

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	Fen orchid
Lead Partner/Agency	Norfolk Wildlife Trust
Steering Group/Other organisations	English Nature, RBG Kew, Broads Authority, independent consultant, NWT with wider consultation group comprising independent academics and botanists
Work programme in existence?	Yes

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 existing		=			=	
4.2 Where feasible reestablish at 6 sites		=			=	

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 Encourage agri environment incentives		=					yes
5.2.1 Provide suitable management at all sites		=					Yes
5.2.2 Consider restoration at 6 former sites		=					Ongoing
5.3.1 Continue to implement recovery strategies for extant populations		=					Ongoing
5.3.2 Consider translocation of material to 4 sites		=					Ongoing
5.3.3 Identify method of introduction of propagated stock for 2000		=				Yes	Ongoing
5.5.1 Research seed bank viability		=					Not started
5.5.3 Encourage European Research		=					Not started
5.5.4 Send data to JNCC/BRC							Ongoing
5.5.6 Monitor extant populations annually		=				Yes	Ongoing
5.6.1 Develop links with other researchers including abroad and liaise with CCW		=				Yes	Ongoing

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
UK							
England			=				
Northern Ireland							
Scotland							
Wales							

Brief text description justifying assessment of status: (~ no more than 100 words for each country/region)

Of the three sites where found one small population has variable numbers, a second appears to be increasing, a third site has a substantial population. At all sites the overall habitat condition is acceptable in terms of scrub cover, mowing regime or planned introduction of mowing/grazing. Concerns over the viability of populations given transitional nature of the habitat. At two sites there are plans to recreate early successional habitat. The apparent increases may be a result of experience of surveyors finding more plants rather than a real increase

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.

There are still unknown factors such as the exact habitat requirements and the potential for colonisation of newly created habitat adjacent extant populations. The outcome of introducing propagated plants into former sites is unknown at present with large scale trials planned for 2000. Research into seed bank viability has not been undertaken as not thought workable in English context

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	R. Land	
Organisation	Norfolk Wildlife Trust	
Assessment date (dd/mm/yy)	05/01/2004	

Completed forms should be submitted to JNCC

Biodiversity Information Service
Joint Nature Conservation Committee
Monkstone House
City Road
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 (For new or revised targets please provide the new paragraph number and target text.)	4.1 Maintain existing populations				
Country	Not appropriate	Target achieved	Some progress	No progress	Insufficient information
UK					
England		=			
Northern Ireland					
Scotland					
Wales					
Text description of target progress (separate for each country/region):					
All three extant sites being managed and with further restoration work planned					
Objective/target (For new or revised targets please provide the new paragraph number and target text.)	4.2 Where feasible re establish at 6 former				
Country	Not appropriate	Target achieved	Some progress	No progress	Insufficient information
UK					
England			=		
Northern Ireland					
Scotland					
Wales					
Text description of target progress (separate for each country/region):					
6 former sites identified and management prescriptions will be provided in 1999. Consideration needs to be given to the methodology for introduction of plantlets.					

Table B: Proposed actions (Copiable table)

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

5.3.3 Identify method of introduction of propagating stock for 2000	=				Yes	Ongoing
5.5.1 Research seed bank viability	=					Not started
5.5.3 Encourage European Research	=					Not started
5.5.4 Send data to JNCC/BRC						Ongoing
5.5.6 Monitor extant populations annually	=				Yes	Ongoing
5.6.1 Develop links with other researchers including abroad and liaise with CCW	=				Yes	Ongoing
Published action/organisation(s) responsible (For new or revised actions please provide the new paragraph number and action text.)	5.1 Assess environmental parameters at extant sites and match with data on GIS to determine areas for introduction by end 1999					

Work plan/organisation(s) responsible <i>(Summary of work plan agreed by the steering group, broken down by year if possible.)</i>	NWT 1999	
Action/workplan undertaken? <i>(Please state yes or no.)</i>	Yes	
Description of work taken and organisation responsible	<i>Please provide details of progress to date, including information about outputs, deadlines, which organisations and where action is being undertaken.</i>	
Output and timescale	<i>Report listing parameters associated with Liparis populations – conductivity, pH, bryophyte associates September 1999</i>	<i>Action by NWT</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>		
Action complete or ongoing? <i>(Please state yes, not started, or ongoing.)</i>	Complete	
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>	5.2 Identify method of introduction of propagated stock for 2000	
Work plan/organisation(s) responsible <i>(Summary of work plan agreed by the steering group, broken down by year if possible.)</i>	NWT RBG Kew Techniques to be identified in 1999 for implementation in 2000	
Action/workplan undertaken? <i>(Please state yes or no.)</i>	No	
Description of work taken and organisation responsible	<i>Please provide details of progress to date, including information about outputs, deadlines, which organisations and where action is being undertaken.</i>	
Output and timescale	<i>Trial planting out undertaken from 1998 using propagated stock in different substrates. Trial continued in 1999 and assessment to be made of the most suitable techniques in Sept 1999</i>	<i>Action by Kew/NWT</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>This action has been delayed due to problems with propagating sufficient stock for large scale introduction. Experimental work at Kew suggests that that the plants may survive better if they are grown on for 3 years before planting out.</i>	
Action complete or ongoing? <i>(Please state yes, not started, or ongoing.)</i>	Necessary stock now available for large scale planting in 2000	
Next steps	<i>Please outline future action/work including an indication of expected output, timescale and organisation responsible.</i>	
Output and timescale	<i>Planting at identified sites for introduction commencing in 2000</i>	<i>Action by NWT</i>
Published action/organisation(s) responsible <i>(For new or revised actions please provide the new paragraph number and action text.)</i>	5.3 Monitor extant populations in 1999	

