

DUNE CONSERVATION MANAGEMENT IN NORTHERN IRELAND

Notes from the network workshop held on 21st and 22nd October 2010

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The workshop was organised by the Sand Dune & Shingle Network (see <http://www.hope.ac.uk/coast>), in conjunction with the Northern Ireland Environment Agency. Over thirty people attended, mostly from Northern Ireland but including representatives from all the other 'home countries' and from The Netherlands, USA and Spain. It was used as a training event for NIEA staff and therefore show-cased what the Network is really good at – networking and 'transfer of knowledge'.

The workshop consisted of a morning of presentations and discussions followed by field visits to two major dune systems on the north Northern Ireland coast – Portstewart Strand and Magilligan.

The presentations began with some scene setters about nature conservation and coastal management in Northern Ireland – in summary NI is lagging behind in legislation and policy. These were followed by a presentation by National Trust on its *Shifting Shores Northern Ireland* programme which follows on from similar work in England and Wales. The purpose of these is to identify climate change impacts on National Trust coastal properties and stimulate an internal and external debate about the need for coastal adaptation in the face of projected climate changes. In England the National Trust was important in galvanising serious debate about the need for adaptation at the coast (in part because it was clearly leading from the front and being willing to take difficult and unpopular decisions); and they hope their latest programme will do the same in Northern Ireland.

Professor Andrew Cooper gave a thought provoking presentation based on his experience running a Life project on beach/dune management in County Donegal (Republic of Ireland). Two key points emerged. One was his plea not to force all dunes, through management, into a single identikit ideal system, but to reflect and respect differences between dune systems. His second point was to temper enthusiasm for local community-led decision-making in coastal management with the realities of local power relationships, especially in rural communities; and the difficulty of achieving 'sustainable coastal management' where decisions are being made at a very local level.

There was then a fascinating presentation about dune management on Murlough National Nature Reserve by the National Trust warden Malachy Martin. This dune system has about 120ha of dune heath and a similar area of less leached fixed dune grassland. However it has had a very substantial problem with invading sea buckthorn and sycamore (both originally planted) along with other scrub and trees. In the last few years large areas of scrub have been cleared and grazing has been extended. There is not an objective of complete eradication (except perhaps the sea buckthorn). As elsewhere, there are challenges with how best to manage the initial aftermath where scrub has been cleared. However, there is both a clear understanding of the need for follow-up management with a commitment to stay with it, and a belief that this is a transient stage (however awful it may look to start with). Ponies, sheep and cattle have all been used to graze more open parts of this site. Interestingly, despite being a National Trust-managed site, access is restricted in the grazing compartments. This is an important site to remain in contact with over progress with their dune management.

In order to understand past, current and future evolution of the dunes on this coast, I had to get my head around the fact that we were on a coastline with a small tidal range and a history of relative sea level fall. Currently, relative sea level seems to be about in balance.

Site visit to Portstewart Strand (part of the Bann Estuary SAC)

Vehicles on the beach

During the summer about half the length of the beach is used for car parking. It was very noticeable that beyond the beach barriers there was an approximately 40 metre wide hillocky strandline and embryo dune zone absent from the stretch of beach used by vehicles. It was difficult to completely argue this away by relying on natural coastal process explanations. Strandline/embryo dunes is an SAC feature for this site, so there was discussion about whether this zoning was sufficient for the purposes of the designation – vehicle usage of the beach has a very long history. Looking at the beach management from a different perspective, the area beyond the beach barriers is zoned for use by kite buggies, wind surfers etc.

Introduction of grazing

As a response to a realisation that the 90ha flower rich fixed dunes were losing some of their diversity, grazing has recently been introduced behind permanent fencing. Before this occurred there was substantial publicity and meetings, which seem to have paid dividends in minimal opposition to the work or the animals (cattle). The point was made that there is significant capital investment over and above the fencing – cattle handling facilities, provision of water and people gates in particular, but also explanatory signage. The stock are grazed outside the most popular visitor period, so grazing starts in September.

Scrub management

In the past sea buckthorn was planted on parts of this dune system. It is now actively spreading. So far, NT has introduced a policy of containing the spread through spraying any outlying colonising bushes. This is to buy time till it decides how to address the large established more mature stands, and accumulate sufficient funding.

