

Gortryahilly Wind Farm

Annex I Habitat Condition Report

FuturEnergy Ireland

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Quality information

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1. Introduction

1.1 Background

AECOM was appointed by FuturEnergy Ireland Development Designated Activity Company ('FuturEnergy Ireland') to carry out a survey of the condition of Annex I habitats¹ at the proposed location of Gortyrahill Wind Farm, Co. Cork, approximately 4 km south-west of Ballyvourney.

The surveyed area (the 'Site') encompasses the proposed Gortyrahill Wind Farm, and is predominantly open pasture and moorland, with a substantial area of commercial forestry plantation in the centre/south. The altitude range is approximately 200-400 m and includes the summit of Carrigalougha in the west at 423 m. By verbal agreement with FuturEnergy Ireland during the survey, the later part of the survey concentrated on Annex I habitat at and near proposed infrastructure, and excluded Annex I habitat distant from proposed infrastructure (particularly the more peripheral south-west and northern parts of the Site). The Site, as defined by the limits of the condition assessment survey, is depicted by the extent of the unfaded habitats shown in Figure 1 in Appendix A (the faded habitats shown on Figure 1 are from the original wind farm habitat survey and cover those areas more distant from infrastructure that were not subject to condition assessment).

1.2 Summary description of the Site

Figure 1, showing a map of the Annex I habitats subject to condition assessment, is provided in Appendix A. Figure 2 in Appendix A shows the condition of the surveyed Annex I habitats. Condition monitoring data is given in Appendix B.

The Annex I vegetation in the Site primarily comprises H4010 North Atlantic wet heaths with *Erica tetralix*, of variable condition. However, there are also several small pockets of H7130 Blanket bog, a few of which also support white beak-sedge *Rhynchospora alba* and thus also constitute H7150 Depressions on peat substrates of the *Rhynchosporion*. H4030 European dry heaths is rare and very limited in extent, mainly on Carrigalougha. Rock exposures constituting H8220 Siliceous rocky slopes with chasmophytic vegetation are extremely rare (see discussion on this in Section 4.4).

Non-Annex I acid grassland, and sometimes agricultural grassland, occur as minor components of mosaics containing Annex I habitat(s) in various parts of the Site. Non-Annex I acid grassland is most common and sometimes abundant near proposed turbines T1, T2, T8, T12 and T13, the proposed substation, and parts of the connecting proposed access tracks. The non-native conifer plantation in the centre/south of the Site is mainly Sitka spruce *Picea sitchensis* but also includes some pine *Pinus* sp. The rectangular northern spur of the plantation has very recently been felled and replanted.

In various parts of the Site there have been interventions to render the moorland vegetation more favourable to livestock production. This has involved excavation of drainage channels, local conversion of former wet heath and/or bog to agricultural grassland (including a substantial new agricultural field at proposed turbine T9), and, locally, burning (evidence of which was seen between proposed turbines T8 and T9). Further to these interventions, grazing pressure has resulted in degradation of significant areas of wet heath.

1.3 NPWS Article 17 data

The NPWS Article 17 data include a polygon covering a large part of the Site, classed as H4060 Alpine and subalpine heath. However, no H4060 was found during either the original wind farm habitat survey or this Annex I condition assessment survey. Heath in the Site corresponds to H4010 North Atlantic wet heaths with *Erica tetralix*, and rarely H4030 European dry heaths. H4060 is a montane habitat type that typically occurs at higher altitude than the Site.

¹ Habitats in this Report preceded by an alphanumeric code in the format 'Hxxxx' are Annex I habitats. These are habitats of European Community interest listed in Annex I of *Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild flora and fauna* (the 'Habitats Directive'). In summary, habitats of Community interest are those that: i) are in danger of disappearance in their natural range, ii) have a small natural range, or iii) are outstanding examples of habitats in (for Ireland) the Atlantic biogeographic zone. 'Priority Annex I habitat' (shown with an asterisk, e.g. H7130*) means that i) is considered to apply and there is a particular responsibility to conserve it owing to the large proportion of its range within the EU.

2. Methodology

2.1 Field survey

The survey was carried out on foot in the period 11 to 14 July 2023 by an AECOM habitat specialist with extensive experience of upland as well as lowland habitats. The weather during the survey was mostly dry with occasional light to heavy showers, which did not hinder the survey.

Condition of Annex I habitat was recorded by making observations at various points during a walk through the habitat and recording the relevant condition criteria in a tablet using a semi-automated spreadsheet. The location of condition assessment points was judged by the surveyor to obtain condition data representative of the vegetation in question in that particular area (rather than sampling atypical or transitional patches). The condition criteria were as described in Perrin *et al.* (2014).

Where this detailed Annex I condition assessment found any habitat differences from the original habitat survey, the differences were mapped as far as possible with the aid of aerial photography and a GPS-enabled tablet running ESRI FieldMaps. In these cases, vegetation stands considered to be homogenous were assigned Annex I or non-Annex I Fossitt habitat types. The Annex I habitats are those listed in Annex I of the EC Habitats Directive, with guidance on interpretation provided in European Commission (2013). The Fossitt habitat types are those described in Fossitt (2000). Vegetation types can occur in patches too small to map amongst more extensive communities, or in complexes that cannot be feasibly mapped within a reasonable timescale, and in these cases mosaic polygons were used, or target notes for extremely small habitats. The aerial imagery assisted with identification and separation of vegetation patches. Notes on habitat features were recorded using ESRI FieldMaps.

2.2 Digitising

Field data recorded in ESRI FieldMaps were subsequently imported into ESRI ArcMap. The habitat maps provided in Figure 1 were finalised using ESRI ArcMap, with reference to the field mapping, tablet target notes and aerial photography.

The GIS habitat polygons were assigned attributes for Fossitt habitat type, Annex I habitat type and Annex I condition, as well as a comment field used where considered appropriate to give descriptive information. The GIS habitat dataset was produced as a feature class within a file geodatabase, which automatically provides unique identifier, polygon area and polygon perimeter attributes. A check was carried out for errors such as small gaps and slivers, missing attributes or non-standard / incorrect attributes.

For this project, since several polygons contained mosaics of more than one Annex I type, or mosaics of Annex I habitat(s) with non-Annex I habitats, a 'Proportions' attribute has been provided which gives estimated proportions of the components in the Annex I attribute. For example, "H4010 / non-Annex I" in the Annex I attribute, and "75/25" in the proportions attribute, indicates that H4010 has an estimated cover of 75%, and non-Annex I habitat 25%, in that polygon. A slight complication is that H7150 is always present at this Site on either H7130 or H4010, so two overlapping Annex I types occupy the same area – in these cases, the Annex I attribute uses a '+' symbol rather than a slash, e.g. "H7130* + H7150".

Having more than one Annex I habitat in some polygons also creates a complication in the GIS data for the 'Structure and Functions' and 'Overall Conservation Status' attributes, since the status of each constituent Annex I habitat is not necessarily the same. For this reason, 'Structure and Function' and 'Overall Conservation Status' contain abbreviations of the standard status terms separated by slashes, which apply to the respective Annex I habitats in the Annex I attribute. The abbreviations are: F = Favourable, UI = Unfavourable Inadequate and UB = Unfavourable Bad. For example, "H4010 / H4030" in the Annex I attribute, and "UB / F" in the status attributes, indicates that H4010 has been assigned Unfavourable Bad status, and H4030 Favourable status, in that polygon.

2.3 Nomenclature

This Report gives the scientific name of vascular plants on first mention of a species, following Stace (2019), and thereafter common names only (except in the Appendices where scientific names are used for brevity). English names of bryophytes and lichens are not well known therefore only scientific names have been used for these in all cases, following Atherton *et al.* (2010) for bryophytes, and Hodgetts (1992) for *Cladonia* spp. lichens.

2.4 Limitations

It is not possible to walk over every square metre of a site. The surveyor employed professional experience to judge where their survey route would best be laid to identify possible changes of condition and vegetation, using aerial photography combined with factors such as angle of slope, aspect, texture and hue of vegetation, and occurrences of features such as streams and rock outcrops, all of which can indicate changes of vegetation type or condition. This is normal for such habitat surveys and is not considered to significantly limit the findings. However, it should be noted that some small habitats that are easily hidden by other vegetation and/or not clear from aerial photography may have gone undetected.

The boundaries between habitats in more natural situations can be gradual rather than sharp. In such cases, the surveyor made a best professional judgement as to where the boundary should be placed. In particular, wet heath and blanket bog commonly grade into each other. If known peat depths from a peat probing survey should indicate peat of 0.5 m or more in areas classed as wet heath (or, generally, any open habitat), then those areas of deeper peat should be regarded as blanket bog; conversely, if known peat depths are less than 0.5 m in areas classed as blanket bog, then those areas of shallower peat should be regarded as wet heath.

Owing to time constraints and associated safety considerations whilst at the summit area of Carrigalougha, and the unexpected occurrence of several habitats not previously noted in the vicinity of proposed infrastructure, it was not possible to complete a full set of condition criteria in the vicinity of T1, nor to return to this location. However, notes and photographs were taken and, particularly in view of the familiarity of the surveyor with such habitats in general, and with nearby identical habitat in which full assessments were carried out, judgement of Annex I condition in the Carrigalougha area is still considered robust.

3. Note on extents of Annex I habitats

This more detailed Annex I condition assessment survey found that previously-reported H4010 wet heath is in some places a minor component of the vegetation occurring in mosaic with other habitats (both Annex I and non-Annex I), and in a few more accurately-mapped instances is not present. The clearest observations of this (listed in approximate order of decreasing significance) are listed below (the areas and habitats mentioned can be seen on Figure 1 in Appendix A):

- at proposed turbine T9 and some adjacent proposed access track – a substantial area in which there was reported to be a mosaic of wet heath and bog but which has been destroyed by conversion of the land to agriculturally-improved pasture;
- between proposed turbines 12 and 13 – there is a mosaic of wet heath and marshy grassland here, however turbine T13 itself is located mostly on non-Annex I grassland (heavily-grazed acid grassland, marshy in places with purple moor-grass *Molinia caerulea* and/or soft rush *Juncus effusus*, and lacking ericoids or deegrass *Trichophorum germanicum*), and turbine T12 is also partly on non-Annex I grassland. A large part of the proposed access track between turbines T12 and T13 is also on non-Annex I acid grassland. Whilst H4010 wet heath is present in this area, there is always a proportion of non-Annex I habitat (mainly grassland), and in particular the proportion of wet heath north of turbine T13 is low²;
- in the vicinity of the proposed substation – there is a mosaic of wet heath and marshy grassland here, however H4010 wet heath is a minor component and non-Annex I habitats dominate (there are also some small patches of Annex I bog in this vicinity, largely avoided by proposed infrastructure);
- at Carrigalougha in the vicinity of proposed turbines T1 and T2 – the summit area and slopes leading to it are topographically complex, leading to the presence of certain habitats in addition to H4010 wet heath, including flat patches of historically cut-over Annex I bog, some non-Annex I acid grassland, and small amounts of dry heath;
- at proposed turbine T8 and some nearby proposed access track – part of the vegetation potentially affected is dominated by non-Annex I grassland rather than wet heath; there are also a few small patches of Annex I bog vegetation in this area;
- at proposed turbine T7 and proposed access track northwards – vegetation here includes a proportion of non-Annex I acid grassland; and,
- at the proposed met mast location – the met mast location itself, and part of the associated access track, are on non-Annex I grassland rather than wet heath.

Additionally, H8220 was found during this detailed Annex I condition assessment survey to be very rare within the survey area, as explained in detail in Section 4.4.

² As described in the methodology, the GIS dataset for this project includes an estimated proportion attribute for those mosaics that include Annex I habitat(s), to assist in deriving more accurate estimates of affected areas of Annex I habitats.

4. Condition of Annex I habitats

Figure 1, showing a map of the Annex I habitats subject to condition assessment, is provided in Appendix A. Figure 2 in Appendix A shows the condition of the surveyed Annex I habitats. Condition monitoring data is given in Appendix B.

In the below descriptions of habitat condition, 'structure and functions' and overall conservation status are rated as Favourable, Unfavourable Inadequate or Unfavourable Bad (as per Perrin *et al.*, 2014). For overall conservation status, account is taken of 'area' and 'future prospects' in addition to 'structure and functions', in particular whether the state of the habitat is likely to be maintained or improved, or could realistically degrade in condition or area.

It is important to note that overall conservation status is often unfavourable even if 'structure and functions' is not, owing to unfavourable 'future prospects' arising from existing pressures or a realistic potential for them (since these habitats are not in protected sites or otherwise subject to conservation management, and indeed are frequently subject to existing adverse impacts). However, there is often potential for 'future prospects' to be rendered favourable by appropriate management (for example, under a habitat management plan). Consequently, 'structure and functions', which equates to current habitat condition, is much more important for the purposes of this Report.

4.1 H4010 Northern Atlantic wet heaths with *Erica tetralix*

This is by far the most extensive Annex I habitat in the Site. It is variable in quality, and many areas are not in good condition. This appears mainly to be due to overgrazing, although artificial drainage is also an issue in a number of places (including, for example, substantial recent drainage ditches near proposed turbines T6, T7 and T12). There is also evidence (dead burnt woody stems) of past burning near proposed turbines T8 and T9, and it is possible that historic burning of which there is now no clear sign might have contributed to the degraded state of some wet heath in other parts of the Site.

The conifer plantation includes several pockets of moorland supporting wet heath, locally in good condition. Part of the plantation just east/south-east of proposed turbine T3 has grown poorly and is clearly planted on wet heath. This was also noted in places south-west of proposed turbine T4, and vegetation which is essentially degraded wet heath was also noted in narrow forest breaks in that vicinity.

4.1.1 H4010 near proposed turbines T1 and T2 and west of the existing Site road

Of nine assessment stops in this area, two passed all criteria but seven failed on multiple criteria. Although cross-leaved heath *Erica tetralix* was present within 20 m of seven of the stops, the actual amount was typically low, and six did not have sufficient ericoid cover. Six stops also exhibited too much common bent *Agrostis capillaris*. These failures reflect the fact that much of this wet heath is overgrazed and often transitional to acid grassland. Some areas have too much purple moor-grass at the expense of other species, and in some cases the only species indicating wet heath rather than dry heath are purple moor-grass or deergrass. Some stops failed on positive indicator and/or bryophyte cover, and although bryophyte cover usually passed, this hides the fact that the constituent mosses often mostly comprised pleurocarpous species that are common in acid grassland.

Consequently, this area of wet heath is in **Poor** condition. Considering conservation status as per Perrin *et al.* (2014), 'structure and functions' is therefore **Unfavourable Bad**, and (irrespective of 'area' and 'future prospects') this leads to an overall condition status of **Unfavourable Bad**.

4.1.2 H4010 between proposed turbine T3 and current met mast

This zone includes the location of a large proposed borrow pit, at the north end of which the current met mast stands.

