

2 DESCRIPTION OF THE PROPOSED DEVELOPMENT

2.1 Site Context

The Srahmore Peat Deposition site is situated approximately 1km northwest of the village of Bangor-Iorras (Bangor-Erris), I gContae Maigh Eo (County Mayo) and comprises a cutover peatland which is part of the Oweninny bog complex. The Bangor region of the Oweninny Bog complex consists of eight separate areas of cutover peatland, numbered Area 1 – Area 8 (inclusive), each of which was assessed for suitability for development at the time of the application to which the existing planning permission relates. Each of these cutover Areas is further subdivided into internal bays for working purposes.

With specific reference to the Srahmore Peat Deposition site, specific areas were designated for activity. Area 5 was selected as the peat reception area, to provide access onto the site from the R313. All required administration and unloading facilities are provided for within Area 5, which were constructed as part of the previous peat deposition operations on-site in 2005.

Area 6 was selected for the actual deposition of peat. During previous activities on site in 2005 and 2007, approximately 448,000m³ of peat from the Bellanaboy Bridge Terminal Site was deposited within Bay 2 (20-25% of potential area currently occupied), Bay 3 (100% occupied), Bay 4 (100% occupied) and Bay 5 (100% occupied). No peat from the terminal site was deposited in Bay 1, Bay 6 or Bay 7.

A section of Area 7 was designated previously, and is again included in this proposal, as a “controlled overflow area” in the event of exceedence of the design rainfall.

Area 6 has been infilled with approximately 448,000m³ of peat from the Bellanaboy Bridge Gas Terminal site. However, remaining void space exists. This is because a smaller volume of infill area was required to accommodate the peat from the terminal site than designs predicted. The reasons for the smaller area is attributable to conservative design assumptions and the fact that the peat was better drained when imported than originally anticipated; due to extended delay in excavation between 2005 and 2007, resulting in a lower moisture content/higher density, thereby reducing the required infill area.

Under the current development proposal it is proposed to utilise some of the remaining void space within the permitted activity boundary of the Srahmore Peat Deposition Site to accommodate up to 75,000m³ of peat from the on-shore pipeline construction.

The existing situation, post deposition of the 448,000m³ of peat from the terminal site, is shown on Figure 2.1. This identifies the area of the site where peat has been deposited and areas of the site where available void space remains to accommodate additional peat.

Within the unfilled Bays of Area 6 (Bay 1, portion of Bay 2, Bay 6 and Bay 7) the topographic landform consists of low-lying depressions of cut-over peatland, which are divided by a series of linear “high fields” left in situ to facilitate stockpiling of peat. These high fields are typically 14m wide and 130m apart. They will be utilised to transport peat from Area 5 for deposition in Area 6. The entire Area 6 is surrounded by perimeter banks of fringe peatland habitats. The site slopes gently at c.1.8 degrees from east to west falling from 20.5 metres above Ordnance Datum (mOD) to 14 (mOD).

2.2 Proposed Development

The location of the peat deposition site is as outlined on Figure 1.1 (regional scale) and Figure 2.1 (local scale). The site ownership and the site activity boundary are shown in blue and red respectively.

The proposal entails the transportation to, and deposition of, up to 75,000m³ of peat on Bord na Móna peatlands at the Srahmore Peat Deposition site. The peat will be excavated from the pipeline footprint during the construction of the on-shore pipeline development. It is estimated that up to 75,000m³ of peat will be surplus to construction requirements (some of the excavated peat will subsequently be used for construction, backfill and landscaping along the pipeline development) and will therefore require permanent storage at the Srahmore site.

Therefore, this Volume of the EIS (Volume 3) relates to the transport and deposition of up to 75,000m³ of peat from the on-shore pipeline development at the Srahmore Peat Deposition site. Volume 1 and Volume 2 of the EIS focus of the construction of the on-shore pipeline development.

Deposition of peat will take place within the available void area of approximately 5ha of Bay 2, 3.4ha of Bay 1 and 3.6ha of Bay 6. A reserve area of 1.3ha is available in Bay 7, if required. The bay locations within Area 6 are shown on Figure 2.1.

