this Procedure is the responsibility of the Resource Manager or his/her deputy.

2. Waste Collection Procedure

4.1 All non-hazardous and hazardous waste collection services are as per the SLA.

4.2 On a monthly basis, stores to provide the relevant IPC Licence Coordinator with a copy of all waste receipts for the Waste Management file.

4.3 On an quarterly basis, AES to provide each stores and the IPC Licence Coordinator with a quarterly report as per the SLA.

3. Litter Action Plan

5.1 Refer to Bord na Mona Group Litter Action Plan at XXX

4. Poly Recycling Procedure

6.1 Once the pile has been stripped, all rolls should be gathered and brought straight to the dedicated hardstand for collection.

6.2 At the hard stand, stack the rolls neatly within easy reach of a truck with grab arm.

6.3 Once 40 to fifty rolls have been gathered at the hardstand, notify your IPPC Coordinator, who will schedule a collection dedicated collection at this location or will make up a load from this location.

IPC Licence P05499-01 to P0507-01.

Reporting Requirements to the EPA. June 2018.

Complaints Procedure

12.3 The licensee shall record all complaints of an environmental nature related to the operation of the activity. Each such record shall give details of the date and time of the complaint, the name of the complainant and give details of the nature of the complaint.
A record shall also be kept of the response made in the case of each complaint. The licensee shall submit a report to the Agency, during the month following such complaints, giving details of any complaints which arise. A summary of the number and nature of complaints received shall be included in the AER.

Action:

This covers all complaints relating to emissions air and land which can occur as follows:

- Complaints regarding dust on adjoining lands or property, received direct to the area.
- Complaints to the local works office
- Complaints to the Environmental Department
- Complaints received via the BNM web, Newbridge, post or email.

Procedure:

1. Compliance Officer and Area Leader to telephone or visit the complainant, enquiring and recording the nature of the complaint.
2. Compliance Officer to complete the attached Complaint Form and submit the details via the Alder portal in the month following the month of receipt of the complaint.
3. Compliance Officer to communicate the complaint to the relevant Operations Leader, meet on site and agree on any corrective actions that can be implemented to reduce the migration of the dust from the operations, on the attached Investigation Report form.

   The licence requirements are as follows and include some additions possible solutions:

   - Regular ridging of headland peat that may be contributing to the dust nuisance
   - Regular ridging of machine passes.
   - Grassing of machine pass ways to reduce loose peat
   - Alternative routes through machine passes
   - Installation of a wind sock to advise on wind direction.
   - Installation of a dust gauge
   - Planting of tree screening/wind breaks
   - Avoidance of the activity during windy weather in the direction of the sensitive property
   - Relocation of haku piles
   - Checking that belt seals and cowls are in place
   - Checking on good operations practice.
   - Availability of hydraulic harrows.
   - Slow travel speeds along dusty headlands, Tool box talks with operators/slow down signs.
   - Structural screens.
   - Relocation of teacentre/welfare facilities to reduce idle travel

4. Complete the Resolution section of the Complaint form based on the results of the investigation and proposed corrective actions
5. Update the resolution to the EPA via Eden.
6. Implement the corrective action and report on progress to the licence holder.

Environmental Communications

Procedure

External

All written communications and reports to be communicated via Eden/Alder

Depending on nature of communication – refer to XXXX Doc

1. EPA – Any incident (Oil Spill/Fire Etc), Exceedance of an emission limit or Trigger level.
2. Fisheries – Oil spills affecting rivers/outfalls.
3. Local Authority – Oil spills affecting rivers/outfalls and fires involving emergency services.
4. National Parks and Wildlife Service – Any incident reported to the EPA that impacts on a SAC, NHA, Natura 2000 site.

Communication from members of the Public?

Refer to Procedure XXX Programme for Public Information

Internal

Reference to internal communications available through the Communications Plan

Environmental Co-ordinator to retain all records on internal and external communications

Date:_____ **Rev: 4**

Environmental Training Procedure

1. Purpose

The purpose of this procedure is to provide for the protection of the environment by training all operatives in good environmental work practices. This will be achieved by identifying and training all personnel in accordance with condition 2.5.1 of the Bord na Mona Energy Ltd IPC Licence's P0499-01 to P0507-01.

2. Scope

The scope of this procedure covers all operatives involved in the production, transportation of peat and all other personnel involved in the craft and technical backup of same.

3. Responsibility

Human Resources and Group Training Department are responsible for identifying new and existing personnel for Environmental Induction training. It is the responsibility of local management to ensure this is carried out.

4 Procedure

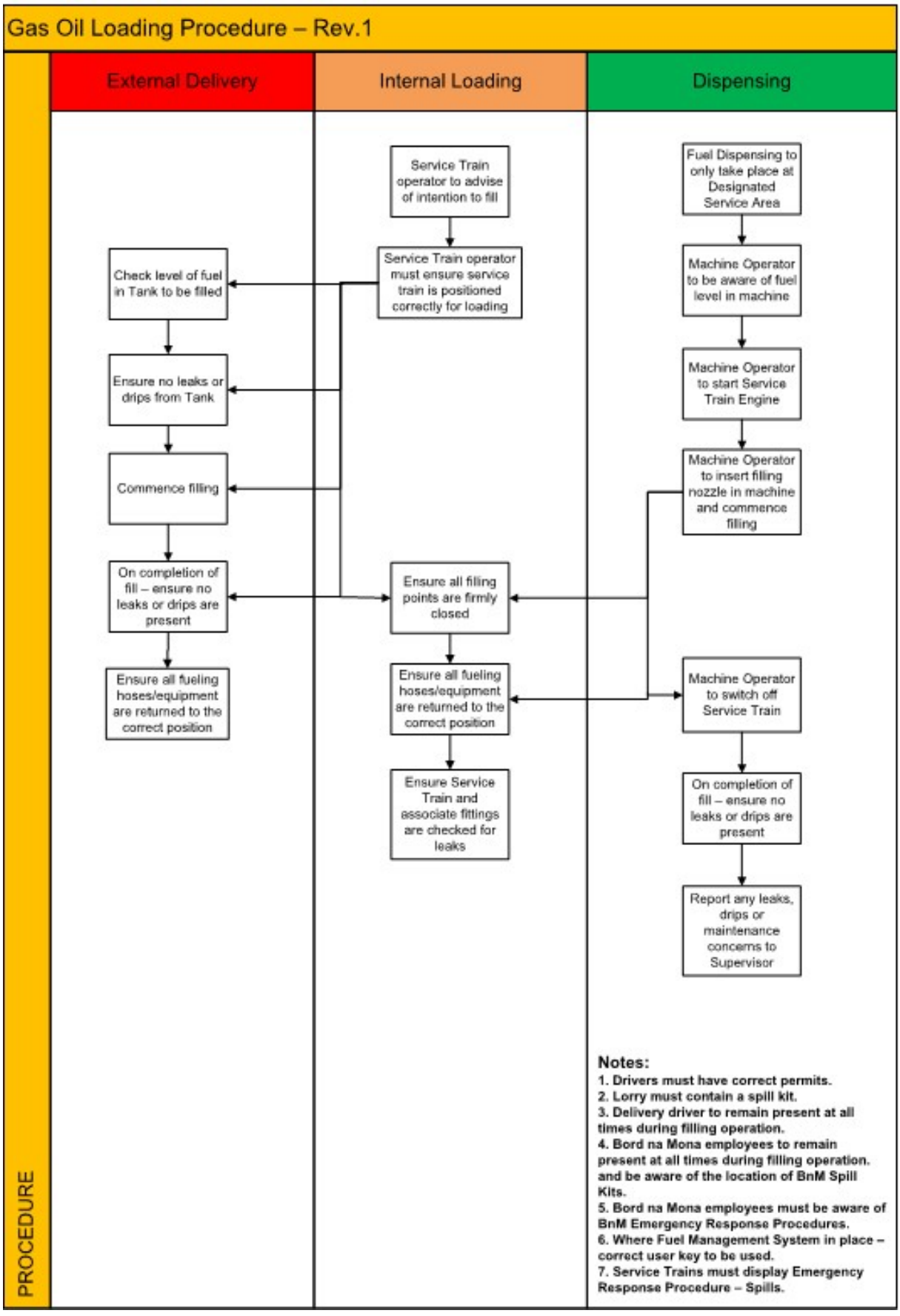
4.1 All relevant operatives to receive in house training, dealing with their responsibilities in maintaining an IPC Licence.

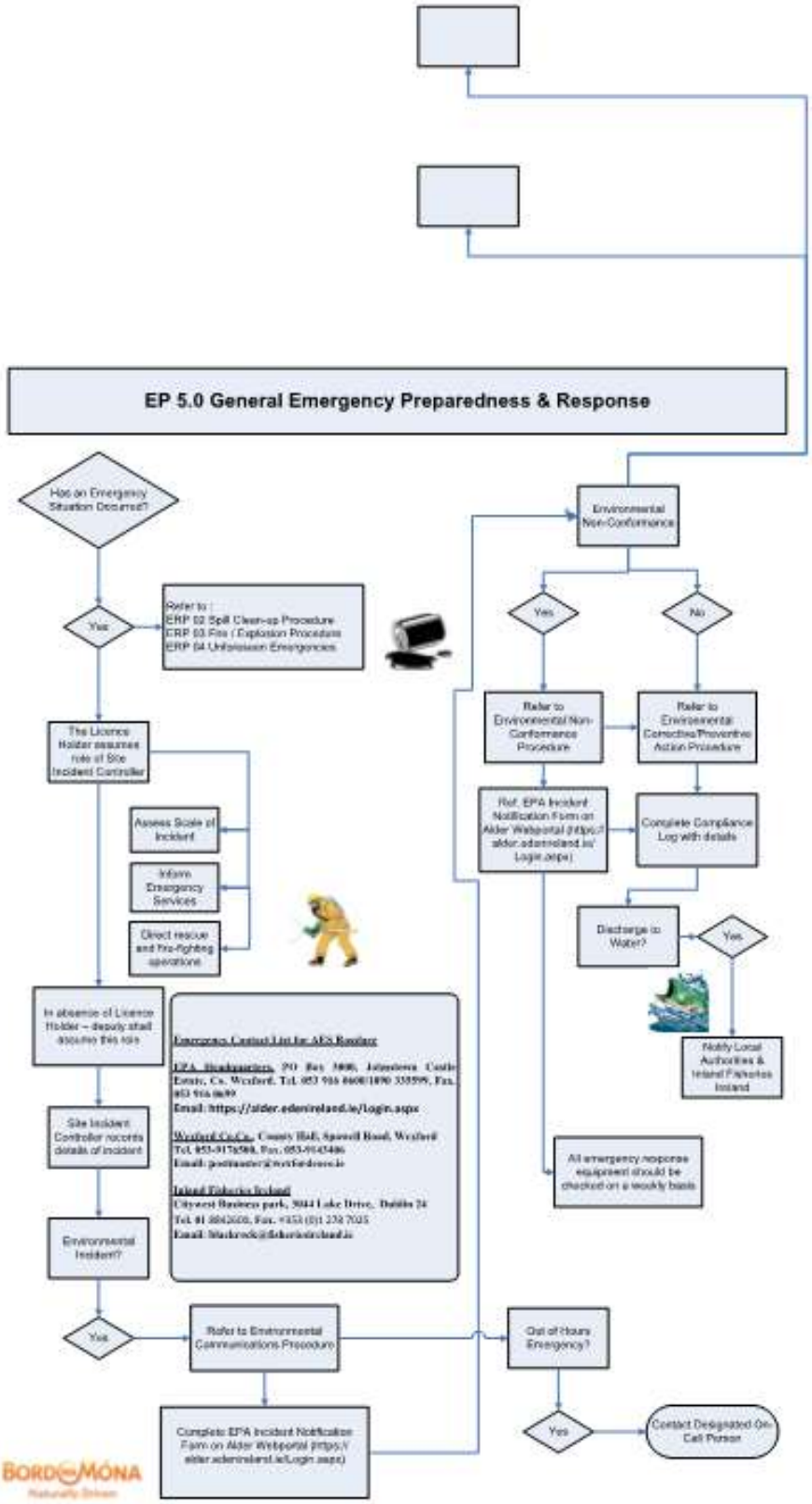
4.2 All relevant personnel to be informed of all monitoring locations at their facility.

4.3 All personnel to be informed of any relevant legislation involving environmental matters.

4.4 All trainees to complete a training assessment form, a record of which will be maintained on Oracle and retained on site.

4.5 The training procedure will be reviewed as per Group Training Department policy.


Gas Oil Loading Procedure – Rev.1
PROCEDURE
External Delivery
Internal Loading
Dispensing
Service Train operator to advise of intention to fill
Fuel Dispensing to only take place at Designated Service Area
Service Train operator must ensure service train is positioned correctly for loading
Check level of fuel in Tank to be filled
Machine Operator to be aware of fuel level in machine
Machine Operator to start Service Train Engine
Ensure no leaks or drips from Tank
Machine Operator to insert filling nozzle in machine and commence filling
Commence filling
On completion of fill – ensure no leaks or drips are present
Ensure all filling points are firmly closed
Ensure all fueling hoses/equipment are returned to the correct position
Machine Operator to switch off Service Train
Ensure all fueling hoses/equipment are returned to the correct position
On completion of fill – ensure no leaks or drips are present
Ensure Service Train and associate fittings are checked for leaks
Report any leaks, drips or maintenance concerns to Supervisor
Notes:
1. Drivers must have correct permits.
2. Lorry must contain a spill kit.
3. Delivery driver to remain present at all times during filling operation.
4. Bord na Mona employees to remain present at all times during filling operation. and be aware of the location of BnM Spill Kits.
5. Bord na Mona employees must be aware of BnM Emergency Response Procedures.
6. Where Fuel Management System in place – correct user key to be used.
7. Service Trains must display Emergency Response Procedure – Spills.


EP 5.0 General Emergency Preparedness & Response
Has an Emergency Situation Occurred?
Yes
Refer to :
ERP 02 Spill Clean-up Procedure
ERP 03 Fire / Explosion Procedure
ERP 04 Unforeseen Emergencies
The Licence Holder assumes role of Site Incident Controller
Assess Scale of Incident
Inform Emergency Services
Direct rescue and fire-fighting operations
In absence of Licence Holder – deputy shall assume this role
Site Incident Controller records details of incident
Environmental Incident?
Yes
Refer to Environmental Communications Procedure
Complete EPA Incident Notification Form on Alder Webportal (https://alder.edenireland.ie/Login.aspx)
Emergency Contact List for AES Roslare
EPA Headquarters, PO Box 3000, Johnstown Castle Estate, Co. Wexford. Tel. 053 916 0600/1890 335599, Fax. 053 916 0699
Email: https://alder.edenireland.ie/Login.aspx
Wexford Co.Co., County Hall, Spawell Road, Wexford
Tel. 053-9178500, Fax. 053-9143486
Email: postmaster@wexfordcoco.ie
Inland Fisheries Ireland
Citywest Business park, 9044 Lake Drive, Dublin 24
Tel. 01 8842600, Fax. +353 (0) 1 232 7035
Email: Mailcode@fisheriesireland.ie
Environmental Non-Conformance
Yes
No
Refer to Environmental Non-Conformance Procedure
Refer to Environmental Corrective/Preventive Action Procedure
Ref. EPA Incident Notification Form on Alder Webportal (https://alder.edenireland.ie/Login.aspx)
Complete Compliance Log with details
Discharge to Water?
Yes
Notify Local Authorities & Inland Fisheries Ireland
All emergency response equipment should be checked on a weekly basis
Out of Hours Emergency?
Yes
Contact Designated On-Call Person
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Bord na Mona Group
Litter Action Plan

Preamble

Bord na Mona Group operates four main businesses:

- Energy

Peat extraction for power generation/solid fuel and horticultural applications.

- Fuels

Manufacture of solid fuels/Sales and Distribution.

- Horticulture

Manufacture/Distribution of growing media products.

- Environmental

Design, manufacture and installation of filtration products for water/air. It also provides Environmental Consultancy and Laboratory Services.

The company has multiple locations and extensive land holdings (circa. 80,000 Ha). It's various bogs and factories are subject to licensing by the Environmental Protection Agency. (IPC Licence's 499 – 507).

Under these licence's, Bord na Mona is obliged to document and operate specific waste management procedures and does so diligently and successfully.

However, there are situations where waste materials can become litter and set out hereunder are the company's plans for dealing with this material, some considerable proportion of which is not generated by the company itself (unauthorised dumping by members of the public)

Litter Action Plan

Objective

Focus on the prevention and control of litter arising from Bord na Mona's activities and that arising from unauthorised dumping on and around its property. It also focuses on the good housekeeping of its buildings and land.

The relevant sections of the Litter Pollution Act 1997, that are relevant to Bord na Mona's activities are sections 3 (Prohibitions relating to litter) and 6 (Duty of occupiers etc. regarding littering).

Scope

The scope of this plan covers all lands and premises owned by Bord na Mona.

Responsibility

The implementation of the Litter Action Plan is the responsibility of the General Manager and/or his/her deputies at each location.

Relevant Documentation

Governments *Litter Action Plan* 2001
Litter Pollution Act, 1997 (Sections 3 & 6)
Integrated Pollution Control Licences.
Waste Management Regulations 1998

Key Action

The key action in the Government Litter Action Plan, relevant to Bord na Mona is set out below:

- *"Consistent with the emphasis in the Forum report on the public sector leading anti-litter action by example, public authorities will be asked to develop litter action plans for their own organisations"*

Action Items

1. Bog Areas (Loose Polythene & other litter)

Ensure of the immediate collection of polythene and other litter
A litter watch will be included in the fortnightly inspections and recorded as part of the requirements of the IPC Licence.

2. Premises.

All premises will operate a daily clean-up regime. Litter bins, if not already provided will be placed at appropriate locations on the site.
A painting programme will be maintained for all buildings.

3. Scrap machines.

A programme of dismantling and recycling scrap machines will be put in place. It will take the form of a quarterly inspection of all redundant machines, where items for scrapping/recycling will be highlighted for dismantling and removed to an appropriate metal recycler.

4. Unauthorised Dumping.

   a) Any incidents of littering and illegal dumping by members of the public on Bord na Mona property or public access roads to the bog, will be reported to the General Manager and/or Environmental Co-ordinator.

   b) The Litter warden for the area will be contacted, and the details passed on.(see attached list of wardens.

   c) Arrangements will be made to meet with the Litter Warden, at the location of the illegal dumping.

   d) If illegal dumping continues to be a problem at this location, the erection of signs, etc will be discussed with the Local Authority.

   e) All incidents of littering/unauthorised dumping will be recorded as part of the Bord na Mona's IPC Licence's. These inspections occur on a fortnightly basis as part of the works inspections/monitoring.

   f) "Hot Spots" for illegal dumping will be observed/monitored during the day to day operations and reported to the Local Authority.

Training & Awareness

This action plan will be circulated to all relevant personnel and will form part of the Annual Environmental Training Programme.
This document will be reviewed annually and updated as necessary.

Local Authority Litter Wardens:

County	Director of Services	Litter Wardens
Laois Co Council Áras An Chontae Portlaoise **Co Laois** 057 8664000	• Kieran Kehoe	• John Rogers 0502 64000/087 9473159 (*Western region*) • John Ging 0502 64000/086 7988312 (*Central region*) • Emily Doyle (*Eastern region*)
Offaly Co Council Aras an Chontae Charleville Rd Tullamore **Co Offaly** 057 9346800	• Sean Murray	• Michael Malone 0506 46800 (*Ferbane/Tullamore area*) • Padraic Minnock (*Birr/Ferbane area*) • Paul Fogarty (*Tullamore area*)
Kildare Co Council St Mary's Naas **Co Kildare**	• Joe Boland	• Noel Geoghan 086 2848563 • Peter Mahoney • Pat Conway

045 980200		• Philip Baxter 086 8285577
Westmeath Co. Council Administrative Offices Co. Buildings Mullingar **Co Westmeath** 044 9332000	• David Hogan	• Larry Murphy *(Mullingar area)* • Olive Manning (*Mullingar area*) • Lorraine Derwin (*Athlone area*)
North Tipperary County Council, The Courthouse, Nenagh, **Co Tipperary (North Riding)** 067 44500	• Jimmy Harney	• Thomas Sheehan 087 4194540 • Francis Casey (*Littleton area*)
South Tipperary County Council Main Office South Tipperary Co Council, Co. Hall, Emmet Street, Clonmel **Co Tipperary (South Riding)** 052 6134455	• Jimmy Harney	• Matthew Peters 087 9192097 • Anthony Wynne 087 9192096
Aras an Chontae Castlebar, **Co Mayo** 094 9024444	• Martin Keating	• Gary Smith 087 2318746 • Josephine Armstrong 087 9192839
Courthouse, Roscommon **Co Roscommon** 0906 637100	• Majella Hunt	• Annette Donlon 0903 37100 (*Athlone/Roscommon/Castlerea area*) • Danny McHuge (*Boyle/Ballangare/Strokestown area*)
Aras an Chontae, Great Water St, Longford **Co Longford** 043 3346231	• Jack Killgallen	• Declan Murtagh (*North region*) • Brigid Devine (*South region*) • Padriac McGee (*Town area*)
Galway County	• Jim Cullen	• Patrick Roche

Council PO Box 27, County Hall, Prospect Hill, Galway **Co Galway** 091 509000		091 509302 • David Kelly 091 509302

Local Authority Contact Info

Relating to IPC Incidents

Local Authorities

Roscommon: Kieran Madden – 0906637185 – environment@roscommoncoco.ie

Meath: environment@meathcoco.ie

Westmeath: environment@westmeathcoco.ie

Longford: environment@longfordcoco.ie

Kildare: environ@kildarecoco.ie (Note: environ in address)

Galway: adolan@galwaycoco.ie / environment@galwaycoco.ie

Laois: Environmental Protection Section 057 8664000 / environmentadmin@laoiscoco.ie

Tipperary: Mark for the attention of Environment section and send to customerservises@tipperarycoco.ie

Inland Fisheries Ireland

For all the upper Shannon areas, covering from Athlone to north Leitrim, Cavan, Meath (from Oldcastle and the upper Inny) Inny catchment, Mullingar lakes area, Lough Ree and River Suck areas the contact person is Jane Gilleran Jane.gilleran@fisheriesireland.ie (087 6878568)

For the lower Shannon covering Offaly (Brosna system, Little Brosna, Tullamore, Camcor, Nenagh, Lough Derg catchments (among others outside the areas you mention), the contact is Michael Fitzsimons michael.fitzsimons@fisheriesireland.ie (087 2473708). In Michaels absence please contact Lorraine O Donnell on Lorraine.odonnell@fisheriesireland.ie (087 9285892)

Awaiting remainder ?

National Parks and Wildlife

nature.conservation@chg.gov.ie

The above should be included in correspondence to the Agency in relation to the following.

1. **EPA** – Any incident (Oil Spill/Fire Etc), Exceedance of an emission limit or Trigger level.
2. **Fisheries** – Oil spills affecting rivers/outfalls.
3. **Local Authority** – Oil spills affecting rivers/outfalls and fires involving emergency services.
4. **National Parks and Wildlife Service** – Any Incident reported to the EPA that impacts on a SAC, NHA, Natura 2000 site.

PROGRAMME FOR PUBLIC INFORMATION

Purpose: To define how Bord na Mona Peat manages the communication of Environmental information concerning the facility with external parties.

Scope: This procedure applies to ALL Bord na Mona Peat IPC Licences.

References: Data Protection Act 1988 with 2003 amendment
IPC Licence Condition 2.7, 2.7.1

Procedure:

1. All external, out-going communication of environmental issues, unless specifically outlined below, must be approved by the Licence Holder. If the Licence Holder is unavailable, then the Environmental Co-ordinator may approve the communication.

2. Certain environmental information, as detailed below, will be available to external parties. Only 1 copy of each document is available for view at any time.

3. It is recommended that visitors should phone or write in advance, as this will facilitate the company to arrange for the necessary staff and documents to be available. However, a prior appointment by any member of the public is not necessary.

4. Viewing time is restricted to normal office hours (8.00am to 3.30pm Mon to Thur, 8.00am to 2.30 Friday).
   No more than 1 hour of staff time is available for assistance of queries per day.

5. Visitors may ask for the Site Manager. They are requested to sign in at reception, giving their name, address, and reason for their visit.

6. Access is restricted to the Meeting Room, and the information will be brought to this designated room for viewing. The original documents are not to be removed, altered or damaged in any way.

7. A copy of the following files will be kept in Document Control and are available to the public as outlined above:

   - IPC licence
   - Annual Environmental Reports
   - Environmental Monitoring Reports
   - Environmental Management System

8. Every effort shall be made to keep the files up-to-date. The information provided will comply with legal requirements and the requirements of the IPC licence, but confidential and commercially sensitive information will be restricted and Bord na Mona Peat must comply with the Data Protection Act 1988 with 2003 amendment.

_____
Resource Manager

Date:_____

Restoration & Aftercare Plan

1. Purpose

The purpose of this procedure is to address Condition 10, regarding the Restoration & Aftercare requirements of IPC Licence P0499-01 to P0507-01

2. Scope

The scope of this procedure is contained in the Bord na Mona Ecology Department's Restoration & Aftercare Rehabilitation draft plans.

3. Responsibility

The implementation of the Restoration & Aftercare plan is the responsibility of the Ecology Department in association with the Environmental Department, Works Management and in consultation with the Land Management Department.

4. Procedure

4.1 Please refer to the Bord na Mona Ecology Department's Restoration & Aftercare Rehabilitation draft plans.

4.2 This plan is to be reviewed on an annual basis.

Service Level Agreement (SLA)

For the provision of a fully Managed Waste Collection, Recycling and Disposal Service

Between

AES Bord Na Móna

and

Bord Na Móna Peat

Table of Contents

1. Objectives and Scope 3
2. SLA Duration and Review 4
3. Customer Service Responsibilities 5
   3.1 Services provided by AES to Bord Na Móna Peat: 5
   3.2 Equipment Service Requests: 6
   3.3 Out of Office Hours Service Requests: ..... **Error! Bookmark not defined.**
   3.4 Additional Service Requests by Bord Na Móna Peat: 7
4. Invoicing and Credit Control: 7
5. Reporting: 8
6. Service Queries or Complaints: 9
7. Issue Prioritisation: 9
8. Performance Review: 9
9. Supporting Responsibilities: 10
10. Agreement: 14

1. Objectives and Scope

This document represents a Service Level Agreement ("SLA") between Advanced Environmental Solutions (Ireland) Limited (AES) and Bord Na Móna Peat; setting out the waste management services provided by AES to Bord Na Móna Peat, the communication lines, responsibilities and response times associated with providing that service.
.

