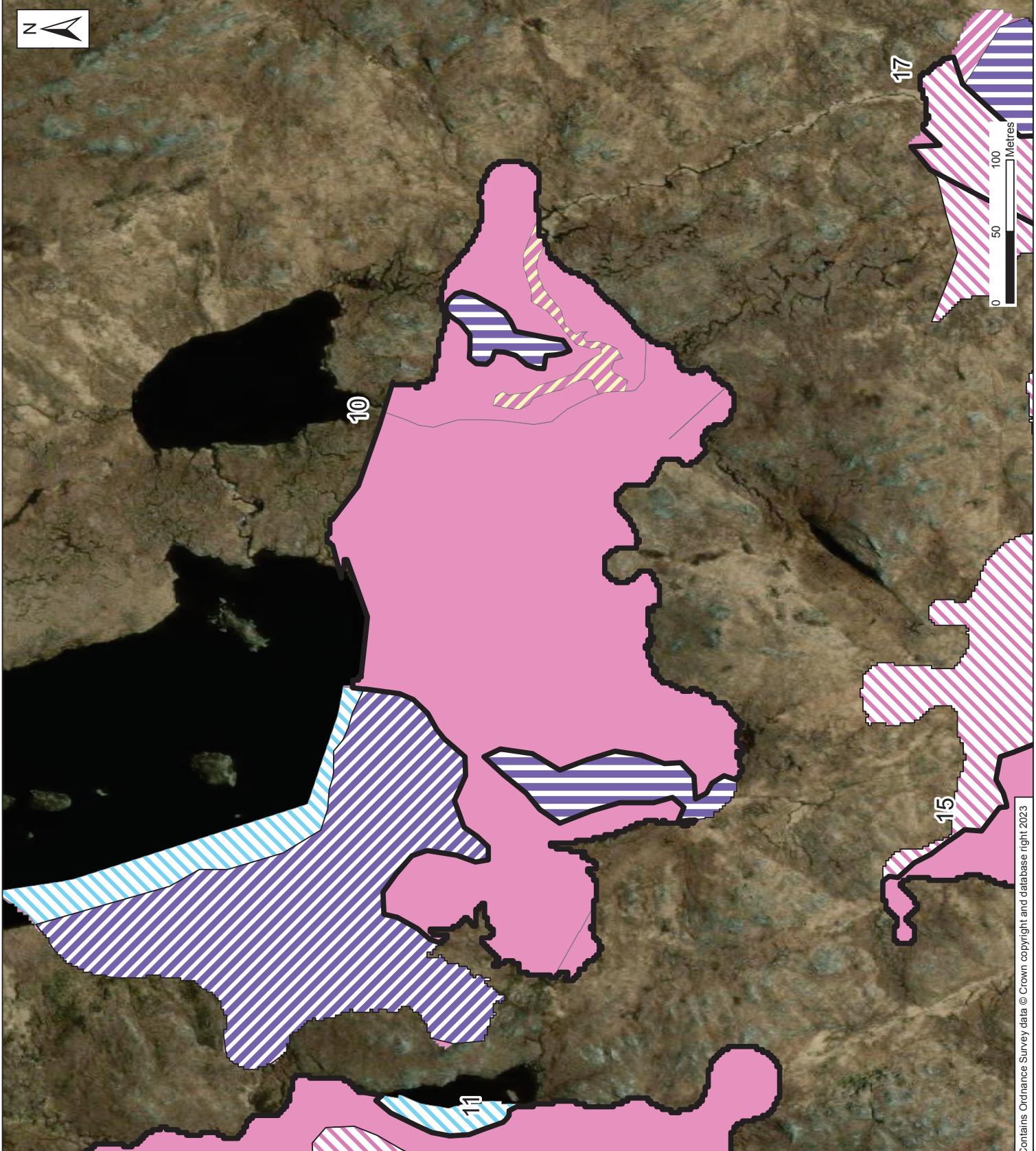


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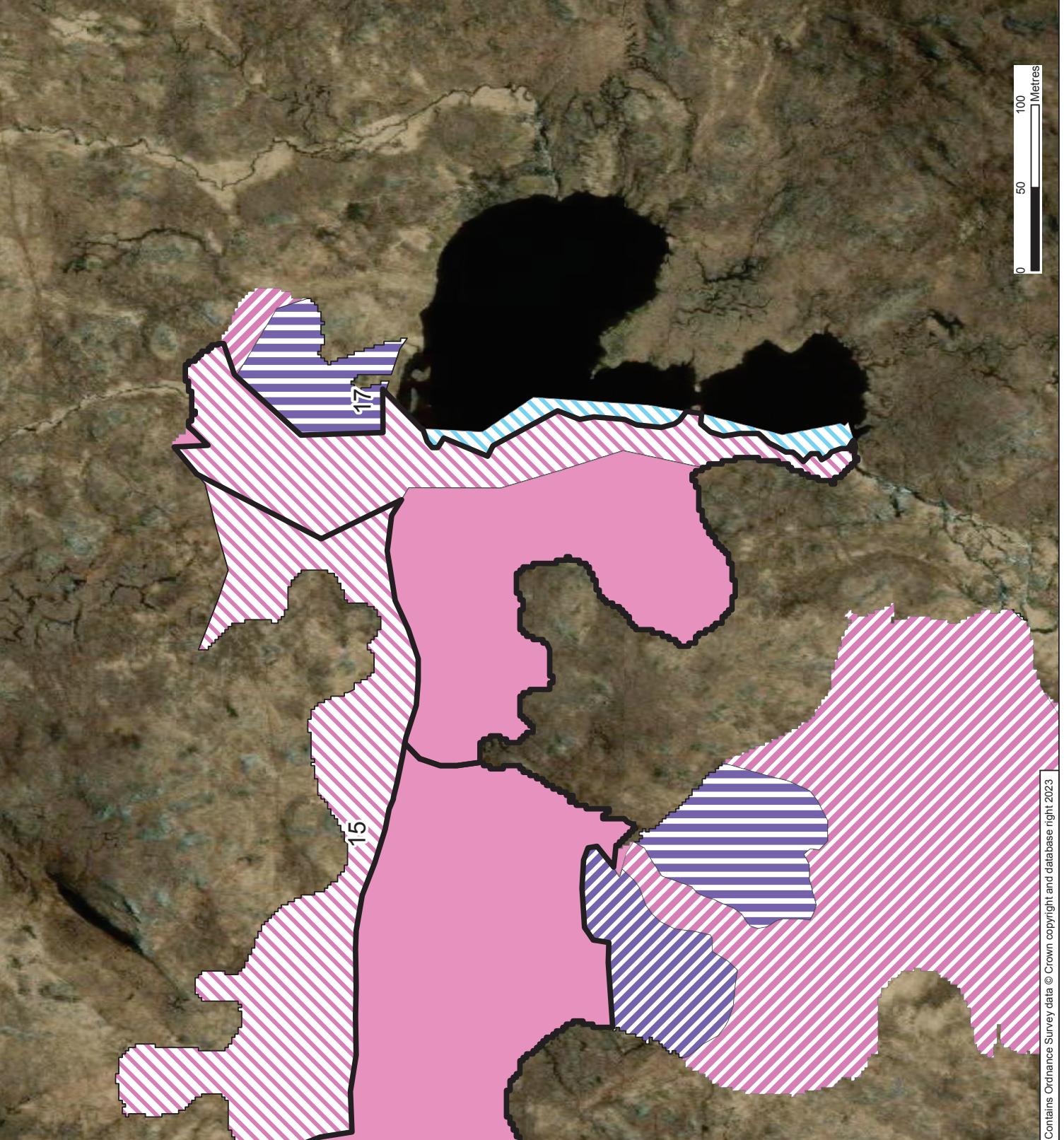
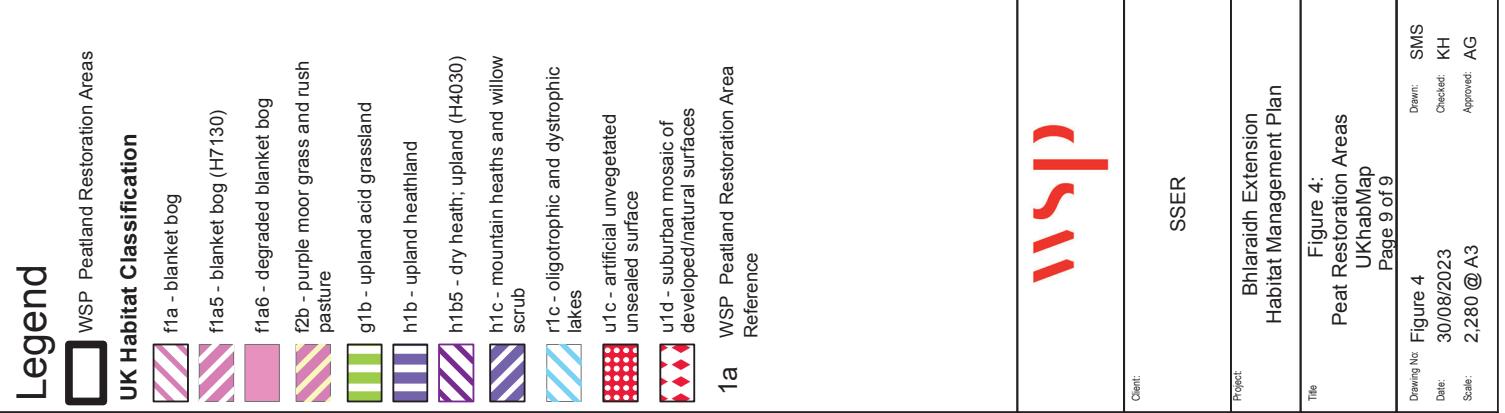
WSP Peatland Restoration Areas	
UK Habitat Classification	
f1a - blanket bog	
f1a5 - blanket bog (H7130)	
f1a6 - degraded blanket bog	
f2b - purple moor grass and rush pasture	
g1b - upland acid grassland	
h1b - upland heathland	
h1b5 - dry heath, upland (H4030)	
h1c - mountain heaths and willow scrub	
r1c - oligotrophic and dystrophic lakes	
u1c - artificial unvegetated surface	
u1d - suburban mosaic of developed/natural surfaces	
1a WSP Peatland Restoration Area Reference	