The proposed activity at Srahmore is a continuation of use of the site, with all activities located within the activity boundary of the Srahmore Peat Deposition site which was previously granted Planning Permission and a Waste Licence by An Bord Pleanála and the EPA respectively. The enabling infrastructure required for peat deposition now proposed was previously constructed prior to the import of the 448,000m³ of peat from the Terminal Site in 2005 and 2007. An additional internal Bay access road will be constructed within the deposition area to facilitate traffic movements on site. In the case of temporary facilities and structures (removed at the completion of the previous peat deposition operations), these can readily be reinstalled to the site for the purpose of the proposed peat deposition (see below for further details).

The peat reception hardstand area (5,112m²) is already constructed under the previous planning and waste licence activities. The entrance from the site onto the R313 Regional Road (including associated security gates and fence), access road from the R313 to site, wheeldip, lighting standards, car parking and truck parking areas (for road haulage vehicles), administration area hardstand and an ESB transformer are all in-situ and ready for use.

The temporary wheelwash (108m²) and weighbridge (68m²) that were installed as part of the previously permitted peat deposition operations were removed from the site once the previous peat deposition activities were completed. Similar infrastructure is readily available for re-establishment and use during the deposition phase of the proposed development, and will be removed from the site thereafter (see Section 2.10 below).

Extensive water management infrastructure was constructed within, and adjacent to, Area 5 and Area 6 under the previous application and remains in operation as permitted under the existing planning permission.

Within Area 5 the permanent hardstand water drainage infrastructure is in-situ to effectively drain water falling on the hardstand and to divert to outfall points following treatment. This infrastructure, including a settlement tank, oil interceptors and settlement lagoons, was constructed in accordance with the plan and particulars submitted in the original application. This infrastructure is maintained and monitored in accordance with the conditions of the existing Waste Licence.

The existing ancillary infrastructure within Area 5 comprises of portacabin buildings providing an administration building, canteen and sanitary facilities with a gross floor area of 108m², all of which were put in place as part of the existing planning permission. Under this application to An Bord Pleanála, a small number of additional, temporary, portacabin structures will be required for the contractors needs during the importation works at the Srahmore Peat Deposition site. This temporary accommodation includes for similar portacabin buildings to those on site at present and will provide an additional gross floor area of 234m², in the form of an office/canteen, a toilet/changing room and a security gate kiosk.

The existing drainage infrastructure within Area 6 comprises of a surface water perimeter swale along the southern and western boundaries of the site; with settlement of water occurring in 4 no. surface water settlement ponds (2 no. ponds of 800 m² each; 2 no. ponds of 400m² each approximately) prior to outfall to the receiving environment.

2.3 Road Transport Operation

The road transportation will involve the haulage of the peat in trucks carrying the excavated peat (up to 75,000m³) from the on-shore pipeline to the Srahmore Peat Deposition site. The assessment of the likely impact from the use of the proposed haulage route is outlined in Section 16 of this EIS and elsewhere within Volume 1 of this EIS. The proposed haul route between the on-shore pipeline development and the Srahmore Peat Deposition site is identified in Figure 16.1 herein. The traffic impact assessment provided has taken account of the cumulative impact of all traffic associated with the construction of the on-shore pipeline together with traffic associated with material imports and workforce movements for the Bellanaboy Terminal site and the Srahmore Peat Deposition site.

2.4 Peat Deposition Site

The proposed deposition works at Srahmore Peat Deposition site of up to 75,000m³ of peat from the on-shore pipeline development will be carried out by an approved contractor, under the management of Bord na Móna, in accordance with the requirements of any planning conditions, together with the requirements of the Waste Licence issued by the EPA.

During the road haulage phase of the project trucks (which will be managed by an approved contractor) will deliver and unload the peat at the existing Peat Reception Hardstand Area. Once the road haulage vehicles enter the Srahmore Peat Deposition site from the R313 they will be managed in accordance with Bord na Móna requirements.

The peat will be transferred from the road vehicles onto the Peat Reception Hardstand Area. The unloaded road vehicles will then directly exit the site from the Peat Reception Hardstand Area.