This SLA:

- Serves as a reference document
- Is a service SLA which is an agreement between the following:
  - AES
  - Bord Na Móna Peat

  Is required to clarify the service expectations of Bord Na Móna Peat and determine the services requirements for AES.
- Defines the key service targets and responsibilities of all parties.
- Defines the communication for queries or complaints.
- Reflects the responsibilities of stakeholders and all parties to the agreement.

2. SLA Duration and Review

This SLA is valid throughout the duration of the current waste management contract between Bord Na Móna Peat and AES.

The AES Account Manager, Paul Curtis, is responsible for maintaining this SLA which will be reviewed at least once per year. The Account Manager, Paul Curtis, will also discuss, document and agree any requested changes to this SLA before any such changes may be made to the SLA.

3. Customer Service Responsibilities

This section sets out the specific service detail, responsibilities and timelines for completion of tasks.

The AES Customer Services Team is responsible for the following:

- Administering sales orders and day-to-day invoicing
- Produce Monthly Waste Reports
- Changes to Scheduled Services

The AES Customer Sales and Account Management Team is responsible for the following:

- Monitor the progress of delivery and service implementation
- Respond to additional sales enquiries outside the contract scope
- Address customers' Head Office queries
- Attend regular review meetings

For all Customer Service queries please contact:
Central Accounts Newbridge
045 439042 centralaccounts@aesirl.ie

Paul Curtis – Account Manager for Bord Na Móna Peat
087 0508582 pcurtis@aesirl.ie

The AES Sales Support for the Bord Na Móna Peat contract is managed from the AES Head Office, Newbridge which is operational from 8.30am to 5.30 pm Monday to Friday.

The Newbridge office is available to assist with the following:

1. Service requests
2. Equipment requests and repairs
3. Service complaints

3.1 Services provided by AES to Bord Na Móna Peat:

The Service Request Document- ie Advice Note Number is attached as an appendix (Appendix 1) to this SLA. This is a dynamic document and may be subject to change over the Term of this Contract as agreed by Bord Na Móna Peat and AES. However, additional service requests outside the scope of the Schedule of Services are charged at the applicable rates and agreed by Bord Na Móna Peat and AES.

The metal process will remain the same for any metal collected in skips & roll on's that price is based on the current market value of the previous month in Ireland. If sites have larger quantities and rather than use skips there is a better price to be had when the metal is collected in bulk by artic & grab but that will be up to each BNM site to manage that. The order is placed the same way they just request artic & grab. Again for this to work we need to be lifting around 15 ton. The monthly metals report can be circulated to the email addresses below if the price can't be inserted into the report, the rate will be included in on the email.

3.2 Equipment Service Requests:

The Schedule of Services & Equipment may be subject to change over the Term of this Contract as agreed by Bord Na Móna Peat.

Equipment Breakdown and Repair

AES Ireland Limited maintain a regular equipment maintenance programme. Maintenance of the Equipment (see Equipment Schedule) will be completed on a six monthly basis. This service will include the replacement of all defective parts, oil changes, etc. for all equipment.

Should Bord Na Móna Peat require an emergency repair please phone the AES Head Office, Newbridge on 045 439066; informing the attendant of a Level 1 Issue as per the Issue Prioritisation Table in section 7 of this SLA document.

Repair Procedure

Calls for repairs of equipment should be made to the AES Head Office, Newbridge as per the above but should be placed with a Priority Level 1 as per the above. Priority 1 issues received during normal working hours will be responded to immediately and an engineer will be contacted within the hour. Once we have an understanding of the issue with the equipment, the engineer will determine the on-site response time. Depending upon the nature of the service requirement, an engineer may:

- Come on site to repair the equipment
- Have the equipment removed from site to repair the equipment

AES will keep Bord Na Móna Peat staff fully informed of the issue resolution and the progress of any resulting repair work.

Costs

Equipment that is under rental from AES (Ireland) Ltd will be serviced under the same scheduled service and a service report will be issued to the Bord Na Móna Peat for this equipment. All scheduled and emergency call outs for the equipment owned by AES will not incur a charge to Bord Na Móna Peat. If the reason for the cause of equipment malfunction is discovered to be misuse or incorrect treatment of the equipment by Bord Na Móna Peat staff, a charge for the repair will apply.

3.3 Additional Service Requests by Bord Na Móna Peat

All Standard Service requests will be logged manually into a call book, which will detail date, time of request, equipment type, location and waste type.

AES will offer Bord Na Móna Peat a 3 day turnaround for Skip Delivery, Exchanges and Collections. All Haz Waste and Weee collections to be completed within 5 working days.

If a service is required urgently then Bord Na Móna Peat shall indicate that at the time of request.

Copy of collection/advice note, containing at least:

- Date
- BNM peat request number
- Type of waste
- Weight
- Signature

on skip collection/exchange to be e-mailed to the original requestor within 48hrs

Additional sales requests should be directed to AES Account Manager, Paul Curtis, who will respond with relevant pricing and service information.

3.4 KPIs agreed between AES and Bord Na Móna Peat

In order to track/monitor the quality of the service provision the following monthly KPIs to be established by AES:

1. Turnaroud time from placement of the request to container/skip delivery (criteria: number of skips delivered/exchanged within 3 days as per agreement and outside of the 3 days)
2. Turnaroud time from placement of the request to container/skip delivery (criteria: number of skips delivered/exchanged within 5 days as per agreement and outside of the 5 days for Haz Waste and WEE collections)
3. Number of the delivery notes e-mailed to the original requestor vs number of requests placed
4. Number of reports (waste report and metal report) e-mailed on time as per agreement

Any additional KPIs if required to be discussed between two parties prior establishment

4. Invoicing and Credit Control:

The AES Finance Department are responsible for the following tasks:

1. Monthly Invoice
2. Invoice queries
3. Account queries
4. Supply of service dockets, weighbridge dockets, etc, upon request

Invoices will be issued each month for the previous month's service. AES credit terms are strictly 30 days from date of invoice.

Reporting:

A monthly waste report along with a Metal Monthly report will be provided by the 15th of the month. The Reports are to be circulated to the following:-

Report Title	Email Details	Frequency
Bord Na Móna Peat Monthly Waste Report	○ DGMstore@bnm.ie ○ BWMstore@bnm.ie ○ MDMstore@bnm.ie ○ LTMstore@bnm.ie ○ Nikolas.Sezonovs@bnm.ie	Monthly
Bord Na Móna Peat monthly Metal report	○ DGMstore@bnm.ie ○ BWMstore@bnm.ie ○ MDMstore@bnm.ie ○ LTMstore@bnm.ie ○ Nikolas.Sezonovs@bnm.ie	Monthly

Traceability

Wheelie Bins: Utilising chip and pin technology and weighing systems on our own collection vehicles, AES is able to capture details (including unique bin identification number, weights and time of service) for wheelie bins directly serviced. These figures will be provided in the monthly reports and invoices.

Skips and Wheelie Bins: The details of waste streams collected by skips, and containers will be provided via the details recorded on the weighbridge dockets. Service collection dockets and weighbridge dockets are matched using collection reference numbers and the waste types, weights, and collection details are reported to Bord Na Móna Peat through the monthly reports and invoices.

Waste collection details from services provided by our sub-contractor companies will be determined by dockets and invoices provided to AES by each sub-contracting company. AES will provide these service details to Bord Na Móna Peat through the monthly reports and invoices.

5. Service Queries or Complaints:

Communication of all service issues must be made to the following:

Issue type:	Communicated by:	Communicated to:	Communication Method:
All	Bord Na Móna Peat	Central Accounts	centralaccounts@aesirl.ie
			045 439042

In order to better assist all our customers, AES have developed a prioritisation list by which to determine the level of importance for all concerned. Please familiarise yourself with the below prioritisation table so your particular issue can be dealt with in an appropriate manner.

Communication of Priority 1 issues must be made by phone and email.

Communication of Priority 2-4 issues may be made by email.

6. Issue Prioritization:

Priority type	Description:
Priority 1	Priority 1 issues have a high impact on the levels of customer service, cause high call volumes and need to be addressed immediately but can be resolved within the effected department (e.g. equipment breakdown).
Priority 2	Priority 2 issues have a significant impact on the service offered (e.g. non collection of a customer's bin).
Priority 3	Priority 3 issues are low service impact routine queries (e.g. invoice queries).
Priority 4	Priority 4 issues have little or no impact on the level of customer services offered (e.g. request for tax certificates).

Note: *The status of issues may change if the issue is not resolved adequately when reported, e.g. repeated non collection of a paid bin may change the status of the issue from a Priority 2 to a Priority 1.*

Escalation:

Issues may be escalated as follows

Role:	Issue type:	Timing:
Paul Curtis – Account Manager	Unresolved Priority 1	1 hour
Paul Curtis – Account Manager	Unresolved Priority 2 issues	5 hours
Paul Curtis – Account Manager	Unresolved Priority 3 issues	2 days
Paul Curtis – Account Manager	Unresolved Priority 4 issues	3 days

7. Performance Review:

Service and Equipment

The regular review meetings between Bord Na Móna Peat and AES will be structured in such a manner as to accomplish the following:

- Review service levels
- Review and/or benchmark recycling progress
- Propose additional recycling initiatives
- Update on upcoming legislation
- Review charges and savings

Review meetings should be once a month for the first three months and quarterly thereafter.

Paul Curtis can be contacted with regard to any of the above issues.

Charges

The Charges will be subject to a review after the first year of the Contract.

8. Supporting Responsibilities:

Environmental

AES will endeavour to ensure that all materials disposed by Bord Na Móna Peat will be treated in line with all appropriate environmental legislation and best practise. As a rule, AES maintain operations in line with the waste hierarchy and utilise landfill as a last resort for otherwise unrecoverable materials.

The Environmental Department ensure that the treatment of various waste streams is compliant with all relevant legislation. They will also ensure that all AES facilities and sub-contract facilities maintain appropriate licences & permits for all waste activities undertaken on behalf of the customer.

The Environmental Department will provide the following functions:

- Ensure provision of service is compliant with all relevant environmental legislation.
- Carry out environmental audits of suppliers and waste outlet facilities.
- Arrange for customer site audits when requested.
- Provide general support on environmental queries.
- Inform AES and customers of any new and/or upcoming environmental legislation.

Charlotte Green (045 439 464) is responsible for all environment functions.

Health and Safety

AES shall ensure that all reasonable steps are taken to ensure the safety of all people and property within the areas covered by the contract. AES maintain a Safety Policy and regularly update our Safety Statement.

The Health & Safety staff ensure services are operated according to health and safety legislation and provide the following functions:

- Carry out appropriate safety audits and risk assessments of customer facilities, especially where machinery and/or equipment will be in operation.
- Ensure all customer staff are trained in the use of machinery and/or equipment.
- Record and track incidents and accidents to appropriate levels.

Garrett Leech will be responsible for all Health, Safety and Quality functions.

Quality Systems

AES has implemented an Integrated Management System Manual incorporating ISO 14001 and OHSAS 18001. In addition, AES has identified the requirements of ISO 9001 and has begun the process for applying for this quality standard across the AES Group.

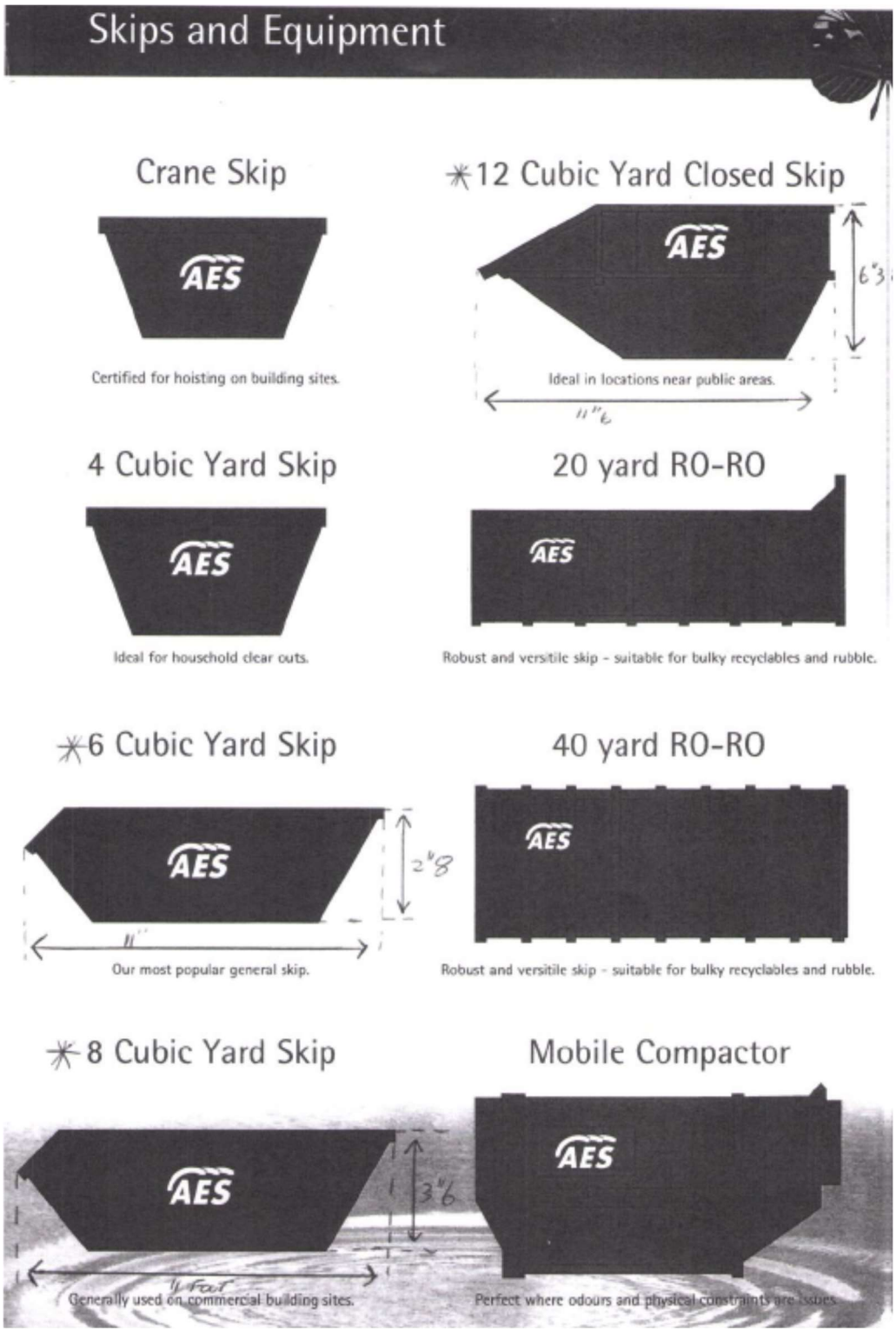
The Quality staff will provide the following functions

- Ensure services are carried out according to AES quality standards and quality management systems.
- Carry out audits of AES's services to ensure compliance with quality management systems.
- Maintain and update AES's quality management manual.

APPENDIX 1

BORD NA MONA REQUEST FORM

BORD NA MONA BLACKWATER WASTE COLLECTION/DELIVERY REQUEST FORM (VER.0.1) IPPC Licence P0502-01			
BNM ADVICE NOTE NO: (HAVE TO BE QUOTED ON ALL DOCUMENTATION)	W21/113		
WORKS NAME	W21 BLACKWATER		
CONTAINER TYPE	Skip	QUANTITY	1
WASTE MATERIAL	Steel	COLLECTION Y/N	YES
SIZE/TYPE	12 Cu. Yd. Lift-On OPEN	EXCHANGE Y/N	NO
LOCATION/SITE DELIVERY ADDRESS	Clonfert Workshop 03 / Clonfert, Eyrecourt, Co Galway		
CONTACT NAME/ NUMBER	Tom Rigney / 087 9924101		
DATE REQUIRED	05/04/2017		
DATE ORDERED	04/04/2017		
REQUESTOR NAME	Brendan Sweeney / 087 7655059		
BILL TO ADDRESS/CONTACT DETAILS	Bord na Móna. Blackwater, Shannonbridge, Co. Offaly. Ireland., Tel: 090-9674420, 090-9674440, Fax: 090-9674424 Brendan.Sweeney@bnm.ie, Ann.Bennett@bnm.ie		


Skips and Equipment
Crane Skip
Certified for hoisting on building sites.
12 Cubic Yard Closed Skip
Ideal in locations near public areas.
4 Cubic Yard Skip
Ideal for household clear outs.
20 yard RO-RO
Robust and versitile skip - suitable for bulky recyclables and rubble.
6 Cubic Yard Skip
Our most popular general skip.
40 yard RO-RO
Robust and versitile skip - suitable for bulky recyclables and rubble.
8 Cubic Yard Skip
Generally used on commercial building sites.
Mobile Compactor
Perfect where odours and physical constraints are issues.

Date:_____ **Rev: 1**

Waste Management Procedure

1. Purpose

To define the correct procedure to be followed when requesting a waste collection service from AES regarding removal of all wastes from all sites within the Feedstock group.

2. Scope

The scope of this procedure covers all bogs in the Licence areas P0499-01 to P0507-01, and Waste Facilities WL0049-02 and 0199-02. It also covers the requirements of Condition 7 of these IPC licences and is detailed in Bord na Mona Peat/AES Service Level Agreement (SLA) located in xxxxx.

3. Responsibility

The implementation of this Procedure is the responsibility of the Resource Manager or his/her deputy.

4. Waste Collection Procedure

4.1 All non-hazardous and hazardous waste collection services are as per the SLA.

4.2 On a monthly basis, stores to provide the relevant IPC Licence Coordinator with a copy of all waste receipts for the Waste Management file.

4.3 On an quarterly basis, AES to provide each stores and the IPC Licence Coordinator with a quarterly report as per the SLA.

5. Litter Action Plan

5.1 Refer to Bord na Mona Group Litter Action Plan at XXX

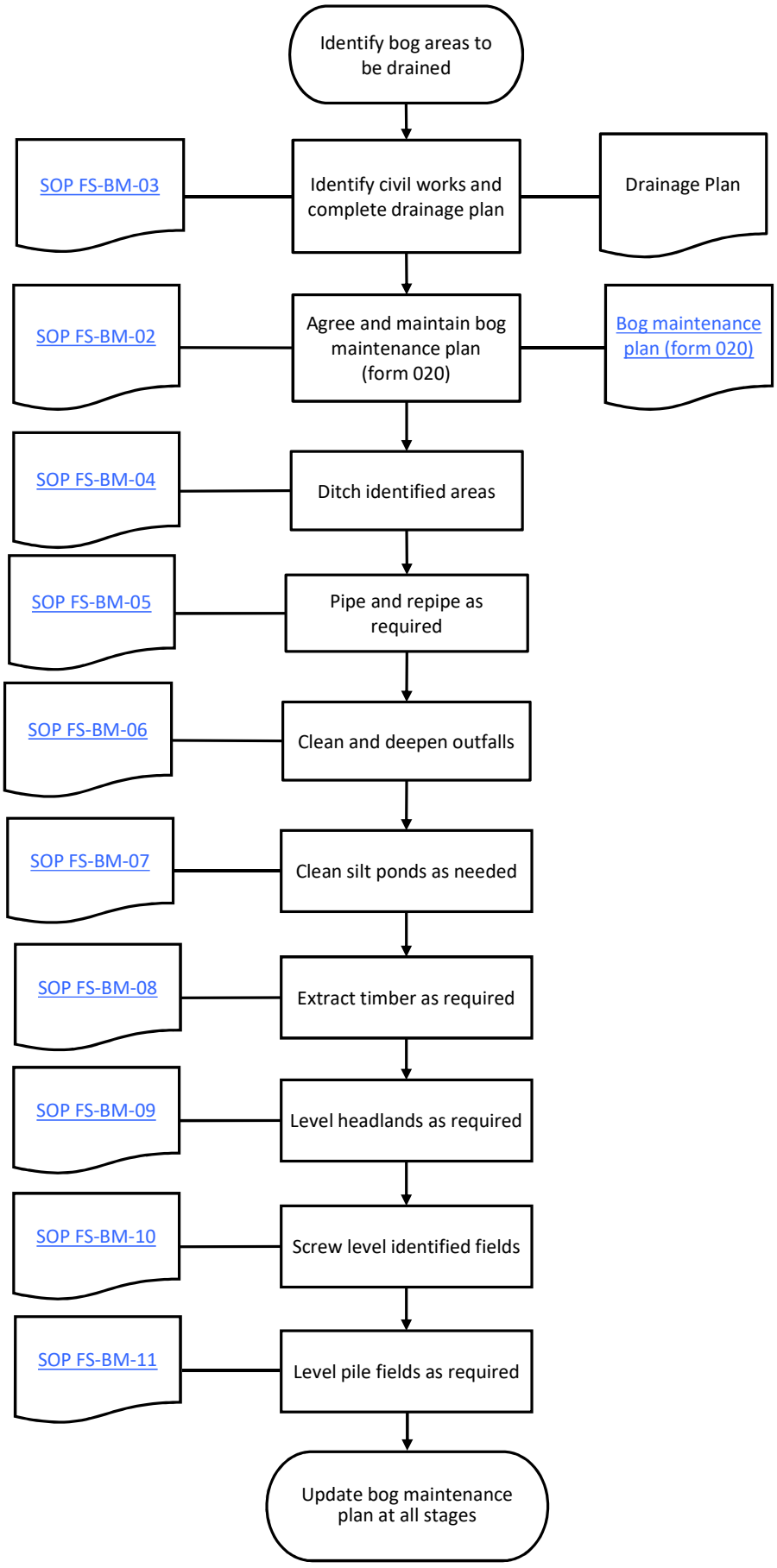
6. Poly Recycling Procedure

6.1 Once the pile has been stripped, all rolls should be gathered and brought straight to the dedicated hardstand for collection.

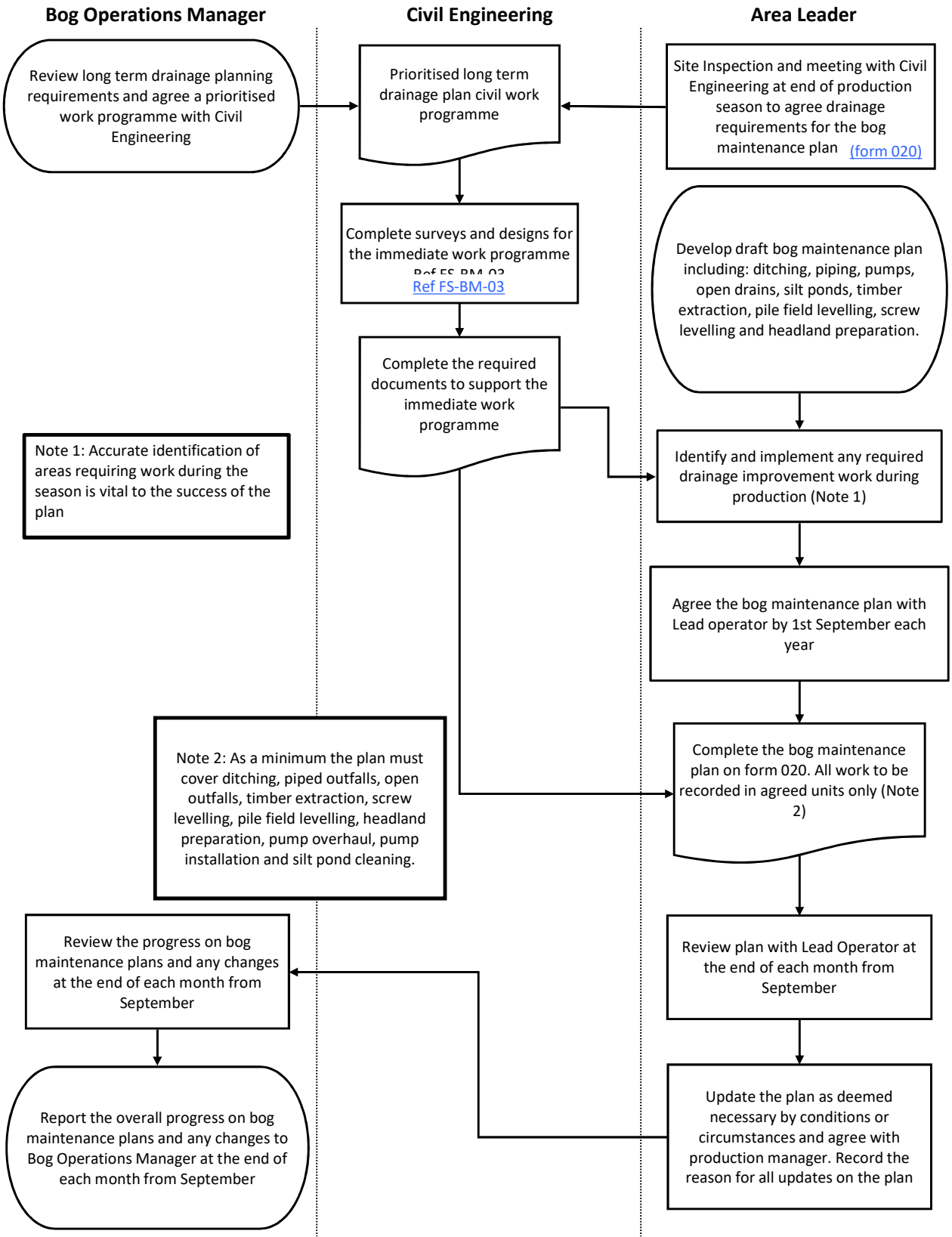
6.2 At the hard stand, stack the rolls neatly within easy reach of a truck with grab arm.

6.3 Once 40 to fifty rolls have been gathered at the hardstand, notify your IPPC Coordinator, who will schedule a collection dedicated collection at this location or will make up a load from this location.

