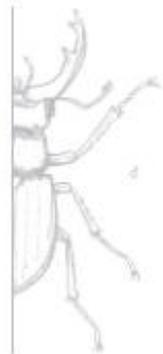


Molland Moor Vegetation Survey
2013

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MOLLAND MOOR VEGETATION SURVEY, 2013

1. Introduction

This report was commissioned by the Molland Estate, with funding from the Exmoor National Park Authority (ENPA) and aimed to assess the current condition of the moorland vegetation, and especially the heathland, on Molland Moor. The results of the 2013 survey were then to be compared with those of the Exmoor Heathland Survey carried out by Natural England (NE) in 2000, and also the very detailed vegetation survey of the site undertaken by ENPA in 1991.

The following report has been prepared using the National Vegetation Classification (NVC)(Rodwell, ed., 1991 & 1992). All vegetation has been keyed down to NVC sub-community level. In all, six days were spent in the field: 18 September (half day), 24 September (half day), 25 September, 7 October, 8 October, 12 October and 13 October. Prior to the commencement of the fieldwork, copies of the 2013 aerial photographs of the site were printed out and these were taken into the field and used as the basis for identifying the shape and size of the various survey units (SU) identified on the maps. The survey units each have a unique number, which is shown on the map, and this can be cross-referenced with the target notes for each SU given in Appendix 1. In all, 178 survey units have been mapped during the course of the 2013 survey. This is a map-based report, with the results being presented in section 2 as a series of 1:5,000 scale plans of the site.

Fieldwork has concentrated on the accurate elucidation of those dry heath communities in which ling *Calluna vulgaris* and other ericaceous dwarf-shrubs comprise an important element of the vegetation. 'Heathland' here is usually defined as a survey unit where there is at least 50% cover of ericaceous dwarf-shrubs. For the purposes of this survey, 'ling' refers to *Calluna vulgaris* specifically, while 'heather' is used to cover all of the main ericaceous dwarf-shrubs (bell heather *Erica cinerea*, cross-leaved heath *Erica tetralix* and whortleberry *Vaccinium myrtillus*) present on Molland Moor. It should also be noted that, though they are dwarf-shrubs which often comprise an important element of heathland dwarf-shrub vegetation, European gorse *Ulex europaeus* and western gorse *U. gallii* are not included in the definition of 'heather' cover used here.

The mire communities found in the valley bottoms and on blanket peat in the watershed above Soakey Moor form complex mosaics of a number of NVC sub-communities, and they would have required substantial additional time to map to the same level of detail as the remainder of the moorland. Given time constraints and the main aims of the project, these have therefore not been the subject of NVC survey. However, a brief walk-over assessment of bog habitats was carried out, and it would appear from this that the mire communities on Molland have changed very little over the course of the last two decades.

Section 3 provides a discussion of the results. Firstly, a brief description of the vegetation sub-communities shown on the maps is provided along with comments on management and other issues that are impacting upon them. Following this, there is an assessment of the quality and condition of the current vegetation mosaic at Molland Moor, and an assessment of changes in the vegetation cover between this work and that carried out by both the ENPA

in 1990 and NE in 2000. It goes on to examine the possible causes of the changes seen, and attempts to set out management prescriptions that will maintain and enhance the high ecological interest of the site. The discussion has drawn not only on the two vegetation surveys, but also on any other pertinent information that exists on the vegetation and management of the site.

2. Results

The following series of maps show the 178 survey units into which the site has been divided along with the survey unit number and the NVC community or sub-community code. The colours used show the various main vegetation types to which each of the survey units has been assigned, and is explained in the key at the beginning of the maps.

For those areas where ling, or other heather species comprise a significant element of vegetation cover, three colour codes have been assigned that attempt to show the extent of heather cover. These categories are for relatively dense heathland stands where cover is 70% or more, for 'open' heathland where heather cover is in the range from 50-69% and heathy grasslands where heather cover is between 10 and 49%. The latter category often includes areas where former surveys and aerial photographs show there to have been heathland vegetation present in the past.

There have been a number of recent controlled burns carried out at Molland Moor. These are attempting to restore the many stands of old heather, much of which are in very poor condition, with recent severe outbreaks of heather beetle *Lochmaea suturalis* having killed a significant percentage of plants in these old-growth stands. In recently burnt areas, the heather cover categories show the potential heather cover once the small regenerating plants have grown and spread out. In NVC terms, many of these recently burnt stands are currently referable to either the M25a *Molinia* community or the U4e acid grassland, but it is thought that in time they will return to a NVC heathland type.

