

APPENDIX 15.1
Archaeological Monitoring Report

Planning Ref: P03/334

**Report
on
Monitoring
at
Srahmore/Attavally,
Bangor Erris,
Co. Mayo.**

By
Sinclair Turrell

Client
Bord na Móna

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1. Abstract.

Monitoring took place of groundworks associated with a development in the Bord na Móna bog at Srahmore and Attavally, County Mayo. The development concerned the deposition of 400,000 cubic metres of peat, excavated from the Enterprise Energy Ireland site in Bellanaboy, Co. Mayo and involved the construction of an access roadway, administrative and reception areas, as well as surface water settlement ponds and associated drainage works. Nothing of archaeological interest was found during the course of monitoring, which took place from 14 December 2004 to 12 March 2005.

2. Introduction.

The site is situated in cut-away industrial peatland in the neighbouring townlands of Srahmore and Attavally, situated just northwest of Bangor Erris, Co. Mayo (Fig. 1). Planning permission had been granted to Bord na Móna (BnM) by Mayo County Council for a development involving the deposition of 400,000 cubic metres of peat excavated from the Enterprise Energy Ireland site in Bellanaboy, Co. Mayo. This peat was to be transported to a 5,112 square metre concrete reception area and then spread over 63 hectares of worked-out bog. The development included the construction of an administration area with parking for lorries and an access road from the R313, as well as five surface water settlement ponds and associated drains. Haul roads constructed from the reception area to the final deposition points were constructed directly on top of the existing high fields and so did not require monitoring. All peat removal was carried out using a mechanical digger fitted with a grading bucket.

3. Historical and archaeological background.

Srahmore and Attavally townlands are in Kiltane Parish (formerly part of Kilcommon Parish) in the Barony of Erris, Co. Mayo. The townlands, separated by a small tributary of the Munkin River, which forms their western boundary, are situated close to the town of Bangor Erris on a coastal plain ringed on three sides by hills dominated by blanket bog. The Owenniny River is just to the south and Carrowmore Lake immediately to the north. The name Srahmore is derived from the Irish '*Shraigh Mór*', meaning 'The Great Bog' and Attavally from '*Ait an Bhaile*', meaning 'The Site of the Town'.

Early written records suggest that the Erris region was divided between two tribes, the Gamanradaii and the Damnomii (Mayo on the Move). The Damnomii are thought to have established a fort, Dun Domhnaill, at Glencastle, 6.5km west of Srahmore/Attavally, which was also the seat of the successive ruling clans (Donovan 1838, XVII). A legend set in this period relates the story of Fergus, who raided the Erris from the north and kidnapped Muinchin, the wife of the local chief, Donnell. Fergus later drowned Muinchin in a river, which was then named in her honour and is known today as the Munkin River (Donovan 1838, XVII). In the late 12th to 13th centuries, Erris was ruled by the O'Caithniadh clan, whose position was later challenged by the O'Dowds. The Annals of the Four Masters record that in 1180 Hugh O'Caithniadh, Lord of Erris, was treacherously slain at Kilcommon (M1180.11), that Caithniadh O'Caithniadh, Lord of Erris died in 1206 (M1206.9), that in 1242 Brian, son of Donough O'Dowda, Lord of Tirelagh, Tirawley and Erris, was killed as he journeyed on a pilgrimage to Boyle Abbey (M1242.6) and that Fergal O'Caithniadh, Lord of Erris, died in Hy-Mac-Caechain in 1274 (M1274.7). The O' Dowd clan established control over the region in the 14th century, to be succeeded in turn by the Barrett family, whose holdings in Erris increased further when they were granted lands by King James I (Mayo on the Move).