I noticed that there were also substantial stands of sea buckthorn on the other side of the Bann estuary. I suggested that, if sea buckthorn eradication for Portstewart dunes became the agreed objective, attempts would need to be made to eradicate it also from this other side of the estuary – otherwise there will be continuing problems of re-colonisation.

In discussion an interesting point came out about NIEA's SAC condition assessments. On all their main dune systems, all the established blocks of scrub are excluded from the assessments. However, in England I would be looking to a decision being made about which areas of scrub are to be retained long-term (and hence excluded from the dune grassland assessments), with all the other scrub areas being assessed as dune grassland in unfavourable condition.

Saltmarsh

Portstewart dunes is a spit system almost closing off the mouth of the River Bann. At the back of the dune spit is a long narrow saltmarsh zone between the tidal river and the dunes, creating lovely transitional habitats. The stock fencing for the dunes has been amended so that the saltmarsh (red fescue dominated) can be grazed either as a separate unit or in combination with the dunes. This should both enhance the saltmarsh interest and provide more flexibility for the grazing.

Training walls (moles), coastal geomorphology and dune stability

A deep water channel is maintained at the mouth of the river by substantial training walls (called 'moles' in Northern Ireland) and rock armouring along the hind side of the tip of the spit. At face value this would appear to be a major constraint on the ability of the dune spit to evolve. In part this must be true, but recent studies strongly suggest that the main movement of sand is on-off shore with subtidal banks.

Despite the rock armouring at the back of the dune spit, some erosion is beginning here. There was some discussion about whether this was a 'problem' for the nature conservation interest of the site. A few years ago NT would probably have put effort into shoring this up. My impression was that now they were unlikely to put much, if any, effort into this which I was pleased to hear. If the erosion becomes more significant, it will be interesting to see whether the river navigation authority become concerned about risks to the deep water channel.

It was observed that this was a very stable dune system, which led to discussion about how important mobility/dynamism was to the ecology of dune systems and over what extent and time scales 'mobility events' needed to occur. It was pointed out that the north Ireland coast and its dunes are likely to move into a phase of relative sea level rise over the next 50 years which may well trigger active remobilisation of dunes. The challenge will be how society responds to this.

Site visit to Magilligan SAC

Multiple ownership

The Magilligan SAC dune system is large, with about 750ha of fixed dune grassland. A substantial part, from the middle westward to the Point, is owned by MoD and used as a live firing range. A middle section is owned/managed by the local authority, and the eastern end (where the great sand field narrows back to the hard rock coast) is managed by the Ulster Wildlife Trust.

As part of a discussion about condition assessments for this SAC, it was emphasised that conservation objectives should be set at the whole site level. This will enable flexibility with the location of any within-site variation in attribute targets. It was pointed out that we should not be aiming for the whole site to be identical (to have an identical mix of attribute targets across the whole site). In other words it is valid, and more 'natural', for some parts of the dune system to have more long grassland, other areas to have an abundance of species-rich short turf, and maybe some parts of the dune system to have more extensive scrub cover. Although the tail should not wag the dog, this then allows some flexibility with matching attribute targets with constraints imposed by ownership and usage (see below).

Visitor management

The middle section of beach and dunes has to absorb the majority of the very large number of visitors who visit this wonderful stretch of coast. The local authority, who owns this area, has spent considerable money and effort to minimise the impact of these visitors on the dunes, including a summer ranger service. Main pathways in and through the dunes have been lain with timbers (the so-called Murlough roll technique – see <http://handbooks.btcv.org.uk/handbooks/content/section/3947>) which have proved very effective. Richard Gillen of Limavady Borough Council looked a little uneasy when someone had the temerity to suggest that a bit more bare sand might not be a bad thing! Richard also pointed out an area that the authority had declared a Local Nature Reserve some years ago but had not then allocated resources for positive management.

The MoD range (including the beach) has no public access, and the Ulster Wildlife Trust reserve has minimal visitor pressure. Both these areas have effective existing or planned habitat management through grazing and mowing to maintain and restore very extensive areas of short turf fixed grassland. It therefore seems reasonable to accept that this level of management is neither achievable nor necessary for the high visitor pressure part of the dunes – although some winter grazing was being explored as a possibility by Limavady Borough Council.