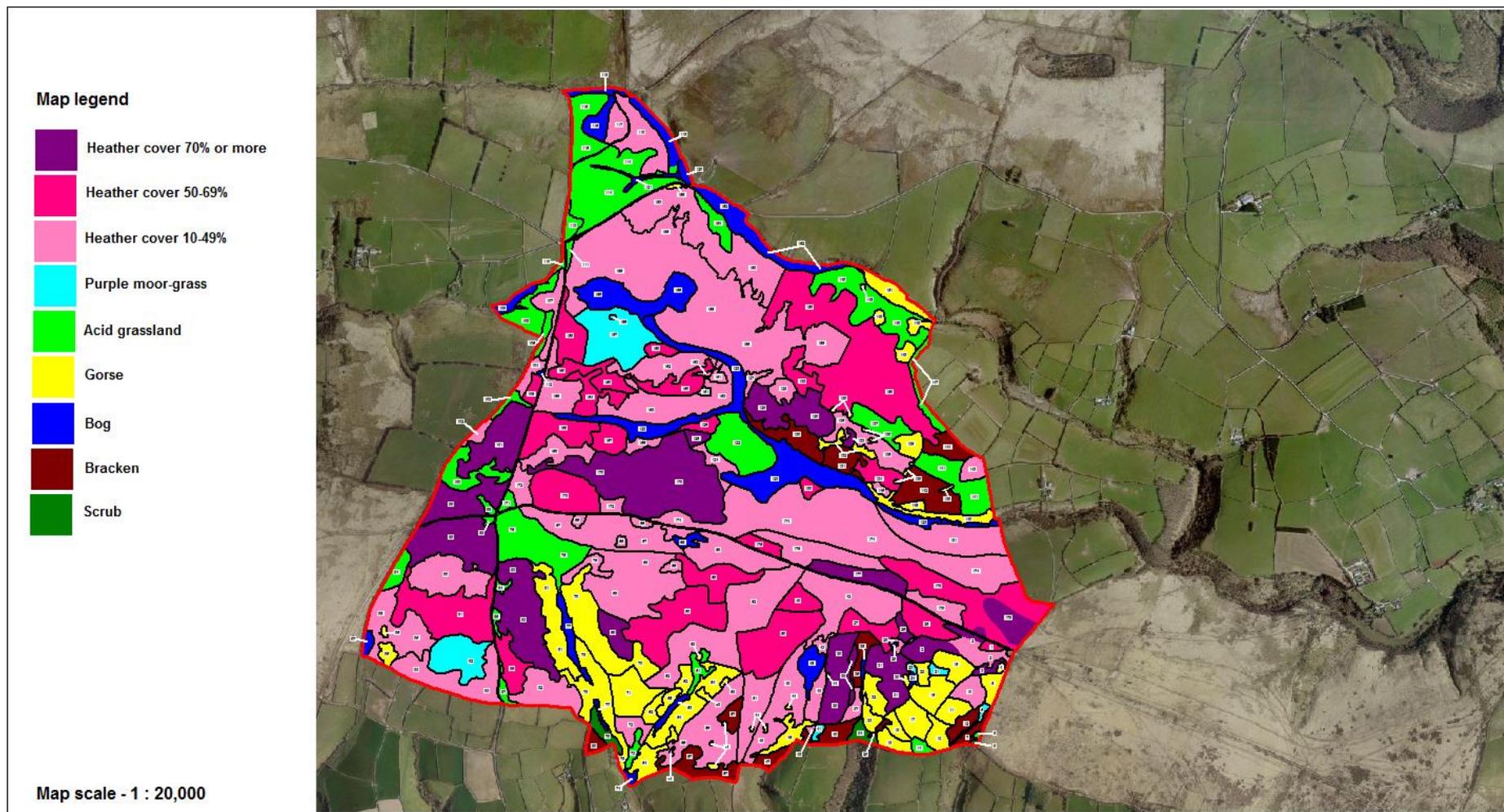


Figure 2.1. Overall map of vegetation type within survey units at Molland Moor

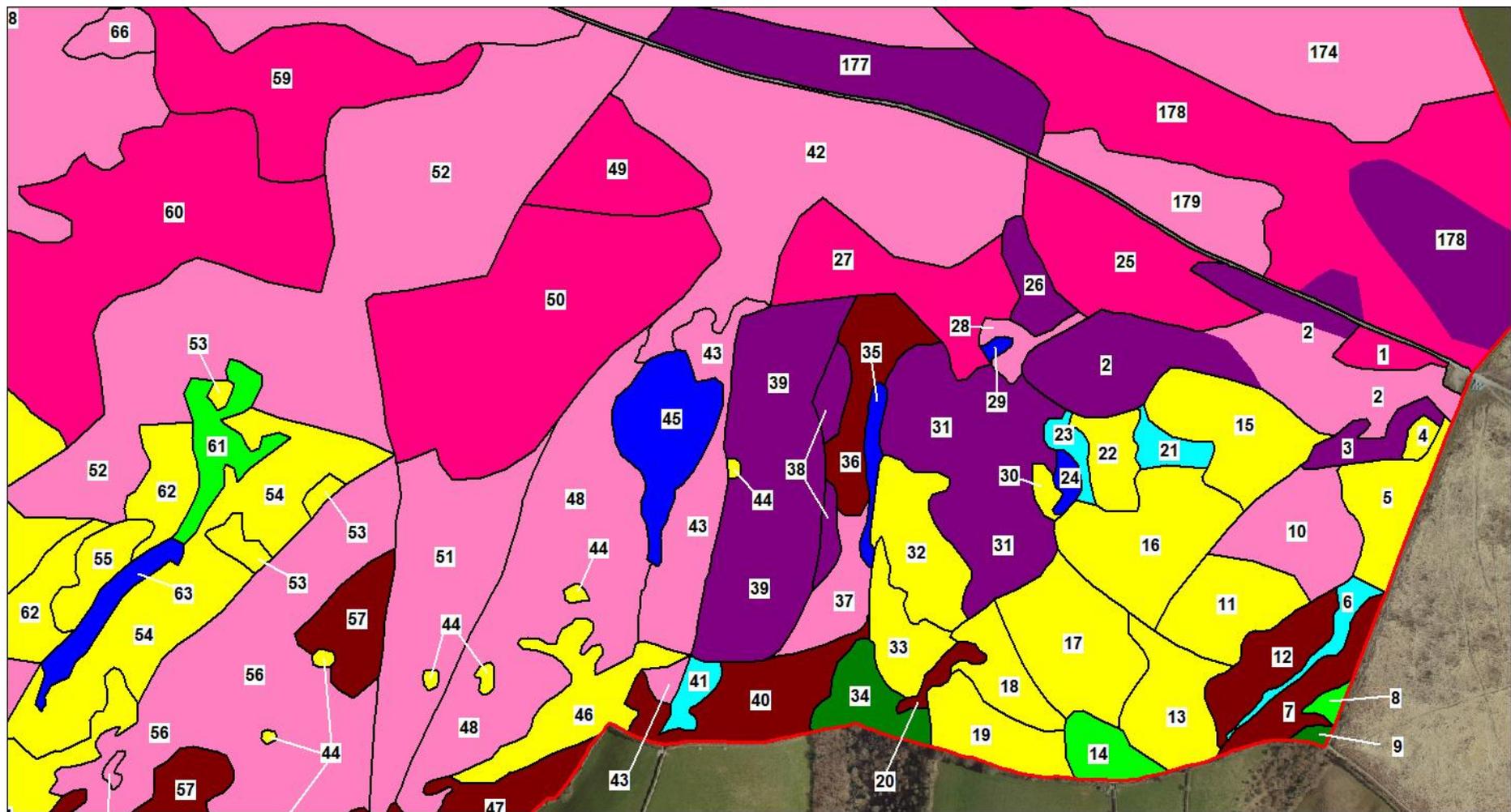


Figure 2.2. Vegetation type within survey units on Molland Moor south-east

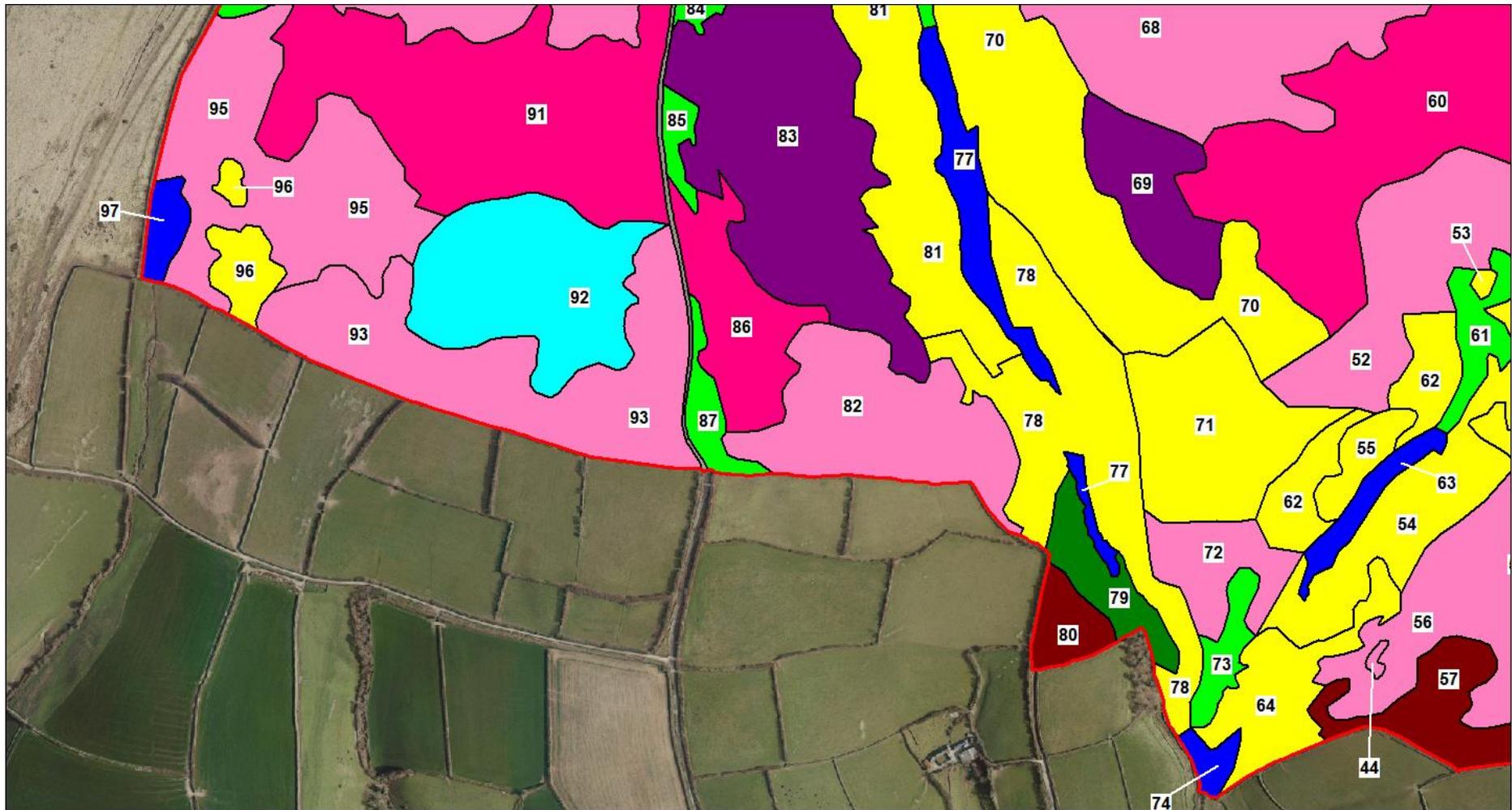


Figure 2.3. Vegetation type within survey units on Molland Moor south-central

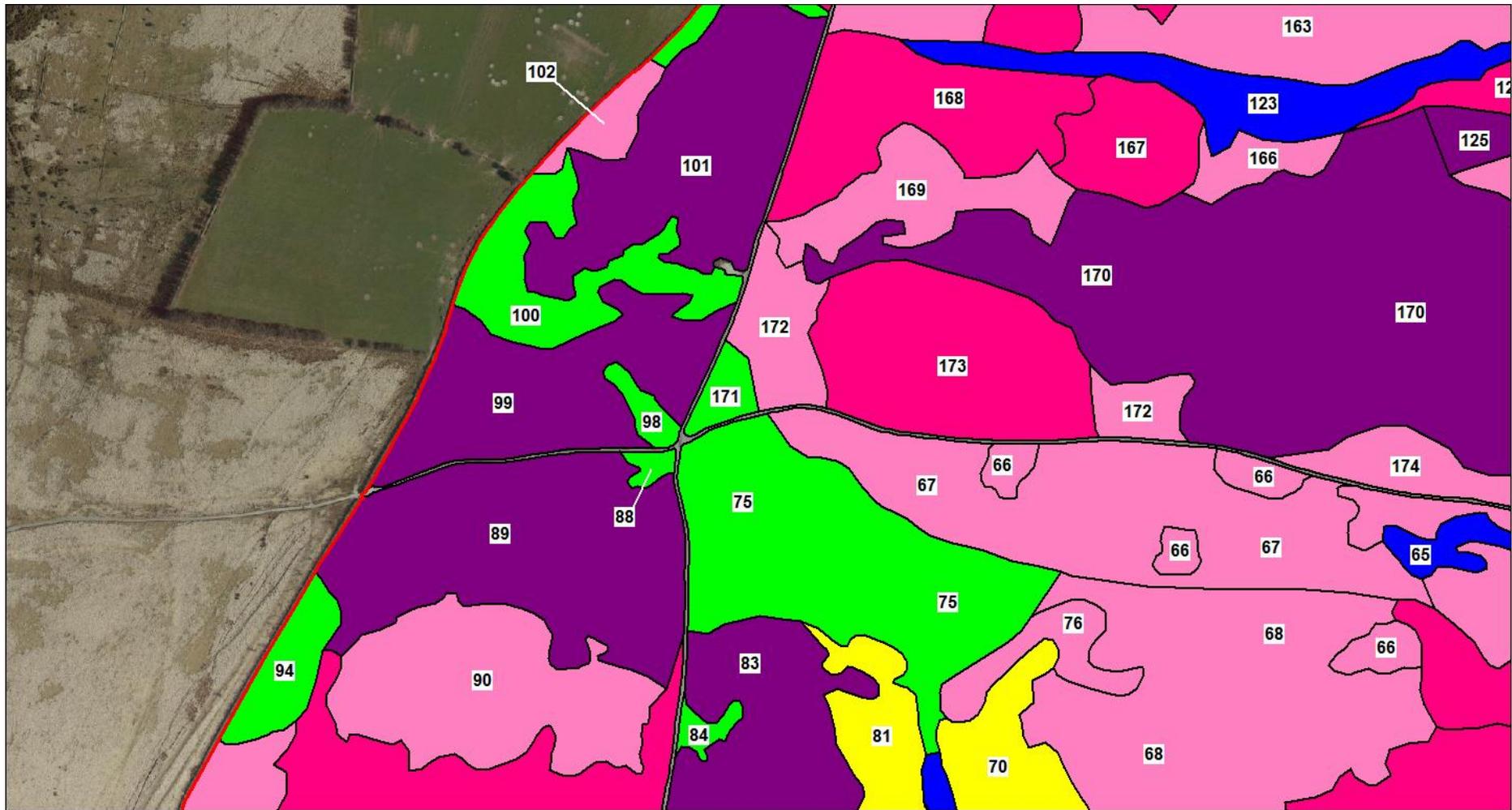


Figure 2.4. Vegetation type within survey units on Molland Moor west

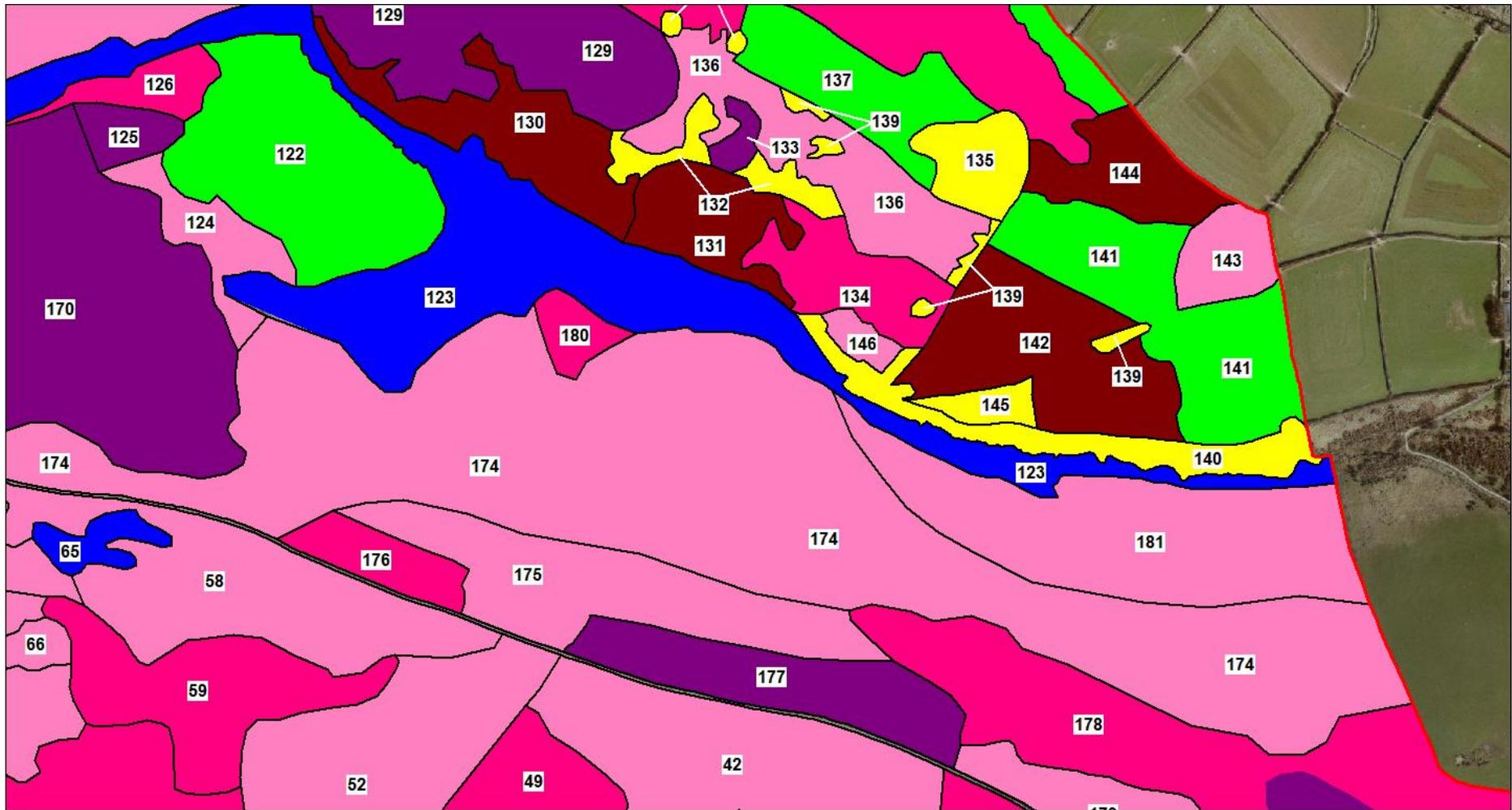


Figure 2.5. Vegetation type within survey units on Molland Moor east

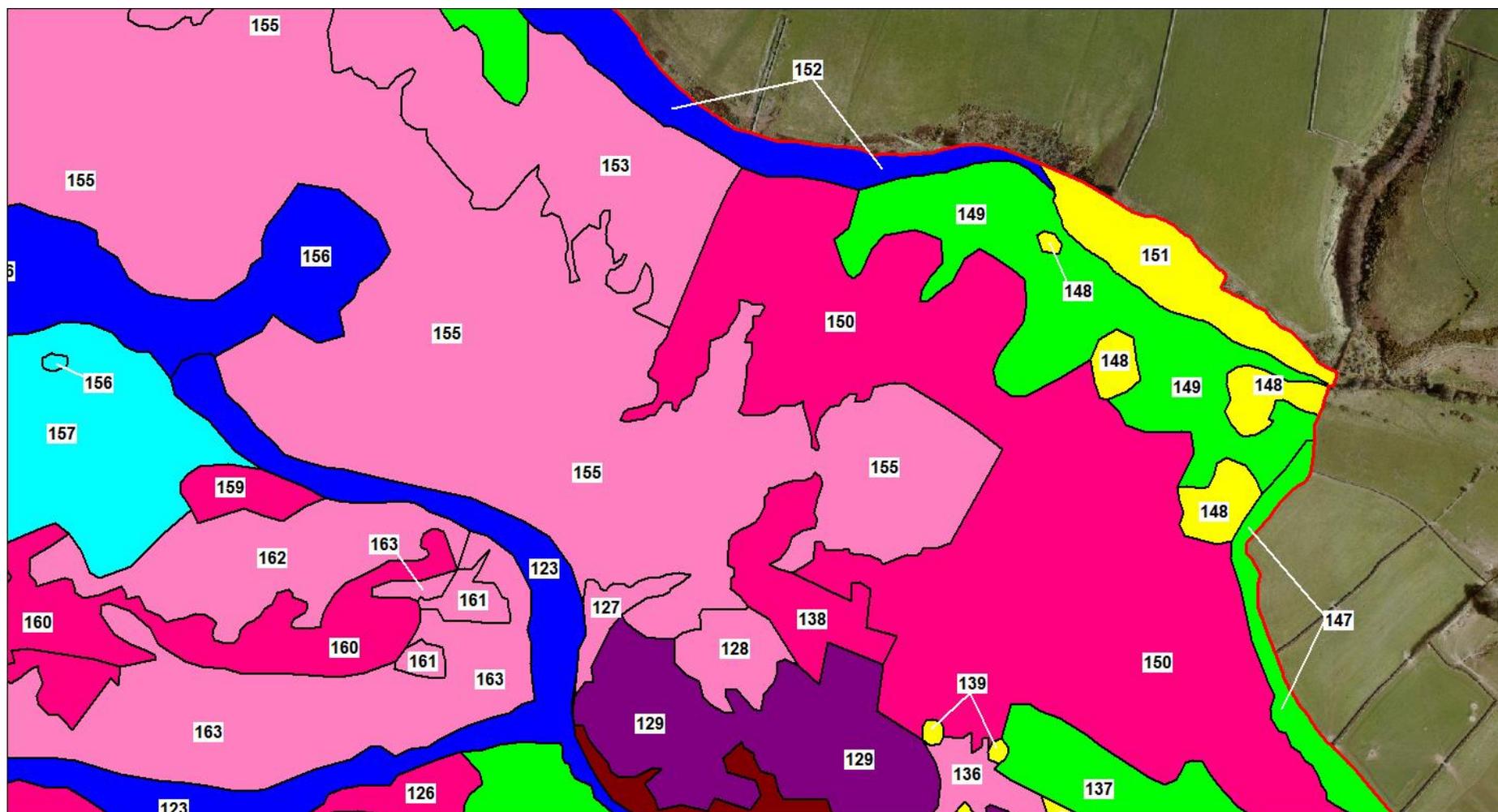


Figure 2.6. Vegetation type within survey units on Molland Moor north-east

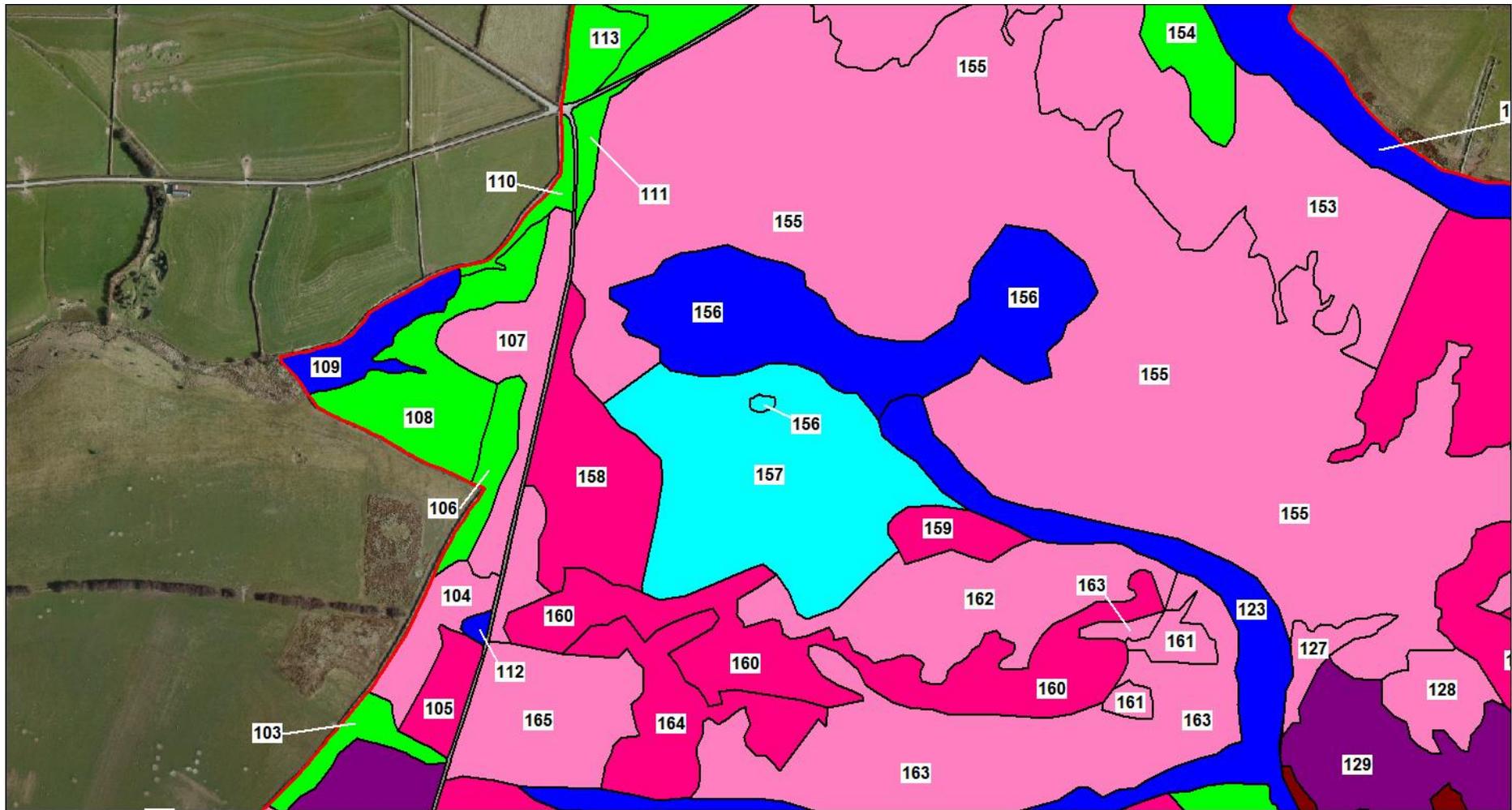


Figure 2.7. Vegetation type within survey units on Molland Moor north-west

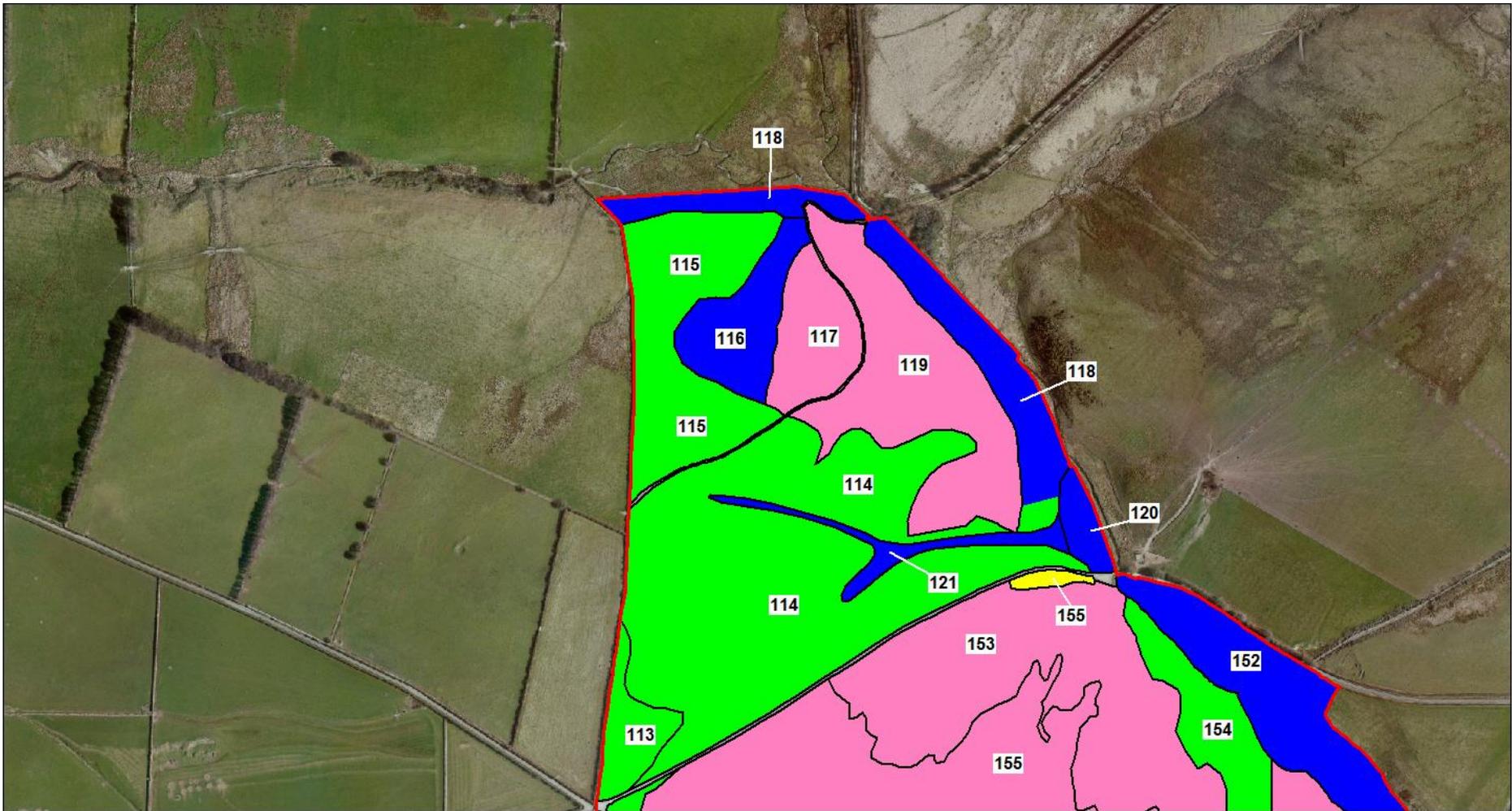


Figure 2.8. Vegetation type within survey units on Molland Moor north

3. Discussion

Figures 3.1 and 3.2 below show the estimated heather cover in the 2013 and 1991 surveys. It was not possible to include a comparison with the 2000 EN survey, as this was a very broad-brush exercise that provided insufficient detail to make meaningful comparisons with the other two surveys. However, a 2003 aerial photograph of the site is included in the report (Figure 3.4) along with a 2013 example (Figure 3.3) for comparison.

The results of the 2013 to 1991 heather cover comparison are very striking, and can be readily appreciated by comparing Figures 3.1 and 3.2. The data is also summarised in Table 3.1, which provides an area figure in hectares for each of the three heather cover categories estimated for both 2013 and 1991. Note that both Table 3.1 and Figures 3.1 and 3.2 deal only with those areas of land where heather cover is $\geq 10\%$. Other areas of bog, grassland, bracken, gorse scrub and other scrub, which were mapped as part of the NVC mapping exercise are not included in this analysis. In general, comparison with the older air photos and vegetation surveys suggests that the distribution and abundance of these 'non-heath' communities on Molland Moor has, with the exception of gorse scrub (which has been subject to much recent cutting and burning) not changed significantly.

