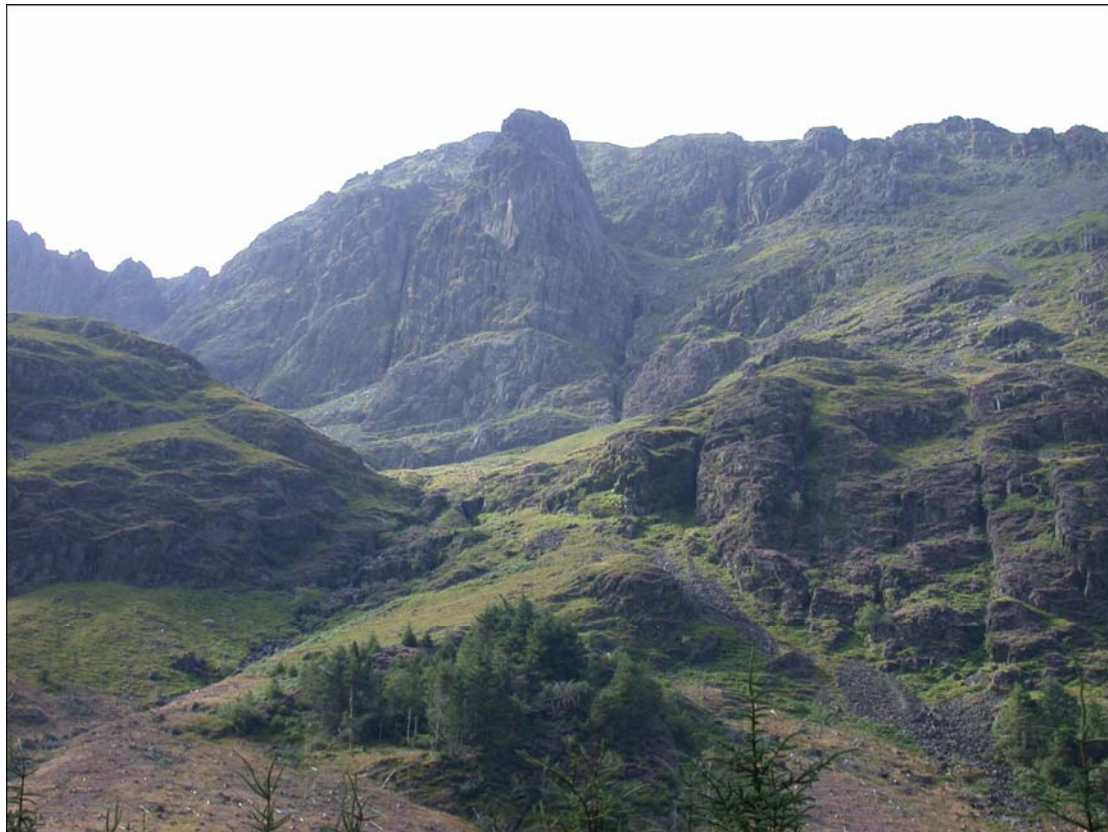


# Wild Ennerdale



## Establishment of a Vegetation Monitoring Baseline

2006



Keith Miller

12 October 2006

Funded by English Nature



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## **1. INTRODUCTION**

The primary purpose of the work is to establish a record of the existing vegetation in Ennerdale and enable the Wild Ennerdale Partnership to measure ecological change in the valley. The nature of the Wild Ennerdale project means that the timescale for vegetation change is unspecified and so it is important that the methodology adopted is simple and repeatable.

## **2. METHODOLOGY**

A preliminary familiarisation visit was made with Simon Webb (English Nature) on 11 August 2006. We visited all of the sites apart from number 09 beside the northern fell fence. 12 sites were identified for the establishment of monitoring quadrats with a variety of habitats, aspects, altitudes, management and grazing impacts. Quadrats in wooded or potentially wooded sites were 5m x 5m, most sites also having 1m x 1m quadrats located within the larger ones; quadrats in open sites were 1m x 1m.

Establishment of quadrats and their recording was undertaken during the late summer: 14-18 August and 06-07 September 2006. To facilitate the fieldwork I was assisted by Mo Richards. Site details, recording dates and the prevailing weather conditions are given in table 1.

Quadrats were established according to the following principles stated in the contract specification:

- the vegetation must be broadly representative of the habitat type;
- quadrats should have a “mirrored location” inside and outside exclosures;
- edge effects caused by fence lines should be avoided.

Where an exclosure exists, quadrats were paired with one positioned within the exclosure and one outside, and directly opposite (i.e. mirrored about the fence line).

At sites 05A and 05B the exclosures had not been constructed when the recording was carried out and quadrats were established on the basis that the fence would be positioned along the line marked by the metal ground markers placed by Simon Webb and Keith Miller on 11 August 2006 to mark the exclosure.

Fence edge effects were avoided by positioning quadrats 1.0, 1.5 or 2.0 metres (as appropriate) from the exclosure fence with the “mirrored” quadrats being an equal distance from the fence and directly opposite one another.

Data on the exact location of the quadrat with respect to exclosure fences, other fence or natural features (as appropriate) were recorded and are included on the relevant quadrat information sheets (section 4). Sketch plans were made of every site and are also included on these information sheets.

Table 1. Site details, recording dates and weather conditions.

Site Ref.	Site Name	Grid Reference	Date Recorded	Weather & Conditions
01	Iron Crag	NY 12181219	17/08/2006	Dry
02	Side Wood	NY 11961391	18/08/2006	Very wet
03	Silver Cove cattle grazing site (open)	NY 13031353	06/09/2006	Dry
04	Silver Cove cattle grazing site (wooded)	NY 13261330	06/09/2006	Wet
05A	Silver Cove	NY 13221122	17/08/2006	Wet
05B	Little Gowder Crag	NY 14261088	07/09/2006	Dry & breezy
06	Dubs Quarry	NY 18481278	14/08/2006	Dry
07	Upper valley south side	NY 18241263	16/08/2006	Dry
08	River Liza upper bend	NY 18901237	15/08/2006	Wet & very midgy
09	Northern fell fence	NY 16951385	16/08/2006	Dry
10A	Ennerdale Water shore (cattle)	NY 12381386	18/08/2006	Wet
10B	Ennerdale Water shore (no cattle)	NY 12431387	18/08/2006	Wet

A total of 10 5m x 5m quadrats and 16 1m x 1m quadrats were established and recorded.

Each quadrat has been allocated a reference number which follow a standard pattern. The first numbers, plus letter in two cases, refer to the site reference as listed in table 1. The second section indicates whether the quadrat is inside or outside an enclosure, has no enclosure, or is or not cattle grazed. The third section shows the size of the quadrat. For example 04–Out–5x5, 07–NoExcl–1x1 and 10A–Cattle–1x1. These have been used throughout the documentation.

## 2.1 Marking quadrats

Quadrats were marked with either wooden pegs (3cm x 3cm tree stakes cut to an appropriate length), stock fence stobs (acquired from a stash discovered beside the fell fence near site 09 and from the FC store) or metal ground markers (upland sites 01, 05A and 05B). The underground “legs” of the metal ground markers could not be extended as we did not have access to the specific Feno driver.

To facilitate relocation some of the pegs and stobs were marked with fluorescent orange paint and where appropriate the enclosure fence was also marked with this paint.

## 2.2 Grid references and altitudes

Grid references and altitudes stated are both GPS readings taken at site. The GPS was allowed at least 5 minutes to settle before taking the reading. These readings have

been compared with the altitude given for the grid reference on *Memory Map* (OS 1:25,000) and all are within 10m.

### **2.3 Plant recording**

All vascular plants and bryophytes were recorded from within the quadrats and assigned a domin score. A total of 58 vascular plants and 45 bryophytes were recorded from the quadrats. The timing of the contract means that certain early flowering species may have been missed or under-recorded. Time was not spent separating *Festuca ovina* and *F. rubra*, nor in most quadrats *Polytrichum commune* and *Polytrichastrum formosum*.

Plants recorded in each quadrat are given in the plant record sheets in section 5.

### **2.4 Vegetation height measurements**

For significant vascular plant species recorded in each quadrat the average of 10 representative height measurements is given.

For grasses 2 height measurements are given: the larger measurement is of the flowering head and the smaller one is of the leaf blade. For *Festuca ovina/rubra* few inflorescences were seen so generally only the average height/length of the leaf blade is given.

### **2.5 Nomenclature**

Botanical nomenclature follows Stace (1997) for vascular plants, Smith (2004) for mosses and Paton (1999) for liverworts.

### **3. RECOMMENDATIONS**

#### Sites 05A and 05B

When the quadrats were established the fenced exclosures at these sites had not been constructed. It is recommended that when these are constructed the fence line forming the mirroring of the inside and outside quadrats is positioned as near as possible to that marked by the metal ground markers placed by Simon Webb and Keith Miller on 11 August 2006 to mark the exclosure. For both sites this is the SW side of the exclosure.

#### Wooden pegs and posts

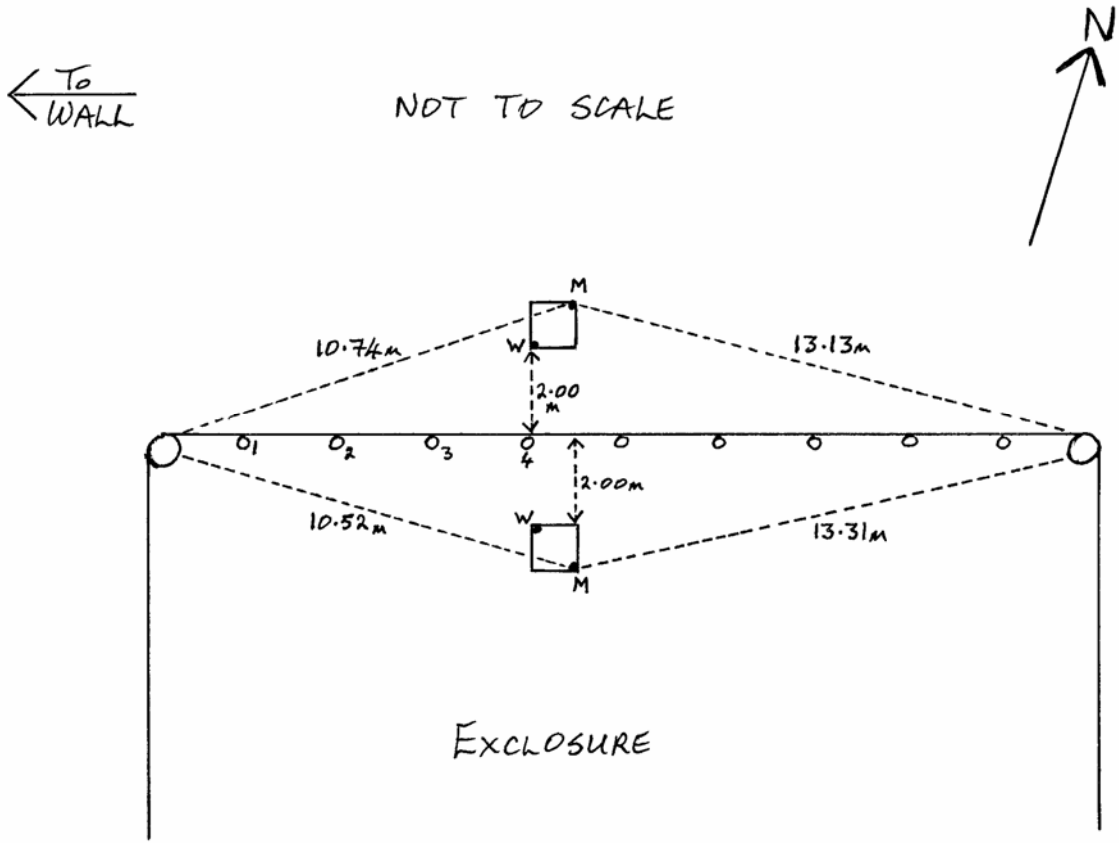
It is recommended that the wooden pegs and posts are inspected intermittently to check for their condition. This will become increasingly important as the monitoring interval increases.

#### Metal ground markers

None of the metal ground markers had their underground “legs” extended as the specific Feno driver was not available. It is recommended that these legs are extended to prevent possible loosening or lifting due to frost heave.

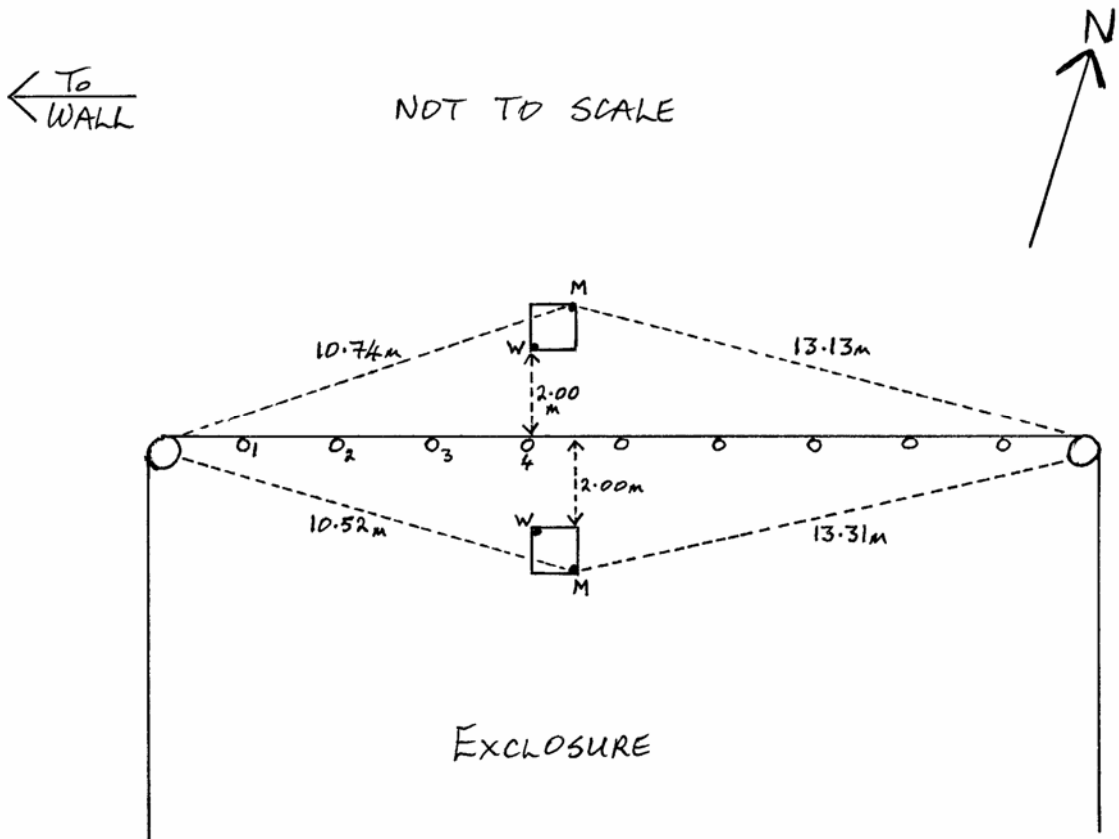
## **4. QUADRAT INFORMATION SHEETS**

Site reference number	<b>01</b>
Site name	Iron Crag
Location	On top of fell above Iron Crag.
Quadrat reference	<b>01 - In - 1x1</b>
Grid reference	NY 12181 12190
Altitude	637m
Size of quadrat	1m x 1m
Alignment of quadrat	Parallel & 90° to NW side of enclosure fence.
Location of pegs	E corner – metal ground marker W corner – wooden peg (not painted) S & N corners – no pegs/markers
Distance from enclosure	2m from enclosure fence