The peat will then be loaded into the Haku trailers by loading shovels operating on the Reception Hardstand. As outlined in Section 4.4 herein, the transfer of peat from road haulage vehicles to low ground bearing pressure trailers for dispersal within the deposition site was found to be the optimum peat transportation method during the previous peat deposition operations in 2005 and 2007.

Figure 2.2 shows the process flow on the hardstand area. The road vehicles will unload on one side of the hardstand while the loading shovels operate on the other side. Plate 1 and 2 show photographs of the road vehicles unloading and the Haku trailers being loaded during the previous operation onsite.

Generally, all peat haulage vehicles will be directed towards one of the two areas for tipping on the reception hardstand, while the other area is worked by the loading shovels, loading peat into the Haku trailers for transport to the deposition area. A number of the Haku trailers

will typically be alongside the peat reception area at any one time for loading. This activity will then alternate, with road haulage vehicles unloading in the opposite area, while the loading shovels will load the Haku trailers in the other area. This sequential operation pattern is necessary both to buffer and prevent the two streams of traffic crossing each other's operating area, and to provide enough storage for the productive working of the loading shovels. This partition of vehicles eliminates the risk of traffic conflicts and hence increases safety within the site.

Figure 2.2: Unloading and export of Peat from Reception Hardstand

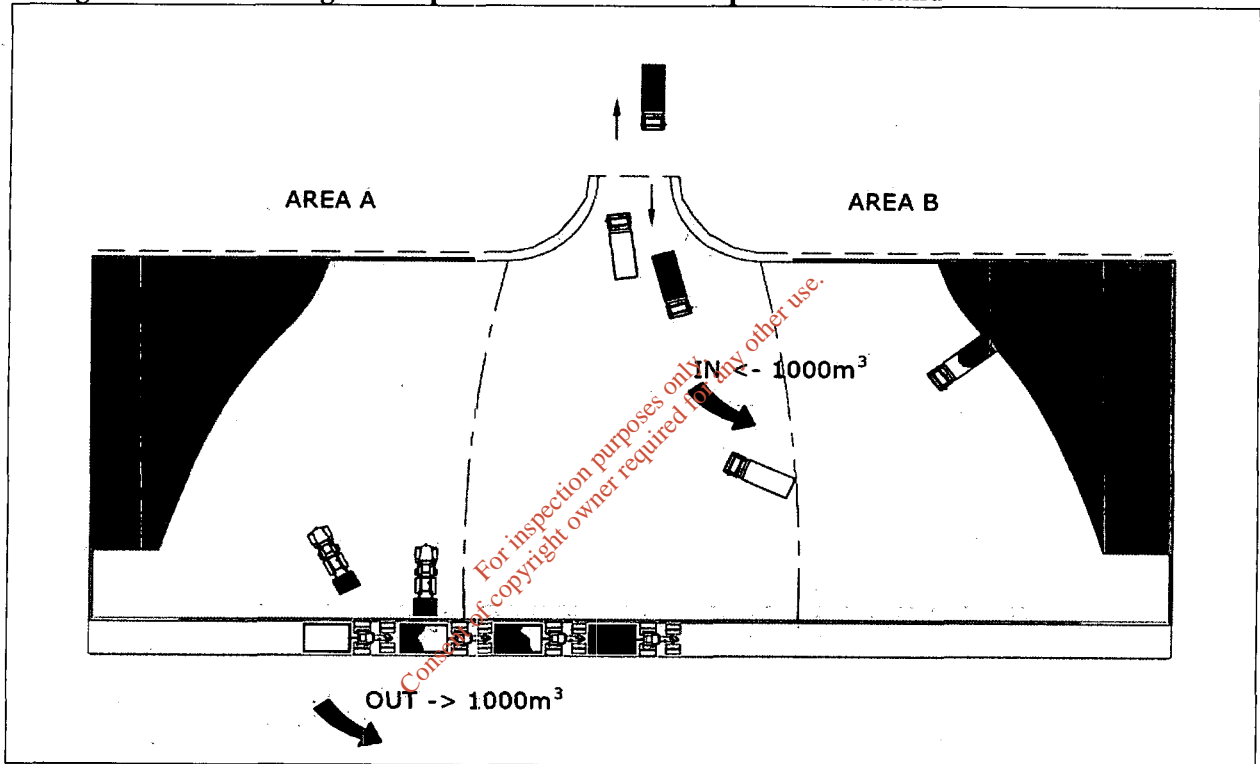


Plate 1: Road haulage vehicles unloading on the Peat Reception Hardstand (as part of the previous peat deposition operation on site, 2005 & 2007)