Table 3.1. Area of heather cover categories on Molland Moor in 2013 and 1991

Heather cover categories	2013	1991
$\geq 70\%$ heather cover	86.9 ha	247.2 ha
50-69% heather cover	115.3 ha	170.7 ha
10-49% heather cover	259.4 ha	40.5 ha
Totals	461.6 ha	458.4 ha

As can be seen very clearly, the total area of vegetation where heather occurs at a cover of 10% or more has remained almost identical between the two years, with 461.6 ha and 458.4 ha recorded in 2013 and 1991 respectively. These figures compare to a total estimated area of Molland Moor of 690.4 ha. However, there has been a complete turnaround in the composition of these heather stands. Table 3.1 shows that in 1991, dense heathland with $\geq 70\%$ heather cover predominated, whilst in 2013 it is the heathy grasslands (most often referable to the M25a and U4e NVC sub-communities) where heather cover is between 10 and 49% (and usually much nearer the lower end of this range) that is much the most widely distributed category.

Over the last two decades there has clearly been a massive decline in the abundance of heather on Molland Moor, and that decline is continuing today. Much of the remaining stock of heather plants is of over-mature 'old-growth', which is in very poor condition. This has been exacerbated by the recent heather beetle outbreaks, with the old plants being insufficiently vigorous to regenerate after episodes of severe beetle damage.

Though there is some layering of the heather bushes, this is only happening to a significant extent in those areas where there are abundant pleurocarpous mosses in the understorey through which the heather plants are able to regenerate, and even in such situations regeneration by layering frequently appears to be insufficient to replace the old dead or dying plants. Over much of the area in which over-mature heather bushes occur, the understorey is dominated by purple moor-grass, which appears to have undergone a massive increase in abundance here, as elsewhere on south-west Exmoor, over the last two decades. The dense *Molinia* litter under the old heather bushes prevents any regeneration by either layering or seedling regeneration, and in these areas, which have been recorded as M25a vegetation in the NVC survey, it is hard to see any outcome other than ever-increasing *Molinia* dominance if no remedial management is undertaken.