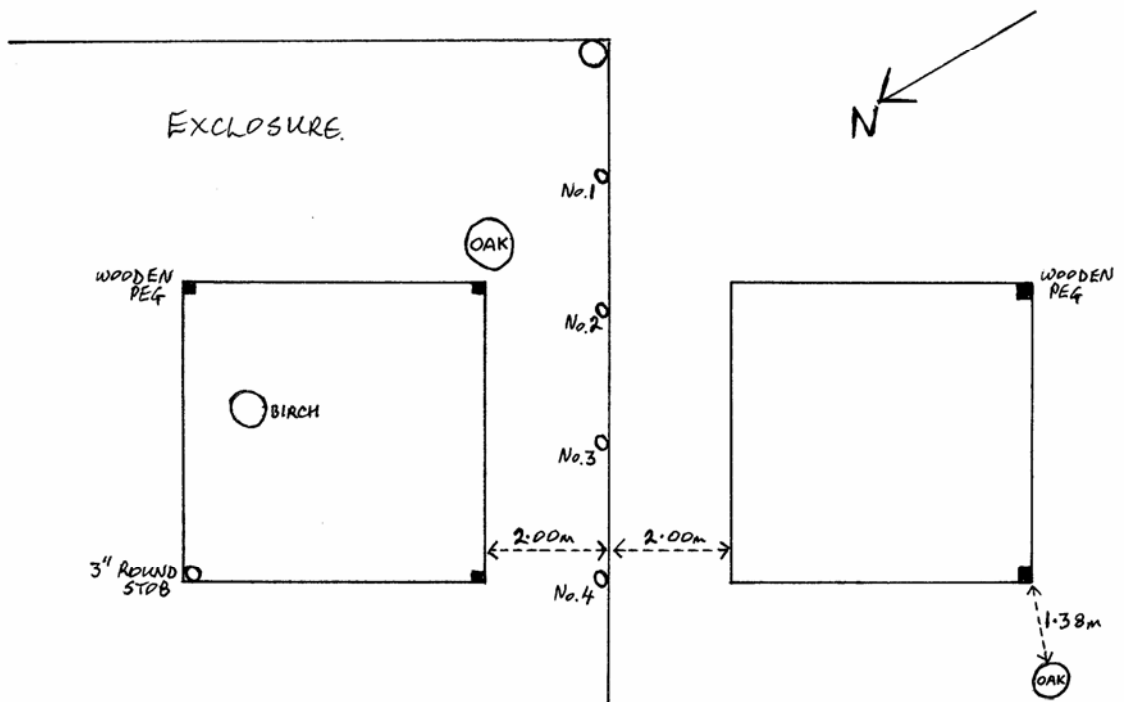




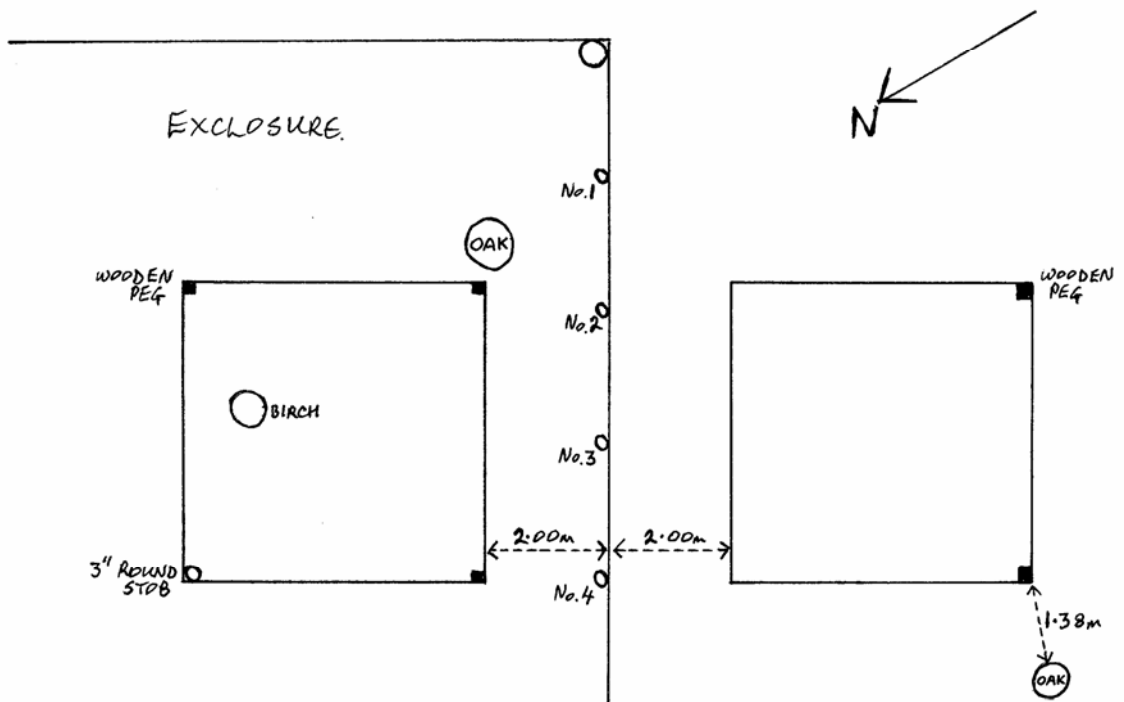
Site reference number	01
Site name	Iron Crag
Location	On top of fell above Iron Crag.
Quadrat reference	01 - Out - 1x1
Grid reference	NY 12179 12197
Altitude	637m
Size of quadrat	1m x 1m
Alignment of quadrat	Parallel & 90° to NW side of exclosure fence.
Location of pegs	N corner - metal ground marker S corner - wooden peg (not painted) E & W corners - no pegs/markers
Distance from exclosure	2m from exclosure fence



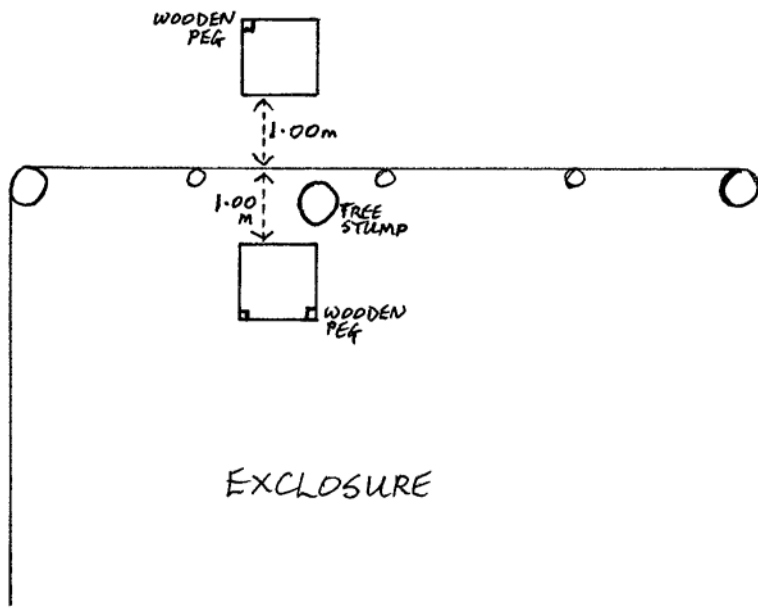
Site reference number	02
Site name	Side Wood
Location	Broadleaved woodland south side of Ennerdale Water.
Quadrat reference	02 – In – 5x5
Grid reference	NY 11959 13924 (N corner)
Altitude	140m
Size of quadrat	5m x 5m
Alignment of quadrat	Parallel & 90° to enclosure fence.
Location of pegs	N corner – 3" round wooden stob (painted orange) E corner – wooden peg (painted orange) W & S corners – wooden pegs (not painted)
Distance from enclosure	2m from enclosure fence



Site reference number	02
Site name	Side Wood
Location	Broadleaved woodland south side of Ennerdale Water.
Quadrat reference	02 – Out – 5x5
Grid reference	NY 11960 13916 (S corner)
Altitude	140m
Size of quadrat	5m x 5m
Alignment of quadrat	Parallel & 90° to enclosure fence.
Location of pegs	S corner – wooden peg (painted orange) W corner – wooden peg (painted orange) N & E corners – no pegs
Distance from enclosure	2m from enclosure fence

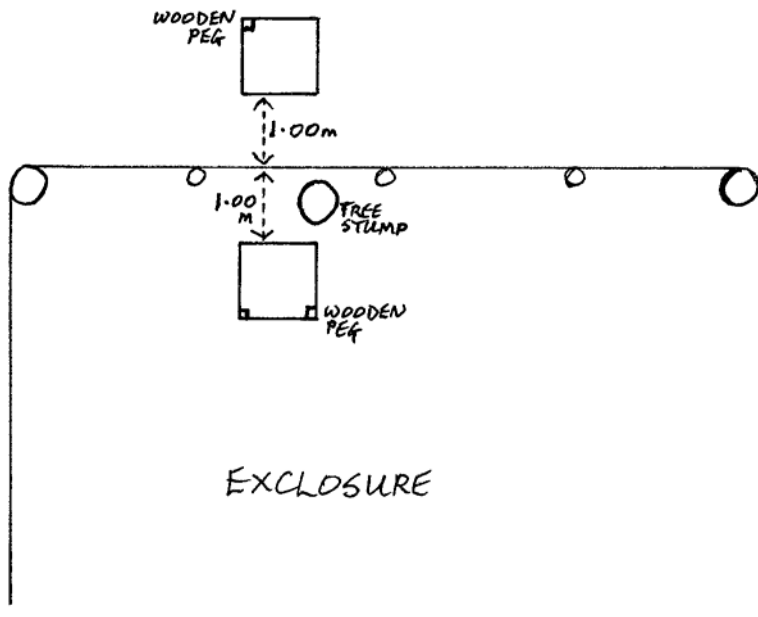


Site reference number	<b>03</b>
Site name	Silver Cove cattle grazing site (open)
Location	Open clear-fell area west side of Woundell Beck.
Quadrat reference	<b>03 – In – 1x1</b>
Grid reference	NY 13033 13534
Altitude	160m
Size of quadrat	1m x 1m
Alignment of quadrat	Parallel & 90° to top enclosure fence.
Location of pegs	NE corner – wooden peg (painted orange) NW corner – wooden peg (painted orange)
Distance from enclosure	1m from enclosure top fence. Fence painted orange on line between In & Out quadrats.



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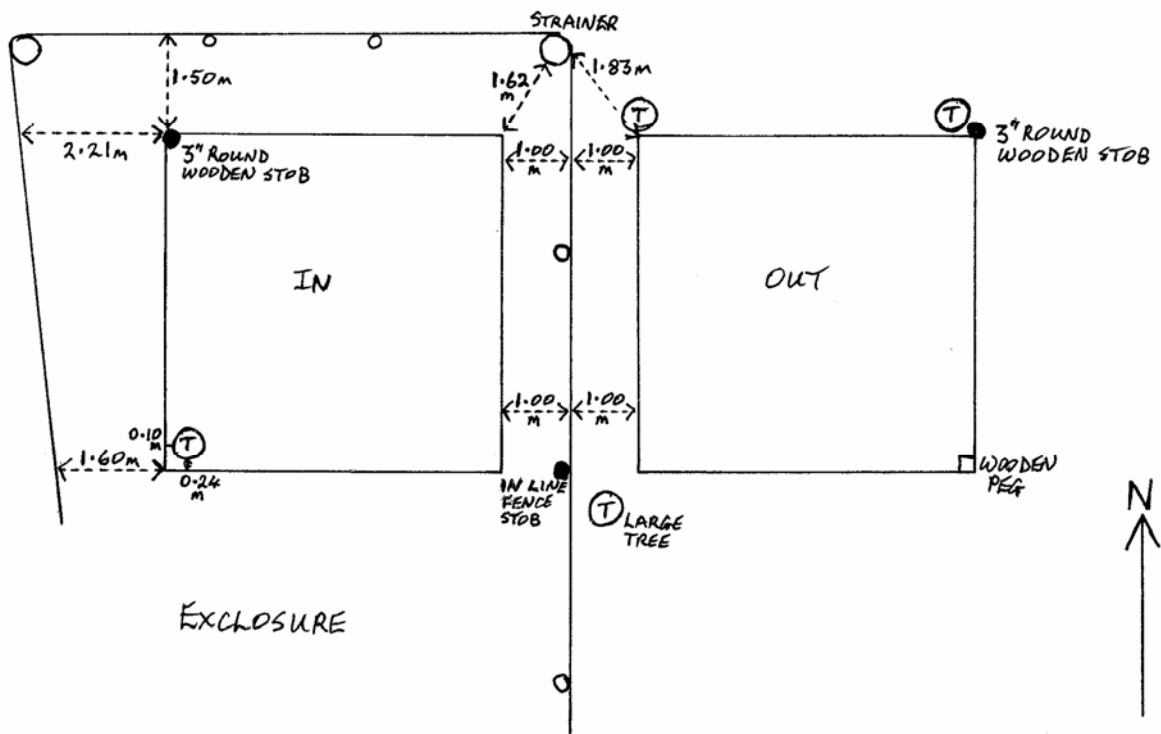
Site reference number	<b>03</b>
Site name	Silver Cove cattle grazing site (open)
Location	Open clear-felled area west side of Woundell Beck.
Quadrat reference	<b>03 – Out – 1x1</b>
Grid reference	NY 13030 13526
Altitude	160m
Size of quadrat	1m x 1m
Alignment of quadrat	Parallel & 90° to top enclosure fence.
Location of pegs	SE corner – wooden peg (not painted)
Distance from enclosure	1m from enclosure top fence. Fence painted orange on line between In & Out quadrats.



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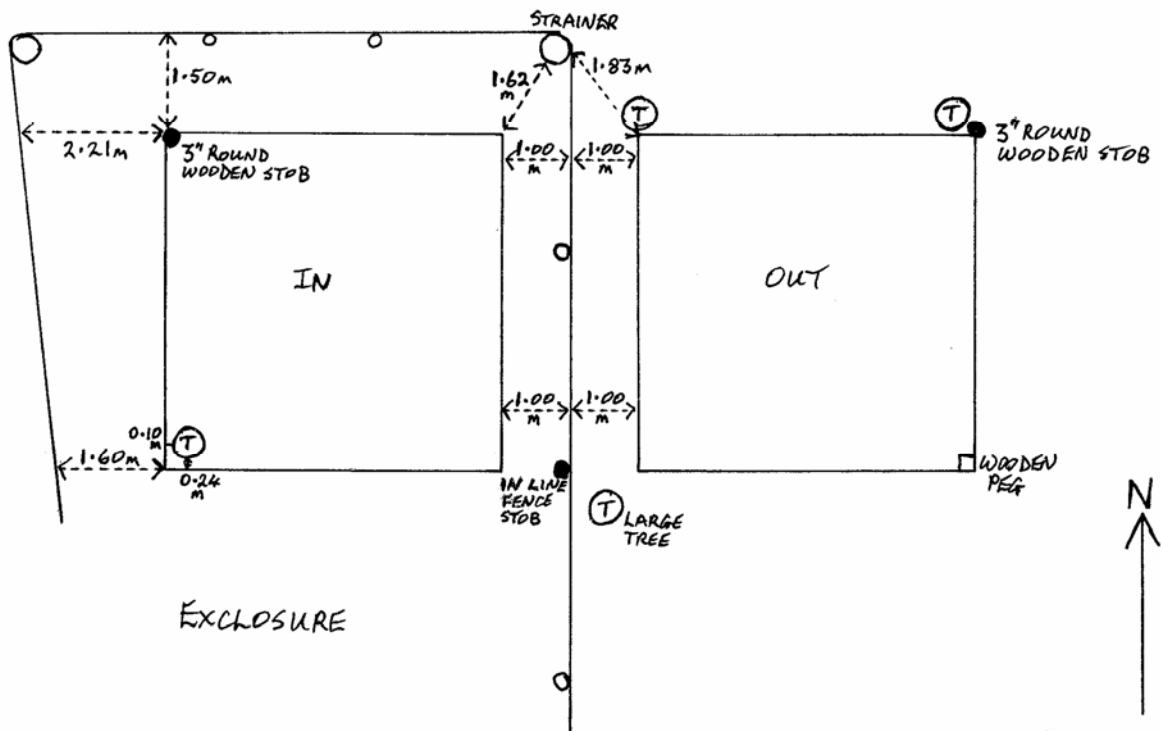
Site reference number	04
Site name	Silver Cove cattle grazed site (wooded)
Location	In larch wood just SE of confluence of Deep Gill with Silvercove Beck.
Quadrat reference	04 – In – 5x5
Grid reference	NY 13260 13314 (NW corner)
Altitude	191m
Size of quadrat	5m x 5m
Alignment of quadrat	Parallel & 90° to E side of enclosure fence
Location of pegs	NW corner – 3" round wooden stob (painted orange)
Distance from enclosure	1m from enclosure fence Enclosure fence stob 1m from SE corner painted orange. Enclosure fence 1m from NE corner painted orange.

