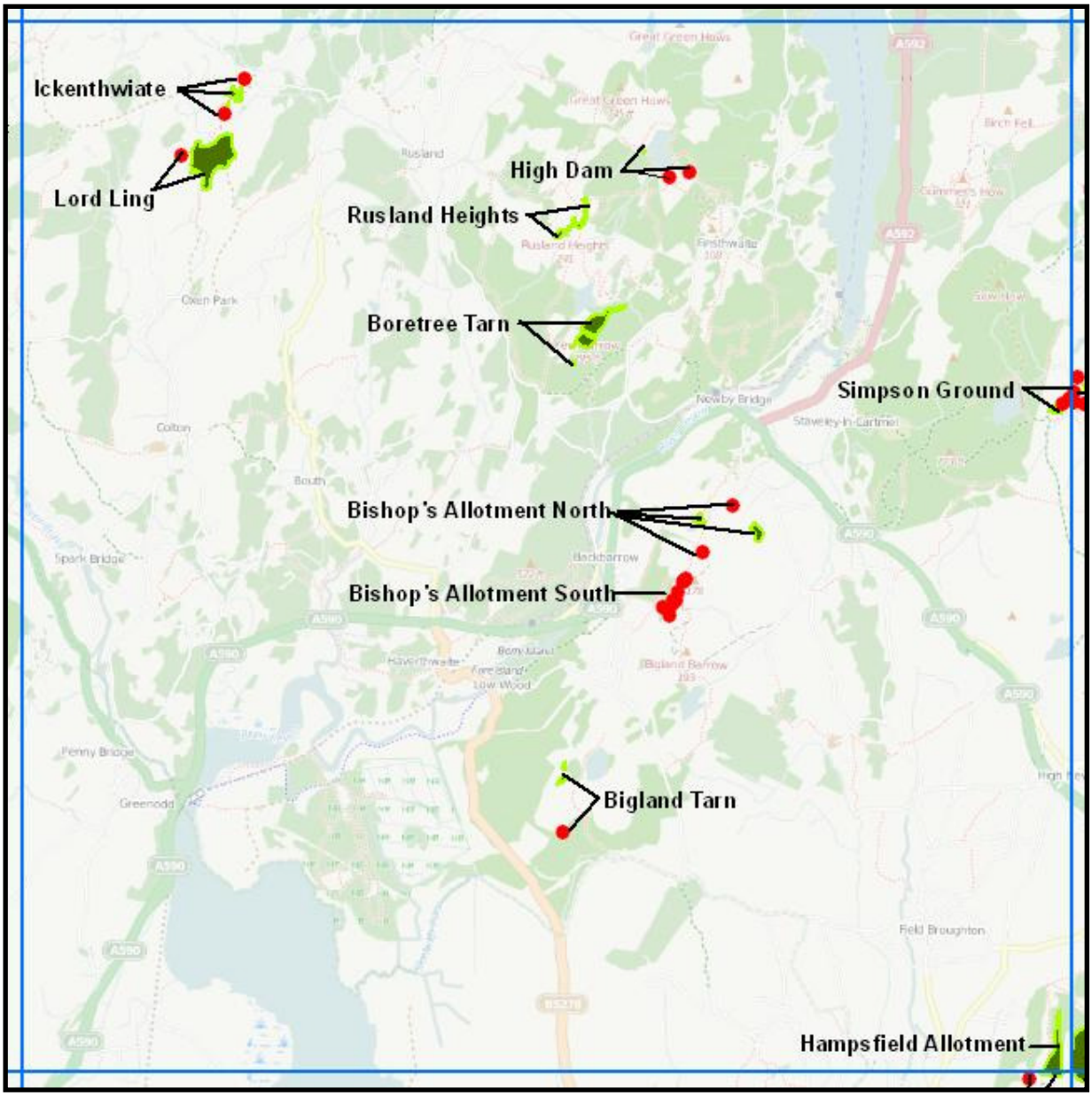
SD38



Sites List:

Jun-SD3188-01	Lord Ling
Jun-SD3289-01	Ickenthwiate
Jun-SD3582-01	Bigland Tarn
Jun-SD3587-01	Boretree Tarn
Jun-SD3588-01	Rusland Heights
Jun-SD3684-01	Bishop's Allotment South
Jun-SD3688-01	High Dam
Jun-SD3785-01	Bishop's Allotment North
Jun-SD4080-01	Hampsfield Allotment
Jun-SD4086-01	Simpson Ground

Uplands for Juniper Project – Survey Form

1. Site details

Site Name: **Lord Ling**	Equiv. L. Ward site (s): **NONE**
Site Ref. Code: Jun-SD3188-01	Survey date: **29/07/2011**
Recorder name (s): **SW RK**	Central grid ref: **SD31797 88532**
Valley / area:	Altitude: **100m**
Aspect:	Ownership:

2. Stand area:

a) Have you changed the boundaries of the stand on the survey map? **YES**

b) GPS number and track name / label? **29/07/11 2&3**

c) Area of sub stands and total area?