Fortunately, the Molland Estate, in liaison with ENPA and NE, has increased the level of burning and grazing on the site in recent years. They have also carried out a large amount of gorse control, by cutting and burning. The initial results of this work are encouraging, with excellent heather regeneration in some of the recently burnt plots, and some localised increases in grazing pressure that appear to be controlling excessive grass growth. It is imperative that burning is sufficiently hot to burn off the litter layer, as cool burns may result in dense growth of purple moor-grass and little heather regeneration. There is much low bracken across Molland Moor, with this being sufficiently dense in places to be shading out heathland and other vegetation communities that are of higher conservation interest. An effective bracken control programme is another important priority for future management.

In conclusion, the cover of heather on Molland Moor has declined very markedly over the last two decades. This decline is continuing, with the remaining heather stock being heavily skewed towards the oldest age-classes, much of which is either senescent or has been killed by recent heather beetle outbreaks. The vast majority of such vegetation shows insufficient layering to be sustainable, and for this reason I do not believe it is appropriate to retain more than a very few old-growth stands in the future. Without urgent management these areas will continue to degenerate towards species-poor purple moor-grass vegetation, a trend that can also be clearly observed on other adjacent moorland areas on East and West Anstey Commons. The programme of remedial management instigated by the Molland Estate has reversed these trends locally, but will need to be rolled out over a much larger area if it is to prevent continued loss of heather on Molland Moor.

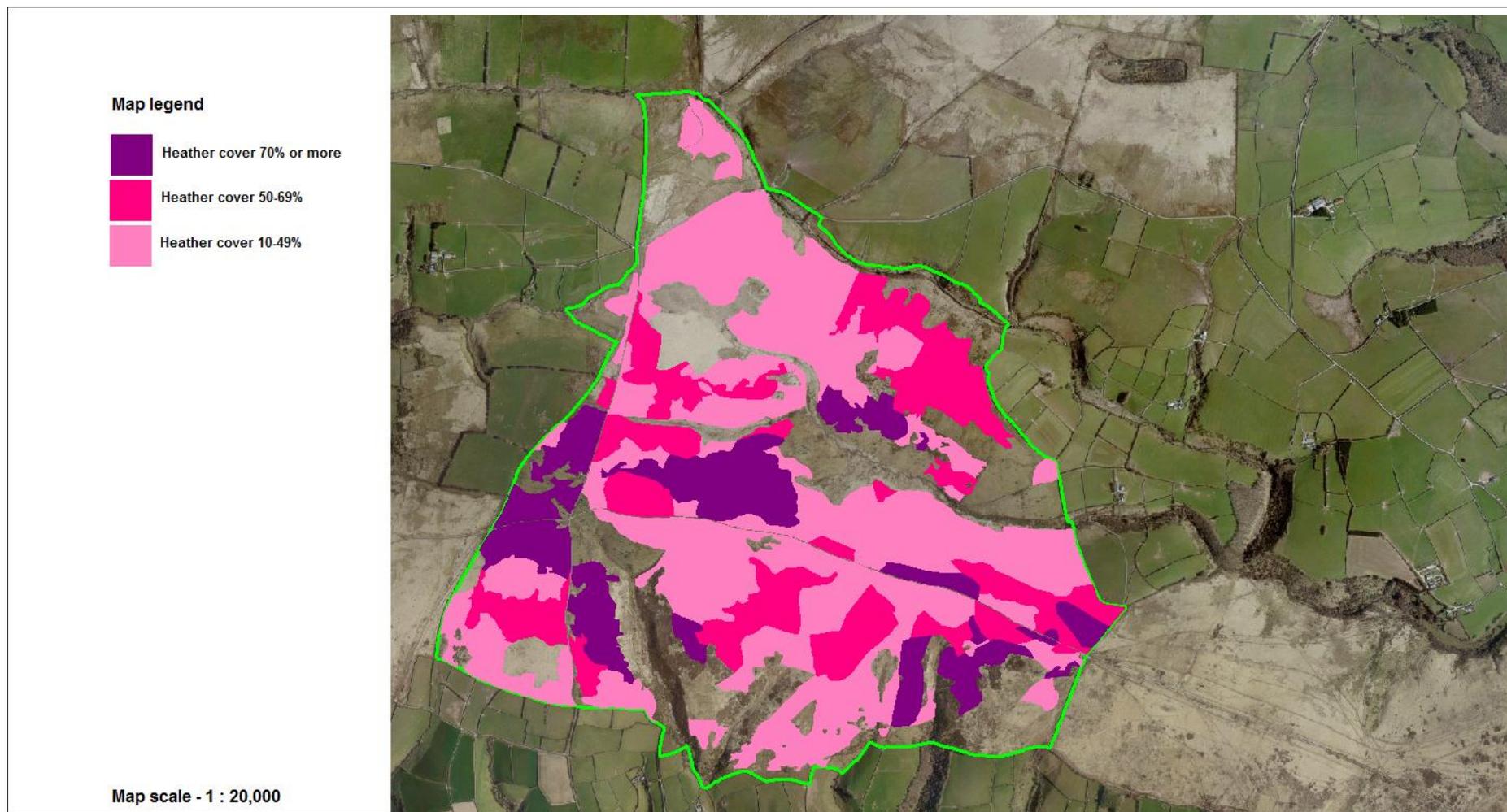


Figure 3.1. Heather cover on Molland Moor in 2013 (mapped over 2013 aerial photo base)