SSER

Client: Drawing No: Figure 4
Project: Bharaid Extension
Title: Peat Restoration Areas
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Figure 4:
UKhabMap
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SMS
Checked: KH
Approved: AG
Date: 30/08/2023
Scale: 2,560 @ A3



Project: Bhilaraith Extension Habitat Management Plan	Drawn: SMS
Title: Peat Restoration Areas	Checked: KH
Page: Figure 4	Approved: AG
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Drawing No: Figure 4
Date: 30/08/2023
Scale: 2,280 @ A3

Legend

UK Habitat Classification	
	WSP Montane Scrub Planting
	f1a - blanket bog
	f1a5 - blanket bog (H7130)
	f1a6 - degraded blanket bog
	f2b - purple moor grass and rush pasture
	g1b - upland acid grassland
	h1b - upland heathland
	h1b5 - dry heath; upland (H4030)
	h1c - mountain heaths and willow scrub
	h1c - oligotrophic and dystrophic lakes
	u1c - artificial unvegetated unsealed surface
	u1d - suburban mosaic of developed/natural surfaces
Montane Scrub 1	WSP Montane Scrub Planting
Reference	



0 50 100 Metres



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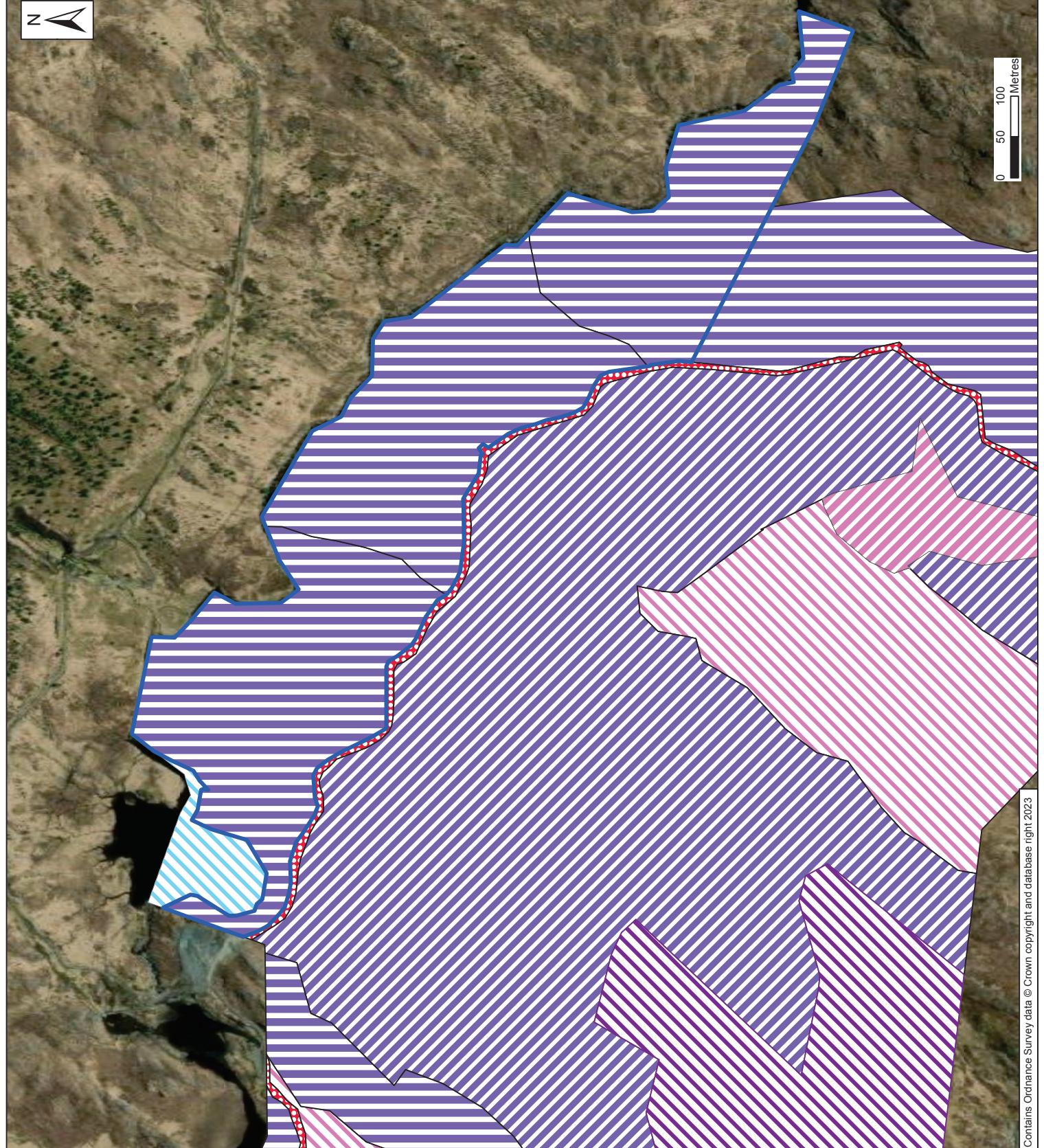
Project: Bhilaraid Extension
Habitat Management Plan

Title: Figure 5: Montane Planting