Sub stand	**A**	**B**								**Total**
Area	**0.5h**	**0.9h**								**1.4h**
Confidence										

3. Plant numbers and Juniper sub-species? Ssp Communis

Sub stand	**A**	**B**								**Total**
Count	**48**	**113**								**161**
Method										
Confidence										

4. Dominant Vegetation …….

Other vegetation types present:

acid grassland	wet grassland / rushes
dry heath	**wet heath / mire**
Limestone grassland	**Bracken**
Scree	Outcrop / cliff
Limestone scree	Limestone outcrop / cliff

5. Grazing / browsing (circle appropriate grazing animal)?

Sheep Cattle Red Deer Other ……

Indicators of high grazing / browsing pressure?

6. Other threats: No other land management affecting Juniper

7. Juniper age: <u>Difficult to assess seedling/young due to Bracken coverage.</u>

Estimate Percentage					
seedling	young	mature	old	Ill	Dead
		10%	20%	20%	50%
Comments:					

Are fruit bearing trees present? **<u>Yes</u>** / no **<u>25%</u>**

8. Fixed point photography: Insert Grid reference and compass bearing fixed-point photos.

Photo label / Number	**Grid Ref.**	**Comp. bearing**	**Magnification**	**Description of fixed point**
3 (with Roger)	**31762**	**NW - N**		**Start of sub-stand A**

9. Comments (associated flora and fauna, survey / access difficulties?):

<u>Bog Myrtle, Bell Heather and Cross-leaved Heath.</u>

<u>Sub-stand B to Sub-stand A in terms of health of trees and regeneration.</u>

<u>Restricted access due to Bracken. Suggest Sept/Oct survey re: Sub-stand C</u>

Uplands for Juniper Project – Survey Form

1. Site details

Site Name: Ickenthwaite	Equiv. L. Ward site (s): Ickenthwaite
Site Ref. Code: Jun-SD3289-01	Survey date: 15/08/2011
Recorder name (s): PM & CM	Cent. grid ref: SD3205 8933
Valley / area: Rusland	Altitude: 110m
Aspect: SE	Ownership:

2. Stand area:

b) Have you changed the boundaries of the stand on the survey map? Yes

d) GPS number and track name / label? Ickenthwaite 1,2,3,4

e) Area of sub stands and total area?

Sub stand	1	2	3	4	5					Total
Area	n/a	0.07	0.52	0.42	n/a					1.01Ha
Confidence	High	High	High	High	High					

3. Plant numbers and Juniper sub-species? Ssp…Common……

Sub stand	1	2	3	4	5					Total
Count	1	9	20	135	2					167
Method	Exact	Exact	Exact	Exact	Exact					
Confidence	High	High	High	High	High					

4. Dominant Vegetation: Acid grassland / extensive Bracken & patches of Gorse

Other vegetation types present:

acid grassland	wet grassland / rushes
dry heath	wet heath / mire
Limestone grassland	Bracken
Scree	Outcrop / cliff
Limestone scree	Limestone outcrop / cliff

5. Grazing / browsing (circle appropriate grazing animal)?

Sheep Cattle Red Deer Other ……..

Indicators of high grazing / browsing pressure?
Grasses were moderately grazed only.

6. Other threats:

7. Juniper age:

Estimate Percentage					
seedling	young	mature	old	Ill	Dead
0	18	30	44	6	2
Comments: No seedlings visible: several ancient trees of 40cm dia bases.					

Are fruit bearing trees present? **Yes** / no (26% bearing fruit)

8. Fixed point photography: Insert Grid reference and compass bearing fixed point photos.

Photo label / Number	Grid Ref.	Comp. bearing	Magnified	Description of fixed point
Ickenthwaite 1	**SD32009 89294**	**SE**		**View of Sub-stand 4**
Ickenthwaite 2	**SD32058 89378**	**S**		**Very old bush**
Ickenthwaite 3	**SD32085 89337**	**SE**		**Ill bush**

9. Comments (associated flora and fauna, survey / access difficulties?):

Ca. 30 Juniper trees located outside of boundary – see areas & outliers marked pink on map.

Stand is reasonably healthy, ca. 25% of trees fruiting but no seedlings found, poss. Due to sheep grazing.

No access or survey difficulties.

Uplands for Juniper Project – Survey Form

1. Site details

Site Name: Bigland Tarn	Equiv. L. Ward site (s): Bigland Tarn
Site Ref. Code: Jun-SD3582-01	Survey date: 22/04/2012
Recorder name (s): P and C Matthiessen	Cent. grid ref: SD 3520 8285
Valley / area: Leven Valley	Altitude: 140 – 170m
Aspect: NW	Ownership: Bigland Estate

2. Stand area:

c) Have you changed the boundaries of the stand on the survey map?
Yes

f) GPS number and track name / label?
N / A

g) Area of sub stands and total area?