The slopes nearest the current met mast, in the vicinity of the northern part of the proposed borrow pit, are the least good. Both assessment stops in this vicinity had insufficient ericoid cover, although it was noted that some adjacent vegetation near the stops did have sufficient ericoid cover. Where ericoids are lacking this appears to be due to a combination of grazing pressure and over-dominance of purple moor-grass. This area is therefore in **Moderate** condition. Considering conservation status as per Perrin *et al.* (2014), 'structure and functions' is therefore **Unfavourable Inadequate**. 'Future prospects' is uncertain (grazing levels would probably continue similarly, but might increase) therefore also Unfavourable Inadequate. Therefore overall conservation status is **Unfavourable Inadequate**.

On the lower flatter ground south of the hillside containing the current met mast, and continuing up to the conifer plantation and the proposed turbine T3, three assessment stops were made and each one passed all condition criteria. Further east (beyond the currently proposed borrow pit), another two assessment stops passed all criteria. Part of this area appears to have been historically cut for peat, but very little sphagnum and no hare's-tail cottongrass *Eriophorum vaginatum* was observed nearer the existing rough road, and only *Sphagnum capillifolium* (which alone is not indicative of bog) further east, thus the area has been treated as wet heath. However, in the event that any peat probing results find deep peat in this area (0.5 m or more peat depth), then the areas of deep peat should be regarded as degraded non-priority H7130 blanket bog. Since all criteria passed in this area, condition is **Good**. Considering conservation status as per Perrin *et al.* (2014), 'structure and functions' is therefore **Favourable**. 'Future prospects' is uncertain since grazing levels could easily be increased to less favourable levels, therefore overall conservation status is **Unfavourable Inadequate**.

4.1.3 H4010 between proposed turbines T3 and T6

This refers to a large area not near any infrastructure and containing in the south-west corner the good example of H8220 described in Section 4.4. Whilst two assessment stops passed all criteria, another five stops all failed on insufficient ericoid cover, and variable other critical criteria including general indicator cover and appropriate bryophyte cover. A common contributing factor in this area is the over-dominance of dense purple moor-grass. It is possible that overgrazing may be an issue also, although this area is more remote from areas that sheep appear to concentrate at. Given the frequent failures across the majority of stops, condition is **Poor**, and 'structure and functions' as per Perrin *et al.* (2014) is **Unfavourable Bad**, which leads (irrespective of 'area' and 'future prospects') to an overall condition status of **Unfavourable Bad**.

4.1.4 H4010 at and near proposed turbine T4

This area of wet heath occupies the majority of an open area within the conifer plantation. This wet heath lies on topographically variable terrain with flat areas, ridges and, to the north-east, a large and fairly steep slope. The western zone, where the majority of proposed turbine T4 sits, has a good range of wet heath species with none over-dominant and satisfactory ericoid cover, and passed all condition criteria. It is therefore in **Good** condition. 'Structure and functions' as per Perrin *et al.* (2014) is therefore **Favourable**. 'Area' and 'future prospects' are also Favourable given that this area is not subject to agricultural management and unlikely to be planted. Therefore overall conservation status is **Favourable**.

The eastern zone frequently fails on too much cover of dwarf shrubs (mainly western gorse *Ulex gallii*), and parts have too much dense purple moor-grass which impoverishes the flora (although this is probably natural at least in part). Therefore condition is **Moderate**. 'Structure and functions' as per Perrin *et al.* (2014) is therefore **Unfavourable Inadequate**. 'Area' and 'future prospects' are Favourable for the same reasons given in the previous paragraph. However, owing to the 'structure and functions' assessment, overall conservation status remains **Unfavourable Inadequate**.

A small fragment of wet heath on an unplanted small area of hilly ground exists to the west of T4, amongst conifer plantation. It is rather dry with too much heather *Calluna vulgaris* and western gorse leading to too high a cover of dwarf shrubs, although the assessment stop carried out here did pass the other criteria. Therefore condition is considered **Moderate**. 'Structure and functions' as per Perrin *et al.* (2014) is **Unfavourable Inadequate** (although arguably natural and simply transitional towards dry heath). 'Future prospects', given that this patch is not under agricultural management and is unlikely to be planted with trees, is considered Favourable, however the 'structure and functions' rating means the overall condition status remains at **Unfavourable Inadequate**.

4.1.5 H4010 on moorland south of proposed turbine T4

This is a large area of heavily ridged heathland, almost entirely wet heath. On the slopes of the ridges, the wet heath is naturally less wet and often over-dominated by purple moor-grass. This sometimes leads to failure of the bryophyte cover criterion, and although this mostly passed it hides the fact the pleurocarpous mosses that are also common in dry heath are often the principal contributor. Cross-leaved heath is always present, albeit typically in small quantity. Beyond the ridge slopes, there is some better-quality wet heath towards the plantation to the north, but generally there is too much heather and sometimes too much western gorse as well, causing frequent failure of the criterion for less than 50% dwarf shrub cover. Three of the assessment stops also failed on bare ground resulting from animal pressure. All but one of the six stops failed on one to three criteria, and where only one failed it was a critical one (bare ground or insufficient ericoid).

Consequently, this majority of wet heath is in **Poor** condition. 'Structure and functions' as per Perrin *et al.* (2014) is therefore **Unfavourable Bad**, and (irrespective of 'area' and 'future prospects') this leads to an overall condition status of **Unfavourable Bad**.

4.1.6 H4010 at and near proposed turbines T6 and T10

These proposed turbines are relatively close together and partly lie within the same block of wet heath (they are otherwise in conifer plantation). Of the three assessment stops in this area, two failed on insufficient cover of ericoids, indicative of overgrazing, although frequent over-abundance of dense purple moor-grass is also a contributing factor. One also failed in having insufficient cover of positive indicators in general, and two in having negligible bryophyte cover (also resulting from too much purple moor-grass). Therefore this wet heath is in **Poor** condition. 'Structure and functions' as per Perrin *et al.* (2014) is therefore **Unfavourable Bad**, and (irrespective of 'area' and 'future prospects') this leads to an overall condition status of **Unfavourable Bad**.

Wet heath south of T6 within the bog/wet heath mosaic is similarly poor, with too much purple moor-grass and insufficient indicators and ericoid cover. Therefore this wet heath is also in **Poor** condition, and 'structure and functions' as per Perrin *et al.* (2014) is also **Unfavourable Bad**, which leads (irrespective of 'area' and 'future prospects') to an overall condition status of **Unfavourable Bad**.

4.1.7 H4010 at and near proposed turbine T7 and proposed met mast

Note that the proposed met mast location itself is in an area of grassland, not wet heath.

The majority of the proposed platform for T7 is an area clearly subject to heavy grazing pressure, that continues eastwards to the edge of the livestock enclosure (where the proposed and existing track turn north-west). The amount of grazing is such that approximately 15% of this area is grassland with no ericoids, increasing to approximately 50% at the far eastern end (which has been split off as a separate polygon), and the wet heath itself invariably contains insufficient ericoid cover. Of the five assessment stops in this area, one also contained excessive bare ground, and four contained too much common bent, indicative of a transition towards acid grassland, both also resulting from excessive grazing pressure. Similar vegetation occurs in a strip on the opposite side of the existing rough road. These areas are clearly in **Poor** condition. 'Structure and functions' as per Perrin *et al.* (2014) is therefore **Unfavourable Bad**, and (irrespective of 'area' and 'future prospects') this leads to an overall condition status of **Unfavourable Bad**.

However, the wet heath at the very western end of the proposed T7 platform, and extending from there in a broad swathe to the current met mast, is in much better condition. Of the four assessment stops in this area, each passed all criteria apart from a single failure on cover of common bent. Although purple moor-grass is abundant here, it is not over-dominant and there is a good cover of ericoids and appropriate bryophytes, and no obvious damage. Consequently, this area is in **Good** condition. 'Structure and functions' as per Perrin *et al.* (2014) is therefore **Favourable**. 'Future prospects' is uncertain since grazing levels could easily be increased to less favourable levels, therefore overall conservation status is **Unfavourable Inadequate**.

Wet heath between proposed turbines T7 and T8, including the vicinity of the proposed track to the met mast, appears to be somewhat variable. At the location of the proposed track to the met mast, there was insufficient ericoid cover and an over-abundance of purple moor-grass. Further east, between proposed turbines T7 and T8, there was also insufficient cover of ericoids and too much common bent, both indicating overgrazing and a degree of transition towards acid grassland. This area has also been subject to drainage by excavation of several large drains. However, other condition criteria passed, and it was locally noted that ericoid cover was sufficient. Therefore condition of this area is considered **Moderate**. 'Structure and functions' as per Perrin *et al.* (2014) is therefore **Unfavourable Inadequate**. 'Future prospects' is however considered Unfavourable Bad because this is an area of active land management to improve conditions for livestock (such as the aforementioned drains, and the conversion of parts of this enclosure to grassland), therefore overall conservation status is **Unfavourable Bad**.

4.1.8 H4010 at and near proposed turbine T8

The zone between proposed turbine T8 and the existing rough track, on which part of the proposed turbine platform and associated access track sits, is virtually all non-Annex I grassland, comprising acid grassland and grassland with dense purple moor-grass with no ericoids or deergrass. The proportion of wet heath in this area has been estimated at 5% only, and is in obvious **Poor** condition owing to the very limited ericoid cover, grazing pressure, and the possibility of complete loss through further grazing. 'Structure and functions' as per Perrin *et al.*

(2014) for the very limited wet heath in this zone is self-evidently **Unfavourable Bad**, which leads (irrespective of 'area' and 'future prospects') to an overall condition status of **Unfavourable Bad**.

Wet heath at the majority of the proposed T8 platform, nearby, and continuing northwards towards T9, is continuous but poor quality. Of eight condition assessment stops, one passed all criteria, but seven failed on insufficient ericoid cover, four failed on insufficient positive indicator cover in general, and all but one failed on too much common bent. Contributing factors include over-abundance of dense purple moor-grass, over-grazing, a degree of transition towards acid grassland in places, and past burning (evidence of which was noted in parts of this area). Condition is therefore clearly **Poor**. 'Structure and functions' as per Perrin *et al.* (2014) is therefore **Unfavourable Bad**, which leads (irrespective of 'area' and 'future prospects', which are also Unfavourable Bad given the existing management) to an overall condition status of **Unfavourable Bad**.

4.1.9 H4010 near proposed turbine T9

A substantial area in this vicinity formerly mapped as a mosaic of wet heath and blanket bog has been converted to a field of agricultural pasture. As a result, proposed turbine T9 no longer impinges on any Annex I habitat. The proposed access track to the north very slightly impinges on the edge of wet heath. Condition assessment stops here failed on either insufficient cover of ericoids, too high a proportion of browsed ericoid shoots, or both. Additionally, there were failures involving bare ground and common bent cover, and the area has evidently been subject to physical disturbance in places, particularly at the south end and beside the existing track, where soft rush is common. A small patch just north of the existing track was not directly entered but has evidently suffered from bulldozing or such-like, and much of it comprises non-Annex I marshy grassland. Clearly this wet heath is in **Poor** condition. 'Structure and functions' as per Perrin *et al.* (2014) is therefore **Unfavourable Bad**, which leads (irrespective of 'area' and 'future prospects', which are also Unfavourable Bad given the existing management) to an overall condition status of **Unfavourable Bad**.

4.1.10 H4010 at and near proposed substation

The majority of the proposed substation lies on ground dominated by non-Annex I habitats such as acid and marshy grassland lacking in ericoids or deergrass. Of the main polygon occupied by the substation footprint, the proportion of wet heath is estimated at about 20%. Assessment stops here failed on insufficient ericoid cover, too much common bent, and (mainly on the northern ridge) too much cover of western gorse. Over-grazing is frequently a problem and over-abundance of purple moor-grass on the ridge. The same issues apply to the more continuous wet heath beginning at the east edge of the substation footprint. Condition is therefore **Poor**. 'Structure and functions' as per Perrin *et al.* (2014) is therefore **Unfavourable Bad**, which leads (irrespective of 'area' and 'future prospects', which are also Unfavourable Bad given the existing management) to an overall condition status of **Unfavourable Bad**.

4.1.11 H4010 at and west of proposed turbine T12

Proposed turbine T12 itself is on non-Annex I grassland and not wet heath, however the western part of the platform extends onto a mosaic of blanket bog and wet heath, and similar wet heath continues westward.

Of the seven assessment stops in this area, two on higher ground adjacent to the conifer plantation passed all criteria. This area is separated in the GIS data, and is in **Good** condition. 'Structure and functions' as per Perrin *et al.* (2014) is therefore **Favourable**. 'Future prospects' is however considered Unfavourable Inadequate because of the degradation in the immediately adjacent wet heath (see next paragraph) which could also take place in this polygon, therefore overall conservation status is **Unfavourable Inadequate**.

However, the other five stops failed on insufficient ericoid cover, too much common bent, and in two cases by complete absence of cross-leaved heath within 20 m. This is indicative of significant over-grazing and a transition towards acid grassland. This area has also been subject to drainage by recent excavation of drains, and there has also been some localised wholesale conversion of habitat to improved pasture which may have included loss of wet heath. Condition is therefore clearly **Poor**. 'Structure and functions' as per Perrin *et al.* (2014) is therefore **Unfavourable Bad**, which leads (irrespective of 'area' and 'future prospects', which are also Unfavourable Bad given the existing management) to an overall condition status of **Unfavourable Bad**.

4.1.12 H4010 between proposed turbines T11 and T12

Most of this area is distant from proposed infrastructure but it includes the vicinity of proposed turbine T11 and the proposed eastwards track from T11. Three assessment stops between T12 and T11 failed in all cases on insufficient ericoid cover, with individual failures on complete absence of cross-leaved heath and too much

common bent. Three further stops in the vicinity of T11 failed on insufficient bryophyte cover, in two cases on general shortage of positive indicators, and in individual cases on insufficient ericoid cover and too much scrub. Of four additional stops north-east of T11, all but one failed on cover of ericoids, cover of appropriate bryophytes and cover of positive indicators in general; the final stop passed all criteria. Overall it is clear that this large area of wet heath is in **Poor** condition. Contributing factors to the poor condition include, depending on precise location, over-grazing, too much purple moor-grass and too much western gorse. 'Structure and functions' as per Perrin *et al.* (2014) is therefore **Unfavourable Bad**, which leads (irrespective of 'area' and 'future prospects') to an overall condition status of **Unfavourable Bad**.

A tiny fragment of wet heath on a slope east of T12 is obviously over-grazed and transitional to acid grassland, with numerous failures of critical criteria including ericoid cover, browsing evidence, bare ground and too much common bent. This is also in clear **Poor** condition, and 'structure and functions' as per Perrin *et al.* (2014) is **Unfavourable Bad**, which leads (irrespective of 'area' and 'future prospects') to an overall condition status of **Unfavourable Bad**.

