

Removal of grass by scraping to enhance nesting areas for breeding waders at Leighton Moss RSPB Reserve, Lancashire, England

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SUMMARY

Suitable breeding areas for ground nesting waders were restored by mechanically scraping off vegetation that had colonized limestone slag banks. In response, breeding numbers of ringed plover *Charadrius hiaticula*, oystercatcher *Haematopus ostralegus* and lapwing *Vanellus vanellus* doubled in the year following restoration. Early successional plants also benefited.

BACKGROUND

Limestone slag banks created in the early 20th century were subsequently colonised by several ground nesting waders (ringed plover *Charadrius hiaticula*, oystercatcher *Haematopus ostralegus*, and lapwing *Vanellus vanellus*). Overtime, the banks became grassed over as a consequence of which suitable open areas which formerly provided nesting areas were lost and numbers of nesting waders declined. The aim of the management described was to recreate bare areas suitable for these birds to nest.

ACTION

Clearance of grassed over areas: Some small scale hand scraping and scraping with a tractor front loader bucket been carried out for several years mainly to retain the more open areas. In early 1999 (in the winter months prior to any nesting activity) all the areas (totalling 2,390 sq m) where waders had bred which had become partially vegetated were scraped using a wheeled JCB fitted with a front bucket. This was mainly concentrated on one large area and was designed to stabilise the situation by retaining and hopefully enhancing, the wader breeding population.

In early 2003 a further five new sections of completely grassed areas totalling 465 sq m were scraped mechanically with a wheeled JCB. The turf was pushed into hollows away

from the scraped areas and the surface was further improved by raking the JCB bucket teeth over the exposed slag in an attempt to fragment it further to create a rubble-like substrate more amenable to breeding waders. In all areas the removal of 8 to 10 cm of turf was sufficient to expose the underlying slag. The areas varied in size from 36 sq m to 136 sq m. This took just 5 hours of JCB work time.

CONSEQUENCES

Benefits to birds: Table 1 shows the numbers of pairs and nests located in 2002 before the new scraping and in 2003 after this management had been undertaken. Three pairs of ringed plover, five pairs of lapwing and three pairs of oystercatcher nested on the newly scraped areas. The total population within the whole slag tip areas increased by five pairs of lapwing and two pairs of oyster-

Table 1. Numbers of pairs of waders nesting on the limestone banks in 2002 prior to, and in 2003 after, scraping management work was undertaken, Leighton Moss RSPB Reserve. (Numbers of nests located indicated in parentheses).

Year	Ringed plover	Lapwing	Oystercatcher
2002	3 (6)	4 (5)	4 (4)
2003	6 (12)	9 (12)	7 (9)

catchers, but remained the same for ringed plover, as apparently three pairs moved to the newly scraped areas from two nearby disturbed locations close to a footpath. The lapwings may have colonised from the adjacent salt marsh. Here, in years of exceptionally high tides many nests are flooded out, whilst the nests of those on the slag banks are well above the highest tidal levels.

Benefits to plants: The scraping management has also been beneficial for plants by allowing those which are typical of the early successional stages of colonisation of bare limestone to flourish. The re-vegetating scraped areas are some of the best sites on the reserve for carline thistle *Carlina vulgaris*, yellow horned poppy *Glaucium flavum* and wild thyme *Thymus drucei*.

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