Work plan/organisation(s) responsible <i>(Summary of work plan agreed by the steering group, broken down by year if possible.)</i>	NWT annually	
Action/workplan undertaken? <i>(Please state yes or no.)</i>	Yes	
Description of work taken and organisation responsible	<i>Please provide details of progress to date, including information about outputs, deadlines, which organisations and where action is being undertaken.</i>	
Output and timescale	Annual monitoring report	Action by
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>	Ongoing	
Next steps	<i>Please outline future action/work including an indication of expected output, timescale and organisation responsible.</i>	
Output and timescale	Action to continue for 2 more years in current form	Action by NWT
Published action/organisation(s) responsible <i>(For new or revised actions please provide the new paragraph number and action text.)</i>	5.4 Develop links with other researchers including abroad and liaise with CCW	
Work plan/organisation(s) responsible <i>(Summary of work plan agreed by the steering group, broken down by year if possible.)</i>	Possible international seminar to be held with Wales in 2000/2001 Internet site to be developed to aid exchange of ideas International researchers to be placed on mailing list of England working group to receive technical reports At least annual contact with CCW	
Action/workplan undertaken? <i>(Please state yes or no.)</i>	Some progress on liaison but none on encouraging research	
Description of work taken and organisation responsible	<i>Please provide details of progress to date, including information about outputs, deadlines, which organisations and where action is being undertaken.</i>	
Output and timescale	Develop web site for Liparis researchers by 2000	Action by 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>	Ongoing	
Next steps	<i>Please outline future action/work including an indication of expected output, timescale and organisation responsible.</i>	
Output and timescale	Consider international seminar	Action by CCW/NWT

Table B. Entries for each of the 9 rows of the table are listed as a-i for each significant action - sorry I haven't had a chance to actually do this within the table itself.

- a. **5.2.1.**
- b. Work plan under development for Welsh populations.
- c. Some work undertaken.
- d. Kenfig NNR. Much management effort is devoted to Liparis at this site. A major programme of scrub control is ongoing together with a programme of mechanised mowing - this does appear to be beneficial as a short-medium term conservation measure for Liparis. Kenfig NNR staff (employed by Bridgend County Borough Council) are also working hard to encourage a more appropriate grazing regime at this site, although many aspects of the management of such a scheme are outwith their control. Limited attempts have been made recently to encourage the enlargement of frontal blowout systems. During 1994, five slacks were close mown in an attempt to encourage population recovery. This resulted in a spectacular flush of young and flowering plants at the largest site mown.
Whiteford NNR. A satisfactory grazing regime is a long-established feature of this site and CCW also pursues an active programme of scrub management. In cooperation with FE and the National Trust, some effort has also been directed at the removal of conifer blocks.
Crymlyn Burrows. Dwr Cymru have undertaken a programme of scrub control at locations otherwise suitable for Liparis. The site might benefit from limited grazing, although this is problematic at this open-access and un-enclosed location.
Laugharne/Pendine Burrows. No current management.
- e. Active management underway at three of the four sites.
- f. Kenfig NNR. Neither CCW nor Bridgend CBC have sufficient control over the grazing management of this key site. This is a long-running issue in the management of the site and is subject to ongoing discussion with all relevant parties. The UKBAP and EC Directive status of Liparis will be used to full effect in future negotiations. The allied problem of dune system fossilization (overstabilisation induced by sediment starvation & undergrazing) is potentially a much harder issue to resolve. At least some of the causal agents are poorly understood and ameliorative mechanisms difficult or even technically impossible to implement - lack of knowledge must therefore be identified as a constraint. CCW has commissioned a review of the overstabilisation issue and is also involved in all relevant coastal fora in the area. Work to develop a long-term strategy for the management of the Welsh dune resource is also at an advanced stage. Localised intensive management, such as that undertaken in 1994, is extremely expensive in terms of money and staff resources.
Whiteford NNR. The sediment starvation issues mentioned above are also relevant here.
Crymlyn Burrows. Sediment starvation also a possible problem here, but the small size of the site, its open-access regime and its juxtaposition to transport and industrial infrastructure are all factors which limit the opportunities for management.
- g. All ongoing.
- h. Work to resolve the above constraints will be pursued at every opportunity. Significant resources will continue to be devoted to appropriate management in the meantime.
- i. Summaries of management undertaken and progress with the resolution of constraints will be reported to the UK Steering Group and other relevant fora as and when required.
- a. **5.2.2.**
- b. Work plan under development for Welsh populations.
- c. Some work undertaken.
- d. Some restoration management has now been undertaken at Tywyn by the MoD.
- e. One experimental area created.
- f. Such management is undoubtedly valuable as a short-medium term recovery measure, but long term viability requires both appropriate grazing and a reasonable ratio of mobile: fixed dune habitat in order to naturally recreate slacks for future colonisation.
- g. Ongoing.
- h. Monitor existing trial and seek further opportunities for slack excavation at suitable locations within the Tywyn/Pembrey system.
- i. Summaries of management undertaken and progress with the resolution of constraints will be reported to the UK Steering Group and other relevant fora as and when required.

