

PLAN-GNÌOMHA
AN T-SEILLEIN
MHÒIR

GREAT YELLOW
BUMBLEBEE
SPECIES
ACTION PLAN



WESTERN ISLES LOCAL
BIODIVERSITY ACTION PLAN

PLANA-GNÌOMHA
BITH-IOMADACHD
IONADAIL NAN EILEAN SIAR

1. SPECIES PROFILE

Species Definition:

Common Name:

Great yellow bumblebee.

Scientific Name:

Bombus distinguendus.

UK Biodiversity Status:

UK Priority Species.

Statutory Protection:

Within the Western Isles some populations of the bee are on NNRs, SSSIs and RSPB reserves. Nationally scarce.

Associated Habitat and Species:

The great yellow bumblebee is closely associated with two priority habitats, machair and neutral grassland (those in-bye Environmentally Sensitive Area (ESA) herb rich fields). It therefore shares many of the conditions enjoyed by other priority species, species of conservation concern and those classified as of local interest. Priority species include corncrake *Crex crex*, corn bunting *Miliaria calandra* and skylark *Alauda arvensis*, and the Northern Colletes bee *Colletes floralis*. Species of conservation concern include ringed plover *Charadrius hiaticula*, dunlin *Calidris alpina*, lapwing *Vanellus vanellus*, redshank *Tringa totanus*, little tern *Sterna albifrons*, twite *Carduelis flavirostris*, and the belted beauty moth *Lycia zonaria*.

2. OBJECTIVES AND TARGETS

	Objective	Target
1	Map the current range of the bee in the Western Isles.	Produce a map by 2005.
2	Maintain the current range of the bee in the Western Isles.	Ensure no net loss of range.
3	Expand the range of the bee in Lewis and Harris.	Expansion of its range from Northton in Harris (where it has been recorded) along the shoreline of Scarista and Horgabost to Luskentyre by 2008. Expansion of range in Lewis by 2008. It has been recently recorded in North Lewis.
4	Promote the relationship between traditional crofting practice and the conservation of the great yellow bumblebee. This could have the dual purpose of showing the values of traditional crofting and an appreciation of the bee and its role as a pollinator of clover.	Create an exhibition by 2005.

...promote the relationship between traditional crofting practice and the conservation of the great yellow bumblebee



1. CUNNTAS GNÈ

Mìneachadh Gnè:

Ainm Cumanta:

Seillean mòr.

Ainm Saidheansail:

Bombus distinguendus.

Inbhe Bith-iomadachd na RA:

Prìomh Ghnèithean na RA.

Dìon Reachdail:

Taobh a-staigh nan Eilean Siar tha cuid de theaghlaichean seillein air tèarmainn NNran, SSSlan agus RSPB. Gann gu nàiseanta.

Àrainn agus Gnèithean Co-cheangailte ris:

Tha dlùth cheangal aig an t-seillean mòr ri dà phrìomh àrainn, machair agus talamh-feòir neo-phàirteach, (na h-achaidhean àitich Cèarn le Àrainneachd Chugallach (ESA) sin a tha làn lusan). Mar sin tha e a' mealtainn mòran shuidhichidhean co-ionann ri prìomh ghnèithean eile, gnèithean le cudrom glèidhteachais agus an fheadhainn a tha den t-seòrsa le ùidh ionadail. Tha prìomh ghnèithean a' gabhail a-staigh an traon *Crex crex*, a' ghealag-bhuachair *Miliaria calandra* agus an uiseag *Alauda arvensis*, agus an seillean Northern Colletes *Colletes floralis*. Tha gnèithean le cudrom glèidhteachais a' gabhail a-staigh an trilleachain-tràghad *Charadrius hiaticula*, an gille-feadaig *Calidris alpina*, a' churracag *Vanellus vanellus*, an cam-ghlas *Tringa totanus*, an steàrnag-bheag *Sterna albifrons*, an gealan-beinne *Carduelis flavirostris* agus an leòmann belted beauty *Lycia zonaria*.

