BACK FROM THE BRINK

HABITAT MANAGEMENT GUIDE

Creating and maintaining bare sand patches

THIS HABITAT MANAGEMENT SHEET COVERS THE FOLLOWING INFORMATION:

- **The importance of bare sand as a habitat**
- **The species the work will benefit**
- **Guidance on planning your sand patches**
- **Step-by-step guide to creating them**
- **Examples of sand patches created in a sand dune system**

Sand patching is a simple and effective way of providing bare ground habitat, adding variation in aspect, removing nutrient enriched soils and encouraging a diversity of plants. On dune systems, areas of bare sand are of particular importance for basking and egg laying.

Why create sand patches?

It is a common misconception that bare sand is a bad thing and, unfortunately, it is now in short supply. On the Sefton coast, 81% of the total area of bare sand has been lost from the dunes since 1945. Declining numbers of visiting tourists to the beach and dunes, a collapse in the population of natural grazers, such as rabbits, and climate change are the key reasons behind this change.

The creation of sand patches will produce a mosaic of bare ground amongst a varied vegetation structure and will provide basking, egg-laying and hunting areas for species such as Sand Lizards and Northern Dune Tiger Beetles. Sand patches will also help to diversify the vegetation of a site and can also provide habitat that benefits other insects such as beetles, solitary bees, wasps and butterflies. Sand patching can often be combined with the removal of invasive species such as Sea Buckthorn and Japanese Rose.

Before you start

The techniques described in this factsheet will produce small areas of new habitat or enhance existing habitat for Sand Lizards, Northern Dune Tiger Beetles and Natterjack Toads in particular. Sand patches are ideal for connecting areas of suitable habitat between isolated populations and increasing the number of potential egg-laying sites.

Planning: Always obtain the landowner's permission to carry out the work. Be aware of possible restrictions on designated sites such as a nature reserve or SSSI; seek consent where required. Carefully survey the existing habitat. You do not want to destroy existing flower-rich

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A 16-ton excavator removing the non-native invasive Japanese rose and creating a sand patch in the process.

grassland or the location of a rare plant. Check for any archaeological interest (even if not a listed site). Consider how the site is used and managed, make sure that their location will not block access points or cause problems with the present habitat management. Select areas which are unlikely to be exposed to excessive disturbance by livestock and humans.

Positioning: Plan where to locate the sand patches, look to improve connectivity between areas of suitable habitat. Select southerly facing slopes which are not shaded by trees or buildings. The immediate area surrounding any new sand patches should be thick vegetation to provide cover for animals. It is better to create several small patches rather than one large one to create a mosaic of vegetation and bare sand. For Sand Lizards, it is recommended that the area of bare sand should be between 10-20% of the total area.

Size of patches: There is no defined size and patches should be designed to look as natural as possible. However, the ideal size should be no less than 2m x 2m otherwise vegetation will quickly recolonise the area.

Shape of patches: The simplest shape is rectangular and this may be a good option if there are limited resources. Digging swathes running at various angles along the slope will create a greater variety of surfaces and aspects. This shape is recommended on gentle slopes and flat ground where there is little natural topographic variation and may present a more natural appearance.

Timing: New sand patches can be created anytime between mid-April and September in areas of vegetation. Existing sand patches must be maintained between mid-April and the end of May only.

Sand Lizards lay their eggs from the end of May and so it is vital that any existing areas of bare sand should be left alone from this time onwards. Only work in areas where there is no bare sand between May-October.

Creating the sand patches

1. Sand patches can be created by hand, using mattocks and spades, or by machine.

2. Remove surface vegetation, roots and top soil to expose an area of bare sand approximately 4m^2.

3a. If working by hand: the excavated material may be piled or spread out. Avoid placing the material on areas of bare sand or vegetation suitable for use as cover. Where possible, deposit on north facing dune slopes.

3b. If using machinery: the surface vegetation, roots and topsoil may be buried beneath the sand patch. Temporarily pile the material to one side taking care not to flatten vegetation, dig out a further 2m of clean sand and pile to another side. Deposit the spoil in the hole and fill in with the fresh sand.

4. Once all organic matter has been removed, you should be left with loose sand. Check through the sand patch to make sure there are no remaining roots. At a minimum, the top 15cm should be clear of any organic matter.

5. Finally, bare sand should be profiled so that it blends in with the original slope. Avoid creating a flat ledge with a steep cliff at the top of the patch by pushing loose sand towards the top - this will create a steeper sand patch.

Maintenance: Sand patches should be maintained annually through the removal of growing vegetation and roots. Using a rake can often help. **This should only be carried out between mid-Aril and end of May.**

Sand Lizards bask on areas of bare sand surrounded by dense vegetation for cover © Andrew Hampson

Example 1: Ainsdale and Birkdale Sandhills Local Nature Reserve, Merseyside.

These large sand patches have been created using a small excavator on a dune ridge that was devoid of any bare sand. The tussocks of marram grass and varied vegetation structure provide cover for any lizards and also support an abundance of prey.

Here, the creation of bare sand also helped with the removal of Sea Buckthorn.

Notice how a small cliff is visible towards the top of the patch; avoid this by pushing loose sand upwards. Some vegetation at the front of the patch has been flattened by spoil left here, this should be avoided by depositing on northerly facing dune slopes where possible.

Example 2: Ainsdale and Birkdale Sandhills Local Nature Reserve, Merseyside.

This is a series of sand patches on southerly facing slopes. The patches were created within areas of dense vegetation including bramble and Marram Grass which provides cover for the lizards. The vegetation was cut back and the patches dug by hand but surrounding vegetation was left undisturbed. This was once a very good area for Sand Lizards but, as areas of bare sand have slowly disappeared, lizard numbers have dwindled. These sand patches will provide an extension of potential egg-laying sites and will hopefully encourage an increase in the range of a nearby population. Sand patches can be examined in late autumn for spent egg shells as evidence of successful breeding.

Example 3: Altcar Training Camp, Merseyside

Large areas of Japanese Rose, a non-native invasive species, were removed using a large excavator, and as a result created large areas of bare sand. Prior to this work taking place, this section of sand dune was very fixed with no bare sand and very little floral diversity. The work, resulted in approximately 20% bare sand across the total area and within months, Northern Dune Tiger Beetles had colonised these patches.