



Species and Habitat Action Plan Assessment Form

Please refer to the accompanying guidance for information about how to complete this form and an explanation of terms used

Field 1: Action Plan details

Species/Habitat Action Plan	<i>Squamarina lentigera</i> - Scaly breck-lichen
Lead Partner/Agency	English Nature (Contact Point - EN)
Steering Group/Other organisations	<i>No, however the following organisations have assisted with the plan implementation: English Nature, Norfolk Wildlife Trust, Suffolk Wildlife Trust, the Elveden Estate.</i>
Work programme in existence?	No, though most of the actions are as for the starry breck lichen

Field 2: Objectives and targets overview

Please list the targets for the action plan, indicating in which country/region the target is applicable, and additional comments including the rationale for new targets. For each new target please add new sequential paragraph numbers and target text. Please provide information about progress and country disaggregation in Table A for all targets.

Number and text	UK	E	NI	S	W	Comments
4.1 Maintain populations at all extant sites.		✓				3 of the 4 current sites are under some active conservation_management.
4.2 Encourage the spread of scaly breck-lichen from current sites where appropriate and feasible.		✓				Transplants were introduced to 2 sites in 1992 and survive at 1 site

Field 3: Proposed actions overview

Please list the proposed actions for the action plan, indicating in which country/region the action is applicable. For each new action please add new sequential paragraph numbers and action text. If the action is regarded as significant (please see guidance) indicate this in the box and provide further details in Table B. For actions not regarded as significant simply state if the action is ongoing or complete. Remember any action which is being dropped from the workplan will be regarded as significant for the first round of reporting.

Number and text	UK	E	NI	S	W	Action significant?	Action complete or ongoing? (Please state yes, not started, or ongoing.)
5.1.1 Ensure that the requirements of this species are considered during future reviews of the Breckland ESA scheme.		✓				No	All but one of the sites are within the ESA
5.2.1 Consider notifying as SSSIs newly discovered unpotected sites, where this is consistent with selection guidelines and necessary to ensure their long-term protection and appropriate management.		✓				No	All current sites are already notified.
5.2.2 Control scrub growth on all extant sites.		✓				Yes	Scrub encroachment an issue on two sites and is being addressed.
5.2.3 Assess the threat to extant sites posed by the drift of agricultural chemicals. Implement measures to address this threat where it is identified to be significant. Measures may include management agreements on SSSIs, and agri-environment schemes on surrounding land.		✓				Yes	No action at present
5.2.4 Undertake soil disturbance on all extant sites to encourage the spread of this species. This management will initially be experimental, and methods should be refined in the light of observations made during initial trials.		✓				Yes	Turf stripping on one current site undertaken by the Elveden Estate with support of the Suffolk Trust. Turf stripping on a pre 1980 site by Norfolk Wildlife Trust.
5.3.1 Assess the possibility of undertaking translocations of this species in order to facilitate its spread.		✓				Yes	Transplants attempted in 1992 appear to survive at one site though possibly already there and overlooked.
5.4.1 Advise landowners and managers of the presence and importance of scaly breck-lichen, its legal status, specific management for its conservation, and any potentially damaging actions. Landowners and managers should have access to specialist advice if needed.		✓				No	The owner of two sites is aware of the interest. Suffolk Wildlife Trust & Norfolk Wildlife Trust have raised awareness amongst staff. MoD aware that it occurs on one site.
5.4.2 As far as possible, ensure that relevant agri-environment project officers are advised of the locations of this species, its importance, management requirements and potential threats.		✓				No	No action
5.5.1 Compile information and resurvey sites where necessary to determine the current		✓				No	Information available on Breck sites. Searched for but not found in Sussex