2. AMASAN AGUS CUIMSEAN

	Amas	Cuimse
1	Mapa a dhèanamh de raon làthaireach an t-seillein sna h-Eileanan Siar.	Mapa a dhèanamh ro 2005.
2	Cumail suas raon làithreach an t-seillein sna h-Eileanan Siar.	Dèanamh cinnteach nach bi call lom a thaobh raon.
3	Raon an t-seillein an Leòdhas agus na Hearadh a leudachadh.	An raon aige a leudachadh bho Thaobh Tuath na Hearadh (far an robh e air a chlàradh) ri cladach Sgarasta agus Horgabost gu Losgaintir ro 2008. An raon a leudachadh ann an Leòdhas ro 2008. O chionn ghoirid chaidh a chlàradh ann an ceann a tuath Leòdhais.
4	An ceangal eadar obair croitearachd traidiseanta agus glèidheadh an t-seillein mhòir. Dh'fhaodadh seo a bhith le rùn luachan croitearachd traidiseanta a shealltainn agus cuideachd luach an t-seillein agus an tàite cudromach aige ann am poileanachadh seamraig.	Taisbeanadh a chruthachadh ro 2005.

Photos (left to right):

Comcrake; Machair flowers; Studies of the great yellow bumblebee are giving us a better understanding of its requirements.

Dealbhan (clì gu deas):

Traon; Flùraichean machrach; Tha sgrùdadh air an seillean mòr air barrachd tuigse a thoirt dhuinn air na feumalachdan aige.



...an ceangal eadar obair croitearachd traidiseanta agus glèidheadh an t-seillein mhòir.

3. CURRENT STATUS

The great yellow bumblebee is one of a number of bumblebee species to have undergone a drastic reduction in range and abundance as a result of loss of habitat in the modern agricultural landscape.

The most recent distribution map for Scotland (Figure 1) shows the main centres of population on the Orkney Isles, the Western Isles south of Harris plus Coll, Tiree and a scattering of mainly coastal records in mainland Caithness and Sutherland.

In the Western Isles the bee is predominantly associated with the machair land of North Uist, Benbecula, South Uist and Barra. It has been recorded on the Monach Isles.

A recent survey of the islands of Harris and Lewis found one nest close to the machair at Northton on the southern end of the island of Harris. Although other scattered areas of suitable habitat were searched no more great yellow bumblebees were found.

*the great yellow
bumblebee has
undergone a drastic
reduction in range
and abundance as
a result of a loss
of habitat...*

Above: Great yellow bumblebee on devil's bit scabious; Right: Sand dunes, Goular, North Uist; Opposite: light grazing by cattle is important for the machair habitat

Gu hàrd: An tseillean mòr air ura-bhallach; Deas: Dùintean Gainmhich, Goular, Uibhist a Tuath; Mu choinneimh: Tha beagan ionaltradh le crodh cudthromach airson àrainneachd na machrach.



3. INBHE LÀITHREACH

'S e an seillean mòr aon de iomadh gnè den t-seillean air an tàinig lùghdachadh anabarrach a thaobh raoin agus àireimh mar thoradh air call àrainn sa chumadh-fìre àiteachais ùr.

Tha am mapa sgaoilidh as ùire airson Alba (Dealbh 1) a' sealltainn gu bheil na h-àireamhan as motha an Arcaibh, sna h-Eileanan Siar deas air na Hearadh còmhla ri Colla, Tìriodh agus cunntas an-siud 's an-seo gu h-àraidh cladaichean air fìr-mòr Ghallaibh agus Chataibh.

Sna h-Eileanan Siar tha an seillean air fhaighinn nas motha air a' mhachair an Uibhist a Tuath, Beinn na Faoghla, Uibhist a Deas agus Barraigh. Chaidh a chlàradh air Hèisgeir.

Ann an sgrùdadh o chionn ghoirid air na Hearadh agus Leòdhas fhuair eadh aon nead faisg air a' mhachair air an Taobh Tuath an ceann a deas na Hearadh. Ged a chaidh ceàrnaidhean sgapte eile de àrainn fhreagarrach a rannsachadh cha d' fhuair eadh seillean-mòr anna.



Dealbh 1: An sgaioleadh làithreach air a bheil lorg (Samhain 2003)

Bho: Murchadh MacDhòmhnaill, (gun clò-bhualadh)

Figure 1: Current known distribution (Nov. 2003)

Source: Murdo MacDonald (Unpublished)



thàinig
lùghdachadh
anabarrach air an
t-seillein mòr thaobh
raoin agus àireimh
mar thoradh air
call àrainn...