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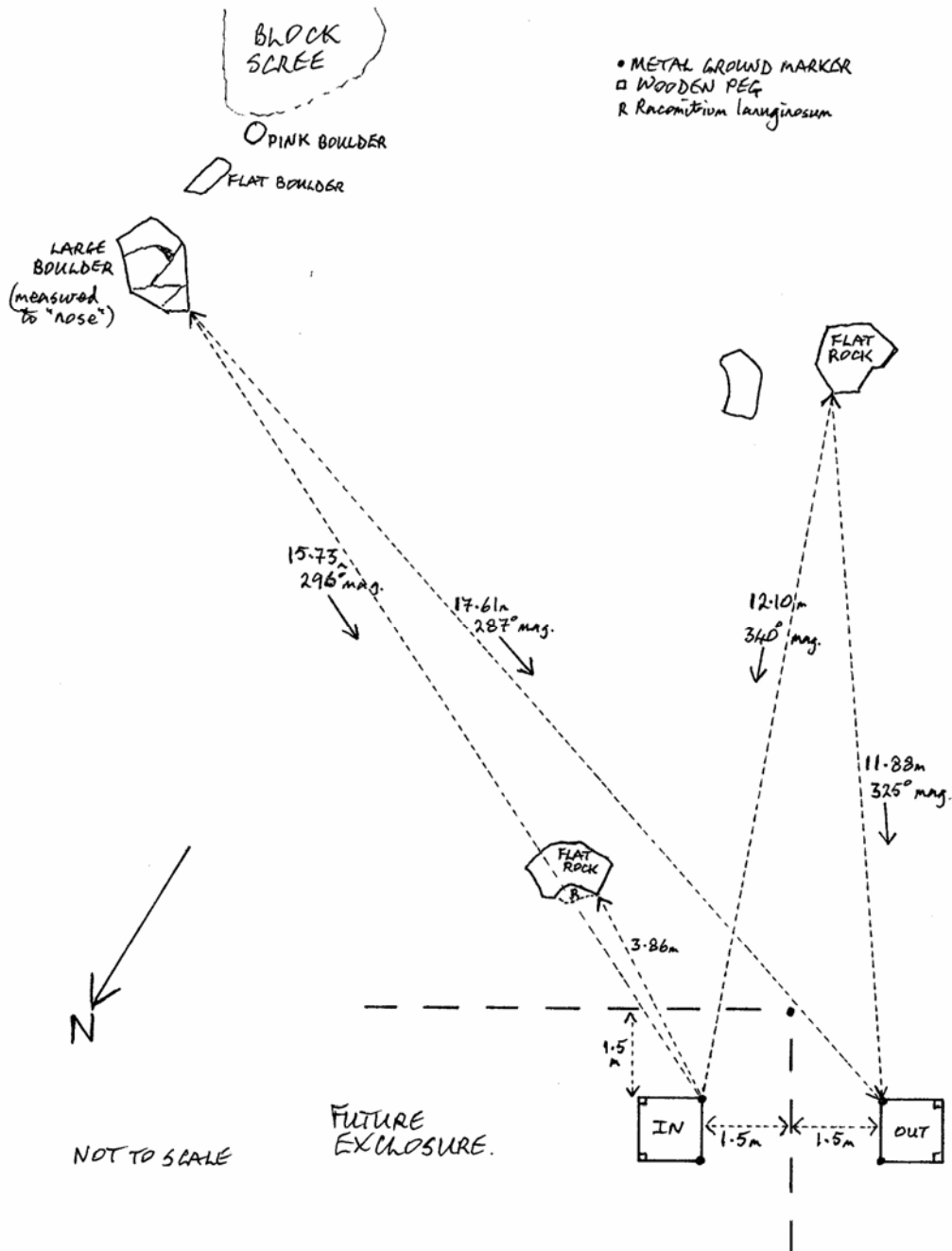


Site reference number	04
Site name	Silver Cove cattle grazed site (wooded)
Location	In larch wood just SE of confluence of Deep Gill with Silvercove Beck.
Quadrat reference	04 – Out – 5x5
Grid reference	NY 13261 13301
Altitude	190m
Size of quadrat	5m x 5m
Alignment of quadrat	Parallel & 90° to E side of enclosure fence
Location of pegs	NE corner – 3" round wooden stob (painted orange) SE corner – wooden peg (painted orange)
Distance from enclosure	1m from enclosure fence Enclosure fence stob 1m from SW corner painted orange. Enclosure fence 1m from NW corner painted orange.

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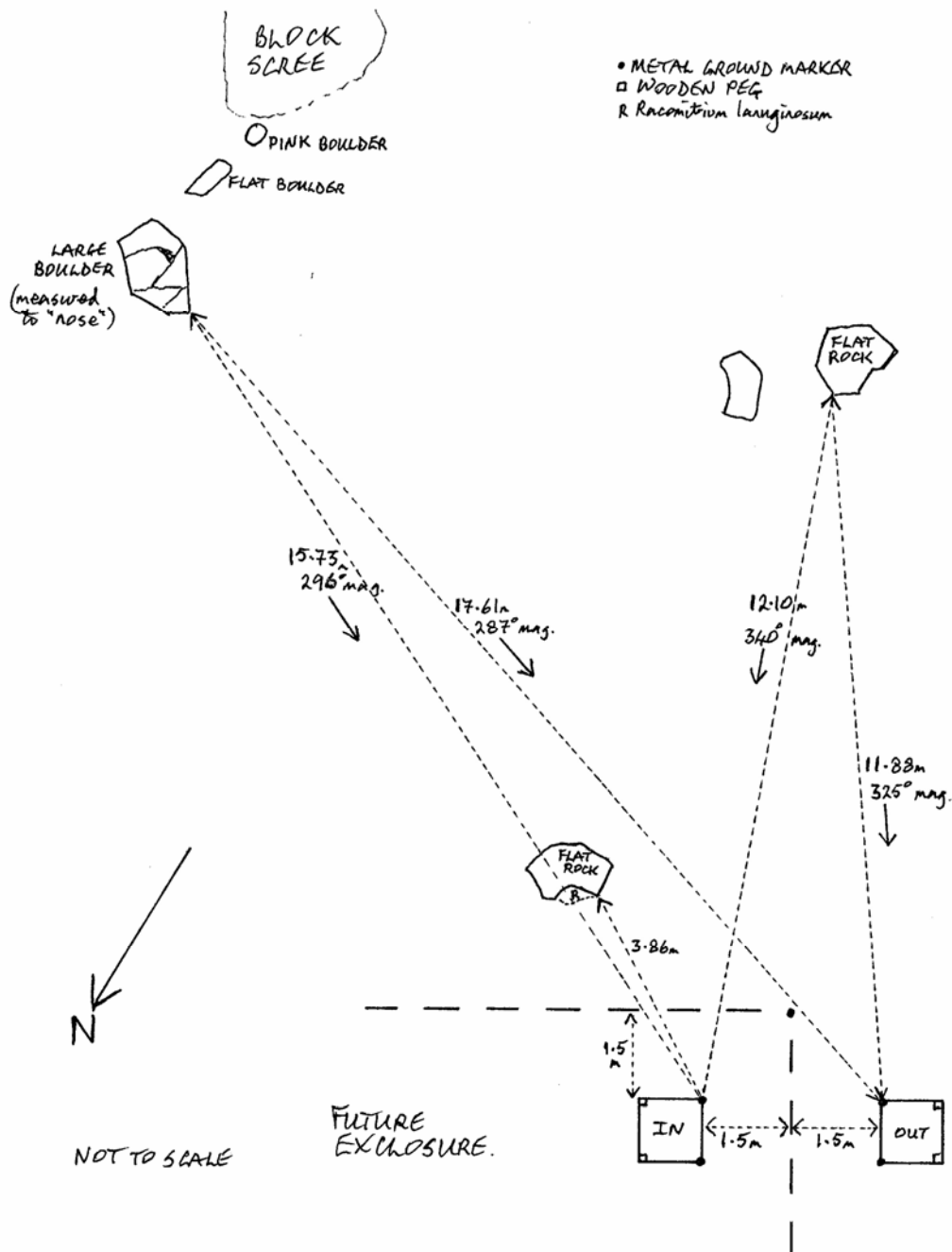


Site reference number	05A
Site name	Silver Cove
Location	Head of Silver Cove.
Quadrat reference	05A - In - 1x1
Grid reference	NY 13223 11229
Altitude	609m
Size of quadrat	1m x 1m
Alignment of quadrat	Parallel & 90° to SW side of (future) enclosure fence.
Location of pegs	S corner - metal ground marker W corner - metal ground marker N corner - wooden peg (not painted) E corner - wooden peg (not painted)
Distance from enclosure	1.5m from SW side of enclosure fence (to be emplaced)

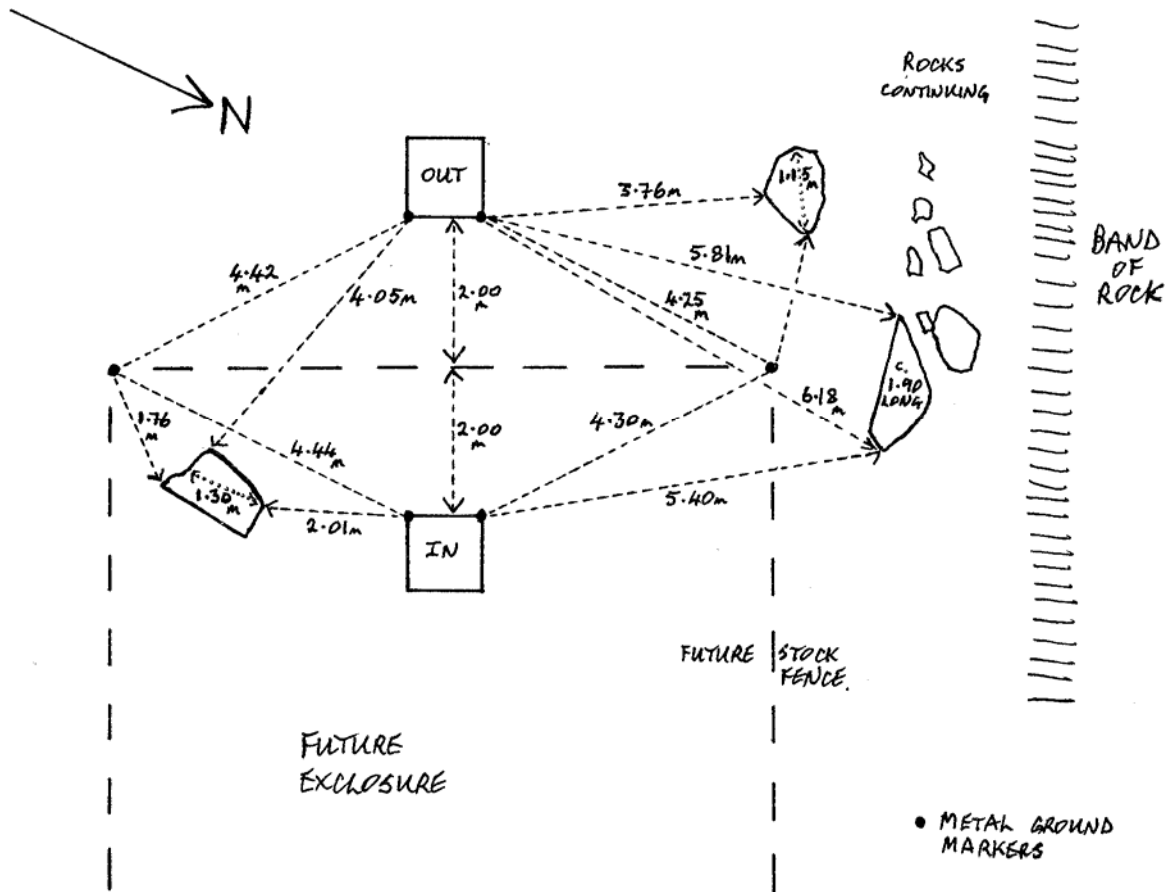




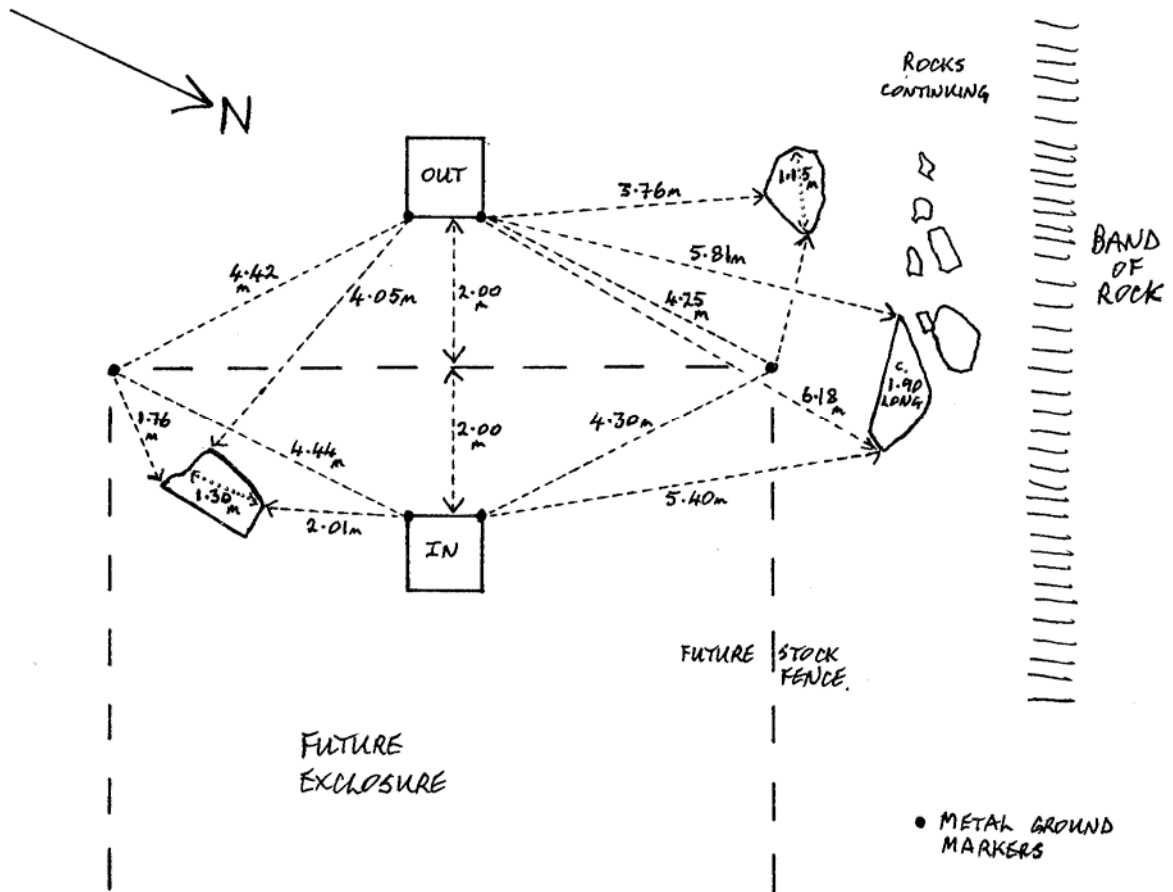
Site reference number	05A
Site name	Silver Cove
Location	Head of Silver Cove.
Quadrat reference	05A – Out – 1x1
Grid reference	NY 13221 11225
Altitude	605m
Size of quadrat	1m x 1m
Alignment of quadrat	Parallel & 90° to SW side of (future) enclosure fence.
Location of pegs	N corner – metal ground marker E corner – metal ground marker S corner – wooden peg (not painted) W corner – wooden peg (not painted)
Distance from enclosure	1.5m from SW side of enclosure fence (to be emplaced)