Sub stand	A	B								**Total**
Area	0.12	0.27								0.39ha
Confidence	5	5								5

3. Plant numbers and Juniper sub-species? **Ssp…**comm**……**

Sub stand	A	B	C							**Total**
Count	12	8	1							21
Method	WT	WT	WT							WT
Confidence	H	H	H							H

4. Dominant Vegetation …Bracken…….

Other habitats / vegetation types present:

acid grassland	wet grassland / rushes
dry heath	wet heath / mire
Limestone grassland	Bracken
Scree	Outcrop / cliff
Limestone scree	Limestone outcrop / cliff
Woodland	

5. Grazing / browsing (circle appropriate grazing animal)?

Sheep Cattle Red Deer Other …Roe deer……..

Indicators of high grazing / browsing pressure?
Low pressure at present

6. Other threats:

Shading by tall trees

7. Juniper age:

Estimate Percentage					
seedling	young	mature	old	Ill	Dead
		20%	70%	10%	
Comments: Ill trees were shaded. Only 10 – 15% of bushes were fruiting.					

Are fruit bearing trees present? Yes / no

8. Fixed point photography: Insert Grid reference and compass bearing fixed point photos.

Photo label / Number	**Grid Ref.**	**Comp. bearing**	**Magnification**	**Description of fixed point**

9. Comments (associated flora and fauna, survey / access difficulties?):
Sub-stand A relates to the northern most stand, Sub-stand B the central area, and Sub-stand C the single outlier to the south.
This stand exists around the boundaries of the open land where it is probably struggling to compete with tall trees and bracken. The age classes found back this up and the fact that no seedlings or young trees were found suggests that there has been no regeneration in the last 30 – 60 years.

Restoration:
This site, one of the southernmost in the National Park for juniper, must have held juniper for more than a century. Its proximity to a number of historical gunpowder works in the Leven Valley suggests that it may have been planted here in the past to supply the huge demand for juniper charcoal from this industry. Restoration work would therefore be worthwhile for historical / cultural reasons, as well as for the wildlife benefits that this species brings.

Very few female (berry bearing) trees were found at Bigland Tarn, so restoration work should involve planting more junipers in an attempt to improve the regeneration potential at the site. Absolute numbers will depend on the wishes of the landowner, but a minimum of sixty junipers should ensure that a sufficient number of each sex are present to encourage regeneration, and also ensure that a number of sufficiently large clumps can form to provide habitat for a number of birds and invertebrates.

These should be planted in clumps of 10, with individuals planted between 5 foot and 8 foot apart. Two groups of 30 should be planted around the highest points within the two enclosures – one at Rough Coppice and one at Bigland Heights. Select predominantly grassy areas close to rock outcrops for planting. Adjacent vegetation growth should not be too strong here; limiting the amount of weeding that will be required around planted junipers.

The type of protection required for planted trees depends upon the grazing regime at the site. If sheep are out-wintered on this area, individual tree guards or fencing will be required to prevent browsing or pulling up of seedlings. Tree guards need to be 0.9m high and at least 30cm diameter, preferably of an open mesh type to reduce the greenhouse effect on the plants.

Uplands for Juniper Project – Survey Form

1. Site details

Site Name: Boretree Tarn	Equiv. L. Ward site (s): Yew Barrow noth and Sth
Site Ref. Code: Jun-SD3587-01	Survey date: 16/10/2011. Re-visited 4/06/2013 – M.D. and P.M.
Recorder name (s): P and C Matthiessen	Cent. grid ref: SD 354870
Valley / area: Finsthwaite	Altitude: 190 – 245 m
Aspect: NW and SE	Ownership:

2. Stand area:

d) Have you changed the boundaries of the stand on the survey map?
Yes

h) GPS number and track name / label?

i) Area of sub stands and total area?

Sub stand	1									**Total**
Area	5.56									5.56 ha
Confidence	3									3

3. Plant numbers and Juniper sub-species? **Ssp…**J.c.comm**……**

Sub stand	1									**Total**
Count	675									675
Method	WT									WT
Confidence	M									M

4. Dominant Vegetation **…**Woodland…**…….**

Other vegetation types present:

acid grassland	wet grassland / rushes
dry heath	wet heath / mire
Limestone grassland	Bracken
Scree	Outcrop / cliff
Limestone scree	Limestone outcrop / cliff

5. Grazing / browsing (circle appropriate grazing animal)?

Sheep Cattle Red Deer Other Roe deer……..

Indicators of high grazing / browsing pressure?