4. ECOLOGY AND MANAGEMENT

The great yellow bumblebee in Scotland occupies at least four distinct habitats in different areas. In the Western Isles it is typically associated with clover rich machair where it feeds on bird's foot trefoil early in the season before moving on to clover and then at the end of the summer to knapweed. In Sutherland and Caithness it occurs on less rich duneland where it may also use only two principal forage plants during the season one from the clover family in the early season and knapweed later on. In Caithness it is also found on coastal cliffs where marsh thistle is the main forage plant in July, and inland where it is probably under-recorded. In Orkney it occurs in a range of unimproved habitats including weedy edges of cereal fields where marsh thistles and woundworts are important forage. High densities of these food plants are generally absent from improved or intensively managed ground.

In the Western Isles nests are associated with the machair and areas that have been winter grazed and then allowed to grow throughout the summer. Areas that are lightly grazed by cattle in summer on a rotational basis, as practised by some townships, also support good numbers of the bee. Such areas supported good stands of red clover and common knapweed.

So far all nests found in the Western Isles have been underground, and those that have been successfully excavated have all been in adapted mouse nests. However Duncan (1935) reported from Orkney that a dozen nests were all on the surface below "rank summer herbage". The numbers of workers of the great yellow bumblebee are lower than most species and the bee itself is larger than most. Two nests from Uist recovered at the end of the season contained 69 cells and 80 cells respectively.

Bumblebee colonies are annual. Fertilised queens establish nests in spring. Several generations of workers (non-breeding females) provide the nest with nectar and pollen, until later in the season males and fresh queens (females destined to breed) are produced. Mating occurs and all die except the fertilised queens, which hibernate underground. The breeding cycle of the great yellow bumblebee is short allowing successful colony formation and production of males and queens within the relatively short northern summer. To some extent this is compounded by their predilection for machair flowers, which are not abundant until June or July.

*in the Western
ISLES the great
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is typically
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clover rich machair...*



4. EAG-EÒLAS AGUS RIANACHD

Tha an seillean mòr an Alba air fhaighinn ann an co-dhiù ceithir àrainnean air leth ann an ceàrnaidhean eadar-dhealaichte. Sna h-Eileanan Siar tha e dualtach a bhith air machair le mòran seamraig far am bi e a' beathachadh air barra-mhislean tràth san t-seusan mus gluais e chun an t-seamraig agus an uair sin aig deireadh an t-samhraidh chun a' chnapan-dhubh. An Cataibh agus Gallaibh gheibhear e air mealbhain nach eil cho torrach agus cuideachd dh'fhaodadh nach cleachd e ach dà phrìomh lus solair rè an t-seusan aon bho theaghlach na seamraig aig toiseach an t-seusain agus an cnapan dubh a-rithist. An Gallaibh gheibhear e cuideachd air na creagan leis a' chluaran làna aige mar phrìomh lus-solair san luchar, agus a-staigh san tìr far am faodadh gu bheil e fo-chlàrte. An Arcaibh tha e air fhaighinn ann an caochladh àrainnean neo-leasaichte a' gabhail a-staigh oirean luibheach achaidhean arbhair far a bheil cluairin làna agus creuchd-lusan aige mar lusan solair cudromach. Sa chumantas chan eil na lusan solair sin tiugh air talamh a tha leasaichte no air a dhian-rianachd.

Sna h-Eileanan Siar tha nid mar as trice air a' mhachair agus ann an ceàrnaidhean a tha air an ionaltradh sa gheamhradh agus an uair sin air am fàgail airson fàs tron t-samhradh. Tha ceàrnaidhean air a bheil beagan ionaltraidh le crodh as t-samhradh air stèidh cuairteachaidh, mar a bhios a' tachairt ann an cuid de bhailtean, cuideachd a' toirt taic do dheagh àireamhan den t-seillean. Bha deagh bhadan de sheamrag dhearg agus cnapan dubh sna ceàrnaidhean sin.

