

# BORD na Móna

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FOR  
ATTN: Production Manager

Don. <i>Ballivor</i>	On
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DATA	
12th March 1976	
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## Silt Control

In October 1975 a silt committee was set up to study the desirability and feasibility of removing silt from our bog effluents. After investigating the problem and visiting several milled peat works the committee produced an interim report and after discussions with the General Manager and myself made firm recommendations.

The interim report states that it is the opinion of the committee that the discharge of peat silt into streams can be reduced considerably by provision of adequate silt ponds and suitably designed drainage systems. The recommendations of the interim report are as follows:-

1. Provision of silt ponds should be a basic feature of new bog development for milled peat and their construction should be planned for all outlet systems.
2. Ideally, ponds should be located in cutaway bog.
3. Sufficient area should be acquired at the initial stage to provide for silt ponds.
4. In production bogs existing large catchments should be broken up into manageable proportions and ponds constructed to accord with local topography.
5. Revision of drainage techniques should be considered such as arranging flatter gradients in external and internal outfalls and extending their width and length in their lower reaches to encourage settlement of silt.
6. Initial drainage effluent should be allowed to spill over face banks (where practicable) until adequate silt ponds have been provided. This should be applied to all new bog development immediately. Similarly, growth and vegetation should not be removed from external outfalls until interference with drainage and/or complaints force us to act. This latter measure would be short term.
7. It is recommended that catchments to be protected by silt ponds should not be greater than 500 acres.
8. Ponds should be designed for maximum run-off of 1 cu.ft. per minute per acre and run-off controlled by provision of small diameter culverts, weirs or sluices.
9. For milled peat 50 sq.ft. of pond per acre of catchment. For 500 acres, 45 ft. wide x 555 ft. long x 7 ft. deep, i.e. 6 ft. max. of silt + 1 ft. min. of water.
10. Ponds should be provided in pairs each sufficient for the catchment protected.
11. Ponds should be cleaned out at regular intervals as required but at least four times a year using a dragline or Hymac retained permanently for this purpose. Investigations to be made into the suitability of pumping units.

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12. Second parallel pond should be used during excessively large water flow. (storm water)
13. The problem of discharging into the Clodiagh River at Monettia has become difficult in view of the E.S.B.'s requirement that the entire river be kept free of silt. Silt ponds will be essential and provision should be made in their lay-out to allow for further extension of the ponds if decantation needs to be improved further.

The above recommendations are accepted in general and it is proposed to adopt the following measures immediately:-

- (i) At Boora design and construct silt ponds to recommended dimensions for a selected outfall serving a catchment of approximately 500 acres of bog in full production.
- (ii) At Monettia bog design and construct silt ponds as necessary to treat that part of the effluent from Monettia bog which will discharge into the Clodiagh River.
- (iii) At Littleton construct a second parallel pond to supplement the existing single pond in the centre of Derryvilla bog, to admit of cleaning each pond in turn and to operate as an overflow in spate conditions. Both ponds to conform to recommended dimensions for the area served.

In all cases ponds will be cleaned out on a regular basis and before the level of deposited silt approaches within 2 ft. of the water surface. The Scientific Officer, Newbridge, will carry out sampling above and below the ponds in order to assess their effectiveness under all conditions. Samples will be taken for colour, solids content in parts per million and initially for Biochemical Oxygen Demand (B.O.D.)

At all milled peat bogs in production, works should carry out surveys and select sites for silt ponds as recommended. The processing of these plans for production bogs will be the responsibility of the Production Control Engineer.

At works still being developed for milled peat, sites suitable for silt ponds to the recommended design should be selected and included in the development plans. The Chief Civil Engineer will be responsible for the progress of plans on milled peat bogs still in development.

All plans should be submitted to Head Office for ratification.

The silt committee will act in an advisory capacity only. It will continue to study the silt problem, will monitor the effectiveness of the ponds at the above three locations and will eventually produce its final report and recommendations.

A. B. Flood  
Production Manager