UKHab Survey Results

Document Path: \\wspgroup\com\central\datapl\objec\70109493 - Bhilaraid Ext03 WIP\GIS\IMXDF\figures\Bhilaraid Figure 5 UKHab Planting.mxd
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Drawing No. Figure 5
Date: 30/08/2023
Scale: 7,185 @ A3

Legend

WSP Caledonian Planting	
	f1a - blanket bog
	f1a5 - blanket bog (H7130)
	f1a6 - degraded blanket bog
	f2b - purple moor grass and rush pasture
	g1b - upland acid grassland
	h1b - upland heathland
	h1b5 - dry heath, upland (H4030)
	h1c - mountain heaths and willow scrub
	h1c - oligotrophic and dystrophic lakes
	u1c - artificial unvegetated unsealed surface
	u1d - suburban mosaic of developed/natural surfaces



SSER

Client:

Project: Bharaid Extension
Habitat Management Plan

Title: Figure 6: Caledonian Planting
UKHab Survey Results

Drawing No: Figure 6
Date: 30/08/2023
Scale: 4.491 @ A3

Drawn: SMS
Checked: KH
Approved: AG

Appendix B

Summary of Baseline Conditions





A summary of the findings from the July 2023 peatland and UKHab survey is provided here:

Peatland Survey

Based on a site visit undertaken in July 2023 there is extensive blanket bog restoration potential and opportunity within the peatland restoration compartments.