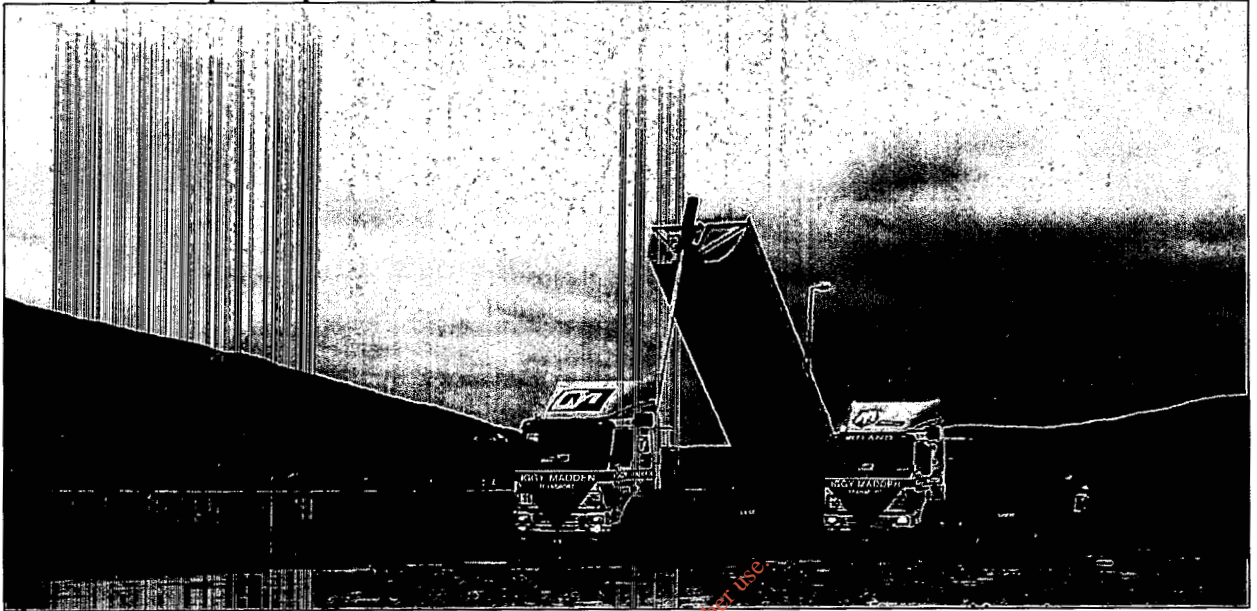


Plate 2: Loading of Haku Trailers from the Peat Reception Hardstand (as part of the previous peat deposition operation on site, 2005 & 2007)



The Haku trailers will be driven out to the deposition area via the existing internal haul roads along the highfield areas and will access the deposition areas within the lowfield bays via access routes.