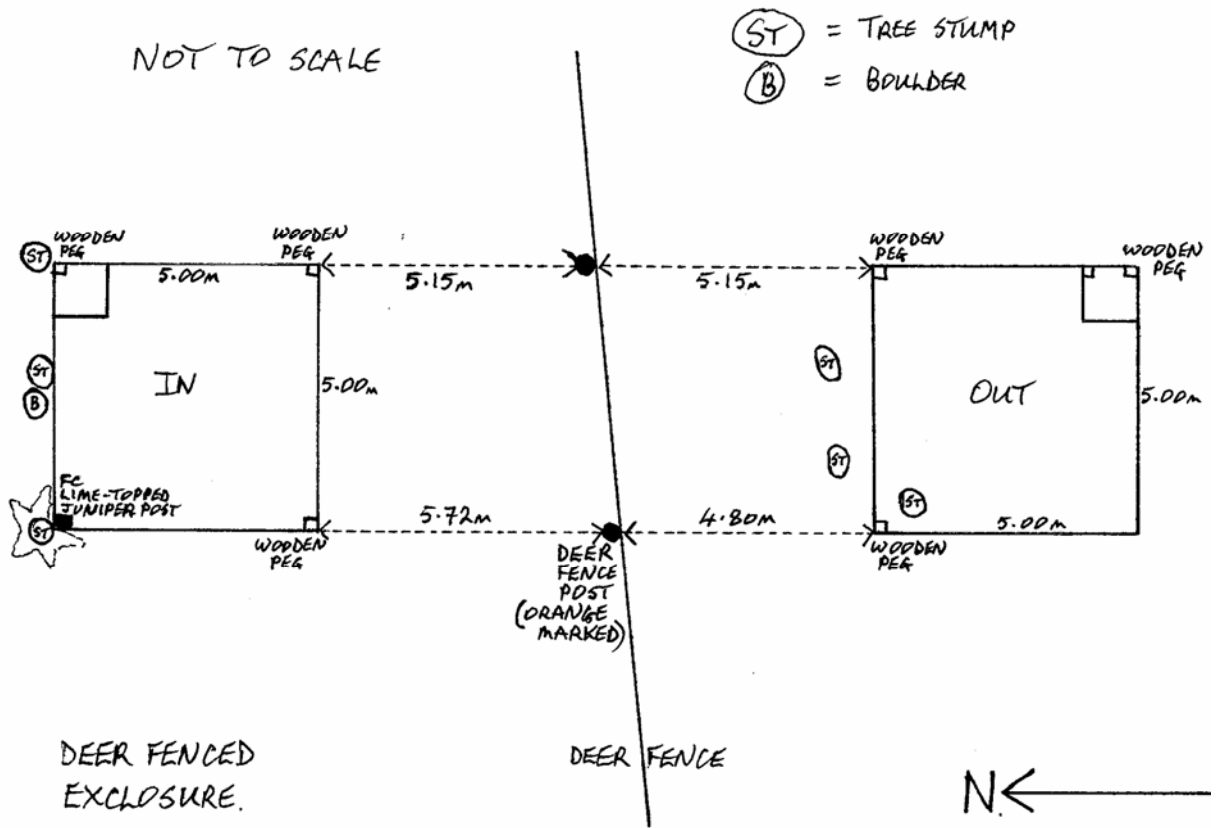
Site reference number	<b>05B</b>
Site name	Little Gowder Crag
Location	East side of col between Little Gowder Crag and Haycock.
Quadrat reference	<b>05B – In – 1x1</b>
Grid reference	NY 14266 10888
Altitude	720m
Size of quadrat	1m x 1m
Alignment of quadrat	Parallel & 90° to SW side of (future) enclosure fence.
Location of pegs	S corner – metal ground marker W corner – metal ground marker
Distance from enclosure	2m from SW side of enclosure fence (to be emplaced)



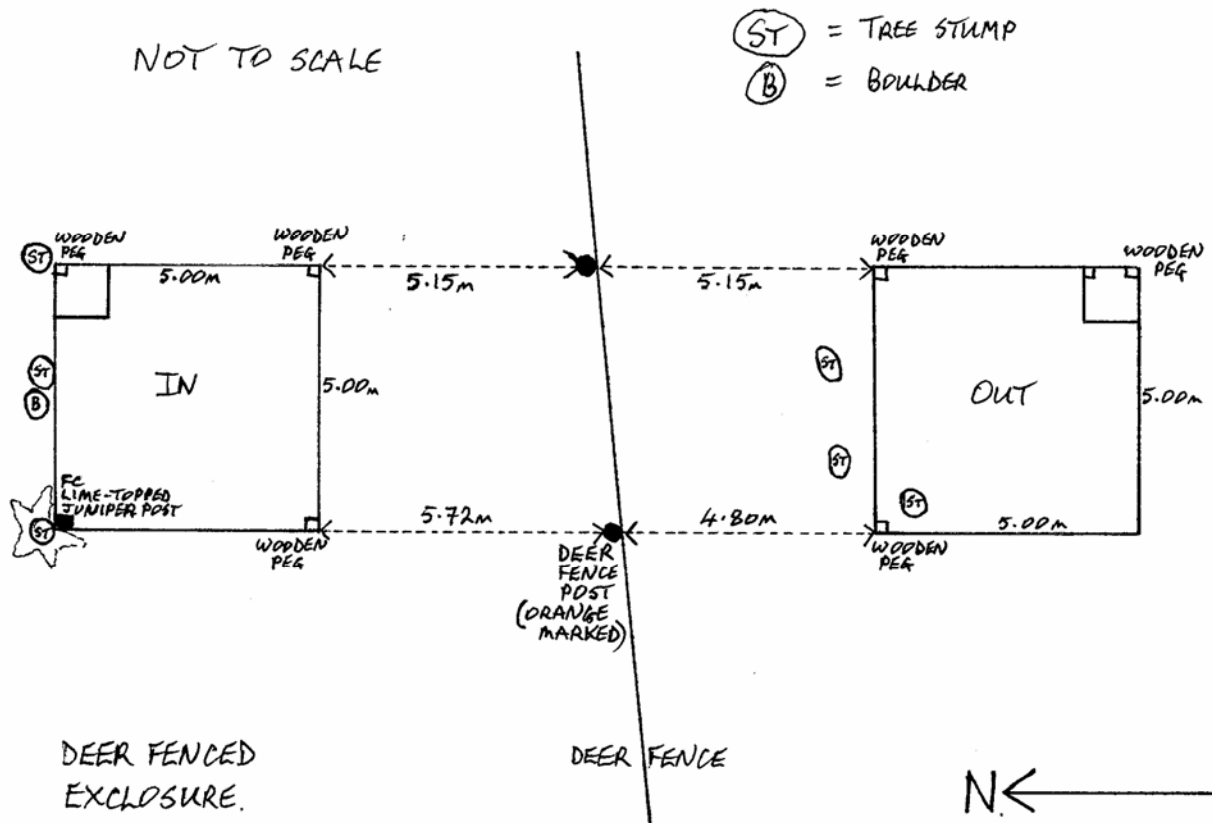
Site reference number	<b>05B</b>
Site name	Little Gowder Crag
Location	East side of col between Little Gowder Crag and Haycock.
Quadrat reference	<b>05B – Out – 1x1</b>
Grid reference	NY 14263 10884
Altitude	717m
Size of quadrat	1m x 1m
Alignment of quadrat	Parallel & 90° to SW side of (future) enclosure fence.
Location of pegs	N corner – metal ground marker E corner – metal ground marker
Distance from enclosure	2m from SW side of enclosure fence (to be emplaced)



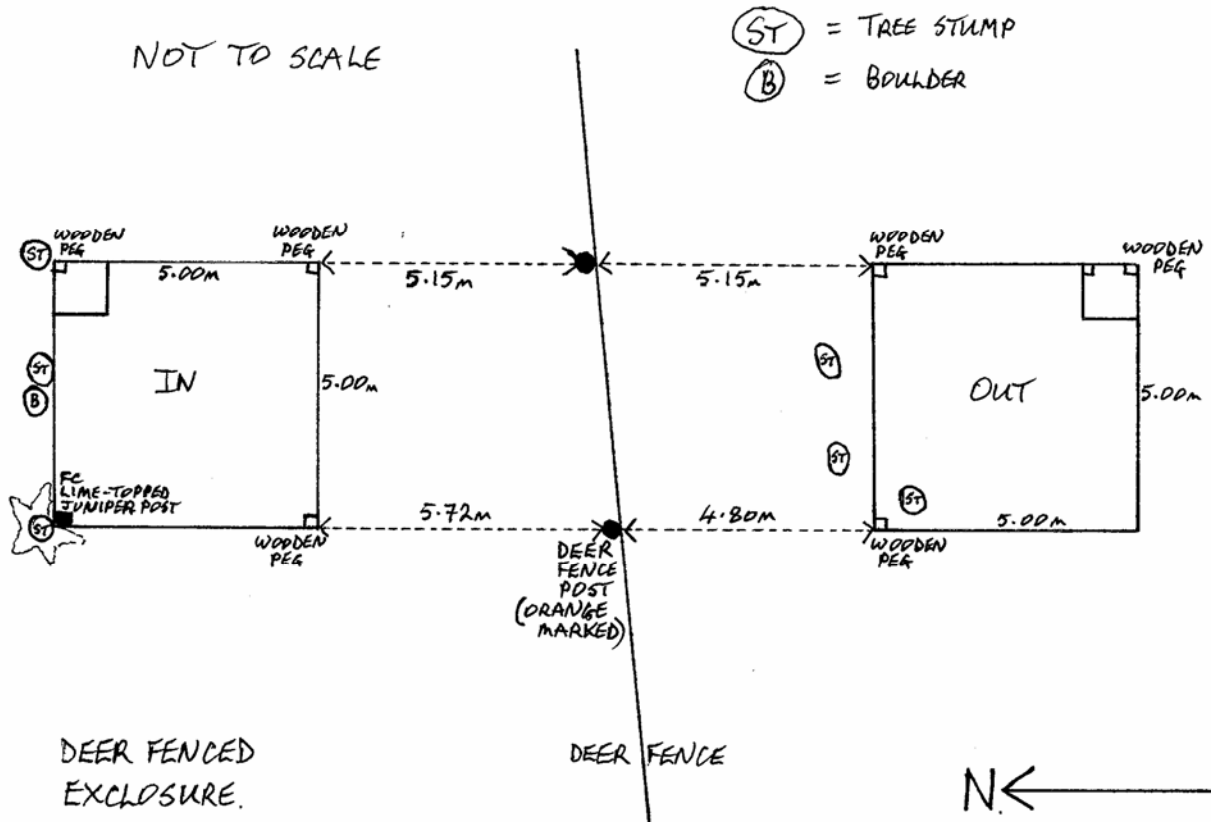
Site reference number	06
Site name	Dubs Quarry
Location	Inside planted deer fenced enclosure below Dubs Quarry.
Quadrat reference	06 - In - 1x1
Grid reference	NY 18483 12789
Altitude	273m
Size of quadrat	1m x 1m
Alignment of quadrat	± N-S
Location of pegs	NE corner – wooden peg by tree stump (painted orange) Could not get another wooden peg into ground.
Distance from enclosure	NE peg 10.15m from orange painted deer fence post



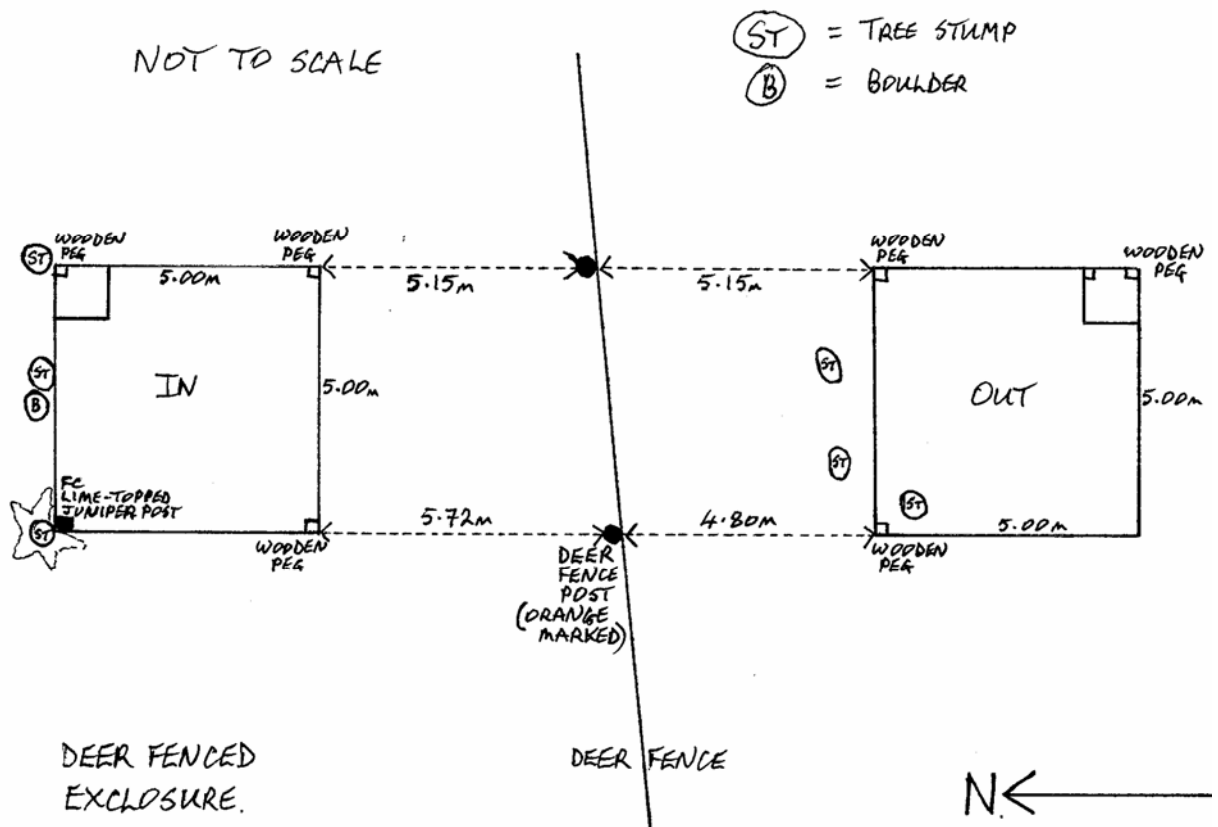
Site reference number	06
Site name	Dubs Quarry
Location	Inside planted deer fenced enclosure below Dubs Quarry.
Quadrat reference	06 – In – 5x5
Grid reference	NY 18483 12789 (NE corner)
Altitude	273m
Size of quadrat	5m x 5m
Alignment of quadrat	± N-S
Location of pegs	SE corner – wooden peg (painted orange) SW corner – wooden peg (painted orange) NE corner – wooden peg (painted orange) by tree stump NW corner – “juniper” post (painted lime)
Distance from enclosure	SE peg 5.15m from deer fence post painted orange SW peg 5.72m from deer fence post painted orange



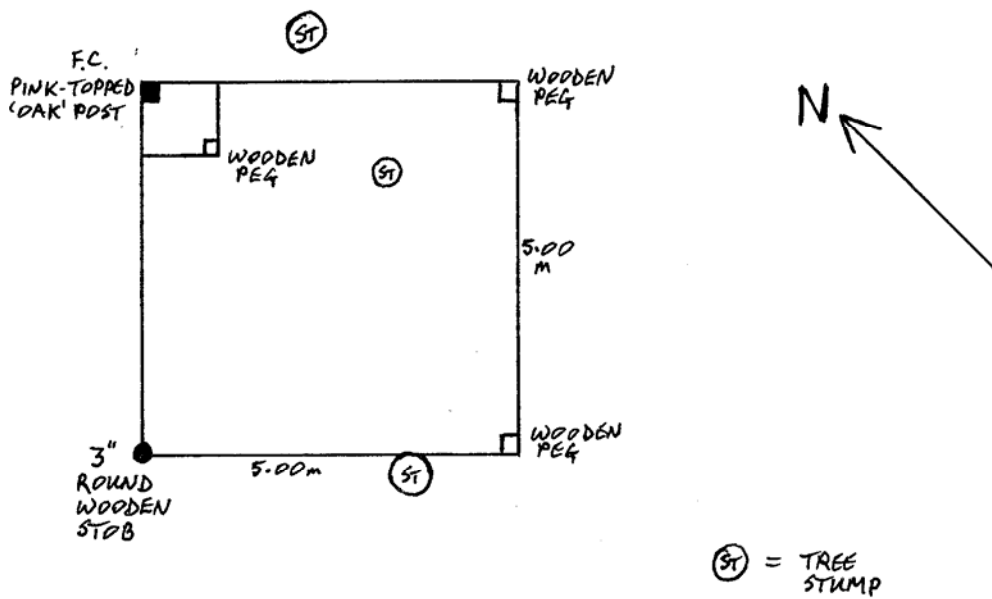
Site reference number	06
Site name	Dubs Quarry
Location	Outside planted deer fenced enclosure below Dubs Quarry.
Quadrat reference	06 – Out – 1x1
Grid reference	NY 18473 12769
Altitude	266m
Size of quadrat	1m x 1m
Alignment of quadrat	±N-S
Location of pegs	SE corner – wooden peg (painted orange) NE corner – wooden peg (painted orange) SW corner & NW corner – no pegs
Distance from enclosure	SE 10.15m from deer fence post painted orange