Ground flora quite dense and tall across much of the stand, with some areas dominated by tall, thick bracken. However, most heather is browsed showing light to moderate impacts, with sometimes more than two thirds of shoots removed in the

winter and with some cushion growth forms (patchy). Browsing of juniper 'moderate' overall and along the top of the ridge most bushes have had more than two thirds of last year's shoots removed during the winter / spring. Recommendations queries

6. Other threats: Shading by tall trees which has already killed tens of trees on the lower slopes.

7. Juniper age:

Estimate Percentage					
seedling	young	mature	old	Ill	Dead
0	<5%	10	80	present	5
Comments: Large proportion of the juniper were tall at 3 – 4m. high. Only five bushes seen with berries and these showed sparse fruiting. This may be due to a combination of browsing and old age.					

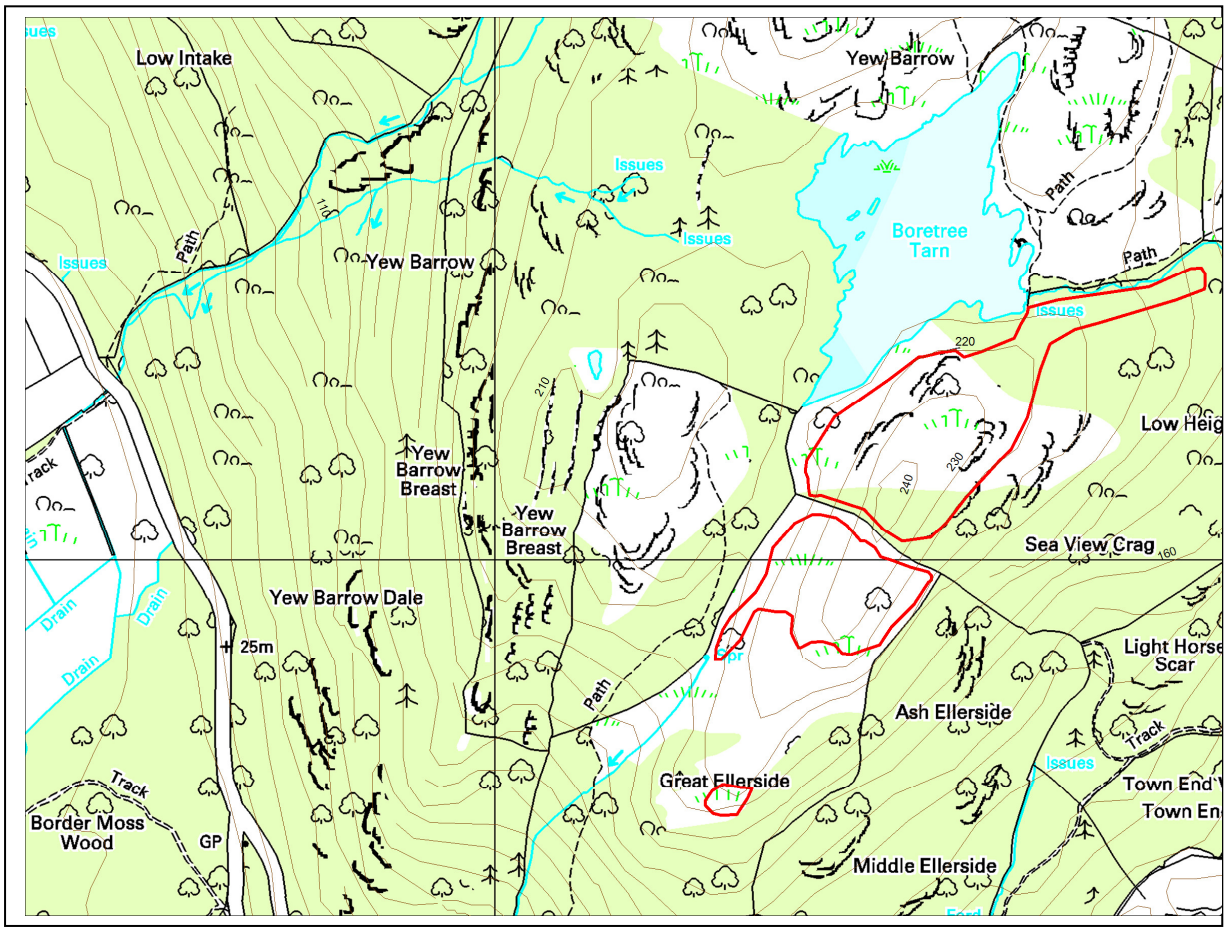
Are fruit bearing trees present? Yes / no

8. Fixed point photography: Insert Grid reference and compass bearing fixed point photos.

Photo label / Number	**Grid Ref.**	**Comp. bearing**	**Magnification**	**Description of fixed point**

9. Comments (associated flora and fauna, survey / access difficulties?):
Access is difficult due to the density of the woodland and of the juniper stand. This is especially so in the northern half of the stand. This made it impossible to measure the area of the stand accurately as the perimeter could not be easily walked.
The numbers are almost certainly an underestimate due to the difficulty of access and there is probably a low density of juniper in the woodland immediately to the east of the northern sub-stand down to about 190 metres altitude. Below this altitude the woodland is very dense and no junipers are present. Tall trees include birch, oak, ash, holly, yew, sycamore, cherry, Scot's pine and larch.Tawny owl, red kite and buzzard were seen.