Gu ruige seo b' ann fon talamh a bha a h-uile nead a chaidh a lorg sna h-Eileanan Siar, agus bha an fheadhainn a fhuair eadh air cladhach a-mach air an atharrachadh bho nid luchas. Ach thug Duncan (1935) cunntas à Arcaibh gu robh dusan nead uile air uachdar na talmhainn còmhdaichte le "fòghlach samhraidh". Tha an àireamh de sheilleanan mòra a tha nan obraichean nas isle na a' chuid as motha de ghnèithean agus tha an seillean fhèin air aon de na gnèithean as motha. Ann an dà nead a fhuair eadh an Uibhist aig deireadh an t-seusain bha 69 ceallan agus 80 ceallan fa leth.

'S e tuineachadh bliadhnaile a tha aig an t-seillean. Bidh na cràin-sheilleanan a' dèanamh nid as t-earrach. Bidh grunn linntean de sheilleanan-obrach (seilleanan boireann nach bi a' briodadh) a' toirt neactar agus poilean chun an nid, gus an tig seilleanan-lunnach agus cràin-sheilleanan ùra (seilleanan boireann air an sònrachadh airson briodadh) nas fhaide air adhart san t-seusan. Nuair a bhios an torrachadh seachad tha iad uile a' bàsachadh ach na cràin-sheilleanan torrach, a bhios a' dol a chadal airson a' gheamhraidh. Tha cuairt briodaidh an t-seillein mhòir goirid agus mar sin tha e comasach tuineachadh a dhèanamh agus seilleanan-lunnach agus cràin-sheilleanan a thoirt gu bith taobh a-staigh samhraidh glè ghoirid gu tuath. Chan eil a' chùis air a dhèanamh nas fhasa leis an iarrtas aca air flùraichean na machrach, nach eil pailt ron Ògmhios no an luchar.

Photos (left to right):

*Redshank, a species of conservation concern; In the Western Isles the bee is typically associated with clover rich machair; Great yellow bumblebee on knapweed
Dealbhan (cli gu deas):
Cam-ghlas, gnith le cudrom glèidteachais;
Sna h-eileanan Siar tha an t-seillean dualtach a bhith air machair le mòran seamraig;
An t-seillean mòr air cnapan-dubh*



Sna h-Eileanan Siar that an t-seillean mòr dualtach a bhith air machair le mòran seamraig



5. BIODIVERSITY CONTEXT

This species is widespread in northern and central Europe and in Asia, although it is declining in many parts of its range.

Records from the British mainland, mostly dating from before 1970 and many from the nineteenth century, are widely scattered indicating a much more extensive range in the past.

Records since 1970 have contracted sharply and they are now strongly biased towards the extreme north and west of Scotland with only four records between 1970 and 2000 in England and one in Wales. Figure 2 shows the change in distribution.

A survey of Northern Ireland and Donegal was carried out in the summer of 2000 but no great yellow bumblebees were found. There are past records for the species in the area. (A report on a survey of *Bombus distinguendus* in Northern Ireland Summer 2000 by Brian Nelson is included in the UK BAP Bumblebee Working Group report for that year).

The UK Action Plan for Great yellow bumblebee (*Bombus distinguendus*) can be viewed at www.ukbap.org.uk/asp/UKPlans.asp?UKListID=152.

(UK Biodiversity Group Tranche 2 Plans, Volume IV - Invertebrates, Page 209.)

Dealbh 2: Mapaichean a' sealltainn mar a dh'atharraich sgaileadh an t-Seillein-mhòir *Bombus distinguendus*

Bho: Murchadh MacDhòmhnaill, (gun clòbhualadh)

Figure 2: Maps showing change in distribution of Great Yellow Bumblebee *Bombus distinguendus*

Source: Murdo MacDonald, (Unpublished)

A h-uile Cunntas All Records



Cunntasan bho 1960 Records since 1960



Cunntasan bho 1990 Records since 1990



5. SUIDHEACHADH BITH-IOMADACHD

Tha mòran den ghnè seo ann an ceann a tuath agus meadhan na h-Eòrpa agus a Àisia, ged a tha e a' crìonadh ann an iomadh pàirt den raon aige.

Tha cunntasan bho thìr-mòr Bhreatainn, a' chuid as motha dhiubh air an clàradh ro 1970, agus mòran bhon naoitheamh linn deug, glè sgapte a' sealltainn raon mòran nas motha sna bliadhnan a dh'fhalbh.

Tha cunntasan bho 1970 air a dhol sìos gu mòr agus tha barrachd dhiubh a-nis sna ceàrnaidhean as fhaide tuath agus chun an iar an Alba le dìreach ceithir cunntasan eadar 1970 agus 2000 an Sasann agus aon sa Chuimrigh. Tha Dealbh 2 a' sealltainn mar a dh'atharraich an sgaoileadh.