Suitable areas for blanket bog restoration were found to comprise peatlands with lowered water tables (from drainage channels and gullies); and areas of actively and/or dormant peat erosion (bare peat areas and peat hags) with limited vegetation cover. These features are summarised below. All Photos referred to are provided in Appendix 3.

Channels and Gullies

Several drainage channels were observed in the peatland restoration areas during the survey. The majority of these appeared to be artificial channels, that had naturalised to some extent overtime, but two are likely to be natural channels (in compartment 10 and 5). The size of these channels ranged from c.0.5-4m wide and c.0.5-3m deep. Many of the channels identified were draining water from blanket bog areas, leading to visible desiccation and a decline in blanket bog species; therefore, blocking some of these channels presents an opportunity to restore bog hydrology and aid blanket bog species recovery. The natural channels identified are not suitable for blocking (NatureScot, 2022)²¹. Details of the channels found in each compartment are provided in Table 4.4 below and examples of the channels observed are shown in Photos 11, 15 and 18.

Numerous erosion gullies, through dry blanket bog habitat, were also present within the peatland restoration areas. These gullies varied in size from c.0.5m wide and c.0.5m deep, to c.10m wide and c.3m deep. In some instances, the gullies were identified as significant bog drainage points and were associated with a network of actively eroding peat. Examples of gullies present are shown in Photos 3, 14, and 16. Several of these gullies provide opportunities for blanket bog restoration. Slowing the flow of water through gullies should retain more water in the bog and prevent further peat erosion.

Bare Peat Areas and Peat Hags

Bare peat areas, in order of 10's of meters, were found within some of the peatland restoration areas (Photos 11 and 4). These included areas that have been eroded at times when channel water levels have been higher and areas being used for vehicle tracks. The latter was causing substantial damage in the compartments where it was present. Many of the bare peat areas appeared to have deep peat (>1m) remaining below the surface,

²¹ NatureScot (2022). Peatland ACTION - Technical Compendium. <https://www.nature.scot/doc/peatland-action-technical-compendium> (Accessed August 2023).



demonstrating a large resource of carbon that was exposed, eroding and being lost. Peatland restoration on these bare peat areas would prevent further losses of peat and peatland carbon stored.

Peat hag erosion faces (ranging in height between c.1-3m), and associated bare peat areas, were also observed within some of the peatland restoration areas. The peat hag erosion faces were characterised by bare peat. Restoration at these locations would prevent further development of erosional features and, as with the bare peat areas described above, prevent further losses of peat and peatland carbon stored. Examples of peat hag erosion faces found on site are shown in Photos 6, 7 and 20.

UKHab and HCA Survey

The site visit undertaken in July 2023 updated the habitat classification (UKHab) and HCA of the Survey Area. The updated UKHab baseline is shown on Figures 4a for the peatland restoration areas, Figure 5 for the montane planting areas, and Figure 6 for the Caledonian woodland planting areas. Relative plant species abundance was estimated using the DAFOR scale²².

Following the site visit and as recommended within the oHMP, the Peatland Restoration Area boundaries were amended to only include areas identified as suitable for peat enhancement or restoration and where UKHab and HCA surveys identified degraded blanket bog or blanket bog in poor or moderate condition. Similarly, riparian planting and montane scrub planting areas were modified following the site visit with unsuitable areas excluded. The area suggested for riparian planting within the oHMP, was deemed to be more suited to Caledonian woodland planting, based on the heath ground layer and altitude of the Site.

Peatland Restoration Areas

Peatland Restoration Areas are comprised of degraded blanket bog and meet the UKHab descriptions of this habitat type with limited variation in species diversity and hydrology across the Survey Area. Typically, the water table was below ground level throughout due to increased drainage caused by peatland restoration features identified within the oHMP and 2023 Site Visit (Listed in Table 4.1 in Section 4). The lower water table has resulted in reduced abundance of peat forming species of Sphagnum and bog cotton throughout, with some areas transitioning to wet heath communities dominated by purple moor grass, dwarf shrubs and/or deer grass. In most areas sphagnum diversity is low and restricted to the

²² The DAFOR scale has been used to estimate the frequency and cover of the different plant species as follows: Dominant (D), Abundant (A), Frequent (F), Occasional (O), Rare (R), The term 'Locally' (L) is also used where the frequency and distribution of a species are patchy and 'Edge' (E) is also used where a species only occurs on the edge of a habitat type.