Restoration: This site is unusual in that it is suffering from shading and browsing at the same time. This is largely due to the presence of red deer as the main herbivore and this species' liking for juniper. It may be that red deer are limiting the fruiting of established bushes through their browsing, and at the same time are not grazing the ground flora enough to create regeneration niches for juniper seed. The most effective restoration management would be to introduce cattle grazing to this area in order to limit the growth of ground flora and trample bracken around juniper, and to limit succession to tall woodland. Management of red deer numbers at the same time would be essential for cattle grazing to have the desired effect however.


Low Intake
Yew Barrow
Issues
Path
Boretree Tarn
Yew Barrow
Yew Barrow Breast
Yew Barrow Breast
Yew Barrow Dale
Sea View Crag
Drain
Drain
Drain
25m
Track
Border Moss Wood
GP
Path
Great Ellerside
Ash Ellerside
Middle Ellerside
Light Horse Scar
Track
Town End
220
210
230
240
160

Uplands for Juniper Project – Survey Form

1. Site details

Site Name: Rusland Heights	Equiv. L. Ward site (s): None
Site Ref. Code: Jun-SD3588-01	Survey date: 14/05/2012
Recorder name (s): M Douglas, A Crowe	Cent. grid ref: SD3529 8807
Valley / area: Rusland	Altitude: 200 – 240m
Aspect: Various	Ownership:

2. Stand area:

e) Have you changed the boundaries of the stand on the survey map?
N / A
j) GPS number and track name / label?
N / A
k) Area of sub stands and total area?

Sub stand	A									**Total**
Area	1.92									1.92
Confidence	4									4

3. Plant numbers and Juniper sub-species? **Ssp…**comm**……**

Sub stand	**A**									**Total**
Count	**200**									**200**
Method	**WT**									**WT**
Confidence	**M**									**M**

4. Dominant Vegetation …dry heath…….

Other habitats / vegetation types present:

acid grassland	wet grassland / rushes
dry heath	wet heath / mire
Limestone grassland	Bracken
Scree	Outcrop / cliff
Limestone scree	Limestone outcrop / cliff
Woodland	

5. Grazing / browsing (circle appropriate grazing animal)?

Sheep Cattle Red Deer Other ……..

Indicators of high grazing / browsing pressure?
Sheep have been off-wintered for around ten years, and DSH in good condition, but most juniper browsed by red deer, more heavily at the south end. Bushes have obviously developed in conditions with less red deer pressure, but have later been more heavily browsed as numbers have increased.

6. Other threats:

Shading of a few trees at the south end

7. Juniper age:

Estimate Percentage					
seedling	young	mature	old	Ill	Dead
		present	Present		
Comments: Dominated by old trees but substantial numbers of mature juniper too. Deer browsing inhibiting fruiting in some trees.					

Are fruit bearing trees present? Yes / no

8. Fixed point photography: Insert Grid reference and compass bearing fixed point photos.

Photo label / Number	**Grid Ref.**	**Comp. bearing**	**Magnification**	**Description of fixed point**
Jun-SD3588-01A				Collapsed, deer browsed juniper
Jun-SD3588-01B				Close up of deer browsed shoots

9. Comments (associated flora and fauna, survey / access difficulties?):
R. Crowe aims to plant between 600 and 1000 junipers around the existing stand under HLS.

Uplands for Juniper Project – Survey Form

1. Site details

Site Name: Bishop's Allotment	Equiv. L. Ward site (s): None
Site Ref. Code: Jun-SD3684-01	Survey date: 08/09/2011
Recorder name (s): P and C Matthiessen	Cent. grid ref: SD 3620 8449
Valley / area: Leven Valley	Altitude: 115 – 140 m
Aspect: W / SW	Ownership:

2. Stand area:

f) Have you changed the boundaries of the stand on the survey map?
Newly plotted juniper.

l) GPS number and track name / label?

m) Area of sub stands and total area?