Chaidh sgrùdadh a dhèanamh air Èireann a Tuath agus Dùn nan Gall ann an samhradh 2000 ach cha robh aon seillean mòr air a lorg. Bha a' ghnè air a clàradh roimhe sa cheàm sin. (Tha cunntas mu sgrùdadh air *Bombus distinguendus* an Èireann a Tuath an Samhradh 2000 le Brian Nelson air a ghabhail a-staigh an aithisg bho Bhuidheann-obrach BAP RA air an t-Seillean mòr airson na bliadhna sin).

Chithear Plan-gnìomha na RA airson an t-Seillein mhòir (*Bombus distinguendus*) aig www.ukbap.org.uk/asp/UKPlans.asp?UKListID=152.

(Buidheann Bith-iomadachd na RA Cuibhreann 2 Planaichean, Volume IV - Neo-dhrum-altachain, Taobh-duilleige 209.)



Left (top): Cuckoo flower
 Left (bottom): Machair at Luskenyire, Harris
 Cli (gu h-àrd): Flùr na cuthaig
 Cli (gu h-ìosal): Machair aig Losgaintir, Na Hearradh

6. CURRENT FACTORS AFFECTING THE SPECIES

- ↘ Loss of traditionally cultivated machair.
- ↘ Heavy summer grazing and reduction in rotation period.
- ↘ The increased use of commercially produced fertiliser instead of the more traditional seaweed.
- ↘ The bee could be threatened by apportionment of the machair, which may lead to year round, and/or heavy summer grazing; the adoption of monoculture grass crops and loss of uncultivated herb rich borders and verges.
- ↘ The great yellow bumblebee is not adversely affected by an absence of rabbits, but is possibly constrained by a lack of nest sites in the absence of long-tailed field mice. During studies carried out in 1998 attempts by queens to usurp occupied nest holes were observed.
- ↘ Increased use of herbicides and pesticides.
- ↘ Global warming

7. OPPORTUNITIES AND CURRENT ACTION

- ↘ There are no actions currently being carried out for the species in the Western Isles.
- ↘ Some prescriptions under ESAs could indirectly enhance bee populations.
- ↘ Opportunity to target more precisely under new agri-environment schemes e.g. Rural Stewardship Scheme (RSS)
- ↘ Current management of the machair where this is occurring traditionally maintains the current population. This includes no grazing in the summer, or at most light grazing by cattle, with no use of insecticide and little or no use of herbicide or artificial fertiliser.
- ↘ Opportunity to support traditional and organic crofting.
- ↘ Funded schemes for corncrake management indirectly enhance the environment for bees. Opportunity to direct this to the advantage of bees without in any way altering its effectiveness for corncrake. RSPB is working on a plan to do this on their reserves.
- ↘ Opportunity to retain a wonderful expanse of summer wild flowers.

the bee could be threatened by apportionment of the machair, which may lead to year round, and/or heavy summer grazing...



6. NITHEAN A THA A' TOIRT BU Aidh AIR A' GHNÈ

- ↘ Call machrach air àiteach san dòigh thraidiseanta.
- ↘ Mòran ionaltradh samhraidh agus lùghdachadh san ùine cuairteachaidh.
- ↘ Barrachd todhar gallda ga chleachdadh an àite na feamainn mar bu nòs.
- ↘ Dh'fhaodadh an t-seillean a bhith ann an cunnart bho cho-roinn na machrach, a dh'fhaodadh leantainn gu ionaltradh fad na bliadhna, agus/no mòran ionaltradh as t-samhradh; gabhail os làimh àiteachas feòir sònraichte agus call oirean agus iomallan neo-àitichte a bha làn lusan.
- ↘ Chan eil dìth rabaidean a' cur dragh air an t-seillean mhòr, ach dh'fhaodadh gu bheil e air a bhacadh aig dìth làraich neadachaidh aig an luch-fheòir. Rè sgrùdaidhean a chaidh an dèanamh an 1998 chaidh aire a thoirt do oidhirpean le cràin-sheilleanan air gabhail a-null tollan neadachaidh fhad 's a bha na beathaichean annta.
- ↘ Barrachd puinnsean-lusan agus puinnsean-bhiastan ga chleachdadh.
- ↘ Blàthachadh na cruinne