4.1.13 H4010 at and near proposed turbine T13, and towards T14

Proposed turbine T13 itself is largely on non-Annex I acid/marshy grassland (without ericoids or deergrass), and not wet heath. It slightly impinges on a polygon to the south estimated to be approximately 80% wet heath and the remainder non-Annex I grassland, and a bank with poor quality wet heath in the western part of the platform. Of six assessment stops in this area, two passed all criteria, however four failed on at least one critical factor including presence of cross-leaved heath within 20 m, cover of positive indicators in general, cover of appropriate bryophytes and cover of ericoids. The contributing factors include overgrazing, and in places too much dense purple moor-grass and, more locally, western gorse. Therefore condition is **Poor**. 'Structure and functions' as per Perrin *et al.* (2014) is therefore **Unfavourable Bad**, which leads (irrespective of 'area' and 'future prospects') to an overall condition status of **Unfavourable Bad**.

The wet heath north-east of T13 is largely fenced off into a separate livestock enclosure, that appeared to have been cattle-grazed at the time of survey (grazing in the rest of the Site involved sheep). The vegetation in this area is often less grazed but frequently suffers from overly dense purple moor-grass. This was a difficult area to access owing to topography and roughness of the vegetation. Assessment stops in this area passed all criteria in one case and failed multiple critical criteria (general indicator cover and appropriate bryophyte cover) in another, and it is clear that there is some non-Annex I grassland amongst the heath. Therefore condition is considered **Moderate**. 'Structure and functions' as per Perrin *et al.* (2014) is therefore **Unfavourable Inadequate**, and since 'future prospects' are uncertain overall condition status is **Unfavourable Bad**.

Wet heath north of T13 is very much a fragmented minority habitat amongst acid grassland, with the whole area subject to heavy grazing pressure. Therefore condition is **Poor**, and 'structure and functions' as per Perrin *et al.* (2014) is **Unfavourable Bad**, which leads (irrespective of 'area' and 'future prospects') to an overall condition status of **Unfavourable Bad**.

4.2 H4030 European dry heaths

Dry heath is present in very small quantity in the Site, and in most areas is absent. It was noted occasionally on the driest parts of rocky ridges and steeper sloping ground in the area between proposed turbines T3 and T6, east of T12, on the open ground beyond the plantation south of T4, and on Carrigalougha in the vicinities of T1 and T2. The only one of these locations where the proposed wind farm could directly impact dry heath is the latter.

4.2.1 H4030 near proposed turbines T1 and T2

Dry heath is a minor component of the habitat mosaic near proposed turbines T1 and T2. Condition assessment stop 6 was near proposed turbine T2. Where it occurs, there is frequent heather but at fairly low cover, being overgrazed and too grassy, and essentially a transition towards acid grassland with many of the same species and grasses dominant. Occasional observed dry heath elsewhere on Carrigalougha is similar. Therefore condition is **Poor**. Considering conservation status as per Perrin *et al.* (2014), 'structure and functions' is therefore **Unfavourable Bad**, and (irrespective of 'area' and 'future prospects') this leads to an overall condition status of **Unfavourable Bad**.

4.2.2 H4030 between proposed turbines T3 and T6

Dry heath is very scarce in this area, occurring on a few rocky ridges, with heather, western gorse and often some bell heather *Erica cinerea*. In most cases, such ridges still have abundant purple moor-grass thus the vegetation is best classed as wet heath. Two condition assessments were carried out on typical very localised dry heath examples. The first failed very obviously in having very much more than 50% cover of western gorse. The second (at the good example of H8220 discussed below) passed all criteria. Considered as a whole, dry heath in this area is therefore in **Moderate** condition. Considering conservation status as per Perrin *et al.* (2014), 'structure and functions' is therefore **Unfavourable Inadequate**. The difficult accessibility of these tiny patches of dry heath suggests that 'area' and 'future prospects' are probably Favourable. However, given the assessment of structure and functions, overall condition status is **Unfavourable Inadequate**.

4.2.3 H4030 on open moorland south of proposed turbine T4

Dry heath in this area is again very limited and restricted to the drier parts of some ridges, with vegetation on ridges mostly still containing abundant purple moor-grass and best classified as wet heath. Two examples of dry heath in this area were subject to condition assessment, representing two typical types of dry heath in this area, one with heather, bell heather and usually some western gorse (plus other common species of acid conditions), and the other similar but north-facing and with frequent *Sphagnum capillifolium* in addition to common pleurocarpous mosses. They both passed all criteria, and are therefore in **Good** condition. Considering conservation status as per Perrin *et al.* (2014), 'structure and functions' is therefore **Favourable**. Given that the very limited occurrences of dry heath are on steep ridges, which tends to limit grazing pressure, 'area' and 'future prospects' are probably Favourable also. Therefore overall condition status is **Favourable**. There is no proposed wind farm infrastructure in this area.

4.2.4 H4030 east of proposed turbine T12

This refers to an extremely small amount of dry heath on moderately sloping ground approximately 250 m east of proposed turbine T12 and 15-20 m south of a proposed access track. The general area around this dry heath is heavily grazed and there is consequently too much grazing pressure on the dry heath. Hence there is far from enough ericoid/positive indicator cover (of which there is only heather and western gorse) and too much evidence of browsing, and the vegetation is essentially acid grassland with sparse overgrazed heather. Therefore condition is **Poor**. Considering conservation status as per Perrin *et al.* (2014), 'structure and functions' is therefore **Unfavourable Bad**, and (irrespective of 'area' and 'future prospects') this leads to an overall condition status of **Unfavourable Bad**. Although there is a proposed access track 15-20 m to the north, it is unlikely to affect this dry heath, which is on sloping ground rather than the flat ground where the track is proposed.

4.3 H7130 Blanket bog and H7150 Depressions on peat substrates of the *Rhynchosporion*

Blanket bog in the Site occurs as small to moderate-sized patches amongst (mostly) wet heath. The majority has been cut-over historically, but most also contains abundant sphagnum (at least in parts), which indicates 'active' peat bog and constitutes H7130* priority blanket bog rather than H7130 non-priority blanket bog. Locally, there is bog without only occasional sphagnum but abundant hare's-tail cottongrass, which also indicates active bog (in the absence of factors suggesting the opposite) and also constitutes H7130* priority blanket bog.

Some patches, however, lack suitable or any sphagnum or hare's-tail cottongrass, and these are regarded as inactive, constituting H7130 non-priority blanket bog. These include a few very degraded examples where either extensive peat cutting (some recent) or drainage has taken place.

Very locally, white beak-sedge occurs on H7130* blanket bog or H4010 wet heath, and in these locations H7150 overlaps with those Annex I types.

4.3.1 H7130 at and near proposed turbines T1 and T2

There are several pockets of blanket bog, mostly active priority H7130*, on Carrigalougha between the existing rough road and proposed turbine T1. This includes a mixed bog/wet heath zone at the platform of T1, and small pockets at and near proposed turbine T2. There are also two bog patches between T2 and T3, which are discussed last in this section. These patches of bog have mostly been historically cut, but sufficiently long ago that the vegetation is mostly good, with plentiful sphagnum.

The bog patches close to or at T1 and T2 are mostly active priority H7130* with frequent to abundant *Sphagnum papillosum*. Three assessment stops were able to be carried out here. Two of these passed all criteria and one failed on one criterion only (for insufficient positive indicators). The failure was at a patch of bog that includes some drier uncut peat of lower diversity with excessive purple moor-grass (classed as inactive non-priority H7130), as well as lower-lying vegetation with sphagnum etc. Bog at T1 is similar with plentiful sphagnum etc. Therefore the condition of these bog patches is considered **Good** with the exception of the patch with the criterion failure, which is **Moderate**. This equates to a 'structure and functions' rating of **Favourable** or **Unfavourable Inadequate**, respectively. Since there appears to be quite heavy grazing on Carrigalougha, which could in future affect the bog patches within the time period for 'future prospects' (twelve years), overall conservation status is considered **Unfavourable Inadequate** in all cases. The patch at T2 includes a very small amount of white-beak sedge, but H7150 here is **Unfavourable Bad** owing to insufficiency of white-beak sedge and too high a cover of deergrass.

The two areas of bog between T2 and T3 are on lower ground and notably differ in that they include some vegetation with white beak-sedge constituting H7150 as well as H7130. At the smaller bog patch, H7150 occupies about 20% of the H7130* priority bog vegetation. At the larger patch closest to the existing rough road, the white beak-sedge is at the west end only and is on wet heath vegetation. All the H7150 in these areas passed all criteria, is in **Good** condition, and 'structure and functions' is **Favourable**; however, given adjacent grazing pressures which could in future affect the H7150 with the time period for 'future prospects' (twelve years), overall conservation status is **Unfavourable Inadequate**. The H7130* blanket bog also passed all criteria and is rated identically.

4.3.2 H7130 at and near proposed turbine T3

Proposed turbine T3 impinges onto the very western end of one of the more substantial blanket bog patches. This patch includes two large high-standing areas of uncut peat with a wide dividing channel and surrounding areas of lower historically-cut peat. The low-lying parts include substantial areas with abundant sphagnum, including *Sphagnum papillosum* and *Sphagnum cuspidatum*, and vascular species such as round-leaved sundew *Drosera rotundifolia* and bog asphodel *Narthecium ossifragum*. The large standing islands of higher peat are in contrast drier, and in places the only sphagnum is *Sphagnum capillifolium* (not a key bog species, occurring widely in wet heath etc.). However, other parts do contain small amounts of *S. papillosum* and, although purple moor-grass is dominant, there is locally frequent hare's-tail cottongrass. Therefore the whole area is considered H7130* priority blanket bog. The two assessment stops in this area failed on one to three criteria. The better location failed only in having rather too much cover of purple moor-grass. Areas beyond the stops with extensive multiple sphagnum species in low-lying areas would pass all criteria, and there is a particularly wet low-lying area near the east end with a fairly large bog pool. Therefore condition is considered **Moderate**. 'Structure and functions' as per Perrin *et al.* (2014) is therefore **Unfavourable Inadequate**, and since the area is beyond agricultural management and not likely to be planted with trees, 'area' and 'future prospects' are considered good, therefore overall conservation status remains **Unfavourable Inadequate**.

Approximately 200 m south-east of T3 there is a separate smaller relict patch of historically cut-over bog within the conifer plantation. An assessment stop carried out here on higher peat failed on insufficiency of positive indicators, and also exhibited local bare ground caused by heavy deer presence and too high a degree of drying. However, smaller low-lying formerly-cut areas still contain *Sphagnum papillosum*, and a stop carried out in such habitat passed all criteria. The dominant higher uncut parts, although drier, still contain locally frequent bog asphodel and occasional hare's-tail cottongrass. Therefore this bog is considered active H7130* priority blanket bog, in **Moderate** condition. As in the previous paragraph, and given the same situation within forestry, 'structure and functions' as per Perrin *et al.* (2014) is therefore **Unfavourable Inadequate**, and overall conservation status is **Unfavourable Inadequate**.

On the open moorland north of proposed turbine T3 there are three small pockets of blanket bog. The small outer pockets both pass all criteria (the pocket by the existing rough road is an old cutting, but now contains very abundant sphagnum including *S. papillosum* and *S. cuspidatum*). These are clearly in **Good** condition, and 'structure and functions' as per Perrin *et al.* (2014) is **Favourable**. The pocket by the road is vulnerable (there is nearby manure dumping) therefore overall conservation status drops to **Unfavourable Inadequate**. The central larger pocket is also historically cut-over, and contains vegetation both like and unlike bog vegetation, considered to be H7130* (since there is reasonable cover of suitable sphagnum) and H7130, respectively. The former contains too high a cover of purple moor-grass. Therefore condition for the H7130* is considered **Moderate**, 'structure and functions' is **Unfavourable Inadequate**, and overall conservation status remains **Unfavourable Inadequate**. The H7130 is considered to be in **Poor** condition owing to too much rush etc., leading to 'structure and functions' and overall conservation status of **Unfavourable Bad**.

There is another small patch of active H7130* bog further north still, towards the current met mast. This was very wet with abundant *S. papillosum*, and passed all criteria. It is therefore in **Good** condition, and 'structure and functions' as per Perrin *et al.* (2014) is **Favourable**. 'Future prospects' is not entirely certain given nearby pressures, therefore overall conservation status is considered **Unfavourable Inadequate**.

Bog patches between proposed turbines T2 and T3 are discussed in the previous section.

4.3.3 H7130 at and near proposed turbine T4

There is a fairly large patch of blanket bog south-west of T4, beyond the infrastructure footprint and surrounded on three sides by conifer plantation. There is not much suggestion of historic peat cutting, and it has been taken as fully intact. Purple moor-grass is generally abundant and one out of four assessment stops failed on this count. However, all other criteria passed, there is a reasonable range of sphagnum species, indicating active status, and white-beak sedge *Rhynchospora alba* is also present very locally, so that H7150 is present as well as H7130*. Therefore this bog is considered to be in **Good** condition. 'Structure and functions' as per Perrin *et al.* (2014) is therefore **Favourable**. Since this area is not under agricultural management and is not likely to be planted with trees, 'future prospects' is also Favourable, therefore overall conservation status is **Favourable**.

For the very localised H7150 specifically, two assessments were carried out. One (at the east end of the bog, with very abundant white beak-sedge) passed all criteria. The other was representative of white beak-sedge elsewhere on this bog, which tends to only occur in small quantity where deer have opened up wet ground a little. However, this bog is in general not wet enough for H7150 but apparently naturally so. Therefore on professional judgement, H7150 here is considered to be **Good** condition. Therefore 'structure and functions' is **Favourable Inadequate**, and overall conservation status also **Favourable** for the same reasons given in the previous paragraph.

At the east end of the proposed platform for T4, there is an area of very poor quality cut-over bog. This contains vegetation largely not resembling that of bog (such as acidic damp soft rush), but since there are small remaining islands and peripheral strips of uncut peat (with evidence of recent peat removal as well as historic cutting), this patch is considered best classed as cut-over bog. It is inactive non-priority H7130 owing to the lack of suitable sphagnum and other vegetation. It is clearly in extremely **Poor** condition, equating to a 'structure and functions' and overall conservation status of **Unfavourable Bad**.

4.3.4 H7130 near proposed turbine T6

Proposed turbine T6 does not lie directly on any bog. There is a small pocket of presumed bog just north-west of T6. This is presumed to be blanket bog only because of apparently sufficiently deep peat seen at a drain that has been excavated through this area. The vegetation itself shows no sign of bog species and is overwhelmingly dominated by very dense purple moor-grass with almost no other species. This patch is clearly not active and in **Poor** condition. Therefore 'structure and functions' as per Perrin *et al.* (2014) is **Unfavourable Bad**, which leads (irrespective of 'area' and 'future prospects') to an overall conservation status of **Unfavourable Bad**. It may be that this area has always been marginal, and if peat probing depths show predominately shallow peat (less than 0.5 m) then it would be best treated as part of the surrounding wet heath.