- a. **5.3.1.**
- b. Work plan under development for Welsh populations.
- c. Some work undertaken.
- d. Most components already covered above. There is a need to develop an overall management/population recovery strategy for the Welsh populations to ensure complementarity of effort between sites.
- e. CCW has a Corporate Plan commitment for the production of such a strategy. Strategy document planned for 2000 - subject to agreement by UK Steering Group.
- f. Lack of knowledge will be factor, but the strategy should at least identify areas where further work is required. Staff time availability a perennial problem!
- g. Ongoing.
- h. Undertake production of a first draft strategy.
- i. Strategy planned for 2000.

5.4.1.

CCW provides a great deal of advice to third party organisations, including Bridgend County Borough Council and other relevant Unitary Authorities, MoD, NT, FE and Dwr Cymru.

Reporting Proforma - Model 1

Species/Habitat Plan	Action	Lead Partner/Agency	Country Group:	Date: 13/10/97	
Fen Orchid (<i>Liparis loeselii</i>)		EN/Norfolk WT/RBG Kew	England & Wales	Current Assessment 13/10/97	
				Previous Assessment None	
Targets Set (<i>list specified targets</i>)				Published (<i>tick</i>)	Revised (<i>tick</i>)
1. Maintain existing populations 2. Where feasible, re-establish at 6 sites where it has been recently lost.				–	–
Overall condition assessment (<i>tick one box only</i>)					
Targets achieved		Targets not achieved - recovering		Targets not achieved - no change_	
Targets not achieved - declining		Loss		Action inappropriate - Targets achieved Action inappropriate - Targets not achieved	
Constraints on action (<i>List policy, resource, data issues, local delivery</i>)					
<p>1. Lack of staff resources slows the ongoing development and review of a recovery strategy for this species in Wales (human and financial resources, CCW).</p> <p>2. Effective management of all sites to aid <i>Liparis</i> recovery inhibited by lack of knowledge on how best to counter overstabilisation (data issues, CCW). Land tenure situation at Kenfig prevents the establishment of an effective grazing and overall management regime at the most important UK site for <i>Liparis</i> (policy, local delivery, CCW, LA). These issues mean that management targeted at <i>Liparis</i> has to be done using costly manpower and machinery, with an accompanying human and cash resource problem (resource, local delivery, LA).</p> <p>3. Other potential players in south Wales have yet to be “signed up” for this project, this partly dependent on outcome of 1 above (staff time resource, CCW).</p>					
New factors affecting the target, species or habitat (<i>List significant factors not identified in the plans</i>)					
None					

Model 1 (continued)

List of organisations/individual contacted for assessment (<i>Please indicate whether organisations</i>