7. COTHROMAN AGUS OBAIR LÀITHREACH

- ↘ Chan eil obair ga dhèanamh aig an àm seo airson a' ghnè sna h-Eileanan Siar.
- ↘ Dh'fhaodadh cuid de òrdaighean fo ESAan leasachadh neo-dhireach a dhèanamh air àireamhan sheillean.
- ↘ Cothrom air cuimseachadh nas cinntiche fo sgeamaichean ùra àiteachais-àrainneachd m.e. Sgeama Strìubhartachd Dùthchail (RSS)
- ↘ Tha rianachd làithreach air a' mhachair far a bheil seo a' tachairt san dòigh thraidiseanta a' cumail suas nan àireamhan a tha ann an-dràsta. Tha seo a' gabhail a-staigh gun ionaltradh a bhith ann as t-samhradh, no dìreach beagan ionaltradh le crodh, gun a bhith a' cleachdadh puinnsean-bhiastan idir agus ma bhios puinnsean-lusan no todhar gallda air a chleachdadh a chumail gu tomhas glè bheag.
- ↘ Cothrom air taic a thoirt do chroitreachd traidiseanta agus fàs-bheairteach.

- ↘ Tha sgeamaichean maoinichte airson rianachd an traoin a' dèanamh leasachadh neo-dhireach air an àrainneachd don t-seillean. Cothrom seo a stiùireadh gu buannachd nan seillean gun atharrachadh sam bith a dhèanamh air a bhuanachd don traon. Tha RSPB ag obrachadh air plana gus seo a dhèanamh air na tèarmainn aca.
- ↘ Cothrom air raon mìorbhaileach de fhlàraichean fiadhaich an t-samhraidh a ghèidheadh.

Photos (left to right):

The machair habitat at Àrd an Runair, North Uist;
Heavy grazing of the machair can affect the bee
Dealbhan (clì gu deas):
Àrainneachd na machrach aig Àrd an Runair,
Uibhist a Tuath; Faodaidh mòran ionaltradh air
na machrach buaidh a' thoirt air an t-seillean



dh'fhaodadh an t-seillean a bhith ann an cunnart bho cho-roinn na machrach, a dh'fhaodadh leantainn gu ionaltradh fad na bliadhna agus / no mòran ionaltradh as t-samhradh.



8. ACTIONS

	Action	Lead	Priority	Timescale	Partners	Objective
1	Policy and Legislation					
1.1	Promote the use of the Rural Stewardship Scheme (RSS) and other incentives to land managers to ensure 'bee friendly' management of the machair habitat. Develop guidance on the use of the schemes for habitat management.	SAC	High	Medium	SEERAD, CnES, SCF, SNH, RSPB	3, 4
2	Site Safeguard and Management					
2.1	Encourage land managers adjacent to existing sites to introduce 'bee-friendly' maintenance techniques. Identify a Lewis and Harris contact to take this forward.	CnES	Medium	Long-term	SNH, SAC, RSPB, SEERAD, Curracag	3
2.2	Identify areas of suitable habitat in Lewis and Harris and encourage 'bee friendly' management in these areas. Develop habitat management guidelines	SNH	Medium	Long-term	Curracag	3
2.3	Ensure that seed mixtures used on the machair include 'bee friendly' flowers and encourage use of seed of local provenance for any re-seeding.	SEERAD	Medium	Medium	SAC, CnES, RSPB, Land Managers	2, 3, 4,
3	Advisory					
3.1	Produce an awareness leaflet and promotional material for all interests including information on how to distinguish it from other bees and actions that community members can undertake themselves.	SNH	High	Medium	BRISC, CnES, RSPB, SWT, Curracag	1,2,3
3.2	Develop an identification course for bumblebees for target groups and a means for reporting back sightings.	BRISC	High	Medium	Curracag, SNH, RSPB	1, 4
3.3	Publicise availability of free conservation advice from SAC.	SAC	High	Long	SNH, SEERAD, RSPB, SCF	2, 3
3.4	Develop a mechanism to discuss positive management of the machair for the bumblebee with the crofting community. Priorities for positive management to be identified.	SAC	High	Medium	SNH, SCF, SEERAD	
3.5	Encourage community members to grow suitable 'bee friendly' flower seeds in their garden and roadside verges.	CnES	High	Short	SIAT, SNH, Curracag	2, ,3, 4
4	Monitoring & Research					
4.1	Agree and establish a programme of annual survey and monitoring on machair and neutral grassland.	SNH	High	Long	RSPB	1,2,3
4.2	Map the current range of the bee in the Western Isles per 5km square or better. Publicise the map and ask for records.	SNH	Medium	Short	Curracag, BRISC, SCF, RSPB	1,2,3
4.3	Research the potential to seed roadside verges and other suitable habitat with species to attract bees. Investigate the use of existing seed stock held by CnES.	CnES	Medium	Medium	BRISC	3
4.4	Investigate the potential for cornrake management to benefit bees and add additional appropriate measures to the plan (e.g. planting knapweed).	RSPB	Medium	Short	SNH, RSPB	3, 4