BORD NA MÓNA Naturally Driven	SOP: FS-BM-01	Rev: 1
Title: Bog Maintenance Flowchart	Approved: PR	Date: 01/11/2012



BORD NA MÓNA Naturally Driven	SOP: FS-BM-02	Rev: 2
Title: Bog Maintenance Plan	Approved: JMcN	Date: 15/07/2016



Additional Notes:

It is vital to identify areas with timber problems during production and remove timber and repair the field where possible

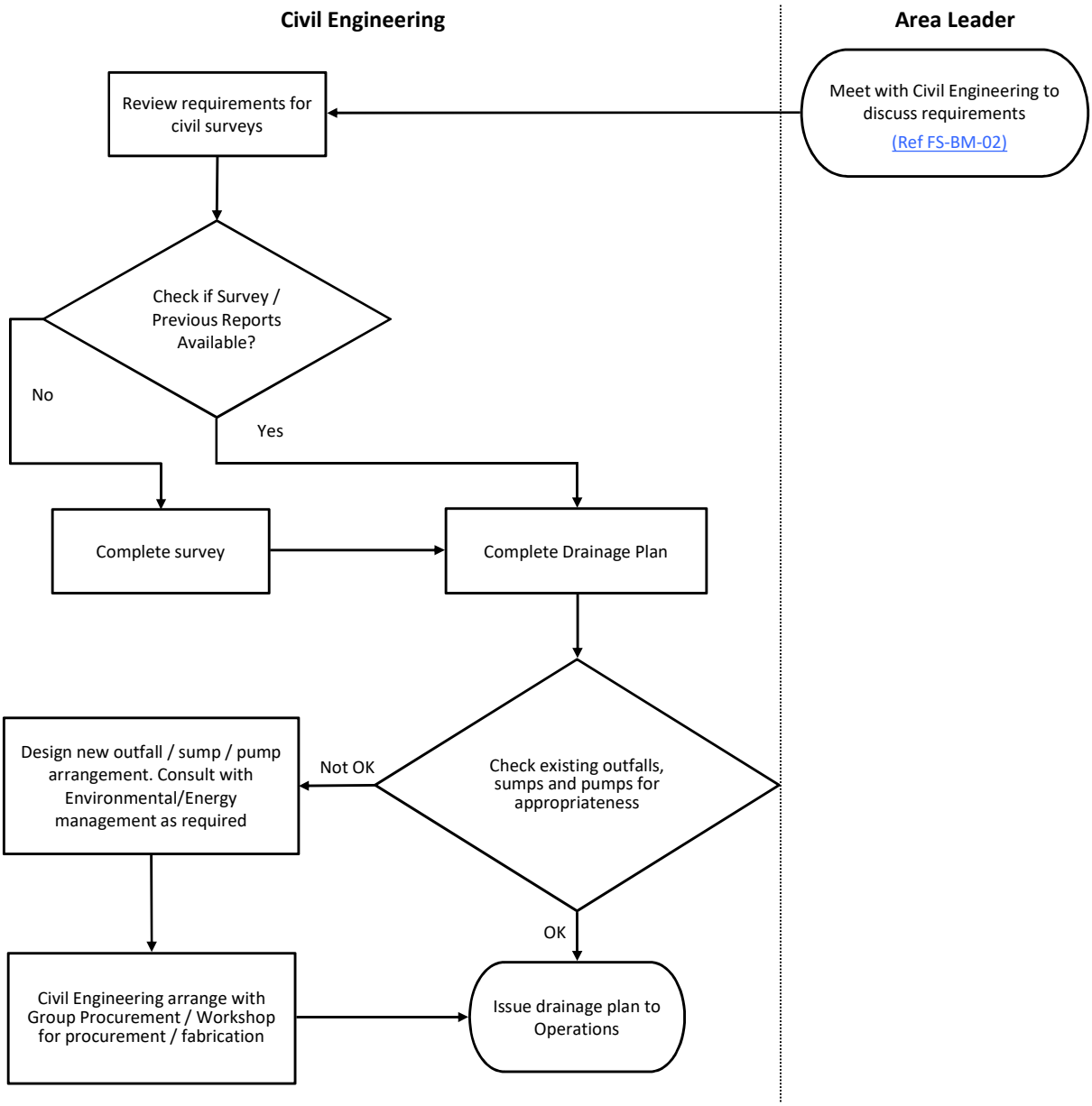
Headland levelling plan to be based on kilometers of headland in the area.

Base screw levelling plan on observations of field profiles during production.

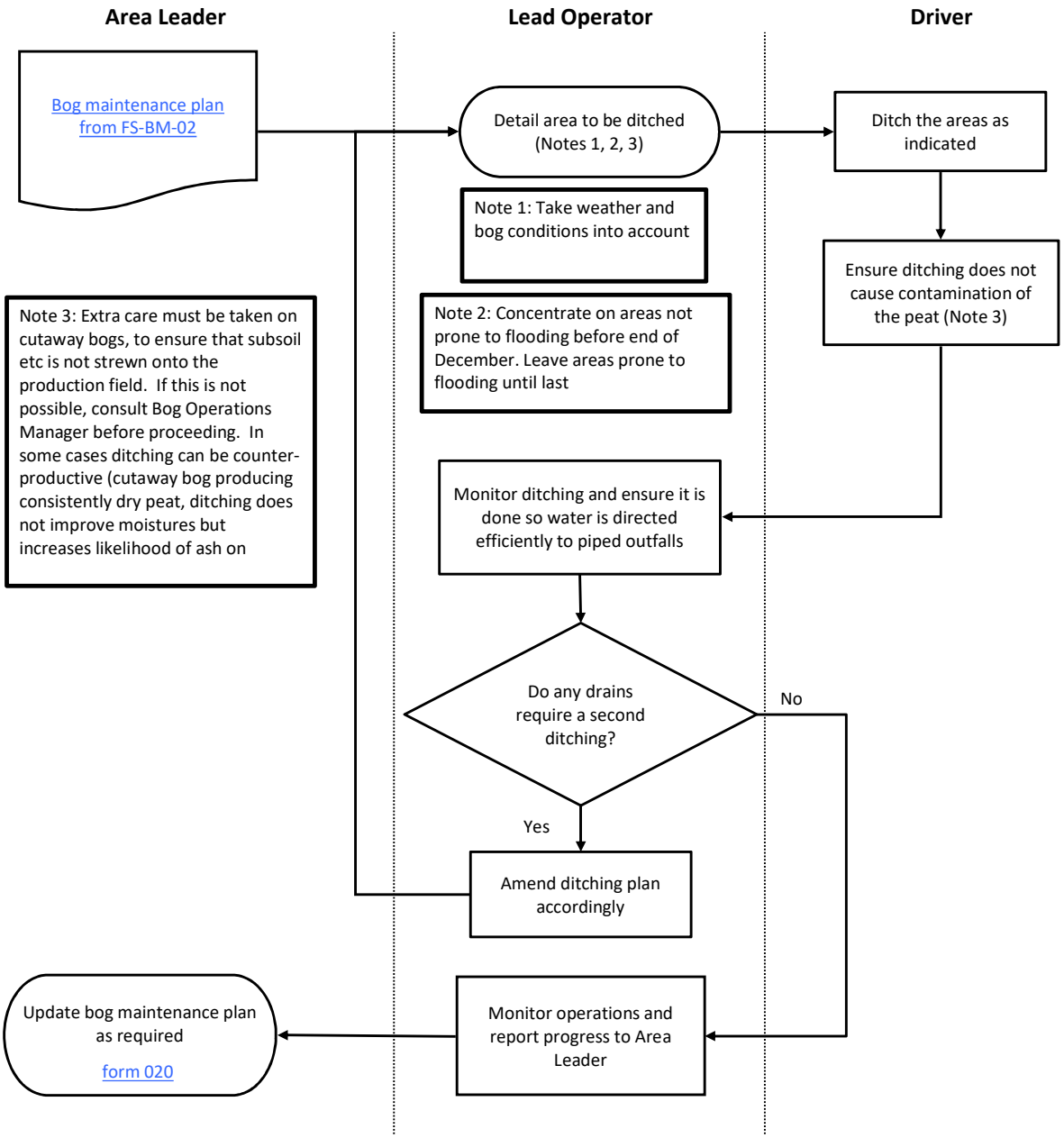
Pile field levelling plan to be based on height above adjoining field.

Any field greater than 1m above adjoining field must be levelled unless lowering the field puts the stock at risk from flooding.

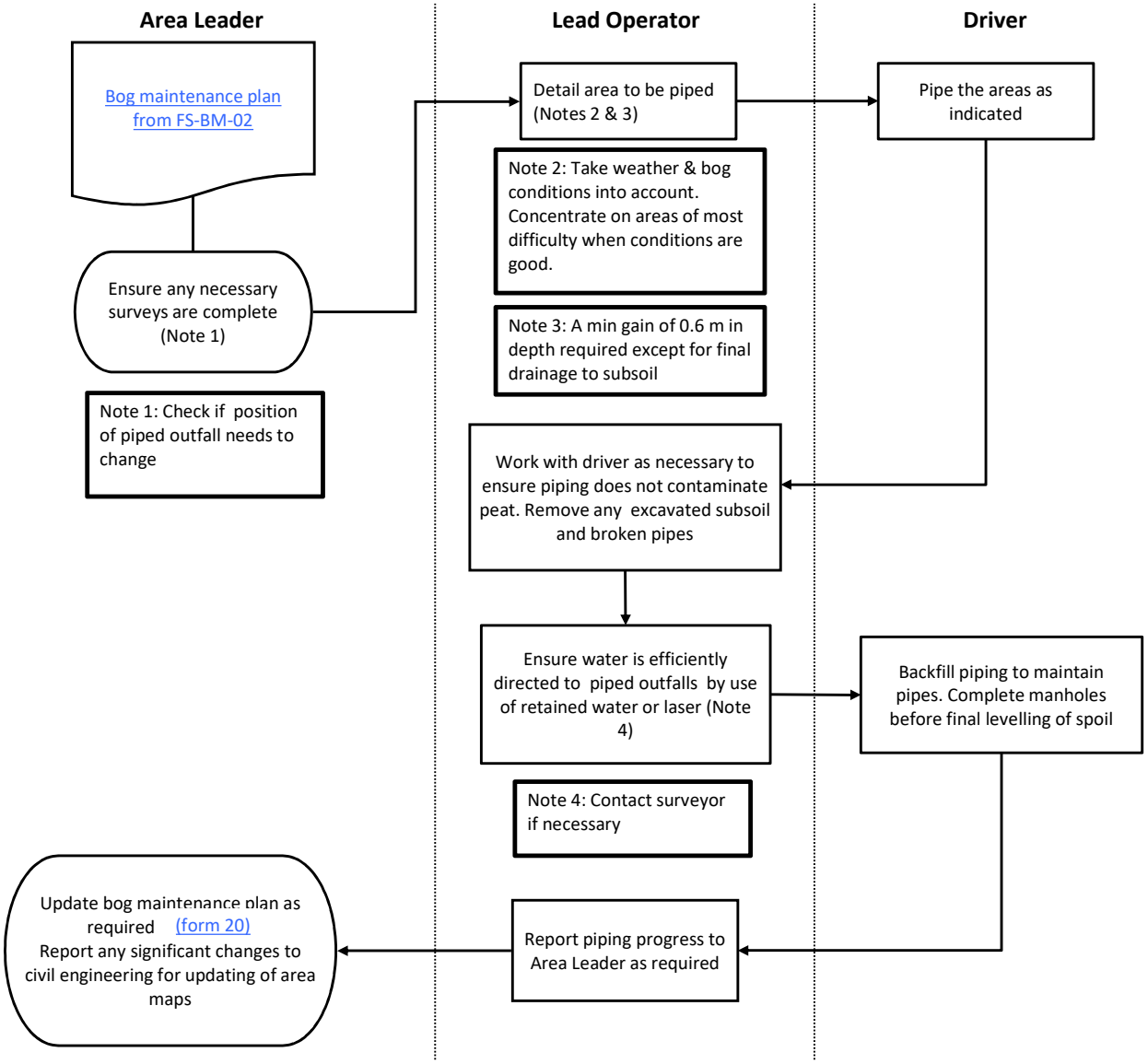
BORD NA MÓNA Naturally Driven	SOP: FS-BM-03	Rev: 2
Title: Drainage Planning & Implementation	Approved: JMcN	Date: 15/07/2016



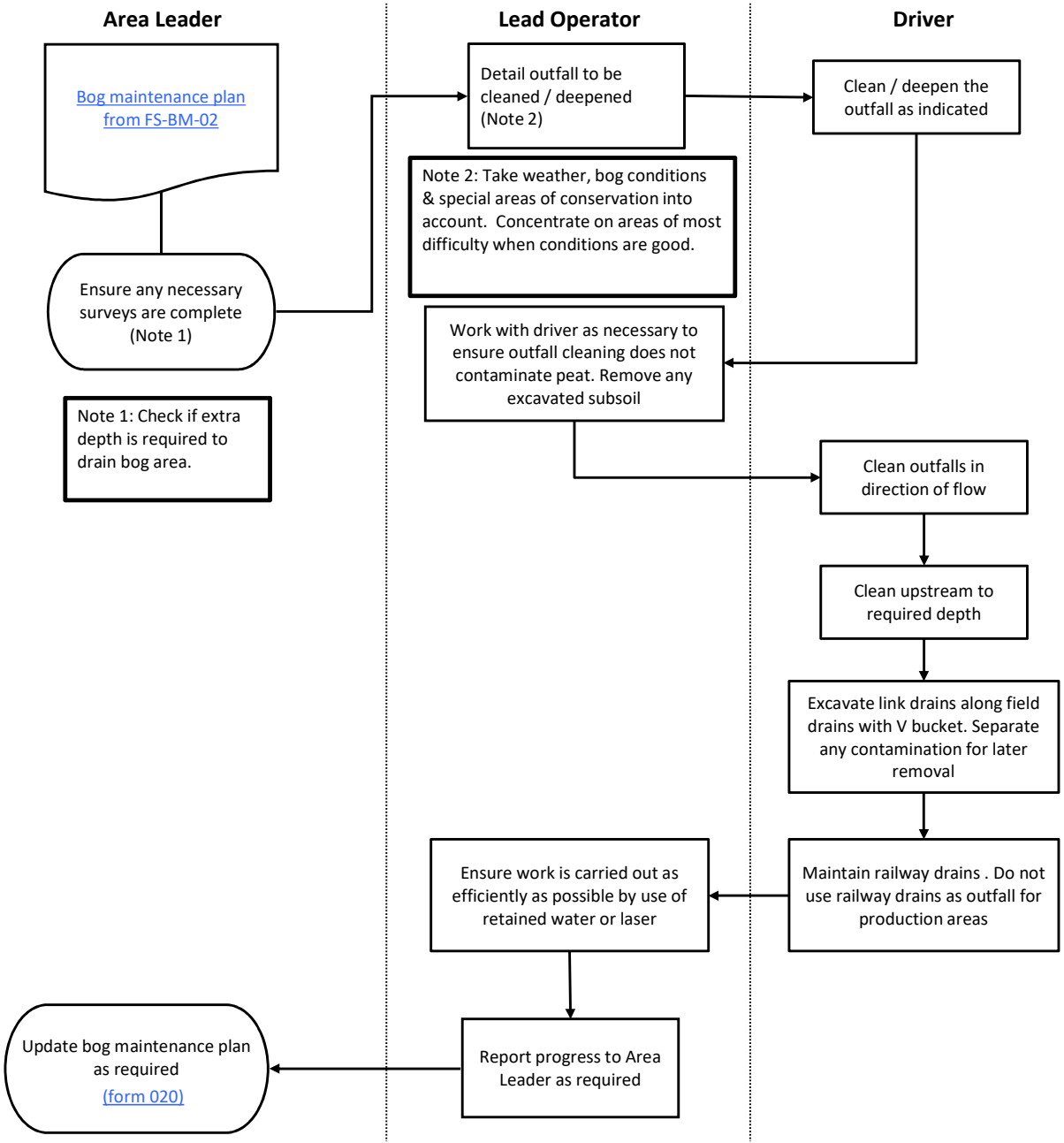
BORD NA MÓNA Naturally Driven	SOP: FS-BM-04	Rev: 2
Title: Ditching	Approved: JMcN	Date: 09/02/2016



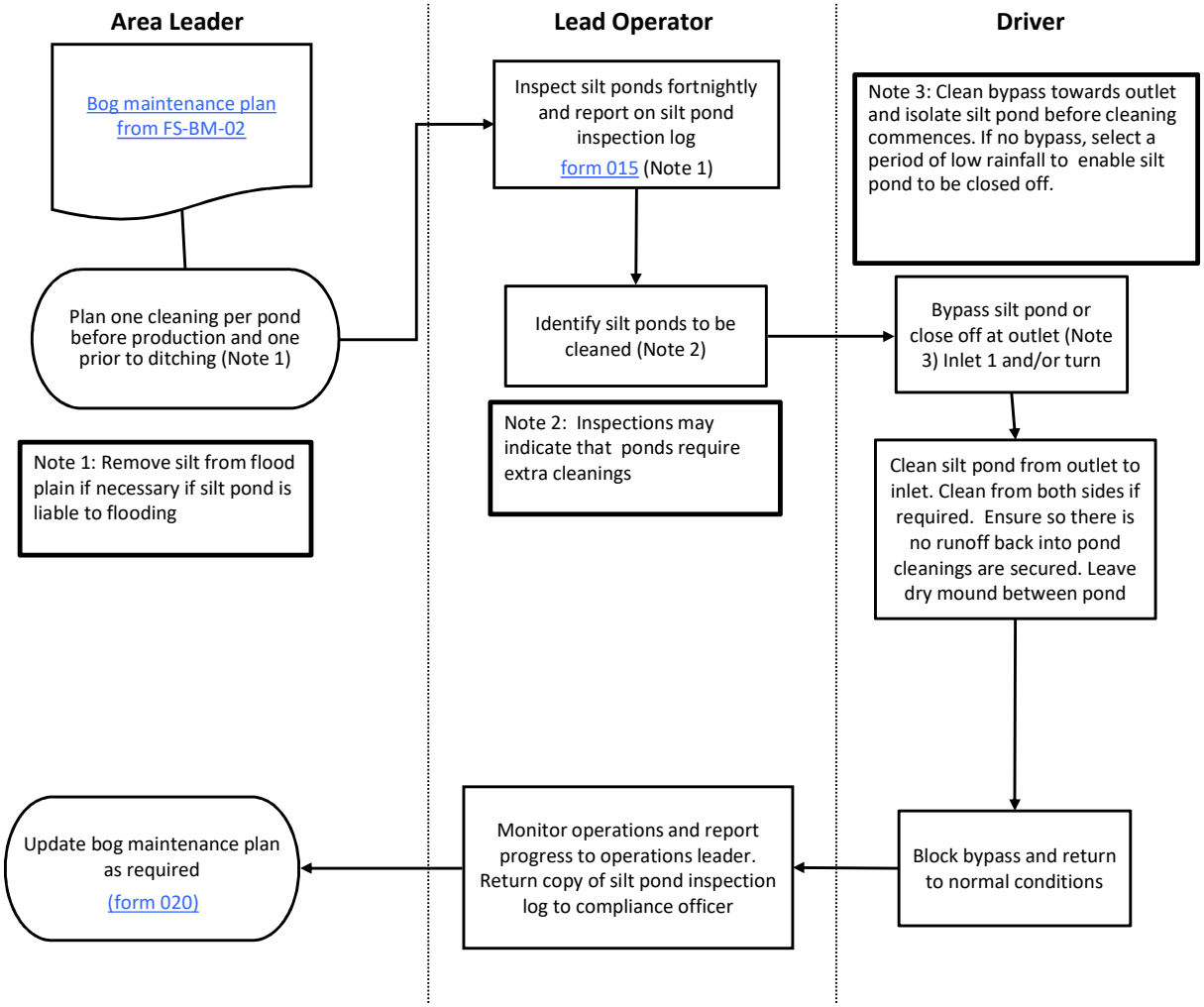
BORD NA MÓNA Naturally Driven	SOP: FS-BM-05	Rev: 2
Title: Piping & Repiping	Approved: JMcN	Date: 15/07/2016



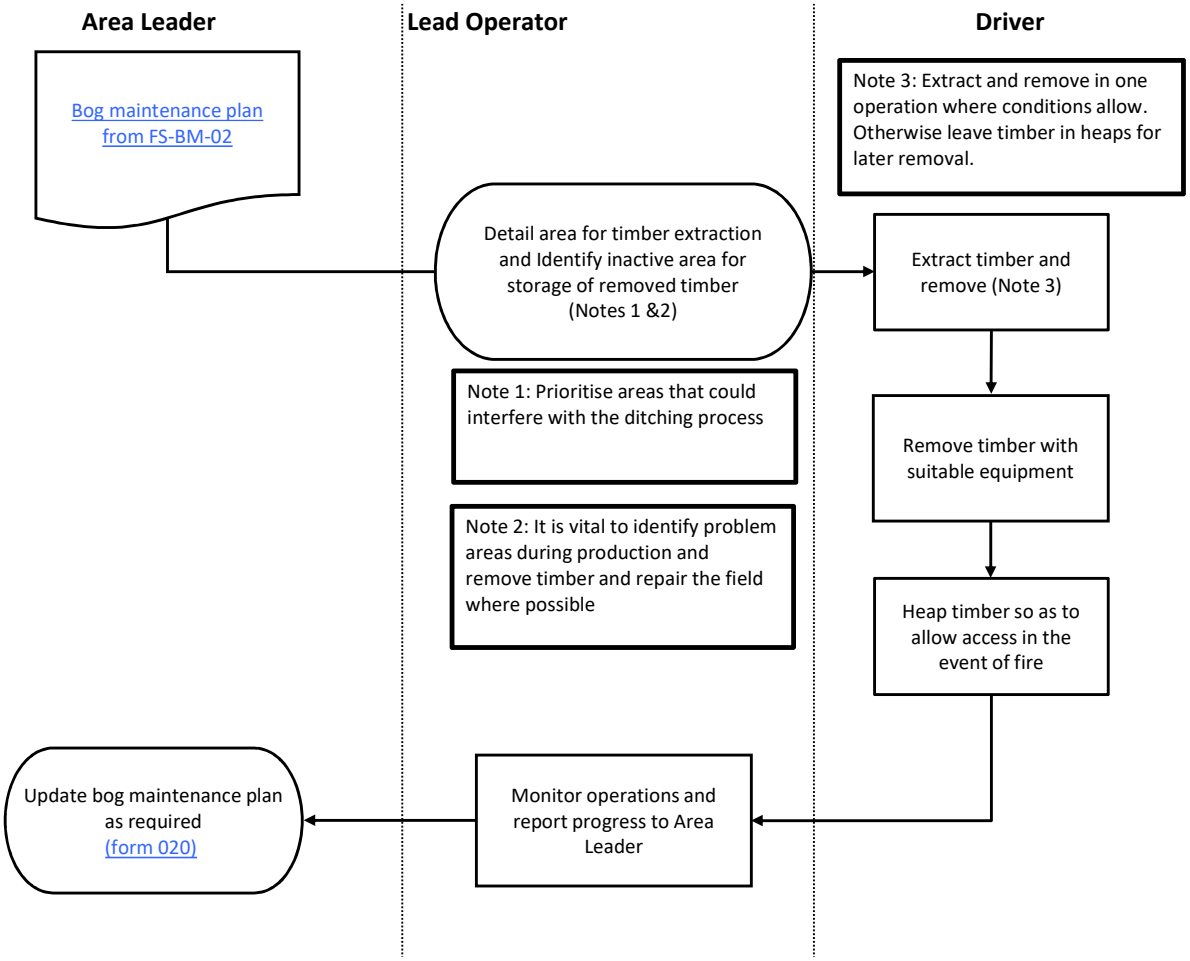
BORD NA MÓNA Naturally Driven	SOP: FS-BM-06	Rev: 2
Title: Open Outfall Procedure	Approved: JMcN	Date: 15/07/2016



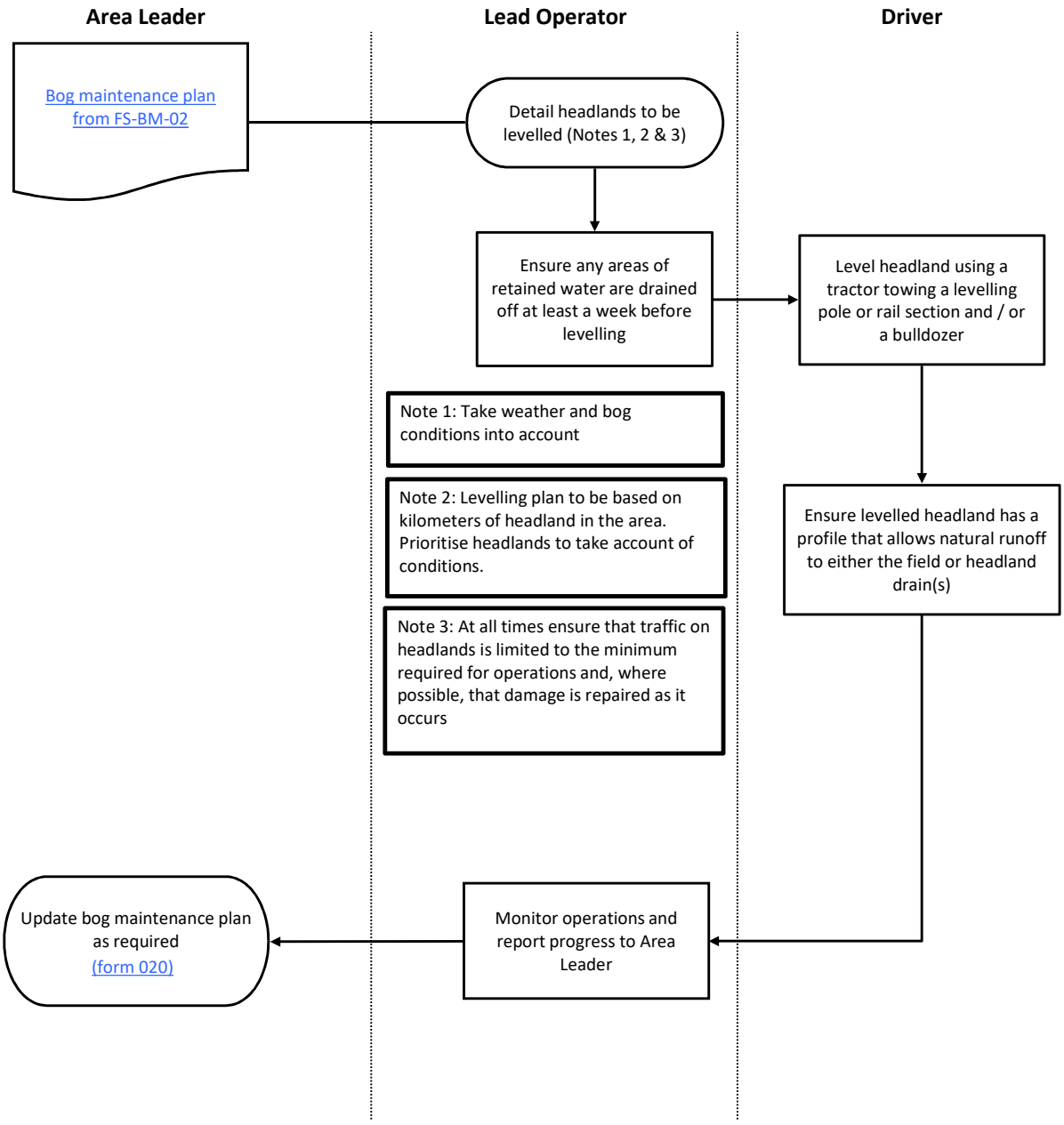
BORD NA MÓNA Naturally Driven	SOP: FS-BM-07	Rev: 3
Title: Silt Pond Cleaning	Approved: JMcN	Date: 15/07/2016