The Cromwellian Settlement, which commenced in 1641, had a major impact on the Erris region. As Cromwell's supporters were rewarded with grants of land in Ireland, displaced landholders who were considered loyal were given alternative land in Mayo, Roscommon, Galway and Clare (O'Hara & ÓMuráile). The original landowners in these areas were in turn forced to relocate west to marginal lands such as those in Erris. With the restoration of the monarchy Charles II repaid his debts to a London goldsmith, Robert Viner, by giving him lands in Kilmore-Erris. These were quickly sold on to Sir James

Shaen, the Surveyor General of Ireland, whose son Arthur inherited the lands in 1695 and began a process of Anglicisation, leasing the majority of the land to English newcomers. Upon Arthur's death in 1725, his land passed to his two daughters and shortly afterwards, by marriage, to John Bingham and Henry Boyle Carter (Mayo on the Move). John Bingham's son, Dennis, came to live in Bangor (then known as *Doire Choinaadaigh*, 'The Oakwood of the Kennedy's') around 1796 and founded the present town, which he named after the Irish *Beann Chor*, 'The Ridge of the Mountain Peaks' (Noone 1991, 269-70). The Bingham and Carter families were to dominate land ownership in the Erris region right up into the twentieth century, their landholdings being gradually acquired by local tenants aided by grants from a series of landholding acts (O'Hara & ÓMuráile).

The derivation of name Attavally reflects the fact that there was once a thriving village here on a ridge to the north of the bog, the census of 1851 recording thirteen dwellings, a national school and a population of ninety-eight people (Noone 1991, 266). Attavally declined as the focus of settlement shifted eastwards to Bangor Erris, which developed rapidly in the early 19th century. In Srahmore, the census of 1841 records a population of sixty, which fell to thirty-two in 1851 and twenty-seven in 1911. In 1855 it was recorded that there were five dwellings in the townland (Noone 1991, 331). Prior to the large-scale exploitation of the bog, a small amount of hand cutting of sod turf took place around its margin. With the construction of the peat-fired power station at Bellacorick in the late 1950's, Bord na Móna began acquiring the bogland to the southwest of Bangor, commencing sod turf production in the early 1960's, before switching to milled peat in 1976 (Whittaker 2004, 16-17). In December 2004 all peat production at Bangor bog came to an end.

There are no known archaeological sites from the two townlands themselves listed in the Sites and Monuments Record (SMR) but several sites are known from the surrounding area. Prehistoric activity is evidenced by a standing stone (MA018-006) in Rathmorgan Townland 4km to the northwest, a court tomb (MA026-00201) and a possible cist burial (MA026-00102) in Tristia Townland 5km to the southwest and an unclassified megalithic tomb (MA026-004) in Bangor, 1km to the east. The topographic files provide further evidence of prehistoric activity in the form of a chert scraper found in Attavally townland itself (1997:10). Several sites in the surrounding area date to the early historical period, including twenty-seven possible crannogs (MA018-014) on Carrowmore Lake, a

rath/enclosure (MA018-007) in Rathmorgan townland, as well as a church (MA026-00301), graveyard (MA026-00302) and abbey (MA026-00303) in Killeen townland, immediately to the southwest of the bog. The topographic files also record a wooden ploughshare or ard (1964:68), found in Attavally 2m below the surface of the bog and two wooden vessels (1938:8574-5) from Bangor, also found in bog.

In 1997, monitoring was carried out on groundworks connected with a water supply pipeline that was laid between Bangor Erris and treatment works at Carrowmore, east of Barnatra. Most of the pipeline was laid beneath existing roads or in the road margin and nothing of archaeological interest was found (Walsh 1998). In August and September of 2003 the bog at Srahmore and Attavally was systematically field walked as part of the 2003 Peatland Survey carried out by ADS Ltd, but nothing of archaeological interest was found (Whitaker, 2003). Further fieldwalking was carried out by ADS Ltd. on 29th October 2003, specifically targeting the proposed development area, but again nothing of archaeological interest was noted (Whitaker 2003).

4. Results.

4.1. Surface water settlement ponds.

A total of five settlement ponds were excavated; a group of two ponds each measuring 50 x 10m, to the east of the reception area (Ponds 1 & 2), a group of two ponds each measuring 100 x 10m, southeast of the reception area, to the south of the small stream (Ponds 3 & 4), and a single pond measuring 50 x 10m, southwest of the road (Pond 5) (Fig. 2). No archaeological deposits or objects were discovered during the excavation of these ponds.