	distribution and status of this species in Britain. Current threats to all extant sites should also be assessed.						(19th century record). Old records also for Isle of Wight & Somerset. Lichen surveys in these areas have failed to find it...
5.5.2	Undertake regular monitoring at all extent sites with the aim of assessing changes in population size and habitat quality.		✓			Yes	All sites surveyed in 1997. Some annual monitoring at one site (Weeting Heath) started 1998.
5.5.3	Commission a research project to improve understanding of the management requirements of this species, the reasons for its sharp decline since the mid-1980s, and to assess the possibility of re-establishing this species at suitable former sites.		✓			Yes	Attempts to re-establish the species but no full study on management requirements.
5.5.4	Investigate the feasibility of <i>ex situ</i> cultivation as an adjunct to translocation attempts.		✓			Yes	Not yet attempted.
5.6.1	Encourage lichenologists to pass all records of scaly breck-lichen including ecological information, to a national database.		✓			No	Records held in British Lichen Society Database.
5.6.2	Liaise with specialist societies to increase the awareness and identification skills of lichenologists and other naturalists in relation to this species, through publishing articles or holding identification workshops.		✓			No	Ongoing - Article on work at Lakenheath published in Bulletin of British Lichen Society. Informal identification sessions on Breck lichens have taken place.

Field 4: Assessment of status

Please tick the appropriate category to indicate the assessment of status of the species or habitat, for each country/region where appropriate, and provide a statement supporting the category selected.

	Not appropriate	Recovered	Signs of recovery	No change	Declining	Lost	Insufficient information
<i>UK</i>							
<i>England</i>					✓		
<i>Northern Ireland</i>	✓						
<i>Scotland</i>	✓						
<i>Wales</i>	✓						
Brief text description justifying assessment of status: (~ no more than 100 words for each country/region)							
Still threatened and declining particularly at its former stronghold of Lakenheath.							

Field 5: Summary statement

Please provide an overview of plan implementation, including new factors affecting the species or habitat which will accelerate or constrain progress towards meeting of the targets. Where a factor results in new action(s) please cross-reference back to the relevant numbers under Field 3 and Table B.

At more sites than the starry breck lichen but still threatened and declining particularly at its former stronghold of Lakenheath. We still have very little information on the autecology of this species and possible reasons for its decline. It might have been expected that the removal of pine seedlings from one of its sites and the felling of larger trees would have favoured this species, as might the series of hot, dry summers. The suspicion remains that the decline may be linked either directly with airborne deposition of nitrogen or indirectly through increasing the vigour and therefore competition of vascular plants. However, the situation appears more complex than for the starry breck lichen as the population appears stable on two of the four sites.

Field 6: Signing off

Please 'sign off' the form below to confirm that steering group members or key contacts have been consulted and agreed the information provided.

Contact details	Lead Partner	Contact Point
Name	Peter Lambley	Dave Stone (species co-ordinator)
Organisation	English Nature	English Nature
Assessment date (dd/mm/yy)		16/9/1999

Completed forms should be submitted to JNCC

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 Joint Nature Conservation Committee
 Monkstone House
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 Peterborough PE1 1JY
 Tel: 01733 562626
 Fax: 01733 555948
 E-mail: lpr99@jncc.gov.uk*

Table A: Action Plan objectives and targets (Copiable table)

For each target please state how, if applicable, it has been disaggregated to the country level. Please insert the paragraph number, UK target and country-specific disaggregated target(s) into the table. Please tick the appropriate category to indicate progress against published and disaggregated targets. For each target please copy the table and detail the (existing or new [new paragraph numbers should run sequentially, under relevant headings in the published volumes]) paragraph number, target text and an assessment of progress.

Objective/target <i>(For new or revised targets please provide the new paragraph number and target text.)</i>			4.1 Maintain populations at all extant sites.		
Country	Not appropriate	Target achieved	Some progress	No progress	Insufficient information
<i>UK</i>					
<i>England</i>			✓		
<i>Northern Ireland</i>	✓				
<i>Scotland</i>	✓				
<i>Wales</i>	✓				
Text description of target progress (separate for each country/region): Population appears stable at two sites, declining at two others.					

Objective/target <i>(For new or revised targets please provide the new paragraph number and target text.)</i>			4.2 Encourage the spread of scaly breck-lichen from current sites where appropriate and feasible.		
Country	Not appropriate	Target achieved	Some progress	No progress	Insufficient information
<i>UK</i>					
<i>England</i>			✓		
<i>Northern Ireland</i>	✓				
<i>Scotland</i>	✓				
<i>Wales</i>	✓				
Text description of target progress (separate for each country/region): Possible success of transplant at one site, though possibly already present, despite a careful search in advance.					