Shortly south of T6 there is a mosaic polygon of blanket bog and wet heath. Although the boundary between these is sometimes sharp owing to geological ridges, there are also areas in which these habitat intergrade and the boundary is unclear. For the most part, the bog here has very abundant purple moor-grass, although this appears to be natural and there is no clear sign of historic peat cutting. Of four assessment stops, two failed on insufficient positive indicators and appropriate bryophyte cover, and overabundance of purple moor-grass. One failed only on the latter. The final stop passed all criteria, and was located at the wettest part which contained bog bean *Menyanthes trifoliata*, black bog-rush *Schoenus nigricans*, mud sedge *Carex limosa* and abundant sphagnum of various species, as well as typical bog vascular species. Multiple failures in half the assessment stops suggests overall **Poor** condition, although it is stressed again that there is no obvious reason for the overabundance of purple moor-grass (the main factor leading to criteria failures), which may be natural, or it may be that the peat depth is borderline and the habitat transitional to wet heath. However, 'structure and functions' as per Perrin *et al.* (2014) is therefore **Unfavourable Bad**, which leads (irrespective of 'area' and 'future prospects') to an overall conservation status of **Unfavourable Bad**.

4.3.5 H7130 at and near proposed turbine T8

There is one small pocket of blanket bog, probably historically cut-over, at the north end of the proposed platform for T8. Similar pockets occur on locally flat ground at and near the proposed track between T8 and T9. These all

contain abundant sphagnum including *S. papillosum* and *S. cuspidatum*, as well as a good complement of common peat bog species, and all condition criteria passed in the two assessment stops taken. Small pockets slightly further east of the proposed track are very similar also. Therefore all these small pockets are considered active and in **Good** condition, although it should be noted that ericoid cover was only just enough in the pocket at T8, reflecting grazing pressure in this general area. Therefore 'structure and functions' as per Perrin *et al.* (2014) is **Favourable**. However, 'future prospects' is uncertain given grazing pressure in this area and also evidence of past burning (not in the bog patches, but with no guarantee that this would not occur within the time period (twelve years) for this criterion). Therefore overall conservation status is considered **Unfavourable Inadequate**.

4.3.6 H7130 near proposed turbine T9

Until very recently, proposed turbine T9 impinged upon a reported mosaic of bog and wet heath. However, a substantial area of such vegetation has been recently converted to agricultural pasture, with a large ditch created around the edge. As a result, the footprint of T9 no longer impinges on anything other than agricultural grassland. There is a small remaining part of the former bog/heath mosaic approximately 50 m east of the proposed T9 platform. This does not contain large amounts of sphagnum (there is a moderate amount) but does contain abundant hare's-tail cottongrass and, very occasionally, hummocks of the moss *Polytrichum strictum*, a species associated with peat bog. It is therefore active H7130* priority blanket bog. Two assessment stops in this patch did not quite achieve sufficient positive indicators, and there is a likely drying effect from the nearby new ditch. There is also some heath rush *Juncus squarrosus* in this area which (although not specified in Perrin *et al.* (2014)) tends to be indicative of overgrazing. However, the presence of *P. strictum* is good (even though it is not given as a positive indicator in Perrin *et al.* 2014)), and this type of bog with abundant hare's-tail cottongrass and pleurocarpous moss is naturally drier and less diverse. Therefore on professional judgement this bog is considered to be in **Moderate** rather than Poor condition. 'Structure and functions' as per Perrin *et al.* (2014) is therefore **Unfavourable Inadequate**. 'Future prospects' is uncertain – the recent loss of most of this habitat area to pasture and creation of a large ditch may mean that it will become unfavourably drier, at least in part, however it seems unlikely that there would be further loss (or this would have presumably been carried out during the recent conversion). Therefore 'future prospects' and overall conservation status are considered **Unfavourable Inadequate**.

4.3.7 H7130 at and near proposed substation

There are two small areas of bog in this area. One is very small and located just west of the proposed substation. It is in a slight declivity and very wet with abundant *Sphagnum papillosum* etc. The other example is mixed with wet heath in more variable terrain, and is slightly impinged upon by the north-east edge of the proposed substation. Condition stops carried out in each passed all criteria, therefore condition is **Good**. 'Structure and functions' as per Perrin *et al.* (2014) is therefore **Favourable**. However, 'future prospects' is uncertain given the heavy grazing pressure in surrounding vegetation which could impact on the bog vegetation within the time period for this criterion (twelve years). Therefore overall conservation status is considered **Unfavourable Inadequate**.

4.3.8 H7130 by proposed turbine T10

There is a very small amount of blanket bog just beyond the western end of the proposed platform for T10, and the connecting proposed access track crosses a small part of it. It has been split into a larger inactive part, without much sphagnum or hare's-tail cottongrass and constituting non-priority H7130 (including where the access track crosses), and a smaller active area with abundant sphagnum constituting priority H7130*. The latter passed on all criteria and is in **Good** condition, therefore 'structure and functions' as per Perrin *et al.* (2014) is **Favourable**; however, there is some uncertainty over 'future prospects' given nearby agricultural track creation and grazing pressure, therefore overall conservation status is considered **Unfavourable Inadequate**.

The non-priority H7130 patch failed on insufficient indicator species, drainage and overabundance of purple moor-grass. Therefore this is in **Poor** condition, 'structure and functions' as per Perrin *et al.* (2014) is **Unfavourable Bad**, and this leads (irrespective of 'area' and 'future prospects') to an overall conservation status of **Unfavourable Bad**.

4.3.9 H7130 at proposed turbine T12

The proposed turbine T12 itself, and the northern part of the platform, do not impinge upon blanket bog, but the central and southern part of the platform and initial part of the connecting access track do. The bog is rather variable, on both fairly flat and sloping ground, and is in mosaic with wet heath.

The best parts of the bog are a flat channel and square of historic peat cutting that now contain abundant sphagnum including *S. papillosum*, and vascular species such as round-leaved sundew. These parts passed all condition criteria (although the channel-shaped cutting contains locally frequent heath rush which is usually a negative indicator). On the whole these better parts of active priority H7130* are in **Good** condition, and 'structure and functions' as per Perrin *et al.* (2014) is **Favourable**. 'Future prospects' is somewhat uncertain given nearby excavated drains and grazing pressures, therefore overall conservation status is **Unfavourable Inadequate**.

However, of five stops on other adjacent bog, on shallow to moderate slopes, four failed on insufficient indicators, and variably on other criteria such as insufficient appropriate bryophytes, overabundance of purple moor-grass, and presumed drying effects from fairly recently-excavated drains. On the moderate slopes, constant frequent hare's-tail cottongrass indicates bog, but note that in such situations drier bog that appears transitional to wet heath and acid grassland, with more pleurocarpous moss than sphagnum, could be natural, and if peat probing depths indicate shallow peat then those parts should be treated as wet heath (which would also fail on insufficient number and cover of indicator species). This bog must be assigned **Poor** condition, 'structure and functions' as per Perrin *et al.* (2014) is **Unfavourable Bad**, and this leads (irrespective of 'area' and 'future prospects') to an overall conservation status of **Unfavourable Bad**.

4.4 H8220 Siliceous rocky slopes with chasmophytic vegetation

In considering which types of rock exposure constitute H8220, it is important to note that the habitat name itself requires that chasmophytic (crevice-dwelling) plant species be present. Additionally, the Annex I interpretation manual (European Commission, 2013) states in section 1 of the H8220 description that H8220 comprises "*Vegetation of fissures of siliceous inland cliffs*", and in section 2 the word 'cliff' is used in every description from Member States. In combination, this implies substantial rock exposures ('cliffs'), with fissures containing crevice-dwelling plant species. Saxifrages *Saxifraga* spp. and *Asplenium* spp. ferns are the main species described that have equivalents in Ireland. This definition clearly does not mean to include small rock exposures that do not contain fissures and/or lack such crevice-dwelling plant species. For this reason, almost all the rock exposures in the surveyed area do not constitute H8220 – they are for the most part small longitudinal rock exposures amongst wet heath or other vegetation, generally at most a few metres in the narrow dimension and often considerably sloping (i.e. not like 'cliffs'), and (as far as could be seen from the inspected examples) without fissures or, where these are present, too small to support or otherwise lacking the kinds of crevice-dwelling plants mentioned above or in Perrin *et al.* (2014) (i.e. lacking St. Patrick's cabbage *Saxifraga spathularis* or ferns). These small rock exposures, that are frequent in some parts of the Site, are part of the fabric of the wet heath or other open habitat; they are not uncommon in upland areas, and not the kinds of rock exposure intended to be highlighted by this Annex I type.

It should also be noted that for habitats not listed in Annex I as priority types, such as H8220, one of the criteria³ (danger of disappearance) that define habitats of Community interest (i.e. Annex I habitats) does not apply. This leaves the second criterion of "small natural range", and the third criterion of "outstanding examples" of habitats in (for Ireland) the Atlantic biogeographic zone. Small natural range does not apply to H8220, and a common-sense understanding of the meaning of "outstanding examples" would not include poor quality examples or examples that are very small for the habitat in question. Consequently, examples of poor quality or very small non-priority habitats that do not have a small natural range are not likely to constitute habitat of Community interest. This highlights the potential for problems in uncritically applying the Annex I habitat list to purposes other than that for which it was intended, which, as stated in the title of Annex I itself, is the designation of Special Areas of Conservation (SAC).

Only one good example of H8220 was found in the surveyed area. This is approximately 300 m north-east of proposed turbine T3. It consists of a substantial and largely vertical north-facing siliceous rock exposure (i.e. a 'cliff'), of approximately 100 m length and oriented roughly east-west, with several large vertical fissures, one plate-like horizontal fissure, and one cavity resembling a small 'cave'. All these fissures/cavities contain St. Patrick's cabbage and at least one type of fern, mostly hard fern *Blechnum spicant* and/or broad buckler-fern *Dryopteris dilatata*, occasionally polypody *Polypodium* sp. Also, more notably, at the entrance of the small 'cave' and under the shade of heather there is a colony of Wilson's filmy-fern *Hymenophyllum wilsonii*. Five condition assessment stops were carried out at fissures in this cliff – the condition assessment for H8220 has only four criteria, which all passed in all instances. Therefore this H8220 example is in **Good** condition. Considering conservation status as per Perrin *et al.* (2014), 'structure and functions' is therefore **Favourable**. Since 'area' and 'future prospects' are also favourable (given the inaccessibility of the features and lack of obvious future threat) overall condition status is also **Favourable**. There is no proposed infrastructure near this feature.

³ See Article 1 Sections (c) and (d) of the Habitats Directive for the three criteria.

An extremely small rock exposure with a few horizontal gaps between 'plates' of rock approximately 100 m north of proposed turbine T2 also contains a small amount of St. Patrick's cabbage but no other relevant species. As discussed above, such an exposure is arguably too small to consider as H8220, bears no resemblance to the term 'cliff' used repeatedly in the Annex I interpretation manual (European Commission, 2013), and is certainly not of Community interest. If assessed under the H8220 condition criteria, it would pass all of them. However, it is on a steep north-facing slope where infrastructure is not planned or likely feasible, thus overall condition status would be **Favourable**.

Since neither of the above features are under threat, and no other H8220 was found in the surveyed area⁴, the proposed wind farm is likely to have no impact on H8220.

⁴ As noted in the limitations, it is not possible to walk over every square metre of a site, therefore it is possible that other small rock exposures with chasmophytes might exist in the surveyed area that were not detected. By virtue of the same arguments given above, and that they would likely be very small, they would arguably not be of Community interest. However, there did not appear to any other rock exposures with fissures containing appropriate chasmophytes at or near proposed infrastructure.

5. Other observations / comments

5.1 Existing pressures on Annex I habitats and potential for improvement with a wind farm

Existing pressures on Annex I habitats are significant at this Site, in particular over-grazing, but also drainage through excavation of drains (apparently recent in several cases), and burning (which has taken place at least near proposed turbines T8 and T9 in recent times). These pressures result in significant adverse effects on the existing Annex I habitat, particularly H4010 wet heath, such that the majority of H4010 is currently in poor condition, most often exhibited by an insufficiency in ericoid or other positive indicator cover, and in places by degradation towards or fully to non-Annex I grassland.

Additionally, there has been wholesale conversion of former wet heath and bog to agricultural pasture. This has very recently taken place on a significant scale in the vicinity of proposed turbine T9, producing a new agricultural field, and on a smaller scale in a few other places nearby. It is estimated that approximately 2.6 ha of Annex I habitat has been recently lost in this way. Grassland likely derived through loss of Annex I wet heath by grazing pressure and drainage appears to be in the order of 15 ha. The area of existing Annex I wet heath that is in unfavourable condition and for which grazing (and locally drainage) appears to be a significant contributing factor exceeds 100 ha.

A consented wind farm would provide immediate relief from burning of wet heath, which cannot take place near wind farm infrastructure for obvious reasons. There is potential to improve the condition of areas of Annex I wet heath by suitable habitat management, such as a more favourable grazing regime, and possibly blocking of certain drains. Additionally, creation of permanent turbine clearance areas in forestry around proposed turbines T3, T4, T5 and T10 provides opportunities for establishment of new wet heath. That wet heath (and locally bog) was the likely vegetation type prior to forestation, and is likely to form upon removal of trees (with ditch blocking if necessary), is demonstrated by the existing islands of wet heath (and bog) within the conifer plantation, and by existing patches of poorly-grown trees apparently on wet heath vegetation (in particular, just south-east / east of proposed turbine T3). Additional forestry clearance beyond that required for turbines (particularly where poorly-grown and on apparent wet heath) could further expand the wet heath habitat network, and moreover would not be in a livestock grazing area, with grazing largely limited to that of deer and consequent higher potential for better quality wet heath to develop that is not overgrazed.

5.2 Naturalness of some unfavourable habitat

The term 'Unfavourable Inadequate' implies that improvement in condition is possible. Whilst this is certainly the case over large parts of this Site, in localised instances it may not be. For example, wet heath on steeper slopes (as locally on Carrigalougha) is liable to be drier with less wet heath species than on more moderate slopes. Similarly, as at proposed turbine T12, marginal bog vegetation on more significantly sloping ground represents a drier form of blanket bog that is less diverse than other bog. These habitats are often transitional to others, and failure of certain condition criteria in such vegetation is at least partly natural.