ABBREVIATIONS:

BRISC	Biological Recording in Scotland
CC	Crofters Commission
CnES	Comhairle nan Eilean Siar
Curracag	Western Isles Natural History Society
RSPB	Royal Society for the Protection of Birds
SAC	Scottish Agricultural College
SCF	Scottish Crofting Foundation
SEERAD	Scottish Executive Environment & Rural Affairs Department
SIAT	Southern Isles Amenity Trust
SNH	Scottish Natural Heritage
SWT	Scottish Wildlife Trust



8. GNÌOMHAN

	Gnìomh	Stiùireadh	Prìomhachas	Raon-ama	Com-pàirtichean	Amas
1	Poileasaidh agus Reachdas					
1.1	Manaidsearan-fearainn a bhrosnachadh gu bhith a' cleachdadh an Sgeama Stiùbhartachd Dùthchail (RSS) agus iomairtean eile gu dèanamh cinnteach gum bi rianachd na h-àrainn machrach 'seillean-chàirdeil'. Stiùireadh a chur ri chèile mu bhith a' cleachdadh sgeamaichean airson rianachd àrainn.	SAC	Àrd	Meadhanach	SEERAD, CnES, SCF, SNH, RSPB	3, 4
2	Dion agus Rianachd Làraich					
2.1	Manaidsearan-fearainn a mhisneachadh gu bhith a' toirt a-steach dòighean glèidhidh 'seillean-chàirdeil a-steach ri taobh làraich ghnàthaichte'. Com-pàirtiche ann an Leòdhas agus sna Hearadh a chomharrachadh gus seo a thoirt air adhart.	CnES	Meadhanach	Fad-ùine	SNH, SAC, RSPB, SEERAD, Curracag	3
2.2	Cèrnaidhean le àrainn fhreagarrach a chomharrachadh an Leòdhas agus sna Hearadh agus rianachd 'seillean-chàirdeil' a mhisneachadh sna cèrnaidhean sin. Stiùireadh mu rianachd àrainn a chur air dòigh	SNH	Meadhanach	Fad-ùine	Curracag	3
2.3	Dèanamh cinnteach gum bi an siol a thèid a chleachdadh air a' mhachair a' gabhail a-staigh fhùraichean 'seillean-chàirdeil' agus misneachadh siol a bhùinneas don sgìre airson ath-shioladh.	SEERAD	Meadhanach	Meadhanach	SAC, CnES, RSPB, Manaidsearan-fearainn	2, 3, 4
3	Comhairle					
3.1	Bileag mothachaidh agus stuth follaiseachd a dhèanamh mun h-uile seillean com-pàirteachaidh a' gabhail a-staigh fiosrachadh mun dòigh air aithneachadh bho sheilleanan eile agus obair a dh'fhaodas buill den choimhearsnachd a dhèanamh leotha fhèin.	SNH	Àrd	Meadhanach	BRISC, CnES, RSPB, SWT, Curracag	1,2,3
3.2	Cùrsa aithneachaidh airson seilleanan a chur air adhart do bhuidhnean-amais agus dòigh air fios a chur air ais nuair a chithear iad.	BRISC	Àrd	Meadhanach	Curracag, SNH, RSPB	1, 4
3.3	Cothrom air comhairle glèidhteachais an-asgaidh bho SAC a chur air beulaibh an t-sluaigh.	SAC	Àrd	Fada	SNH, SEERAD, RSPB, SCF	2, 3
3.4	Dòigh a dhealbhadh air beachdachadh mu dheagh rianachd den mhachair airson an t-seillean mhòir còmhla ris a' choimhearsnachd croitearachd. Prìomh nithean airson deagh rianachd a bhith air an comharrachadh.	SAC	Àrd	Meadhanach	SNH, SEERAD, SCF	
3.5	Buill den choimhearsnachd a mhisneachadh gu siol fhùraichean 'seillean-chàirdeil' freagarrach a chur sa ghàrradh agus aig oir a' rathaid	CnES	Àrd	Goirid	SIAT, SNH, Curracag	2, 3, 4
4	Sgrùdadh agus Rannsachadh					
4.1	Prògram airson sgrùdadh bliadhnaid den mhachair agus talamh-feòir neo-phàirteach aontachadh agus a stèidheachadh.	SNH	Àrd	Fada	RSPB	1,2,3
4.2	Mapa a dhèanamh de raon làthaireach an t-seillean sna h-Eileanan Siar gach 5km ceàrnagach no nas lugha. Am mapa a chur air beulaibh an t-sluaigh agus cunntasan iarraidh orra.	SNH	Meadhanach	Goirid	Curracag, BRISC, SCF, RSPB	1,2,3
4.3	Rannsachadh a' chothrom air siol a chur an oirean an rathaid agus àrainnean iomchaidh eile le gnèithean fhùraichean a tharraingean seilleanan. Rannsachadh mu chleachdadh stoc sil a tha aig CnES cheana.	CnES	Meadhanach	Meadhanach	BRISC,	3
4.4	Rannsachadh a' chothruim air an traon a rianachd gu buannachd nan seillean agus ceuman freagarrach eile a chur ris a' phlana (m.e. cur cnapan dubh).	RSPB	Meadhanach	Goirid RSPB,	SNH,	3, 4