Table B: Proposed actions (Copiable table)

For each significant action please copy and complete the table below.

Published action/organisation(s) responsible <i>(For new or revised actions please provide the new paragraph number and action text.)</i>	5.2.2 Control scrub growth on all extant sites.	
Work plan/organisation(s) responsible <i>(Summary of work plan agreed by the steering group, broken down by year if possible.)</i>	EN, Suffolk Wildlife Trust, Elveden Estate	
Action/workplan undertaken? <i>(Please state yes or no.)</i>	Yes	
Description of work taken and organisation responsible.	Scrub removal on going at Lakenheath, initiated at Little Heath, Barnham	
Output and timescale	On going	<i>Action by</i> EN, WTs, Elveden Estate
Constraints to action <i>(Please provide an explanation of the significant issues or difficulties encountered and how they have been or will be resolved. Any constraints which the steering group are unable to resolve should also be detailed.)</i>	Constraints eg common rights at Lakenheath, largely overcome. Estate positive now about scrub removal.	
Action complete or ongoing? <i>(Please state yes, not started, or ongoing.)</i>	On going	
Next steps	Continue scrub control	
Output and timescale	Continuing	<i>Action by</i> EN, WTs, Elveden Estate
Published action/organisation(s) responsible <i>(For new or revised actions please provide the new paragraph number and action text.)</i>	5.2.3 Assess the threat to extant sites posed by the drift of agricultural chemicals. Implement measures to address this threat where it is identified to be significant. Measures may include management agreements on SSSIs, and agri-environment schemes on surrounding land. Assess the threat to extant sites posed by the drift of agricultural chemicals. Implement measures to address this threat where it is identified to be significant. Measures may include management agreements on SSSIs, and agri-environment schemes on surrounding land.	
Work plan/organisation(s) responsible <i>(Summary of work plan agreed by the</i>	EN	

<i>steering group, broken down by year if possible.)</i>		
Action/workplan undertaken? <i>(Please state yes or no.)</i>	Proposal to research effects of agricultural chemicals on lichens put forward internally within EN for consideration .	
Description of work taken and organisation responsible.	None as yet	
Output and timescale	Not agreed as yet	<i>Action by</i> EN
Constraints to action <i>(Please provide an explanation of the significant issues or difficulties encountered and how they have been or will be resolved. Any constraints which the steering group are unable to resolve should also be detailed.)</i>	Potential large piece of research requiring resources both in time & money to establish viability of the proposal.	
Action complete or ongoing? <i>(Please state yes, not started, or ongoing.)</i>	Not started	
Next steps	To get funding for the work, which would be of potential benefit to other lichen BAP species. EN to initiate	
Output and timescale	Not known	<i>Action by</i> EN

Published action/organisation(s) responsible <i>(For new or revised actions please provide the new paragraph number and action text.)</i>	5.2.4 Undertake soil disturbance on all extant sites to encourage the spread of this species. This management will initially be experimental, and methods should be refined in the light of observations made during initial trials.	
Work plan/organisation(s) responsible <i>(Summary of work plan agreed by the steering group, broken down by year if possible.)</i>	Work undertaken by Elveden Estate in conjunction with Suffolk Wildlife Trust.	
Action/workplan undertaken? <i>(Please state yes or no.)</i>	Yes	
Description of work taken and organisation responsible.	Turf stripping on three plots in February 1999 at Lakenheath. Also earlier work by Norfolk Wildlife Trust at Thetford Heath.(a former site).	
Output and timescale	One days work Lakenheath but c. 10 years before we know whether it may be working. (Similar at Thetford)	<i>Action by</i> WTs, Elveden Estate
Constraints to action <i>(Please provide an explanation of the significant issues or difficulties encountered and how they have been or will be resolved. Any constraints which the steering group are unable to resolve should also be detailed.)</i>	Only lack of knowledge on technique to create the best substrate.	
Action complete or ongoing?	Complete Lakenheath. On going? Thetford	

<i>(Please state yes, not started, or ongoing.)</i>		
Next steps	monitoring	
Output and timescale	10 years before we have some idea of success or failure ?	Action by EN