5.3 Atlantic hazel scrub

Just north-west of proposed turbine T14, on the lower part of the sloping moorland, there are two small patches of scrub dominated by hazel *Corylus avellana* (also with some grey willow *Salix cinerea*), on north-east facing slopes. The western patch is very small and was passed by during the Annex I condition assessment, and was seen to contain primrose *Primula vulgaris* in the ground flora and abundant bryophytes on the hazel. The other larger patch was seen at a distance, but since it lies near the small patch in an almost identical topographic situation it can be expected to be similar. This type of vegetation represents a form of hazel-dominated woodland referred to in the UK as 'Atlantic hazel scrub'. The more significant larger patch is beyond the proposed infrastructure. Potentially, a habitat management plan could include measures to protect and possibly expand this more significant larger patch.

6. References

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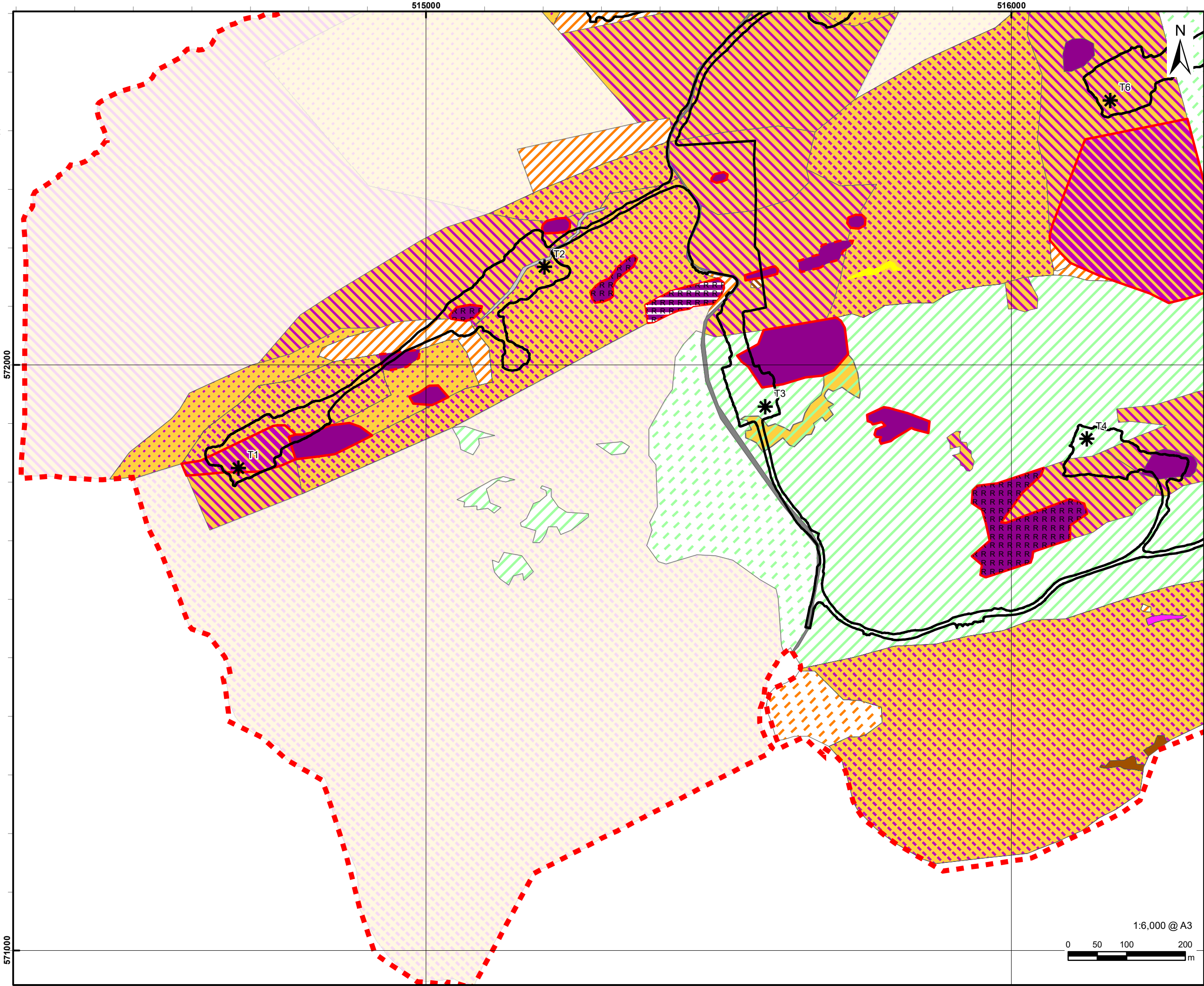
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Stace, C. (2019). *New Flora of the British Isles* (4th edition). C&M Floristics, Middlewood Green.

Appendix A Figures

Revision: 0 Drawn: NN Checked: ND Approved: TM Date: 2023-03-30



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PROJECT

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CLIENT

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CONSULTANT

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LEGEND

Red line boundary

Site (footprint)

Annex I habitats (n/a = non-Annex I)

H4010

H4010 / H4030 / non-Annex I

H4010 / non-Annex I

H7130

H7130*

H7130* / H7130

H7130* + H7150

H7130* / H7150 + H4010 / non-Annex I

H7130* / H4010

H8220 / H4010 / H4030

n/a (FP2 acid/neutral flush)

n/a (WD4 conifer plantation)

n/a (WD4 poorly-grown, on H4010)

n/a (WS2 recent conifer plantation)

n/a (HD1 bracken)

n/a (agricultural/non-agricultural grassland)

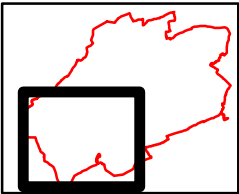
n/a (non-agricultural grassland)

n/a (disturbed manured grass)

n/a (old track)

n/a (road / track)

Note: unfaded habitats are those of the Annex I condition assessment, which did not extend to areas distant from infrastructure. Faded habitats are from the original wind farm survey and cover the distant areas.



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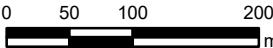
FIGURE TITLE

Habitat map with overlaid infrastructure

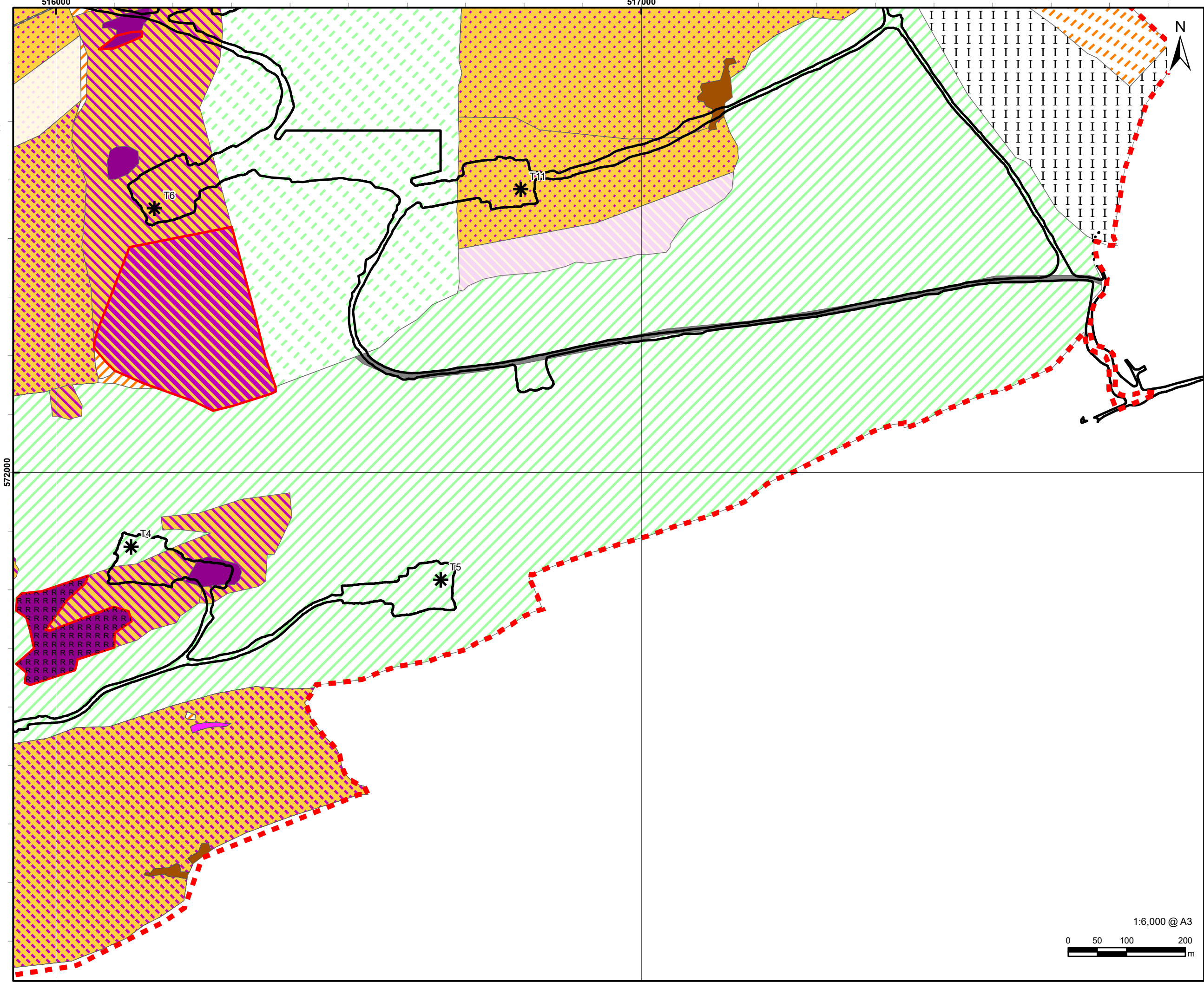
FIGURE NUMBER

Figure 1 Sheet 1 of 4

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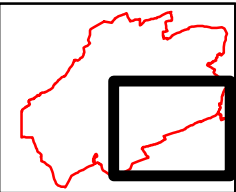
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LEGEND

- Red line boundary
- Site (footprint)
- Annex I habitats (n/a = non-Annex I)**
 - H4010
 - H4010 / H4030 / non-Annex I
 - H4010 / non-Annex I
 - H7130
 - H7130*
 - H7130* + H7150
 - H7130* / H4010
 - n/a (FP2 acid/neutral flush)
 - n/a (WD4 conifer plantation)
 - n/a (WS2 recent conifer plantation)
 - n/a (HD1 bracken)
 - n/a (GA1 agricultural grassland)
 - n/a (agricultural/non-agricultural grassland)
 - n/a (non-agricultural grassland)
 - n/a (new track, estimated position only)
 - n/a (road / track)

Note: unfaded habitats are those of the Annex I condition assessment, which did not extend to areas distant from infrastructure. Faded habitats are from the original wind farm survey and cover the distant areas.

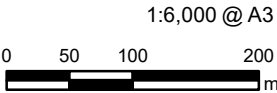


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PROJECT NUMBER
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FIGURE TITLE
Habitat map with overlaid infrastructure

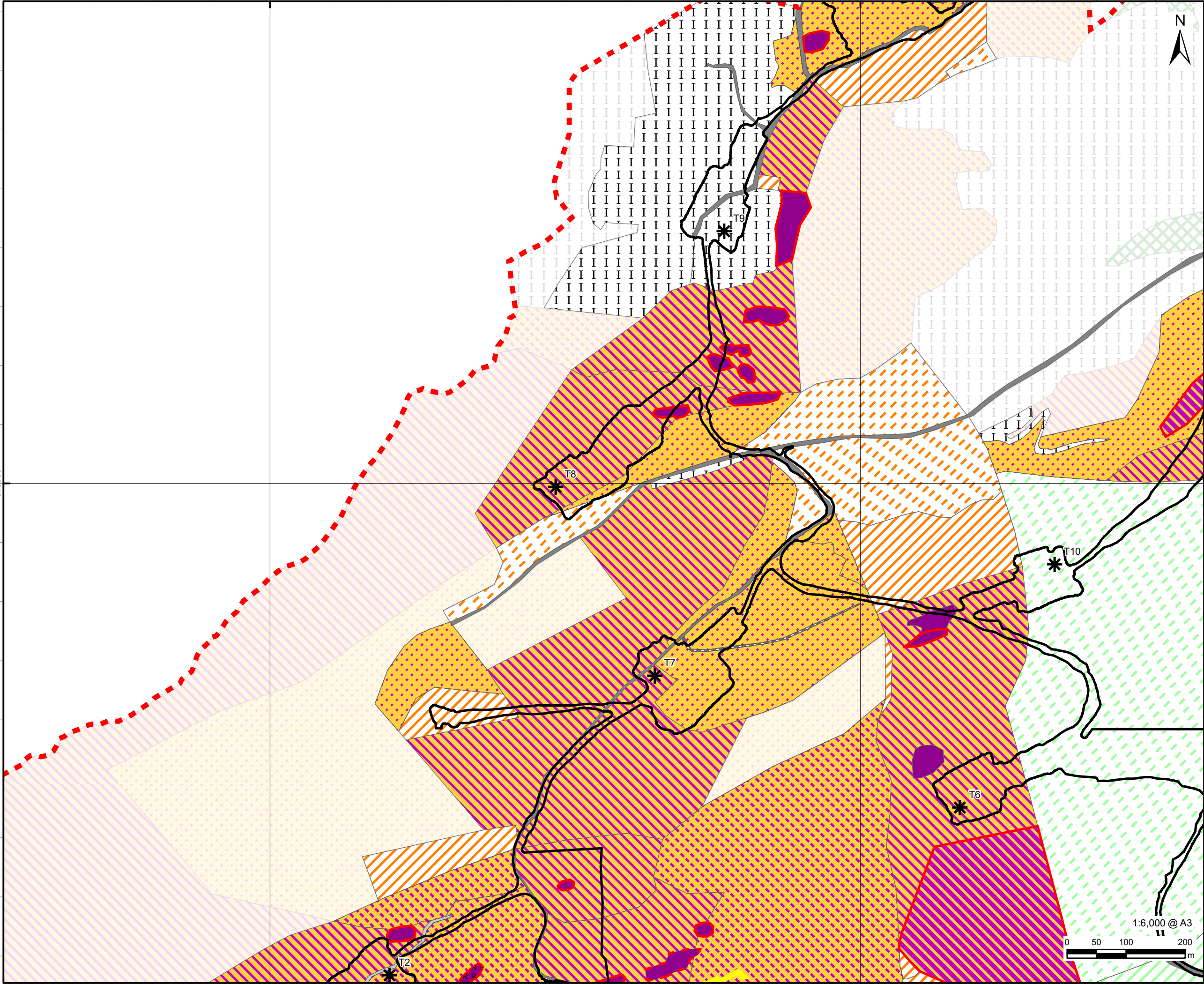
FIGURE NUMBER
Figure 1 Sheet 2 of 4



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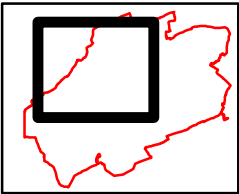
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LEGEND

- Red line boundary
- Site (footprint)
- Annex I habitats (n/a = non-Annex I)**
 - H4010
 - H4010 / H4030 / non-Annex I
 - H4010 / non-Annex I
 - H7130
 - H7130*
 - H7130* / H7130
 - H7130* + H7150
 - H7130* / H4010
 - H8220 / H4010 / H4030
 - n/a (WD4 conifer plantation)
 - n/a (WS2 recent conifer plantation)
 - n/a (GA1 agricultural grassland)
 - n/a (agricultural/non-agricultural grassland)
 - n/a (non-agricultural grassland)
 - n/a (old track)
 - n/a (new track, estimated position only)
 - n/a (road / track)

Note: unfaded habitats are those of the Annex I condition assessment, which did not extend to areas distant from infrastructure. Faded habitats are from the original wind farm survey and cover the distant areas.