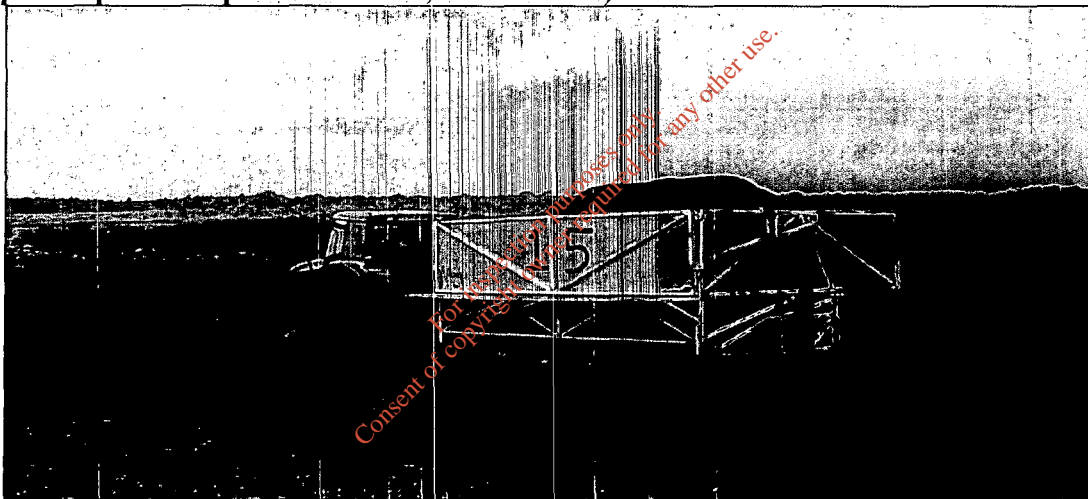
It is envisaged that a fleet of approximately 12 No. Haku trailers will be required to transport the estimated daily volume of 1,000m³ of peat (actual daily volume imports may be influenced by weather conditions), over the operation programme of the facility. It is

proposed to complete deposition within Bay 2, where 5ha deposition area remains, and thereafter move to Bay 1, where 3.4ha deposition area is available and then to Bay 6 where 3.6ha deposition area is available. A reserve deposition area of 1.3ha is available in Bay 7 if required.

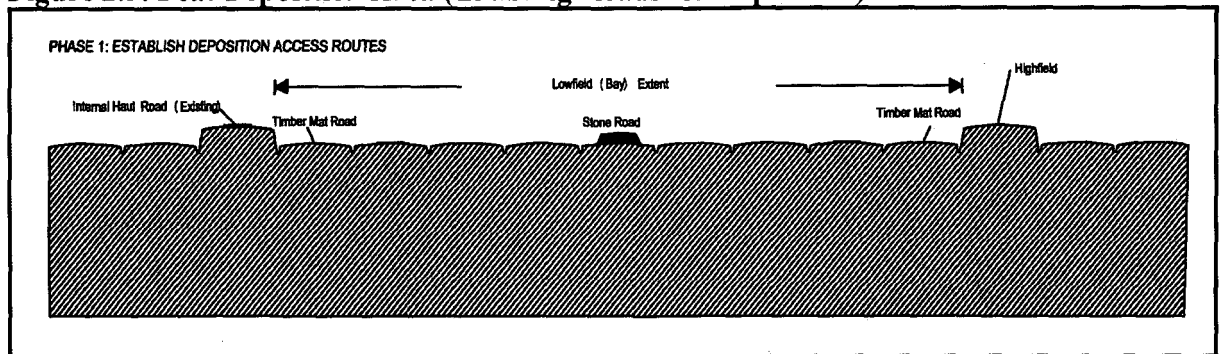
The details provided below and the associated figures provide a general operating methodology which will be followed in the internal deposition operation. This operating methodology was successfully observed during the previous operations within the site.

The Haku trailers will travel from the reception area to the deposition site along internal roadways constructed on the high fields in Area 6. Plate 3 shows a loaded Haku travelling out from the reception hardstand.

Plate 3: Loaded Haku trailer travelling out to deposition area (as part of the previous peat deposition operation on site, 2005 & 2007)



It is proposed to construct internal access route within Bay 2, in order to minimise the handling and disturbance of the peat. A central rock fill road will be constructed on a geotextile base. This will allow tractors and Haku trailers to travel along the central spine of Bay 2. The road will be constructed by laying a geotextile reinforcing material directly on the native peat and depositing compacted rockfill to form the haul road. Temporary timber mat roads will be laid adjacent and parallel to the central rock road. These timber mats will be moved as required to facilitate the filling and shaping of the peat. Owing to ground conditions within Bay 6, internal circulation will be facilitated by means of timber mat placement directly onto the existing ground. Figure 2.3 shows a representative indication of the location of the internal access roads within and adjacent to the deposition bays.