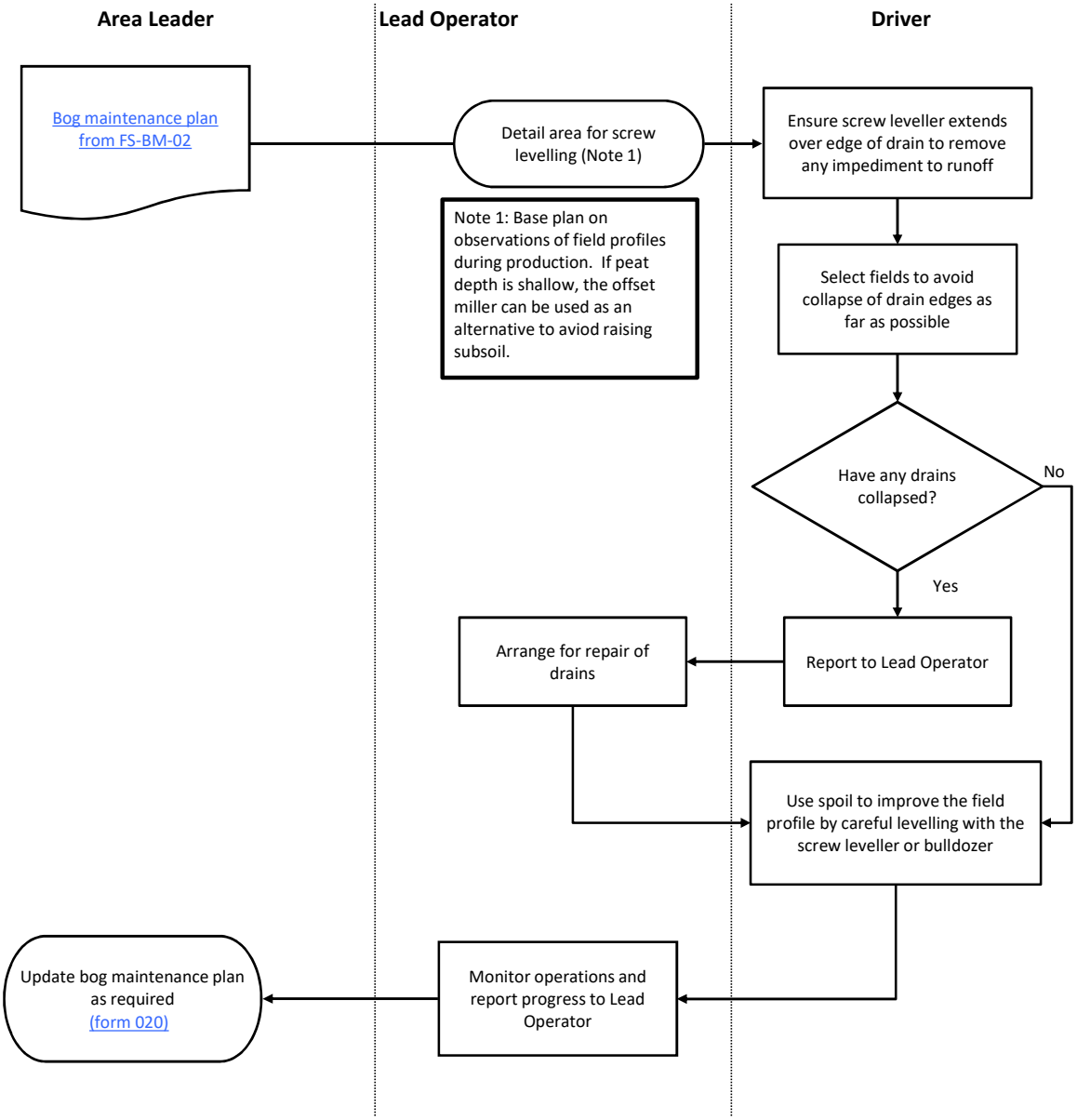
BORD NA MÓNA Naturally Driven	SOP: FS-BM-08	Rev: 2
Title: Timber Extraction	Approved: JMcN	Date: 15/07/2016



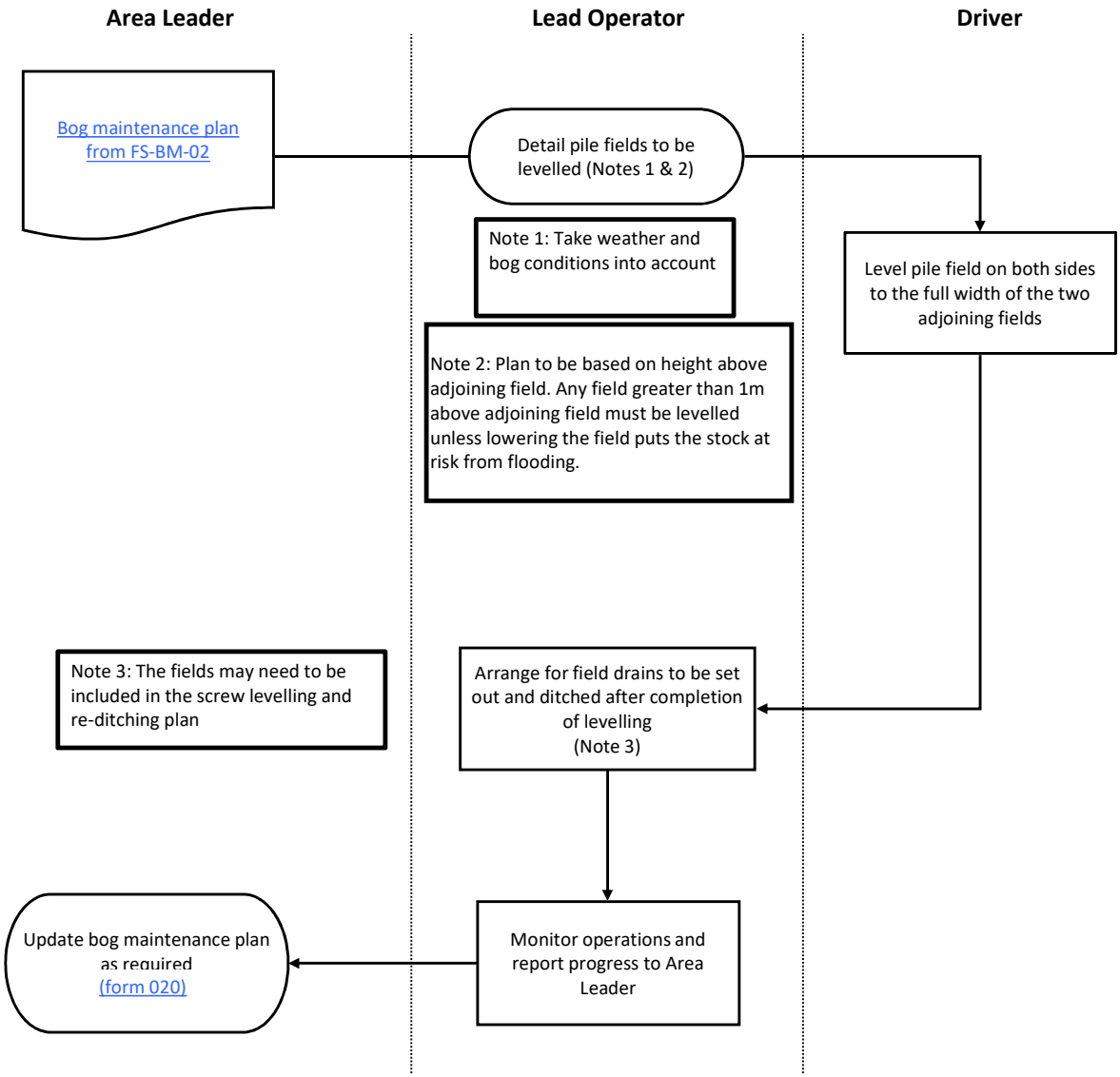
BORD NA MÓNA Naturally Driven	SOP: FS-BM-09	Rev: 2
Title: Headland Levelling	Approved: JMcN	Date: 15/07/2016



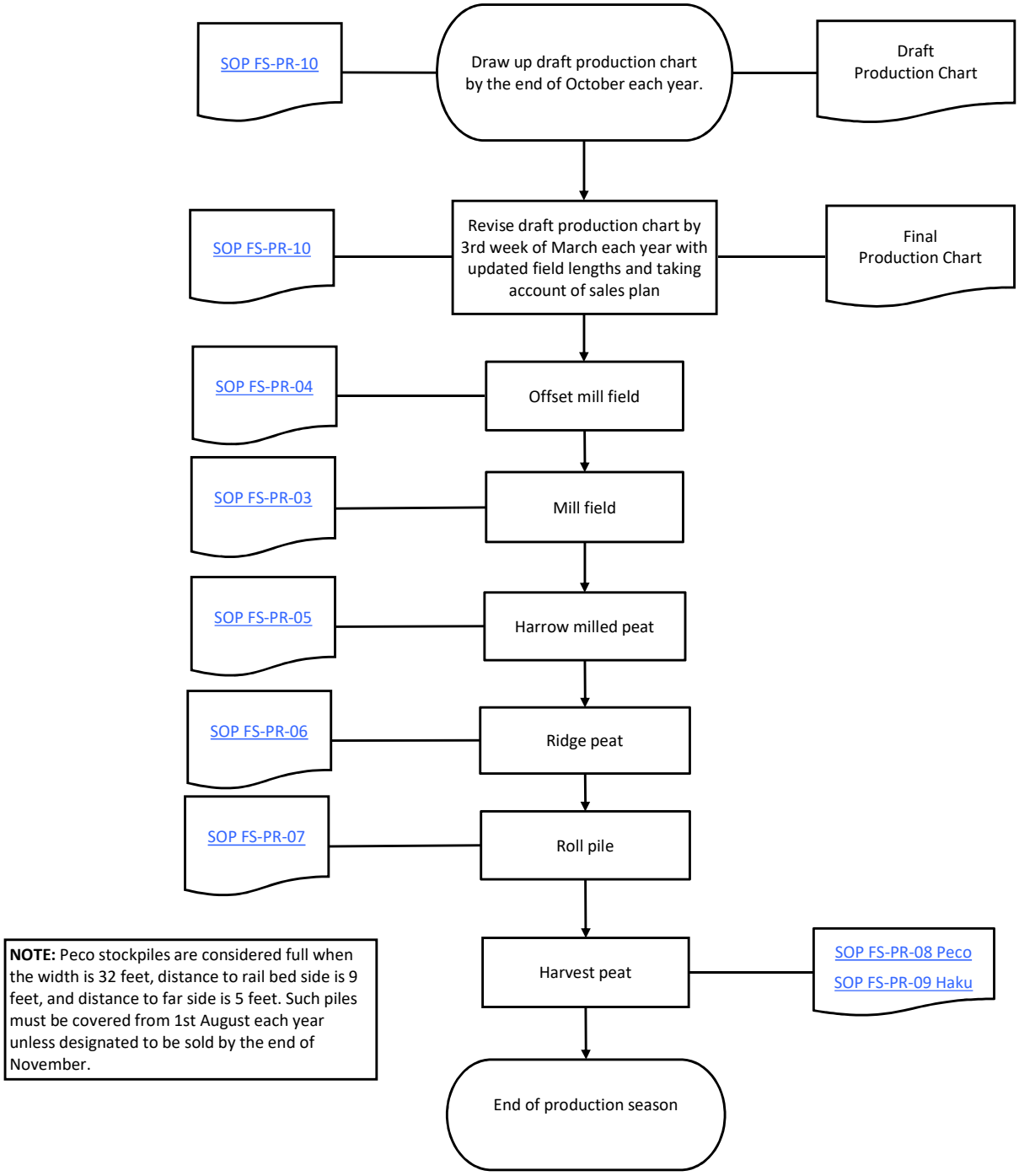
BORD NA MÓNA Naturally Driven	SOP: FS-BM-10	Rev: 2
Title: Screw Levelling	Approved: JMcN	Date: 18/05/2016



BORD NA MÓNA Naturally Driven	SOP: FS-BM-11	Rev: 3
Title: Pile Field Lowering	Approved: JMcN	Date: 15/07/2016



BORD NA MÓNA Naturally Driven	SOP: FS-PR-01	Rev: 2
Title: Production Flowchart	**Approved: PR**	**Date: 08/06/2016**



NOTE: Peco stockpiles are considered full when the width is 32 feet, distance to rail bed side is 9 feet, and distance to far side is 5 feet. Such piles must be covered from 1st August each year unless designated to be sold by the end of November.

BORD NA MÓNA Naturally Driven	SOP: FS-PR-02	Rev: 2
Title: General Milled Peat Production	Approved: PR	Date: 26/07/2012

1) Purpose

The purpose of this procedure is to describe the general arrangements for production of milled peat in Bord na Móna Energy.

2) Scope

The scope of this procedure is Milled Peat Production within area of responsibility.

3) Responsibility

Bog Operations Manager, Team Leaders**,** Operations Leader, A.E.G. Team Leaders and Area Supervisor.

4) Related Documents

Fire Policy
Environmental Guidelines.
Operating Procedures.

5) Procedure

Operations Leaders in conjunction with Team Leader/Area Supervisor will check all covered piles before stripping for production and leave covered those covered with 12 or 13m polythene until agreed with the Transport Manager.

Operations Leaders will ensure that the production equipment is checked at start of season, with particular attention to guards and fire extinguishers; and Team Leader/Area Supervisor will ensure that daily checks take place as per maintenance/safety check list.

Operations Leaders will check that the production cycle of milling, harrowing, ridging, harvesting and pile rolling is operated as outlined in procedures; so as to maximize the production of dry milled peat.

Operations Leaders will check that accurate production returns are notified before 9.00am each morning to Feedstock finance department, and that production is recorded on the production return sheet: (ref form 016A/B/C).

Operational Leaders, in conjunction with Team Leader/Area Supervisor, will ensure that fire rollers, bulldozers with lights, and a ditcher are available during production, as required by Fire Policy.

Operations Leaders will check that Team Leaders/Area Supervisors ensure that machinery is blown down & washed at end of each day

Operational Leaders will check that Team Leaders/Area Supervisors ensure that production machines are parked after wash down with separation to prevent spread of fire.

Operational Leaders, in conjunction with Team Leader/Area Supervisor, will ensure that production activity stops when winds pose a fire hazard and/or an environmental risk, and that a close fire watch is kept on piles, machinery and surrounding scrub.

Operational Leaders, in conjunction with Team Leader/Area Supervisor, will check piles regularly and ensure production ceases when full. (i.e. at size requiring 13m polythene)

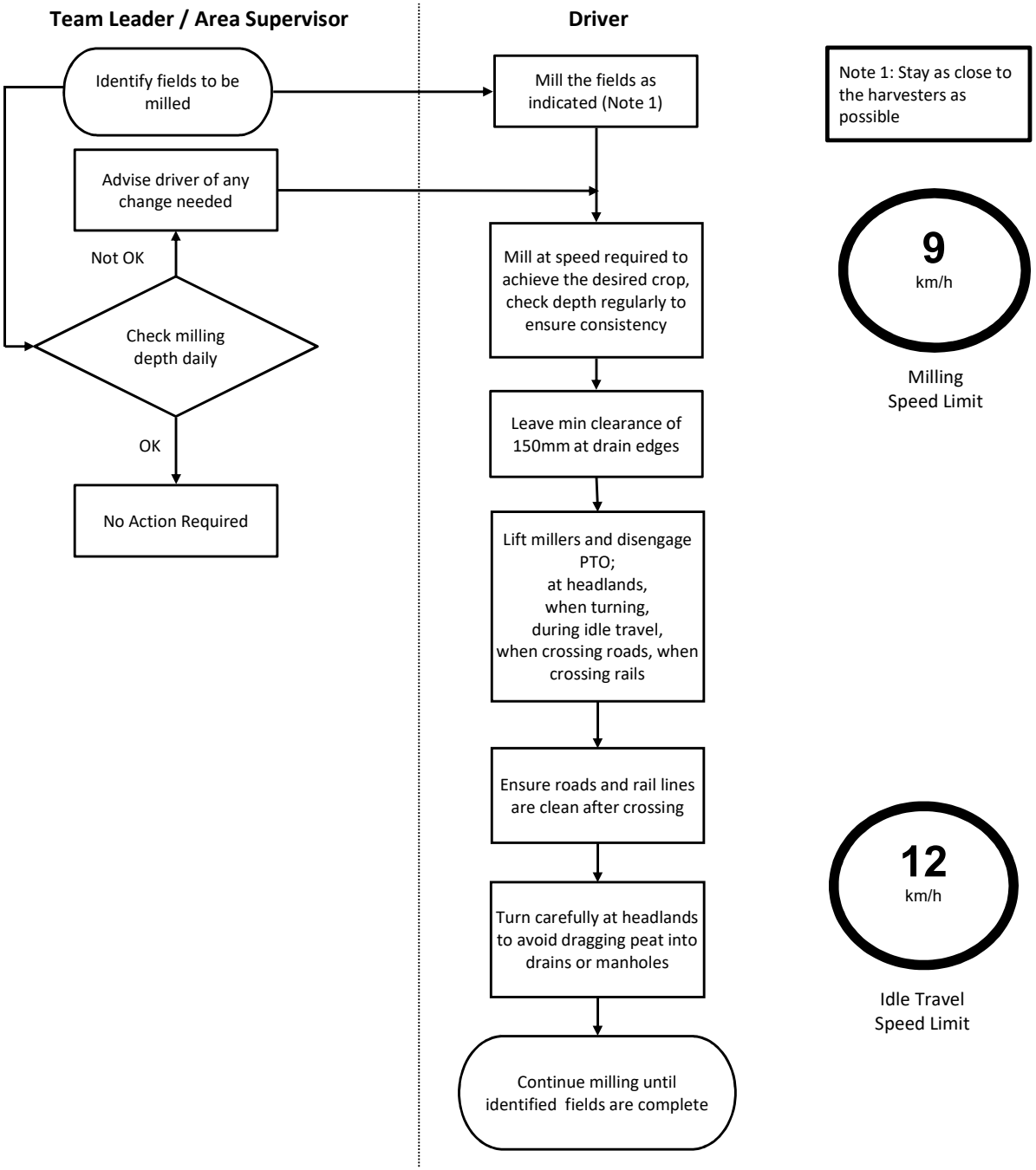
The Resource Manager in consultation with the Head of Feedstock, defines the end of the production season.

Operational Leaders will ensure that all machinery is properly blown down and washed down at end of season and is parked up as outlined in 'Production Machinery Lay-up Procedure'.

6) Records

Audit check lists; Production Returns, Covering Plan.

BORD NA MÓNA Naturally Driven	SOP: FS-PR-03	Rev: 1
Title: Milling (Light or new triple miller)	**Approved: PR**	**Date: 26/07/2012**



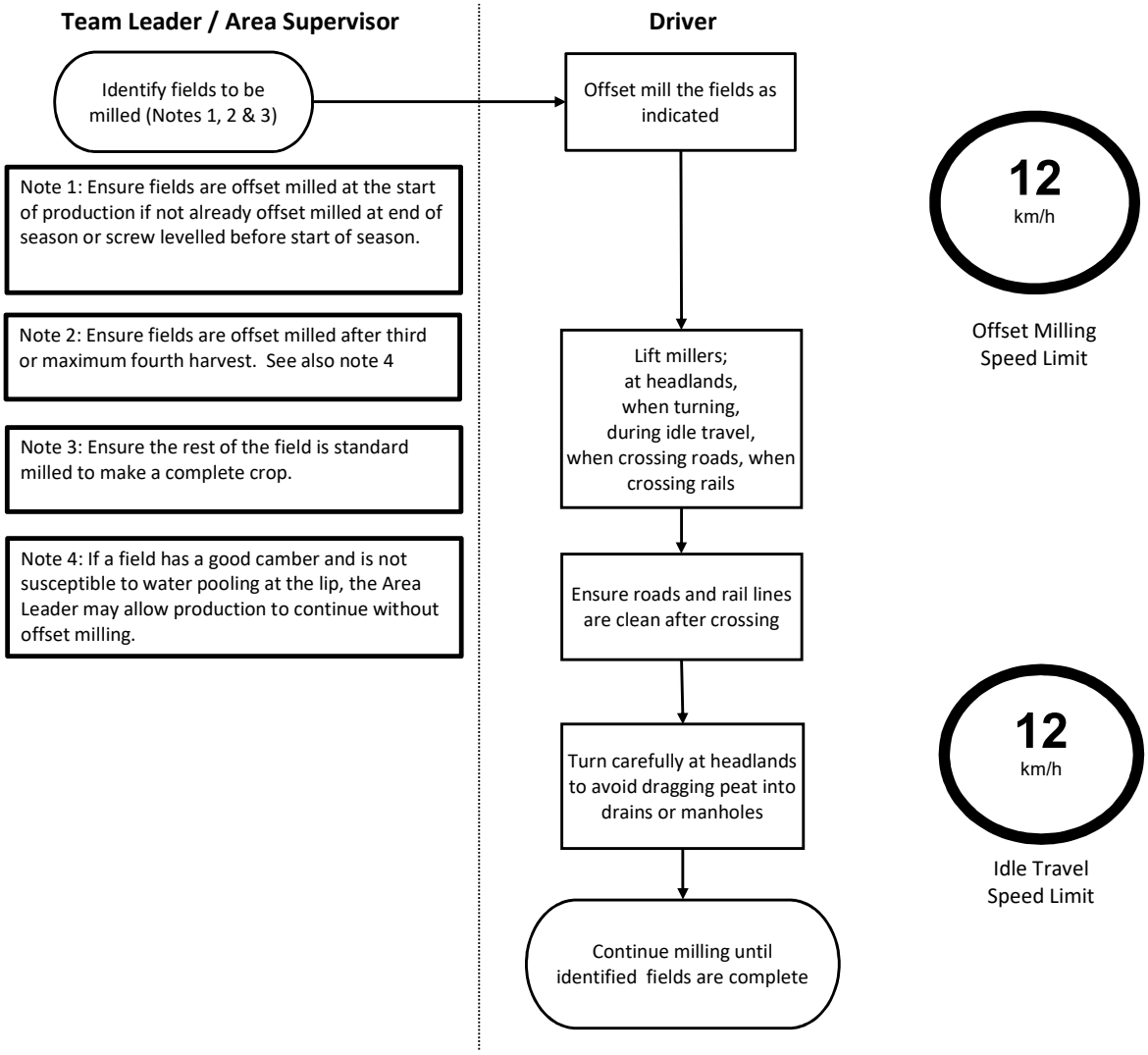
Additional notes

Ensure that machinery is blown down & washed at end of each day

Ensure that production machines are parked after wash down with separation to prevent spread of fire.