4.1.1 Ponds 1 & 2.

These two ponds were situated parallel to each other 10m apart and excavated to a depth of around 3m (Plate 1). The stratigraphy of the peat in Pond 2 and its underlying geology was recorded as Section A. The upper 2m of peat were an orange-brown, well-humified *Sphagnum* peat, fibrous in parts, with frequent *Calluna* (heather) roots, some *Juncus* (sedge) and occasional small patches of *Eriophorum* (bog cotton). There was 0.3m thick zone of tree roots around 0.5m from the base of this layer. The basal layer of peat was around 0.15m thick and comprised of mid-brown, very well humified *Sphagnum* peat. Immediately below the peat was a very compact, single layer of stones forming an

impermeable pan. These stones rested in part on a thin but distinct layer of a black, jelly-like substance, probably a concentrate of material leached out of the peat. Below this was a 0.4m thick layer of light yellow-brown, sandy, gravelly silt, followed in turn by a pale grey, sandy, stony silt.

4.1.2 Ponds 3 & 4.

These two ponds were situated parallel to each other 10m apart and excavated to a depth of around 3m. The peat here was from 0.5-1m thick and comprised of moderately well humified, reddish brown *Sphagnum* peat, containing frequent sedge roots and occasional tree roots, overlying a 0.2m band of dark brown, very well humified *Sphagnum* peat.

4.1.3. Pond 5.

This was a single pond, excavated to a depth of 3m through up to 2m of peat (Plate 3), consisting of a reddish-brown moderately well, humified *Sphagnum* peat containing frequent sedge roots and some tree roots, which overlay a 0.2m thick layer of well humified dark brown *Sphagnum* peat.

4.2. Site access road.

The road was some 430 metres long (Fig. 2), the first 300 metres being built directly on top of the existing bog. It was excavated through up to 1m of peat (Plate 2), comprising of a dark red-brown, fibrous, moderately well humified *Sphagnum* peat, containing frequent heather and tree (*Pinus*) roots, occasional sedge roots, a few *Phragmites* (reed) fragments and some patches of bog cotton. Below this was a 15cm thick layer of dark brown, very well humified *Sphagnum* peat. Nothing of archaeological interest was noted here.

4.3. Administrative area.

This area measured 62 x 28m (Fig. 2), with peat being excavated down to the top of the stone subsoil (Plate 4). The thickness of peat here varied from 1m in the eastern and western corners of the area to 0.2m in the northern corner, with the subsoil rising towards this corner. At its thickest, the peat consisted of a 0.9m thick layer of moderately humified, dark red-brown *Sphagnum* peat, which was somewhat fibrous, containing frequent sedge roots, as well as frequent tree roots. Below this was a 0.12m thick layer of

well-humified, dark brown *Sphagnum* peat lying directly above the compact, stony subsoil. Nothing of archaeological interest was found in this area.

4.4. Peat reception area.

This area measured 120 x 42m (Fig. 2). To the northwest the peat covering was around 0.2–0.5m, the peat being absent in places. The peat was considerably thicker to the southeast, where it reached a maximum depth of 1.5m (Plate 5). Here it was composed of red-brown, fibrous, moderately well humified *Sphagnum* peat, with frequent sedge roots and a few reed fragments. Below this was a thin layer of dark brown-grey, well-humified *Sphagnum* peat. Frequent remains of Scots Pine (*Pinus sylvestris*) were encountered in the upper layer, with stumps, trunks and branches present, as well as roots. The base of two stumps occurred some 0.8m above the bottom of the bog, indicating that the bog had already developed at the time that it was colonised by the pine. The underlying glacial stone and gravel layer occurred at 18.65m OD. Nothing of archaeological interest was noted in this area.

4.5. Drains

Three major drains were excavated, all connecting with settlement ponds (Fig. 2). In addition, some small *ad hoc* drains were excavated into the surface of the peat to the sides of the access road in order to correct localised drainage problems. No archaeological deposits or objects were found during any of these drainage works.

4.5.1. Drain 1.

This short drain, around 65m long and up to 3m wide, connected Pond 5 with the nearby stream. Up to 2.2m of peat were removed, the stratigraphy being the same as that of Pond 5 above.

4.5.2. Drain 2.

This drain was some 460m long with a width of 2-3m. It ran from the northeast corner of the peat reception area to Ponds 1 and 2, before draining into the nearby stream (Fig. 2). Near the reception area the peat was only 0.3m thick, deepening around the settlement ponds to 1.8m thick. The stratigraphy of this peat was similar to that recorded at Pond 2 and described above as Section A.