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FIGURE TITLE

Habitat map with overlaid infrastructure

FIGURE NUMBER

Figure 1 Sheet 3 of 4

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LEGEND

Red line boundary

Site (footprint)

Annex I habitats (n/a = non-Annex I)

H4010

H4010 / H4030 / non-Annex I

H4010 / non-Annex I

H7130

H7130*

H7130* / H4010

H7130 / H7130* / H4010

n/a (FP2 acid/neutral flush)

n/a (WD4 conifer plantation)

n/a (WS2 recent conifer plantation)

n/a (WS1 dense scrub)

n/a (HD1 bracken)

n/a (GA1 agricultural grassland)

n/a (agricultural/non-agricultural grassland)

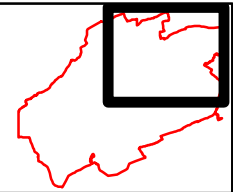
n/a (non-agricultural grassland)

n/a (new track, estimated position only)

n/a (road / track)

Atlantic hazel scrub

Note: unfaded habitats are those of the Annex I condition assessment, which did not extend to areas distant from infrastructure. Faded habitats are from the original wind farm survey and cover the distant areas.



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FIGURE TITLE

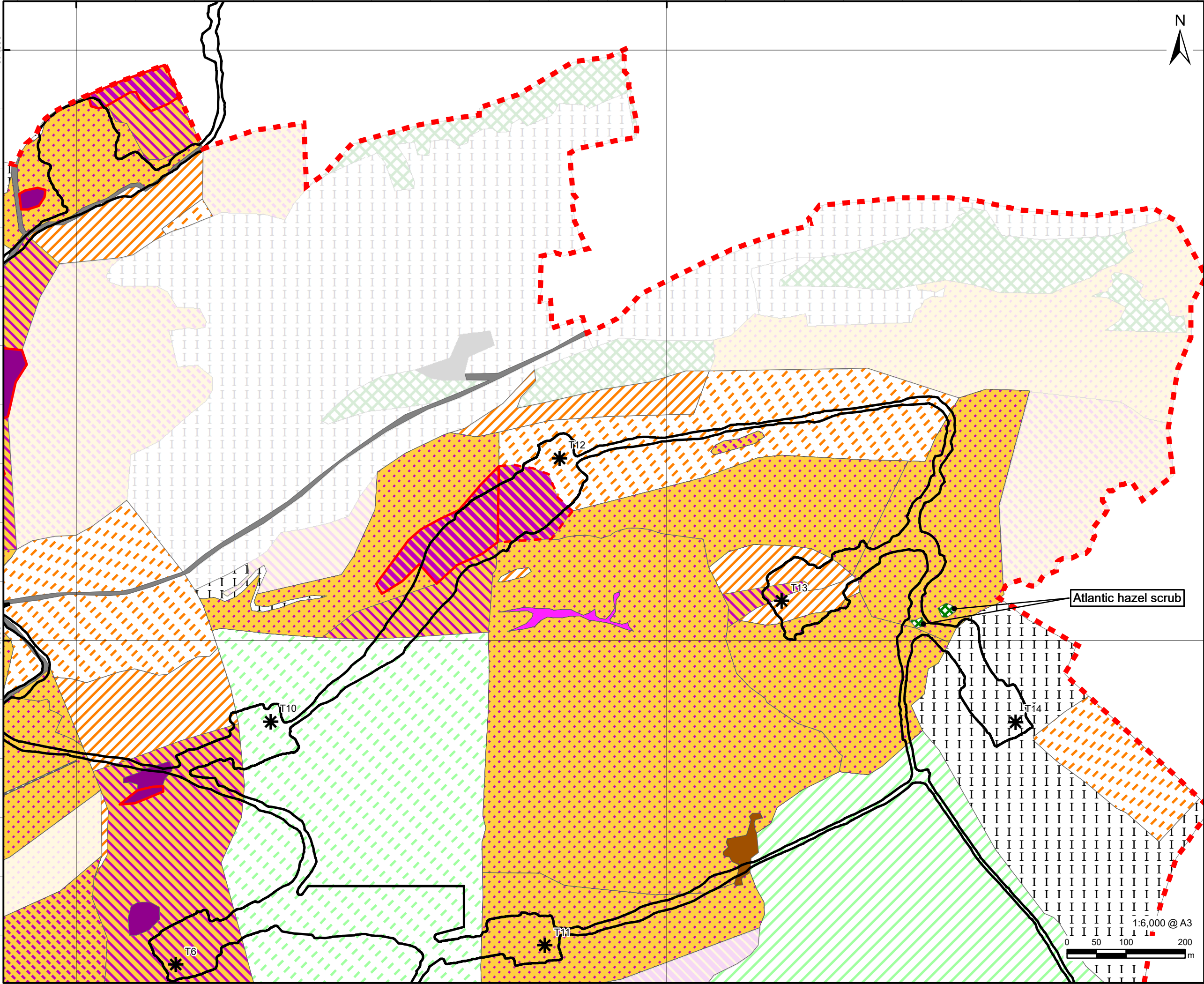
Habitat map with overlaid infrastructure

FIGURE NUMBER

Figure 1 Sheet 4 of 4

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0 50 100 200 m





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LEGEND

Red line boundary

Site (footprint)

'Structure and functions' of Annex I habitat, i.e. current condition

No Annex I habitats present

Favourable

Two Annex I habitats, Favourable and Unfavourable Bad

Three Annex I habitats, Favourable, Unfavourable Inadequate and Unfavourable Bad

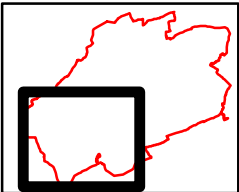
Three Annex I habitat, one Favourable, two Unfavourable Bad

Unfavourable Inadequate

Two Annex I habitats, Unfavourable Inadequate and Unfavourable Bad

Unfavourable Bad

Note: uncoloured areas within the red line are distant from infrastructure and were not subject to Annex I condition assessment. See also Figure 1.



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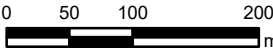
FIGURE TITLE

Current condition of assessed Annex I habitats

FIGURE NUMBER

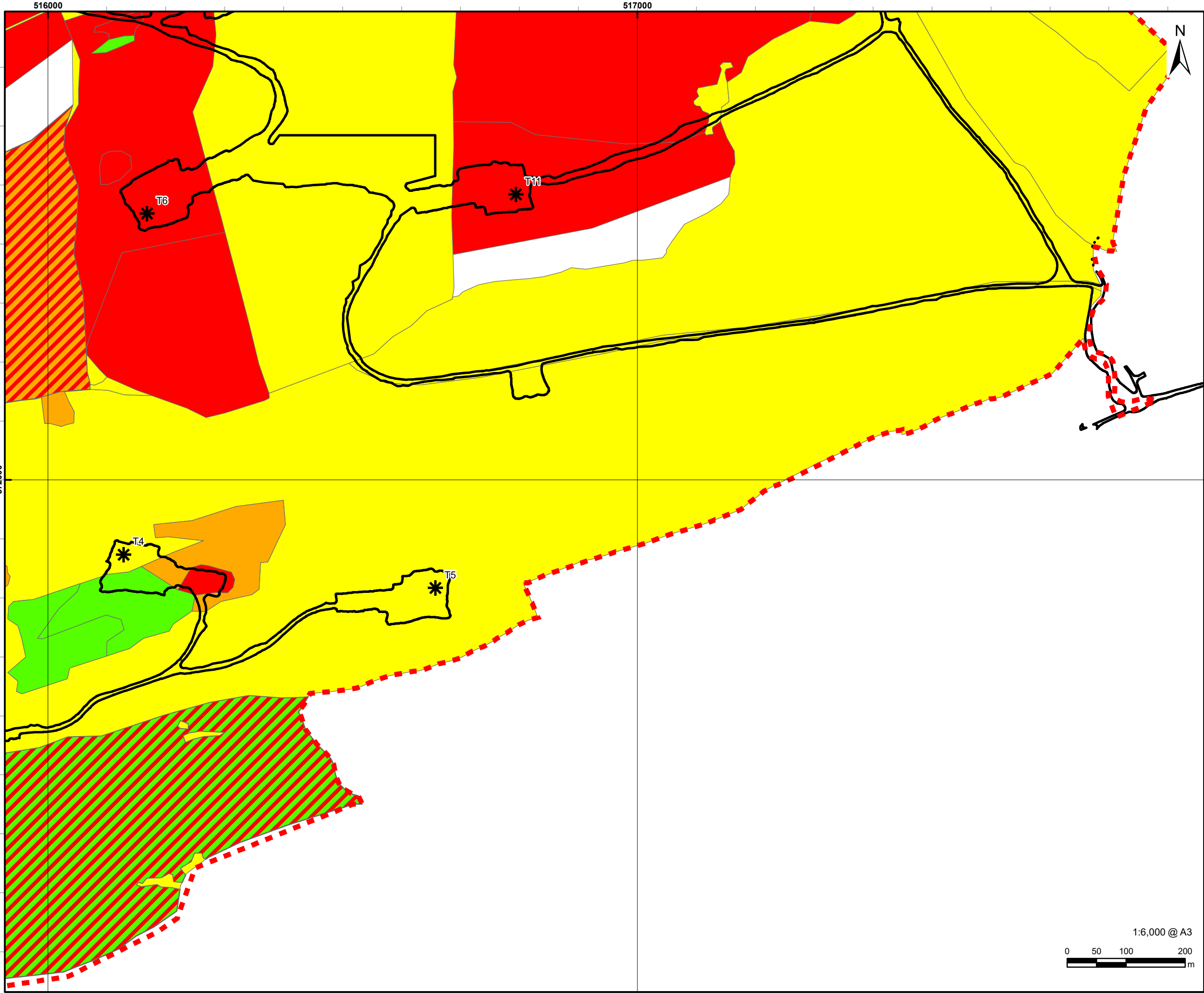
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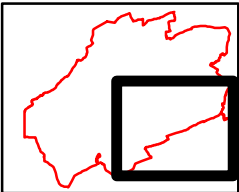
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- LEGEND
- Red line boundary
 - Site (footprint)
 - 'Structure and functions' of Annex I habitat, i.e. current condition
 - No Annex I habitats present
 - Favourable
 - Two Annex I habitats, Favourable and Unfavourable Bad
 - Three Annex I habitats, Favourable, Unfavourable Inadequate and Unfavourable Bad
 - Three Annex I habitat, one Favourable, two Unfavourable Bad
 - Unfavourable Inadequate
 - Two Annex I habitats, Unfavourable Inadequate and Unfavourable Bad
 - Unfavourable Bad

Note: uncoloured areas within the red line are distant from infrastructure and were not subject to Annex I condition assessment. See also Figure 1.



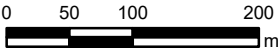
ISSUE PURPOSE
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PROJECT NUMBER
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FIGURE TITLE
Current condition of assessed Annex I habitats

FIGURE NUMBER
Figure 2 Sheet 2 of 4

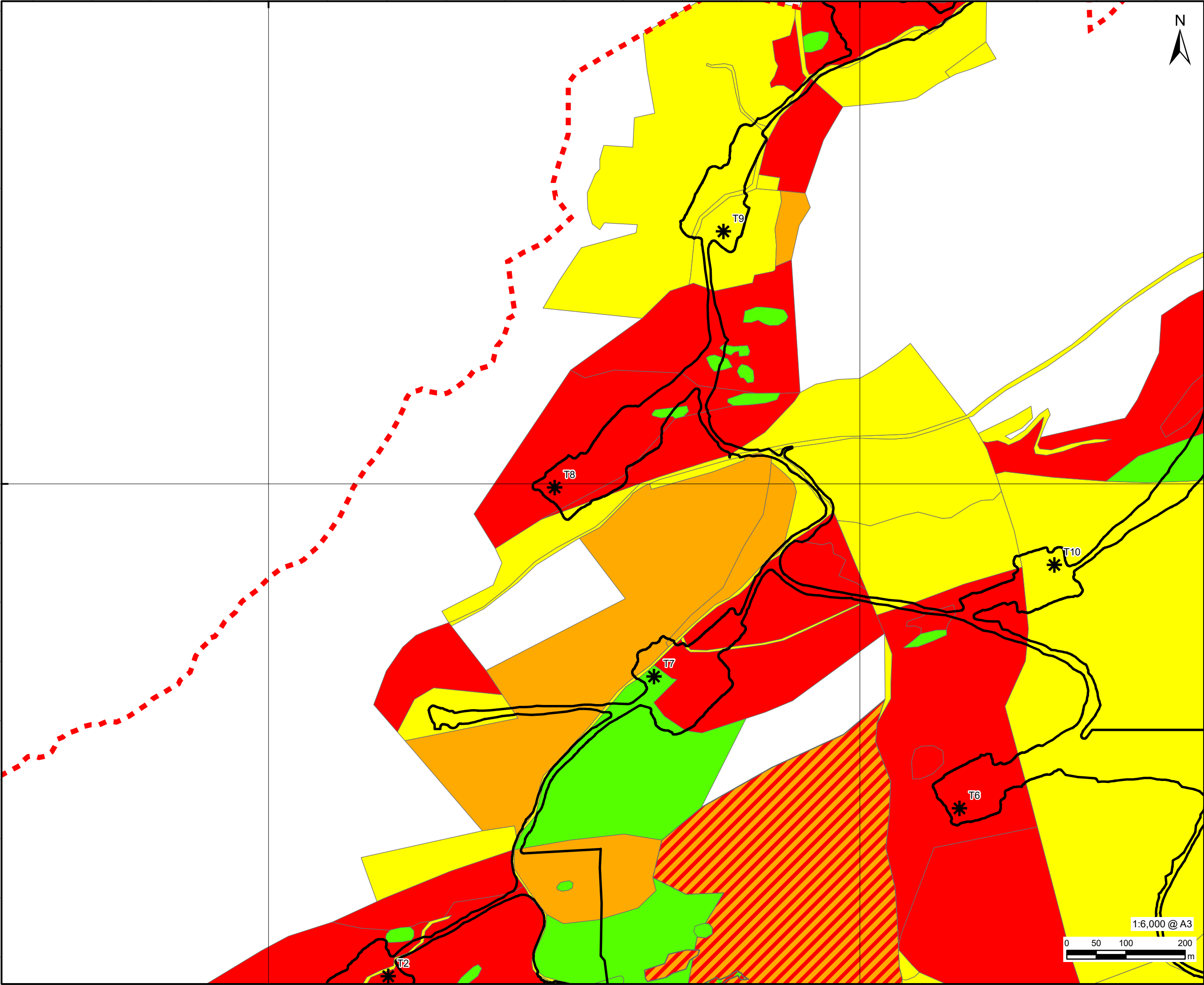
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LEGEND