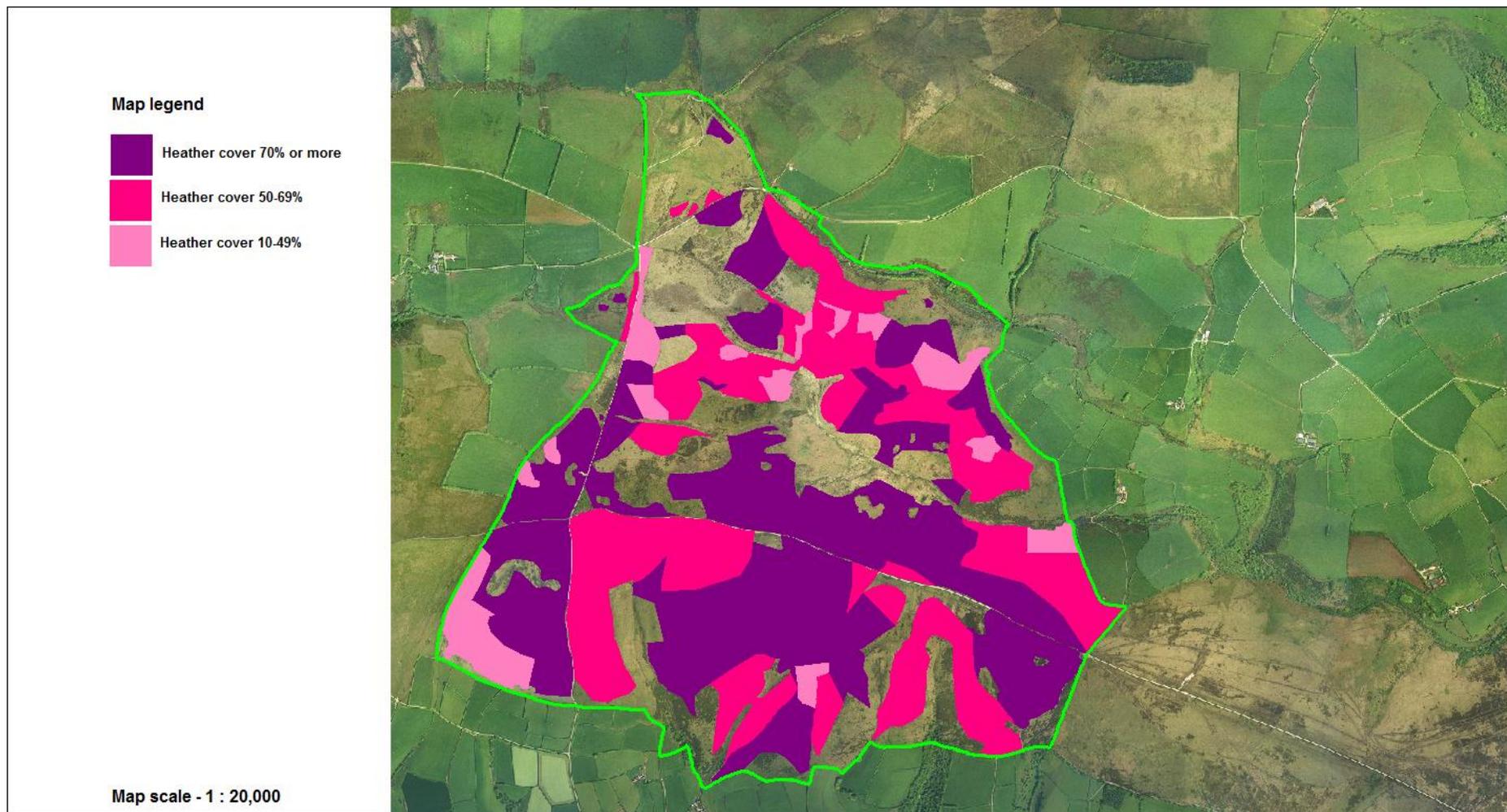


Figure 3.2. Heather cover on Molland Moor in 1991 (mapped over 2003 aerial photo base)

MOLLAND MOOR:

AERIAL PHOTOGRAPH - 2013



Map scale: 1 : 20,000

Figure 3.3. Aerial photograph of Molland Moor in 2013

MOLLAND MOOR:

AERIAL PHOTOGRAPH - 2003



Map scale: 1 : 20,000

Figure 3.4. Aerial photograph of Molland Moor in 2003

4. References

Rodwell JS ed. (1991). British Plant Communities. Volume 2. Mires and heaths. University Press, Cambridge.

Rodwell JS ed. (1992). British Plant Communities. Volume 3. Grasslands and montane communities. University Press, Cambridge.

5. Acknowledgements

The author would like to thank Christina Williams of the Molland Estate for organising this survey, and Jason Ball, Sarah Bryan and Matt Sully of ENPA for help in its planning, execution and writing up and Simon Thorpe of the Heather Trust for commenting on an earlier draft.

Appendix 1: Survey Unit Target notes, Molland Moor vegetation survey, 2013

The following notes were made in the course of the fieldwork. The descriptions below can be cross-referenced with the survey unit numbers on the maps to give more detailed information on various aspects of the vegetation, including NVC type, condition and management issues.

Survey Unit 1 – Old-growth ling with much purple moor-grass and scattered low bracken. Cover of ericaceous dwarf-shrubs just over 50%. Classified as H12a, but likely to become increasingly *Molinia*-dominated without careful management.

Survey Unit 2 – The whole of this area is currently referable to the M25a NVC community. Much of it has been burnt quite recently. Currently the vegetation is dominated by purple moor-grass, but there is a lot of regenerating ling and whortleberry. The strongest regeneration of dwarf-shrubs is in the western arm, and in the strip along the southern edge of the ridge road. The western block of regenerating *Calluna* has unfortunately been subject to recent attack by heather beetle, with most plants being reddened-off at the time of the survey. Nonetheless, it is thought probable that ling-dominated heath will be the longer term plagioclimax community here. To the east, the dwarf-shrub cover is more fragmented, and *Molinia* is very dominant in most places. It is unlikely that this section will return to heathland, but will remain as M25a vegetation in which scattered dwarf-shrubs occur amongst a purple moor-grass-dominated sward. There are patchy stands of low bracken scattered across much of this survey unit, which may soon become thick enough to start shading out the regenerating dwarf-shrubs.

Survey unit 3 – Old-growth ling at approximately 70% cover. There is much purple moor-grass between the heather bushes. SU3 has been recorded as NVC H12 heathland.

Survey unit 4 – This unit comprises a small patch of tall European gorse. It is referable to the W23 NVC community.

Survey unit 5 – This is an area from which European gorse has been cleared recently. Currently it has a rather scrappy appearance, with purple moor-grass dominating the sward. There is much regeneration of dwarf-shrubs, with European and western gorse being the main species, though there is also locally frequent pioneer- to building-phase ling and whortleberry. Bracken and bramble are also frequent, with the former having a patchy, low cover of between 10 and 20%. There is a little bristle bent here. Currently, this area is referable to the M25 community, but it seems likely that it will move back towards a mosaic of European and western gorse communities without further management intervention.

Survey unit 6 – A narrow strip of M25a with regenerating dwarf-shrubs and gorses, occasional bristle bent and patchy low bracken.

Survey unit 7 – Quite dense U20 bracken community, with some bramble, and appearing to be moving towards W25.

Survey unit 8 – U4a and M25b in 50:50 mosaic. Low bracken frequent throughout.

Survey unit 9 – Scrub woodland with birch, oak, beech, rowan and hazel.

Survey unit 10 – Currently this area supports a *Molinia*-dominated sward, and is referable to the M25a sub-community of the NVC. Formerly there was over-mature ling here, which has been burnt recently. Regeneration of heather is good in places, but overall, it seems unlikely that it will be sufficient to restore a heathland plagioclimax in the longer term.

Survey unit 11 – A thick mat of co-dominant purple moor-grass and bristle bent occupies much of this area, which has been assessed as a 50:50 mosaic of M25a and U3 grassland. There is only a little European gorse and bracken is also very local, with approximately 5% cover. Ling and bell heather are no more than occasional throughout the survey unit. However, western gorse is frequent, and it seems likely that much of this area will regenerate back towards an H4 community dominated by the latter species.

Survey unit 12 – U20 bracken community with an understorey of fine-leaved grasses. 10-20% of the unit has denser bracken, with a litter layer and bramble, and is moving towards a W25 community.

Survey unit 13 – Older air photos show this area to have been dominated by European gorse. However, this species has been cut and burnt, and the vegetation is now chiefly a mixture of purple moor-grass and bristle bent. Pioneer-/building-phase ling is patchily frequent and there is also much regenerating European and western gorse. Currently the vegetation is M25a in 67:33 mosaic with U3, but it is likely to move towards W23 and H4/8 gorse-dominated vegetation over time.

Survey unit 14 – SU14 has stand of species-poor purple moor-grass and soft rush around gateway. Categorised as a 50:50 mosaic of M25b and MG10a.

Survey unit 15 – A rather mixed mosaic dominated by M25, with a strong H8 element, the latter mainly comprising western gorse. Regenerating ling and bell heather are only occasional. There is also some low bracken, though this is at low cover, and there are a few patches of European gorse. Overall assessed as being a 50:40:10 mosaic of M25a, H8a and H8b. Much of this area is likely to become rather gorse-dominated again without further management effort.

Survey unit 16 – An untidy mosaic of purple moor-grass with regenerating, western gorse-being very frequent, and more locally with areas in which there is a higher incidence of regenerating ling and bell heather. All of this unit has been burnt quite recently. Recorded as a mosaic of M25a, M25b, H8a and W23 in the ratio 60:20:10:10. It seems likely that this area will return to predominantly gorse-dominated vegetation without further management.

Survey unit 17 – This is another unit that has been cleared of gorse quite recently and is now regenerating. The three main elements of the vegetation here are European gorse, western gorse and purple moor-grass with much ling and western gorse. These being respectively categorised as a 33:33:33 mix of W23, H8a and M25a. The latter community

may have the potential to regenerate back to mixed heathland, but the other areas are likely to once again become very gorse-dominated in time.

Survey unit 18 – Unit 18 is a western gorse-dominated area, which is regenerating after recent clearance. There is also much purple moor-grass, as well as patchy ling and bell heather. Further management will be required in the future to prevent this unit becoming swamped with *Ulex gallii* again. The whole unit is referable to the H8a NVC sub-community.

Survey unit 19 – Survey unit 19 is an area of W23 European gorse vegetation. The western half has tall, mature bushes while to the east, the *Ulex* has been cleared recently, but is regenerating very strongly.

Survey unit 20 – U20 bracken grassland is present here in a small valley that runs away towards the southern boundary of the open moor.

Survey unit 21 – This is an area of M25a, with dwarf-shrubs insufficiently frequent for reversion to heathland.

Survey unit 22 – Tall European gorse scrub dominates this survey unit. Around the fringes of the gorse bushes, there are some stands of old-growth ling.

Survey unit 23 – M25a *Molinia* grassland, with scattered over-mature, dead and dying ling bushes. It seems probable that purple moor-grass will continue to dominate here.

Survey unit 24 – A small area of M6a mire occurs here around a small spring. Surrounding this is M25a, with the two sub-communities occurring at approximately 50:50.