GIORRACHADH:

BRISC	Clàradh Bith-eòlasach an Alba
CC	Ùghdarras nan Croitearan
CnES	Comhairle nan Eilean Siar
Curracag	Comann Nàdair nan Eilean Siar
RSPB	Comann Rìoghail Dion nan Eun
SAC	Colaiste Àiteachais na h-Alba
SCF	Urras Croitearachd na h-Alba
SEERAD	Roinn na h-Àrainneachd & Chùisean Dùthchail Riaghaltais na h-Alba
SIAT	Urras Goireas nan Eilean a Deas
SNH	Dualchas Nàdair na h-Alba
SWT	Urras Fhiadh-bheatha na h-Alba

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distinguendus*

...the bee
is closely
associated with
two priority
habitats,
machair
and neutral
grassland.



9. FIOSRACHADH

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Bumblebees. Naturally Scottish series,
Dualchas Nàdair na h-Alba.

Dualchas Nàdair na h-Alba (2001)

Species Dossier for *Bombus
distinguendus*

Photos (left to right):

Skylark; The bee feeds on knapweed at the end
of the summer; Traditional crafting practices can
benefit the bee

Dealbhan (clì gu deas)

Uiseag/Topag; Bi an t-seillean a' beathachadh
air cnapan-dubh aig deireadh an t-samhraidh;
Faodaidh dòighean croitearachd traidiseanta an
t-seillean a leasachadh



tha dlùth
cheangal aig
an t-seillean
(mòr) ri dà
phrìomh àrainn
machair agus
talamh-fèidh
neo-phàirteach

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Photographs courtesy of Bill Neill, Angus & Michelle MacDonald, James Smith SNH & RSPB.

Dealbhan le cead bho Bill Neill, Angus & Michelle MacDonald, James Smith SNH & RSPB.

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Department for Sustainable Communities
Comhairle nan Eilean Siar
Council Offices, Sandwick Road
Stornoway HS1 2BW
Tel: 01870 602425 Fax: 01870 602332
Website: www.cne-siar.gov.uk/biodiversity

Roinn Coimhearsnachdan Buan
Comhairle nan Eilean Siar
Oifisean na Comhairle
Rathad Shannabhaig
Steòrnabhagh HS1 2BW
Fòn: 01870 602425 Facs: 01870 602332
Làrach-lìn: www.cne-siar.gov.uk/biodiversity