Site reference number	06
Site name	Dubs Quarry
Location	Outside planted deer fenced enclosure below Dubs Quarry.
Quadrat reference	06 – Out – 5x5
Grid reference	NY 18473 12769 (SE corner)
Altitude	266m
Size of quadrat	5m x 5m
Alignment of quadrat	±N-S
Location of pegs	SE corner – wooden peg (painted orange) NE corner – wooden peg (painted orange) NW corner – wooden peg (painted orange) SW corner – no peg
Distance from enclosure	SE peg 10.15m from deer fence post painted orange NW peg 4.80m from deer fence post painted orange NE peg 5.15m from deer fence post painted orange



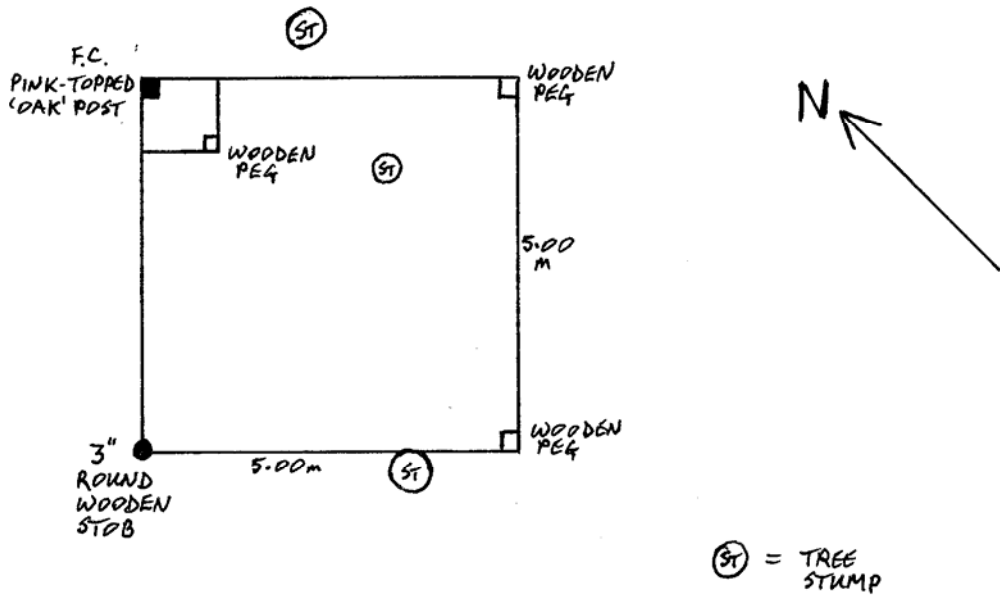
Site reference number	07
Site name	Upper valley south side
Location	Planted area within upper valley south of River Liza (not fenced).
Quadrat reference	07 – NoExcl – 1x1
Grid reference	NY 18247 12636
Altitude	251m
Size of quadrat	1m x 1m
Alignment of quadrat	NW–SE & NE–SW
Location of pegs	S corner – wooden peg (painted orange) N corner – FC pink-marked (“oak”) wooden post (also now marked orange at base)
Distance from exclosure	Not applicable. In N corner of 5m x 5m quadrat



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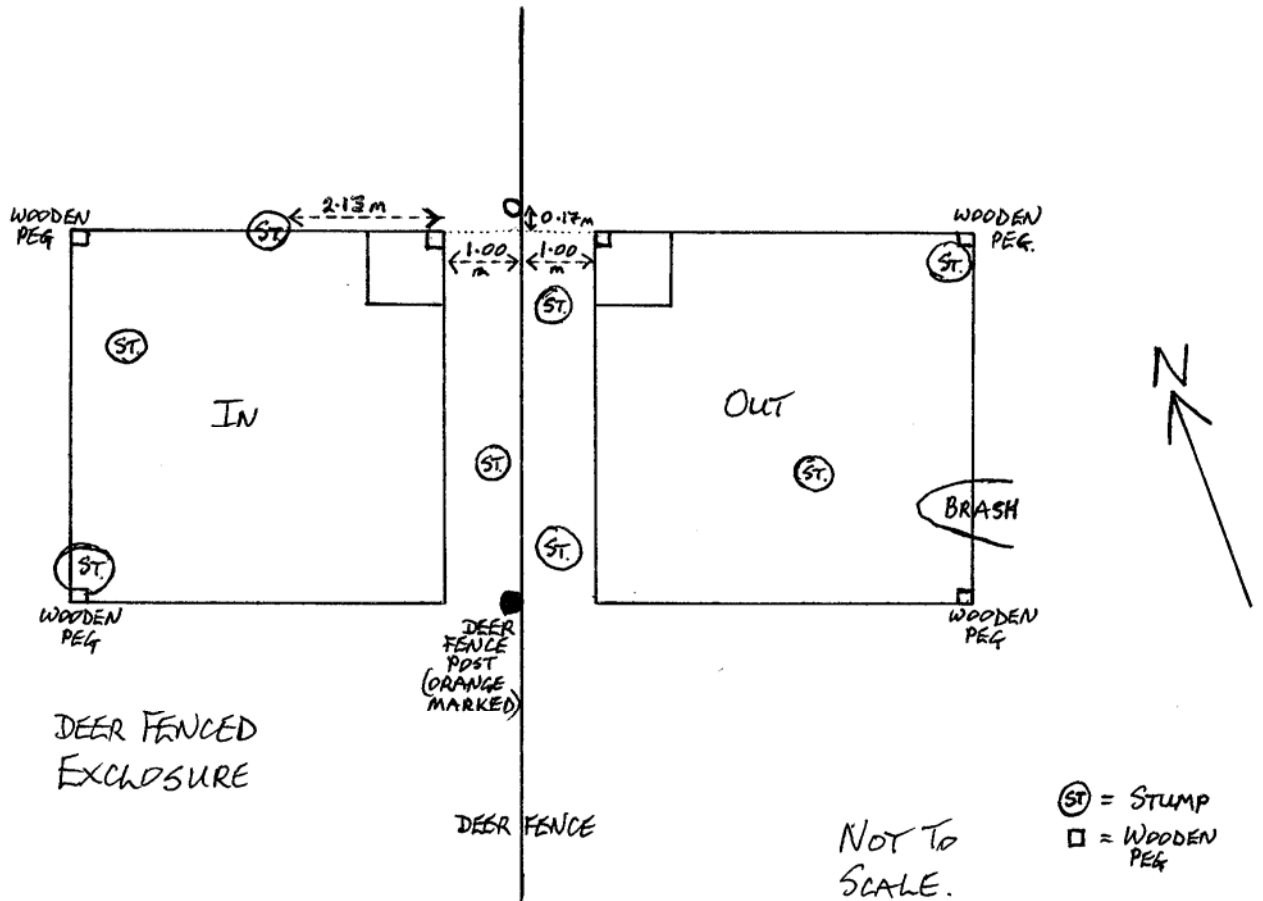


Site reference number	07
Site name	Upper valley south side
Location	Planted area within upper valley south of River Liza (not fenced).
Quadrat reference	07 – NoExcl – 5x5
Grid reference	NY 18244 12629 (W corner)
Altitude	256m
Size of quadrat	5m x 5m
Alignment of quadrat	NW–SE & NE–SW
Location of pegs	W corner – 3" round wooden stob (painted orange) E corner – wooden peg (painted orange) S corner – wooden peg (painted orange) N corner – FC pink-marked ("oak") wooden post (also now marked orange at base)
Distance from enclosure	Not applicable

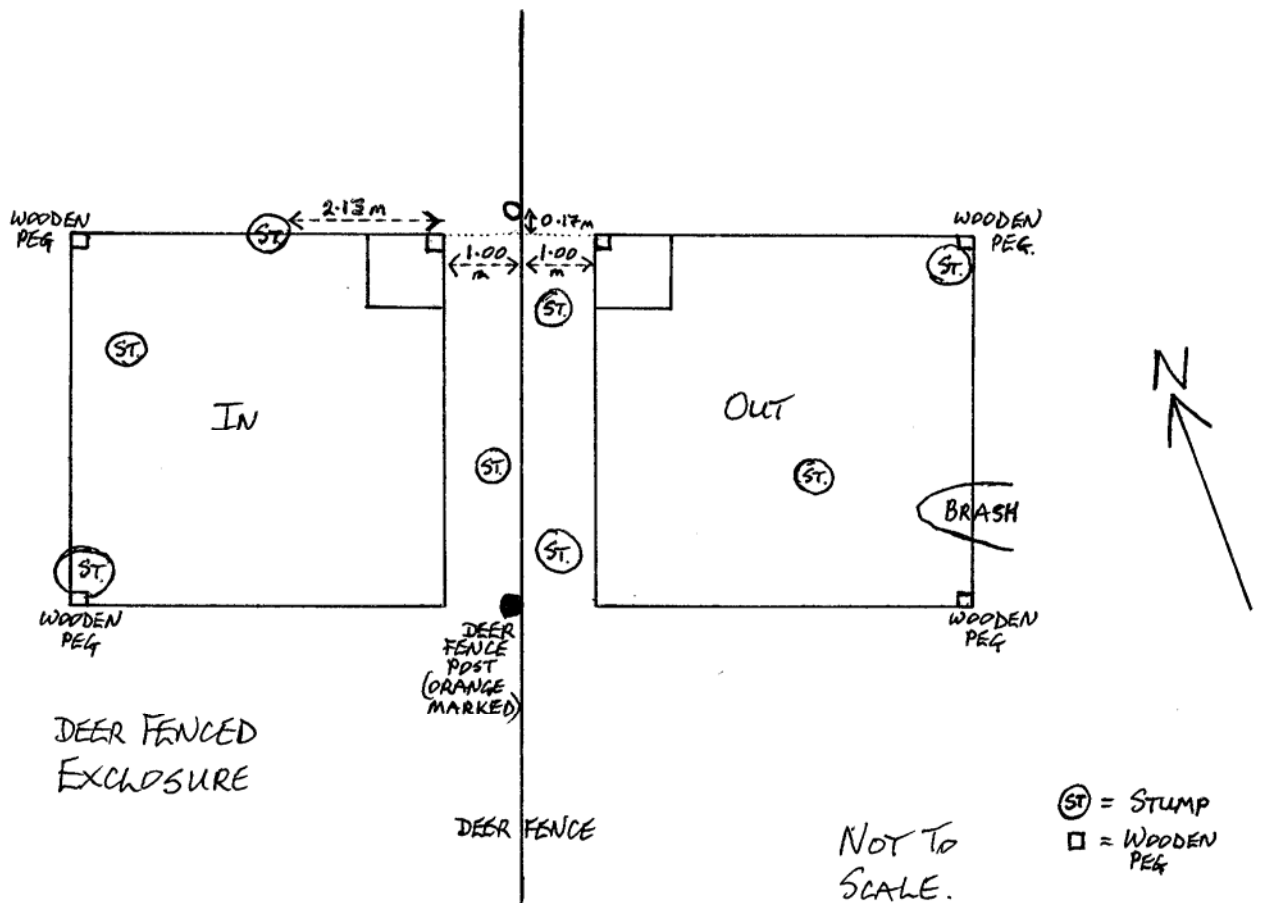


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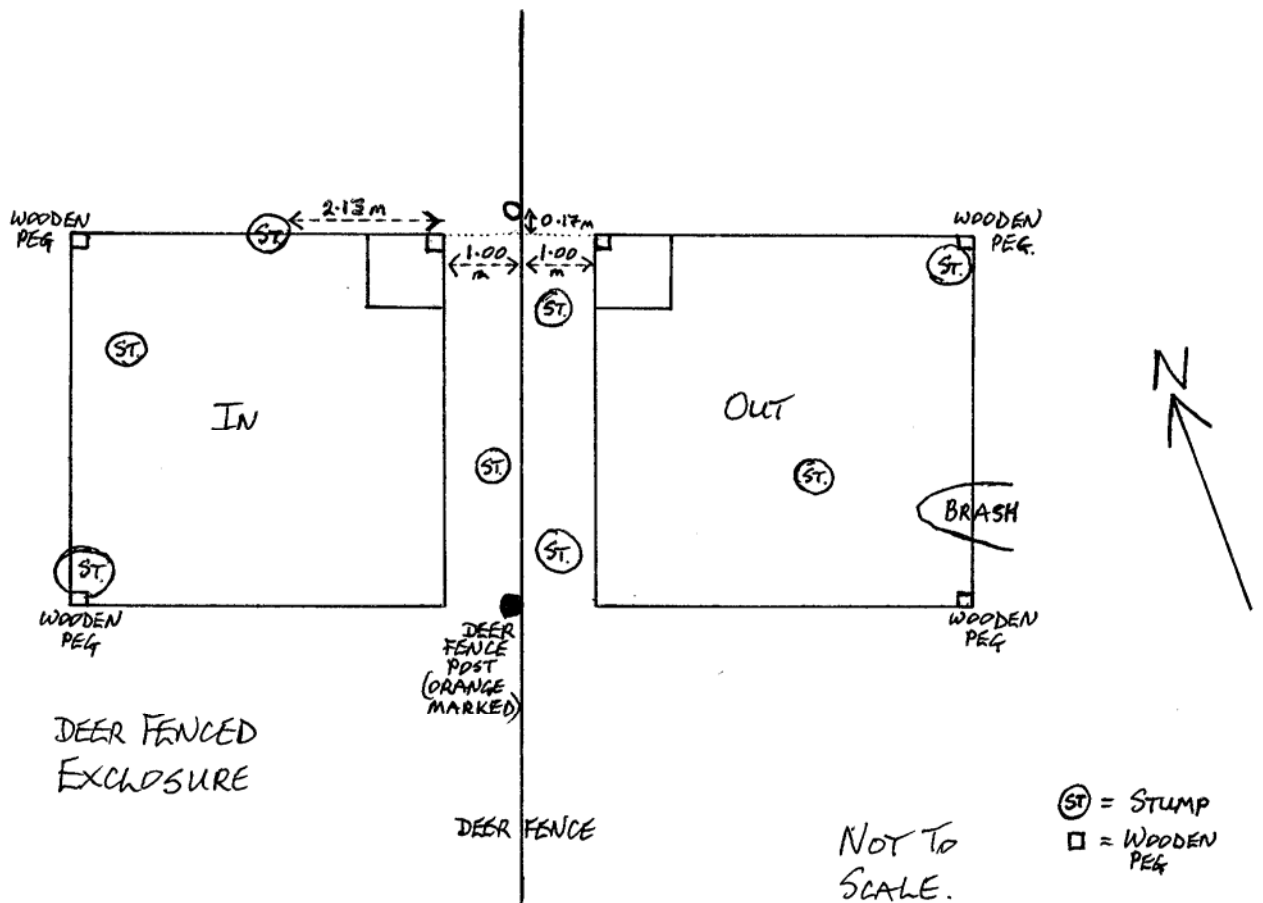
Site reference number	08
Site name	River Liza upper bend
Location	Inside the prominent bend in the River Liza, below top ford. Inside enclosure deer fence – clear-felled area.
Quadrat reference	08 – In – 1x1
Grid reference	NY 18900 12374
Altitude	261m
Size of quadrat	1m x 1m
Alignment of quadrat	Parallel & 90° to enclosure deer fence
Location of pegs	NE corner – wooden peg (painted orange) SE, SW & NW corners – no pegs or markers
Distance from enclosure	1m from enclosure deer fence In NE corner of 5m x 5m quadrat