Survey unit 25 – This survey unit comprises old-growth ling and whortleberry, some of which is dead or dying. Cover of ericaceous dwarf-shrubs is just over 50%, but there is much purple moor-grass and low bracken growth, the latter being at high cover across much of this area, and dense enough in patches to be shading out the vegetation beneath. Recorded as H12a, though heather cover is only just high enough to justify this.

Survey unit 26 – Here there is a small area of denser old-growth heath in which ling and whortleberry are the dominant species. Some *Molinia* is also present beneath the heather canopy. This community belongs to the H12a NVC sub-community.

Survey unit 27 – Survey unit 27 has old-growth *Calluna* with much purple moor-grass and low bracken. It has been categorised as H12a, but is only marginally classed as heathland because of the relatively low heather cover.

Survey unit 28 – Around the wet mire vegetation described below (SU29), there is a band of purple moor-grass-dominated vegetation with a scattering of over-mature ling bushes. This is referable to the NVC M25a sub-community.

Survey unit 29 – Immediately adjacent to the small spring that arises here, there is sedge-rich M6a mire that has a short, well-grazed sward.

Survey unit 30 – This consists of a small stand of mature European gorse scrub that is classified within the W23 NVC community.

Survey unit 31 – Survey unit 31 is a relatively large stand of mature ling-dominated upland heath. There are some small patches of European and western gorse, but these are too small and fragmented to justify mapping. This area is thought to belong to the H12a sub-community, though the presence of frequent *Ulex gallii*, especially on the lower slopes makes some stands transitional towards a H8b type.

Survey unit 32 – Lying on the west-facing slopes of Anstey's Combe, this area is dominated by mature, dense growth of western gorse and is assigned to the H8a NVC sub-community.

Survey unit 33 – Survey unit 33 consists of a stand of dense, old European gorse lying towards the bottom of Anstey's Combe. It belongs to the W23 NVC community type.

Survey unit 34 – This area covers a stand of native deciduous scrub-woodland lying at the bottom of Anstey's Combe.

Survey unit 35 – The small bog in the bottom of Anstey's Combe has a mixture of purple moor-grass and soft rush-dominated communities. These are believed to belong respectively to the M25b and M23b NVC sub-communities, occurring in a 50:50 mix.

Survey unit 36 – The upper east-facing slopes of Anstey's Combe have open bracken grassland referable to the U20 NVC community.

Survey unit 37 – The steep east-facing slopes in the lower half of Anstey's Combe have a mosaic of purple moor-grass with scattered old ling bushes and patchy stands of western gorse. Bracken is present as a low, open canopy throughout much of this area. In NVC terms, it is assessed as being a 50:50 mosaic of M25a and H8a.

Survey unit 38 – This unit is made up of two small blocks of over-mature ling on the break of the east-facing slopes above Anstey's Combe. There is quite frequent western gorse and bell heather here, and though the community is still thought to belong to the H12a, it is clearly transitional to H8 types. Heather cover is still quite high here.

Survey unit 39 – This is a large, recently burnt block on the plateau between Anstey's Combe and Gourt Mires. Currently the vegetation is categorised as a heathy purple moor-grass community of the M25a type. However, regeneration of young ling is strong here, and it would seem highly probable that the majority of this area will return to H12a heath. Only in the northern third, where *Molinia* is more abundant is the young heather more patchy. There is a little low bracken, though not enough at the moment to shade out other vegetation.

Survey unit 40 – Lying on the southern edge of the moor, this area has U20 bracken grassland, though at its western end, where it runs into the small valley draining Gourt Mires, the bracken is denser and these stands probably belong to the W25 community.

Survey unit 41 – This comprises a small area of MG10a soft-rush grassland.

Survey unit 42 – The unit is characterised by heathy acid grassland with frequent low bracken, patchy *Molinia* and scattered clumps of over-mature, dead or dying ling bushes. Cover of the latter is not sufficient for this area to be classed as heathland. In NVC terms most has been classified as a heathy U4e grassland community. Approximately 10% of the area belongs to the M25a sub-community.

Survey unit 43 – Unit 43 is situated along the shallow west-facing slopes above Gourt Mire and is dominated by purple moor-grass, with scattered mature ling bushes occurring throughout. Many of these are either in poor condition or are dead. The vegetation belongs to the M25a sub-community of the NVC.

Survey unit 44 – Unit 44 covers a number of small blocks of mature European gorse (W23) that are scattered across White Moor.

Survey unit 45 - This unit covers the permanently wet valley bog habitats present in Gourt Mires. Due to time constraints, no detailed mapping of the complex mosaic of bog communities occurring here has been attempted. Around the springlines, there are patches of sedge-rich M6a and also areas of this community with abundant soft rush (M6c). Beyond this, where the ground is somewhat less waterlogged, there are stands of wet M25a purple moor-grass bog and some small patches of M15b wet heath.

Survey unit 46 – SU46 comprises a stand of mature European gorse (W23 60%) and bracken grassland (U20 40%) on the southern edge of the moor.

Survey unit 47 – This is a large patch of bracken grassland (U20) on the southern edge of the moor between Triss Combe and Gourt Mires.

Survey unit 48 – Unit 48 lies on the gentle south-facing slopes of White Moor and is dominated by M25a vegetation in which a relatively open sward of purple moor-grass is interspersed with scattered clumps of regenerating ling.

Survey unit 49 – Survey unit 49 is a patch of over-mature ling that is still reasonably dense, though with *Molinia* and acid grassland between the mature bushes. Bracken is quite frequent, and becoming dense in a few places. It is categorised as H12c.

Survey unit 50 – Though it has been burnt recently, this vegetation is very similar to that described above (H12c). Regeneration of ling is generally good, and it seems likely that this area will return back to a grassy heath community. As is the case in the preceding survey unit, bracken is becoming overly frequent in some places.

Survey unit 51 – M25a vegetation that is closely similar to that in the adjacent SU48 was recorded here.

Survey unit 52 – Survey unit 52 comprises a very extensive band of mixed U4e and M25a (50:50), through both of which are scattered bushes and young regrowth of ling and whortleberry.

Survey unit 53 – This unit is made up of three small blocks of mature W23 European gorse scrub.

Survey unit 54 – On the slopes of the small side valley running up from the bottom of Triss Combe there is much western gorse-dominated heath that appears to be transitional between H4 and H8 types. Overall, I do not believe bristle bent is sufficiently frequent to justify classification as the former, so I have recorded it as a H8a NVC type. Ericaceous dwarf-shrubs are generally only present at low cover within the heath. There is also much bracken growth around the margins of the gorse bushes.

Survey unit 55 – This area comprises a large stand of mature European gorse (W23).

Survey unit 56 – This is a large stand of relatively short and open M25a purple moor-grass, amongst which there is a considerable element of H8/H4 species, including western gorse, bristle bent and ling.

Survey unit 57 – Unit 57 covers two stands of U20 bracken grassland, the most northerly with a low bracken canopy lying over mixed fine-leaved grasses and purple moor-grass, while the southerly area has bracken over a typical acid grass mix of common bent and sheep's fescue.

Survey unit 58 – Lying immediately to the south of the road, this strip of vegetation has a 50:50 mosaic of M25a and U4e, with both communities having scattered mature to over-mature bushes of ling, as well as some younger growth of this species and whortleberry.

Survey unit 59 – The vegetation here has a higher density of over-mature ling and whortleberry than the surrounding moorland, with these species occurring as an open cover with the gaps between the old bushes having very mossy acid grassland.

Survey unit 60 – Unit 60 has M25a vegetation, in which relatively short purple moor-grass is interspersed with frequent old ling bushes, many of which are dead or dying. Until recently, this area would have been categorised as heathland vegetation.

Survey unit 61 – At the head of the small tributary valley running up from Triss Combe, there is a mosaic of U4a acid grassland (60%) and U20 bracken grassland (40%). Mature European gorse has recently been cleared from part of this area, and cover of ericaceous dwarf-shrubs is generally rather low.

Survey unit 62 – The vegetation here is western-gorse dominated H4-H8 heath that is the same as that recorded on the opposite side of this small side valley off of Triss Combe (see SU54 above).

Survey unit 63 – The central part of the tributary valley has rather species-poor acid mire vegetation dominated by purple moor-grass, which has been assigned to the M25b sub-community of the NVC.

Survey unit 64 – This area, lying at the foot of the tributary valley has a dense stand of mature W23 European gorse scrub.

Survey unit 65 – Just to the south of the road, this small area has wet heath/blanket bog vegetation with purple moor-grass, ling, hare's-tail cottongrass deer sedge and bog-mosses. It is thought to belong to the M17a NVC blanket bog, though it clearly also has affinities to M15 wet heath.

Survey unit 66 – This unit encompasses four small stands of M25a, with purple moor-grass dominant and ling, much of which is old, being frequent (10-30% cover overall).

Survey unit 67 – Forming an extensive strip running along the road eastwards from near Ridgway Cross, this unit has U4e grassland with a very high cover of pleurocarpous mosses (40%) in a mosaic with H12c (30%). A feature of this area is the abundance of soft rush, which can dominate in fragmented stands that fit within the MG10a NVC sub-community (30%). Ling is frequent and whortleberry abundant, as both old senescent bushes and younger regrowth coming up through the luxuriant moss layer.

Survey unit 68 – SU68 has mossy U4e (60%) grassland in which whortleberry is abundant and ling locally frequent as both old bushes and layering regrowth through the moss cushions. In a few places, heather cover is high enough for the vegetation to be categorised as H12c (10%) There is an open cover of low bracken fronds throughout, and also frequent patchy M25a purple moor-grass (30%).

Survey unit 69 – This unit has mature closed-canopy ling-dominated H12a heath, though western gorse, bell heather and bristle bent are also present at lower cover, and it has clear affinities to H4/H8 heathland. There are some patches of low bracken.

Survey unit 70 – Lying on the west-facing slopes above Triss Combe, this unit has H8a western gorse-dominated heath, though bristle bent is also present at relatively low cover, and the vegetation also has strong affinities with an H4 type.

Survey unit 71 – This is a recently cut/burnt stand of vegetation which, before management, was probably quite similar to that described in the preceding paragraph. There is much purple moor-grass as well as locally frequent bristle bent, and western gorse and European gorse are both now regenerating strongly. In NVC terms, the area has been assessed as a 50:40:10 mosaic of W23, H8a and H4.

Survey unit 72 – Unit 72 has M25a vegetation in which ericaceous dwarf-shrubs and western gorse are frequent.

Survey unit 73 – This is a small area of acid grassland and bracken, assigned to the U4a (60%) and U20 (40%) NVC types.

Survey unit 74 – Lying at the bottom of Triss Combe, SU74 is a small stand of boggy M25b.

Survey unit 75 – Below Ridgway Cross, at the head of Triss Combe, SU75 includes a large stand of U4a acid grassland with scattered hawthorn scrub and patchy open bracken, with some areas having sufficient cover of the latter to approach a U20 type.

Survey unit 76 – SU 76 is categorised as M25a with relatively high cover of old ling bushes, these being sufficiently frequent in part of this area for the vegetation to resemble H12.