Ensure that daily maintenance/safety checks are carried out, with particular attention to guards and fire extinguishers

BORD NA MÓNA Naturally Driven	SOP: FS-PR-04	Rev: 2
Title: Milling (Offset Miller)	Approved: JMcN	Date: 06/11/2015



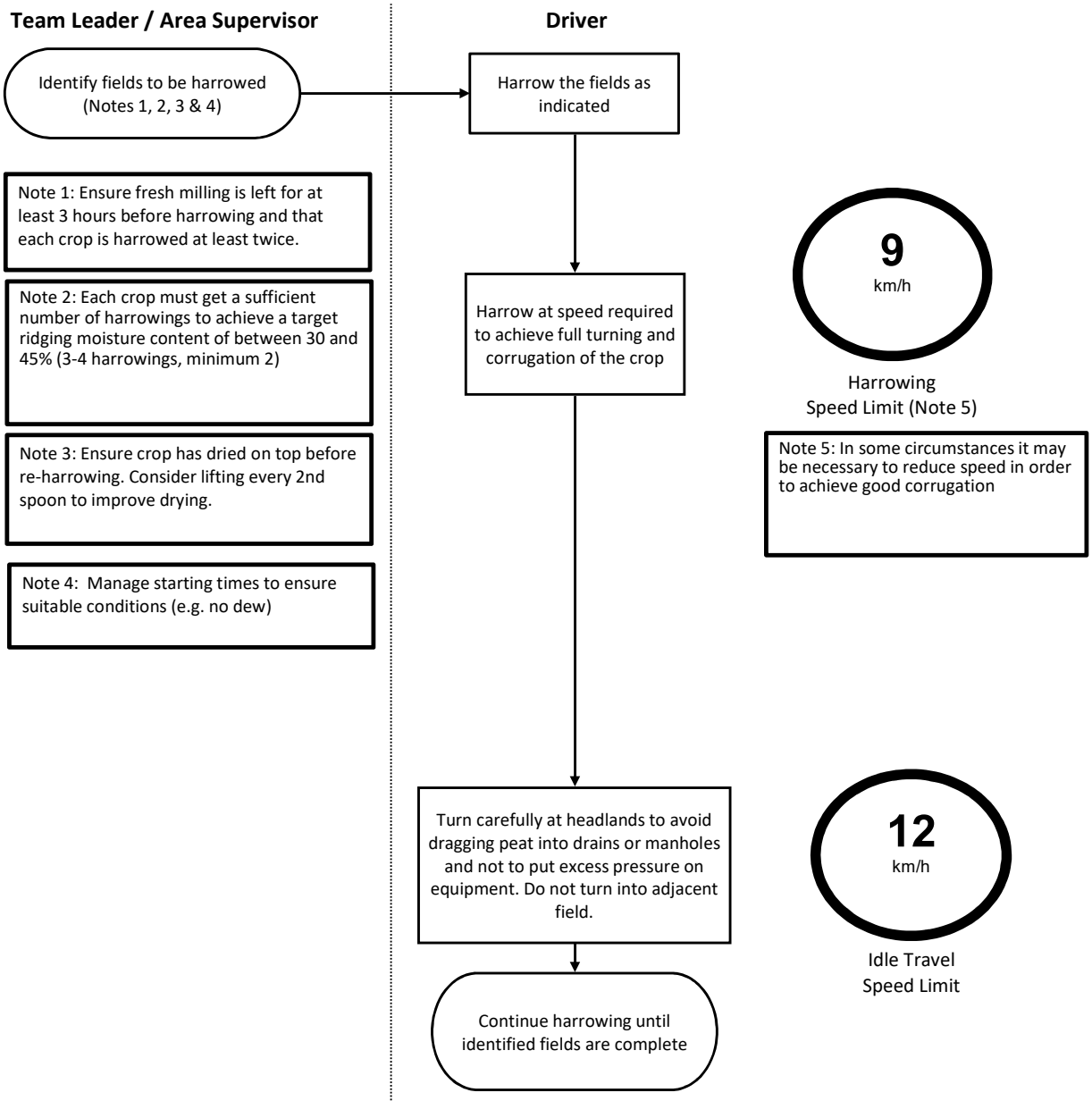
Additional notes

Ensure that machinery is blown down & washed at end of each day

Ensure that production machines are parked after wash down with separation to prevent spread of fire.

Ensure that daily maintenance/safety checks are carried out, with particular attention to guards and fire extinguishers

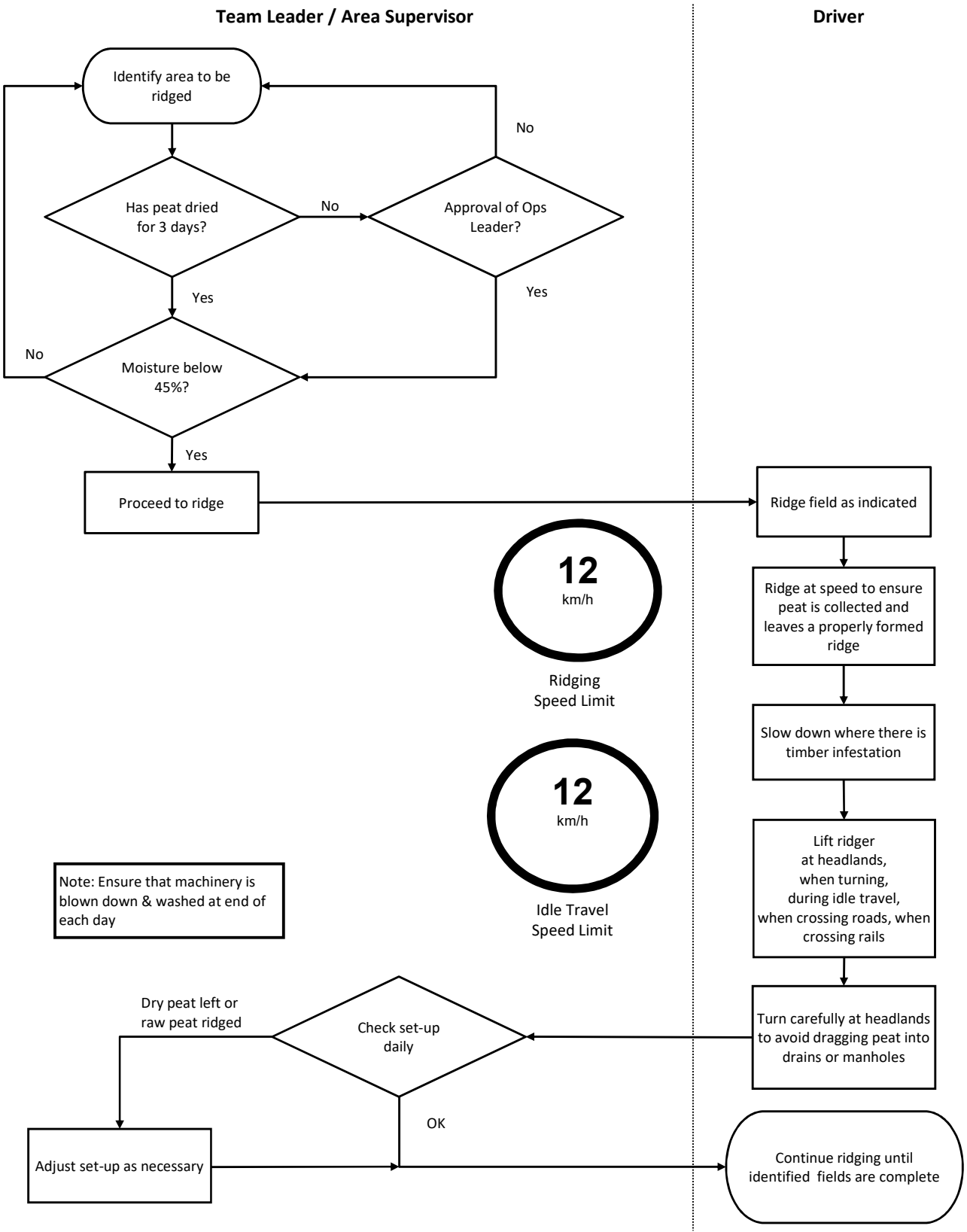
BORD NA MÓNA	SOP: FS-PR-05	Rev: 2
Title: Harrowing	Approved: PR	Date: 26/07/2012



Additional notes

Ensure that machinery is blown down & washed at end of each day
Ensure that production machines are parked after wash down with separation to prevent spread of fire.
Ensure that daily maintenance/safety checks are carried out, with particular attention to guards and fire extinguishers
Lift hydraulic spoons during idle travel, and when crossing roads or rails
Lift standard (non-hydraulic) spoons when crossing roads
Detatch conventional harrows during idle travel.
Maintain slow speeds along headlands.
Routes should be optimised to reduce excess travel to reduce dust.

BORD NA MÓNA Naturally Driven	SOP: FS-PR-06	Rev: 2
Title: Ridging	Approved: PR	Date: 26/07/2012



Additional notes

Ensure that machinery is blown down & washed at end of each day

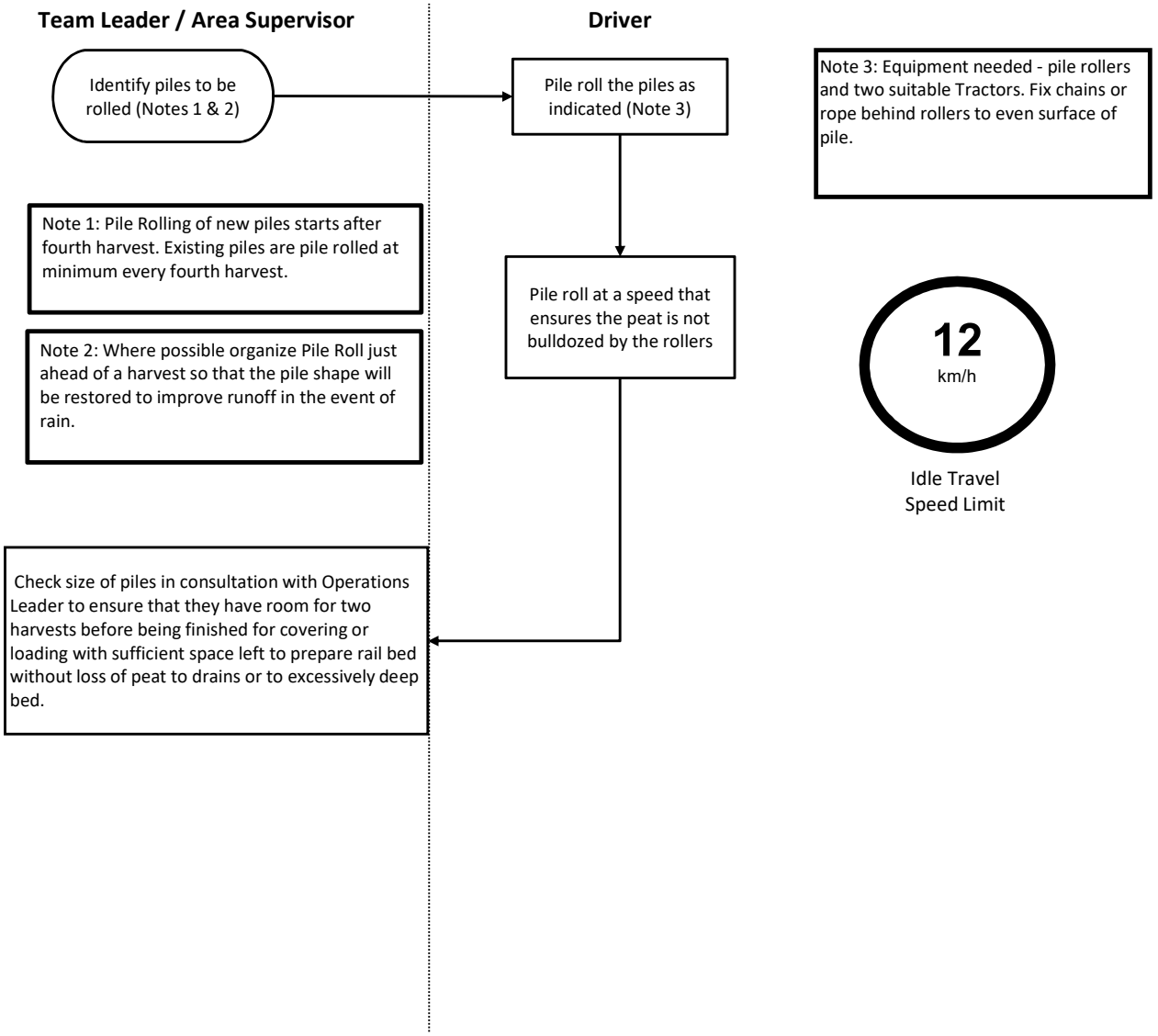
Ensure that production machines are parked after wash down with separation to prevent spread of fire.

Ensure that daily maintenance/safety checks are carried out, with particular attention to guards and fire extinguishers

Lift the blades of the ridger well in advance of leaving the field to avoid pulling peat onto the headland.

Routes to be optimised to avoid excess travel in all areas.

BORD NA MÓNA Naturally Driven	SOP: FS-PR-07	Rev: 1
Title: Pile Rolling	**Approved: PR**	**Date: 26/07/2012**



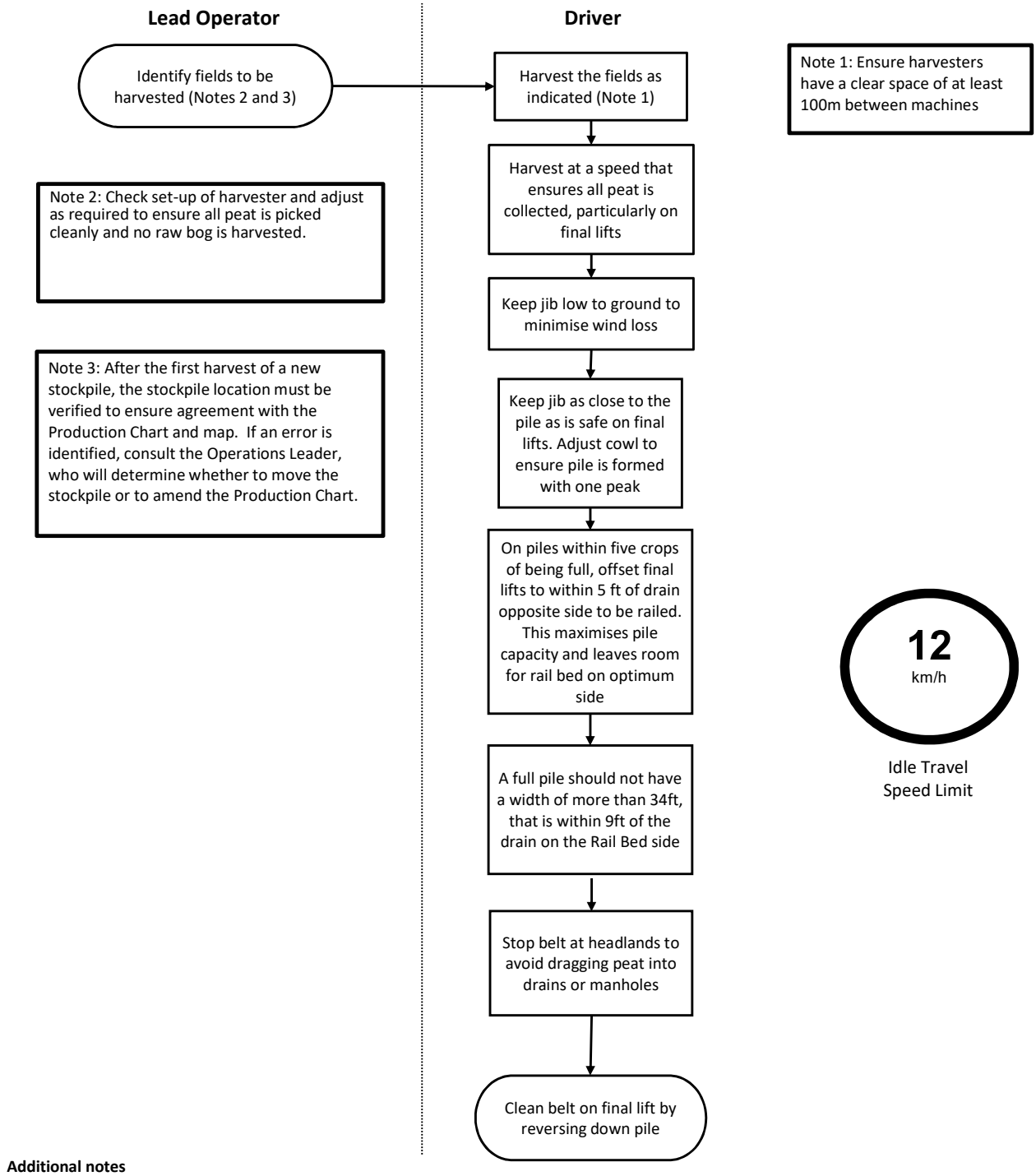
Additional notes

Ensure that machinery is blown down & washed at end of each day

Ensure that production machines are parked after wash down with separation to prevent spread of fire.

Ensure that daily maintenance/safety checks are carried out, with particular attention to guards and fire extinguishers

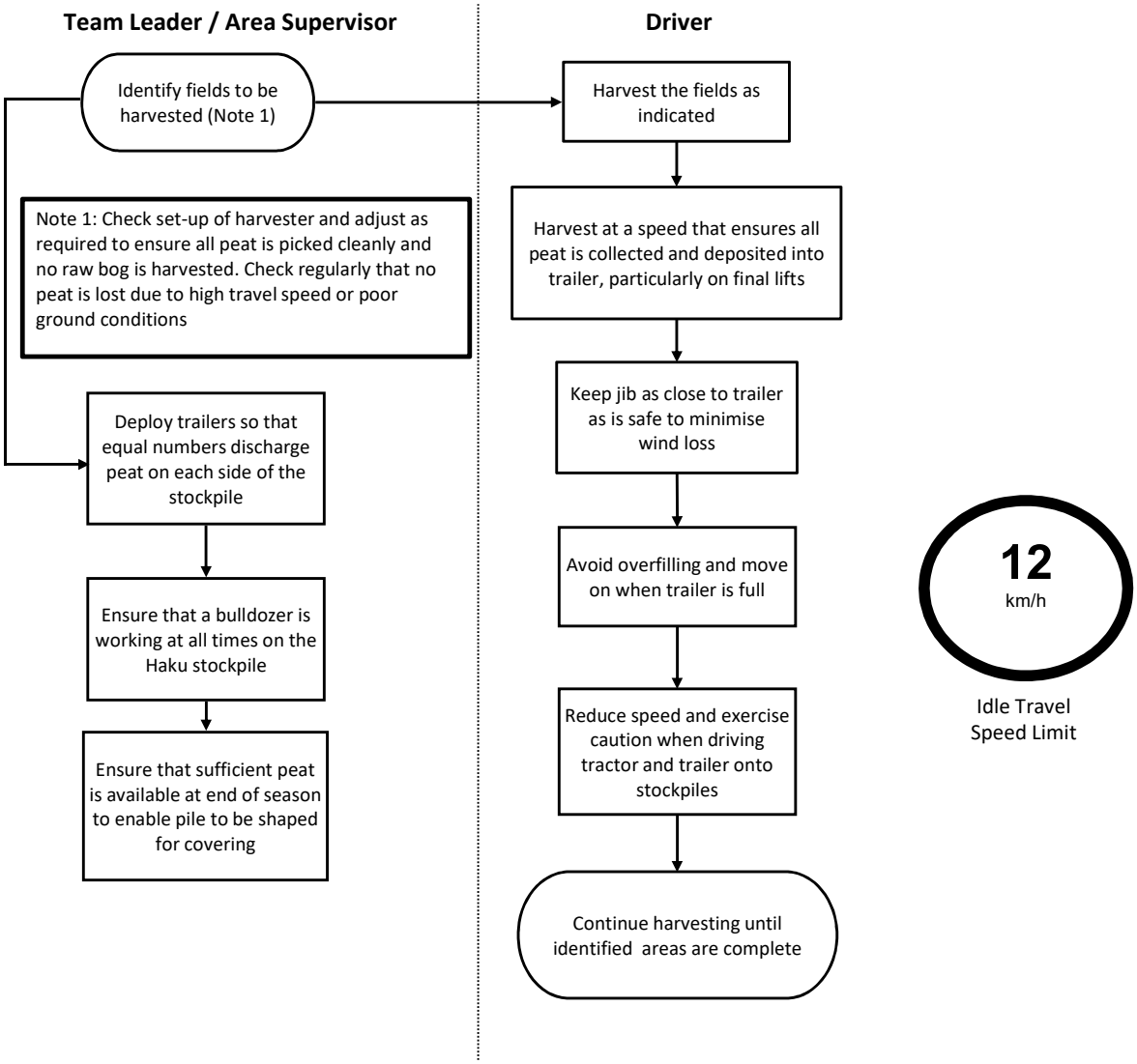
BORD NA MÓNA Naturally Driven	SOP: FS-PR-08	Rev: 4
Title: Peco Harvesting	Approved: JMcN	Date: 14/07/2016



Additional notes

Ensure that machinery is blown down & washed at end of each day
Ensure that production machines are parked after wash down with separation to prevent spread of fire.
Ensure that daily maintenance/safety checks are carried out, with particular attention to guards and fire extinguishers
Routes to be optimised to avoid excess travel in all areas.
Discharge belt prior to exiting production field.
Ensure rubber belt seats are in place.

BORD NA MÓNA	SOP: FS-PR-09	Rev: 2
Title: Haku Harvesting	Approved: PR	Date: 26/07/2012



Additional notes

Ensure that machinery is blown down & washed at end of each day
Ensure that production machines are parked after wash down with separation to prevent spread of fire.
Ensure that daily maintenance/safety checks are carried out, with particular attention to guards and fire extinguishers
Routes to be optimised to avoid excess travelling in all areas
Discharge belt prior to exiting production field.

BORD NA MÓNA Naturally Driven	SOP: FS-PR-10	Rev: 2
Title: Preparation of Production Charts	**Approved: JM**	**Date: 19/11/2014**

1) Purpose

The purpose of this procedure is to describe the general arrangements for deciding on the Production Chart for each milled peat area in Bord na Móna Feedstock Operations.

2) Scope

The scope of this procedure is Milled Peat Production within area of responsibility.

3) Responsibility

The Resource Manager is primarily responsible for this procedure, with input from the Assistant Resource Manager, Civil Data, Operations Leader, A.E.G. Team Leaders and Area Supervisor.

4) Related Documents

Operating Procedures
Production Chart / Production Return form form 016 A/B/C

5) Procedure

During September the Transport Manager will ensure that the Short Term Loading Plan(s) relevant for the works are up to date and include all stockpiles which are scheduled for sale up to the end of December.

During September the Transport Manager will provide the planned sales (tonnes from 12 Month Loading Plan) from each area in the period January to the end of March to the relevant Operations Leaders.

At the end of September each year, Civil Data will issue a map of each bog area to the works. The map will show; all individual production fields including field ID, production length, all existing stock piles including stock in tonnes and tonnes per meter. The map will highlight stockpiles which are scheduled for sale up to the end of December and covered piles.

For each area the Operations Leader, with the Team Leaders, will review and mark up the map. The objective will be to maximise the number of fields per stockpile as far as possible. The review will consider kilos to be removed because of contamination or drainage and these will be marked up on the map. This must be complete before the end of the third week in October.

Where there is an opportunity to increase fields per pile (or any other improvement) by selling particular piles, the Transport Manager will be asked to sell these piles between January and March. A list of these piles will be supplied to the relevant Transport Manager at the end of October **(form 029)**.

Over the Winter period, Civil Data obtain accurate measurements of production fields where the field length is changing. This information along with the map and the draft production chart is inputted into the GIS system.

By the end of February, Civil Data issue for each area an updated map and production chart which includes the official field lengths, updated stockpiles and stock and updated piles scheduled to be sold over the six week period from the beginning of March.

For each area, the Operations Leader, with the Team Leaders, will review the map, and modify the draft production chart based on the updated information including the field lengths provided by Civil Data. This must be complete before the end of the second week in March.

The plan is then reviewed by the Resource Manager and/or the Assistant Resource Manager, and a final production chart is created by the end of the third week in March.

A copy of the final production chart is sent to the Finance Department and Civil Data.

6) Records

Production charts (draft and final)

BORD NA MÓNA	SOP: FS-PR-11	Rev: 1
Title: Updating Production Charts	Approved: PR	Date: 27/02/2013

1) Purpose

The purpose of this procedure is to describe the arrangements for updating Production Charts and starting new stockpiles in Bord na Móna Feedstock Operations.

2) Scope

The scope of this procedure is Milled Peat Production within area of responsibility.

3) Responsibility

The Operations Leaders is primarily responsible for this procedure, with input from the Team Leaders and Area Supervisors, and approval from the Assistant Resource Manager or Resource Manager.

4) Related Documents

Operating Procedures
Production Chart / Production return form form 016 A/B/C

5) Procedure

Updating Production Charts

The Team Leader / Area Supervisor is responsible for anticipating the requirement to update the production chart. This must be done at least 10 days before the change is due to take effect.

The Team Leader / Area Supervisor must meet with his Operations Leader to agree the proposed change(s), including the starting of any new stockpiles.

The Operations Leader amends the production chart with the proposed change(s).

The Operations Leader must obtain the approval of the Assistant Resource Manager before implementing the change(s). Where the change is approved, the revision level of the plan is identified through the date. Where appropriate, and in particular where the early sale of a pile will improve bog layout, the Assistant Resource Manager should consult with the Transport Manager and arrange for that sale.

A copy of the amended plan will be e-mailed to Civil Data, the Transport Manager, and Feedstock Finance.

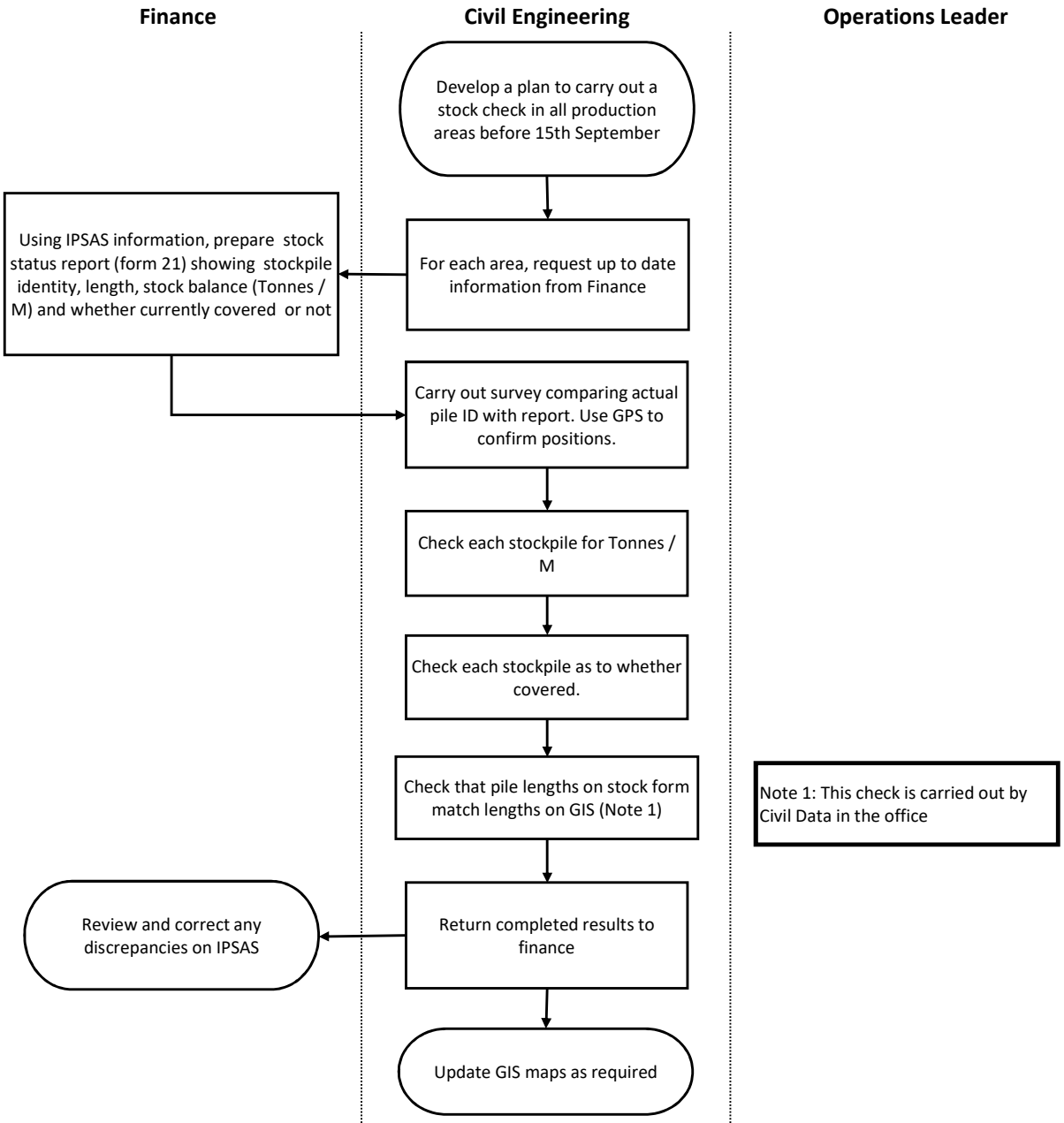
A hard copy of the amended production return form 16A/B/C will be distributed to the Team Leader / Area Supervisor.