Red line boundary

Site (footprint)

'Structure and functions' of Annex I habitat, i.e. current condition

No Annex I habitats present

Favourable

Two Annex I habitats, Favourable and Unfavourable Bad

Three Annex I habitats, Favourable, Unfavourable Inadequate and Unfavourable Bad

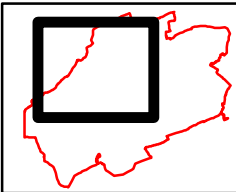
Three Annex I habitat, one Favourable, two Unfavourable Bad

Unfavourable Inadequate

Two Annex I habitats, Unfavourable Inadequate and Unfavourable Bad

Unfavourable Bad

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PROJECT NUMBER

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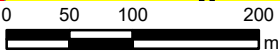
FIGURE TITLE

Current condition of assessed Annex I habitats

FIGURE NUMBER

Figure 2 Sheet 3 of 4

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LEGEND

Red line boundary

Site (footprint)

'Structure and functions' of Annex I habitat, i.e. current condition

No Annex I habitats present

Favourable

Two Annex I habitats, Favourable and Unfavourable Bad

Three Annex I habitats, Favourable, Unfavourable Inadequate and Unfavourable Bad

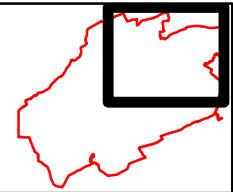
Three Annex I habitat, one Favourable, two Unfavourable Bad

Unfavourable Inadequate

Two Annex I habitats, Unfavourable Inadequate and Unfavourable Bad

Unfavourable Bad

Note: uncoloured areas within the red line are distant from infrastructure and were not subject to Annex I condition assessment. See also Figure 1.



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PROJECT NUMBER

60706008 / 1.1

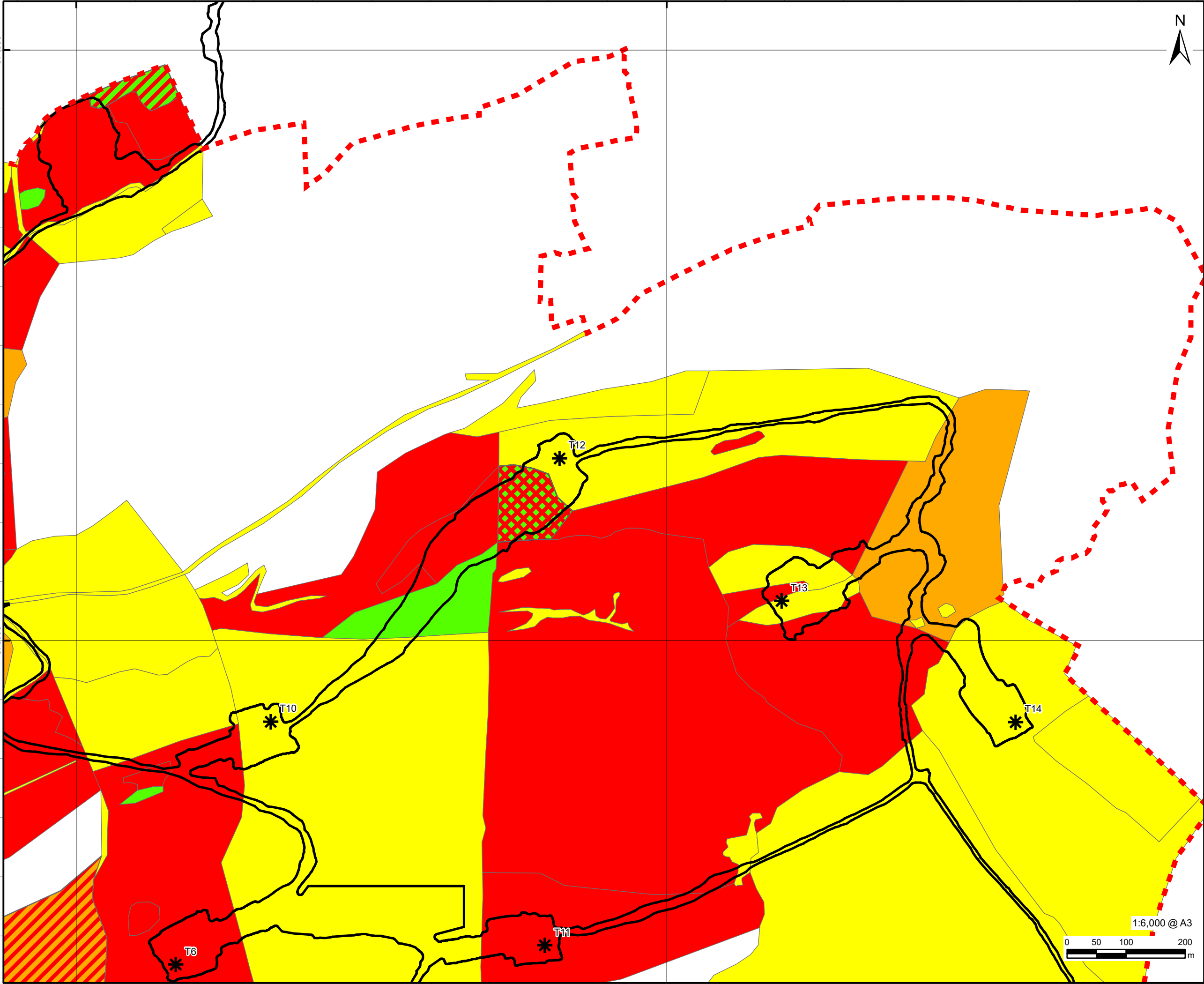
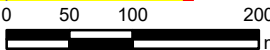
FIGURE TITLE

Current condition of assessed Annex I habitats

FIGURE NUMBER

Figure 2 Sheet 4 of 4

1:6,000 @ A3



Appendix B Condition monitoring data

Unless otherwise stated, the extent over which the condition criteria for Annex I habitats in the following tables are assessed is indicated as follows:

- plain text = assessed in quadrat area;
- **bold** = assessed over wider surrounding area; and,
- ***bold italic*** = assessed over both of the above extents.

H4010 North Atlantic wet heaths with *Erica tetralix*

Condition criterion:

Stop: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

	Near T10 / T6		Between T3 and T6.....							In bog mosaic S of T6	Near T6 / T10		NE of T3.....		Near T3	
<i>Erica tetralix</i> present in 20 m radius	Pass	Fail	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
* At least 50% cover positive indicators	Pass	Fail	Fail	Pass	Fail	Fail	Pass	Pass	Fail	Pass	Fail	Fail	Pass	Pass	Pass	Pass
At least 10% cover <i>Cladonia</i> / <i>Sphagnum</i> / <i>Racomitrium lanuginosum</i> / pleurocarpous moss	Pass	Fail	Fail	Pass	Pass	Pass	Pass	Pass	Fail	Pass	Fail	Fail	Fail	Pass	Pass	Pass
At least 15% cover ericoids / <i>Empetrum nigrum</i>	Fail	Fail	Fail	Fail	Fail	Fail	Pass	Pass	Fail	Fail	Fail	Pass	Fail	Pass	Pass	Pass
<50% cover dwarf shrubs	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
<1% cover TOGETHER <i>Agrostis capillaris</i> , <i>Holcus lanatus</i> , <i>Phragmites australis</i> , <i>Pteridium</i> , <i>Ranunculus repens</i>	Pass	Pass	Pass	Fail	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
<1% cover non-native species	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
<20% cover trees/scrub	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
<10% cover <i>Pteridium aquilinum</i> / <i>Juncus effusus</i>	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
<10% crushed/broken/pulled-up sphagnum	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
<33% ericoid / <i>E. nigrum</i> / <i>Myrica gale</i> shoots browsed	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
No burning into bryophyte/lichen layer or bare peat	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
** No burning of sensitive areas	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
<10% cover disturbed bare ground	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
<10% drainage by cutting/ditches/tracking/trampling	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass

Condition criterion:

Stop: 17

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	W of T4	At and near T4.....	Large open moorland south of T4.....										Near T1 / T2 & approach from E			
<i>Erica tetralix</i> present in 20 m radius	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Fail	Pass	Pass	Pass
* At least 50% cover positive indicators	Pass	Pass	Pass	Fail	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Fail	Fail	Pass	Fail
At least 10% cover <i>Cladonia</i> / <i>Sphagnum</i> / <i>Racomitrium lanuginosum</i> / pleurocarpous moss	Pass	Pass	Pass	Fail	Pass	Fail	Pass	Fail	Pass	Pass	Pass	Pass	Pass	Pass	Fail	Pass
At least 15% cover ericoids / <i>Empetrum nigrum</i>	Pass	Pass	Pass	Pass	Pass	Pass	Fail	Pass	Pass	Pass	Pass	Pass	Fail	Fail	Pass	Fail
<50% cover dwarf shrubs	Fail	Pass	Pass	Fail	Fail	Fail	Pass	Fail	Fail	Fail	Pass	Pass	Pass	Pass	Pass	Pass
<1% cover TOGETHER <i>Agrostis capillaris</i> , <i>Holcus lanatus</i> , <i>Phragmites australis</i> , <i>Pteridium</i> , <i>Ranunculus repens</i>	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Fail	Fail	Fail	Fail
<1% cover non-native species	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
<20% cover trees/scrub	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
<10% cover <i>Pteridium aquilinum</i> / <i>Juncus effusus</i>	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
<10% crushed/broken/pulled-up sphagnum	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
<33% ericoid / <i>E. nigrum</i> / <i>Myrica gale</i> shoots browsed	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
No burning into bryophyte/lichen layer or bare peat	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
** No burning of sensitive areas	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
<10% cover disturbed bare ground	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Fail	Fail	Pass	Fail	Pass	Pass	Pass	Pass	Pass
<10% drainage by cutting/ditches/tracking/trampling	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass

Condition criterion:

Stop: 33

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	West of T12.....	South of T12.....	Near T11.....	NE of T11.....												
<i>Erica tetralix</i> present in 20 m radius	Pass	Pass	Fail	Fail	Pass	Pass	Pass	Pass	Fail	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
* At least 50% cover positive indicators	Fail	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Fail	Fail	Pass	Fail	Fail	Fail	Fail
At least 10% cover <i>Cladonia</i> / <i>Sphagnum</i> / <i>Racomitrium lanuginosum</i> / pleurocarpous moss	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Fail	Fail	Fail	Fail	Fail	Fail	Fail
At least 15% cover ericoids / <i>Empetrum nigrum</i>	Fail	Pass	Fail	Fail	Fail	Pass	Pass	Fail	Fail	Fail	Pass	Fail	Pass	Fail	Fail	Fail	Fail
<50% cover dwarf shrubs	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Fail	Pass	Pass	Pass	Pass
<1% cover TOGETHER <i>Agrostis capillaris</i> , <i>Holcus lanatus</i> , <i>Phragmites australis</i> , <i>Pteridium</i> , <i>Ranunculus repens</i>	Fail	Pass	Fail	Fail	Fail	Pass	Pass	Pass	Fail	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
<1% cover non-native species	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
<20% cover trees/scrub	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
<10% cover <i>Pteridium aquilinum</i> / <i>Juncus effusus</i>	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
<10% crushed/broken/pulled-up sphagnum	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
<33% ericoid / <i>E. nigrum</i> / <i>Myrica gale</i> shoots browsed	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
No burning into bryophyte/lichen layer or bare peat	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
** No burning of sensitive areas	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
<10% cover disturbed bare ground	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
<10% drainage by cutting/ditches/tracking/trampling	Pass	Pass	Fail	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass

Condition criterion:

Stop: 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64

	.....	At and near T13, and towards T14.....						NE of T13.....		Fragment east of T12		At / near T12...		Betw T7/T8	At / near T8....	
<i>Erica tetralix</i> present in 20 m radius	Pass	Pass	Fail	Pass	Pass	Pass	Fail	Pass	Pass	Pass	Fail	Fail	Pass	Pass	Pass	Pass
* At least 50% cover positive indicators	Pass	Pass	Pass	Pass	Pass	Pass	Fail	Pass	Fail	Pass	Pass	Pass	Pass	Pass	Fail	Fail
At least 10% cover <i>Cladonia</i> / <i>Sphagnum</i> / <i>Racomitrium lanuginosum</i> / pleurocarpous moss	Pass	Fail	Fail	Fail	Pass	Pass	Pass	Pass	Fail	Pass	Pass	Pass	Pass	Pass	Pass	Pass
At least 15% cover ericoids / <i>Empetrum nigrum</i>	Pass	Pass	Fail	Pass	Pass	Pass	Fail	Pass	Pass	Fail	Fail	Fail	Fail	Fail	Fail	Pass
<50% cover dwarf shrubs	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
<1% cover TOGETHER <i>Agrostis capillaris</i> , <i>Holcus lanatus</i> , <i>Phragmites australis</i> , <i>Pteridium</i> , <i>Ranunculus repens</i>	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Fail	Fail	Fail	Fail	Fail	Fail	Fail
<1% cover non-native species	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
<20% cover trees/scrub	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
<10% cover <i>Pteridium aquilinum</i> / <i>Juncus effusus</i>	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
<10% crushed/broken/pulled-up sphagnum	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
<33% ericoid / <i>E. nigrum</i> / <i>Myrica gale</i> shoots browsed	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Fail	Pass	Pass	Pass	Pass	Pass
No burning into bryophyte/lichen layer or bare peat	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
** No burning of sensitive areas	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
<10% cover disturbed bare ground	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Fail	Pass	Pass	Fail	Pass	Pass
<10% drainage by cutting/ditches/tracking/trampling	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass

Condition criterion:

Stop: 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80

	.....	Between T8 and T9.....	NE of T9.....	Substation.....	At and east of T7.....												
<i>Erica tetralix</i> present in 20 m radius	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
* At least 50% cover positive indicators	Fail	Pass	Fail	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
At least 10% cover <i>Cladonia</i> / <i>Sphagnum</i> / <i>Racomitrium lanuginosum</i> / pleurocarpous moss	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
At least 15% cover ericoids / <i>Empetrum nigrum</i>	Fail	Pass	Fail	Fail	Fail	Fail	Fail	Pass	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Fail	Fail
<50% cover dwarf shrubs	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
<1% cover TOGETHER <i>Agrostis capillaris</i> , <i>Holcus lanatus</i> , <i>Phragmites australis</i> , <i>Pteridium</i> , <i>Ranunculus repens</i>	Fail	Pass	Fail	Fail	Fail	Fail	Pass	Pass	Fail	Fail	Fail	Fail	Pass	Fail	Fail	Fail	Fail
<1% cover non-native species	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
<20% cover trees/scrub	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Fail	Pass	Pass	Pass	Pass	Pass	Pass	Pass
<10% cover <i>Pteridium aquilinum</i> / <i>Juncus effusus</i>	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
<10% crushed/broken/pulled-up sphagnum	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
<33% ericoid / <i>E. nigrum</i> / <i>Myrica gale</i> shoots browsed	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Fail	Fail	Fail	Pass	Pass	Pass	Pass	Pass	Pass	Pass
No burning into bryophyte/lichen layer or bare peat	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
** No burning of sensitive areas	Pass	Pass	Pass	Pass	Fail	Fail	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
<10% cover disturbed bare ground	Pass	Pass	Pass	Pass	Pass	Pass	Fail	Pass	Pass	Pass	Pass	Fail	Pass	Pass	Pass	Pass	Pass
<10% drainage by cutting/ditches/tracking/trampling	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass

Condition criterion:

Stop: 81 82 83 84 85 86 87 88 89 90 91 92

	West end of T7 to current met mast									Near T2.....			Met mast track
<i>Erica tetralix</i> present in 20 m radius	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Fail	Pass	Pass	Pass
* At least 50% cover positive indicators	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
At least 10% cover <i>Cladonia</i> / <i>Sphagnum</i> / <i>Racomitrium lanuginosum</i> / pleurocarpous moss	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
At least 15% cover ericoids / <i>Empetrum nigrum</i>	Pass	Pass	Pass	Pass	Fail	Fail	Pass	Pass	Pass	Fail	Fail	Fail	Fail
<50% cover dwarf shrubs	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
<1% cover TOGETHER <i>Agrostis capillaris</i> , <i>Holcus lanatus</i> , <i>Phragmites australis</i> , <i>Pteridium</i> , <i>Ranunculus repens</i>	Fail	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Fail	Pass	Pass	Pass
<1% cover non-native species	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
<20% cover trees/scrub	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
<10% cover <i>Pteridium aquilinum</i> / <i>Juncus effusus</i>	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
<10% crushed/broken/pulled-up sphagnum	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
<33% ericoid / <i>E. nigrum</i> / <i>Myrica gale</i> shoots browsed	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
No burning into bryophyte/lichen layer or bare peat	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
** No burning of sensitive areas	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
<10% cover disturbed bare ground	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
<10% drainage by cutting/ditches/tracking/trampling	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass

* Positive vascular indicators = *Eriophorum angustifolium*, *Trichophorum germanicum*, *Calluna*, *Erica tetralix*, *Myrica*, *Potentilla erecta*, *Carex* spp., *Rhychospora* spp., *Schoenus* spp., *Drosera* spp., *Narthecium*, *Pedicularis* spp., *Polygala* spp., *Salix repens*, *Succisa*.

Positive bryophyte/lichen indicators = *Sphagnum* spp., pleurocarpous mosses, *Pleurozia*, *Breutelia*, *Diplophyllum albicans*, non-crustose lichens.

** Sensitive areas = slopes >1 in 3, gully sides, areas with abundant bryophytes/lichens or pools etc, <10 m from watercourses, <50 m from drains, >400 m altitude, severely wind-clipped vegetation, and soils <5 cm deep.

H4030 European dry heaths

Condition criterion:

Stop: 1 2 3 4 5 6

	Between T3 & T6		Moorland south of T4		East of T12	Near T2
>2 bryophytes / non-crustose lichens (excluding <i>Campylopus</i> spp. or <i>Polytrichum</i> spp.)	Pass	Pass	Pass	Pass	Pass	Pass
* At least 2 positive indicators	Pass	Pass	Pass	Pass	Pass	Pass
At least 50% cover positive indicators (50-75% if basic heath)	Pass	Pass	Pass	Pass	Fail	Fail
<50% cover TOGETHER <i>Myrica</i> / <i>Salix repens</i> / <i>Ulex gallii</i>	Fail	Pass	Pass	Pass	Pass	Pass
<1% cover TOGETHER <i>Cirsium arvense/vulgaris</i> , <i>Ranunculus repens</i> , large <i>Rumex</i> spp., <i>Jacobaea vulgaris</i> or <i>Urtica dioica</i>	Pass	Pass	Pass	Pass	Pass	Pass
<1% cover non-native species	Pass	Pass	Pass	Pass	Pass	Pass
<20% cover trees/scrub	Pass	Pass	Pass	Pass	Pass	Pass
<10% cover <i>Pteridium aquilinum</i> or <i>Juncus effusus</i>	Pass	Pass	Pass	Pass	Pass	Pass
<50% cover senescent <i>Calluna</i>	Pass	Pass	Pass	Pass	Pass	Pass
<33% ericoid / <i>Empetrum nigrum</i> shoots browsed	Pass	Pass	Pass	Pass	Fail	Fail
** No burning of sensitive areas	Pass	Pass	Pass	Pass	Pass	Pass
Outside sensitive areas all <i>Calluna</i> phases present throughout + at least 10% cover mature <i>Calluna</i>	Pass	Pass	Pass	Pass	Pass	Pass
<10% cover disturbed bare ground	Pass	Pass	Pass	Pass	Pass	Pass

* Positive indicators (all are vascular) = *Calluna*, *Erica cinerea*, *Vaccinium myrtillus*, *Vaccinium vitis-idaea*, *Empetrum nigrum*, *Arctostaphylos* spp., *Ulex gallii*, *Daboecia*.

** Sensitive areas = soil <5 cm deep, slopes >1 in 2, gully sides, areas with abundant bryophytes/lichens (including equivalents of NVC H21/22), areas with clear unevenness in heather, pools/erosion areas, <10 m from watercourses.

H7130*/H7130 Blanket bog and H7150 Depressions on peat substrates of the *Rhynchosporion*

In several cases, H7150 was observed on H7130 blanket bog, therefore both overlapping Annex I types are present at these locations. The assessment for H7150 uses largely the same criteria as H7130 except for three additional/alternative criteria, given in the last three rows of the table below.

Condition criterion:	Stop:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	W of T10.....	NE of T3.....	South of T6.....	NW of T6	N of T3	At / by T3.....	SE of T3.....	SW of T4.....									
* At least 7 positive indicator species	Fail	Pass	Pass	Pass	Pass	Pass	Fail	Fail	Fail	Pass	Fail	Pass	Fail	Pass	Pass	Pass	Pass
At least 10% cover bryophytes/lichen (excluding <i>Sphagnum fallax</i>)	Pass	Pass	Pass	Pass	Pass	Pass	Fail	Fail	Fail	Pass	Fail	Pass	Pass	Pass	Pass	Pass	Pass
<75% cover EACH <i>Calluna</i> , <i>Eriophorum vaginatum</i> , <i>Molinia</i> , <i>Trichophorum germanicum</i> , <i>Schoenus</i> , <i>Eleocharis multicaulis</i>	Fail	Pass	Pass	Fail	Fail	Pass	Fail	Fail	Fail	Pass	Fail	Fail	Pass	Pass	Pass	Fail	Fail
<1% cover TOGETHER <i>Agrostis capillaris</i> , <i>Holcus lanatus</i> , <i>Phragmites australis</i> , <i>Pteridium</i> , <i>Ranunculus repens</i>	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
<1% cover non-native species	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
<10% cover trees/scrub	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
<10% crushed/broken/pulled-up sphagnum	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
<33% ericoid, <i>Empetrum nigrum</i> or <i>Myrica gale</i> shoots browsed	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
No burning into bryophyte/lichen layer or bare peat	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
** No burning of sensitive areas	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
<10% cover disturbed bare ground	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Fail	Pass	Pass	Pass	Pass
<10% drainage by cutting/ditches/tracking/trampling	Fail	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Fail	Fail	Pass	Pass	Pass
<5% cover erosion gullies/areas within bog mosaic	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
ADDITIONAL CRITERIA FOR H7150 ONLY:																	
*** At least 5 positive indicators	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	Pass	n/a
At least 10% cover <i>Rhynchospora</i>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	Fail	n/a
<35% cover <i>Molinia</i> , <i>Trichophorum</i> , <i>Schoenus</i> , <i>Eleocharis multicaulis</i>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	Fail	n/a

Condition criterion:

Stop: 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32

	.....	Between T2 and T3.....							At and near T1 and T2			SW of T12.....		Near T12.....		
* At least 7 positive indicator species	Pass	Pass	Pass	Pass	n/a	Pass	n/a	Pass	Pass	Pass	Fail	Fail	Pass	Fail	Fail	Pass
At least 10% cover bryophytes/lichen (excluding <i>Sphagnum fallax</i>)	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Fail	Pass	Pass	Fail	Pass
<75% cover EACH <i>Calluna</i> , <i>Eriophorum vaginatum</i> , <i>Molinia</i> , <i>Trichophorum germanicum</i> , <i>Schoenus</i> , <i>Eleocharis multicaulis</i>	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Fail	Pass	Pass	Fail	Pass
<1% cover TOGETHER <i>Agrostis capillaris</i> , <i>Holcus lanatus</i> , <i>Phragmites australis</i> , <i>Pteridium</i> , <i>Ranunculus repens</i>	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Fail	Pass	Pass	Pass
<1% cover non-native species	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
<10% cover trees/scrub	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
<10% crushed/broken/pulled-up sphagnum	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
<33% ericoid, <i>Empetrum nigrum</i> or <i>Myrica gale</i> shoots browsed	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
No burning into bryophyte/lichen layer or bare peat	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
** No burning of sensitive areas	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
<10% cover disturbed bare ground	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
<10% drainage by cutting/ditches/tracking/trampling	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Fail	Fail	Pass	Fail	Pass
<5% cover erosion gullies/areas within bog mosaic	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
ADDITIONAL CRITERIA FOR H7150 ONLY:																
*** At least 5 positive indicators	n/a	n/a	n/a	n/a	Pass	n/a	Pass	Pass	Pass	n/a	n/a	n/a	n/a	n/a	n/a	n/a
At least 10% cover <i>Rhynchospora</i>	n/a	n/a	n/a	n/a	Pass	n/a	Pass	Pass	Fail	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<35% cover <i>Molinia</i> , <i>Trichophorum</i> , <i>Schoenus</i> , <i>Eleocharis multicaulis</i>	n/a	n/a	n/a	n/a	Pass	n/a	Pass	Pass	Fail	n/a	n/a	n/a	n/a	n/a	n/a	n/a

n/a = this criterion is not applicable, because although H7150 is present it is not on H7130 (on H4010 instead), and this criterion is only relevant to H7130.

Condition criterion:

Stop: 33 34 35 36 37 38 39 40 41

	.....	T8	Betw T8 / T9	East of T9.....	Substation.....	B.Pit A			
* At least 7 positive indicator species	Pass	Fail	Pass	Pass	Fail	Fail	Pass	Pass	Pass
At least 10% cover bryophytes/lichen (excluding <i>Sphagnum fallax</i>)	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
<75% cover EACH <i>Calluna</i> , <i>Eriophorum vaginatum</i> , <i>Molinia</i> , <i>Trichophorum germanicum</i> , <i>Schoenus</i> , <i>Eleocharis multicaulis</i>	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
<1% cover TOGETHER <i>Agrostis capillaris</i> , <i>Holcus lanatus</i> , <i>Phragmites australis</i> , <i>Pteridium</i> , <i>Ranunculus repens</i>	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
<1% cover non-native species	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
<10% cover trees/scrub	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
<10% crushed/broken/pulled-up sphagnum	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
<33% ericoid, <i>Empetrum nigrum</i> or <i>Myrica gale</i> shoots browsed	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
No burning into bryophyte/lichen layer or bare peat	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
** No burning of sensitive areas	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
<10% cover disturbed bare ground	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
<10% drainage by cutting/ditches/tracking/trampling	Pass	Pass	Pass	Pass	Fail	Fail	Pass	Pass	Pass
<5% cover erosion gullies/areas within bog mosaic	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
ADDITIONAL CRITERIA FOR H7150 ONLY:									
*** At least 5 positive indicators	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
At least 10% cover <i>Rhynchospora</i>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<35% cover <i>Molinia</i> , <i>Trichophorum</i> , <i>Schoenus</i> , <i>Eleocharis multicaulis</i>	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

* Positive vascular indicators = *Eriophorum angustifolium*, *Eriophorum vaginatum*, *Trichophorum germanicum*, *Calluna*, *Erica tetralix*, *Vaccinium myrtillus*, *Empetrum nigrum*, *Myrica*, *Rhynchospora* spp., *Schoenus* spp., *Drosera* spp., *Narthecium*, *Menyanthes*, *Andromeda*, *Carex bigelowii*, *Pedicularis* spp., *Pinguicula* spp., *Polygala* spp.

Positive bryophyte/lichen indicators = *Sphagnum* spp., *Pleurozia*, *Odontoschisma*, *Racomitrium lanuginosum*, *Breutelia*, *Diplophyllum albicans*, *Scapania gracilis*, non-crustose lichens.

** Sensitive areas = slopes >1 in 3, gully sides, areas with abundant bryophytes/lichens or pools etc, <10 m from watercourses, <50 m from drains, >400 m altitude.

*** Positive indicators for H7150 (all are vascular) = *Rhynchospora* spp., *Sphagnum* (not *Sphagnum fallax*), *Eriophorum angustifolium*, *Juncus bulbosus*, *Menyanthes*, *Narthecium*, *Drosera* spp., *Utricularia* spp., *Carex limosa*, *Carex panicea*, *Eleocharis multicaulis*

H8220 Siliceous rocky slopes with chasmophytic vegetation

Condition criterion:	Stop:	1	2	3	4	5
	Small cliff with fissures and appropriate chasmophytes c.300 m NE of T3					
* At least 1 positive indicator	Pass	Pass	Pass	Pass	Pass	
<1% cover non-native species	Pass	Pass	Pass	Pass	Pass	
<25% cover trees/scrub	Pass	Pass	Pass	Pass	Pass	
<50% forb/dwarf shrub shoots grazed	Pass	Pass	Pass	Pass	Pass	

* Positive indicators (all are vascular) = ferns (*Asplenium adiantum-nigrum*, *Athyrium*, *Blechnum*, *Dryopteris* spp., *Hymenophyllum* spp.), *Saxifraga spathularis*, *Sedum rosea*