4.5.3. Drain 3.

This was by far the longest drain, being 1.75km long with a width of 2-4m. It was commenced at Ponds 4 & 5, curved in an arc towards a northeast-southwest field drain, the course of which it followed before reaching the headland at the south-western edge of the bog. Here it followed the northeast-southwest industrial railway, crossing seven bays, until reaching Bay 1 at the southern edge of the bog, which it then followed until ending at an existing settlement pond (Fig 2).

The initial section of the drain followed the line of an existing concrete pipe and little new peat was removed here. It then turned to follow the line of a field drain, where up to 0.3m of peat was excavated. There was a gravel ridge exposed on the surface of the fields here, which meant that for much of this section it was not necessary to remove any peat. As the drain approached the headland the peat thickened, reaching a maximum depth of 1.8m before the drain took a right angle to follow the railway line.

The first 60m of this section, at the end of Bay 7, were cut through around 1.4m of peat, the upper 0.9m of which was redeposited and contained sawn brushwood, gravel and pieces of concrete pipe. There was also a layer of well-preserved, sawn brushwood just below the surface (Plate 6), which had initially been laid down, together with a layer of gravel, to provide support for the adjacent railway line, before BnM began using polyfabric for this purpose. Across Bay 6, the peat thickened to around 2.3m, and was less disturbed. The opportunity was taken to record the stratigraphy here as Section B (Plate 7). The first 0.4m consisted of a dark brown, friable *Sphagnum* peat, which contained frequent sedge roots and had been disturbed. Below this was a 0.4m thick layer of pale brown, fibrous, moderately well humified *Sphagnum* peat, with very frequent sedge roots. This layer had a horizontal band of paler peat running through it. Beneath this was a 0.5m thick, dark-brown, moderately well humified *Sphagnum* peat, with frequent sedge roots and becoming lighter towards the base. This layer was followed by a 0.25m thick, dark brown-grey, well humified *Sphagnum* peat, with occasional sedge roots and, finally, a dark brown, very well humified *Sphagnum* peat with black horizontal banding. The subsoil here was again a compact layer of stones overlying pale yellow-brown, silty gravel.

Across Bay 5 the peat thickened to 3.4m and tree roots began to occur in the lower peat. It was not possible, on health and safety grounds, to record the stratigraphy in detail but near The junction of Bays 5 and 4 (Plate 8) the upper peat was a fairly well humified, red-brown, fibrous, *Sphagnum* peat, with frequent sedge roots. Below this, beginning at around 1.2m from the base of the bog, there was a layer of poorly humified, brown *Sphagnum* peat which contained much decayed reed and sedge roots, as well as some *Betula* (birch) roots. This peat also contained a lot of horizontally deposited twiggy material, the bark on the twigs showing that they were of birch. Some occasional charcoal fragments were also noted within this layer. Since this part of the bog must have been too wet for fire to have occurred here it is likely that it was washed in from the surrounding area. Shortly after this section of the drain was excavated a large section of the southern edge collapsed into it. The fibrous nature of the sedge-dominated peat normally lends it a good structural integrity and the collapse here suggests that there may have originally been hollow here, filled in prior to the commercial exploitation of the bog.

At Bay 4 it was possible to record the peat, as Section C (Plate 9). The upper layer was a 1.6m thick deposit of moderately well humified *Sphagnum* peat with frequent sedge roots. This layer, the top of which was disturbed had horizontal bands of both darker and paler peat. Below this was a 0.3m thick layer of fairly well humified *Sphagnum* peat with frequent sedge and birch roots and frequent fragments of reed. This was succeeded by a dark brown, well humified peat, 0.15m thick, which contained frequent remains of sedge, birch and reed and was 'fenny' in nature. Below this was a fairly well humified, brown *Sphagnum* peat, 0.2m thick, with occasional sedge and birch roots but frequent reed fragments. Finally, there was another 'fenny' deposit of dark brown peat with frequent birch twigs and roots but only occasional sedge roots. This layer was not fully excavated and probing indicated at least another 1m of peat below it.