are national, regional or local)			
CCW			
Actions (List all actions in published plan and indicate whether undertaken at national, regional or local level)	Action taken by:	Contribution to outcome (low, medium, high, insufficient information) 1	Resource (source and Level)
Policy and legislation 5.1.1	None taken by WOAD to date	None	None
<p>Site safeguard and management</p> <p>5.2.1 <i>Liparis</i> is known from four Welsh sand dune sites and positive management is underway at two of these (Kenfig & Whiteford). Further development of Welsh species recovery project is required to give clarify management objectives for <i>Liparis</i> at all four sites. It is very difficult to isolate the costs associated specifically with the conservation of <i>Liparis</i> from overall site management costs, values in last column are best guesses only for this heading.</p> <p>1. Kenfig NNR. Management ongoing at this site includes grazing (inadequate level), scrub control and eradication (limited in extent) and mowing (not specifically targeted at <i>Liparis</i>), as well as broader site fabric conservation. General overstabilisation of dune system not being addressed.</p> <p>2. Whiteford NNR. No management specifically targeted at <i>Liparis</i>, but grazing and scrub eradication are helping to slow down its decline. A review of monitoring data collected to-date is required to feed into the development of the Welsh recovery project.</p> <p>3. Crymlyn Burrows. No positive management undertaken to-date, but some planned (see 5.3.1).</p> <p>4. Pendine. No specific management for <i>Liparis</i>. A difficult site under commercial control as a weapons test site.</p> <p>5.2.2. Detailed survey of two Welsh sites undertaken in 1997, one with low overall population size (Pendine) and one where <i>Liparis</i> is feared extinct (Tywyn). Work done as a prelude to possible restoration management. Study failed to reveal any additional populations at Pendine or presence at Tywyn, thereby</p>	<p>Bridgend County Borough Council / CCW</p> <p>CCW</p> <p>CCW</p>	<p>Low</p> <p>Medium</p> <p>Nil</p> <p>Nil</p> <p>Low</p>	<p>Local Authority c. £ 30K pa. CCW c. £ 10 k pa. via s16 agreement</p> <p>CCW, c. £15 k pa.</p> <p>Nil</p> <p>Nil</p> <p>CCW £ 2k Contract</p>

clarifying options for restoration management at both sites.			research
<p>Species management and protection</p> <p>5.3.1 Monitoring of populations recovered as part of species recovery project at Kenfig NNR ongoing. Review required to inform future development of project in Wales.</p> <p>Joint CCW/Welsh Water Project is planned at Crymlyn Burrows, programme of scrub removal and possibly soil stripping planned for 1997/8.</p> <p>CCW's strategic review of sand dune management priorities in Wales will feed into development of recovery strategy through its consideration of the general issue of overstabilisation.</p> <p>5.3.2. Inappropriate action for Wales, will not be pursued.</p>	CCW CCW/WW CCW	Low	CCW, £ 1k pa.
<p>Advisory</p> <p>5.4.1 Revision to plan needed, with incorporation of an advisory section required. CCW already advises the LA on the management of Kenfig NNR and MoD will require advice concerning management of Tywyn and Pendine.</p>	CCW		
<p>Future research and monitoring</p> <p>5.5.1 CCW is about to commission a project to examine dynamics of seed germination in the wild.</p> <p>5.5.2 Action inappropriate for Wales. However, CCW will liaise with NT and FA to investigate possibility of early felling of plantations where these abut existing open dunes/slacks with recovery potential for <i>Liparis</i>.</p> <p>5.5.3 CCW still engaged in contact with European workers. Further contact is required, together with a review to pull together all known information on management.</p> <p>5.5.4. Not undertaken, advice required on data formats.</p> <p>5.5.5. As for 5.5.4.</p>	CCW CCW	Nil at present Low	Nil at present c. £ 0.1k pa
<p>Communication and publicity</p> <p>Bridgend CBC undertakes a great deal of public liaison. Costs are rough estimates only as it is very hard to separate these from general visitor liaison. CCW staff also involved in communications and publicity at a national level.</p>	Bridgend CBC / CCW	High	LA, c. £ 3k pa. CCW c. 2 k per year through support of

			above and own work.
Additional actions (<i>List additional activities which have contributed to the meeting plan targets, again indicating whether national, regional or local</i>)	Action taken by:	Contribution to outcome (low, medium, high, insufficient information) 1	Resource (Source and Level)

Next steps (*Please provide an indication of the forward programme of work planned*)

1. Review of Welsh recovery project required to incorporate the results of recent commissioned research and monitoring. Review will need to consider how BAP requirements can be fulfilled and to what extent these “add up” to achieving favourable conservation status for *Liparis*. Review should focus on management objectives at each site, ensuring that there is adequate linkage to CCW’s strategic review of coastal dune management in Wales as well as the forthcoming habitat action plan for sand dunes. Review should incorporate a critical appraisal of the factors impeding this BAP and possible measures for their amelioration.
2. Commissioned research into germination ecology of taxon may be continued, depending on funding and the outcome of work initiated in 1997/98.
3. Additional funding needs to be sought to enable the continuation and expansion of the recovery project. The support of industry (British Steel at Kenfig, British Petroleum at Crymlyn and MoD’s operators at Pendine) will need to be secured, either to enable direct site work or sponsorship. The support of partners such as FA (at Tywyn) and MoD (Tywyn & Pendine) also needs to be engaged.

¹ Please provide on a separate sheet any information that you feel supports the decisions taken on whether the contribution to the outcome is low, medium, high or why there is insufficient information to make a judgement.