Sub stand										**Total**
Area										N / A
Confidence										

3. Plant numbers and Juniper sub-species? **Ssp…**comm**……**

Sub stand	A									**Total**
Count	19									19
Method	WT									WT
Confidence	H									H

4. Dominant Vegetation …Woodland…**……**

Other vegetation types present:

acid grassland	wet grassland / rushes
dry heath	wet heath / mire
Limestone grassland	Bracken
Scree	Outcrop / cliff
Limestone scree	Limestone outcrop / cliff

5. Grazing / browsing (circle appropriate grazing animal)?

Sheep Cattle Red Deer Other Roe Deer……..

Indicators of high grazing / browsing pressure?
Low grazing pressure from deer alone at present. Distribution of juniper in wet areas may suggest heavy browsing / grazing in the past?

6. Other threats:

Most bushes shaded by willow / birch.

7. Juniper age:

Estimate Percentage					
seedling	young	mature	old	Ill	Dead
		present	present	present	
Comments:					

Are fruit bearing trees present? Yes / no

8. Fixed point photography: Insert Grid reference and compass bearing fixed point photos.

Photo label / Number	**Grid Ref.**	**Comp. bearing**	**Magnification**	**Description of fixed point**

9. Comments (associated flora and fauna, survey / access difficulties?):

2 red kites and 1 adder seen. Birch, willow and oak dominate the area where the juniper is found.
This is probably a small remnant population form a once bigger stand, which is now struggling to compete with taller growing trees.

Restoration:
It appears that this stand may have been affected by grazing in the past, with many of the junipers being found in sub-optimal areas in wet ground, perhaps regenerating here away from livestock. This has now been reversed and low levels of grazing are allowing succession to tall trees which are shading out the juniper. No juniper seedlings or young trees were found, and with only 4 berry bearing bushes present the potential for regeneration may be low.

The proximity of this stand to a number of historical gunpowder works in the Leven Valley suggests that it may have been planted here in the past to supply the huge demand for juniper charcoal from this industry. Restoration work would therefore be worthwhile for historical / cultural reasons, as well as for the wildlife benefits that this species brings.

Juniper planting would therefore be a good option for this site. Absolute numbers will depend on the wishes of the landowner, but a minimum of sixty junipers should ensure that a sufficient number of each sex are present to encourage regeneration, and also ensure that a number of sufficiently large clumps can form to provide habitat for a number of birds and invertebrates.

These should be planted in clumps of 10, with individuals planted between 4 foot and 8 foot apart. Junipers should be planted around the highest ground within the enclosure, away from most of the tall trees. Selection of predominantly grassy areas close to rock outcrops should limit the amount of weeding that will be required, as low growing grasses are less likely to out-compete seedling junipers.

The type of protection required for planted trees depends upon the grazing regime at the site. If sheep are out-wintered on this area, individual tree guards or fencing will be required to prevent browsing or pulling up of seedlings. Tree guards need to be 0.9m high and at least 30cm diameter, preferably of an open mesh type to reduce the greenhouse effect on the plants. The presence of the boundary wall running along the ridge of high ground could allow the construction of a relatively inexpensive exclosure adjacent to this feature.

Uplands for Juniper Project – Survey Form

1. Site details

Site Name: High Dam	Equiv. L. Ward site (s): High Dam E&W
Site Ref. Code: Jun-SD3688-01	Survey date: 14-08-2011
Recorder name (s): PM CM	Cent. grid ref: SD3606 8862
Valley / area: Finsthwaite	Altitude: 186m
Aspect: SE	Ownership:

2. Stand area:

g) Have you changed the boundaries of the stand on the survey map? NO

n) GPS number and track name / label? High Dam 1 (sub-stand 30)

o) Area of sub stands and total area?

Sub stand	1	2	3	4	25	30				**Total**
Area	0	0	0	4	-	229				2.26ha
Confidence										5

n.b. Juniper in sub-stand 25 too spread out for meaningful estimate.

3. Plant numbers and Juniper sub-species? Ssp Common Juniper

Sub stand	**1**	**2**	**3**	**4**	**25**	**30**				**Total**
Count	**0**	**0**	**0**	**4**	**18**	**14**				**36**
Method	Exact	Exact	Exact	Exact	Exact	Exact				**Exact count**
Confidence	High	High	High	High	High	High				**High**

4. Dominant Vegetation …….

Other vegetation types present:
dry heath wet heath / **mire.**
Sub-stands 2 & 30 – Some Alder, Willow & Birch but also open Mire with Bog Myrtle.
Sub-stands 1,3 & 4 – Oak, Birch dry woodland
Sub-stand 25 – Larch, Birch & Alder woodland (very wet with some Mire)

5. Grazing / browsing (circle appropriate grazing animal)?

None. Stock excluded.

Indicators of high grazing / browsing pressure?

No grazing impact assessment carried out. No signs of grazing on grasses, Heather or Bog Myrtle.

6. Other threats:

Four sub-sites previously recorded now have no Juniper.