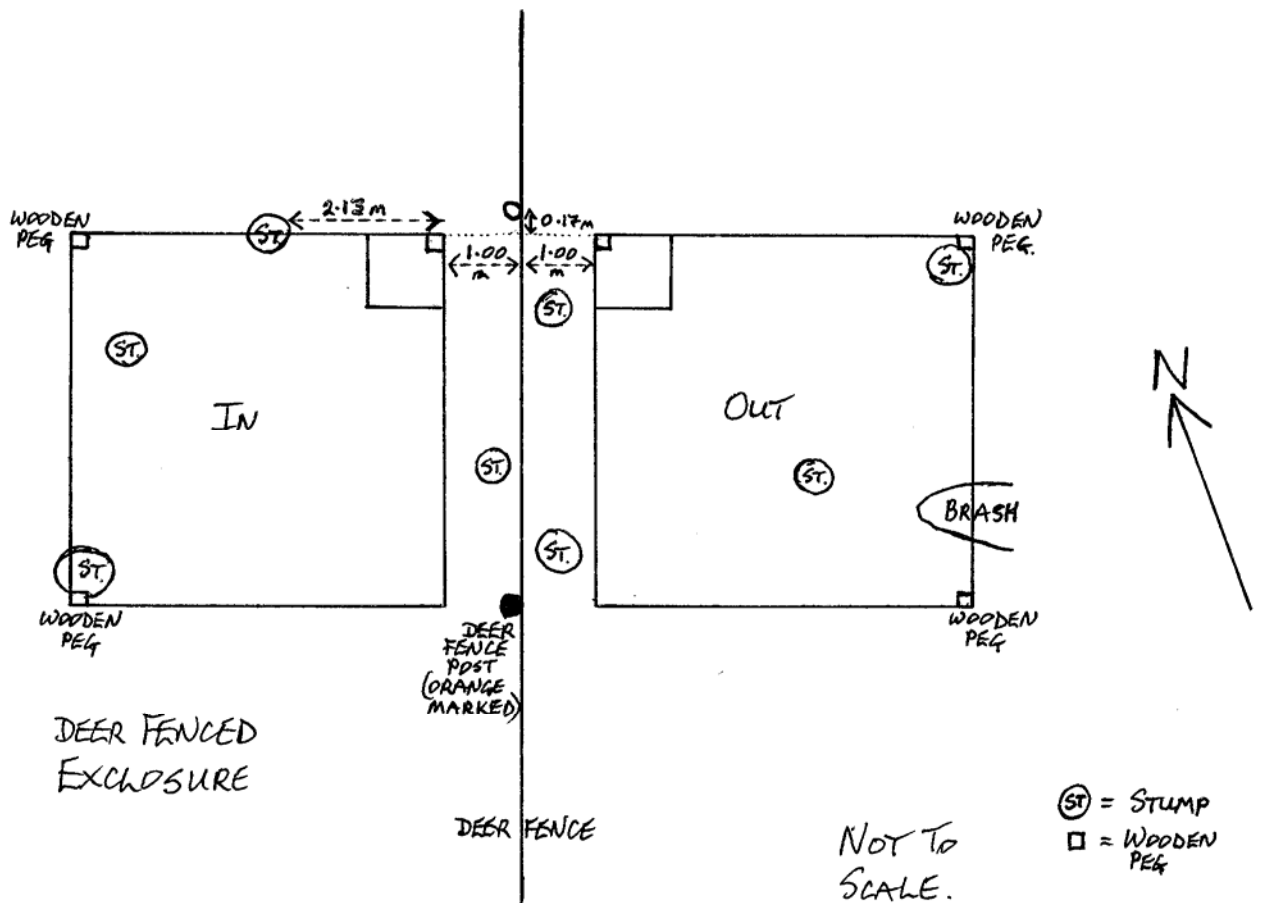
Site reference number	08
Site name	River Liza upper bend
Location	Inside the prominent bend in the River Liza, below top ford. Outside enclosure deer fence – clear-felled area.
Quadrat reference	08 – Out – 1x1
Grid reference	NY 18903 12373
Altitude	265m
Size of quadrat	1m x 1m
Alignment of quadrat	Parallel & 90° to enclosure deer fence
Location of pegs	NW corner – wooden peg (painted orange) NE, SE & SW corners – no pegs or markers
Distance from enclosure	1m from enclosure deer fence In NW corner of 5m x 5m quadrat



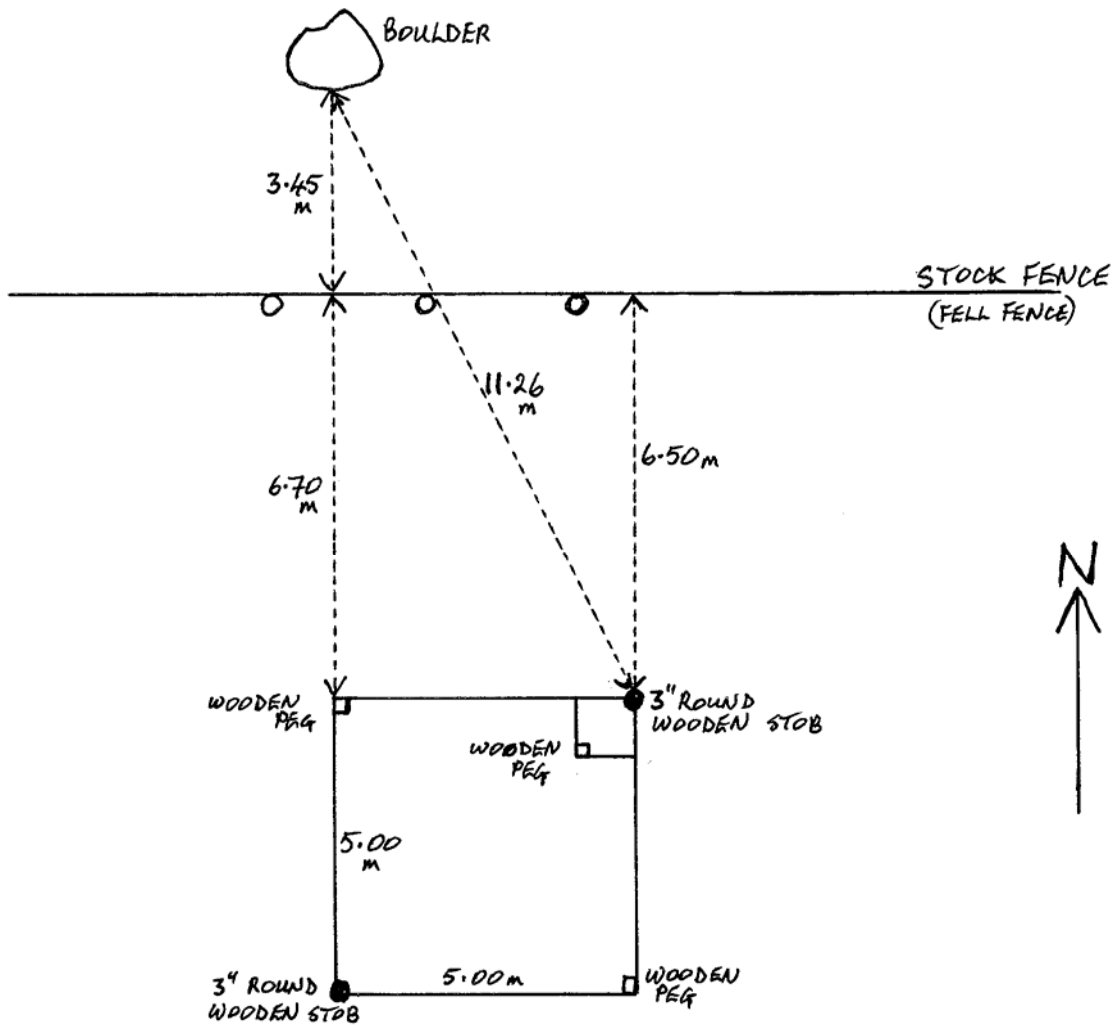
Site reference number	08
Site name	River Liza upper bend
Location	Inside the prominent bend in the River Liza, below top ford. Inside enclosure deer fence – clear-felled area.
Quadrat reference	08 – In – 5x5
Grid reference	NY 18896 12368 (SW corner)
Altitude	260m
Size of quadrat	5m x 5m
Alignment of quadrat	Parallel & 90° to enclosure deer fence
Location of pegs	NW corner – wooden peg (painted orange) NE corner – wooden peg (painted orange) SW corner – wooden peg (painted orange) SE corner – no peg or marker
Distance from enclosure	1m from enclosure deer fence



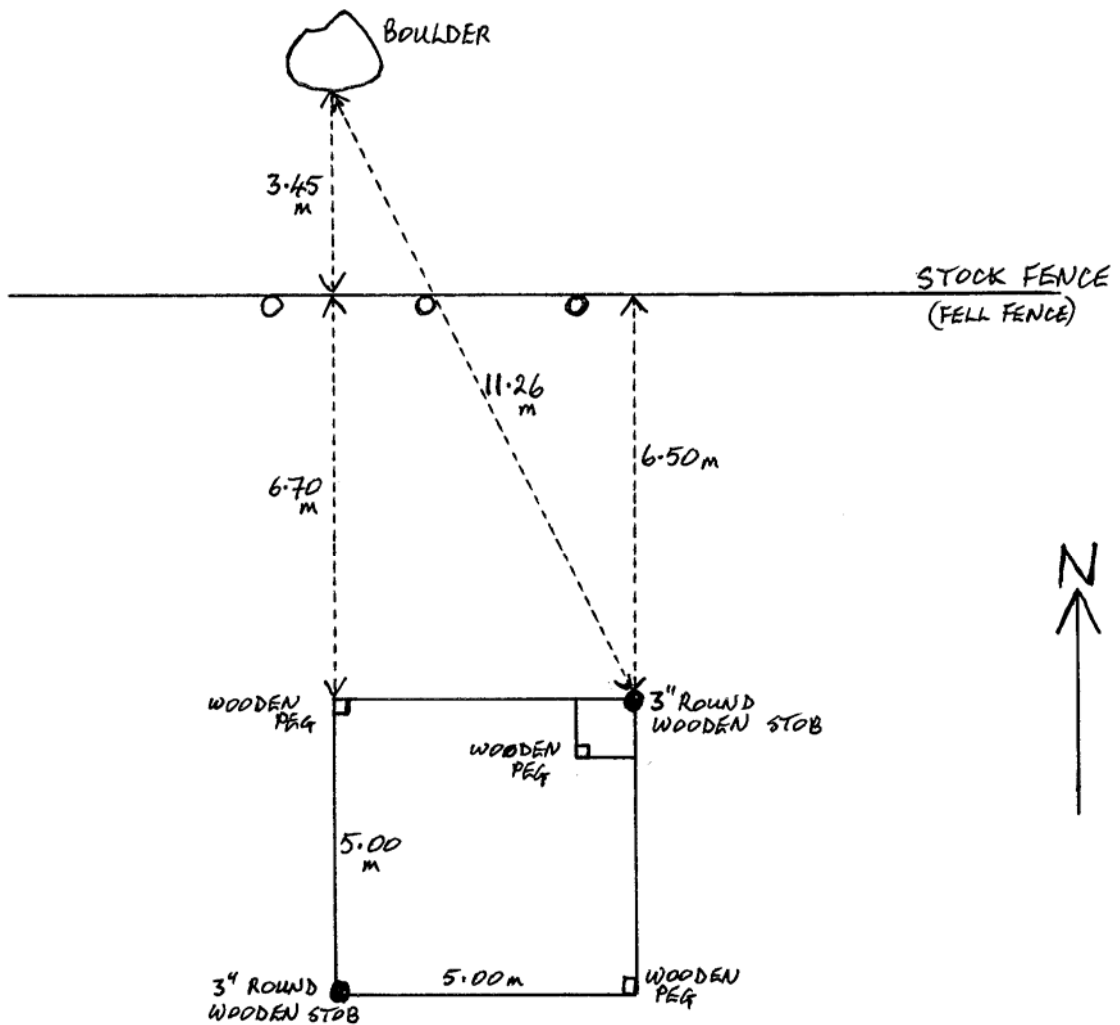
Site reference number	08
Site name	River Liza upper bend
Location	Inside the prominent bend in the River Liza, below top ford. Outside enclosure deer fence – clear-felled area.
Quadrat reference	08 – Out – 5x5
Grid reference	NY 18905 12365 (SE corner)
Altitude	267m
Size of quadrat	5m x 5m
Alignment of quadrat	Parallel & 90° to enclosure deer fence
Location of pegs	NW corner – wooden peg (painted orange) NE corner – wooden peg (painted orange) SE corner – wooden peg (painted orange) SW corner – no peg or marker
Distance from enclosure	1m from enclosure deer fence



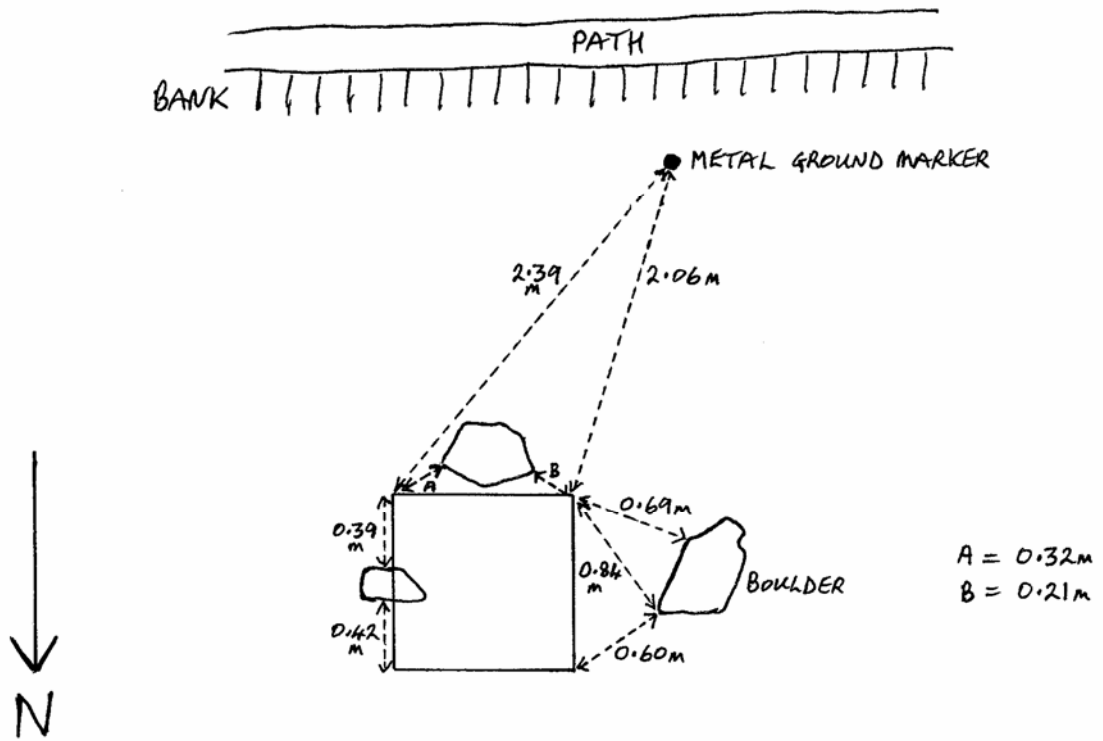
Site reference number	09
Site name	Northern fell fence
Location	Immediately below upper stock fence. Clear-felled area not within deer fence.
Quadrat reference	09 – NoExcl – 1x1
Grid reference	NY 16952 13855
Altitude	364m
Size of quadrat	1m x 1m
Alignment of quadrat	± N-S & E-W
Location of pegs	NE corner – 3" round wooden stob (painted orange) SW corner – wooden peg (painted orange)
Distance from enclosure	Not applicable. In NE corner of 5m x 5m quadrat.