6) Records

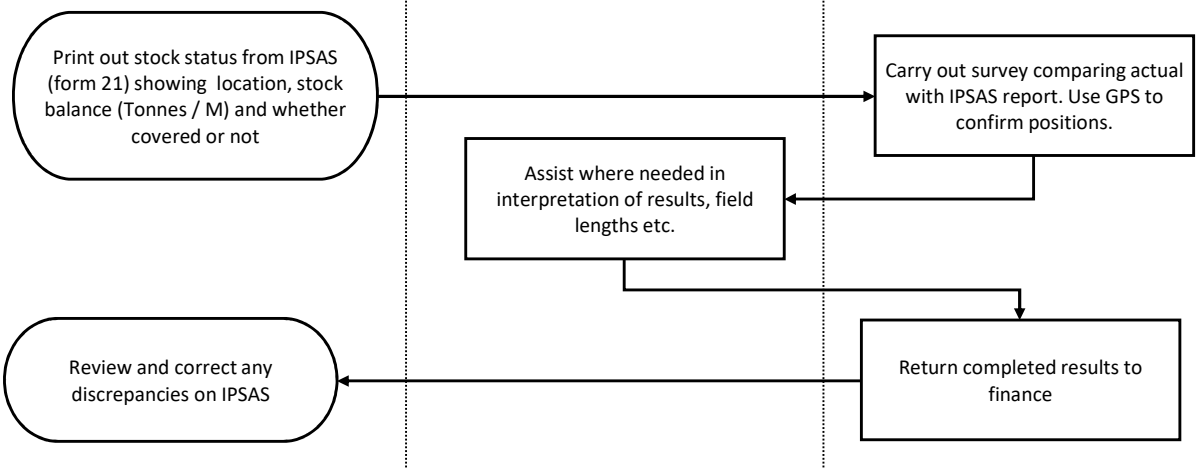
IPSAS records

BORD NA MÓNA	SOP: FS-PR-12	Rev: 1
Title: Stockpile Inventory	Approved: PR	Date: 27/02/2013

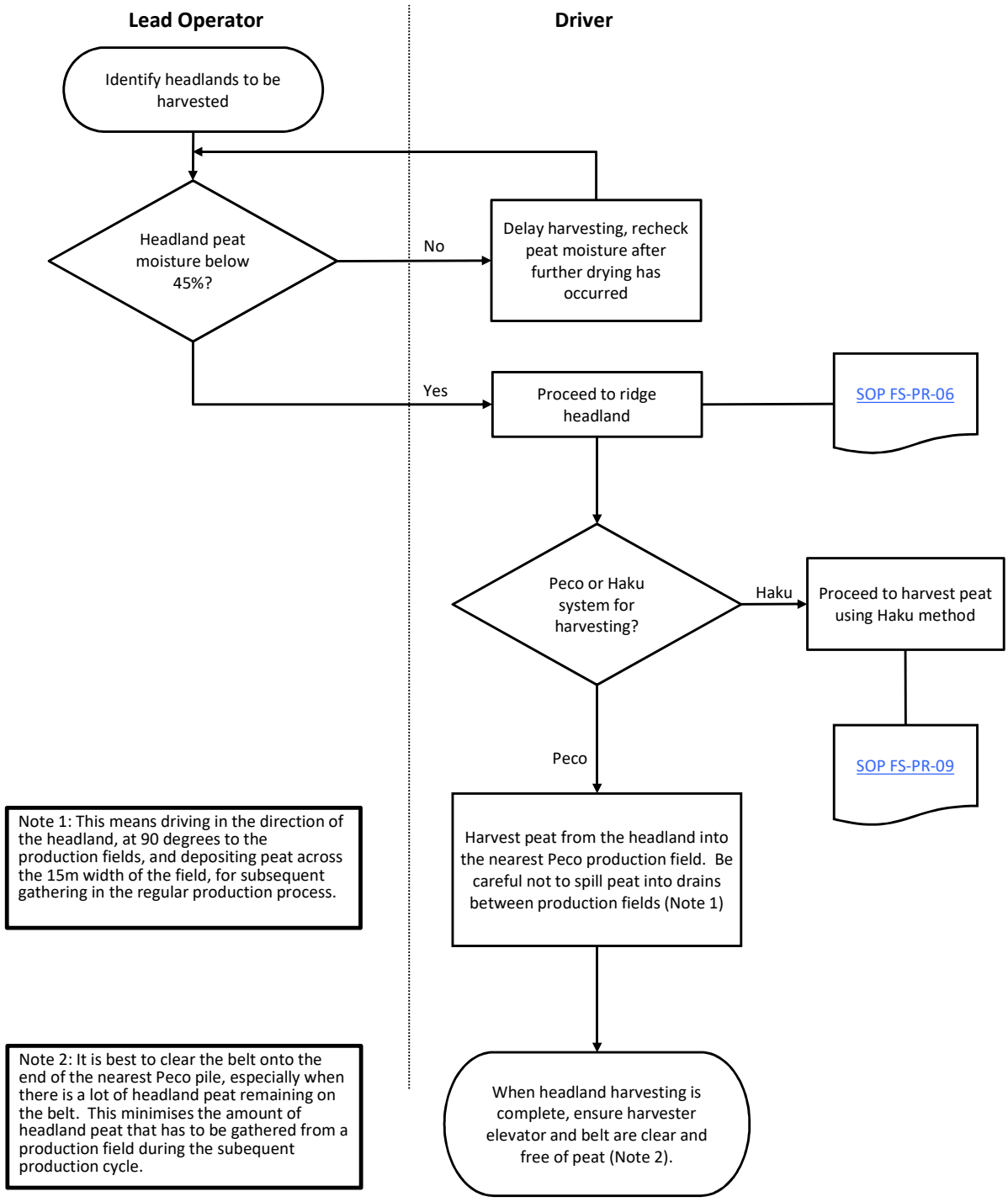
1) First Stock Check



2) March Stock Check



BORD NA MÓNA Naturally Driven	SOP: FS-PR-13	Rev: Draft
Title: Headland Harvesting	Approved: JMcN	Date: 12/05/2016



Note 1: This means driving in the direction of the headland, at 90 degrees to the production fields, and depositing peat across the 15m width of the field, for subsequent gathering in the regular production process.

Note 2: It is best to clear the belt onto the end of the nearest Peco pile, especially when there is a lot of headland peat remaining on the belt. This minimises the amount of headland peat that has to be gathered from a production field during the subequent production cycle.

Additional notes

Ensure that machinery is blown down & washed at end of each day

Ensure that production machines are parked after wash down with separation to prevent spread of fire.

Ensure that daily maintenance/safety checks are carried out, with particular attention to guards and fire extinguishers

BORD NA MÓNA Naturally Driven	SOP: FS-PR-14	Rev: 1
Title: Stockpile Survey with Trimble Yuma 2 Tablet	**Approved: JMcN**	**Date: 09/06/2016**

1) Purpose
The purpose of this procedure is to describe how to conduct a stockpile survey using the Trimble Yuma 2 (stockpile survey) tablets

2) Scope
The scope of this procedure is Milled Peat Production within area of responsibility.

3) Responsibility
Civil Data, Head of Bog Operations, Bog Operations Managers, Bog Operations Area Leaders

4) Related Documents
IPSAS Stockpile reports

5) Procedure
1. Switch on the tablet (green button at bottom right of device) and if prompted, input the password (password is BOORA, all capitals)

2. In most cases the tablet will default open to the maps application. If the desktop screen appears, select the ArcPad 10 (maps) application

3. The tablet may take a minute or two to locate the user, A "no fix error" message will appear until the position is located.

4. Go to the end of a stockpile, and tap the satellite icon (top left of the screen): 

5. An attribute box/pop-up window will appear, press the dark green **OK** button

6. Repeat steps 4 and 5 for every survey location

7. If the tablet goes into "sleep mode", tap the screen with the stylus to power back up the screen

8. All survey results are automatically saved. Once the survey has been complete, turn off the tablet, recharge its battery using the charger provided, and contact Civil Data or the Quality Manager for instructions to return the tablet

9. Civil data will download the survey results. Where data is missing or incomplete, Civil Data will liaise with the relevant user and seek an extra survey. Civil data will cross check stock pile chart names and actual ground locations. Results will then be issued to Peat Division management.

6) Records
IPSAS Stockpile reports, Civil Data GIS database

BORD NA MÓNA Naturally Driven	SOP: FS-PR-15	Rev: 3
Title: Ridge Sampling	Approved: JMcN	Date: 03/08/2016

1) Purpose

The purpose of this procedure is to describe the arrangements for ridge sampling by the Area Leaders during production.

2) Scope

The scope of this procedure is Milled Peat Production within area of responsibility.

3) Responsibility

The Bog Operations Area Leader is responsible for this procedure.

4) Related Documents

Operating Procedures

Daily Key Production Check Sheet form 22/23

5) Procedure

Each day when ridging is taking place, the Area Leader must sample two ridges. These ridges can be from any of his areas, but the Area Leader must ensure that all of his areas are sampled roughly equally in any one week*. The Area Leader should decide (based on his knowledge of the area), whether a single sample, or a blended sample, is required.

**For example, Area Leader 1 has three production areas. On production day 1, he samples one ridge in area 1 and one ridge in area 2; on production day 2, he samples one ridge in area 3 and one ridge in area 1; on production day 3 he samples one ridge in area 2 and one ridge in area 3.*

Samples must be a minimum of 500g, and must be stored in sealed and labelled plastic bag.

The Area Leader must ensure that the samples are tested for moisture content (either in the lab, or using an Ohaus monitor), and results are recorded on form 22/23

6) Records

Form 22

BORD NA MÓNA Naturally Driven	SOP: FS-PR-16	Rev: Draft
Title: End of Production Season Procedure	**Approved: EMcD**	**Date: 14/10/2016**

1) Purpose

The purpose of this procedure is to describe end of Production Season activities

2) Scope
The scope of this procedure is Milled Peat Production within area of responsibility.

3) Responsibility
Head of Bog Operations, Bog Operations Managers, Bog Operations Area Leaders and Compliance Department.

4) Related Documents
IPC Licences

5) Procedure
1. To minimise silt runoff, ensure:
a) Flood prone production fields are cleared of milled peat or else recompacted
b) Other production fields that have been milled have been ridged.
c) ALL loose peat on headlands is ridged up to a location on the headland margins, secured against washing into drains.

2. Wrap all stripped polythene and deposit at hard stand/designated collection area for removal

3. Ensure all barrels and grease drums are returned to the bunded lock up.

4. Gather up and dispose of waste in the skip or bin provided

5. Gather up any remaining polybrane and store for reuse or removal

6. Gather up and stockpile any scrap rail or metal for collection by waste contractor

7. Ensure tractors and machinery are parked in deisgnated areas, set apart to minimise risk of fire damage

8. Ensure tea centres, compounds, bunded storage and machinery are locked and secured.

9. Where primary sepric tanks are used, check tank level and arrange sludge disposal if necessary

6) Records
Bog Maintenance form 020

BORD NA MÓNA Naturally Driven	Procedure: 001	Rev: 7
Title: Document Control	**Approved: JM**	**Date: 26/10/2016**

1) Purpose

The purpose of this procedure is to describe the arrangements in Bord na Móna Peat Division for document control.

2) Scope

The scope of this procedure is as follows:

a) The documents associated with the Quality Management System, Environmental Management System and the Energy Management System
b) Customer specifications
c) Engineering drawings
d) Safety Data Sheets

3) Related Documents

Bord na Móna Peat Quality Management System (QMS) documents
Bord na Móna Peat Energy Management System (EnMS) documents
Bord na Móna Peat Environmental Management System (EMS) documents

Customer specifications
Engineering drawings
Safety Data Sheets

4) Procedure

The QMS, EMS and the EnMS are electronic. All QMS, EMS and EnMS documents are password controlled so that they can only be amended by the responsible person or a designated deputy. Copies of documents may be printed off at any time for training or review purposes. These are defined as uncontrolled copies, and must be destroyed after use. Where there is limited access to the IT system, the Area Leader may retain a paper version of relevant SOPs, but is responsible for their updating. Whenever SOPs are updated, the Quality Manager will send an updated version to all Managers and Area Leaders, who will then update any paper copies held.

All QMS, EMS and EnMS documents, including amendments to same, are approved by the responsible person, depending on the nature and level of the document. Records of approval can be by signature, or by email or other traceable electronic method. In order to maintain consistent best practice, changes to SOPs must be approved by the Heads of Environment/H&S, Supply Chain, Bog Operations, and/or Asset Management, as appropriate. This is done by sending an email for comment to the relevant approver with a copy of the draft amended SOP(s) attached. Approval is assumed in the absence of any comment by the date stated in the email. This method of approval may also be used for other QMS/EMS/EnMS documents at the discretion of the Quality Manager. As far as possible, copies of superseded Quality manual, Environmental manual and Energy manual chapters, procedures, flowcharts and SOPs are retained in an archive file within the PQMS Shared drive.

Customer specifications are built into contracts. The master copies are maintained by Bord na Móna Legal in Newbridge.

Engineering drawings are the responsibility of Technical Services, who issue updated drawings to the workshop. The workshop may retain marked copies of obsolete drawings for reference in connection with older machinery still in use. Safety data sheets are obtained by Procurement as part of the tendering process. Suppliers are held responsible for informing Procurement of any changes. Copies of relevant safety data sheets are available in stores, and copies are updated by Procurement after any change.

If Bord na Móna personnel need to refer to any statutory or regulatory document, they are required to check the latest version on line. There is therefore no need to retain paper copies of such documents.

5) Records

Evidence of approval (electronic)
Archive files

Revision Index			
Revision	Date	Description of change	Approved
1	01/12/2012	First release	PR
2	02/12/2013	Added reference to form 24	JM
3	17/10/2014	Amended approval arrangements and added safety data sheets	JM
4	27/04/2016	Added reference to retention of obsolete drawings	JM
5	21/07/2016	Change to job titles, organisation name, removed ref to controlled copies	JM
6	18/08/2016	Inclusion of Energy Management System	JM
7	26/10/2016	Inclusion of paper copy control by Area Leaders	JM
8	12/01/2018	Integration of Environmental System	SG

1) Purpose

The purpose of this procedure is to describe the arrangements in Bord na Móna Peat Division for record control.

2) Scope

The scope of this procedure is as follows:

- Records required by the Bord na Móna Peat Division Quality system and Energy system.
- Additional Records required by the business.

3) Procedure

Records maintained by the organisation, and their locations and retention periods, are defined in the table below.

Record	Paper / Electronic	Location	Retention period
Management review	E	Quality files	5 years
Personnel files (competence)	P/E	General office	Length of service + 2 years
Inspection and test results	P/E	Relevant works	5 years
Sales documents	P/E	General office	7 years
Supplier / subcontractor ratings	E	System	3 years
Corrective action requests	P/E	Quality files	3 years
Corrective action log	E	System	3 years
Calibration records	P/E	Quality files	5 years
Internal audit reports	P/E	Quality files	3 years
Internal audit schedules	E	Quality files	3 years
Non-conforming product records	P/E	General office	3 years
Concession requests	P/E	Quality files	3 years
Concession log	E	System	3 years
Purchase orders	E	System	7 years
Energy audits, NCs	E	Energy files	7 years
Energy Management Reviews	E	Energy files	7 years

The person responsible for retaining each of the above records must ensure that they are kept in such a way that they remain legible, identifiable and retrievable.

A full system back-up is carried out daily by the IT department in Bord na Móna head office.

At the end of the specified retention period, the responsible person may dispose of those records. They may be retained longer at the disposition of the responsible person.

Revision Index			
Revision	Date	Description of change	Approved
1	01/12/2012	First release	PR

-	12/09/2014	Reviewed	JM
2	21/07/2016	Change to org name, amended Paper/Electronic Records, record retention	JM
3	18/08/2016	Inclusion of ref to Energy Management System	JM

BORD NA MÓNA Naturally Driven	Procedure: 003	Rev: 4
Title: Internal Audit	Approved: JM	Date: 18/08/2016

1) Purpose

The purpose of this procedure is to describe the arrangements in Bord na Móna Peat Division for internal audits.

2) Scope

The scope of this procedure is the requirements of the Bord na Móna Peat Division Quality Management System and Energy Management System.

3) Related Documents

Internal audit schedule form 009.
Internal audit checklist form 006.
Internal audit form 007.
Multi-pillar audit form 031

4) Procedure

The Bord na Móna Peat Quality Manager is responsible for drawing up the QMS audit schedule (form 009) and the EnMS audit schedule form EMF 07. This is done at least annually. The results of previous audits, and the importance of the process(es) being audited are taken into account when drawing up the schedules. The schedules cover all areas of the organisation, and all clauses of the Bord na Móna Peat Division Quality manual and Energy manual.

Audits may be carried out using a pre-prepared checklist (form 006), by following a specific procedure or work instruction, or by tracing a particular product item through the entire product realization process. Multi-pillar audits are carried out using form 031. Audits must be carried out by competent auditors, and auditors must not audit any area for which they are directly responsible.

All non-conformities identified during internal audits are followed up with the arrangements in procedure 005. Ensuring timely response and the verification of actions taken is done through the corrective action process and follow up audits.

The results of internal audits are summarised at least annually by the Quality Manager as an input to the management review process.

Each section of the Quality manual, the Energy manual, each quality procedure, and each energy procedure, is reviewed at least once per year by the Quality Manager to ensure its continued accuracy and relevance. Records of these reviews are kept in the associated indexes.

5) Records

Internal audit reports
Completed internal audit schedules

Completed corrective action requests

Revision Index			
Revision	Date	Description of change	Approved
1	01/12/2012	First release	PR
-	12/09/2014	Reviewed	JM
2	21/07/2016	Change to job titles, organisation name	JM
3	02/08/2016	Ref to multi pillar audit – tracking system	JM
4	18/08/2016	Inclusion of energy Management System	JM

BORD NA MÓNA Naturally Driven	SOP: FS-HO-01	Rev: 2
Title: Hort Bogs - General	Approved: PMcK	Date: 28/07/2016

1) Purpose
The purpose of this procedure is to describe the differences (from standard Peat Division requirements) in the operation and maintenance of horticultural bogs

2) Scope
The scope of this procedure is Peat Division Horticultural team within area of responsibility.

3) Responsibility

Hort Customer Delivery Manager, Hort Area Leaders, Hort Lead Operators

4) Related Documents
FS-HO-02
FS-HO-03
FS-HO-04
FS-HO-05

5) Definitions
There are four outlets for peat from horticultural bogs. These are RHP; Professional; Non-professional; and fuel.

Professional - Low density, low weed content peat that has been designated for sale to the professional market

RHP - Professional Grade horticultural peat that has been approved by an RHP auditor as suitable for sale to RHP market.

Non-professional grade horticultural peat - Intermediate density and weed content, suitable for the non-professional market

Fuel from horticultural bogs - Any peat that does not meet the above standards may be sold as fuel, provided it meets the density and moisture requirements. For any other peat, refer to the non-conformance Procedure 004.

6) Procedure

Additional requirements for bog maintenance and operations on Horticultural bogs include the following:
1. Additional requirements for bog maintenance include: Identification of a buffer zone, identification of RHP zones; and maintenance of boundaries. Ref FS-HO-02.
2. All weeds and debris (including scrap polythene, concrete pipes, etc), must be removed and disposed of off-site. This must be carried out year round, reference FS-HO-03
3. Weeds and density must be controlled as per procedure FS-HO-04
4. The temperature of stockpiled horticultural peat must be monitored and reported as per procedure FS-HO-05

7) Records
Records required are described in the relevant procedures

BORD NA MÓNA	SOP: FS-HO-02	Rev: 1
Title: Hort Bogs - Bog Maintenance	Approved: SG	Date: 23/07/2014

1) Purpose

The purpose of this procedure is to describe the differences (from standard Feedstock requirements) in the maintenance of horticultural bogs

2) Scope

The scope of this procedure is Feedstock Horticultural team within area of responsibility. This procedure is in force throughout the year, including in the production season

3) Responsibility

Hort Resource Manager, Assistant Resource Manager**,** Operations Leader, A.E.G. Team Leaders and Area Supervisor.

4) Related Documents

FS-HO-01
RHP Module 560 - Peat Horticulture

5) Procedure

Identification of a buffer zone. Buffer zones are in place to delineate RHP from non-RHP areas. The extent of these buffer zones is 10m, or as described in RHP Module 560 - Peat Horticulture

Identification of RHP Zones: RHP zones are to be clearly identified on maps located in the relevant bog areas, and by using RHP-approved markers on the ground.

Maintenance of Boundaries: Boundaries of RHP bogs are to be maintained with buffer zones to minimise risk of transfer of seed/weeds, and to minimise risk of debris contamination. Boundaries must be maintained in such a way as to prevent the transfer of extraneous material into RHP areas.

BORD NA MÓNA	SOP: FS-HO-03	Rev: 1
Title: Hort Bogs - Bog Housekeeping	**Approved: SG**	**Date: 23/07/2014**

1) Purpose
The purpose of this procedure is to describe the differences (from standard Feedstock requirements) in the housekeeping of horticultural bogs

2) Scope
The scope of this procedure is Feedstock Horticultural team within area of responsibility.

3) Responsibility
Hort Resource Manager, Assistant Resource Manager**,** Operations Leader, A.E.G. Team Leaders and Area Supervisor.

4) Related Documents
FS-HO-01
RHP Module 560 - Peat Horticulture
Form 26

5) Procedure
Operations procedures should be conducted in such a manner as to minimise contamination by viable weeds. This particularly applies to buffer zones, where precautions should be taken to avoid dragging weeds and other debris by moving plant.

The Team Leader/Area Supervisor should check the Horticultural site paying particular to any possible issues with weeds, contamination, and any other debris. This should be carried out at least weekly during the production season, and at least monthly during the non-production season.

Particular note is to be paid to Rushes, Sheep's Sorrel, P Moorgrass, and R Willowherb. For further information, see the Bord na Móna/RHP poster on display in relevant tea centres.

The Team Leader/Area Supervisor should check for

- weed growing on the site and in the surroundings (buffer zone)
- stones
- wood
- liquids such as fuel, oil, etc
- concrete pipes
- other waste

If weed or pollutants are found, the Team Leader/Area Supervisor ensures that the weeds or pollutants are removed and the area is cleaned

Where weed is found the supervisor must ensure that any products, tools or facilities which were in contact are cleaned.