Figure 2.3: Peat Deposition Area (Enabling Roads for Deposition)


The Haku trailers will be hauled within the bay and commence depositing the peat from the timber mat road and the central rock fill road. Once unloaded, the Haku trailers will continue to the end of the bay and return to the reception area via the highfield internal roads. This will prevent conflicting movement of traffic within the deposition bays. This initial deposition operation is shown on Figure 2.4 and 2.5 below.

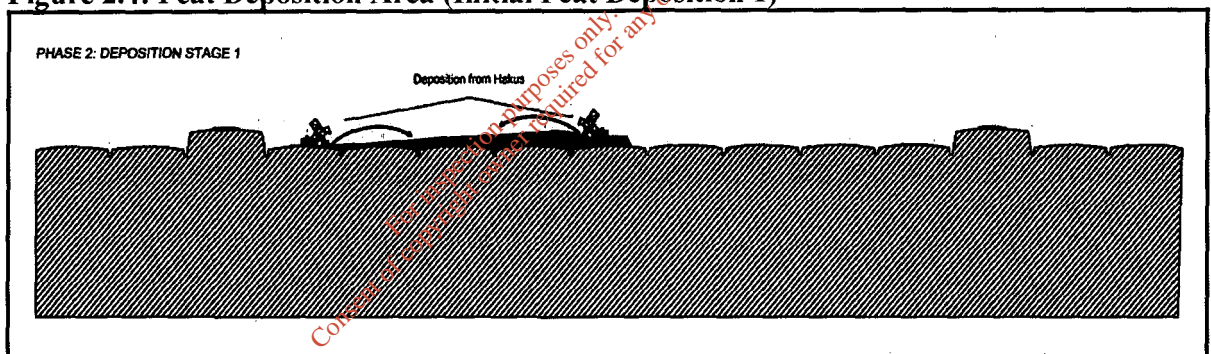
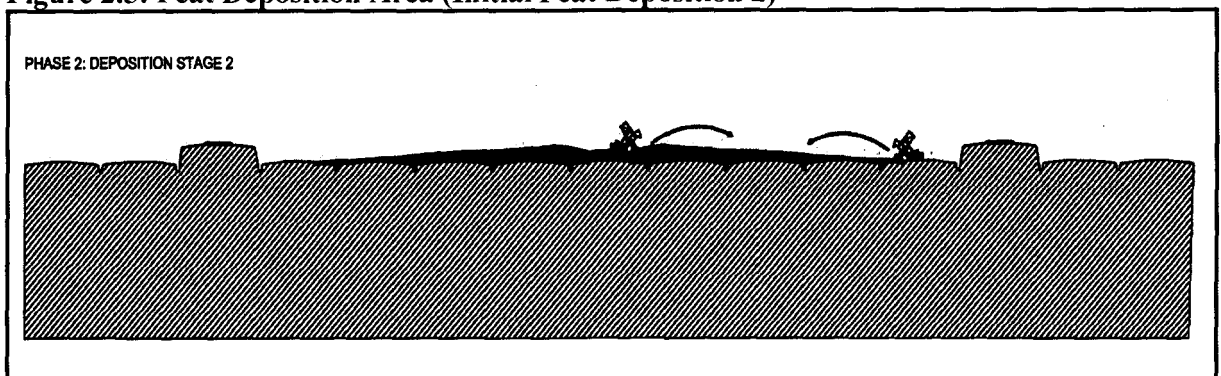
Figure 2.4: Peat Deposition Area (Initial Peat Deposition 1)

Figure 2.5: Peat Deposition Area (Initial Peat Deposition 2)


Plate 4 shows the deposition of peat from the Haku trailers on the deposition area and the excavators used for final placement.

Plate 4: Peat unloading from Haku trailers onto deposition area (as part of the previous peat deposition operation on site, 2005 & 2007)



Following deposition within the outer fringes of the bay, further peat deposition will be undertaken from the central rock road to fill the central section of the bay. Peat will be deposited within the central section on the haul road to cap off the deposition area. Following the capping of the deposition area final shaping contouring and trimming of the peat will be undertaken to ensure the appropriate grade off the peat mounds. The outer verges of the peat will also be trimmed and the toe drain along the verge of the highfield maintained to ensure all water can freely drain from the peat deposition area. This is represented in Figures 2.6 and 2.7 below. The timber mats will be exported from the site once activities are complete.