Site reference number	09
Site name	Northern fell fence
Location	Immediately below upper stock fence. Clear-felled area not within deer fence.
Quadrat reference	09 – NoExcl – 5x5
Grid reference	NY 16952 13855 (NE corner)
Altitude	364m
Size of quadrat	5m x 5m
Alignment of quadrat	± N-S & E-W
Location of pegs	NE corner – 3" round wooden stob (painted orange) SW corner – 3" round wooden stob (painted orange) NW corner – wooden peg (painted orange) SE corner – wooden peg (painted orange)
Distance from exclosure	Not applicable

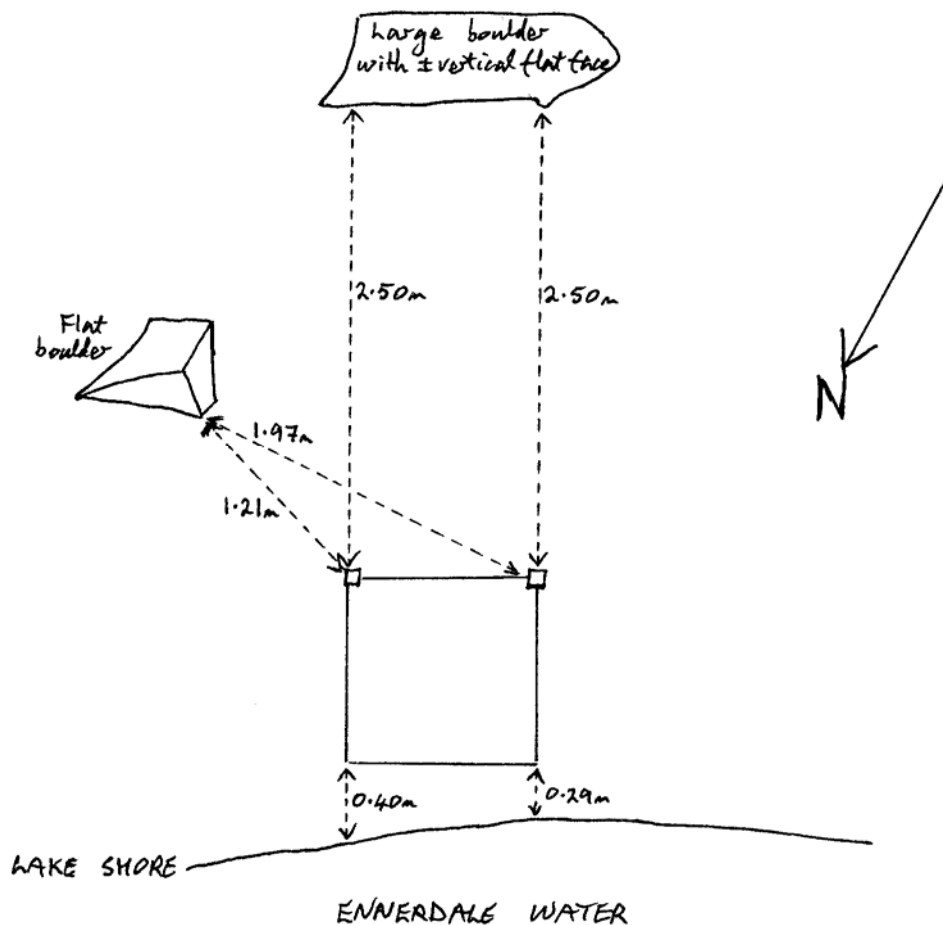


Site reference number	<b>10A</b>
Site name	Ennerdale Water shore (cattle)
Location	SE edge of Ennerdale Water. In area grazed by cattle.
Quadrat reference	<b>10A – Cattle – 1x1</b>
Grid reference	NY 12389 13866
Altitude	113m
Size of quadrat	1m x 1m
Alignment of quadrat	N – S, E – W
Location of pegs	No pegs or other markers placed for quadrat.
Distance from enclosure	Not applicable





Site reference number	<b>10B</b>
Site name	Ennerdale Water shore (no cattle)
Location	SE edge of Ennerdale Water. In area not grazed by cattle.
Quadrat reference	<b>10B – NoCattle – 1x1</b>
Grid reference	NY 12433 13876
Altitude	111m
Size of quadrat	1m x 1m
Alignment of quadrat	65°–245° & 155°–335° magnetic
Location of pegs	ESE corner – wooden peg (not painted) SSW corner – wooden peg (not painted) These are the corners away from the lake shore.
Distance from enclosure	Not applicable



## **5. QUADRAT PLANT RECORD SHEETS**

Quadrat Reference	Site name	Date recorded
01 – In – 1x1	Iron Crag	17/08/2006

	Cover (Domin)	Average height
<i>Agrostis canina</i>	6	14/23cm
<i>Agrostis capillaris</i>	3	
<i>Calluna vulgaris</i>	5	20cm
<i>Carex pilulifera</i>	5	19cm
<i>Deschampsia flexuosa</i>	4	
<i>Empetrum nigrum</i>	3	10cm
<i>Festuca ovina / rubra</i>	5	17cm
<i>Galium saxatile</i>	4	
<i>Vaccinium myrtillus</i>	1	
<i>Vaccinium vitis-idaea</i>	3	15cm
<i>Dicranum scoparium</i>	3	
<i>Hypnum jutlandicum</i>	7	
<i>Racomitrium lanuginosum</i>	1	
<i>Cladonia sp.</i>	3	

Quadrat Reference	Site name	Date recorded
01 – Out – 1x1	Iron Crag	17/08/2006

	Cover (Doin)	Average height
<i>Agrostis canina</i>	4	7/14cm
<i>Calluna vulgaris</i>	4	7cm
<i>Carex pilulifera</i>	8	13cm
<i>Empetrum nigrum</i>	3	4cm
<i>Festuca ovina / rubra</i>	6	12cm
<i>Galium saxatile</i>	3	
<i>Nardus stricta</i>	2	12/20cm
<i>Vaccinium myrtillus</i>	3	6cm
<i>Vaccinium vitis-idaea</i>	3	5cm
<i>Dicranum scoparium</i>	1	
<i>Hypnum jutlandicum</i>	7	
<i>Polytrichum commune</i>	3	
<i>Cladonia sp.</i>	2	
Rock	1	

Quadrat Reference	Site name	Date recorded
02 – In – 5x5	Side Wood	18/08/2006

	Cover (Domin)	Average height
<i>Anthoxanthum odoratum</i>	4	33/50cm
<i>Betula</i> sp.	1	1 large tree
<i>Blechnum spicant</i>	1	
<i>Deschampsia flexuosa</i>	9	30/66cm
<i>Dryopteris dilatata</i>	1	60cm
<i>Fraxinus excelsior</i>	1 (1 seedling)	
<i>Galium saxatile</i>	5	
<i>Oxalis acetosella</i>	3	
<i>Polypodium vulgare</i>	1	
<i>Pteridium aquilinum</i>	4	100cm
<i>Quercus</i> sp.	3	Range 10-36cm
<i>Sorbus aucuparia</i>	5	Range 11-600cm
<i>Vaccinium myrtillus</i>	4	35cm
<i>Hylocomium splendens</i>	5	
<i>Hypnum jutlandicum</i>	3	
<i>Isoetes macrospora</i>	2	
<i>Mnium hornum</i>	2	
<i>Plagiothecium undulatum</i>	3	
<i>Pseudoscleropodium purum</i>	1	
<i>Rhytidiadelphus loreus</i>	8	
<i>Rhytidiadelphus triquetrus</i>	3	
<i>Sphagnum quinquefarium</i>	4	
<i>Thuidium tamariscinum</i>	5	
<i>Bazzania trilobata</i>	2	
<i>Diplophyllum albicans</i>	2	
<i>Scapania gracilis</i>	3	

Quadrat Reference	Site name	Date recorded
02 – Out – 5x5	Side Wood	18/08/2006

	Cover (Domin)	Average height
<i>Agrostis capillaris</i>	5	10/32cm
<i>Anthoxanthum odoratum</i>	3	
<i>Betula</i> sp.	1 (1 seedling)	5cm
<i>Deschampsia flexuosa</i>	4	10/48cm
<i>Festuca ovina / rubra</i>	3	
<i>Galium saxatile</i>	4	
<i>Oxalis acetosella</i>	4	
<i>Pteridium aquilinum</i>	4	50cm
<i>Quercus</i> sp.	1 (1 seedling)	10cm
<i>Sorbus aucuparia</i>	1 (2 seedlings)	Range 6-11cm
<i>Vaccinium myrtillus</i>	3	9cm
<i>Atrichum undulatum</i>	2	
<i>Campylopus flexuosus</i>	2	
<i>Dicranella heteromalla</i>	2	
<i>Dicranodontium denudatum</i>	2	
<i>Dicranum scoparium</i>	3	
<i>Hylocomium splendens</i>	5	
<i>Hypnum jutlandicum</i>	3	
<i>Kindbergia (Eurhynchium) praelonga</i>	1	
<i>Mnium hornum</i>	2	
<i>Plagiothecium undulatum</i>	2	
<i>Pleurozium schreberi</i>	2	
<i>Polytrichum commune / P. formosum</i>	4	
<i>Rhytidiadelphus loreus</i>	5	
<i>Rhytidiadelphus squarrosus</i>	1	
<i>Sphagnum quinquefarium</i>	4	
<i>Thuidium tamariscinum</i>	5	
<i>Bazzania trilobata</i>	3	
<i>Diplophyllum albicans</i>	3	
<i>Mylia taylorii</i>	2	
<i>Scapania gracilis</i>	3	
<i>Scapania nemorea</i>	2	
Bare ground	3	
Rock	2	

Quadrat Reference	Site name	Date recorded
03 – In – 1x1	Silver Cove cattle grazing site (open)	06/09/2006

	Cover (Domin)	Average height
<i>Agrostis canina</i>	4	24/58cm
<i>Calluna vulgaris</i>	3	37cm
<i>Carex viridula</i> ssp. <i>oedocarpa</i>	3	
<i>Deschampsia flexuosa</i>	9	26/55cm
<i>Festuca ovina</i> / <i>rubra</i>	4	23cm
<i>Galium saxatile</i>	4	
<i>Oxalis acetosella</i>	3	
<i>Picea sitchensis</i>	1 (1 seedling)	
<i>Sorbus aucuparia</i>	2 (6 seedlings)	Range 27-66cm
<i>Vaccinium myrtillus</i>	4	21cm
<i>Hypnum jutlandicum</i>	3	
<i>Plagiothecium undulatum</i>	2	
<i>Polytrichum commune</i> / <i>P. formosum</i>	3	
<i>Rhytidiadelphus loreus</i>	5	
<i>Sphagnum tenellum</i>	2	
<i>Diplophyllum albicans</i>	2	
<i>Scapania nemorea</i>	2	

Quadrat Reference	Site name	Date recorded
03 – Out – 1x1	Silver Cove cattle grazing site (open)	06/09/2006

	Cover (Domin)	Average height
<i>Agrostis canina</i>	4	21/45cm
<i>Betula</i> sp.	1 (1 seedling)	5cm
<i>Calluna vulgaris</i>	5	35cm
<i>Deschampsia flexuosa</i>	8	24/52cm
<i>Festuca ovina / rubra</i>	3	20cm
<i>Galium saxatile</i>	5	
<i>Sorbus aucuparia</i>	1 (1 seedling)	16cm
Fern sp.	1	1 tiny fern
<i>Plagiothecium undulatum</i>	2	
<i>Polytrichum commune / P. formosum</i>	3	
<i>Rhytidiadelphus loreus</i>	4	
<i>Lophozia ventricosa</i>	1	
Rock	4	



Quadrat Reference	Site name	Date recorded
04 – In – 5x5	Silver Cove cattle grazed site (wooded)	06/09/2006

	Cover (Doin)	Average height
<i>Agrostis canina</i>	4	28/43cm
<i>Agrostis capillaris</i>	5	30/45cm
<i>Anthoxanthum odoratum</i>	4	
<i>Calluna vulgaris</i>	1	
<i>Deschampsia flexuosa</i>	8	33/50cm
<i>Festuca ovina / rubra</i>	3	
<i>Galium saxatile</i>	7	
<i>Larix</i>	1	1 large tree
<i>Oxalis acetosella</i>	1	
<i>Pteridium aquilinum</i>	1	
<i>Sorbus aucuparia</i>	2 (6 seedlings)	Range 10-80cm
<i>Vaccinium myrtillus</i>	4	21cm
<i>Hypnum jutlandicum</i>	4	
<i>Plagiothecium undulatum</i>	5	
<i>Pleurozium schreberi</i>	7	
<i>Pseudoscleropodium purum</i>	4	
<i>Pseudotaxiphyllum elegans</i>	1	
<i>Rhytidiadelphus squarrosus</i>	8	
<i>Thuidium tamariscinum</i>	3	
<i>Diplophyllum albicans</i>	2	
<i>Lophocolea bidentata</i>	1	
<i>Scapania nemorea</i>	3	
Rock	2	
Tree stumps & brash	2	

Quadrat Reference	Site name	Date recorded
04 – Out – 5x5	Silver Cove cattle grazed site (wooded)	06/09/2006

	Cover (Doin)	Average height
<i>Agrostis canina</i>	3	
<i>Agrostis capillaris</i>	5	26/50cm
<i>Anthoxanthum odoratum</i>	4	
<i>Calluna vulgaris</i>	2	26cm
<i>Deschampsia flexuosa</i>	7	25/46cm
<i>Festuca ovina / rubra</i>	4	20cm
<i>Galium saxatile</i>	7	
<i>Pteridium aquilinum</i>	1	
<i>Sorbus aucuparia</i>	1 (3 seedlings)	Range 20-52cm
<i>Vaccinium myrtillus</i>	4	25cm
<i>Dicranum majus</i>	2	
<i>Hypnum jutlandicum</i>	5	
<i>Plagiothecium undulatum</i>	3	
<i>Pleurozium schreberi</i>	5	
<i>Polytrichum commune / P. formosum</i>	3	
<i>Pseudoscleropodium purum</i>	5	
<i>Rhytidiadelphus loreus</i>	2	
<i>Rhytidiadelphus squarrosus</i>	8	
<i>Sphagnum papillosum</i>	1	
<i>Sphagnum tenellum</i>	1	
<i>Barbilophozia floerkei</i>	1	
<i>Diplophyllum albicans</i>	1	
<i>Lophocolea bidentata</i>	1	
<i>Scapania nemorea</i>	3	
Rock	3	
Tree stumps, dead wood & brash	1	

Quadrat Reference	Site name	Date recorded
<b>05A – In – 1x1</b>	<b>Silver Cove</b>	<b>17/08/2006</b>

	Cover (Domin)	Average height
<i>Agrostis canina</i>	2	
<i>Calluna vulgaris</i>	1	10cm
<i>Carex panicea</i>	4	
<i>Carex pilulifera</i>	6	14cm
<i>Festuca ovina / rubra</i>	3	
<i>Huperzia selago</i>	1	
<i>Nardus stricta</i>	7	14/30cm
<i>Narthecium ossifragum</i>	3	
<i>Potentilla erecta</i>	4	
<i>Trichophorum cespitosum</i>	5	20cm
<i>Vaccinium myrtillus</i>	3	
<i>Hylocomium splendens</i>	2	
<i>Hypnum jutlandicum</i>	3	
<i>Pleurozium schreberi</i>	3	
<i>Racomitrium lanuginosum</i>	2	
<i>Rhytidiadelphus loreus</i>	2	
<i>Rhytidiadelphus squarrosus</i>	4	

Quadrat Reference	Site name	Date recorded
<b>05A – Out – 1x1</b>	<b>Silver Cove</b>	<b>17/08/2006</b>

	<b>Cover (Domin)</b>	<b>Average height</b>
<i>Agrostis canina</i>	4	10/24cm
<i>Agrostis capillaris</i>	4	12/27cm
<i>Calluna vulgaris</i>	4	13cm
<i>Carex panicea</i>	3	
<i>Festuca ovina / rubra</i>	3	8cm
<i>Galium saxatile</i>	3	
<i>Huperzia selago</i>	1	
<i>Nardus stricta</i>	9	10/37cm
<i>Narthecium ossifragum</i>	3	
<i>Potentilla erecta</i>	3	
<i>Vaccinium myrtillus</i>	3	8cm
<i>Dicranum scoparium</i>	1	
<i>Hylocomium splendens</i>	1	
<i>Hypnum jutlandicum</i>	3	
<i>Sphagnum papillosum</i>	3	
<i>Diplophyllum albicans</i>	3	

Quadrat Reference	Site name	Date recorded
<b>05B – In – 1x1</b>	<b>Little Gowder Crag</b>	<b>07/09/2006</b>

	Cover (Domin)	Average height
<i>Agrostis canina</i>	3	
<i>Diphasiastrum alpinum</i>	3	5cm
<i>Festuca ovina / rubra</i>	9	4/17cm
<i>Galium saxatile</i>	4	
<i>Huperzia selago</i>	3	4cm
<i>Potentilla erecta</i>	2	
<i>Vaccinium myrtillus</i>	3	3cm
<i>Hypnum jutlandicum</i>	3	
<i>Polytrichum commune</i>	5	
<i>Racomitrium lanuginosum</i>	3	
<i>Rhytidiadelphus loreus</i>	1	
<i>Diplophyllum albicans</i>	1	
Rock	1	