A record of the check is maintained on the Housekeeping check list (Form 026)

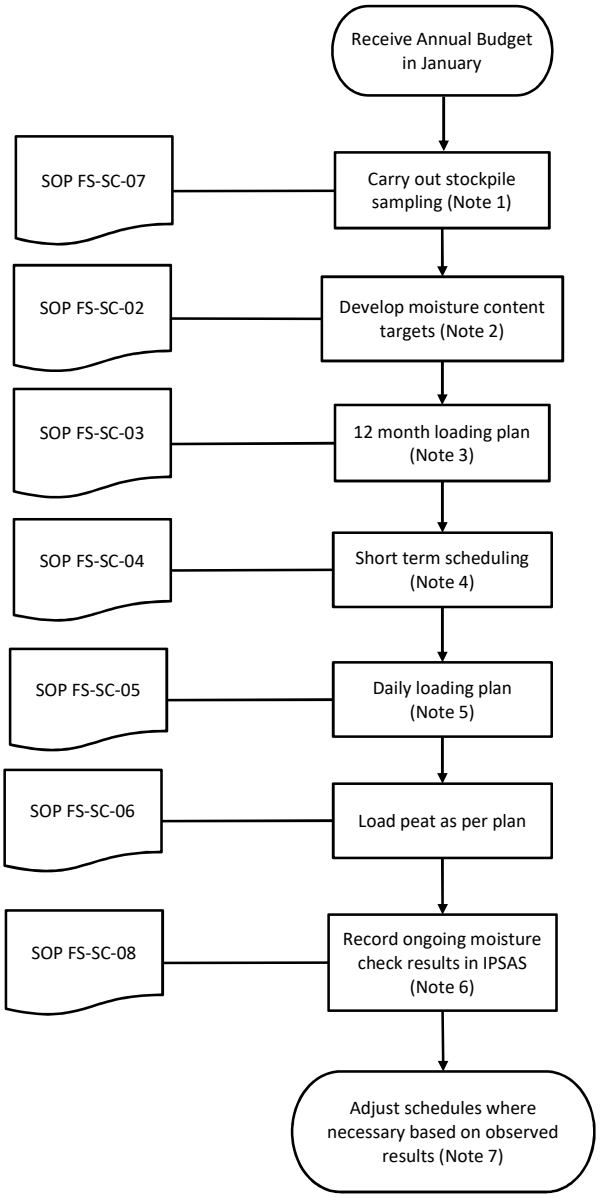
Note the use of herbicides is not permitted

BORD NA MÓNA
Naturally Driven

Bog Operations Compliance Check List

								Compliant											
										v		v		v		v			
Compliance Description	**Owner/Responsibility**	**Reporting to**	**Saved to**	**Form/Record/SOP**	**Frequency**	**Evidence**	**Comments**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
Ensure Rail Plan is followed	Eamonn Mulhall - Ignatius Kelly - Kevin Harte			FS-SC-10	Weekly			yes	yes	yes	yes	yes	yes	yes	yes				
Ensure Stockpiles are opened/cut/railed according to rail plan	Level 5			FS-SC-10	Weekly														
Inspect Silt Pond	Level 5			FS-BM-07	Fortnightly														
Complete Bog Maintenance Report for previous month	Level 5				(Nov-May)														
Report Bog Maintenance Plan for previous month	Eamonn Mulhall - Ignatius Kelly - Kevin Harte	John McNiff		FS-BM-02	Monthly														
Work off Bog Maintenance Plan - complete previous month's work programme	Level 5			FS-BM-02	Monthly														
Approve and issue production charts	Eamonn Mulhall - Ignatius Kelly - Kevin Harte			FS-BM-02	March														
Complete stockpile location check	Level 5	Finance		FS-PR-12	March														
Complete Polythene order form	Eamonn Mulhall - Ignatius Kelly - Kevin Harte	Materials Manager		FS-SP-03 and Form 18	April														
Complete Pre-Production checks	Level 5	John McNiff		FS-PR-01	April														
Complete Key Production checks	Level 5	John McNiff		FS-PR-01 and Form 22/23	Apr-Sep														
Report Key Production checks	Eamonn Mulhall - Ignatius Kelly - Kevin Harte	John McNiff		FS-PR-01 and Form 22/23	Apr-Sep														
Ensure stores has a stock of 13m rolls for early covering	Level 5			FS-SP-01	May														
Receive form 19 from Supply Chain	Eamonn Mulhall - Ignatius Kelly - Kevin Harte	Level 5 Bog Ops			July														
On non-Harvesting days, cover full stockpiles	Level 5			FS-PR-01 / FS-SP-09 and Form 19	Aug-Sep														
Plan Covering Programme	Eamonn Mulhall - Ignatius Kelly - Kevin Harte			FS-PR-01 and Form 19	September														
When end of season is called, cover all piles	Level 5			FS-PR-01 and Form 19	September														
Complete post-production stock check	Level 5			FS-PR-01	September														
Agree Bog Maintenance plans	Eamonn Mulhall - Ignatius Kelly - Kevin Harte			FS-BM-02	September														
Cover all piles	Level 5			FS-SP-05 / FS-SP-06 and Form 19	October														
Inform Supply Chain of any piles needing to be sold (eg. Heating peat)	Eamonn Mulhall - Ignatius Kelly - Kevin Harte	Supply Chain		FS-SP-10	October														
Return unused polythene to stores	Level 5			FS-SP-03 / FS-SP-04	October														
Report Bog Maintenance Plan for Management Review	Eamonn Mulhall - Ignatius Kelly - Kevin Harte	John McNiff			May														
Process performance for Management Review (incl. summary of form 23 issues)	Eamonn Mulhall - Ignatius Kelly - Kevin Harte	John McNiff		Form 23	Nov														
<Add additional key business activity.>																			
<Add additional key business activity.>																			
<Add additional key business activity.>																			

BORD NA MÓNA Naturally Driven	SOP: FS-SC-01	Rev: 2
Title: Scheduling Flowchart	**Approved: PR**	**Date: 29/07/2014**



Note 1: Stockpile sampling will be carried out on all stockpiles with greater than 2 tonnes per meter at the end of each production season

Note 2: Management determine tonnes and moisture requirements by month for each customer

Note 3: Monthly schedule to be agreed by area and customer

Note 4: Information from customers and from stock are used to develop plans for stripping and laying of rails

Note 5: Information from stockpiles and expected lorry movements are used to design a delivery schedule which meets the quality targets.

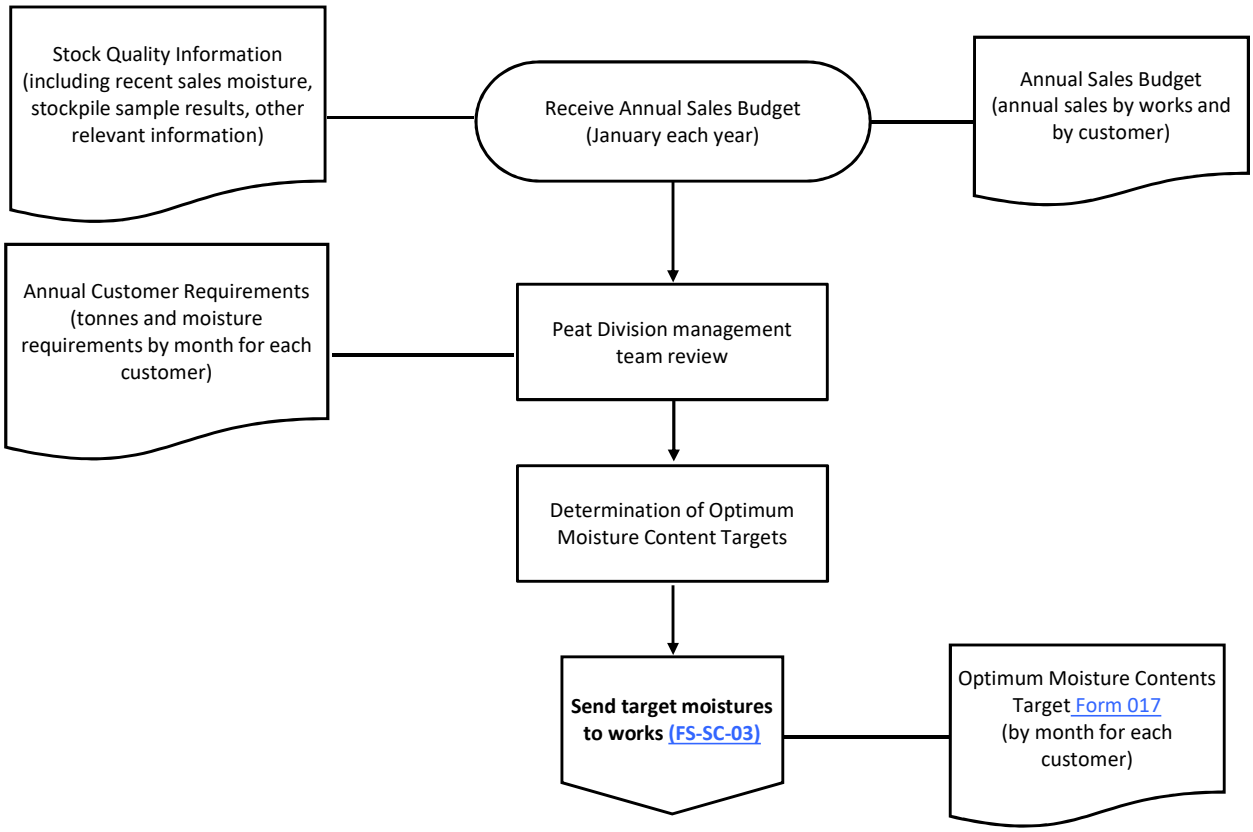
For power stations the "Daily Loading Planner" spreadsheet is used.

For briquette factories the "Blend Loading Planner" spreadsheet is used.

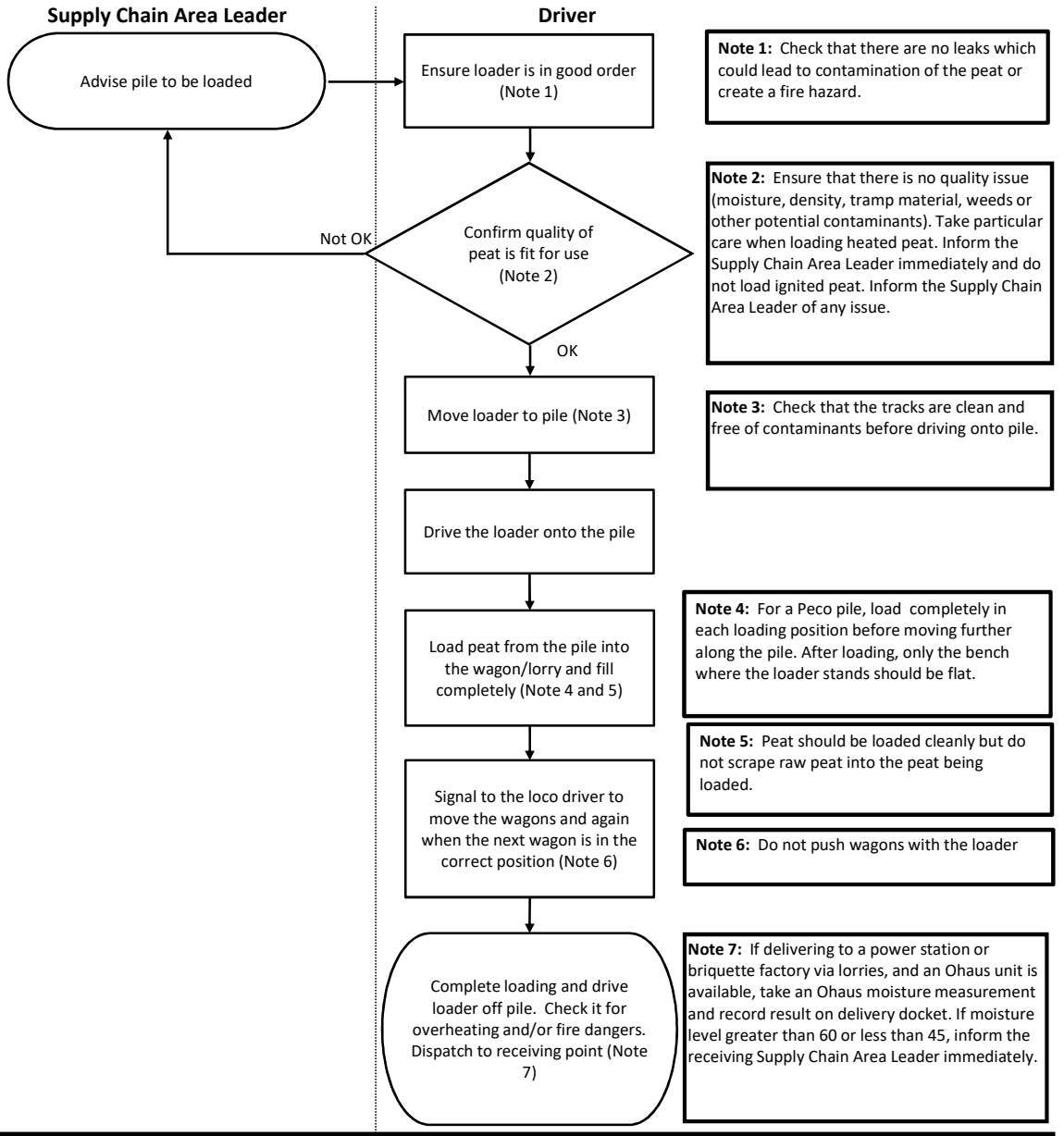
Note 6: Ohaus measurements must be taken at all points of deli very of rakes. Where there is no auto sampler, take a 1 litre sample from a depth of 2 feet into the centre wagon.

Note 7: Moisture control (General) - There are 3 sources of information regarding moisture content of peat.
Information on stockpiles in IPSAS comes from a number of sources, including stockpile sampling, and ongoing lab and Ohaus testing. This information can be used to develop the 12 month loading plan and the short term schedule.
The daily Ohaus measurements are carried out as peat is delivered in rakes, and as lorries are loaded at the bog area loading points. This information is used to develop the daily loading plans, and to adjust those plans as necessary when results differ significantly from those expected.
The on-line moisture probes in the ESB Power Stations are used to monitor the current moisture content of the primary and secondary batches. The information from these probes is used to make immediate decisions on adjustments to the delivery sequences of rakes and lorries in order to avoid moisture penalties. Where on-line moisture probes are available in other locations, they may be used to control the daily moisture content to achieve the agreed customer target.

BORD NA MÓNA Naturally Driven	SOP: FS-SC-02	Rev: 2
Title: Develop Moisture Targets	**Approved: JM**	**Date: 18/07/2016**



BORD NA MÓNA Naturally Driven	SOP: FS-SC-06	Rev: 2
Title: Peat Loading	**Approved: JM**	**Date: 20/07/2016**



General Notes: Where there is only a single operator, the driver should load 2 wagons and then using the loco, position the rake to load any balance of that pile section into the next wagons before starting to load from the next section. After completion of loading the rake, only the bench for the loader should be flat.

When loading from the far "opening" end of a new pile reverse the rake(s) down as far as possible to the opening end of the stockpile. (Where possible, sufficient rail should be laid to accommodate one full rake). Begin loading at the end of the pile, taking the full depth of the pile as far as possible. When the wagons within reach are loaded, the digger "tops" the pile moving along as the wagons are filled until the rake(s) are loaded. The digger is then moved back to the end of the pile and is parked off the pile to reduce the risk of fire. This process is repeated until the pile is fully opened (which should take no more than 4 double rakes.) This exposes the flattened section to getting wet, so loading this section must be prioritised.

When loading lorries move the loader along the bench to the next position to load the next portion of the trailer. Fill a walking floor trailer or tautliner along its full length but take care not to overfill as the cover has to be pulled over the load.

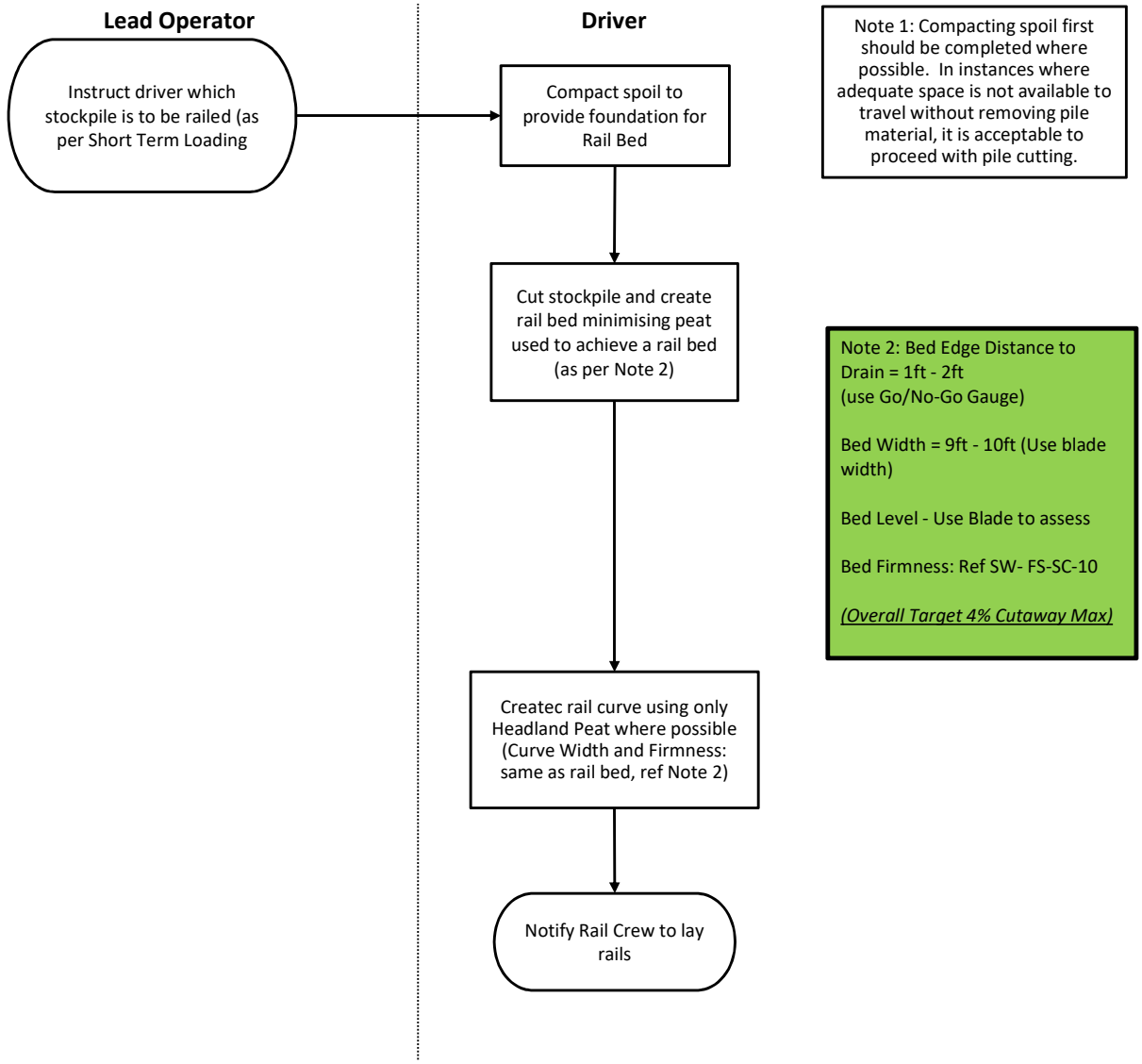
Fill a tipper trailer to approx 2/3 full then press down the peat in the trailer using the bucket to apply about 2 tonnes of pressure taking care not to hit cross ties. Top up the load and press again then top off and prepare the load for covering.

Take care when loading that no peat spills onto railways, roads or into drains.

If loading for sale for Horticulture, carry out a density measure of a representative sample of the peat which was loaded so that the volume loaded can be accurately calculated. Remember that the customer will check this.

All servicing of loading machines must be done with the machine off the pile and on the ground to prevent contamination of peat in the pile.

BORD NA MÓNA Naturally Driven	SOP: FS-SC-10	Rev: 1
Title: Rail Bed Creation	Approved: JMcN	Date: 14/07/2016



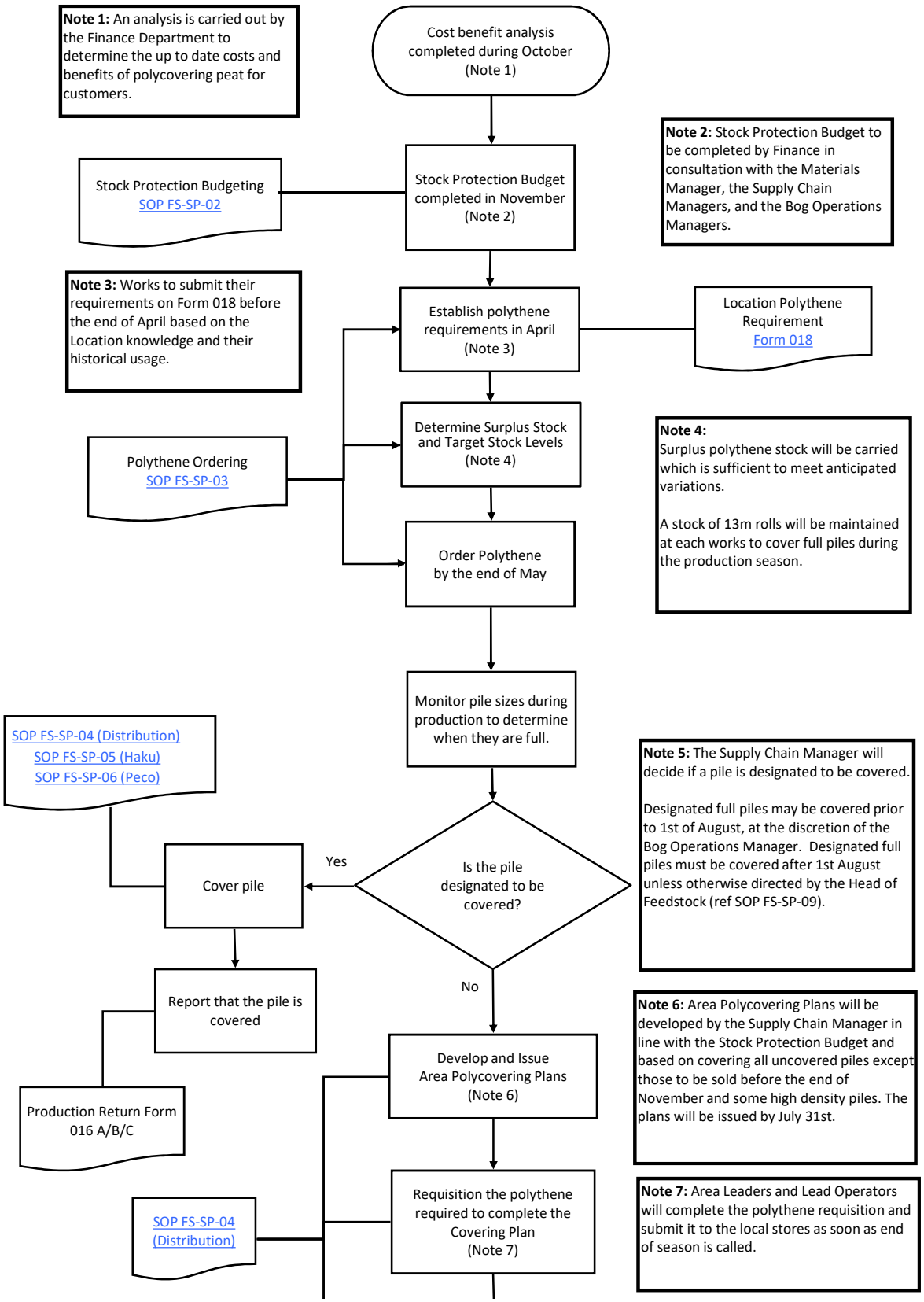
Additional notes

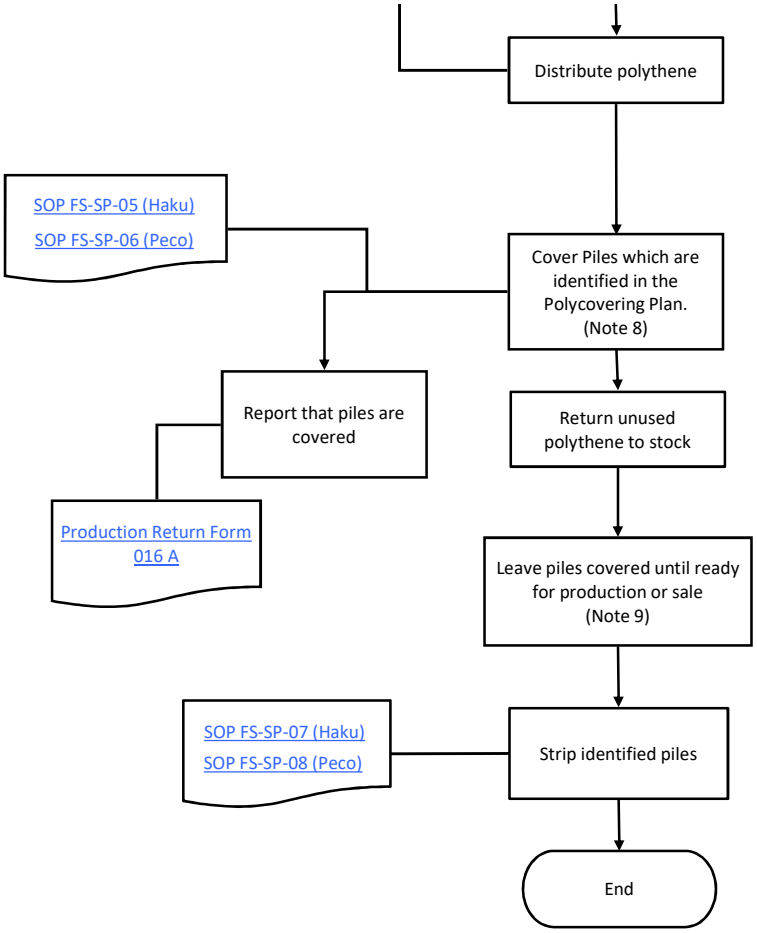
Ensure that machinery is blown down & washed at end of each day

Ensure that production machines are parked after wash down with separation to prevent spread of fire.

Ensure that daily maintenance/safety checks are carried out, with particular attention to guards and fire extinguishers

Bord na Móna Naturally Driven	SOP: FS-SP-01	Rev: 4
Title: Stock Protection Flowchart	Approved: JMcN	Date: 15/07/2016





Note 8:
The Head of Bog Operations in consultation with the Head of Peat Divsion will issue the instruction to commence covering piles.

The Bog Operations Manager in consultation with the Head of Peat Division defines the end of the production season, at which point all uncovered piles which are planned to be covered must be covered.

In the event that it becomes clear that not all stock will be covered, priority must be given to low density stockpiles and full piles.

Note 9: Stripping for production should not be started until authorised by the Bog Operations Manager.

Stripping for sale should not be started until authorised by the Supply Chain Manager and no earlier than 14 days prior to commencing selling.

BORD NA MÓNA Naturally Driven	SOP: FS-SP-03	Rev: 2
Title: Polythene Ordering	Approved: JMcN	Date: 15/07/2016

1) Purpose

The purpose of this procedure is to describe the methodology used to determine the polythene to be ordered for stock protection each year.

Because of the procurement lead-time required for polythene sheet purchase and distribution it is necessary to carry out an estimation exercise each year before the 31st of May. This is done in order to have stocks in place for the covering programme which takes place from August each year.

2) Scope

This procedure covers all milled peat production areas throughout the Bord na Móna Feedstock bog network.

3) Responsibility

The following functions are responsible for elements of the Polythene Ordering process:

Materials Manager
Bog Operations Manager
Finance Department

4) Related Documents

Annual production budget for the financial year in question
Annual polythene budget
Works Polythene Requirements Form 018

5) Procedure

Works (determination of requirements)

Polythene requirements are to be determined before the end of April each year in order to facilitate timely issue of purchase orders by the Materials Manager.

1. The Materials Manager issues form 018 to each Location including the estimated cost of each roll type.

2. Each Location uses its local knowledge and historical data to complete form 018. This will include:
- The width of roll
- The length of roll
- The number of rolls
- The total estimated order value based on the estimated costs, should be equal to their budgeted expenditure

3. Each Bog Operations Manager will submit his completed Form 018 to the Materials Manager by the end of April.

Materials Manager (ordering from suppliers)

1. Review the completed Form 018 from each Location, and calculate the total requirements.

2. Determine the targeted stock levels (targeted stock levels are the stock levels after all polythene is purchased and none has been used) for each type of roll based on the total requirements plus a sufficient stock surplus to meet unplanned requirements. The appropriate level of stock surplus for each roll type will be agreed by the Materials Manager with the Finance Department and the Bog Operations Managers each year.