Survey unit 77 – In the central part of Triss Combe, the valley bottom has some stands of species-rich mire vegetation attributable to the M6a, M6c and M25a NVC sub-communities. Due to time constraints, no detailed mapping of the complex mosaic of bog communities occurring here has been attempted.

Survey unit 78 – On the steep slopes of Triss Combe, one of the most prominent vegetation types is dense stands of mature European gorse (W23).

Survey unit 79 – This area has a stand of mixed scrub near the foot of Triss Combe.

Survey unit 80 – SU80 is a north-east-facing bank near the bottom of Triss Combe that has U20 bracken grassland vegetation.

Survey unit 81 – The steep slopes on the east-facing side of Triss Combe have purple moor-grass, with much western gorse and moderately dense bracken in some areas. This unit has been assessed as 50:30:20, M25a:H8a:U20. Ericaceous dwarf-shrubs occur at moderate densities throughout.

Survey unit 82 – This area is dominated by purple moor-grass and is assigned to the M25a sub-community. There is also frequent ling and western gorse.

Survey unit 83 – Lying on the plateau between Triss Combe and Moor Lane, this is a large stand of dense mature heathland in which ling is the most frequent constituent, though western gorse and bell heather are also present at relatively high cover.

Survey units 84 and 85 – These are two small areas of acid grassland with scattered old plants of ling lying adjacent to Moor Lane. They have been assigned to the U4e sub-community of the NVC.

Survey unit 86 – Unit 86 is an area of mixed H12a heath (50%) and M25a purple moor-grass vegetation (50%) occurring on the plateau between Triss Combe and Moor Lane. Even in the *Molinia* areas, there is much mature ling and whortleberry.

Survey unit 87 – This is a strip of U4a (80%) and European gorse scrub (W23, 20%) lying along the road by the Moor Lane cattle grid.

Survey unit 88 – To the south-west of Ridgway Cross, there is a small stand of U4a grassland on a shallow bank.

Survey unit 89 – This is an area of quite recently burnt vegetation in which there is abundant regeneration of ling. Though purple moor-grass is currently co-dominant with the heather, it seems likely that this unit should return in time to dense heathland vegetation.

Survey unit 90 – SU90 is transitional between heathy acid grassland of the U4e type and grassy upland heath of the H12c sub-community. For the purposes of this exercise, it has been assigned to a 50:50 mosaic of these two types. There is some low bracken across the unit.

Survey unit 91 – Unit 91 is a large stand of ling and purple moor-grass, with the cover of ericaceous dwarf-shrubs being sufficiently high to justify classification as a H12a upland heath, though it should be noted that *Molinia* cover here is also high.

Survey unit 92 – This is an area of species-poor purple moor-grass belonging to the M25b sub-community. Cover of ericaceous dwarf-shrubs is generally rather low across the unit.

Survey unit 93 – Running along the southern margin of the moor, unit 93 has *Molinia* M25a vegetation with locally frequent over-mature ling bushes scattered throughout. Many of the latter are dead or dying, and it seems highly likely that this area will continue to become more dominated by purple moor-grass.

Survey unit 94 – Lying on the boundary with Cussacombe Common, SU 94 has rather species-poor M25b vegetation, with purple moor-grass dominating and ericaceous dwarf-shrubs present at only low cover.

Survey unit 95 - SU95 has a 50:50 mosaic of U4e acid grassland and M25a purple moor-grass vegetation. There are scattered old, senescent ling bushes, as well as frequent young regrowth of this species and whortleberry.

Survey unit 96 – This includes two clumps of W23 European gorse scrub lying near the south-western corner of the site.

Survey unit 97 – At the extreme south-western corner of Molland Moor, there is a small spring-fed acid mire, with M25b (70%) and M6a (30%) vegetation.

Survey unit 98 – To the north-west of Ridgway Cross, there is a strip of U4e acid grassland running up towards the summit of Round Hill. This unit has frequent mature ling bushes and much whortleberry.

Survey unit 99 – The southern slopes of Round Hill have relatively dense old-growth ling that has been assigned to the H12a sub-community of the NVC. To the south of the quarry, the heather canopy is becoming more open, and there are fine-leaved grasses and *Molinia* between the *Calluna* bushes.

Survey unit 100 – To the north of the quarry, a band of U4e (90%) grassland with scattered bracken and old ling bushes runs around the southern flank of Round Hill. Along its western edge, where this unit reaches the moorland boundary, there is a strip of MG10a (10%).

Survey unit 101 – On the northern side of Round Hill, there is a reasonably large block of dense ling, though around its fringes, it becomes more fragmented, with *Molinia* in the gaps between the old heather bushes. This vegetation belongs to the H12a NVC community.

Survey unit 102 – SU102 is a small area of *Molinia*-dominated M25a vegetation, with scattered old senescent ling bushes.

Survey unit 103 – This area has a mix of soft rush MG10a (70%) grassland and species-poor U4a/b acid grassland (30%).

Survey unit 104 – Typical M25a, with scattered ling bushes amongst the dominant purple moor-grass sward.

Survey unit 105 - Unit 104 has a 50:50 mosaic of U4e acid grassland with frequent old ling plants, plus abundant whortleberry, and H12c grassy heathland. The old *Calluna* bushes here are collapsing into the surrounding moss cushions and appear to be layering quite well.

Survey unit 106 – A strip of soft rush MG10a grassland runs along the western boundary of the moor here.

Survey unit 107 – This is another area of very old, rather broken-down ling, with a 50:50 mixture of U4e and H12c vegetation communities. The condition of the old heather bushes is very poor, but there is again frequent layering into surrounding moss cushions. Soft rush is also frequent here.

Survey unit 108 – The west-facing slopes on the edge of the moor have typical U4a acid grassland, with a little soft rush and some old ling plants.

Survey unit 109 – Running up from the western boundary of the site, this small valley bog has species-rich vegetation, with M25a (50%), M6c (40%) and M6d (10%) being the main communities noted. Local plant species such as water pennywort *Hydrocotyle vulgaris* and bogbean *Menyanthes trifoliata* were recorded here.

Survey unit 110 – This unit comprises a strip of species-poor MG10a soft rush grassland running up from the valley bog described above.

Survey unit 111 – SU111 is a continuation of the above strip of MG10a rush grassland on the other side of the road up to White Post.

Survey unit 112 – A small patch of M15a-M25a bog vegetation is present on the hill crest next to the road here.

Survey unit 113 – Survey unit 113 is an area of species-poor acid grassland that is a 50:50 mixture of U4b and M10a.

Survey units 114 and 115 – Either side of the track down to Upper Willingford Bridge there is a mixture of acid grassland (U4a, 50%), soft rush grassland (MG10a, 30%) and mat grass-dominated vegetation (U5d), the latter sub-community being the main locus for young ling growth, though elsewhere, there is a thin scatter of senescent ling, most of which is dead or dying. This looks to be an area where there has been a substantial decline in heather cover recently as a result of the death of old plants, and a lack of any regeneration.

Survey unit 116 – On the slopes immediately above Upper Willingford Bridge, large springs arise and around them, a very interesting area of wet valley bog dominated by sharp-flowered rush has developed. The mire community is species-rich, with much devil's-bit scabious *Succisa pratensis*, bog-mosses *Sphagnum* spp., marsh violet *Viola palustris* etc. Though M6d is the main sub-community (80%), there are also small area of M6a (15%) and M29 (5%).

Survey unit 118 – This unit covers the mosaic of species-poor valley bog (M23b, 50%, M25b 20%) and acid grassland (U4a, 30%) that is present in the corridor on either side of the Dane's Brook.

Survey units 117 and 119 – These two units lie to either side of the Upper Willingford track, on the north-east-facing slopes above the Dane's Brook. The main vegetation type is a rather scrappy acid grassland with some stands of common bent/sheep's fescue (U4e, 50%) and others where mat grass predominates (U5d, 40%). The former occurs on the steeper slopes where there is a mineral soil, while the latter occurs towards the hill crest, where there is a thin layer of organic material. A feature of these grasslands is the presence of frequent old ling bushes, most of which are dead or dying. Though there is some younger ling, especially in the U5 stands, this is insufficient to replace that being lost, and as elsewhere in this part of the site (see 114 and 115 above), the vegetation is clearly moving from heathland towards acid grassland. In only about 10% of the two units is heather cover still thick enough to justify classification as H12c heathland, though even here, much of the heather is very old and appears to be dying. Another feature of this unit is that soft rush is quite abundant throughout.

Survey unit 120 – The small area of valley bog just above Lower Willingford Bridge is dominated by purple moor-grass mire (M25b), and there are also some very small stands of open sedge-rich M6a vegetation.

Survey unit 121 – Running down the small valley towards Lower Willingford Bridge is a small stream around which is a strip of rather species-poor soft-rush-dominated valley bog (M23b).

Survey unit 122 – On Black Ball, there is heathy acid grassland of the U4e NVC sub-community. There are patchy bushes of old ling and a thin scatter of low bracken fronds. Another feature of this area is the presence of a number of mature hawthorn bushes.

Survey unit 123 – The bottom of the central valley that runs across Molland Moor has some of the best stands of acid bog vegetation on Exmoor, including a number of local species, such as bog-bean, ivy-leaved bellflower and pale butterwort. The survey unit encompasses all of the main areas of bog vegetation from the Lyshwell boundary westwards through Red Ford and up through Soakey Moor to the point where water flows out of the blanket bog (SU156). The vegetation here is a very complex mosaic of M25, M6, M15, M4 and M29 NVC communities. It was beyond the scope of this project to map these in detail.

Survey unit 124 – For the most part, unit 124 is composed of purple moor-grass M25a vegetation in which there is a high cover (10-50%) of ling. However, there are also some stands of U4e in which old *Calluna* and soft rush are prominent features.

Survey unit 125 – SU125 has a small block of wet heath (M15b) lying on the plateau to the south of Long Breach Bottom.

Survey unit 126 – Lying on a north-facing bank above Long Breach Bottom, SU126 has U4e grassland (50%) in its western half and H12c heath (50%) to the east.

Survey unit 127 – This is a small strip of M25a, with relatively high cover of old heather compared to the very extensive stands of this vegetation lying to the north of here (SU155).

Survey unit 128 – Situated on the top of Moorhouse Ridge, SU128 is a mosaic of U4e acid grassland (60%), M25a (20%) and H12c (10%). Old ling in poor condition is scattered throughout.

Survey unit 129 – Unit 129 is the largest remaining block of relatively dense H12a heather moorland on Moorhouse Ridge. The ling plants are old, but the canopy has not yet begun to open up appreciably.

Survey unit 130 – On the lower south-facing slopes of Moorhouse Ridge there is mixed vegetation in which U20 grassland (50%) is the main constituent, with smaller quantities of U4a (30%), H12c (10%) and M25a (10%). There are also a few hawthorn trees here.

Survey unit 131 – Also sited on the southern side of Moorhouse Ridge, unit 131 has a relatively homogeneous stand of U20 bracken grassland. There are a number of hawthorn trees within this unit.

Survey unit 132 – SU132 consists of two large clumps of European gorse scrub (W23) situated on the southern slopes of Moorhouse Ridge.