Published action/organisation(s) responsible <i>(For new or revised actions please provide the new paragraph number and action text.)</i>	5.3.1 Assess the possibility of undertaking translocations of this species in order to facilitate its spread.	
Work plan/organisation(s) responsible <i>(Summary of work plan agreed by the steering group, broken down by year if possible.)</i>	EN	
Action/workplan undertaken? <i>(Please state yes or no.)</i>	Yes	
Description of work taken and organisation responsible.	Transplants put out in 1992 at a number of sites. Only success possibly Little Heath Barnham, but possibly already on site as it was found away from the precise transplant site.	
Output and timescale	No further transplants planned at present.	Action by EN
Constraints to action <i>(Please provide an explanation of the significant issues or difficulties encountered and how they have been or will be resolved. Any constraints which the steering group are unable to resolve should also be detailed.)</i>	Lack of knowledge of precise requirement and techniques.. It seems easier to transplant some foliose lichens on trees than these lichens which grow as rosettes on the ground.	
Action complete or ongoing? <i>(Please state yes, not started, or ongoing.)</i>	Complete for the present	
Next steps	none planned but review	
Output and timescale	1999-2000.	Action by EN

Published action/organisation(s) responsible <i>(For new or revised actions please provide the new paragraph number and action text.)</i>	5.5.2 Undertake regular monitoring at all extent sites with the aim of assessing changes in population size and habitat quality	
Work plan/organisation(s) responsible <i>(Summary of work plan agreed by the steering group, broken down by year if possible.)</i>	EN, with assistance from SWT & NWT	
Action/workplan undertaken? <i>(Please state yes or no.)</i>	Yes (1997)	

Description of work taken and organisation responsible.	Survey of sites in 1997	
Output and timescale	Brief report (Oliver Gilbert)	<i>Action by</i> EN, SWT, NWT
Constraints to action <i>(Please provide an explanation of the significant issues or difficulties encountered and how they have been or will be resolved. Any constraints which the steering group are unable to resolve should also be detailed.)</i>		
Action complete or ongoing? <i>(Please state yes, not started, or ongoing.)</i>	On going	
Next steps	<i>Please outline future action/work including an indication of expected output, timescale and organisation responsible.</i>	
Output and timescale		<i>Action by</i>

Published action/organisation(s) responsible <i>(For new or revised actions please provide the new paragraph number and action text.)</i>	5.5.3 Commission a research project to improve understanding of the management requirements of this species, the reasons for its sharp decline since the mid-1980s, and to assess the possibility of re-establishing this species at suitable former sites	
Work plan/organisation(s) responsible <i>(Summary of work plan agreed by the steering group, broken down by year if possible.)</i>	EN	
Action/workplan undertaken? <i>(Please state yes or no.)</i>	No	
Description of work taken and organisation responsible.	None at present to be considered	
Output and timescale	To be determined	<i>Action by</i> EN
Constraints to action <i>(Please provide an explanation of the significant issues or difficulties encountered and how they have been or will be resolved. Any constraints which the steering group are unable to resolve should also be detailed.)</i>	Potential funding, lack of expertise nationally?	
Action complete or ongoing? <i>(Please state yes, not started, or ongoing.)</i>	Not started	
Next steps	Not determined	
Output and timescale	Not determined	<i>Action by</i>

Published action/organisation(s) responsible <i>(For new or revised actions please provide the new paragraph number and action text.)</i>	5.5.4 Investigate the feasibility of ex situ cultivation as an adjunct to translocation attempts.	
Work plan/organisation(s) responsible <i>(Summary of work plan agreed by the steering group, broken down by year if possible.)</i>	EN	
Action/workplan undertaken? <i>(Please state yes or no.)</i>	No	
Description of work taken and organisation responsible.		
Output and timescale	<i>To be considered</i>	<i>Action by EN</i>
Constraints to action <i>(Please provide an explanation of the significant issues or difficulties encountered and how they have been or will be resolved. Any constraints which the steering group are unable to resolve should also be detailed.)</i>	<i>Lack of knowledge of potential techniques .</i>	
Action complete or ongoing? <i>(Please state yes, not started, or ongoing.)</i>	<i>Not started</i>	
Next steps	<i>To consider it.</i>	
Output and timescale	<i>1999-2000</i>	<i>Action by ?EN</i>