From Bay 3 onwards the machine dug along an existing ditch, widening and deepening it, without fully excavating the peat. After Bay 3 birch became less frequent and occasional pine roots began to occur, increasing in frequency as the drain approached the south-west corner of the bog where the drain turned north to follow the line of an existing field drain. Here the work consisted only of removing silt from the drain and no fresh peat was excavated. There were frequent pine stumps and roots exposed on the field surface in this area.

5. Discussion and conclusions.

Although no archaeological deposits or artefacts were uncovered during the course of monitoring, the work did provide an opportunity to record the peat stratigraphy across the bog and therefore reveal something of its development. The upper layers of peat were fairly uniform across the whole area monitored, being a fibrous peat dominated by sedge roots. The type of sedge peat that was found here is locally common, having a reputation of making good fuel but being difficult to cut by hand, the fibres clogging the blade of the *Sleán*, which has to be cleaned between each cutting stroke. In the lower levels of peat there was a distinct difference between the peat occurring at the edges of the bog and that found in the central area. The peat in the centre contained a lot of reed, together with birch roots and twigs. These twigs were deposited horizontally, suggesting that they were laid down in waterlogged conditions. On the other hand, the peat occurring at the margins of the bog contained frequent remains of scots pine and also included heather and bog cotton suggesting drier conditions here, dominated by pine forest.

Scots pine was abundant in Ireland before 2000 BC, although geographically limited to the west of Ireland, the northeast and the Wicklow mountains (Bennett 1984, 144). However around 2000 BC there was a rapid decline and pine virtually disappeared from Ireland. Pine is a light-demanding species and competes poorly with broad-leaved trees. It is, however, tolerant of a wide range of conditions and could survive on marginal land such as the edge of bogs and above the deciduous tree line. In these locations, free from competition from other species, it tended to form large monocultures. Since the pine decline was a widespread and synchronous phenomenon, it is thought that it was largely brought about by a climatic downturn resulting in wetter conditions (Bennett 1984, 146). The high ground and bog margins where pine flourished would have borne the brunt of these wetter climatic conditions.

The evidence from the bog here seems to accord well with this scenario. Pines were found growing around the margin of the bog, heather and bog cotton remains confirming that this area was relatively dry. Pine was the only tree found here suggesting it had formed a forest monoculture and several large stumps were noted, some 0.7-0.8m above the base of the bog, showing that some bog development had taken place before it was colonised by the pine, whose roots were able to penetrate down into the gravel subsoil.

Although the bog here was completely cut away in places substantial peat deposits remain, particularly around the headlands and high fields. The bog is to be buried under the redeposited peat, after which the drains will be blocked and it will be returned to a natural waterlogged state. These conditions will ensure the preservation of any archaeology that may still exist here.

Bibliography.

- Author unknown. *The Annals of the Four Masters*. Accessed at:
<http://www.ucc.ie/celt/published/T100005C/index.html>. April 2005.
- Bennett, K.D. 1984. The Post-Glacial History of *Pinus sylvestris* in the British Isles. *Quaternary Science Reviews* 3, 133-155.
- Noone, S. 1991. *Where The Sun Sets: Ballycroy, Belmullet, Kilcommon & Kiltane, Co. Mayo*. Naas. The Leinster Leader.
- Mayo on the Move. *Landlordism in Erris*. Accessed at:
<http://towns.mayo-ireland.ie/WebX714@250.SaMtaM1drKa.0@ee7cfc5>. April 2005.
- O'Donovan, J. 1838. *The Ordnance Survey Letters. Mayo*. Vol. I.
- O'Hara, B. and Ómuraile, N. *County Mayo: An Outline History*. Accessed at:
<http://www.mayohistory.com/FullHist.htm>. April 2005.
- Walsh, G. 1998. 405. Erris Regional Water Supply Scheme, in Bennett, I. (ed.) *Excavations 1997*. Bray. Wordwell.
- Whittaker, J. 2003. *Archaeological Impact Study for a Proposed Development in a BnM Bog at Srahmore and Attavally, Co. Mayo*. ADS Ltd. Unpublished Report.
- Whittaker, J. 2004. *Peatland Survey 2003: Owenniny Group Bellacorick and Bangor Bogs, Co. Mayo*. Dublin. ADS Ltd.