Beach cleaning

It was noted that, as part of their efforts to maintain 'blue flag' status of their beach, the local authority undertook regular mechanised beach cleaning through the summer. In discussion we were not clear how essential this is for the 'blue flag' criteria. However, in contrast, at Portstewart Strand (which also has 'blue flag' status), it is only human litter that is cleared (leaving any seaweed etc) – but they are able to use volunteers to achieve this.

Scrub management

A very interesting observation was made about the scrub on the Ulster Wildlife Trust reserve. Whilst accepting that scrub can be very invasive, the main blocks of blackthorn scrub present on the dunes here actually date from the time when there were very high numbers of rabbits and the blackthorn was one of the few things they did not extensively eat! On this basis, the Wildlife Trust was not planning to remove these old stands but would continue to monitor to ensure there was not "mission creep".

Low numbers of cattle very effectively graze the nature reserve, but there is a lot of burnet rose within the grassland turf, which I understand is increasing. It will be interesting to see how this situation develops over time.

On the MoD land, they have recently invested in over £100,000 worth of tractor and cut and collect mower to counter the clear spread of scrub on their range and, I think, to 'prepare the ground' for the extension of cattle grazing.

Dune slacks

Magilligan SAC has virtually all the dune slack vegetation in Northern Ireland. However, the conservation interest of much of it is declining (advanced succession/ drying out). In the short term, within the MoD range where much of it occurs, this is starting to be countered by mowing and grazing. However, I was not clear whether there was sufficient understanding of the hydrology of the dune system to know whether changes in surrounding drainage regimes or shifts in weather patterns were important in driving these changes.

I will be watching developments with great interest. Dune ecohydrology is at the top of the dune nature conservation agenda in England at present, with a range of initiatives underway to better understand, and therefore address, the widespread deterioration in dune slack condition. A contribution to this is the recently published phase 2 report on dune ecohydrology.

Old more acidic dunes

At the rear of the MoD range were extensive areas of more acidic, much older, low dunes that appeared to be mostly a form of acidic grassland, with some extensive areas of sparse-ish bracken. It looked as though the much of the bracken had been sprayed this summer (a lot of the grass looked 'scorched'). Unfortunately there was not time to discuss what was going on here – a pity, as this extensive area clearly showed contrasting conditions with the rest of the dunes. I could well imagine wheatears breeding on these dune areas. All I did pick on was that some fields had been intensively grazed by sheep for many years, but that MoD was in the process of easing back on this.

Further information

For Portstewart see:

http://www.nationaltrust.org.uk/main/w-global/w-localtoyou/w-northernireland/w-northernireland-countryside_environment/w-northernireland-places_visit-coast/w-northernireland-places_visit-coast-londonderry.htm

<http://www.causewaycoastandglens.com/P2921-Portstewart-Strand-and-Barmouth-Portstewart.aspx>
<http://www.jncc.gov.uk/ProtectedSites/SACselection/sac.asp?EUCode=UK0030084>

For Magilligan see:

http://www.geographyinaction.co.uk/Magilligan/Mag_intro.html
http://www.ni-environment.gov.uk/nature_reserves/nature_reserves_magilligan.shtml
<http://www.jncc.gov.uk/ProtectedSites/SACselection/sac.asp?EUCode=UK0016613>

For the Umbra Nature Reserve (Magilligan) see:

<http://www.ulsterwildlifetrust.org/nature+reserves/Umbra>

For Murlough National Nature Reserve see:

http://www.ni-environment.gov.uk/nature_reserves/nature_reserves_murlough.shtml
<http://www.nationaltrust.org.uk/main/w-murlough>
<http://www.jncc.gov.uk/ProtectedSites/SACselection/sac.asp?EUCode=UK0016612>

For National Trust's Shifting Shores policy see:

http://www.nationaltrust.org.uk/main/w-shifting_shores_ni.pdf
http://www.nationaltrust.org.uk/main/w-chl/w-countryside_environment/w-coastline/w-coastline-shifting_shores.htm