Quadrat Reference	Site name	Date recorded
<b>05B – Out – 1x1</b>	<b>Little Gowder Crag</b>	<b>07/09/2006</b>

	Cover (Domin)	Average height
<i>Agrostis canina</i>	3	
<i>Diphasiastrum alpinum</i>	5	5cm
<i>Festuca ovina / rubra</i>	9	6/12cm
<i>Galium saxatile</i>	4	
<i>Huperzia selago</i>	3	5cm
<i>Potentilla erecta</i>	3	
<i>Vaccinium myrtillus</i>	3	3cm
<i>Hypnum jutlandicum</i>	3	
<i>Polytrichum commune</i>	2	
<i>Racomitrium lanuginosum</i>	4	
<i>Rhytidiadelphus loreus</i>	1	
Rock	1	

Quadrat Reference	Site name	Date recorded
06 – In – 1x1	Dubs Quarry	14/08/2006

	Cover (Domin)	Average height
<i>Agrostis capillaris</i>	8	30/40cm
<i>Calluna vulgaris</i>	2	20cm
<i>Carex binervis</i>	2	
<i>Carex pilulifera</i>	3	
<i>Digitalis purpurea</i>	1	
<i>Festuca ovina / rubra</i>	2	
<i>Galium saxatile</i>	4	
<i>Juncus squarrosus</i>	1	
<i>Vaccinium myrtillus</i>	1	10cm
Fern sp.	1	1 tiny
<i>Campylopus flexuosus</i>	4	
<i>Dicranella heteromalla</i>	2	
<i>Hypnum jutlandicum</i>	1	
<i>Polytrichum commune / P. formosum</i>	2	
Bare ground	1	
Rocks	4	

Quadrat Reference	Site name	Date recorded
06 – In – 5x5	Dubs Quarry	14/08/2006

	Cover (Domin)	Average height
<i>Agrostis canina</i>	3	
<i>Agrostis capillaris</i>	6	29/40cm
<i>Athyrium felix-femina</i>	1	
<i>Blechnum spicant</i>	1	
<i>Calluna vulgaris</i>	5	24cm
<i>Carex binervis</i>	4	
<i>Carex panicea</i>	2	
<i>Carex pilulifera</i>	3	
<i>Carex viridula</i> ssp. <i>oedocarpa</i>	3	
<i>Cerastium fontanum</i>	1	
<i>Chamerion angustifolium</i>	3	
<i>Cirsium palustre</i>	3	
<i>Deschampsia cespitosa</i>	2	
<i>Deschampsia flexuosa</i>	4	33/50cm
<i>Digitalis purpurea</i>	3	
<i>Dryopteris dilatata</i>	1	
<i>Epilobium brunnescens</i>	1	
<i>Festuca ovina</i> / <i>rubra</i>	4	
<i>Galium saxatile</i>	3	
<i>Holcus lanatus</i>	2	
<i>Juncus effusus</i>	1	70cm
<i>Juncus squarrosus</i>	3	
<i>Juniperus communis</i> (planted)	2 (5 planted)	10cm
<i>Luzula multiflora</i>	2	
<i>Oreopteris limbosperma</i>	1	
<i>Potentilla erecta</i>	3	
<i>Salix</i> sp.	1	
<i>Senecio jacobaea</i>	1	
<i>Vaccinium myrtillus</i>	1	10cm
<i>Campylopus flexuosus</i>	3	
<i>Campylopus introflexus</i>	1	
<i>Dicranella heteromalla</i>	1	
<i>Dicranum scoparium</i>	1	
<i>Hypnum jutlandicum</i>	3	
<i>Pogonatum aloides</i>	1	
<i>Polytrichum commune</i> / <i>P. formosum</i>	4	
Bare ground	2	
Rock	3	
Tree stumps & brash	4	



Quadrat Reference	Site name	Date recorded
06 – Out – 1x1	Dubs Quarry	14/08/2006

	Cover (Domin)	Average height
<i>Agrostis canina</i>	3	
<i>Agrostis capillaris</i>	5	30/45cm
<i>Betula</i> sp.	1 (1 seedling)	
<i>Calluna vulgaris</i>	3	13cm
<i>Carex binervis</i>	4	
<i>Deschampsia flexuosa</i>	5	32/60cm
<i>Dryopteris dilitata</i>	1	
<i>Festuca ovina / rubra</i>	6	23cm
<i>Galium saxatile</i>	4	
<i>Juncus squarrosus</i>	4	
<i>Vaccinium myrtillus</i>	1	
<i>Hypnum jutlandicum</i>	2	
<i>Polytrichum commune / P. formosum</i>	6	

Quadrat Reference	Site name	Date recorded
06 – Out – 5x5	Dubs Quarry	14/08/2006

	Cover (Domin)	Average height
<i>Agrostis canina</i>	2	
<i>Agrostis capillaris</i>	5	35/50cm
<i>Athyrium felix-femina</i>	1	
<i>Betula</i> sp.	1	
<i>Blechnum spicant</i>	1	
<i>Calluna vulgaris</i>	5	20cm
<i>Carex binervis</i>	3	
<i>Carex viridula</i> ssp. <i>oedocarpa</i>	2	
<i>Chamerion angustifolium</i>	1	
<i>Cirsium palustre</i>	1	
<i>Deschampsia cespitosa</i>	1	
<i>Deschampsia flexuosa</i>	6	37/56cm
<i>Digitalis purpurea</i>	2	
<i>Dryopteris dilatata</i>	3	
<i>Festuca ovina</i> / <i>rubra</i>	5	26cm
<i>Galium saxatile</i>	4	
<i>Juncus effusus</i>	1	
<i>Juncus squarrosus</i>	2	
<i>Oreopteris limbosperma</i>	1	
<i>Picea sitchensis</i>	1 (1 seedling)	36cm
<i>Potentilla erecta</i>	3	
<i>Vaccinium myrtillus</i>	2	6cm
<i>Hylocomium splendens</i>	1	
<i>Hypnum jutlandicum</i>	3	
<i>Polytrichum commune</i> / <i>P. formosum</i>	4	
<i>Pseudotaxiphyllum elegans</i>	1	
<i>Rhytidiadelphus loreus</i>	1	
<i>Rhytidiadelphus squarrosus</i>	1	
Rocks	3	
Tree stumps & brash	4	

Quadrat Reference	Site name	Date recorded
07 – NoExcl – 1x1	Upper valley south side	16/08/2006

	Cover (Domin)	Average height
<i>Agrostis canina</i>	2	
<i>Agrostis capillaris</i>	4	21/46cm
<i>Calluna vulgaris</i>	1	7cm
<i>Carex binervis</i>	4	
<i>Carex pilulifera</i>	7	30cm
<i>Digitalis purpurea</i>	1	
<i>Festuca ovina / rubra</i>	4	16cm
<i>Juncus squarrosus</i>	4	
<i>Campylopus flexuosus</i>	3	
<i>Hypnum jutlandicum</i>	4	
<i>Plagiothecium undulatum</i>	2	
<i>Polytrichum commune / P. formosum</i>	5	
Bare ground	4	
Rocks	1	

Quadrat Reference	Site name	Date recorded
07 – NoExcl – 5x5	Upper valley south side	16/08/2006

	Cover (Domin)	Average height
<i>Agrostis canina</i>	2	
<i>Agrostis capillaris</i>	4	18/40cm
<i>Calluna vulgaris</i>	3	12cm
<i>Carex binervis</i>	2	
<i>Carex pilulifera</i>	7	24cm
<i>Deschampsia cespitosa</i>	1	
<i>Deschampsia flexuosa</i>	4	12/40cm
<i>Digitalis purpurea</i>	1	
<i>Dryopteris dilatata</i>	2	
<i>Festuca ovina / rubra</i>	4	14cm
<i>Festuca vivipara</i>	2	
<i>Galium saxatile</i>	3	
<i>Juncus effusus</i>	1	
<i>Juncus squarrosus</i>	4	
<i>Luzula multiflora</i>	1	
<i>Picea sitchensis</i>	1 (1 seedling)	20cm
<i>Quercus</i> sp. (planted)	(12 planted)	Range 25-48cm
<i>Sorbus aucuparia</i>	1	
<i>Campylopus flexuosus</i>	3	
<i>Campylopus introflexus</i>	1	
<i>Dicranella heteromalla</i>	2	
<i>Hypnum jutlandicum</i>	3	
<i>Plagiothecium undulatum</i>	2	
<i>Polytrichum commune / P. formosum</i>	5	
Bare ground	4	
Tree stumps & brash	3	

Quadrat Reference	Site name	Date recorded
08 – In – 1x1	River Liza upper bend	15/08/2006

	Cover (Domin)	Average height
<i>Agrostis capillaris</i>	3	
<i>Calluna vulgaris</i>	4	22cm
<i>Deschampsia flexuosa</i>	9	33/48cm
<i>Juncus squarrosus</i>	2	
<i>Molinia caerulea</i>	2	38/65cm
<i>Picea sitchensis</i>	1	14cm
<i>Pinus sylvestris</i>	1	21cm
<i>Polytrichum commune</i> / <i>P. formosum</i>	7	
Rock	1	

Quadrat Reference	Site name	Date recorded
08 – In – 5x5	River Liza upper bend	15/08/2006

	Cover (Domin)	Average height
<i>Agrostis capillaris</i>	3	27/42cm
<i>Calluna vulgaris</i>	6	32cm
<i>Carex binervis</i>	3	
<i>Carex pilulifera</i>	1	
<i>Deschampsia flexuosa</i>	8	20/46cm
<i>Dryopteris dilatata</i>	3	
<i>Festuca ovina / rubra</i>	3	
<i>Festuca vivipara</i>	1	
<i>Juncus conglomeratus</i>	1	
<i>Juncus squarrosus</i>	3	
<i>Luzula multiflora</i>	1	
<i>Molinia caerulea</i>	2	38/65cm
<i>Picea sitchensis</i>	2	50cm
<i>Pinus sylvestris</i>	2	39cm
<i>Potentilla erecta</i>	2	
<i>Vaccinium myrtillus</i>	1	
<i>Brachythecium rutabulum</i>	3	
<i>Campylopus flexuosus</i>	3	
<i>Campylopus introflexus</i>	3	
<i>Dicranella heteromalla</i>	2	
<i>Dicranum scoparium</i>	3	
<i>Hypnum jutlandicum</i>	3	
<i>Plagiothecium undulatum</i>	3	
<i>Pogonatum urnigerum</i>	2	
<i>Polytrichum commune / P. formosum</i>	8	
<i>Nardia scalaris</i>	1	
Rocks	2	
Tree stumps & brash	3	

Quadrat Reference	Site name	Date recorded
<b>08 – Out – 1x1</b>	<b>River Liza upper bend</b>	<b>15/08/2006</b>

	Cover (Domin)	Average height
<i>Agrostis canina</i>	4	
<i>Calluna vulgaris</i>	8	45cm
<i>Carex binervis</i>	2	
<i>Carex echinata</i>	2	
<i>Carex panicea</i>	3	
<i>Deschampsia flexuosa</i>	5	20/50cm
<i>Festuca ovina / rubra</i>	3	
<i>Juncus squarrosus</i>	4	
<i>Polytrichum commune / P. formosum</i>	5	
<i>Barbilophozia floerkei</i>	1	
<i>Diplophyllum albicans</i>	1	

Quadrat Reference	Site name	Date recorded
<b>08 – Out – 5x5</b>	<b>River Liza upper bend</b>	<b>15/08/2006</b>

	Cover (Domin)	Average height
<i>Agrostis canina</i>	3	
<i>Agrostis capillaris</i>	4	30/50cm
<i>Athyrium felix-femina</i>	2	
<i>Blechnum spicant</i>	1	
<i>Calluna vulgaris</i>	5	40cm
<i>Carex binervis</i>	4	
<i>Carex echinata</i>	3	
<i>Carex panicea</i>	3	
<i>Chamerion angustifolium</i>	1	
<i>Deschampsia cespitosa</i>	2	
<i>Deschampsia flexuosa</i>	8	32/50cm
<i>Digitalis purpurea</i>	1	
<i>Dryopteris dilatata</i>	3	
<i>Festuca ovina / rubra</i>	4	
<i>Juncus squarrosus</i>	3	
<i>Picea sitchensis</i>	1 (3 seedlings)	Range 22-53cm
<i>Potentilla erecta</i>	3	
<i>Rumex acetosella</i>	1	
<i>Salix</i> sp.	1	
<i>Vaccinium myrtillus</i>	2	15cm
<i>Campylopus flexuosus</i>	3	
<i>Campylopus introflexus</i>	1	
<i>Dicranella heteromalla</i>	1	
<i>Hypnum jutlandicum</i>	4	
<i>Kindbergia (Eurhynchium) praelonga</i>	1	
<i>Plagiothecium undulatum</i>	3	
<i>Polytrichum commune / P. formosum</i>	5	
<i>Rhytidiadelphus squarrosus</i>	3	
<i>Barbilophozia floerkei</i>	1	
<i>Diplophyllum albicans</i>	1	
Tree stumps & brash	4	



Quadrat Reference	Site name	Date recorded
<b>09 – NoExcl – 1x1</b>	<b>Northern fell fence</b>	<b>16/08/2006</b>

	<b>Cover (Domin)</b>	<b>Average height</b>
<i>Calluna vulgaris</i>	3	7cm
<i>Deschampsia flexuosa</i>	7	15/36cm
<i>Festuca ovina / rubra</i>	3	
<i>Dicranella heteromalla</i>	3	
<i>Polytrichum juniperinum</i>	1	
Bare ground	8	
Rocks	4	

Quadrat Reference	Site name	Date recorded
<b>09 – NoExcl – 5x5</b>	<b>Northern fell fence</b>	<b>16/08/2006</b>

	Cover (Domin)	Average height
<i>Agrostis canina</i>	3	
<i>Calluna vulgaris</i>	3	7cm
<i>Deschampsia flexuosa</i>	7	13/40cm
<i>Festuca ovina / rubra</i>	3	
<i>Galium saxatile</i>	3	
<i>Senecio vulgaris</i>	1	
<i>Vaccinium myrtillus</i>	3	8cm
<i>Campylopus flexuosus</i>	3	
<i>Campylopus introflexus</i>	4	
<i>Dicranella heteromalla</i>	2	
<i>Hypnum jutlandicum</i>	3	
<i>Polytrichum juniperinum</i>	2	
Bare ground	8	
Rocks	4	
Tree stumps & brash	4	

Quadrat Reference	Site name	Date recorded
10A – Cattle – 1x1	Ennerdale Water shore (cattle)	18/08/2006

	Cover (Domin)	Average height
<i>Carex viridula</i> ssp. <i>oedocarpa</i>	4	
<i>Drosera rotundifolia</i>	1	
<i>Erica tetralix</i>	1	7cm
<i>Molinia caerulea</i>	6	8/25cm
<i>Nardus stricta</i>	6	10/25cm
<i>Narthecium ossifragum</i>	4	
<i>Pinguicula vulgaris</i>	1	
<i>Potentilla erecta</i>	3	
<i>Trichophorum cespitosum</i>	4	10cm
<i>Campylopus atrovirens</i>	1	
<i>Polytrichum commune</i>	3	
<i>Racomitrium aciculare</i>	2	
<i>Marsupella emarginata</i>	3	
Rock	5	

Quadrat Reference	Site name	Date recorded
10B – NoCattle – 1x1	Ennerdale Water shore (no cattle)	18/08/2006

	Cover (Domin)	Average height
<i>Carex panicea</i>	4	
<i>Carex viridula</i> ssp. <i>oedocarpa</i>	4	
<i>Drosera rotundifolia</i>	1	
<i>Hydrocotyle vulgaris</i>	1	
<i>Juncus bulbosus</i>	3	
<i>Molinia caerulea</i>	7	16/30cm
<i>Nardus stricta</i>	7	12/29cm
<i>Narthecium ossifragum</i>	4	
<i>Potentilla erecta</i>	2	
<i>Trichophorum cespitosum</i>	3	21cm
<i>Campylopus atrovirens</i>	2	
<i>Hyocomium armoricum</i>	1	
<i>Polytrichum commune</i>	3	
<i>Rhytidiadelphus squarrosus</i>	1	
<i>Marsupella emarginata</i>	3	
<i>Nardia scalaris</i>	1	
<i>Scapania undulata</i>	2	
Bare ground	4	
Rock	4	

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