7. Juniper age:

Estimate Percentage					
seedling	young	mature	old	Ill	Dead
		30%	15%	50%	5%
Comments: Most trees had areas of brown leaves & generally scanty leaf cover.					

Are fruit bearing trees present? **Yes (1 tree)** / no

8. Fixed point photography: Insert Grid reference and compass bearing fixed point photos.

Photo label / Number	**Grid Ref.**	**Comp. bearing**	**Magnification**	**Description of fixed point**
High Dam 25-1	SD36156 88538	E		Group of 4 ill trees in sub-stand 25
High Dam 25-2	SD36167 88540	E		1 dying tree in sub-stand 25
High Dam 30-1	SD35931 88757	N		Relatively healthy tree in sub-stand 30
High Dam 30-2	SD35930 88764	W		Tree in sub-stand 30

9. Comments (associated flora and fauna, survey / access difficulties?):

In general, all the sub-stands were overshadowed by large trees which appear to have grown up since Ward's survey. Grazing pressure was very low so it seems probable that the poor condition of this stand is mainly due to competition for light with larger trees. The 'best' sub-stand (no. 30) was shaded on its north side but open to the sun on its south side (mire with Bog Myrtle). Most areas were very boggy (2,25,30) with extensive Larch, Birch, Alder etc. Areas 1,3 & 4 were drier with extensive Oak, Holly & Birch. Access is generally good but very boggy in most places.

Although the area of sub-stand 25 was not considered possible for measurement, the location of the trees was as follows:-

SD36108 88526 – 1 tree nearly dead <5cm SD36128 88505 – 1 tree<5cm
SD36133 88566 – 1 tree ill, 5 – 10cm SD36103 88569 – 4 ill trees, 5 – 10cm
SD36103 88530 – 1 tree, nearly dead, <5cm SD36181 88540 – 1 tree, nearly dead
SD36168 88538 – 4 trees, all ill, 5 – 10cm SD36146 88521 – 1 tree, ill, <5cm
SD36149 88565 – 3 trees, all ill, 5 – 10cm SD 36137 88540 – 1 fruiting tree <5cm

No Juniper were found under Larch plantation and only some under Alder/Birch. The only sub-stand doing reasonably well was not shaded at all on its southern side.

Uplands for Juniper Project – Survey Form

1. Site details

Site Name: Bishop's Allotment North	Equiv. L. Ward site (s):
Site Ref. code: SD3785-01	Survey date: 17/04/2012
Recorder name (s):P Matthiessen	Cent. grid ref: SD367 852
Valley / area: Leven valley	Altitude: 110 – 120m
Aspect: NW	Ownership:

2. Stand area:

h) Have you changed the boundaries of the stand on the survey map? NO

p) GPS number and track name / label? Old Back A / Old Back B GPS no.5

q) Area of sub stands and total area?

Sub stand	A	B								**Total**
Area	8498	16953								25451m2
Confidence	HIGH	HIGH								HIGH

3. Plant numbers and Juniper sub-species? **Ssp…** J communis

Sub stand	**A**	**B**		**C outlier**	**D outlier**					**Total**
Count	**10**	**29**		**2**	**4**					**45**
Method	**Walk-through**	**Walk-through**								
Confidence	**HIGH**	**HIGH**		**HIGH**	**HIGH**					

4. Dominant Habitat / Vegetation. Acid grassland

Other habitats / vegetation types present:

acid grassland	**wet grassland** / rushes
dry heath	wet heath / mire
Limestone grassland	**Bracken**
Scree	Outcrop / cliff
Limestone scree	Limestone outcrop / cliff
Woodland	

5. Grazing / browsing (circle appropriate grazing animal)?

Sheep **Cattle** Red Deer Other **Roe Deer**

Indicators of high grazing / browsing pressure?

6. Other threats: None obvious – seems fairly low

7. Juniper age:

Estimate Percentage					
seedling	young	mature	old	Ill	Dead
		50	50	5	
Comments: Almost all in good condition					

Are fruit bearing trees present? Yes / **no**

8. Fixed point photography: Insert Grid reference and compass bearing fixed point photos.

Photo label / Number	**Grid Ref.**	**Comp. bearing**	**Magnification**	**Description of fixed point**

9. Comments (associated flora and fauna, survey / access difficulties?):
This stand lies immediately to the north of the small stand on Bishop's Allotment recorded by P Matthiessen in 2011. It is, however, distinct from the latter.
It is noteworthy that most of the Juniper in the present survey were growing in the open away from standing trees. The few Juniper in poor condition were, in fact, shaded by Willow trees.