Survey unit 133 – Situated between the two gorse clumps described above, this small area has dense ling attributable to the H12a sub-community of the NVC.

Survey unit 134 – SU134 is an area with just over 50% cover of ling that has been classified as a H12c sub-community. However, many of the *Calluna* bushes are in very poor condition, with a number having died recently, and it seems likely that without careful management this area will continue moving towards an acid grassland community.

Survey unit 135 – Recent cutting of European gorse has been carried out here, and there is much regeneration of that species. It has been categorised as a 50% mosaic of U4a and W23, though it seems likely that it will again become gorse-dominated in time given the amount of young *Ulex* re-growth.

Survey unit 136 – On the top of Moorhouse Ridge, SU136 has a very ‘messy’ mosaic of U4e (40%), H12c (30%), M25a (20%) and U20 (10%). There are scattered old ling bushes, many of which are in very poor condition.

Survey unit 137 – This unit has rather disturbed-looking U4e grassland with quite frequent soft rush and scattered old bushes of ling, many of which are in very poor condition.

Survey unit 138 – The vegetation here is a 50:50 mix of H12c and M25a. Cover of old ling is high throughout, though many of the plants are old and in poor condition.

Survey unit 139 – Seven small clumps of European gorse on the eastern part of Moorhouse Ridge make up SU139.

Survey unit 140 - Survey unit 140 is dominated by dense W23 European gorse scrub, though there are also a number of hawthorn and rowan bushes here.

Survey unit 141 – This unit has U4a grassland with occasional old ling bushes and patchily frequent low bracken.

Survey unit 142 – Unit 142 is an area of U20 bracken grassland with scattered hawthorn bushes.

Survey unit 143 – Just inside the Lyshwell gate, there is a small patch of purple moor-grass-dominated M25a vegetation with a few old heather plants.

Survey unit 144 – This is an area of U20 bracken grassland at the eastern end of the site. There are a few old heather bushes here.

Survey unit 145 – Dense European gorse has been cleared from this area quite recently, but is now regenerating strongly.

Survey unit 146 – SU146 comprises a small patch of M25a *Molinia* vegetation in which old ling bushes are quite frequent.

Survey unit 147 – Along the eastern boundary of the moor, this unit has heavily trampled U4a acid grassland.

Survey unit 148 – Unit 148 encompasses four clumps of European gorse (W23) on the steep slopes above the Dane’s Brook.

Survey unit 149 – On the steep, north-facing slopes above the Dane's Brook there is a mixture of U4a and U4e acid grassland (40% and 20% respectively), plus U20 bracken grassland (40%). There are many hawthorn bushes here and also scattered old *Calluna* plants.

Survey unit 150 – This large area has rather stressed-looking old ling in an open canopy over fine-leaved grasses and mosses. Whortleberry is also abundant and soft rush very frequent. The cover of heather is still high enough (50-70%) to justify inclusion in the grassy H12c heathland type of the NVC. There is some layering of the heather bushes into the abundant cushions of pleurocarpous mosses, but it is thought doubtful that such regeneration is sufficient to prevent a continuing decline in heather cover without management intervention.

Survey unit 151 – To the north of the Dane's Brook, there is a steep bank with abundant European gorse (W23) and a range of native deciduous trees and shrubs at lower frequency.

Survey unit 152 – Along the corridor of the Dane's Brook, the main vegetation types present are valley bog dominated by either purple moor-grass (M25b) or soft rush (M23b). There are also areas of wet grey willow scrub and an outgrown beech hedge. Detailed assessment of the vegetation here is beyond the scope of this project.

Survey unit 153 – Most of unit 153 has grassy H12c heathland (40%), in which heather cover is between 50 and 70%. There are also extensive areas of U4e acid grassland (30%) and some U20 bracken grassland (20%) and mat grass vegetation (U5d, 10%). Old heather bushes occur frequently throughout the unit, many of these being heavily stressed, dead or dying. Though there is some layering of the ling into moss cushions, this does not seem likely to be enough to arrest the continuing decline of heather cover here without careful management. Bell heather and western gorse are both occasional, and the vegetation is clearly transitional towards a H8 NVC type. At the northern end of this large unit, soft rush occurs at high frequency in the vegetation mosaic.

Survey unit 154 – This is an area of U4e acid grassland with scattered hawthorn and some cover of low, open bracken fronds.

Survey unit 155 – SU155 is the largest single unit recorded on Molland Common, and covers the very large and relatively homogeneous purple moor-grass sward that swathes much of the central plateau. Throughout this area, old bushes of ling and other ericaceous dwarf-shrubs can be found, and for this reason the vegetation has been assigned to the M25a sub-community of the NVC. Most of the ling is senescent, and there is little evidence of regeneration of ericaceous dwarf-shrubs through the dense mat of *Molinia* litter that covers the ground.

Survey unit 156 – The watershed at the head of Soakey Moor has the only significant expanse of blanket bog present on Molland Moor. The main NVC type is the M17a sub-community of the NVC. Around the periphery of the mire, there are some stands that are transitional towards M15b wet heath. Detailed mapping of the plant communities here has

not been attempted, but there does not appear to have been much change in the size or composition of the blanket bog from either of the earlier surveys of Molland Moor.

Survey unit 157 – This is the most species-poor and extensive stand of purple moor-grass on Molland Moor. Ericaceous dwarf-shrubs only occur very occasionally, and many of the scattered old ling plants remaining appear to have been killed recently by heather beetle.

Survey units 158 and 159 – As with many of the stands of heathland on Molland, SU158 and 159 are dominated by very old and broken-down ling plants, and though heather cover is still sufficiently high to justify classification as a grassy H12c heathland type, many of the heather bushes are in very poor condition. Though there is layering through the moss layer under the bushes, it seems unlikely that this will be sufficient to prevent the continued degeneration of the heath towards grass-dominated vegetation. Purple moor-grass also appears to be colonising between the heather bushes, and in areas where this species has become established, there is no regeneration of young ling plants.

Survey unit 160 – Along the ridge between the two arms of the central bog, there is a band of old-growth ling with an understorey of *Molinia*. The heather canopy is quite open, and purple moor-grass is very dense and preventing any regeneration of ericaceous dwarf-shrubs. Heather cover is still high enough to justify classification as a H12a heathland type, but without sensitive management it is hard to see anything other than the gradual replacement of heather with purple moor-grass.

Survey unit 161 – This unit comprises two small blocks of M25a purple moor-grass vegetation with frequent old ling bushes.

Survey unit 162 – Unit 162 is a large block of rather species-poor *Molinia*, though there are still occasional plants of ling and cross-leaved heath.

Survey unit 163 – On the shallow slopes above Long Breach Bottom, there is a band of heathy U4e acid grassland. Old heather and whortleberry bushes are frequent across much of this unit and there are also a number of hawthorn bushes.

Survey unit 164 – This area of M25a has generally high cover of ling. The central part has been burnt recently, and there is very good regeneration of young heather plants, suggesting that at least a proportion should return to heathland vegetation in the long term.

Survey unit 165 – SU165 has heathy U4e acid grassland with scattered over-mature ling bushes.

Survey unit 166 – This is a strip of M25a grassland with occasional mature to senescent heather bushes.

Survey unit 167 – Unit 167 has U4e grassland in which there is abundant (20-40%) young regenerating *Calluna*, the latter presumably indicating that this area has been burnt recently. There is patchy low bracken and frequent soft rush and purple moor-grass.

Survey unit 168 – SU168 has a mosaic of vegetation dominated by upland heath (H12c, 70%), with some heathy purple moor-grass (M25a, 20%) and fine-leaved acid grassland (U4e, 10%). The heather plants are very old, and in poor condition, and this unit requires management effort urgently to prevent further loss of heather cover.

Survey unit 169 – This area has a heathy purple moor-grass (M25a, 80%) and wet heath (M15b, 20%) mosaic.

Survey unit 170 – This is the largest single stand of closed-canopy heath remaining on Molland Moor. Situated on the plateau of Black Ball, it is dominated by dense old ling, with some whortleberry also present. Even here though, the canopy is beginning to open up, and away from those areas where there is still mossy acid grassland under the heather bushes, there is little evidence of young heather plants, with dense purple moor-grass preventing regeneration by layering or seedling growth. This area belongs to the H12a sub-community of the NVC.

Survey unit 171 – Situated just to the north-east of Ridgway Cross, unit 171 is an area of U4e acid grassland with scattered hawthorn scrub and some old-growth ling.

Survey unit 172 – This unit includes two patches of mixed vegetation, with H12c heathland (50%), U4e acid grassland (30%) and purple moor-grass (M25a, 20%). Old, broken-down ling bushes are very frequent across much of the unit.

Survey unit 173 – Lying between the two blocks described in the preceding section, it seems likely that unit 173 was very similar in character until it was recently burnt. This management has been very successful in regenerating young heather and whortleberry across the majority of the area, and though it is categorised currently as a 60:40 mosaic of U4e and M25a, it seems likely that it will return to heather-dominated vegetation over the next few years. The sward has been well grazed, which appears to have checked the re-growth of purple moor-grass and favoured the regeneration of ericaceous dwarf-shrubs.

Survey unit 174 – Situated on the north-facing slopes between the ridge road and the central valley, unit 174 is a very extensive tract of purple moor-grass-dominated vegetation (M25a). There are still frequent old heather bushes amongst the *Molinia*, and this area has been much more heather-dominated until recently. In many places the majority of the heather bushes are dead or dying, presumably as a result of recent attack by heather beetle. Without urgent management effort, it seems certain that purple moor-grass will continue to increase at the expense of heather.

Survey unit 175 – This unit has typical M25a vegetation, with scattered ling ‘broomsticks’ poking through the dense *Molinia* mat.

Survey unit 176 – Lying adjacent to the ridge road, this small area has been burnt, and though there is still abundant *Molinia*, there is also strong re-growth of ling, with the density of young plants being high enough to return the unit to heath-grass with a much higher heather cover than in the unmanaged M25a surrounding it. For the moment, it is still categorised as M25a.

Survey unit 177 – This is a second area lying adjacent to the ridge road that has been recently burnt, and is now showing very strong recovery of heathland vegetation. Heather here is already dense enough in places for it to be classified as H12a (50%), with the remainder still being M25a, though here too there is very frequent young ling. As is the case in SU176, the density of heather in the burnt plot looks to be significantly higher than on the surrounding unmanaged moor.

Survey unit 178 – The most easterly section of land lying immediately to the north of the ridge road still has quite good heather cover, though purple moor-grass is locally dominant, and the old heather plants are generally in very poor condition. However, two small plots in this unit have been burnt recently, and the recovery of young heather plants has been very strong, with the density of these appearing to be higher than in the surrounding vegetation.

Survey unit 179

This is a strip of fairly typical M25a lying adjacent to the ridge road.

Survey unit 180 – SU180 is a small patch of H12c, with very broken-down old ling situated just to the north of the central valley. As elsewhere on Molland Common, the condition of the old heather plants is very poor and careful management will be required in order to regenerate heathland.

Survey unit 181 – On the steep north-facing slopes above the stream, there is a 60:40 mix of M25a and U20. Old ling bushes are frequent throughout, though many of these are in poor condition, or are already dead.