Figure 2.6: Peat Deposition Area (Advanced Peat Deposition 3)

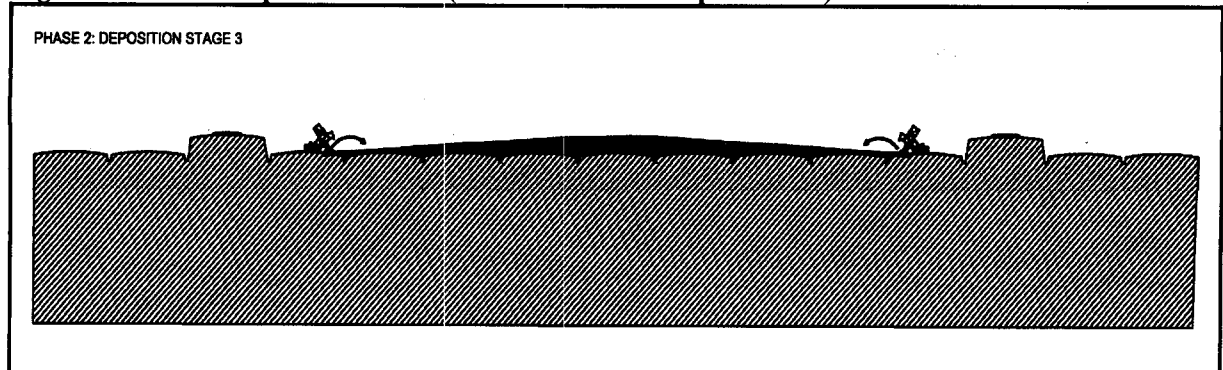
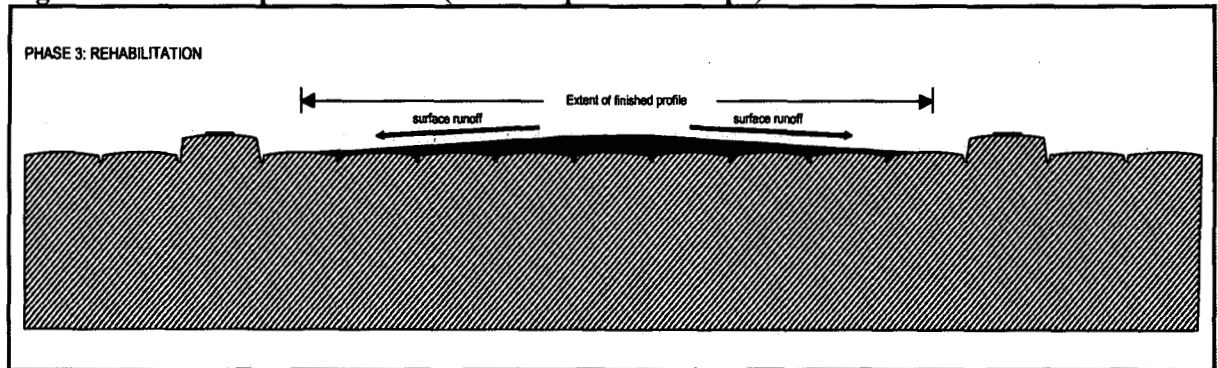


Figure 2.7: Peat Deposition Area (Final Deposition Shape)


The deposited peat will be graded and shaped to ensure that water can freely shed to the toe drains. This will ensure the long term stability of the peat. If required, shallow slit drains will be excavated to assist in the drainage. In the deposition activity, a final cross fall of 1:37.5 from the centre of the peat is required to ensure that drainage is enhanced. The maximum thickness of the peat fill at the centre of the deposition bay will be approximately 2m.