Uplands for Juniper Project – Survey Form

1. Site details

Site Name: Hampsfield allotment	Equiv. L. Ward site (s): Hampsfield Allotment SW, NW, NE, SE
Site Ref. Code: Jun-SD4080-01	Survey date: 02/01/2012
Recorder name (s): P&C Matthiessen	Cent. grid ref: SD400-802
Valley / area: Field Broughton/Cartmel	Altitude: 130 – 190m
Aspect: NE/NW	Ownership:

2. Stand area:

i) Have you changed the boundaries of the stand on the survey map? No

r) GPS number and track name / label? No tracks recorded

s) Area of sub stands and total area?

Sub stand	A	B								**Total**
Area	4.5	10.8								15.3Ha
Confidence	Med	Med								

3. Plant numbers and Juniper sub-species? **Ssp…**Common Juniper

Sub stand	A	B							**Total**
Count	78	300-400							378-478
Method	Direct	Direct							VP
Confidence	High	Medium							Medium

4. Dominant Vegetation …Limestone Grassland & Ash/Holly open woodland

Other vegetation types present:

acid grassland	wet grassland / rushes
dry heath	wet heath / mire
Limestone grassland	Bracken
Scree	Outcrop / cliff
Limestone scree	Limestone outcrop / cliff

5. Grazing / browsing (circle appropriate grazing animal)?

Sheep Cattle Red Deer Other Roe Deer

Indicators of high grazing / browsing pressure?

Medium grazing pressure from deer.

6. Other threats: Most of the area was covered by Conifer plantation until about 7 years ago, when it was clear-felled.

7. Juniper age:

Estimate Percentage					
seedling	young	mature	old	Ill	Dead
		80%	10%	15%	
Comments: Die-back occurring where exposed to prevailing wind.					

Are fruit bearing trees present? Yes / no (approx. 15%)

8. Fixed point photography: Insert Grid reference and compass bearing fixed point photos. NO PHOTOS TAKEN

Photo label / Number	**Grid Ref.**	**Comp. bearing**	**Magnification**	**Description of fixed point**

9. Comments (associated flora and fauna, survey / access difficulties?):
The general impression is that the Juniper stand once covered a wider area but that the old conifer plantation (now felled) probably shaded out a lot of Junipers & caused them to die. The highest density of Juniper is in the SE part of sub-stand B which consists largely of Limestone pavement and would not therefore have been planted with conifers.
Access to parts of the Limestone pavement is difficult, hence the count for sub-stand B is not very accurate.

Uplands for Juniper Project – Survey Form

1. Site details

Site Name: Simpson Ground	Equiv. L. Ward site (s): None
Site Ref. code: Jun-SD4086-01	Survey date: 05/09/2013
Recorder name (s): M. Douglas	Cent. grid ref: SD4004 8648
Valley / area: South Lakes	Altitude: 170m – 180m.
Aspect: Various	Ownership:

2. Stand area:

j) Have you changed the boundaries of the stand on the survey map?
N / A

t) GPS number and track name / label?
N / A

u) Area of sub stands and total area?

Sub stand	A	B	C	D	E	F	G	H		**Total**
Area										
Confidence	4	5	5	5	5	5	4	5		4

3. Plant numbers and Juniper sub-species? **Ssp…J.c.comm** ……

Sub stand	A	B	C	D	E	F	G	H		**Total**
Count	21	2	1	5	1	1	5	2		38
Method										WT
Confidence	h	h	h	h	h	h	h	h		h

4. Dominant Vegetation …Acid grassland…….

Other habitats / vegetation types present:

acid grassland
dry heath
Limestone grassland
Scree
Limestone scree
Woodland
wet grassland / rushes
wet heath / mire
Bracken
Outcrop / cliff
Limestone outcrop / cliff

5. Grazing / browsing (circle appropriate grazing animal)?

Sheep Cattle Red Deer Other ……..

Indicators of high grazing / browsing pressure?

Almost all junipers browsed, most showing moderate to heavy browsing impacts. Height, extent and depth of browsing all suggest red deer browsing. Impacts on heather also point to frequent browsing by red deer.

6. Other threats:

7. Juniper age:

Estimate ~~Percentage~~					
seedling	young	mature	old	Ill	Dead
4	1	3	25		5
Comments: Some very old juniper but numerous berry bearing trees and some recent regen.					

Are fruit bearing trees present? Yes / no

8. Fixed point photography: Insert Grid reference and compass bearing fixed point photos.

Photo label / Number	**Grid Ref.**	**Comp. bearing**	**Magnification**	**Description of fixed point**
Jun-SD4086-01A				Overview of Area A.

9. Comments (associated flora and fauna, survey / access difficulties?):
Juniper is scattered across a large area at this site and is mostly composed of old trees. Although 4 seedlings and one young juniper were found, the browsing on these and other bushes suggests that they might struggle to establish under current conditions. Numerous trees at this allotment include ash, rowan, holly, grey willow, birch and eared willow (1 individual found at SD 39984 86514).

Red deer may be visiting the site frequently and could be an obstacle to plans to plant juniper in the near future.