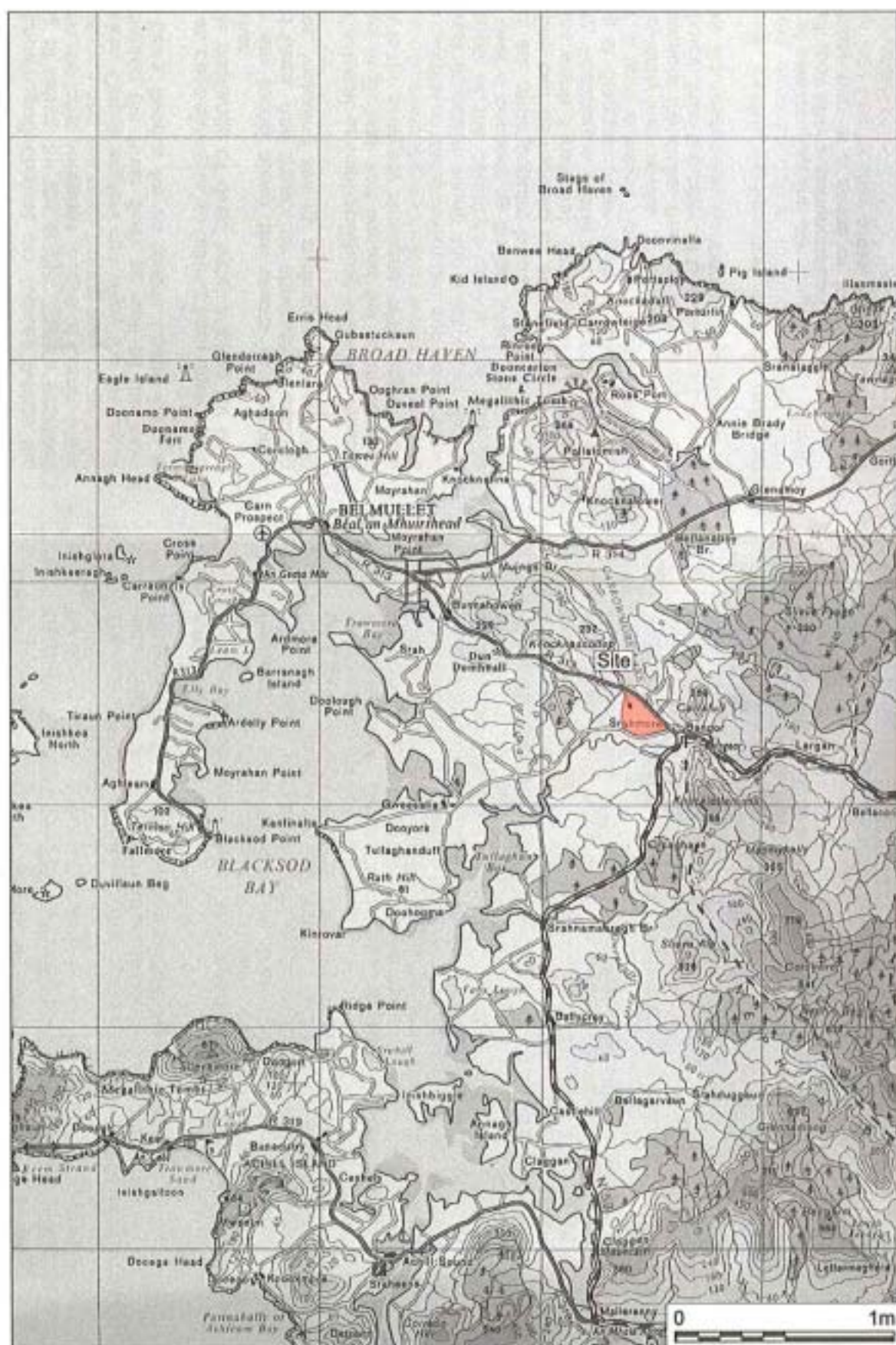


Fig. 1 Location of site.