Estimates indicate that Bays 1, 2 & 6 have available void volume to accommodate the full 75,000m³, based on a similar density to the peat imported from the Terminal Site. Additional void area is available in Bay 7 if required. The environmental studies undertaken for this Volume of the EIS fully consider the entirety of the Srahmore site, including Bays 1, 2, 6 & 7.)

The proposed working methodology for peat deposition is similar to that used in the previous operation. Experience during the previous operations showed that reducing the handling and movement of the peat enhanced its stability. By depositing and mounding/grading the peat, the stability of the deposition should be maximised. This methodology eliminates the need to bulldoze the peat towards the centre of the mound, thereby eliminating the movement of plant on the deposited peat.

The edge of the peat deposition area will be offset from the bottom toe of each of the high fields, thereby allowing for the construction of drainage ditches at the edge of the lowfields to enhance lowfield drainage in the long term.

2.5 Peat Handling Logistics On-Site

During the proposed programme of peat import, the Srahmore Peat Deposition site may operate for twelve hours per day, as was the case under the existing planning permission.

It is proposed that up to 75,000m³ of peat will be used to complete the infill of Bay 2. This bay is approximately 20-25% occupied from peat deposited from the Terminal Site. Peat deposition will continue to infill Bay 1 and Bay 6. The peat will be hauled from the reception area to the Bays for deposition. An area of 5ha is available in Bay 2, 3.4ha in Bay 1 and 3.6ha in Bay 6. An area of 1.3ha in Bay 7 is included in the application to act as a reserve for deposition, if required.

Based on the experience of the previous operation and the estimated daily import quantity of peat from the on-shore pipeline construction (i.e. 1,000m³/day), a maximum of 12 No. Haku trailers will be required.

The import and deposition of 1,000m³/day will be largely dependent on climatic conditions. Local and climatic conditions may produce a variance in the number of Haku trailers required daily.

On a daily basis the following operating protocol will apply:

- The tractors and loading shovels will be visually inspected on the reception hardstand prior to use on a daily basis;
- The tractors will draw the Haku trailers to loading positions immediately adjacent to the reception hardstand for loading;
- The Haku trailers will be loaded with peat and will then continue to draw the peat out to the deposition area in Area 6 and thereafter return for refilling;
- At the end of the working day, the tractors and Haku trailers will be parked up on the reception hardstand in Area 5;
- At the end of each day of operation a fitter will check each item of plant and carry out any maintenance/repairs, which can be carried out on-site;
- As and when necessary plant will be brought off site for more extensive repairs/maintenance and replacement plant will be provided; and
- At all times the full complement of plant and equipment will be available on the site.

2.6 The Drainage System

Systems for the drainage of the peat reception hardstand in Area 5 and for the drainage of deposited peat in Area 6 were implemented during the previous development works for the acceptance of the peat from the Terminal site.

The drainage system is managed to maintain drainage to the two catchment areas (see Figure 2.8).

The drainage scheme constructed and installed at the site sought to eliminate any water build-up and remove excessive water from the site, particularly during periods of high rainfall. This drainage system conveys water to the Owenmore and Munhin River via settlement lagoons at controlled and regulated rates of discharge.

This drainage system ensures that surface water runoff from Areas 5 and 6 is effectively treated before reaching the Munhin River and Owenmore River, to prevent excessive suspended sediment from entering the river.

A detailed description of drainage for the site is provided in Section 9 herein.

2.7 Operational Plant Requirements

The following plant and equipment will be required in order to carry out the deposition of the 75,000m³ of peat.

- 12 No. Haku trailers
- 12 No. Tractors
- 2 No. Loading shovels at peat reception area to load peat into Haku Trailers
- 10 No. Excavators for moving and shaping peat
- 1 No. Dozer for road preparation grading and clearing work if required.

Support plant will also be available on site as follows:

- 2 No. Maintenance Fitters tractors
- 2 No. Tractors and service wagons
- 2 No. Tractor & Trailer (road repair & timber mat movement)
- 2 No. Tracked dumpers for stone road construction
- 2 No. Wheel dumpers for movement of materials
- 1 No. Supervisor's quad bike
- 2 No. Site supervisor's vehicles.