3. Determine the current stock levels of each type of roll.

4. Calculate the amount of polythene to be ordered. For each type of roll this will be the targeted stock level minus the current stock level.

5. Place orders with approved suppliers before the end of May.

BORD NA MÓNA Naturally Driven	SOP: FS-SP-04	Rev: 4
Title: Polythene Distribution	Approved: JMcN	Date: 15/07/2016

1) Purpose

The purpose of this procedure is to describe the arrangements for distributing polythene to the production areas. It aims to ensure all materials issues are recorded and charged to the correct bog area, whilst minimising the level of post season material returns.

2) Scope

This procedure covers all polythene distributed through the Bord na Móna Peat Division stores network.

3) Responsibility

The following functions are responsible for elements of the Polythene Distribution process:

The local stores team
Materials Manager
Bog Operations Manager
Lead Operator
Area Leader

4) Related Documents

Material requisition
Polycovering Plan Form 019

5) Procedure

1. The local stores team will receipt, inspect, store and detail on the inventory management system all new season polythene as per the materials receipt process.

2. The Materials Manager must arrange to have a stock of 13m rolls available at all works to facilitate earlier covering of full piles. Some of this will be distributed to production areas to facilitate early covering and the required requisitions will be provided by the Bog operations Manager.

3. When any pile is designated as full by the Area Leader, he will contact the Supply Chain Manager and determine if the pile is designated for covering.

4. If the pile is designated for covering, the Lead Operator will organise to have the pile covered using the area's polythene. If additional polythene is required, the Lead Operator will send a requisition to the local stores.

5. The Supply Chain Manager, with the approval of the Bog Operations Manager, determines which piles are to be covered taking into account piles scheduled to be sold before the end of November, and piles which are already covered. From this, the piles to be covered will be determined.

6. The Supply Chain Manager will input the piles to be covered on the form 019 for each area and have them issued to the relevant Area Leaders by **July 31st.**

7. The Area Leader and Lead Operator will complete the form 019 for the area. This will include; roll width, roll length, and number of rolls for each pile which is being covered. The Area Leader will submit the completed form to the local stores team as soon as end of season is called.

8. The local stores team will record and arrange delivery of all requirements; ensuring accurate records detailing each movement are updated through the inventory management system. All material costs will be charged to the relevant bog area at point of issue.

9. Should additional polythene be required by an area above their original order, authorisation from the relevant Bog Operations Manager will be required.

10. Where there is a shortage of a particular type of polythene, the Bog Operations Manager will work with counterparts in other Locations to manage inter-Location stocks. Where suitable polythene is not available, 13m rolls can either be used as is, or cut to the desired width.

11. Whilst the level of materials returns to stores should be minimised, the required collection of any unused reels from individual bog area to be advised to the local stores team by the relevant Area Leader as soon as the covering operation in the area has concluded.

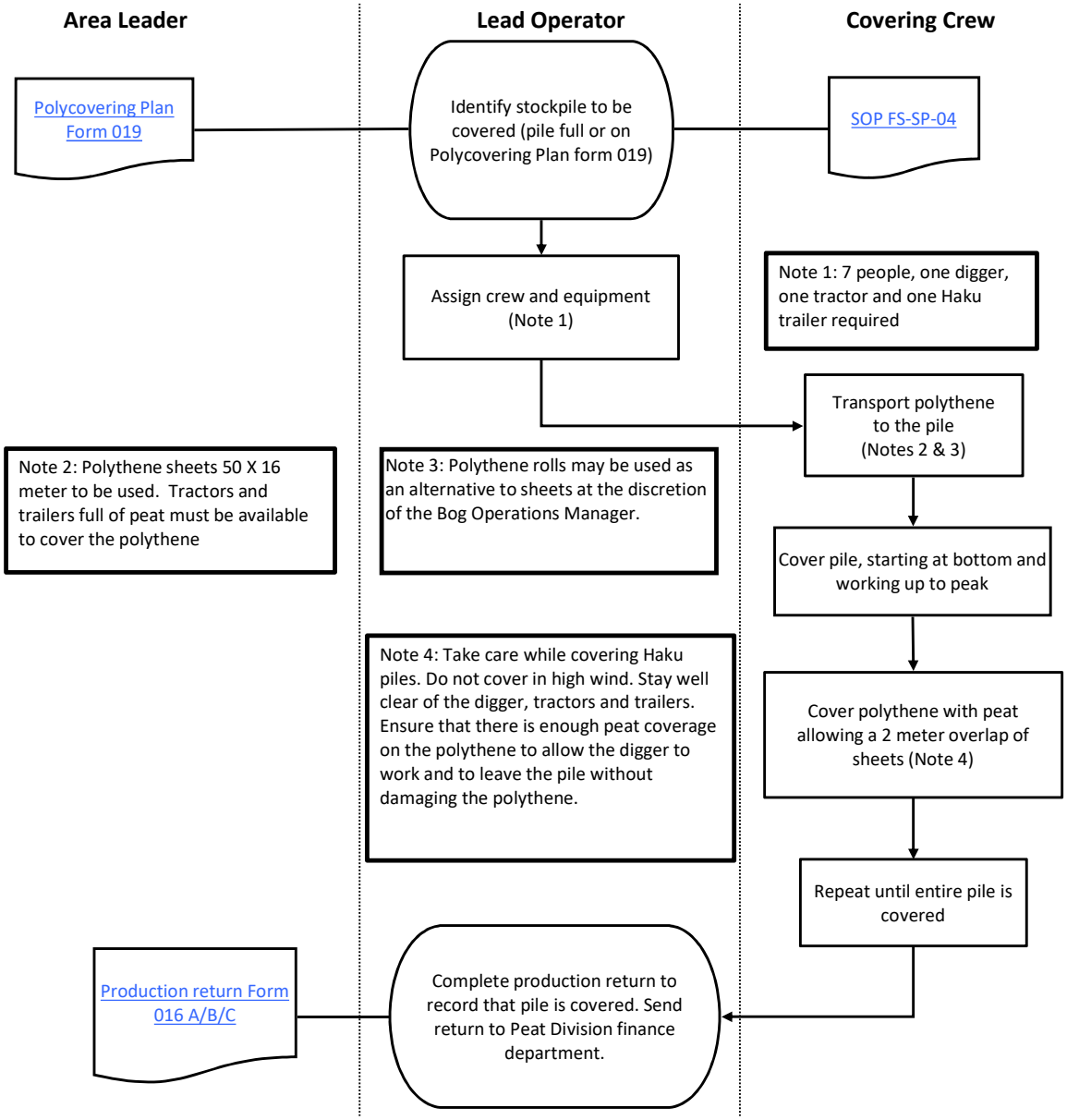
12. The local stores team must ensure any unused polythene is properly secured, and reinstated on the inventory management system by **October 31st** at the latest.

13. The Materials Manager must ensure that all surplus material from the current season is colour coded and positioned appropriately to allow FIFO distribution of such stock for the following season.

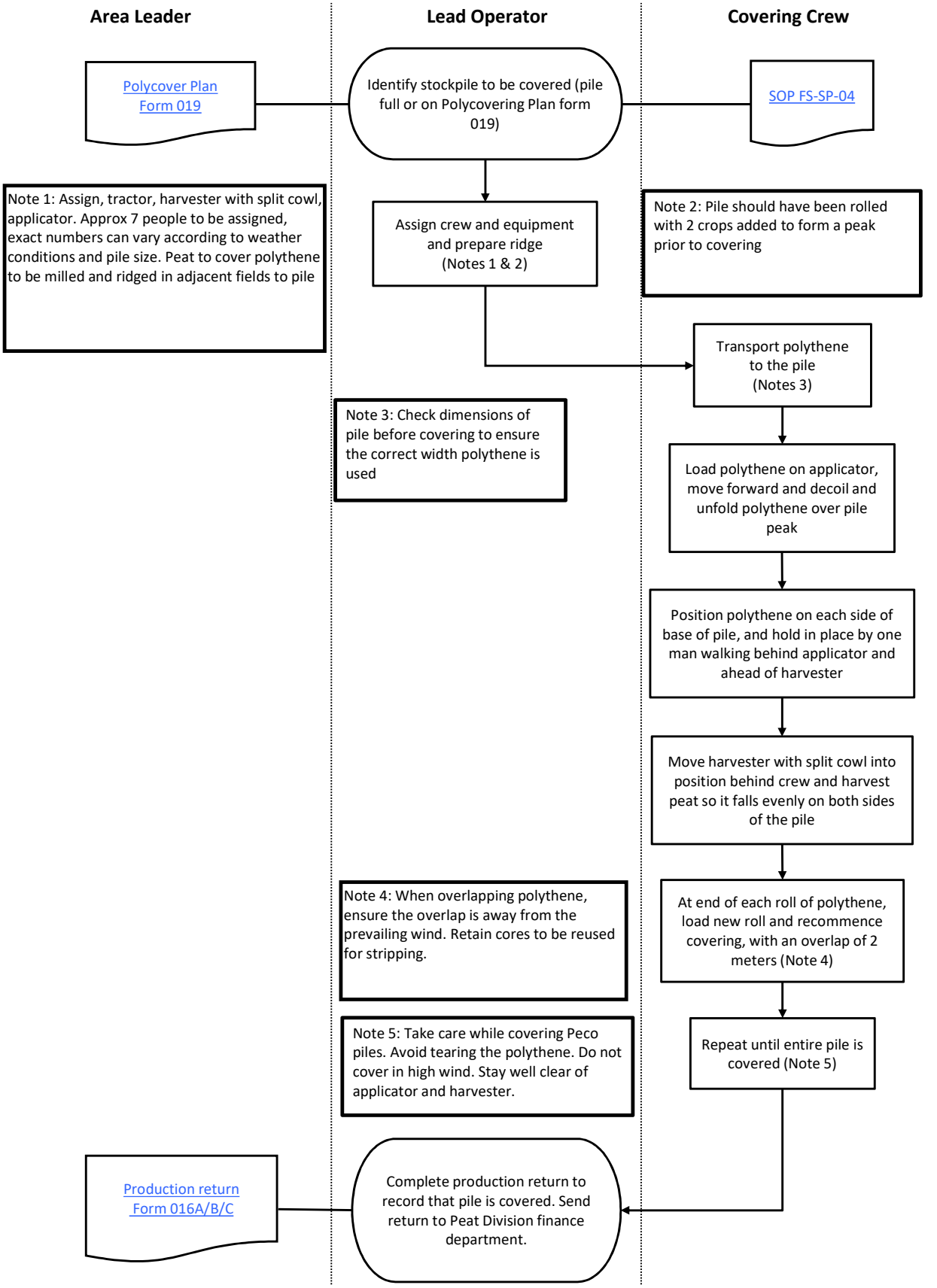
6) Records

Material requisitions

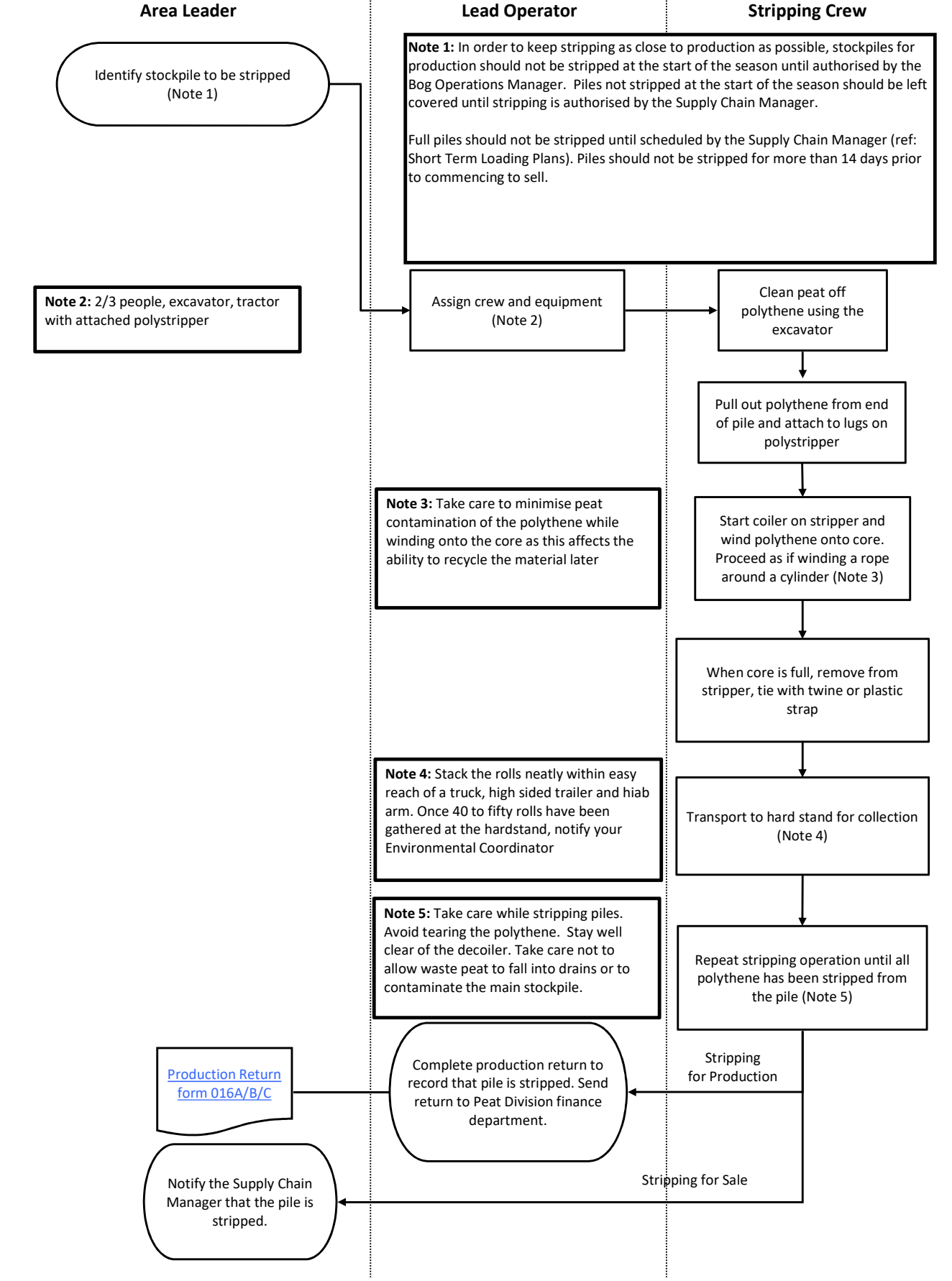
BORD NA MÓNA Naturally Driven	SOP: FS-SP-05	Rev: 2
Title: Covering Haku Stockpiles	Approved: JMcN	Date: 15/07/2016



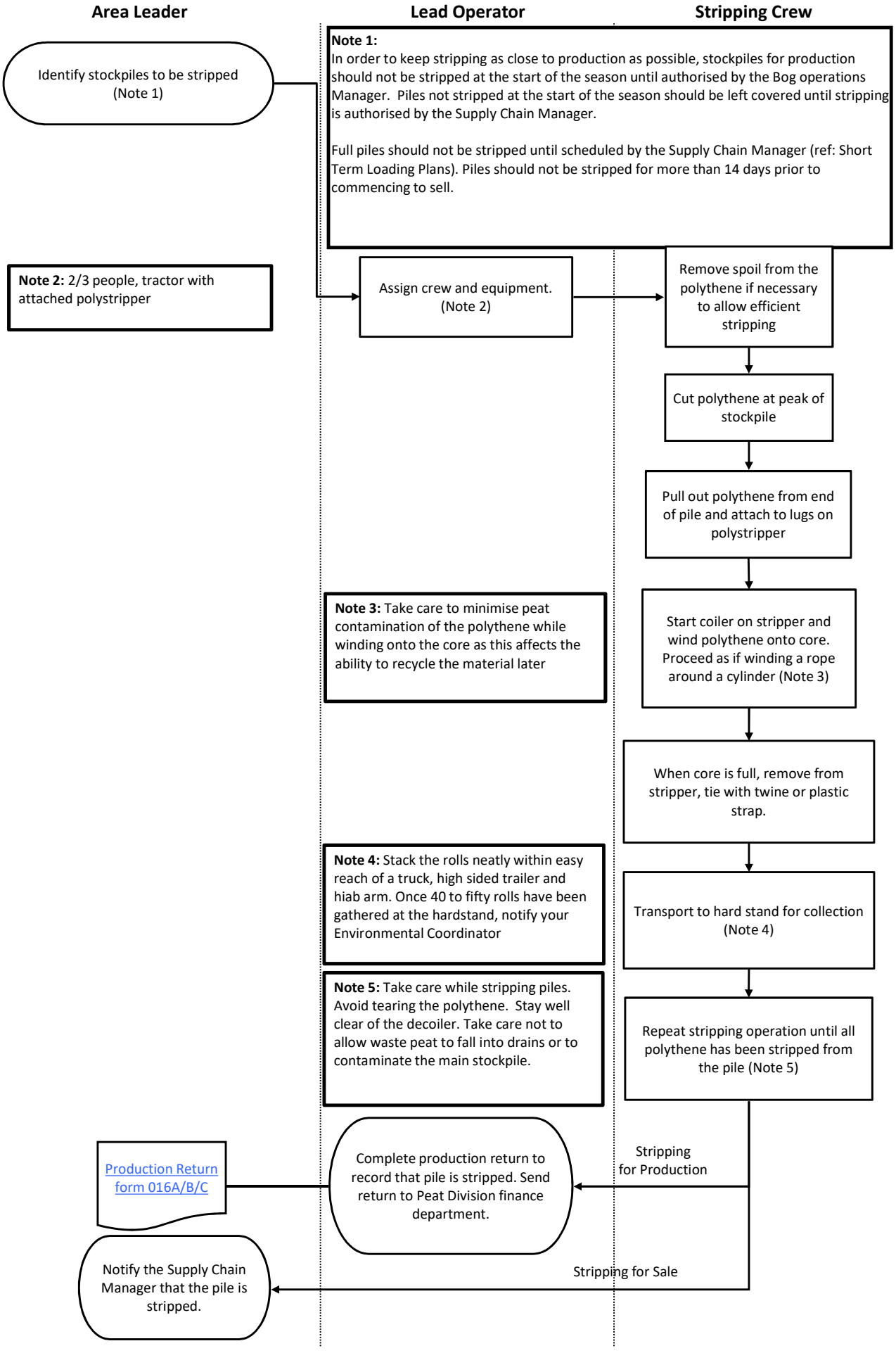
BORD NA MÓNA Naturally Driven	SOP: FS-SP-06	Rev: 2
Title: Covering Peco Stockpiles	Approved: JMcN	Date: 15/07/2016



BORD NA MÓNA Naturally Driven	SOP: FS-SP-07	Rev: 2
Title: Stripping Haku Stockpiles	**Approved: JMcN**	**Date: 15/07/2016**



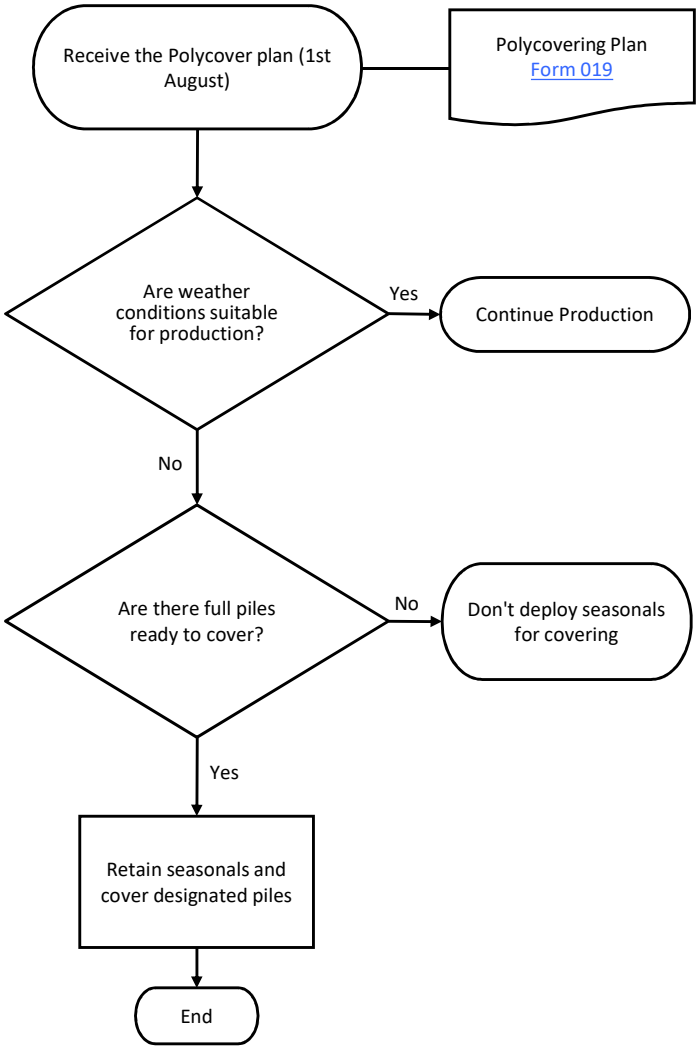
BORD NA MÓNA Naturally Driven	SOP: FS-SP-08	Rev: 2
Title: Stripping Peco Stockpiles	Approved: JMcN	Date: 15/07/2016



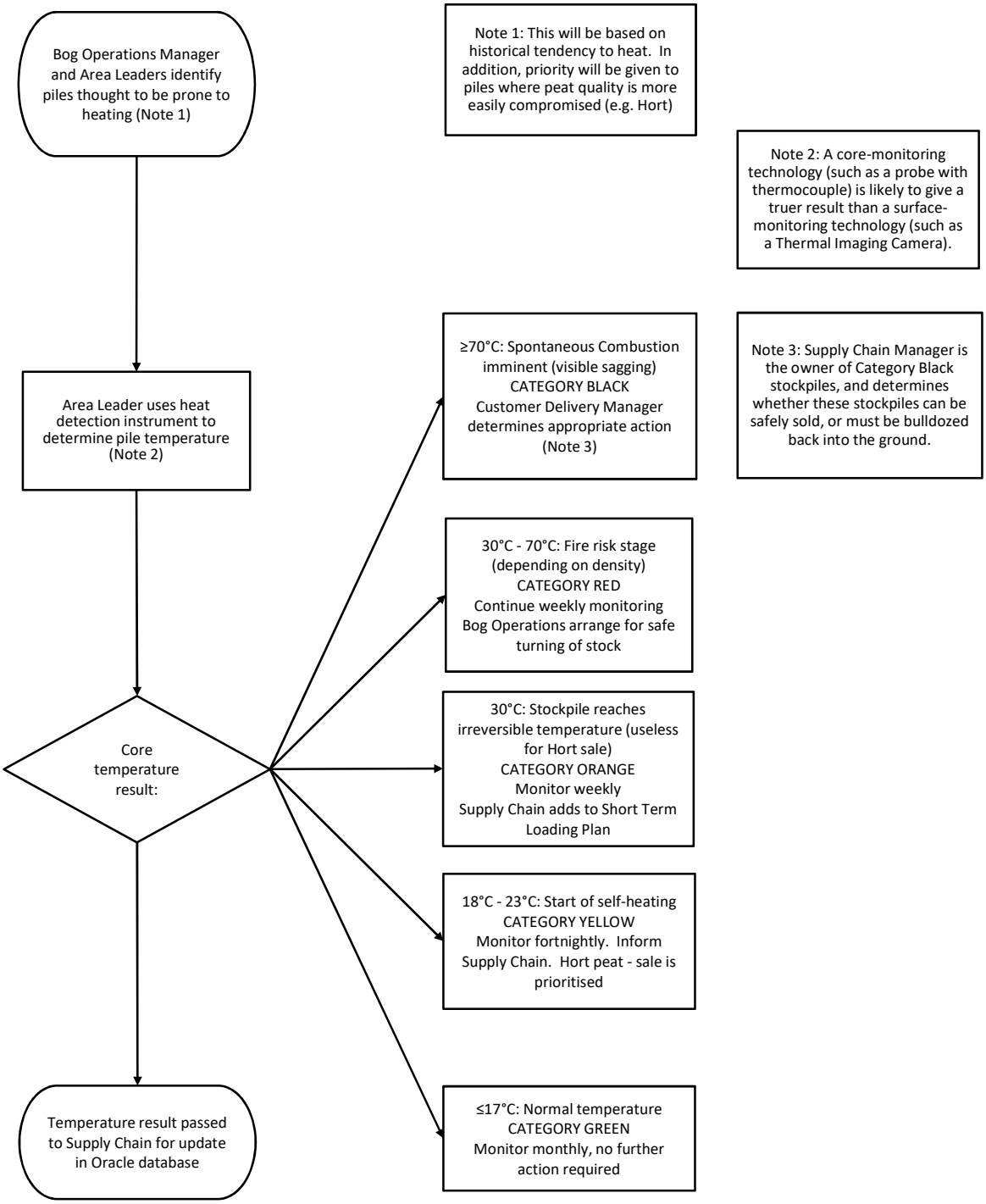
BORD NA MÓNA Naturally Driven	SOP: FS-SP-09	Rev: 3
Title: Covering Piles during Production	**Approved: JMcN**	**Date: 10/4/2018**

Note 1: This SOP comes into force after 1st August each year in all Locations. It is Bord na Móna (Peat Division) policy to cover full piles from 15th August or at 80% production.

Note 2: Peco stockpiles are considered full when the width is 32 feet, distance to rail bed side is 9 feet, and distance to far side is 5 feet.



BORD NA MÓNA Naturally Driven	SOP: FS-SP-10	Rev: 1
Title: Management of Heating Peat	**Approved: JMcN**	**Date: 15/04/2016**



Additional notes

Beware of fire risk - dust from heating piles entering machinery air intake

Ensure that machinery is blown down & washed at end of each day

Ensure that production machines are parked after wash down with separation to prevent spread of fire.

Ensure that daily maintenance/safety checks are carried out, with particular attention to guards and fire extinguishers