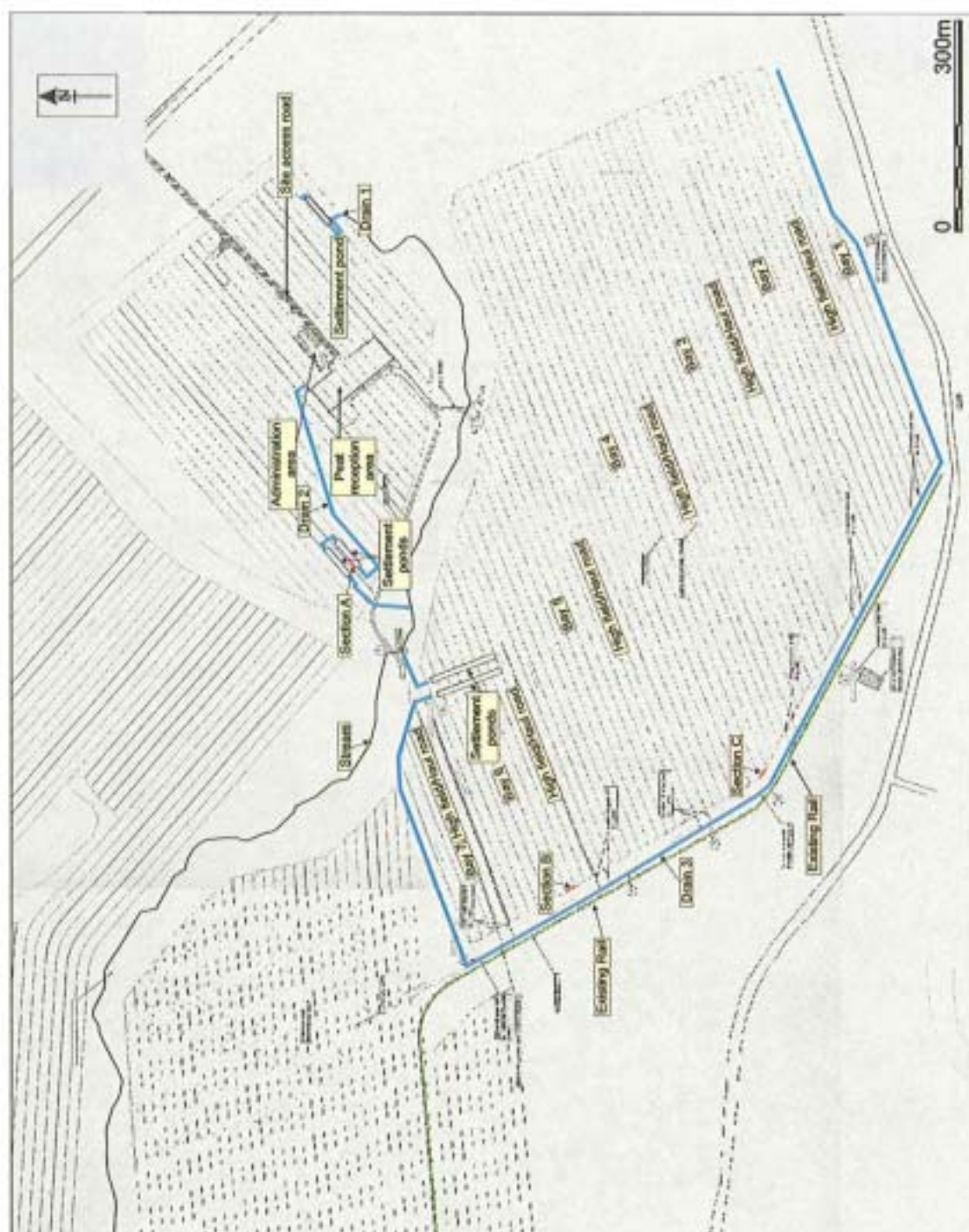


Fig. 2 Srahmore Peat Deposition Site, showing location of development.



Plate 1 Water settlement pond 2 from north-east.



Plate 2 Site access road from south-west.



Plate 3 Water settlement pond 5 from west.



Plate 4 Administration area from north-east.



Plate 5 Peat reception area from north.



Plate 6 Drain 3, showing modern brushwood.



Plate 7 Drain 3, section B.



Plate 8 Drain 3, showing peat stratigraphy near High Field 3.



Plate 9 Drain 3, Section C.